



A Phoenix Mecano Company

DIN rail enclosures

Combirail

Alurail

CombiNorm-Connect

CombiNorm-Compact

CombiNorm-Classic



BOPLA: Innovative, capable and reliable

For more than 40 years Bopla has been supporting customers in a wide range of electronic applications as a capable and valuable partner in all matters concerning enclosure systems, membrane keypads, touch screen and electronic services. BOPLA has become one of the leading companies in the enclosure industry with many years of experience supplying innovative and superior quality products, supported by our highly qualified staff, providing a reliable and excellent consulting service in our ability to deliver. As of today we have more than 30,000 satisfied customers from all industry sectors and 7,000,000 achieved

applications. In addition to our comprehensive standard range of enclosures made of plastic, aluminium and profiles, these are suitable for almost any area of application and market sector. Today the development of individual system solutions for our customers is included in our spectrum of capabilities. The possibilities are extremely varied.

- Individual forms of value-added processing (silk screen printing, engraving, etc.)
- Mechanical machining (milling, cutting, etc.)





- Assembly work (gluing, adding components, etc.)
- Soldering and connectorising work (wiring, etc.)
- Production of prototypes and first samples (vacuum casting, 3D printing, etc.)
- Device production (test work, reliability testing, etc.)
- Construction of special enclosures

The production of customer specific membrane keypads and touch screen that are designed on the basis of your requirements by our technical experts including the provision of electronic services (procurement, storage, assembly and soldering) to provide a custom solution. We are always happy to offer this “full service” package and can guarantee you full production capabilities from one source! As we are part of the internationally operating Phoenix Mecano group of companies, we can guarantee a worldwide supply to our customers with BOPLA products in the shortest possible time.

We invite you to: Test us, our products and our range of services!

This brochure will give you an insight into the world of our DIN rail enclosures. For obvious reasons it is not possible to illustrate the full scope of what we have available, as that constitutes more than 25,000 articles. For more information, “THE RED BOOK, Edition 4.1” shows the complete BOPLA product portfolio and is supplemented by technical information on our products and with explanations of our comprehensive range of services. We can help you to choose your enclosure by providing our website www.bopla.de, with CAD drawings in 2D, pdf and dxf formats for all the products in our extensive range. After you have registered online, you can also open and store 3D data in the stp format. This data makes your design work much easier, because when you have exact dimensions of your drawings, you can check directly whether your electronic components will fit in the enclosure you have chosen. It is well worth taking a look!

We look forward to seeing you!
The BOPLA team from Bünde



Combirail

Modular DIN rail enclosure made of polyamide UL 94 V0

- 3 basic sizes
- 3 standard lengths
- special lengths on request
- easy snap-on mounting
- 100°C temperature resistance
- potential earthing for DIN rail
- design-matching wall fitting



Colour	Profile: light grey, similar to RAL 7035; lateral elements: black, similar to RAL 9005; special colours on request
Enclosure material	Extruded profiles: polyamide PA-GF HT, UL 94 V0; lateral elements: polyamide PA, UL 94 V0; for details see Technical Information.

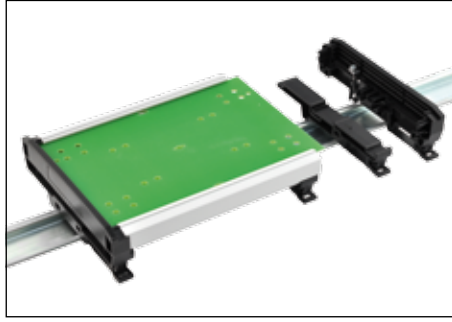
Made of halogen-free plastic, the enclosures are temperature-resistant up to 100 °C, suitable for high mechanical loads and they comply with UL 94 V0. Because the foot catches are integrated into the lateral elements, it is possible to mount them swiftly and conveniently on a rail complying with DIN EN 60715 TH 35.

The enclosure's low-contour geometry facilitates the assembly of flat electronics modules. The insertion of PCBs can be effected at three levels. Fitting to the edge of the PCB is possible by using the top level. In that process, the connectors remain freely accessible for wiring purposes. Further options available on request include hoods, front panels and lateral BUS cross connectors.





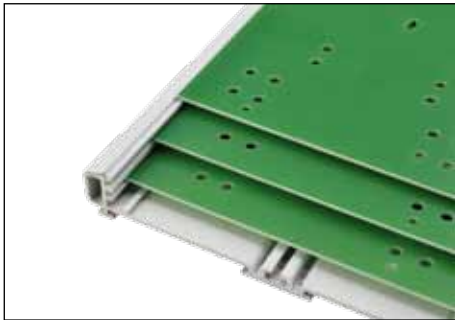
The lateral elements with integrated foot catch are snapped on to the enclosure profile, thus permitting a swift and inexpensive mounting procedure.



The optional foot elements increase mechanical stability in the case of longer profiles and/or high loads.



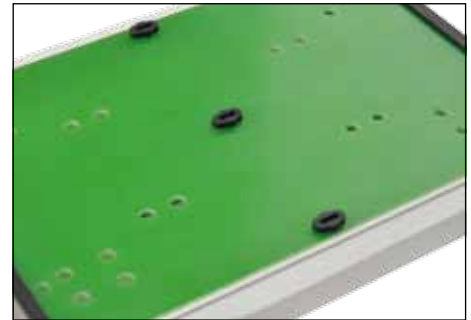
The PCB so inserted can – due to the potential ground contact (available under Accessories) – be conductively connected to the DIN rail. Additional PE terminal blocks and their wiring work are therefore no longer necessary. The potential ground contact is simply inserted into a special groove in the lateral element.



The guide grooves on three levels facilitate an optimal PCB positioning or an additional front panel mounting.



It is possible to mount the enclosures on to a wall directly using wall mounting flanges (see under Accessories).



Please note that on the PCB layout a margin of 3.1 mm must be kept free of insertions from the edges of the enclosure profile to the lateral elements. For the middle and bottom PCB levels, a space of 2.8 mm should also be kept free for the insert groove. As for the top PCB level situated on the profile, there are no limitations in that area.



Made of PC UL 94 V0, transparent hoods are individually available on request. Defined areas on the PCB thus receive optimal protection while any necessary free access to other areas also remains possible.



Hoods as part-covers for the PCB are also available on request.

To achieve the best-possible mounting results, the PCB must be consistently 16 mm longer than the profile. This means in effect that total enclosure length is PCB measurement plus 4 mm. The optional locking elements serve to fix the PCB in place and support it.

Combirail enclosure profiles

Basic profiles

Model	Order no.	A	B	C	b1	c1
CRP 72-100	67207100	32,45	88,5	84	72,5	101
CRP 72-160	67207160	32,45	88,5	144	72,5	161
CRP 72-220	67207220	32,45	88,5	204	72,5	221

Scope of delivery: Enclosure profile

Note: C = profile length. Special lengths, hoods, front and mounting panels on request. Lateral elements under Accessories.

Please mind the insertion surfaces.



Basic profiles

Model	Order no.	A	B	C	b1	c1
CRP 108-100	67210100	32,45	124	84	108	101
CRP 108-160	67210160	32,45	124	144	108	161
CRP 108-220	67210220	32,45	124	204	108	221

Scope of delivery: Enclosure profile

Note: C = profile length. Special lengths, hoods, front and mounting panels on request. Lateral elements under Accessories.

Please mind the insertion surfaces.



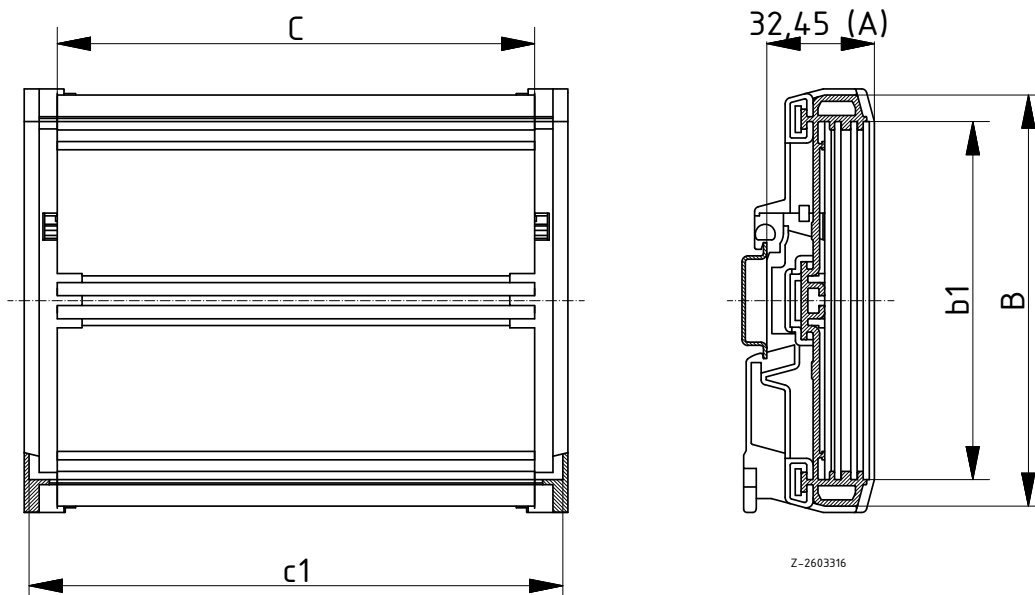
Basic profiles

Model	Order no.	A	B	C	b1	c1
CRP 122-100	67212100	32,45	138,5	84	122,5	101
CRP 122-160	67212160	32,45	138,5	144	122,5	161
CRP 122-220	67212220	32,45	138,5	204	122,5	221

Scope of delivery: Enclosure profile

Note: C = profile length. Special lengths, hoods, front and mounting panels on request. Lateral elements under Accessories.

Please mind the insertion surfaces.



Combirail accessories

Lateral elements



Model	Order no.	Note
CR 72-KS	67307100	For CRP 72
CR 108-KS	67310100	For CRP 108
CR 122-KS	67312100	For CRP 122

Scope of delivery: 2 lateral elements (right / left)

DIN rail foot elements

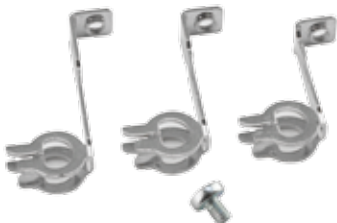


Model	Order no.	Note
CR 72-R	67307200	For CRP 72
CR 108-R	67310200	For CRP 108
CR 122-R	67312200	For CRP 122

Scope of delivery: 10 foot elements

Note: Depending on the application at hand, the longer basic profiles will require an additional foot element to ensure the best-possible grip on the DIN rail.

PE contact metals



Model	Order no.	Note
CR-EO	67300301	For top PCB level
CR-EM	67300302	For middle PCB level
CR-EU	67300303	For bottom PCB level

Scope of delivery: 20 contact metals, 20 fixing screws (head diameter of 6 mm)

Note: Mounting is effected by snapping into the lateral element. Contacting to the PCB is effected by means of the screw provided.

