



BOPLA

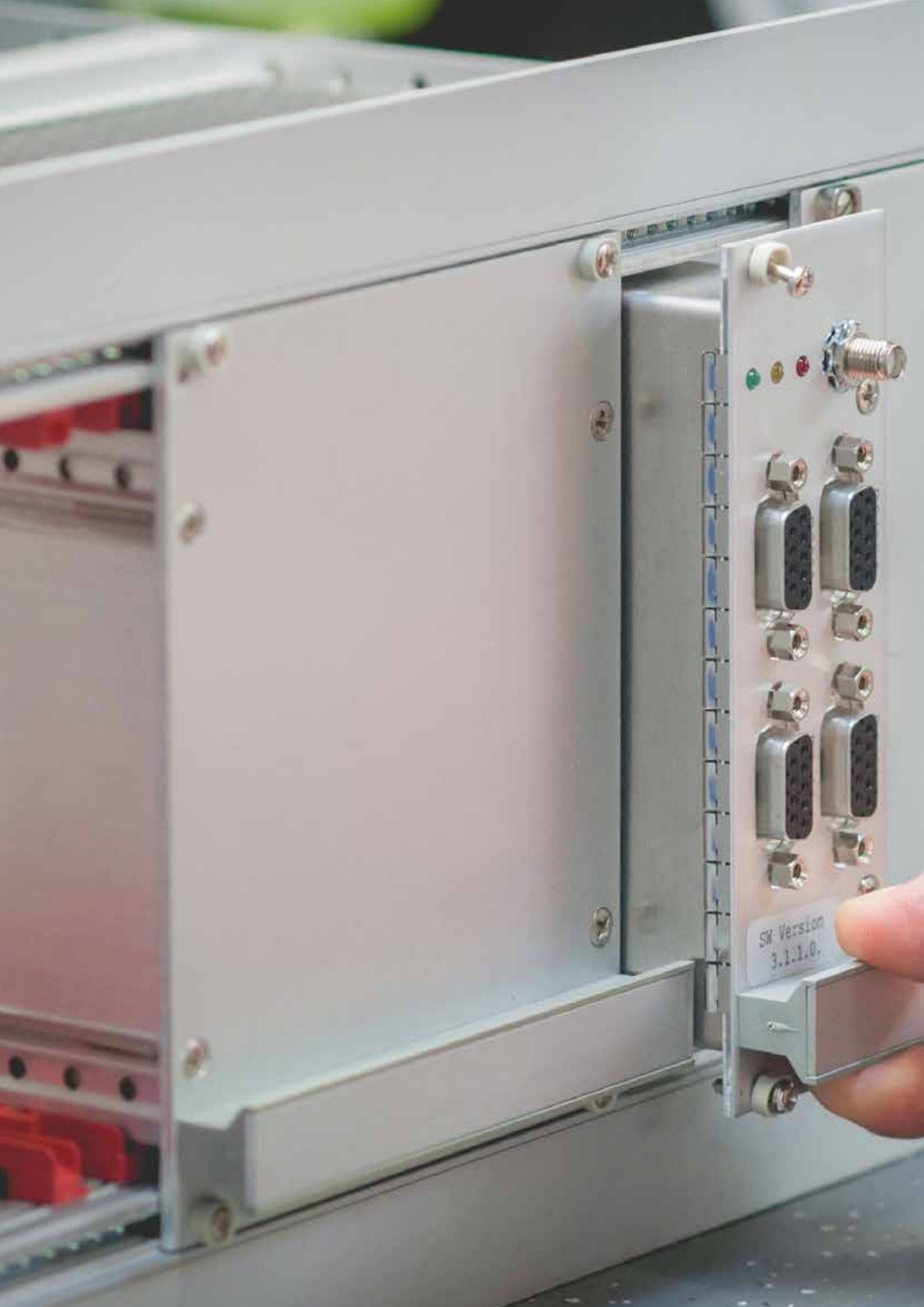
A Phoenix Mecano Company

THE RED BOOK

19"-EDITION



BOPLA
enclosures ■ content matters



SW: Version
3.1.1.0.



Content

BOPLA – the company	Page	4-5
At home in every sector	Page	6-7
19" Enclosure planner	Page	8-9
The world of 19"	Page	10-11
Services	Page	14-35
 19" Enclosures		
Interzoll Case	Page	38-49
Interzoll	Page	50-87
Interzoll Modul	Page	88-121
Interzoll Plus	Page	122-143
Internorm Stil	Page	144-177
Intertego	Page	178-209
Internorm	Page	210-221
Technical information	Page	225-238



BOPLA – Enclosures which provide a home for electronics.

BOPLA enclosures stand out thanks to the excellent quality and design. Combining them with our customers' electronics creates something very special.

For more than 50 years, Bopla Gehäuse Systeme GmbH has been manufacturing and developing enclosures and membrane keypads for applications in the electronic and industrial markets including measurement and control, safety, automotive and medical technology sectors.

With our plastic or aluminium enclosures, we are always ahead of the competition. This is how innovations are created, or existing themes re-interpreted. In this way, BOPLA combines the virtues of a medium sized company with the advantages provided by a group which operates world-wide. Fast, flexible, innovative and well networked, both locally and globally.

As the subsidiary of the Swiss company of Phoenix Mecano AG, which has around 7,000 employees, BOPLA has recourse to production and marketing sites in all the important markets. This simplifies logistics, and also makes it possible to meet even better our customers' requirements in their target markets.

However, what continues to be most important for BOPLA is protecting valuable electronic components in your application, this is what we develop and manufacture day after day.

BOPLA
enclosures ■ content matters

At home in every sector



Building management

Energy and
utility technology

Industry

Bus and rail technology

Automotive

Safety and security technology

Network and
communications technology





BOPLA

A Phoenix Mecano Company

19" Enclosure technology

Electronics

Infrastructure
(signal and traffic light systems)

Aerospace technology

Control and
instrumentation applications

Science and research
Medicine



19" Enclosure planner

1.

Enclosures

Interzoll Case
Interzoll
Interzoll Modul
Interzoll Plus
Internorm Stil
Intertego
Internorm

2.

Characteristics



Protection class

IP00 ... IP69



Impact resistance

IK00 ... IK 10



Flame retardance

UL94 V-0



Variable sizes



EMC protection



Material complies with the railway standard

DIN EN 45545



Plastic with UV protection



Seawater resistance



Locking is possible



Wall mounting is possible



Mast mounting



Battery compartment



Hinged catch



As standard, applies to the product range and a few variants



Achievable with accessories or by means of modification

3.

Enclosure sizes

Dimensions

Model	A	B	C*	HP
2 U				
IT 1025...	99.85	250.36	*	42
IT 1035...	99.85	357.04	*	63
IT 1044...	99.85	443.4	*	80
IT 1045...	99.85	463.72	*	84
3 U				
IT 1525...	144.3	250.36	*	42
IT 1535...	144.3	357.04	*	63
IT 1544...	144.3	443.4	*	80
IT 1545...	144.3	463.72	*	84
4 U				
IT 2025...	188.75	250.36	*	42
IT 2035...	188.75	357.04	*	63
IT 2044...	188.75	443.4	*	80
IT 2045...	188.75	463.72	*	84

*C = 184.4, **244.4**, 304.4 mm
Additional processing of the enclosure is required

4.

Accessories

- COVER PLATE
- CLAMP PROFILE SET
- BUS- AND REARPROFILES
- HANDLE
- TIP-UP FOOT SET
- TAPPED STRIP
- SLOTTED SET SCREW
- INSULATING STRIP
- CARD GUIDE
- BGT FLANGE
- DECOR STRIPS
- DECOR ELEMENTS

Colours



Enclosure colour

- Graphite grey
similar to RAL 7024
Special colour on request

5.

www.bopla.de

Our website contains the following details of all our products:

- TECHNICAL DRAWINGS
(pdf, dxf, stp)
- ARTICLE NUMBERS
- MATERIAL DATA
- WORKS TEST CERTIFICATES
- ASSEMBLY INSTRUCTIONS
- MATCHING ACCESSORIES
- BASKET FUNCTION

Quick-Finder:

The Quick-Finder gets you there faster! Enter the code (e.g. #35) into the search box on our website, or add it to the address (e.g. www.bopla.de/35).



The world of 19 inch applications

The 19" assembly system consists of dimensionally-matched mechanical and electromechanical components which allow the mechanical design and wiring in a modular construction of electrical devices and equipment. The dimensional harmonisation of the components is completed by means of specific pitch lines, in particular with regard to hole positions and rows of holes.

For this reason, the 19" assembly system can be described as the „mechanical construction kit“ for electronic devices and equipment.

The 19 inch assembly system is designed in such a way that complete devices and equipment can be built up in a modular form. This means that in their electrical functions, various plug-in units are assembled mechanically in accordance with standardised measurements or with coordinated dimension levels.

This guarantees that plug-in units can be positioned next to each other as required and that in turn sub racks with different module insertions can be used on top of each other in one frame, cabinet or enclosure.

Internorm Stil



Interzoll Plus



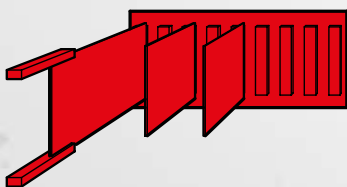
Interzoll



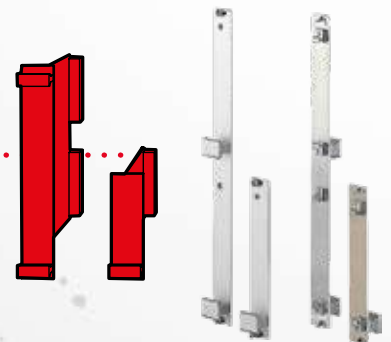
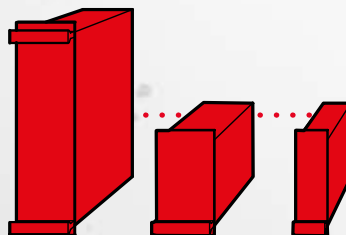
Intertego



Electronic



Plug-in unit



Plug-in front panel & accessories

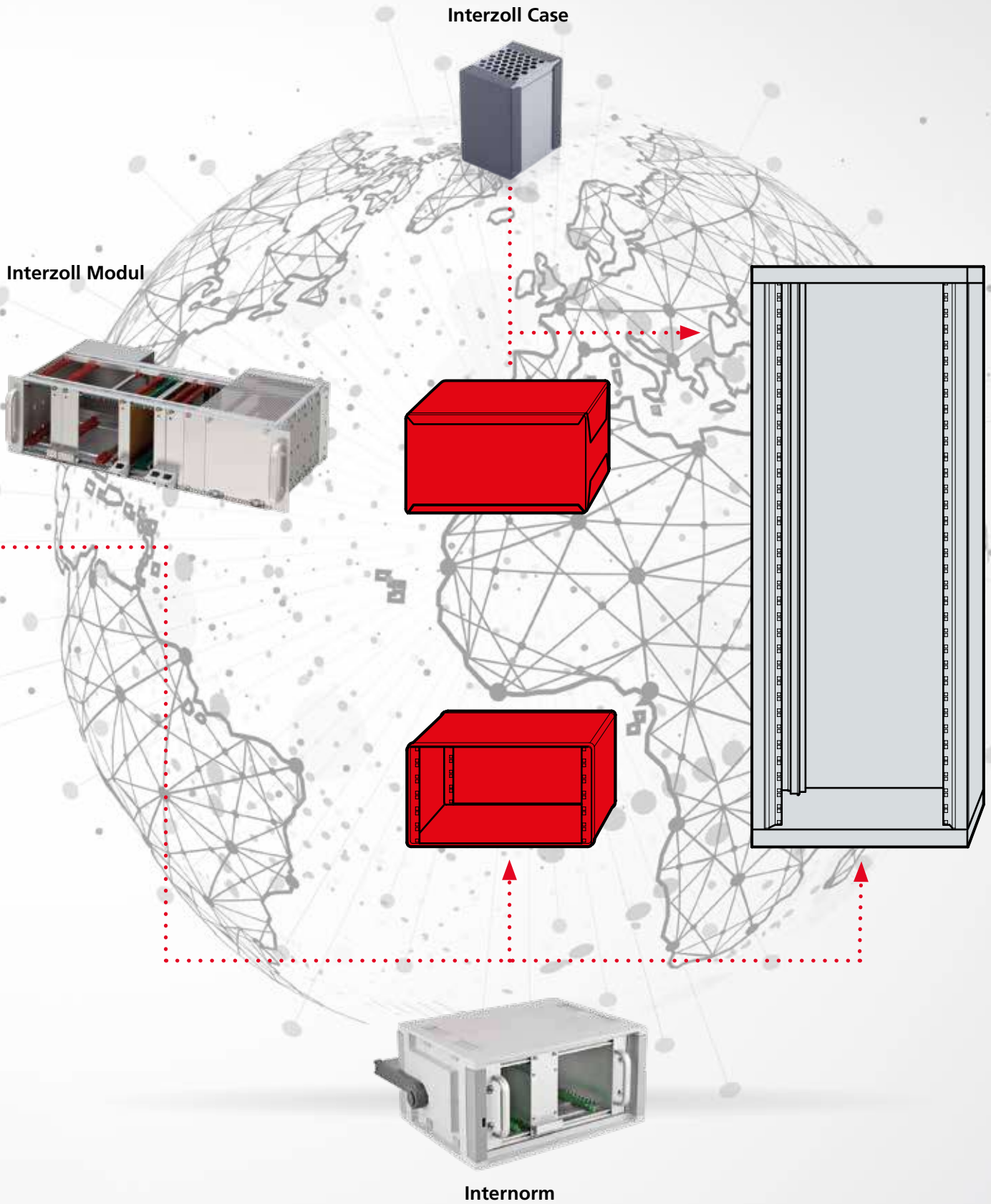


Did you know? We can supply you with enclosures, accessory components and complete solutions for the entire 19" world, both inside and outside the switch cabinet.



BOPLA

A Phoenix Mecano Company







Processing

We offer you a complete „All-round carefree package“ with a wide range of intelligent services, tailor-made for your application.

Services



Our enclosures are machine-finished on the premises. At BOPLA, we have an experienced workforce as well as state-of-the-art machine and systems. A combination that ensures you affordable production runs at a consistently high standard of quality.

For more than 50 years we have been your partner for sophisticated solutions, and we have constantly expanded and perfected our range of services. Form your own opinion of our know-how: machining service, membrane keypads / HMLs and system integration. We look forward to seeing you!



Machining service



Quick-Finder:
www.bopla.de/14

Mechanical machining

We carry out processing for you on modern CNC machines and equipment. This ensures constant and even quality of work.

In addition, the overall solution consisting of the enclosure and customer-specific processing results in optimal delivery times while reducing both the risk of rejects and transport costs.

Our range of services includes:

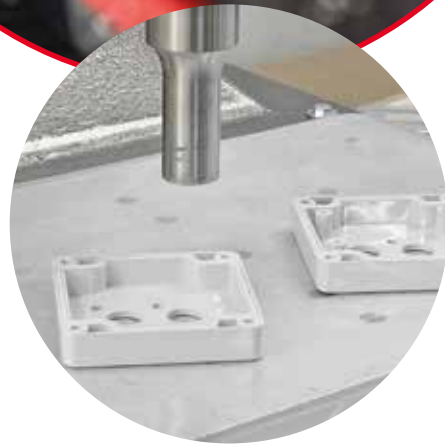
- Drilling
- Milling
- Counter-sinking
- Thread-cutting



We saw extruded aluminium profiles in accordance with your specifications. This ensures optimal delivery times and a high level of quality for the products.

Profile processing:

- Cutting
- Sawing



Ultrasonic welding

We use a special ultrasonic welding method to join the screw domes to our enclosures.

All our plastic enclosures are equipped with screw bosses made of plastic to fasten the mounting plates or PCBs. If you would like an additional fastening method at another position, then we can carry out this requirement by welding in a screw dome.

Services

Surface improvement

By "surface improvement" we mean all the technical processes used during production of a part in order to improve the surface characteristics. These characteristics may be functional or decorative, or a combination of both.



Digital printing

In principle all types of enclosures can be designed using digital printing. The digital printers which we use allow the printing of enclosures up to a weight of 8 kg and maximum dimensions of 690 x 490 x 150 mm (L x W x H). Depending on their size and weight, multiple enclosures can be printed at the same time.



Silk screen and pad printing

We use silk screen and pad printing in accordance with your specifications in RAL, Pantone or HKS colours. Our modern machinery and high-quality ink guarantee optimal print quality.

Your advantages:

- High level of coverage
- Special colours are available, e.g. gold, silver, etc.
- Extremely tough and durable



Laser marking

Flexible, abrasion-resistant and environmentally-friendly. Thanks to the innovative laser process, even changing layouts during every marking procedure is not a problem. In addition, the method is extremely precise, including with narrow line thicknesses and small symbols, and it also offers absolute abrasion resistance to chemicals.



Engraving

Engraving involves the cutting of letters or images in aluminium and plastic components, for example in enclosures, part front panels, plug-in front panels and profiles.

Classical engraving takes place using a graver or a cutter on the surfaces. During this process, the rotating tools remove material, creating a visual contrast to the background.



Lacquering

Lacquering is an additional method of refining our enclosures and components. Lacquers are liquid or powdery coating materials which can be applied thinly to our enclosures or components and, by means of chemical or physical processes such as the vaporisation of the solvent, result in the building up of a continuous, solid film.



Quick-Finder:
www.bopla.de/101



Powder-coating

Powder-coating is a process in which powder is applied to our metal enclosures. As part of the process, the enclosures are transported by a conveyor system. Powder-coated enclosures are extremely tough mechanically, and have better mechanical characteristics (impact and scratch resistance) than the untreated metal enclosures.



EMC coating plastic enclosures:

BOPLA is your competent partner when it is necessary to protect electronics against external interference. We provide three processes which offer you the necessary protection.

With plastic housings:

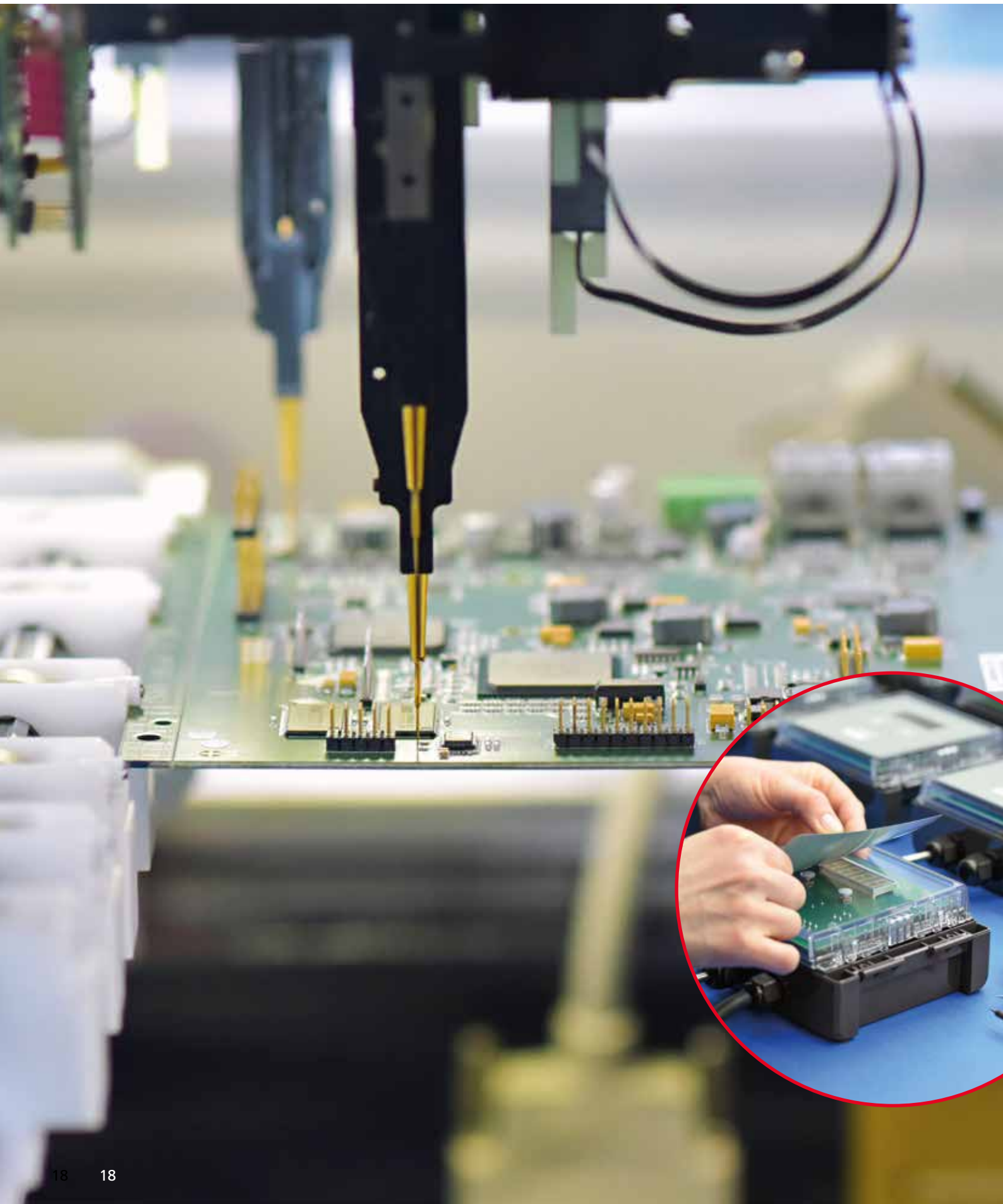
- Copper-chrome-nickel evaporation
- Aluminium evaporation
- Lacquering with conductive copper lacquer



Aluminium enclosures:

Even without any additional screening measures, the electrically conductive base material used for the aluminium enclosure provides good basic screening, and optional accessories can be used to optimise this.

Services



Integration of electronics



Quick-Finder:
www.bopla.de/90

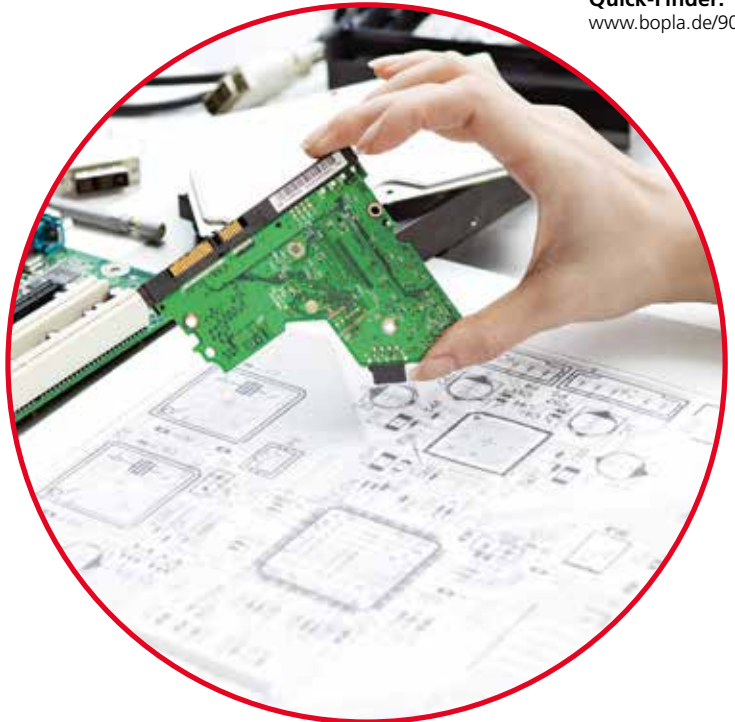
The heart of your product

We offer the full range of services, from development support for the electronic module to materials management and production up to complete assembly of your individual enclosure. A comprehensive end-of-line test is also one of our services.

Development support

Every project starts with a detailed concept phase in which we provide comprehensive advice and then define the tasks, requirements and workload. Based on these factors, we prepare a cost overview for your final product.

Our contact persons accompany you reliably during the entire process.



Manufacturing

You benefit from our electronics services as a result of economic efficiency and short delivery times. In addition, consistent quality management in order production ensures the constant high standard of the modules.

Extract from our services:

- SMD and THT insertion of all design shapes
- High-precision and performance automatic machines for all batch sizes
- Various soldering processes
- Conventional assembly of all designs
- Separate area for small and special series production

Completion / Testing

Following your instructions, we will gladly carry out the integration of:

- Electronic modules
- Electromechanical components
- Touch screens / display units
- Membrane keypads and decor foils
- Cables and connection leads
- EMC screening

Qualified technicians carry out the final assessment of the modules, with function and end tests.



Services



Mounting / Testing / Packaging

The perfect result



Quick-Finder:
www.bopla.de/102

For mechanical processing, mounting of the enclosure parts or additional mechanical articles, terminal insertion, pre-wiring or the mounting of membrane keypads – this is how you minimise the amount of your in-house work, and we take over the risk of manufacturing faulty products.

For example, we take care of the following for you:

- Mounting of subracks
- Installation of cable glands
- Installation of DIN rails
- Soldering and bonding work
- Completion

If there are special demands in respect of particle-free mounting of your optical, electronic and precision components, a work table is available which operates with a vertical flow of air and is assigned to purity class 6 according to DIN EN ISO 14644-1.



Protection type testing

Many of our enclosures already provide high levels of protection as standard. If these levels are not adequate for your application, we test the feasibility of a higher level of protection in our in-house laboratory.

Individual marking & packaging

In recent years there has been a considerable increase in the requirement for tailor-made packaging, especially in the integrated complete solution sector. We have worked hard to deal with these enquiries, and we offer our customers the necessary technical competence in order to meet their specific wishes. We will be happy to work closely with you as early as the offer phase of a project in order to define your requirements in detail with our logistics experts.

Individual enclosures

You are looking for ways to implement one of your own designs? Or do you want to develop your own individual enclosure in order to integrate specific functions?

We will gladly manufacture your individual enclosure. Make use of our many years of experience – we have already created many successful special solutions for a range of sectors. You benefit from our high levels of specialist knowledge, excellent product quality, and our experienced employees!



Our offer comprises:

Consultation



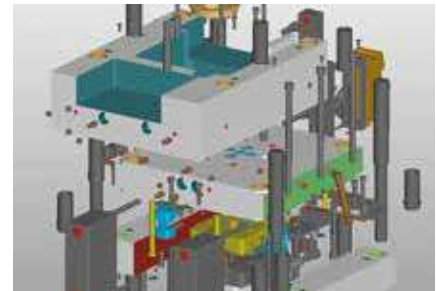
- Consultation
- Spezifikation
- Preliminary costing

Construction



- Preparation of drawing
- Filling study
- Prototype construction

Tool



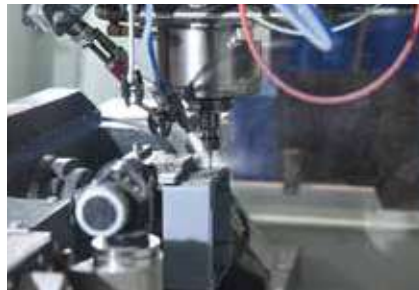
- Tool drawing
- Tool manufacture

Production process



- Plastic injection moulding
- Aluminium profile extrusion
- Aluminium / zinc die casting
- Stamping and bending technology
- Further processing

Processing



- Milling
- Drilling
- Counter-sinking
- Punching
- Sawing

Refinement



- Printing
- (Powder) lacquering
- Engraving
- Laser marking
- EMC screening

Packaging



- HMI integration
- Assembly
- Wiring
- Cable assembly

Testing



- IP test
- IK test
- Climatic test
- EMV test

Packaging



- ESD-compliant packaging
- Individual packaging
- Returnable packaging
- Logistics concept

Individual enclosures



Technology

Plastic injection molded enclosures

Aluminium-/Zinc die-cast



Modified enclosures on 19" basis

Stamping and bending technology

Extrusion of aluminum profiles

Advantages



Quick-Finder:
www.bopla.de/60

Advantages of plastic

Plastic injection-moulded enclosure:

- Individual design
- Low weight
- Low unit costs for large quantities
- In parts which are resistant to aggressive environmental influences (salt water)

Advantages of metal

Aluminium / zinc die casting:

- Reliable even under extreme conditions
- High impact resistance, stability and ingress protection
- Resistant to chemicals and temperature
- Very good heat dissipation
- Good EMC screening
- Low unit costs

Aluminium profile enclosures:

- Variable lengths
(a „family“ of enclosures can easily be created)
- Ideal for use in difficult environments
(high chemical and temperature resistance)
- Good opportunities for EMC screening and conductive connections
- Very good heat dissipation
- Low tool costs
- High level of impact resistance
- Very good stability

Stamping and bending technology:

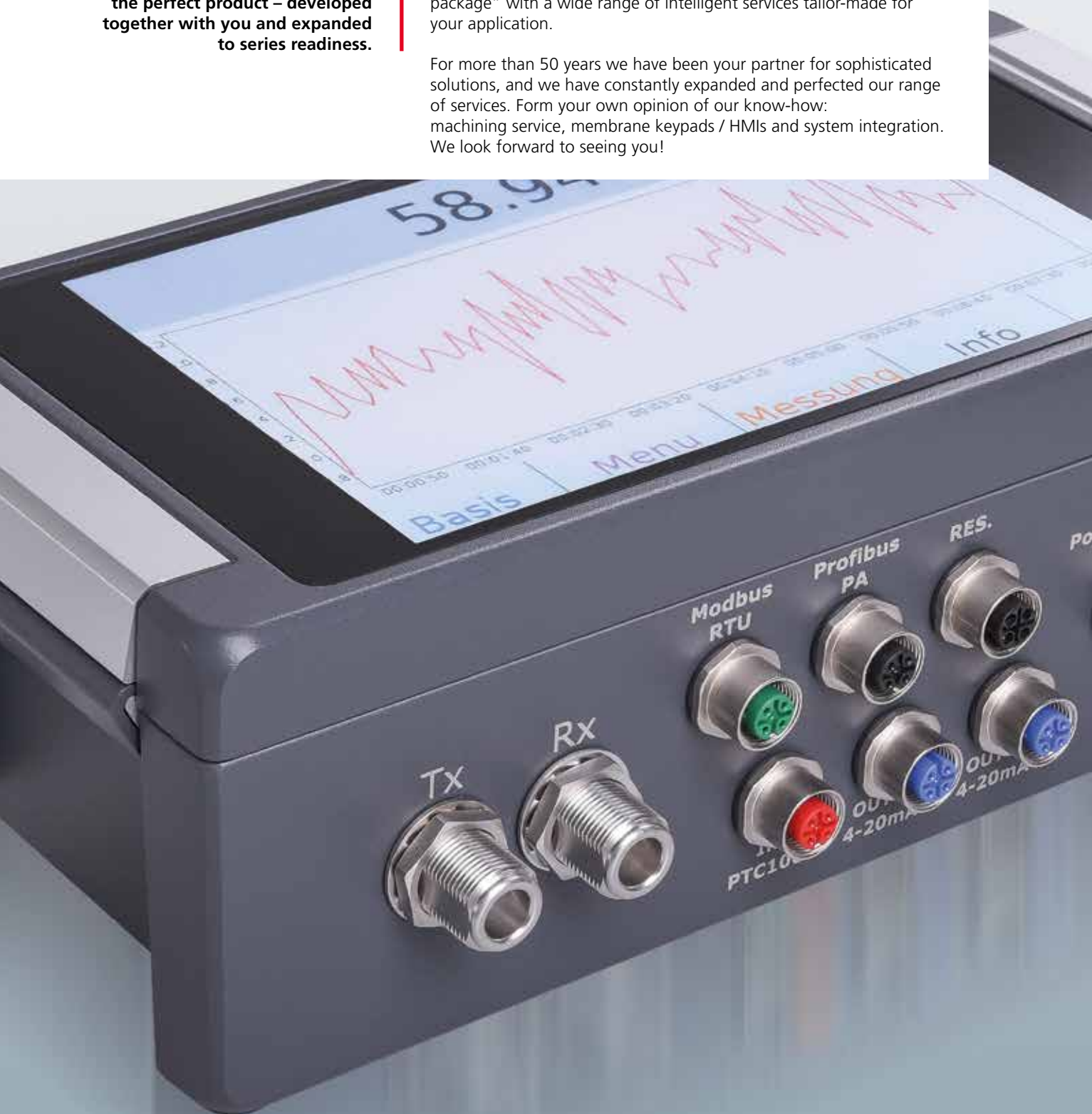
- Small quantities at lower cost than with plastic enclosures
- Good opportunities for EMC screening and conductive connections
- Ideal for use in difficult environments
(high chemical and temperature resistance)
- Low-cost alterations to the enclosure design are possible
- Very good stability

System integration

System integration allows us to deliver the perfect product – developed together with you and expanded to series readiness.

For you, system integration means a complete „All-round carefree package“ with a wide range of intelligent services tailor-made for your application.

For more than 50 years we have been your partner for sophisticated solutions, and we have constantly expanded and perfected our range of services. Form your own opinion of our know-how: machining service, membrane keypads / HMI's and system integration. We look forward to seeing you!



Here are the solutions!

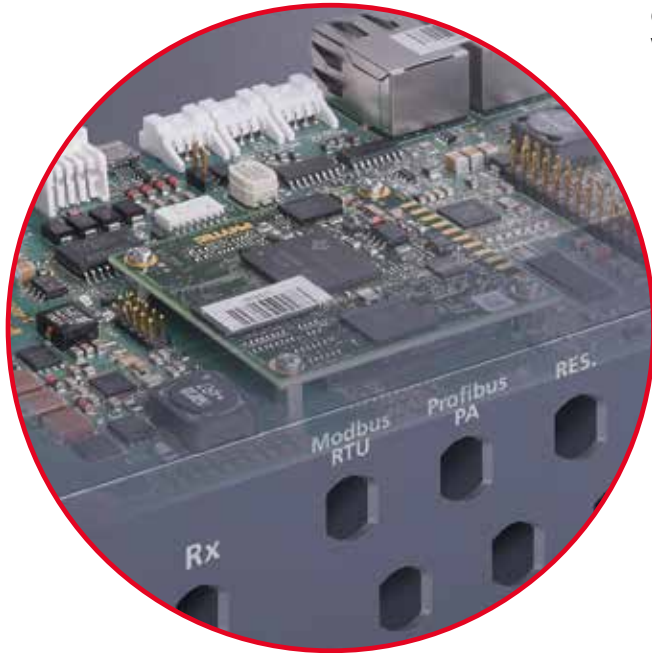


Quick-Finder:
www.bopla.de/77

All the components are brought together at this stage of the process, and your individual device is created!

Our range of services includes:

- Procurement and warehousing of all necessary components
- Insertion (THT / SMT)
- Module test (AOI / ICT)
- Function test
- Labelling and packing



The enclosure

BOPLA's enclosure sector product range is incredibly diverse and ranges from hand-held, desktop, console and wall-mounted enclosures to 19" applications. Select the suitable enclosure from our comprehensive product range.

The electronics

From procurement of all necessary components to insertion to the module test – it's what we do.



The processing

We excel in all standard processes: milling, drilling, countersinking, thread-cutting, sawing, ultrasonic welding, and many more. These include engraving and laser engraving, printing and lacquering, and powder and EMC coatings.

The HMI solution

We create HMI devices for every application. From simple membrane mounting to the complex integration of touch screens – all in impressive quality and with an appealing design!



Mounting / function test

The integration of highly-sensitive components / modules and the final check of the device by means of a function and end test is carried out by our qualified and expert personnel in our in-house laboratory.

Membrane keypads



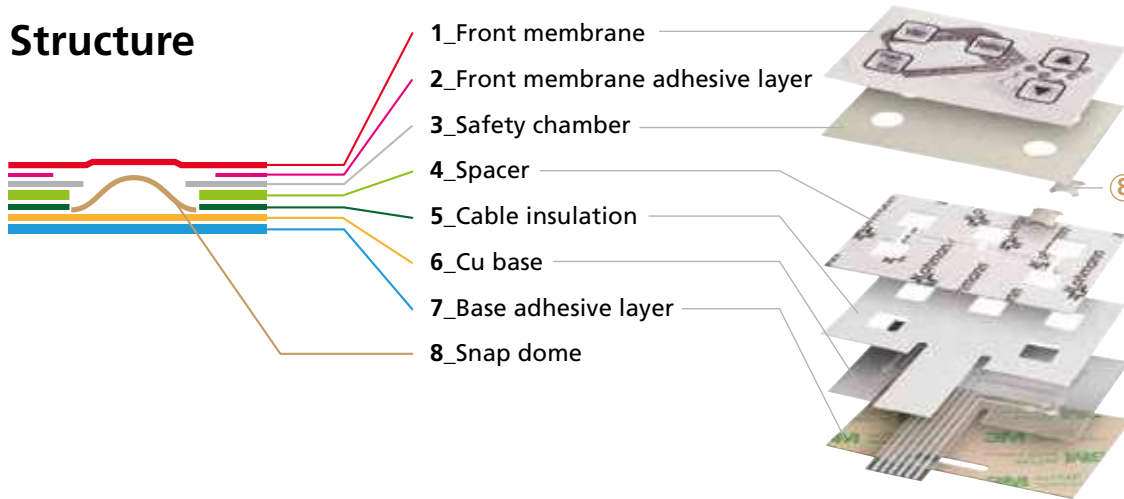
The front membrane is the visual and tactile interface between your membrane keypad and the user. It can be labelled and surface-finished using a number of different printing and embossing methods.

The visual impression made is also of decisive importance for the appeal of your device! Various materials, including polyester and polycarbonate, combined with geometrical flexibility, colour and design, permit ergonomically rational flat membrane keypads for electronically controlled devices.

Our high-quality front membranes conform to high tightness and robustness standards. There are virtually no limits on design. The front membranes can be supplied with or without self-adhesive layers, depending on the customer's requirements. In addition, we can also offer key embossing and display windows, depending on your needs.

The structure

Structure

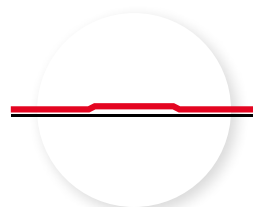


Quick-Finder:
www.bopla.de/72

Embossing

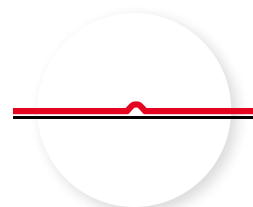
Membranes are embossed primarily to improve ease of use.

Series of keys are made „feelable“, while the membrane effect of the embossing improves tactile feedback from the actuating elements.



Raised embossing

Height: approx. 0.3 - 0.5 mm*



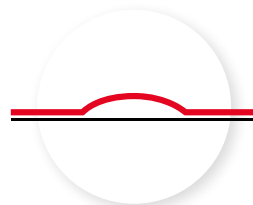
Cap embossing

Height: approx. 0.6 - 0.8 mm*



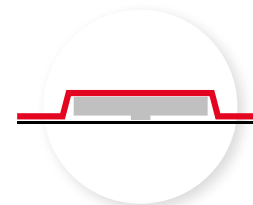
Rim embossing

Height: approx. 0.3 - 0.5 mm*



Dome embossing

Height: approx. 0.6 - 1.4 mm*



Profile embossing

Height: approx. 1.0 - 1.5 mm*

* Dependent on the membrane material

Printing methods



Screen printing

Industrial screen printing is the most widely-used process for manufacturing all types of especially high-quality membrane keypads / HMI's. Digital printing can supplement or replace screen printing.



Digital printing

Previously unachieved flexibility in front membrane design.

- High-quality photos and graphics
- Various colour gradients and graphics possible
- Fast and flexible
- For short runs and individual printing
- Prototypes

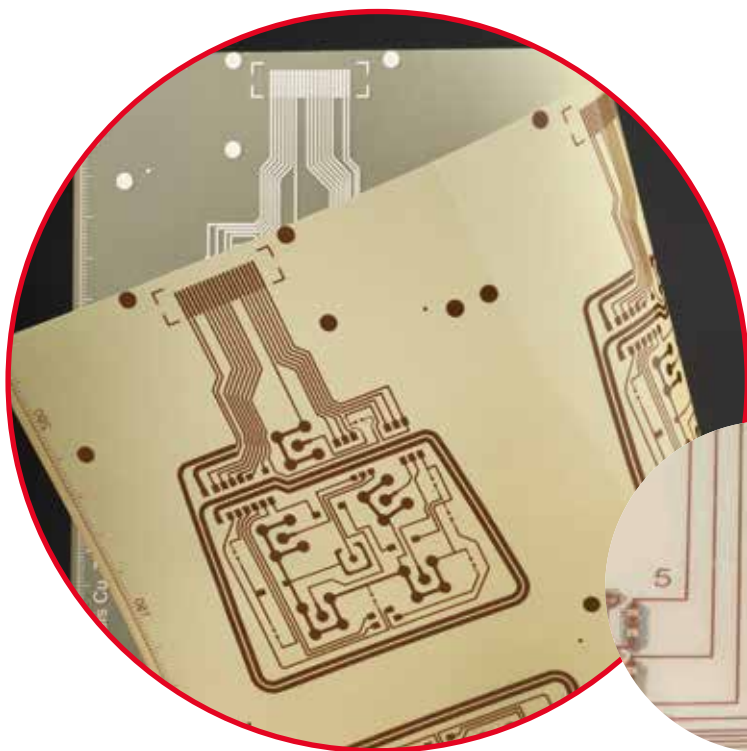


High-gloss technology

The design can be considerably upgraded by using a smooth membrane and a special textured lacquer in order to create glossy effects in the area of the keys.

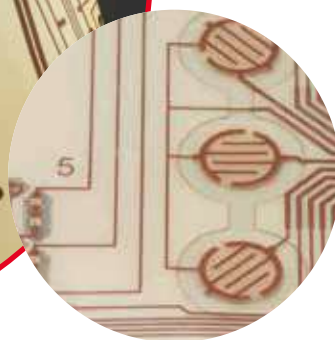
Membrane keypads

Membranes with copper conductors



For demanding applications, we also create exclusive high-quality membrane keypads that incorporate the outstanding properties of surface-treated copper conductors.

Instead of using adhesives, as with printed silver technology, we can securely and permanently solder LEDs, photo diodes or other components. These are advantages which in practice frequently give our customers the necessary security when using membrane keypads.



Profiline membrane keypads

This technology succeeds in providing outstanding data-entry operation for a large range of industrial requirements. Customised design for every keypad!

Profiline embossing

Profiline embossing combined with an inlay generates the so-called „short-stroke feeling“ to assure unequivocal tactile feedback. Can be executed in a range of different forms.

Improved user-friendliness thanks to:

- Unequivocal tactile feedback
- Exceptionally good key feel
- Freedom of design for key geometry
- Clearly designed key shaping, can also be implemented as a rocker switch and/or oversize key



Profiline membrane keypads
Height: approx. 1.0 - 1.5 mm*



* Dependent on the membrane material

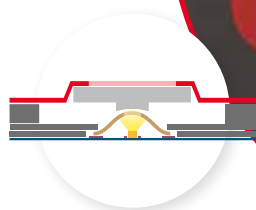
The technologies

Profiline illuminated

In poor light conditions, our illuminated membrane keypads simplify operations, and this ensures that operating errors are minimised.

Profiline illuminated

The use of special LEDs and special treatment of the inlay provides homogenous illumination, with long-lasting functionality assured. The light from the LED passes through the aperture in the snap dome and into the integrated acrylic inlay, where it is correspondingly scattered.



Profiline embossing illuminated

Height: approx. 1.0 - 1.5 mm*

* Dependent on the membrane material



USB keypads

Plug & Play – the membrane keypad for immediate operation using the USB port.

We use printed electronics to integrate configurable keypad controllers into the membrane keypad.

The ribbon cable can be connected directly to USB A sockets, so there is no need for additional hardware to operate traditional membrane keypads.

Advantages of a USB keypad:

- Cost, space and time-savings
- Optimum for connection to PC or embedded system
- 188 functions thanks to three control levels (FN keys)
- 19 macros, mouse function, multimedia keys
- Other bus interface possible



Touch / display integration

As a result of their widespread use in mobile telephones and tablets, many electronic devices are now also operated in industrial applications by means of a touch screen or a display. Convince yourself of the advantages of this versatile technology.

We support you in developing cost-effective, user-friendly devices with touch operation by integrating capacitive and resistive touch screens in standard and customers' own electronics enclosures.

The combination of a touch screen with a conventional membrane keypad is also possible. In addition, we offer solutions with a continuous front membrane (resistive touch screens) or a continuous cover glass (capacitive touch screens) for every application in which there must be no dirt-collecting edges – examples include the medical technology and foodstuffs sectors.

The technologies

Capacitive touch screen

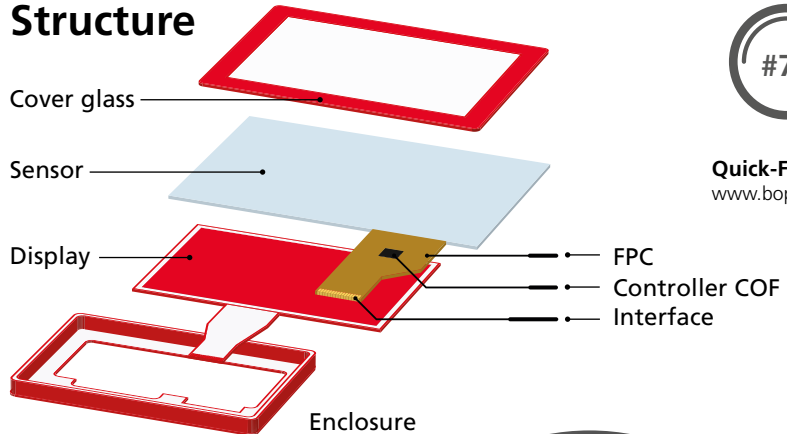
Until recently, membrane keypads and conventional resistive touch screen solutions have been used in the industrial environment, but capacitive touch screen technology is now increasingly taking over. Capacitive technology, definitively shaped by the consumer market, now meets the high demands made in all sectors of industry.

This technology is noted for its exceptionally high reliability, intuitive operation and unique functionality.

Additional advantages of a PCAP (projected capacitive) solution:

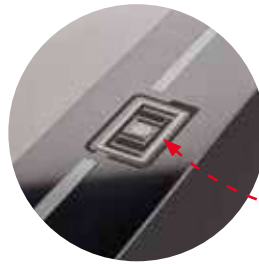
- Vandal-proof
- Easy cleaning
- Can be operated wearing gloves
- Temperature resistance
- UV resistance
- Operation in wet environments no problem
- Extremely high service-life

Structure



Quick-Finder:
www.bopla.de/77

Depending on the requirement, printed silver conductors can also be created, for example in the form of an additional key.



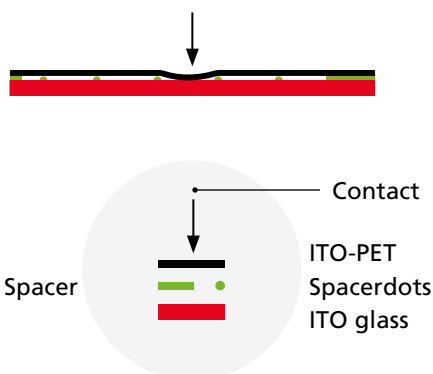
Resistive touch screen

Our flexible and rationally-priced touch screen solution for your product!

Selection of the optimum technology is of decisive importance, especially in the field of touch screen systems. We supply resistive and capacitive touch / display solutions, with their differing technical requirements, in numerous standard formats, or developed specifically to meet your individual needs.

This is why detailed analysis of the operating requirements, covering all mechanical components, is a vital necessity at the very start of device development. We are at the side of our customer's technical departments to provide support on all of these items.

Structure



Selection of our possible implementation routes:

- Full-surface lamination on a decorative foil
- Viewing windows cut out in the decorative foil
- Partial lamination on the decorative foil
- Rear installation in the enclosure
- Combination of touch screen with membrane keypad

Touch / display integration

Our solutions for all enclosures



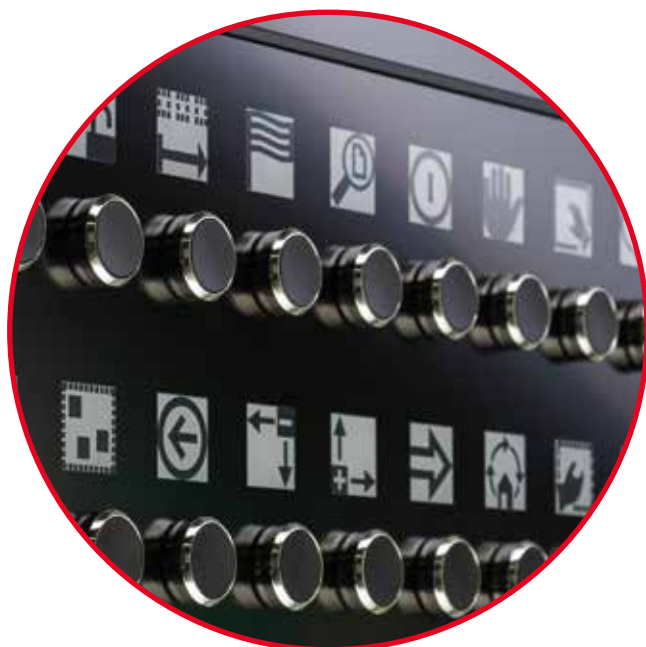
Individual enclosures, optimised for the installation of capacitive and resistive touch screens.

In addition to the integration of standard displays, our enclosures also make possible the installation of resistive and capacitive touch screens.

In both cases, the integration of the touch screen can be achieved in many ways. For applications in which dirt-collecting edges are not allowed to remain, we provide solutions behind glass or with a continuous front membrane – full-surface laminated or with rear spacer dots.

- Individual solutions for all types of enclosures
- Enclosure, front membrane or glass backprinted or printed for specific projects
- Special grouting compound technologies for optimal protection against harsh environment, shock and vibration

Digital Label System – DLS



DLS offers individual, exchangeable new marking of keys during ongoing operation.

By using DLS, keys can constantly be digitally re-marked. DLS can carry out multiple occupancies of keys, in addition to customised symbols or languages. The markings are also visible when the keys are voltage-free. By using e-paper displays, DLS operates energy-efficiently because energy is only needed when the markings are changed. Various interfaces allow new marking with the symbols available in the memory.

- Fewer keys
- Re-marking of keys
- Customised personalised marking
- Voltage-free display operation
- User-friendly configuration software

Printed electronics

Capacitive keypads

Touch sensor membranes convert nonconductive surfaces such as membranes, glass panels or, e.g., enclosures into a capacitive keypad.

Touch-sensor membranes

A touch-sensor membrane can, for instance, be bonded behind non-conductive surfaces in order to convert these surfaces into a membrane keypad. Direct printing of enclosure parts with touch-sensor systems makes it possible to efficiently combine production operations, save resources and reduce consumption of materials.

- Cost-savings
- Plug & Play sensor-surface and controller solution
- Reduced risk of failure
- Direct printing of alternative surfaces
- Good optical transparency
- No mechanical wear
- Easy cleaning thanks to sealed surfaces



Printed antennas

Antennas of various geometries are needed for RFID products, depending on the particular application – we design the antenna geometry needed for your application.

Ready to receive

We design the antenna geometry needed for your application and can print it using our tried-and-proven copper technology. Copper technology provides greater range, faster read potentials and higher data-transmission rates compared to conductive silver. In addition, we use NFC and RFID chips to integrate a passive digital identification feature into the membrane for you.

- Range up to 7 cm thanks to copper technology
- Direct integration into front membranes and membrane keypads
- Password-protected memory contents
- Easy and cost-efficient integration into existing systems, even in small production runs



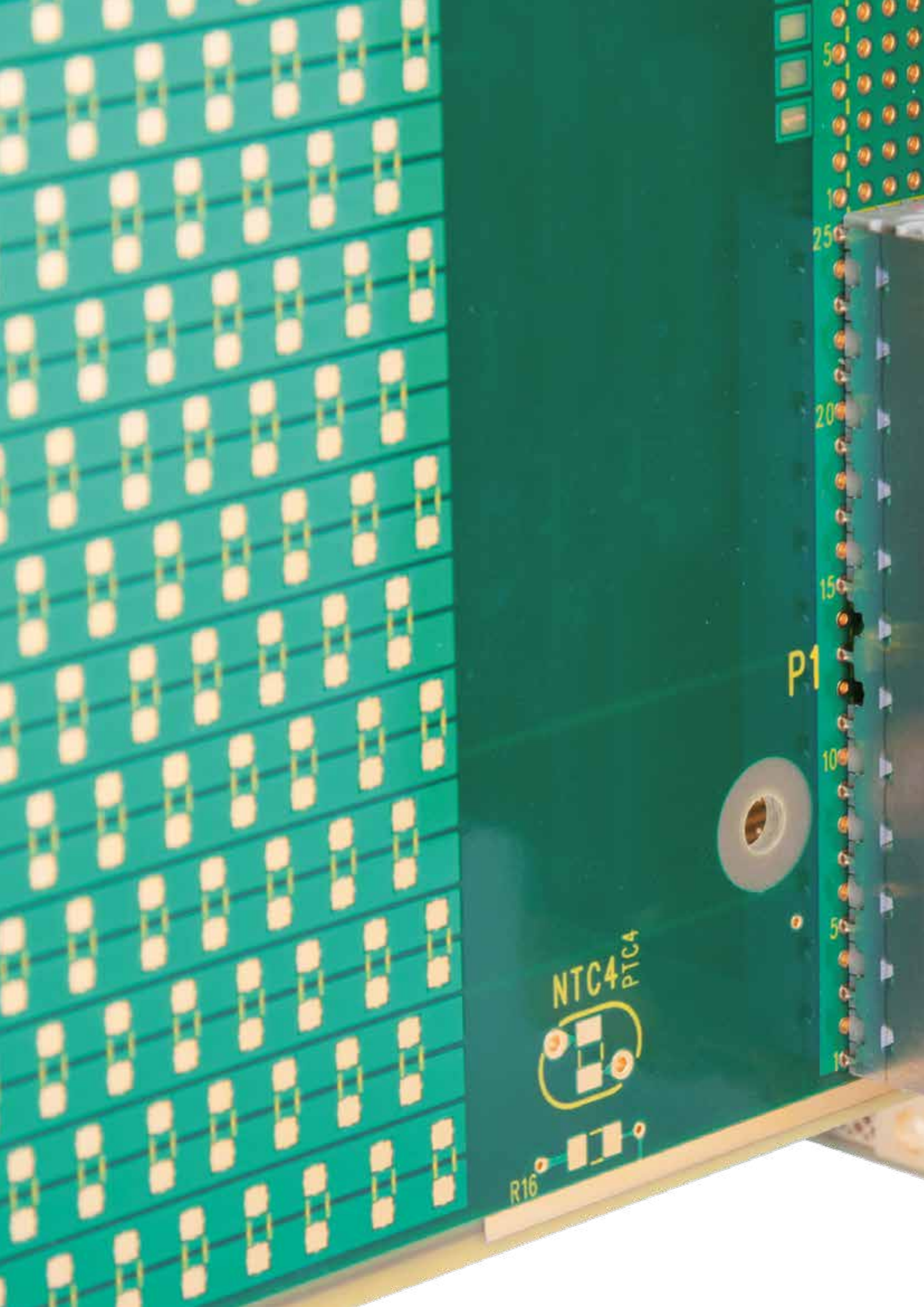
On request

Pressure sensor systems

- Low-profile and lightweight
- Combinations with other sensors possible
- Sensor electronics can be integrated for better scalability
- Integration of customer designs

Printed heaters

- Low-profile, lightweight and flexible
- Can be integrated into membrane keypads, glass and touch systems
- Self-regulating or with integrated measuring electronics
- Up to 200 °C in continuous operation (depending on overall system)



NTC4_{PTC4}



R16

P1

25

20

15

10

5

1

5

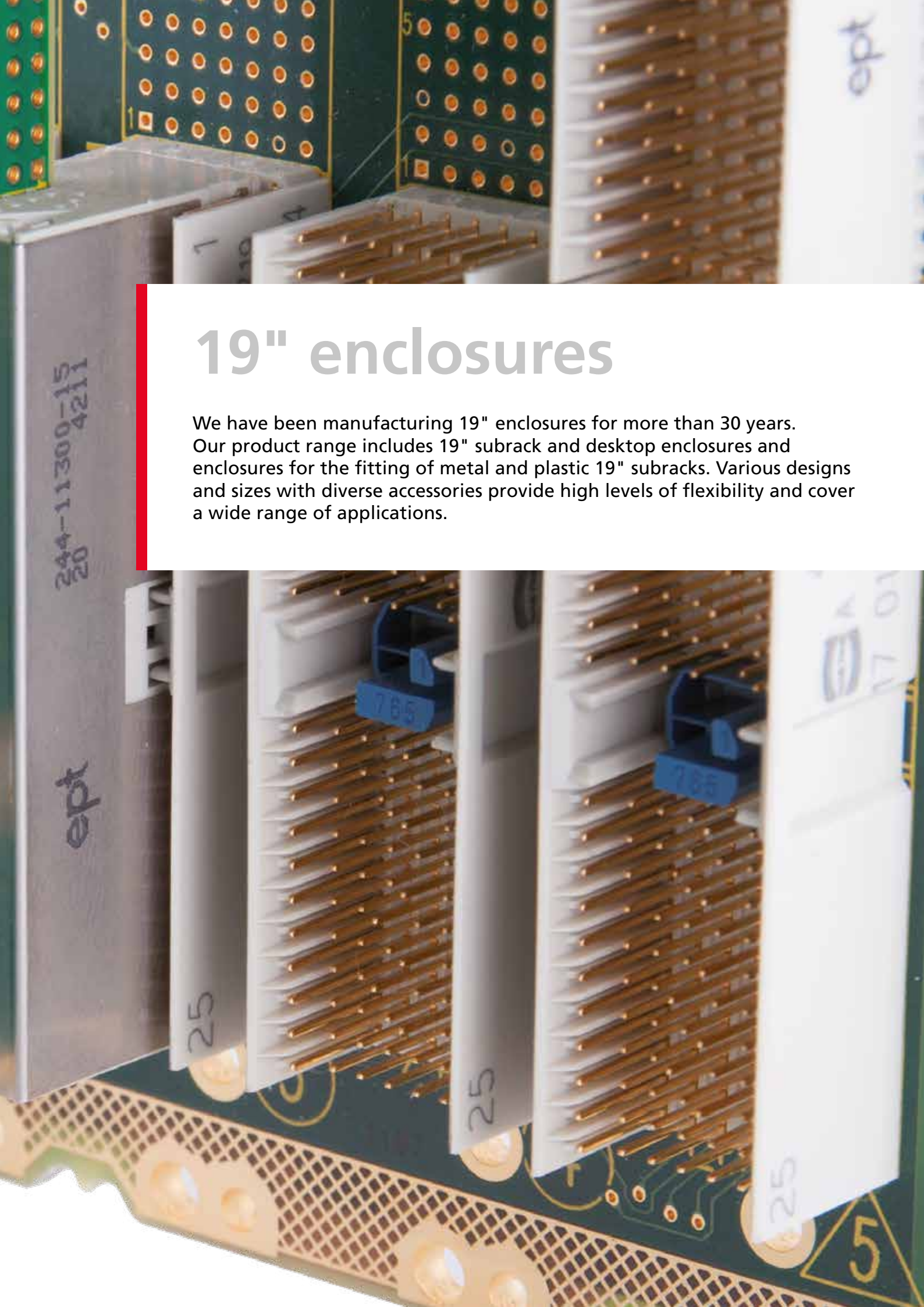
1

5

1

5

1



19" enclosures

We have been manufacturing 19" enclosures for more than 30 years. Our product range includes 19" subrack and desktop enclosures and enclosures for the fitting of metal and plastic 19" subracks. Various designs and sizes with diverse accessories provide high levels of flexibility and cover a wide range of applications.

The product advantages



Interzoll Case is a series of tailor-made enclosures manufactured for specific projects and in sheet aluminium or steel using stamping and bending technology. Standard designs exist for manufacturing numerous enclosure types from 19" switch cabinet enclosures to elegant display enclosures.



Enclosure break-throughs and holders for PCBs are integrated in the enclosure directly during the production process. Later reworking is no longer necessary.



The standard designs are available for downloading as 3D-CAD files on www.bopla.de and could be manufactured directly as a "standard product". However, they can also be used as a basis for completely individual designs.



Many surface coatings and colours are available for the external design. Interzoll Case can be given an even more individual design by using printing (even under anodised surfaces).



Optional contact areas between the enclosure components ensure optimal EMC screening.



Quick-Finder:
www.bopla.de/28

Examples of use



Interzoll Case



Colour:

 Individually according to your specifications

Protection class:

Depending on the enclosure construction up to IP40 / DIN EN 60529;
higher degrees of protection project-specific on request

Material:

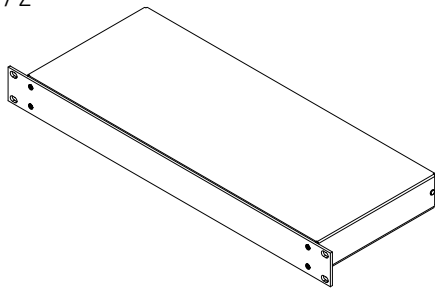
Individually manufactured; for example made of aluminum, steel or stainless steel. Other materials and surface coatings are always possible on request.

For details see technical information.

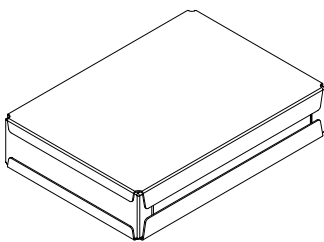


Housing shapes

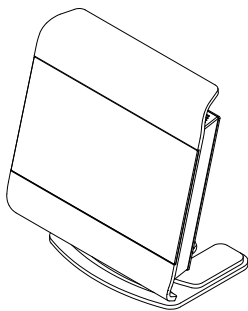
IC / Z



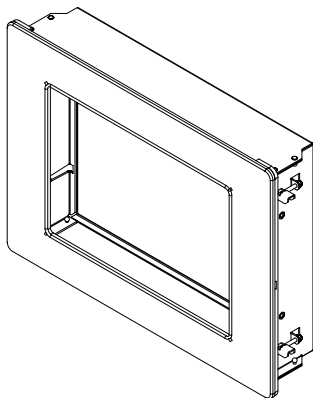
IC / P / T / H



IC / M

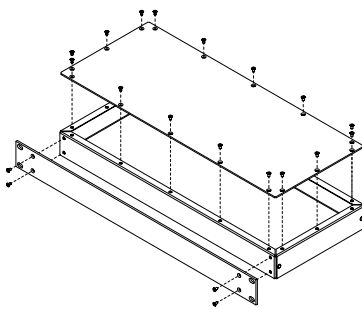


IC / E

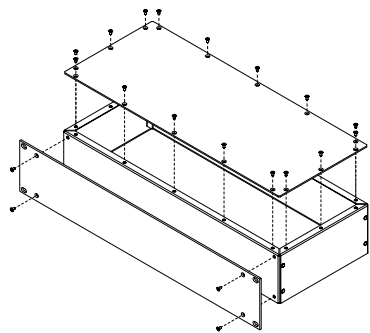


Design types

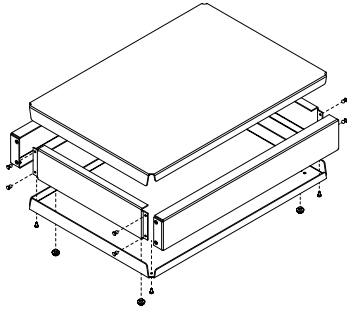
19" enclosures 1 U



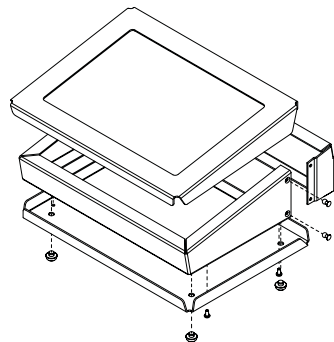
19" enclosures 2 U



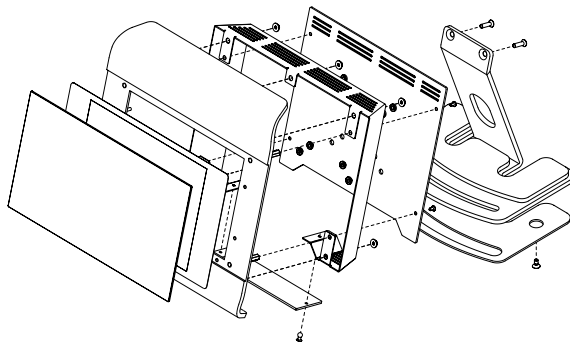
Desktop enclosures



Console enclosures

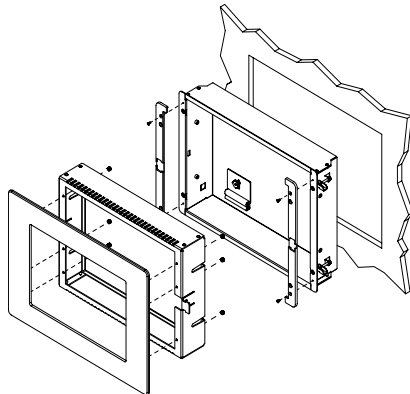


Monitor enclosures



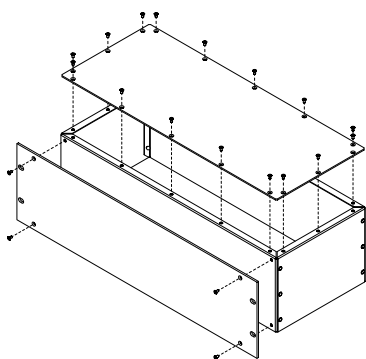
Cavity wall installation enclosures

IC / E 10.1 panel

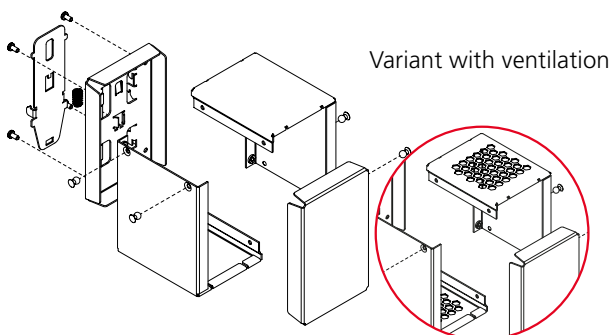


Interzoll Case

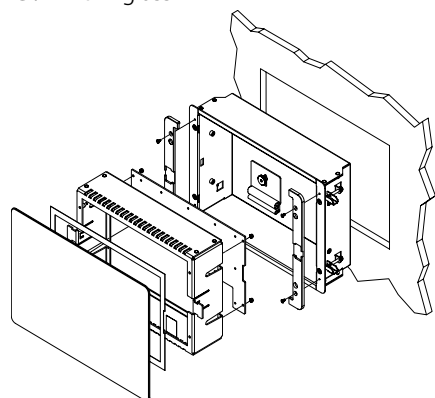
19" enclosures 3 U



DIN rail enclosures



IC / E 10.1 glass



Dimensions

Model	A	B	C
19" enclosures			
IC/Z 18180 (-EMC)	43.6	482.6	482.6
IC/Z 24180 (-EMC)	43.6	482.6	482.6
IC/Z 30180 (-EMC)	43.6	482.6	482.6
IC/Z 18280 (-EMC)	88.1	482.6	482.6
IC/Z 24280 (-EMC)	88.1	482.6	482.6
IC/Z 30280 (-EMC)	88.1	482.6	482.6
IC/Z 18380 (-EMC)	132.5	482.6	482.6
IC/Z 24380 (-EMC)	132.5	482.6	482.6
IC/Z 30380 (-EMC)	132.5	482.6	482.6
Console enclosures			
IC/P 180312	180	32	121.5
IC/P 180324	180	32	243
IC/P 180336	180	32	364.5
IC/P 220315	228	32	155
IC/P 220331	228	32	310
IC/P 220346	228	32	465
IC/P 260318	260	32	180
IC/P 260336	260	32	360
IC/P 260354	260	32	540
Desktop enclosures			
IC/T 280620	280	60	200
IC/T 280640	280	60	400
IC/T 281220	280	120	200
IC/T 281240	280	120	400
IC/T 281825	280	180	250
IC/T 281850	280	180	500
DIN rail enclosures			
IC/H 041118 (-L)	40	110	182.5
IC/H 081006 (-L)	80.5	102.5	63.5
IC/H 081013 (-L)	80.5	102.5	130
IC/H 101005 (-L)	100.5	102.5	51.5
IC/H 101605 (-L)	100.5	162.5	51.5
IC/H 161005 (-L)	160.5	102.5	51.5
Monitor enclosures			
IC/M 7"	266.4	245	164.6
IC/M 10.1"	309.8	305	209.6
Cavity wall installation enclosures			
IC/E 10,1" panel	398	297	75.5
IC/E 12,1" panel	428	335	75.5
IC/E 15,6" panel	536	366	85.5
IC/E 7,0" glass	248	173	75.5
IC/E 10,1" glass	308	215	75.5

Interzoll Case

19" enclosures



19" enclosures, 1 U

Model	Order no.	A	B	C	U	HP	IP	Note
IC/Z 18180	28618180*	43.6	482.6	180	1	84	40	
IC/Z 18180-EMV	28618181*	43.6	482.6	180	1	84	40	EMC version
IC/Z 24180	28624180*	43.6	482.6	240	1	84	40	
IC/Z 24180-EMV	28624181*	43.6	482.6	240	1	84	40	EMC version
IC/Z 30180	28630180*	43.6	482.6	300	1	84	40	
IC/Z 30180-EMV	28630181*	43.6	482.6	300	1	84	40	EMC version

Scope Of Delivery: Enclosure body, lid, front panel and fixing material

Enclosure material for construction proposal:

- Enclosure body and lid: untreated aluminium
- Front panel: anodised aluminium front side and rear side
- EMC front panel: aluminium, anodised front, passivated rear side

Notes: Not a stock article - enclosures are made to customers' specifications. The enclosure is designed for PCB mounting by means of self-clinch fasteners on the baseplate. The PCB mounting can be designed individually.



19" enclosures, 2 U

Model	Order no.	A	B	C	U	HP	IP	Note
IC/Z 18280	28618280*	88.1	482.6	180	2	84	40	
IC/Z 18280-EMV	28618281*	88.1	482.6	180	2	84	40	EMC version
IC/Z 24280	28624280*	88.1	482.6	240	2	84	40	
IC/Z 24280-EMV	28624281*	88.1	482.6	240	2	84	40	EMC version
IC/Z 30280	28630280*	88.1	482.6	300	2	84	40	
IC/Z 30280-EMV	28630281*	88.1	482.6	300	2	84	40	EMC version

Scope Of Delivery: Enclosure body, lid, front panel and fixing material

Enclosure material for construction proposal:

- Enclosure body and lid: untreated aluminium
- Front panel: anodised aluminium front side and rear side
- EMC front panel: aluminium, anodised front, passivated rear side

Notes: Not a stock article - enclosures are made to customers' specifications. The enclosure is designed for PCB mounting by means of self-clinch fasteners on the baseplate. The PCB mounting can be designed individually.

