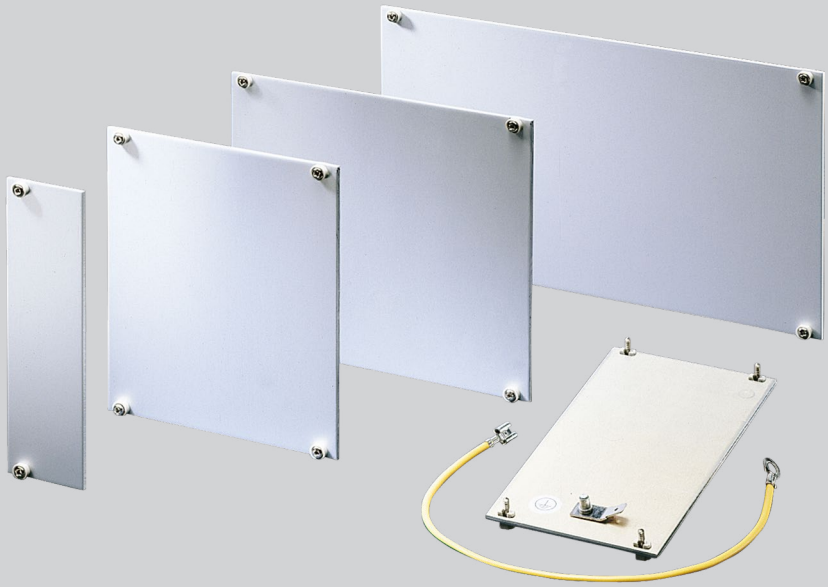


CONNECT AND PROTECT

Front panels, Plug-in-Units, Frame type Plug-in-Units

nVent
SCHROFF

OVERVIEW

MAIN KATALOG

Cabinets 1

Wall mounted cases 2

Accessories for cabinets and wall mounted cases . . 3

Climate control . . 4

Electronics cases 5

Subracks/ 19" chassis 6

Front panels, plug-in units 7

Systems 8

Power supply units 9

Backplanes 10

Connectors, front panel component system 11

Appendix 12

FRONT PANELS

- Extensive standard range
- Individual modification to customer requirements: drill holes, cut-outs
- Individual printing
- Front Panel Express

PLUG-IN UNITS

- Front panels with handles in various designs
  - Extensive standard range
  - Individual modification to customer requirements: drill holes, cut-outs
  - Individual printing
  - Front Panel Express

36106003 (09292001 04612001)

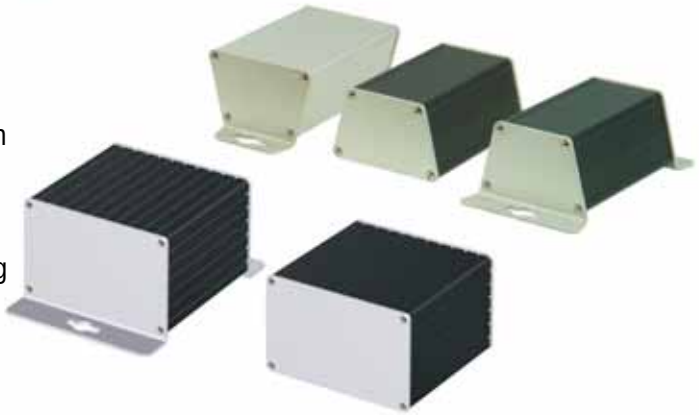
Front panels, plug-in units, frame-type plug-in units

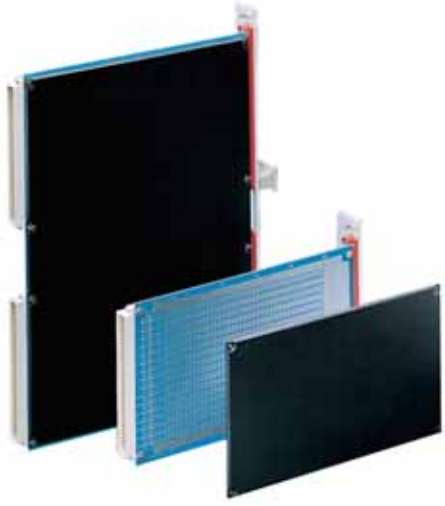
FRAME-TYPE PLUG-IN UNITS

- To hold and protect PCBs
- High stability
- Outstanding cooling
- With or without EMC shielding

MINIPAC

- Convenient small case - flexible enough for all your requirements
- To accommodate non-standardised or standardised PCBs
- As desktop enclosure, for wall mounting or mounting on a DIN support rail





ACCESSORIES

- Brackets, handles, covers
- Assembly material
- Tools

Overview **7.0**

Front panels .. 7.2

Plug-in units .. 7.16

Frame type plug-in units .. 7.64

minipac 7.98

PCB accessories ... 7.102

Assembly material 7.107

Modules to mount drive units see chapter System Accessories .. 8.110

36106004 (04802002 04812001 11092008 04995001)

Modules – Front panels

OVERVIEW

MAIN KATALOG

Cabinets 1

Wall mounted cases 2

Accessories for cabinets and wall mounted cases . . 3

Climate control . . 4

Electronics cases 5

Subracks/ 19" chassis 6

Front panels, plug-in units 7

Systems 8

Power supply units 9

Backplanes 10

Connectors, front panel component system 11

Appendix 12

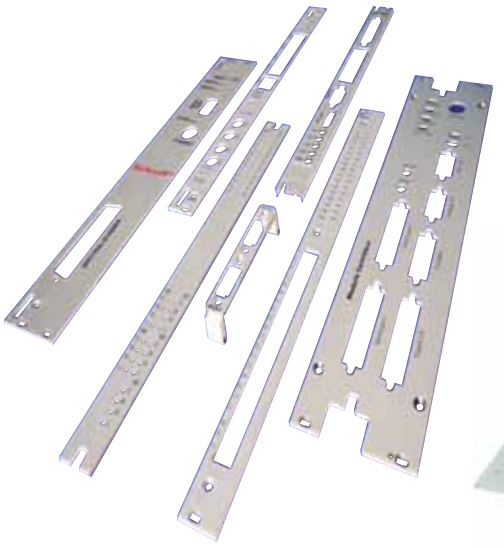
04292001

STANDARDS

- IEC 60297-3-101/IEEE 1101.1/10

SERVICEPLUS

e.g. individual colouring
e.g. customised cut-outs
e.g. printing
e.g. mounting service
e.g. special dimensions



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Modules – Front panels

OVERVIEW

FRONT PANELS FOR FITTING IN SUBRACKS, CASES AND SYSTEMS

- Extensive standard range with various finishes and materials (aluminium or stainless steel)
- Front Panel Express:
  Fast delivery service of customised versions (from 2 days)
- EMC shielding retrofittable

04292001

FRONT PANELS, UNSHIELDED

- Aluminium, clear anodised
- Aluminium, clear pre-anodised, cut edge untreated
- Aluminium, front anodised, rear iridescent green chromated
- Other finishes on request

04600006

FRONT PANELS SHIELDABLE, FLAT

- With lateral grooves to fit EMC gaskets (stainless steel)
- Compatible with the shielded U profile version

04602004

FRONT PANELS, SHIELDABLE, U PROFILE

- With lateral groove to fix a textile self-adhesive EMC gasket
- Compatible with the shielded flat version
- High robustness through U profile

04295001 04295002

FURTHER FRONT PANELS

- Hinged/folding front panels
- Front panels with GND/earthing
- Mezzanine front panels
- AdvancedTCA front panels
- MicroTCA front panels
- AdvancedMC front panels

Overview **7.2**

Front panels
Unshielded **7.4**
Shieldable **7.5**
EMC stainless steel gaskets **7.6**
Assembly tool **7.6**

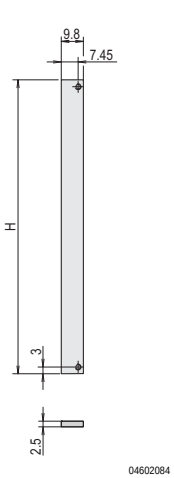
Front panels
Shieldable (U profile) **7.7**
EMC textile gasket . **7.6**

Further front panels
Hinged **7.8**
Hinged, shielded . **7.9**
For D-Sub connectors **7.10**
For Coax connectors **7.11**
3 U with GND/ earthing **7.11**
Mezzanine front panels 7.12

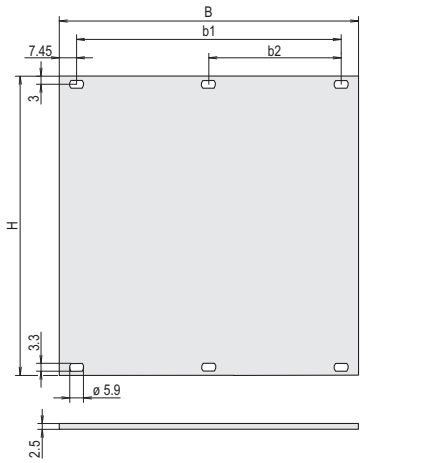
Assembly kit 7.107
AdvancedTCA front panels 8.12
MicroTCA front panels 8.65
AdvancedMC front panels 8.60

Modules – Front panels

FRONT PANELS, UNSHIELDED



2 HP



> 2 HP

- Front panel, Al, 2.5 mm
- Versions:
  - Al, anodised
  - Al, anodised, cut edges plain
  - Al, front anodised, rear iridescent green chromated

NOTE

- Other sizes and finishes available on request
- Please order fixing material separately, see chapter Assemply parts, page 7.107

ORDER INFORMATION

Height	H	Width	B	b1	b2	Qty 1)	Anodised, cut edges plain	Anodised	Front anodised, rear colorless chromated
U	mm	HP	mm	mm	mm		Part no.	Part no.	Part no.
1	39.5	84	426.4	411.5	203.2	1	–	–	**20850-426**
2	84.0	84	426.4	411.5	203.2	1	**30818-271**	**30807-416**	**30847-461**
3	128.4	2	9.8	–	–	1 (SPQ 5)[1]	**30810-433**	**30810-432**	**30847-470**
3	128.4	3	14.9	–	–	1 (SPQ 5)[1]	**30818-272**	**30807-508**	**30847-471**
3	128.4	4	20.0	–	–	1 (SPQ 5)[1]	**30818-273**	**30807-481**	**30838-043**
3	128.4	5	25.0	–	–	1 (SPQ 5)[1]	**30818-274**	**30807-510**	**30838-044**
3	128.4	6	30.1	–	–	1 (SPQ 5)[1]	**30818-275**	**30807-482**	**30838-045**
3	128.4	7	35.2	–	–	1 (SPQ 5)[1]	**30818-276**	**30807-509**	**30838-046**
3	128.4	8	40.3	25.4 [2]	–	1 (SPQ 5)[1]	**30818-277**	**30807-484**	**30838-047**
3	128.4	10	50.5	35.6	–	1 (SPQ 5)[1]	**30818-279**	**30807-483**	**30838-049**
3	128.4	12	60.6	45.7	–	1 (SPQ 5)[1]	**30818-281**	**30807-485**	**30838-051**
3	128.4	14	70.8	55.9	–	1 (SPQ 5)[1]	**30818-282**	**30807-501**	**30838-053**
3	128.4	21	106.3	91.4	–	1 (SPQ 5)[1]	**30818-289**	**30807-487**	**30838-060**
3	128.4	28	141.9	127.0	–	1 (SPQ 5)[1]	**30818-296**	**30807-496**	**30838-067**
3	128.4	42	213.0	198.1	101.6 [2]	1	**30818-310**	**30807-494**	**30838-081**
3	128.4	63	319.7	304.8	157.5	1	**30818-331**	**30808-067**	**30838-102**
3	128.4	84	426.4	411.5	203.2	1	**30818-352**	**30807-506**	**30838-123**
4	172.9	84	426.4	411.5	203.2	1	**30818-434**	**30807-596**	**30847-465**
6	261.8	2	9.8	–	–	1 (SPQ 5)[1]	**30818-747**	**30818-741**	**30847-472**
6	261.8	4	20.0	–	–	1 (SPQ 5)[1]	**30818-518**	**30807-778**	**30838-124**
6	261.8	5	25.0	–	–	1 (SPQ 5)[1]	**30818-519**	**30807-777**	**30838-125**
6	261.8	6	30.1	–	–	1 (SPQ 5)[1]	**30818-520**	**30807-752**	**30838-126**
6	261.8	7	35.2	–	–	1 (SPQ 5)[1]	**30818-521**	–	**30838-127**
6	261.8	8	40.3	25.4 [2]	–	1 (SPQ 5)[1]	**30818-522**	**30807-779**	**30838-128**
6	261.8	10	50.5	35.6	–	1 (SPQ 5)[1]	**30818-524**	**30807-753**	**30838-130**
6	261.8	12	60.6	45.7	–	1 (SPQ 5)[1]	**30818-526**	**30807-755**	**30838-132**
6	261.8	14	70.8	55.9	–	1 (SPQ 5)[1]	**30818-528**	**30807-758**	**30838-134**
6	261.8	16	80.9	66.0	–	1 (SPQ 5)[1]	**30818-530**	**30807-780**	**30838-136**
6	261.8	21	106.3	91.4	–	1 (SPQ 5)[1]	**30818-535**	**30807-757**	**30838-141**
6	261.8	28	141.9	127.0	–	1 (SPQ 5)[1]	**30818-542**	**30807-766**	**30838-148**
6	261.8	42	213.0	198.1	101.6 [2]	1	**30818-556**	**30807-764**	**30838-162**
6	261.8	63	319.7	304.8	157.5	1	**30818-577**	**30807-771**	**30838-183**
6	261.8	84	426.4	411.5	203.2	1	**30818-598**	**30807-776**	**30838-204**
9	395.1	84	426.4	411.5	203.2	1	–	–	**30847-556**

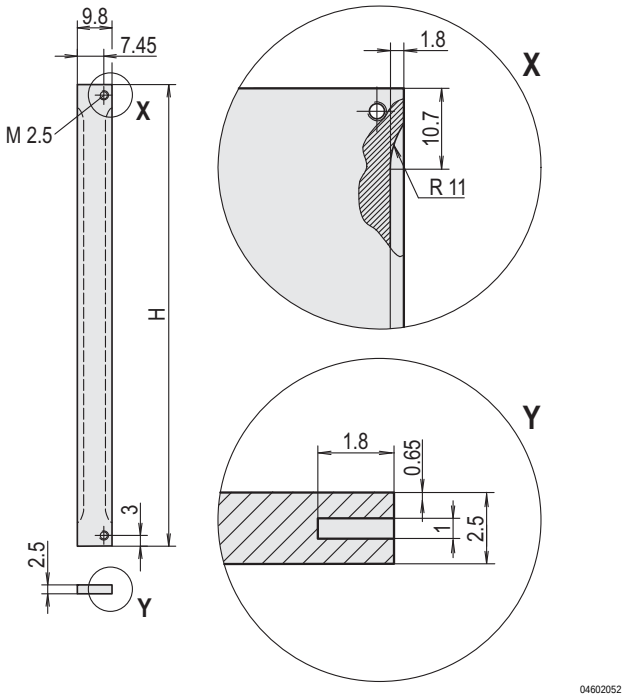
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

2) This dimension is only available for "front anodised, rear iridescent green chromated" version

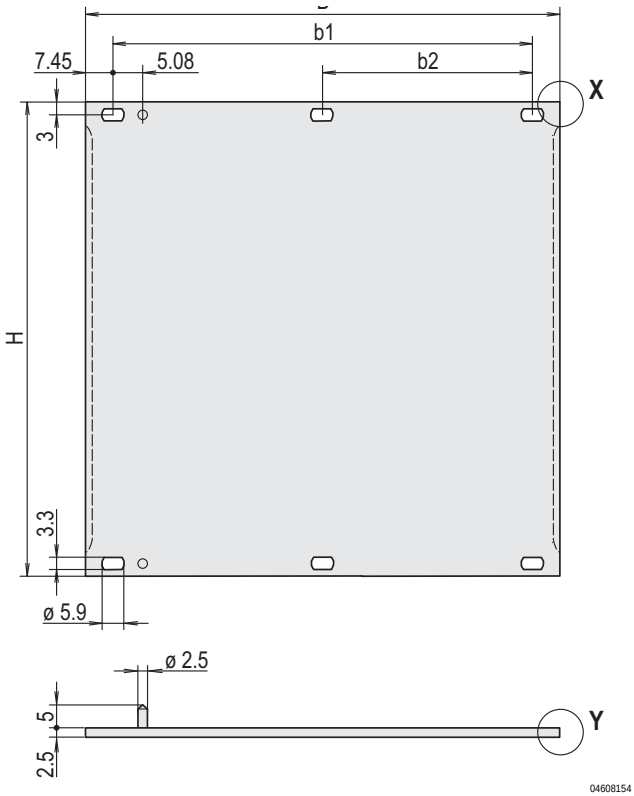
- Please order fixing material (sleeves, collar screws) separately, see page 7.107

Modules – Front panels

FRONT PANELS, SHIELDABLE



2 HP



> 2 HP

- Front panel, Al, 2.5 mm, front anodised, rear iridescent green chromated, 2 alignment pins pressed-in, stainless steel
- Shielding with stainless steel EMC gasket

ORDER INFORMATION

Height H U	mm	Width HP	B mm	b1 mm	b2 mm	Align-ment pin	Qty	Part no.
2	84	84	426.4	411.5	203.2	–	1	**30846-588**
3	128.4	2	9.8	–	–	–	1 (SPQ 5)[1)]	**30846-864**
3	128.4	3	14.9	–	–	x	1 (SPQ 5)[1)]	**20846-425**
3	128.4	4	20	–	–	x	1 (SPQ 5)[1)]	**20846-426**
3	128.4	5	25	–	–	x	1 (SPQ 5)[1)]	**20846-427**
3	128.4	6	30.1	–	–	x	1 (SPQ 5)[1)]	**20846-428**
3	128.4	7	35.2	–	–	x	1 (SPQ 5)[1)]	**20846-429**
3	128.4	8	40.3	25.4	–	x	1 (SPQ 5)[1)]	**20846-430**
3	128.4	10	50.5	35.6	–	x	1 (SPQ 5)[1)]	**20846-431**
3	128.4	12	60.6	45.7	–	x	1 (SPQ 5)[1)]	**20846-432**
3	128.4	14	70.8	55.9	–	x	1 (SPQ 5)[1)]	**20846-433**
3	128.4	21	106.3	91.4	–	x	1 (SPQ 5)[1)]	**20846-434**
3	128.4	28	141.9	127	–	x	1 (SPQ 5)[1)]	**20846-436**
3	128.4	42	213	198.1	101.6	x	1	**20846-437**
3	128.4	63	319.7	304.8	157.5	x	1	**20846-438**
3	128.4	84	426.4	411.5	203.2	–	1	**30846-676**
4	172.9	84	426.4	411.5	203.2	–	1	**30846-683**
6	261.8	2	9.8	–	–	–	1 (SPQ 5)[1)]	**30846-865**
6	261.8	4	20	–	–	x	1 (SPQ 5)[1)]	**20846-443**
6	261.8	5	25	–	–	x	1 (SPQ 5)[1)]	**20846-444**
6	261.8	6	30.1	–	–	x	1 (SPQ 5)[1)]	**20846-445**
6	261.8	7	35.2	–	–	x	1 (SPQ 5)[1)]	**20846-446**
6	261.8	8	40.3	25.4	–	x	1 (SPQ 5)[1)]	**20846-447**
6	261.8	10	50.5	35.6	–	x	1 (SPQ 5)[1)]	**20846-448**
6	261.8	12	60.6	45.7	–	x	1 (SPQ 5)[1)]	**20846-449**
6	261.8	14	70.8	55.9	–	x	1 (SPQ 5)[1)]	**20846-450**
6	261.8	16	80.9	66	–	x	1 (SPQ 5)[1)]	**20846-456**
6	261.8	21	106.3	91.4	–	x	1 (SPQ 5)[1)]	**20846-451**
6	261.8	28	141.9	127	–	x	1 (SPQ 5)[1)]	**20846-452**
6	261.8	42	213	198.1	101.6	x	1	**20846-453**
6	261.8	63	319.7	304.8	157.5	x	1	**20846-454**
6	261.8	84	426.4	411.5	203.2	–	1	**30846-771**
9	395.1	84	426.4	411.5	203.2	–	1	**30846-859**

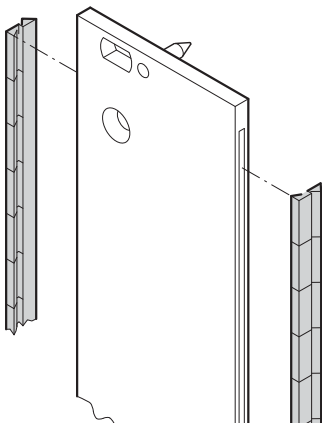
Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

NOTE

- Please order fixing material (sleeves, collar screws) separately, see page 7.107
- Please order stainless steel EMC gasket separately, see page 7.6

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

STAINLESS STEEL EMC GASKET



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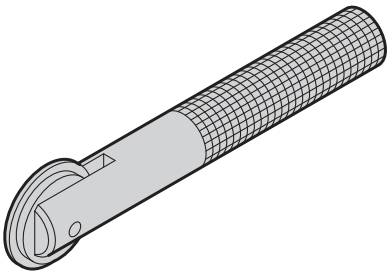
Montagewerkzeug



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- The stainless steel EMC gaskets are inserted into the lateral slots of the shieldable front panels (2 pieces per front panel)

DELIVERY COMPRISES

Item	Qty	Description
1	10/100	EMC gasket (stainless steel)

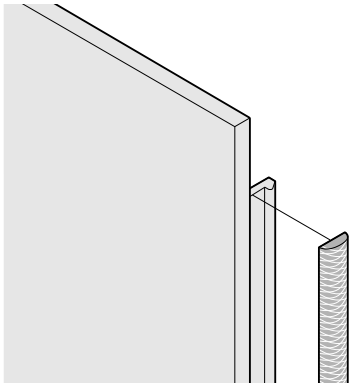
ORDER INFORMATION

Height U	Height mm	Qty/PU	Part no.
2	52	10	**21101-775**
3	97	10	**21101-705**
3	97	100	**21101-706**
4	142	10	**21101-713**
4	142	100	**21101-714**
5	187	10	21101-777
5	187	100	21101-778
6	232	10	**21101-707**
6	232	100	**21101-708**
9	367	10	**21101-709**
9	367	100	**21101-710**
Assembly tool for EMC gasket (stainless steel), 1 piece			**24560-270**

NOTE

- Please order assembly tool separately

TEXTILE EMC GASKET



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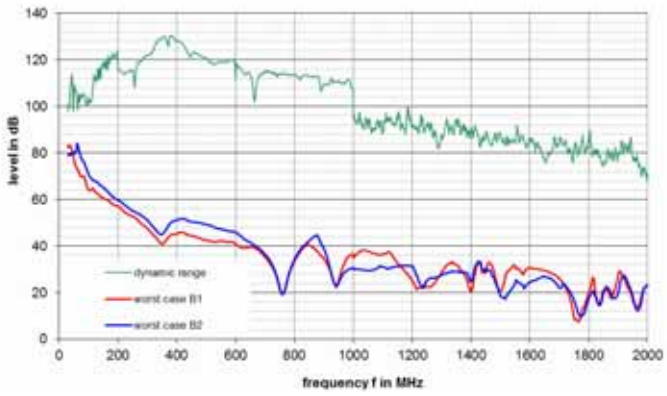
EMC characteristic (typical, green)

B1 (red): -40 ... -70 °C, B2 (blue): -40 ... -85 °C



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- Textile EMC gasket is glued laterally on the front panel, in the groove of the right-hand profile
- 2 temperature ranges
  - Temperature range -40... +70 °C
  - Temperature range -40... +85 °C

DELIVERY INCLUDES

Item	Qty	Description
1	see Order Information	EMC textile gasket, core: TPE foam (-40... +70 °C), Core: silicon with hollow chamber (-40... +85 °C), sleeve: textile cladding with CuNi coating

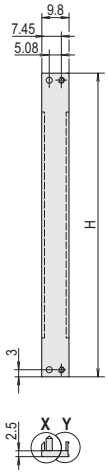
ORDER INFORMATION

Height U	Height mm	Qty/PU piece	Part no. Temperature range -40... +70 °C	Part no. Temperature range -40... +85 °C
2	52	10	**21101-857**	**21102-857**
3	97	10	**21101-853**	**21102-853**
3	97	100	**21101-854**	**21102-854**
4	142	10	**21101-858**	**21102-858**
5	187	10	**21101-978**	**21102-978**
6	232	10	**21101-855**	**21102-855**
6	232	100	**21101-856**	**21102-856**
9	365	10	**21101-859**	**21102-859**
9	365	100	**21101-904**	**–**

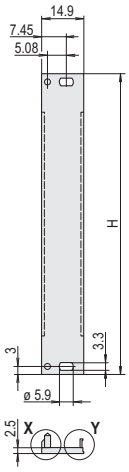
Modules – Front panels

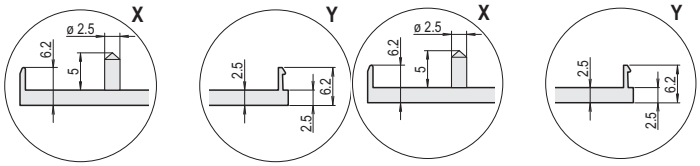
FRONT PANELS, U PROFILE, SHIELDABLE

2 HP



3 U





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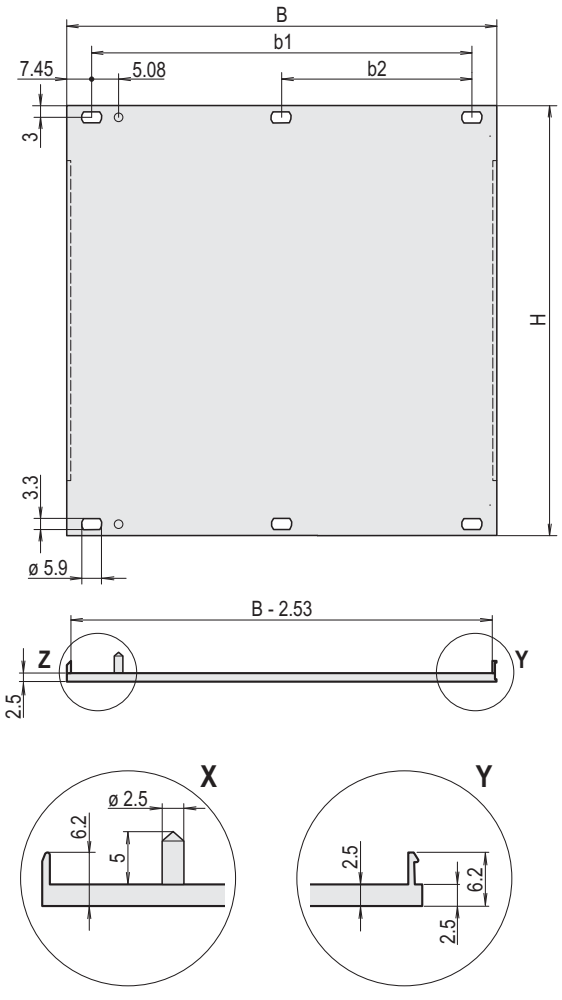
> 3 HP