Combirail accessories

Locking elements for fixing the PCBs in place

Model	Order no.	Note
CR-LF1	67300401	For top PCB level, lateral
CR-LF2	67300402	For top PCB level, central
CR-LF3	67300403	For middle PCB level, central
CR-LF4	67300404	For bottom PCB level, central

Scope of delivery: LF 1: 100 pieces; LF 2-4: 50 pieces



Flange for direct wall mounting

Model	Order no.
CR-WL	67300405

Scope of delivery: 10 wall mounting flanges

Note: PE contact metals cannot be fitted if the wall mounting flanges are used.





Alurail

Modular DIN rail enclosure – aluminium profile technology

- 2 basic sizes
- 7 standard lengths
- Special lengths on request
- Variable positioning of the modules
- Can be used as single-PCB enclosure
- Design-matching wall fitting
- Earthing set as accessory



Colour	Profile, natural-coloured anodised aluminium; profile caps light grey, similar to RAL 7035; special colours on request
Protection class	Depending on enclosure design, up to IP 40 / DIN EN 60529
Enclosure material	Extruded profiles: Al Mg Si 0.5, anodised; profile caps: polyamide 6.6 FR; for details see Technical Information

All plastic parts are made of flame-resistant material (UL 94 V0).

By using the special snap-lock element, the basic profiles can easily be mounted on a DIN rail acc. to DIN EN 60715 TH 35. For wall mounting, use the wall fitting (available as an accessory).

All basic and module profiles have grooves at various heights to hold circuit boards or mounting panels. Basic profile ARP 105/31 is designed especially for use with Euro card format PCBs. Aluminium front panels are available as accessories. Special designs, e.g. using crystal-clear material, are available on request.

When used in combination with the basic profiles, the module profiles which can be fitted in different ways (grid 15 mm) allow individual enclosure configurations. On request we can supply special module bridges for non-continuous module profiles.



Alurail 75/31 enclosure profiles



Basic profiles, one-piece

Model	Order no.	A	B	C
ARP 75/31-52,5	87010525	25,5	75	42,5
ARP 75/31-70	87010700	25,5	75	60
ARP 75/31-105	87011050	25,5	75	95
ARP 75/31-140	87011400	25,5	75	130
ARP 75/31-175	87011750	25,5	75	165
ARP 75/31-210	87012100	25,5	75	200
ARP 75/31-245	87012450	25,5	75	235
ARP 75/31-1000	87010000	25,5	75	990

Scope of delivery: Enclosure profile

Note: C = profile length; special lengths on request.
Front panels and profile caps as accessories.

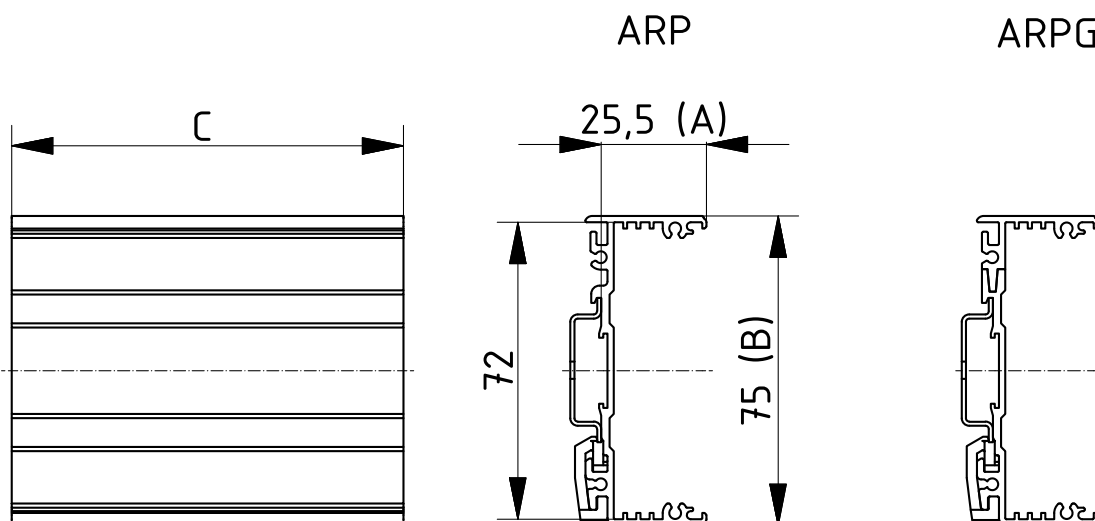


Basic profiles, divided

Model	Order no.	A	B	C
ARPG 75/31-52,5	87030525	25,5	75	42,5
ARPG 75/31-70	87030700	25,5	75	60
ARPG 75/31-105	87031050	25,5	75	95
ARPG 75/31-140	87031400	25,5	75	130
ARPG 75/31-175	87031750	25,5	75	165
ARPG 75/31-210	87032100	25,5	75	200
ARPG 75/31-245	87032450	25,5	75	235
ARPG 75/31-1000	87030000	25,5	75	990

Scope of delivery: Enclosure profile, 2 parts

Note: C = profile length; special lengths on request.
Front panels and profile caps as accessories.



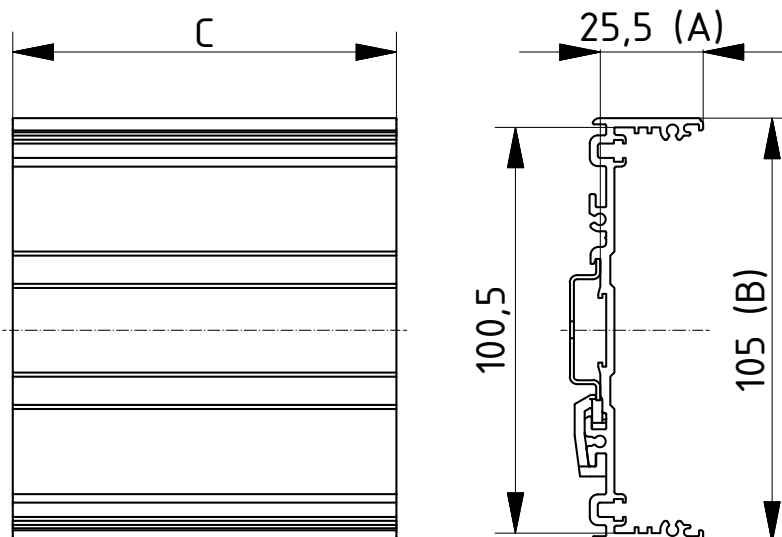
Alurail 105/31 enclosure profiles

Basic profiles, one-piece

Model	Order no.	A	B	C
ARP 105/31-52,5	87020525	25,5	105	42,5
ARP 105/31-70	87020700	25,5	105	60
ARP 105/31-105	87021050	25,5	105	95
ARP 105/31-140	87021400	25,5	105	130
ARP 105/31-175	87021750	25,5	105	165
ARP 105/31-210	87022100	25,5	105 </td <td>200</td>	200
ARP 105/31-245	87022450	25,5	105	235
ARP 105/31-1000	87020000	25,5	105	990

Scope of delivery: Enclosure profile

Note: C = profile length; special lengths on request.
Front panels and profile caps as accessories.



Z-2603259

Alurail module profiles for mounting on the basic profiles

Module profile, one-piece



Model	Order no.	A	B	C
ARPM 45/27-35	87100350	28,1	45	25
ARPM 45/27-52,5	87100525	28,1	45	42,5
ARPM 45/27-70	87100700	28,1	45	60
ARPM 45/27-105	87101050	28,1	45	95
ARPM 45/27-140	87101400	28,1	45	130
ARPM 45/27-175	87101750	28,1	45	165
ARPM 45/27-210	87102100	28,1	45	200
ARPM 45/27-245	87102450	28,1	45	235
ARPM 45/27-1000	87100000	28,1	45	990

Scope of delivery: Module profile

Note: C = profile length; special lengths and module bridges for partial module mounting on request. Module caps as accessories.

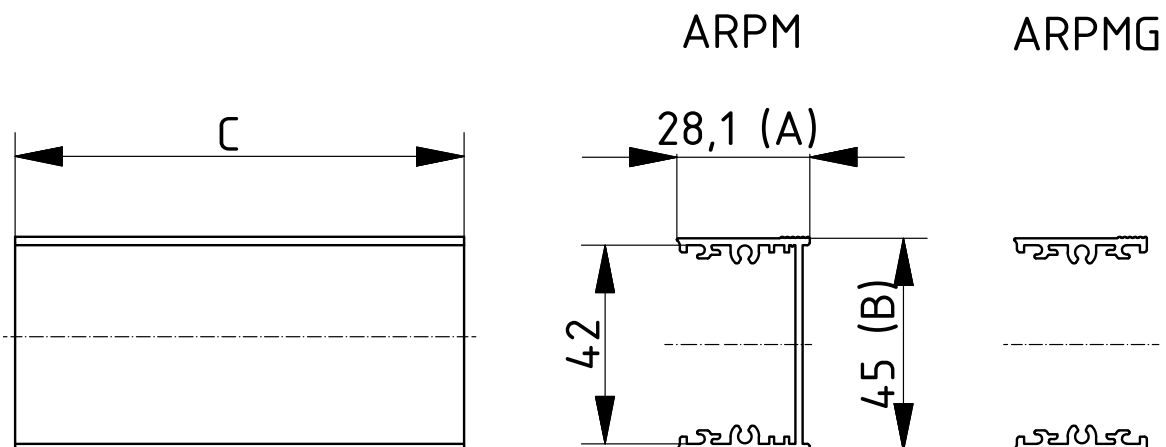
Module profile, divided



Model	Order no.	A	B	C
ARPMG 00/27-35	87120350	28,1	45	25
ARPMG 00/27-52,5	87120525	28,1	45	42,5
ARPMG 00/27-70	87120700	28,1	45	60
ARPMG 00/27-105	87121050	28,1	45	95
ARPMG 00/27-140	87121400	28,1	45	130
ARPMG 00/27-175	87121750	28,1	45	165
ARPMG 00/27-210	87122100	28,1	45	200
ARPMG 00/27-245	87122450	28,1	45	235
ARPMG 00/27-1000	87120000	28,1	45	990

Scope of delivery: Module profile, 2 parts

Note: C = profile length; special lengths and module bridges for partial module mounting on request. Module caps and front panels as accessories.



Alurail module profiles

for mounting on the basic profiles

Module profile, one-piece

Model	Order no.	A	B	C
ARPM 75/42-35	87110350	43,1	75	25
ARPM 75/42-52,5	87110525	43,1	75	42,5
ARPM 75/42-70	87110700	43,1	75	60
ARPM 75/42-105	87111050	43,1	75	95
ARPM 75/42-140	87111400	43,1	75	130
ARPM 75/42-175	87111750	43,1	75	165
ARPM 75/42-210	87112100	43,1	75	200
ARPM 75/42-245	87112450	43,1	75	235
ARPM 75/42-1000	87110000	43,1	75	990

Scope of delivery: Module profile

Note: C = profile length; special lengths and module bridges for partial module mounting on request.
Module caps and front panels as accessories.