Interzoll Case

19" enclosures

19" enclosures, 3 U



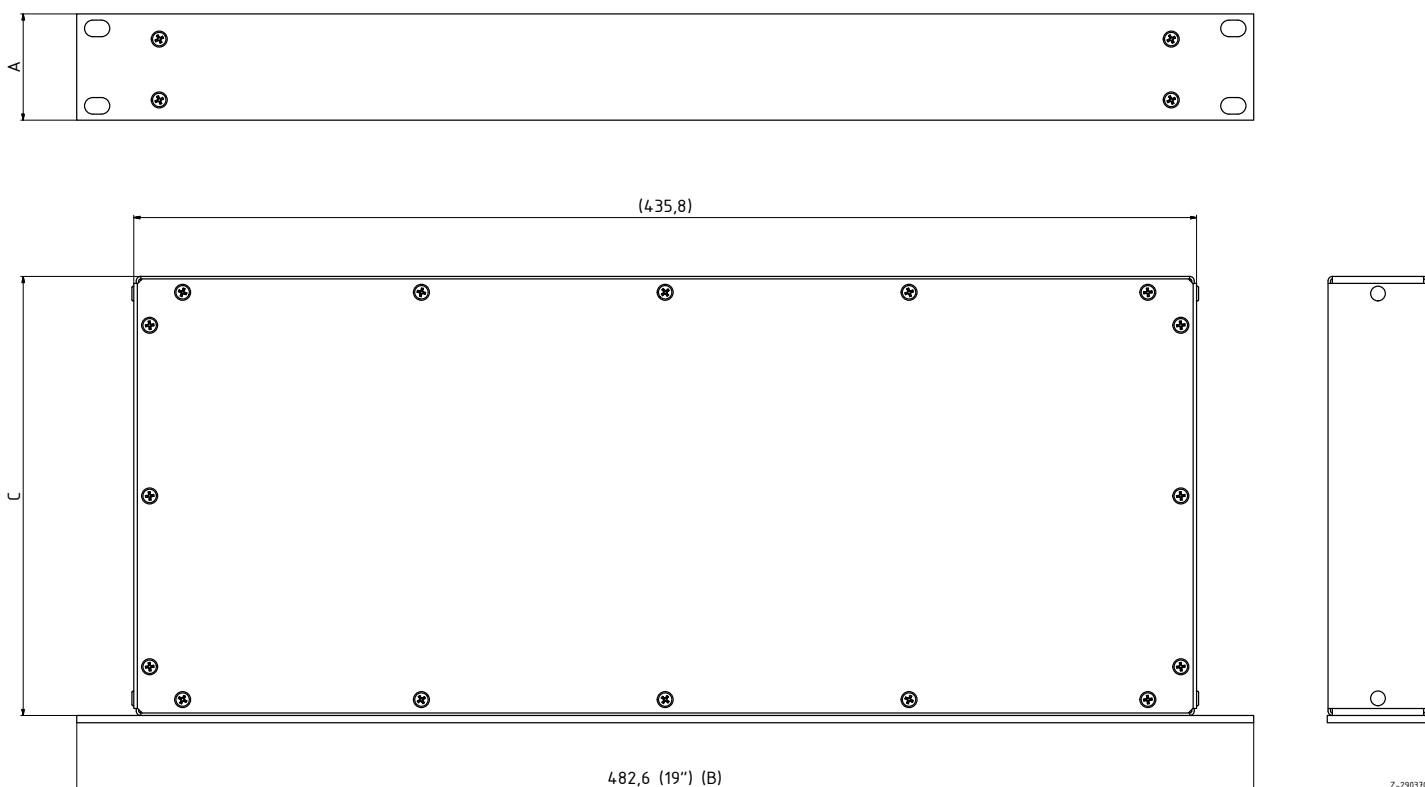
Model	Order no.	A	B	C	U	HP	IP	Note
IC/Z 18380	28618380*	132.5	482.6	180	3	84	40	
IC/Z 18380-EMV	28618381*	132.5	482.6	180	3	84	40	EMC version
IC/Z 24380	28624380*	132.5	482.6	240	3	84	40	
IC/Z 24380-EMV	28624381*	132.5	482.6	240	3	84	40	EMC version
IC/Z 30380	28630380*	132.5	482.6	300	3	84	40	
IC/Z 30380-EMV	28630381*	132.5	482.6	300	3	84	40	EMC version

Scope Of Delivery: Enclosure body, lid, front panel and fixing material

Enclosure material for construction proposal:

- Enclosure body and lid: untreated aluminium
- Front panel: anodised aluminium front side and rear side
- EMC front panel: aluminium, anodised front, passivated rear side

Notes: Not a stock article - enclosures are made to customers' specifications. The enclosure is designed for PCB mounting by means of self-clinch fasteners on the baseplate. The PCB mounting can be designed individually.



Interzoll Case

Console enclosures



Console enclosures

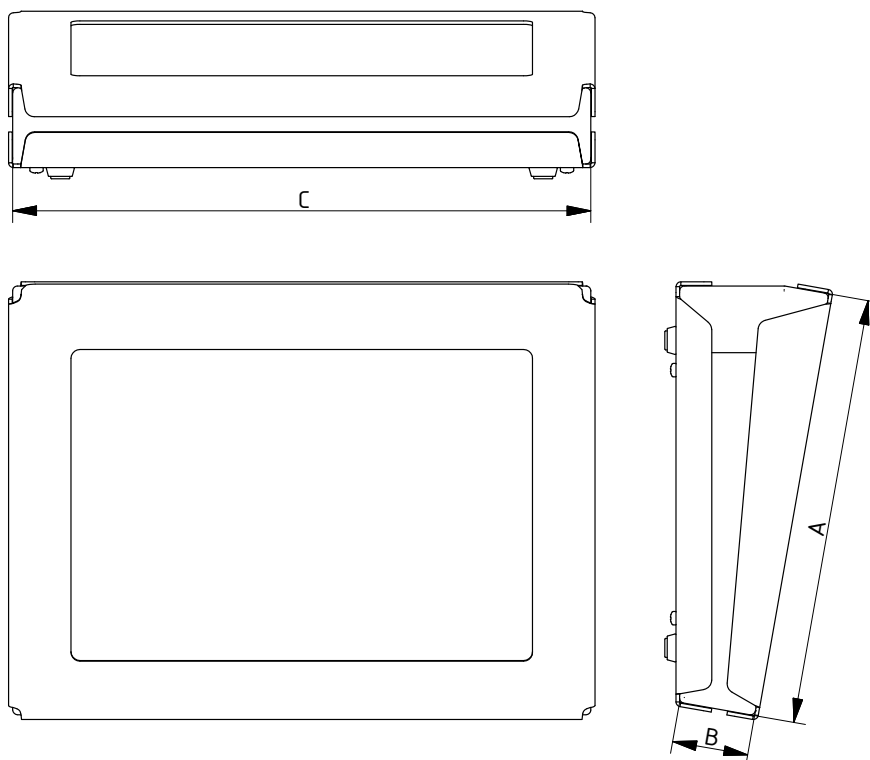
Model	Order no.	A	B	C	Display max.	IP
IC/P 180312	28010001*	180	32	121.5	-	40
IC/P 180324	28010002*	180	32	243	7"	40
IC/P 180336	28010003*	180	32	364.5	-	40
IC/P 220315	28010004*	228	32	155	-	40
IC/P 220331	28010005*	228	32	310	10.1"	40
IC/P 220346	28010006*	228	32	465	-	40
IC/P 260318	28010007*	260	32	180	-	40
IC/P 260336	28010008*	260	32	360	12.1"	40
IC/P 260354	28010009*	260	32	540	-	40

Scope Of Delivery: cover plate top and bottom / front, rear and side part, unit foot and fixing material

Enclosure material for construction proposal

- Cover plate top and bottom / front, rear and side part: aluminium, powder-coated in RAL colour
- Unit foot: PA6 black, ø12x4

Notes: Cover plate above (e.g. with membrane keypad surface) also suitable as an adhesive surface for touch/display integration. Not a stock article – enclosures are manufactured for individual customers.



Z-2904044

Interzoll Case

Desktop enclosures

Desktop enclosures

Model	Order no.	A	B	C	IP	Note
IC/T 280620	28020004*	280	60	200	40	
IC/T 280640	28020001*	280	60	400	40	
IC/T 281220	28020005*	280	120	200	40	
IC/T 281240	28020002*	280	120	400	40	
IC/T 281825	28020006*	280	180	250	40	
IC/T 281850	28020003*	280	180	500	40	
AF1/INS	86050000	-	-	-	-	Tip-up feet



Interzoll Case

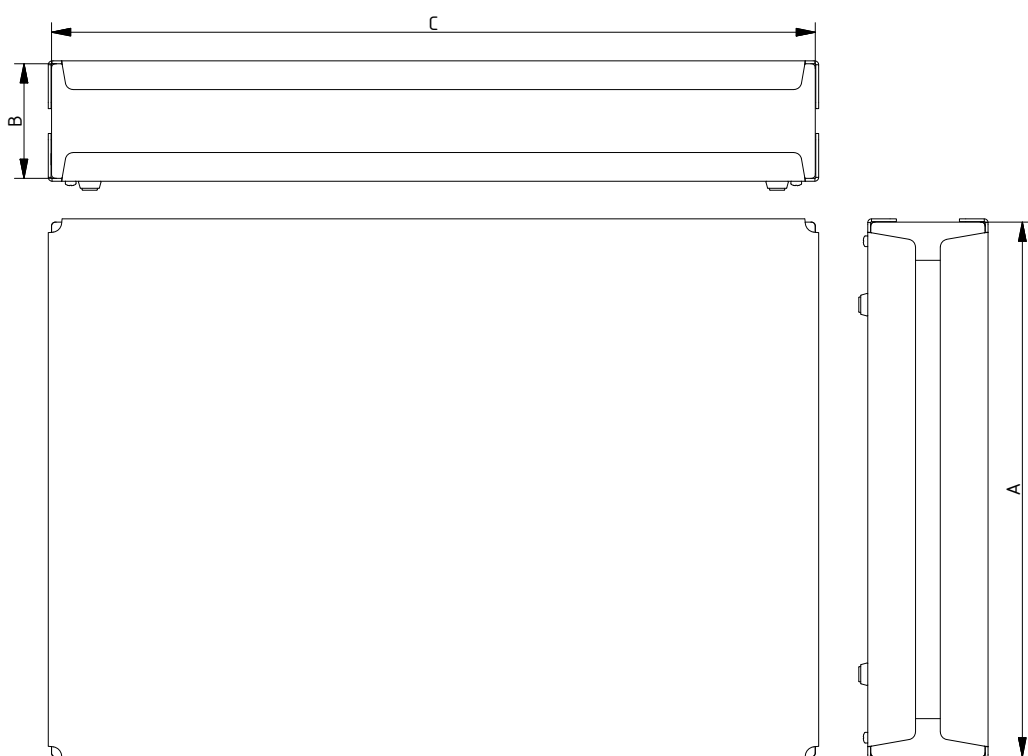
Scope Of Delivery: cover plate top and bottom / front, rear and side part, unit foot and fixing material

Enclosure material for construction proposal

- Cover plate top and bottom / front, rear and side part: aluminium, powder-coated in RAL colour

- Unit foot: PA6 black, ø12x4

Notes: The lower cover plate is screwed to the enclosure by means of cylinder head screws and can be used as a mounting panel. Not a stock article – enclosures are manufactured for individual customers.



Z-280404.3

Interzoll Case

DIN rail enclosures



DIN rail enclosures

Model	Order no.	A	B	C	IP
IC/H 041118	28030005*	40	110	182.5	40
IC/H 081006	28030001*	80.5	102.5	63.5	40
IC/H 081013	28030006*	80.5	102.5	130	40
IC/H 101005	28030002*	100.5	102.5	51.5	40
IC/H 101605	28030003*	100.5	162.5	51.5	40
IC/H 161005	28030004*	160.5	102.5	51.5	40

Scope Of Delivery: cover plate top and bottom, front part and rear part and unit foot

Enclosure material for construction proposal

- Cover plate top and bottom / Front and rear part: aluminium, powder-coated in RAL colour

Notes: The front lid could also be screwed with cylinder head screws or further processed. Not a stock article – enclosures are manufactured for individual customers.



DIN rail enclosures with ventilation

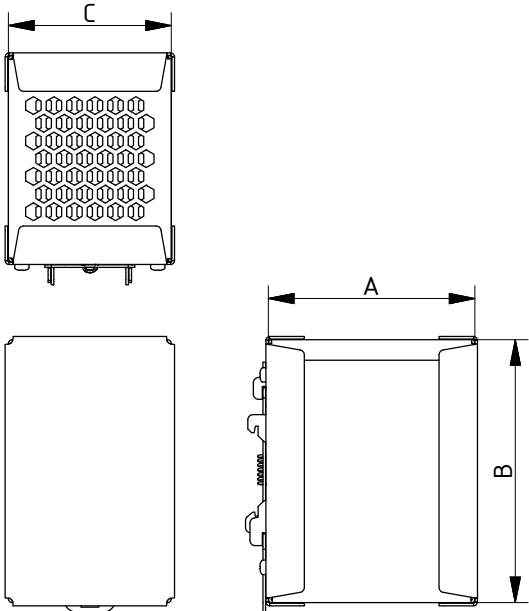
Model	Order no.	A	B	C	IP	Note
IC/H 041118-L	28031005*	40	110	182.5	20	With ventilation
IC/H 081006-L	28031001*	80.5	102.5	63.5	20	With ventilation
IC/H 081013-L	28031006*	110	80.5	130	20	With ventilation
IC/H 101005-L	28031002*	100.5	102.5	51.5	20	With ventilation
IC/H 101605-L	28031003*	100.5	162.5	51.5	20	With ventilation
IC/H 161005-L	28031004*	160.5	102.5	51.5	20	With ventilation

Scope Of Delivery: cover plate top and bottom, front part and rear part and unit foot

Enclosure material for construction proposal

- Cover plate top and bottom / Front and rear part: aluminium, powder-coated in RAL colour

Notes: The front lid could also be screwed with cylinder head screws or further processed. Not a stock article – enclosures are manufactured for individual customers.



Z-2904045

Interzoll Case

Monitor enclosures

Monitor enclosures

Model	Order no.	A	B	C	b1	Display max.	IP
IC/M 10.1"	28040002*	309.8	305	209.6	256.54	10.1"	40
IC/M 7"	28040001*	266.4	245	164.6	177.8	7"	40
Scharnier/Hinge	28040003*	-	-	-	-	-	-

Scope Of Delivery: Front panel incl. glass, frame, rear lid, foot and fixing material

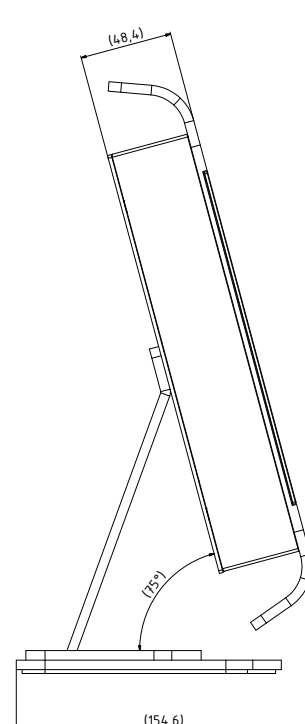
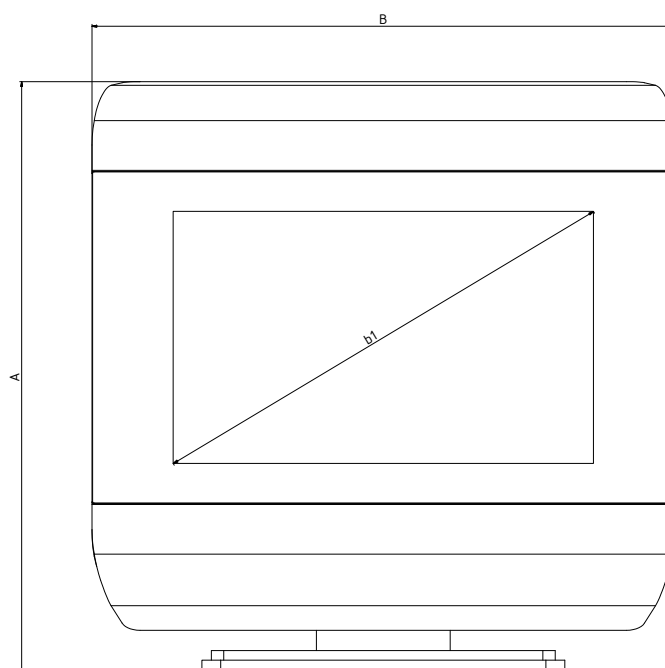
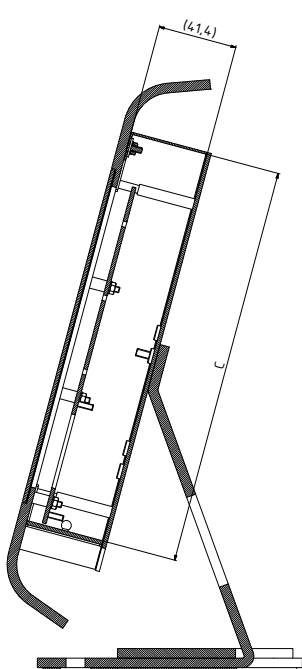
Enclosure material design suggestion

- Front panel: Aluminium, powder-coated in RAL colour incl. 2mm thick glass
- Frame: Aluminium, powder-coated in RAL colour
- Rear lid: Aluminium, powder-coated in RAL colour
- Foot: Electrolytically-galvanised sheet steel, powder-coated in RAL colour incl. EPDM sponge rubber

Notes: In place of the enclosure foot, the enclosure can also be mounted on the wall by means of a VESA fixing. The flush glued glass pane can be used for integrating touch displays by means of optical bonding. Not a stock article – enclosures are manufactured for individual customers.



Interzoll Case



Interzoll Case

Cavity wall installation enclosures



Cavity wall installation enclosures for panel PC

Model	Order no.	A	B	C	c1	IP
IC/E 10,1" Panel	28050003*	398	297	75.5	10	40
IC/E 12,1" Panel	28050005*	428	335	75.5	10	40
IC/E 15,6" Panel	28050004*	536	366	85.5	10	40

Scope Of Delivery: front panel, side trims, display frame and cavity wall mounting frame

Enclosure material for construction proposal

- Front panel and side trims: anodised aluminium
- Display frame: untreated aluminium
- Cavity wall installation frame: sheet steel, sendzimir-galvanised

Notes: Not a stock article - enclosures are made to customers' specifications.



Cavity wall installation enclosures with glass front

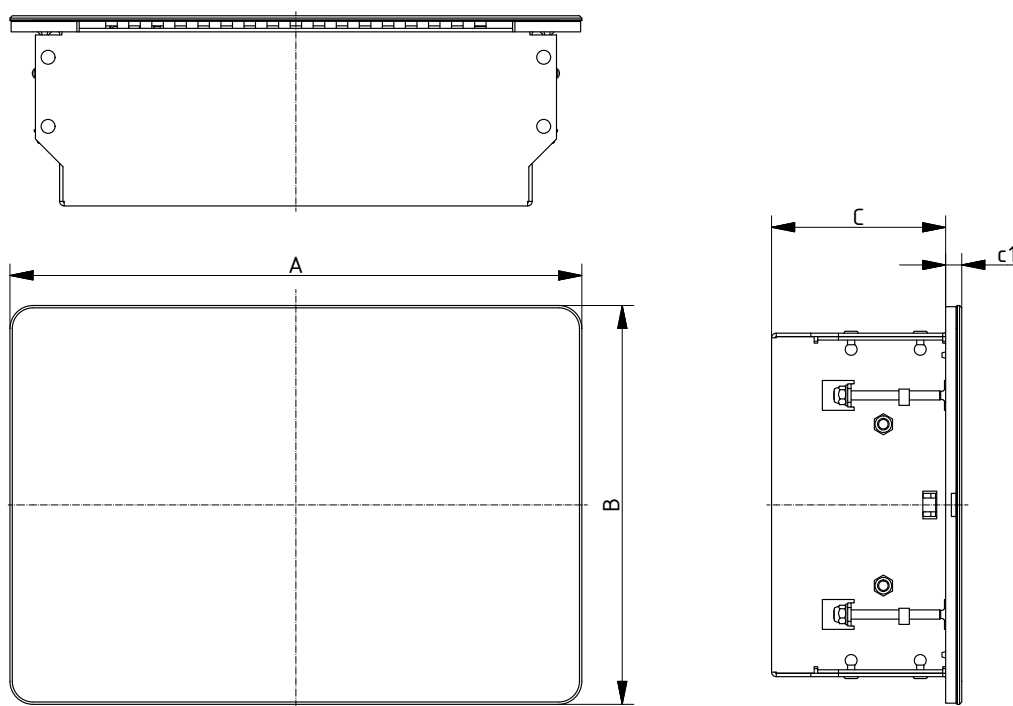
Model	Order no.	A	B	C	c1	Display max.	IP
IC/E 10,1" Glas	28050002*	308	215	75.5	7	10.1"	40
IC/E 7,0" Glas	28050001*	248	173	75.5	7	7"	40

Scope Of Delivery: front panel, side trims, display frame, cavity wall mounting frame, retaining plate and glass

Enclosure material for construction proposal

- Side trims: anodised aluminium
- Display frame: untreated aluminium
- Cavity wall installation frame: sheet steel, sendzimir-galvanised
- Retaining plate: untreated aluminium
- Glass: non-reflecting float glass, chemically-treated on one side

Notes: Enclosure suitable for integration of a touch screen / displays. Not a stock article – enclosures are manufactured for individual customers.



Z-2804071



BOPLA

A Phoenix Mecano Company

The product advantages



The subracks in the Interzoll ranges are especially suitable for basic applications in which no measures are required for EMC screening. For EMC requirements we recommend the Interzoll Modul range.



Selected variants are equipped with aluminium profile single-piece side panels fitted with an integrated mounting flange. This guarantees a high level of mechanical stability coupled with excellent cost effectiveness.



Additional mounting option above the profiles using a threaded strip (GS-II).



Subracks and accessories with BN designations are certified for use in buses and rail vehicles.



Locking of the card guides is by means of snap bolts which can easily be released by finger activation. Easy operation even when slot positions are close together.



Quick-Finder:
www.bopla.de/53

Examples of use





Colour:

Profiles aluminium, anodized in natural color

Protection class:

Up to IP40 / DIN EN 60529 to the built-in front

Material:

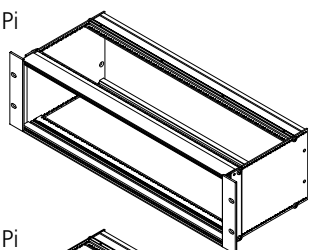
Profiles: Al Mg Si 0,5

For details see technical information.

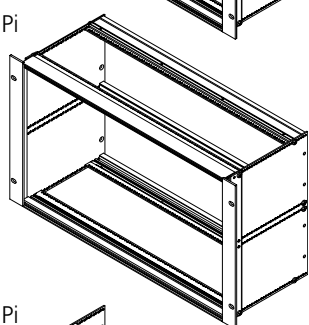


Enclosure sizes

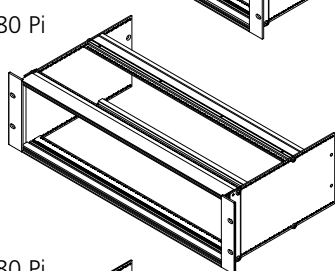
BGT M 18380 Pi



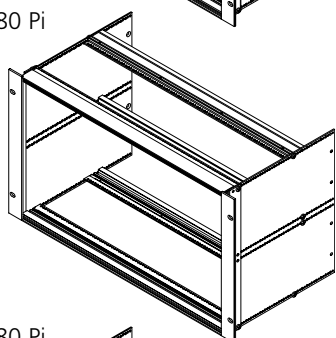
BGT M 18680 Pi



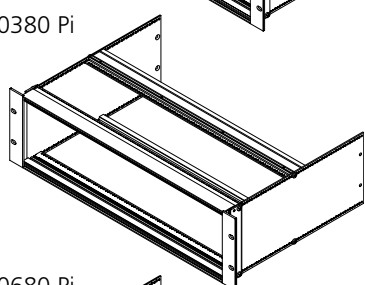
BGT M 24380 Pi



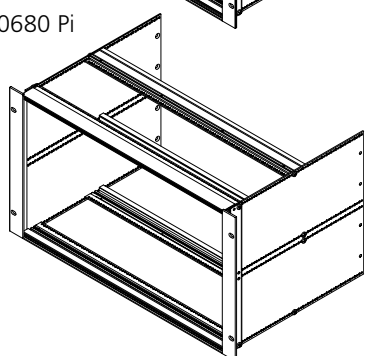
BGT M 24680 Pi



BGT M 30380 Pi

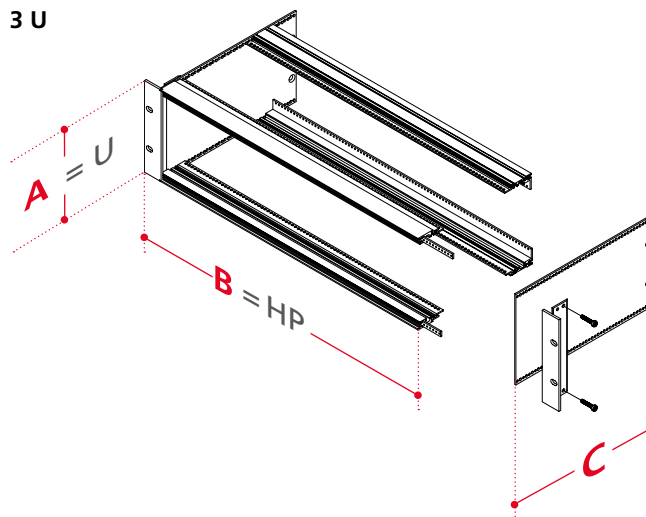


BGT M 30680 Pi



Design types

3 U

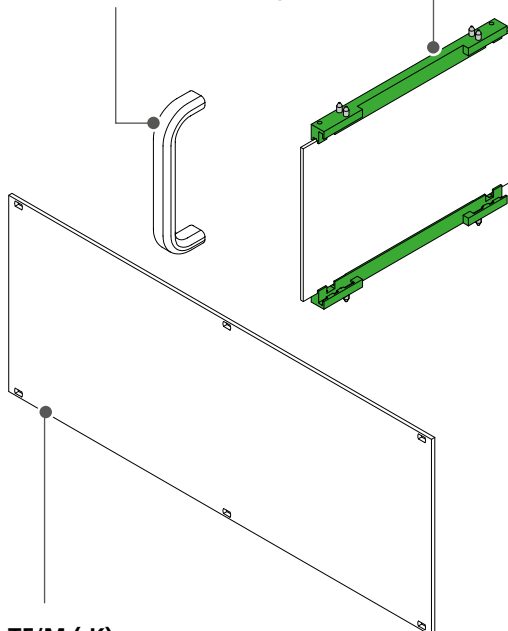


KF

Snap-in card guide
(screwable option)

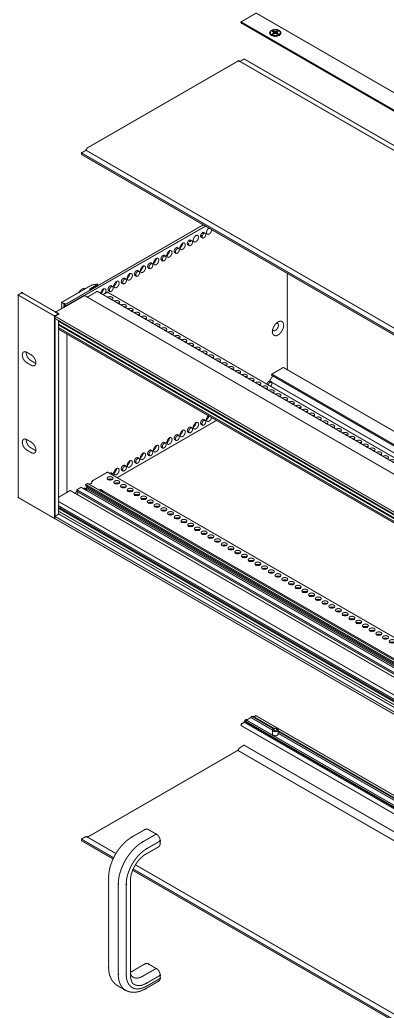
GR

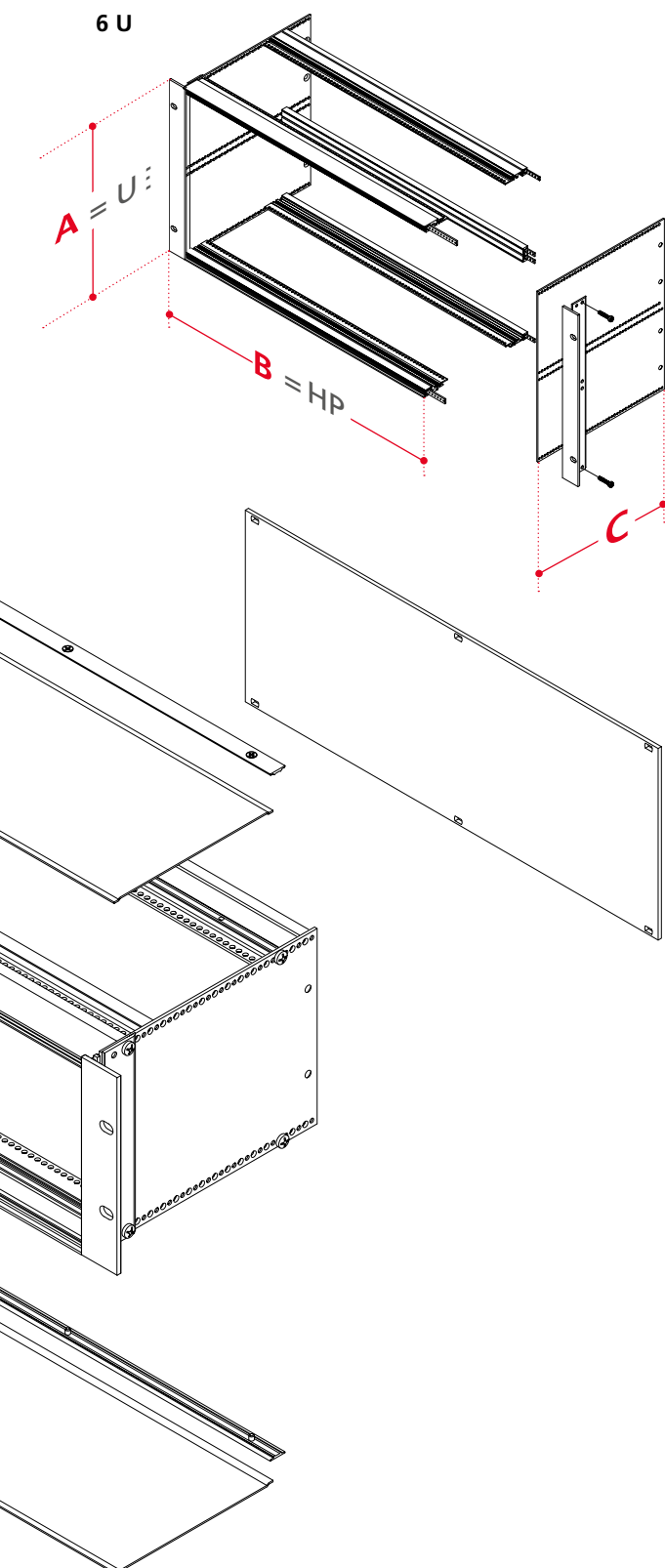
Handles for flanges



TF/M (-K)

Part front panels
(collapsible option)





Dimensions

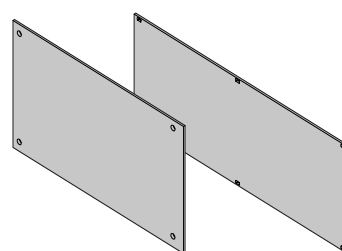
Model	A	B	C	HP
3 U For backplanes (.Pi) or connectors (.12)				
BGT 18340	132.5	269.24	178.24	42
BGT 24340	132.5	269.24	238.24	42
BGT 30340	132.5	269.24	298.24	42
BGT 18360	132.5	375.92	178.24	63
BGT 24360	132.5	375.92	238.24	63
BGT 30360	132.5	375.92	298.24	63
BGT 18380	132.5	482.6	178.24	84
BGT 24380	132.5	482.6	238.24	84
BGT 30380	132.5	482.6	298.24	84
3 U With profile side panel for backplanes or connectors (BN 411 002)				
BGT 22340(-BN)	132.5	269.24	218.24	42
BGT 22360(-BN)	132.5	375.92	218.24	63
BGT 22380(-BN)	132.5	482.6	218.24	84
6 U For backplanes (.Pi) or connectors (.12)				
BGT 18640	265.85	269.24	178.24	42
BGT 24640	265.85	269.24	238.24	42
BGT 30640	265.85	269.24	298.24	42
BGT 18660	265.85	375.92	178.24	63
BGT 24660	265.85	375.92	238.24	63
BGT 30660	265.85	375.92	298.24	63
BGT 18680	265.85	482.6	178.24	84
BGT 24680	265.85	482.6	238.24	84
BGT 30680	265.85	482.6	298.24	84
6 U With profile side panel for backplanes or connectors				
BGT 22640	265.85	269.24	218.24	42
BGT 22660	265.85	375.92	218.24	63
BGT 22680	265.85	482.6	218.24	84

Accessories



Handles / Flanges

Various profiles e.g. front profiles, bus profiles, rear profiles, double connector profiles, snap profiles, end profiles



Front and part front panels in different versions



Card guide, one and three parts

Interzoll

Subrack for backplanes (.Pi)

Subrack, 3 U, for backplanes (.Pi)

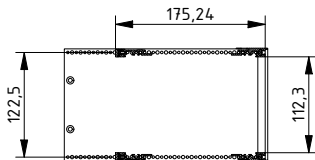
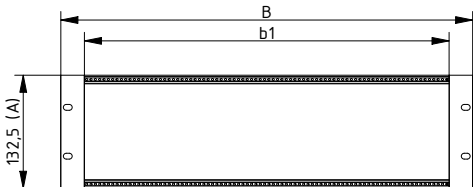


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 18340.Pi	53183425	132.5	269.24	178.24	213.36	3	42	160	20
BGT 18360.Pi	53183625	132.5	375.92	178.24	320.04	3	63	160	20
BGT 18380.Pi	53183825	132.5	482.6	178.24	426.72	3	84	160	20
BGT 24340.Pi	53243425	132.5	269.24	238.24	213.36	3	42	160, 220	20
BGT 24360.Pi	53243625	132.5	375.92	238.24	320.04	3	63	160, 220	20
BGT 24380.Pi	53243825	132.5	482.6	238.24	426.72	3	84	160, 220	20
BGT 30340.Pi	53303425	132.5	269.24	298.24	213.36	3	42	160, 220, 280	20
BGT 30360.Pi	53303625	132.5	375.92	298.24	320.04	3	63	160, 220, 280	20
BGT 30380.Pi	53303825	132.5	482.6	298.24	426.72	3	84	160, 220, 280	20

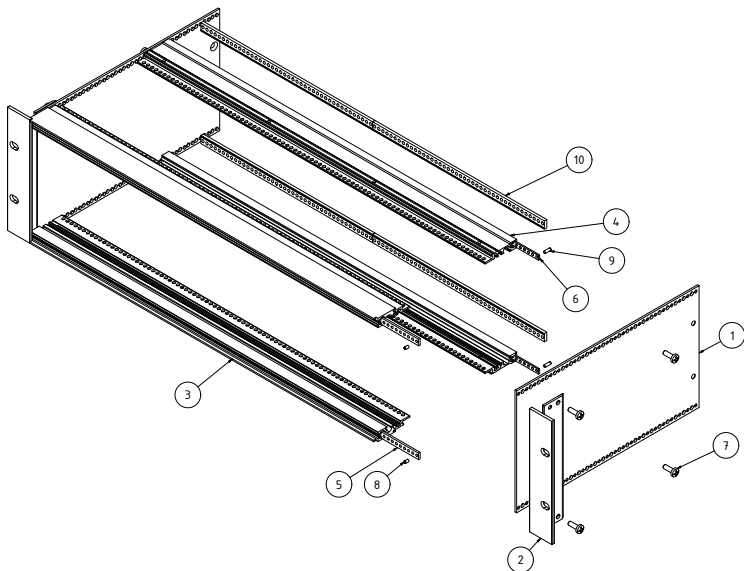
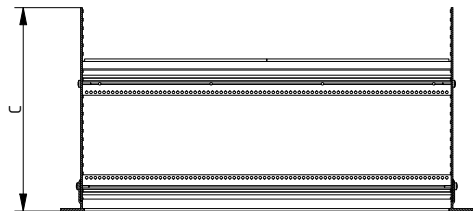
Scope Of Delivery:

- 1) 2 side panels (BSW ...300)
- 2) 2 flanges (FL 00300)
- 3) 2 front profiles (PF 000..)
- 4) 2 bus profiles (PB 000..)
- 5) 2 tapped strips for front panel fixing (GS 000.. I)
- 6) 2 tapped strips for backplane fixing (GS 000.. II)
- 7) 8 screws M4 x 12 (BFS 0100)
- 8) 2 M2.5x5 (GSE-5) slotted set screws
- 9) 2 M2.5x8 (GSE-8) slotted set screws
- 10) 4 insulating strips (IS 00042)

Notes: Subrack with handle on request.



Z-2903312



Interzoll

Subrack for backplanes (.Pi)

Subrack with profile side wall 3 U for backplanes (.Pi)

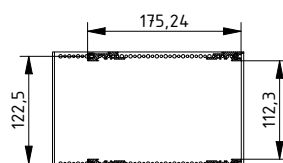
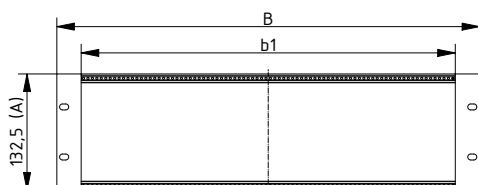
Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22340.Pi	53223425	132.5	269.24	218.24	213.36	3	42	160	20
BGT 22360.Pi	53223625	132.5	375.92	218.24	320.04	3	63	160	20
BGT 22380.Pi	53223825	132.5	482.6	218.24	426.72	3	84	160	20



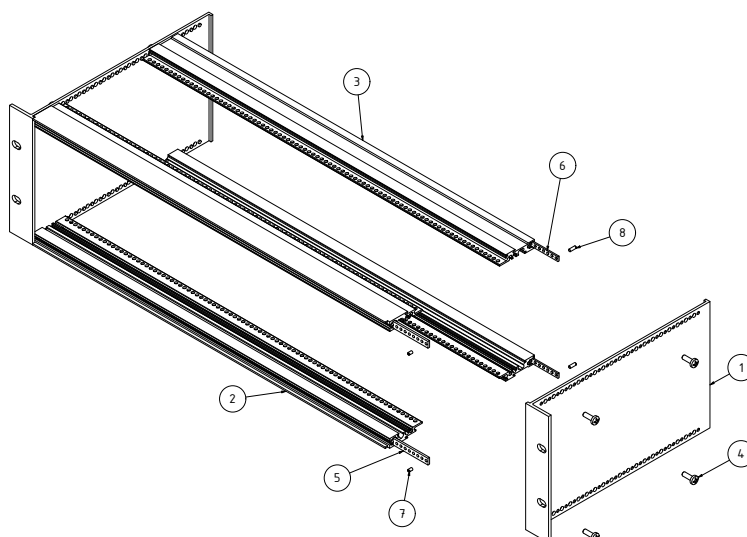
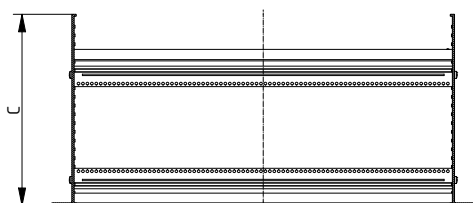
Scope Of Delivery:

- 1) 2 side panels with integrated flange (BSW 22300)
- 2) 2 front profiles (PF 000..)
- 3) 2 bus profiles (PBK 000..)
- 4) 8 screws M4 x 12 (BFS 0100)
- 5) 2 tapped strips for front panel fixing (GS 000.. I)
- 6) 2 tapped strips for backplane fixing (GS 000.. II)
- 7) 2 M2.5x5 (GSE-5) slotted set screws
- 8) 2 M2.5x8 (GSE-8) slotted set screws

Notes: Backplane mounting without insulating strips. Subrack with handle on request.



Z-2903313



Interzoll

Subrack for backplanes (.Pi)

Subrack 6 U for backplanes (.Pi)

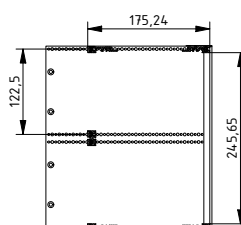
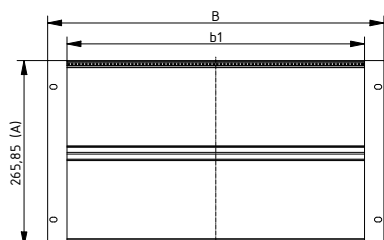


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 18640.Pi	53186425	265.85	269.24	178.24	213.36	6	42	160	20
BGT 18660.Pi	53186625	265.85	375.92	178.24	320.04	6	63	160	20
BGT 18680.Pi	53186825	265.85	482.6	178.24	426.72	6	84	160	20
BGT 24640.Pi	53246425	265.85	269.24	238.24	213.36	6	42	160, 220	20
BGT 24660.Pi	53246625	265.85	375.92	238.24	320.04	6	63	160, 220	20
BGT 24680.Pi	53246825	265.85	482.6	238.24	426.72	6	84	160, 220	20
BGT 30640.Pi	53306425	265.85	269.24	298.24	213.36	6	42	160, 220, 280	20
BGT 30660.Pi	53306625	265.85	375.92	298.24	320.04	6	63	160, 220, 280	20
BGT 30680.Pi	53306825	265.85	482.6	298.24	426.72	6	84	160, 220, 280	20

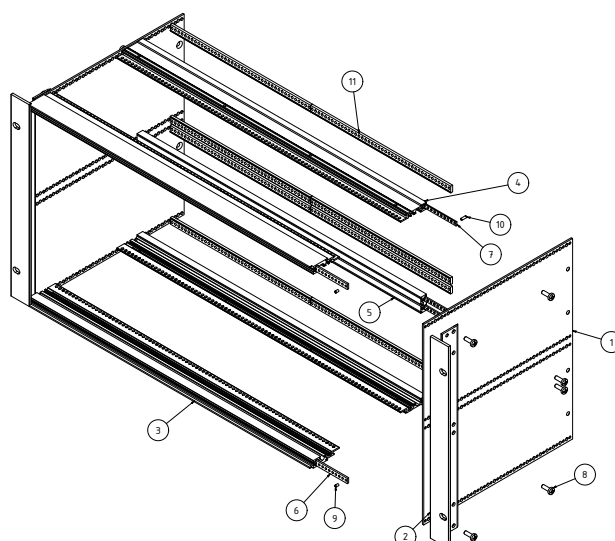
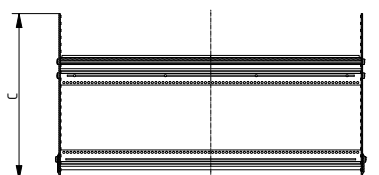
Scope Of Delivery:

- 1) 2 side panels (BSW ..600)
- 2) 2 flanges (FL 00600)
- 3) 2 front profiles (PF 000..)
- 4) 2 bus profiles (PB 000..)
- 5) 1 double bus profile (PBD 006..)
- 6) 2 tapped strips for front panel fixing (GS 000.. I)
- 7) 2 tapped strips for backplane fixing (GS 000.. II)
- 8) 12 screws M4 x 12 (BFS 0100)
- 9) 2 M2.5x5 (GSE-5) slotted set screws
- 10) 4 M2.5x8 (GSE-8) slotted set screws
- 11) Insulating strips (42TE: 2x IS 00042, 63TE: 2x IS 00042 + 2x IS 00021, 84TE: 4x IS 00042)

Notes: Subrack with handle on request.



Z-2903306



Interzoll

Subrack for backplanes (.Pi)

Subrack with profile side wall 6 U for backplanes (.Pi)

Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22640.Pi	53226425	265.85	269.24	218.24	213.36	6	42	160	20
BGT 22660.Pi	53226625	265.85	375.92	218.24	320.04	6	63	160	20
BGT 22680.Pi	53226825	265.85	482.6	218.24	426.72	6	84	160	20

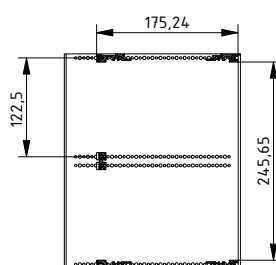
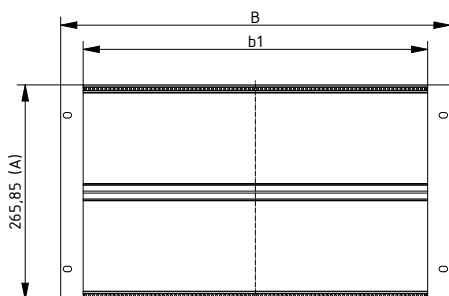


Scope Of Delivery:

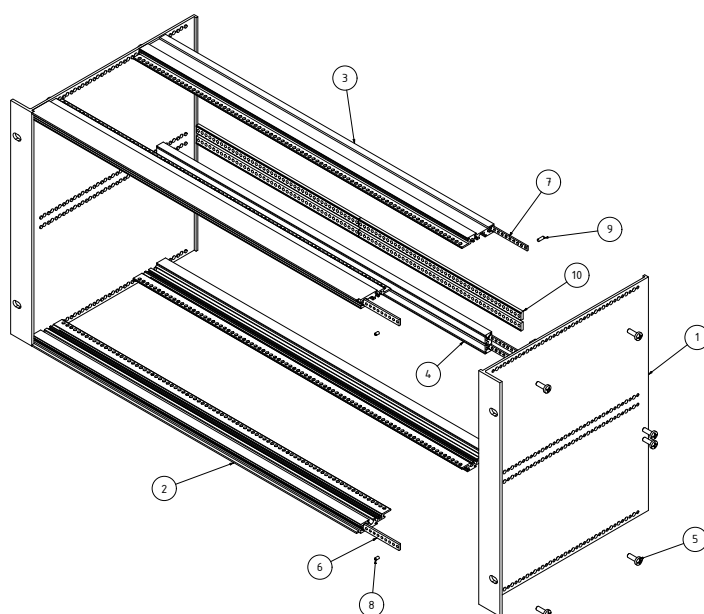
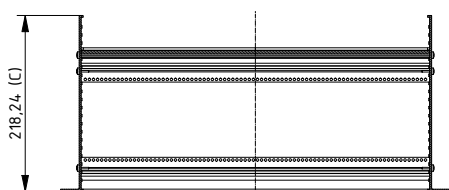
- 1) 2 side panels with integrated flange (BSW 22600)
- 2) 2 front profiles (PF 000..)
- 3) 2 bus profiles (PBK 000..)
- 4) 1 double bus profile (PBD 006..)
- 5) 12 screws M4 x 12 (BFS 0100)
- 6) 2 tapped strips for front panel fixing (GS 000.. I)
- 7) 4 tapped strips for backplane fixing (GS 000.. II)
- 8) 2 M2.5x5 (GSE-5) slotted set screws
- 9) 4 M2.5x8 (GSE-8) slotted set screws
- 10) Insulating strips (42TE: 2x IS 00042, 63TE: 2x IS 00042 + 2x IS 00021, 84TE: 4x IS 00042)

Notes: Backplane mounting without insulating strips (PBK) withinsulating strips (PBD).

Subrack with handle on request.



Z-2903307



Interzoll

Subrack for connectors (.12)

Subrack 3 U for connectors (.12)

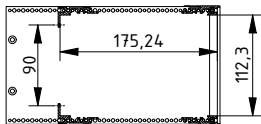
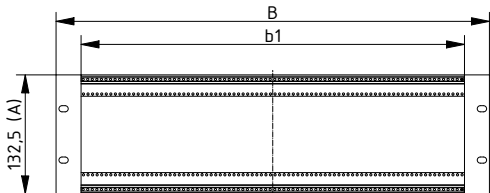


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 18340.12	53183405	132.5	269.24	178.24	213.36	3	42	160	20
BGT 18360.12	53183605	132.5	375.92	178.24	320.04	3	63	160	20
BGT 18380.12	53183805	132.5	482.6	178.24	426.72	3	84	160	20
BGT 24340.12	53243405	132.5	269.24	238.24	213.36	3	42	160, 220	20
BGT 24360.12	53243605	132.5	375.92	238.24	320.04	3	63	160, 220	20
BGT 24380.12	53243805	132.5	482.6	238.24	426.72	3	84	160, 220	20
BGT 30340.12	53303405	132.5	269.24	298.24	213.36	3	42	160, 220, 280	20
BGT 30360.12	53303605	132.5	375.92	298.24	320.04	3	63	160, 220, 280	20
BGT 30380.12	53303805	132.5	482.6	298.24	426.72	3	84	160, 220, 280	20

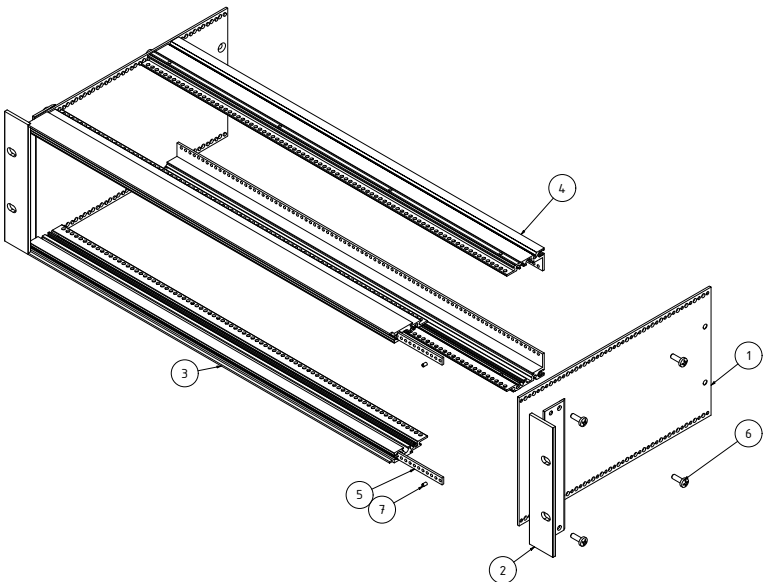
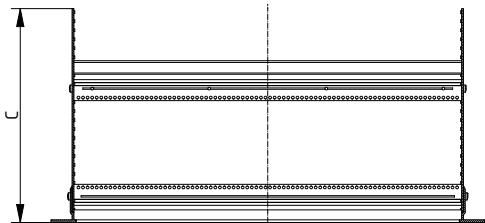
Scope Of Delivery:

- 1) 2 side panels (BSW ...300)
- 2) 2 flanges (FL 00300)
- 3) 2 front profiles (PF 000..)
- 4) 2 rear profiles (PR 000... 12)
- 5) 2 tapped strips for front panel fixing (GS 000.. I)
- 6) 8 screws M4 x 12 (BFS 0100)
- 7) 2 M2.5x5 (GSE-5) slotted set screws

Notes: Subrack with handle on request.



Z-2904340



Interzoll

Subrack for connectors (.12)

Subrack with profile side wall 3 U for connectors (.12)

Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22340.12	53223405	132.5	269.24	218.24	213.36	3	42	160	20
BGT 22360.12	53223605	132.5	375.92	218.24	320.04	3	63	160	20
BGT 22380.12	53223805	132.5	482.6	218.24	426.72	3	84	160	20

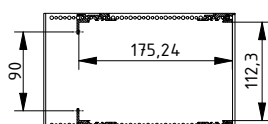
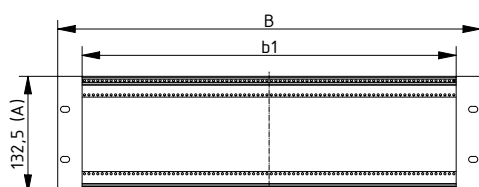


Scope Of Delivery:

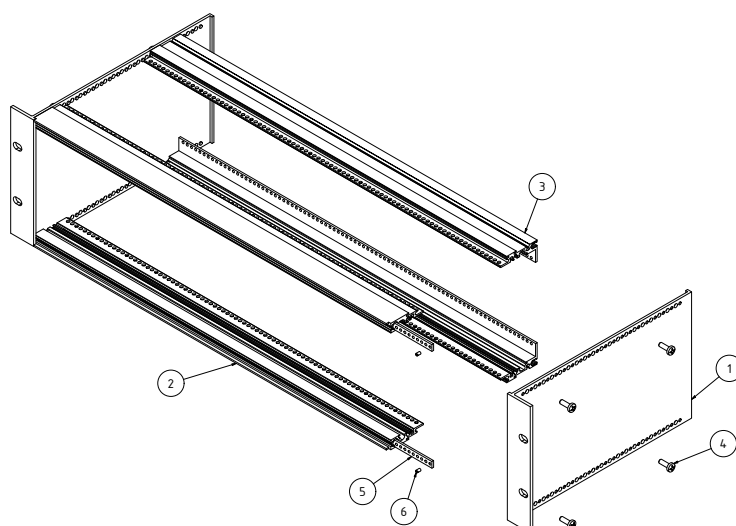
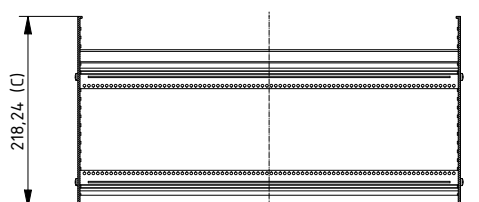
- 1) 2 side panels with integrated flange (BSW 22300)
- 2) 2 front profiles (PF 000..)
- 3) 2 rear profiles (PRK 000.. .12)
- 4) 8 screws M4 x 20 (BFS 0600)
- 5) 2 tapped strips for front panel fixing (GS 000.. I)
- 6) 2 M2.5x5 (GSE-5) slotted set screws

Notes: Subrack with handle on request.

Interzoll



Z-2904341



Interzoll

Subrack for connectors (.12)



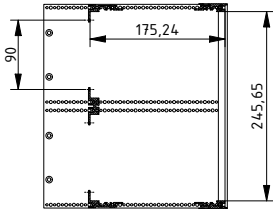
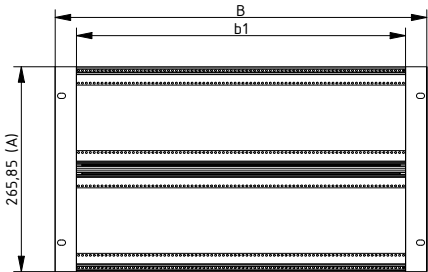
Subrack 6 U for connectors (.12)

Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 18640.12	53186405	265.85	269.24	178.24	213.36	6	42	160	20
BGT 18660.12	53186605	265.85	375.92	178.24	320.04	6	63	160	20
BGT 18680.12	53186805	265.85	482.6	178.24	426.72	6	84	160	20
BGT 24640.12	53246405	265.85	269.24	238.24	213.36	6	42	160, 220	20
BGT 24660.12	53246605	265.85	375.92	238.24	320.04	6	63	160, 220	20
BGT 24680.12	53246805	265.85	482.6	178.24	426.72	6	84	160, 220	20
BGT 30640.12	53306405	265.85	269.24	298.24	213.36	6	42	160, 220, 280	20
BGT 30660.12	53306605	265.85	375.92	298.24	320.04	6	63	160, 220, 280	20
BGT 30680.12	53306805	265.85	482.6	298.24	426.72	6	84	160, 220, 280	20

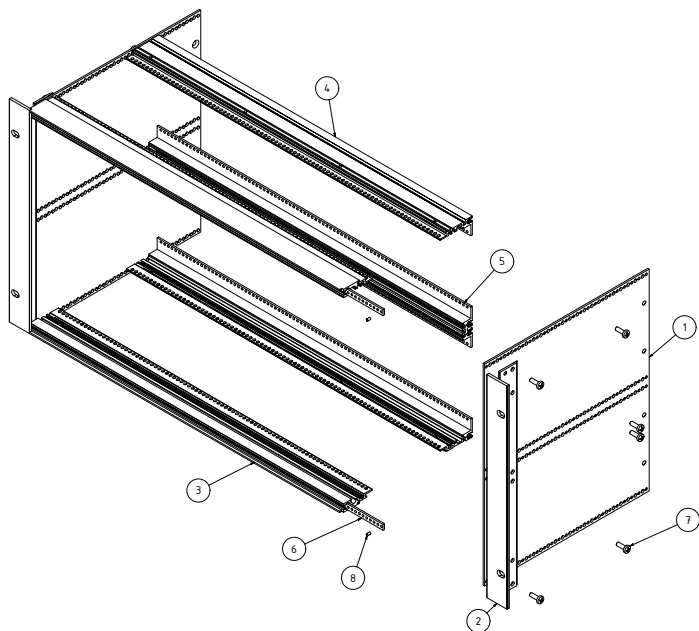
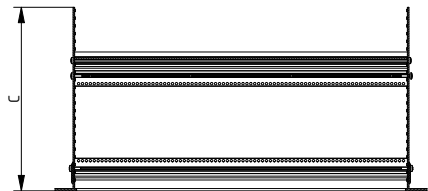
Scope Of Delivery:

- 1) 2 side panels (BSW ..600)
- 2) 2 flanges (FL 00600)
- 3) 2 front profiles (PF 000..)
- 4) 2 rear profiles (PR 000.. .12)
- 5) 1 double rear profile (PSD 006.. .12)
- 6) 2 tapped strips for front panel fixing (GS 000.. I)
- 7) 12 screws M4 x 12 (BFS 0100)
- 8) 2 M2.5x5 (GSE-5) slotted set screws

Notes: Subrack with handle on request.



Z-2904343



Interzoll

Subrack for connectors (.12)

Subrack with profile side wall 6 U for connectors (.12)

Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22640.12	53226405	265.85	269.24	218.24	213.36	6	42	160	20
BGT 22660.12	53226605	265.85	375.92	218.24	320.04	6	63	160	20
BGT 22680.12	53226805	265.85	482.6	218.24	426.72	6	84	160	20

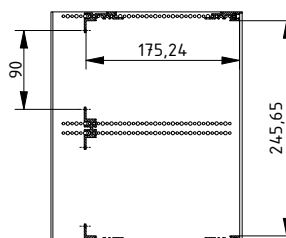
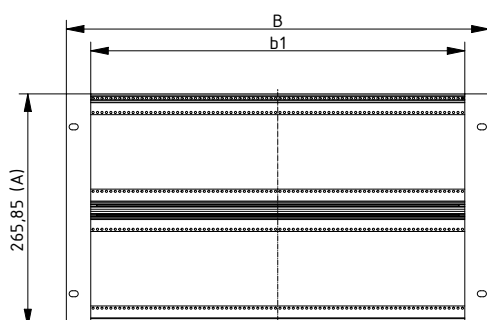
Scope Of Delivery:

- 1) 2 side panels with integrated flange (BSW 22600)
- 2) 2 front profiles (PF 000..)
- 3) 2 rear profiles (PRK 000.. .12)
- 4) 1 double rear profile (PSD 006.. .12)
- 5) 12 screws M4 x 12 (BFS 0100)
- 6) 2 tapped strips for front panel fixing (GS 000.. I)
- 7) 2 M2.5x5 (GSE-5) slotted set screws

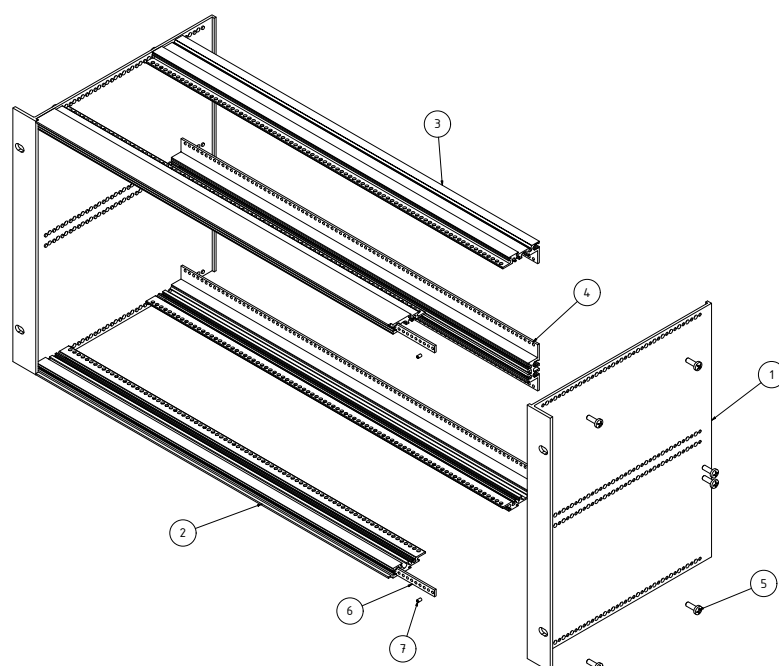
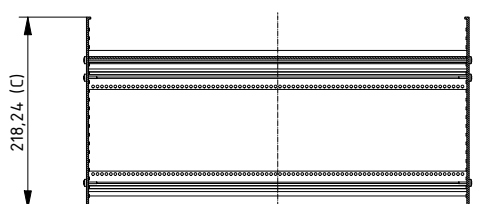
Notes: Subrack with handle on request.



Interzoll



Z-2904344



Interzoll

Subrack tested according to railway standard

Subrack for high mechanical load with profile side wall 3 U for backplanes
(.Pi) tested acc. to Federal Railway standard BN 411 002

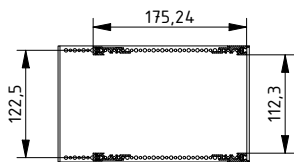
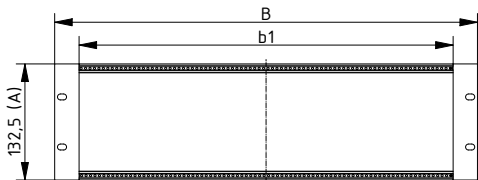


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22340.Pi-BN	53223455	132.5	269.24	218.24	213.36	3	42	160	20
BGT 22360.Pi-BN	53223655	132.5	375.92	218.24	320.04	3	63	160	20
BGT 22380.Pi-BN	53223855	132.5	482.6	218.24	426.72	3	84	160	20

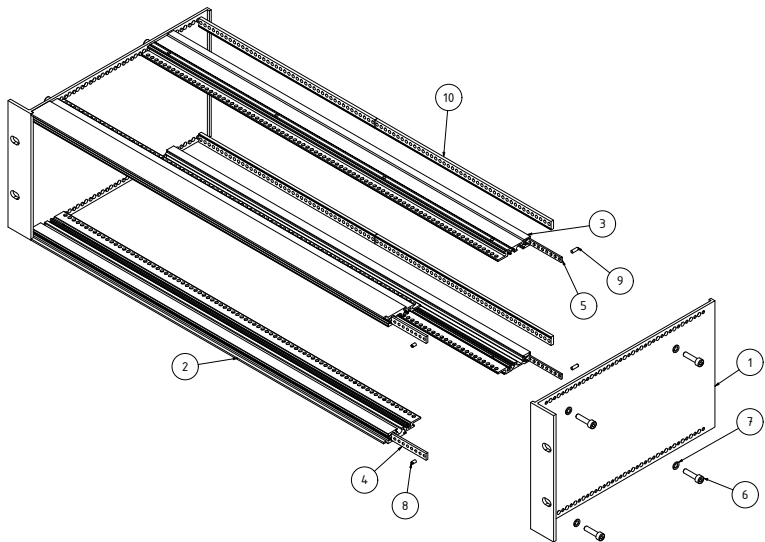
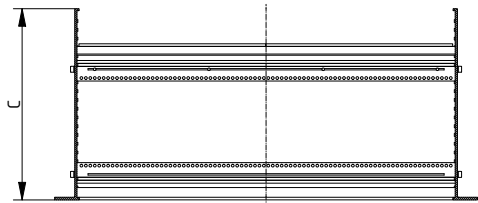
Scope Of Delivery:

- 1) 2 side panels with integrated flange (BSW 22300)
- 2) 2 front profiles (PF 000..)
- 3) 2 bus profiles (PB 000..)
- 4) 2 tapped strips for front panel fixing (GS 000.. I)
- 5) 2 tapped strips for backplane fixing (GS 000.. II)
- 6) 8 screws M4 x 20 (BFS 0600)
- 7) 8 securing washers (BFS 0700)
- 8) 2 M2.5x5 (GSE-5) slotted set screws
- 9) 2 M2.5x8 (GSE-8) slotted set screws
- 10) Insulating strips (42TE: 2x IS 00042, 63TE: 2x IS 00042 + 2x IS 00021, 84TE: 4x IS 00042)

Notes: Tested to Federal Railway standard BN 411 002. Approved for all electronic equipment on rail and bus vehicles. Approval test IABG-Ottobrunn for type BGT 22380.Pi/12-BN. Subrack with handle on request



Z-2903314



Interzoll

Subrack tested according to railway standard

**Subrack for high mechanical load with profile side wall 3 U for connectors
(.12) tested acc. to Federal Railway standard BN 411 002**

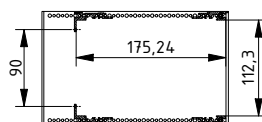
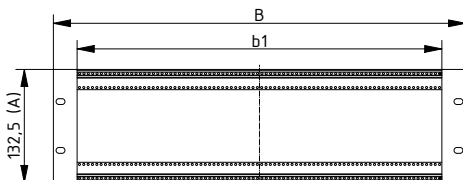
Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT 22340.12-BN	53223465	132.5	269.24	218.24	213.36	3	42	160	20
BGT 22360.12-BN	53223665	132.5	375.92	218.24	320.04	3	63	160	20
BGT 22380.12-BN	53223865	132.5	482.6	218.24	426.72	3	84	160	20



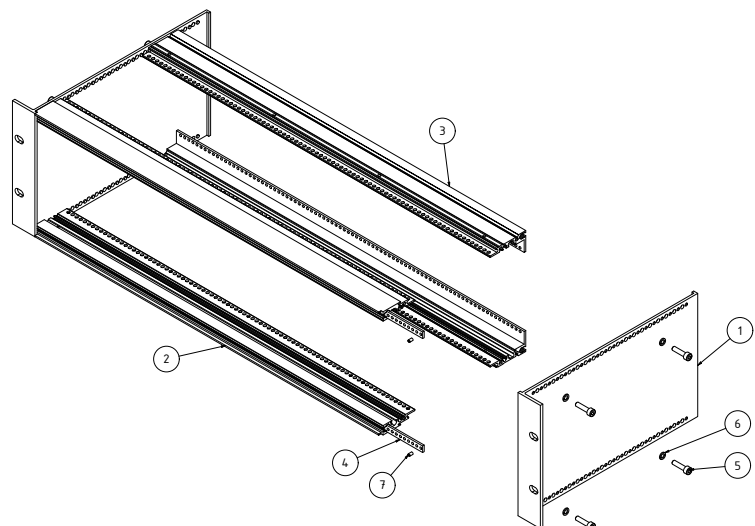
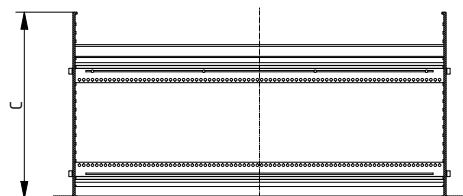
Scope Of Delivery:

- 1) 2 side panels with integrated flange (BSW 22300)
- 2) front profiles (PF 000..)
- 3) 2 rear profiles (PRK 000.. .12)
- 4) 2 tapped strips for front panel fixing (GS 000.. I)
- 5) 8 screws M4 x 20 (BFS 0600)
- 6) 8 securing washers (BFS 0700)
- 7) 2 M2.5x5 (GSE-5) slotted set screws

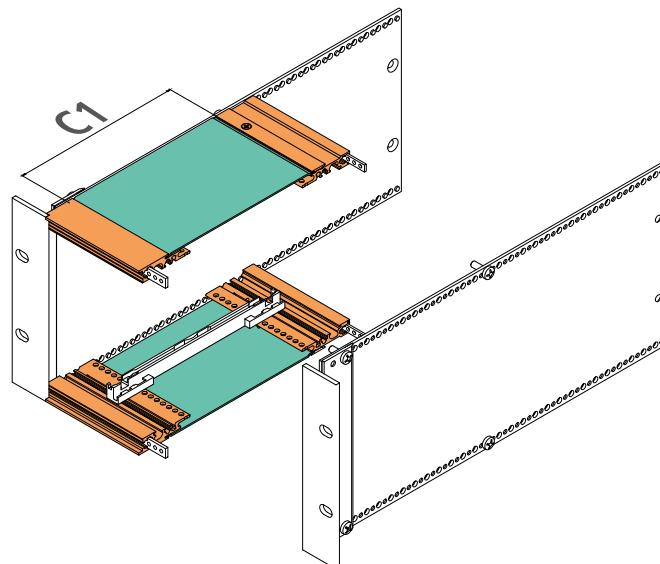
Notes: Tested to Federal Railway standard BN 411 002. Approved for all electronic equipment on rail and bus vehicles. Approval test IABG-Ottobrunn for type BGT 22380.Pi/12-BN. Subrack with handle on request



Z-2904342

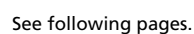
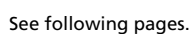


Cover plates for subrack Interzoll



C1

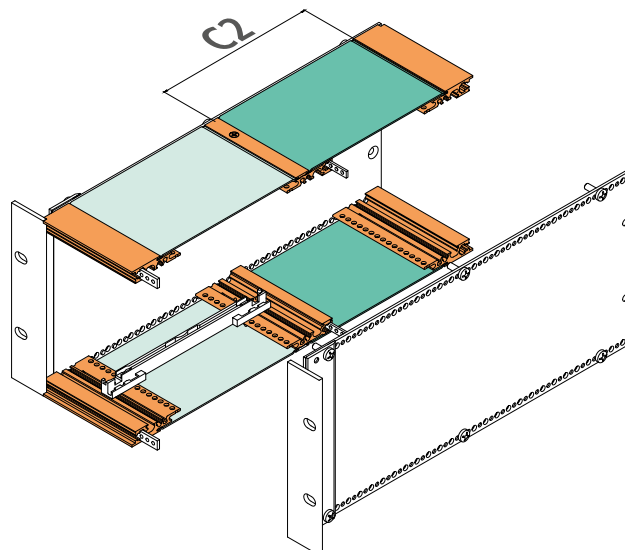
BGT independently of height units applies to .Pi or .12			ADG over insertion depth (in front)									
Model	Depth	TE	Card depth 160 mm			Card depth 220 mm			Card depth 280 mm			
			Order no.	Item name	Depth ADG	Order no.	Item name	Depth ADG	Order no.	Item name	Depth ADG	
BGT 18_40	178.24	42		L. a. A.	ADG 12042	123 mm	-	-	-	-	-	
				L. a. A.	ADG 12042-L	123 mm	-	-	-	-	-	
BGT 18_60	178.24	63		L. a. A.	ADG 12063	123 mm	-	-	-	-	-	
				54912631	ADG 12632-L	123 mm	-	-	-	-	-	
BGT 18_80	178.24	84		54912840	ADG 12084	123 mm	-	-	-	-	-	
				54912841	ADG 12084-L	123 mm	-	-	-	-	-	
BGT 22_40	218.24	42		L. a. A.	ADG 12042	123 mm	-	-	-	-	-	
				L. a. A.	ADG 12042-L	123 mm	-	-	-	-	-	
BGT 22_60	218.24	63		L. a. A.	ADG 12063	123 mm	-	-	-	-	-	
				54912631	ADG 12632-L	123 mm	-	-	-	-	-	
BGT 22_80	218.24	84		54912840	ADG 12084	123 mm	-	-	-	-	-	
				54912841	ADG 12084-L	123 mm	-	-	-	-	-	
BGT 24_40	238.24	42		L. a. A.	ADG 12042	123 mm	54918420	ADG 18042	183 mm	-	-	
				L. a. A.	ADG 12042-L	123 mm	L. a. A.	ADG 18042-L	183 mm	-	-	
BGT 24_60	238.24	63		L. a. A.	ADG 1263	123 mm	54918630	ADG 18063	183 mm	-	-	
				54912631	ADG 12632-L	123 mm	L. a. A.	ADG 18063-L	183 mm	-	-	
BGT 24_80	238.24	84		54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	-	-	
				54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	-	-	
BGT 30_40	298.24	42		L. a. A.	ADG 12042	123 mm	54918420	ADG 18042	183 mm	L. a. A.	ADG 24042	243 mm
				L. a. A.	ADG 12042-L	123 mm	L. a. A.	ADG 18042-L	183 mm	L. a. A.	ADG 24042-L	243 mm
BGT 30_60	298.24	63		L. a. A.	ADG 12063	123 mm	54918630	ADG 18063	183 mm	L. a. A.	ADG 24063	243 mm
				54912631	ADG 12632-L	123 mm	L. a. A.	ADG 18063-L	183 mm	L. a. A.	ADG 24063-L	243 mm
BGT 30_80	298.24	84		54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	L. a. A.	ADG 24084	243 mm
				54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	L. a. A.	ADG 24084-L	243 mm
BGT 36_40	358.24	42		L. a. A.	ADG 12042	123 mm	54918420	ADG 18042	183 mm	L. a. A.	ADG 24042	243 mm
				L. a. A.	ADG 12042-L	123 mm	L. a. A.	ADG 18042-L	183 mm	L. a. A.	ADG 24042-L	243 mm
BGT 36_60	358.24	63		L. a. A.	ADG 12063	123 mm	54918630	ADG 18063	183 mm	L. a. A.	ADG 24063	243 mm
				54912631	ADG 12632-L	123 mm	L. a. A.	ADG 18063-L	183 mm	L. a. A.	ADG 24063-L	243 mm
BGT 36_80	358.24	84		54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	L. a. A.	ADG 24084	243 mm
				54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	L. a. A.	ADG 24084-L	243 mm



65

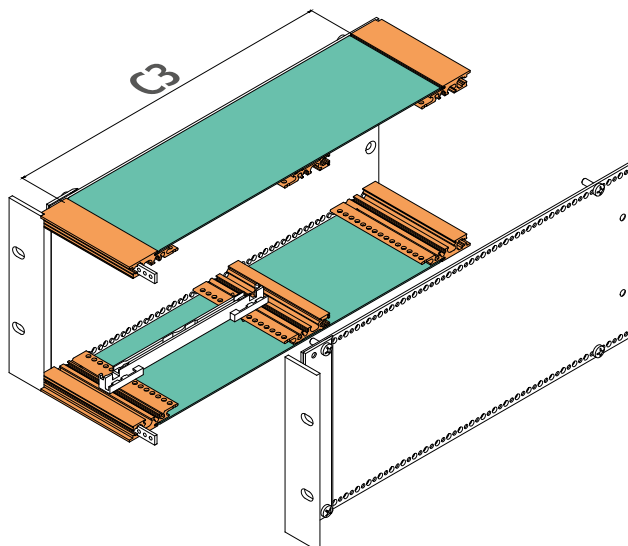
 ADG Version closed
 ADG Version perforated
 L. a. A. = Delivery on request

Cover plates for subrack Interzoll



C2

BGT independently of height units applies to .Pi or .12			ADG over connection area (rear) across the entire beam depth with an interrupted design										
Model	Depth	TE	Card depth 160 mm			Card depth 220 mm			Card depth 280 mm			Fixing material (Clamp profile sets)	
			Order no.	Items name	Depth ADG	Order no.	Items name	Depth ADG	Order no.	Items name	Depth ADG	Order no.	Items name
BGT 18_40	178.24	42	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 18_60	178.24	63	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 18_80	178.24	84	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 22_40	218.24	42	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 22_60	218.24	63	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 22_80	218.24	84	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
BGT 24_40	238.24	42	54960420	ADG 06042	63 mm	-	-	-	-	-	-	54002841	EPS 00042-I
			54960421	ADG 06042-L	63 mm	-	-	-	-	-	-	54002841	EPS 00042-I
BGT 24_60	238.24	63	54960630	ADG 06063	63 mm	-	-	-	-	-	-	54002631	EPS 00063-I
			54960631	ADG 06063-L	63 mm	-	-	-	-	-	-	54002631	EPS 00063-I
BGT 24_80	238.24	84	54960840	ADG 06084	63 mm	-	-	-	-	-	-	54002841	EPS 00084-I
			54960840	ADG 06084-L	63 mm	-	-	-	-	-	-	54002841	EPS 00084-I
BGT 30_40	298.24	42	L. a. A.	ADG 12042	123 mm	54960420	ADG 18042	63 mm	-	-	-	54002841	EPS 00042-I
			L. a. A.	ADG 12042-L	123 mm	54960421	ADG 18042-L	63 mm	-	-	-	54002841	EPS 00042-I
BGT 30_60	298.24	63	L. a. A.	ADG 12630	123 mm	54960630	ADG 18063	63 mm	-	-	-	54002631	EPS 00063-I
			54912631	ADG 12632-L	123 mm	54960631	ADG 18063-L	63 mm	-	-	-	54002631	EPS 00063-I
BGT 30_80	298.24	84	54912840	ADG 12084	123 mm	54960840	ADG 18084	63 mm	-	-	-	54002841	EPS 00084-I
			54912841	ADG 12084-L	123 mm	54960841	ADG 18084-L	63 mm	-	-	-	54002841	EPS 00084-I
BGT 36_40	358.24	42	L. a. A.	ADG 18042	183 mm	L. a. A.	ADG 18042	123 mm	54960420	ADG 06042	63 mm	54002841	EPS 00042-I
			L. a. A.	ADG 18042-L	183 mm	L. a. A.	ADG 18042-L	123 mm	54960421	ADG 06042-L	63 mm	54002841	EPS 00042-I
BGT 36_60	358.24	63	L. a. A.	ADG 18063	183 mm	L. a. A.	ADG 18063	123 mm	54960630	ADG 06063	63 mm	54002631	EPS 00063-I
			54912631	ADG 18063-L	183 mm	54912631	ADG 18063-L	123 mm	54960631	ADG 06063-L	63 mm	54002631	EPS 00063-I
BGT 36_80	358.24	84	54912840	ADG 18084	183 mm	54912840	ADG 18084	123 mm	54960840	ADG 06084	63 mm	54002841	EPS 00084-I
			54912841	ADG 18084-L	183 mm	54912841	ADG 18084-L	123 mm	54960841	ADG 06084-L	63 mm	54002841	EPS 00084-I



C3

BGT independently of height units applies to .Pi or .12			ADG continuous from front profile to front profile							
Model	Depth	TE		Order no.	Items name	Depth ADG	Front profile (2 pieces per carrier)		Fixing material (0,2 sets per carrier)	
				Order no.	Items name		Order no.	Items name	Order no.	Items name
BGT 18_40	178.24	42		L. a. A.	ADG 13042	133 mm	54200042	PF 00042	54700010	BFS 0100
				L. a. A.	ADG 13042-L	133 mm	54200042	PF 00042	54700010	BFS 0100
BGT 18_60	178.24	63		54913630	ADG 13063	133 mm	54200063	PF 00063	54700010	BFS 0100
				L. a. A.	ADG 13063-L	133 mm	54200063	PF 00063	54700010	BFS 0100
BGT 18_80	178.24	84		L. a. A.	ADG 13084	133 mm	54200084	PF 00084	54700010	BFS 0100
				L. a. A.	ADG 13084-L	133 mm	54200084	PF 00084	54700010	BFS 0100
BGT 22_40	218.24	42		-	-	-	-	-	-	-
				-	-	-	-	-	-	-
BGT 22_60	218.24	63		-	-	-	-	-	-	-
				-	-	-	-	-	-	-
BGT 22_80	218.24	84		-	-	-	-	-	-	-
				-	-	-	-	-	-	-
BGT 24_40	238.24	42		L. a. A.	ADG 19042	193 mm	542000420	PF 00042	54700010	BFS 0100
				L. a. A.	ADG 19042-L	193 mm	542000420	PF 00042	54700010	BFS 0100
BGT 24_60	238.24	63		54919630	ADG 19063	193 mm	542000630	PF 00063	54700010	BFS 0100
				L. a. A.	ADG 19063-L	193 mm	542000630	PF 00063	54700010	BFS 0100
BGT 24_80	238.24	84		54919840	ADG 19084	193 mm	542000840	PF 00084	54700010	BFS 0100
				L. a. A.	ADG 19084-L	193 mm	542000840	PF 00084	54700010	BFS 0100
BGT 30_40	298.24	42		L. a. A.	ADG 25042	253 mm	542000420	PF 00042	54700010	BFS 0100
				L. a. A.	ADG 25042-L	253 mm	542000420	PF 00042	54700010	BFS 0100
BGT 30_60	298.24	63		54925630	ADG 25063	253 mm	542000630	PF 00063	54700010	BFS 0100
				L. a. A.	ADG 25063-L	253 mm	542000630	PF 00063	54700010	BFS 0100
BGT 30_80	298.24	84		54925840	ADG 25084	253 mm	542000840	PF 00084	54700010	BFS 0100
				54925841	ADG 25084-L	253 mm	542000840	PF 00084	54700010	BFS 0100
BGT 36_40	358.24	42		54931420	ADG 31042	313 mm	542000420	PF 00042	54700010	BFS 0100
				54931421	ADG 31042-L	313 mm	542000420	PF 00042	54700010	BFS 0100
BGT 36_60	358.24	63		L. a. A.	ADG 31063	313 mm	542000630	PF 00063	54700010	BFS 0100
				L. a. A.	ADG 31063-L	313 mm	542000630	PF 00063	54700010	BFS 0100
BGT 36_80	358.24	84		54931840	ADG 31084	313 mm	542000840	PF 00084	54700010	BFS 0100
				54931841	ADG 31084-L	313 mm	542000840	PF 00084	54700010	BFS 0100

BGT = Subrack

ADG = Cover plates edged

EPS = Clamp profile set

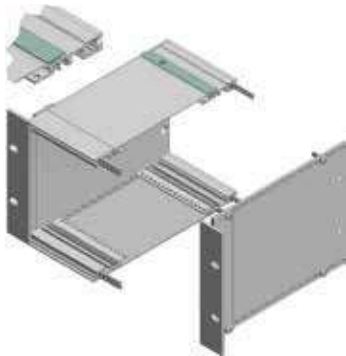
 ADG Version closed

 ADG Version perforated

L. a. A. = Delivery on request

Interzoll

Cover plates



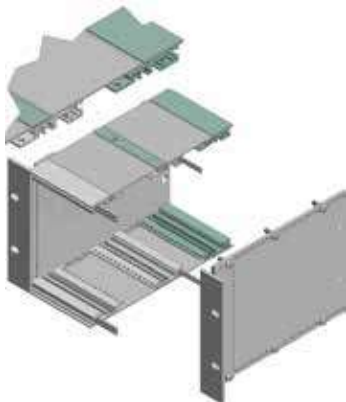
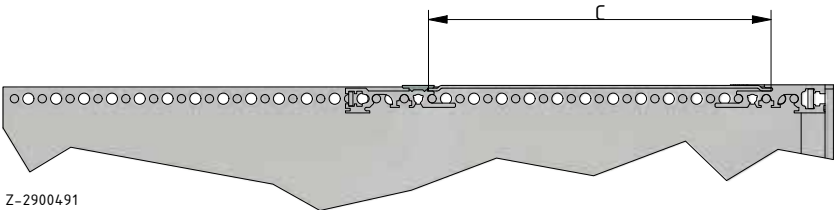
Clamp profile sets, natural-coloured anodised aluminium, for screwing on of the cover plates

Model	Order no.	HP
EPS 00042	54002420	42
EPS 00063	54002630	63
EPS 00084	54002840	84

Scope of Delivery: 2 clamp profiles including mounting material (BFS 0200)

Notes: The EPS and EPS-I clamp profile sets are required for mounting of the cover plates (ADG...). This allows removal of the top covers without disassembly of the BGT side wall.