04608156

- High stability through U profile
- Front panel, U profile, Al, front anodised, rear conductive, 2 alignment pins pressed-in, stainless steel
- Differerences in the finish between 2 ... 12 HP and 14 ... 84 HP

ORDER INFORMATION

Height H U	mm	Width HP	B mm	b1 mm	b2 mm	Align-ment pin	Qty	Part no.
2	84	84	426.4	411.5	203.2	–	1 (SPQ 5)1)	**20848-262**
3	128.4	2	9.8	–	–	x	1 (SPQ 5)1)	**30849-001**
3	128.4	3	14.9	–	–	x	1 (SPQ 5)1)	**30849-004**
3	128.4	4	20	–	–	x	1 (SPQ 5)1)	**30848-354**
3	128.4	5	25	–	–	x	1 (SPQ 5)1)	**30848-378**
3	128.4	6	30.1	–	–	x	1 (SPQ 5)1)	**30848-380**
3	128.4	7	35.2	–	–	x	1 (SPQ 5)1)	**30848-382**
3	128.4	8	40.3	25.4	–	x	1 (SPQ 5)1)	**30848-356**
3	128.4	10	50.5	35.6	–	x	1 (SPQ 5)1)	**30848-386**
3	128.4	12	60.6	45.7	–	x	1 (SPQ 5)1)	**30848-358**
3	128.4	14	70.8	55.9	–	x	1 (SPQ 5)1)	**20848-013**
3	128.4	16	80.9	66	–	x	1 (SPQ 5)1)	**20848-015**
3	128.4	21	106.3	91.4	–	x	1 (SPQ 5)1)	**20848-020**
3	128.4	28	141.9	127	–	x	1 (SPQ 5)1)	**20848-027**
3	128.4	42	213	198.1	101.6	x	1	**20848-047**
3	128.4	63	319.7	304.8	157.5	x	1	**20848-068**
3	128.4	84	426.4	411.5	203.2	–	1	**20848-097**
4	172.9	84	426.4	411.5	203.2	–	1	**20848-271**
6	261.8	2	9.8	–	–	x	1 (SPQ 5)1)	**30849-002**
6	261.8	4	20	–	–	x	1 (SPQ 5)1)	**30848-355**
6	261.8	5	25	–	–	x	1 (SPQ 5)1)	**30848-379**
6	261.8	6	30.1	–	–	x	1 (SPQ 5)1)	**30848-381**
6	261.8	7	35.2	–	–	x	1 (SPQ 5)1)	**30848-383**
6	261.8	8	40.3	25.4	–	x	1 (SPQ 5)1)	**30848-357**
6	261.8	10	50.5	35.6	–	x	1 (SPQ 5)1)	**30848-387**
6	261.8	12	60.6	45.7	–	x	1 (SPQ 5)1)	**30848-359**
6	261.8	14	70.8	55.9	–	x	1 (SPQ 5)1)	**20848-106**
6	261.8	16	80.9	66	–	x	1 (SPQ 5)1)	**20848-108**
6	261.8	21	106.3	91.4	–	x	1 (SPQ 5)1)	**20848-113**
6	261.8	28	141.9	127	–	x	1 (SPQ 5)1)	**20848-120**
6	261.8	42	213	198.1	101.6	x	1	**20848-139**
6	261.8	63	319.7	304.8	157.5	x	1	**20848-160**
6	261.8	84	426.4	411.5	208.3	–	1	**20848-189**
9	395.1	84	426.4	411.5	203.2	–	1	**20848-280**

1) Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

NOTE

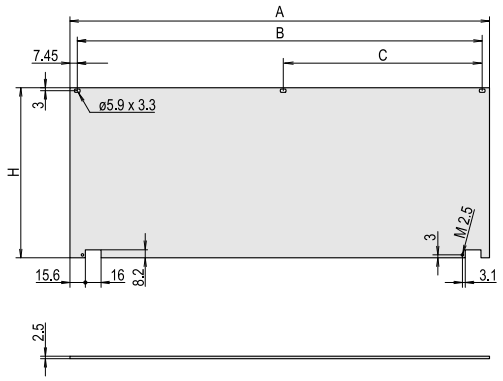
- Differences in finish between 2 ... 12 HP and 14 ... 84 HP
  - 2 ... 12 HP: one-part U-profile
  - 14 ... 84 HP: multi-part U-profile (front panel with crimped profiles)
- Please order fixing material (sleeves, collar screws) separately, see page 7.107
- Please order textile EMC gasket separately, see page 7.6

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Modules – Front panels

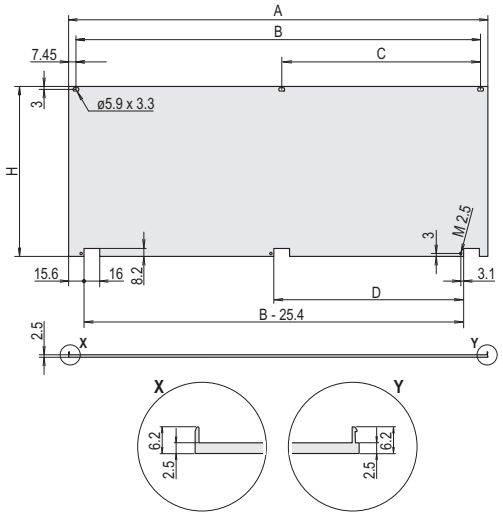
FRONT PANELS, BOTTOM-HINGED

04295001



04602080

Unshielded



04602079

Shielded

- Suitable for subracks (europacPRO) and cases (ratiopacPRO, propacPRO, compacPRO)
- Front panel can be unhinged at 135° (not ratiopacPRO) opening angle
- The useable width is not restricted
- Mounts on the horizontal rails
- 2 versions:
  - unshielded
  - shielded, U front panel with textile EMC gasket

DELIVERY COMPRISES (kit)

Item	Qty		Description
	Unshielded	Shielded	
1	1	-	Front panel, hinged, Al, 2.5 mm, anodised, cut edges plain
1a	-	1	Front panel, U profile, hinged, Al, 2.5 mm, front anodised, rear iridescent green chromated
2	2	3	Hinge, Zn die-cast, nickel-plated
3	2	3	Sleeve, PA
4	2	3	Knurled screw M2.5 x 12.3, nickel-plated
5	-	1	EMC textile gasket, core: foam, sleeve: textile cladding with CuNi coating
6	1	1	Assembly kit

NOTE

- Unshielded: Dimension C for 84 HP only

ORDER INFORMATION

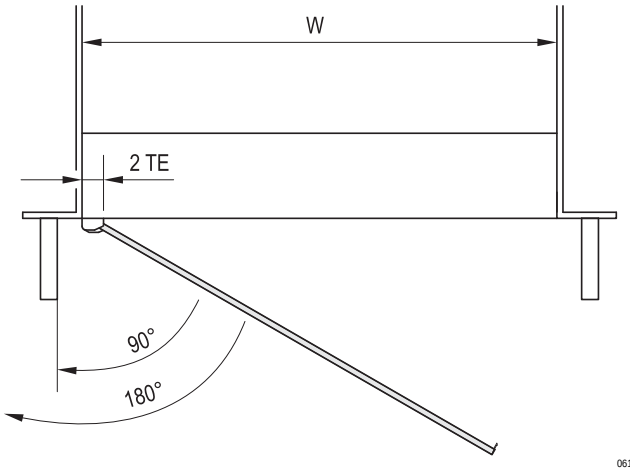
Dimensions							Shielded	Unshielded
Height	Width	A	B	C	D	H	Part no.	Part no.
U	HP	mm	mm	mm	mm	mm		
3	28	141.9	127.0	–	–	128.4	**20848-608**	**20838-280**
3	42	213.0	198.1	101.6	86.4	128.4	**20848-599**	**20838-271**
3	63	319.7	304.8	157.5	137.2	128.4	**20848-600**	**20838-272**
3	84	426.4	411.5	208.3 [1)]	193.0	128.4	**20848-601**	**20838-273**
4	42	213.0	198.1	101.6	86.4	172.9	**20848-605**	**20838-277**
4	63	319.7	304.8	157.5	137.2	172.9	**20848-606**	**20838-278**
4	84	426.4	411.5	208.3 [1)]	193.0	172.9	**20848-607**	**20838-279**
6	28	141.9	127.0	–	–	261.8	**20848-696**	**–**
6	42	213.0	198.1	101.6	86.4	261.8	**20848-602**	**20838-274**
6	63	319.7	304.8	157.5	137.2	261.8	**20848-603**	**20838-275**
6	84	426.4	411.5	208.3 [1)]	193.0	261.8	**20848-604**	**20838-276**

1) Dimension with unshielded front panel

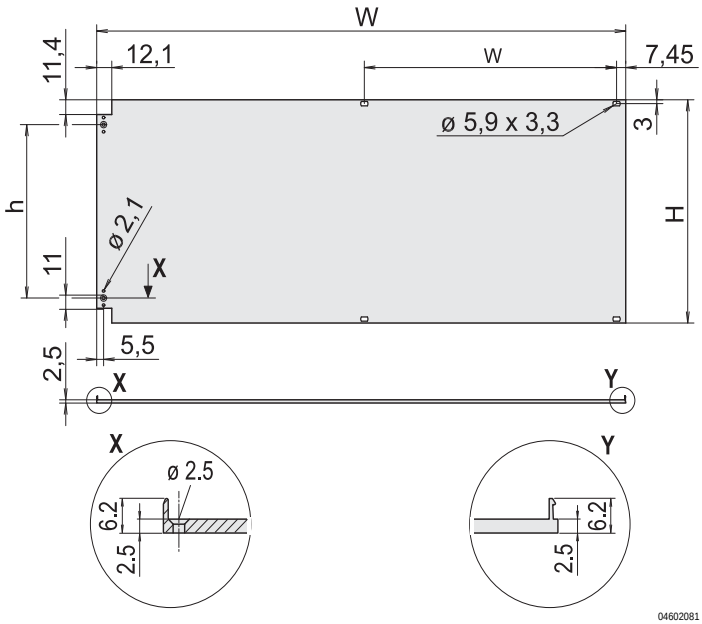
Modules – Front panels

FRONT PANEL, HINGED, SHIELDED

04295002



06106053



04602081

- Suitable for subracks (europacPRO) and cases (ratiopacPRO, propacPRO, compacPRO)
- Mounts on horizontal rails
- Front panel with textile EMC gasket
- Hinges can be fitted on left or right

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front panel, hinged, Al, 2.5 mm, front anodised, rear iridescent green chromated
2	2	Hinge, Zn die-cast, chrome-plated
3	1	Textile EMC gasket, core: foam, sleeve: textile cladding with CuNi coating
4	1	Assembly kit

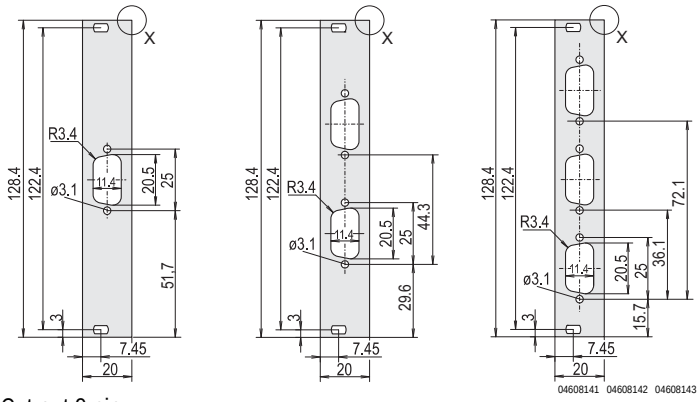
ORDER INFORMATION

Height U	H mm	h mm	W mm	w mm	Part no.
3	128.4	89.9	426.4	203.2	**20848-611**
6	261.8	223.2	426.4	203.2	**20848-617**

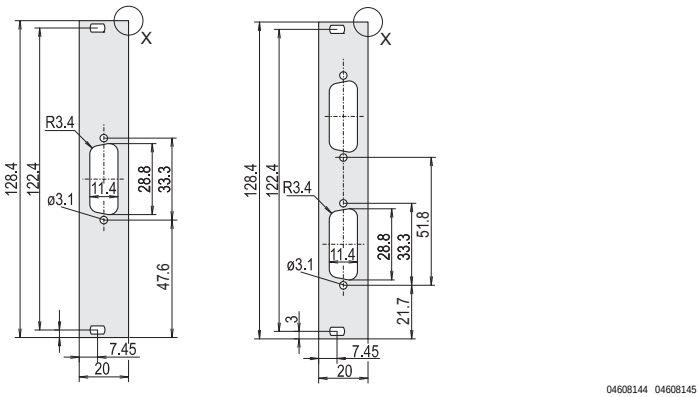
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Modules – Front panels

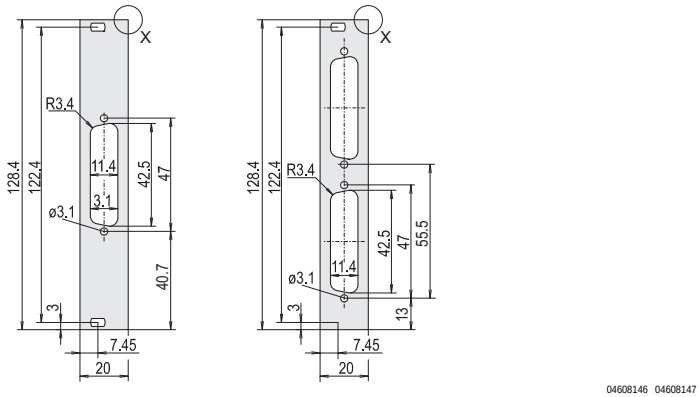
FRONT PANELS FOR D-SUB CONNECTORS



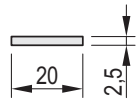
Cut-out 9-pin



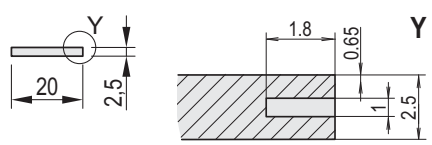
Cut-out 15-pin



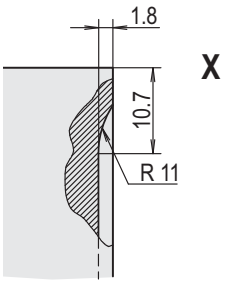
Cut-out 25-pin

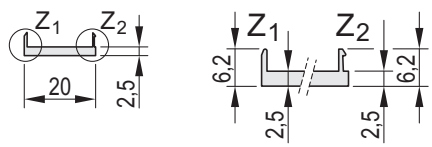


Unshielded



EMC gasket, stainless steel





04608150 04608151 04608149 04608148 04808152 04808153

For textile EMC gasket

- 3 U/4 HP
- Aluminium, front anodised, rear irisdescent green chromated
- Shielding through: stainless steel EMC or textile EMC gasket (please order separately)

DELIVERY COMPRISES

Item	Description
1a	Front panel, Al, 2.5 mm, front anodised, rear irisdescent green chromated
1b	Front panel, Al, 2.5 mm, front anodised, rear iridescent green chromated; for EMC stainless steel gasket
1c	Front panel, U profile, Al, 2.5 mm, front anodised, rear conductive; for EMC gasket (textile)

ORDER INFORMATION

Cut-out	Qty	Unshielded Part no. 1a	For EMC gasket Stainless steel Part no. 1b	Textile Part no. 1c
1 × 9-polig	1 piece (SPQ 5)	**30118-341**	**30118-348**	30849-749
2 × 9-polig	1 piece (SPQ 5)	**30118-344**	**30118-351**	30849-750
3 × 9-polig	1 piece (SPQ 5)	**30118-347**	30118-354	30849-751
1 × 15-polig	1 piece (SPQ 5)	**30118-342**	**30118-349**	30849-752
2 × 15-polig	1 piece (SPQ 5)	**30118-345**	30118-352	30849-753
1 × 25-polig	1 piece (SPQ 5)	**30118-343**	30118-350	30849-754
2 × 25-polig	1 piece (SPQ 5)	**30118-346**	30118-353	30849-755

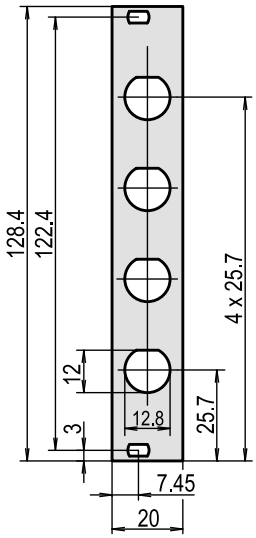
Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

NOTE

- Please order fixing material (sleeves, collar screws) separately, see page 7.107
- Please order stainless steel EMC gasket separately, see page 7.6
- Please order textile EMC gasket separately, see page 7.6

Modules – Front panels

FRONT PANELS FOR COAX CONNECTORS



04602057

- 3 U/4 HP
- Aluminium, 2.5 mm, front anodised, rear irisdescent green chromated

ORDER INFORMATION

Description	Qty/PU	Part no.
Cut-out 4 x Coax, unshielded	1	**30118-355**

NOTE

- Please order fixing material (sleeves, collar screws) separately, see page 7.107

FRONT PANELS 3 U WITH GND/EARTHING CONNECTION

02998001

- Earthed front panel (protection class 1)

DELIVERY COMPRISES (items 1 – 3 assembled)

Item	Qty	Description
1	1	Front panel 3 U, Al, 2.5 mm, front anodised, rear iridescent green chromated with GND/earthing connection
2	4	Plastic sleeve, PA, grey
3	4	Collar screws, M2.5 x 11 and 12.3 Pozidrive, St, nickel-plated
4	1	GND/earthing kit, length of GND/earthing cable 320 mm

ORDER INFORMATION

Height U	Width HP	Qty	Part no.
3	7	1 piece (SPQ 5)	**20119-159**
3	14	1 piece (SPQ 5)	**20119-160**
3	21	1 piece (SPQ 5)	**20119-161**
3	28	1 piece (SPQ 5)	**20119-162**
3	42	1	**20119-163**

Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

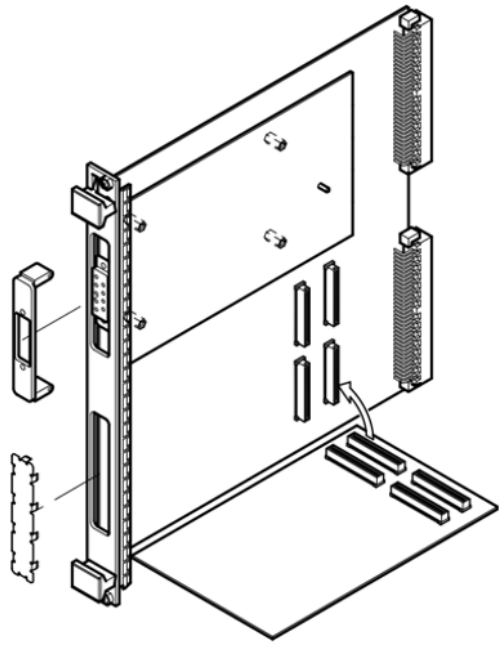
NOTE

- Please order fixing material (sleeves, collar screws) separately, see page 7.107

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Assemblies – Front panels

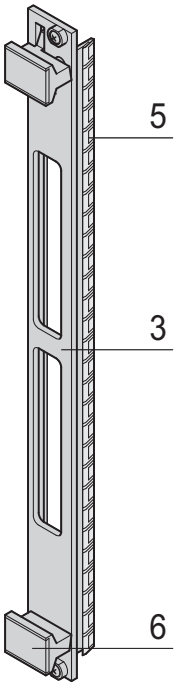
PMC MEZZANINE FRONT PANELS



04615054

- Based on PCI 2.2 specification
  (PCI = **P**eripheral **C**omponent **I**nterface)
- In accordance with PMC mezzanine specification IEEE P 1386

PMC MEZZANINE FRONT PANEL KIT, SHIELDED, WITH TRAPEZOIDAL EXTRACTOR HANDLE TYPE 1



MPA44845

Item 3: front panel, item 5: EMC gasket, item 6: front handle

- PMC= **P**CI **M**ezzanine **C**ard
- For module size 194 x 74 mm2
- In accordance with specification IEEE P1386
  (CMC= **C**ommon **M**ezzanine **C**ard)
- 6 U/4 HP front panel with stainless steel EMC gasket and front handles

DELIVERY INCLUDES (assembled)

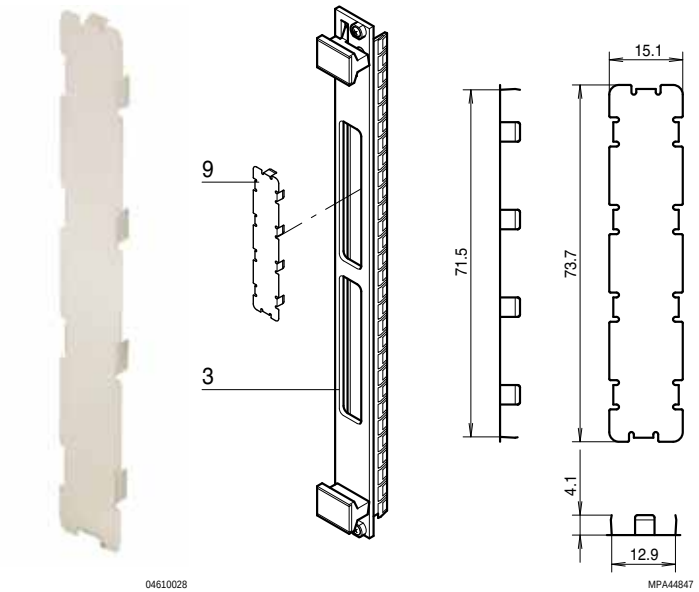
Item	Qty	Description
3	1	PMC front panel, Al extrusion, 6 U, 4 HP, clear passivated
5	1	EMC gasket (St, stainless)
6	2	Trapeziform extraxtor handle, type 1

ORDER INFORMATION

Item	Description	Part No.
3+5+6	Front panel with 2 cut-outs	20897-950
Accessories		
Spacer to mount PMC and FMC mezzanine boards		see page 7.15
Voltage keying/coding pin for PMC mezzanine boards		see page 7.15
PMC cover for front panel cutouts for EMC shielding, PMC gasket for mezzanine front panels		see page 7.13
PMC gasket for mezzanine front panels		see page 7.13

Modules – Front panels

PMC CUTOUT COVER FOR EMC PROTECTION



Item 9: EMC cover; Item 3: front panel

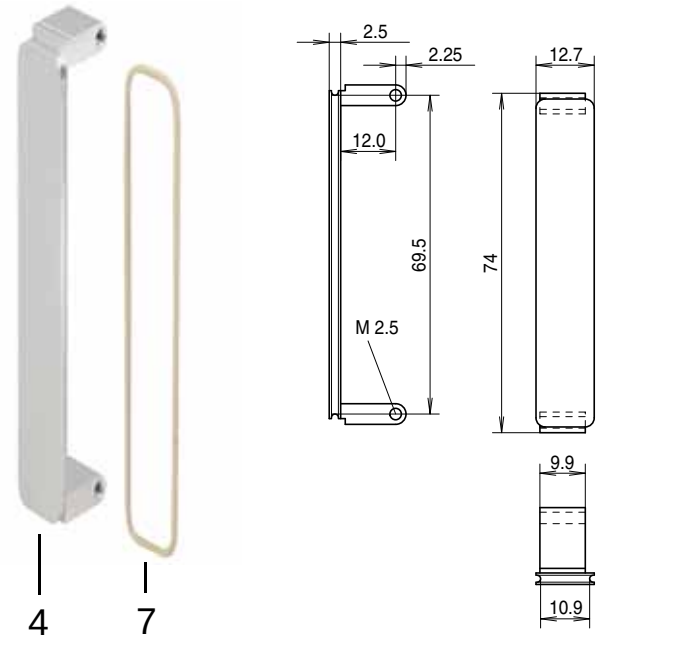
- EMC cover to close unused cut-outs in the PMC mezzanine front panels
- Material stainless steel, 0.2 mm
- Colour: black or bright

ORDER INFORMATION

Colour	Qty	Part no.
Black	1 piece (SPQ 10)	**60835-024**
Bright	1 piece (SPQ 10)	**60835-022**

Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 10 pieces or a multiple.
Pricing is per individual item.