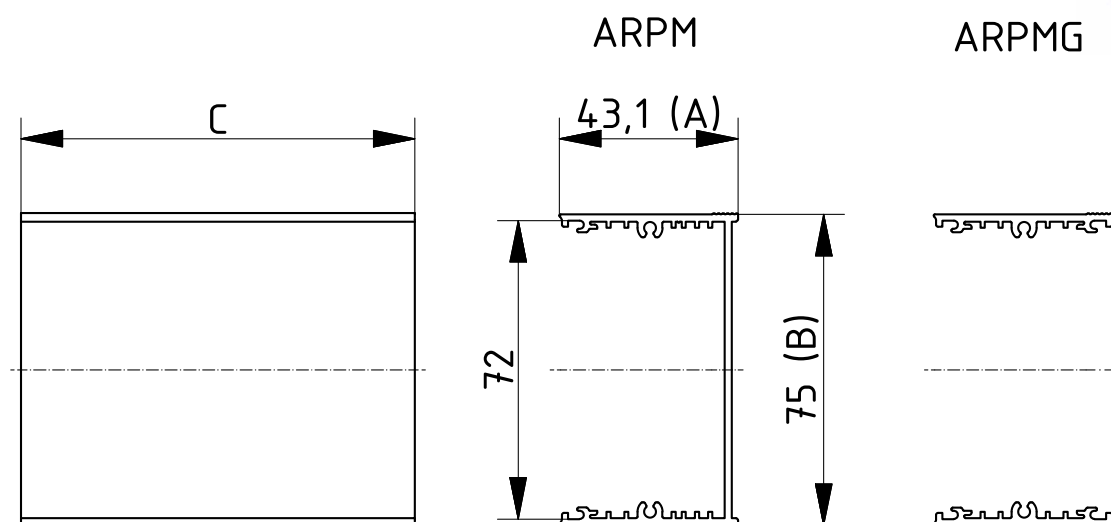


Module profile, divided

Model	Order no.	A	B	C
ARPMG 00/42-35	87130350	43,1	75	25
ARPMG 00/42-52,5	87130525	43,1	75	42,5
ARPMG 00/42-70	87130700	43,1	75	60
ARPMG 00/42-105	87131050	43,1	75	95
ARPMG 00/42-140	87131400	43,1	75	130
ARPMG 00/42-175	87131750	43,1	75	165
ARPMG 00/42-210	87132100	43,1	75	200
ARPMG 00/42-245	87132450	43,1	75	235
ARPMG 00/42-1000	87130000	43,1	75	990

Scope of delivery: Module profile, 2 parts

Note: C = profile length; special lengths and module bridges for partial module mounting on request.
Module caps and front panels as accessories.



Alurail accessories

Basic profile caps with drill holes for fixing the module



Model	Order no.	Note
AR 75/31-KS 1	87301100	For ARP(G) 75
AR 105/31-KS 1	87301200	For ARP 105

Scope of delivery: 2 basic profile caps, 4 fixing screws, 1 snap-on element, 1 positioning screw for snap-on element

Note: Special colours on request.

Basic profile caps without drill holes



Model	Order no.	Note
AR 75/31-KS 2	87302100	For ARP(G) 75
AR 105/31-KS 2	87302200	For ARP 105

Scope of delivery: 2 basic profile caps, 4 fixing screws, 1 snap-on element, 1 positioning screw for snap-on element

Note: Special colours on request.

Side panels for basic profile, natural-coloured anodised aluminium



Model	Order no.	Note
AR 75-KS-AL	87304100	For ARP(G) 75/31-...
AR 75/45-KS-AL	87304200	For ARP(G) 75/31-... + ARPM(G) 45/27-...
AR 75/75-KS-AL	87304300	For ARP(G) 75/31-... + ARPM(G) 75/42-...
AR 105-KS-AL	87304110	For ARP 105/31-...
AR 105/45-KS-AL	87304210	For ARP 105/31-... + ARPM(G) 45/27-...
AR 105/75-KS-AL	87304310	For ARP 105/31-... + ARPM(G) 75/42-...

Scope of delivery: 2 side panels, 4 fixing screws, 1 snap-on element, 1 positioning screw for snap-on element

Note: Can be used as an alternative to the profile/module caps. This permits an especially narrow construction for the units. Special designs for off-centre arrangement of the module profiles on request.

Alurail accessories

Module profile caps

Model	Order no.	Note
ARM 45/27	87303100	For ARPM(G) 45
ARM 75/42	87303200	For ARPM(G) 75

Scope of delivery: 2 module profile caps, 4 fixing screws, 2 mounting screws

Note: Special colours on request.



Front panels for basic profiles, natural-coloured anodised aluminium

Model	Order no.	Note
AR 75-52,5 FP	87400525	For ARP(G) 75/31-52,5
AR 75-70 FP	87400700	For ARP(G) 75/31-70
AR 75-105 FP	87401050	For ARP(G) 75/31-105
AR 75-140 FP	87401400	For ARP(G) 75/31-140
AR 75-175 FP	87401750	For ARP(G) 75/31-175
AR 75-210 FP	87402100	For ARP(G) 75/31-210
AR 75-245 FP	87402450	For ARP(G) 75/31-245
AR 75-1000 FP	87400000	For ARP(G) 75/31-1000
AR 105-52,5 FP	87410525	For ARP(G) 105/31-52,5
AR 105-70 FP	87410700	For ARP(G) 105/31-70
AR 105-105 FP	87411050	For ARP(G) 105/31-105
AR 105-140 FP	87411400	For ARP(G) 105/31-140
AR 105-175 FP	87411750	For ARP(G) 105/31-175
AR 105-210 FP	87412100	For ARP(G) 105/31-210
AR 105-245 FP	87412450	For ARP(G) 105/31-245
AR 105-1000 FP	87410000	For ARP(G) 105/31-1000

Scope of delivery: 1 front panel



Alurail accessories



Front panels for module profiles, natural-coloured anodised aluminium

Model	Order no.	Note
ARM 45-35 FP	87420350	For ARPM(G) 45(00)/27-35
ARM 45-52,5 FP	87420525	For ARPM(G) 45(00)/27-52,5
ARM 45-70 FP	87420700	For ARPM(G) 45(00)/27-70
ARM 45-105 FP	87421050	For ARPM(G) 45(00)/27-105
ARM 45-140FP	87421400	For ARPM(G) 45(00)/27-140
ARM 45-175 FP	87421750	For ARPM(G) 45(00)/27-175
ARM 45-210 FP	87422100	For ARPM(G) 45(00)/27-210
ARM 45-245 FP	87422450	For ARPM(G) 45(00)/27-245
ARM 45-1000 FP	87420000	For ARPM(G) 45(00)/27-1000
ARM 75-35 FP	87430350	For ARPM(G) 75(00)/42-35
ARM 75-52,5 FP	87430525	For ARPM(G) 75(00)/42-52,5
ARM 75-70 FP	87430700	For ARPM(G) 75(00)/42-70
ARM 75-105 FP	87431050	For ARPM(G) 75(00)/42-105
ARM 75-140 FP	87431400	For ARPM(G) 75(00)/42-140
ARM 75-175 FP	87431750	For ARPM(G) 75(00)/42-175
ARM 75-210 FP	87432100	For ARPM(G) 75(00)/42-210
ARM 75-245 FP	87432450	For ARPM(G) 75(00)/42-245
ARM 75-1000 FP	87430000	For ARPM(G) 75(00)/42-1000

Scope of delivery: 1 front panel



Wall fitting for the basic profile

Model	Order no.	Note
AR 52,5 WB	87310525	For ARP...-52,5
AR 70 WB	87310700	For ARP...-70
AR 105 WB	87311050	For ARP...-105
AR 140 WB	87311400	For ARP...-140
AR 175 WB	87311750	For ARP...-175
AR 210 WB	87312100	For ARP...-210
AR 245 WB	87312450	For ARP...-245

Scope of delivery: 2 wall fixing elements, 1 DIN rail

Note: The DIN rail length is identical to that of the relevant basic profile length of ARP 75 / ARP 105.

Alurail accessories

Earthing set for basic profiles

Model	Order no.
AR-E	87309010

Scope of delivery: 5 earthing claws

Note: The earthing claw is pressed into the basic profile during assembly and breaks through the anodised layer, so ensuring proper contacting. The use of commercially available cable lugs for flat connectors acc. to DIN 46244-A6.3-0.8 permits earthing of the enclosure parts or the fitted components.



Snap-on element for basic profiles, suitable for DIN rails acc. to DIN EN 60715 TH 35

Model	Order no.
AR-R	87309020

Scope of delivery: 5 snap-on elements, 5 positioning screws

Note: Depending on the application, an additional snap-on element may be necessary with longer profiles to ensure optimal support on the DIN rail.





CombiNorm-Connect

Modular assembly design,
DIN rail bus connectors and
a choice of terminal blocks
make this program stand out
from the rest.

- 7 widths
- minimal design width with a maximum number of poles
- optimal proportional relationship between PCB surface area and enclosure size
- standard scope of delivery includes front panels and transparent hoods
- DIN rail bus connectors with gold-plated contacts
- spring-cage terminal blocks
- screw connection terminal blocks, fixed and pluggable into one another



Colour	Light grey, similar to RAL 7035; special colours on request
Protection class	IP 20/DIN EN 60529
Enclosure material	Polyamide, UL 94 V0; for details see Technical Information

The enclosures are designed to be mounted on rails complying with DIN EN 60715 TH 35 for widths of 12.5, 17.5, 22.5, 35, 45, 67.5 and 90 mm. The 12.5 mm version comes with the foot catch premounted. From the 35 mm width upward, the enclosures can be broadened by mounting intermediate elements (scope of delivery). The result is then two, three or four PCB levels.

All enclosures can be delivered with or without air vents.

Signal and supply voltages can be looped through by means of the DIN rail bus connector. In doing so, various modules can be removed without having to interrupt the bus connections.

Depending on the number and layout of the terminal points there can be one, two or three terminal levels in an enclosure. Please see the photos and drawings for more detail.

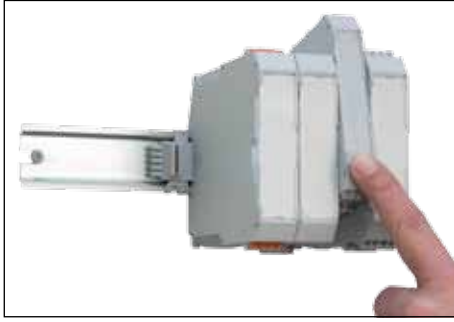
Possible terminal insertion for the enclosures:

Model	Maximum insertion with terminals	PCB levels	connection levels
CNT 12	6 x 2-pole	1	3
CNT 17	6 x 3-pole	1	1,2,3
CNT 22	6 x 4-pole	1	1,2,3
CNT 35	12 x 3-pole	2	1,2,3
CNT 45	12 x 4-pole	2	1,2,3
CNT 67	3 x 4-pole	3	1
CNT 90	4 x 4-pole	4	1

Matching terminal blocks under Accessories.