Exception: If a subrack with a profile side wall is used, the clamp profile is integrated with the bus or rear profile. Use is not possible with subrack types listed as "with profile side walls, except for the .BN variant".



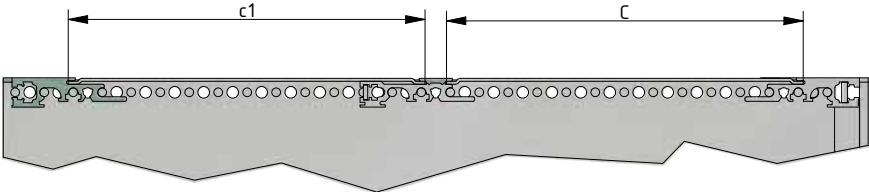
Clamp profile sets-I, natural-coloured anodised aluminium, for screwing on 2 cover plates behind each other

Model	Order no.	HP
EPS 00042-I	54002421	42
EPS 00063-I	54002631	63
EPS 00084-I	54002841	84

Scope of Delivery: 2 clamp profiles, 2 front profiles, mounting material (BFS 0200, BFS 0100)

Notes: If a subrack with a profile side wall is used, the clamp profile is integrated with the bus or rear profile.

Exception: If a subrack with a profile side wall is used, the clamp profile is integrated with the bus or rear profile. Use is not possible with subrack types listed as "with profile side walls, except for the .BN variant".



Interzoll

Card guides

Card guides, one and three parts, plastic, UL 94 V1 green

Model	Order no.	Card depth	Note
KF 160	54700160	160	one piece
KF 220-K	54700225	220	three pieces
KF/X 220	89700220	160	one piece

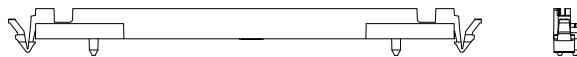
Scope Of Delivery: 10 card guides

Notes: Snap-in / optionally screwable with GS...II and BFS 0300 (54700030). Three-part card guide in special lengths on request.

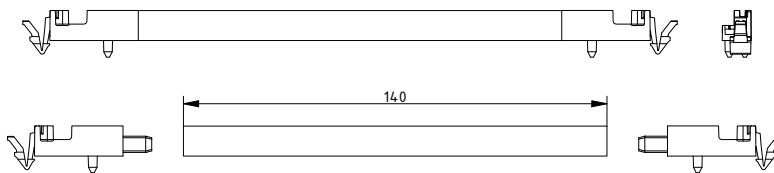


Interzoll

KF 160



KF 220-K



KF/X 220



Z-2904345

Interzoll

Thread and insulating strips



Tapped strips, galvanised steel, M2.5, 7 x 2 mm, for part front panel fixing

Model	Order no.	HP
GS 00042-I	54000421	42
GS 00063-I	54000631	63
GS 00084-I	54000841	84

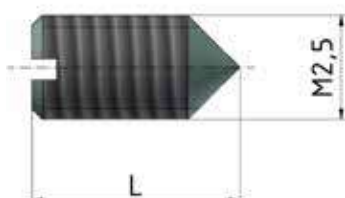
Scope Of Delivery: 2 tapped strips



Tapped strips, galvanised steel, M2.5, 5 x 1.5 mm, for horizontal profile grooves and rear fixing of backplanes, insulating strips and Z rails

Model	Order no.	HP
GS 00042-II	54000422	42
GS 00063-II	54000632	63
GS 00084-II	54000842	84

Scope Of Delivery: 2 tapped strips



Slotted set screw M2.5 x 8 / M2.5 x 5, V2A, for positioning and earthing the tapped strip

Model	Order no.	Note
GSE-5	54700390	L = 5mm
GSE-8	54700395	L = 8mm

Scope Of Delivery: 10 slotted set screws

Notes: GSE-5 for use in the recessed double groove of the front profile, in the horizontal grooves (e.g. card guide screwing system) and in the double bus profiles for 6 U subracks and in the adapter profiles.
GSE-8 for use in the external double groove.

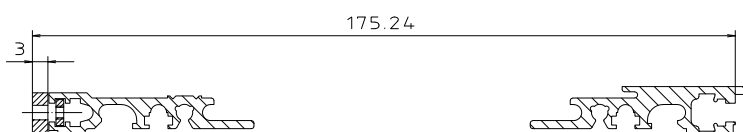


Insulated plastic, UL 94 V1, for insulated fixing of backplanes

Model	Order no.	HP
IS 00042	54000142	42
IS 00063	54000163	63
IS 00080	54000180	80
IS 00084	54000184	84

Scope Of Delivery: 4 insulating strips (IS 00042 = 2 insulating strips)

Notes: To achieve the necessary insertion depth when using bus profile rails.



Z-2900470

Interzoll

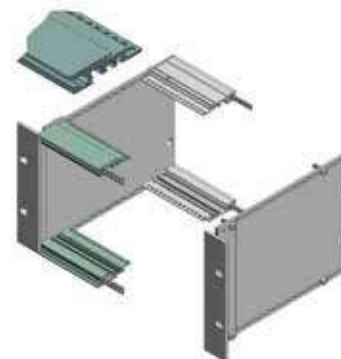
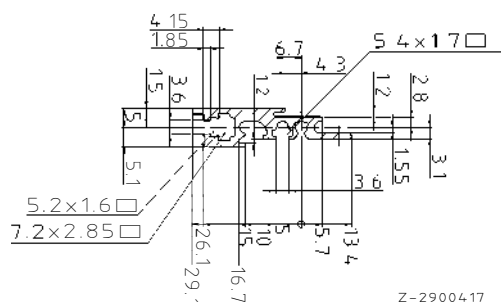
Profiles / profile sets

Front profiles, natural-coloured anodised aluminium

Model	Order no.	HP
PF 00042	54200042	42
PF 00063	54200063	63
PF 00084	54200084	84

Scope Of Delivery: 1 front profile

Notes: Additional sizes on request.



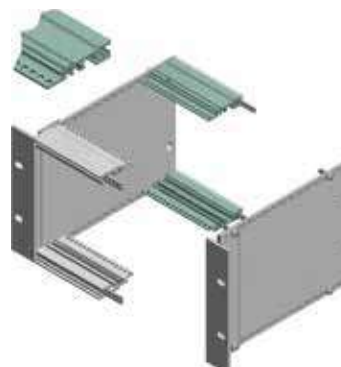
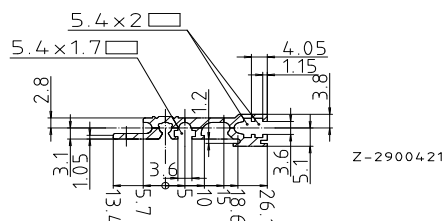
Interzoll

Bus profiles, natural-coloured anodised aluminium, for indirect backplane fixing

Model	Order no.	HP
PB 00042	54300042	42
PB 00063	54300063	63
PB 00084	54300084	84

Scope Of Delivery: 1 bus profile

Notes: Additional sizes on request. Please order insulating strips separately.

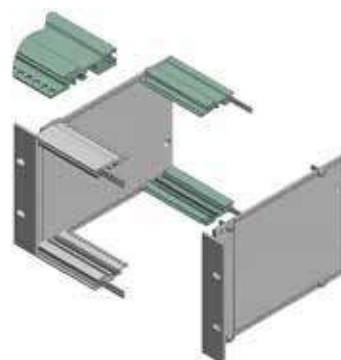
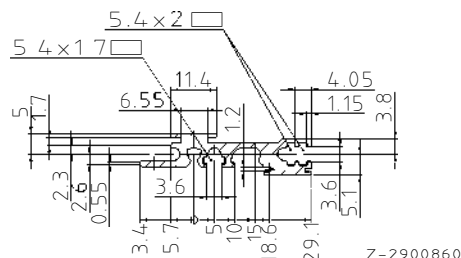


Bus profiles with an integrated insulating strip clearance and clamp profile for ADG, natural-coloured anodised aluminium, for backplane fixing

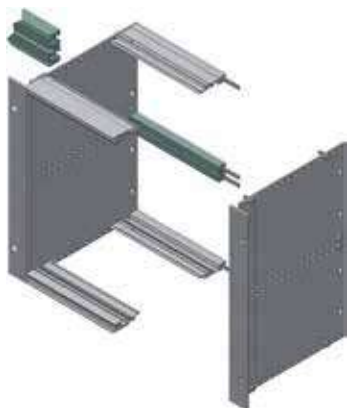
Model	Order no.	HP
PBK 00042	54300142	42
PBK 00063	54300163	63
PBK 00084	54300184	84

Scope Of Delivery: 1 bus profile

Notes: Additional sizes on request.



Profiles / profile sets



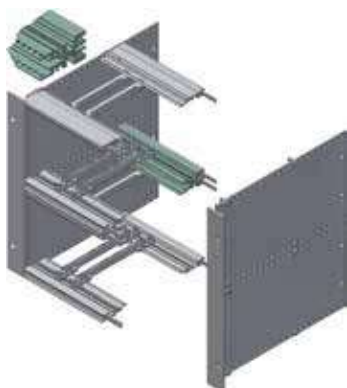
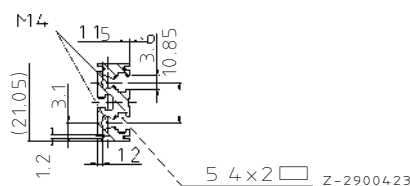
Double bus profiles for subracks, 6 U, natural-coloured anodised aluminium, for backplane fixing

Model	Order no.	HP
PBD 00642	54300642	42
PBD 00663	54300663	63
PBD 00684	54300684	84

Scope Of Delivery: 1 double bus profile

Notes: Additional sizes on request.

Please order insulating strips separately.



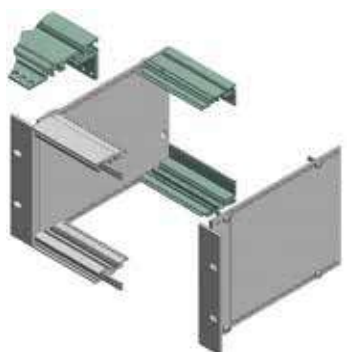
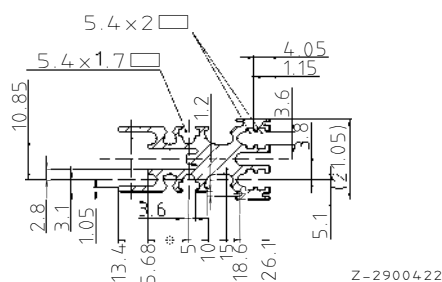
Double bus profiles, natural-coloured anodised aluminium, for fitting of backplanes in BGT 6 U divided into 2 x 3 U

Model	Order no.	HP
PBD 00342	54300342	42
PBD 00363	54300363	63
PBD 00384	54300384	84

Scope Of Delivery: 1 double bus profile

Notes: Additional sizes on request.

Please order insulating strips separately.

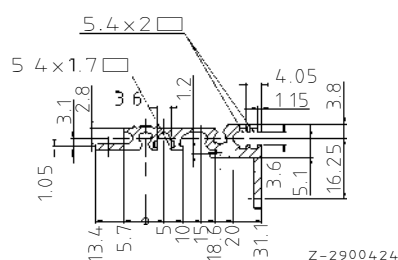


Aluminium rear profiles, natural-coloured anodised, for connectors acc. to DIN EN 60603-2 (previously DIN 41612)

Model	Order no.	HP
PR 00042.12	54304200	42
PR 00063.12	54306300	63
PR 00084.12	54308400	84

Scope Of Delivery: 1 rear profile

Notes: Additional sizes on request.



Interzoll

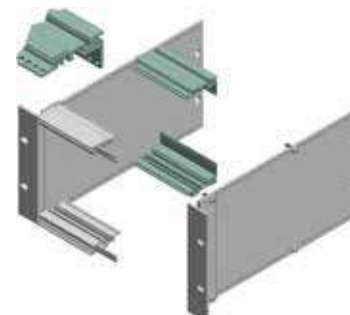
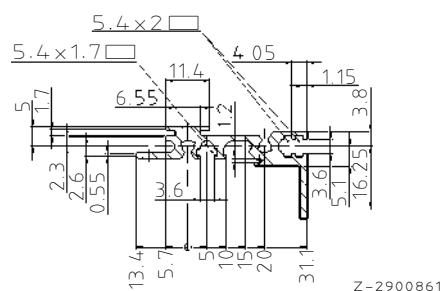
Profiles / profile sets

Rear profiles, natural-coloured anodised aluminium, for connectors acc. to DIN EN 60603-2 (previously DIN 41612), with integrated clamp profile

Model	Order no.	HP
PRK 00042.12	54364200	42
PRK 00063.12	54366300	63
PRK 00084.12	54368400	84

Scope Of Delivery: 1 rear profile

Notes: Additional sizes on request.



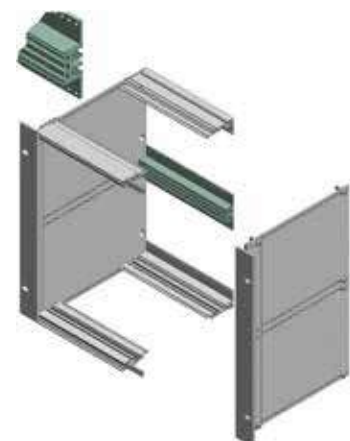
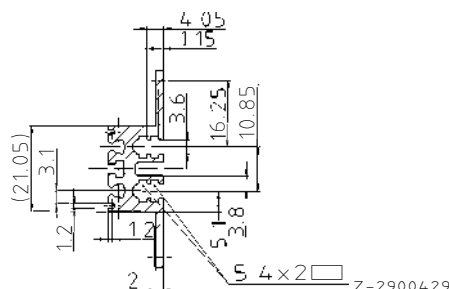
Interzoll

Double rear profiles, natural-coloured anodised aluminium, for connectors acc. to DIN EN 60603-2 (previously DIN 41612)

Model	Order no.	HP
PSD 00642.12	54306420	42
PSD 00663.12	54306630	63
PSD 00684.12	54306840	84

Scope Of Delivery: 1 double rear profile

Notes: Additional sizes on request.

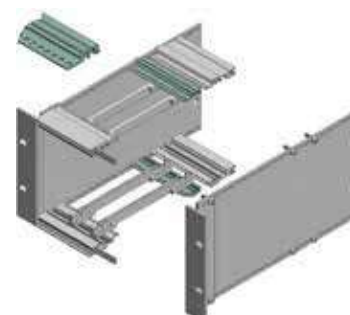
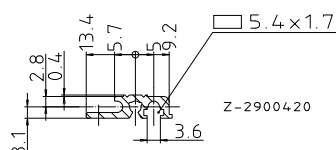


Snap profiles, natural-coloured anodised aluminium, for holding card guides

Model	Order no.	HP
RP 00042	54400042	42
RP 00063	54400063	63
RP 00084	54400084	84

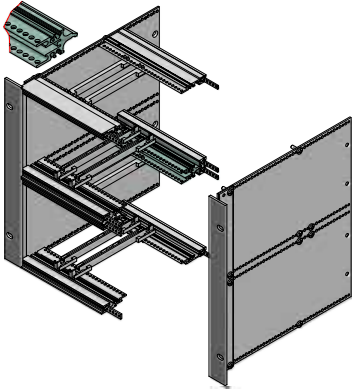
Scope Of Delivery: 1 snap profile

Notes: Additional sizes on request.



Interzoll

Profiles / profile sets

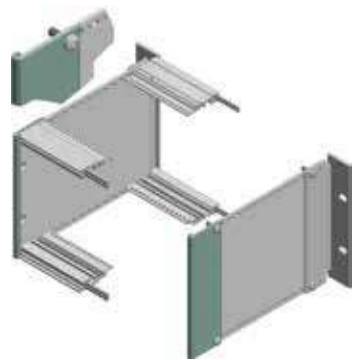
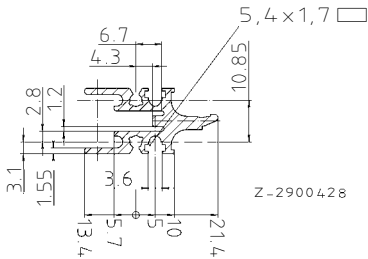


Double snap profiles, natural-coloured anodised aluminium, for dividing a BGT 6 U into 2 x 3 U, snaps into PSD or PBD

Model	Order no.	HP
RPD 00342	54400342	42
RPD 00363	54400363	63
RPD 00384	54400384	84

Scope Of Delivery: 1 double snap profile

Notes: Additional sizes on request.

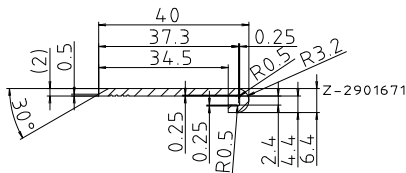


End profile on rear, natural-coloured anodised aluminium, for subrack side panels

Model	Order no.	U
RAP 00300	54000300	3
RAP 00600	54000600	6

Scope Of Delivery: 2 end profiles

Notes: Additional sizes on request.



Interzoll

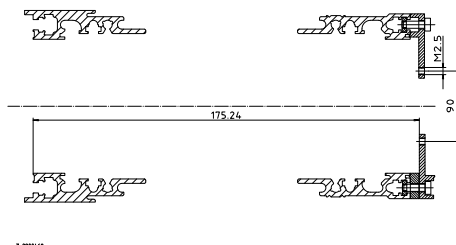
Profiles / profile sets

Z-rails, natural-coloured anodised aluminium, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	HP
ZS 00042	54001420	42
ZS 00063	54001630	63
ZS 00084	54001840	84

Scope Of Delivery: 2 Z-rails

Notes: For conversion or extension of a backplane level to a mounting level for connectors acc. to DIN EN 60603-2. Additional sizes on request.



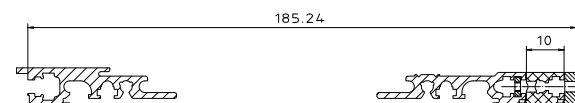
Z-2900148

Adapter profiles, natural-coloured anodised aluminium, for extending the insertion depth acc. to DIN EN 60603-2, types F, G, U, V

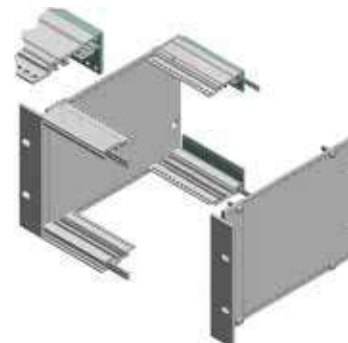
Model	Order no.	HP
AP 00042	54000420	42
AP 00063	54000630	63
AP 00084	54000840	84

Scope Of Delivery: 2 adapter profiles

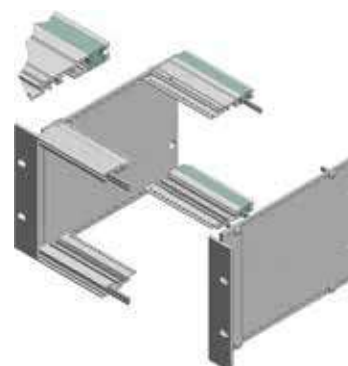
Notes: Please order accessories separately: Tapped strips GS 000.. II, Insulating strips IS 000.., Cheese-head screw BFS 0300 Larger quantities on request



Z-29000471

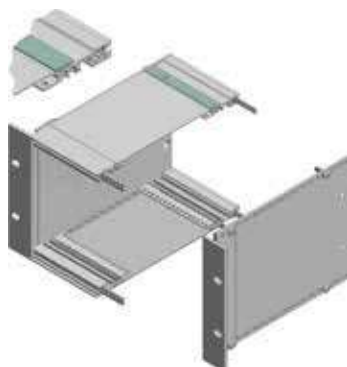


Interzoll



Interzoll

Profiles / profile sets



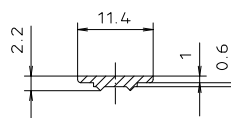
Integrated clamp profiles, natural-coloured anodised aluminium, for fixing the ADG cover plates to the subrack

Model	Order no.	HP
KL 00042	54600042	42
KL 00063	54600063	63
KL 00084	54600084	84

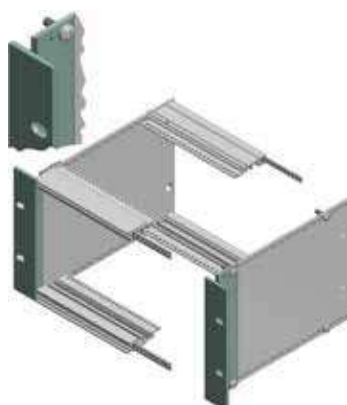
Scope Of Delivery: 1 integrated clamp profile

Notes: For use for profiles PB, PR, RP. Please order the BSF 0200 (54700020) countersunk screw separately.

Additional sizes on request.



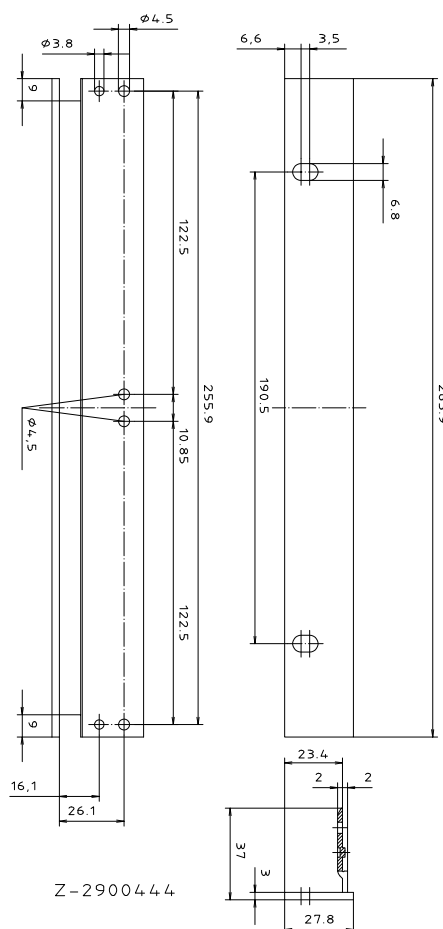
Z-2900427



Flanges 3 / 6 U for mounting with subrack side panels

Model	Order no.	U
FL 00300	54600300	3
FL 00600	54600600	6

Scope Of Delivery: 2 flanges



Z-2900444

Profiles / profile sets

Model	Order no.	U
FLG 00300	54600310	3
FLG 00600	54600610	6

This technical drawing illustrates a cable tray assembly. It features two main sections of the tray, each with a green-painted side rail and a grey-painted top surface. The sections are joined by a coupling bracket that fits into the top of both trays. The drawing shows the internal structure of the trays, including the top surface and the side rails. The coupling bracket is shown in a position that allows it to be easily attached to the trays.



Model	Order no.	U
GR 00300	54600320	3
GR 00600	54600620	6

Interzoll

Side panels

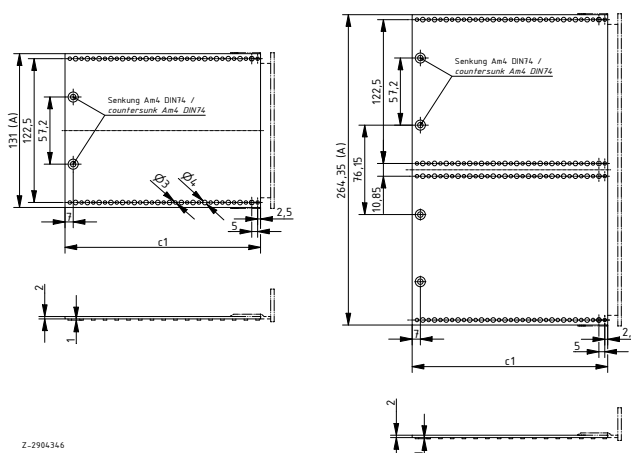


Side panels, passivated aluminium, without flange

Model	Order no.	A	c1	U	Note
BSW 18300	54018300	131	166.6	3	Side panel depth 166,6
BSW 18600	54018600	264.35	166.6	6	Side panel depth 166,6
BSW 24300	54024300	131	226.6	3	Side panel depth 226,6
BSW 24600	54024600	264.35	226.6	6	Side panel depth 226,6
BSW 30300	54030300	131	286.6	3	Side panel depth 286,6
BSW 30600	54030600	264.35	286.6	6	Side panel depth 286,6

Scope Of Delivery: 1 side panel

Notes: Additional types on request.



Z-2904346

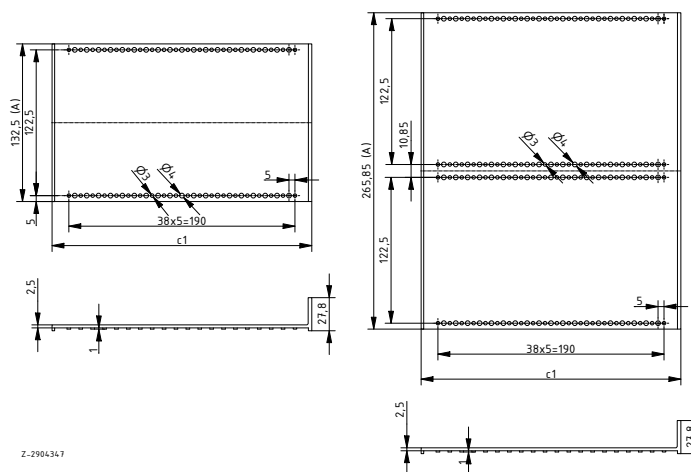


Side panels, natural-coloured anodised aluminium, with integrated flange

Model	Order no.	A	c1	U	Note
BSW 22300	54022030	132.5	218.24	3	Side panel depth 218,24
BSW 22600	54022600	265.85	218.24	6	Side panel depth 218,24

Scope Of Delivery: 1 side panel

Notes: More versions, also with handle drill holes, on request.



Z-2904347

Interzoll

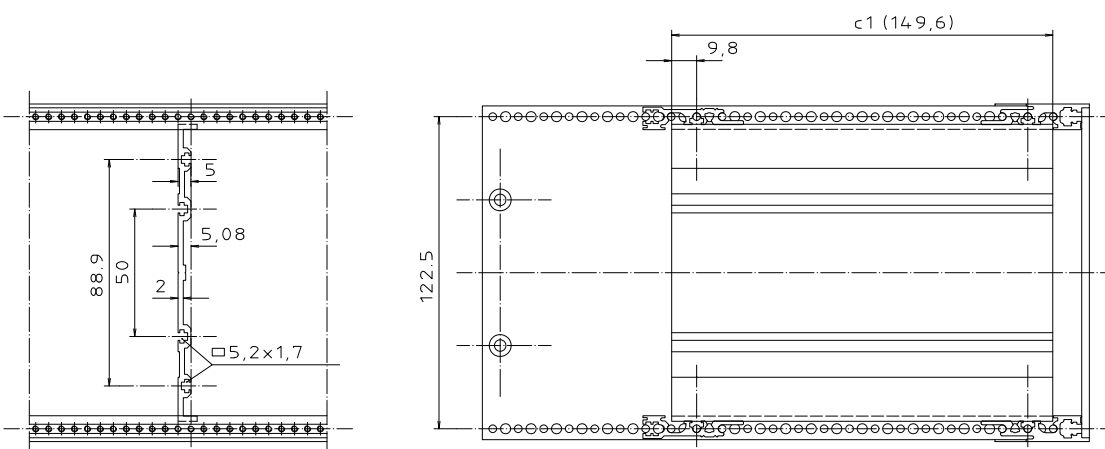
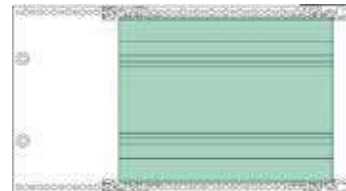
Accessories

Partition, 3 U, screwable, with slots for GS...II, natural-coloured anodised aluminium, for separating defined sections

Model	Order no.	U	Card depth
TP 16300	54016300	3	160

Scope Of Delivery: 1 partition, 4 screws M 2.5 x 5, 4x tapped strips GS 00005-II

Notes: : The partitions – TP – can be screwed to the profile struts anywhere in the subrack. They are used to separate e.g. mechanical and electronic sectors and for the vertical fitting of components (transformers etc). The plug-in slots in the partitions are for the fitting of tapped strips II. Additional sizes on request.



Z-2900484

Interzoll

Screws

Interzoll mounting material

Model	Order no.	Note
BFS 0100	54700010	Recessed head screw M 4x12 for Interzoll profiles
BFS 0200	54700020	Countersunk screw M 3x5, cross-head, for fixing of clamp profiles
BFS 0300	54700030	Cheese-head screw M 2.5x8, slotted, for fixing of card earthing, card guide, insulating strip and Z rails
BFS 0600	54700033	Allen cheese-head screw M 4x20 for profile rails in railway-tested version
BFS 0700	54700034	Securing washer, Ø 4.3 mm, Allen screw BFS 0600
KM 5	54700350	M5 cage nut for fitting of BGT / FPS in the enclosure or cabinet
KS 5	54700360	M5 cross-head screw for fitting of BGT / FPS in the enclosure or cabinet
KU 5	54700370	Washer for KS 5, nickel-plated brass

Scope Of Delivery: KM, KS, KU and BFS 0300 = 10 pieces; BFS = 20 pieces



KM 5



KS 5



KU 5



BFS 0100



BFS 0200



BFS 0300



BFS 0600



BFS 0700

Interzoll

Front panel

Part front panels, natural-coloured anodised aluminium, passivated on rear

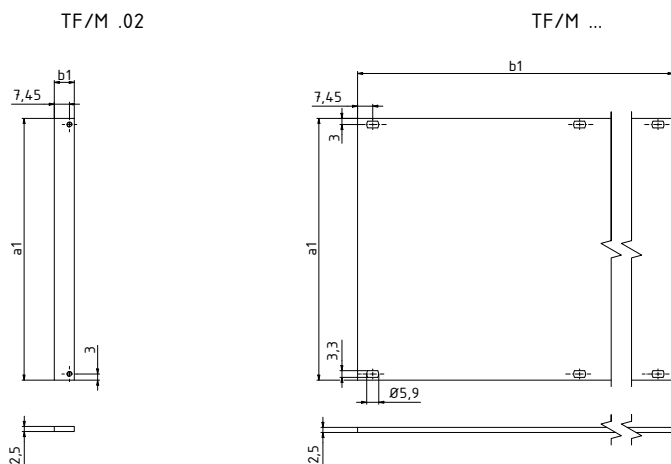
Model	Order no.	a1	b1	U	HP
TF/M 242	86842023	84.05	213.01	2	42
TF/M 263	86863023	84.05	319.69	2	63
TF/M 284	86884023	84.05	426.37	2	84
TF/M 302	86802033	128.5	9.81	3	2
TF/M 303	86803033	128.5	14.89	3	3
TF/M 304	86804033	128.5	19.97	3	4
TF/M 306	86806033	128.5	30.13	3	6
TF/M 307	86807033	128.5	35.21	3	7
TF/M 308	86808033	128.5	40.29	3	8
TF/M 310	86810033	128.5	50.45	3	10
TF/M 312	86812033	128.5	60.61	3	12
TF/M 314	86814033	128.5	70.77	3	14
TF/M 318	86818033	128.5	91.09	3	18
TF/M 319	86819033	128.5	96.17	3	19
TF/M 320	86820033	128.5	101.25	3	20
TF/M 321	86821033	128.5	106.33	3	21
TF/M 328	86828033	128.5	141.97	3	28
TF/M 340	86840033	128.5	202.85	3	40
TF/M 342	86842033	128.5	213.01	3	42
TF/M 363	86863033	128.5	319.69	3	63
TF/M 384	86884033	128.5	426.37	3	84
TF/M 484	86884043	172.95	426.37	4	84
TF/M 604	86804063	261.85	19.97	6	4
TF/M 605	86805063	261.85	25.05	6	5
TF/M 608	86808063	261.85	40.29	6	8
TF/M 628	86828063	261.85	141.89	6	28
TF/M 642	86842063	261.85	213.01	6	42
TF/M 684	86884063	261.85	426.37	6	84



Interzoll

Scope Of Delivery: 1 part front panel

Notes: Special sizes on request. Screw holders and collar screws as accessories.



Z-2904.355

Interzoll

Front panel

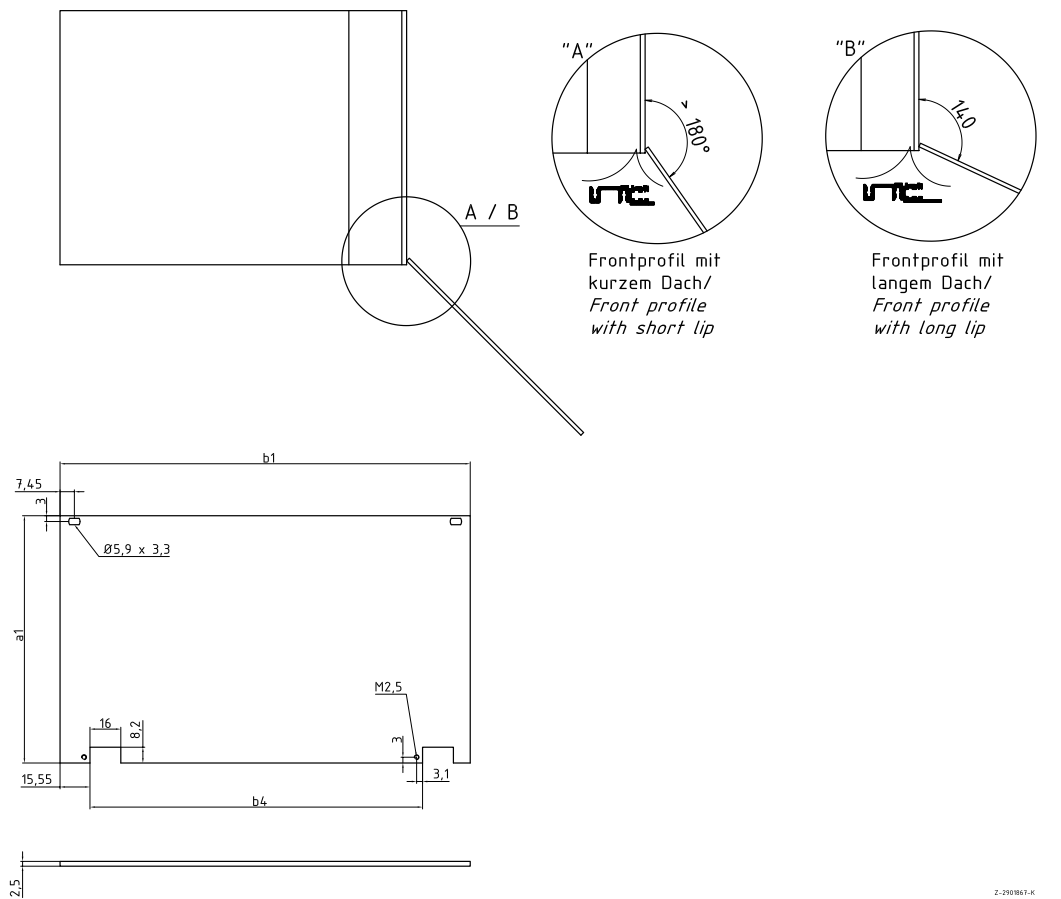


Front panels, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-K	86842038	128.5	213.01	3	42
TF/M 363-K	86863038	128.5	319.69	3	63
TF/M 384-K	86884038	128.5	426.37	3	84
TF/M 642-K	86842068	261.85	213.01	6	42
TF/M 663-K	86863068	261.85	319.69	6	63
TF/M 684-K	86884068	261.85	426.37	6	84

Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws BFS/M 2200, mounting material

Notes: The usable width is not restricted. Can be unhooked at 135° except for Internorm Stil. One tapped strip above and below is required for each fixing.



Z-290867-K

Interzoll

Front panel

Plug-in front panels, front natural-coloured anodised aluminium, passivated on rear, incl. handles, plastic, UL 94 V 0, light grey

Model	Order no.	a1	b1	U	HP
ST/M 303	86803037	128.5	14.89	3	3
ST/M 304	86804037	128.5	19.97	3	4
ST/M 305	86805037	128.5	25.05	3	5
ST/M 306	86806037	128.5	30.13	3	6
ST/M 308	86808037	128.5	40.29	3	8
ST/M 309	86809037	128.5	45.37	3	9
ST/M 310	86810037	128.5	50.45	3	10
ST/M 312	86812037	128.5	60.61	3	12
ST/M 318	86818037	128.5	91.09	3	18
ST/M 321	86821037	128.5	106.33	3	21

Scope Of Delivery: :

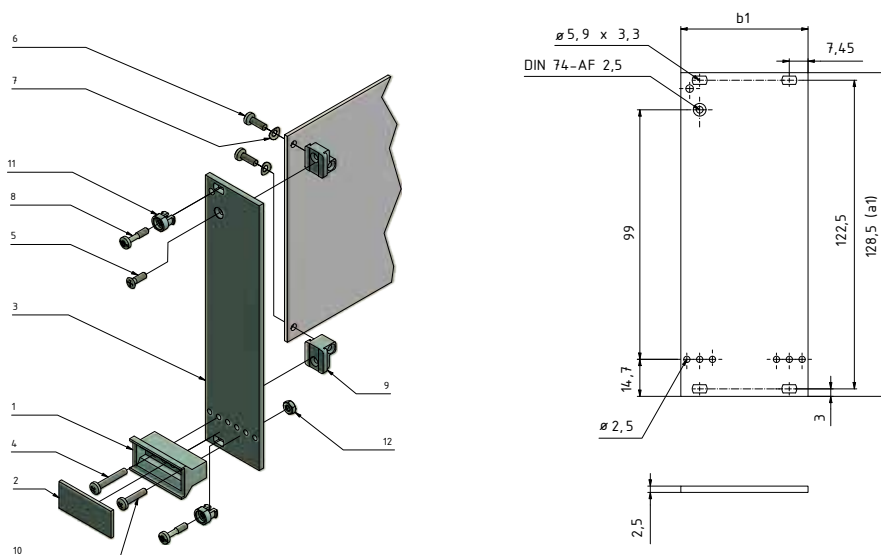
- 1) 1 handle, trapezoidal shape (LEXAN UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear yellow chromated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 plastic screw holders (PA6, grey, unscreened, for plug-in front panels)
- 11) 8 HP and higher: 4 plastic screw holders (grey, unscreened, for plug-in front panels)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)

Notes: Additional sizes on request.



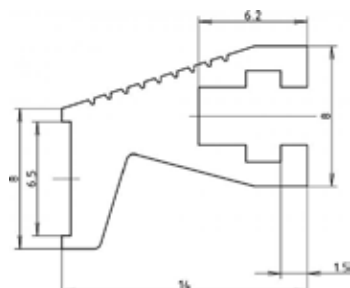
Interzoll

ST/M 3..



Interzoll

Front panel

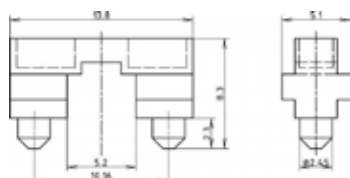


Handle profile, natural-coloured anodised aluminium, metre profile

Model	Order no.
GRL/M 1000-AL	86081740

Scope Of Delivery: 1m handle profile

Notes: Mounting material, (86081750) and BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



Fixing piece, plastic, black, for fixing the handle profile GRL to the front panel

Model	Order no.
FX/M	86081750

Scope Of Delivery: 20 fixing pieces

Notes: Mounting in aluminium handle GRL/M (86081740) with BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.

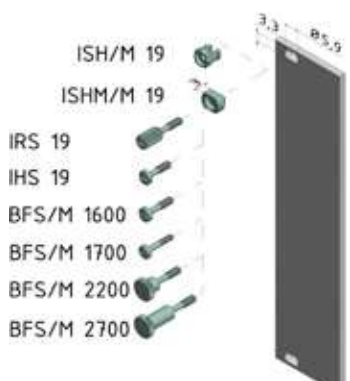


PCB holder and fixing material

Model	Order no.	Note
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
LKH/M 02	86080020	With 4 through holes for fixing front panels and circuit boards
LKH/M 03	86080030	With 2 M 2.5 threads for fixing of front panels and circuit boards

Scope Of Delivery: 10 pieces

BFS/M: 20 pieces



Mounting material for part front panels and plug-in units

Model	Order no.	Note
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
IHS 19	54700410	Collar screws SHR Z M2.5x11.3x6.3-SP, slotted-head screw
IRS 19	54700420	Slotted knurled screw, collar screws SHR R M2.5x11.3x6.3-SP
ISH/M 19	86080510	Plastic screwholder, PA 6, grey
ISHM/M 19	86080500	Metal screw holder, stainless steel (1.4305), for conductive contacting for riveting to the front panel

Scope Of Delivery: ISH 19 / IRS 19 = 10 pieces, otherwise 20 pieces

Interzoll

Frame-type plug-in units

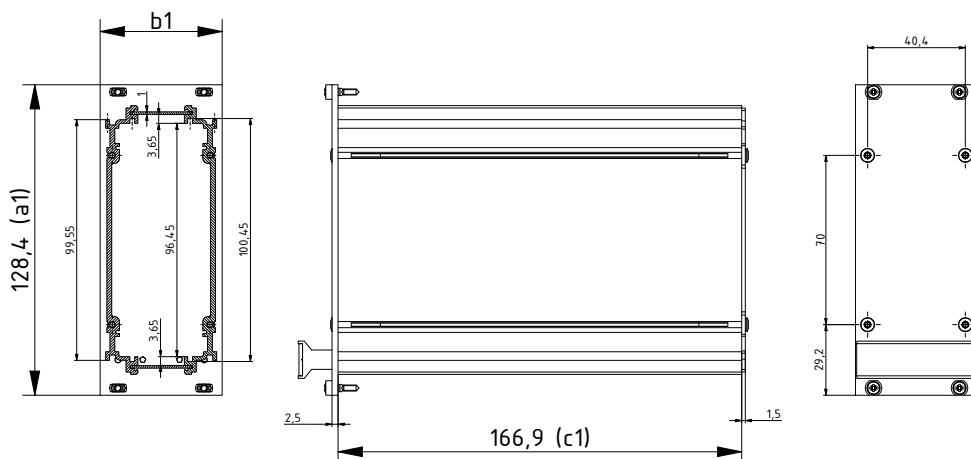
Interzoll PRO frame-type plug-in units, 3 U, natural-coloured anodised aluminium front panel, colourless passivated aluminium side profiles, galvanised steel cover plates, plain, galvanised steel rear panel with one slot, 3 U



Model	Order no.	a1	b1	c1	U	HP
IZK/M 16308-RW1-P	85808311	128.4	40.3	166.9	3	8
IZK/M 16310-RW1-P	85810311	128.4	50.46	166.9	3	10
IZK/M 16312-RW1-P	85812311	128.4	60.62	166.9	3	12
IZK/M 16314-RW1-P	85814311	128.4	70.78	166.9	3	14
IZK/M 16321-RW1-P	85821311	128.4	106.34	166.9	3	21
IZK/M 16328-RW1-P	85828311	128.4	141.9	166.9	3	28
IZK/M 16342-RW1-P	85842311	128.4	213.02	166.9	3	42

Scope Of Delivery: 1 front panel with handle, 2 side panels, 2 top covers, 1 rear panel, mounting material

Notes: Additional versions, 6 U, EMC or with hood on request.



Z-2904357

Cover plates, perforated, 1mm, galvanised sheet steel, for frame-type plug-in units, 3 U

Model	Order no.	c1	HP
IZK/M 16008-ADL-P	86090812	166.9	8
IZK/M 16010-ADL-P	86091012	166.9	10
IZK/M 16012-ADL-P	86091212	166.9	12
IZK/M 16014-ADL-P	86091412	166.9	14
IZK/M 16021-ADL-P	86092112	166.9	21
IZK/M 16028-ADL-P	86092812	166.9	28
IZK/M 16042-ADL-P	86094212	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Interzoll

Frame-type plug-in units



Cover plates, perforated, 1mm, galvanised sheet steel, for PRO frame-type plug-in units, 3 U, to accommodate card guides

Model	Order no.	c1	HP
IZK/M 16008-ADL-KF-P	86090813	166.9	8
IZK/M 16010-ADL-KF-P	86091013	166.9	10
IZK/M 16012-ADL-KF-P	86091213	166.9	12
IZK/M 16014-ADL-KF-P	86091413	166.9	14
IZK/M 16021-ADL-KF-P	86092113	166.9	21
IZK/M 16028-ADL-KF-P	86092813	166.9	28
IZK/M 16042-ADL-KF-P	86094213	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Card guides for cover plates IZK/M-ADL-KF, plastic, UL 94 V0, red

Model	Order no.	Card depth
IZK/M KF-160-P	86216030	160

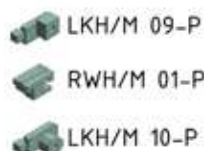
Scope Of Delivery: 10 card guides



Rear panel open, galvanised sheet steel, for IZK/M frame-type plug-in units

Model	Order no.	HP
IZK/M 00308-RWO-P	86090833	8
IZK/M 00310-RWO-P	86091033	10
IZK/M 00312-RWO-P	86091233	12
IZK/M 00314-RWO-P	86091433	14
IZK/M 00321-RWO-P	86092133	21
IZK/M 00328-RWO-P	86092833	28
IZK/M 00342-RWO-P	86094233	42

Scope Of Delivery: 1 rear panel



PCB and rear panel holder

Model	Order no.	
LKH/M 09-P	86080090	
LKH/M 10-P	86080110	
RWH/M 01-P	86080120	

Scope Of Delivery:

LKH/M 10-P = 10 pieces (5 pairs right / left)

RWH/M 01-P = 10 pieces



BOPLA

A Phoenix Mecano Company

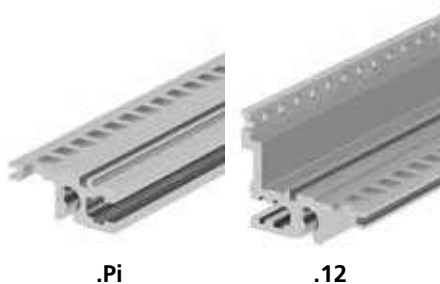
The product advantages



The subracks in the Interzoll Modul series have the option of continuous EMC screening. All enclosure components can be connected conductively by means of specially-matched EMC accessories.



Interzoll Modul provides a matching card guide for every situation – and with mechanical coding on request. To unlock, apply side pressure.



Versions for backplane technology (.Pi) for direct screw-on connectors (.12) acc. to DIN EN 60603-2, and for plug-in units acc. to IEC 60297-3-101.



Subracks and accessories with the BN designation are certified for use in buses and rail vehicles.



The support brackets are firmly pressed to the side panel to cope with extreme mechanical loads. All side panels are passivated and have a conductive function.



Quick-Finder:
www.bopla.de/85

Examples of use



Interzoll Modul


Colour:

Anodized in natural color

Production class:

IP40 / DIN EN 60529

IP20 / DIN EN 60529 with ventilation (ADG...-L)

Material:

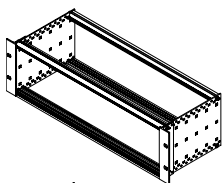
Profiles: Al Mg Si 0,5, anodized

For details see technical information.

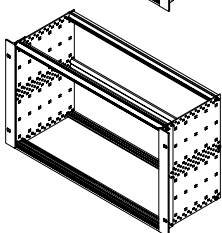


Enclosure sizes

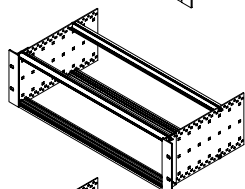
BGT M 18380



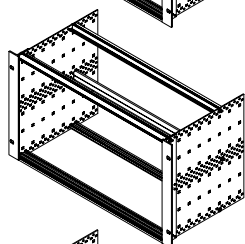
BGT M 18680



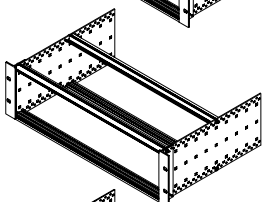
BGT M 24380



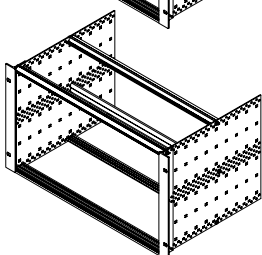
BGT M 24680



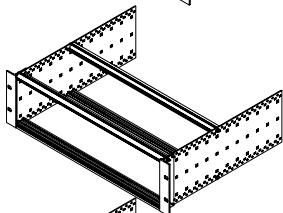
BGT M 30380



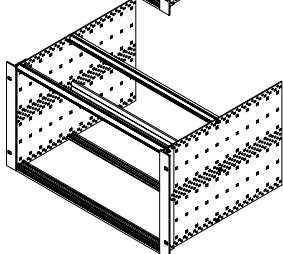
BGT M 30680



BGT M 36380

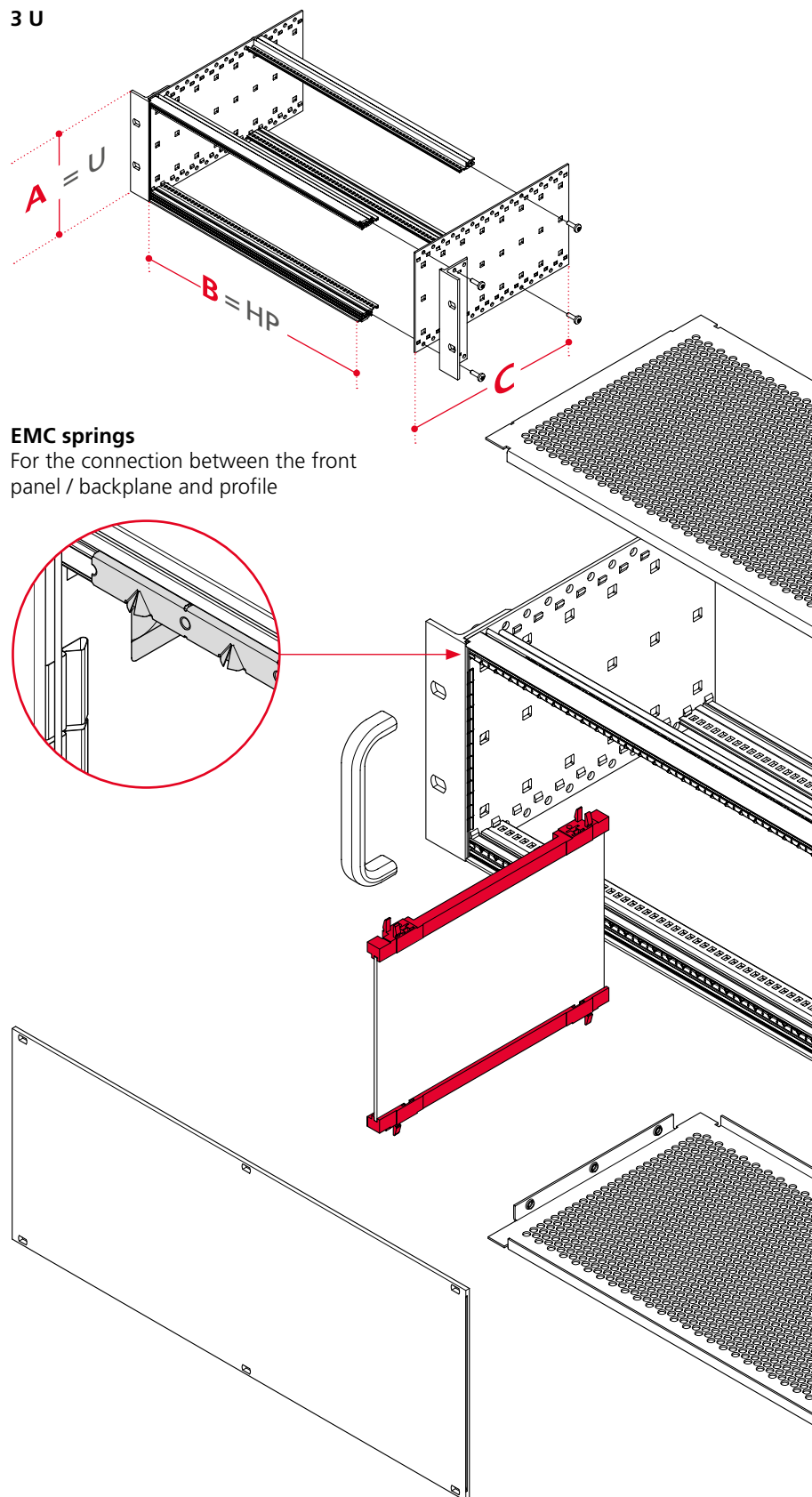


BGT M 36680



Design types

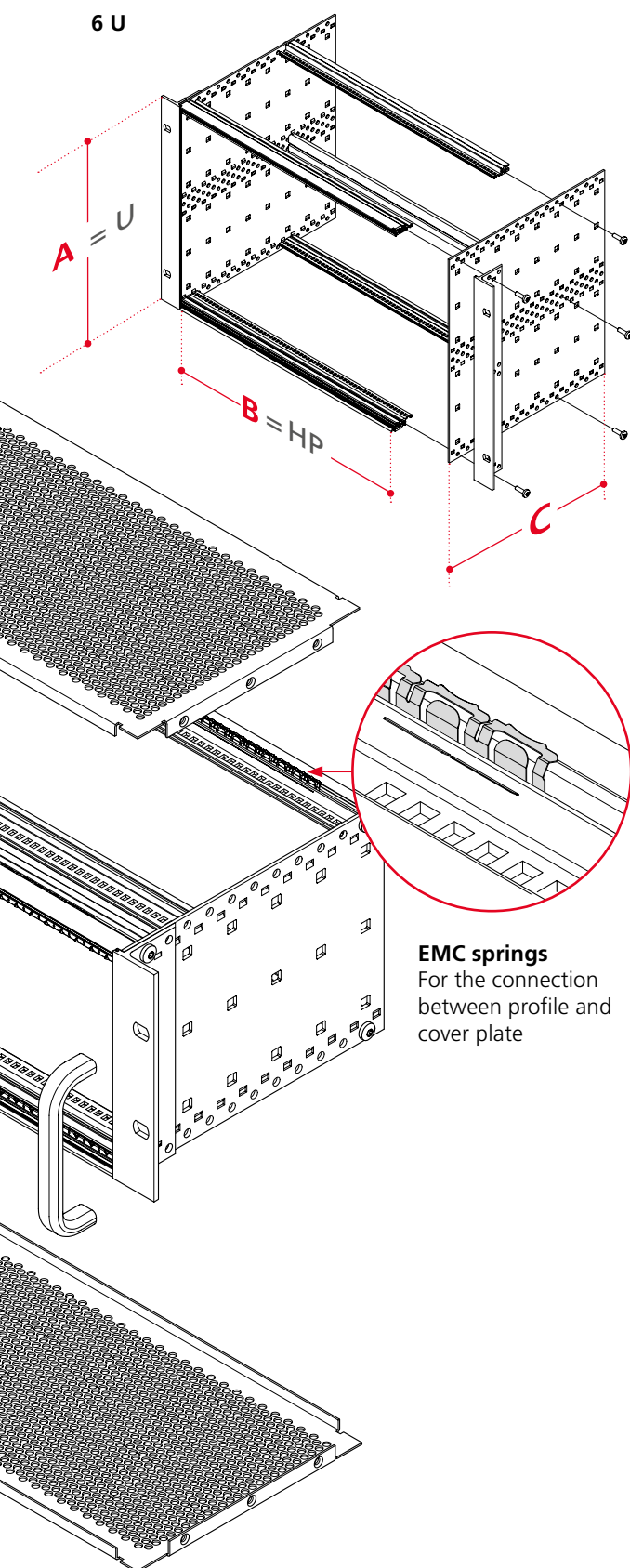
3 U



EMC springs

For the connection between the front panel / backplane and profile

Interzoll Modul



Dimensions

Model	A	B	C	HP
3 U For backplanes (.Pi) or connectors(.12)				
BGT / M 18340	132.5	269.24	178	42
BGT / M 24340	132.5	269.24	238	42
BGT / M 30340	132.5	269.24	298	42
BGT / M 36340	132.5	269.24	358	42
BGT / M 18360	132.5	375.92	178	63
BGT / M 24360	132.5	375.92	238	63
BGT / M 30360	132.5	375.92	298	63
BGT / M 36360	132.5	375.92	358	63
BGT / M 18380	132.5	482.6	178	84
BGT / M 24380	132.5	482.6	238	84
BGT / M 30380	132.5	482.6	298	84
BGT / M 36380	132.5	482.6	358	84
6 U For backplanes (.Pi) or connectors (.12)				
BGT / M 18640	265.9	269.24	178	42
BGT / M 24640	265.9	269.24	238	42
BGT / M 30640	265.9	269.24	298	42
BGT / M 36640	265.9	269.24	358	42
BGT / M 18660	265.9	375.92	178	63
BGT / M 24660	265.9	375.92	238	63
BGT / M 30660	265.9	375.92	298	63
BGT / M 36660	265.9	375.92	358	63
BGT / M 18680	265.9	482.6	178	84
BGT / M 24680	265.9	482.6	238	84
BGT / M 30680	265.9	482.6	298	84
BGT / M 36680	265.9	482.6	358	84

Accessories



Shielded rear hood



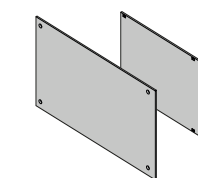
Card guide



Handles / Flanges



Various profiles e.g. front profiles, (double) bus profiles, rear profiles, double connector profiles, snap profiles, end profiles



Front and part front panels in different versions

Interzoll Modul

Subrack for backplanes (.Pi)

Subrack, 3 U, for backplanes (.Pi)

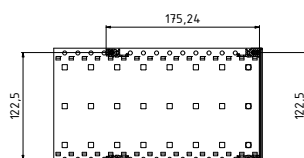
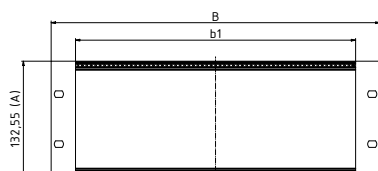


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT/M 18340.Pi	85183425	132.5	269.24	178	213.64	3	42	160	20
BGT/M 18360.Pi	85183625	132.5	375.92	178	320.32	3	63	160	20
BGT/M 18380.Pi	85183825	132.5	482.6	178	427	3	84	160	20
BGT/M 24340.Pi	85243425	132.5	269.24	238	213.64	3	42	160, 220	20
BGT/M 24360.Pi	85243625	132.5	375.92	238	320.32	3	63	160, 220	20
BGT/M 24380.Pi	85243825	132.5	482.6	238	427	3	84	160, 220	20
BGT/M 30340.Pi	85303425	132.5	269.24	298	213.64	3	42	160, 220, 280	20
BGT/M 30360.Pi	85303625	132.5	375.92	298	320.32	3	63	160, 220, 280	20
BGT/M 30380.Pi	85303825	132.5	482.6	298	427	3	84	160, 220, 280	20
BGT/M 36340.Pi	85363425	132.5	269.24	358	213.64	3	42	160, 220, 280, 340	20
BGT/M 36360.Pi	85363625	132.5	375.92	358	320.32	3	63	160, 220, 280, 340	20
BGT/M 36380.Pi	85363825	132.5	482.6	358	427	3	84	160, 220, 280, 340	20

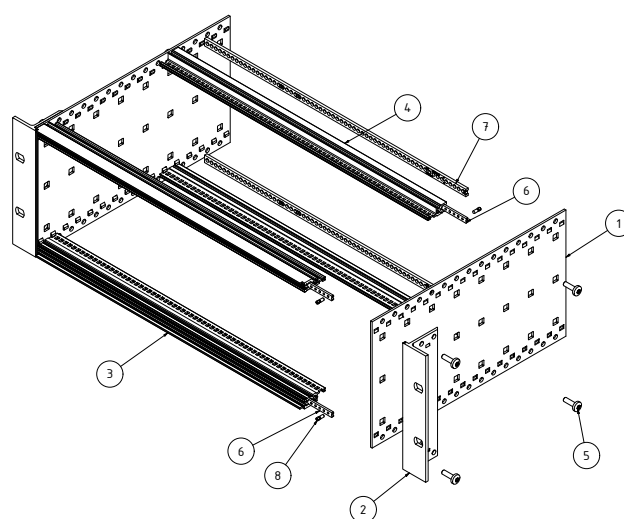
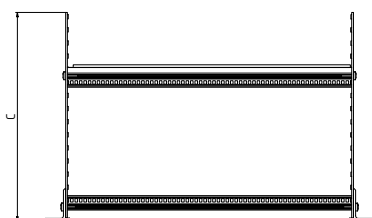
Scope Of Delivery:

- 1) 2 side panels (BSW/M ..300)
- 2) 2 flanges (FL/M 00300)
- 3) 2 front profiles (PF/M 000..)
- 4) 2 bus profiles (PB/M 000..)
- 5) Mounting material (BFS 0100)
- 6) 4 tapped strips (GS/M)
- 7) 2 insulating strips (IS/M)
- 8) 4 M2.5 (GSE/M) slotted set screws

Notes: If the ejector handles are used acc. to DIN IEC 60297-3-102 / IEEE 1101.10, the subrack must be fitted with the appropriate PF/M 000.. BN-HG front profile. The required subracks can be supplied on request.