PMC BEZEL FOR MEZZANINE FRONT PANELS



- Mezzanine front panel is fitted into PMC front panel cut-outs; EMC shielding with conductive O-ring
- Material:
  - Aluminium extrusion (anodised, contact surfaces conductive)
  - Zinc die-cast (untreated, black or chrome-plated, matt)

DELIVERY COMPRISES (kit)

Item	Qty	Description
4	1	PMC bezel for mezzanine front panel, Zn die-cast or Al extrusion
7	1	EMC gasket (O-ring), Cho-Seal

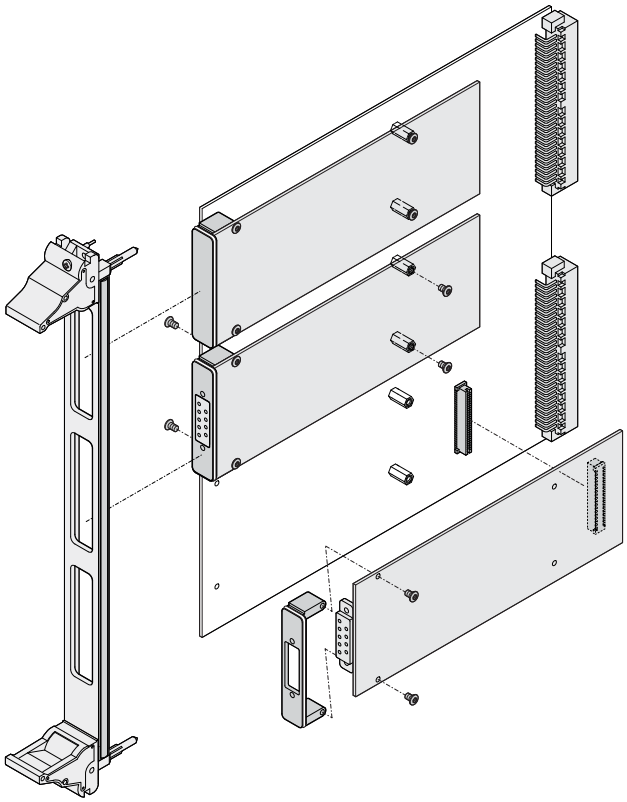
ORDER INFORMATION

PMC mezzaninefront panel Material	Qty/PU	with EMC gasket Part no.	without EMC gasket Part no.
Al extrusion, anodised, contact surfaces conductive	1	**20835-598**	–
Al extrusion, anodised, contact surfaces conductive	10	**20835-889**	**20835-899**
Zn die-cast, untreated	1	**20835-890**	–
Zn die-cast, untreated	10	20835-893	20835-896
Zinc die-cast, black, chromated	1	**20835-922**	–
Zinc die-cast, black, chromated	10	20835-924	20835-931
Zinc die-cast, chrome-plated, matt	1	**20835-923**	–
Zinc die-cast, chrome-plated, matt	10	20835-928	20835-929
Cheesehead screw M2.5 × 5 mm, PU 100 pieces			**21100-624**
EMC gasket O-ring, 1 piece (Standard Pack Quantity 10 pieces)			**60835-021**

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

Assemblies – Front panels

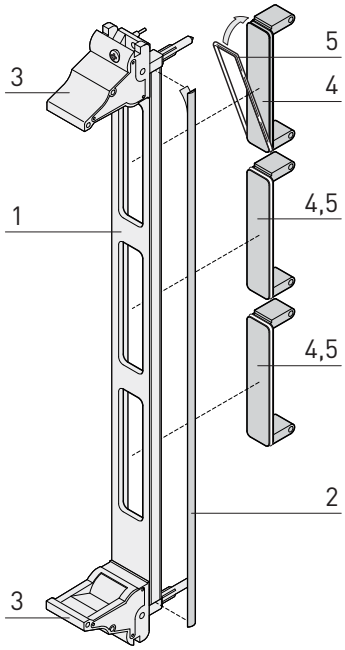
FMC MEZZANINE FRONT PANELS



04615052

- FMC = FPGA mezzanine card
- For standard defined I/O mezzanine modules which connect to carrier cards
- For single 69.0 x 76.5 mm or double 139.0 x 76.5 mm modules
- In accordance with Vita 57.1 specification

FMC MEZZANINE FRONT PANEL KIT, SHIELDED, WITH IEL HANDLE



04615050

- 3 U or 6 U, 4 HP, U-shaped front panels with textile gasketing
- 1 or 3 FMC cutouts (depending on height)
- 1 or 2 IEL front handles (depending on height)
- EMC shielded, both the front panel and the FMC bezels

DELIVERY INCLUDES (assembled)

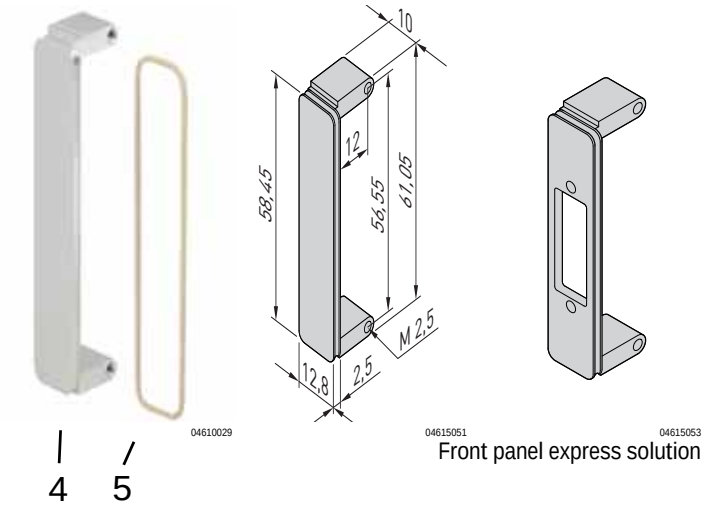
Item	Qty 3 U	Qty 6 U	Description
1	1	1	FMC front panel, U profile, Al, 4 HP, front anodized, rear conductive, 3 U has 1 cut out, 6 U has 3 cut outs
2	1	1	EMC textile gasket for front panel
3	1	2	IEL handle (handel, black, RAL 9005; button, light grey, RAL 7035)
4	1	3	FMC bezel for front panel cut outs
5	1	3	EMC gasket (O-ring)
6	1	1	Assembly kit

ORDER INFORMATION

Height U	Part no.
3	20836-253
6	20836-254
Accessories	
Spacer to mount PMC mezzanine boards	see page 7.15

Assemblies – Front panels

EMC BEZEL FOR FMC MEZZANINE FRONT PANEL CUT-OUTS



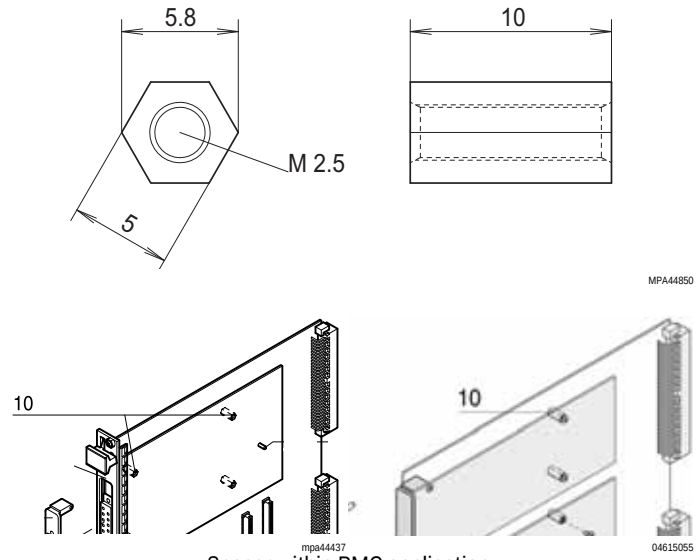
Front panel express solution

- FMC bezel is fitted into FMC Mezzanine front panel cut-outs
- Material, Al extrusion (anodised, contact surface conductive)
- Shielding for FMC bezels with an optional conductive O-ring, please order separately

ORDER INFORMATION

Description	Item	Qty/PU piece	Part no.
EMC bezel for FMC Mezzanine front panel cut outs	4	10	20835-849
Accessories			
EMC gasket for mezzanine front panel item 5 , O-ring, (VITA 57.1), 1 piece (standard pack quantity 10 pieces)			**60835-077**
Cheesehead screw M2.5 × 5 mm, PU 100 pieces			**21100-624**

SPACER TO MOUNT PMC AND FMC MEZZANINE BOARDS



Spacer within PMC application

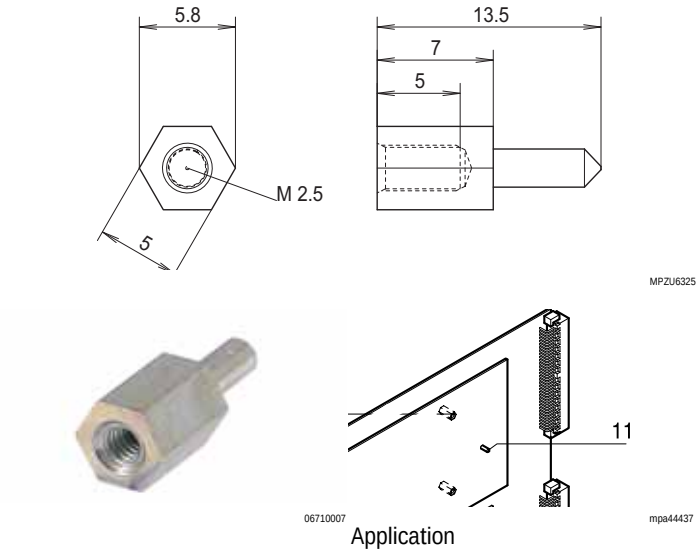
- To provide a standoff between mezzanine boards per the IEEE P1386 or VITA 57.1 specification and the carrier card

ORDER INFORMATION

Description	Item	Material	Qty	Part no.
Spacer	10	St, zinc-plated	1 piece (SPQ 10)	**60897-278**

Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 10 pieces or a multiple.
Pricing is per individual item.

VOLTAGE KEYING/CODING PIN FOR PMC MEZZANINE BOARDS



Application

- To prevent accidental damage when fitting mezzanine boards, keying/coding pins are bolted to the VMEbus boards to distinguish between 3.3 V and 5 V operation. The mezzanine boards have a hole drilled in the appropriate position. The keying/coding pin thus ensures that only mezzanine boards with the same operating voltage can be inserted. For double-height euroboards 2 pieces are required.

ORDER INFORMATION

Description	Item	Material	Qty	Part no.
Keying/ coding pin 5 V/3.3 V	11	St, zinc-plated	1 piece (SPQ 10)	**60827-026**

Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 10 pieces or a multiple.
Pricing is per individual item.

Part number in bold face type: ready for shipping within 2 working days
Part number in normal type: ready for shipping within 10 working days

OVERVIEW

MAIN KATALOG

Cabinets 1

Wall mounted cases 2

Accessories for cabinets and wall mounted cases . . 3

Climate control . . 4

Electronics cases 5

Subracks/ 19" chassis 6

Front panels, plug-in units 7

Systems 8

Power supply units 9

Backplanes 10

Connectors, front panel component system 11

Appendix 12

04612001

PLUG-IN UNITS AS KITS OR FROM INDIVIDUAL PARTS

- Handles in different designs for various applications
- Inserter/extractor handles for forces up to 1500 N
- Upgradable EMC shielding

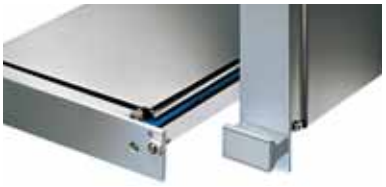
STANDARDS

- IEC 60297-3-101 / IEEE 1101.1/11
  IEC 60297-3-102 / IEEE 1101.10
  IEC 60297-3-103
  IEC 1296

SERVICEPLUS

e.g. individual configuration and assembly
e.g. modifications (special colours or sizes)
e.g. custom solutions with modification to the plug-in units

Handles for plug-in units

		Kit Page	Individual components Page
04602005	**For CompactPCI and VME64x applications** Inserter/extractor handle, type IEL/IET, allows keying/coding and insertion/extraction forces up to 700 N per pair	7.18	7.20
04605005	**For VPX, VXS, CompactPCI and VME64x applications** Inserter/extractor handle, type XL, allows keying/coding and insertion/extraction forces up to 1500 N per pair	7.30	7.31
04604059	**For e.g. VMEbus applications** Trapeziform extractor handle, type 2	7.33	7.35
04692005	**For e.g. VMEbus applications** Trapeziform extractor handle, type 1	7.40	7.42
04692011	**For Multibus® II applications** Extractor handle, multibus type II, IEC 60297	–	7.46
04692008	**For plug-in units in accordance with IEC 60297** Extractor handle in key form 1	–	7.48
04692010	**For plug-in units in accordance with IEC 60297** Extractor handle in key form 2	–	7.51
04692003	**For plug-in units in accordance with IEC 60297** Static handle	7.54	7.56
 04692004	**Accessories for plug-in units** Mechanical protection for static trapeziform handle and fixing materials kit	7.64	–

Overview 7.17
Plug-in units with injector and extractor handles

For CompactPCI and VME64x applications **7.18**

For VPX, VXS, CompactPCI and VME64x applications 7.30

For e.g. VMEbus applications type 2 . . . . . **7.33**

For e.g. VMEbus applications type 1 . . . . . **7.40**

For Multibus® II applications **7.46**

For plug-in units in accordance with IEC 60297 . . . **7.48**

For plug-in units in accordance with IEC 60297 . . . **7.51**

For plug-in units in accordance with IEC 60297 . . . **7.54**

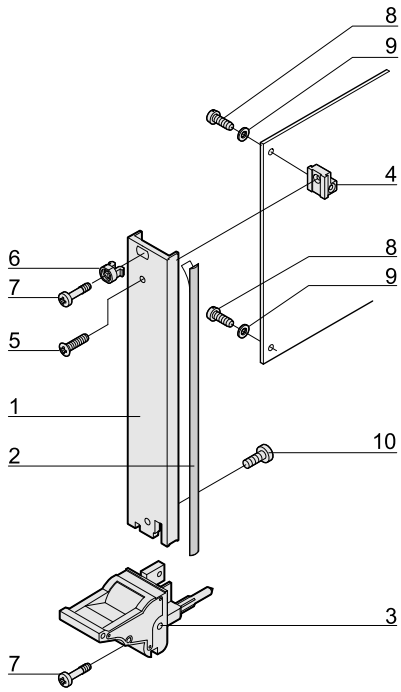
Accessories for plug-in units **7.62**

PCB cover **7.64**

KITS

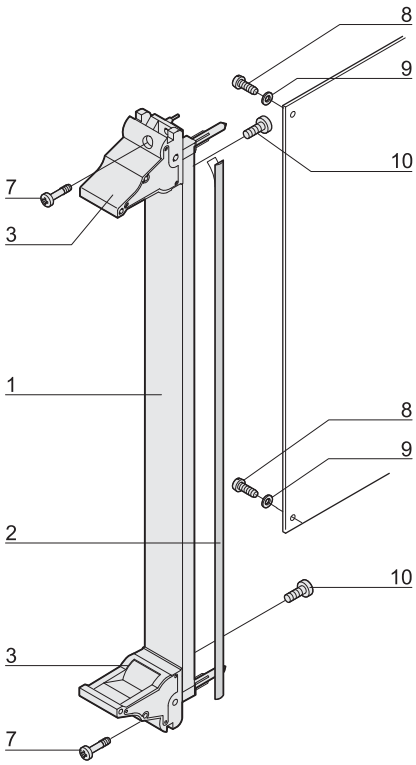
PLUG-IN UNITS WITH IEL INSERTER/EXTRACTOR HANDLE FOR COMPACTPCI/VME64X APPLICATIONS

3 U



04602073

6 U



04602074

- In accordance with IEEE 1101.10 and IEC 60297-3-102
- Codable to IEC 60297-3-103/ IEEE 1101.10
- Front panel shielded
- Suitable for insertion and extraction forces up to 700 N (per pair)
- Suitable for fitting microswitches

DELIVERY COMPRISES (kit)

Item	Qty 3 U <8HP	Qty 3 U ≥8HP	Qty 6 U <8HP	Qty 6 U ≥8HP	Description
1	1	1	1	1	Front panel (U profile), Al, front anodised, rear conductive
2	1	1	1	1	EMC sealing (textile), core: foam, sleeve: textile cladding, CuNi coated
3	1	1	2	2	Handle with integrated alignment pin for perforated strips and guide rails, lever: plastic, PC, black, RAL 9005 key: plastic, PC, light grey, RAL 7035
4	1	1	-	-	Board support, die-cast zinc
5	1	1	-	-	Raised Pozidrive countersunk screw M2.5 × 8, St, nickel-plated
6	1	3	-	2	Sleeve, PA, grey
7	2	4	2	4	Pozidrive collar screw, M2.5 × 12.3, St, nickel-plated
8	2	2	2	2	Panhead screw with Torx/slot, M2.5 × 6, St, zinc-plated, self-locking
9	2	2	2	2	Washer A2.7, DIN 125, St, nickel-plated
10	1	1	2	2	Panhead screw with Torx, M2.5 × 7, St, nickel-plated

ORDER INFORMATION

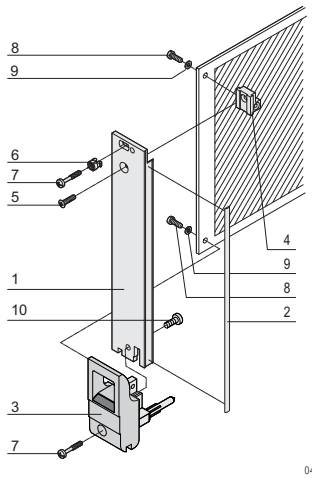
Width HP	Part no. Rear I/O	Part no. Front assembly
3 U Height		
4	**20848-751**	**20848-585**
6	**-**	**20848-587**
8	**20848-752**	**20848-589**
10	**-**	**20848-590**
12	**-**	**20848-591**
6 U Height		
4	**-**	**20848-592**
6	**-**	**20848-594**
8	**-**	**20848-596**
10	**-**	**20848-597**
12	**-**	**20848-598**
Accessories		
Microswitch for handles, CompactPCI/VME64x application PU 10 pieces		**20817-606**

- Dimension drawing of front profile see page 7.26
- Description of microswitch see page 7.31

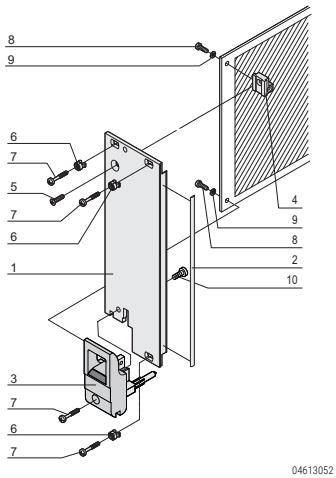
KITS

PLUG-IN UNITS WITH IET INSERTION/EXTRACTOR HANDLE FOR COMPACTPCI/VME64X APPLICATIONS

3 U

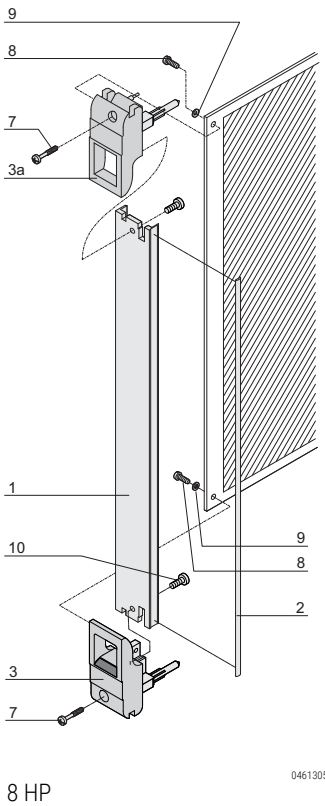


< 8 HP

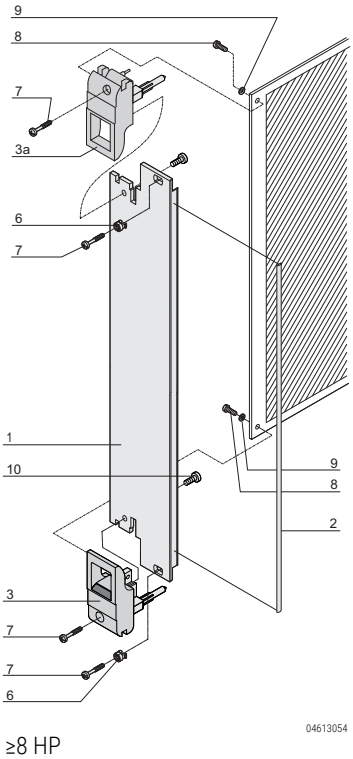


≥8 HP

6 U



< 8 HP



≥8 HP

- Suitable for insertion and extraction forces up to 700 N (per pair)
- Version for telecoms applications
- To IEEE 1101.10 and IEC 60297-3-102
- Codable to IEC 60297-3-103/ IEEE 1101.10
- Front panel, shielded (3 U, 6 HP)
- designed for fitting of microswitches
- Online download of 3D CAD data

DELIVERY INCLUDES (Kit)

Item	Qty				Description
	3 U		6 U		
	<8 HP	≥8 HP	<8 HP	≥8 HP	
1	1	1	1	1	Front panel (U profile), Al, front anodized, rear conductive
2	1	1	1	1	EMC sealing (textile), core: foam, sleeve: textile cladding, CuNi coated
3	1	1	2	2	Handle with integrated alignment pin for perforated strips and guide rails, lever: plastic, PC, black, RAL 9005 Key: Plastic, PC, light gray, RAL 7035
4	1	1	-	-	Board support, die-cast zinc
5	1	1	-	-	Raised Pozidrive countersunk screw M2.5 × 8, St, nickel-plated
6	1	3	-	2	Sleeve, PA, gray
7	2	4	2	4	Pozidrive collar screw, M2.5 × 12.3, St, nickel-plated
8	2	2	2	2	Panhead screw with Torx/slot, M2.5 × 6, St, zinc-plated, self-locking
9	2	2	2	2	Washer A2.7, DIN 125, St, nickel-plated
10	1	1	2	2	Panhead screw with Torx, M2.5 × 7, St, nickel-plated

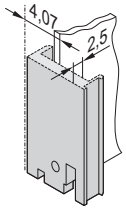
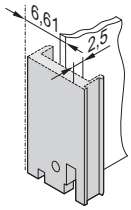
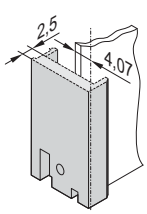
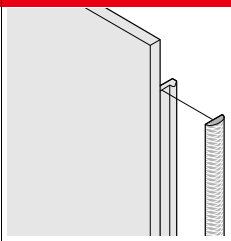
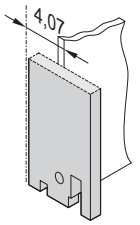
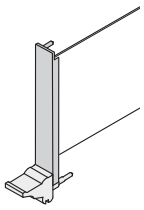
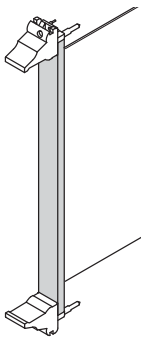
ORDER INFORMATION

Width HP	Part no.
3 U Height	
4	**20848-763**
8	**20848-764**
12	**20848-765**
6 U Height	
4	**20848-766**
8	**20848-767**
12	**20848-768**
Accessories	
Coding peg, PC, UL 94 V-0, grey, RAL 7035 PU 100 pieces	**20817-501**
Microswitch for handles, CompactPCI/VME64x application PU 10 pieces	**20817-606**

- For description of coding peg and microswitch see page 7.23
- Description of microswitch see page 7.31

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

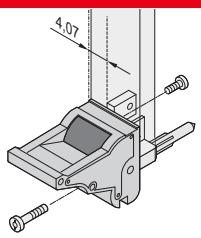
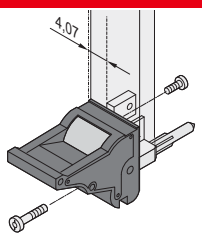
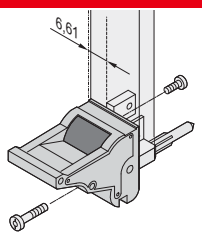
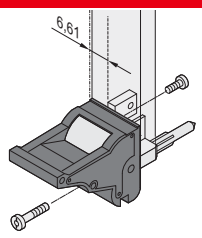
ORDER INFORMATION

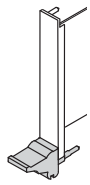
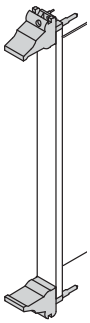
		Front panel, U profile, shieldable			Textile EMC gasket		Front panel, flat, unshielded, front mounting
		Front mounting	Front mounting, PCB fixing with 0.1" offset	Rear I/O mounting			
		 04608060	 04608062	 04608061	 BGA45760		 04608063
		Al extrusion, 2.5 mm, front anodised, rear conductive; alignment pin pressed-in (3 U only), stainless steel; manufacturing process causes various surface structures to appear between 4 to 12 HP and 14 to 16 HP			always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0, temperature range -40 ... 70 °C		front panel, Al, 2.5 mm, front anodised, rear irisdescent green chromated
	Width HP	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5)[1]
		3 U Height					
 04608067	4	**30848-312**	**30848-426**	**30848-867**			**30848-327**
	5	**30848-300**	**30848-427**	–			**30848-328**
	6	**30848-313**	**30848-428**	–			**30848-329**
	7	**30848-301**	**30848-429**	–			**30848-330**
	8	**30848-314**	**30848-430**	**30848-869**			**30848-331**
	9	**20848-227**	–	–	**21101-853**	**21101-854**	–
	10	**30848-315**	**30848-431**	–			**30848-333**
	11	**20848-228**	–	–			–
	12	**30848-316**	**30848-432**	**30848-985**			**30848-335**
	14	**20848-230**	–	–			–
	16	**20848-232**	–	–			–
		6 U Height					
 04608066	4	**30848-317**	**30848-317**	**30848-317**			**30848-336**
	5	**30848-304**	**30848-304**	**30848-304**			**30848-337**
	6	**30848-318**	**30848-318**	**30848-318**			**30848-338**
	7	**30848-305**	**30848-305**	**30848-305**			**30848-339**
	8	**30848-319**	**30848-319**	**30848-319**			**30848-340**
	9	**20848-243**	**20848-243**	**20848-243**	**21101-855**	**21101-856**	–
	10	**30848-320**	**30848-320**	**30848-320**			**30848-342**
	11	**20848-244**	**20848-244**	**20848-244**			–
	12	**30848-321**	**30848-321**	**30848-321**			**30848-344**
	14	**20848-246**	**20848-246**	**20848-246**			–
	16	**20848-248**	**20848-248**	**20848-248**			–
Fixing material see page		7.23	7.23	7.23			7.23
Dimensions see page		7.26	7.26	7.25			7.27

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

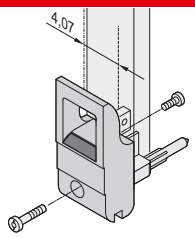
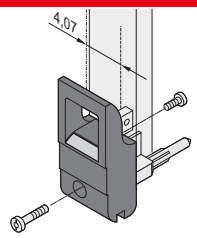
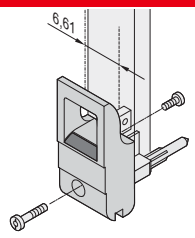
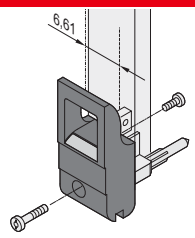
ORDER INFORMATION

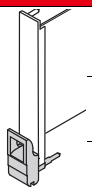
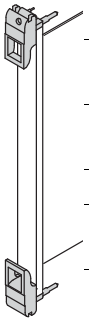
	Inserter/extractor handle, type IEL, board fixing without offset		Inserter/extractor handle, type IEL, board fixing with 0.1" offset	
	lever: light grey, RAL 7035 key: black, RAL 9005	lever: black, RAL 9005 key: light grey, RAL 7035	lever: light grey, RAL 7035 key: black, RAL 9005	lever: black, RAL 9005 key: light grey, RAL 7035
	 04608050	 04608052	 04608051	 04608053
	in accordance with IEEE 1101.10 and IEC 60297-3-102, with locking, suitable for insertion and extraction forces up to 700 N (per pair), suitable for fitting of microswitches; block die-cast zinc, nickel-plated, with integrated alignment pin for perforated strip, codable to IEEE 1101.10 and IEC 60297-3-103, lever/key UL 94 V-0, slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated, panhead screw with Torx, M2.5 x 7, St, nickel-plated		in accordance with IEEE 1101.10 and IEC 60297-3-102, with locking, suitable for insertion and extraction forces up to 700 N (per pair), suitable for fitting of microswitches; 0.1" offset is used for PSUs with SMD Plus, block die-cast zinc, nickel plated; with integrated alignment pin for perforated strip, codable to IEEE 1101.10 and IEC 60297-3-103, lever/key UL 94 V-0, slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated, panhead screw with Torx, M2.5 x 7, St, nickel-plated	

Assembly	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces
 04608071	**3 U Height** bottom							
Front side	**20817-620**	**20817-621**	**20817-612**	**20817-613**	**20817-690**	**20817-691**	**20817-682**	**20817-683**
Rear I/O	**20817-622**	**20817-623**	**20817-614**	**20817-615**	–	–	–	–
 04608070	**6 U Height** top							
Front side	**20817-622**	**20817-623**	**20817-614**	**20817-615**	**20817-692**	**20817-693**	**20817-684**	**20817-685**
Rear I/O	**20817-620**	**20817-621**	**20817-612**	**20817-613**	–	–	–	–
	bottom							
Front side	**20817-620**	**20817-621**	**20817-612**	**20817-613**	**20817-690**	**20817-691**	**20817-682**	**20817-683**
Rear I/O	**20817-622**	**20817-623**	**20817-614**	**20817-615**	–	–	–	–
Dimensions see page	7.28				7.28			