Any terminal points not required can be sealed by filler plugs.

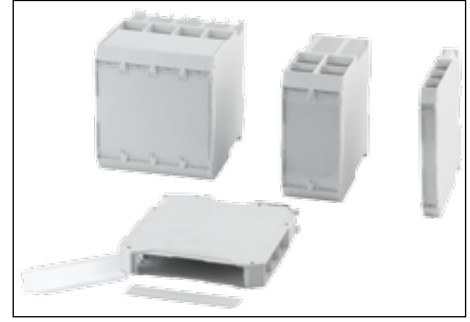




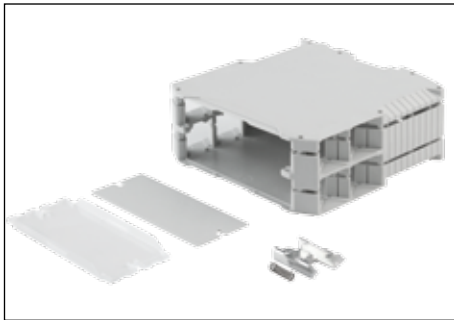
The enclosures can be snapped on to a rail with or without the DIN rail bus connector. The bus connector is also used to loop the signal and supply voltages through on the rear side. This means that individual modules can be removed without interrupting the connection to other units. The bus connectors are simply snapped on to the DIN rail and plugged together. The gold-plated contacts ensure that the quality of contact is high.



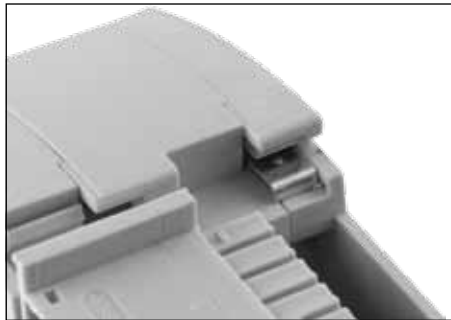
Spring-cage and screw-type terminals can be used for wiring purposes. The screw-type terminals are available in the single section or double section (plug-in) design. The terminals are fitted by means of soldering. In this way, inserting the entire board into the enclosure is a straightforward procedure. Any terminal points not required can be sealed by filler plugs (available in the Accessories range).



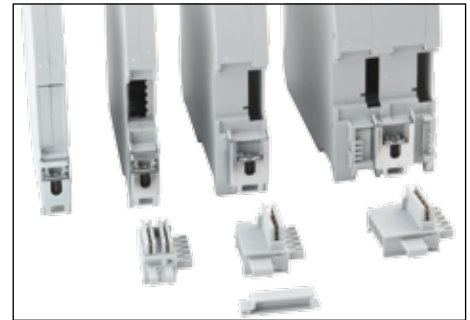
The front surfaces, which are designed to an optimally large size, provide plenty of space of display or service elements and are protected by a hinged transparent hood. The separate front panels are easy to handle and to print on.



The enclosure elements are snapped into one another, the foot catch is mounted and front panel inserted. The transparent hood can then be clipped in.



Optional is a functional earth ground contact for use with the conductive connection between PCB and DIN rail.



All the CNT...TB enclosures have one or more openings at the rear for DIN rail bus connectors.

Suitable are:

CNT-BV 12.. for CNT 12 TB

CNT-BV 17.. for CNT 17 and 35 TB

CNT-BV 22.. for CNT 22, 45, 67 and 90 TB

If necessary, the openings upward of Width 17 can be sealed by means of BLTB filler plugs. Width 12 can be delivered already sealed as standard.

CombiNorm-Connect

Enclosure with one connection level on one side

Model	Order no.	A	B	C	a1	a2	Note
CNT 17/1-3 TB-L	67617131	17,5	99	114,5	11		1 x 3-pole
CNT 17/1-3 TB	67617132	17,5	99	114,5	11		1 x 3-pole
CNT 22/1-4 TB-L	67622141	22,5	99	114,5	16		1 x 4-pole
CNT 22/1-4 TB	67622142	22,5	99	114,5	16		1 x 4-pole
CNT 35/1-2-3 TB-L	67635121	35	99	114,5	11	16	2 x 3-pole
CNT 35/1-2-3 TB	67635122	35	99	114,5	11	16	2 x 3-pole
CNT 45/1-2-4 TB-L	67635123	45	99	114,5	16	21	2 x 4-pole
CNT 45/1-2-4 TB	67635124	45	99	114,5	16	21	2 x 4-pole
CNT 67/1-3-4 TB-L	67667131	67,5	99	114,5	16	21	3 x 4-pole
CNT 67/1-3-4 TB	67667132	67,5	99	114,5	16	21	3 x 4-pole
CNT 90/1-4-4 TB-L	67690141	90	99	114,5	16	21	4 x 4-pole
CNT 90/1-4-4 TB	67690142	90	99	114,5	16	21	4 x 4-pole

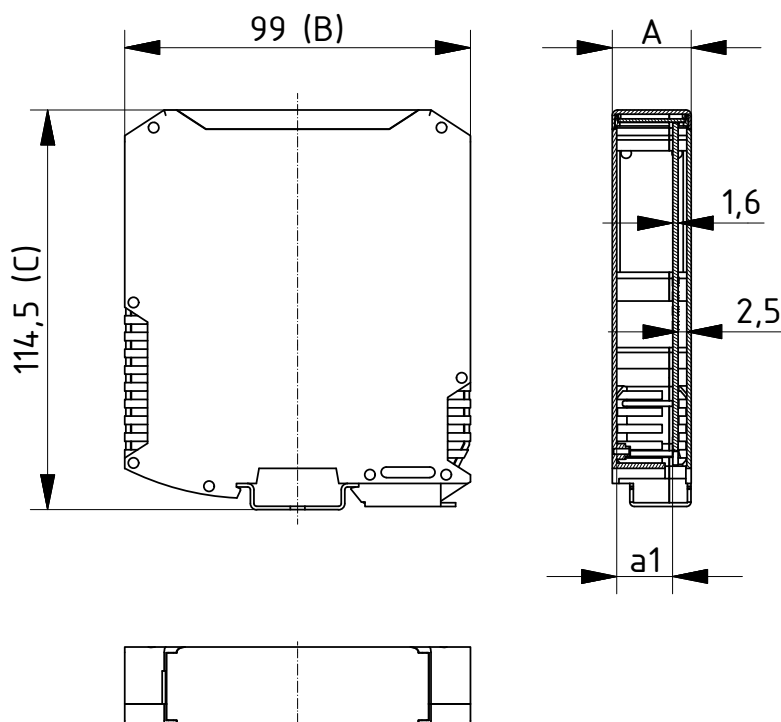


Scope of delivery: Enclosure, front panel, 2 side panels, transparent hood, foot catch, spring

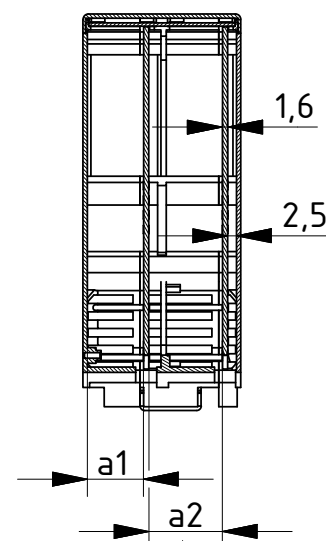
Note: TB = with rear-side opening for DIN rail bus connector; L = with air vents

Accessories: See following pages.

CNT 17/22



CNT 35/45/67/90



CNT 35/45 1xa2
 CNT 67 2xa2
 CNT 90 3xa2

CombiNorm-Connect



Enclosure with two connection levels on both sides

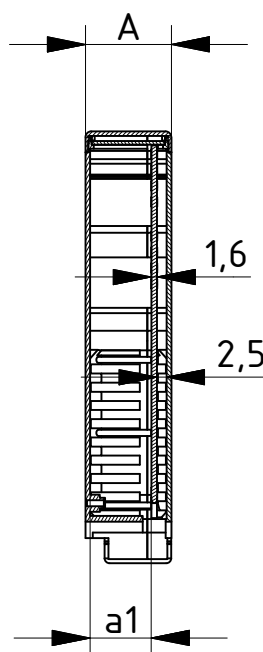
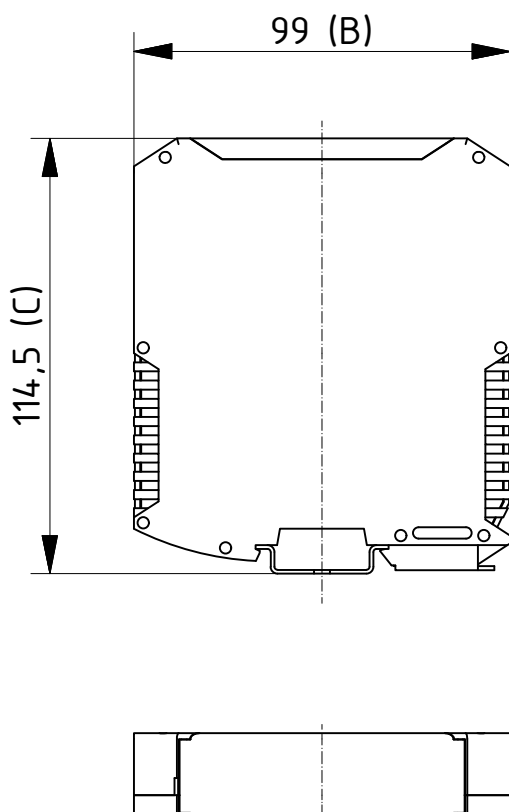
Model	Order no.	A	B	C	a1	a2	Note
CNT 17/4-3 TB-L	67617431	17,5	99	114,5	11		4 x 3-pole
CNT 17/4-3 TB	67617432	17,5	99	114,5	11		4 x 3-pole
CNT 22/4-4 TB-L	67622441	22,5	99	114,5	16		4 x 4-pole
CNT 22/4-4 TB	67622442	22,5	99	114,5	16		4 x 4-pole
CNT 35/4-2-3 TB-L	67635421	35	99	114,5	11	16	8 x 3-pole
CNT 35/4-2-3 TB	67635422	35	99	114,5	11	16	8 x 3-pole
CNT 45/4-2-4 TB-L	67635423	45	99	114,5	16	21	8 x 4-pole
CNT 45/4-2-4 TB	67635424	45	99	114,5	16	21	8 x 4-pole

Scope of delivery: Enclosure, front panel, transparent hood, foot catch, spring

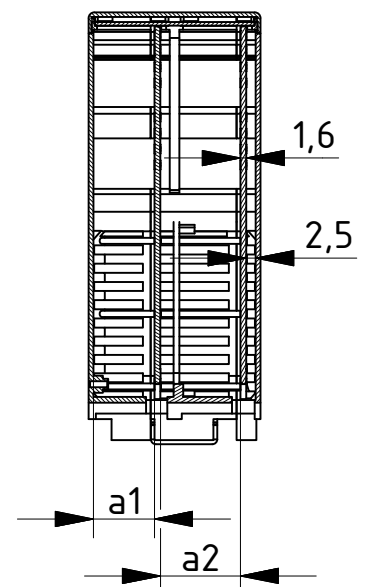
Note: TB = with rear-side opening for DIN rail bus connector; L = with air vents

Accessories: See following pages.