Z-2904.358



Interzoll Modul

Subrack for backplanes (.Pi)

Subrack 6 U for backplanes (.Pi)

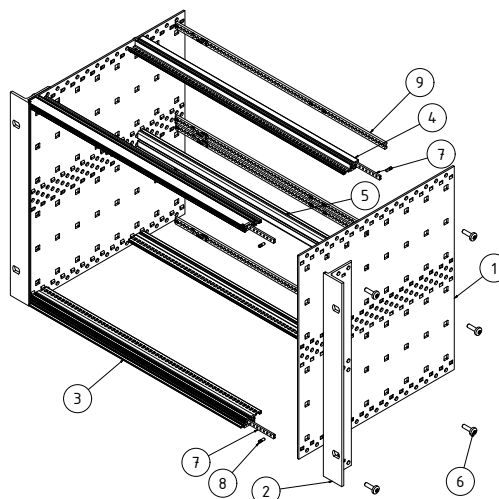
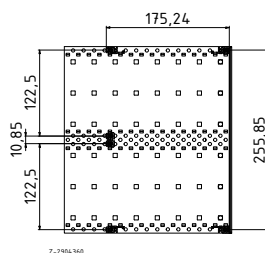
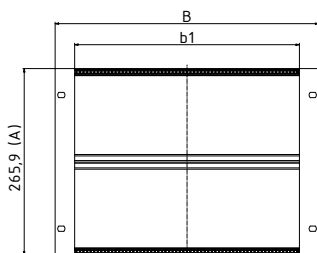
Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT/M 18640.Pi	85186425	265.9	269.24	178	213.64	6	42	160	20
BGT/M 18660.Pi	85186625	265.9	375.92	178	320.32	6	63	160	20
BGT/M 18680.Pi	85186825	265.9	482.6	178	427	6	84	160	20
BGT/M 24640.Pi	85246425	265.9	269.24	238	213.64	6	42	160, 220	20
BGT/M 24660.Pi	85246625	265.9	375.92	238	320.32	6	63	160, 220	20
BGT/M 24680.Pi	85246825	265.9	482.6	238	427	6	84	160, 220	20
BGT/M 30640.Pi	85306425	265.9	269.24	298	213.64	6	42	160, 220, 280	20
BGT/M 30660.Pi	85306625	265.9	375.92	298	320.32	6	63	160, 220, 280	20
BGT/M 30680.Pi	85306825	265.9	482.6	298	427	6	84	160, 220, 280	20
BGT/M 36640.Pi	85366425	265.9	269.24	358	213.64	6	42	160, 220, 280, 340	20
BGT/M 36660.Pi	85366625	265.9	375.92	358	320.32	6	63	160, 220, 280, 340	20
BGT/M 36680.Pi	85366825	265.9	482.6	358	427	6	84	160, 220, 280, 340	20



Scope Of Delivery:

- 1) 2 side panels (BSW/M ..600)
- 2) 2 flanges (FL/M 00600)
- 3) 2 front profiles (PF/M 000..)
- 4) 2 bus profiles (PB/M 000..)
- 5) 1 double bus profile (PBD/M 006..)
- 6) Mounting material (BFS 0100)
- 7) 6 tapped strips (GS/M)
- 8) 6 M2.5 (GSE/M) slotted set screws
- 9) 4 insulating strips (IS/M)

Notes: If the ejector handles are used acc. to DIN IEC 60297-3-102 / IEEE 1101.10, the subrack must be fitted with the appropriate PF/M 000.. BN-HG front profile. The required subracks can be supplied on request.



Interzoll Modul

Subrack for connectors (.12)

Subrack 3 U for connectors (.12)

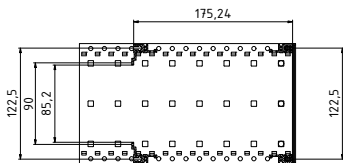
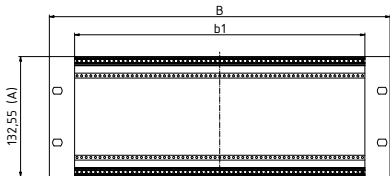


Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT/M 18340.12	85183405	132.5	269.24	178	213.64	3	42	160	20
BGT/M 18360.12	85183605	132.5	375.92	178	320.32	3	63	160	20
BGT/M 18380.12	85183805	132.5	482.6	178	427	3	84	160	20
BGT/M 24340.12	85243405	132.5	269.24	238	213.64	3	42	160, 220	20
BGT/M 24360.12	85243605	132.5	375.92	238	320.32	3	63	160, 220	20
BGT/M 24380.12	85243805	132.5	482.6	238	427	3	84	160, 220	20
BGT/M 30340.12	85303405	132.5	269.24	298	213.64	3	42	160, 220, 280	20
BGT/M 30360.12	85303605	132.5	375.92	298	320.32	3	63	160, 220, 280	20
BGT/M 30380.12	85303805	132.5	482.6	298	427	3	84	160, 220, 280	20
BGT/M 36340.12	85363405	132.5	269.24	358	213.64	3	42	160, 220, 280, 340	20
BGT/M 36360.12	85363605	132.5	375.92	358	320.32	3	63	160, 220, 280, 340	20
BGT/M 36380.12	85363805	132.5	482.6	358	427	3	84	160, 220, 280, 340	20

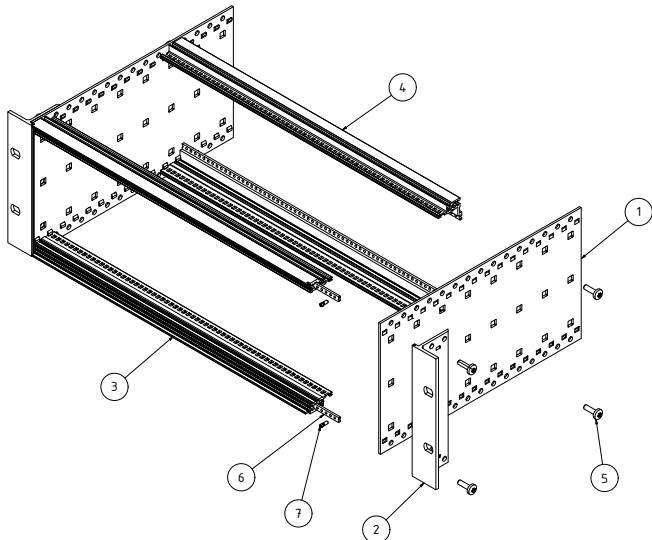
Scope Of Delivery:

- 1) 2 side panels (BSW/M ..300)
- 2) 2 flanges (FL/M 00300)
- 3) 2 front profiles (PF/M 000..)
- 4) 2 bus profiles (PB/M 000..)
- 5) Mounting material (BFS 0100)
- 6) 2 tapped strips (GS/M)
- 7) 2 M2.5 (GSE/M) slotted set screws

Notes: If the ejector handles are used acc. to DIN IEC 60297-3-102 / IEEE 1101.10, the subrack must be fitted with the appropriate PF/M 000.. BN-HG front profile. The required subracks can be supplied on request.



Z-2904359



Interzoll Modul

Subrack for connectors (.12)

Subrack 6 U for connectors (.12)

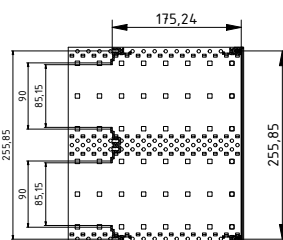
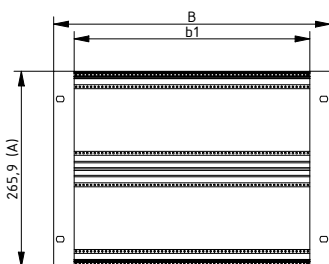
Model	Order no.	A	B	C	b1	U	HP	Card depth	IP
BGT/M 18640.12	85186405	265.9	269.24	178	213.64	6	42	160	20
BGT/M 18660.12	85186605	265.9	375.92	178	320.32	6	63	160	20
BGT/M 18680.12	85186805	265.9	482.6	178	427	6	84	160	20
BGT/M 24640.12	85246405	265.9	269.24	238	213.64	6	42	160, 220	20
BGT/M 24660.12	85246605	265.9	375.92	238	320.32	6	63	160, 220	20
BGT/M 24680.12	85246805	265.9	482.6	238	427	6	84	160, 220	20
BGT/M 30640.12	85306405	265.9	269.24	298	213.64	6	42	160, 220, 280	20
BGT/M 30660.12	85306605	265.9	375.92	298	320.32	6	63	160, 220, 280	20
BGT/M 30680.12	85306805	265.9	482.6	298	427	6	84	160, 220, 280	20
BGT/M 36640.12	85366405	265.9	269.24	358	213.64	6	42	160, 220, 280, 340	20
BGT/M 36660.12	85366605	265.9	375.92	358	320.32	6	63	160, 220, 280, 340	20
BGT/M 36680.12	85366805	265.9	482.6	358	427	6	84	160, 220, 280, 340	20



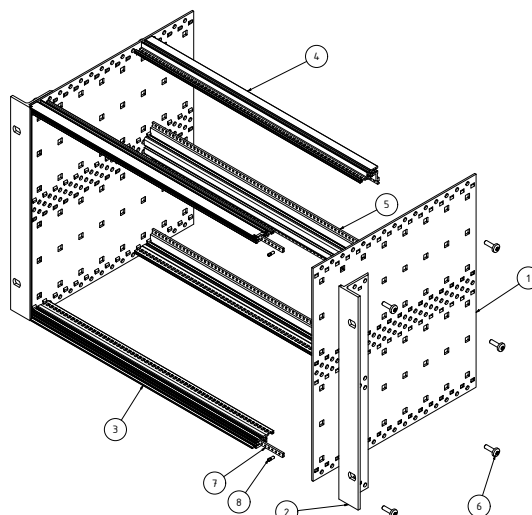
Scope Of Delivery:

- 1) 2 side panels (BSW/M ..600)
- 2) 2 flanges (FL/M 00600)
- 3) 4) 2 front profiles (PF/M 000..)
- 5) 2 rear profiles (PR/M 000.. .12)
- 6) 1 double connector profile (PSD/M 006.. .12)
- 7) Mounting material (BFS 0100)
- 8) 2 tapped strips (GS/M)
- 9) 2 M2.5 (GSE/M) slotted set screws

Notes: If the ejector handles are used acc. to DIN IEC 60297-3-102 / IEEE 1101.10, the subrack must be fitted with the appropriate PF/M 000.. BN-HG front profile. The required subracks can be supplied on request.



Z-2954.361



Interzoll Modul

EMC screening

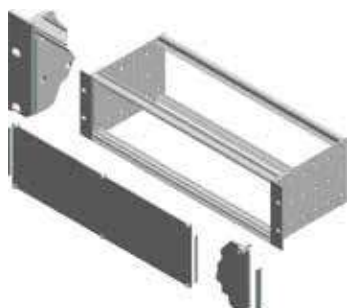


EMC springs, stainless steel, for the connection between profile and cover plate

Model	Order no.	HP
EMV-Feder-AP/M 42TE	86001042	42
EMV-Feder-AP/M 63TE	86001063	63
EMV-Feder-AP/M 84TE	86001084	84

Scope Of Delivery: 10 EMC springs

Notes: Can be mounted in all front and rear profiles for contacting with angled EMC cover plates.



EMC springs, stainless steel, for the connection between front panels, front panel and flange or rear panel and rear end profile

Model	Order no.	U
EMV-Feder-FP/M 2HE	86001002	2
EMV-Feder-FP/M 3HE	86001003	3
EMV-Feder-FP/M 6HE	86001006	6

Scope Of Delivery: 10 EMC springs

Notes: Can be mounted in flanges and end profiles. The front panels must also be equipped with springs.



EMC springs, stainless steel, for the connection between the front panel / backplane and profile

Model	Order no.	HP
EMV-Feder-FP/M 42TE	86001142	42
EMV-Feder-FP/M 63TE	86001163	63
EMV-Feder-FP/M 84TE	86001184	84

Scope Of Delivery: 10 EMC springs

Notes: arrows point outwards.



Assembly tools for EMC spring

Model	Order no.	Note
MWZ/M-I	86001201	For AP/M
MWZ/M-II	86001202	For FP/M

Scope Of Delivery: 1 piece

Interzoll Modul

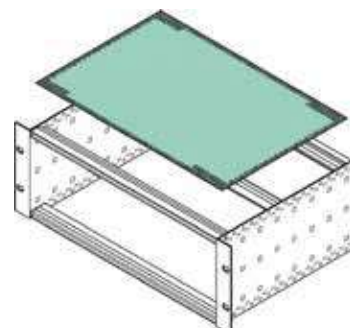
Cover plates

Insertable cover plates, perforated untreated aluminium, not for use with BN profiles

Model	Order no.	b1	c1	HP	Card depth
AD/M 13042-L	86442132	218.14	128	42	160
AD/M 13063-L	86463132	324.82	128	63	160
AD/M 13084-L	86484132	431.5	128	84	160
AD/M 19042-L	86442192	218.14	188	42	220
AD/M 19063-L	86463192	324.82	188	63	220
AD/M 19084-L	86484192	431.5	188	84	220

Scope Of Delivery: 1 cover plate

Notes: Fixing in the profile rail groove. Other versions on request.

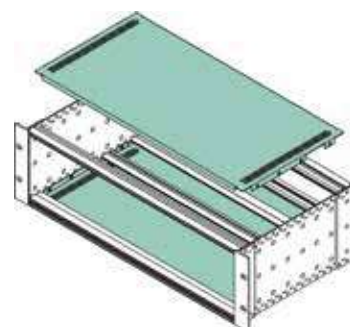


Cover plates EMC, screw-on, aluminium, passivated, perforated, with side notches for profile rails with depths 160, 220, 280, 340, 400 and 460 mm

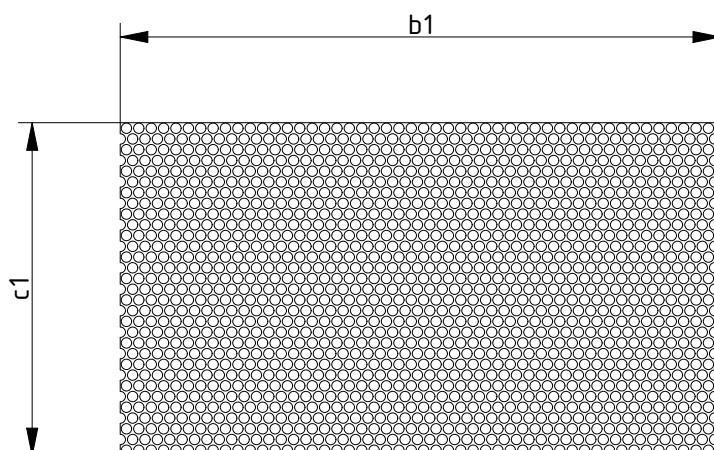
Model	Order no.	b1	c1	HP	Card depth
ADGA/M 15042-L	86442154	217.99	151	42	160
ADGA/M 15063-L	86463154	324.67	151	63	160
ADGA/M 15084-L	86484154	431.35	151	84	160
ADGA/M 21042-L	86442214	217.99	211	42	160, 220
ADGA/M 21063-L	86463214	324.67	211	63	160, 220
ADGA/M 21084-L	86484214	431.35	211	84	160, 220
ADGA/M 27042-L	86442274	217.99	271	42	160, 220, 280
ADGA/M 27063-L	86463274	324.67	271	63	160, 220, 280
ADGA/M 27084-L	86484274	431.35	271	84	160, 220, 280
ADGA/M 33084-L	86484334	431.35	331	84	160, 220, 280, 340
ADGA/M 39084-L	86484394	431.35	391	84	160, 220, 280, 340, 400
ADGA/M 45084-L	86484454	431.35	451	84	160, 220, 280, 340, 400, 460

Scope Of Delivery: 2 cover plates, mounting material

Notes: 4 EMC springs AP/M are required for contacting to the profile rails.



Interzoll Modul



Interzoll Modul

Card guides



Card guides standard, one piece, plastic, UL 94 V0, red

Model	Order no.	Card depth	Note
KF/M 160	86216010	160	Groove width 2 mm
KF/M 160-2,5	86216020	160	Groove width 2.5 mm
KF/M 220	86222010	220	Groove width 2 mm
KF/M 220-2,5	86222020	220	Groove width 2.5 mm
KF/M 80	86021008	80	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: 80 mm long card guide for a plug-in unit with rear I/O acc. to DIN IEC 60297-3-101 / IEEE 1101.11. Fixing screws (only BN) BFS/M 0200 (86000020) as accessory.

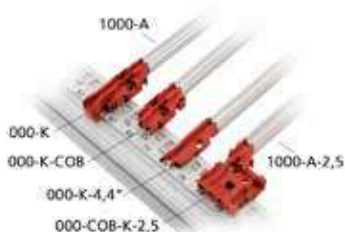


Card guides for coding block, one piece, plastic, UL 94 V0, red

Model	Order no.	Card depth	Note
KF/M 160-COB	86021016	160	Groove width 2 mm
KF/M 160-COB-V	86022016	160	Groove width 2 mm
KF/M 220-COB	86021022	220	Groove width 2 mm
KF/M 220-COB-V	86022022	220	Groove width 2 mm
KF/M 280-COB-V	86022028	280	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: Coding block and coding pegs on request. V-design for heavy modules. Fixing screws (only BN) BFS/M 0200 (86000020) as accessory.



Individual components for universal card guide, plastic, UL 94 V0, red, card guide profiles of natural-coloured anodised aluminium

Model	Order no.	Note
KF/M 000-COB-K-2,5	86020300	End pieces including coding block, groove width 2.5 mm
KF/M 000-K	86020000	Standard end pieces, groove width 2 mm
KF/M 000-K-4,4"	86020200	End pieces for card height 4.4", groove width 2 mm
KF/M 000-K-COB	86020100	End pieces for coding block / card retainer, groove width 2 mm
KF/M 1000	86200020	Card guide profile (1000 mm), groove width 2 mm
KF/M 1000-A-2,5	86200030	Card guide profile (1000 mm), groove width 2.5 mm

Scope Of Delivery: 1 piece; end pieces: 10 pairs (right/left)

Notes: End pieces ...4,4" are for circuit board height 4.4" (111.7 mm). Card earthing cannot be used with this type. Fixing screws only for use with the BN profiles. For card guide ...4.4" please use BFS/M 2400 (86000240); for all other types BFS/M 0200 (86000200). Special profile lengths on request.



Card guides, one piece, for heavy PCBs and plug-in units, natural-coloured anodised aluminium

Model	Order no.	Card depth	Note
KF/M 160-V-A	86416010	160	Groove width 2 mm
KF/M 220-V-A	86422010	220	Groove width 2 mm
KF/M 280-V-A	86428010	280	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: Fixing screws only for use with the BN profiles. Please use BFS/M 2500 (86000250) see accessories.

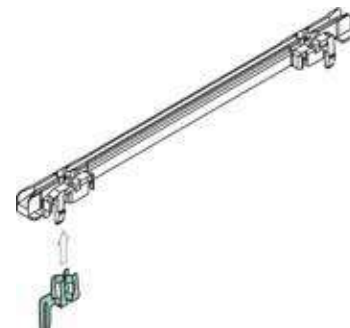
Interzoll Modul

Card guides

Card earthing, tin-plated steel, for contacting between board and subrack

Model	Order no.	Note
KE/M	86022100	Card earthing for circuit board

Scope Of Delivery: 20 card earthing units

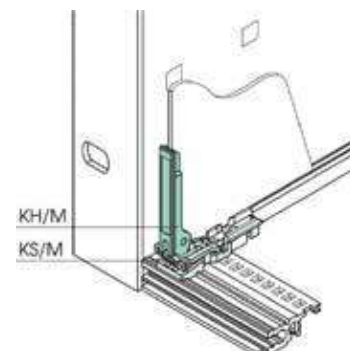


Card lever and card retainer, plastic, UL 94 V0, red, only for use with KF/M...COB (-V)

Model	Order no.	Note
KH/M	86022300	Card lever
KS/M	86022200	Card retainer

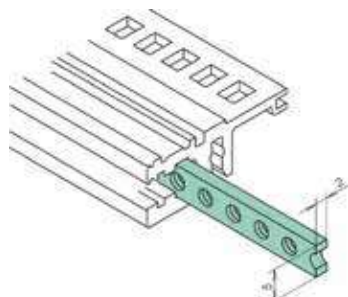
Scope Of Delivery: 1 card lever / 1 card retainer

Notes: 3 HP.



Interzoll Modul

Thread and insulating strips

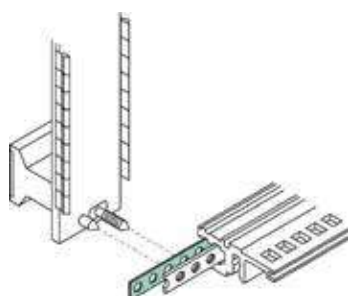


Tapped strips, galv. steel, M2.5

Model	Order no.	HP
GS/M 00042	86542110	42
GS/M 00063	86563110	63
GS/M 00084	86584110	84

Scope Of Delivery: 1 tapped strip

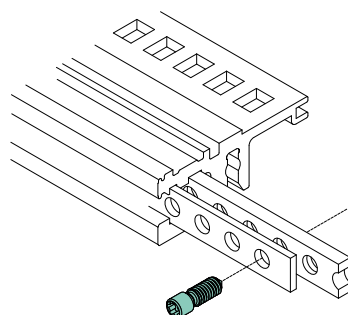
Notes: Can be used for all Interzoll Modul profiles. To fix front panels, use 12.3 mm long collar screws.



Perforated strip, untreated aluminium, for centring the shielded front panels via guide pins

Model	Order no.	HP
LO/M 00042	86542120	42
LO/M 00063	86563120	63
LO/M 00084	86584120	84

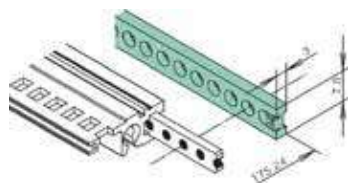
Scope Of Delivery: 1 perforated strip



M2.5 slotted set screw for fixing the perforated strip and fixing and earthing the threaded insert.

Model	Order no.	Note
GSE/M	86002000	SHR STI Z M2.5x6 Torx 8 A2, stainless steel

Scope Of Delivery: 20 slotted set screws

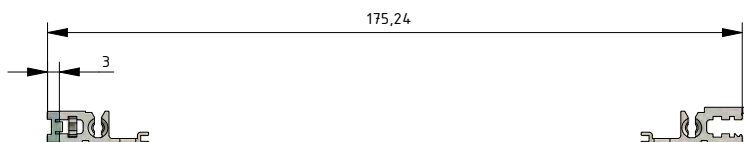


Insulating strip, plastic, UL 94 V0, for insulated fixing of backplanes

Model	Order no.	HP
IS/M 00042	86542130	42
IS/M 00063	86563130	63
IS/M 00084	86584130	84

Scope Of Delivery: 1 insulating strip

Notes: Mounting material BFS/M 0300 and 0400 as accessories.



Z-2904365

Interzoll Modul

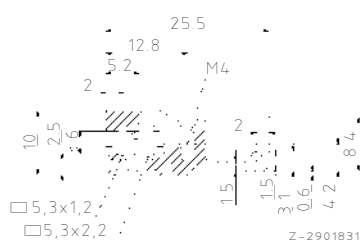
Profiles / profile sets

Front profiles without lip, natural-coloured anodised aluminium, conductive contact surfaces, for installation behind full-width front panels

Model	Order no.	HP
PF/M 00042-OD	86542310	42
PF/M 00063-OD	86563310	63
PF/M 00084-OD	86584310	84

Scope Of Delivery: 1 profile

Notes: For installation behind a full-width front panel, e.g. 6 U. Please order the EMC spring separately.

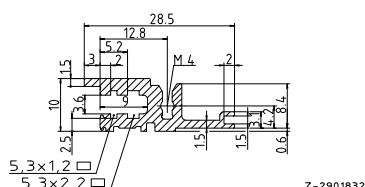


Front profiles with short lip (standard), natural-coloured anodised aluminium, conductive contact surfaces

Model	Order no.	HP
PF/M 00042	86542320	42
PF/M 00063	86563320	63
PF/M 00084	86584320	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

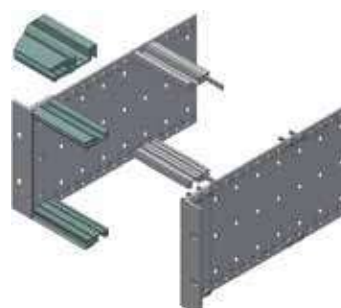
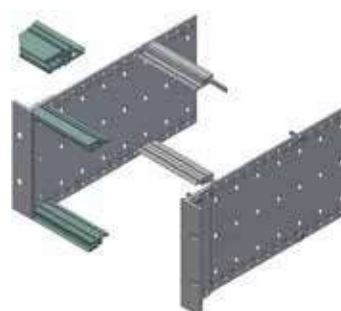
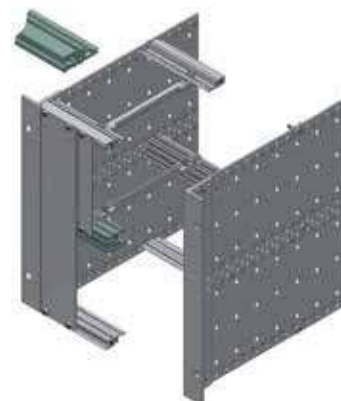
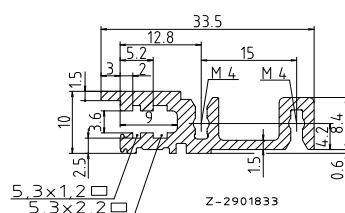


Front profiles for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing

Model	Order no.	HP
PF/M 00042-BN	86542330	42
PF/M 00063-BN	86563330	63
PF/M 00084-BN	86584330	84

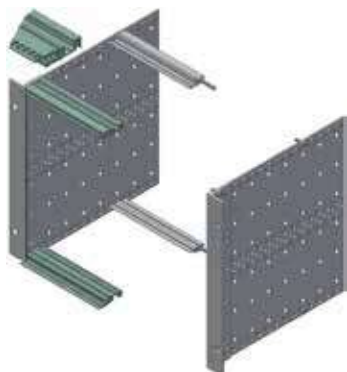
Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.



Interzoll Modul

Profiles / profile sets

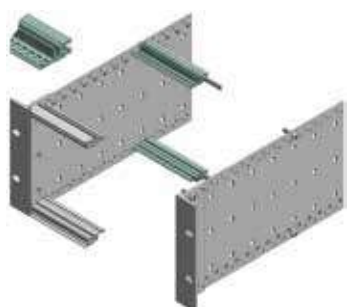
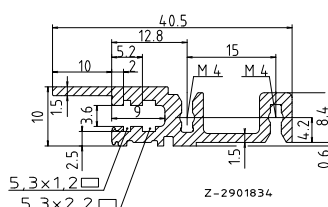


Front profiles for high mechanical loads and ejector handle acc. to IEC 60297-3-102 / IEEE 1101.10, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing

Model	Order no.	HP
PF/M 00042-BN-HG	86542340	42
PF/M 00063-BN-HG	86563340	63
PF/M 00084-BN-HG	86584340	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

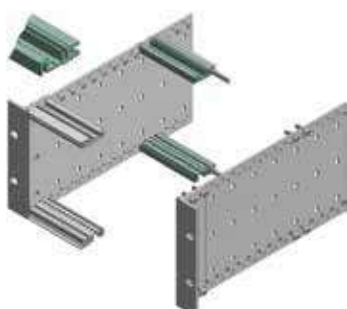
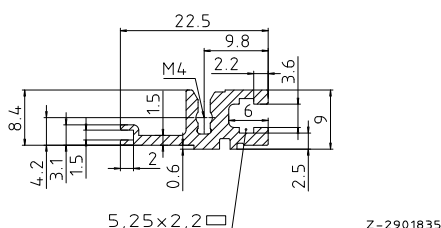


Bus profiles, natural-coloured anodised aluminium, for indirect backplane fixing

Model	Order no.	HP
PB/M 00042	86542410	42
PB/M 00063	86563410	63
PB/M 00084	86584410	84

Scope Of Delivery: 1 profile

Notes: Please order the insulating strip and EMC spring separately.

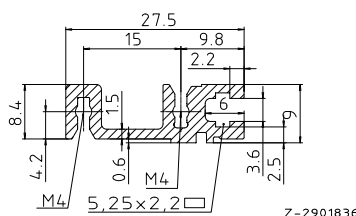


Bus profiles for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing, for indirect backplane fixing

Model	Order no.	HP
PB/M 00042-BN	86542420	42
PB/M 00063-BN	86563420	63
PB/M 00084-BN	86584420	84

Scope Of Delivery: 1 profile

Notes: Please order the insulating strip and EMC spring separately.



Interzoll Modul

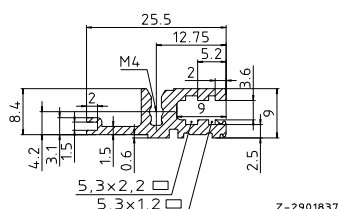
Profiles / profile sets

Bus profiles, natural-coloured anodised aluminium, conductive contact surfaces, for backplane mounting with an integrated insulating strip clearance

Model	Order no.	HP
PBIS/M 00042	86542430	42
PBIS/M 00063	86563430	63
PBIS/M 00084	86584430	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

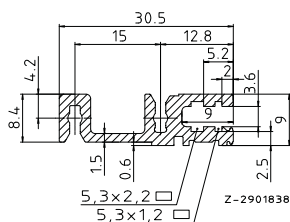


Bus profiles with an integrated insulating strip clearance for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing, for direct backplane fixing

Model	Order no.	HP
PBIS/M 00042-BN	86542440	42
PBIS/M 00063-BN	86563440	63
PBIS/M 00084-BN	86584440	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

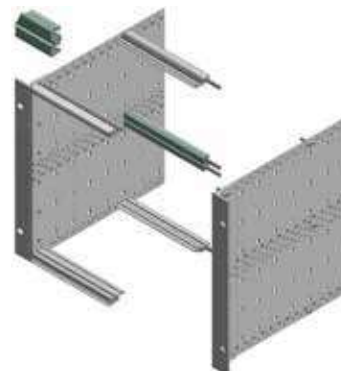
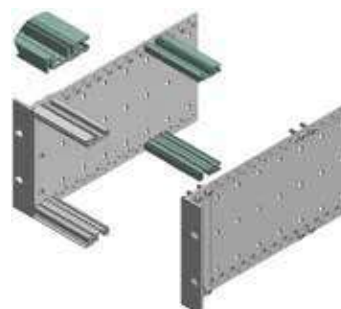
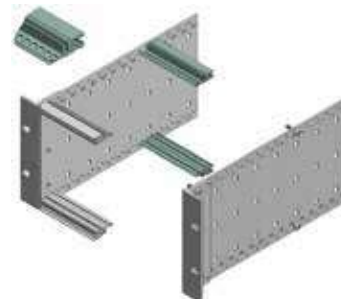
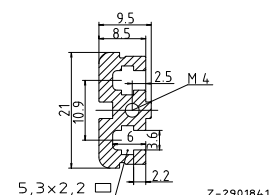


Double bus profiles, natural-coloured anodised aluminium, conductive contact surfaces, for bus PCB fixing

Model	Order no.	HP
PBD/M 00642	86542450	42
PBD/M 00663	86563450	63
PBD/M 00684	86584450	84

Scope Of Delivery: 1 profile

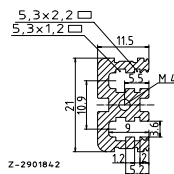
Notes: Please order the insulating strip and EMC spring separately.



Profiles / profile sets

Model	Order no.	HP
PBDIS/M 00642	86542460	42
PBDIS/M 00663	86563460	63
PBDIS/M 00684	86584460	84

Notes: Please order the EMC spring separately.



Model	Order no.	HP
PR/M 00042.12	86542510	42
PR/M 00063.12	86563510	63
PR/M 00084.12	86584510	84

[illegible]

Model	Order no.	HP
PR/M 00042.12-BN	86542520	42
PR/M 00063.12-BN	86563520	63
PR/M 00084.12-BN	86584520	84

Z-2901840

Technical drawing of a mechanical part (Z-2901840) showing dimensions and tolerances. The drawing includes a cross-section view of a shaft assembly with various components labeled with numbers 1 through 6. Dimensions are provided in millimeters (mm) with associated tolerances.

Key dimensions and tolerances:

- Overall length: 30.5 mm
- Shaft diameter: M4
- Threaded section length: 15 mm
- Internal thread: M4
- Internal hole diameter: 0.6 mm
- Internal hole length: 12.8 mm
- Internal hole diameter: 5.2 mm
- Internal hole length: 9 mm
- Internal hole diameter: 5.3 x 2.2 mm
- Internal hole diameter: 5.3 x 1.1 mm
- Internal hole diameter: 2.5 mm
- Internal hole length: 9 mm
- Internal hole diameter: 15.2 mm
- Internal hole length: 24.6 mm
- Internal hole diameter: 2 mm
- Internal hole length: 2.4 mm
- Internal hole diameter: 2.5 mm
- Internal hole length: 2.4 mm

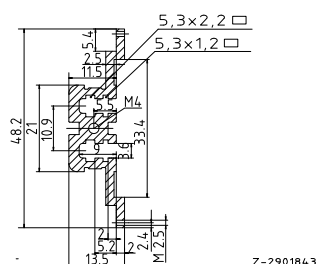
Interzoll Modul

Profiles / profile sets

Double connector profiles, natural-coloured anodised aluminium, conductive contact surfaces, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	HP
PSD/M 00642.12	86542610	42
PSD/M 00663.12	86563610	63
PSD/M 00684.12	86584610	84

Scope Of Delivery: 1 profile

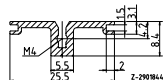


Snap profiles, natural-coloured anodised aluminium, conductive contact surfaces, for combined mounting and rear fitting of 80 mm Compact PCI units

Model	Order no.	HP
RP/M 00042	86542710	42
RP/M 00063	86563710	63
RP/M 00084	86584710	84

Scope Of Delivery: 1 profile

Notes: RP/M 00084 with notch.

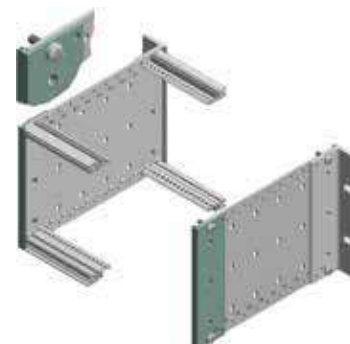
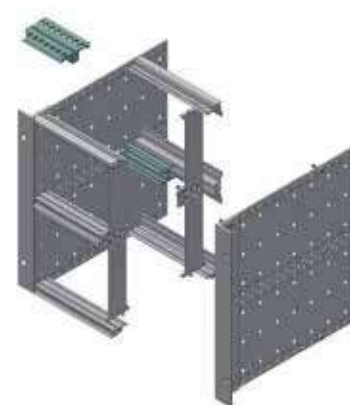
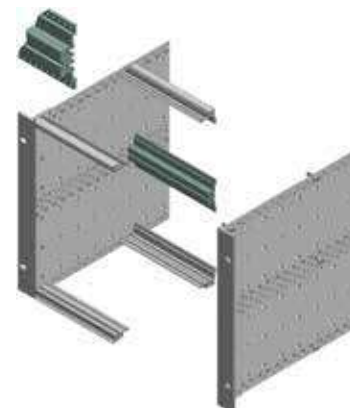
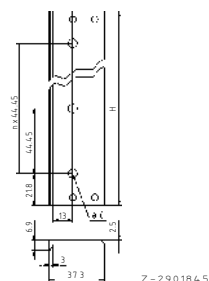


End profiles, passivated aluminium, for rear shielding, for use with all side panels

Model	Order no.	U
RAP/M 00300	86503810	3
RAP/M 00600	86506810	6

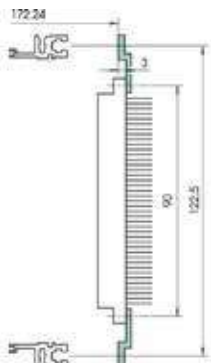
Scope Of Delivery: 1 profile

Notes: Mounting takes place with the profile rail fixing. Optional additional screwing with BFS/M 0600 (86000060) and 1500 (86000150). Can also be mounted on the front with the universal flange.



Interzoll Modul

Profiles / profile sets

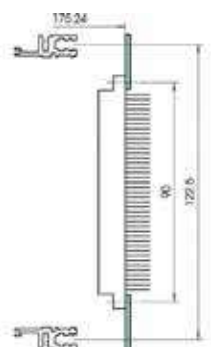


Z-rails, natural-coloured anodised aluminium, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	b1	HP
ZS/M 00040	86540210	203.2	40
ZS/M 00060	86560210	304.8	60
ZS/M 00084	86584210	426.7	84

Scope Of Delivery: 1 Z-rail

Notes: For extension of a bus profile for direct connector mounting. Not for use with PBIS. Mounting material BFS/M 0300 (86000030) as accessory. b1 = profile length



Perforated rails, passivated aluminium, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	b1	HP
LS/M 00040	86540220	203.2	40
LS/M 00060	86560220	304.8	60
LS/M 00084	86584220	426.7	84

Scope Of Delivery: 1 perforated rail

Notes: For extension of a bus profile for direct connector mounting. Only for use with PBIS. Mounting material BFS/M 0400 (86000040) as accessory. b1 = profile length

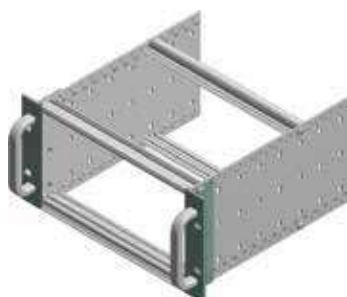


Flanges, front natural-coloured anodised, rear passivated, for BSW/M

Model	Order no.	U
FL/M 00300	86700031	3
FL/M 00600	86700061	6

Scope Of Delivery: 1 flange

Notes: Mounting is via the profile rail fixing. Additional fixing with BFS/M 0600 (86000060) and 1500 (86000150).



Flanges with holes for fixing handle, front natural-coloured anodised, rear passivated, for BSW /M

Model	Order no.	U
FLG/M 00300	86700032	3
FLG/M 00600	86700062	6

Scope Of Delivery: 1 flange

Notes: Mounting is via the profile rail fixing. Additional fixing with BFS/M 0600 (86000060) and 1500 (86000150).

Interzoll Modul

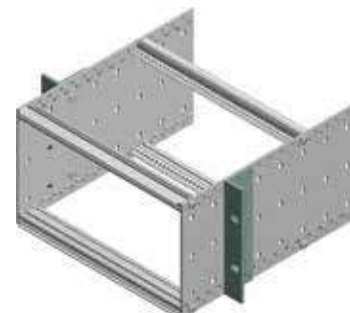
Profiles / profile sets

Flanges, universal, front natural-coloured anodised, rear passivated, for BSW/M

Model	Order no.	U
FLU/M 00300	86700033	3
FLU/M 00600	86700063	6

Scope Of Delivery: 1 flange

Notes: Mounting is via the profile rail fixing or, optionally, separately in a 30 mm grid. Mounting material BFS/M 0600 (86000060) and 1500 (86000150) as accessories.

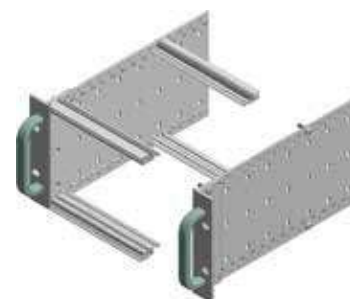


Handles for subracks, natural-coloured anodised aluminium

Model	Order no.	U
GR/M 00300	86700035	3

Scope Of Delivery: 1 handle

Notes: Mounting material BFS/M 0700 86000070 as accessories.



Interzoll Modul

Interzoll Modul

Side panels

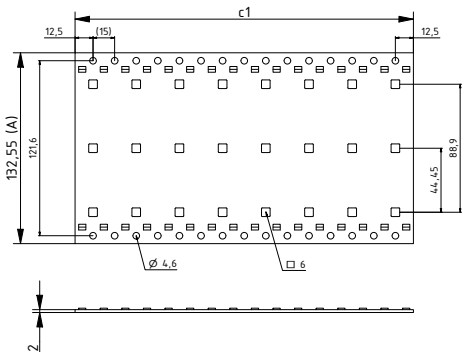


Side panels Standard and Compact PCI, passivated aluminium without flange

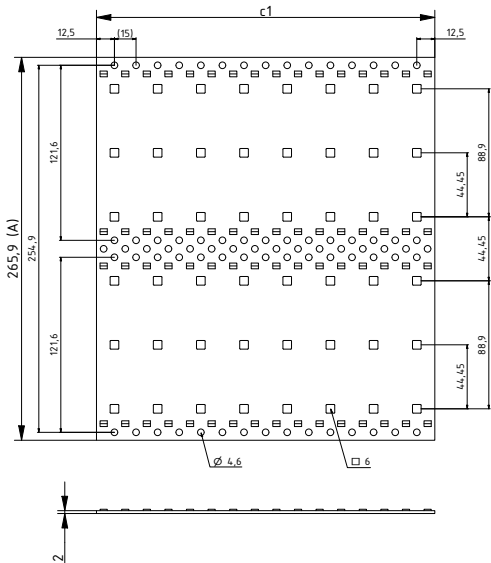
Model	Order no.	A	c1	U	Note
BSW/M 18300	86618031	132.55	175	3	Enclosure depth 178, side panel depth 175
BSW/M 18600	86618061	265.9	175	6	Enclosure depth 178, side panel depth 175
BSW/M 24300	86624031	132.55	235	3	Enclosure depth 238, side panel depth 235
BSW/M 24600	86624061	265.9	235	6	Enclosure depth 238, side panel depth 235
BSW/M 30300	86630031	132.55	295	3	Enclosure depth 298, side panel depth 295
BSW/M 30600	86630061	265.9	295	6	Enclosure depth 298, side panel depth 295
BSW/M 36300	86636031	132.55	355	3	Enclosure depth 358, side panel depth 355
BSW/M 36600	86636061	265.9	355	6	Enclosure depth 358, side panel depth 355
BSW/M 42300	86642031	132.55	415	3	Enclosure depth 418, side panel depth 415
BSW/M 42600	86642061	265.9	415	6	Enclosure depth 418, side panel depth 415
BSW/M 48300	86648031	132.55	475	3	Enclosure depth 478, side panel depth 475
BSW/M 48600	86648061	265.9	475	6	Enclosure depth 478, side panel depth 475

Scope Of Delivery: 1 side panel

Notes: Side panel 3 and 6 U - rear I/O for Compact PCI systems with installation of 160 mm plug-in units on the front and 80 mm plug-in units on the rear acc. to DIN IEC 60297-3-101 / IEEE 1101.11 on request.



Z-2904367



Side panels

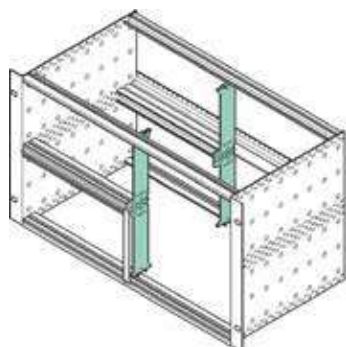


Notes: Flange types with holes for front handles and other sizes on request.



Interzoll Modul

Accessories

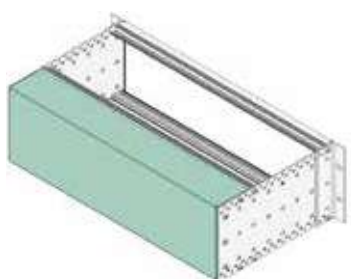


Separating strut, diecast zinc, for combined mounting of Euro and double Euro cards in 6 U subracks

Model	Order no.	U
TST/M 00600	86010600	6

Scope Of Delivery: 1 partition element

Notes: The partition element can be fitted on the left or right in the subrack. The partition is hooked in and can be screwed into position if required. Special profile rails on request. Part front panels and mounting material BFS/M 2900 (86002900) and 0900 (86000090) as accessories. Not suitable for AD/M.

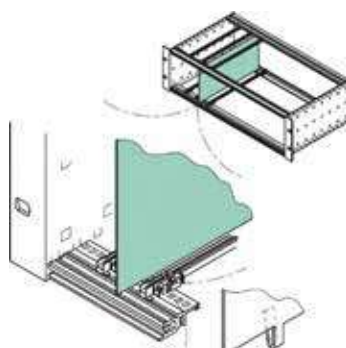


Shielded rear hood, passivated aluminium

Model	Order no.	U	HP
RW/M 00384	86384031	3	84

Scope Of Delivery: 1 rear hood

Notes: If the rear hood is used, the side panel must be 60 mm deeper than the rated dimension. Additional sizes on request. Mounting material BFS/M 0500 (86000050) and EMC spring AP/M (86001084) as accessories.

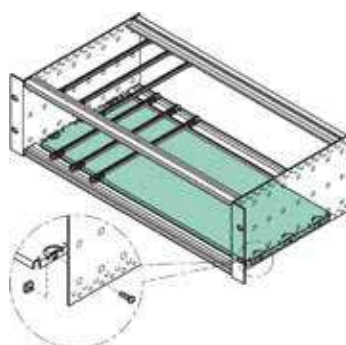


Partition, stainless steel, snaps onto the profiles

Model	Order no.	U	Card depth
TP/M 16300	86316032	3	160

Scope Of Delivery: 1 partition panel

Notes: 2 mm space requirement on the construction side. Additional sizes on request.

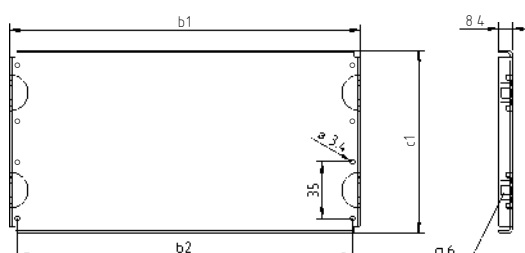


Mounting panel, passivated aluminium, for fixing additional components

Model	Order no.	b1	b2	c1	HP	Card depth
MP/M 22042	86342223	218	208.3	172.5	42	220
MP/M 22084	86384223	431.4	421.6	172.5	84	220

Scope Of Delivery: 1 mounting panel

Notes: Additional sizes on request. Mounting material BFS/M 0500 (86000050) and 0600 (86000060) as accessories. For Internorm Stil, use BFS/INS 0300 (86050300) instead of BFS/M 0500 (86000050).



Interzoll Modul

Accessories

Flanges for control panel mounting, natural-coloured anodised, for visually attractive closure to switch panel top and bottom

Model	Order no.	HP
FLS/M 00042	86742004	42
FLS/M 00063	86763004	63
FLS/M 00084	86784004	84

Scope Of Delivery: 1 flange

Notes: One flange each is screwed for up and down on the front profile. Mounting material BFS/M 0200 (86000020) as accessory.



Interzoll Modul

Screws



Interzoll Modul mounting material

Model	Order no.	Note
BFS/M 0100	86000010	SHR Z M 4x14-SO, toothed, galvanised steel, torx 20, for all Interzoll Modul profiles
BFS/M 0200	86000020	SHR Z KT 2.5x9.3, galvanised steel, torx 8, for FLS/M, KF/M...
BFS/M 0300	86000030	SHR Z M 2.5x7, galvanised steel, torx 8, for ZS/M
BFS/M 0400	86000040	SHR Z M 2.5x10, galvanised steel, torx 8, for LS/M
BFS/M 0500	86000050	SHR Z M 4x6-SO, toothed, anodised steel, torx 20, MP/M, RW/M
BFS/M 0600	86000060	MU M 4-4KT-SO, galvanised steel, for VB/M, TL/M, TLB/M, MP/M, RAP/M
BFS/M 0700	86000070	SHR S M 5x12, galvanised steel, recessed screw head, for GR/M
BFS/M 0800	86000080	SHR S M 4x5, galvanised steel, torx 20, for TL/M, TLB/M
BFS/M 0900	86000090	SHR S M 4x14-SO, toothed, torx 20, anodised steel, for TST/M
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1500	86000150	SHR Z M 4x6-SO countersink cone, galvanised steel, torx 20, for VB/M, RAP/M
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 1800	86000180	MU M 2.5-4KT, galvanised steel, for FX/M
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2400	86000240	SHR S KT 2.5x7.3, galvanised steel, torx 8, for KF/M 000-K-4.4"
BFS/M 2500	86000250	SHR Z KT 2.7x7.3, galvanised steel, torx 8, for KF/M 160-V-A
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
BFS/M2800	86000280	SHR Z M4x6-F-SO, toothed, torx 20, for ADGA/M
BFS/M2900	86000290	SHR Z KT 2.5x10, galvanised steel, torx 8, for TST/M

Scope Of Delivery: 20 pieces

Interzoll Modul

Front panel

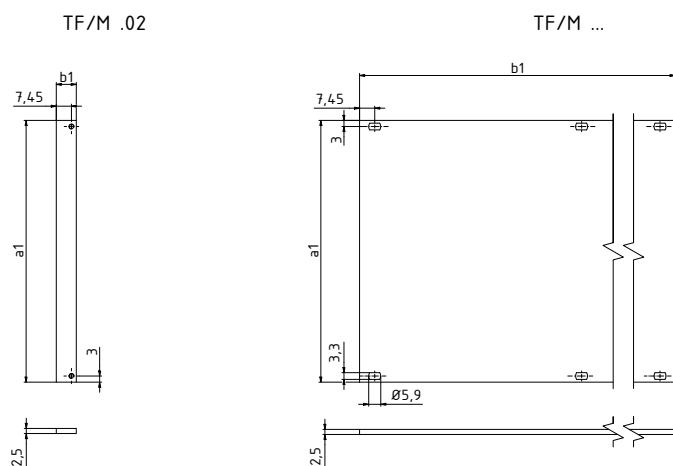
Part front panels, natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 242	86842023	84.05	213.01	2	42
TF/M 263	86863023	84.05	319.69	2	63
TF/M 284	86884023	84.05	426.37	2	84
TF/M 302	86802033	128.5	9.81	3	2
TF/M 303	86803033	128.5	14.89	3	3
TF/M 304	86804033	128.5	19.97	3	4
TF/M 306	86806033	128.5	30.13	3	6
TF/M 307	86807033	128.5	35.21	3	7
TF/M 308	86808033	128.5	40.29	3	8
TF/M 310	86810033	128.5	50.45	3	10
TF/M 312	86812033	128.5	60.61	3	12
TF/M 314	86814033	128.5	70.77	3	14
TF/M 318	86818033	128.5	91.09	3	18
TF/M 319	86819033	128.5	96.17	3	19
TF/M 320	86820033	128.5	101.25	3	20
TF/M 321	86821033	128.5	106.33	3	21
TF/M 328	86828033	128.5	141.97	3	28
TF/M 340	86840033	128.5	202.85	3	40
TF/M 342	86842033	128.5	213.01	3	42
TF/M 363	86863033	128.5	319.69	3	63
TF/M 384	86884033	128.5	426.37	3	84
TF/M 484	86884043	172.95	426.37	4	84
TF/M 604	86804063	261.85	19.97	6	4
TF/M 605	86805063	261.85	25.05	6	5
TF/M 608	86808063	261.85	40.29	6	8
TF/M 628	86828063	261.85	141.89	6	28
TF/M 642	86842063	261.85	213.01	6	42
TF/M 684	86884063	261.85	426.37	6	84



Scope Of Delivery: 1 part front panel

Notes: Special sizes on request. Screw holders and collar screws as accessories.



Interzoll Modul

Front panel

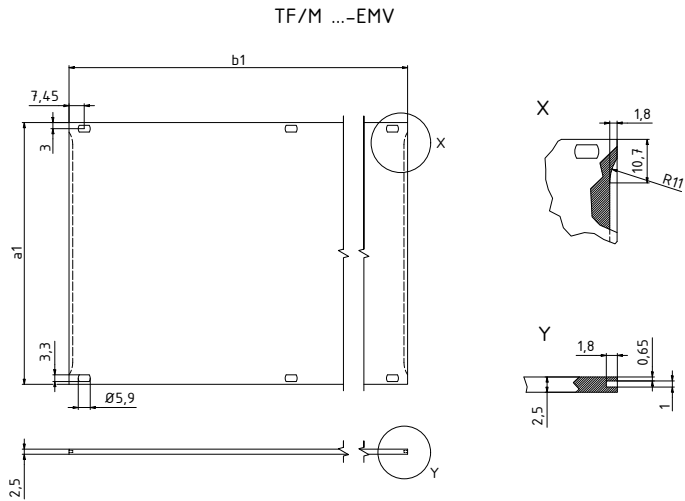


Part front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pins

Model	Order no.	a1	b1	U	HP
TF/M 304-EMV	86804034	128.5	19.97	3	4
TF/M 308-EMV	86808034	128.5	40.29	3	8
TF/M 310-EMV	86810034	128.5	50.45	3	10
TF/M 314-EMV	86814034	128.5	70.77	3	14
TF/M 320-EMV	86820034	128.5	101.25	3	20
TF/M 321-EMV	86821034	128.5	106.33	3	21
TF/M 340-EMV	86840034	128.5	202.85	3	40
TF/M 342-EMV	86842034	128.5	213.01	3	42
TF/M 363-EMV	86863034	128.5	319.69	3	63
TF/M 384-EMV	86884034	128.5	426.37	3	84
TF/M 604-EMV	86804064	261.85	19.97	6	4
TF/M 608-EMV	86808064	261.85	40.29	6	8
TF/M 612-EMV	86812064	261.85	60.61	6	12
TF/M 684-EMV	86884064	261.85	426.37	6	84

Scope Of Delivery: 1 part front panel

Notes: Additional sizes on request. For mounting material and EMC springs, see Interzoll Modul accessories.



Z-2904370

Interzoll Modul

Front panel

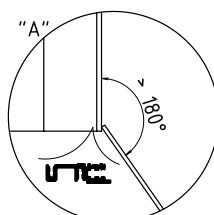
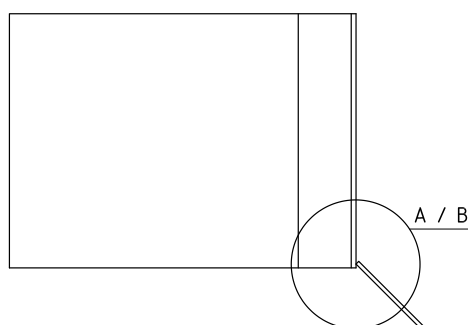
Front panels, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-K	86842038	128.5	213.01	3	42
TF/M 363-K	86863038	128.5	319.69	3	63
TF/M 384-K	86884038	128.5	426.37	3	84
TF/M 642-K	86842068	261.85	213.01	6	42
TF/M 663-K	86863068	261.85	319.69	6	63
TF/M 684-K	86884068	261.85	426.37	6	84

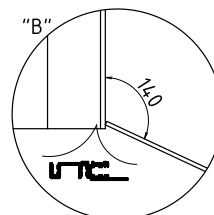


Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws BFS/M 2200, mounting material

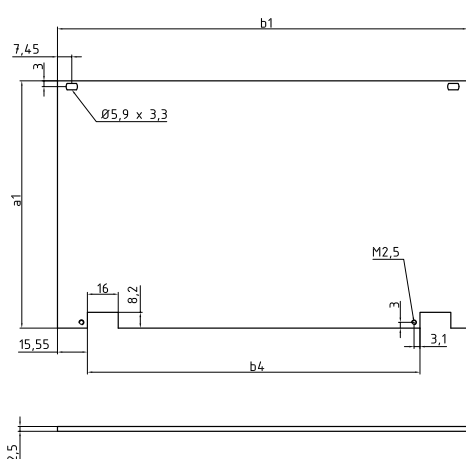
Notes: The usable width is not restricted. Can be unhooked at 135° except for Internorm Stil. One tapped strip above and below is required for each fixing.



Frontprofil mit
kurzem Dach/
Front profile
with short lip



Frontprofil mit
langem Dach/
Front profile
with long lip



Z-290/987-K

Interzoll Modul

Front panel

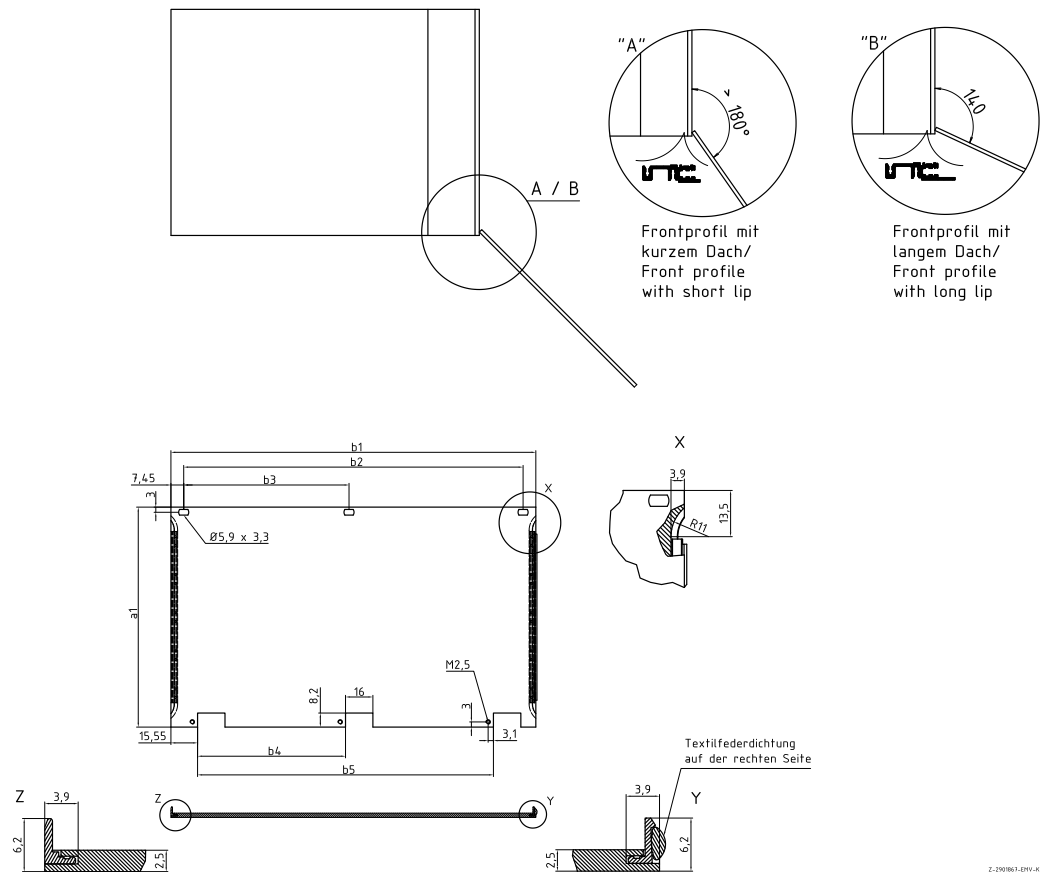


Front panels, EMC, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-EMV-K	86842037	128.5	213.01	3	42
TF/M 363-EMV-K	86863037	128.5	319.69	3	63
TF/M 384-EMV-K	86884037	128.5	426.37	3	84
TF/M 642-EMV-K	86842067	261.85	213.01	6	42
TF/M 684-EMV-K	86884067	261.85	426.37	6	84

Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws M2.5x12.3, EMC textile seal, mounting material

Notes: Shielded, part front panels with slits for EMC springs (can also be used without EMC springs). The usable width is not restricted. Can be removed at 135°, except for Internorm Stil. 1 tapped strip is required in each case for fixing up and down.



Z-290/863-EMV-K

Interzoll Modul

Front panel

Plug-in front panels, front natural-coloured anodised aluminium, passivated on rear, incl. handles, plastic, UL 94 V 0, light grey

Model	Order no.	a1	b1	U	HP
ST/M 303	86803037	128.5	14.89	3	3
ST/M 304	86804037	128.5	19.97	3	4
ST/M 305	86805037	128.5	25.05	3	5
ST/M 306	86806037	128.5	30.13	3	6
ST/M 308	86808037	128.5	40.29	3	8
ST/M 309	86809037	128.5	45.37	3	9
ST/M 310	86810037	128.5	50.45	3	10
ST/M 312	86812037	128.5	60.61	3	12
ST/M 318	86818037	128.5	91.09	3	18
ST/M 321	86821037	128.5	106.33	3	21

Scope Of Delivery: :

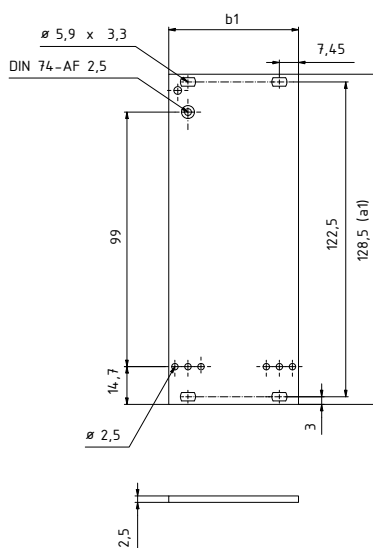
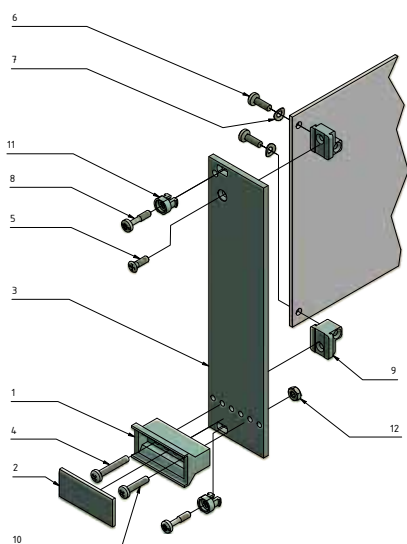
- 1) 1 handle, trapezoidal shape (LEXAN UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear yellow chromated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 plastic screw holders (PA6, grey, unscreened, for plug-in front panels)
- 11) 8 HP and higher: 4 plastic screw holders (grey, unscreened, for plug-in front panels)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)

Notes: Additional sizes on request.



Interzoll Modul

ST/M 3..



Interzoll Modul

Front panel



Plug-in front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pin

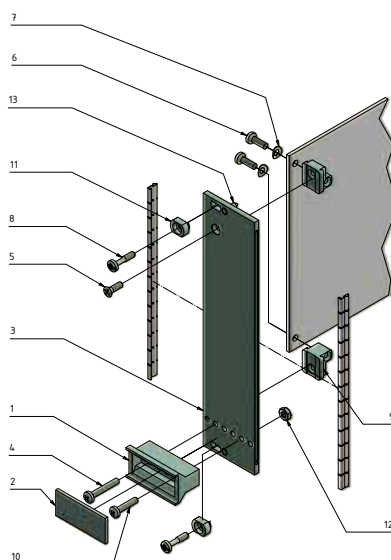
Model	Order no.	a1	b1	U	HP
ST/M 303-EMV	86803038	128.5	14.89	3	3
ST/M 304-EMV	86804038	128.5	19.97	3	4
ST/M 305-EMV	86805038	128.5	25.05	3	5
ST/M 306-EMV	86806038	128.5	30.13	3	6
ST/M 308-EMV	86808038	128.5	40.29	3	8
ST/M 309-EMV	86809038	128.5	45.37	3	9
ST/M 310-EMV	86810038	128.5	50.45	3	10
ST/M 312-EMV	86812038	128.5	60.61	3	12
ST/M 318-EMV	86818038	128.5	91.09	3	18
ST/M 321-EMV	86821038	128.5	106.33	3	21

Scope Of Delivery: :

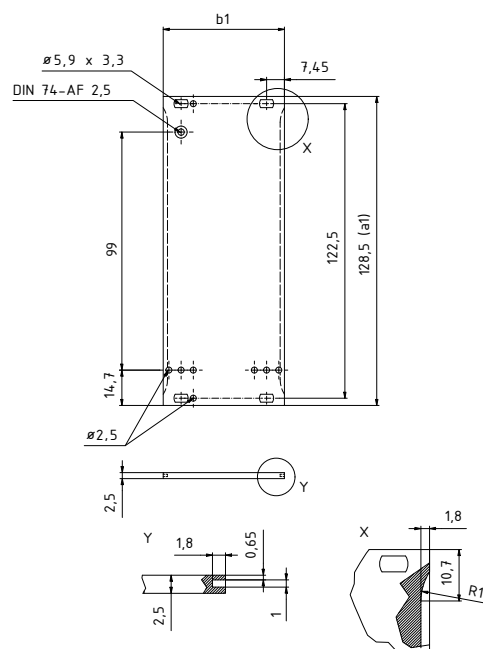
- 1) 1 handle, trapezoidal shape (PPO-UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear yellow chromated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 metal screw holders (stainless steel, for plug-in front panels with slit)
- 11) 8 HP and higher: 4 metal screw holders (stainless steel, for plug-in front panels with slit)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)
- 13) 2 pressed-in alignment pins (stainless steel)

Notes: Additional sizes on request. EMC springs FP/M as Interzoll Modul accessories.

ST/M 3...-EMV



Z-2904.371



Interzoll Modul

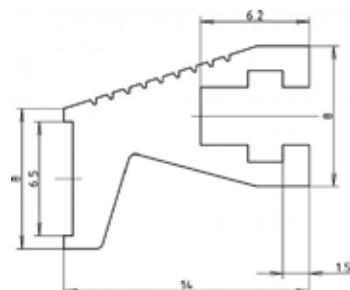
Front panel

Handle profile, natural-coloured anodised aluminium, metre profile

Model	Order no.
GRL/M 1000-AL	86081740

Scope Of Delivery: 1m handle profile

Notes: Mounting material, (86081750) and BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.

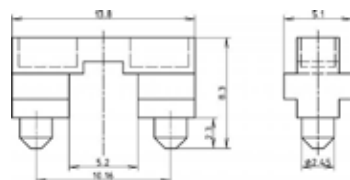


Fixing piece, plastic, black, for fixing the handle profile GRL to the front panel

Model	Order no.
FX/M	86081750

Scope Of Delivery: 20 fixing pieces

Notes: Mounting in aluminium handle GRL/M (86081740) with BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



PCB holder and fixing material

Model	Order no.	Note
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
LKH/M 02	86080020	With 4 through holes for fixing front panels and circuit boards
LKH/M 03	86080030	With 2 M 2.5 threads for fixing of front panels and circuit boards

Scope Of Delivery: 10 pieces

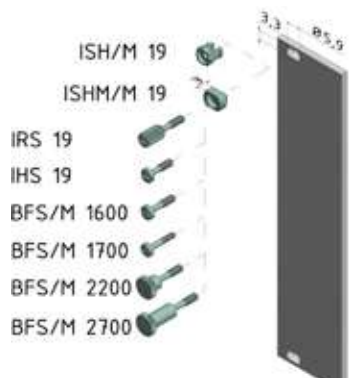
BFS/M: 20 pieces



Mounting material for part front panels and plug-in units

Model	Order no.	Note
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
IHS 19	54700410	Collar screws SHR Z M2.5x11.3x6.3-SP, slotted-head screw
IRS 19	54700420	Slotted knurled screw, collar screws SHR R M2.5x11.3x6.3-SP
ISH/M 19	86080510	Plastic screwholder, PA 6, grey
ISHM/M 19	86080500	Metal screw holder, stainless steel (1.4305), for conductive contacting for riveting to the front panel

Scope Of Delivery: ISH 19 / IRS 19 = 10 pieces, otherwise 20 pieces



Interzoll Modul

Frame-type plug-in units

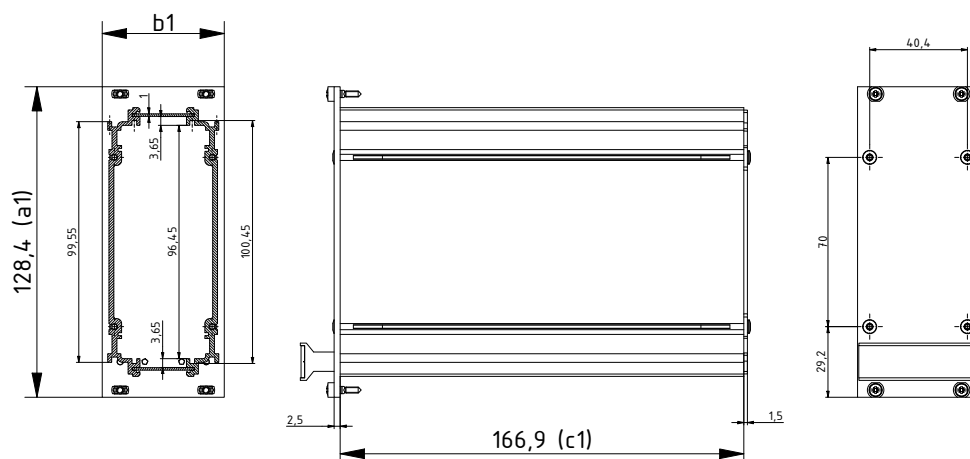


Interzoll PRO frame-type plug-in units, 3 U, natural-coloured anodised aluminium front panel, colourless passivated aluminium side profiles, galvanised steel cover plates, plain, galvanised steel rear panel with one slot, 3 U

Model	Order no.	a1	b1	c1	U	HP
IZK/M 16308-RW1-P	85808311	128.4	40.3	166.9	3	8
IZK/M 16310-RW1-P	85810311	128.4	50.46	166.9	3	10
IZK/M 16312-RW1-P	85812311	128.4	60.62	166.9	3	12
IZK/M 16314-RW1-P	85814311	128.4	70.78	166.9	3	14
IZK/M 16321-RW1-P	85821311	128.4	106.34	166.9	3	21
IZK/M 16328-RW1-P	85828311	128.4	141.9	166.9	3	28
IZK/M 16342-RW1-P	85842311	128.4	213.02	166.9	3	42

Scope Of Delivery: 1 front panel with handle, 2 side panels, 2 top covers, 1 rear panel, mounting material

Notes: Additional versions, 6 U, EMC or with hood on request.



Z-2904-357



Cover plates, perforated, 1mm, galvanised sheet steel, for frame-type plug-in units, 3 U

Model	Order no.	c1	HP
IZK/M 16008-ADL-P	86090812	166.9	8
IZK/M 16010-ADL-P	86091012	169.9	10
IZK/M 16012-ADL-P	86091212	166.9	12
IZK/M 16014-ADL-P	86091412	166.9	14
IZK/M 16021-ADL-P	86092112	166.9	21
IZK/M 16028-ADL-P	86092812	166.9	28
IZK/M 16042-ADL-P	86094212	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth

Interzoll Modul

Frame-type plug-in units

Cover plates, perforated, 1mm, galvanised sheet steel, for PRO frame-type plug-in units, 3 U, to accommodate card guides

Model	Order no.	c1	HP
IZK/M 16008-ADL-KF-P	86090813	166.9	8
IZK/M 16010-ADL-KF-P	86091013	166.9	10
IZK/M 16012-ADL-KF-P	86091213	166.9	12
IZK/M 16014-ADL-KF-P	86091413	166.9	14
IZK/M 16021-ADL-KF-P	86092113	166.9	21
IZK/M 16028-ADL-KF-P	86092813	166.9	28
IZK/M 16042-ADL-KF-P	86094213	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth

Card guides for cover plates IZK/M-ADL-KF, plastic, UL 94 V0, red

Model	Order no.	Card depth
IZK/M KF-160-P	86216030	160

Scope Of Delivery: 10 card guides

Rear panel open, galvanised sheet steel, for IZK/M frame-type plug-in units

Model	Order no.	HP
IZK/M 00308-RWO-P	86090833	8
IZK/M 00310-RWO-P	86091033	10
IZK/M 00312-RWO-P	86091233	12
IZK/M 00314-RWO-P	86091433	14
IZK/M 00321-RWO-P	86092133	21
IZK/M 00328-RWO-P	86092833	28
IZK/M 00342-RWO-P	86094233	42

Scope Of Delivery: 1 rear panel

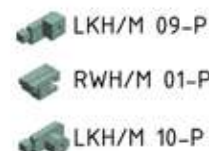
PCB and rear panel holder

Model	Order no.
LKH/M 09-P	86080090
LKH/M 10-P	86080110
RWH/M 01-P	86080120

Scope Of Delivery:

LKH/M 10-P = 10 pieces (5 pairs right / left)

RWH/M 01-P = 10 pieces



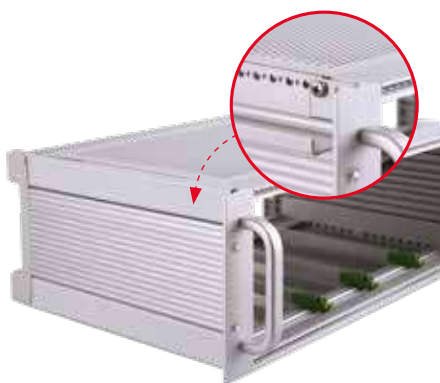
The product advantages



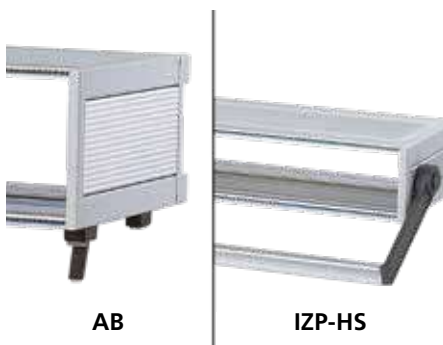
The 19" Interzoll Plus desktop enclosure system is compatible with the accessory components from the Interzoll product range.