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

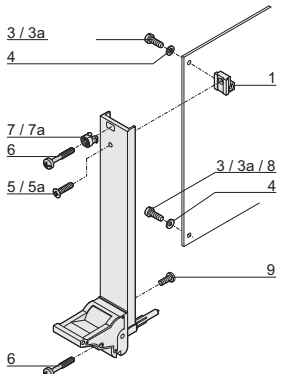
ORDER INFORMATION

	Inserter/extractor handle, type IET, board fixing without offset		Inserter/extractor handle, type IET, board fixing with 0.1" offset	
	lever: light grey, RAL 7035 key: black, RAL 9005	lever: black, RAL 9005 key: light grey, RAL 7035	lever: light grey, RAL 7035 key: black, RAL 9005	lever: black, RAL 9005 key: light grey, RAL 7035
	 04608054	 04608056	 04608055	 04608057
	in accordance with IEEE 1101.10 and IEC 60297-3-102, with locking, suitable for insertion and extraction forces up to 700 N (per pair), suitable for fitting of microswitches; block die-cast zinc, nickel-plated, with integrated alignment pin for perforated strip, codable to IEEE 1101.10 and IEC 60297-3-103, lever/key UL 94 V-0, Slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated, panhead screw with Torx, M2.5 x 7, St, nickel-plated		in accordance with IEEE 1101.10 and IEC 60297-3-102, with locking, suitable for insertion and extraction forces up to 700 N (per pair), suitable for fitting of microswitches; 0.1" offset is used for PSUs with SMD Plus: block die-cast zinc, nickel plated; with integrated alignment pin for perforated strip, codable to IEEE 1101.10 and IEC 60297-3-103, lever/key UL 94 V-0, slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated, panhead screw with Torx, M2.5 x 7, St, nickel-plated	

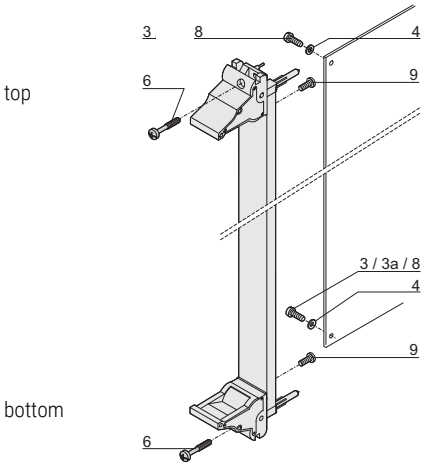
Assembly	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces	PU 10 pieces	PU 100 pieces
 04608073	**3 U Height** bottom							
Front side	**20817-660**	**20817-661**	**20817-652**	**20817-653**	**20817-714**	**20817-715**	**20817-706**	**20817-707**
Rear I/O	**20817-662**	**20817-663**	**20817-654**	**20817-655**	–	–	–	–
 04608072	**6 U Height** top							
Front side	**20817-662**	**20817-663**	**20817-654**	**20817-655**	**20817-716**	20817-717	**20817-708**	**20817-709**
Rear I/O	**20817-660**	**20817-661**	**20817-652**	**20817-653**	–	–	–	–
	bottom							
Front side	**20817-660**	**20817-661**	**20817-652**	**20817-653**	**20817-714**	**20817-715**	**20817-706**	**20817-707**
Rear I/O	**20817-662**	**20817-663**	**20817-654**	**20817-655**	–	–	–	–
Fixing material see page	7.23				7.23			
Dimensions see page	7.29				7.29			

ORDER INFORMATION

3 U



6 U

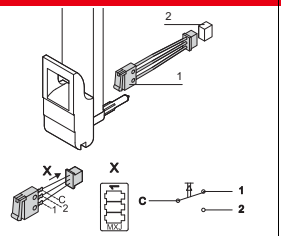
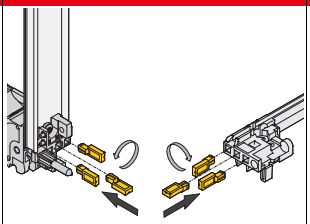
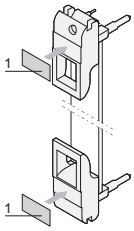
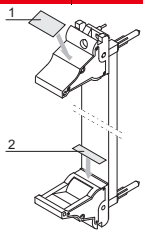


Fixing material	Item	3 U	Required quantity 3 U < 8 HP	3 U ≥ 8 HP	6 U < 8 HP	6 U ≥ 8 HP	Qty/PU	Part no.
Printed board bracket Zn die-cast	1	06707050	1	1	–	–	1 piece (SPG 10)[1)]	**60807-181**
Pozidrive panhead screw M2.5 × 6, St, nickel-plated , not for 0.1" offset	3	AZA45177	2	2	2	2	100	**21101-219**
Slotted panhead screw with Torx 8 M2.5 × 6, St, zinc-plated, self-securing thread not for 0.1" offset	3a	aza45940	2	2	2	2	100	**24560-159**
Washer 2.7, DIN 125, St, nickel-plated	4	AZA46586	2	2	2	2	100	**21100-721**
Raised Pozidrive countersunk panhead screw M2.5 × 8, St, nickel-plated	5	06702056	1	1	–	–	100	**21100-429**
Raised countersunk panhead screw with Torx 8 M2.5 × 8, St, nickel-plated	5a	06708050	1	1	–	–	100	**24560-164**
Pozidrive/slotted collar screw M2.5 × 12.3, St, nickel-plated	6	AZA46586	1	3	–	2	100	**21101-101**
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	7	aza45933	1	3	–	2	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	7a	aza45934	1	3	–	2	100	**21100-662**
Pozidrive panhead screw for IEL/IET handle with 0.1" offset M2.5 × 10, nickel-plated steel	8	AZA45177	2	2	2	2	100	**21101-220**
Torx panhead screw M2.5 × 7, St, nickel-plated, Torx 8,	9	aza45940	1	1	2	2	100	**24560-147**

SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ORDER INFORMATION

Microswitch	Keying/coding	Label strips	Label strips	
with cable and plug	in accordance with IEC 60297-3-103	19 x 9.5 mm	19 x 9.5 mm	19 x 4.8 mm
 bga46314 bga46315	 04612052	 04606050	 bga46317	
Molex connector housing 51021-0300, Molex crimp contact 50058-8000 and fixing clip (item 3), plastic, PC, UL 94 V-0, max. switched current 50 mA, operating range -25 °C to +70 °C, mech. life ≥ 20,000 switching cycles, electr. life ≥ 20,000 switching cycles; suitable mating connectors (item 2) e.g. Molex 53261-0319, 53048-0310, 53047-0310, 53398-0319, 51047-0300 not included in scope of delivery	The keying/coding pegs prevent plug-in units to be mounted in wrong slots. They are inserted in the chambers of the codable card guides as well as in the insertion/extraction handles IEL or IET (4 possible positions), resulting in 64 codings per card guide; when coding the upper and lower card guide, 4096 codings will result; guide rails for coding see page 6.40	Polyester, self-adhesive,white, 1 sheet 210 pieces (Item 1)	Polyester, self-adhesive, white, 1 sheet 210 pieces (item 1)	Polyester, self-adhesive, white, 1 sheet 320 pieces (item 2)
PU 10 pieces	PU 100 pieces	PU 210 pieces	PU 210 pieces	PU 320 pieces
3 U Height bottom				
20817-606	**20817-501**	**60817-340**	**60817-340**	**60817-341**
6 U Height top				
20817-606	**20817-501**	**60817-340**	**60817-340**	**60817-341**
bottom				
20817-606	**20817-501**	**60817-340**	**60817-340**	**60817-341**

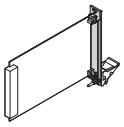
Plug-in units – for CompactPCI, VME64x

DIMENSIONS

FRONT PANELS, U-PROFILES, INSERTER/EXTRACTOR HANDLES, TYPE IEL/IET, REAR I/O, SHIELDABLE

PCB fixing without offset

3 U



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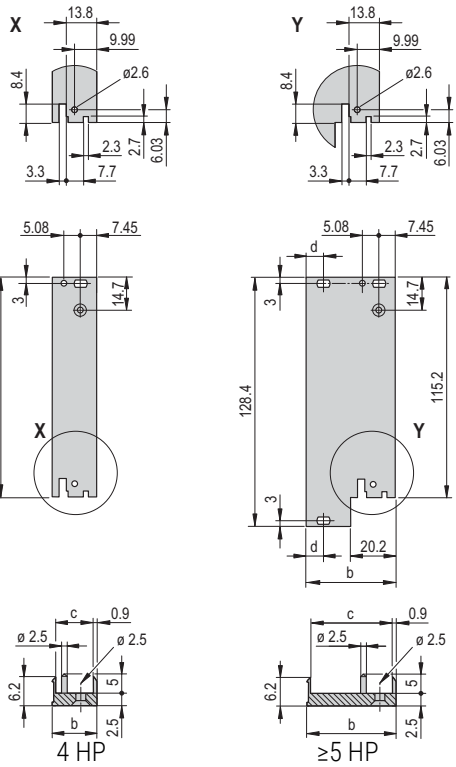
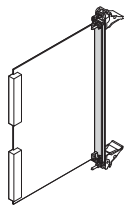


04608069

6 U



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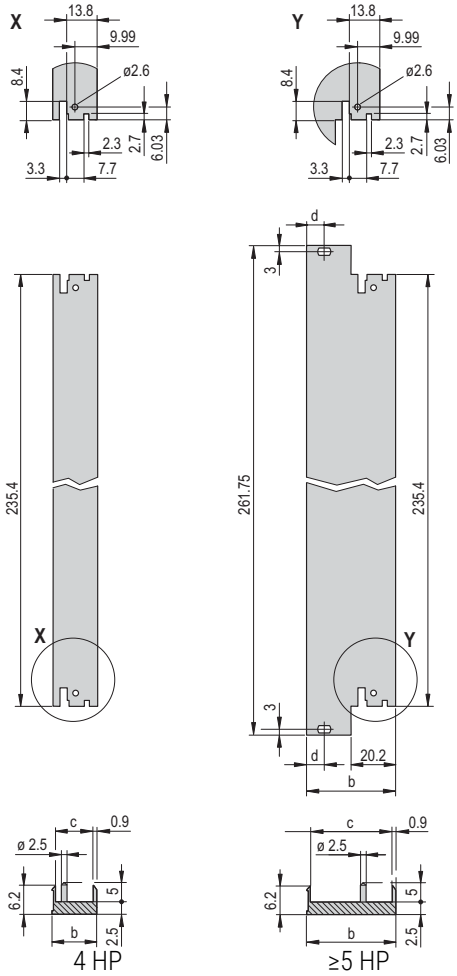


04608075

Dimensions table			
Width	b	c	d
HP	mm	mm	mm
4	19.98	17.45	–
5	25.06	22.53	–
6	30.14	27.61	–
7	35.22	32.69	–
8	40.30	37.77	7.45
9	45.38	42.85	7.45
10	50.46	47.93	7.45
11	55.54	53.01	7.45
12	60.62	58.09	7.45
14	70.78	68.25	7.45
16	80.94	78.41	7.45

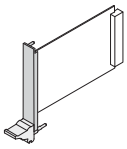
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Plug-in units – for CompactPCI, VME64x

DIMENSIONS FRONT PANELS, U-PROFILES, INSERTER/EXTRACTOR HANDLES, TYPE IEL, IET, SHIELDABLE

PCB fixing without offset / with 0.1" offset

3 U



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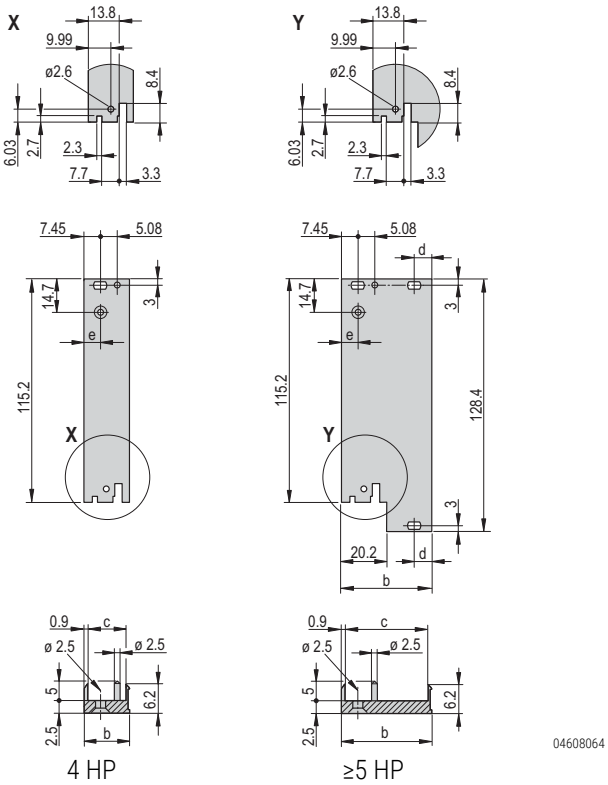
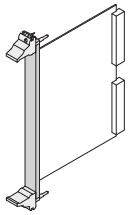


4 HP ≥5 HP

04608064

6 U



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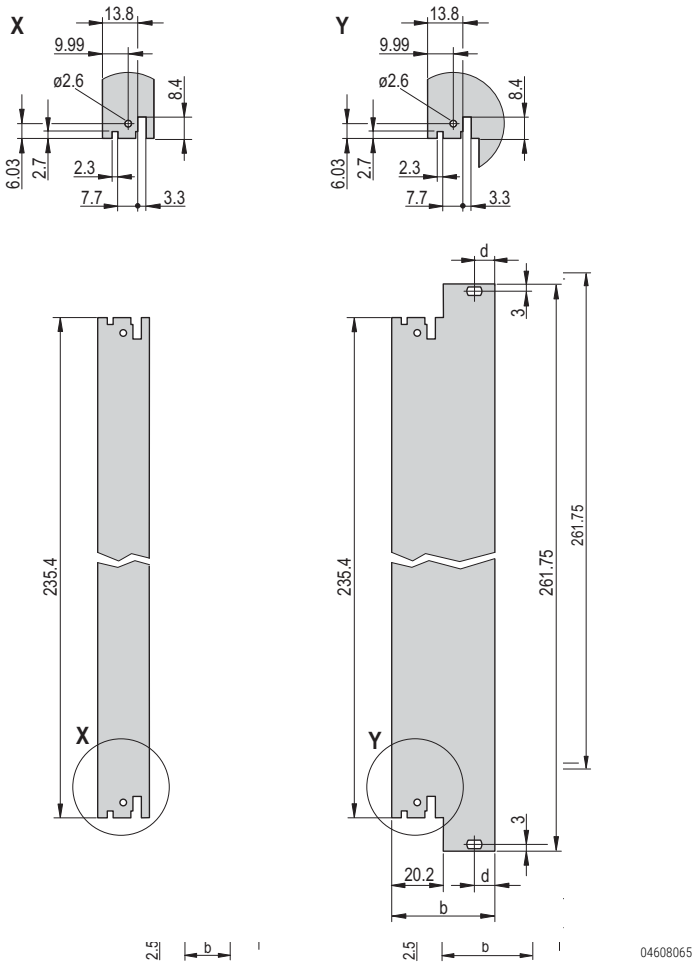


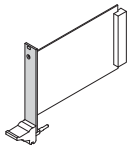
4 HP ≥5 HP

04608065

Dimensions table					
Width HP	b mm	c mm	d mm	without offset e mm	with 0.1" offset e mm
4	19.98	17.45	–	7.45	9.99
5	25.06	22.53	–	7.45	9.99
6	30.14	27.61	–	7.45	9.99
7	35.22	32.69	–	7.45	9.99
8	40.30	37.77	7.45	7.45	9.99
9	45.38	42.85	7.45	7.45	9.99
10	50.46	47.93	7.45	7.45	9.99
11	55.54	53.01	7.45	7.45	9.99
12	60.62	58.09	7.45	7.45	9.99
14	70.78	68.25	7.45	7.45	9.99
16	80.94	78.41	7.45	7.45	9.99

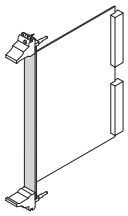
PCB fixing without offset

3 U



04608080

6 U



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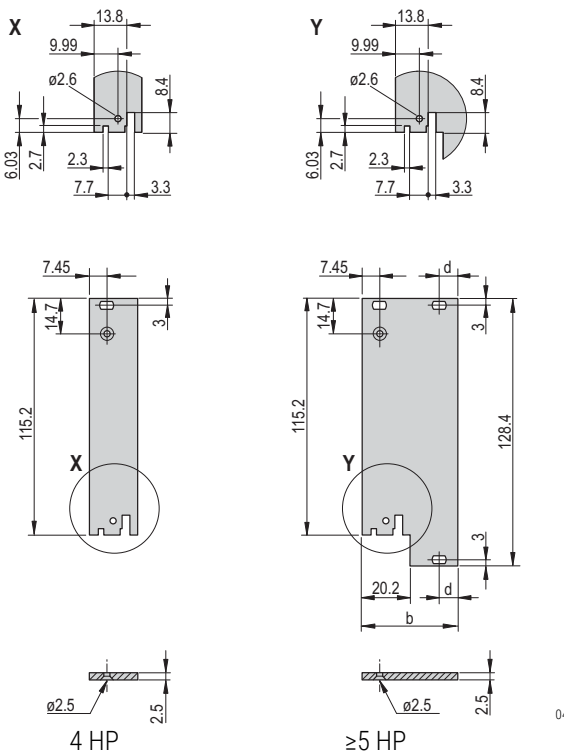
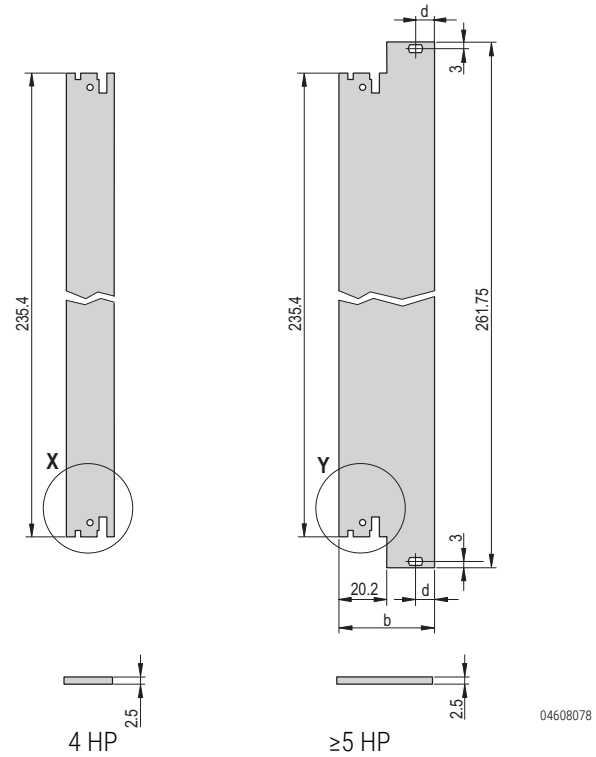


04608077

4 HP ≥5 HP



04608078

4 HP ≥5 HP

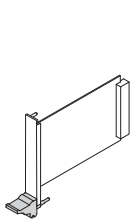
Dimensions table

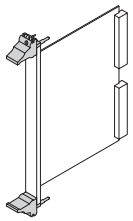
Width HP	b mm	d mm
4	19.98	–
5	25.06	–
6	30.14	–
7	35.22	–
8	40.30	7.45
9	45.38	7.45
10	50.46	7.45
11	55.54	7.45
12	60.62	7.45
14	70.78	7.45
16	80.94	7.45

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

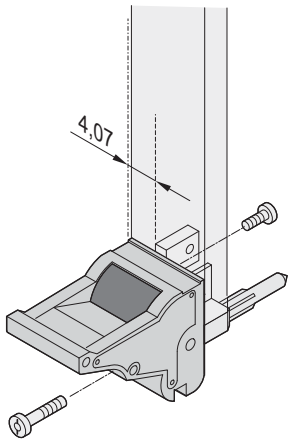
Plug-in units – for CompactPCI, VME64x

DIMENSIONS INSERTER/EXTRACTOR HANDLE, TYPE IEL





04608071 04608070



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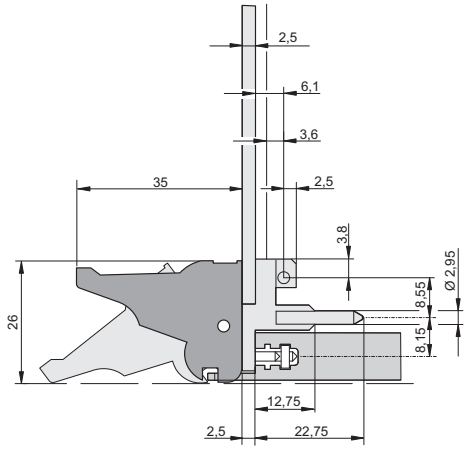

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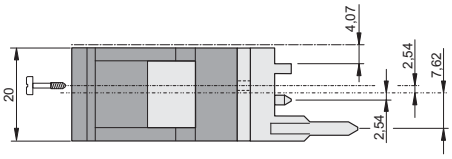
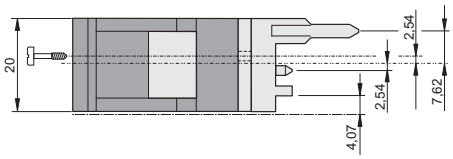
bottom



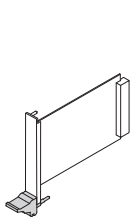
04607053

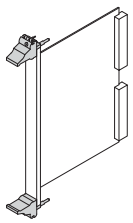
top



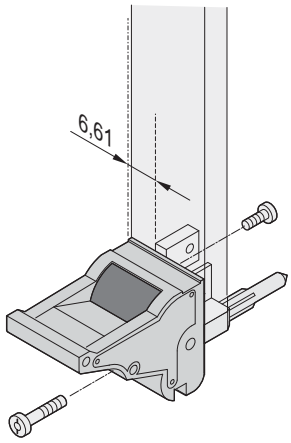
04607054

DIMENSIONS INSERTER/EXTRACTOR HANDLE, TYPE IEL, 0.1" OFFSET





04608071 04608070



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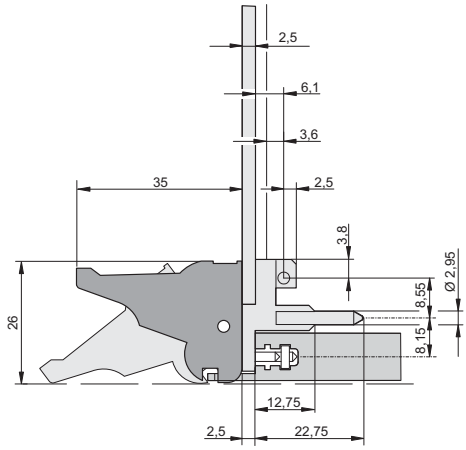

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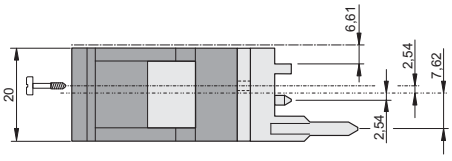
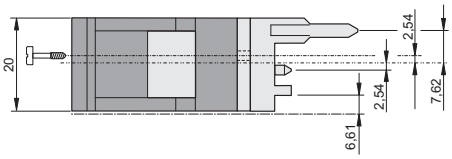


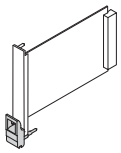
04603061

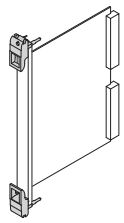
top



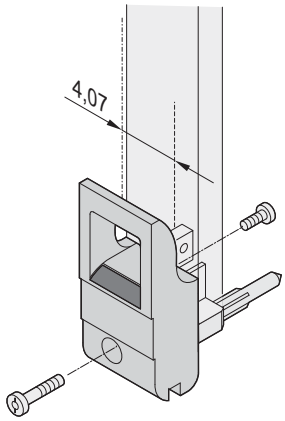
04607055

DIMENSIONS INSERTER/EXTRACTOR HANDLE, TYPE IET

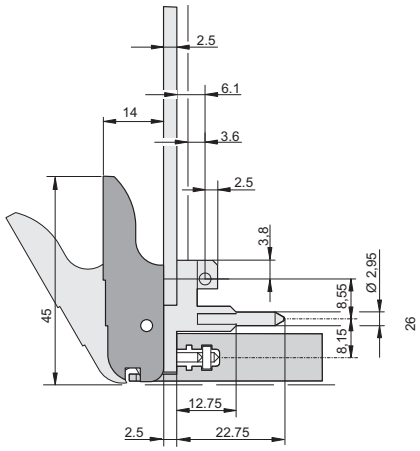




04608073 04608072

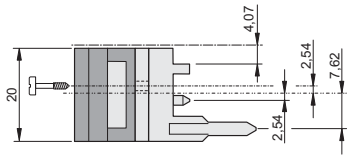


04608054



04603060

bottom



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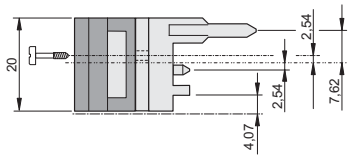
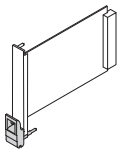
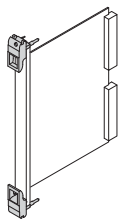


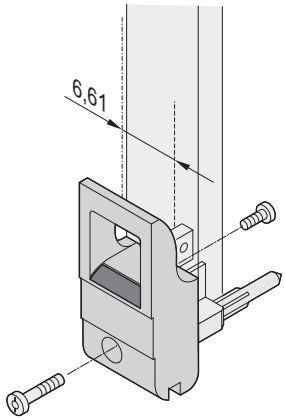
04607057

DIMENSIONS INSERTER/EXTRACTOR HANDLE, TYPE IET, 0.1" OFFSET





04608073 04608072



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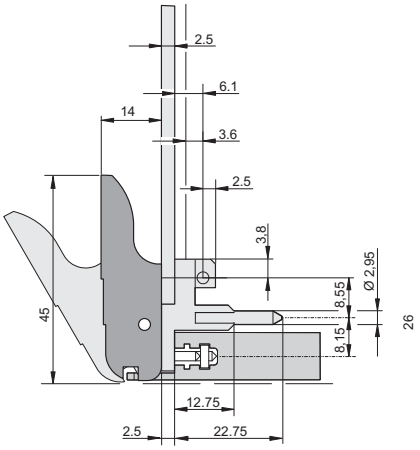

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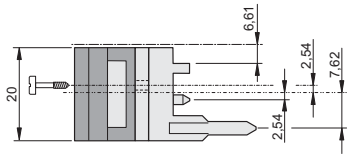
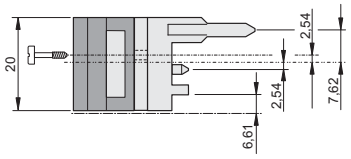
bottom