CNT 17/22



CNT 35/45



CombiNorm-Connect

Enclosure with three connection levels on both sides

Model	Order no.	A	B	C	a1	a2	Note
CNT 12/6-2 TB-L	67612621	12,5	99	114,5	6,1		6 x 2-pole
CNT 12/6-2 TB	67612622	12,5	99	114,5	6,1		6 x 2-pole
CNT 12/6-2-L	67612623	12,5	99	114,5	6,1		6 x 2-pole
CNT 12/6-2	67612624	12,5	99	114,5	6,1		6 x 2-pole
CNT 17/6-3 TB-L	67617631	17,5	99	114,5	11		6 x 3-pole
CNT 17/6-3 TB	67617632	17,5	99	114,5	11		6 x 3-pole
CNT 22/6-4 TB-L	67622641	22,5	99	114,5	16		6 x 4-pole
CNT 22/6-4 TB	67622642	22,5	99	114,5	16		6 x 4-pole
CNT 35/6-2-3 TB-L	67635621	35	99	114,5	11	16	12 x 3-pole
CNT 35/6-2-3 TB	67635622	35	99	114,5	11	16	12 x 3-pole
CNT 45/6-2-4 TB-L	67635623	45	99	114,5	16	21	12 x 4-pole
CNT 45/6-2-4 TB	67635624	45	99	114,5	16	21	12 x 4-pole

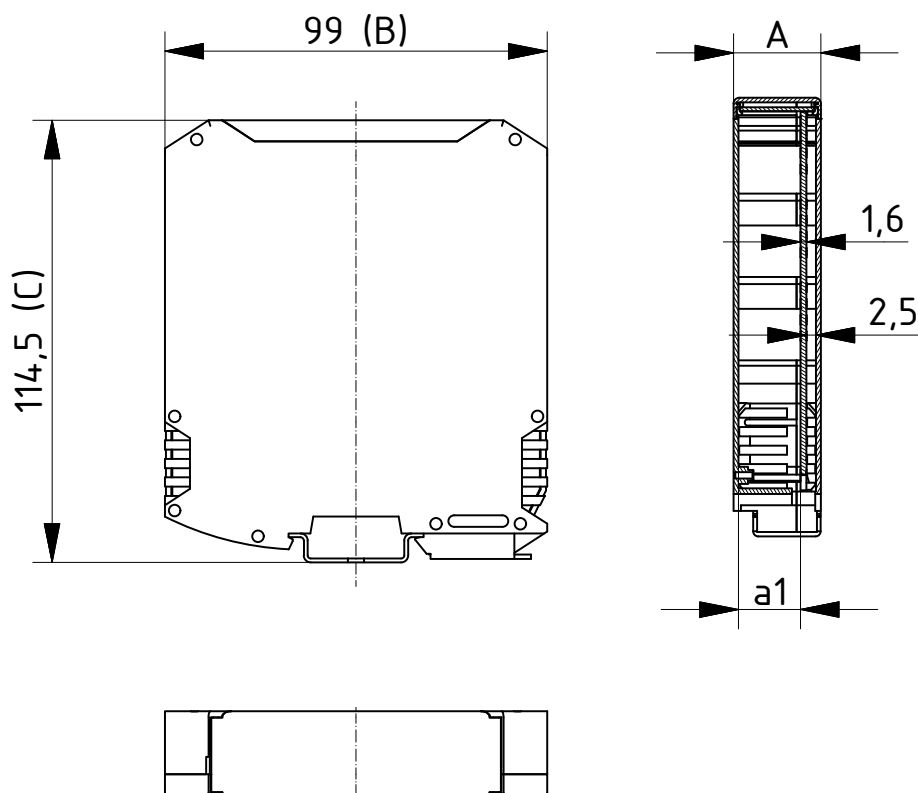


Scope of delivery: Enclosure, front panel, transparent hood, foot catch, spring. Versions upward of CNT 12... come with foot catch and spring premounted.

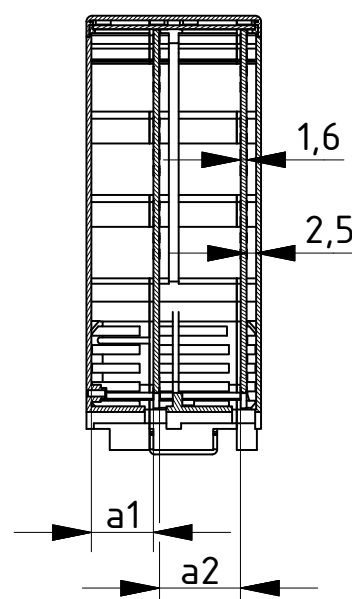
Note: TB = with rear-side opening for DIN rail bus connector; L = with air vents

Accessories: See following pages.

CNT 12/17/22



CNT 35/45



CombiNorm-Connect accessories



Filler plug

Model	Order no.	Note
CNT-BL 12	67713012	For terminal points 2-pole, 5 mm pitch
CNT-BL 17	67713017	For terminal points 3-pole, 5 mm pitch
CNT-BL 22	67713022	For terminal points 4-pole, 5 mm pitch
CNT-BLTB 17/22	67713023	For the bus connector opening upward of CNT 17 TB

Scope of delivery: 10 filler plugs

Note: For application options, please see the intro pages.



Bus connector / pin strip for bus connector

Model	Order no.	Note
CNT-STL	67710000	Pin strip, 5-pole, for CNT-BV 12/2-5, to solder into the PCB
CNT-BV 12/2-5	67711225	5-pole, for CNT 12
CNT-BV 17/1-5	67711715	5-pole, for CNT 17 and 35
CNT-BV 22/1-5	67712215	5-pole, for CNT 22, 45, 67 and 90

Scope of delivery: 10 pieces

Note: The DIN rail bus connector may only be activated if power has been disconnected. If, for operational reasons, it is necessary to switch on low power, then empirical values can be provided on request.

Connection data CNT-BV: I = 8 A; U = 125 V



Functional earth ground contact

Model	Order no.
CNT-E	67712300

Scope of delivery: 10 contacts

Note: For contacting the PCB to the earthed DIN rail.

CombiNorm-Connect terminal blocks

Screw connection terminal blocks, single section, 5 mm pitch, for wave soldering processes

Model	Order no.	Note
SPK 2-L	67720021	2-pole, soldering pins on the left
SPK 2-R	67720022	2-pole, soldering pins on the right
SPK 3-L	67720031	3-pole, soldering pins on the left
SPK 3-R	67720032	3-pole, soldering pins on the right
SPK 4-L	67720041	4-pole, soldering pins on the left
SPK 4-R	67720042	4-pole, soldering pins on the right

Scope of delivery: 50 terminal blocks

Note:

Technical data acc. to IEC / DIN VDE

Connection capacity:

Single-wire (rigid): 0.14 – 2.5 mm²

Fine-strand (flexible): 0.14 – 2.5 mm²

AWG: 26-14

Fine-strand with ferrule, without plastic sleeve: 0.25 – 2.5 mm²

Fine-strand with ferrule, with plastic sleeve: 0.25 – 2.5 mm²

Multi-conductor connection capacity (two conductors with the same cross-section):

Single-wire (rigid): 0.14 – 0.75 mm²

Fine-strand (flexible): 0.14 – 0.75 mm²

Fine-strand with ferrule, without plastic sleeve: 0.25 – 0.75 mm²

Fine-strand with TWIN ferrule, with plastic sleeve: 0.5 – 1.5 mm²

Rated current / conductor cross-section: 24 A / 2.5

Rated insulation voltage at pollution level 2: 400 V

Rated insulation voltage / rated impulse voltage: 250V/4KV overvoltage category III / pollution level 3
400V/4KV overvoltage category III / pollution level 2
630V/4KV overvoltage category II / pollution level 2

Approval data (UL / CUL)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		20A	-	10A
Connection capacity (AWG):		30-12	-	30-12

Approval data (CSA)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		10A	-	10A
Connection capacity (AWG):		28-12	-	28-12

Dimensions: Pitch: 5.0 mm
Drill hole Ø / pin dimensions: 1.4 mm / 0.8 x 1.0 mm
Wire stripping length: 7 mm
Screw size: M3
Tightening torque: 0.5-0.6 Nm

Colour: Light grey, similar to RAL 7035

Materials: Insulating material type / insulating material group: PA/I: PA/I
Inflammability class: UL 94 V0



CombiNorm-Connect terminal blocks



Screw connection terminal blocks, double section, 5 mm pitch, for wave soldering processes

Model	Order no.	Note
STL 2-L	67730021	Pin strip, 2-pole, soldering pins on the left
STL 2-R	67730022	Pin strip, 2-pole, soldering pins on the right
STL 3-L	67730031	Pin strip, 3-pole, soldering pins on the left
STL 3-R	67730032	Pin strip, 3-pole, soldering pins on the right
STL 4-L	67730041	Pin strip, 4-pole, soldering pins on the left
STL 4-R	67730042	Pin strip, 4-pole, soldering pins on the right
SHRST 2	67730050	Screw connector, 2-pole
SHRST 3	67730060	Screw connector, 3-pole
SHRST 4	67730070	Screw connector, 4-pole

Scope of delivery: 50 items; can be delivered strapped on request

Note:

According to DIN EN 61984, CNT connectors are connectors without breaking capacity.

When used according to regulations, they may not be connected or disconnected when live or if power is switched on.

Only pin strip and screw plugs with the same number of poles may only be combined.