Interzoll Plus has sheet steel covers on top and underneath. Different colours can be achieved by using powder lacquering.



The side parts consist of an anodised aluminium profile onto which the plastic covers for the enclosure screws can be snapped.



Optional tip-up feet or handles allow use as a desktop enclosure.

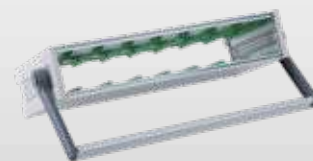


Interzoll Plus has integrated tip-up feet on the back, so in mobile use it can be securely positioned upright and rear exits are protected mechanically.



Quick-Finder:
www.bopla.de/29

Examples of use





BOPLA

A Phoenix Mecano Company

Interzoll Plus



Colour:

Enclosure:

● Light grey, similar to RAL 7035
and natural color anodized, special colours on request

Protection class:

IP40 / DIN EN 60529

IP20 / DIN EN 60529 with ventilation (ADG...-L)

Material:

Profiles: Al Mg Si 0,5, anodized

Cover plates: sheet steel

Plastic panels, covers: ABS / PVC V-1

For details see technical information.



Interzoll Plus

19"

Enclosure sizes

IZP 18340

IZP 18360

IZP 18380

IZP 24340

IZP 24360

IZP 24380

IZP 30340

IZP 30360

IZP 30380

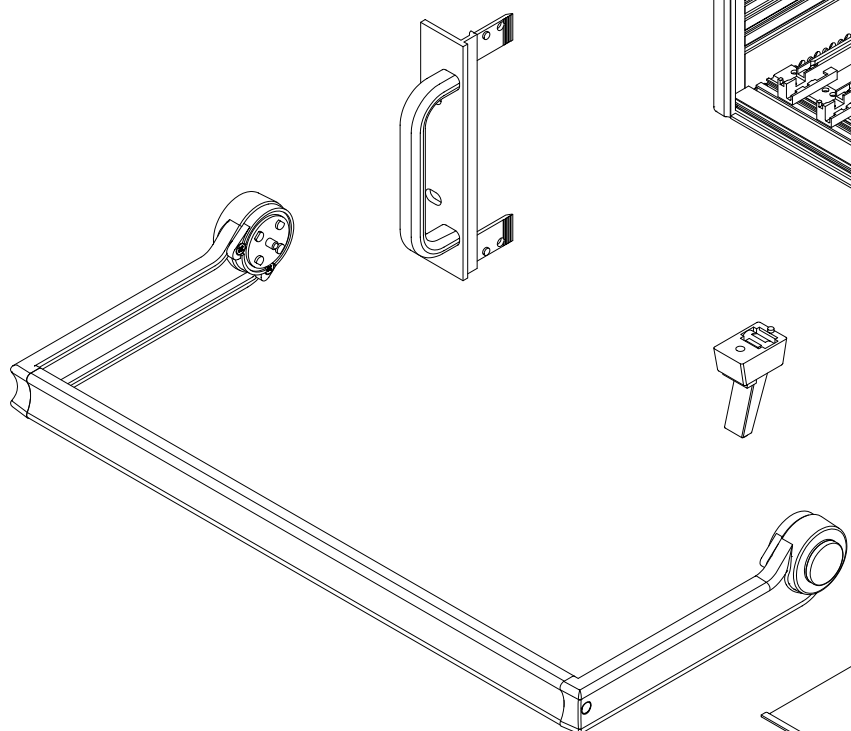
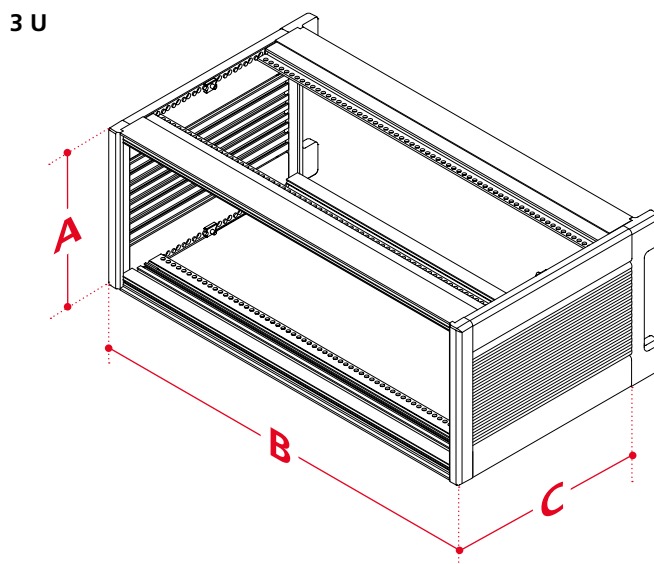
IZP 36340

IZP 36360

IZP 36380

Design types

3 U





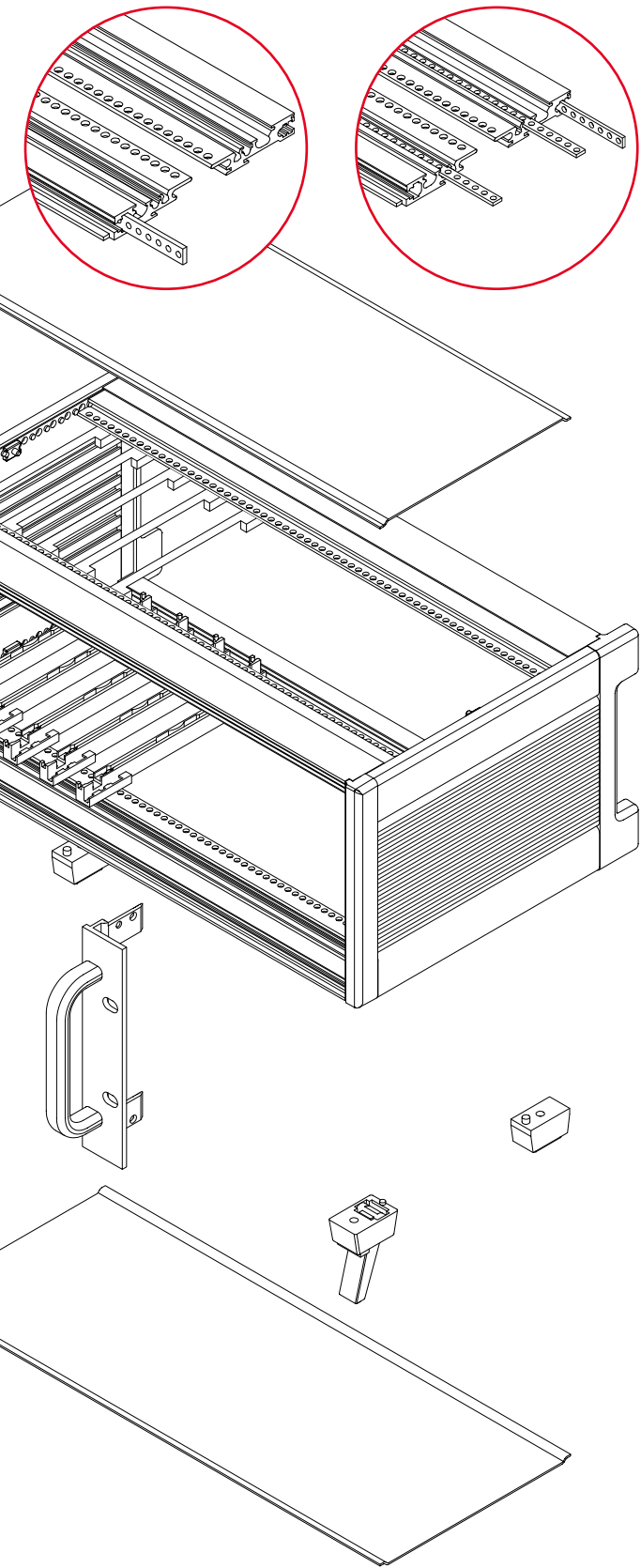
BOPLA

A Phoenix Mecano Company

Interzoll Plus

Tapped strips GS I

Tapped strips GS II



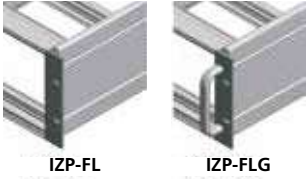
Dimensions

Model	A	B	C	HP
3 U				
IZP 18340	132.7	235.84	197.2	42
IZP 18360	132.7	342.52	197.2	63
IZP 18380	132.7	449.2	197.2	84
IZP 24340	132.7	235.84	257.2	42
IZP 24360	132.7	342.52	257.2	63
IZP 24380	132.7	449.2	257.2	84
IZP 30340	132.7	235.84	317.2	42
IZP 36360	132.7	342.52	317.2	63
IZP 30380	132.7	449.2	317.2	84
IZP 36340	132.7	235.84	377.2	42
IZP 36360	132.7	342.52	377.2	63
IZP 36380	132.7	449.2	377.2	84

Accessories



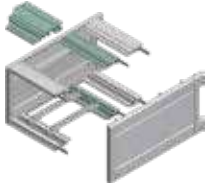
Card guide, one and three parts



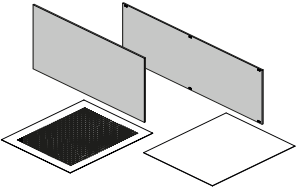
Subrack flange, aluminium, silver-coloured anodised



Clamp profile sets for fitting of split cover plates



Bus and rear profiles



Front and part front panels and cover plates in different versions

Interzoll Plus

Enclosure



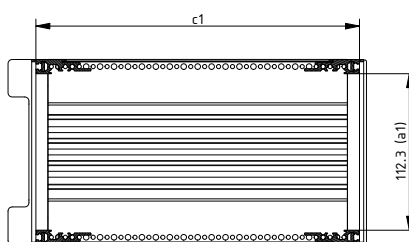
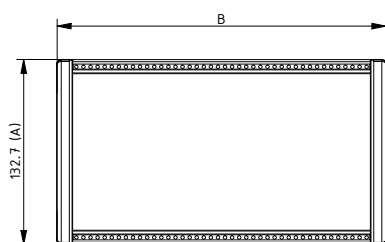
Enclosure profile sets, 3U

Model	Order no.	A	B	C	a1	b1	c1	U	HP	Card depth	IP
Izp 18340	28183405	132.7	235.84	197.2	112.3	213.36	172.2	3	42	160	20
Izp 18360	28183605	132.7	342.52	197.2	112.3	320.04	172.2	3	63	160	20
Izp 18380	28183805	132.7	449.2	197.2	112.3	426.72	172.2	3	84	160	20
Izp 24340	28243405	132.7	235.84	257.2	112.3	213.36	232.2	3	42	220	20
Izp 24360	28243605	132.7	342.52	257.2	112.3	320.04	232.2	3	63	220	20
Izp 24380	28243805	132.7	449.2	257.2	112.3	426.72	232.2	3	84	220	20
Izp 30340	28303405	132.7	235.84	317.2	112.3	213.36	292.2	3	42	280	20
Izp 30360	28303605	132.7	342.52	317.2	112.3	320.04	292.2	3	63	280	20
Izp 30380	28303805	132.7	449.2	317.2	112.3	426.72	292.2	3	84	280	20
Izp 36340	28363405	132.7	235.84	377.2	112.3	213.36	352.2	3	42	340	20
Izp 36360	28363605	132.7	342.52	377.2	112.3	320.04	352.2	3	63	340	20
Izp 36380	28363805	132.7	449.2	377.2	112.3	426.72	352.2	3	84	340	20

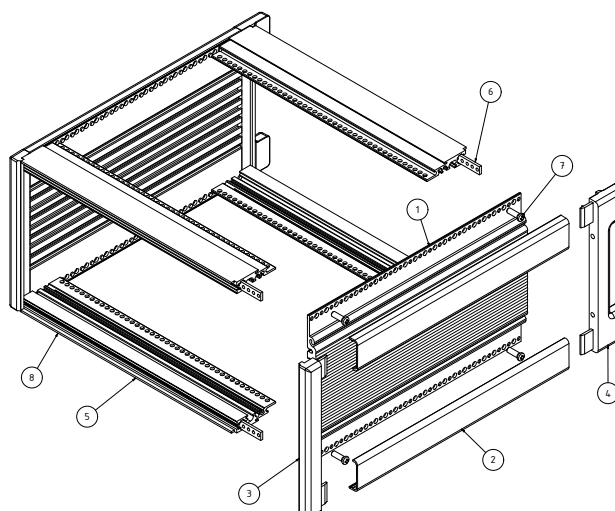
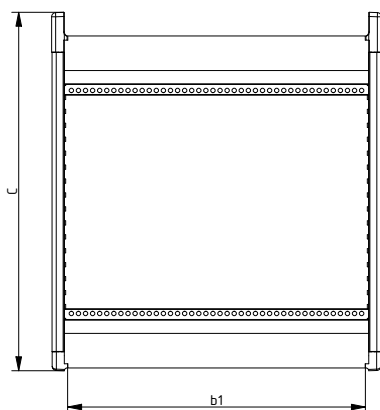
Scope Of Delivery:

- 1) 2 side panels (anodised aluminium)
- 2) 4 screw covers (plastic, similar to RAL 7035)
- 3) 2 covers (plastic, similar to RAL 7035)
- 4) 2 covers with foot (plastic, similar to RAL 7035)
- 5) 4 front profiles (anodised aluminium)
- 6) 4 tapped strips GS I (galvanised steel)
- 7) 8 screws (M4x12/BFS 0400 steel)
- 8) 4 rubber feet

Notes: Installation acc. to IEC 60297-3-101. 2 U versions on request.



Z-2903304



Interzoll Plus

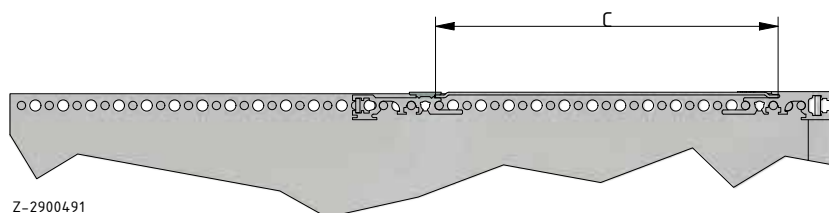
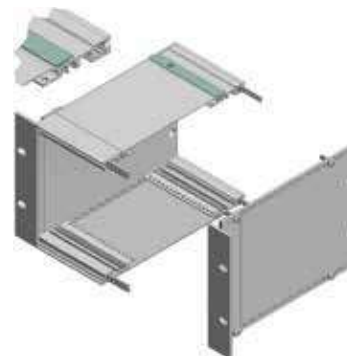
Cover plates

Clamp profile sets, natural-coloured anodised aluminium, for fitting of split cover plates

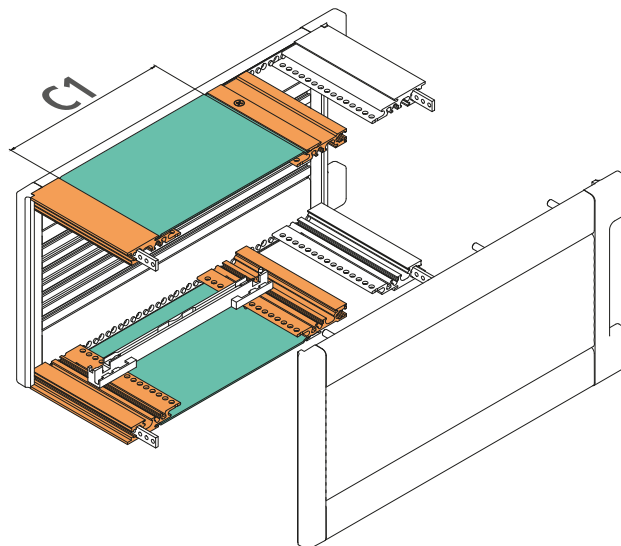
Model	Order no.	HP
EPS 00042	54002420	42
EPS 00063	54002630	63
EPS 00084	54002840	84

Scope Of Delivery: 2 profiles, incl. mounting material (BFS 0200)

Notes: The EPS and EPS-I clamp profile sets are required for mounting of the cover plates (ADG...). This allows removal of the top covers without disassembly of the BGT side wall. Exception: If a subrack with a profile side wall is used, the clamp profile is integrated with the bus or rear profile.

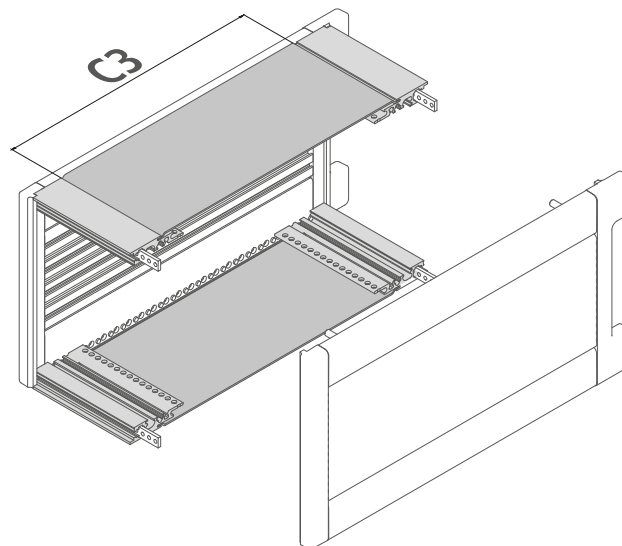


Cover plates for subrack Interzoll Plus



C1

IZP independent of rack units			ADG over insertion depth (in front)						
Model	Depth	TE	Card depth 160 mm			Card depth 220 mm			
			Order-no.	Item name	Depth ADG	Order-no.	Item name	Depth ADG	
IZP 18_40	197.2	42	-	-	-	-	-	-	
IZP 18_60	197.2	63	-	-	-	-	-	-	
IZP 18_80	197.2	84	-	-	-	-	-	-	
IZP 24_40	257.2	42	54912420	ADG 12042	123 mm	54918420	ADG 18042	183 mm	
			54912421	ADG 12042-L	123 mm	54918421	ADG 18042-L	183 mm	
IZP 24_60	257.2	63	54912630	ADG 12063	123 mm	54918630	ADG 18063	183 mm	
			54912631	ADG 12063-L	123 mm	54918631	ADG 18063-L	183 mm	
IZP 24_80	257.2	84	54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	
			54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	
IZP 30_40	317.2	42	54912420	ADG 12042	123 mm	54918420	ADG 18042	183 mm	
			54912421	ADG 12042-L	123 mm	54918421	ADG 18042-L	183 mm	
IZP 30_60	317.2	63	54912630	ADG 12063	123 mm	54918630	ADG 18063	183 mm	
			54912631	ADG 12063-L	123 mm	54918631	ADG 18063-L	183 mm	
IZP 30_80	317.2	84	54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	
			54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	
IZP 36_40	377.2	42	54912420	ADG 12042	123 mm	54918420	ADG 18042	183 mm	
			54912421	ADG 12042-L	123 mm	54918421	ADG 18042-L	183 mm	
IZP 36_60	377.2	63	54912630	ADG 12063	123 mm	54918630	ADG 18063	183 mm	
			54912631	ADG 12063-L	123 mm	54918631	ADG 18063-L	183 mm	
IZP 36_80	377.2	84	54912840	ADG 12084	123 mm	54918840	ADG 18084	183 mm	
			54912841	ADG 12084-L	123 mm	54918841	ADG 18084-L	183 mm	

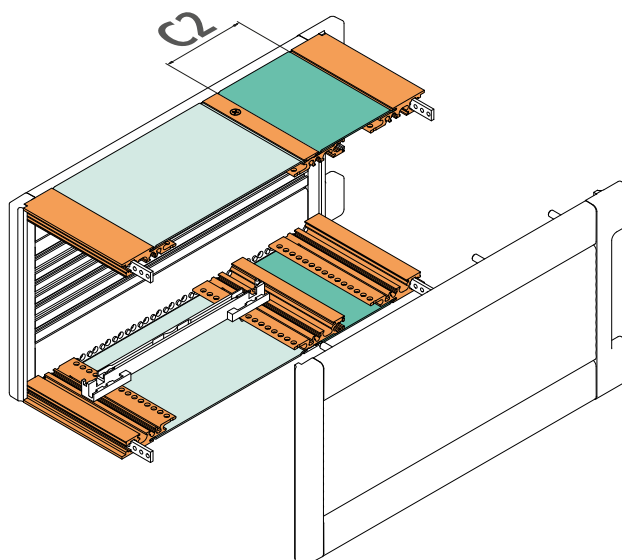


See following pages.

Interzoll Plus

- ADG version closed
- ADG version perforated
- L. a. A. = delivery on request

Cover plates for subrack Interzoll Plus



C2

IZP independent of rack units			ADG over connection area (in rear) Across the entire beam depth with an interrupted design						
Model	Depth	TE	In addition to position C1 (at card depth 160 mm)			In addition to position C1 (at card depth 220 mm)			
			Order-no.	Item name	Depth ADG	Order-no.	Item name	Depth ADG	
IZP 18_40	197.2	42	-	-	-	-	-	-	
IZP 18_60	197.2	63	-	-	-	-	-	-	
IZP 18_80	197.2	84	-	-	-	-	-	-	
IZP 24_40	257.2	42	54960420	ADG 06042	63 mm	-	-	-	
			54960421	ADG 06042-L	63 mm	-	-	-	
IZP 24_60	257.2	63	54960630	ADG 06063	63 mm	-	-	-	
			54960631	ADG 06063-L	63 mm	-	-	-	
IZP 24_80	257.2	84	54960840	ADG 06084	63 mm	-	-	-	
			54960841	ADG 06084-L	63 mm	-	-	-	
IZP 30_40	317.2	42	54912420	ADG 12042	123 mm	54960420	ADG 06042	63 mm	
			54912421	ADG 12042-L	123 mm	54960421	ADG 06042-L	63 mm	
IZP 30_60	317.2	63	54912630	ADG 12063	123 mm	54960630	ADG 06063	63 mm	
			54912631	ADG 12063-L	123 mm	54960631	ADG 06063-L	63 mm	
IZP 30_80	317.2	84	54912840	ADG 12084	123 mm	54960840	ADG 06084	63 mm	
			54912841	ADG 12084-L	123 mm	54960841	ADG 06084-L	63 mm	
IZP 36_40	377.2	42	54912420	ADG 18042	183 mm	54912420	ADG 12042	123 mm	
			54912421	ADG 18042-L	183 mm	54912421	ADG 12042-L	123 mm	
IZP 36_60	377.2	63	54912630	ADG 18063	183 mm	54912630	ADG 12063	123 mm	
			54912631	ADG 18063-L	183 mm	54912631	ADG 12063-L	123 mm	
IZP 36_80	377.2	84	54918840	ADG 18084	183 mm	54912840	ADG 12084	123 mm	
			54918841	ADG 18084-L	183 mm	54912841	ADG 12084-L	123 mm	



	54301042	IZPB 00042	54304210	IZPR 00042	54002420	EPS 00042
	54301042	IZPB 00042	54304210	IZPR 00042	54002420	EPS 00042
	54301063	IZPB 00063	54306310	IZPR 00063	54002630	EPS 00063
	54301063	IZPB 00063	54306310	IZPR 00063	54002630	EPS 00063
	54301084	IZPB 00084	54308410	IZPR 00084	54002840	EPS 00084
	54301084	IZPB 00084	54308410	IZPR 00084	54002840	EPS 00084

Interzoll Plus

■ ADG version closed
■ ADG version perforated
L. a. A. = delivery on request

Interzoll Plus

Card guides



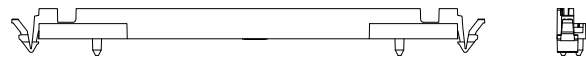
Card guides, one and three parts, plastic, UL 94 V1 green

Model	Order no.	Card depth	Note
KF 160	54700160	160	one piece
KF 220-K	54700225	220	three pieces
KF/X 220	89700220	160	one piece

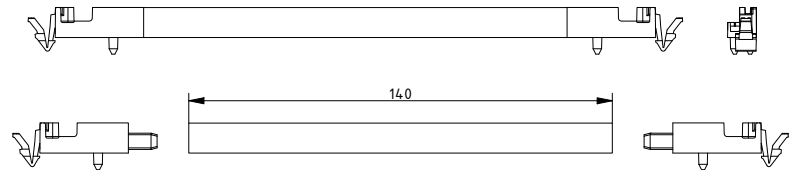
Scope Of Delivery: 10 card guides

Notes: Snap-in / optionally screwable with GS...II and BFS 0300 (54700030). Three-part card guide in special lengths on request.

KF 160



KF 220-K



KF/X 220



Z-2904345

Interzoll Plus

Thread and insulating strips

Tapped strips, galvanised steel, M2.5, 7 x 2 mm, for part front panel fixing

Model	Order no.	HP
GS 00042-I	54000421	42
GS 00063-I	54000631	63
GS 00084-I	54000841	84

Scope Of Delivery: 2 tapped strips



Tapped strips, galvanised steel, M2.5, 5 x 1.5 mm, for horizontal profile grooves and rear fixing of backplanes, insulating strips and Z rails

Model	Order no.	HP
GS 00042-II	54000422	42
GS 00063-II	54000632	63
GS 00084-II	54000842	84

Scope Of Delivery: 2 tapped strips

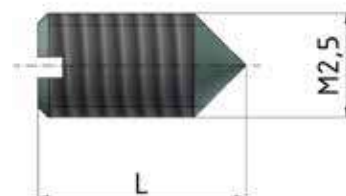


Slotted set screw M2.5 x 8 / M2.5 x 5, V2A, for positioning and earthing the tapped strip

Model	Order no.	Note
GSE-5	54700390	L = 5mm
GSE-8	54700395	L = 8mm

Scope Of Delivery: 10 slotted set screws

Notes: GSE-5 for use in the recessed double groove, in the horizontal grooves (e.g. card guide screwing system) and in the double bus profiles for 6 U subracks and in the adapter profiles. GSE-8 for use in both double grooves.



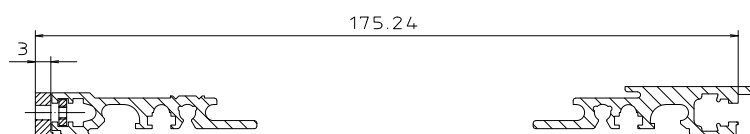
Interzoll Plus

Insulated plastic, UL 94 V1, for insulated fixing of backplanes

Model	Order no.	HP
IS 00042	54000142	42
IS 00063	54000163	63
IS 00080	54000180	80
IS 00084	54000184	84

Scope Of Delivery: 4 insulating strips (IS 00042 = 2 insulating strips)

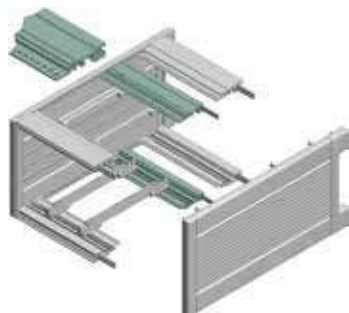
Notes: To achieve the necessary insertion depth when using bus profile rails.



Z-2900470

Interzoll Plus

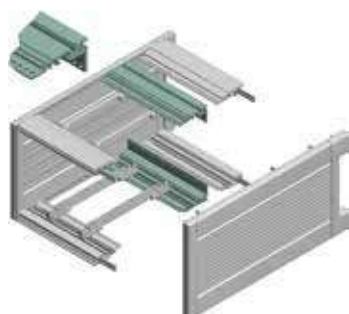
Profiles / profile sets



Bus profile set, aluminium natural-coloured anodised, for indirect backplane fixing

Model	Order no.	HP
IZPB 00042	54301042	42
IZPB 00063	54301063	63
IZPB 00084	54301084	84

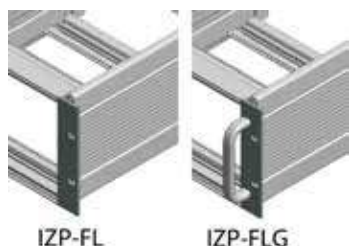
Scope Of Delivery: 2 profiles including tapped strips and mounting material (BFS 0400)



Rear profile set, aluminium natural-coloured anodised, for connectors acc. to DIN EN 60603-2 (previously DIN 41612)

Model	Order no.	HP
IZPR 00042.12	54304210	42
IZPR 00063.12	54306310	63
IZPR 00084.12	54308410	84

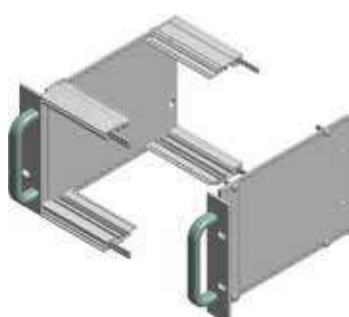
Scope Of Delivery: 2 profiles including mounting material (BFS 0400)



Flange set 3 U, aluminium natural-coloured anodised, for mounting with IZP side panels

Model	Order no.	Note
IZP-FL 00300	54530000	for IZP 3 U, without handle drilled holes
IZP-FLG 00300	54531000	for IZP 3 U, with handle drilled holes Scope

Of Delivery: 2 pieces (IZP-FLG... including 2 fixing screws BFS 0400 (4700031))



Handle set 3 U, aluminium natural-coloured anodised, for mounting with flanges (IZP-FLG 00300)

Model	Order no.	U
GR 00300	54600320	3
GR 00600	54600620	6

Scope Of Delivery: 2 handles including mounting material (BFS 0400)

Interzoll Plus

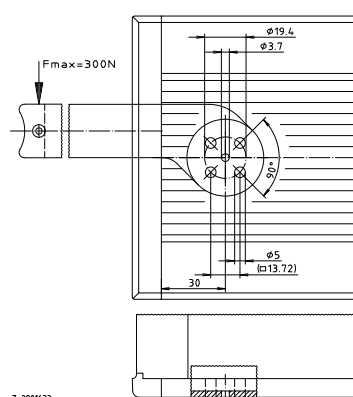
Accessories

Handles / tip-up bows, hinged

Model	Order no.	HP	Note
IZP-HS 00040	54542010	42	For IZP ... 40
IZP-HS 00060	54563010	63	For IZP ... 60
IZP-HS 00080	54584010	84	For IZP ... 80

Scope Of Delivery: profile (aluminium)

Notes: Fixed detent positions of the handle at 30° stages. Mechanical processing of the side panels on request.
The maximum load is 300 N.

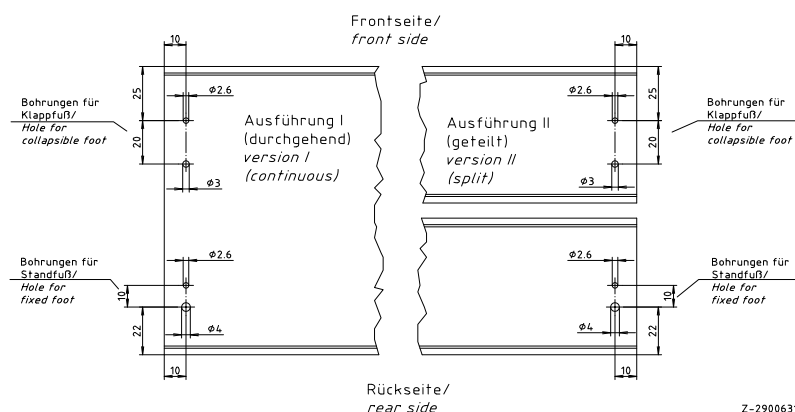


Tip-up feet, polyamide

Model	Order no.	Note
AB 1230	39603000	Including 4 sheet metal screws

Scope Of Delivery: Set-up foot set (2 fixed and 2 hinged feet), fixing material

Notes: Mechanical processing of the cover plate on request.



Interzoll Plus

Screws

Mounting material

Model	Order no.	Note
BFS 0200	54700020	Countersunk screw M 3x5, cross-head, for fixing of clamp profiles
BFS 0300	54700030	Cheese-head screw M 2.5x8, slotted, for fixing of card earthing, card guide, insulating strip and Z rails
BFS 0400	54700031	Recessed head screws M 4x12 for Interzoll-Plus profiles
KM 5	54700350	M5 cage nut for fitting of BGT / FPS in the enclosure or cabinet
KS 5	54700360	M5 cross-head screw for fitting of BGT / FPS in the enclosure or cabinet
KU 5	54700370	Washer for KS 5, nickel-plated brass

Scope Of Delivery: KM, KS and KU 10 pcs.; BFS 20 pcs.



Interzoll Plus

Front panel

Part front panels, natural-coloured anodised aluminium, passivated on rear

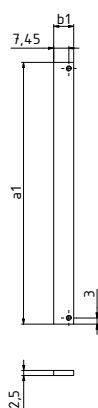
Model	Order no.	a1	b1	U	HP
TF/M 242	86842023	84.05	213.01	2	42
TF/M 263	86863023	84.05	319.69	2	63
TF/M 284	86884023	84.05	426.37	2	84
TF/M 302	86802033	128.5	9.81	3	2
TF/M 303	86803033	128.5	14.89	3	3
TF/M 304	86804033	128.5	19.97	3	4
TF/M 306	86806033	128.5	30.13	3	6
TF/M 307	86807033	128.5	35.21	3	7
TF/M 308	86808033	128.5	40.29	3	8
TF/M 310	86810033	128.5	50.45	3	10
TF/M 312	86812033	128.5	60.61	3	12
TF/M 314	86814033	128.5	70.77	3	14
TF/M 318	86818033	128.5	91.09	3	18
TF/M 319	86819033	128.5	96.17	3	19
TF/M 320	86820033	128.5	101.25	3	20
TF/M 321	86821033	128.5	106.33	3	21
TF/M 328	86828033	128.5	141.97	3	28
TF/M 340	86840033	128.5	202.85	3	40
TF/M 342	86842033	128.5	213.01	3	42
TF/M 363	86863033	128.5	319.69	3	63
TF/M 384	86884033	128.5	426.37	3	84
TF/M 484	86884043	172.95	426.37	4	84
TF/M 604	86804063	261.85	19.97	6	4
TF/M 605	86805063	261.85	25.05	6	5
TF/M 608	86808063	261.85	40.29	6	8
TF/M 628	86828063	261.85	141.89	6	28
TF/M 642	86842063	261.85	213.01	6	42
TF/M 684	86884063	261.85	426.37	6	84



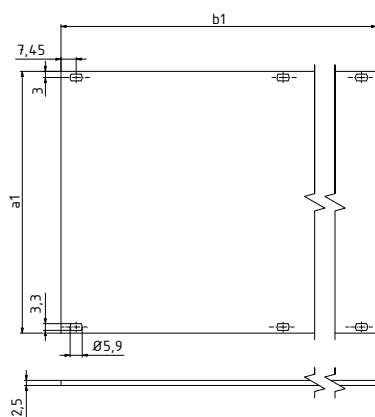
Scope Of Delivery: 1 part front panel

Notes: Special sizes on request. Screw holders and collar screws as accessories.

TF/M .02



TF/M ...



Z-2904355

Interzoll Plus

Front panel

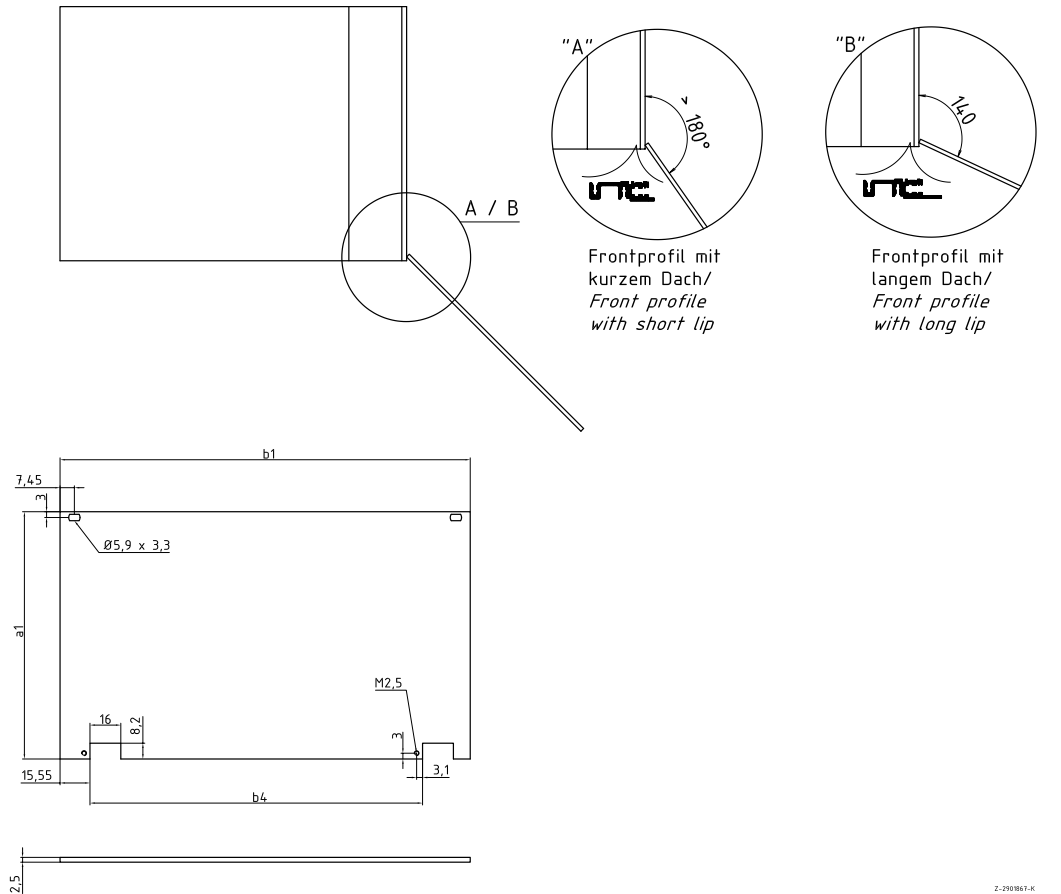


Front panels, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-K	86842038	128.5	213.01	3	42
TF/M 363-K	86863038	128.5	319.69	3	63
TF/M 384-K	86884038	128.5	426.37	3	84
TF/M 642-K	86842068	261.85	213.01	6	42
TF/M 663-K	86863068	261.85	319.69	6	63
TF/M 684-K	86884068	261.85	426.37	6	84

Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws BFS/M 2200, mounting material

Notes: The usable width is not restricted. Can be unhooked at 135° except for Internorm Stil. One tapped strip above and below is required for each fixing.



Z_290967-K

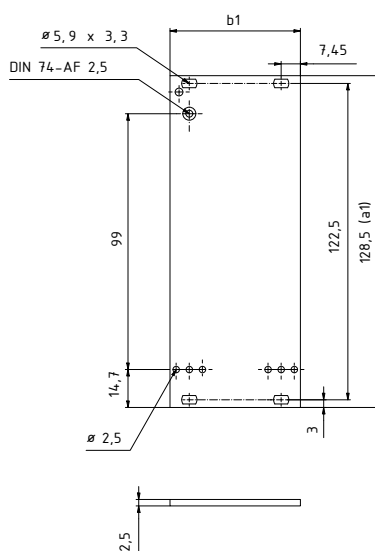
Front panel

The image displays four views of the 1000 Series Aluminum Extrusion. From left to right: a front view showing the extrusion's profile with a central slot and mounting tabs; a side view showing the extrusion's length and the placement of mounting tabs; an end view showing the extrusion's width and the mounting tabs; and a cross-section view showing the internal structure of the extrusion, including the central slot and the mounting tabs.

Model	Order no.	a1	b1	U	HP
ST/M 303	86803037	128.5	14.89	3	3
ST/M 304	86804037	128.5	19.97	3	4
ST/M 305	86805037	128.5	25.05	3	5
ST/M 306	86806037	128.5	30.13	3	6
ST/M 308	86808037	128.5	40.29	3	8
ST/M 309	86809037	128.5	45.37	3	9
ST/M 310	86810037	128.5	50.45	3	10
ST/M 312	86812037	128.5	60.61	3	12
ST/M 318	86818037	128.5	91.09	3	18
ST/M 321	86821037	128.5	106.33	3	21

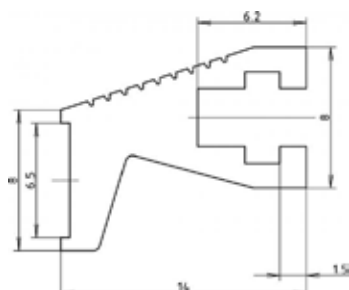
- 1) 1 handle, trapezoidal shape (LEXAN UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear yellow chromated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 plastic screw holders (PA6, grey, unscreened, for plug-in front panels)
- 11) 8 HP and higher: 4 plastic screw holders (grey, unscreened, for plug-in front panels)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)

Interzoll Plus



Interzoll Plus

Front panel

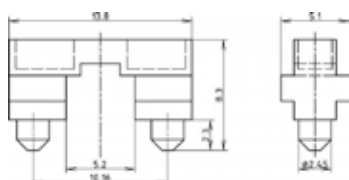


Handle profile, natural-coloured anodised aluminium, metre profile

Model	Order no.
GRL/M 1000-AL	86081740

Scope Of Delivery: 1m handle profile

Notes: Mounting material, (86081750) and BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



Fixing piece, plastic, black, for fixing the handle profile GRL to the front panel

Model	Order no.
FX/M	86081750

Scope Of Delivery: 20 fixing pieces

Notes: Mounting in aluminium handle GRL/M (86081740) with BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.

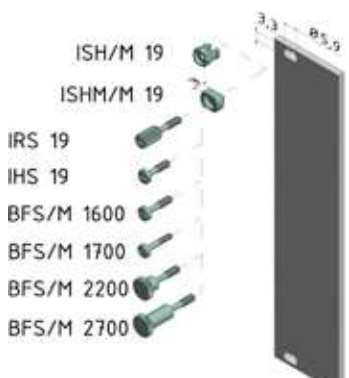


PCB holder and fixing material

Model	Order no.	Note
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
LKH/M 02	86080020	With 4 through holes for fixing front panels and circuit boards
LKH/M 03	86080030	With 2 M 2.5 threads for fixing of front panels and circuit boards

Scope Of Delivery: 10 pieces

BFS/M: 20 pieces



Mounting material for part front panels and plug-in units

Model	Order no.	Note
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
IHS 19	54700410	Collar screws SHR Z M2.5x11.3x6.3-SP, slotted-head screw
IRS 19	54700420	Slotted knurled screw, collar screws SHR R M2.5x11.3x6.3-SP
ISH/M 19	86080510	Plastic screwholder, PA 6, grey
ISHM/M 19	86080500	Metal screw holder, stainless steel (1.4305), for conductive contacting for riveting to the front panel

Scope Of Delivery: ISH 19 / IRS 19 = 10 pieces, otherwise 20 pieces

Interzoll Plus

Frame-type plug-in units

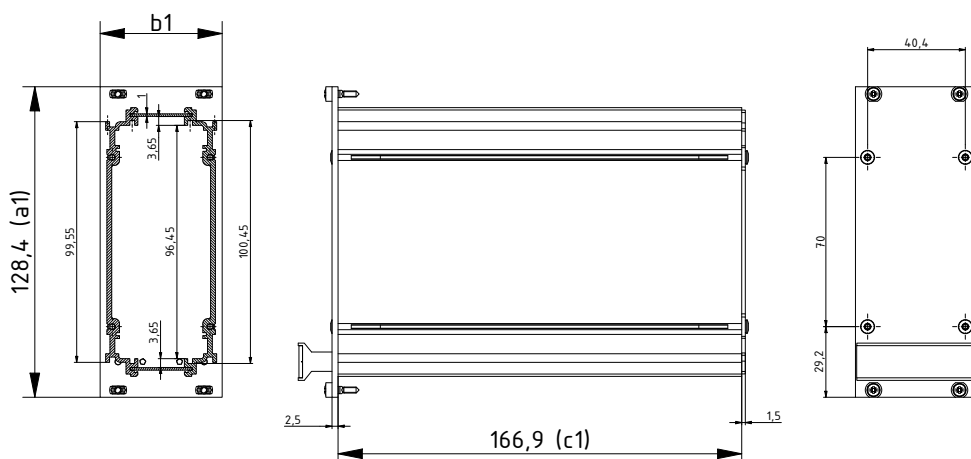
Interzoll PRO frame-type plug-in units, 3 U, natural-coloured anodised aluminium front panel, colourless passivated aluminium side profiles, galvanised steel cover plates, plain, galvanised steel rear panel with one slot, 3 U



Model	Order no.	a1	b1	c1	U	HP
IZK/M 16308-RW1-P	85808311	128.4	40.3	166.9	3	8
IZK/M 16310-RW1-P	85810311	128.4	50.46	166.9	3	10
IZK/M 16312-RW1-P	85812311	128.4	60.62	166.9	3	12
IZK/M 16314-RW1-P	85814311	128.4	70.78	166.9	3	14
IZK/M 16321-RW1-P	85821311	128.4	106.34	166.9	3	21
IZK/M 16328-RW1-P	85828311	128.4	141.9	166.9	3	28
IZK/M 16342-RW1-P	85842311	128.4	213.02	166.9	3	42

Scope Of Delivery: 1 front panel with handle, 2 side panels, 2 top covers, 1 rear panel, mounting material

Notes: Additional versions, 6 U, EMC or with hood on request.



Z-2904357

Cover plates, perforated, 1mm, galvanised sheet steel, for frame-type plug-in units, 3 U

Model	Order no.	c1	HP
IZK/M 16008-ADL-P	86090812	166.9	8
IZK/M 16010-ADL-P	86091012	166.9	10
IZK/M 16012-ADL-P	86091212	166.9	12
IZK/M 16014-ADL-P	86091412	166.9	14
IZK/M 16021-ADL-P	86092112	166.9	21
IZK/M 16028-ADL-P	86092812	166.9	28
IZK/M 16042-ADL-P	86094212	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Interzoll Plus

Frame-type plug-in units



Cover plates, perforated, 1mm, galvanised sheet steel, for PRO frame-type plug-in units, 3 U, to accommodate card guides

Model	Order no.	c1	HP
IZK/M 16008-ADL-KF-P	86090813	166.9	8
IZK/M 16010-ADL-KF-P	86091013	166.9	10
IZK/M 16012-ADL-KF-P	86091213	166.9	12
IZK/M 16014-ADL-KF-P	86091413	166.9	14
IZK/M 16021-ADL-KF-P	86092113	166.9	21
IZK/M 16028-ADL-KF-P	86092813	166.9	28
IZK/M 16042-ADL-KF-P	86094213	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Card guides for cover plates IZK/M-ADL-KF, plastic, UL 94 V0, red

Model	Order no.	Card depth
IZK/M KF-160-P	86216030	160

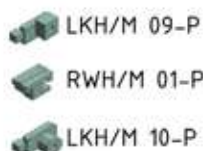
Scope Of Delivery: 10 card guides



Rear panel open, galvanised sheet steel, for IZK/M frame-type plug-in units

Model	Order no.	HP
IZK/M 00308-RWO-P	86090833	8
IZK/M 00310-RWO-P	86091033	10
IZK/M 00312-RWO-P	86091233	12
IZK/M 00314-RWO-P	86091433	14
IZK/M 00321-RWO-P	86092133	21
IZK/M 00328-RWO-P	86092833	28
IZK/M 00342-RWO-P	86094233	42

Scope Of Delivery: 1 rear panel



PCB and rear panel holder

Model	Order no.	
LKH/M 09-P	86080090	
LKH/M 10-P	86080110	
RWH/M 01-P	86080120	

Scope Of Delivery:

LKH/M 10-P = 10 pieces (5 pairs right / left)

RWH/M 01-P = 10 pieces



BOPLA

A Phoenix Mecano Company

The product advantages



The 19" Internorm Stil desktop enclosure system consists of powder-coated aluminium components and is compatible with the accessory components and profiles in the Interzoll Modul product range.



We recommend the ventilated enclosure if electronic components generate high temperatures. In this way, the airflow is conducted from "below at the front" to "top at the rear".



The standard enclosure design provides good EMC characteristics, which can be upgraded by the use of optional EMC components.



Thanks to the various equipment options such as handles and tip-up feet, Internorm Stil can be flexibly adapted to the relevant application.



As an option, handles or 19" flanges can be fitted on the front side for switch cabinet installation.



Quick-Finder:
www.bopla.de/86

Examples of use





BOPLA

A Phoenix Mecano Company

Internorm Stil



Colour:

Enclosure:

● White aluminum, similar to RAL 9006

Profiles, feet:

● Anthracite grey, similar to RAL 7016

Protection class:

IP20 / DIN EN 60529

Material:

Profiles: Al Mg Si 0,5, anodized

Covers: diecast aluminum

Front handles / flanges: diecast aluminum

Side walls, cover and side panels:

passivated aluminium

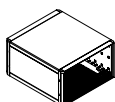
For details see technical information.



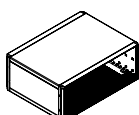
Enclosure sizes

3 U

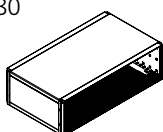
INS 24340



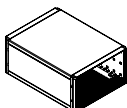
INS 24360



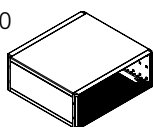
INS 24380



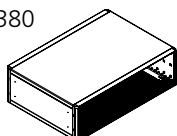
INS 30340



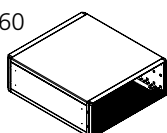
INS 30360



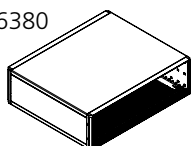
INS 30380



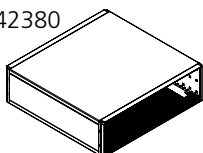
INS 36360



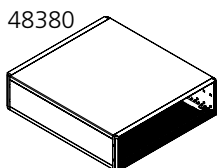
INS 36380



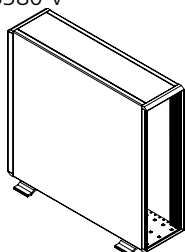
INS 42380



INS 48380

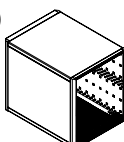


INS 48380 V

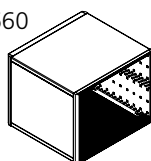


6 U

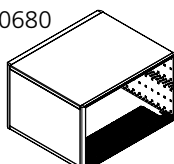
INS 30640



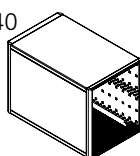
INS 30660



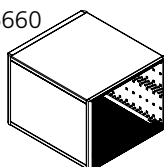
INS 30680



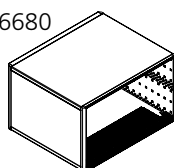
INS 36640



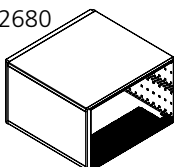
INS 36660



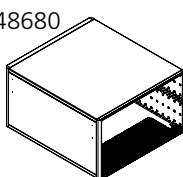
INS 36680



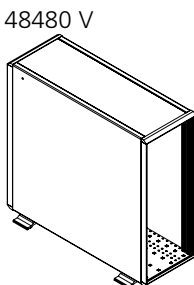
INS 42680



INS 48680

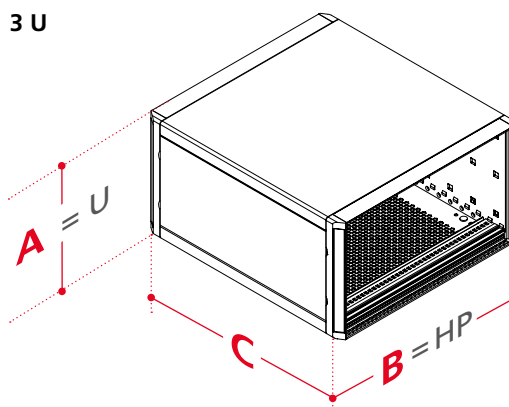


INS 48480 V



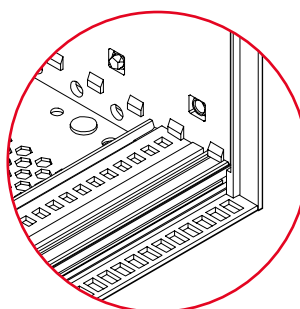
Design types

3 U

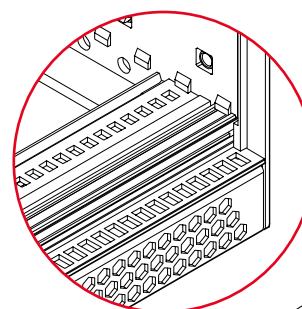


B + C = Profile lengths
individually selectable

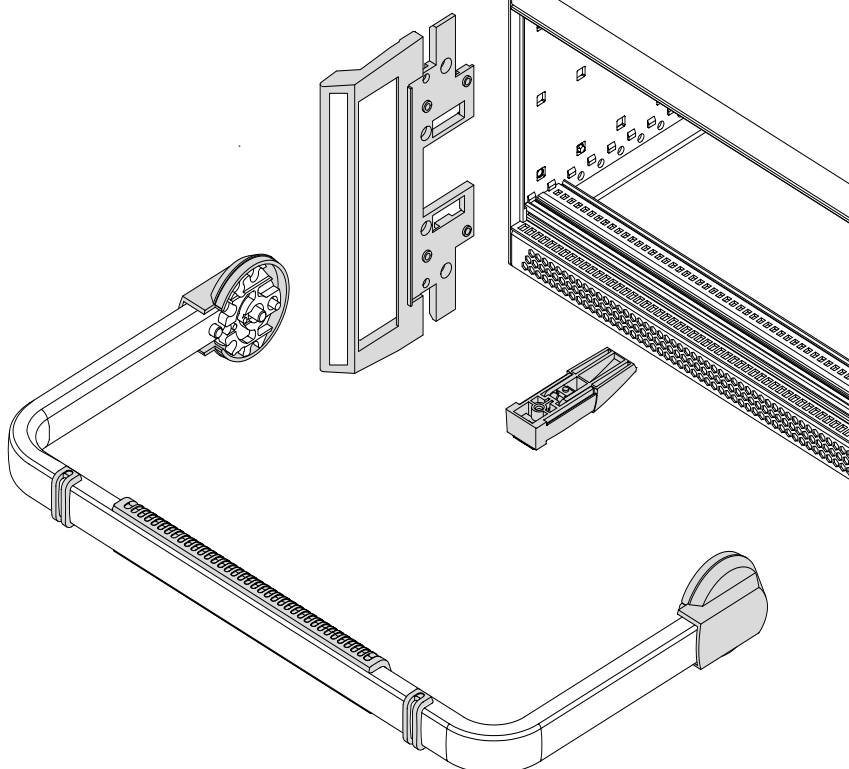
Without ventilation



With ventilation

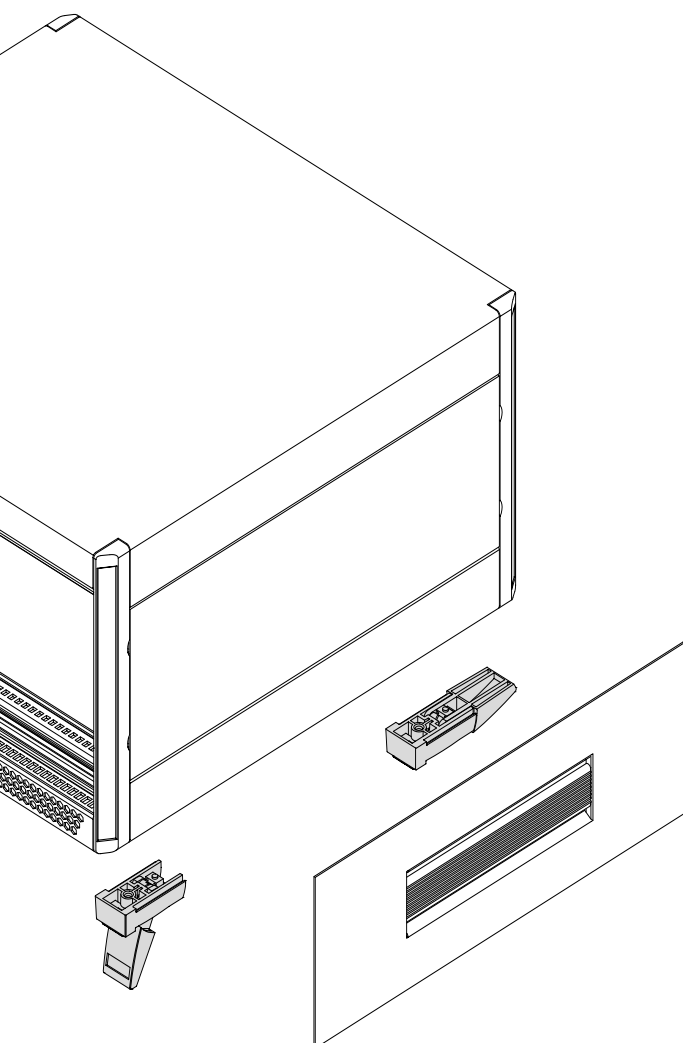
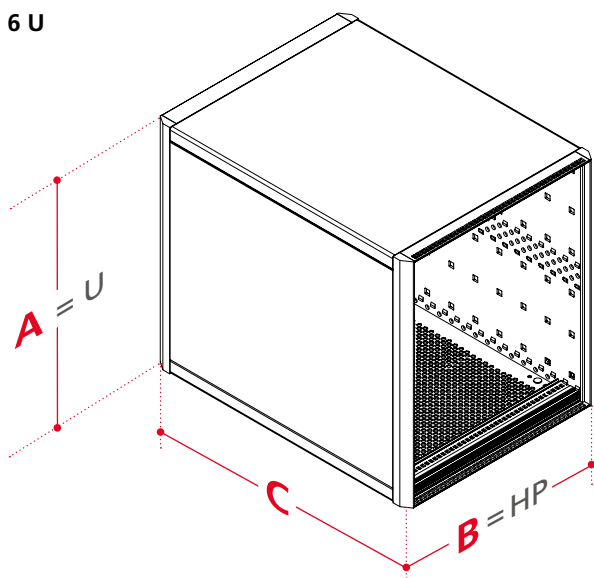


All enclosure sizes are available with
and without ventilation.



Internorm Stil

6 U



Dimensions

Model	A	B	C	HP
3 U	Without / with ventilation			
INS 24340 (-L)	132.55 / 177	235.54	255.5	42
INS 24360 (-L)	132.55 / 177	342.02	255.5	63
INS 24380 (-L)	132.55 / 177	448.7	255.5	84
INS 30340 (-L)	132.55 / 177	235.54	315.5	42
INS 30360 (-L)	132.55 / 177	342.02	315.5	63
INS 30380 (-L)	132.55 / 177	448.7	315.5	84
INS 36360 (-L)	132.55 / 177	342.02	375.5	63
INS 36380 (-L)	132.55 / 177	448.7	375.5	84
INS 42380 (-L)	132.55 / 177	448.7	435.5	84
INS 48380 (-L)	132.55 / 177	448.7	495.5	84
6 U	Without / with ventilation			
INS 30640 (-L)	265.9 / 310.35	235.54	315.5	42
INS 30660 (-L)	265.9 / 310.35	342.02	315.5	63
INS 30680 (-L)	265.9 / 310.35	448.7	315.5	84
INS 36640 (-L)	265.9 / 310.35	235.54	375.5	42
INS 36660 (-L)	265.9 / 310.35	342.02	375.5	63
INS 36680 (-L)	265.9 / 310.35	448.7	375.5	84
INS 42680 (-L)	265.9 / 310.35	448.7	435.5	84
INS 48680 (-L)	265.9 / 310.35	448.7	495.5	84
Tower enclosure	Without ventilation			
INS 48380 V	132.55 (3 U)	448.7	495.5	84
INS 48480 V	177 (4 U)	448.7	495.5	84

Accessories



Strap handles incl. lateral trim



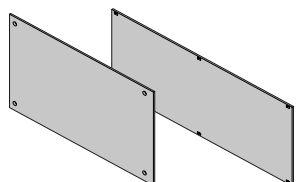
Flange with handle, screwable in place of the cover strips



Plug-in stack adapter



EMC springs for horizontal shielding between cover plates and side panels



Front and part front panels in different versions

Internorm Stil

Without ventilation



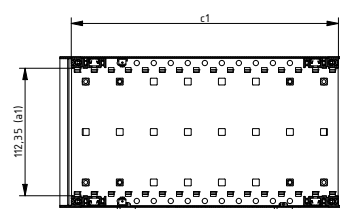
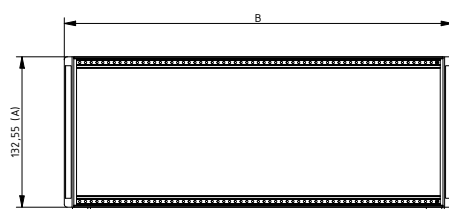
Enclosures without ventilation, 3 U

Model	Order no.	A	B	C	a1	b1	c1	U	HP	IP
INS 24340	85024345	132.55	235.54	255.5	112.35	213.94	235.5	3	42	20
INS 24360	85024365	132.55	342.02	255.5	112.35	320.62	235.5	3	63	20
INS 24380	85024385	132.55	448.7	255.5	112.35	427.3	235.5	3	84	20
INS 30340	85030345	132.55	235.54	315.5	112.35	213.94	295.5	3	42	20
INS 30360	85030365	132.55	342.02	315.5	112.35	320.62	295.5	3	63	20
INS 30380	85030385	132.55	448.7	315.5	112.35	427.3	295.5	3	84	20
INS 36360	85036365	132.55	342.02	375.5	112.35	320.62	355.5	3	63	20
INS 36380	85036385	132.55	448.7	375.5	112.35	427.3	355.5	3	84	20
INS 42380	85042385	132.55	448.7	435.5	112.35	427.3	415.5	3	84	20
INS 48380	85048385	132.55	448.7	495.5	112.35	427.3	475.5	3	84	20

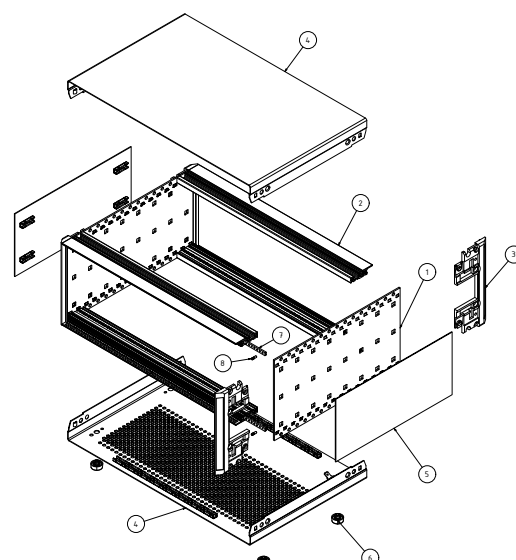
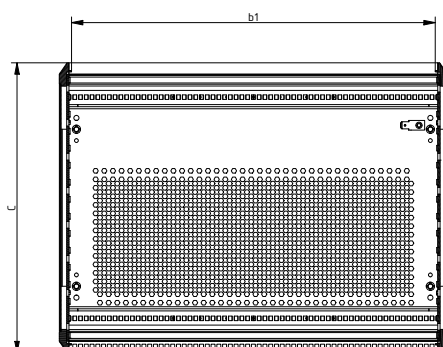
Scope Of Delivery:

- 1) 2 side panels (Al, white chromated)
- 2) 4 front profiles, suitable for ejector handle acc. to IEEE 1101.10
(aluminium, powder-coated visible surfaces, anthracite grey, similar to RAL 7016)
- 3) 4 trims (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 4) 2 cover plates with earthing connection; both with front ventilation
(aluminium, white chromated, visible surfaces powder-coated, white aluminium, similar to RAL 9006)
- 5) 2 side panel coverings (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 6) 4 enclosure feet (PC, black with anti-slip protection)
- 7) 4 tapped strips (GS/M)
- 8) 4 M2.5 (GSE/M) slotted set screws
- 9) 1 set of BFS/INS 0100, BFS/INS 0200, BFS/INS 0300 fixing material (not shown)

Notes: Installation acc. to IEC 60297-3-101



Z-2903302



Internorm Stil

Without ventilation

Enclosures without ventilation, 6 U

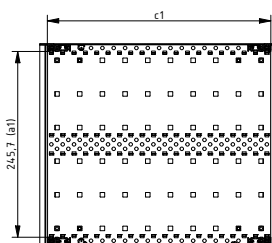
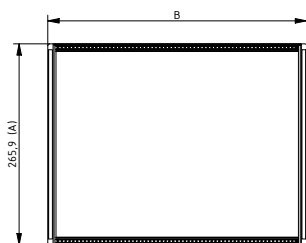
Model	Order no.	A	B	C	a1	b1	c1	U	HP	IP
INS 30640	85030645	265.9	235.54	315.5	245.69	213.94	295.5	6	42	20
INS 30660	85030665	265.9	342.02	315.5	245.69	320.62	295.5	6	63	20
INS 30680	85030685	265.9	448.7	315.5	245.69	427.3	295.5	6	84	20
INS 36640	85036645	265.9	235.54	375.5	245.69	213.94	355.5	6	42	20
INS 36660	85036665	265.9	342.02	375.5	245.69	320.62	355.5	6	63	20
INS 36680	85036685	265.9	448.7	375.5	245.69	427.3	355.5	6	84	20
INS 42680	85042685	265.9	448.7	435.5	245.69	427.3	415.5	6	84	20
INS 48680	85048685	265.9	448.7	495.5	245.69	427.3	475.5	6	84	20



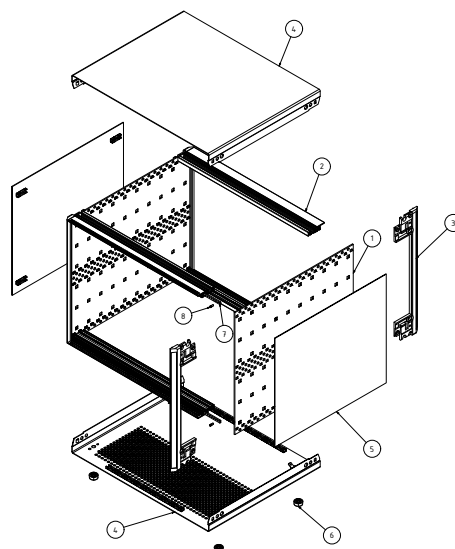
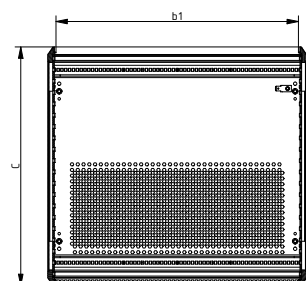
Scope Of Delivery:

- 1) 2 side panels (Al, white chromated)
- 2) 4 front profiles, suitable for ejector handle acc. to IEEE 1101.10
(aluminium, powder-coated visible surfaces, anthracite grey, similar to RAL 7016)
- 3) 4 trims (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 4) 2 cover plates with earthing connection; both with front ventilation
(aluminium, white chromated, visible surfaces powder-coated, white aluminium, similar to RAL 9006)
- 5) 2 side panel coverings (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 6) 4 enclosure feet (PC, black with anti-slip protection)
- 7) 4 tapped strips (GS/M)
- 8) 4 M2.5 (GSE/M) slotted set screws
- 9) 1 set of BFS/INS 0100, BFS/INS 0200, BFS/INS 0300 fixing material (not shown)

Notes: Installation acc. to IEC 60297-3-101



Z-2904372



Internorm Stil

With ventilation



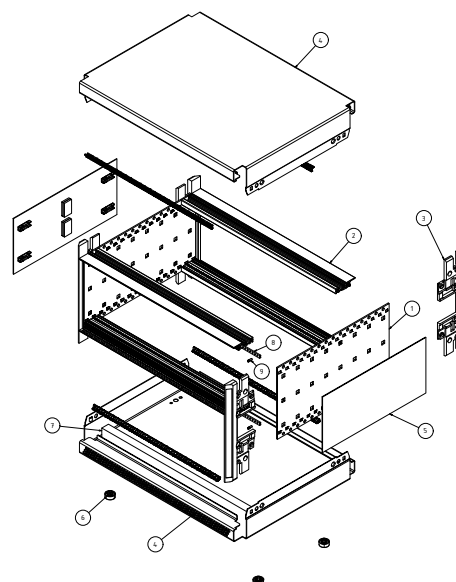
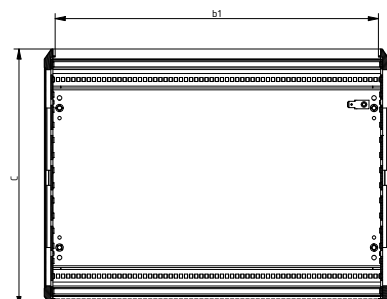
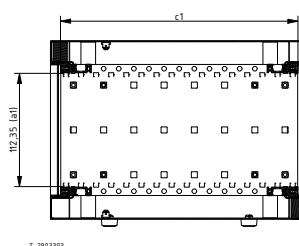
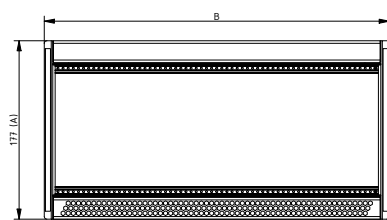
Enclosures with integrated ventilation, 3 U, each above and below with additional 0.5 U for the ventilation sections

Model	Order no.	A	B	C	a1	b1	c1	U	HP	IP
INS 24340-L	85024346	177	235.54	255.5	112.35	213.94	235.5	3	42	20
INS 24360-L	85024366	177	342.02	255.5	112.35	320.62	235.5	3	63	20
INS 24380-L	85024386	177	448.7	255.5	112.35	427.3	235.5	3	84	20
INS 30340-L	85030346	177	235.54	315.5	112.35	213.94	295.5	3	42	20
INS 30360-L	85030366	177	342.02	315.5	112.35	320.62	295.5	3	63	20
INS 30380-L	85030386	177	448.7	315.5	112.35	427.3	295.5	3	84	20
INS 36340-L	85036346	177	235.54	375.5	112.35	213.94	355.5	3	42	20
INS 36360-L	85036366	177	342.02	375.5	112.35	320.62	355.5	3	63	20
INS 36380-L	85036386	177	448.7	375.5	112.35	427.3	355.5	3	84	20
INS 42380-L	85042386	177	448.7	435.5	112.35	427.3	415.5	3	84	20

Scope Of Delivery:

- 1) 2 side panels (Al, white chromated)
- 2) 4 front profiles, suitable for ejector handle acc. to IEEE 1101.10
(aluminium, powder-coated visible surfaces, anthracite grey, similar to RAL 7016)
- 3) 4 trims (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 4) 2 lateral cover plates with earthing connection
(aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 5) 2 side panel coverings (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 6) 4 enclosure feet (PC, black with anti-slip protection)
- 7) 2 filter strips
- 8) 4 tapped strips (GS/M)
- 9) 4 M2.5 (GSE/M) slotted set screws
- 10) 1 set of BFS/INS 0100, BFS/INS 0200, BFS/INS 0300 fixing material (not shown)

Notes: Installation acc. to IEC 60297-3-101



Internorm Stil

With ventilation

Enclosures with integrated ventilation, 6 U, each above and below with additional 0.5 U for the ventilation sections

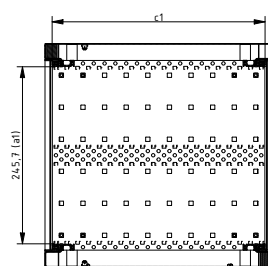
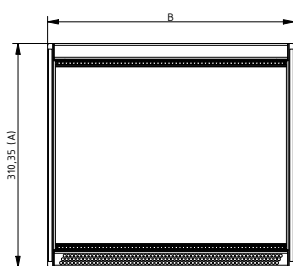
Model	Order no.	A	B	C	a1	b1	c1	U	HP	IP
INS 30640-L	85030646	310.35	235.54	315.5	245.69	213.94	295.5	6	42	20
INS 30660-L	85030666	310.35	342.02	315.5	245.69	320.62	295.5	6	63	20
INS 30680-L	85030686	310.35	448.7	315.5	245.69	427.3	295.5	6	84	20
INS 36640-L	85036646	310.35	235.54	375.5	245.69	213.94	355.5	6	42	20
INS 36660-L	85036666	310.35	342.02	375.5	245.69	320.62	355.5	6	63	20
INS 36680-L	85036686	310.35	448.7	375.5	245.69	427.3	355.5	6	84	20
INS 42680-L	85042686	310.35	448.7	435.5	245.69	427.3	415.5	6	84	20
INS 48680-L	85048686	310.35	448.7	495.5	245.69	427.3	475.5	6	84	20



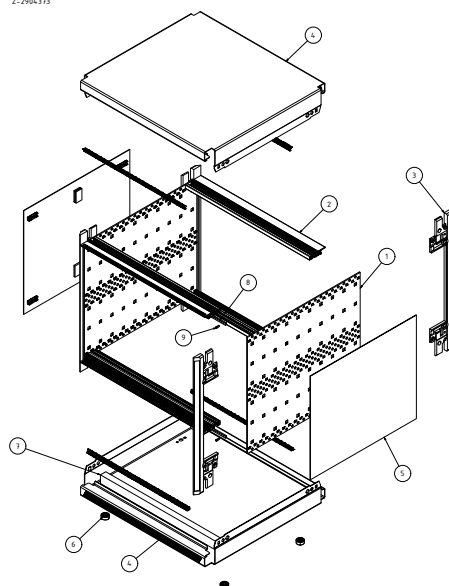
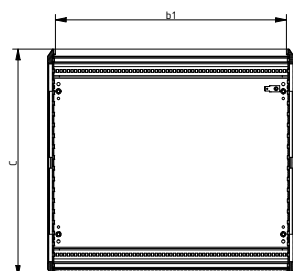
Scope Of Delivery:

- 1) 2 side panels (Al, white chromated)
- 2) 4 front profiles, suitable for ejector handle acc. to IEEE 1101.10 (aluminium, powder-coated visible surfaces, anthracite grey, similar to RAL 7016)
- 3) 4 trims (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 4) 2 lateral cover plates with earthing connection (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 5) 2 side panel coverings (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 6) 4 enclosure feet (PC, black with anti-slip protection)
- 7) 2 filter strips
- 8) 4 tapped strips (GS/M)
- 9) 4 M2.5 (GSE/M) slotted set screws
- 10) 1 set of BFS/INS 0100, BFS/INS 0200, BFS/INS 0300 fixing material (not shown)

Notes: Installation acc. to IEC 60297-3-101



Z-2904373



Internorm Stil

Tower enclosure



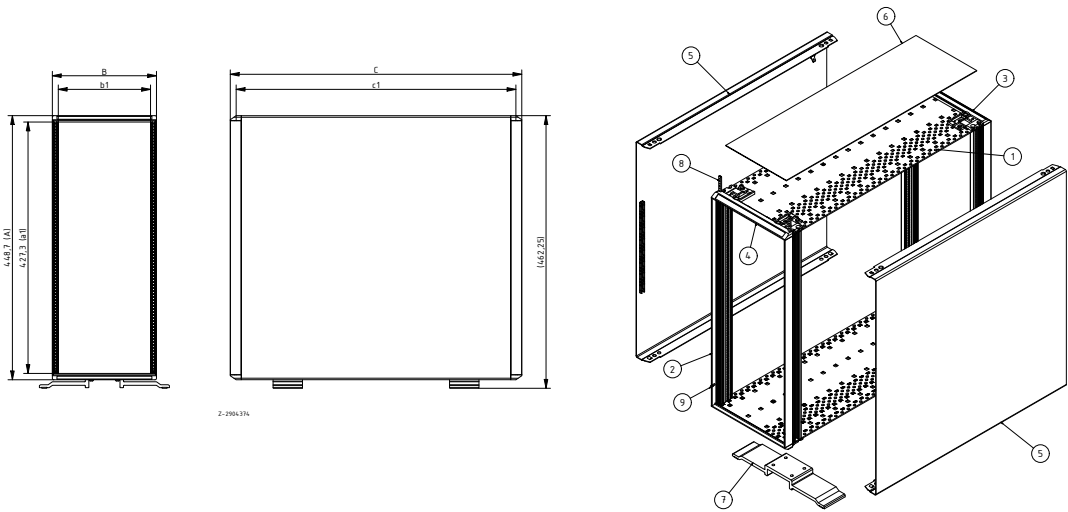
Tower enclosure without ventilation, 3 / 4 U

Model	Order no.	A	B	C	a1	b1	c1	U	HP	IP
INS 48380 V	85048388	132.55	448.7	495.5	112.35	427.3	475.5	3	84	20
INS 48480 V	85048488	177	448.7	495.5	156.8	427.3	475.5	4	84	20

Scope Of Delivery:

- 1) 2 side panels (aluminium, white chromated)
- 2) 4 front profiles (aluminium, powder-coated visible surfaces, anthracite grey, similar to RAL 7016)
- 3) 2 rear trims (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 4) 2 front covers (diecast zinc, powder-coated, anthracite grey, similar to RAL 7016)
- 5) 2 lateral cover plates with earthing connection (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 6) 1 top cover (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 7) 2 enclosure feet (aluminium, powder-coated, anthracite grey, similar to RAL 7016, with anti-slip protection)
- 8) 4 tapped strips (GS/M)
- 9) 4 M2.5 (GSE/M) slotted set screws
- 10) 1 set of BFS/INS 0100, BFS/INS 0200, BFS/INS 0300 fixing material (not shown)

Notes: Installation acc. to DIN IEC 60297-3-101. For dimension assignment, see INS 3 U.