04603062

top

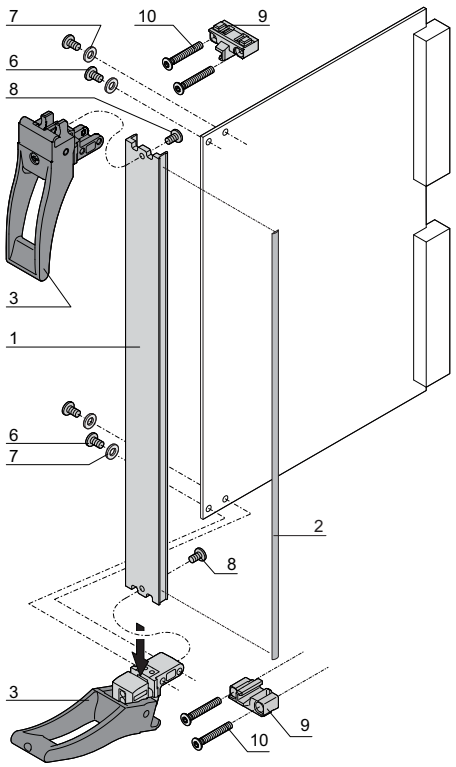


04607058

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

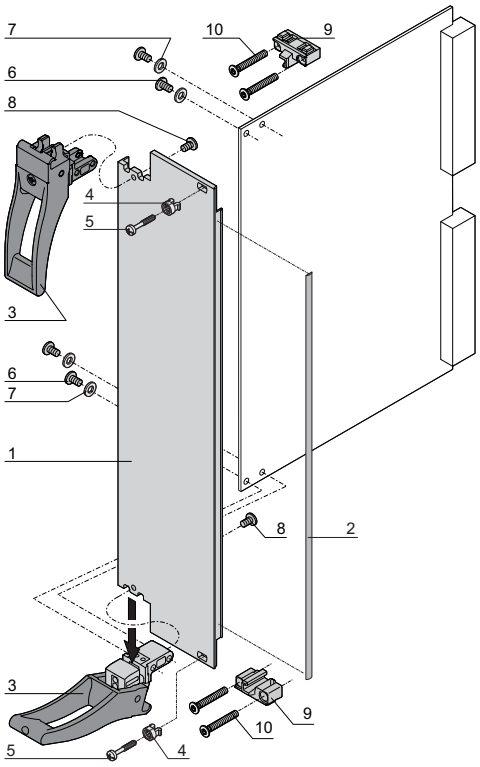
Plug-in units – for CompactPCI, VME64x,

PLUG-IN UNITS WITH XL INSERTION/EXTRACTOR HANDLE FOR COMPACTPCI, VME64X, VXS AND VPX APPLICATIONS



04613055

< 8 HP



04613056

≥8 HP

- Suitable for insertion and extraction forces up to 1500 N (per pair)
- To IEEE 1101.10 and IEC 60297-3-102
- Codable to IEC 60297-3-103/ IEEE 1101.10
- Front panel, shielded (6 U)
- Versions allowing microswitches to be fitted on request
- Online download of 3D CAD data

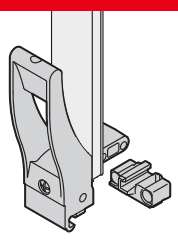
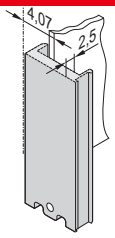
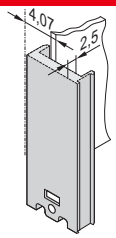
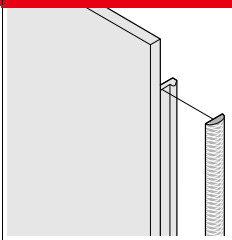
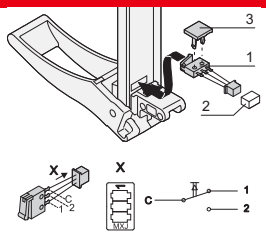
DELIVERY INCLUDES (Kit)

Item	Qty <8 HP	Qty ≥8 HP	Description
1	1	1	Front panel (U profile), Al, front anodized, rear conductive
2	1	1	EMC sealing (textile), core: foam, sleeve: textile cladding, CuNi coated
3	2	2	Handle with integrated alignment pin for perforated strips and guide rails, lever: plastic, PC, black, RAL 9005 Key: Plastic, PC, light gray, RAL 7035
4	-	2	Sleeve, PA, gray
5	-	2	Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated
6	4	4	Panhead screw with Torx/slot, M2.5 x 6, St, zinc-plated, self-locking
7	4	4	Washer A2.7, DIN 125, St, nickel-plated
8	4	4	Pan head screw with torx M2.5 x 7, St, zinc-plated
9	1	1	XL bearing, zinc diecast, nickel-plated
10	4	4	Countersunk screw with torx M2.5 x 17, St, zinc-plated

ORDER INFORMATION

Width HP	Part no.
6 U Height	
4	**20848-769**
8	**20848-770**
12	**20848-771**

- Dimension drawing of front profile, see page 7.32

		Inserter/extractor handle, type XL	U front profile, shieldable, for inserter/extractor handle, type XL		EMC gasket (textile)		Microswitch item 1 with cable and plug
			without cut-out for microswitch	with cut-out for microswitch			
		04605008	 04608081	 04608082	 04608083	 BGA45760	 04608084 bga46315
		kit, incl. die-cast bearing and assembly kit; insertion and extraction force up to 1500 Nm per pair; handle in PA, fibreglass reinforced, UL 94V 0; robust board fixing with double bolt fixing, microswitches can be fitted	Al, front anodised, sides and rear conductive, for sleeve and collar screw see page 7.37	Al, front anodised, sides and rear conductive for sleeve and collar screw see page 7.37	always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0		Molex connector housing 51021-0300, Molex crimp contact 50058-8000 and fixing clip (item 3), plastic, PC, UL 94 V-0, max. switched current 50 mA, operating range -25 °C to +70 °C, mech. life ≥ 20,000 switching cycles, electr. life ≥ 20,000 switching cycles; suitable mating connector (item 2) e.g. Molex 53261-0319, 53048-0310, 53047-0310, 53398-0319, 51047-0300, not included in scope of delivery
Width HP		PU 10 pieces	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	PU 10 pieces
		6 U Height					
4			**30849-153**	**30849-154**			
8		**20817-874**	**30849-155**	30849-156	**21101-855**	**21101-856**	**20817-877**
12			**30849-157**	**30849-158**			
Dimensions see page		7.30	7.30	7.30			

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

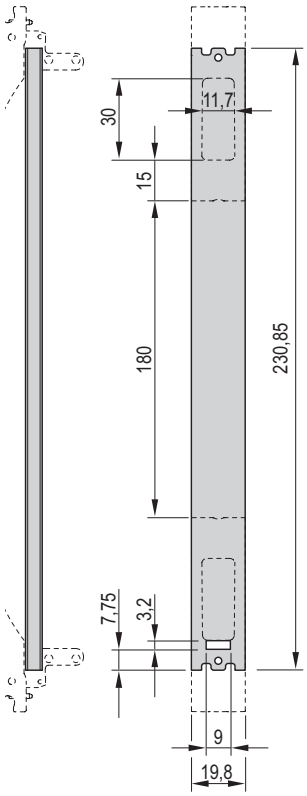
NOTE

- Please order front panels separately

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

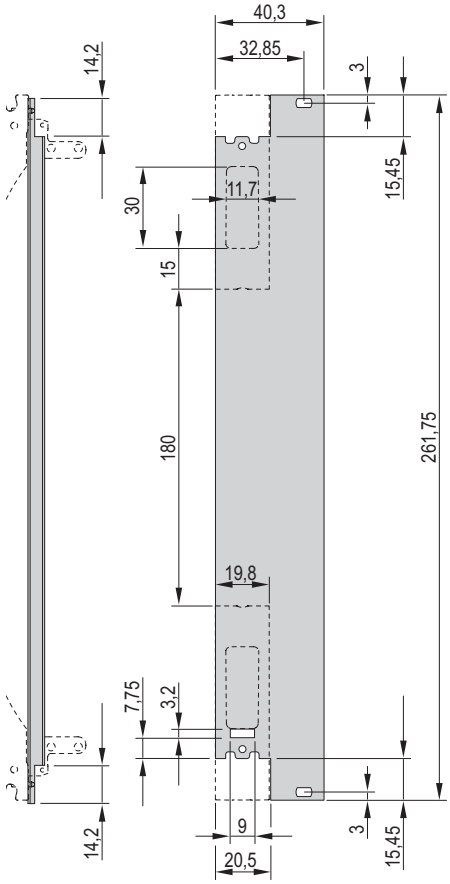
DIMENSIONS U FRONT PROFILE FOR EXTRACTOR HANDLE TYPE XL, SHIELDABLE

6 U/4 HP



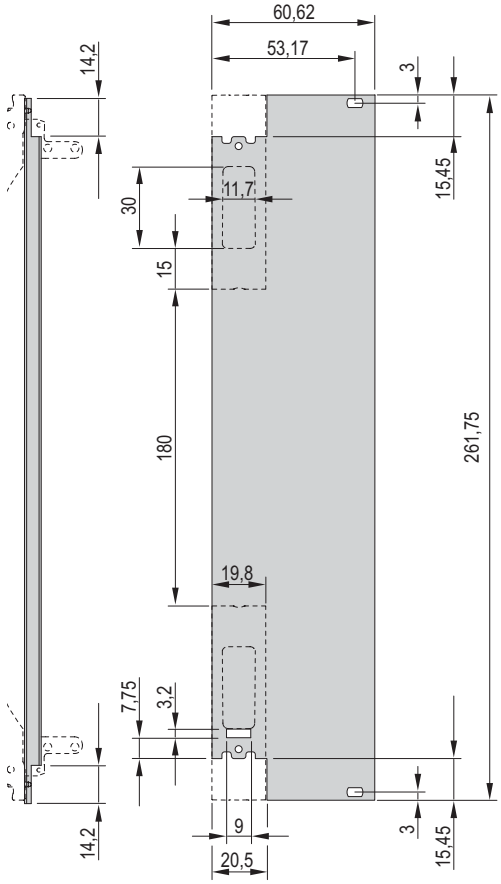
04605053

6 U/8 HP



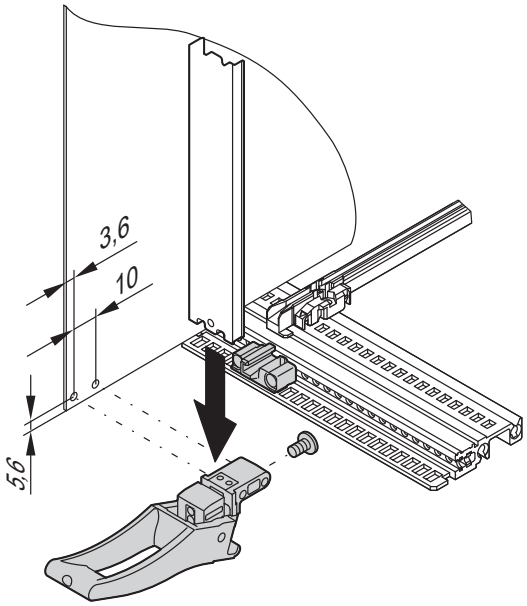
04605054

6 U/12 HP



04605055

DIMENSIONS INSERTER/EXTRACTOR HANDLE, TYPE XL

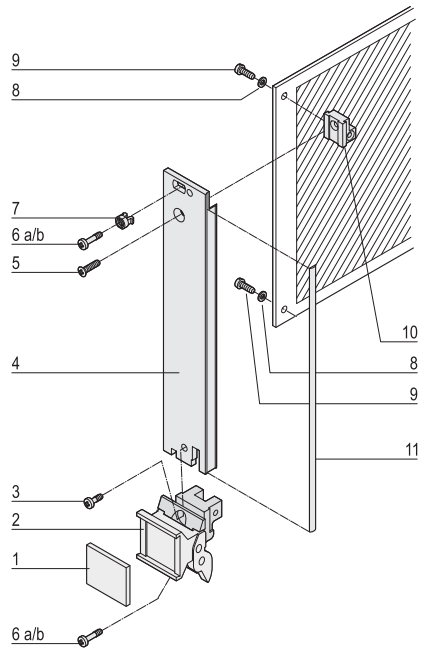


04608113

KITS

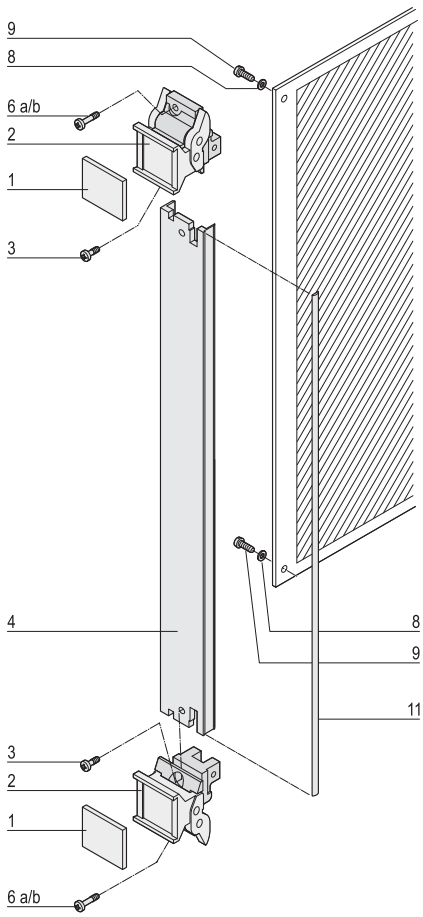
PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2

3 U



04604050

6 U



04604051

- Shielded

DELIVERY COMPRISES (kit)

Item	Qty				Description
	3 U		6 U		
	<8HP	≥8HP	<8HP	≥8HP	
1	1	1	2	2	Identification plate, Al, 1.5 mm, anodised, cut edges untreated
2	1	1	2	2	Extractor handle, trapeziform, type 2, lever: PPE, light grey, RAL 7035, block die-cast zinc, nickel-plated, with integrated alignment pin for perforated strip
3	1	1	2	2	Pozidrive flathead screw, St, M2.5 x 6, nickel-plated
4	1	1	1	1	Front panel, U profile, Al, front anodised, rear conductive
5	1	1	–	–	Raised Pozidrive countersunk screw M2.5 × 8, St, nickel-plated
6a	2	4	2	4	Pozidrive collar screw, M2.5 × 12.3, St, nickel-plated,
6b	2	4	2	4	collar screw, Pozidrive/slot, M2.5 × 11, St, nickel-plated,
7	1	3	–	2	Sleeve, PA, grey
8	2	2	2	2	Washer A 2.7, DIN 125
9	2	2	2	2	Panhead screw with Torx/slot, M2.5 x 6, St, zinc-plated, self-locking
10	1	1	–	–	Board support, die-cast zinc
11	1	1	1	1	EMC sealing (textile), core: foam, sleeve: textile cladding, Cu-Ni coated

ORDER INFORMATION

Height U	Width HP	Part no.
3	4	**20848-686**
3	6	**20848-687**
3	8	**20848-688**
3	10	20848-689
3	12	20848-690
6	4	**20848-691**
6	6	**20848-692**
6	8	**20848-693**
6	10	20848-694
6	12	20848-695

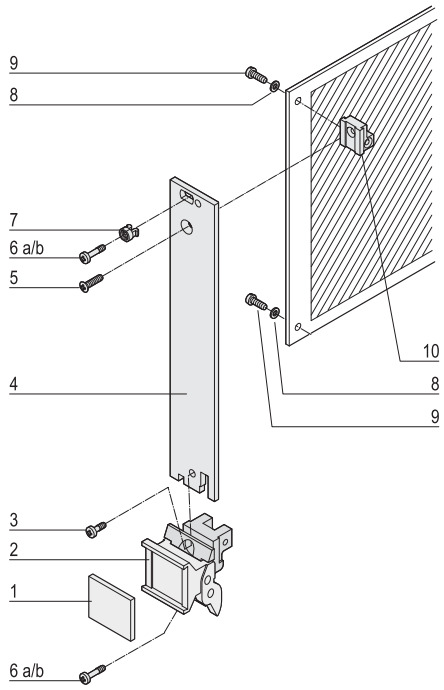
- Dimension drawings of front profile see page 7.38
- Description of microswitch see page 7.31

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

KITS

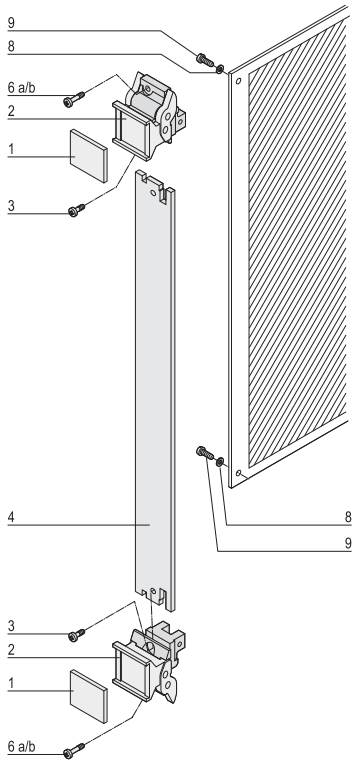
PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2

3 U



04604052

6 U



04604053

- Unshielded

DELIVERY COMPRISES (kit)

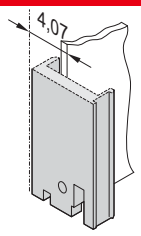
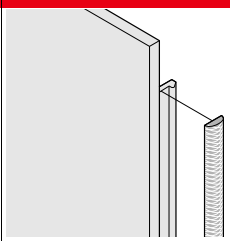
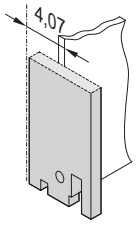
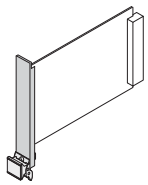
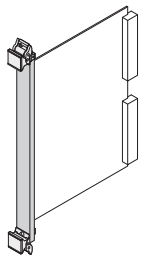
Item	Qty				Description
	3 U		6 U		
	<8HP	≥8HP	<8HP	8 HP	
1	1	1	2	2	Identification plate, Al, 1.5 mm, anodised, cut edges plain
2	1	1	2	2	Extractor handle, trapeziform, type 2, lever: PPE, light grey, RAL 7035, block: die-cast zinc, nickel-plated
3	1	1	2	2	Flathead screw M2.5 x 6, nickel-plated
4	1	1	1	1	Front panel, Al, 2.5 mm, front: anodised, rear: irisdescent green chromated
5	1	1	–	–	Raised Pozidrive countersunk screw, M2.5 × 8, St, nickel-plated
6a	2	4	2	4	Slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated,
6b	2	4	2	4	slotted Pozidrive collar screw, M2.5 x 11, St, nickel-plated
7	1	3	–	2	Sleeve, PA, grey
8	2	2	2	2	Washer A 2.7, DIN 125
9	2	2	2	2	Slotted Torx panhead screw, M2.5 x 6, St, zinc-plated, self-locking
10	1	1	–	–	Board support, die-cast zinc

ORDER INFORMATION

Height U	Width HP	Part no.
3	4	**20817-860**
3	5	**20817-861**
3	6	**20817-862**
3	7	**20817-863**
3	8	**20817-864**
3	10	**20817-865**
3	12	**20817-866**
6	4	**20817-867**
6	5	**20817-868**
6	6	**20817-869**
6	7	**20817-870**
6	8	**20817-871**
6	10	20817-872
6	12	20817-873

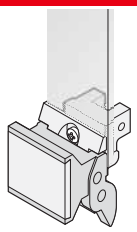
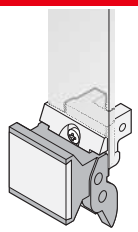
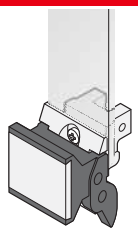
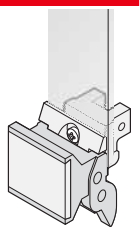
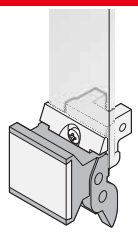
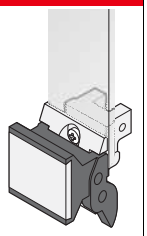
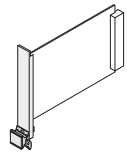
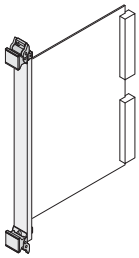
- Dimension drawing of front profile see page 7.38
- Description of microswitch see page 7.31

ORDER INFORMATION

		Front panel, U profile, shieldable	Textile EMC gasket		Front panel, flat, unshielded
		 04608060	 BGA45760		 04608063
		Al extrusion, 2.5 mm, front anodised, rear conductive; alignment pin pressed-in (3 U only), stainless steel; manufacturing process causes various surface structures to appear between 4 to 12 HP and 14 to 16 HP	always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0, temperature range -40 ... 70 °C		Front panel, Al, 2.5 mm, front anodised, rear irisdescent green chromated
	Width HP	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5)[1]
 04608109		**3 U Height**			
	4	**30848-312**	**21101-853**	**21101-854**	**30848-327**
	5	**30848-300**			**30848-328**
	6	**30848-313**			**30848-329**
	7	**30848-301**			**30848-330**
	8	**30848-314**			**30848-331**
	10	**30848-315**			**30848-333**
	12	**30848-316**			**30848-335**
 04608107		**6 U Height**			
	4	**30848-317**	**21101-855**	**21101-856**	**30848-336**
	5	**30848-304**			**30848-337**
	6	**30848-318**			**30848-338**
	7	**30848-305**			**30848-339**
	8	**30848-319**			**30848-340**
	10	**30848-320**			**30848-342**
	12	**30848-321**			**30848-344**
Dimensions see page		7.38			7.36

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple
Part no. includes one packing unit (PU); delivery is exclusively made in PU

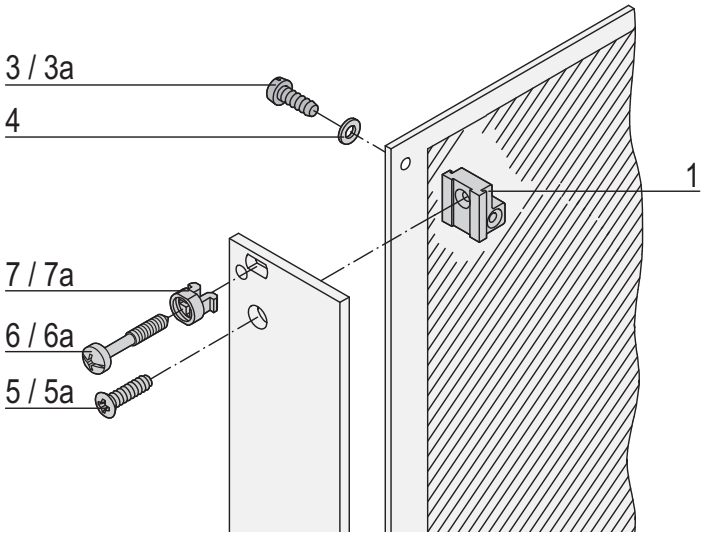
ORDER INFORMATION

	Trapeziform extractor handle, type 2 without alignment pin			Trapeziform extractor handle, type 2 with alignment pin		
	lever, light grey, RAL 7035	lever, dark grey, RAL 7032	lever, black, RAL 9005	lever, light grey, RAL 7035	lever, dark grey, RAL 7032	lever, black, RAL 9005
	 04608085	 BGA45760	 04608087	 BGA45760	 04608086	 04608087
	Extractor handle, PPE; block, die-cast zinc, zinc-plated; identification plate, Al, 1.5 mm, anodised, cut edges plain; Pozidrive flat-head screw, M2.5 x 6, nickel-plated; slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated; slotted Pozidrive collar screw, M2.5 × 11, St, nickel-plated,			Extractor handle, PPE; block, die-cast zinc, zinc-plated; Identification plate, Al, 1.5 mm, anodised, cut edges plain; Pozidrive flat-head screw, M2.5 x 6, nickel-plated; slotted Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated; slotted Pozidrive collar screw, M2.5 × 11, St, nickel-plated,		
Width HP	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]
 04608114	**3 U Height** bottom					
	20817-858	**20817-854**	**20817-856**	**20817-833**	20817-829	**20817-831**
 04608115	**6 U Height** top					
	20817-858	**20817-854**	**20817-856**	**20817-833**	20817-829	**20817-831**
	bottom					
	20817-858	**20817-854**	**20817-856**	**20817-833**	20817-829	**20817-831**
Dimensions see page	7.39			7.39		

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

ORDER INFORMATION



bga46045

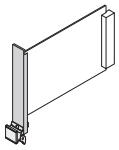
Fixing material	Item		Required quantity 3 U < 8 HP	Required quantity 3 U ≥ 8 HP	Required quantity 6 U < 8 HP	Required quantity 6 U ≥ 8 HP	Qty/PU	Part no.
Printed board bracket Zn die-cast	1	06707050	1	1	–	–	1 Stück (LLG 10)[1)]	**60807-181**
Pozidrive panhead screw M2.5 × 6, St, nickel-plated	3	AZA45177	2	2	2	2	100	**21101-219**
Slotted panhead screw with Torx 8 M2.5 × 6, St, zinc-plated Self-securing thread	3a	aza45940	2	2	2	2	100	**24560-159**
Washer 2.7, St, nickel-plated	4	AZA46586	2	2	2	2	100	**21100-721**
Raised Pozidrive countersunk panhead screw M2.5 × 8, St, nickel-plated	5	06702056	1	1	–	–	100	**21100-429**
Raised countersunk panhead screw with Torx 8 M2.5 × 8, St, nickel-plated	5a	06708050	1	1	–	–	100	**24560-164**
Slotted Pozidrive collar screw M2.5 × 11, St, nickel-plated AZA46586	6	AZA46586	1	3	–	2	100	**21100-748**
Slotted Pozidrive collar screw M2.5 × 12.3, St, nickel-plated AZA46586	6a	AZA46586	1	3	–	2	100	**21101-101**
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	7	aza45933	1	3	–	2	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	7a	aza45934	1	3	–	2	100	**21100-662**

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

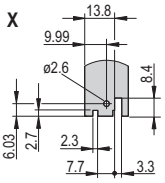
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