Technical data acc. to IEC / DIN VDE for STL:

Rated current / conductor cross-section: 12A / -

Rated insulation voltage at pollution level 2: 320 V

Rated insulation voltage / rated impulse voltage: 250V/4KV overvoltage category III / pollution level 3

320V/4KV overvoltage category III / pollution level 2

400V/4KV overvoltage category II / pollution level 2

Approval data (UL / CUL)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		12A	-	10A
Connection capacity (AWG):		-	-	-

Approval data (CSA)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		10A	-	10A
Connection capacity (AWG):		-	-	-

Dimensions: Pitch: 5.0 mm
Drill hole Ø / pin dimensions: 1.4 mm / 1 x 1

Colour: Light grey, similar to RAL 7035

Materials: High-temperature resistant polyamide for use with unleaded soldering processes
Insulating material type / insulating material group: PA/I
Inflammability class: UL 94 V0

CombiNorm-Connect terminal blocks

Note:

Technical data acc. to IEC / DIN VDE for SHRST

Connection capacity:

Single-wire (rigid):	0.2 – 2.5 mm ²
Fine-strand (flexible):	0.2 – 2.5 mm ²
AWG:	24-12
Fine-strand with ferrule, without plastic sleeve:	0.25 – 2.5 mm ²
Fine-strand with TWIN ferrule, with plastic sleeve:	0.25 – 2.5 mm ²

Multi-conductor connection capacity (two conductors with the same cross-section):

Single-wire (rigid):	0.2 – 1 mm ²
Fine-strand (flexible):	0.2 – 1.5 mm ²
Fine-strand with ferrule, without plastic sleeve:	0.25 – 1 mm ²
Fine-strand with TWIN ferrule, with plastic sleeve:	0.5 – 1.5 mm ²

Rated current / conductor cross-section:	12 A / 2.5 mm ²
Rated insulation voltage at pollution level 2:	320 V
Rated insulation voltage / rated impulse voltage:	250V/4KV overvoltage category III / pollution level 3 320V/4KV overvoltage category III / pollution level 2 630V/4KV overvoltage category II / pollution level 2

Approval data (UL / CUL)	Use Group:	B	C	D
Rated voltage:		250V	-	300V
Rated current:		12A	-	10A
Connection capacity (AWG):		30-12	-	30-12

Approval data (CSA)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		10A	-	10A
Connection capacity (AWG):		28-12	-	28-12

Dimensions:	Pitch: 5.0 mm
	Wire stripping length: 7 mm
	Screw size: M3
	Tightening torque: 0.5-0.6 Nm

Colour:	Light grey, similar to RAL 7035
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Materials:	Insulating material type / insulating material group: PA/I Inflammability class: UL 94 V0
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CombiNorm-Connect terminal blocks

Spring-cage terminal blocks, single section, 5 mm pitch, for wave soldering processes

Model	Order no.	Note
FPK 2-L	67740021	2-pole, soldering pins on the left
FPK 2-R	67740022	2-pole, soldering pins on the right
FPK 3-L	67740031	3-pole, soldering pins on the left
FPK 3-R	67740032	3-pole, soldering pins on the right
FPK 4-L	67740041	4-pole, soldering pins on the left
FPK 4-R	67740042	4-pole, soldering pins on the right

Scope of delivery: 50 pieces

Note:

Technical data acc. to IEC / DIN VDE

Connection capacity:

Single-wire (rigid): 0.2 – 2.5 mm²

Fine-strand (flexible): 0.2 – 2.5 mm²

AWG 24-14

Fine-strand with ferrule, without plastic sleeve: 0.25 – 2.5 mm²

Fine-strand with ferrule, with plastic sleeve: 0.25 – 2.5 mm²

Rated current / conductor cross-section: 22 A / 2.5 mm²

Rated insulation voltage at pollution level 2: 250 V

Rated insulation voltage / rated impulse voltage: 250V/4KV overvoltage category III / pollution level 3

250V/4KV overvoltage category III / pollution level 2

250V/4KV overvoltage category II / pollution level 2

Approval data (UL / CUL)	Use Group:	B	C	D
Rated voltage:		300V	-	300V
Rated current:		10A	-	10A
Connection capacity (AWG):		24-14	-	24-14

Approval data (CSA)	Use Group:	B	C	D
Rated voltage:		-	-	-
Rated current:		-	-	-
Connection capacity (AWG):		-	-	-

Dimensions:

Pitch: 5.0 mm

Wire stripping length: 10 mm

Drill hole Ø / pin dimensions: 1.4 mm / 0.8 x 1.0 mm

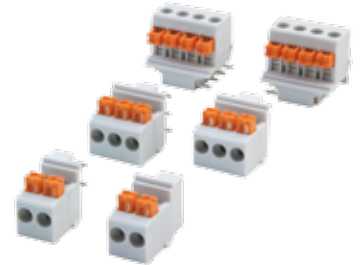
Colour:

Light grey, similar to RAL 7035

Materials:

Insulating material type / insulating material group: PA/I

Inflammability class: UL 94 V0



Application example

of our comprehensive range of services for CombiNorm.



Decor foils:

Design and manufacture of customer-specific front membranes
Coordinated enclosure and front membrane design

Printing choice:

Screen or pad printing

Mechanical processing:

Milling, drilling, countersinking
Ultrasonic welding of individual mounting points

Mounting work:

Front membranes are glued on

This is only a small selection of our comprehensive range of services, with which we manufacture individual products of excellent quality.

You will find further information about our products in the introduction to our main catalogue: THE RED BOOK.



CombiNorm-Compact

The design of this DIN rail enclosure considerably reduces mounting work and time.

- 3 sizes
- 2 lid types
- Patented pre-mounted rail snap foot
- Matching connection terminals as accessories
- Comprehensive range of accessories



Colour	Light grey, similar to RAL 7035; special colours on request
Protection class	IP 40/DIN EN 60529; with air vents IP 30/DIN EN 60529; clamps IP 20/DIN EN 60529
Enclosure material	PA 6.6-FR (UL 94 V0); for details see Technical Information

Possible terminal insertion for the enclosures:

Model	Maximum insertion with terminals
CN 19	4 x 2-pole
CN 22	4 x 3-pole
CN 26	4 x 3-pole

Matching terminals in accessories.





The different enclosure combinations using shells and lids offer a range of advantages:



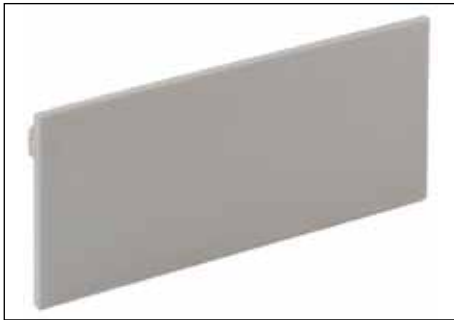
CN..GK with CN-DK: This combination requires the PCB to have a stepped profile. There is optimal access to the terminals of enclosures which are connected to each other.



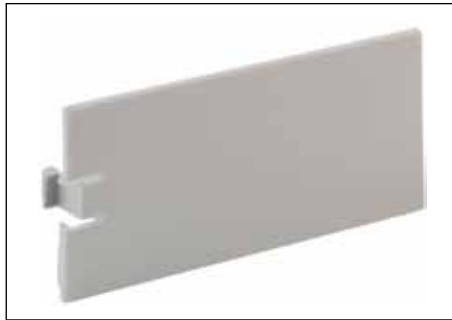
CN..GK with CN-DU: This combination permits the use of a rectangular (grooved) PCB, which minimises the production costs.



CN..GU with CN-DU: Universal enclosure without pre-set terminal positions, permitting the use of larger bus wire connectors parallel to the PCB (up or down).



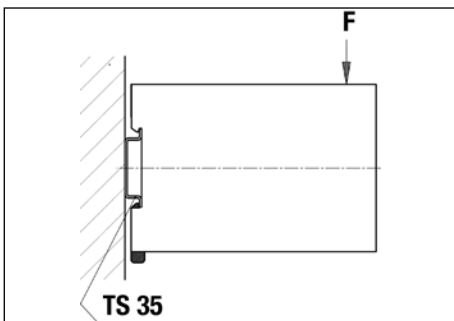
The **CN..FP** front panels are coded in their direction of insertion. Customer-specific front panels, e.g. made of aluminium, are also available as alternatives. A PCB plug-in slot for the fitting of – for example – front operating elements is provided parallel to the front panel.



Instead of a front panel, a **CN..FK** front flap (light grey) can be snapped in. It can be removed for operation of the rear components.



The use of the crystal-clear front flap **CN...FKG** makes LEDs visible without additional processing.



Load capacity:
max. 40 N (static load)

Contoured CombiNorm-Compact

for DIN rail acc. to DIN EN 60715 TH 35

Enclosure shells

Model	Order no.	A	B	C	a1	a2
CN 19 GK	65019100	19	75	110,8	13	15
CN 22 GK	65022100	22,5	75	110,8	16,5	18,5
CN 26 GK	65026100	26	75	110,8	20	22

Scope of delivery: PU = 5 pieces

Note: See following pages for accessories.



Enclosure shells with air vents

Model	Order no.	A	B	C	a1	a2
CN 19 GK-L	65019110	19	75	110,8	13	15
CN 22 GK-L	65022110	22,5	75	110,8	16,5	18,5
CN 26 GK-L	65026110	26	75	110,8	20	22

Scope of delivery: PU = 5 pieces

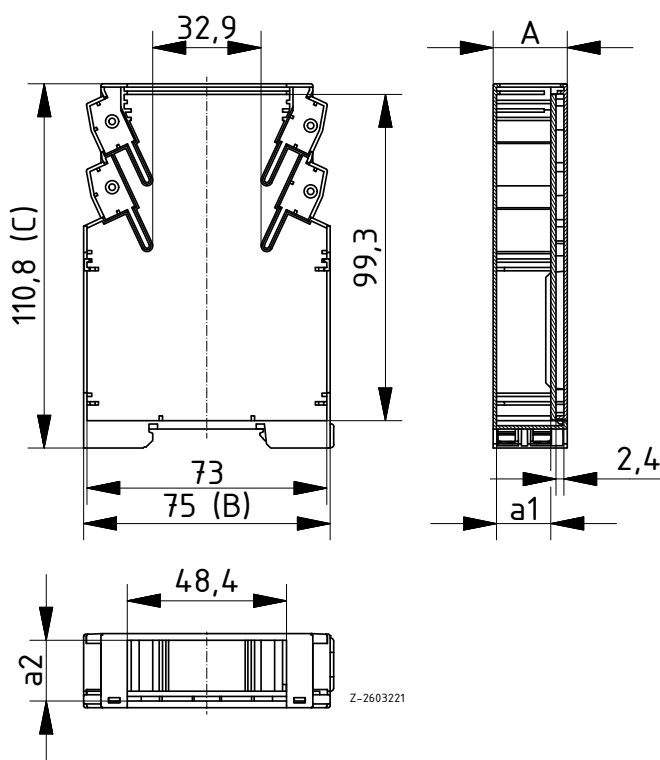
Note: See following pages for accessories.



Contoured enclosure lid for CN..GK

Model	Order no.
CN-DK	65000200

Scope of delivery: PU = 5 pieces



CombiNorm-Compact universal for DIN rail acc. to DIN EN 60715 TH 35



Enclosure shells

Model	Order no.	A	B	C	a1	a2
CN 19 GU	65019000	19	75	110,8	13	15
CN 22 GU	65022000	22,5	75	110,8	16,5	18,5
CN 26 GU	65026000	26	75	110,8	20	22

Scope of delivery: PU = 5 pieces

Note: See following pages for accessories.