Internorm Stil

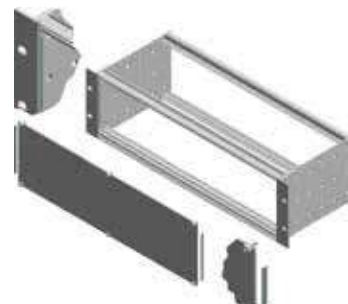
EMC screening

EMC springs, stainless steel, for the connection between front panels, front panel and flange or rear panel and rear end profile

Model	Order no.	U
EMV-Feder-FP/M 2HE	86001002	2
EMV-Feder-FP/M 3HE	86001003	3
EMV-Feder-FP/M 6HE	86001006	6

Scope Of Delivery: 10 EMC springs

Notes: Can be mounted in flanges and end profiles. The front panels must also be equipped with springs.

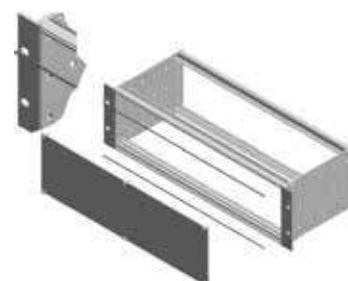


EMC springs, stainless steel, for the connection between the front panel / backplane and profile

Model	Order no.	HP
EMV-Feder-FP/M 42TE	86001142	42
EMV-Feder-FP/M 63TE	86001163	63
EMV-Feder-FP/M 84TE	86001184	84

Scope Of Delivery: 10 EMC springs

Notes: arrows point outwards.



Assembly tools for EMC spring

Model	Order no.	Note
MWZ/M-I	86001201	For AP/M
MWZ/M-II	86001202	For FP/M

Scope Of Delivery: 1 piece



EMC springs for horizontal shielding between cover plates and side panels, stainless steel

Model	Order no.	Note
EMV-Feder-AS/INS 24000	86055124	For INS 24...
EMV-Feder-AS/INS 30000	86055130	For INS 30...
EMV-Feder-AS/INS 36000	86055136	For INS 36...
EMV-Feder-AS/INS 42000	86055142	For INS 42...
EMV-Feder-AS/INS 48000	86055148	For INS 48...

Scope Of Delivery: 4 EMC springs



Support profiles for contacting between side panel and plug-in unit, uncoated aluminium

Model	Order no.	U	Note
TL/INS 00300	86051103	3	For INS ..3..
TL/INS 00600	86051106	-	For INS ..6..

Scope Of Delivery: 4 support profiles including EMC profile seals and mounting material

Notes: EMC spring -FP/M can also be used instead of the textile profile seal.



Internorm Stil

Card guides



Card guides standard, one piece, plastic, UL 94 V0, red

Model	Order no.	Card depth	Note
KF/M 160	86216010	160	Groove width 2 mm
KF/M 160-2,5	86216020	160	Groove width 2.5 mm
KF/M 220	86222010	220	Groove width 2 mm
KF/M 220-2,5	86222020	220	Groove width 2.5 mm
KF/M 80	86021008	80	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: 80 mm long card guide for a plug-in unit with rear I/O acc. to DIN IEC 60297-3-101 / IEEE 1101.11. Fixing screws (only BN) BFS/M 0200 (86000020) as accessory.

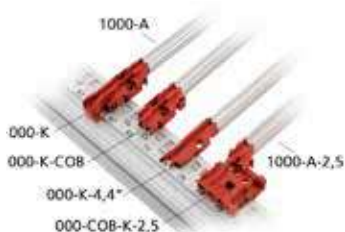


Card guides for coding block, one piece, plastic, UL 94 V0, red

Model	Order no.	Card depth	Note
KF/M 160-COB	86021016	160	Groove width 2 mm
KF/M 160-COB-V	86022016	160	Groove width 2 mm
KF/M 220-COB	86021022	220	Groove width 2 mm
KF/M 220-COB-V	86022022	220	Groove width 2 mm
KF/M 280-COB-V	86022028	280	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: Coding block and coding pegs on request. V-design for heavy modules. Fixing screws (only BN) BFS/M 0200 (86000020) as accessory.



Individual components for universal card guide, plastic, UL 94 V0, red, card guide profiles of natural-coloured anodised aluminium

Model	Order no.	Note
KF/M 000-COB-K-2,5	86020300	End pieces including coding block, groove width 2.5 mm
KF/M 000-K	86020000	Standard end pieces, groove width 2 mm
KF/M 000-K-4,4"	86020200	End pieces for card height 4.4", groove width 2 mm
KF/M 000-K-COB	86020100	End pieces for coding block / card retainer, groove width 2 mm
KF/M 1000	86200020	Card guide profile (1000 mm), groove width 2 mm
KF/M 1000-A-2,5	86200030	Card guide profile (1000 mm), groove width 2.5 mm

Scope Of Delivery: 1 piece; end pieces: 10 pairs (right/left)

Notes: End pieces ...4,4" are for circuit board height 4.4" (111.7 mm). Card earthing cannot be used with this type. Fixing screws only for use with the BN profiles. For card guide ...4.4" please use BFS/M 2400 (86000240); for all other types BFS/M 0200 (86000200). Special profile lengths on request.



Card guides, one piece, for heavy PCBs and plug-in units, natural-coloured anodised aluminium

Model	Order no.	Card depth	Note
KF/M 160-V-A	86416010	160	Groove width 2 mm
KF/M 220-V-A	86422010	220	Groove width 2 mm
KF/M 280-V-A	86428010	280	Groove width 2 mm

Scope Of Delivery: 1 card guide

Notes: Fixing screws only for use with the BN profiles. Please use BFS/M 2500 (86000250) see accessories.

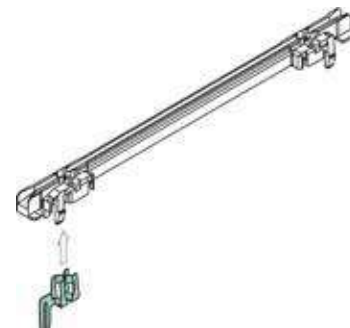
Internorm Stil

Card guides

Card earthing, tin-plated steel, for contacting between board and subrack

Model	Order no.	Note
KE/M	86022100	Card earthing for circuit board

Scope Of Delivery: 20 card earthing units

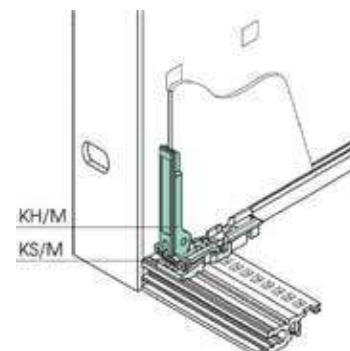


Card lever and card retainer, plastic, UL 94 V0, red, only for use with KF/M...COB (-V)

Model	Order no.	Note
KH/M	86022300	Card lever
KS/M	86022200	Card retainer

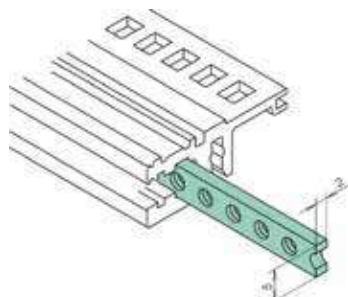
Scope Of Delivery: 1 card lever / 1 card retainer

Notes: 3 HP.



Internorm Stil

Thread and insulating strips

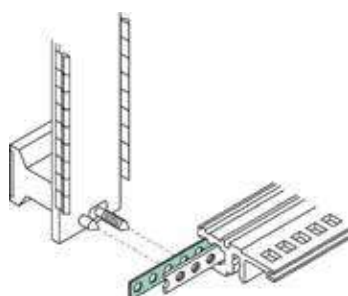


Tapped strips, galv. steel, M2.5

Model	Order no.	HP
GS/M 00042	86542110	42
GS/M 00063	86563110	63
GS/M 00084	86584110	84

Scope Of Delivery: 1 tapped strip

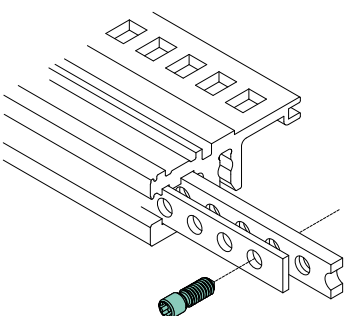
Notes: Can be used for all Interzoll Modul profiles. To fix front panels, use 12.3 mm long collar screws.



Perforated strip, untreated aluminium, for centring the shielded front panels via guide pins

Model	Order no.	HP
LO/M 00042	86542120	42
LO/M 00063	86563120	63
LO/M 00084	86584120	84

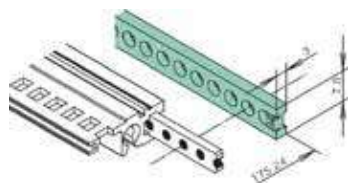
Scope Of Delivery: 1 perforated strip



M2.5 slotted set screw for fixing the perforated strip and fixing and earthing the threaded insert.

Model	Order no.	Note
GSE/M	86002000	SHR STI Z M2.5x6 Torx 8 A2, stainless steel

Scope Of Delivery: 20 slotted set screws

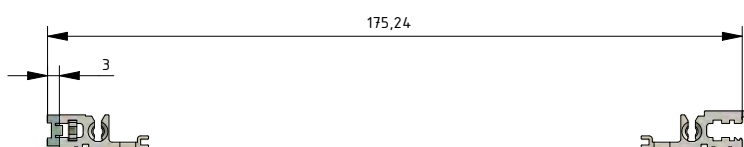


Insulating strip, plastic, UL 94 V0, for insulated fixing of backplanes

Model	Order no.	HP
IS/M 00042	86542130	42
IS/M 00063	86563130	63
IS/M 00084	86584130	84

Scope Of Delivery: 1 insulating strip

Notes: Mounting material BFS/M 0300 and 0400 as accessories.



Z-2904365

Internorm Stil

Profiles

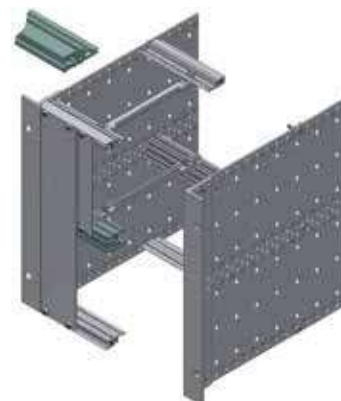
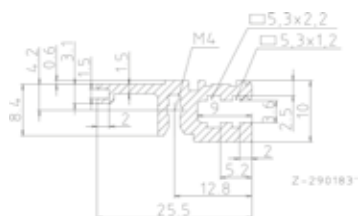
Front profiles without lip, natural-coloured anodised aluminium, conductive contact surfaces, for installation behind full-width front panels

Model	Order no.	HP
PF/M 00042-OD	86542310	42
PF/M 00063-OD	86563310	63
PF/M 00084-OD	86584310	84

Scope Of Delivery: 1 profile

Notes: For installation behind a full-width front panel, e.g. 6 U. Please order the EMC spring separately.

Fastening screws for profile fixing BFS/INS 0100 (86050100).



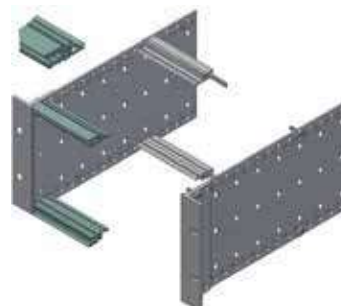
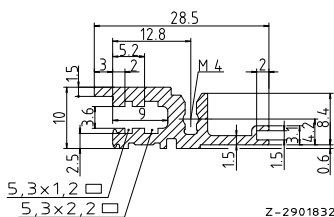
Front profiles with short lip (standard), natural-coloured anodised aluminium, conductive contact surfaces

Model	Order no.	HP
PF/M 00042	86542320	42
PF/M 00063	86563320	63
PF/M 00084	86584320	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

Fastening screws for profile fixing BFS/INS 0100 (86050100).



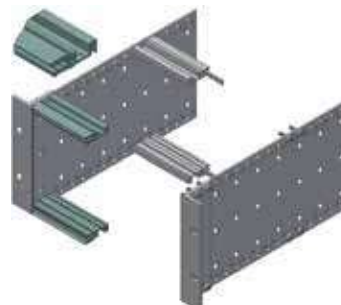
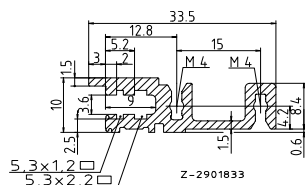
Front profiles for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing

Model	Order no.	HP
PF/M 00042-BN	86542330	42
PF/M 00063-BN	86563330	63
PF/M 00084-BN	86584330	84

Scope Of Delivery: 1 profile

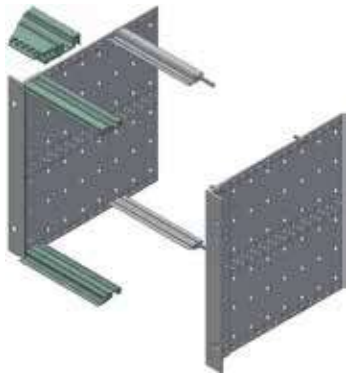
Notes: Please order the EMC spring separately.

Fastening screws for profile fixing BFS/INS 0100 (86050100).



Internorm Stil

Profiles

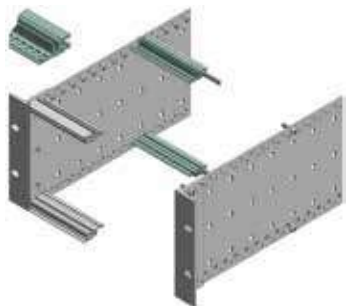
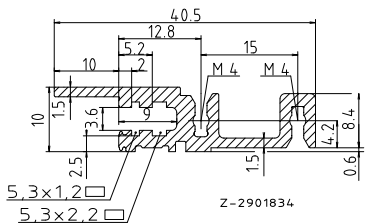


Front profiles for high mechanical loads and ejector handle acc. to IEC 60297-3-102 / IEEE 1101.10, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing

Model	Order no.	HP
PF/M 00042-BN-HG	86542340	42
PF/M 00063-BN-HG	86563340	63
PF/M 00084-BN-HG	86584340	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately. Fastening screws for profile fixing BFS/INS 0100 (86050100).



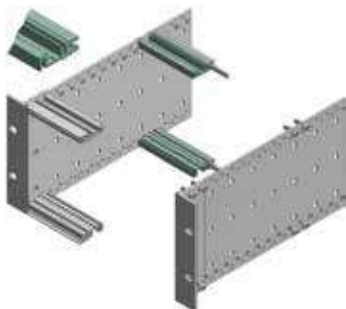
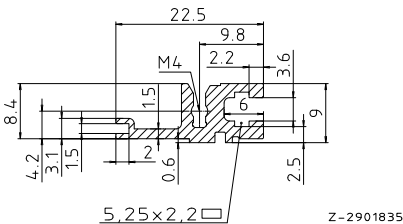
Bus profiles, natural-coloured anodised aluminium, for indirect backplane fixing

Model	Order no.	HP
PB/M 00042	86542410	42
PB/M 00063	86563410	63
PB/M 00084	86584410	84

Scope Of Delivery: 1 profile

Notes: Please order the insulating strip and EMC spring separately.

Fastening screws for profile fixing BFS/INS 0100 (86050100).



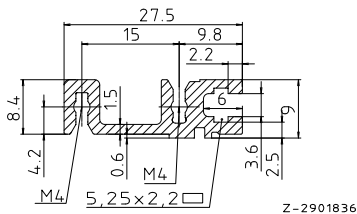
Bus profiles for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing, for indirect backplane fixing

Model	Order no.	HP
PB/M 00042-BN	86542420	42
PB/M 00063-BN	86563420	63
PB/M 00084-BN	86584420	84

Scope Of Delivery: 1 profile

Notes: Please order the insulating strip and EMC spring separately.

Fastening screws for profile fixing BFS/INS 0100 (86050100).



Internorm Stil

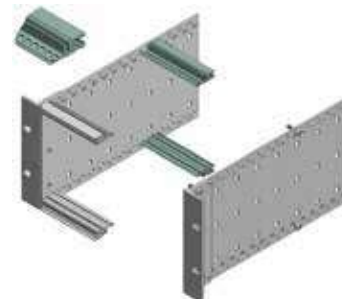
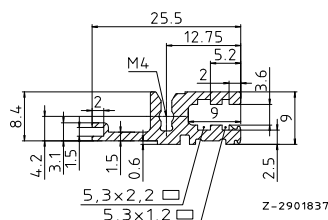
Profiles

Bus profiles, natural-coloured anodised aluminium, conductive contact surfaces, for backplane mounting with an integrated insulating strip clearance

Model	Order no.	HP
PBIS/M 00042	86542430	42
PBIS/M 00063	86563430	63
PBIS/M 00084	86584430	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately. Fastening screws for profile fixing BFS/INS 0100 (86050100).

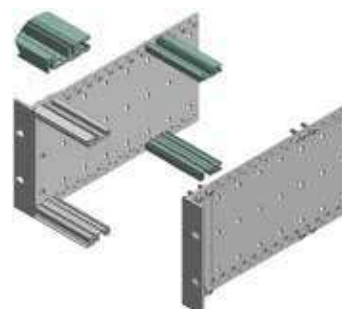
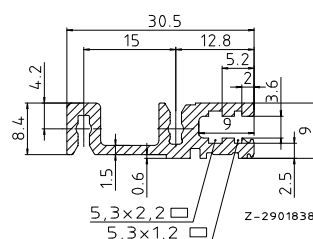


Bus profiles with an integrated insulating strip clearance for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing, for direct backplane fixing

Model	Order no.	HP
PBIS/M 00042-BN	86542440	42
PBIS/M 00063-BN	86563440	63
PBIS/M 00084-BN	86584440	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately. Fastening screws for profile fixing BFS/INS 0100 (86050100).

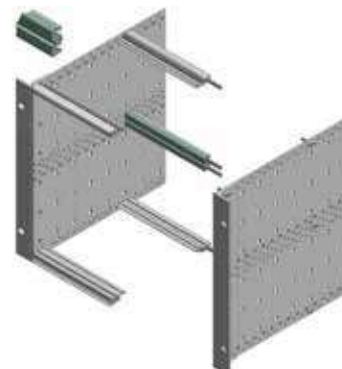
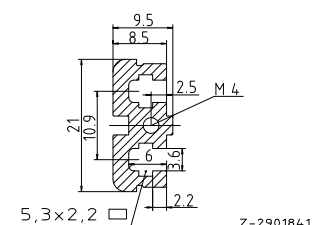


Double bus profiles, natural-coloured anodised aluminium, conductive contact surfaces, for bus PCB fixing

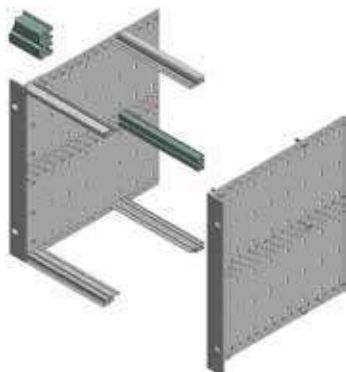
Model	Order no.	HP
PBD/M 00642	86542450	42
PBD/M 00663	86563450	63
PBD/M 00684	86584450	84

Scope Of Delivery: 1 profile

Notes: Please order the insulating strip and EMC spring separately. Fastening screws for profile fixing BFS/INS 0100 (86050100).



Profiles

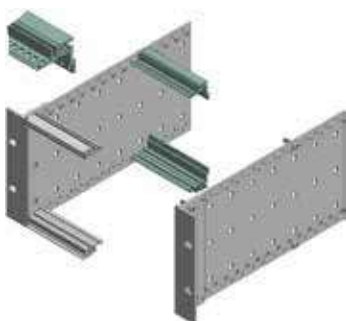
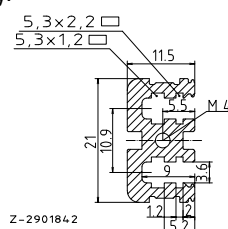


Double bus profiles with an integrated insulating strip clearance, natural-coloured anodised aluminium, conductive contact surfaces, for direct backplane fixing

Model	Order no.	HP
PBDIS/M 00642	86542460	42
PBDIS/M 00663	86563460	63
PBDIS/M 00684	86584460	84

Scope Of Delivery: 1 profile

Notes: Please order the EMC spring separately.

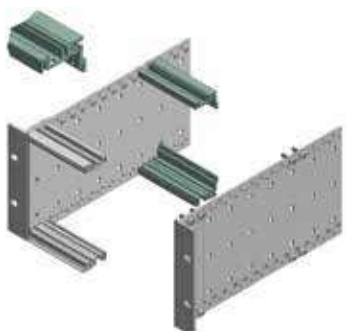
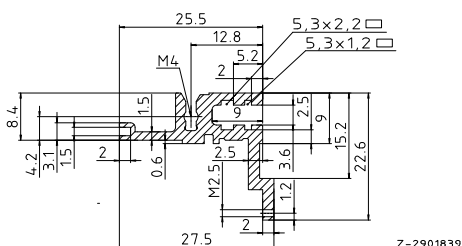


Rear profiles, natural-coloured anodised aluminium, conductive contact surfaces, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	HP
PR/M 00042.12	86542510	42
PR/M 00063.12	86563510	63
PR/M 00084.12	86584510	84

Scope Of Delivery: 1 profile

Notes: Fastening screws for profile fixing
BFS/INS 0100 (86050100).

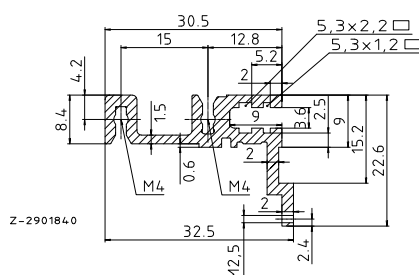


Rear profiles for high mechanical loads, natural-coloured anodised aluminium, conductive contact surfaces, 2-hole fixing, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	HP
PR/M 00042.12-BN	86542520	42
PR/M 00063.12-BN	86563520	63
PR/M 00084.12-BN	86584520	84

Scope Of Delivery: 1 profile

Notes: Fastening screws for profile fixing
BFS/INS 0100 (86050100).



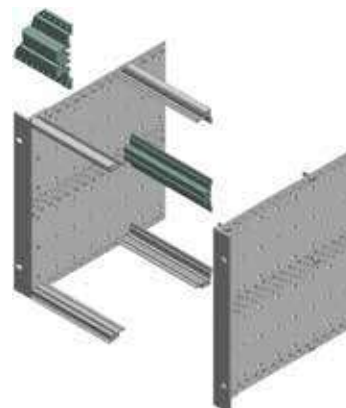
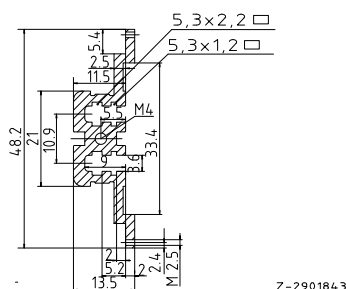
Internorm Stil

Profiles

Double connector profiles, natural-coloured anodised aluminium, conductive contact surfaces, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	HP
PSD/M 00642.12	86542610	42
PSD/M 00663.12	86563610	63
PSD/M 00684.12	86584610	84

Scope Of Delivery: 1 profile

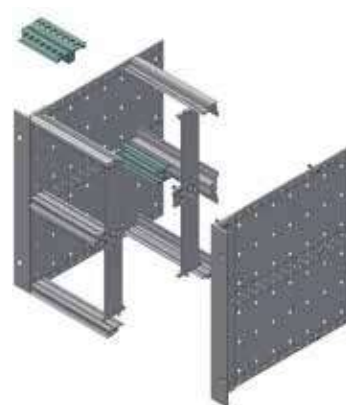
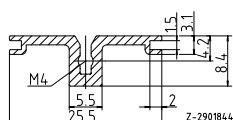


Snap profiles, natural-coloured anodised aluminium, conductive contact surfaces, for combined mounting and rear fitting of 80 mm Compact PCI units

Model	Order no.	HP
RP/M 00042	86542710	42
RP/M 00063	86563710	63
RP/M 00084	86584710	84

Scope Of Delivery: 1 pro

file **Notes:** RP/M 00084 with notch. Fastening screws for profile fixing BFS/INS 0100 (86050100).

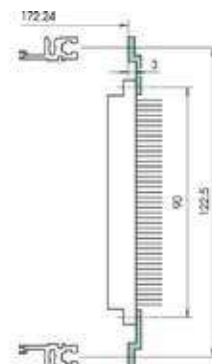


Z-rails, natural-coloured anodised aluminium, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	b1	HP
ZS/M 00040	86540210	203.2	40
ZS/M 00060	86560210	304.8	60
ZS/M 00084	86584210	426.7	84

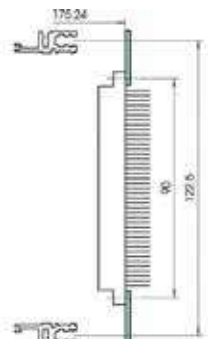
Scope Of Delivery: 1 Z-rail

Notes: For extension of a bus profile for direct connector mounting. Not for use with PBIS. Mounting material BFS/M 0300 (86000030) as accessory. b1 = profile length



Internorm Stil

Profiles

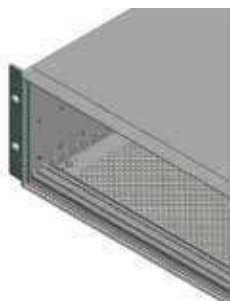


Perforated rails, passivated aluminium, for connectors acc. to DIN EN 60603-2 (formerly DIN 41612)

Model	Order no.	b1	HP	Note
LS/M 00040	86540220	203.2	40	40 HP
LS/M 00060	86560220	304.8	60	60 HP
LS/M 00084	86584220	426.7	84	84 HP

Scope Of Delivery: 1 perforated rail

Notes: For extension of a bus profile for direct connector mounting. Only for use with PBIS. Mounting material BFS/M 0400 (86000040) as accessory. b1 = profile length



19" flange, aluminium, anthracite grey, powder-coated, screwable in place of the cover strips

Model	Order no.	U	Note
FL/INS 00300	86052003	3	For INS ..3..
FL/INS 00300-L	86052004	3	For INS ..3.. -L
FL/INS 00600	86052006	6	For INS ..6..
FL/INS 00600-L	86052007	6	For INS ..6.. -L

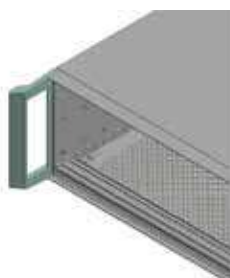
Scope Of Delivery: 2 flanges



Flange with handle, aluminium, anthracite grey, powder-coated, screwable in place of the cover strips

Model	Order no.	U	Note
FLG/INS 00300	86051303	3	For INS ..3..
FLG/INS 00300-L	86051304	3	For INS ..3.. -L
FLG/INS 00600	86051306	6	For INS ..6..
FLG/INS 00600-L	86051307	6	For INS ..6.. -L

Scope Of Delivery: 2 handles



Front handles, aluminium, anthracite grey, powder-coated, screwable in place of the cover strips

Model	Order no.	U	Note
FGR/INS 00300	86051003	3	For INS ..3..
FGR/INS 00300-L	86051004	3	For INS ..3.. -L
FGR/INS 00600	86051006	6	For INS ..6..
FGR/INS 00600-L	86051007	6	For INS ..6.. -L

Scope Of Delivery: 2 handles

Internorm Stil

Accessories

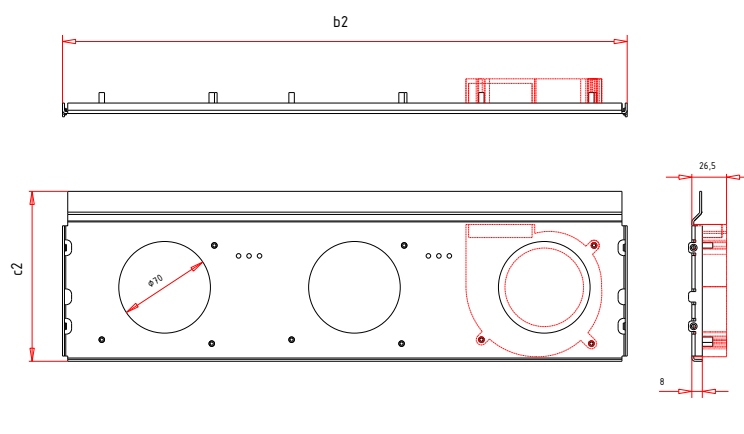
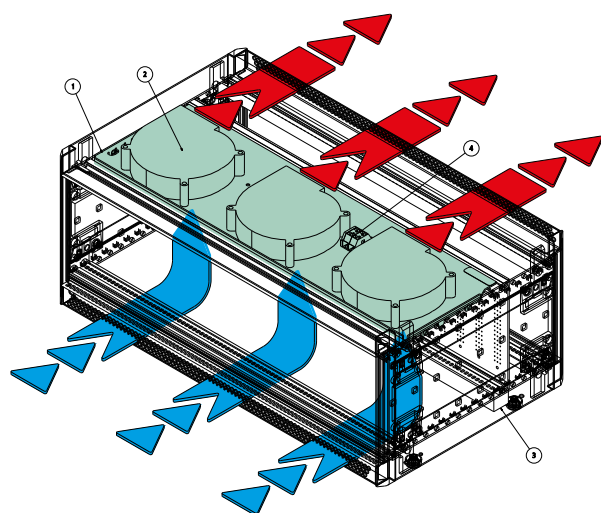
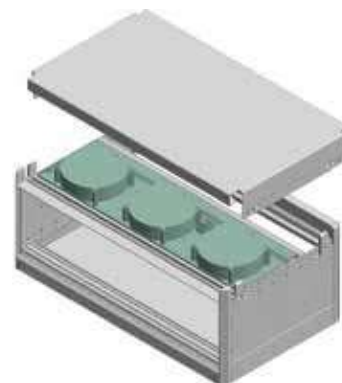
Ventilation elements

Model	Order no.	b2	c2	HP	Card depth	Note
RLE/INS-L 16084	86057841*	431.35	129.8	84	160	For INS ... 80-L
RLE/INS-L 22084	86057842*	431.35	189.9	84	220	For INS ... 80-L

Scope Of Delivery:

- 1) 1 fan support
 - 2) 3 radial fans
 - 3) 1 partition
 - 4) 1 connection terminal
- Fixing material (not shown)

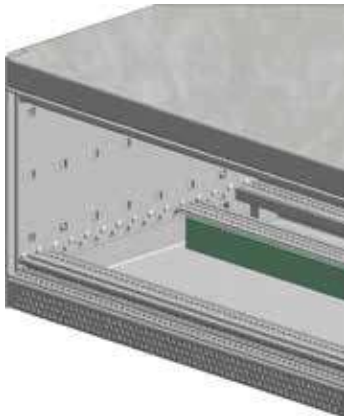
Notes: Additional sizes on request.



* = Available on request

Internorm Stil

Accessories

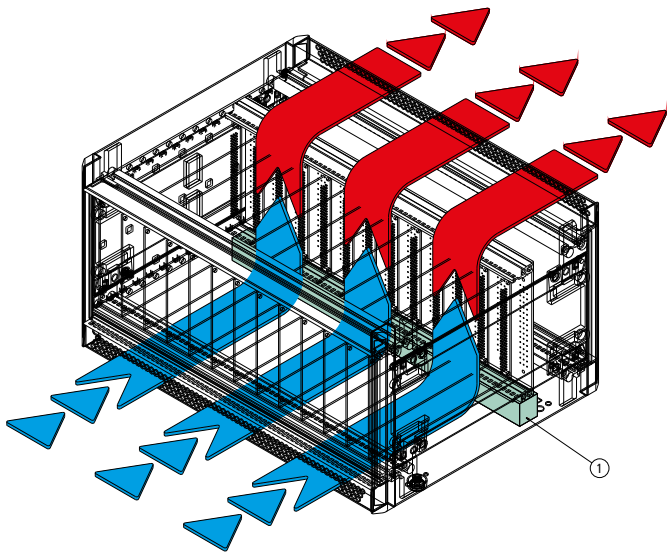


Partition, self-adhesive PE foam for sealing between rear profile and baseplate

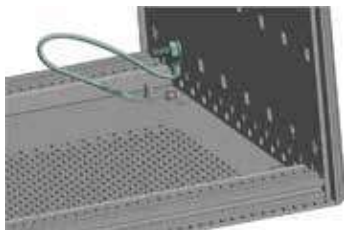
Model	Order no.	HP	Note
RA/INS 00042	86055042	42	For INS ... 40-L
RA/INS 00063	86055063	63	For INS ... 60-L
RA/INS 00084	86055084	84	For INS ... 80-L

Scope Of Delivery: 1 partition

Notes: Temperature range -20 °C to +120 °C. Only suitable for INS with ventilation.



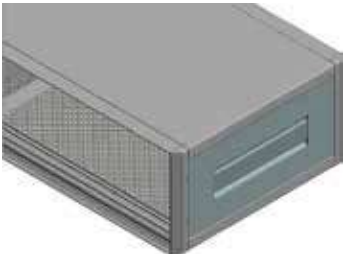
Z-2904376



Earthing set for earthing connection of the enclosure parts, 1.5 mm Cu lead, PVC sheathing

Model	Order no.
ES/INS	86056000

Scope Of Delivery: 1 lead, incl. mounting material



Strap handles made of plastic-coated spring steel, anthracite grey, incl. lateral trim

Model	Order no.	U	Note
FBGR/INS 24300	86051324	3	For INS 243..
FBGR/INS 30300	86051330	3	For INS 303..
FBGR/INS 36300	86051336	3	For INS 363..
FBGR/INS 42300	86051342	3	For INS 423..
FBGR/INS 48300	86051348	3	For INS 483..

Scope Of Delivery:

- 1 handle (steel spring, plastic-coated (soft plastic), anthracite grey, similar to RAL 7016)
- 1 lateral trim (aluminium, white chromated, powder-coated visible surfaces, white aluminium, similar to RAL 9006)
- 1 protective foil (polyester, white aluminium, similar to RAL 9006)
- 2 adapters (diecast aluminium)
- 1 set of fixing material

Notes: No mechanical processing required when retrofitted to INS enclosures (3 U).
Max. supporting load approx. 20 kg.

Internorm Stil

Accessories

Tip-up handle for INS, 3 U, adjustable and snap-in, anthracite grey/white aluminium, powder-coated (can only be fitted in connection with SBT/INS)

Model	Order no.	U	Note
AGR/INS 00342	86051142	3	For INS ..340
AGR/INS 00363	86051163	3	For INS ..360
AGR/INS 00384	86051184	3	For INS ..380

Scope Of Delivery:

1 carrying bar (aluminium profile, powder-coated, white aluminium, similar to RAL 9006)

1 handle shell (ABS, UL 94 V-0, anthracite grey, similar to RAL 7016)

2 tip-up protection units (ABS, UL 94 V-0, anthracite grey, similar to RAL 7016)

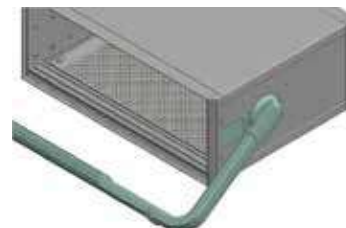
2 snap-on elements (diecast aluminium)

2 caps (ABS, UL 94 V-0, anthracite grey, similar to RAL 7016)

1 set of fixing material

Notes: Can be retrofitted without mechanical processing. The handle is adjustable in 30° detent stages.

Max. supporting load approx. 30 kg.



Lateral trims for AGR tip-up handle

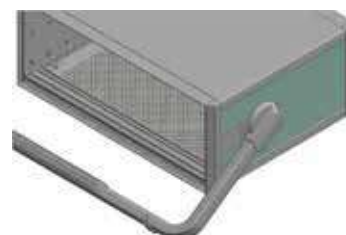
Model	Order no.	U	Note
SBT/INS 24300	86059243	3	For INS 243..
SBT/INS 30300	86059303	3	For INS 303..
SBT/INS 36300	86059363	3	For INS 363..
SBT/INS 42300	86059423	3	For INS 423..
SBT/INS 48300	86059483	3	For INS 483..

Scope Of Delivery: 2 lateral trims (aluminium sheet, powder-coated, white aluminium, similar to RAL 9006),

2 bow handle adapters (diecast aluminium, powder-coated, anthracite grey, similar to RAL 7016),

1 set of fixing material

Notes: For use with AGR/INS.



Tip-up feet, collapsible, plastic, UL 94 V0, anthracite grey, non-slip

Model	Order no.	Note
AF1/INS	86050000	Tip-up feet

Scope Of Delivery: 4 feet (PA UL 94 V-0), 4 anti-slip protection elements (TPE), 2 tip-ups (PA UL 94 V-0), 1 set of fixing material

Notes: For use instead of the standard feet. Max. supporting load 25 kg for each foot; max. enclosure weight 50 kg.



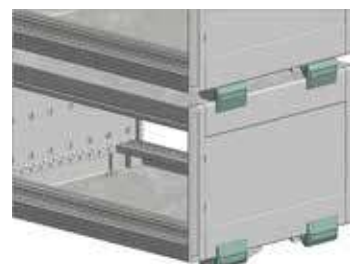
Plug-in stack adapter, anthracite grey (only for use with the AF1/INS tip-up foot)

Model	Order no.
STA1/INS	86050010

Scope Of Delivery: 4 stacking adapters

Notes: For use as a stacking aid or design element. Can only be used with tip-up foot AF1/INS (86050000).

Because of the stack adapter, only the side guide is provided.



Internorm Stil

Screws



Fixing screws for additionally fitted profiles

Model	Order no.	Note
BFS/INS 0100	86050100	SHR Z M 4x14-SO, toothed, countersink cone, galvanised steel, torx 20

Scope Of Delivery: 20 screws



Shorter fitting screws for profiles (if a card guide is screwed to slot 1)

Model	Order no.	Note
BFS/INS 0200	86050200	SHR Z M 4x10-SO, toothed, countersink cone, galvanised steel, torx 20

Scope Of Delivery: 20 screws



Fitting screws for cover plates and mounting panels

Model	Order no.	Note
BFS/INS 0300	86050300	SHR S M 4x8-SO, anodised steel, torx 20

Scope Of Delivery: 20 screws

Internorm Stil

Screws

Interzoll Modul mounting material

Model	Order no.	Note
BFS/M 0200	86000020	SHR Z KT 2.5x9.3, galvanised steel, torx 8, for FLS/M, KF/M...
BFS/M 0300	86000030	SHR Z M 2.5x7, galvanised steel, torx 8, for ZS/M
BFS/M 0400	86000040	SHR Z M 2.5x10, galvanised steel, torx 8, for LS/M
BFS/M 0500	86000050	SHR Z M 4x6-SO, toothed, anodised steel, torx 20, MP/M, RW/M
BFS/M 0600	86000060	MU M 4-4KT-SO, galvanised steel, for VB/M, TL/M, TLB/M, MP/M, RAP/M
BFS/M 0700	86000070	SHR S M 5x12, galvanised steel, recessed screw head, for GR/M
BFS/M 0800	86000080	SHR S M 4x5, galvanised steel, torx 20, for TL/M, TLB/M
BFS/M 0900	86000090	SHR S M 4x14-SO, toothed, torx 20, anodised steel, for TST/M
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1500	86000150	SHR Z M 4x6-SO countersink cone, galvanised steel, torx 20, for VB/M, RAP/M
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 1800	86000180	MU M 2.5-4KT, galvanised steel, for FX/M
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2400	86000240	SHR S KT 2.5x7.3, galvanised steel, torx 8, for KF/M 000-K-4.4"
BFS/M 2500	86000250	SHR Z KT 2.7x7.3, galvanised steel, torx 8, for KF/M 160-V-A
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
BFS/M2800	86000280	SHR Z M4x6-F-SO, toothed, torx 20, for ADGA/M
BFS/M2900	86000290	SHR Z KT 2.5x10, galvanised steel, torx 8, for TST/M

Scope Of Delivery: 20 pieces

BFS/M



Internorm Stil

Front panel

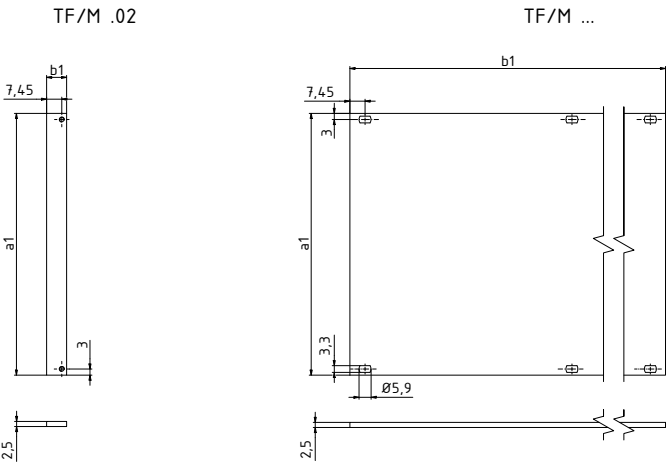


Part front panels, natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 242	86842023	84.05	213.01	2	42
TF/M 263	86863023	84.05	319.69	2	63
TF/M 284	86884023	84.05	426.37	2	84
TF/M 302	86802033	128.5	9.81	3	2
TF/M 303	86803033	128.5	14.89	3	3
TF/M 304	86804033	128.5	19.97	3	4
TF/M 306	86806033	128.5	30.13	3	6
TF/M 307	86807033	128.5	35.21	3	7
TF/M 308	86808033	128.5	40.29	3	8
TF/M 310	86810033	128.5	50.45	3	10
TF/M 312	86812033	128.5	60.61	3	12
TF/M 314	86814033	128.5	70.77	3	14
TF/M 318	86818033	128.5	91.09	3	18
TF/M 319	86819033	128.5	96.17	3	19
TF/M 320	86820033	128.5	101.25	3	20
TF/M 321	86821033	128.5	106.33	3	21
TF/M 328	86828033	128.5	141.97	3	28
TF/M 340	86840033	128.5	202.85	3	40
TF/M 342	86842033	128.5	213.01	3	42
TF/M 363	86863033	128.5	319.69	3	63
TF/M 384	86884033	128.5	426.37	3	84
TF/M 484	86884043	172.95	426.37	4	84
TF/M 604	86804063	261.85	19.97	6	4
TF/M 605	86805063	261.85	25.05	6	5
TF/M 608	86808063	261.85	40.29	6	8
TF/M 628	86828063	261.85	141.89	6	28
TF/M 642	86842063	261.85	213.01	6	42
TF/M 684	86884063	261.85	426.37	6	84

Scope Of Delivery: 1 part front panel

Notes: Special sizes on request. Screw holders and collar screws as accessories.



Z.-2904355

Internorm Stil

Front panel

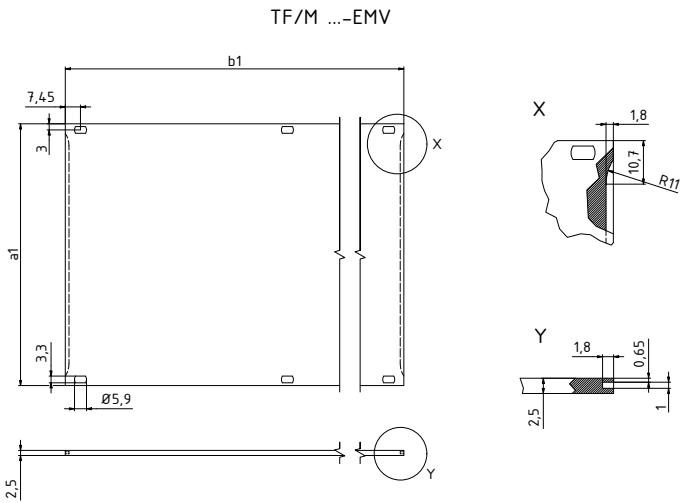
Part front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pins



Model	Order no.	a1	b1	U	HP
TF/M 304-EMV	86804034	128.5	19.97	3	4
TF/M 308-EMV	86808034	128.5	40.29	3	8
TF/M 310-EMV	86810034	128.5	50.45	3	10
TF/M 314-EMV	86814034	128.5	70.77	3	14
TF/M 320-EMV	86820034	128.5	101.25	3	20
TF/M 321-EMV	86821034	128.5	106.33	3	21
TF/M 340-EMV	86840034	128.5	202.85	3	40
TF/M 342-EMV	86842034	128.5	213.01	3	42
TF/M 363-EMV	86863034	128.5	319.69	3	63
TF/M 384-EMV	86884034	128.5	426.37	3	84
TF/M 604-EMV	86804064	261.85	19.97	6	4
TF/M 608-EMV	86808064	261.85	40.29	6	8
TF/M 612-EMV	86812064	261.85	60.61	6	12
TF/M 684-EMV	86884064	261.85	426.37	6	84

Scope Of Delivery: 1 part front panel

Notes: Additional sizes on request. For mounting material and EMC springs, see Interzoll Modul accessories.



Z-2904370

Internorm Stil

Front panel

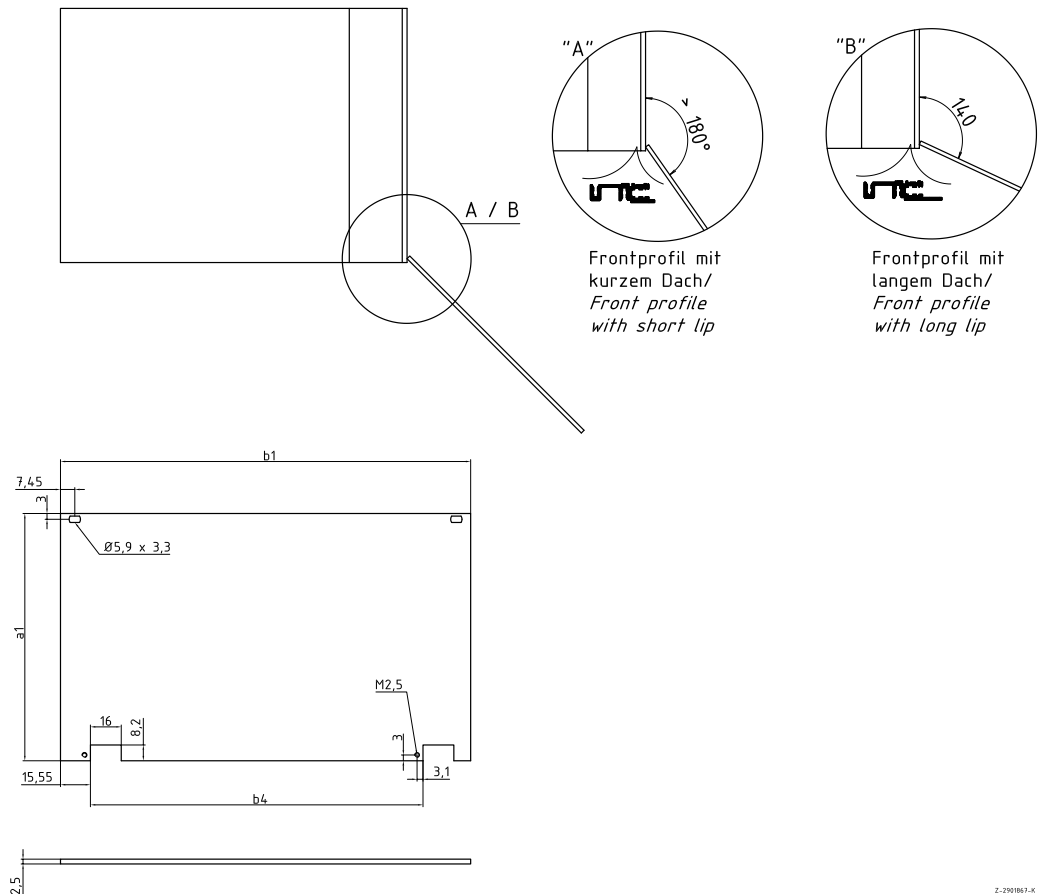


Front panels, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-K	86842038	128.5	213.01	3	42
TF/M 363-K	86863038	128.5	319.69	3	63
TF/M 384-K	86884038	128.5	426.37	3	84
TF/M 642-K	86842068	261.85	213.01	6	42
TF/M 663-K	86863068	261.85	319.69	6	63
TF/M 684-K	86884068	261.85	426.37	6	84

Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws BFS/M 2200, mounting material

Notes: The usable width is not restricted. Can be unhooked at 135° except for Internorm Stil. One tapped strip above and below is required for each fixing.



Z-2901863-X

Internorm Stil

Front panel

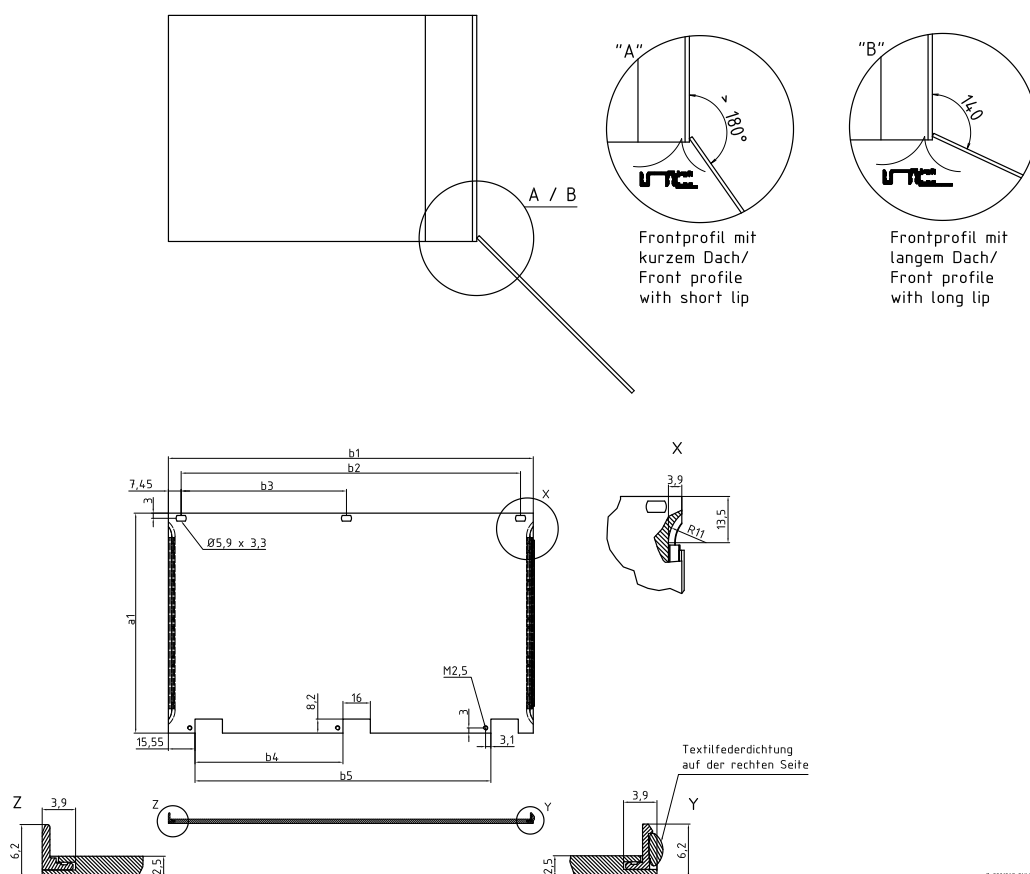
Front panels, EMC, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-EMV-K	86842037	128.5	213.01	3	42
TF/M 363-EMV-K	86863037	128.5	319.69	3	63
TF/M 384-EMV-K	86884037	128.5	426.37	3	84
TF/M 642-EMV-K	86842067	261.85	213.01	6	42
TF/M 684-EMV-K	86884067	261.85	426.37	6	84



Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws M2.5x12.3, EMC textile seal, mounting material

Notes: Shielded, part front panels with slits for EMC springs (can also be used without EMC springs). The usable width is not restricted. Can be removed at 135°, except for Internorm Stil. 1 tapped strip is required in each case for fixing up and down.



Z-2919637-EMV-K

Internorm Stil

Front panel

Plug-in front panels, front natural-coloured anodised aluminium, passivated on rear, incl. handles, plastic, UL 94 V 0, light grey

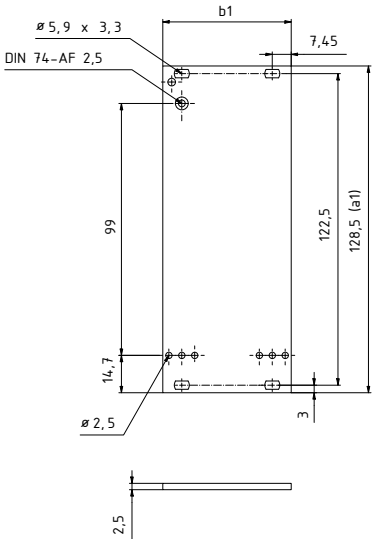
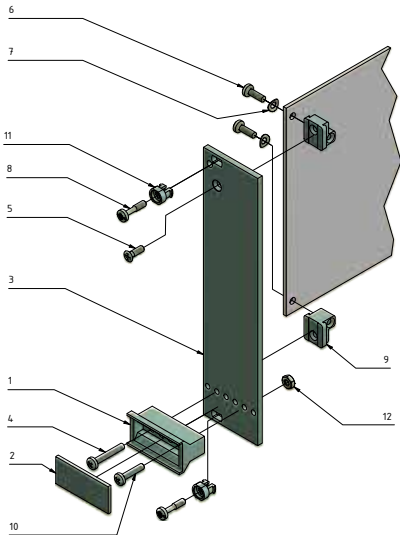
Model	Order no.	a1	b1	U	HP
ST/M 303	86803037	128.5	14.89	3	3
ST/M 304	86804037	128.5	19.97	3	4
ST/M 305	86805037	128.5	25.05	3	5
ST/M 306	86806037	128.5	30.13	3	6
ST/M 308	86808037	128.5	40.29	3	8
ST/M 309	86809037	128.5	45.37	3	9
ST/M 310	86810037	128.5	50.45	3	10
ST/M 312	86812037	128.5	60.61	3	12
ST/M 318	86818037	128.5	91.09	3	18
ST/M 321	86821037	128.5	106.33	3	21

Scope Of Delivery: :

- 1) 1 handle, trapezoidal shape (LEXAN UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear passivated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 plastic screw holders (PA6, grey, unscreened, for plug-in front panels)
- 11) 8 HP and higher: 4 plastic screw holders (grey, unscreened, for plug-in front panels)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)

Notes: Additional sizes on request.

ST/M 3..



Internorm Stil

Front panel

Plug-in front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pin

Model	Order no.	a1	b1	U	HP
ST/M 303-EMV	86803038	128.5	14.89	3	3
ST/M 304-EMV	86804038	128.5	19.97	3	4
ST/M 305-EMV	86805038	128.5	25.05	3	5
ST/M 306-EMV	86806038	128.5	30.13	3	6
ST/M 308-EMV	86808038	128.5	40.29	3	8
ST/M 309-EMV	86809038	128.5	45.37	3	9
ST/M 310-EMV	86810038	128.5	50.45	3	10
ST/M 312-EMV	86812038	128.5	60.61	3	12
ST/M 318-EMV	86818038	128.5	91.09	3	18
ST/M 321-EMV	86821038	128.5	106.33	3	21

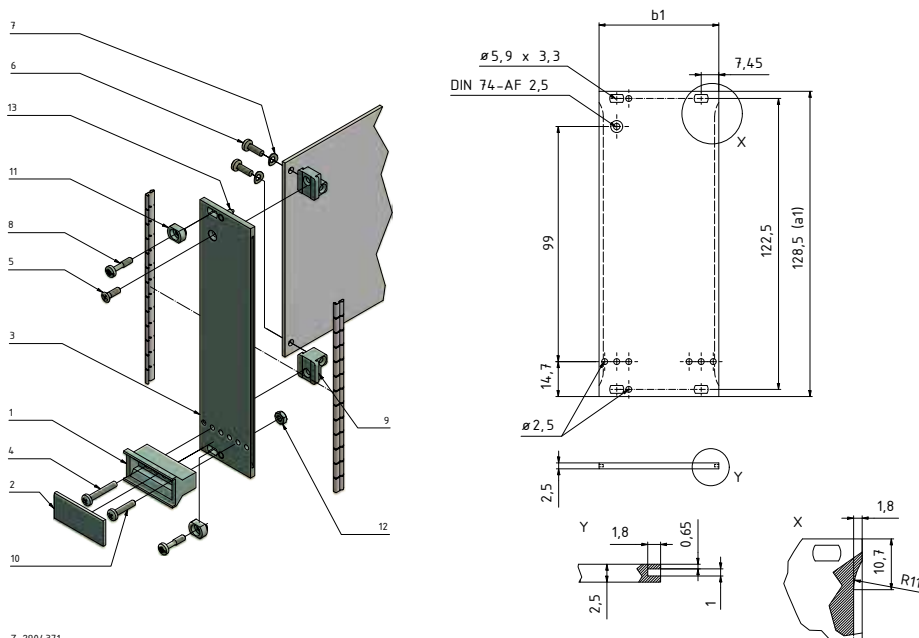
Scope Of Delivery: :

- 1) 1 handle, trapezoidal shape (PPO-UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear passivated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 metal screw holders (stainless steel, for plug-in front panels with slit)
- 11) 8 HP and higher: 4 metal screw holders (stainless steel, for plug-in front panels with slit)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)
- 13) 2 pressed-in alignment pins (stainless steel)

Notes: Additional sizes on request. EMC springs FP/M as Interzoll Modul accessories.



ST/M 3...-EMV

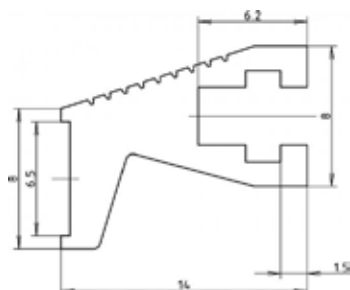


Z-2904.371

Internorm Stil

Front panel

Handle profile, natural-coloured anodised aluminium, metre profile

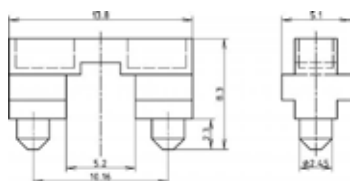


Model **Order no.**

GRL/M 1000-AL **86081740**

Scope Of Delivery: 1m handle profile

Notes: Mounting material, (86081750) and BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



Fixing piece, plastic, black, for fixing the handle profile GRL to the front panel

Model **Order no.**

FX/M **86081750**

Scope Of Delivery: 20 fixing pieces

Notes: Mounting in aluminium handle GRL/M (86081740) with BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.

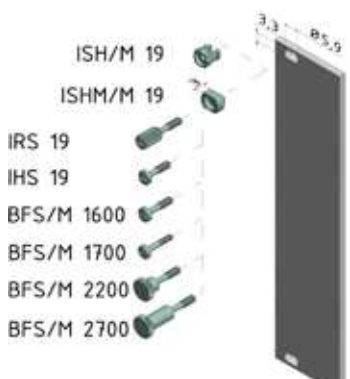


PCB holder and fixing material

Model	Order no.	Note
BFS/M 1000	86000100	SHR Z M 2.5x12, galvanised steel, slotted, for LKH/M 02, 03
BFS/M 1200	86000120	SHB FED 2.6, anodised steel, for LKH/M 03
BFS/M 1900	86000190	SHR Z M 2.5 x 8, anodised steel, cross-head, for FX/M, LKH/M 03
BFS/M 2000	86000200	MU M 2.5-6KT, galvanised steel, for LKH/M 02
BFS/M 2100	86000210	SHR S M 2.5x8, galvanised steel, cross-head, for ST/M (-EMV), LKH/M 02, 03
BFS/M 2600	86000260	SHR Z M 2.5x16, galvanised steel, recessed screw head, for LKH/M 02, 03
LKH/M 02	86080020	With 4 through holes for fixing front panels and circuit boards
LKH/M 03	86080030	With 2 M 2.5 threads for fixing of front panels and circuit boards

Scope Of Delivery: 10 pieces

BFS/M: 20 pieces



Mounting material for part front panels and plug-in units

Model	Order no.	Note
BFS/M 1600	86000160	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels
BFS/M 1700	86000170	Collar screws, SHR Z M 2.5x12.3x6.5-SP, nickel-plated steel, for front panels, torx 8
BFS/M 2200	86000220	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx18.3, nickel-plated steel
BFS/M 2700	86000270	Knurled screw without slot, SHR R M 2.5x12.3x6.5-SPx25.3, anodised steel, for PF/M with long lip
IHS 19	54700410	Collar screws SHR Z M2.5x11.3x6.3-SP, slotted-head screw
IRS 19	54700420	Slotted knurled screw, collar screws SHR R M2.5x11.3x6.3-SP
ISH/M 19	86080510	Plastic screwholder, PA 6, grey
ISHM/M 19	86080500	Metal screw holder, stainless steel (1.4305), for conductive contacting for riveting to the front panel

Scope Of Delivery: ISH 19 / IRS 19 = 10 pieces, otherwise 20 pieces

Internorm Stil

Frame-type plug-in units

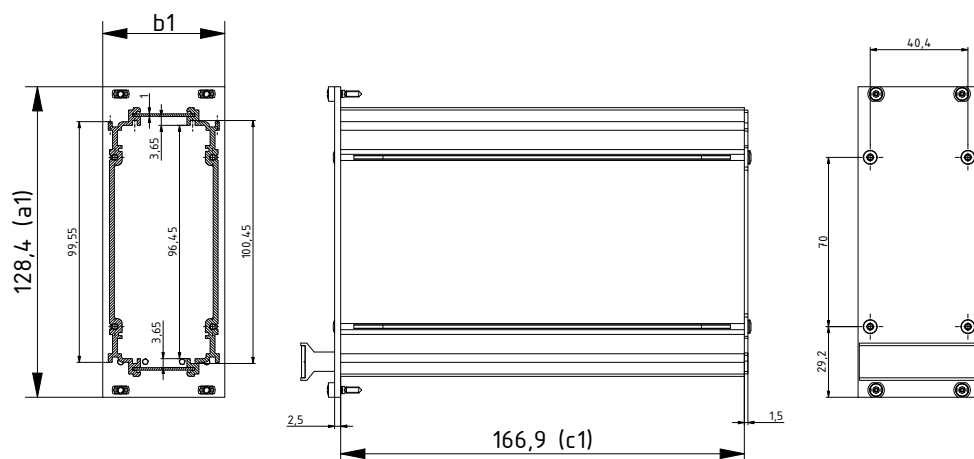
Interzoll PRO frame-type plug-in units, 3 U, natural-coloured anodised aluminium front panel, colourless passivated aluminium side profiles, galvanised steel cover plates, plain, galvanised steel rear panel with one slot, 3 U



Model	Order no.	a1	b1	c1	U	HP
IZK/M 16308-RW1-P	85808311	128.4	40.3	166.9	3	8
IZK/M 16310-RW1-P	85810311	128.4	50.46	166.9	3	10
IZK/M 16312-RW1-P	85812311	128.4	60.62	166.9	3	12
IZK/M 16314-RW1-P	85814311	128.4	70.78	166.9	3	14
IZK/M 16321-RW1-P	85821311	128.4	106.34	166.9	3	21
IZK/M 16328-RW1-P	85828311	128.4	141.9	166.9	3	28
IZK/M 16342-RW1-P	85842311	128.4	213.02	166.9	3	42

Scope Of Delivery: 1 front panel with handle, 2 side panels, 2 top covers, 1 rear panel, mounting material

Notes: Additional versions, 6 U, EMC or with hood on request.



Z-2904.357

Cover plates, perforated, 1mm, galvanised sheet steel, for frame-type plug-in units, 3 U

Model	Order no.	c1	HP
IZK/M 16008-ADL-P	86090812	166.9	8
IZK/M 16010-ADL-P	86091012	166.9	10
IZK/M 16012-ADL-P	86091212	166.9	12
IZK/M 16014-ADL-P	86091412	166.9	14
IZK/M 16021-ADL-P	86092112	166.9	21
IZK/M 16028-ADL-P	86092812	166.9	28
IZK/M 16042-ADL-P	86094212	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Internorm Stil

Frame-type plug-in units



Cover plates, perforated, 1mm, galvanised sheet steel, for PRO frame-type plug-in units, 3 U, to accommodate card guides

Model	Order no.	c1	HP
IZK/M 16008-ADL-KF-P	86090813	166.9	8
IZK/M 16010-ADL-KF-P	86091013	166.9	10
IZK/M 16012-ADL-KF-P	86091213	166.9	12
IZK/M 16014-ADL-KF-P	86091413	166.9	14
IZK/M 16021-ADL-KF-P	86092113	166.9	21
IZK/M 16028-ADL-KF-P	86092813	166.9	28
IZK/M 16042-ADL-KF-P	86094213	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Card guides for cover plates IZK/M-ADL-KF, plastic, UL 94 V0, red

Model	Order no.	Card depth
IZK/M KF-160-P	86216030	160

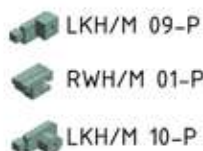
Scope Of Delivery: 10 card guides



Rear panel open, galvanised sheet steel, for IZK/M frame-type plug-in units

Model	Order no.	HP
IZK/M 00308-RWO-P	86090833	8
IZK/M 00310-RWO-P	86091033	10
IZK/M 00312-RWO-P	86091233	12
IZK/M 00314-RWO-P	86091433	14
IZK/M 00321-RWO-P	86092133	21
IZK/M 00328-RWO-P	86092833	28
IZK/M 00342-RWO-P	86094233	42

Scope Of Delivery: 1 rear panel



PCB and rear panel holder

Model	Order no.	
LKH/M 09-P	86080090	
LKH/M 10-P	86080110	
RWH/M 01-P	86080120	

Scope Of Delivery:

LKH/M 10-P = 10 pieces (5 pairs right / left)

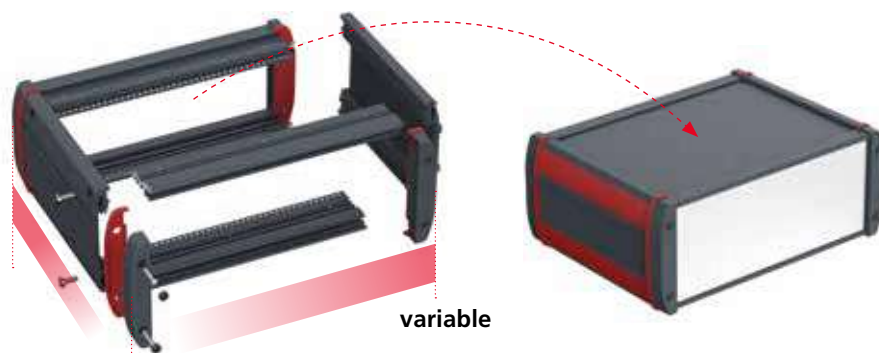
RWH/M 01-P = 10 pieces



BOPLA

A Phoenix Mecano Company

The product advantages



Intertego is an aluminium profile enclosure whose height and width are variable. The material and function of cover plates and front panels allow the creation of almost any design.



The EMC characteristics of the enclosure can be further upgraded by the use of special EMC components.



Intertego can be used in many situations and is especially suitable for the installation of 19" modules.



On request, the enclosure colour can be varied to meet the customers' specific requirements by means of the powder-coated surface.



The side system groove is used to hold decor strips for colour design and function components e.g. tip-up feet or wall-mounting brackets.