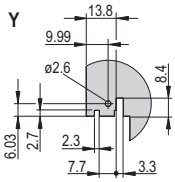
DIMENSIONS FRONT PANELS, U PROFILES, FOR TRAPEZIFORM EXTRACTOR HANDLES, TYPE 2

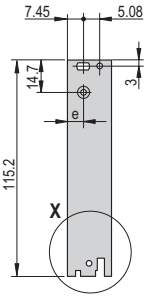
3 U

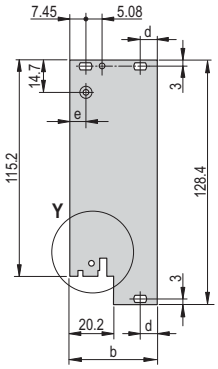


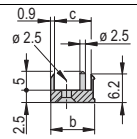
04608109

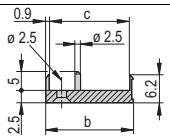




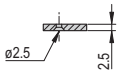


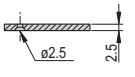






shieldable





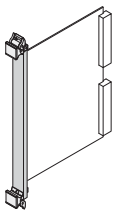
unshielded

04608064 04608077

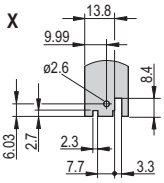
4 HP

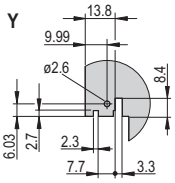
≥5 HP

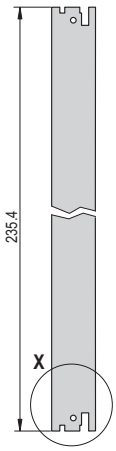
6 U

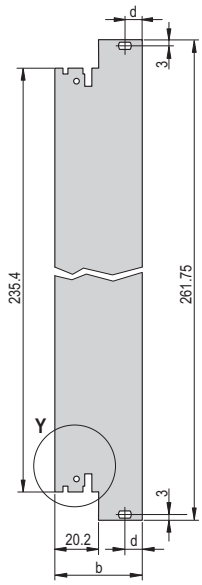


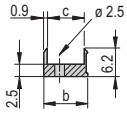
04608107

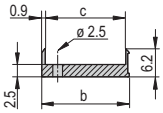


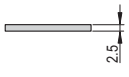












04608065 04608078

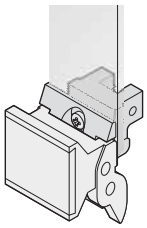
4 HP

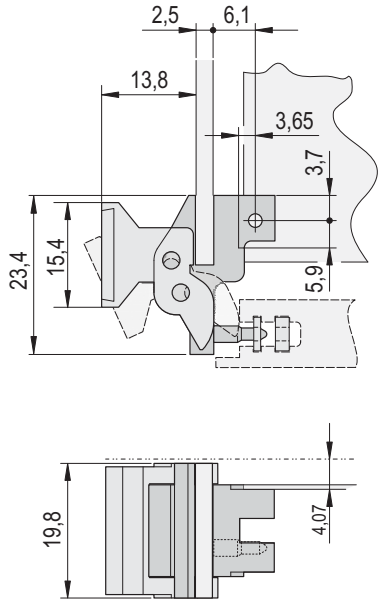
≥5 HP

Dimensions table			
Width HP	b mm	c mm	d mm
4	19.98	17.45	–
5	25.06	22.53	–
6	30.14	27.61	–
7	35.22	32.69	–
8	40.30	37.77	7.45
9	45.38	42.85	7.45
10	50.46	47.93	7.45
11	55.54	53.01	7.45
12	60.62	58.09	7.45
14	70.78	68.25	7.45
16	80.94	78.41	7.45

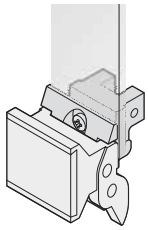
DIMENSION DRAWINGS EXTRACTOR HANDLE, TRAPEZIFORM, TYPE 2

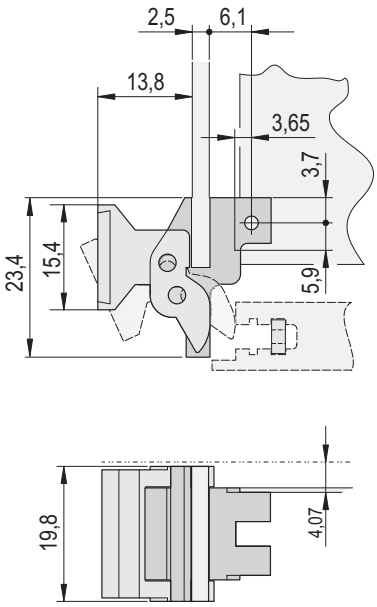
with alignment pin





without alignment pin



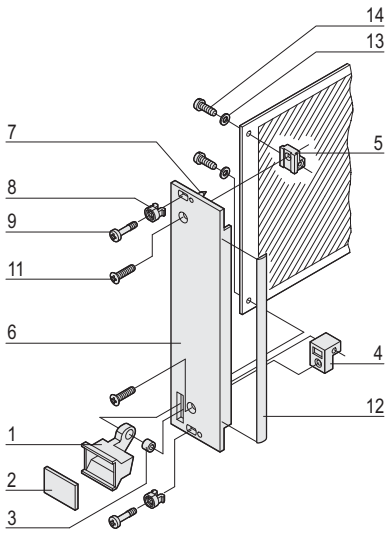


Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

KITS

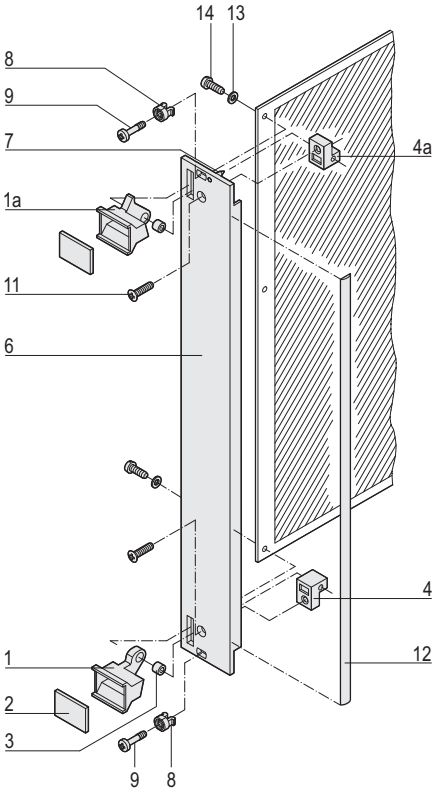
PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 1 – FRONT PANEL, U-PROFILE, SHIELDED

3 U



04602058

6 U



04602059

- At 6 U the board position can be offset by 1 HP to the right by swapping the top and bottom board supports; thus space is created for SMD components on the left (solder) side; for board thickness 1.6 mm only

DELIVERY COMPRISES (kit)

Item	Qty 3 U	Qty 6 U	Description
1	1	1	Extractor handle, trapeziform type, PPE, grey, bottom
1a	-	1	Extractor handle, trapeziform type, PPE, grey, top
2	1	2	Identification plate, Al, 1.5 mm, anodised, cut edges plain
3	1	2	Pivot bush, Ms
4	1	1	Board support, die-cast zinc, bottom
4a	-	1	Board support, die-cast zinc, top
5	1	-	Board support, die-cast zinc
6	1	1	Front panel, U profile, for trapeziform extractor handle, front anodised, rear conductive
7	2	2	Alignment pin, pressed-in, stainless steel
8	2	2	Sleeve, PA, grey, up to 7 HP front panel width
8	4	4	Sleeve, PA, grey, from 8 HP front panel width
9	2	2	Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 × 12.3, front panel width up to 7 HP
9	4	4	Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 × 12.3, front panel width from 8 HP
11	1	2	Raised countersunk panhead screw, M2.5 × 8
12	1	1	EMC gasket (textile)
13	2	2	Washer, A2.7, DIN 125
14	2	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 10

ORDER INFORMATION

Width HP	3 U Part no.	6 U Part no.
4	**20848-485**	**20848-492**
6	**20848-487**	**20848-494**
8	**20848-489**	**20848-496**
10	**20848-490**	20848-497
12	**20848-491**	**20848-498**

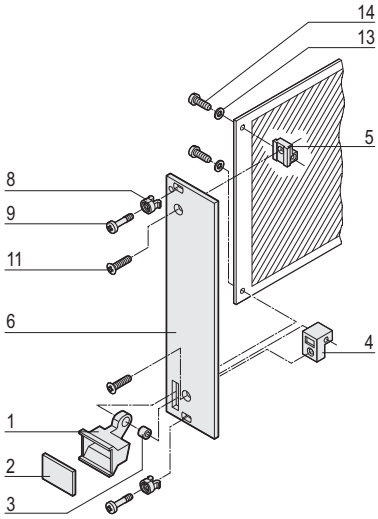
NOTE

- Dimension front panel see page 7.45

KITS

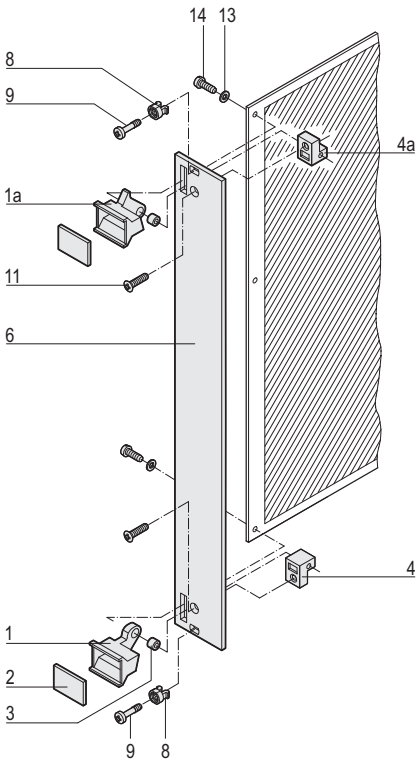
PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 1 – FRONT PANEL UNSHIELDED

3 U



04602060

6 U



04602061

- At 6 U the board position can be offset by 1 HP to the right by swapping the top and bottom board supports; thus space is created for SMD components on the left (solder) side;
  for board thickness 1.6 mm only

DELIVERY COMPRISES (kit)

Item	Qty 3 U	Qty 6 U	Description
1	1	1	Extractor handle, trapezium shape, PPE, grey, bottom
1a	–	1	Extractor handle, trapezium shape, PPE, grey, top
2	1	2	Identification plate, Al, 1.5 mm, anodised, cut edges plain
3	1	2	Pivot bush, Ms
4	1	1	Board support, die-cast zinc, bottom
4a	–	1	Board support, die-cast zinc, top
5	1	–	Board support, die-cast zinc
6	1	1	Front panel for trapeziform extractor handle, front anodised, rear irisdescent green chromated
8	2	2	Sleeve, PA, grey, up to 7 HP front panel width
8	4	4	Sleeve, PA, grey, from 8 HP front panel width
9	2	2	Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 × 11 and 12.3, front panel width up to 7 HP
9	4	4	Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 × 11 and 12.3, front panel width from 8 HP
11	1	2	Raised countersunk panhead screw, M2.5 × 8
13	2	2	Washer, A2.7, DIN 125
14	2	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 10

ORDER INFORMATION

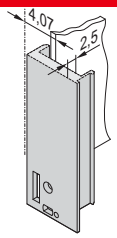
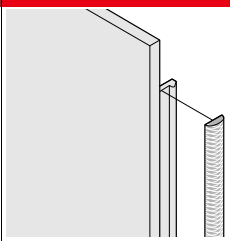
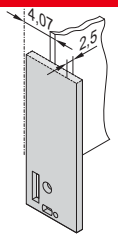
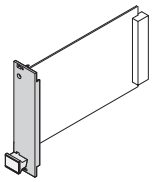
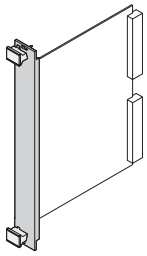
Width HP	3 U Part no.	6 U Part no.
4	**20817-443**	**20817-448**
5	**20817-444**	**20817-449**
6	**20817-445**	**20817-450**
7	**20817-446**	**20817-451**
8	**20817-447**	**20817-452**
10	**20817-456**	**20817-458**
12	**20817-457**	**20817-459**

NOTE

- Dimension front panel see page 7.45

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

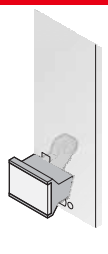
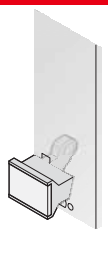
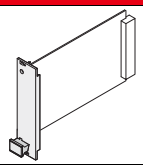
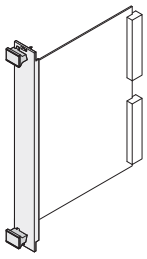
ORDER INFORMATION

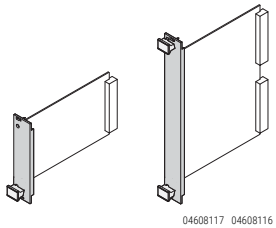
		Front panel, U profile, shieldable	Textile EMC gasket		Front panel, unshielded
		 04608091	 BGA45760		 04608092
		Al profile, front anodised, rear conductive, alignment pin pressed-in, stainless steel	always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0, temperature range -40 ... 70 °C		front panel, Al, 2.5 mm, front anodised, rear irisdescent green chromated
	Width HP	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5)[1]
		3 U Height			
 04608117	4	**30848-461**	**21101-853**	**21101-854**	**30847-659**
	5	–			**30847-660**
	6	**30848-463**			**30847-661**
	7	–			**30847-662**
	8	**30848-465**			**30847-663**
	10	**30848-466**			**30847-664**
	12	**30848-467**			**30847-665**
		6 U Height			
 04608116	4	**30848-468**	**21101-855**	**21101-856**	**30847-666**
	5	–			**30847-667**
	6	**30848-470**			**30847-668**
	7	–			**30847-669**
	8	**30848-472**			**30847-670**
	10	**30848-473**			**30847-671**
	12	**30848-474**			**30847-672**
Dimensions see page		7.45			7.45

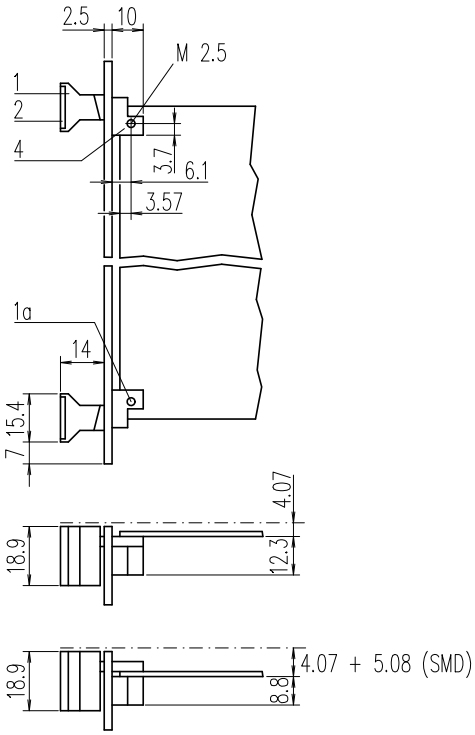
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

ORDER INFORMATION

	Trapeziform extractor handle	
	black	grey
	 04608093	 04608094
	handle closed laterally, PPE, UL 94 V-1, black; pivot bush; identification plate, Al, 1.5 mm, anodised, cut edges plain; board support die-cast zinc; in the 6 U version, space can be created for SMD components on the left side by swapping the top and bottom handles and thus moving the PCB position 1 HP to the right	
Width HP	1 piece (SPQ 10)[1)]	1 piece (SPQ 10)[1)]
 04608119	**3 U Height** top	
	20817-329	**20817-327**
 04608118	**6 U Height** top	
	20817-330	**20817-328**
	bottom	
	20817-329	**20817-327**

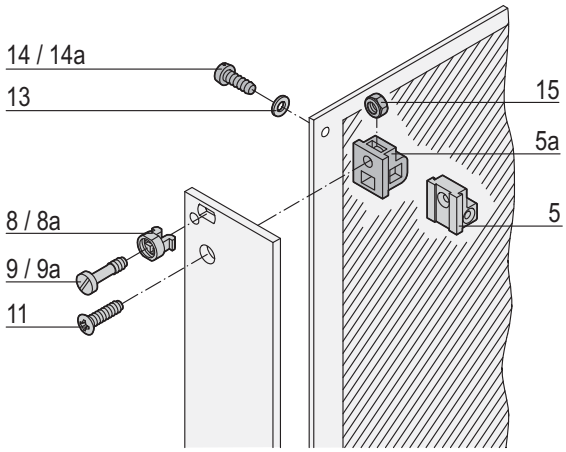

04608117 04608116



bga42556

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

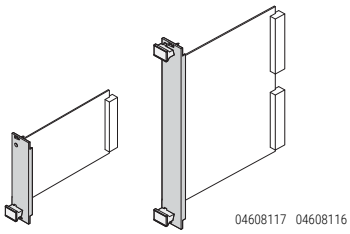
ORDER INFORMATION

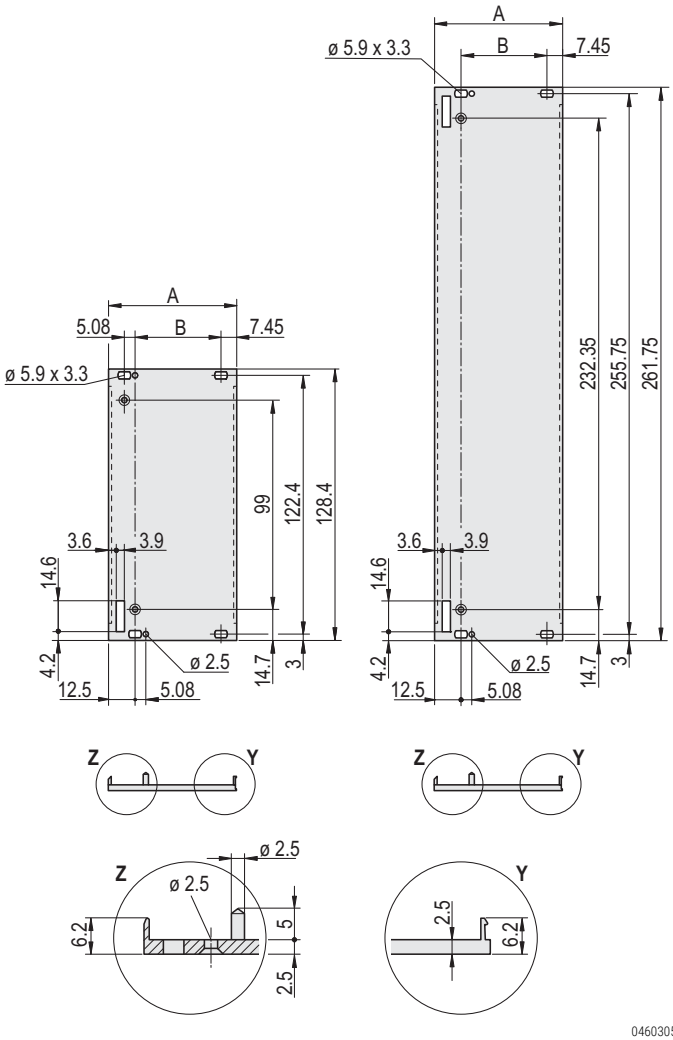


bga42545

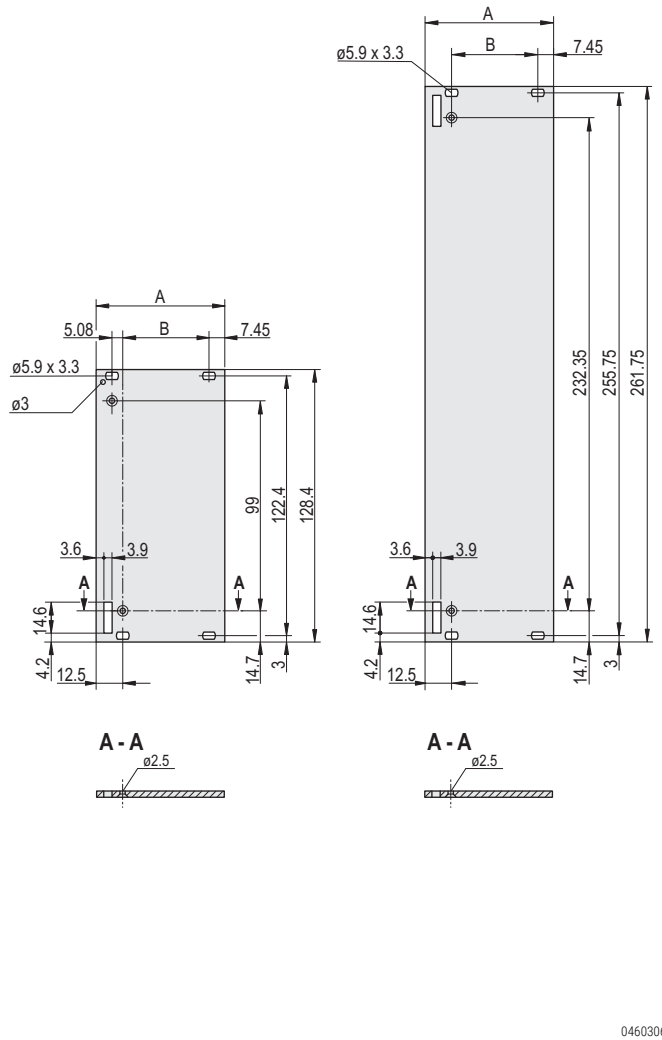
Fixing material	Item		Required Qty 3 U < 8 HP	Required Qty 3 U ≥ 8 HP	Required Qty 6 U < 8 HP	Required Qty 6 U ≥ 8 HP	Qty/PU	Part no.
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5	06707050	1	2	2	4	1 piece (SPQ 10)[1]	**60807-181**
Board support, plastic, PBT, UL 94 V-0, grey, with recess for hexagon nut M2.5, for fixing front panel	5a	AZA45177	1	2	2	4	1 piece (SPQ 10)[1]	**60807-183**
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	8	aza45933	2	4	2	4	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	8a	aza45934	2	4	–	–	100	**21100-662**
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	9	AZA46586	2	4	2	4	100	**21100-748**
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	9a	AZA46586	2	4	2	4	100	**21101-101**
Raised Pozidrive countersunk screw M2.5 x 8, St, nickel-plated	11	06702056	2	2	2	2	100	**21100-429**
Washer 2.7 DIN 125, St, nickel-plated, 100 pieces	13	AZA46586	2	2	2	2	100	**21100-721**
Pozidrive panhead screw M2.5 x 10, St, nickel-plated for item 5	14	AZA45177	2	2	2	2	100	**21101-220**
Panhead screw, self-tapping 2.5 x 8, St, zinc-plated for item 5b	14a	06702057	1	1	–	–	100	**21100-710**
Hexagon nut M2.5, nickel-plated steel for item 5b	15	aza43239	1	1	–	–	100	**21100-144**

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple





3 U 6 U

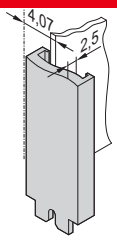
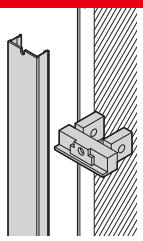
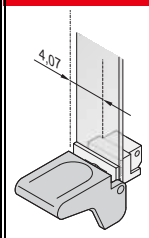
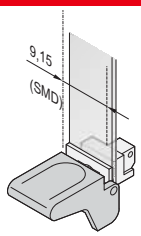
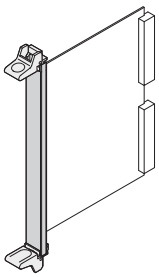


3 U 6 U

Dimensions table		
Width HP	A mm	B mm
4	19.98	–
5	25.06	–
6	30.14	–
7	35.22	–
8	40.30	20.32
10	50.46	30.48
12	60.62	40.64

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ORDER INFORMATION

		U front profile	Mounting block for D-Sub connector (50 pin)	Extractor handle for Multibus® II symmetrical handle grey, RAL 7032	SMD handle grey, RAL 7032
		 04608095	 04608098	 04608099	 04608108
		Al extrusion, 1 mm	for fixing D-Sub connectors 50-pin, thread on front UNC4/40; required quantity: for 6 U 1x, for 9 U 2x	extractor handle for Multibus® II, PC, UL 94 V-0; bearing, Zn die-cast, nickel-plated; slotted cheesehead screw, M2.5 x 6, Pozidrive/slotted collar screw, M2.5 × 12.3, St, nickel-plated in the 6 U version, space can be created for SMD components on the left side by swapping the top and bottom handles and thus moving the PCB position 1 HP to the right	
	Width HP	1 piece (SPQ 5)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]
 04608120		**6 U Height**		**6 U Height** top	
	4	**30829-001**	**60829-008**	**20829-011**	**20829-004**
				bottom	
				20829-011	**20829-003**
		9 U Height		**9 U Height** top	
	4	**30829-007**	**60829-008**	**20829-011**	**20829-004**
				bottom	
				20829-011	**20829-003**
Dimensions see page		7.47	7.47	7.47	7.47

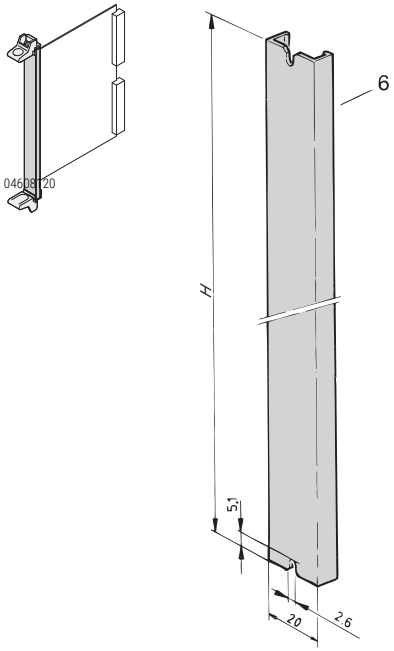
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

Plug-in units – for Multibus II

DIMENSION DRAWINGS FRONT PANELS, U PROFILE / FRONT PANEL FOR MULTIBUS® II

6/9 U

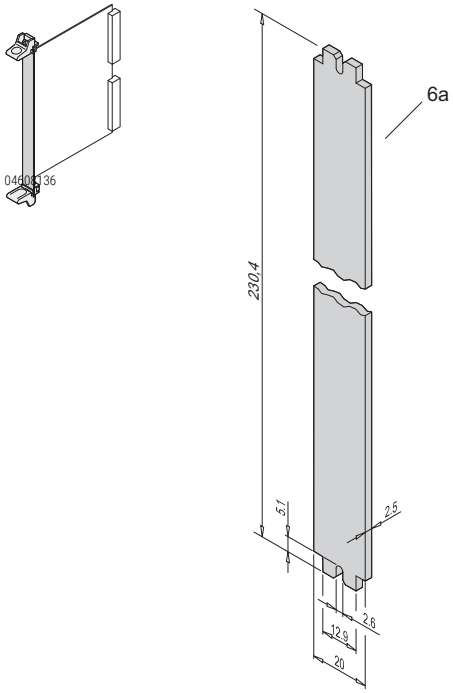


A4-2580

Dimensions table

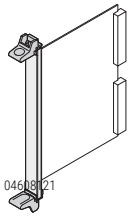
Height U	Height mm
6	230.4
9	363.7

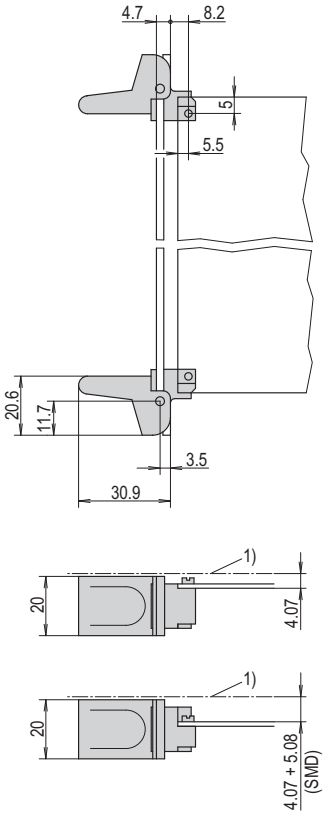
6 U



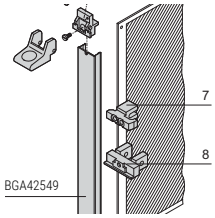
BGA46120

DIMENSIONS EXTRACTOR HANDLES, MOUNTING BLOCK FOR MULTIBUS® II

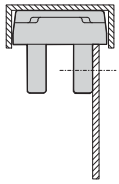


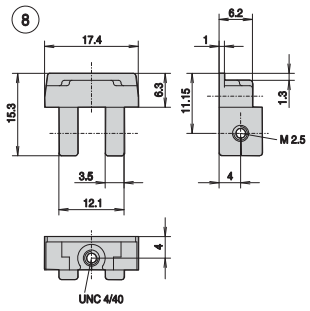


gba42579



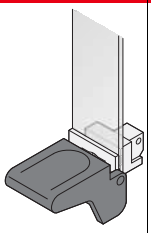
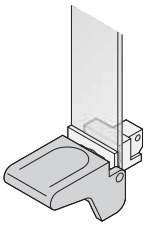
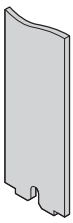
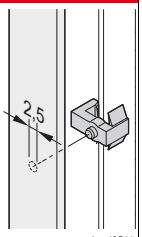
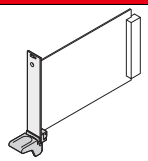
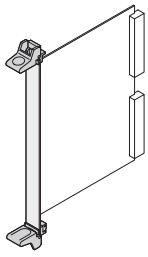
for D-Sub connector (50 pin)