Enclosure shells with air vents

Model	Order no.	A	B	C	a1	a2
CN 19 GU-L	65019010	19	75	110,8	13	15
CN 22 GU-L	65022010	22,5	75	110,8	16,5	18,5
CN 26 GU-L	65026010	26	75	110,8	20	22

Scope of delivery: PU = 5 pieces

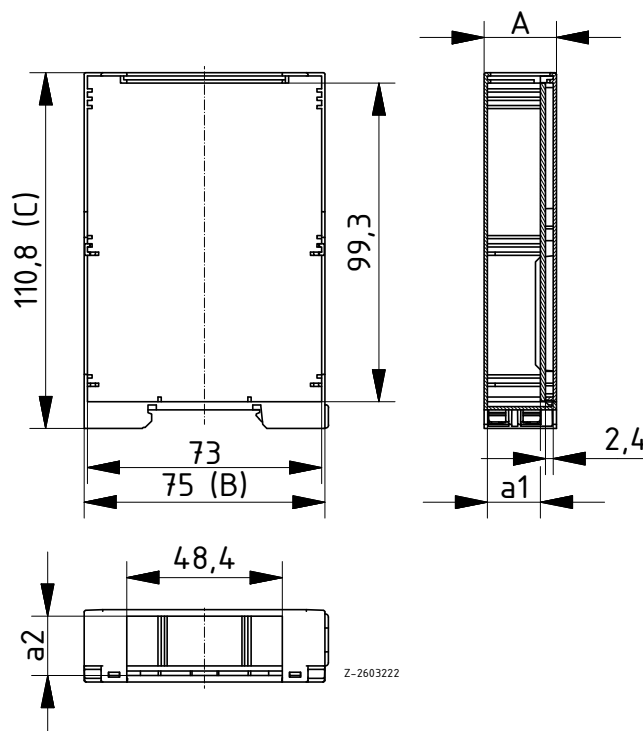
Note: See following pages for accessories.



Universal enclosure lid for CN..GU and CN ..GK

Model	Order no.
CN-DU	65000100

Scope of delivery: PU = 5 pieces



CombiNorm-Compact

connection terminals

Connection terminals, 2 and 3 poles, IP 20

Model	Order no.	Note:
AK 8191/2DL	66000052	2-pole, on left of component side (seen from front), PCB vertical
AK 8191/2DR	66000062	2-pole, on right of component side (seen from front), PCB vertical
AK 8191/3DL	66000072	3-pole, on left of component side (seen from front), PCB vertical
AK 8191/3DR	66000082	3-pole, on right of component side (seen from front), PCB vertical

Scope of delivery: 1 connection terminal

Note:

Rated cross-section:	2.5 mm ²
Max. conductor cross-section:	single-wire (rigid) 0.2 – 4 mm ² , fine-strand (flexible) 0.2 – 2.5 mm ²
Rated current:	16 A
Rated voltage acc. to VDE 110/01.89:	250V/4KV/3 overvoltage category III 690V/4KV/2 overvoltage category II (max. 600 V for earthed equipment or expected overvoltage) 1000V/4KV/1 overvoltage category I
Dimensions:	Pitch 5.0 mm Drill hole Ø 1.3 mm Wire stripping length 6.5 mm
Colour:	Green, similar to RAL 6017
Materials:	Insulating material: PA, inflammability class UL 94 V0 Contact bow: tinned ETP copper Soldering pin: tinned ETP copper



CombiNorm-Compact accessories



Plug-in front panels, direction of insertion coded

Model	Order no.	Note
CN 19 FP	65019500	For CN 19
CN 22 FP	65022500	For CN 22
CN 26 FP	65026500	For CN 26

Scope of delivery: 1 front panel



Front flaps, snap-on

Model	Order no.	Note
CN 19 FK	65019600	For CN 19
CN 22 FK	65022600	For CN 22
CN 26 FK	65026600	For CN 26

Scope of delivery: 1 front flap



Front flaps, snap-on, crystal-clear

Model	Order no.	Note
CN 19 FKG	65019700	For CN 19
CN 22 FKG	65022700	For CN 22
CN 26 FKG	65026700	For CN 26

Scope of delivery: 1 front flap



Marking plate for clipping onto upper and lower section of enclosure front

Model	Order no.
CN-BZ	66000022

Scope of delivery: 1 marking plate

CombiNorm-Compact accessories

Covers for unused terminal locations for CN..GK (L)

Model	Order no.	Note
CN-BL 1	66000032	1-pole
CN-BL 2	66000042	2-pole

Scope of delivery: 1 cover



Terminal identification strip, self-adhesive

Model	Order no.	Note
AK-BS	66000100	

Scope of delivery: Terminal identification strip AK-BS



Wall adapter for all CombiNorm-Compact enclosures

Model	Order no.	Note
CN-WA	66000012	DIN rail TH 35

Scope of delivery: 1 adapter

Note: For individual mounting on wall surfaces. Matches all types.





CombiNorm-Classic

This DIN rail offers maximum mounting space

- 5 sizes
- Matching connection terminals as accessories
- DIN rail holder, also for use as wall fitting
- Terminal approvals acc. to UL 1059, CSA 22.2 no. 158 and EN 60998
- Comprehensive range of accessories

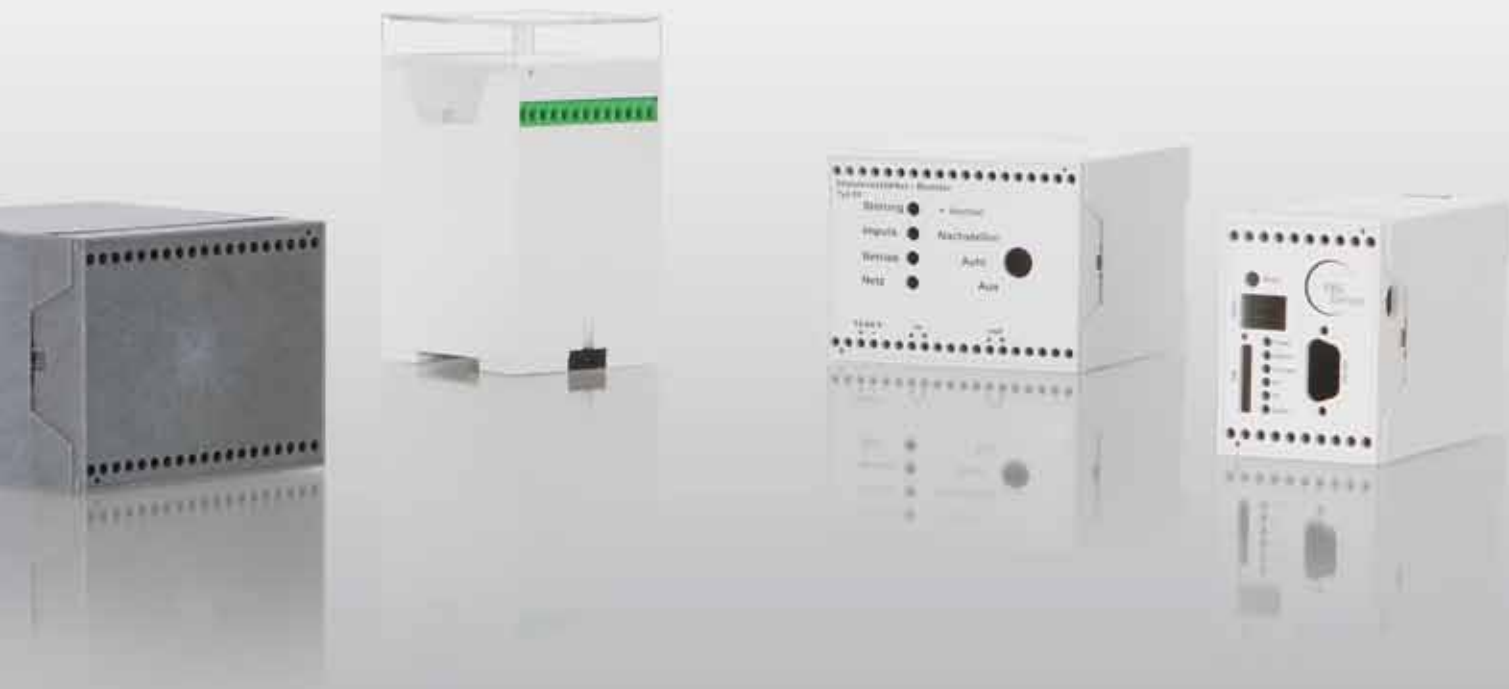


Colour	Light grey, similar to RAL 7035; special colours on request
Protection class	Up to IP 40/DIN EN 60529, terminals IP 20/DIN EN 60529
Enclosure material	ABS; UL 94 V0 material on request; for details see Technical Information

The enclosures can be latched onto the 35 mm rail in accordance with DIN EN 60715 TH 35. The hinged latching hoods CNH..N or CNH..H can be opened upwards or downwards or removed completely, as required. If necessary, they can also be sealed. When sealed, the hood also conceals the screws of the connection terminals (not STL 950/ V). The CNS types have a side-mounted flap for adjustment of devices during operation. To comply with CSA and other regulations, on request we can supply the enclosures in high-temperature and flame-resistant material (UL 94 V0). All the terminals listed below are UL (UL 1059), CUL (CSA 22.2 no.158), VDE (EN 60998) approved.

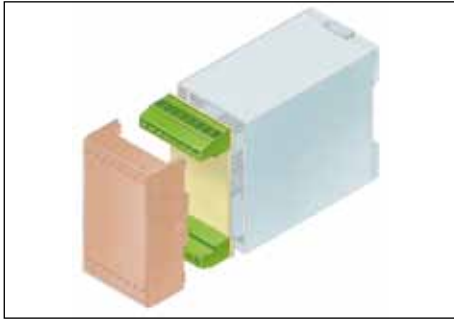
Model	Maximum insertion with terminals
CN(S) 22 AK	2 x 4-pole
CN(S) 45 AK	2 x 8-pole
CN(S) 55 AK	2 x 10-pole
CN(S) 70 AK	2 x 13-pole
CN(S) 100 AK	2 x 19-pole

Any terminal positions which are not needed can be closed with blind plates CNB 100.

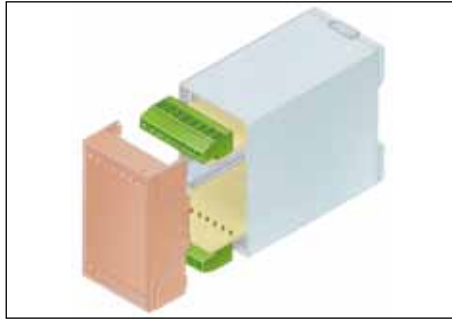




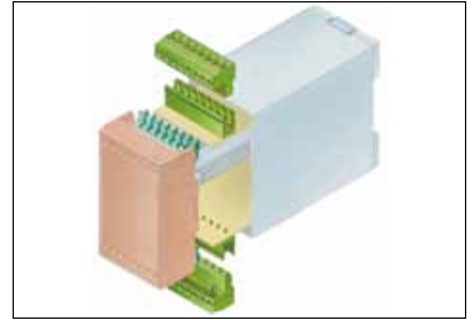
Terminal types



AK 700 V: This terminal is specially designed for a circuit board which is fitted to the base and parallel to the front lid. This makes it possible to fit front operating elements at the same time. IP 20 protection.

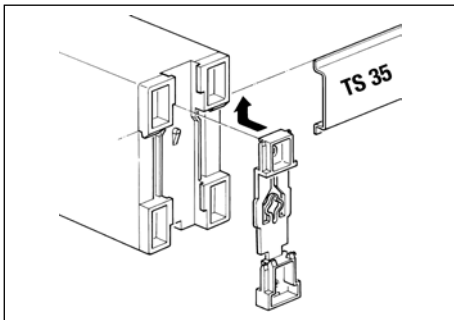


AK 700 H: This terminal is designed for use with vertically inserted circuit boards. It creates a 9 mm clearance to the outside, so circuit boards can be fitted with components on both sides.