Quick-Finder:
www.bopla.de/95

Examples of use





BOPLA

A Phoenix Mecano Company

Intertego



Colour:

● Graphite grey, similar to RAL 7024

Special colours on request

Protection class:

IP40 / DIN EN 60529

With ventilation holes (ADL) IP20 / DIN EN 60529

Material:

Profiles: Al Mg Si 0,5,

Diecast corners: zinc alloy Z410

Decor elements: TPE

For details see technical information.

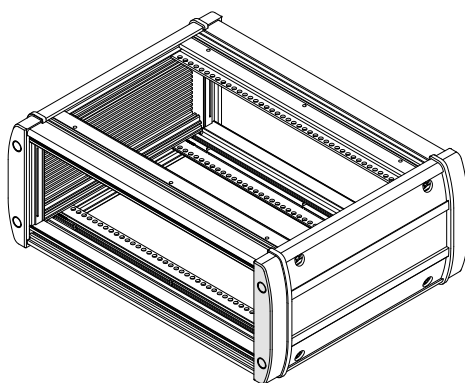


Desktop

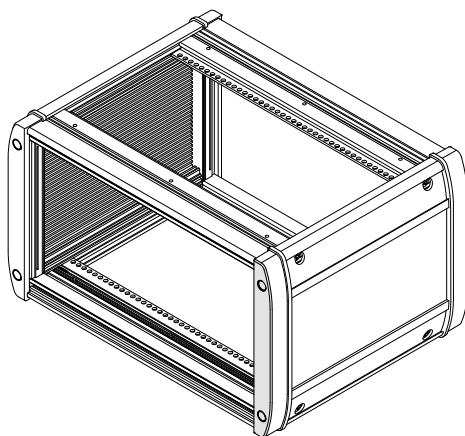
Intertego

Enclosure heights

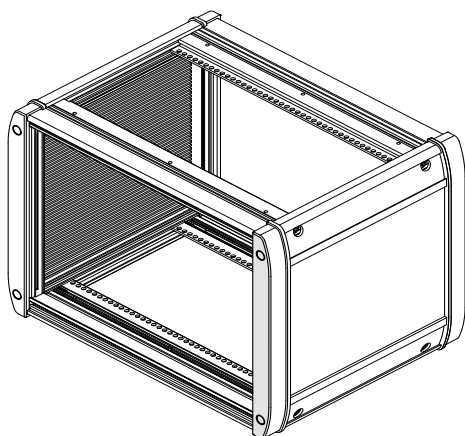
2U IT 10...



3U IT 15...



4U IT 20...

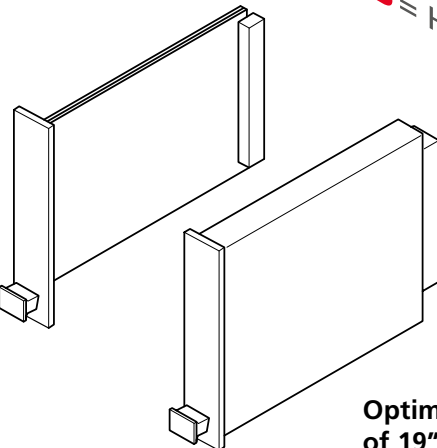
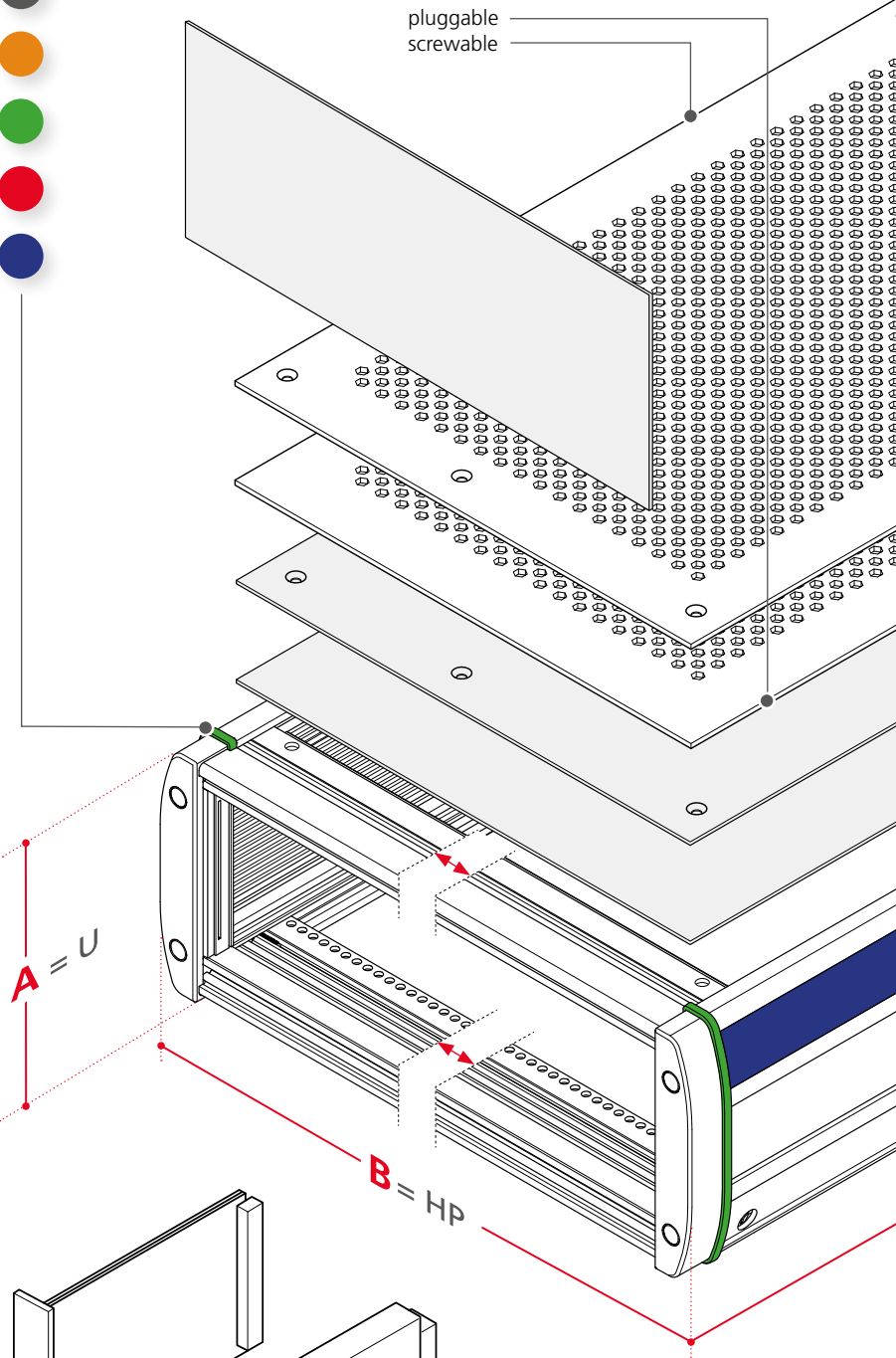


Design type

- Decor elements
-
-
-
-

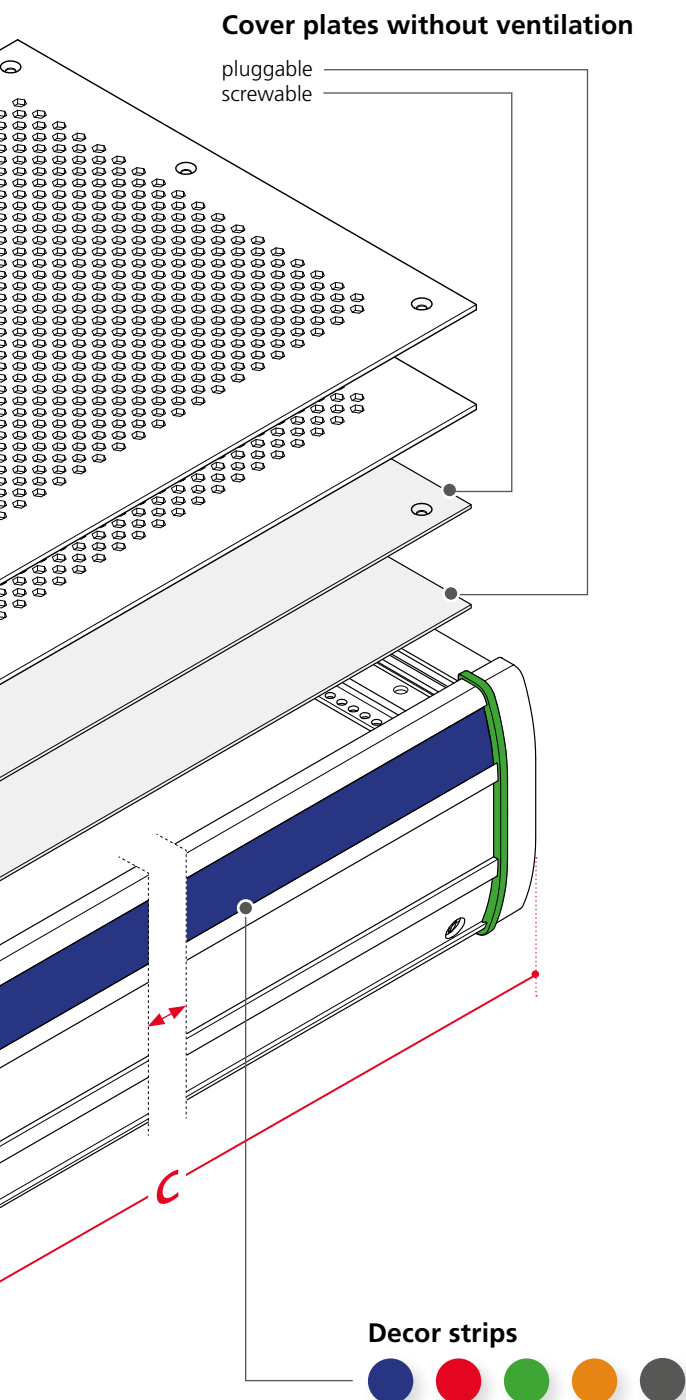
Cover plates with ventilation

pluggable
screwable



Optimised for the fitting
of 19" components

Intertego



Dimensions

Model	A	B	C*	HP
2U				
IT 1025...	99.85	250.36	*	42
IT 1035...	99.85	357.04	*	63
IT 1044...	99.85	443.4	*	80
IT 1045...	99.85	463.72	*	84
3U				
IT 1525...	144.3	250.36	*	42
IT 1535...	144.3	357.04	*	63
IT 1544...	144.3	443.4	*	80
IT 1545...	144.3	463.72	*	84
4U				
IT 2025...	188.75	250.36	*	42
IT 2035...	188.75	357.04	*	63
IT 2044...	188.75	443.4	*	80
IT 2045...	188.75	463.72	*	84

*C = 184,4, 244,4, 304,4 mm

Individual length and width dimensions on request.

Accessories



Bus, rear and snap profiles for the fitting of 19" components



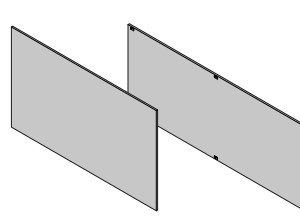
Handle / Tip-up bow



Tip-up feet / Unit feet



Handle shell



Front and part front panels and cover plates in different versions

Intertego

2 U

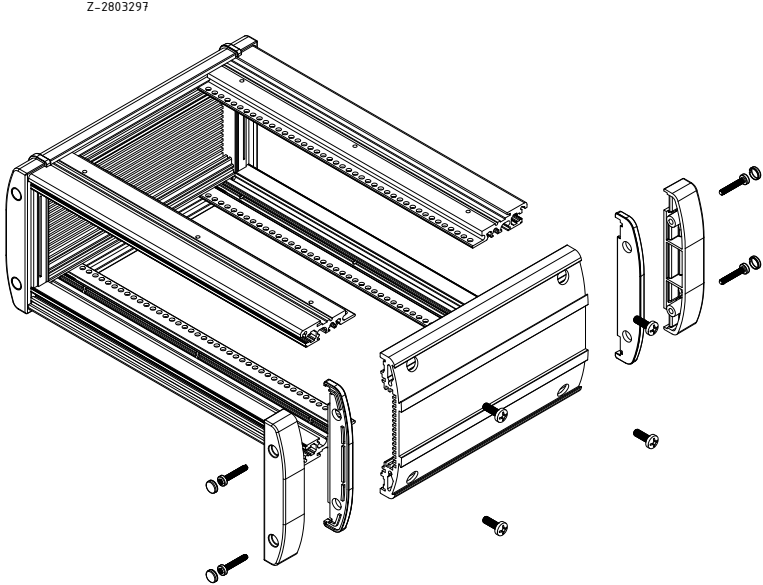
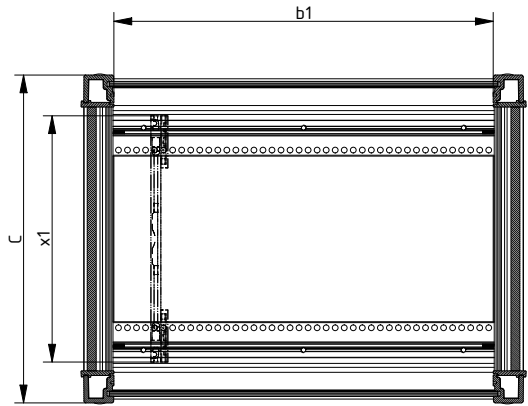
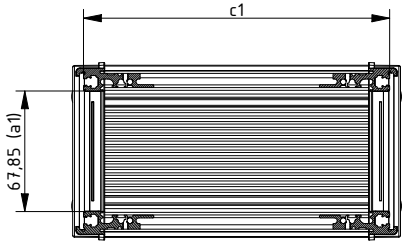
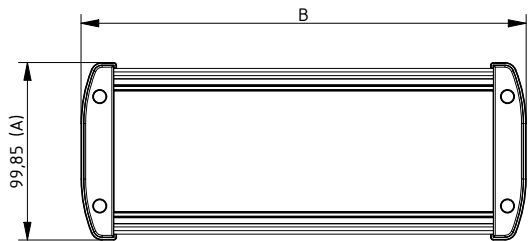


Enclosure profile sets 2 U

Model	Order no.	A	B	C	a1	b1	c1	U	HP	Card depth	IP
IT 102520	95102520	99.85	250.36	184.4	67.85	213.36	172.2	2	42	160	40
IT 102525	95102525	99.85	250.36	244.4	67.85	213.36	232.2	2	42	220	40
IT 102530	95102530	99.85	250.36	304.4	67.85	213.36	292.2	2	42	280	40
IT 103520	95103520	99.85	357.04	184.4	67.85	320.04	172.2	2	63	160	40
IT 103525	95103525	99.85	357.04	244.4	67.85	320.04	232.2	2	63	220	40
IT 103530	95103530	99.85	357.04	304.4	67.85	320.04	292.2	2	63	280	40
IT 104420	95104420	99.85	443.4	184.4	67.85	406.4	172.2	2	80	160	40
IT 104425	95104425	99.85	443.4	244.4	67.85	406.4	232.2	2	80	220	40
IT 104430	95104430	99.85	443.4	304.4	67.85	406.4	292.2	2	80	280	40
IT 104520	95104520	99.85	463.72	184.4	67.85	426.72	172.2	2	84	160	40
IT 104525	95104525	99.85	463.72	244.4	67.85	426.72	232.2	2	84	220	40
IT 104530	95104530	99.85	463.72	304.4	67.85	426.72	292.2	2	84	280	40

Scope Of Delivery: 2 side profiles, 4 front profiles, 4 diecast corners, 4 decor elements, dark grey, mounting material

Notes: Special sizes on request. Accessories (EMC, 19",...) see following pages.



Intertego

3 U

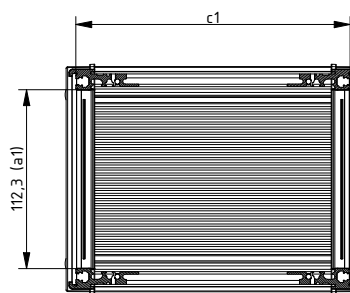
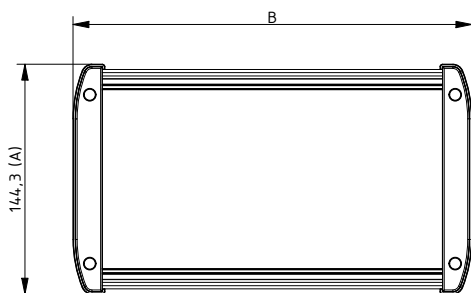
Enclosure profile sets, 3U

Model	Order no.	A	B	C	a1	b1	c1	U	HP	Card depth	IP
IT 152520	95152520	144.3	250.36	184.4	112.3	213.36	172.2	3	42	160	40
IT 152525	95152525	144.3	250.36	244.4	112.3	213.36	232.2	3	42	220	40
IT 152530	95152530	144.3	250.36	304.4	112.3	213.36	292.2	3	42	280	40
IT 153520	95153520	144.3	357.04	184.4	112.3	320.04	172.2	3	63	160	40
IT 153525	95153525	144.3	357.04	244.4	112.3	320.04	232.2	3	63	220	40
IT 153530	95153530	144.3	357.04	304.4	112.3	320.04	292.2	3	63	280	40
IT 154420	95154420	144.3	443.4	184.4	112.3	406.4	172.2	3	80	160	40
IT 154425	95154425	144.3	443.4	244.4	112.3	406.4	232.2	3	80	220	40
IT 154430	95154430	144.3	443.4	304.4	112.3	406.4	292.2	3	80	280	40
IT 154520	95154520	144.3	463.72	184.4	112.3	426.72	172.2	3	84	160	40
IT 154525	95154525	144.3	463.72	244.4	112.3	426.72	232.2	3	84	220	40
IT 154530	95154530	144.3	463.72	304.4	112.3	426.72	292.2	3	84	280	40

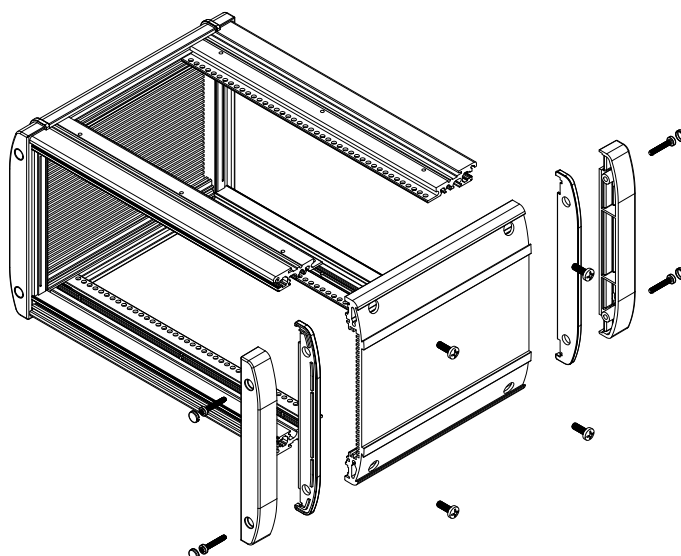
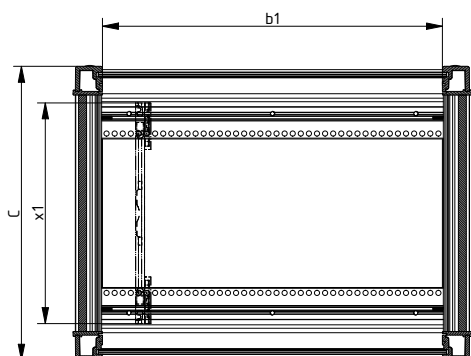


Scope Of Delivery: 2 side profiles, 4 front profiles, 4 diecast corners, 4 decor elements, dark grey, mounting material

Notes: Special sizes on request. Accessories (EMC, 19",...) see following pages.



Z-2804378



Intertego

4 U

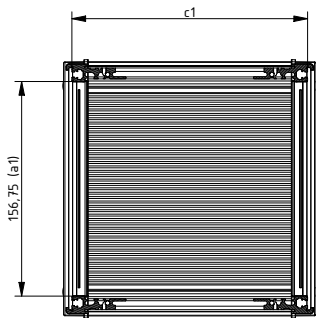
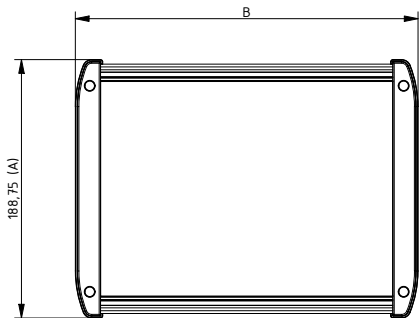


Enclosure profile sets 4 U

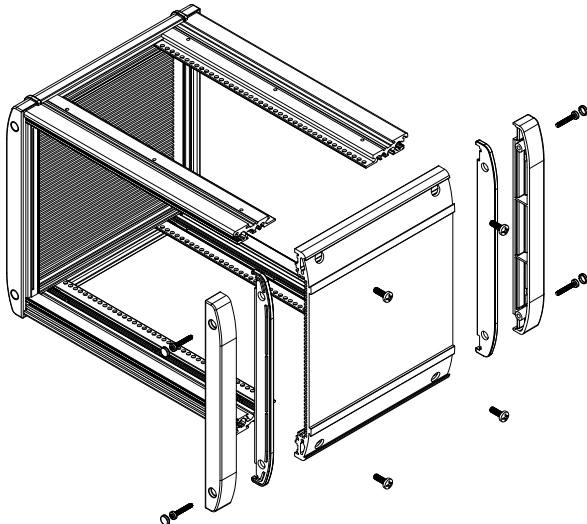
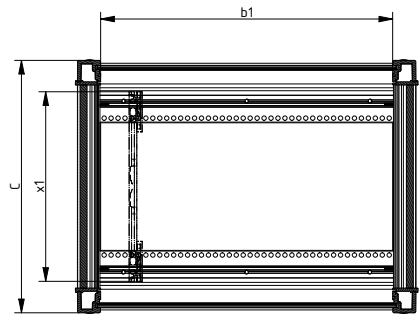
Model	Order no.	A	B	C	a1	b1	c1	U	HP	Card depth	IP
IT 202520	95202520	188.75	250.36	184.4	156.75	213.36	172.2	4	42	160	40
IT 202525	95202525	188.75	250.36	244.4	156.75	213.36	232.2	4	42	220	40
IT 202530	95202530	188.75	250.36	304.4	156.75	213.36	292.2	4	42	280	40
IT 203520	95203520	188.75	357.04	184.4	156.75	320.04	172.2	4	63	160	40
IT 203525	95203525	188.75	357.04	244.4	156.75	320.04	232.2	4	63	220	40
IT 203530	95203530	188.75	357.04	304.4	156.75	320.04	292.2	4	63	280	40
IT 204420	95204420	188.75	443.4	184.4	156.75	406.4	172.2	4	80	160	40
IT 204425	95204425	188.75	443.4	244.4	156.75	406.4	232.2	4	80	220	40
IT 204430	95204430	188.75	443.4	304.4	156.75	406.4	292.2	4	80	280	40
IT 204520	95204520	188.75	463.72	184.4	156.75	426.72	172.2	4	84	160	40
IT 204525	95204525	188.75	463.72	244.4	156.75	426.72	232.2	4	84	220	40
IT 204530	95204530	188.75	463.72	304.4	156.75	426.72	292.2	4	84	280	40

Scope Of Delivery: 2 side profiles, 4 front profiles, 4 diecast corners, 4 decor elements, dark grey, mounting material

Notes: Special sizes on request. Accessories (EMC, 19",...) see following pages.



Z-2804.379



Intertego

EMC springs / seals

EMC textile seal, self-adhesive, for mounting on front and side profiles for conductive connections between profiles and EMC cover plate

Model	Order no.
IT-EMV 1	95112000

Scope Of Delivery: 8 seals, length 425 mm



EMC corner seal set for mounting on the diecast corners to create conductive connections between the side profiles and the front area

Model	Order no.	U	Note
IT-EMV 2	95110001	2	For IT 10....
IT-EMV 3	95160001	3	For IT 15....

Scope Of Delivery: 4 EMC corner seals

Notes: 4 U not available



EMC springs for mounting on EMC part front panels, screw-on with side slits / assembly tool

Model	Order no.	U
EMV-Feder-FP/M 2HE	86001002	2
EMV-Feder-FP/M 3HE	86001003	3

Scope Of Delivery: 10 EMC springs or 1 assembly tool

Notes: Can be mounted on TF/M...-EMV 4 U not available

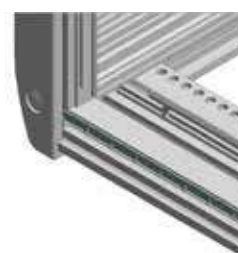


EMC spring, for mounting on front profiles for conductive connections between front profiles and screw-on EMC part front panels

Model	Order no.	HP
EMV-Feder-FP/M 42TE	86001142	42
EMV-Feder-FP/M 63TE	86001163	63
EMV-Feder-FP/M 80TE	86001180	80
EMV-Feder-FP/M 84TE	86001184	84

Scope Of Delivery: 10 EMC springs

Notes: For mounting, use assembly tool MWZ/M-II (86001202).



Mounting tool for EMC spring FP/M

Model	Order no.	Note
MWZ/M-II	86001202	For FP/M

Scope Of Delivery: 1 assembly tool



EMC round cord seal, for mounting in front profiles for conductive connections between profiles and plug-in EMC front panels

Model	Order no.	Note
HF-DI	59010509	Sold by the metre

Notes: Available on request – mounting takes place in factory.



Intertego

Cover plates



Plain cover plates, 1 mm, graphite grey aluminium, powder-coated

Model	Order no.	Note
IT 002520 AD-7024	95012520	For IT ..2520
IT 002525 AD-7024	95012525	For IT ..2525
IT 002530 AD-7024	95012530	For IT ..2530
IT 003520 AD-7024	95013520	For IT ..3520
IT 003525 AD-7024	95013525	For IT ..3525
IT 003530 AD-7024	95013530	For IT ..3530
IT 004420 AD-7024	95014420	For IT ..4420
IT 004425 AD-7024	95014425	Für IT ..4425
IT 004430 AD-7024	95014430	For IT ..4430
IT 004520 AD-7024	95014520	For IT ..4520
IT 004525 AD-7024	95014525	For IT ..4525
IT 004530 AD-7024	95014530	For IT ..4530

Scope Of Delivery: 1 cover plate

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request.



Plain cover plates, 1 mm, natural-coloured anodised aluminium

Model	Order no.	Note
IT 002520 AD-EQ	95022520	For IT ..2520
IT 002525 AD-EQ	95022525	For IT ..2525
IT 002530 AD-EQ	95022530	For IT ..2530
IT 003520 AD-EQ	95023520	For IT ..3520
IT 003525 AD-EQ	95023525	For IT ..3525
IT 003530 AD-EQ	95023530	For IT ..3530
IT 004420 AD-EQ	95024420	For IT ..4420
IT 004425 AD-EQ	95024425	Für IT ..4425
IT 004430 AD-EQ	95024430	For IT ..4430
IT 004520 AD-EQ	95024520	For IT ..4520
IT 004525 AD-EQ	95024525	For IT ..4525
IT 004530 AD-EQ	95024530	For IT ..4530

Scope Of Delivery: 1 cover plate

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request.

Intertego

Cover plates

Cover plates with ventilation, 1 mm, graphite grey aluminium, powder-coated

Model	Order no.	Note
IT 002520 ADL-7024	95032520	For IT ..2520
IT 002525 ADL-7024	95032525	For IT ..2525
IT 002530 ADL-7024	95032530	For IT ..2530
IT 003520 ADL-7024	95033520	For IT ..3520
IT 003525 ADL-7024	95033525	For IT ..3525
IT 003530 ADL-7024	95033530	For IT ..3530
IT 004420 ADL-7024	95034420	For IT ..4420
IT 004425 ADL-7024	95034425	Für IT ..4425
IT 004430 ADL-7024	95034430	For IT ..4430
IT 004520 ADL-7024	95034520	For IT ..4520
IT 004525 ADL-7024	95034525	For IT ..4525
IT 004530 ADL-7024	95034530	For IT ..4530

Scope Of Delivery: 1 cover plate (4 mm hexagonal hole)

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request.



Cover plates with ventilation, 1 mm, natural-coloured anodised aluminium

Model	Order no.	Note
IT 002520 ADL-EQ	95042520	For IT ..2520
IT 002525 ADL-EQ	95042525	For IT ..2525
IT 002530 ADL-EQ	95042530	For IT ..2530
IT 003520 ADL-EQ	95043520	For IT ..3520
IT 003525 ADL-EQ	95043525	For IT ..3525
IT 003530 ADL-EQ	95043530	For IT ..3530
IT 004420 ADL-EQ	95044420	For IT ..4420
IT 004425 ADL-EQ	95044425	Für IT ..4425
IT 004430 ADL-EQ	95044430	For IT ..4430
IT 004520 ADL-EQ	95044520	For IT ..4520
IT 004525 ADL-EQ	95044525	For IT ..4525
IT 004530 ADL-EQ	95044530	For IT ..4530

Scope Of Delivery: 1 cover plate (4 mm hexagonal hole)

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request.



Intertego

Cover plates

Cover plates, screw-on, 2mm, aluminium, graphite grey, powder-coated

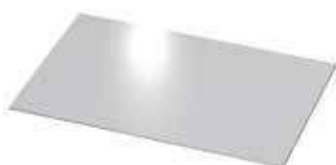


Model	Order no.	Note
IT 002520 AD-A-2-7024	95172520	For IT ..2520
IT 002525 AD-A-2-7024	95172525	For IT ..2525
IT 002530 AD-A-2-7024	95172530	For IT ..2530
IT 003520 AD-A-2-7024	95173520	For IT ..3520
IT 003525 AD-A-2-7024	95173525	For IT ..3525
IT 003530 AD-A-2-7024	95173530	For IT ..3530
IT 004420 AD-A-2-7024	95174420	For IT ..4420
IT 004425 AD-A-2-7024	95174425	Für IT ..4425
IT 004430 AD-A-2-7024	95174430	For IT ..4430
IT 004520 AD-A-2-7024	95174520	For IT ..4520
IT 004525 AD-A-2-7024	95174525	For IT ..4525
IT 004530 AD-A-2-7024	95174530	For IT ..4530

Scope Of Delivery: 1 cover plate

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request. Please order fastening screws (95700030).

Cover plates closed, screw-on, 2mm, aluminium, natural-coloured anodised



Model	Order no.	Note
IT 002520 AD-A-2-EQ	95122520	For IT ..2520
IT 002525 AD-A-2-EQ	95122525	For IT ..2525
IT 002530 AD-A-2-EQ	95122530	For IT ..2530
IT 003520 AD-A-2-EQ	95123520	For IT ..3520
IT 003525 AD-A-2-EQ	95123525	For IT ..3525
IT 003530 AD-A-2-EQ	95123530	For IT ..3530
IT 004420 AD-A-2-EQ	95124420	For IT ..4420
IT 004425 AD-A-2-EQ	95124425	Für IT ..4425
IT 004430 AD-A-2-EQ	95124430	For IT ..4430
IT 004520 AD-A-2-EQ	95124520	For IT ..4520
IT 004525 AD-A-2-EQ	95124525	For IT ..4525
IT 004530 AD-A-2-EQ	95124530	For IT ..4530

Scope Of Delivery: 1 cover plate

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request. Please order fastening screws (95700030).

Intertego

Cover plates

Cover plates with ventilation, screw-on, 2mm, aluminium, graphite grey powder-coated

Model	Order no.	Note
IT 002520 ADL-A-2-7024	95142520	For IT ..2520
IT 002520 ADL-A-2-EQ	95132520	For IT ..2520
IT 002525 ADL-A-2-7024	95142525	For IT ..2525
IT 002530 ADL-A-2-7024	95142530	For IT ..2530
IT 003520 ADL-A-2-7024	95143520	For IT ..3520
IT 003525 ADL-A-2-7024	95143525	For IT ..3525
IT 003530 ADL-A-2-7024	95143530	For IT ..3530
IT 004420 ADL-A-2-7024	95144420	For IT ..4420
IT 004425 ADL-A-2-7024	95144425	Für IT ..4425
IT 004430 ADL-A-2-7024	95144430	For IT ..4430
IT 004520 ADL-A-2-7024	95144520	For IT ..4520
IT 004525 ADL-A-2-7024	95144525	For IT ..4525
IT 004530 ADL-A-2-7024	95144530	For IT ..4530



Scope Of Delivery: 1 cover plate (4 mm hexagonal hole)

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request. Please order fastening screws (95700030).

Cover plates with ventilation, screw-on, 2mm, aluminium, natural-coloured anodised

Model	Order no.	Note
IT 002525 ADL-A-2-EQ	95132525	For IT ..2525
IT 002530 ADL-A-2-EQ	95132530	For IT ..2530
IT 003520 ADL-A-2-EQ	95133520	For IT ..3520
IT 003525 ADL-A-2-EQ	95133525	For IT ..3525
IT 003530 ADL-A-2-EQ	95133530	For IT ..3530
IT 004420 ADL-A-2-EQ	95134420	For IT ..4420
IT 004425 ADL-A-2-EQ	95134425	Für IT ..4425
IT 004430 ADL-A-2-EQ	95134430	For IT ..4430
IT 004520 ADL-A-2-EQ	95134520	For IT ..4520
IT 004525 ADL-A-2-EQ	95134525	For IT ..4525
IT 004530 ADL-A-2-EQ	95134530	For IT ..4530



Scope Of Delivery: 1 cover plate (4 mm hexagonal hole)

Notes: Special sizes on request. Mechanical processing of the cover plates and mounting of the unit feet on request. Please order fastening screws (95700030).

Screws for screw-on cover plates

Model	Order no.
SHR S M3x5 DIN 965 A2	95700030

Scope Of Delivery: 20 pcs. of SHR S M3x5 DIN 965 A2

Notes: Every "A-2" variant cover plate is fastened with 6 screws.



Intertego

Cover plates



Plain EMC cover plates, aluminium, visible area graphite grey, powder-coated

Model	Order no.	Note
IT 002520 AD-7024-EMV	95052520	For IT ..2520
IT 002525 AD-7024-EMV	95052525	For IT ..2525
IT 002530 AD-7024-EMV	95052530	For IT ..2530
IT 003520 AD-7024-EMV	95053520	For IT ..3520
IT 003525 AD-7024-EMV	95053525	For IT ..3525
IT 003530 AD-7024-EMV	95053530	For IT ..3530
IT 004420 AD-7024-EMV	95054420	For IT ..4420
IT 004425 AD-7024-EMV	95054425	Für IT ..4425
IT 004430 AD-7024-EMV	95054430	For IT ..4430
IT 004520 AD-7024-EMV	95054520	For IT ..4520
IT 004525 AD-7024-EMV	95054525	For IT ..4525
IT 004530 AD-7024-EMV	95054530	For IT ..4530

Scope Of Delivery: 1 cover plate

Notes: Cover plates with side contact lugs, uncoated, for IT-EMV 1.

Special sizes, notch for additional profiles and processing for unit feet / tip-up feet, crew-on cover plate on request.

Intertego

Card guides

Card guides, one and three parts, plastic, UL 94 V1 green

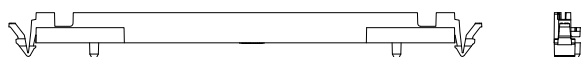
Model	Order no.	Card depth	Note
KF 160	54700160	160	one piece
KF 220-K	54700225	220	three pieces
KF/X 220	89700220	160	one piece

Scope Of Delivery: 10 card guides

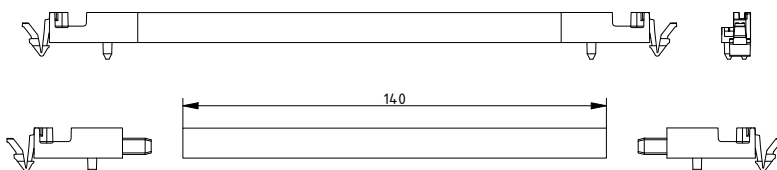
Notes: Snap-in / optionally screwable with GS...II and BFS 0300 (54700030). Three-part card guide in special lengths on request.



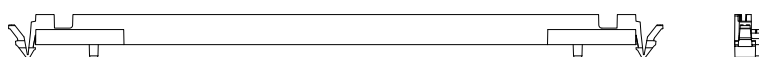
KF 160



KF 220-K



KF/X 220



Z-2904345

Intertego

Thread and insulating strips



Tapped strips, galvanised steel, M2.5, 7 x 2 mm, for part front panel fixing

Model	Order no.	HP
GS 00042-I	54000421	42
GS 00063-I	54000631	63
GS 00080-I	54000801	80
GS 00084-I	54000841	84

Scope Of Delivery: 2 tapped strips

Notes: Special lengths on request.

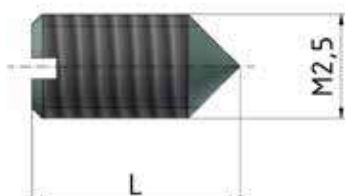


Tapped strips, galvanised steel, M2.5, 5 x 1.5 mm, for horizontal profile grooves and rear fixing of backplanes, insulating strips and Z rails

Model	Order no.	HP
GS 00042-II	54000422	42
GS 00063-II	54000632	63
GS 00080-II	54000802	80
GS 00084-II	54000842	84

Scope Of Delivery: 2 tapped strips

Notes: Special lengths on request.



Slotted set screw M2.5 x 8 / M2.5 x 5, V2A, for positioning and earthing the tapped strip

Model	Order no.	Note
GSE-5	54700390	L = 5mm
GSE-8	54700395	L = 8mm

Scope Of Delivery: 10 slotted set screws

Notes: GSE-5 for use in the recessed double groove, in the horizontal grooves (e.g. card guide screwing system) and in the double bus profiles for 6 U subracks and in the adapter profiles. GSE-8 for use in both double grooves.

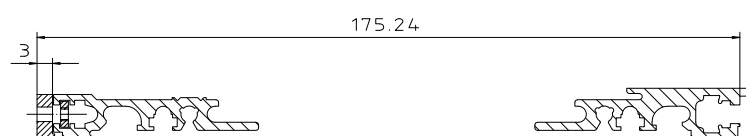


Insulated plastic, UL 94 V1, for insulated fixing of backplanes

Model	Order no.	HP
IS 00042	54000142	42
IS 00063	54000163	63
IS 00080	54000180	80
IS 00084	54000184	84

Scope Of Delivery: 4 insulating strips (IS 00042 = 2 insulating strips)

Notes: To achieve the necessary insertion depth when using bus profile rails.



Z-2900470

Intertego

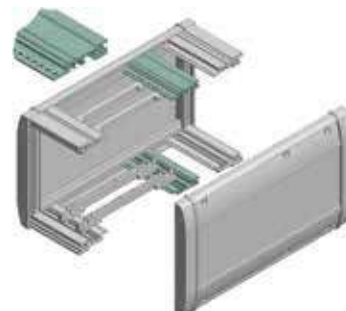
19" profiles

Aluminium bus profiles, natural-coloured anodised, for indirect fixing of backplanes

Model	Order no.	HP	Note
ITPB 002500	95300025	42	For IT ..25..
ITPB 003500	95300035	63	For IT ..35..
ITPB 004400	95300044	80	For IT ..44..
ITPB 004500	95300045	84	For IT ..45..

Scope Of Delivery: 2 profiles including mounting material (BFS 0400)

Notes: Mechanical processing of the side profiles in accordance with the depth of the circuit board is required before the profiles are fitted. EMC cover plates must be cut off in the area of the lateral contact lugs in accordance with the mounting position. Processing and special lengths on request.

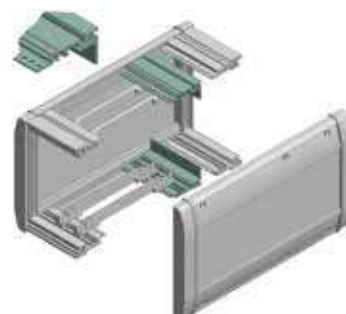


Rear profiles, aluminium, natural-coloured, for connectors acc. to DIN EN 60603-2 (previously DIN 41612)

Model	Order no.	HP	Note
ITPR 002500	95302500	42	For IT ..25..
ITPR 003500	95303500	63	For IT ..35..
ITPR 004400	95304400	80	For IT ..44..
ITPR 004500	95304500	84	For IT ..45..

Scope Of Delivery: 2 profiles including mounting material (BFS 0400)

Notes: Mechanical processing of the side profiles in accordance with the depth of the circuit board is required before the profiles are fitted. EMC cover plates must be cut off in the area of the lateral contact lugs in accordance with the mounting position. Processing and special lengths on request.

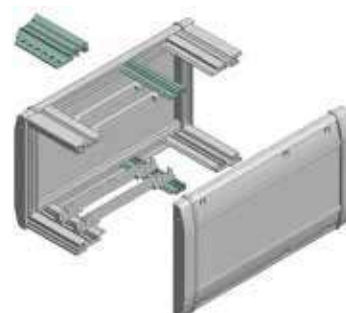


Snap profiles, natural-coloured anodised aluminium, for holding the card guides

Model	Order no.	HP	Note
ITRP 002500	95400025	42	For IT ..25..
ITRP 003500	95400035	63	For IT ..35..
ITRP 004400	95400044	80	For IT ..44..
ITRP 004500	95400045	84	For IT ..45..

Scope Of Delivery: 2 profiles including mounting material (BFS 0400)

Notes: Mechanical processing of the side profiles in accordance with the depth of the circuit board is required before the profiles are fitted. EMC cover plates must be cut off in the area of the lateral contact lugs in accordance with the mounting position. Processing and special lengths on request.

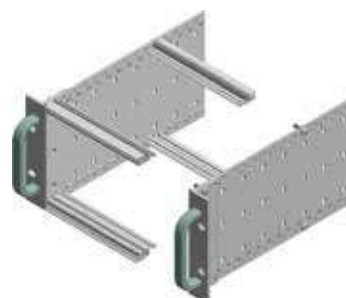


Handles for Intertego diecast corners, natural-coloured anodised aluminium

Model	Order no.	U
GR/M 00300	86700035	3

Scope Of Delivery: 1 handle

Notes: Mounting material BFS/M 0700 (86000070) as accessories. For use on the diecast corners by means of mechanical processing for variants IT 15... and IT 20... .



Intertego

Accessories



Decor strips, TPE

Model	Order no.	Colour	Note
IT 000020 DS-blau	95011520	Blue	For IT....20
IT 000020 DS-dunkelgrau	95011120	Dark grey	For IT....20
IT 000020 DS-grün	95011320	Green	For IT....20
IT 000020 DS-orange	95011420	Orange	For IT....20
IT 000020 DS-rot	95011220	Red	For IT....20
IT 000025 DS-blau	95011525	Blue	For IT....25
IT 000025 DS-dunkelgrau	95011125	Dark grey	For IT....25
IT 000025 DS-grün	95011325	Green	For IT....25
IT 000025 DS-orange	95011425	Orange	For IT....25
IT 000025 DS-rot	95011225	Red	For IT....25
IT 000030 DS-blau	95011530	Blue	For IT....30
IT 000030 DS-dunkelgrau	95011130	Dark grey	For IT....30
IT 000030 DS-grün	95011330	Green	For IT....30
IT 000030 DS-orange	95011430	Orange	For IT....30
IT 000030 DS-rot	95011230	Red	For IT....30

Scope Of Delivery: 4 decor strips (for 1 enclosure)

Notes: Mounting in the side system grooves. Special lengths up to max. 310 mm on request. As an alternative, individually printed membranes can be used.



Decor elements, TPE

Model	Order no.	Colour	Note
IT 100000 DE-blau	95102501	Blue	For IT 10....
IT 100000 DE-grün	95102301	Green	For IT 10....
IT 100000 DE-orange	95102401	Orange	For IT 10....
IT 100000 DE-rot	95102201	Red	For IT 10....
IT 150000 DE-blau	95152501	Blue	For IT 15....
IT 150000 DE-grün	95152301	Green	For IT 15....
IT 150000 DE-orange	95152401	Orange	For IT 15....
IT 150000 DE-rot	95152201	Red	For IT 15....
IT 200000 DE-blau	95202501	Blue	For IT 20....
IT 200000 DE-grün	95202301	Green	For IT 20....
IT 200000 DE-orange	95202401	Orange	For IT 20....
IT 200000 DE-rot	95202201	Red	For IT 20....

Scope Of Delivery: 4 decor elements (for 1 enclosure)

Notes: Can be used as an alternative to the decor elements included in the IT... standard scope of delivery.



Flange panel, natural-coloured anodised aluminium, for fitting an enclosure (80 HP useful width) in a 19" cabinet

Model	Order no.	Note
IT 10 FLP	95005280	For IT 1044., space requirement 3 U
IT 15 FLP	95005380	For IT 1544., space requirement 4 U
IT 20 FLP	95005480	For IT 2044., space requirement 5 U

Scope Of Delivery: 1 flange panel

Notes: Mounting between side panel and diecast corner instead of the decor elements.

Intertego

Accessories

Wall fitting, graphite grey aluminium, powder-coated

Model	Order no.	Note
IT 000020 WB	95005020	For IT....20
IT 000025 WB	95005025	For IT....25
IT 000030 WB	95005030	For IT....30

Scope Of Delivery: 2 wall fittings, 4 covers, dark grey

Notes: The screw holes can be covered by using decor strips DS... . Special lengths on request. Coloured covers can also be used.



Coloured covers for wall mounting

Model	Order no.	Colour	Note
AS 0030 AK-WB-blau	94784000	Blue	For AS 0030-...WB-..., IT 0000.. WB
AS 0030 AK-WB-grün	94783000	Green	For AS 0030-...WB-..., IT 0000.. WB
AS 0030 AK-WB-orange	94786000	Orange	For AS 0030-...WB-..., IT 0000.. WB
AS 0030 AK-WB-rot	94785000	Red	For AS 0030-...WB-..., IT 0000.. WB

Scope Of Delivery: 4 covers



Wall angle for fitting on front of enclosure, graphite grey sheet steel, powder-coated

Model	Order no.	Note
IT 10 WW	95005200	For IT 10....
IT 15 WW	95005300	For IT 15....
IT 20 WW	95005400	For IT 20....

Scope Of Delivery: 2 wall angles

Notes: Mounting between side panel and diecast corner instead of the decor elements.



Tower foot, graphite grey aluminium, powder-coated

Model	Order no.	Note
IT 000020 T	95006020	For IT....20
IT 000025 T	95006025	For IT....25
IT 000030 T	95006030	For IT....30

Scope Of Delivery: 2 tower feet, 4 rubber feet

Notes: Special lengths on request.



Intertego

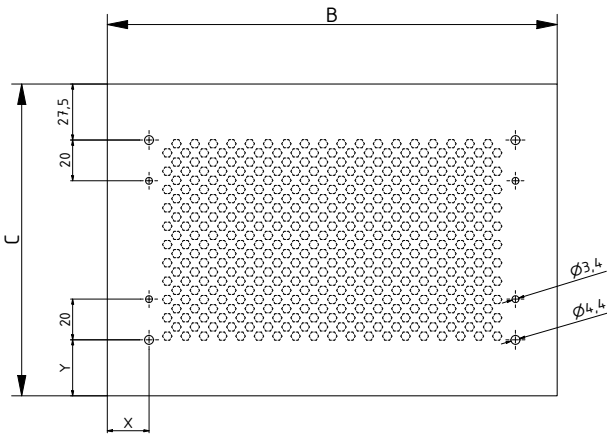
Accessories



Tip-up feet, polyamide

Model	Order no.	Note
AF1/INS	86050000	Tip-up feet

Scope Of Delivery: Set-up foot set (2 fixed and 2 hinged feet), fixing material
Notes: Mechanical processing of the cover plates and mounting of the tip-up feet on request.



Bearbeitung gilt für alle Abdeckbleche
mit/ohne Lüftung ! (Auch EMV-Varianten)

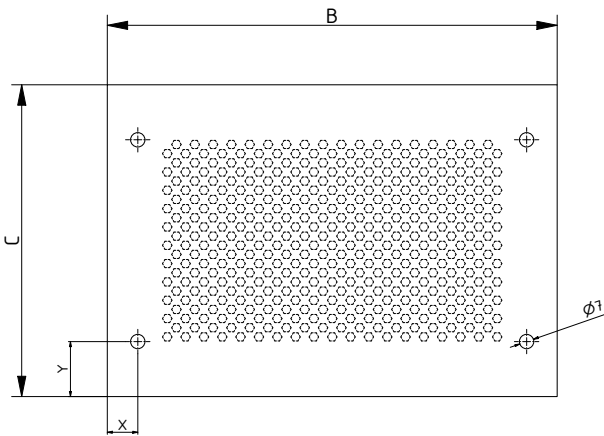
Z-2804380



Unit feet, polyamide

Model	Order no.
IT GF	95006000

Scope Of Delivery: 4 unit feet
Notes: Mechanical processing of the cover plates and mounting of the unit feet on request.



Bearbeitung gilt für alle Abdeckbleche
mit/ohne Lüftung ! (Auch EMV-Varianten)

Z-2804381

Intertego

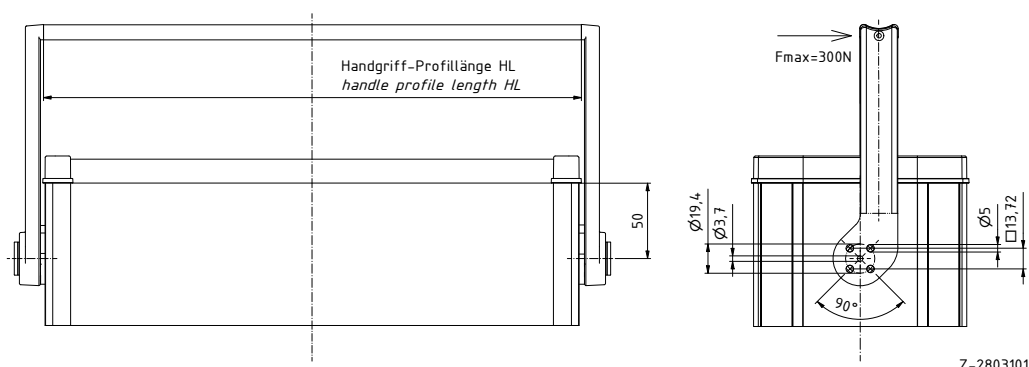
Accessories

Handles / Tip-up bows for IT 15..., IT 20...

Model	Order no.	Note
IT 002500 HS1	95007325	For IT 1525..., IT 2025..
IT 003500 HS1	95007335	For IT 1535..., IT 2035..
IT 004400 HS1	95007344	For IT 1544..., IT 2044..
IT 004500 HS1	95007345	For IT 1545..., IT 2045..

Scope Of Delivery: profile (aluminium)

Notes: Mechanical processing of the side profiles and mounting of the handles on request. The maximum load is 300 N.

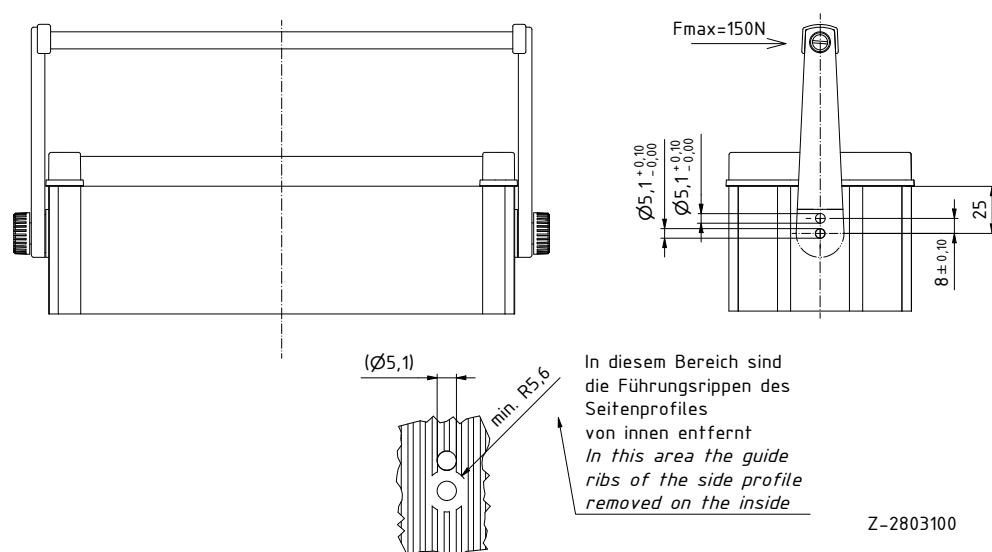


Handles / Tip-up bows for IT 10...

Model	Order no.	Note
IT 002500 HS2	95007225	For IT 1025..
IT 003500 HS2	95007235	For IT 1035..
IT 004400 HS2	95007244	For IT 1044..
IT 004500 HS2	95007245	For IT 1045..

Scope Of Delivery: profile (aluminium)

Notes: Mechanical processing of the side profiles and mounting of the handles on request. The maximum load is 150 N.



Intertego

Accessories

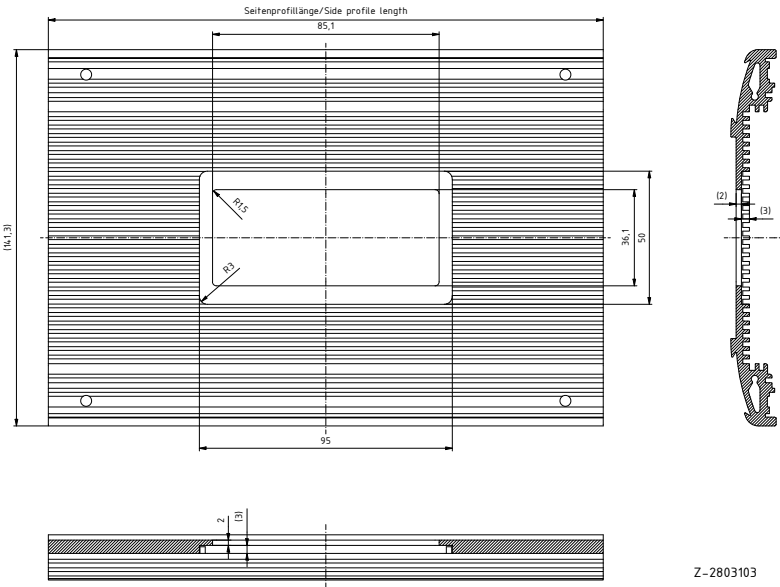


Handle shells, black plastic

Model	Order no.
IT-GRS	95007100

Scope Of Delivery: 2 handle shells

Notes: Mechanical processing of the side profiles and mounting of the handle shells on request.



Z-2803103

Intertego

Accessories

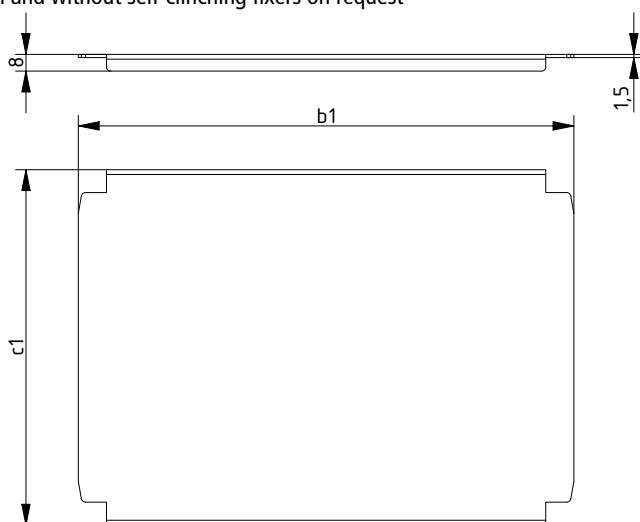
Mounting panel for screwless mounting in the guide grooves of the side walls, 1.5mm thick untreated aluminium



Model	Order no.	b1	c1	Note
IT 002520 MP	95082520	237.62	148.4	For IT ..2520
IT 002525 MP	95082525	237.62	208.4	For IT ..2525
IT 002530 MP	95082530	237.62	268.4	For IT ..2530
IT 003520 MP	95083520	344.3	148.4	For IT ..3520
IT 003525 MP	95083525	344.3	208.4	For IT ..3525
IT 003530 MP	95083530	344.3	268.4	For IT ..3530
IT 004420 MP	95084420	430.66	148.4	For IT ..4420
IT 004425 MP	95084425	430.66	208.4	Für IT ..4425
IT 004430 MP	95084430	430.66	268.4	For IT ..4430
IT 004520 MP	95084520	450.98	148.4	For IT ..4520
IT 004525 MP	95084525	450.98	208.4	For IT ..4525
IT 004530 MP	95084530	450.98	268.4	For IT ..4530

Scope Of Delivery: 1 mounting panel

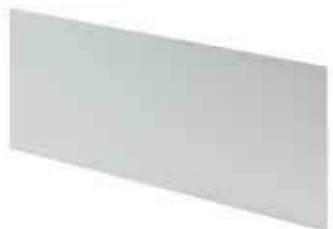
Notes: Processing e.g. with and without self-clinching fixers on request



Z-2804382

Intertego

Front panel

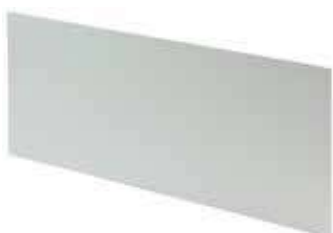


Front panels, 2 mm, natural-coloured anodised aluminium, plug-in

Model	Order no.	U	HP	Note
IT 102500 FP	95104025	2	42	For IT 1025..
IT 103500 FP	95104035	2	63	For IT 1035..
IT 104400 FP	95104044	2	80	For IT 1044..
IT 104500 FP	95104045	2	84	For IT 1045..
IT 152500 FP	95154025	3	42	For IT 1525..
IT 153500 FP	95154035	3	63	For IT 1535..
IT 154400 FP	95154044	3	80	For IT 1544..
IT 154500 FP	95154045	3	84	For IT 1545..
IT 202500 FP	95204025	4	42	For IT 2025..
IT 203500 FP	95204035	4	63	For IT 2035..
IT 204400 FP	95204044	4	80	For IT 2044..
IT 204500 FP	95204045	4	84	For IT 2045..

Scope Of Delivery: 1 front panel

Notes: Special sizes on request.



EMC front panels, natural-coloured anodised aluminium on front, 2 mm, colour-passivated on rear, plug-in

Model	Order no.	U	HP	Note
IT 102500 FP-EMV	95114025	2	42	For IT 1025..
IT 103500 FP-EMV	95114035	2	63	For IT 1035..
IT 104400 FP-EMV	95114044	2	80	For IT 1044..
IT 104500 FP-EMV	95114045	2	84	For IT 1045..
IT 152500 FP-EMV	95164025	3	42	For IT 1525..
IT 153500 FP-EMV	95164035	3	63	For IT 1535..
IT 154400 FP-EMV	95164044	3	80	For IT 1544..
IT 154500 FP-EMV	95164045	3	84	For IT 1545..
IT 202500 FP-EMV	95214025	4	42	For IT 2025..
IT 203500 FP-EMV	95214035	4	63	For IT 2035..
IT 204400 FP-EMV	95214044	4	80	For IT 2044..
IT 204500 FP-EMV	95214045	4	84	For IT 2045..

Scope Of Delivery: 1 front panel

Notes: Special sizes on request.

Intertego

Front panel

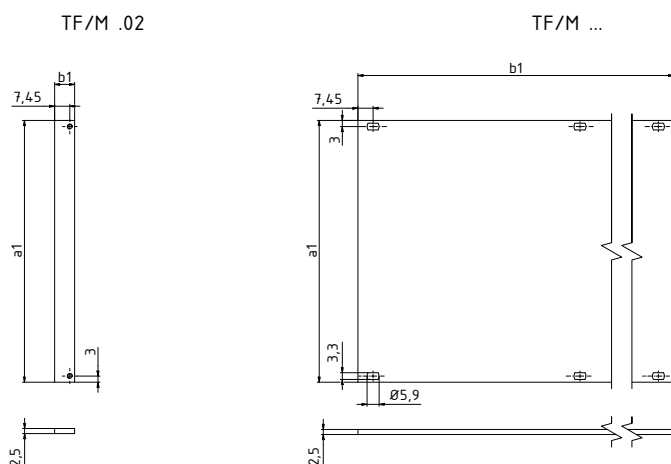
Part front panels, natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 242	86842023	84.05	213.01	2	42
TF/M 263	86863023	84.05	319.69	2	63
TF/M 280	86880023	84.05	406.05	2	28
TF/M 284	86884023	84.05	426.37	2	84
TF/M 302	86802033	128.5	9.81	3	2
TF/M 303	86803033	128.5	14.89	3	3
TF/M 304	86804033	128.5	19.97	3	4
TF/M 306	86806033	128.5	30.13	3	6
TF/M 307	86807033	128.5	35.21	3	7
TF/M 308	86808033	128.5	40.29	3	8
TF/M 310	86810033	128.5	50.45	3	10
TF/M 312	86812033	128.5	60.61	3	12
TF/M 314	86814033	128.5	70.77	3	14
TF/M 318	86818033	128.5	91.09	3	18
TF/M 319	86819033	128.5	96.17	3	19
TF/M 320	86820033	128.5	101.25	3	20
TF/M 321	86821033	128.5	106.33	3	21
TF/M 328	86828033	128.5	141.97	3	28
TF/M 340	86840033	128.5	202.85	3	40
TF/M 342	86842033	128.5	213.01	3	42
TF/M 363	86863033	128.5	319.69	3	63
TF/M 380	86880033	128.5	406.05	3	80
TF/M 384	86884033	128.5	426.37	3	84
TF/M 442	86842043	172.95	213.01	4	42
TF/M 463	86863043	172.95	319.69	4	63
TF/M 480	86880043	172.95	406.05	4	80
TF/M 484	86884043	172.95	426.37	4	84



Scope Of Delivery: 1 front panel

Notes: Special sizes on request. Screw holders and collar screws as accessories.



Intertego

Front panel

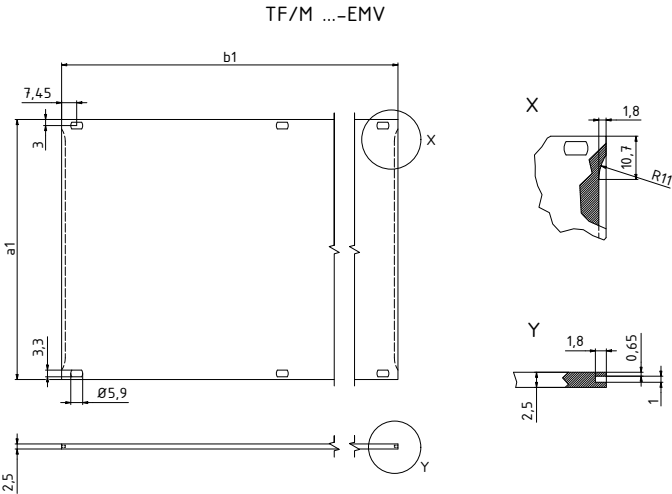


Part front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pins

Model	Order no.	a1	b1	U	HP
TF/M 242-EMV	86842024	84.05	213.01	2	42
TF/M 263-EMV	86863024	84.05	319.69	2	63
TF/M 280-EMV	86880024	84.05	406.05	2	28
TF/M 284-EMV	86884024	84.05	426.37	2	84
TF/M 304-EMV	86804034	128.5	19.97	3	4
TF/M 308-EMV	86808034	128.5	40.29	3	8
TF/M 310-EMV	86810034	128.5	50.45	3	10
TF/M 314-EMV	86814034	128.5	70.77	3	14
TF/M 320-EMV	86820034	128.5	101.25	3	20
TF/M 321-EMV	86821034	128.5	106.33	3	21
TF/M 340-EMV	86840034	128.5	202.85	3	40
TF/M 342-EMV	86842034	128.5	213.01	3	42
TF/M 363-EMV	86863034	128.5	319.69	3	63
TF/M 380-EMV	86880034	128.5	406.05	3	80
TF/M 384-EMV	86884034	128.5	426.37	3	84

Scope Of Delivery: 1 front panel

Notes: Matching screw holder, collar screws and EMC springs as accessories. 4 U EMC part front panels unavailable.



Z-2904370

Intertego

Front panel

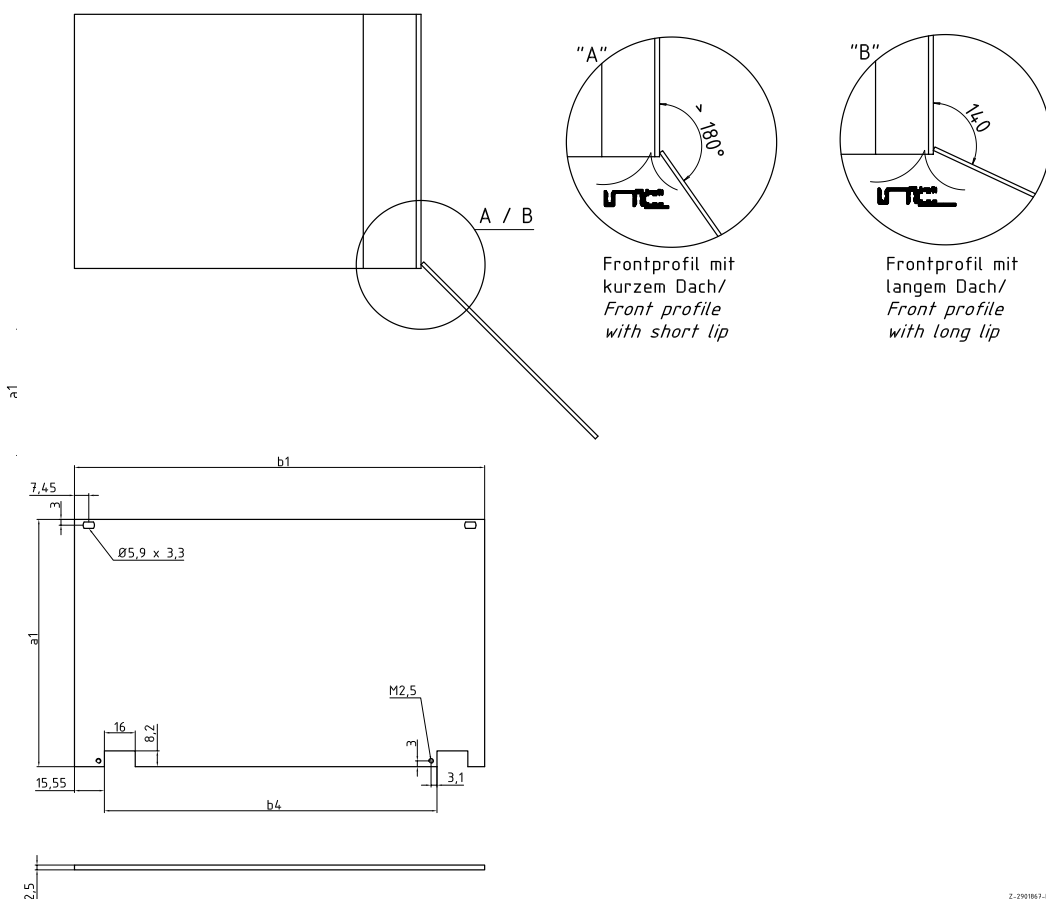
Front panels, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-K	86842038	128.5	213.01	3	42
TF/M 363-K	86863038	128.5	319.69	3	63
TF/M 384-K	86884038	128.5	426.37	3	84
TF/M 642-K	86842068	261.85	213.01	6	42
TF/M 663-K	86863068	261.85	319.69	6	63
TF/M 684-K	86884068	261.85	426.37	6	84



Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws BFS/M 2200, mounting material

Notes: The usable width is not restricted. Can be unhooked at 135° except for Internorm Stil. One tapped strip above and below is required for each fixing.



Intertego

Front panel

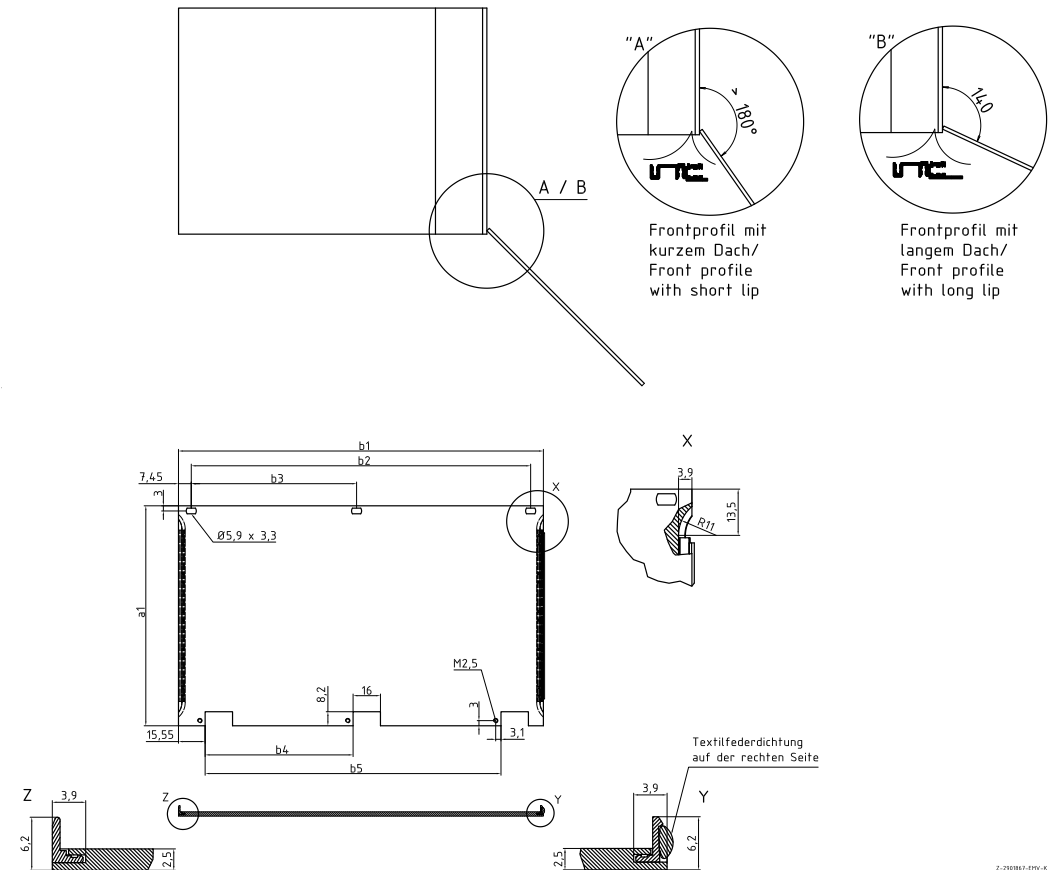


Front panels, EMC, 3 / 6 U, collapsible, front natural-coloured anodised aluminium, passivated on rear

Model	Order no.	a1	b1	U	HP
TF/M 342-EMV-K	86842037	128.5	213.01	3	42
TF/M 363-EMV-K	86863037	128.5	319.69	3	63
TF/M 384-EMV-K	86884037	128.5	426.37	3	84
TF/M 642-EMV-K	86842067	261.85	213.01	6	42
TF/M 684-EMV-K	86884067	261.85	426.37	6	84

Scope Of Delivery: 1 front panel, 1 hinge set, 3 plastic screw holders, 3 knurled screws M2.5x12.3, EMC textile seal, mounting material

Notes: Shielded, part front panels with slits for EMC springs (can also be used without EMC springs). The usable width is not restricted. Can be removed at 135°, except for Internorm Stil. 1 tapped strip is required in each case for fixing up and down.