BGA42585

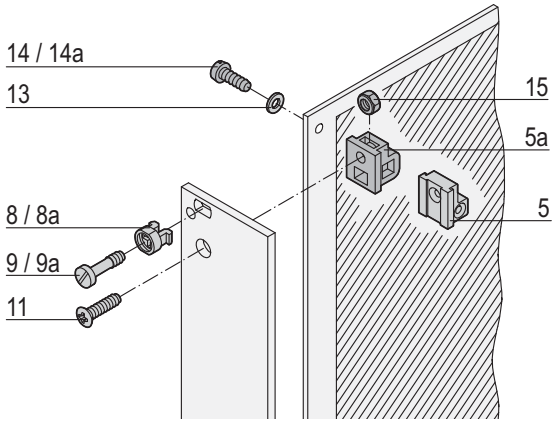
ORDER INFORMATION

	Extractor handle		Front panel	Fixing clip
	black	grey		
	 04608101	 04608102	 04608103	 bga42544
	extractor handle in key form 1, PC, UL 94 V-0; bearing Zn die-cast, nickel-plated; slotted cheesehead screw, M2.5 x 6 (fitted); in the 6 U version, space can be created for SMD components on the left side by swapping the top and bottom handles and thus moving the PCB position 1 HP to the right		Al, 2.5 mm; available on request	for fixing PCB to the front panel (blind hole X2.6, depth 1.3 mm); also for SMD applications; clip, PPE, UL 94 V-0, red
Width HP	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]		PU 100 pieces
 04608123	**3 U Height** bottom			
	20817-345	**20817-325**	–	–
 04608122	**6 U Height** top			
	20817-346	**20817-326**	–	**21100-719**
	bottom			
	20817-345	**20817-325**	–	
Dimensions see page	7.50	7.50	7.50	

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

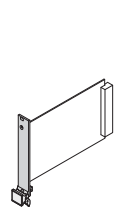
ORDER INFORMATION



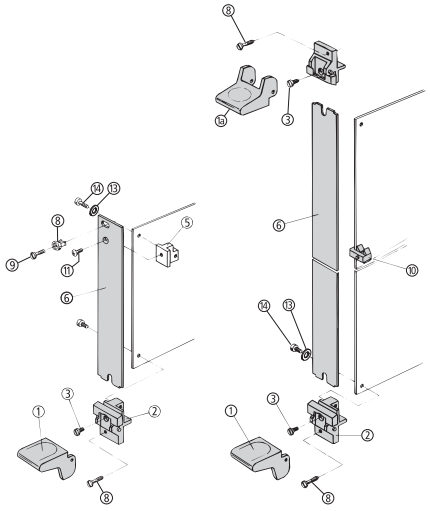
Fixing material	Item		Required Qty 3 U	Required Qty 6 U	Qty/PU	Part no.
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5	06707050	1	–	1 piece (SPQ 10)[1]	**60807-181**
Board support, plastic, PBT, UL 94 V-0, grey, with recess for hexagon nut M2.5, for fixing front panel	5a	AZA45177	1	–	1 piece (SPQ 10)[1]	**60807-183**
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	8	aza45933	1	–	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	8a	aza45934	1	–	100	**21100-662**
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	9	AZA46586	2	2	100	**21100-748**
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	9a	AZA46586	2	2	100	**21101-101**
Raised Pozidrive countersunk screw M2.5 x 8, St, nickel-plated	11	06702056	1	–	100	**21100-429**
Washer 2.7 DIN 125, St, nickel-plated, 100 pieces	13	AZA46586	2	2	100	**21100-721**
Pozidrive panhead screw M2.5 x 10, St, nickel-plated for item 5	14	AZA45177	2	2	100	**21101-220**
Pan head screw, self-tapping 2.5 x 8, St, zinc-plated for item 5b	14a	06702057	1	–	100	**21100-710**
Hexagon nut M2.5, nickel-plated steel for item 5b	15	aza43239	3	6	100	**21100-144**

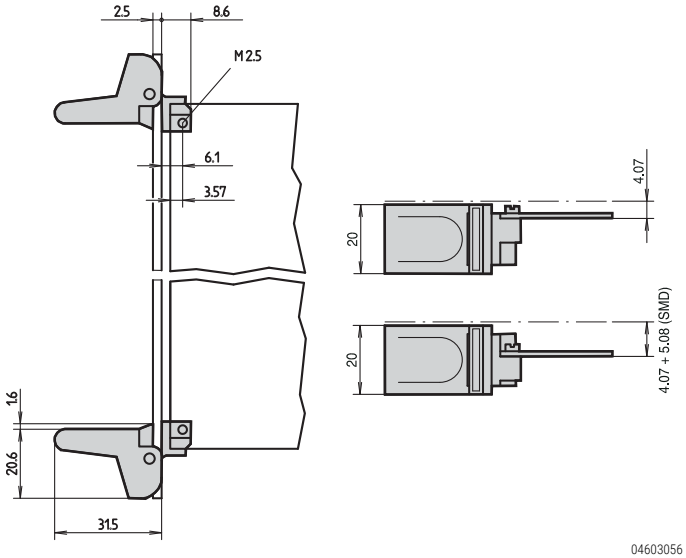
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

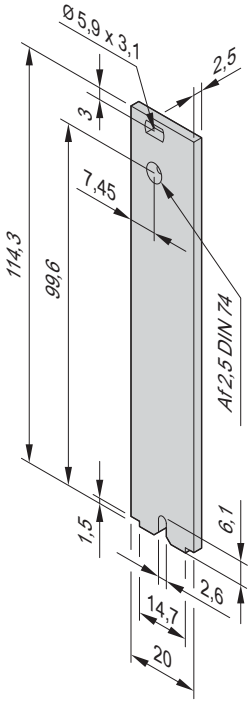


04608089 04603055

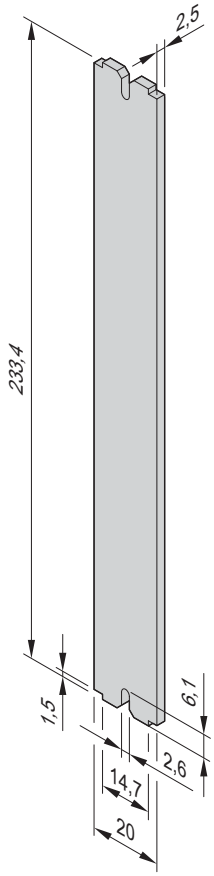




04603056



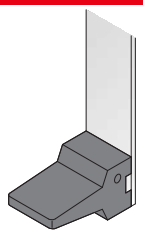
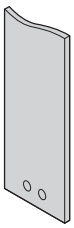
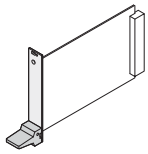
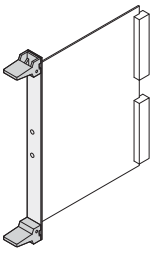
3 U



6 U

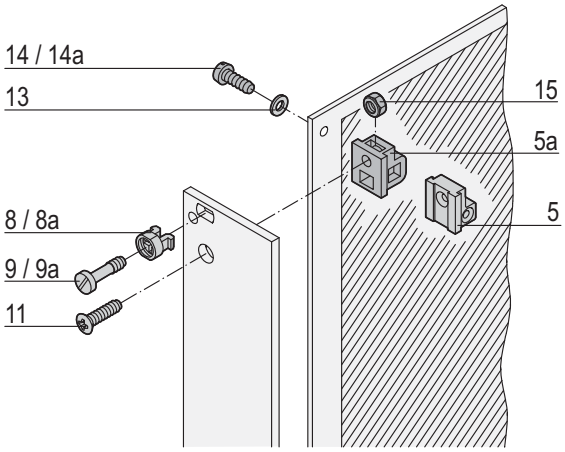
04603057

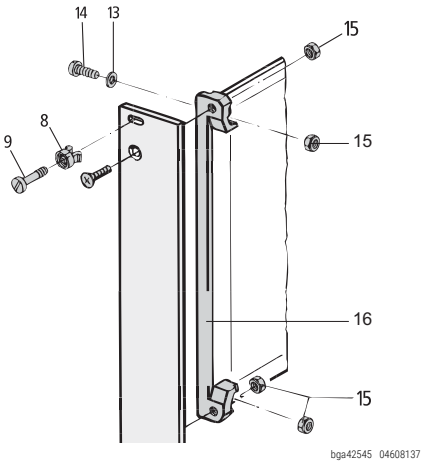
ORDER INFORMATION

	Extractor handle black	Front panel
	 04608104 extractor handle, PBT, UL 90 V-0; bearing Zn die-cast, nickel-plated; incl. assembly kit for handle mounting	 04608106 Al, 2.5 mm; available on request
Width HP	1 piece (SPQ 10)[1]	
 04608124	**3 U Height** top	
	20808-137	–
 04608125	**6 U Height** top	
	20808-137	–
	bottom	
	20808-137	–
Dimensions see page	7.53	7.53

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ);
please order at least the SPQ quantity or a multiple
Part no. includes one packing unit (PU); delivery is exclusively made in PU

FIXING MATERIAL FOR EXTRACTOR HANDLES, KEY FORM 2



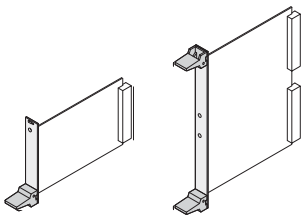


Fixing material	Item		Required Qty 3 U	Required Qty 6 U	Qty/PU	Part no.
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5	06707050	1	2	1 piece (SPQ 10)[1)]	**60807-181**
Board support, plastic, PBT, UL 94 V-0, grey, with recess for hexagon nut M2.5, for fixing front panel	5a	AZA45177	1	2	1 piece (SPQ 10)[1)]	**60807-183**
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	8	aza45933	1	–	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	8a	aza45934	1	–	100	**21100-662**
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	9	AZA46586	2	2	100	**21100-748**
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	9a	AZA46586	2	2	100	**21101-101**
Raised Pozidrive countersunk screw M2.5 x 8, St, nickel-plated	11	06702056	1	–	100	**21100-429**
Washer 2.7 DIN 125, St, nickel-plated, 100 pieces	13	AZA46586	2	2	100	**21100-721**
Pozidrive panhead screw M2.5 x 10, St, nickel-plated for item 5	14	AZA45177	2	2	100	**21101-220**
Panhead screw, self-tapping 2.5 x 8, St, zinc-plated for item 5b	14a	06702057	1	–	100	**21100-710**
Hexagon nut M2.5, nickel-plated steel for item 5b	15	aza43239	3	–	100	**21100-144**
PCB bracket 4 clearance holes for front panel/PCB fixing, 4 recesses for hexagon nuts; PBT, UL 94 V-0, red	16	04608138	1	2	1 piece (SPQ 10)	**60807-011**

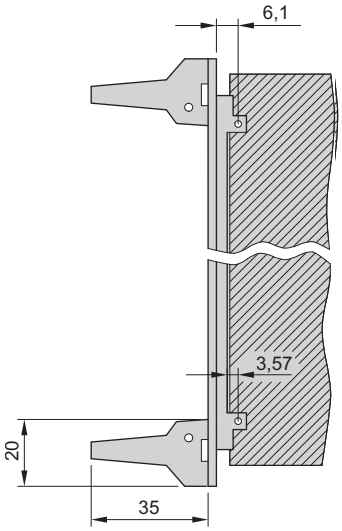
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Plug-in units – for IEC 60297, key form 2

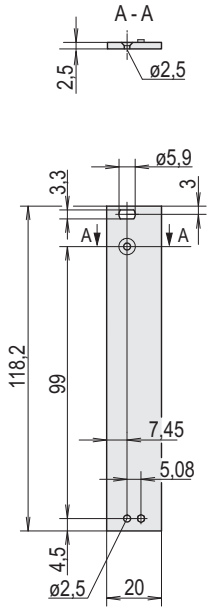
DIMENSIONS HANDLES/FRONT PANELS KEY FORM 2



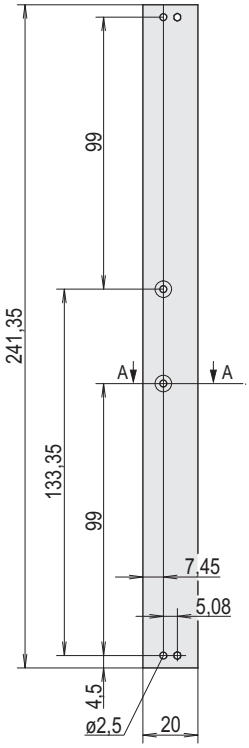
04608124 04608125



BGA42573



3 U

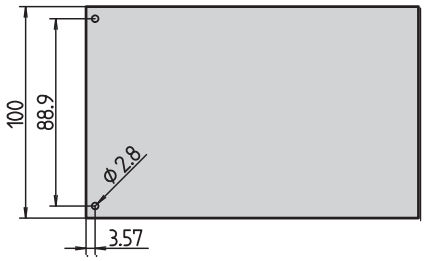


BGA42578

6 U

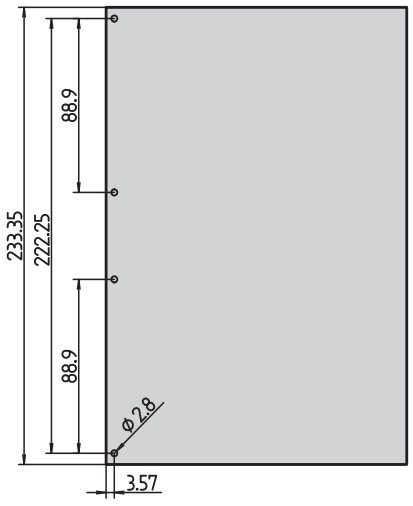
DIMENSIONS DRILL HOLE DIMENSIONS ON THE PCB KEY FORM 2

3 U



BGA43076

6 U



BGA43077

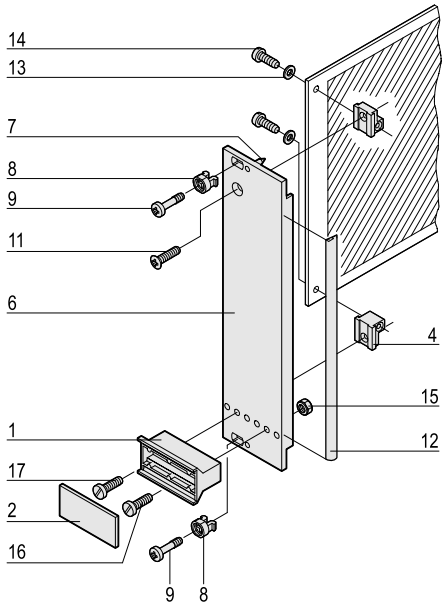
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Plug-in units – for IEC 60297, trapeziform

KITS

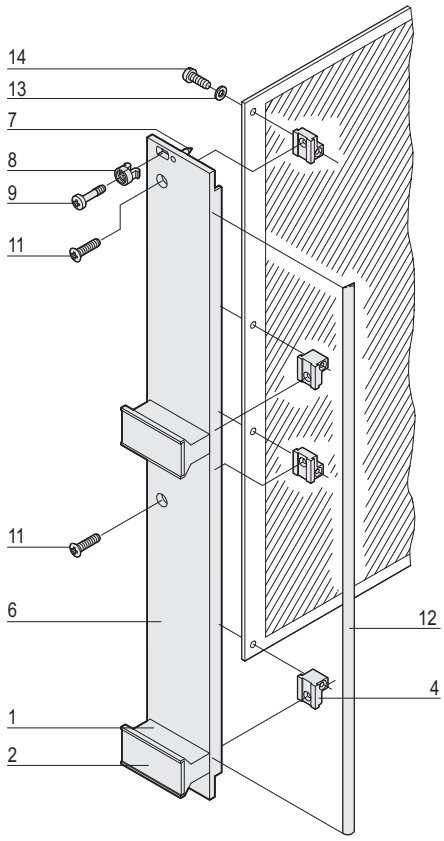
PLUG-IN UNIT WITH STATIC TRAPEZIFORM HANDLE

3 U



04602062

6 U



04602063

- Front panel, U-profile, shielded
- Handle without extraction function

DELIVERY COMPRISES

Item	Qty 3 U	Qty 6 U	Description
1	1	2	Plastic handle, trapeziform, PPE, grey
2	1	2	Identification plate, Al, 1.5 mm, anodised, cut edges plain
4	2	4	Board support, die-cast zinc
6	1	1	Front panel, U profile, for trapeziform handle, front anodised, rear conductive
7	2	2	Alignment pin, pressed-in, stainless steel
8	2	2	Sleeve, PA, grey, up to 7 HP front panel width
8	4	4	Sleeve, PA, grey, from 8 HP front panel width
9	2	2	Pozidrive/slotted collar screw, St, nickel-plated, M2.5 × 11 and 12.3, front panel width up to 7 HP
9	4	4	Pozidrive/slotted collar screw, St, nickel-plated, M2.5 × 11 and 12.3, front panel width from 8 HP
11	1	2	Raised countersunk screw, St, nickel-plated, M2.5 × 8
12	1	1	EMC sealing (textile)
13	2	4	Washer, A2.7, DIN 125
14	2	4	Pozidrive flathead screw, St, nickel-plated, M2.5 × 10
15	1	2	Hexagon nut, St, nickel-plated, M2.5
16	1	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 12
17	1	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 16

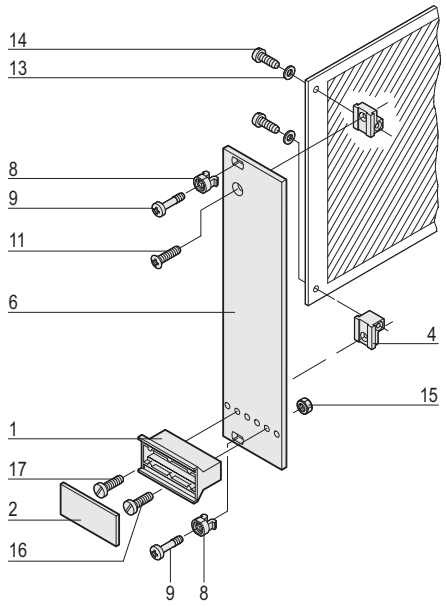
ORDER INFORMATION

Width HP	3 U Part no.	6 U Part no.
3	**20848-663**	20848-671
4	**20848-664**	**20848-672**
5	**20848-665**	**20848-673**
6	**20848-666**	**20848-674**
7	**20848-667**	20848-675
8	**20848-668**	**20848-676**
10	**20848-669**	**20848-677**
12	**20848-670**	20848-678

KITS

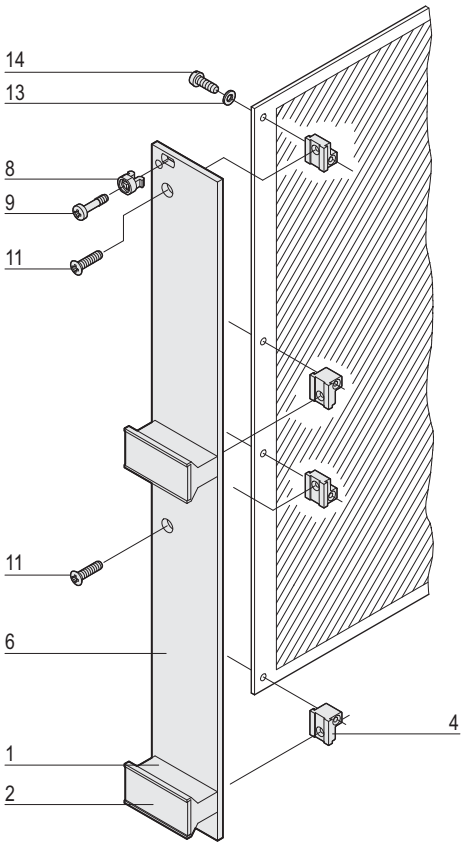
PLUG-IN UNIT WITH STATIC TRAPEZIFORM HANDLE

3 U



04602064

6 U



04602065

- Front panel unshielded
- Handle without extraction function

DELIVERY COMPRISES

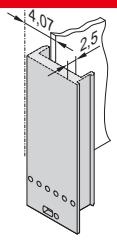
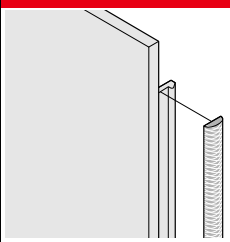
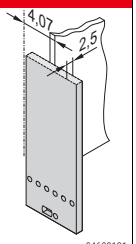
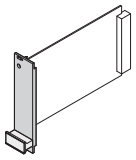
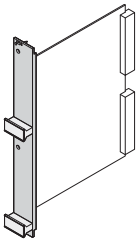
Item	Qty		Description
	3 U	6 U	
1	1	2	Plastic handle, trapeziform, PPE, grey
2	1	2	Identification plate, Al, 1.5 mm, anodised, cut edges untreated
4	2	4	Board support, die-cast zinc
6	1	1	Front panel for trapeziform handle, front anodised, rear irisdescent green chromated
8	2	2	Sleeve, PA, grey, up to 7 HP front panel width
8	4	4	Sleeve, PA, grey, from 8 HP front panel width
9	2	2	Pozidrive/slotted collar screw, St, nickel-plated, M2.5 × 11 and 12.3, front panel width up to 7 HP
9	4	4	Pozidrive/slotted collar screw, St, nickel-plated, M2.5 × 11 and 12.3, front panel width from 8 HP
11	1	2	Raised countersunk screw, St, nickel-plated, M2.5 × 8
13	2	4	Washer, A2.7
14	2	4	Pozidrive flathead screw, St, nickel-plated, M2.5 × 8
15	1	2	Hexagon nut, St, nickel-plated, M2.5
16	1	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 12
17	1	2	Pozidrive flathead screw, St, nickel-plated, M2.5 × 16

ORDER INFORMATION

Width HP	3 U Part no.	6 U Part no.
3	**20818-017**	20809-507
4	**20818-018**	**20818-025**
5	**20818-019**	**20818-026**
6	**20818-020**	**20818-027**
7	**20818-021**	**20818-162**
8	**20818-022**	**20818-028**
10	**20818-023**	**20818-029**
12	**20818-024**	**20818-120**

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

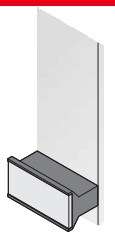
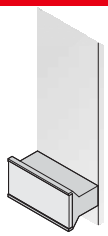
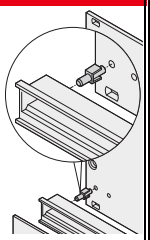
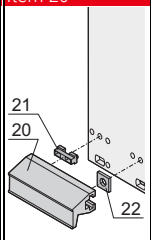
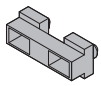
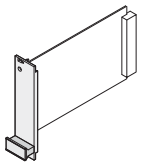
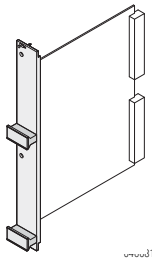
ORDER INFORMATION

		Front panel, U-profile, shieldable			Front panel unshielded
		Front panel, U-profile	Textile EMC gasket		
		 04608130	 bga45760		 04608131
		Al extrusion, front anodised, rear conductive, alignment pin pressed-in, stainless steel	always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0, temperature range -40 ... 70 °C		front panel, Al 2.5 mm; front anodised; rear iridescent green chromated
	Width HP	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5)[1]
 04608126		**3 U Height**			
	3	**30849-086**	**21101-853**	**21101-854**	**30847-602**
	4	**30849-087**			**30847-603**
	5	**30849-088**			**30847-604**
	6	**30849-089**			**30847-605**
	7	**30849-090**			**30847-606**
	8	**30849-091**			**30847-607**
	10	**30849-092**			**30847-608**
	12	**30849-093**			**30847-609**
 04608127		**6 U Height**			
	3	**30849-097**	**21101-855**	**21101-856**	**30847-625**
	4	**30849-098**			**30847-626**
	5	**30849-099**			**30847-627**
	6	**30849-100**			**30847-628**
	7	**30849-101**			–
	8	**30849-102**			**30847-630**
	10	**30849-103**			**30847-631**
	12	**30849-104**			–
Dimensions see page		7.60			7.60

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

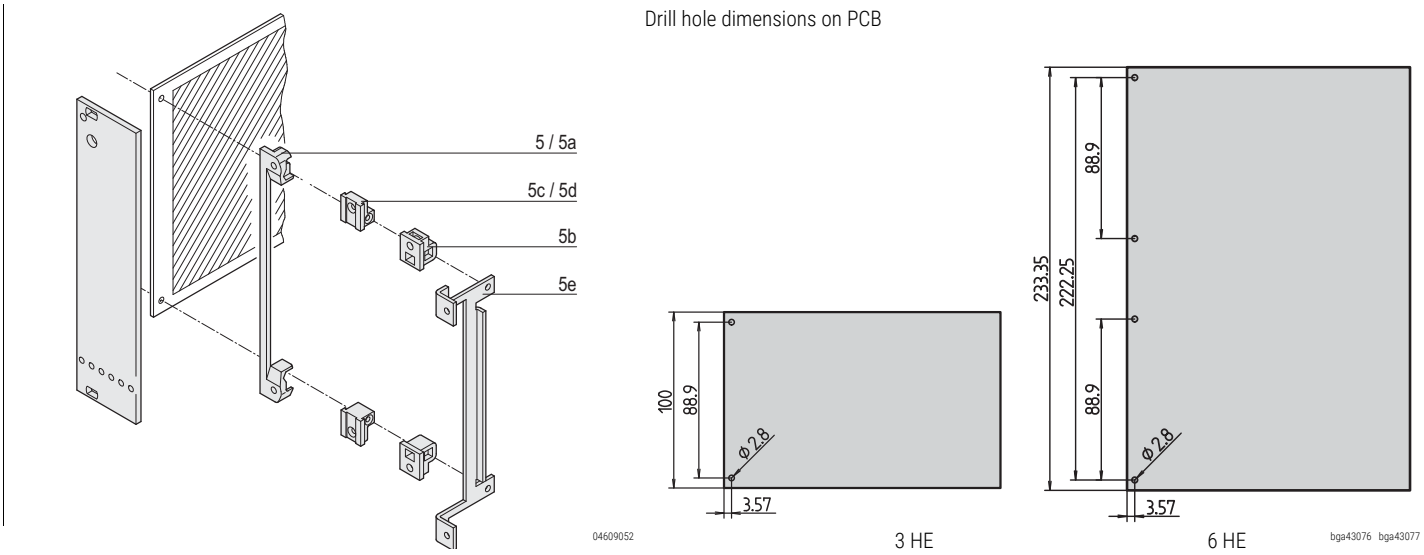
Part no. includes one packing unit (PU); delivery is exclusively made in PU