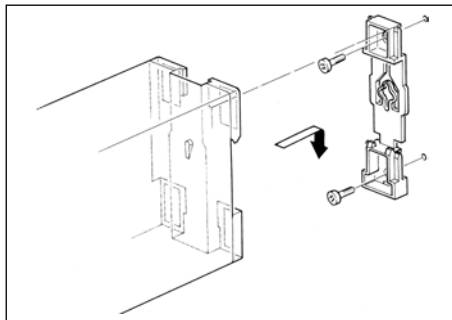


STL 950 / AK 950: This terminal consists of two parts. The STL 950 connector strip is soldered to the vertically-insertable circuit board. The AK 950 terminal slots into the connector strip, so faulty units can be replaced quickly.

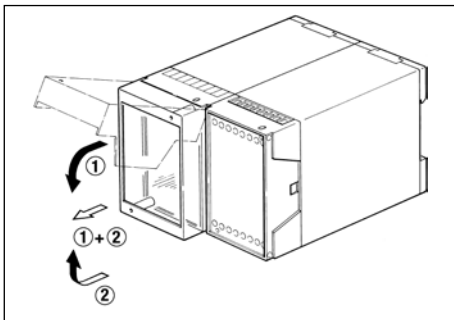
The STL adapter CNA 100 must be fitted to support the circuit board.



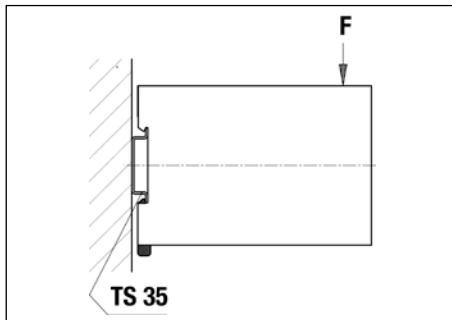
Fitting for rail fixing (factory-fitted)



Mounting for direct wall fitting



Hood activation



Load capacity, F = static load max. 40 N

CombiNorm-Classic

for DIN rail acc. to DIN EN 60715 TH 35

Enclosure

Model	Order no.	A	B	C	a1
CN 22 AK	65002210	22,5	75	109,5	18,7
CN 45 AK	65004510	45	75	109,5	41,2
CN 55 AK	65005510	55	75	109,5	51,2
CN 70 AK	65007010	70	75	109,5	66,2
CN 100 AK	65010010	100	75	109,5	96,2

Scope of delivery: Lid, base with latch (mounted)

Note: See following pages for accessories.

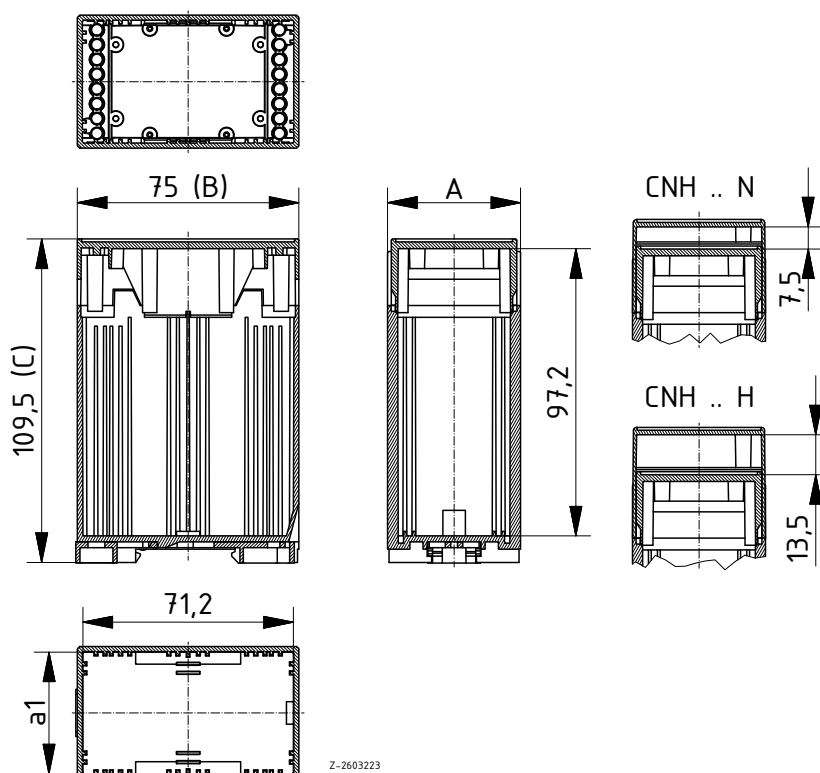


Enclosure with adjusting flap

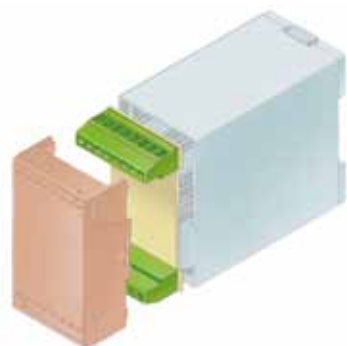
Model	Order no.	A	B	C	a1
CNS 22 AK	65002230	22,5	75	109,5	18,7
CNS 45 AK	65004530	45	75	109,5	41,2
CNS 55 AK	65005530	55	75	109,5	51,2
CNS 70 AK	65007030	70	75	109,5	66,2
CNS 100 AK	65010030	100	75	109,5	96,2

Scope of delivery: Lid, base with latch (mounted), adjusting flap

Note: See following pages for accessories.



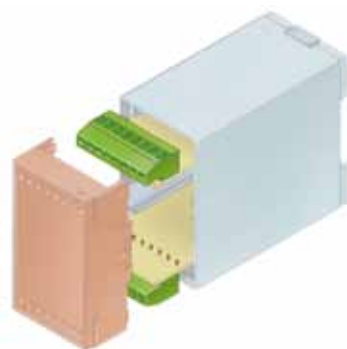
CombiNorm-Classic connection terminals



Connection terminals for circuit boards which are parallel to the front side

Model	Order no.	Colour	Note
AK 700/2V	66002000	Green	2-pole
AK 700/3V	66003000	Green	3-pole
AK 700/4V	66004000	Green	4-pole
AK 700/8V	66008000	Green	8-pole
AK 700/10V	66010000	Green	10-pole
AK 700/13V	66013000	Green	13-pole
AK 700/19V	66019000	Green	19-pole

Scope of delivery: 1 connection terminal



Connector strip for vertically-inserted circuit boards

Model	Order no.	Colour	Note
AK 700/2H	66004110	Green	2-pole
AK 700/3H	66003100	Green	3-pole
AK 700/4H	66004100	Green	4-pole
AK 700/8H	66008100	Green	8-pole
AK 700/10H	66010100	Green	10-pole
AK 700/13H	66013100	Green	13-pole
AK 700/19H	66019100	Green	19-pole

Scope of delivery: 1 connection terminal

Ratings acc. to EN 60998 for AK 700/..V and AK 700/..H

Rated voltage	250 V
Rated current	24 A (T60)
Conductor cross-section	2.5 mm ²
Test voltage	2.0 kV
Torque / screw size	0.5 Nm/M3

Maximum conductor cross-section

Single-wire (rigid)	4.0 mm ²
Fine-strand (flexible)	2.5 mm ²

Materials

Insulating material	PA
Inflammability class	UL 94 V0
Temperature range	-30 °C / +105 °C
Terminal clamp	CuZn
Soldering tag	Cu

Dimensions

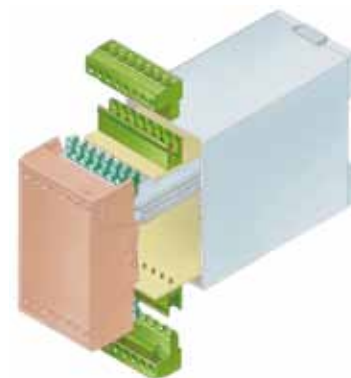
Pitch	5.0 mm
Drill hole diameter	1.3 mm
Wire stripping length	8.0 mm

CombiNorm-Classic connection terminals

Connection terminal for STL 950

Model	Order no.	Colour	Note
AK 950/4	66004600	Green	4-pole
AK 950/8	66008600	Green	8-pole
AK 950/10	66010600	Green	10-pole
AK 950/13	66013600	Green	13-pole
AK 950/19	66019600	Green	19-pole

Scope of delivery: 1 connection terminal



Connector strip for soldering onto vertically-inserted circuit boards

Model	Order no.	Note
STL 950/4V	66004500	4-pole
STL 950/8V	66008500	8-pole
STL 950/10V	66010500	10-pole
STL 950/13V	66013500	13-pole
STL 950/19V	66019500	19-pole

Scope of delivery: 1 connector strip

Ratings acc. to EN 60998

Rated voltage	250 V
Rated current	24 A (T60)
Conductor cross-section	2.5 mm ²
Test voltage	2.0 kV
Torque / screw size	0.5 Nm/M3

Maximum conductor cross-section

Single-wire (rigid)	4.0 mm ²
Fine-strand (flexible)	2.5 mm ²

Materials

Insulating material	PA
Inflammability class	UL 94 V 0
Temperature range	-30 °C / + 105 °C
Terminal clamp	CuZn
Soldering tag	Cu

Dimensions

Pitch	5.0 mm
Drill hole diameter	1.3 mm
Wire stripping length	8.0 mm

Note: For STL 950 insertion, STL adapter CNA 100 must be mounted to support the PCB.
Connector strip STL 950 and connection terminal AK 950 can only be used together.

CombiNorm-Classic accessories



Hinged hood, crystal-clear, 9 mm high

Model	Order no.	Note
CNH 22 N	65002260	For CN(S) 22 AK
CNH 45 N	65004560	For CN(S) 45 AK
CNH 55 N	65005560	For CN(S) 55 AK
CNH 70 N	65007060	For CN(S) 70 AK
CNH 100 N	65010060	For CN(S) 100 AK

Scope of delivery: 1 hood



Hinged hood, crystal-clear, 15 mm high

Model	Order no.	Note
CNH 22 H	65002250	For CN(S) 22 AK
CNH 45 H	65004550	For CN(S) 45 AK
CNH 55 H	65005550	For CN(S) 55 AK
CNH 70 H	65007050	For CN(S) 70 AK
CNH 100 H	65010050	For CN(S) 100 AK

Scope of delivery: 1 hood

CombiNorm-Classic accessories

Blind plate for covering unused terminal locations, 19 parts, can be broken off

Model	Order no.
CNB 100	65010070

Scope of delivery: 2 pieces



Adapter plate for fitting circuit boards and closing the screw openings with the use of STL 950, 20 parts, can be broken off

Model	Order no.
CNA 100	65010100

Scope of delivery: 2 pieces



Terminal identification strip, self-adhesive

Model	Order no.
AK-BS	66000100

Scope of delivery: Terminal identification strip AK-BS



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