Z-2901003-010V-K

Intertego

Front panel



Plug-in front panels, EMC, front natural-coloured anodised aluminium, passivated on rear with slot for EMC spring and pressed-in alignment pin

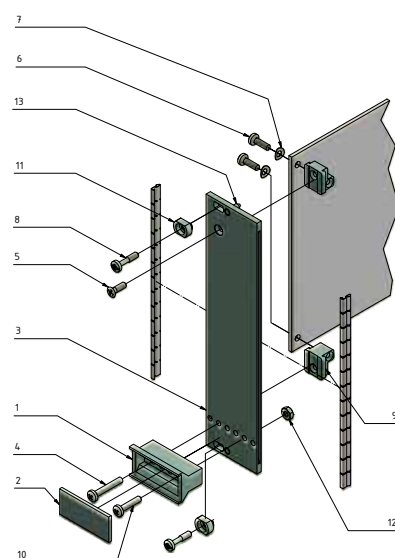
Model	Order no.	a1	b1	U	HP
ST/M 303-EMV	86803038	128.5	14.89	3	3
ST/M 304-EMV	86804038	128.5	19.97	3	4
ST/M 305-EMV	86805038	128.5	25.05	3	5
ST/M 306-EMV	86806038	128.5	30.13	3	6
ST/M 308-EMV	86808038	128.5	40.29	3	8
ST/M 309-EMV	86809038	128.5	45.37	3	9
ST/M 310-EMV	86810038	128.5	50.45	3	10
ST/M 312-EMV	86812038	128.5	60.61	3	12
ST/M 318-EMV	86818038	128.5	91.09	3	18
ST/M 321-EMV	86821038	128.5	106.33	3	21

Scope Of Delivery :

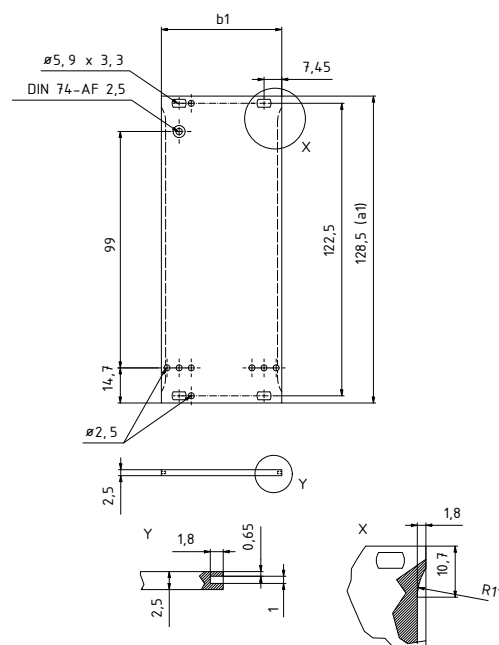
- 1) 1 handle, trapezoidal shape (PPO-UL94 V-0)
- 2) 1 identification plate (aluminium 1.5 mm, anodised)
- 3) 1 front panel (aluminium 2.5 mm, front anodised, rear yellow chromated)
- 4) 1 cylinder head screw (SHR Z M 2.5x16)
- 5) 1 panhead screw (SHR S M 2.5x8)
- 6) 2 cylinder head screws (SHR Z M 2.5x8)
- 7) 2 spring discs (A 2.6)
- 8) up to 7 HP: 2 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 8) 8 HP and higher: 4 collar screws with recessed screw head (M 2.5x12.3, for plug-in front panels)
- 9) 2 circuit board holders (ZN diecast, 2 threads M 2.5)
- 10) 1 cylinder head screw (SHR Z M 2.5x12)
- 11) up to 7 HP: 2 metal screw holders (stainless steel, for plug-in front panels with slit)
- 11) 8 HP and higher: 4 metal screw holders (stainless steel, for plug-in front panels with slit)
- 12) 1 hexagon nut (M 2.5 for version with metal circuit board holder)
- 13) 2 pressed-in alignment pins (stainless steel)

Notes: Additional sizes on request. EMC springs FP/M as Interzoll Modul accessories.

ST/M 3...-EMV

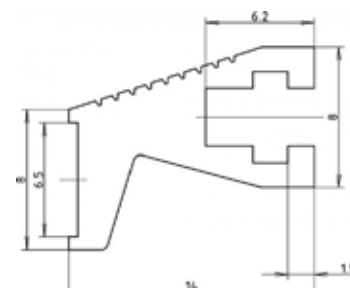


Z-2904371

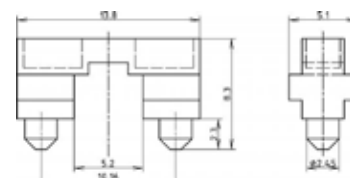


Handle profile, natural-coloured anodised aluminium, metre profile

Notes: Mounting material, (86081750) and BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



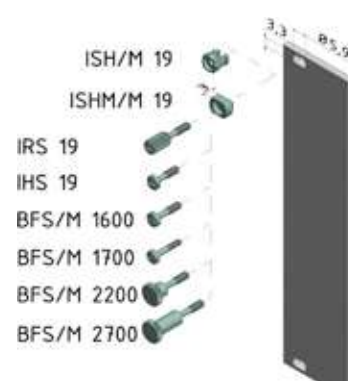
Notes: Mounting in aluminium handle GRL/M (86081740) with BFS/M 1800 (86000180) / 1900 (86000190) see Interzoll Modul chapter.



BFS/M: 20 pieces



Scope Of Delivery: ISH 19 / IRS 19 = 10 pieces, otherwise 20 pieces



Intertego

Frame-type plug-in units

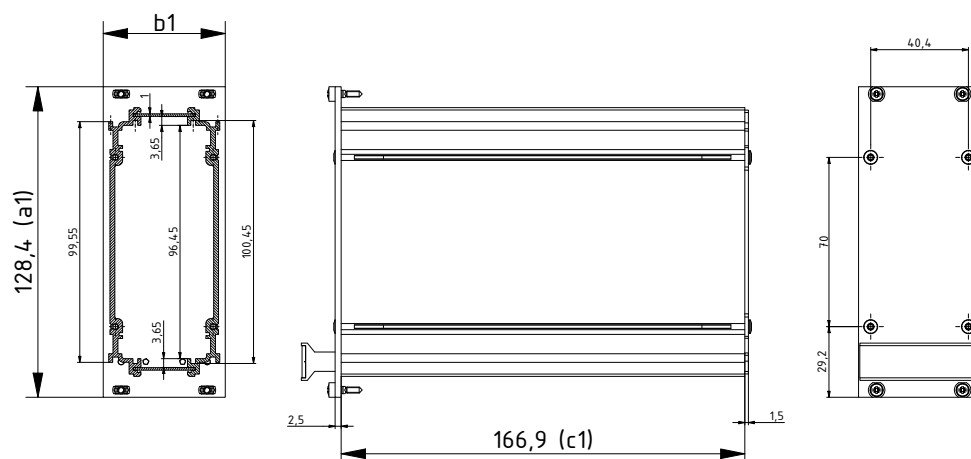


Interzoll PRO frame-type plug-in units, 3 U, natural-coloured anodised aluminium front panel, colourless passivated aluminium side profiles, galvanised steel cover plates, plain, galvanised steel rear panel with one slot, 3 U

Model	Order no.	a1	b1	c1	U	HP
IZK/M 16308-RW1-P	85808311	128.4	40.3	166.9	3	8
IZK/M 16310-RW1-P	85810311	128.4	50.46	166.9	3	10
IZK/M 16312-RW1-P	85812311	128.4	60.62	166.9	3	12
IZK/M 16314-RW1-P	85814311	128.4	70.78	166.9	3	14
IZK/M 16321-RW1-P	85821311	128.4	106.34	166.9	3	21
IZK/M 16328-RW1-P	85828311	128.4	141.9	166.9	3	28
IZK/M 16342-RW1-P	85842311	128.4	213.02	166.9	3	42

Scope Of Delivery: 1 front panel with handle, 2 side panels, 2 top covers, 1 rear panel, mounting material

Notes: Additional versions, 6 U, EMC or with hood on request.



Z-2904-357



Cover plates, perforated, 1mm, galvanised sheet steel, for frame-type plug-in units, 3 U

Model	Order no.	c1	HP
IZK/M 16008-ADL-P	86090812	166.9	8
IZK/M 16010-ADL-P	86091012	166.9	10
IZK/M 16012-ADL-P	86091212	166.9	12
IZK/M 16014-ADL-P	86091412	166.9	14
IZK/M 16021-ADL-P	86092112	166.9	21
IZK/M 16028-ADL-P	86092812	166.9	28
IZK/M 16042-ADL-P	86094212	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth

Intertego

Frame-type plug-in units

Cover plates, perforated, 1mm, galvanised sheet steel, for PRO frame-type plug-in units, 3 U, to accommodate card guides

Model	Order no.	c1	HP
IZK/M 16008-ADL-KF-P	86090813	166.9	8
IZK/M 16010-ADL-KF-P	86091013	166.9	10
IZK/M 16012-ADL-KF-P	86091213	166.9	12
IZK/M 16014-ADL-KF-P	86091413	166.9	14
IZK/M 16021-ADL-KF-P	86092113	166.9	21
IZK/M 16028-ADL-KF-P	86092813	166.9	28
IZK/M 16042-ADL-KF-P	86094213	166.9	42

Scope Of Delivery: 1 cover plate

Notes: c1 = cover plate depth



Card guides for cover plates IZK/M-ADL-KF, plastic, UL 94 V0, red

Model	Order no.	Card depth
IZK/M KF-160-P	86216030	160

Scope Of Delivery: 10 card guides



Rear panel open, galvanised sheet steel, for IZK/M frame-type plug-in units

Model	Order no.	HP
IZK/M 00308-RWO-P	86090833	8
IZK/M 00310-RWO-P	86091033	10
IZK/M 00312-RWO-P	86091233	12
IZK/M 00314-RWO-P	86091433	14
IZK/M 00321-RWO-P	86092133	21
IZK/M 00328-RWO-P	86092833	28
IZK/M 00342-RWO-P	86094233	42

Scope Of Delivery: 1 rear panel



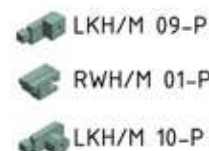
PCB and rear panel holder

Model	Order no.	
LKH/M 09-P	86080090	
LKH/M 10-P	86080110	
RWH/M 01-P	86080120	

Scope Of Delivery:

LKH/M 10-P = 10 pieces (5 pairs right / left)

RWH/M 01-P = 10 pieces



The product advantages



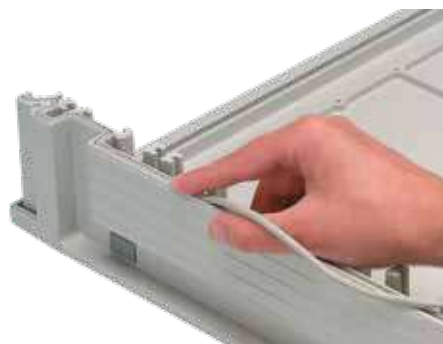
By using an Internorm enclosure, a 19" subrack can be converted into a sturdy desktop device. The enclosure half-shells – made of impact-resistant plastic – are screwed together using variable-length aluminium profiles.



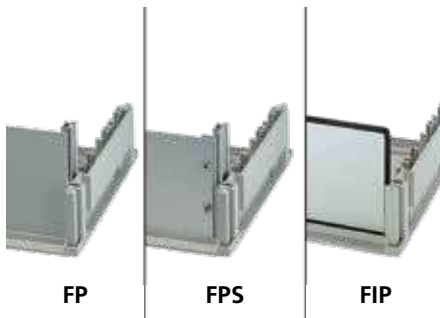
The enclosure screws are under hinged covers opened by means of a pushbutton. This principle is used for the tip-up feet on the underside of the enclosure.



The height of both half-shells (basic height: 3 U) can be extended in 1 U steps with extension sets.



The enclosure can be upgraded to protection class IP54 by the use of seals and IP front panels or lockable doors.



Different front and rear panels allow adaptation of the enclosure to a very wide range of applications.



Quick-Finder:
www.bopla.de/30

Examples of use



Internorm



Colour:

Enclosure:

● Light grey, similar to RAL 7035

Corner profiles, cover caps:

● Silver grey, similar to RAL 7001

Protection class:

IP40 / DIN EN 60529

IP54 / DIN EN 60529 optional

Material:

Enclosure: PS (polystyrene)

Seal: CR / TPE

(Round cord / FIP seal)

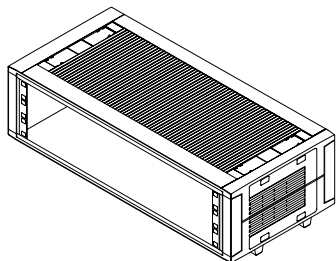
For details see technical information.



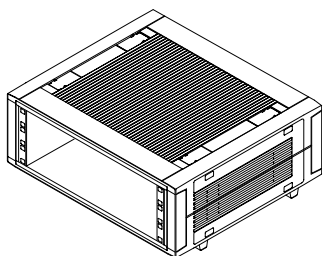
19"

Enclosure sizes

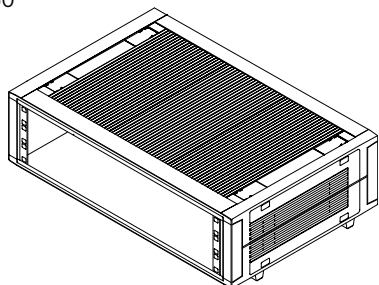
IN 25060



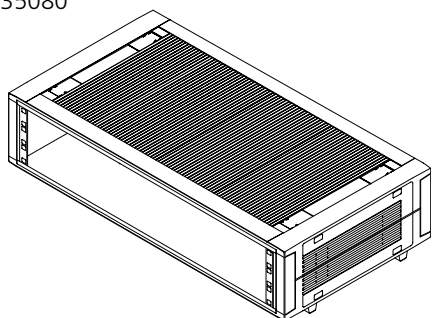
IN 35040



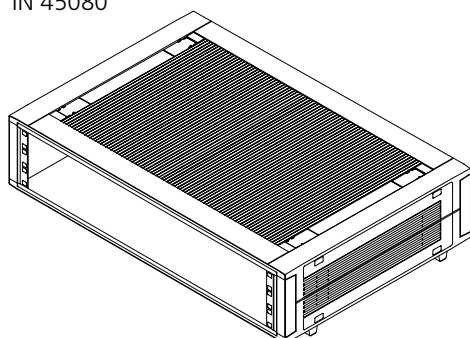
IN 35060



IN 35080

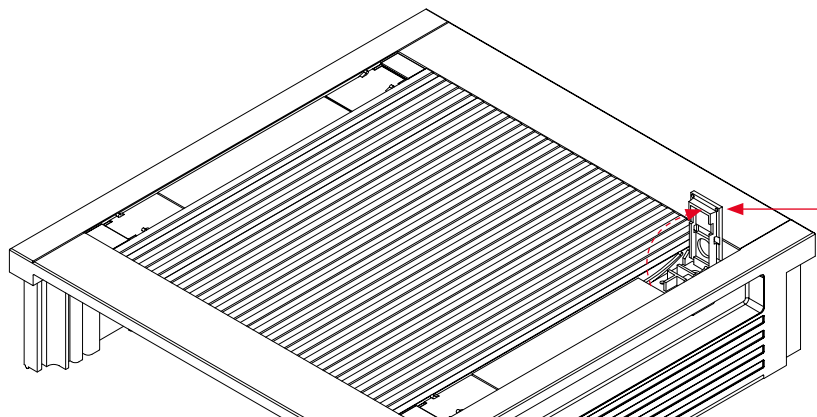


IN 45080

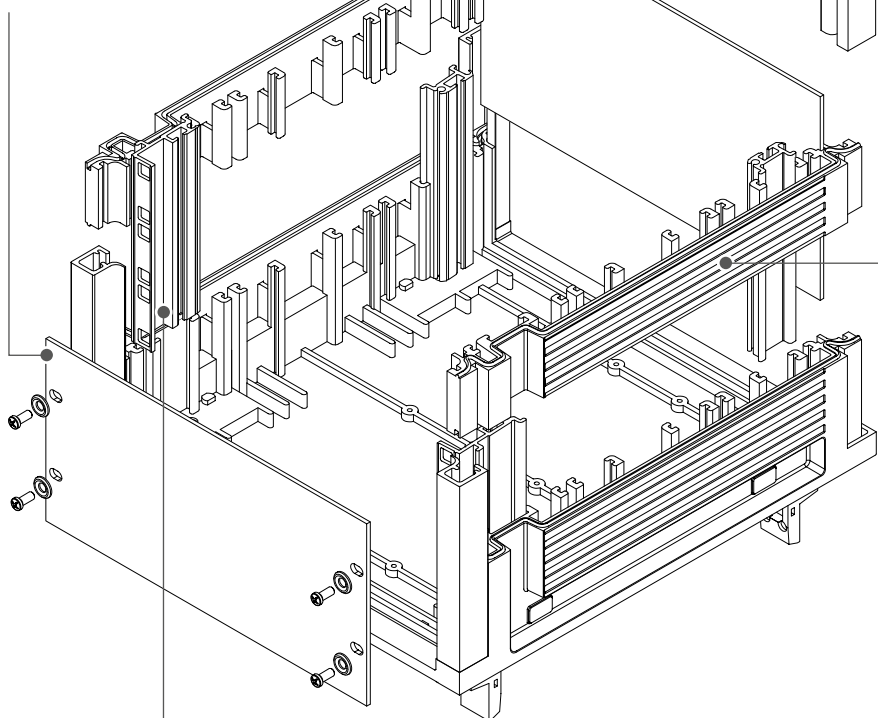


Design types

3 U

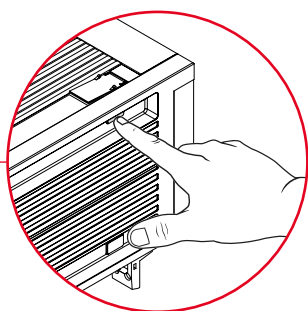


FPS ...
Front / back panels
screwable



PZ ...
19" profile sets for fitting of subracks
or screw-on front panels.

Internorm



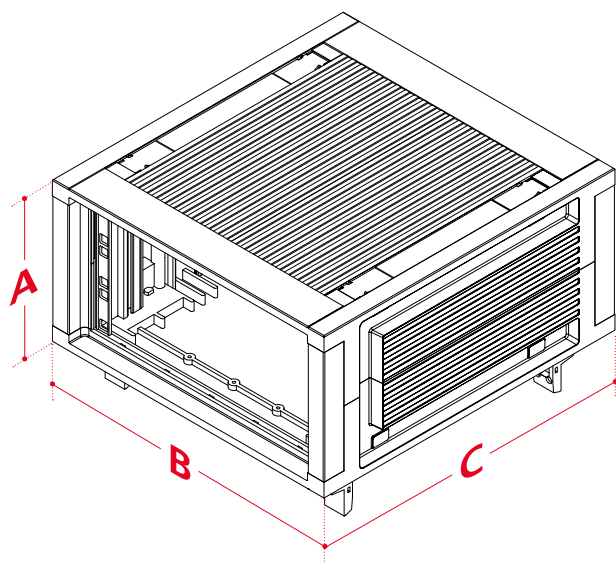
Press to open!

PEK ...

corner profile sets for pushing or latching onto the enclosure corners. Optionally also available with moulded-on wall bracket.

AB ...

One extension set raises the enclosure by one HP. Extensions sets with air vents on request.



Dimensions

Model	A	B	C	HP
3 U				
IN 25060	169	434	250	63
IN 35040	169	327	350	42
IN 35060	169	434	350	63
IN 35080	169	540	350	84
IN 45080	169	540	450	84

Accessories



Wall corner profile sets



Seal IP 54 / EMC seal for enclosures and extension sets



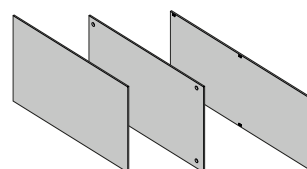
Extension sets 1 HP



Snap-in outlet filter



Handles / tip-up bows, hinged



Front and part front panels in different versions

Internorm

Enclosure

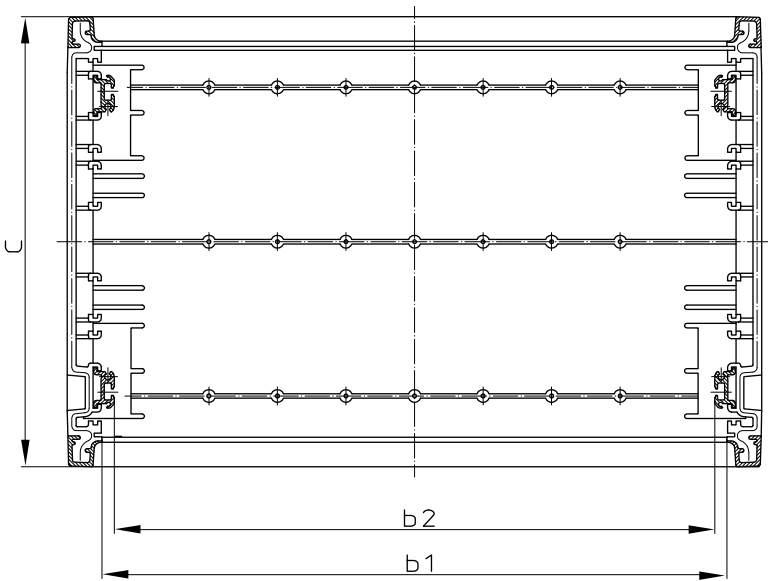
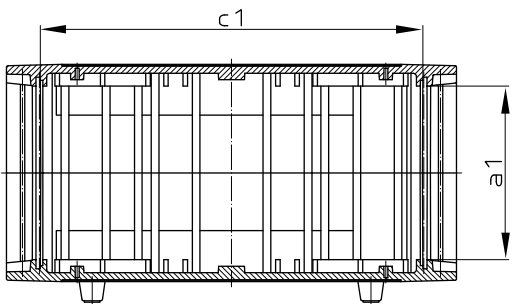
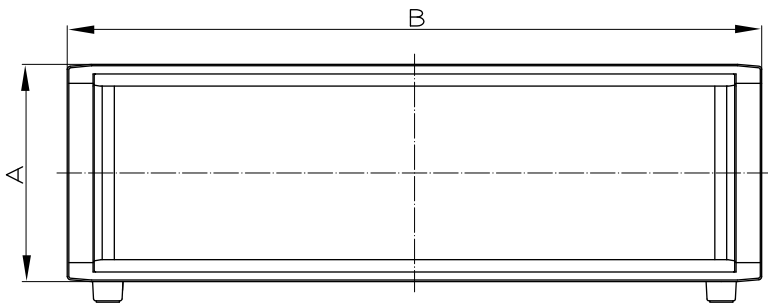


Enclosure half-shells, plain, with fitted screw covers and collapsible feet

Model	Order no.	A	B	C	a1	b1	b2	c1	U	HP	IP
IN 25060	30250600	169	434	250	135	379	360	197	3	63	54
IN 35040	30350400	169	327	350	135	272	253	297	3	42	54
IN 35060	30350600	169	434	350	135	379	360	297	3	63	54
IN 35080	30350800	169	540	350	135	486	467	297	3	84	54
IN 45080	30450800	169	540	450	135	486	467	397	3	84	54

Scope Of Delivery: 2 enclosure half-shells including fixing material

Notes: Additional sizes and types with air vents on request. Necessary mounting, 19" and corner profiles (4 pieces) as accessories.



Z-2203305

Internorm

Extension sets

Extension sets 1 U

Model	Order no.	Note
AB 25100	31251000	For IN 25...
AB 35100	31351000	For IN 35...
AB 45100	31451000	For IN 45...

Scope Of Delivery: 1 extension set = 2 pieces

Notes: One extension set raises the enclosure by one U. Extensions sets with air vents on request.



Internorm

Seals



Seal IP 54 / EMC seal for enclosures and extension sets

Model	Order no.
IN-DI	31500000
IN-DI EMV	31500010

Scope Of Delivery: 1 m seal

Notes: FIP front panels are needed if ingress protection is required for the enclosure. Aluminium or conductive copper lacquering is required to achieve EMC protection.

Internorm

Profiles / profile sets

19" profile sets, natural-coloured anodised aluminium, for fitting of subracks or screw-on FPS... front panels

Model	Order no.	U
PZ 00300	31000080	3
PZ 00400	31000081	4
PZ 00500	31000082	5
PZ 00600	31000083	6

Scope Of Delivery: 2 profiles

Notes: 3 (54700340) as accessories.

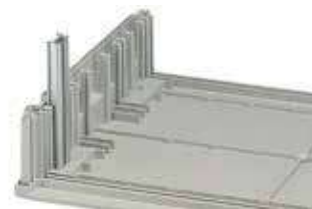


Mounting profile sets, natural-coloured anodised aluminium, vertical mounting grooves for insertion of FP..., FPK..., FIP... front panels

Model	Order no.	U
PM 00300	31000070	3
PM 00400	31000071	4
PM 00500	31000072	5
PM 00600	31000073	6

Scope Of Delivery: 2 profiles

Notes: Additional sizes on request. Fixing material KM 4/5.3 (54700340) for profile groove as accessories.



Corner profile sets, plastic, silver grey, for pushing or latching onto the enclosure corners

Model	Order no.	U
PEK 00300	31030300	3
PEK 00400	31040300	4
PEK 00500	31050300	5
PEK 00600	31060300	6

Scope Of Delivery: 2 profiles

Notes: Additional sizes on request.



Wall corner profile sets, aluminium, silver grey, powdered

Model	Order no.	U
PEW 00300	31030400	3

Scope Of Delivery: 2 profiles

Notes: Additional sizes on request.



Internorm

Accessories



Handles / tip-up bows, hinged

Model	Order no.	HP	Note
HS 00040	31000641	42	For IN ...40
HS 00060	31000661	63	For IN ...60
HS 00080	31000681	84	For IN ...80

Scope Of Delivery: handle side part (PA6), profile (aluminium), seals, screws

Notes: Processing of the enclosure and mounting on request. The maximum load is 300 N.



Outlet filter, snap-in, ABS UL 94 V0, light grey

Model	Order no.	A	B	Note
AF 1515	31801515	150	150	Installation depth 28 mm

Scope Of Delivery: Lid/base, filter mat, cleaning instructions, servicing instructions

Notes: Mechanical processing of the enclosures is required for the fitting of the outlet filters. Technical details, filter specifications and additional designs on request.

Internorm

Screws

Internorm mounting material

Model	Order no.	Note
KM 4/5,3	54700340	M4 cage nut for insertion into the vertical groove of PM... and PZ... profiles.
KM 5	54700350	M5 cage nut for fitting of BGT / FPS in the enclosure or cabinet
KS 5	54700360	M5 cross-head screw for fitting of BGT / FPS in the enclosure or cabinet
KU 5	54700370	Washer for KS 5, nickel-plated brass

Scope Of Delivery: 10 pieces



Internorm

Front panel



Front/rear panels, plug-in, natural-coloured anodised aluminium

Model	Order no.	U	Note
FP 00340	31000010	3	For IN ..040
FP 00360	31000020	3	For IN ..060
FP 00380	31000030	3	For IN ..080

Scope Of Delivery: 1 front panel

Notes: Only for use with PM... mounting profile. Additional sizes on request.



Front/rear panels, plug-in, plastic, light grey

Model	Order no.	U	Note
FPK 00340	31003400	3	For IN ..040
FPK 00360	31003600	3	For IN ..060
FPK 00380	31003800	3	For IN ..080

Scope Of Delivery: 1 front panel

Notes: Only for use with PM... mounting profile. Additional sizes on request.



Front/rear panels, screwable, natural-coloured anodised aluminium

Model	Order no.	U	Note
FPS 00180	31018100	1	For IN ..080
FPS 00240	31024100	2	For IN ..040
FPS 00260	31026100	2	For IN ..060
FPS 00280	31028100	2	For IN ..080
FPS 00340	31000040	3	For IN ..040
FPS 00360	31000050	3	For IN ..060
FPS 00380	31000060	3	For IN ..080
FPS 00480	31000061	4	For IN ..080
FPS 00580	31000062	5	For IN ..080
FPS 00680	31000063	6	For IN ..080

Scope Of Delivery: 1 front panel

Notes: Only for use with PZ...19" profile. Additional sizes on request. Fixing material KM 5 (54700350), KS 5 (54700360), KU 5 (54700370) as accessories.



Front/rear panels, plug-in, natural-coloured anodised aluminium, including fitted seal, IP 54

Model	Order no.	U	Note
FIP 00340	31000450	3	For IN ..040
FIP 00360	31000460	3	For IN ..060
FIP 00380	31000470	3	For IN ..080

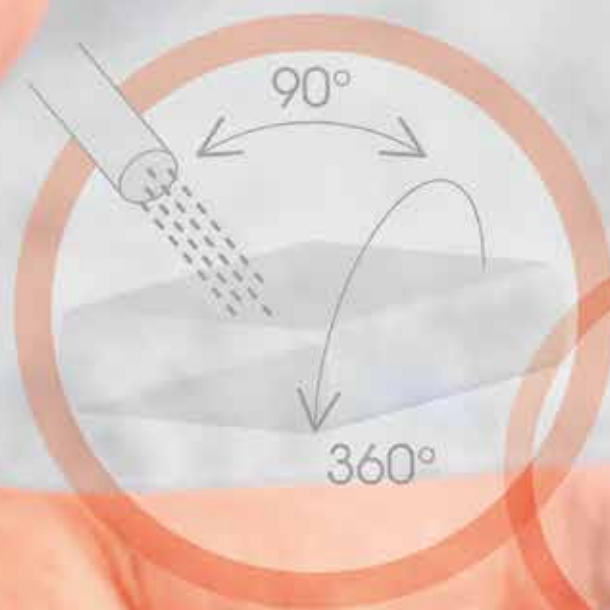
Scope Of Delivery: 1 front panel

Notes: Only for use with PM... mounting profile. Additional sizes on request. The IN-DI (31500000) seal is needed if ingress protection is required for the enclosure.

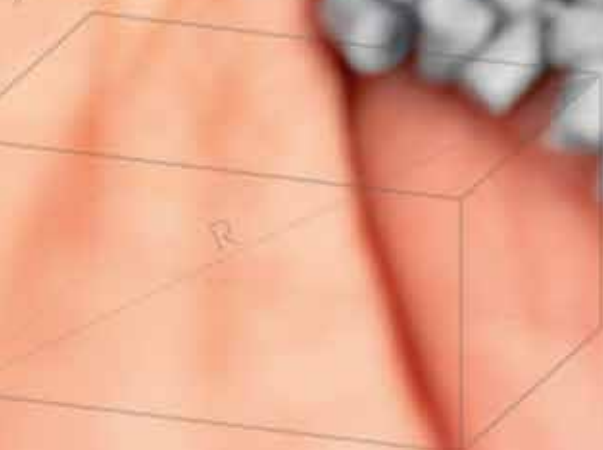


BOPLA

A Phoenix Mecano Company



$P^2 + b^2 + h^2$ (spatial)



	Neoprene CR	Polyurethane PU	EPDM	Silicone
Acetone	o	o	+	—
Formic acid	o	Δ	+	—
Hydrochloric acid	+	—	+	—
Benzene	o	+	—	—
Styrene fluid	o	Δ	o	—
Butane	Δ	+	—	—
Methanol	+	—	+	—
Calcium chloride	Δ	+	+	—
Chlorine benzole	—	—	—	—
Diesel oil	o	+	—	—
Acetic acid	75 %	Δ	+	—
Formaldehyde	+	+	+	—
Freon 113	o	Δ	—	—

Technical Information

The following pages include all the important technical information about our products.

Lactic acid	+	+	+
Mineral oils	o	o	—
Engine oils	o	o	—
Sodium carbonate	Δ	Δ	+
Sodium chloride	+	Δ	+
Sodium hydroxide	50 %	—	+
Soda lye	50 %	—	+
Nitric acid	—	—	10 %
Hydrochloric acid	o	—	+
Lubricating oil	o	Δ	—
Carbon disulphide	—	o	—
Sulphuric acid	50 %	—	10 %
Soap suds	—	+	+
Detergents	o	+	—
Turpentine oil	—	—	—
Hydrocarbon tetrachloride	—	—	—
Toluol	—	—	—
Trichloroethylene	—	—	—
Water (distilled, river, tap, sea)	+	+	+
Tartaric acid	—	Δ	—
Xylo	—	—	—
Ammonium nitrate	Δ	Δ	—



Technical Information | Protection classes

Important: We assume no liability for cited standards!

The degree of protection offered by an enclosure is shown by the letters IP (Ingress Protection) and two indexes. The first index indicates two factors (protection for persons and equipment), the second index indicates only one factor (protection against water).

Example: IP 54

└ = protection against splashing water
└ = protection against dust and wire contact with dangerous parts

DIN EN 60529; VDE 0470–1 : 2014-09

First index: Protection against contact and foreign objects

Symbol	Index	Protection against contact		Protection against foreign objects	
		Brief description	Definition	Brief description	Definition
	0	Not protected	–	Not protected	–
	1	Protection against the back of the hand touching dangerous parts	The object probe, a >50 mm diameter sphere, must be at a sufficient distance from dangerous parts	Protection against a solid foreign object of 50 mm or more in diameter	The object probe, a >50 mm diameter sphere, must not fully penetrate
	2	Protection against a finger touching dangerous parts	The test finger, jointed, >12 mm in diameter and 80 mm long, must be at a sufficient distance from dangerous parts	Protection against a solid foreign object of 12.5 mm or more in diameter	Protection against a solid foreign object of 12.5 mm or more in diameter
	3	Protection against a tool touching dangerous parts	The object probe, >2.5 mm in diameter, must not be able to penetrate	Protection against a solid foreign body of 2.5 mm or more in diameter	The object probe, a >2.5 mm diameter sphere, must not penetrate at all
	4	Protection against a wire touching dangerous parts	The object probe, >1.0 mm in diameter, must not be able to penetrate	Protection against a solid foreign object of 1.0 mm or more in diameter	The object probe, a >1.0 mm diameter sphere, must not penetrate at all
	5	Protection against a wire touching dangerous parts	The object probe, 1.0 mm in diameter, must not be able to penetrate	Protection against dust	Dust penetration is not completely prevented ¹⁾
	6	Protection against a wire touching dangerous parts	The object probe, 1.0 mm in diameter, must not be able to penetrate	Dust-tight	No ingress of dust

An enclosure must only be designated with the **first index** (protection against penetration) for a degree of protection when it also meets all lower degrees of protection.

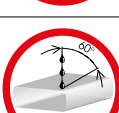
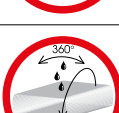
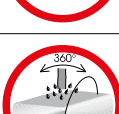
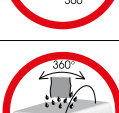
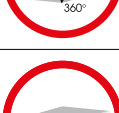
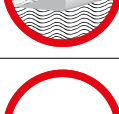
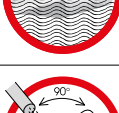
¹⁾ Dust must not penetrate in sufficient quantities to prevent the equipment from operating satisfactorily or to impair safety.

Up to index 6, the **second index** (protection against water) must only be used for a degree of protection for an enclosure if it also meets all lower degrees of protection. However, an enclosure which is only designated with the second index 7, 8 (protection against immersion) or 9K (protection against a jet of steam) is considered to be unsuitable for use with a jet of water (index 5 or 6). This means that it does not need to meet the requirements indicated by indexes 5 or 6. Only an enclosure with a double designation meets the requirements regarding resistance to a jet of water and to immersion/jet of steam.

Important note: The degrees of protection given for the enclosures refer to unmachined enclosures as supplied. In the case of protection against water in particular (second index), the test conditions will be met if during the given time for the experiment no water has penetrated, or not in harmful quantities.

The protection classifications do not take into account the effects of ageing and so cannot be guaranteed throughout the lifetime of the enclosure. Additionally, changes in temperature and atmospheric conditions can create loss of pressure in the enclosure, and moisture may be absorbed through the seal area. BOPLA can fit the enclosure with a pressure compensation element for enclosures to be deployed in these environments.

Second index: Protection against water

Symbol	Index	Brief description		Definition
	0	Not protected		–
	1	Protection against falling drops of water		Drops of water falling vertically onto the enclosure must not have any harmful effects.
	2	Protection against falling drops of water when the enclosure is tilted at any angle of up to 15°		Drops of water falling vertically onto the enclosure must not have any harmful effects if the enclosure is tilted at any angle of up to 15° on both sides of the vertical.
	3	Protection against spraying water, spray nozzle: 10 l/min; 5 min		Water sprayed onto the enclosure at an angle of up to 60° on both sides of the vertical must not have any harmful effects.
	4	Protection against splashing water, spray nozzle: 10 l/min; 5 min		Water splashed onto the enclosure from any direction must not have any harmful effects.
	5	Protection against water jets, jet nozzle: 12.5 l/min; 3 min		Water projected in jets against the enclosure from any direction must not have any harmful effects.
	6	Protection against powerful water jets, jet nozzle: 100 l/min; 3 min		Water projected in powerful jets against the enclosure from any direction must not have any harmful effects.
	7	Protection against the effects of temporary immersion in water 1 m; 30 min	Test procedures acc. to code numbers 7 and 8 may NOT meet the requirements of code numbers 5 and 6.	Water must not enter in a quantity which results in harmful effects if the enclosure is temporarily immersed in water under standardised pressure and time conditions.
	8	Protection against the effects of continuous immersion in water > IPx7; definition acc. to agreement		Water must not enter in a quantity that could have harmful effects if the enclosure is kept under water.
	9	Protection against high water jet temperatures and high water pressure from a flat jet nozzle		Water directed at high pressure and at high temperatures onto the enclosure from any direction must not have any harmful effects.



Technical information | Impact resistance

Important: We assume no liability for cited standards!

The **IK classification** is an international standard which describes suitability for the widest range of ambient conditions. It states how resistant articles such as enclosures are to mechanical stress. The official classification with IK codes of 00 to 10 specifies impact resistance up to a defined minimum level of impact energy which the enclosure must withstand. This code is expressed by means of the letters IK and a two-digit code number.

Example: IK 08

└ = impact energy up to 5 joules

IEC 62262:2002; IEC 60068-2-75:2015

Index: Resistance to mechanical stress

		Resistance to collision and impact	
Symbol	Index	Brief description	Definition
	00	No impact resistance	—
	01-05	Protection against blows with an impact energy of 0.15 joules to 0.7 joules	Defines an impact from a light tool (polyamide)
	06	Protection against blows with an impact energy of up to 1 joule	Defines an impact from a 500 g tool (polyamide) from a distance of 20 cm
	07	Protection against blows with an impact energy of up to 2 joules	Defines an impact from a 500 g tool (steel) from a distance of 40 cm
	08	Protection against blows with an impact energy of up to 5 joules	Defines an impact from a 1.7 kg tool (steel) from a distance of 29.5 cm
	09	Protection against blows with an impact energy of up to 10 joules	Defines an impact from a 5 kg tool (steel) from a distance of 20 cm
	10	Protection against blows with an impact energy of up to 20 joules	Defines an impact from a 5 kg tool (steel) from a distance of 40 cm

Technical information | Flame resistance

Standard 94 of the Underwriters Laboratories (UL94) is accepted worldwide as the predominant standard for classifying the flame retardance of plastics. The procedure according to UL94 is to test the ability of the material to extinguish itself after flaming. The classification is according to the speed of burning and the extinguishing time, droplet formation, and the duration of afterglow time. Depending on the wall thickness, several classifications are possible for each material. The basis for the appropriate specification of a material should correspond to the thickness of the moulding's main wall. Information on the UL 94 classification is only comparable and meaningful if it specifies the relevant wall thickness.

The flammability category always refers to the raw material, tested using ideal test pieces. In the case of manufactured parts, deviations caused by different material thicknesses and the effects of processing are unavoidable.



Quick-Finder:
www.bopla.de/116

Index: Flame retardance of plastics

Symbol	Index	Brief description	Definition												
	HB	The test specimen is held horizontally. For wall thicknesses up to 3 mm, the rate of combustion must be 76 mm/min, and less than 38 mm/min for wall thicknesses of 3 mm.	Often misunderstood: Non-flame-retardant qualities (or materials which are not intended for flame-retardant applications) do not automatically meet horizontal burning criteria. Although the least rigorous, UL 94 HB is a category of flammability and can only be achieved by means of testing.												
	V-2	Test specimen vertical, flame height 20 mm; self-extinguishing up to 30 s after the flame has been removed; no burning droplets; afterglow = max. 60 s.	Cotton wool under the test specimen may ignite.												
	V-1	Test specimen vertical, flame height 20 mm; self-extinguishing up to 10 s after the flame has been removed; no burning droplets; afterglow = max. 60 s.	Cotton wool under the test specimen may not ignite.												
	V-0	Test specimen vertical, flame height 20 mm; self-extinguishing up to 10 s after the flame has been removed; no burning droplets; afterglow = max. 30 s.	Cotton wool under the test specimen may not ignite.												
	V-5	Fire test to determine flammability classes UL 94 5VB and UL 94 5VA. Plastics which comply with at least V0 classification can also be tested; in this case, the flame height is 125 mm.	The process exposes a vertically-mounted specimen 5 times for a period of 5 seconds with pauses of 5 seconds. In addition to the test criteria as per UL 94 V, this flammability test also takes into consideration the formation of holes in panels. <table><tr><th></th><th>UL 94 5VB</th><th>UL 94 5VA</th></tr><tr><td>Afterflame time / afterglow time of the test specimens after the 5th flame application [sec]</td><td>< 60</td><td>< 60</td></tr><tr><td>Burning droplets</td><td>no</td><td>no</td></tr><tr><td>Hole formation (in panels)</td><td>no</td><td>yes</td></tr></table>		UL 94 5VB	UL 94 5VA	Afterflame time / afterglow time of the test specimens after the 5th flame application [sec]	< 60	< 60	Burning droplets	no	no	Hole formation (in panels)	no	yes
	UL 94 5VB	UL 94 5VA													
Afterflame time / afterglow time of the test specimens after the 5th flame application [sec]	< 60	< 60													
Burning droplets	no	no													
Hole formation (in panels)	no	yes													



Technical information | Plastics

Tolerances on plastics according (DIN 16901)

Deviations from the nominal dimensions are unavoidable in the manufacture of plastic mouldings.

There are various reasons for these deviations:

- a) Processing parameters. These depend on
- the evenness of the moulding compounds
 - the setting of the machine
 - the temperature of the tools
 - the distortion of the tool under pressure.

The tolerances for this standard have been laid down taking into account these factors and numerous measurements in practice.

The plastics in this standard are divided into tolerance rows. All the plastics used by BOPLA for standard enclosures are in row 130, for which the tolerances given below apply. The tolerances apply on the basis of the machining shrinkage worked into the tool only for the appropriate enclosure with the standard material stated.

- b) The condition of the tool:
- manufacturing tolerances for tool dimensions
 - wear on tools
 - deviations in the position of movable tool parts.

Nominal measuring range

over up to	0 1	1 3	3 6	6 10	10 15	15 22	22 30	30 40	40 53	53 70	70 90
A	±0.18	±0.19	±0.20	±0.21	±0.23	±0.25	±0.27	±0.30	±0.34	±0.38	±0.44
B	±0.08	±0.09	±0.10	±0.11	±0.13	±0.15	±0.17	±0.20	±0.24	±0.28	±0.34

over up to	90 120	120 160	160 200	200 250	250 315	315 400	400 500	500 630	630 800	800 1000	
A	±0.51	±0.60	±0.70	±0.90	±1.10	±1.30	±1.60	±2.00	±2.50	±3.00	
B	±0.41	±0.50	±0.60	±0.80	±1.00	±1.20	±1.50	±1.90	±2.40	±2.90	

A = Dimensions which are not tool-specific are those formed by the interaction of movable tool parts, e.g. wall thickness, floor thickness or dimensions which are affected by additives or slide bars.

B = Tool-specific dimensions are those in the same part of the tool.

Information on membrane keypad tolerances:

The installation areas for membrane keypads are dimensioned in the catalogue illustrations (Internet) with the tolerances which are present during manufacture. These tolerances are already restricted in comparison with DIN 16901.

As the membrane dimensions are also furnished with manufacturing tolerances, this may result in undesirable crack dimensions (greatest dimension of enclosure and the smallest dimension of membrane). In the case of membrane keypads developed by BOPLA, this is reduced to a minimum.

**BOPLA**

A Phoenix Mecano Company

The material properties of plastics

Material properties	Unit	Test specification	PS	ABS	PC	SE1 GFN1	PC/ABS-blend	PA6.6 FR	PA6 FR (NV12)	PA6 GF 15	UP-GF
Impact strength + 20 °C	KJ/m ²	ISO 179	-	60	without breaking	30	-	-	without breaking	36	49
Impact strength - 30 °C		DIN 53453	-	40		30	-	-		-	-
Notched impact str. (Charpy) + 20 °C	KJ/m ²	ISO 179	7	10	25	-	-	-	3,5	55	-
Notched impact str. (Charpy) - 30 °C		DIN 53453	4	4	10	-	-	-	-	-	-
Max. bending stress	N/mm ²	ISO 178 DIN 53452	-	64	> 70	110	-	-	-	-	> 100
Round body pressure stress	°C	ISO 335-1 DIN 0471/2-5	-	75	125	125	125	-	125	-	-
Retention of shape under heat ¹⁾ A	°C	ISO 75	75	80	125	120	120	90	70	150	150
Retention of shape under heat ¹⁾ B		DIN 53461	-	85	135	130	130	215	190	210	-
Thermal conductivity	W/mK	DIN 52612 ASTM C 177	0.17	0.18	0.2	0.23	-	-	-	-	0.6
Glow hot wire test	°C with mm	ISO 695 DIN 0471/2-1	-	650/2	850/1	960/3,2	960/2	-	850/1	-	-
Combustibility	Grade from mm	UL 94	HB/1.47	HB/1.6	V2/1.14	V1/1.47	V0/1.6	V0/1	V2/1.6	HB/1.6	V0/4
Water absorption	%	ISO 62 DIN 53495 ASTM D 570	< 0.1	0.4	0.35	0.22	-	2.2	2.5	2.2	0.7
Surface resistivity	Ohm	IEC 93	> 10 ¹³	> 10 ¹⁴	> 10 ¹⁵	> 10 ¹⁵	-	> 10 ¹⁵	> 10 ¹²	-	> 10 ¹²
Special volume resistivity	Ohm x cm	IEC 93 DIN 53482 VDE 303 T3 ASTM 27	> 10 ¹⁶	> 10 ¹⁵	> 10 ¹⁶	> 10 ¹⁵	-	> 10 ¹⁵	> 10 ¹⁵	> 10 ¹²	> 10 ¹³
Dielectric strength	KV/mm	IEC 243 DIN EN 53481 VDE 303 T2 ASTM 149	-	-	28	26	-	-	-	-	18

1) The ability of the enclosures to maintain their shape when subject to heat depends on a seal being inserted. The temperature resistance can still be affected by mechanical stress.

All the above data are for guidance only. They have been determined using standardized test pieces and can vary within normal tolerances. The combustibility classification always refers to the raw material, which was tested on ideal test pieces. In the case of manufactured parts, deviations caused by different material thicknesses and the effects of processing are unavoidable.

Outdoor capabilities

BOPLA plastic enclosures qualified for outdoor use are produced from granulates tested for outdoor applications.

The corresponding materials have all been subjected to testing in accordance with the UL746C standard „Polymeric Materials - Use in Electrical Equipment“. This materials testing program also includes artificial weathering:

1. 1000 hours under exposure to xenon-arc weathering
2. Seven-day water immersion test at 70 °C

Prior to and after weathering, the material is tested for all relevant properties, such as flammability, mechanical parameters, etc.. The results of the tests are recorded in two categories on the material's Yellow Card (citation from UL test documentation):

(f1): This footnote indicates that the material meets both the UV and the moisture and immersion-test requirements of UL 746C.

(f2): This footnote indicates that the material has been tested only partially for exposure to UV radiation, moisture and/or underwater conditions or that it has passed these tests only to a restricted extent.

Material characteristics of seals

Test specifications: DIN 53461	Neoprene CR	Polyurethane PU	EPDM	Silicone Si	Perbunan N NBR	TPE
Permitted temperature range	- 30 to + 90 °C	- 40 to + 100 °C	- 35 to + 120 °C	- 60 to + 200 °C	- 35 to + 100 °C	- 40 to + 70 °C

Technical information | Plastics

Chemical resistance of plastics

	PS	ABS	PC	PC/ABS- blend	PA	UP-GF Polyester
Acetone	---	---	---	---	+	---
Formic acid	40 %	---	---	---	---	10 %
Ammonia	+	25 %	---	---	10 %	---
Benzene	---	---	o	---	+	---
Brake fluid	Δ	o	---	---	+	+
Butane	---	+	+	+	+	Δ
Butanol	Δ	Δ	Δ	Δ	+	+
Calcium chloride	+	+	+	Δ	10 %	+
Chlorine benzole	---	---	---	---	+	+
Diesel oil	---	+	o	Δ	+	+
Acetic acid	50 %	25 %	10 %	10 %	5 %	10 %
Formaldehyde	40 %	30 %	Δ	Δ	o	30 %
Frigen 113	Δ	---	+	---	+	+
Fruit juice	Δ	Δ	+	Δ	+	+
Glycerine	+	+	o	Δ	+	+
Heating oil	---	o	o	Δ	+	+
Hydraulic oil	Δ	Δ	+	---	+	+
Caustic potash solution	50 %	50 %	---	---	50 %	---
Potassium chloride	+	Δ	+	Δ	10 %	+
Potassium hydroxide	Δ	Δ	Δ	Δ	Δ	---
Linseed oil	+	+	+	+	+	+
Methanol	Δ	Δ	---	Δ	o	---
Methylene chloride	---	---	---	---	o	---
Lactic acid	80 %	80 %	+	+	o	+
Mineral oils	Δ	Δ	+	Δ	+	+
Engine oils	o	+	+	Δ	+	+
Sodium carbonate	+	+	+	Δ	10 %	+
Sodium chloride	+	+	+	+	---	+
Sodium hydroxide	Δ	+	Δ	Δ	Δ	---
Soda lye	50 %	50 %	---	---	+	40 %
Nitric acid	10 %	---	10 %	Δ	---	10 %
Hydrochloric acid	10 %	o	20 %	Δ	---	---
Lubricating oil	Δ	Δ	+	Δ	+	+
Carbon disulphide	---	---	---	---	+	---
Sulphuric acid	50 %	50 %	50 %	50 %	---	---
Soap suds	Δ	Δ	o	Δ	Δ	+
Detergents	Δ	Δ	+	+	Δ	Δ
Turpentine oil	---	Δ	o	Δ	+	+
Hydrocarbon tetrachloride	---	---	Δ	---	+	+
Toluol	---	---	---	---	+	---
Trichloroethylene	---	---	---	---	+	---
Water (distilled, river, tap, sea)	+	+	+	+	+	+
Tartaric acid	+	+	+	+	10 %	+
Xylol	---	---	---	---	+	+
Zinc sulphate	+	+	+	+	Δ	+
Citric acid	+	+	10 %	+	Δ	+

Symbols

- + resistant to all concentrations °C resistant to this max. °C
- % resistant to this max. percentage concentration
- o resistant under certain conditions
- not resistant
- Δ no information available

Unless otherwise stated, the tests were carried out at room temperature.
If different media coincide, the resistances may change and consequently we cannot accept any liability for these data.

**BOPLA**

A Phoenix Mecano Company

The chemical resistance of seals

	Neoprene CR	Polyure- thene PU	EPDM	Silicone Si	Perbunane N NBR	TPE
Aceton	o	o	+	o	---	---
Formic acid	o	Δ	+	o	Δ	o at 10 %
Ammonia	+	---	+	+	+	+
Benzene	o	+	---	+	o	Δ
Brake fluid	o	Δ	o	+	o	Δ
Butane	Δ	+	---	---	+	Δ
Butanol	+	---	+	Δ	+	Δ
Calcium chloride	Δ	+	+	Δ	+	Δ
Chlorine benzole	---	---	---	---	---	Δ
Diesel oil	o	+	---	o	+	Δ
Acetic acid	75 %	Δ	+	---	---	5 %
Formaldehyde	+	+	+	+	40 %	Δ
Frigen 113	o	Δ	---	Δ	+	Δ
Fruit juice	+	+	+	+	---	+
Glycerine	+	+	+	+	+	+
Heating oil	o	+	---	o	+	Δ
Hydraulic oil	---	+	---	o	o	Δ
Caustic potash solution	+	Δ	+	Δ	o	Δ
Potassium chloride	Δ	Δ	+	+	+	Δ
Potassium hydroxide	+	---	+	o	o	+
Linseed oil	+	+	---	o	+	Δ
Methanol	+	---	+	+	+	Δ
Methylene chloride	---	---	---	---	---	Δ
Lactic acid	+	+	+	Δ	+	o
Mineral oils	o	o	---	+	+	Δ
Engine oils	o	o	---	+	+	Δ
Sodium carbonate	Δ	Δ	+	Δ	+	Δ
Sodium chloride	+	Δ	+	+	+	Δ
Sodium hydroxide	50 %	---	+	o	o	+
Soda lye	50 %	---	+	---	o	50 %
Nitric acid	---	---	10 %	---	---	+
Hydrochloric acid	o	---	+	Δ	---	+
Lubricating oil	o	Δ	---	+	+	Δ
Carbon disulphide	---	o	---	+	---	Δ
Sulphuric acid	50 %	---	20 %	25 %	o	+
Soap suds	---	+	+	+	+	Δ
Detergents	o	+	+	+	+	Δ
Turpentine oil	---	---	---	---	+	Δ
Hydrocarbon tetrachloride	---	---	---	---	---	Δ
Toluol	---	---	---	---	---	Δ
Trichloroethylene	---	---	---	---	---	Δ
Water (distilled, river, tap, sea)	+	+	+	+	+	+
Tartaric acid	o	Δ	+	+	---	Δ
Xylol	---	---	---	---	---	Δ
Zinc sulphate	Δ	Δ	+	+	+	Δ
Citric acid	Δ	Δ	+	+	---	Δ

Symbols

- + resistant to all concentrations °C resistant to this max. °C
- % resistant to this max. percentage concentration
- o resistant under certain conditions
- not resistant
- Δ no information available

Unless otherwise stated, the tests were carried out at room temperature.

If different media coincide, the resistances may change and consequently we cannot accept any liability for these data.



Technical information | Aluminium

Anodisation

Many BOPLA products are based on aluminium profiles and panel materials, and in many cases the metallic look is used as a design feature.

However, an untreated aluminium surface is reactive, and when subjected to ambient influences it can form layers of oxidation and corrosion which can quickly dull the look. Moreover, an untreated aluminium surface is very sensitive to scratches and other mechanical damage.

During anodisation, the surface of the material is chemically converted and – in contrast to other processes – is given a coating. By means of the **Electrolytic Oxidation of Aluminium**, a sealed and mechanically very stable oxide layer (ELOXAL) is created which protects the surface of the material against mechanical damage and corrosion.

Anodised surfaces can be produced in various colours, but perfect reproducibility is not always guaranteed in the case of different manufacturing batches. For this reason, on request we offer only the anodised colour “black” as an alternative to our natural-coloured anodised aluminium surfaces..

Passivation

An anodised surface is the optimal choice for the great majority of enclosure applications, because it protects against mechanical environmental influences. At the same time, it is not conductive. For some applications - especially when, for purposes of EMC screening, enclosure components must be connected conductively to each other – the non-conductive anodised layer interferes with the process or is even unsuitable.

We achieve reliable corrosion protection with a conductive surface by means of chemical passivation designed especially for use with aluminium. The process also results in considerably improved paint adhesion on aluminium. For this reason, we also use low concentration chemical passivation for the pre-treatment of all powder-coated aluminium surfaces.

Our standard powder-coating processes are:

- a) Degreasing
- b) Powder-coating
 - Depth of layer > 50 µm
 - Base: polyester amino-resin
 - Pigment: lead, chromate-free
 - Surface: structured, silicone-free

Our standard lacquering has shown good resistance to chemicals: mineral oils, motor fuels, drilling emulsions, cleaning fluids, weak acids and lyes, weak solvents and weathering. On request, we can also use other lacquers or processes. A different surface structure or gloss can also be obtained.

On principle, always take into consideration that the various aluminium casting processes result in different surface qualities. While die casting gives a smooth, even surface and chill casting results in a slightly grainy surface. This affects special requirements regarding surface quality, e.g. for screen-printing, engraving, etc.

Seawater-resistant version

SBGL: Seawater-resistant primed and lacquered. This version has a special lacquer and the following design:

- Seawater-resistant priming
- 2K - PUR lacquer or as per specification

SWB: This version is powder-coated:

- Polyester powder, silk gloss (fine) / structure (coarser) or as per specification
- Internal parts completely powder-coated

Before being coated to give corrosion protection, these parts are either passivated (Cr(III)-based) or depending on specification and release, yellow-chromated (Cr(VI)-based). These parts also meet the salt spray test according to DIN EN ISO 9227 NSS (1000 hours).

These lacquering processes are only suitable for aluminium parts. Polyester enclosures cannot be supplied in seawater-resistant primed and lacquered (SBGL) or seawater-resistant (SWB) versions because the temperatures needed to burn on the lacquers are too hot for the material.



The properties of aluminium alloys

Properties	Units	GD-Al Si 9 CU 3 (diecasting)	GD-Al Si 12 (diecasting)	GK-Al Si12 (chill casting)	Al Mg Si 0,5 (wrought alloy)
Density	g/cm ³	2.65	2.65	2.65	2.7
App. yielding point	N/mm ²	140	130	80	160
Tensile strength	N/mm ²	240	240	170	215
Ductile yield	%	< 1	1	6	12
Brinell hardness	HB	80	60	55	no inform. avail.
Electr. resistivity	m/Ohm mm ²	no inform. avail.	17 - 27	17 - 27	28 - 34
Therm. conductivity	W/mK	110 - 120	130 - 160	140 - 170	190 - 210
Heat resistance	°C	200	200	200	200
Cold resistance	°C	-100	-100	-100	-100

The chemical resistance of aluminium

	Reaction	Remarks
Acetone	+	
Formic acid	o	
Ammonia	+	
Benzene	+	
Benzole	o	contains no H ₂ O = + contains H ₂ O = o
Drilling oil, cutting oil	+	
Butane	+	
Calcium chloride	+	
Chlorine benzole	+	
Acetic acid	+	
Fat, wax	+	
Formaldehyde	+	free of formic acid
Glycerine	+ ---	contains NaCl = ---
Heating oil	+	
Potassium chloride	o	
Potassium hydroxide	---	
Linseed oil	+	< 250 °C
Methanol	+	
Methylene chloride	+	
Lactic acid	+	
Sodium carbonate	o	

	Reaction	Remarks
Sodium chloride	o	
Sodium hydroxide	+	free of H ₂ when molten
Petroleum	+	
Propane	+	
Nitric acid	+	
Lubricating oil	+	
Soap suds	+	
Carbon disulphide	+	
Sulphuric acid	o	
Hydrocarbon tetrachloride	+	
Toluol	+	
Trichloroethylene	+	light metal tri
Water vapour	+	
Hydrogen	+	
Xylol	+	
Zinc sulphate	o	
Citric acid	+	

Symbols:

+ resistant

o resistant under certain conditions

--- not resistant

Unless otherwise stated, the tests were carried out at room temperature.

If different media coincide, the resistances may change and consequently we cannot accept any liability for these data.

Technical information | Aluminium

Tolerances for pressure die castings (DIN 1688, part 4 : 1986-08)*

Tolerances of dimensions not related to the shape, linear dimensions

(lengths, widths, heights, central distances, diameters, roundings)

Spatial diagonal area ¹	Degree of accuracy	Shape dependency	Nominal measuring range													
			up to 18	over 18 to 30	over 30 to 50	over 50 to 80	over 80 to 120	over 120 to 180	over 180 to 250	over 250 to 315	over 315 to 400	over 400 to 500	over 500 to 630	over 630 to 800	over 800 to 1000	over 1000 to 1250
up to 180	GTA 13	shape-related	±0.14	±0.17	±0.20	±0.23	±0.27	±0.32								
		non-shape-related	±0.24	±0.27	±0.30	±0.33	±0.37	±0.42								
over 50 to 500	GTA 13/5	shape-related	±0.17	±0.20	±0.25	±0.30	±0.35	±0.40	±0.45	±0.50	±0.55	±0.60				
		non-shape-related	±0.32	±0.35	±0.40	±0.45	±0.50	±0.55	±0.60	±0.65	±0.70	±0.75				
over 180	GTA 14	shape-related	±0.22	±0.26	±0.31	±0.37	±0.44	±0.50	±0.60	±0.65	±0.70	±0.80	±0.90	±1.00	±1.20	±1.30
		non-shape-related	±0.42	±0.46	±0.51	±0.57	±0.64	±0.70	±0.80	±0.85	±0.90	±1.00	±1.10	±1.20	±1.40	±1.50
over 500	GTA 14/5	shape-related	±0.25	±0.35	±0.40	±0.45	±0.55	±0.65	±0.75	±0.80	±0.85	±0.95	±1.10	±1.20	±1.40	±1.60
		non-shape-related	±0.55	±0.65	±0.70	±0.75	±0.85	±0.95	±1.00	±1.10	±1.10	±1.20	±1.40	±1.50	±1.70	±1.90

Dimensional cast variations for thicknesses

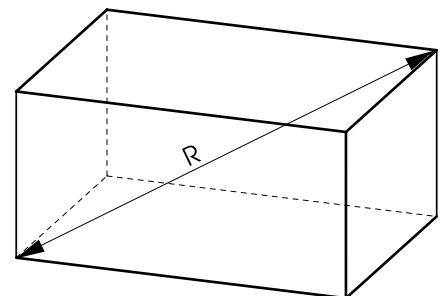
(wall thicknesses, fins, ribs)

Spatial diagonal area ¹	Degree of accuracy	Shape dependency	Nominal measuring range		
			up to 18	over 18 to 30	over 30 to 50
up to 180	GTA 13	shape-related	±0.15	±0.20	±0.20
		non-shape-related	±0.25	±0.30	±0.30
over 50 to 500	GTA 13/5	shape-related	±0.20	±0.25	±0.30
		non-shape-related	±0.35	±0.40	±0.45
over 180	GTA 14	shape-related	±0.25	±0.30	±0.35
		non-shape-related	±0.45	±0.50	±0.55
over 500	GTA 14/5	shape-related	±0.30	±0.40	±0.45
		non-shape-related	±0.55	±0.65	±0.70

1) Determining the spatial diagonal:

The spatial diagonal R is determined by the extreme points of the casting. It is calculated from the nominal dimensions of the prismatic body which delimits the casting whatever its shape.

$$R = \sqrt{l^2 + b^2 + h^2} \text{ (spatial diagonal)}$$



Shape-related dimensions are those in the same parts of the tool. Non-shape-related dimensions are those created by the interaction of movable tool components, e.g. wall thicknesses, base thicknesses and dimensions affected by additives or slides.

* Important: We assume no liability for cited standards!

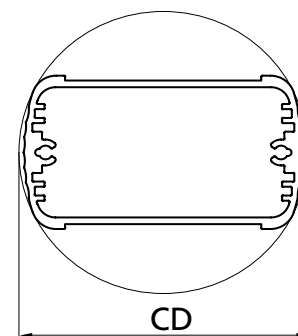
Tolerances for aluminium profiles (DIN EN 12020-2 : 2001-07)*

Cross-section dimensions

(General information)

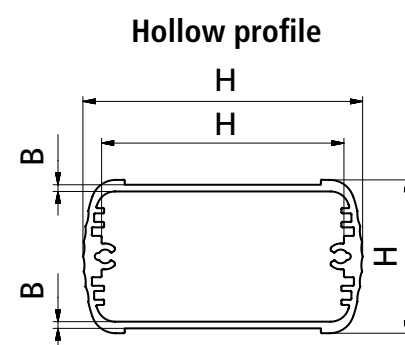
The limit deviations of the following dimensions are specified in the corresponding tables.

- A: Wall thicknesses, except for those which enclose the hollow spaces in hollow profiles
- B: Wall thicknesses which enclose the hollow spaces in hollow profiles, except for wall thicknesses between two hollow spaces
- H: All dimensions except for wall thickness
- CD: Circumscribing circle
- L: Profile length

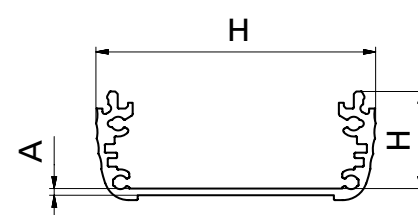


Limit deviations for dimensions other than wall thickness

Dimension H		Limit deviations for H
over	up to	
–	10	±0.15
10	15	±0.20
15	30	±0.25
30	45	±0.30
45	60	±0.40
60	90	±0.45
90	120	±0.60
120	150	±0.80
150	180	±1.0
180	240	±1.2
240	300	±1.5



Solid profile



Z-2803301

Limit deviations of wall thicknesses

Nominal wall thickness A and B		Limit deviations for			
		Wall thickness A (Circumscribing circle)		Wall thickness B (Circumscribing circle)	
over	up to	CD ≤ 100	100 < CD ≤ 300	CD ≤ 100	100 < CD ≤ 300
–	1.5	±0.15	±0.20	±0.20	±0.30
1.5	3	±0.15	±0.25	±0.25	±0.40
3	6	±0.20	±0.30	±0.40	±0.60
6	10	±0.25	±0.35	±0.60	±0.80

Tolerance for the profile length (cut) L ± 0.2 mm (standard), ± 0.1 mm (on request at an extra charge).



Overview of standards | Defined standards in the 19" sector

Tolerances for processing work and equipment (DIN ISO 2768-m)

We specialise in the processing of enclosures and the integration of electronic components. To do this, we carry out all the necessary work stages on the most up-to-date machines and plant. Our standard tolerances for processing and equipment comply with DIN ISO 2768-m.

Nominal size range

from 0.5 to 3	over 3 up to 6	over 6 up to 30	over 30 up to 120	over 120 up to 400	over 400 up to 1000
±0.1	±0.1	±0.2	±0.3	±0.5	±0.8

Overview of standards for 19" products:

Our 19" enclosures comply with a large number of international standards which cover not only mechanical but also electromagnetic compatibility and vibration resistance.

Internal and external dimensions comply with:	Refers to product group
IEC 60297-3-101 /DIN EN 60297-3-101) / IEEE 1101.1 (subracks and plug-in units)	Intertego (in part sections), Internorm Stil, Interzoll Plus, Internorm (for fitting 19" plug-in units), Interzoll Modul, Interzoll, part front and plug-in front panels, extractor handles (HGS), frame-type plug-in units
IEC 60297-3-102 (DIN EN 60297-3-102) / IEEE 1101.10/11 (injector/extractor handles)	Internorm Stil, Interzoll Modul, extractor handles (HGS)
IEC 60297-3-103 (DIN EN 60297-3-103) (coding and alignment pin)	Internorm Stil, Interzoll Modul, extractor handles (HGS)
Earth conductor connections comply with:	Refers to product group
DIN EN 50178 / VDE 0160	Internorm Stil
DIN EN 60950 Teil 1 / VDE 0805 Part 1	Internorm Stil
DIN EN 61010-1 / VDE 0411 Part 1	Internorm Stil
EMC test acc. to:	Refers to product group
VG 95373 Part 15	Intertego, Internorm Stil
IEC 61587-3	Interzoll Modul
Shock and vibration test acc. to:	Refers to product group
IEC 61587-2	Interzoll Modul
BN 411002	Interzoll Modul, Interzoll
BN 411003	Interzoll Modul
EN 50155	Interzoll Modul
DIN EN 45545-1	Interzoll Modul, Internorm Stil
Fire protection behavior acc. to:	Refers to product group
DIN EN 45545-2	Interzoll Modul, Internorm Stil
For direct screw-type connectors acc. to:	Refers to product group
IEC 60603-2 (DIN EN 60603-2, formerly: DIN 41612)	Internorm Stil, Interzoll Plus, Interzoll Modul, Interzoll, Intertego, CombiCard 1000-7000
For plug-in units acc. to:	Refers to product group
IEC 60297-3-101 (DIN EN 60297-3-101)	Internorm Stil, Interzoll Plus, Interzoll Modul, extractor handles (HGS), plug-in front panels, frame-type plug-in units, Interzoll, Intertego, Combi-Card 1000-7000
For plug-in units with insertion and extraction function acc. to:	Refers to product group
IEC 60297-3-102 (DIN EN 60297-3-102) / IEEE 1101.10/11	Internorm Stil, Interzoll Modul, extractor handles (HGS)
IP classification:	Refers to product group
DIN EN 60529; VDE 0470-1	Internorm Stil (IP 20), Internorm (IP 54), Interzoll Modul (IP 20), Interzoll (IP 20), Interzoll Plus (IP 20), Intertego (IP 40 / 20 – with ventilation)

Electro-magnetic compatibility

European EMC directive 2004/108/EC was developed within the framework of the standardization of national regulations and has been in force since 20th July 2007. This makes it necessary to submit to EMC tests not only radio equipment but also all electrical and electronic equipment, plants and systems. The purpose of this test is to obtain the awarding of the CE mark which is the pre-condition for the operation of all electrical equipment.

If electro-magnetic compatibility cannot be achieved by means of EMC compatible circuit design and/or metallic internal encapsulation, appropriate measures can be taken in respect of the enclosure. For the choice of an enclosure, this means that an electrical component with EMC can be used in any desired enclosure in 90% of cases without any further work or costs. To achieve shielding, there is no need to sacrifice the essential advantages of plastic enclosures:

- an attractive design
- considerable price savings
- much lighter and more variable

Shielding with plastic enclosures

Plastic enclosures can also be screened effectively without losing the advantages of plastic. Shielding is also achieved by adding a metal coating inside or outside the enclosure.

We prefer to use copper conductive lacquer for reasons of cost and time. In view of the regulations relating to the disposal of electrical scrap, these costs now have to be taken into consideration when calculations are made. Please note that we are unable to take back enclosures which have been specially coated at the customer's request. The aluminium vapour-blasting process is performed in high-vacuum plants. We use a coating of at least 2.5 µm as standard. However, greater thicknesses are possible at any time depending on the enclosure material.

The mechanical properties of the plastic are not altered by the vapourblasting, so no brittleness or tears will result. The new type of copperchrome-nickel coating (CU/Ni/Cr) gives the modular and fully-insulated enclosures an increased level of EMC protection. Coating masks are now available for most of our standard enclosures so that these can be screened at very low cost. In all cases where the procedures described above are not sufficient to provide shielding, the use of contact seals may increase the shielding efficiency. We can recommend or specify these special seals and then deliver them on the basis of customer-specific requirements as well as the type of enclosure used.

Another effective screening measure is to provide an inner metal cap for components, component groups or the entire electronics, if these parts are highly sensitive to radiation interference. This capping can also intensify the screening measures described above.

To complete EMC measures, for cable insertion we supply the appropriate plastic or metal cable glands with the possibility of connecting the cable screening to the enclosure earthing connection. If you require information on the damping values for various BOPLA enclosures with the appropriate screening, please ask for our specific EMC information.

Shielding in the case of aluminium enclosures

Under certain circumstances, the material used for aluminium enclosures may provide some EMC reduction. However, the joints (tongue and groove) need to be fitted with the appropriate conductive seals for optimal EMC applications. Please also note that the lacquer coatings must be bridged. This can be done with the appropriate conductive seals or by removing the lacquer coatings. The amount of work involved must be made clear when the requirements are specified. If necessary, we will give you the addresses of competent contact persons and institutes who will help you with EMC problems. They will carry out the necessary tests and measurements for you and can issue certificates.

IMPORTANT

All technical details are provided to the best of our knowledge but do not release the user from the obligation to test the suitability of these details in respect of the intended processes and purposes.

The customer bears the responsibility with regard to the suitability and use for the intended purpose of our products.

All liability on the part of Bopla Gehäuse Systeme GmbH in connection with technical information of any kind whatsoever is excluded. We reserve the right to optimise products, to change materials and to amend drawings.

Notes



BOPLA

A Phoenix Mecano Company

Sample service with mechanical processing!

Your personal contact:



Germany

Olaf Kleineberg

olaf.kleineberg@bopla.de

Mobil 0173 / 7276474

Worldwide

www.bopla.de/110

Now
request
online



Quick-Finder:
www.bopla.de/28



As enclosure specialists, our aim is to ensure that as early as the development phase, your valuable electronics, including all interfaces, display and operating elements, are secured in the enclosure in accordance with their function and as near to series production requirements as possible. This is why we support you with individual samples when you are selecting your enclosure.

- Free selection from all standard enclosures
- On request, also including mechanical processing according to your specifications
- You will soon receive your personal enclosure sample

www.bopla.de



PDF, DXF and 3D data
for all products are available on our websites.

HP U

54
53
52
51
50
49
48
47
46
45
44
43
42
41
40
39
38
37
36
35
34
33
32
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0



A Phoenix Mecano Company

Bopla Gehäuse Systeme GmbH
Borsigstraße 17-25 | D-32257 Bünde
Tel. +49 (0) 5223-969-0 | Fax +49 (0) 5223-969-100
info@bopla.de | www.bopla.de

cm

27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0