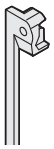
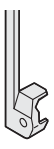
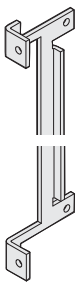
ORDER INFORMATION

		Plastic handle in trapeziform			Al profile handle		
		Trapeziform handle black	Trapeziform handle grey	Fixing clip	Handle item 20	Fixing part for Al profile handle item 21	Square nut item 22
		 04608132	 04608133	 04808064	 04608134	 04608135	06707050
		handle: PPE, UL 94 V-1; identification plate: Al, 1.5 mm, anodized, cut edges plain; please order clip separately; 3, 4 HP each have 2 alignment pins, 5 ... 42 TE have no alignment pins; required qty: 1 handle for 3 HE 2 handles for 6 HE		clip, PPE, UL 94 V-0, black	Al extrusion, anodised; fixing part, POM, black; square nut, St, nickel-plated; at length of 1000 mm only Al extrusion	fixing part, POM, black	DIN 562, M2.5, St, nickel-plated
	Width HP	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	PU 100 pieces	1 piece (SPQ 10)[1]	PU 100 pieces	PU 100 pieces
		3 / 6 U Height					
	3	**20809-396**	**20809-294**	–	**20809-281**		
	4	**20809-397**	**20809-295**	–	**20809-282**		
	5	**20808-080**	**20808-003**	**21101-239**	**20809-283**		
	6	**20808-081**	**20808-060**	**21101-239**	**20809-284**		
	7	**20808-082**	**20808-061**	**21101-239**	**20809-285**		
	8	**20808-083**	**20808-062**	**21101-239**	**20809-286**		
	9	**20808-084**	**20808-063**	**21101-239**	**20809-287**		
	10	**20808-085**	**20808-004**	**21101-239**	**20809-288**	–	–
	12	**20808-086**	**20808-064**	**21101-239**	**20809-289**		
	14	**20808-087**	**20808-065**	**21101-239**	**20809-290**		
	21	**20808-088**	**20808-066**	**21101-239**	**20809-291**		
	28	**20808-089**	**20808-067**	**21101-239**	**20809-292**		
	40	**20808-090**	**20808-009**	**21101-239**	–		
	42	**20808-091**	**20808-068**	**21101-239**	**20809-293**		
	61	20808-092	**20808-012**	–	–		
04608128 04608129	1000 mm	–	–	–	**30809-428**	**21100-476**	**21100-359**
Fixing material see page		7.59 Item 15, 16, 17					
Dimensions see page		7.59	7.59		7.59	7.59	7.59

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); lease order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU



	Item		Required Qty 3 U	Required Qty 6 U	Qty/PU	Part no.
PCB bracket 4 clearance holes for front panel/PCB fixing, 4 recesses for hexagon nuts; PBT, UL 94 V-0, red	5		1	2	1 piece (SPQ 10)[1)]	**60807-011**
PCB bracket 4 threads M2.5 for front panel/PCB fixing, PBT, UL 94 V-0, grey, 1 piece	5a		1	2	1 piece (SPQ 10)[1)]	**60807-211**
PCB bracket Clearance hole for front panel fixing, with recess for hexagon nut, drill hole for self-tapping screw for PCB fixing, PBT, UL 94 V-0, grey, 1 piece	5b		2	4	1 piece (SPQ 10)[1)]	**60807-183**
PCB bracket 2 threads M2.5 for front panel/PCB fixing, die-cast zinc, 1 piece	5c		2	4	1 piece (SPQ 10)[1)]	**60807-181**
PCB bracket Thread M2.5 for front panel fixing, clearance hole for PCB fixing, die-cast zinc, 1 piece	5d		2	4	1 piece (SPQ 10)[1)]	**60807-203**
PCB bracket 4 M2.5 threads for fixing front panel/PCB for recessed PCB mounting (20 mm), mounting depth 192.24 mm, St, zinc-plated; not for europacPRO, multipacPRO, ratiopacPRO, propacPRO or compacPRO, 1 piece	5e		1	2	1 piece (SPQ 10)[1)]	**30808-871**

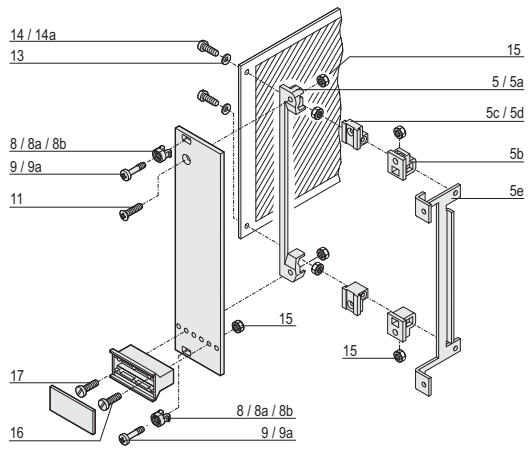
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Plug-in units – for IEC 60297, trapeziform

INDIVIDUAL COMPONENTS

FIXING MATERIAL FOR STATIC TRAPEZIFORM HANDLE

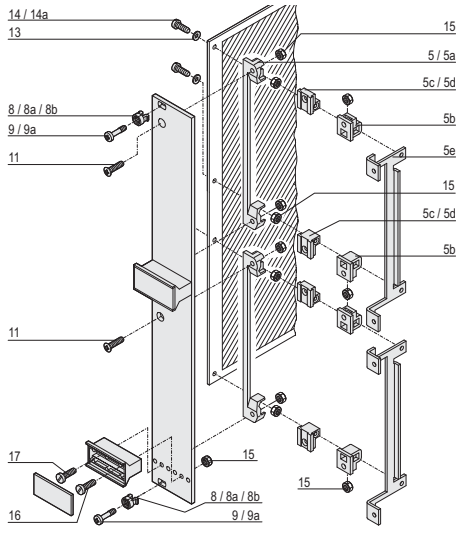
3 U



6 U

top

bottom



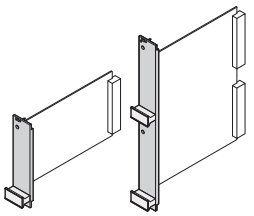
	Item		Required Qty 3 U < 8 HP	Required Qty 3 U ≥ 8 HP	Required Qty 6 U < 8 HP	Required Qty 6 U ≥ 8 HP	Qty/PU	Part no.
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	8	aza45933	2	4	2	4	100	**21100-464**
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steal	8	aza45934	2	4	2	4	100	**21100-662**
Metal sleeve, for form hole 5.9 x 3.3, to press-in Nickel-plated brass	8a	aza45934	2	4	2	4	100	**21100-660**
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated not for europacPRO and cases	9	AZA46586	2	4	2	4	100	**21100-748**
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	9a	AZA46586	2	4	2	4	100	**21101-101**
Raised Pozidrive countersunk screw M2.5 x 8, St, nickel-plated	11	06702056	1	1	2	2	100	**21100-429**
Washer 2.7 DIN 125, St, nickel-plated, 100 pieces	13	AZA46586	2	2	4	4	100	**21100-721**
Pozidrive panhead screw M2.5 x 8, nickel-plated steel if using item 13	14	06702057	2	2	4	4	100	**21101-069**
Panhead screw, self-tapping 2.5 x 8, St, zinc-plated for items 5 and 5b	14a	06702057	1	1	–	–	100	**21100-710**
Hexagon nut M2.5, nickel-plated steel for items 5 and 5b	15	aza43239	4 (5) 2 (5b)	4 (5) 2 (5b)	8 (5) 4 (5b)	8 (5) 4 (5b)	100	**21100-144**
Pozidrive panhead screw M2.5 x 12, nickel-plated steel	16	06702057	1	1	2	2	100	**21101-221**
Pozidrive panhead screw M2.5 x 16, nickel-plated steel	17	06702057	1	1	2	2	100	**21101-222**

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

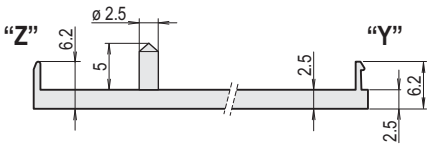
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Plug-in units – for IEC 60297, trapeziform

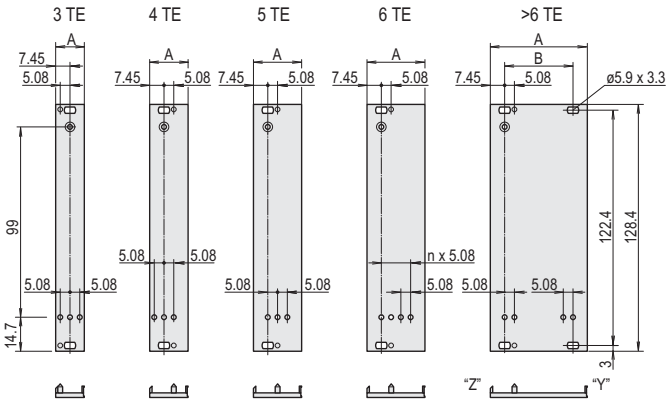
DIMENSIONS FRONT PANELS, U PROFILE, SHIELDABLE FOR STATIC TRAPEZIFORM HANDLE



04608126 04608127

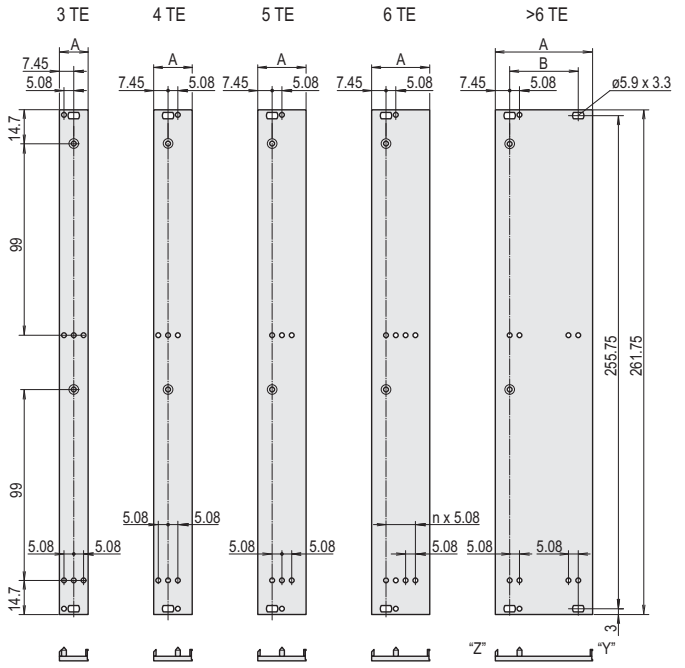


04608111



04603064

3 U

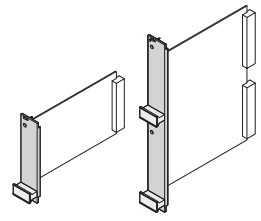


04608110

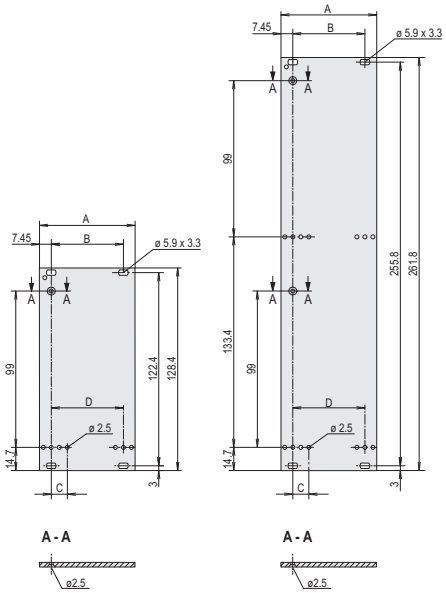
6 U

Dimensions table		
Width HP	A mm	B mm
3	14.90	-
4	19.98	-
5	25.06	-
6	30.14	-
7	35.22	-
8	40.30	25.40
10	50.46	35.56
12	60.62	45.72

DIMENSIONS FRONT PANELS FOR STATIC TRAPEZIFORM HANDLE



04608126 04608127



04603053

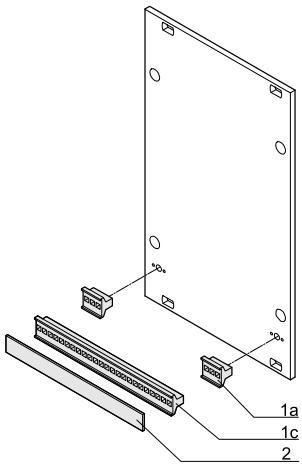
3 U 6 U

Dimensions table

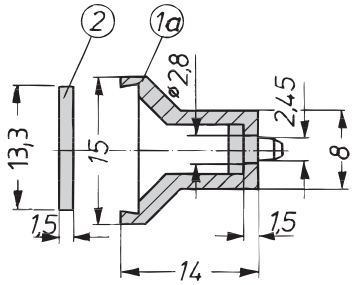
Width	A	B	C	D
HP	mm	mm	mm	mm
3	14.90	-	-	-
4	19.98	-	-	-
5	25.06	-	10.16	-
6	30.14	-	-	15.24
7	35.22	-	-	20.32
8	40.30	25.40	-	25.40
10	50.46	35.56	-	35.56
12	60.62	45.72	-	45.72

Plug-in units – for IEC 60297, trapeziform

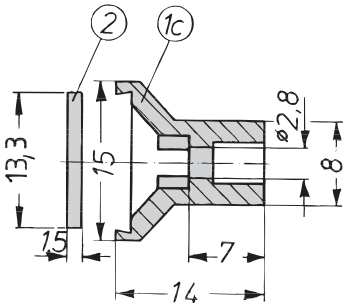
DIMENSIONS STATIC PLASTIC HANDLES, TRAPEZIFORM



BGA46447



A4-328a

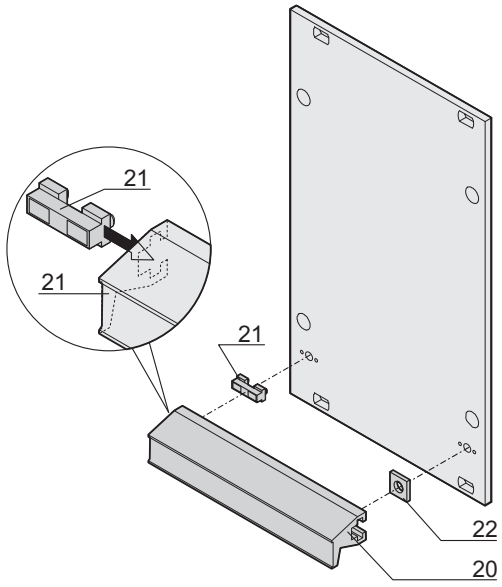


A4-328c

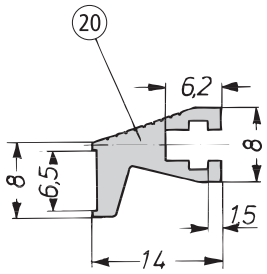
Dimensions table

Item	Width	Width
	HP	mm
1a	3	13.8
1a	4	18.9
1c	5	24.0
1c	6	29.0
1c	7	34.1
1c	8	39.2
1c	9	44.3
1c	10	49.4
1c	12	59.6
1c	14	69.7
1c	21	105.2
1c	28	140.8
1c	40	201.8
1c	42	212.0
1c	61	308.5

DIMENSIONS ALUMINIUM EXTRUSION HANDLES



04602069



A4-328d

Dimensions table

Item	Width	Width
20	HP	mm
20	3	13.8
20	4	18.9
20	5	24.0
20	6	29.0
20	7	34.1
20	8	39.2
20	9	44.3
20	10	49.4
20	12	59.6
20	14	69.7
20	21	105.2
20	28	140.8
20	40	201.8
20	42	212.0
20	-	1000

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Plug-in units – with mechanical shielding

PLUG-IN UNIT WITH MECHANICAL SHIELDING, 3 U KITS

04694001

- Mechanical protection of sub-assembly
- Earthing of shielding panels possible by Faston connectors 6.3 × 0.6 mm
- For euroboards 100 × 160 mm

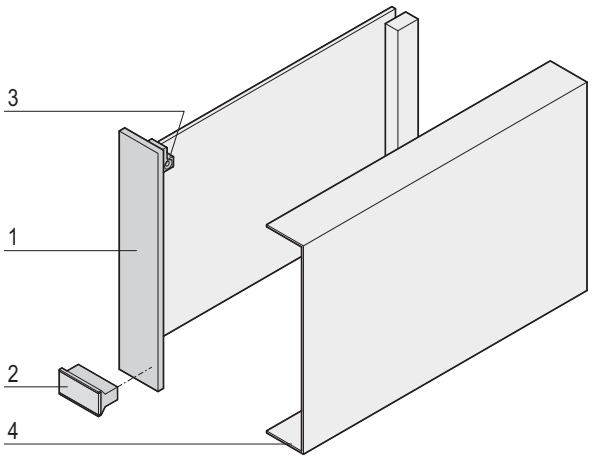
Handles
without extraction function

04692003

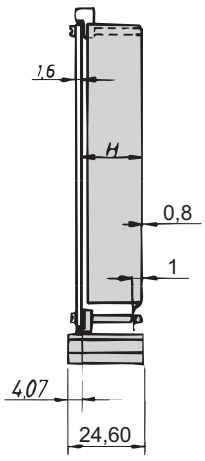
Handles
with extraction function

04692005

3 U KIT, SHIELDING COMPONENT SIDE, HANDLES WITH/WITHOUT EXTRACTION FUNCTION



04602077



a4-237

- Usable connectors in accordance with EN 60603 (DIN 41612): Construction type B, C, D, F, H, R;

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, front: anodised, rear: irisdescent green chromated
2	1	Trapeziform handle, PPE, UL 94 V-1, grey
3	1	Board support, PBT, UL 94 V-0, red
5	1	Assembly kit (also for shielding panels)

ORDER INFORMATION

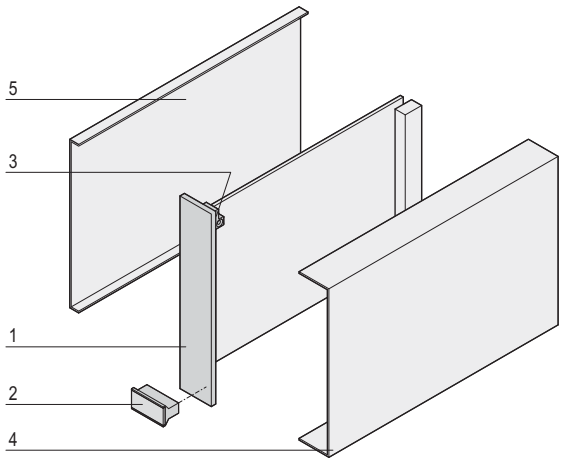
Width	H	Plug-in unit without extraction function	Plug-in unit with extraction function
HP	mm	Part no.	Part no.
6	24.60	**20809-502**	20809-516
Item 4 Shielding panel component side for 7 HP front panel width, stainless steel, 0.8 mm, 1 piece		**20809-371**	**20809-371**

NOTE

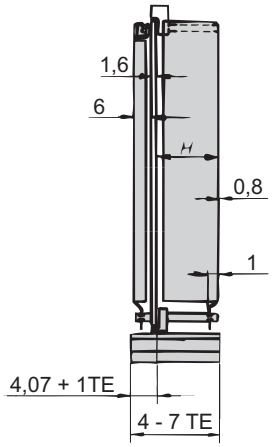
- Keying/coding with separate keying/coding strip is not possible
- Please order shielding plates separately

Plug-in units – with mechanical shielding

3 U KITS, BOTH SIDES SHIELDED (SOLDER/COMPONENT SIDE), HANDLES WITH/WITHOUT EXTRACTION FUNCTION



04602078



a4-236a

- Usable connectors in accordance with EN 60603 (DIN 41612): Construction type B, C, D, F, H, R;

DELIVERY COMPRISES

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, front: anodised, rear: irisdescent green chromated
2	1	Trapeziform handle, without extraction function, PPE, UL 94 V-1, grey
3	2	Board support, PBT, UL 94 V-0, red
6	1	Assembly kit (also for shielding panels)

ORDER INFORMATION

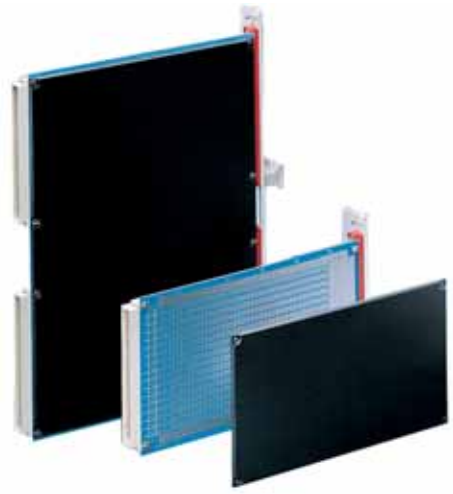
Width	H	Plug-in unit without extraction function	Plug-in unit with extraction function
HP	mm	Part no.	Part no.
4	9.60	**20809-495**	–
5	14.70	20809-496	20809-511
6	19.80	20809-497	20809-512
7	24.90	**20809-498**	20809-513
Item 4 Shielding panel component side for 4 HP front panel width, stainless steel, 0.8 mm, 1 piece		**20809-329**	**20809-329**
Item 4 Shielding panel component side or 5 HP front panel width, stainless steel, 0.8 mm, 1 piece		**20809-357**	**20809-357**
Item 4 Shielding panel component side for 6 HP front panel width, stainless steel, 0.8 mm, 1 piece		**20809-359**	**20809-359**
Item 4 Shielding panel component side for 7 HP front panel width, stainless steel, 0.8 mm, 1 piece		**20809-371**	**20809-371**
Item 5 Shielding panel on solder side, stainless steel, 0.8 mm, 1 piece		**30809-571**	**30809-571**

NOTE

- Keying/coding with separate keying/coding strip is not possible
- Where the shielding plate is used for the solder side, the PCB is offset to the right by 1 HP

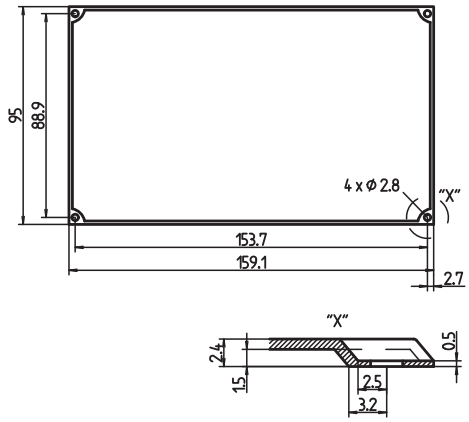
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

PCB COVER FOR EUROBOARDS



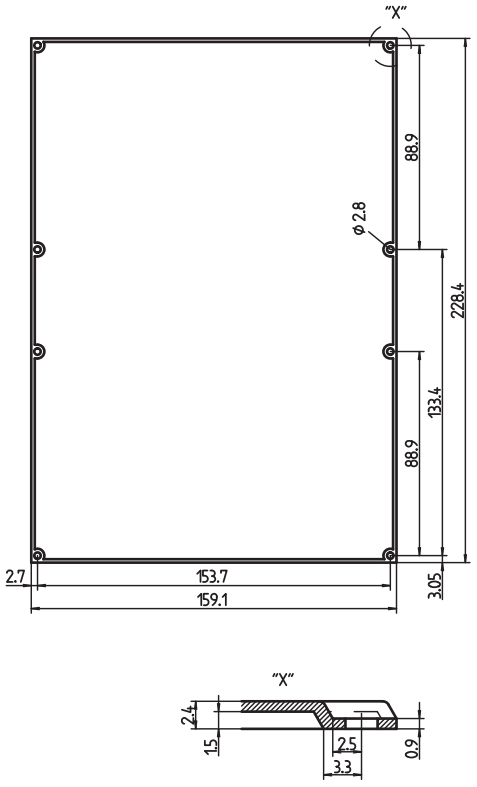
11092008

For PCBs 100 × 160 mm



LKA40520

For PCBs 233.35 × 160 mm



LKA30451

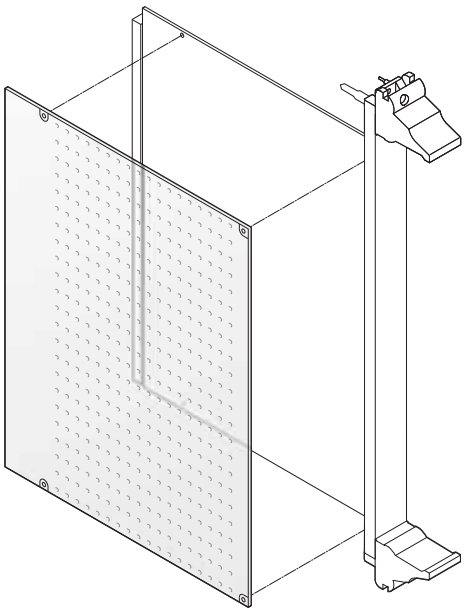
- Mechanical protection of the solder side

ORDER INFORMATION

Description	Qty	Part no.
PCB cover (thickness 0.9 mm) for euroboards (100 x 160 mm), PBT, black, max. operating temperature without permanent deformation 55 °C	1 piece (SPQ 10)	**61000-007**
PCB cover (thickness 0.9 mm) with similar temperature expansion coefficients to FR4 PCB; for euroboards (100 x 160 mm), LCP, UL 94 V-0, white, max. operating temperature without permanent deformation 85 °C	1 piece (SPQ 10)	**61000-177**
PCB cover for double euroboards (233.35 x 160 mm), PP, UL 94 V-0, black	1 piece (SPQ 10)	**61000-012**
Slotted flathead screw M2.5 x 6, height of head 1.2 mm, PU 100 pieces		**21102-007**
Slotted flathead screw M2.5 x 12, height of head 1.2 mm, PU 100 pieces		**21102-008**

SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: please order at least 10 pieses of PCB covers or a multiple

PCB COVER FOR COMPACTPCI



12303051

- Mechanical protection of solder side
- Cover is perforated for better cooling of components

DELIVERY COMPRISES

Item	Qty	Description
1	1	Cover, plastic, 0.5 mm, antistatic, perforated, UL 94 V-0; max. operating temperature 65 °C, max. continuous operating temperature 55 °C

ORDER INFORMATION

Height U	Depth mm	Part no.
6	80	24579-039
3	160	**24579-037**
6	160	**24579-038**
Fixing clips PU 100 pieces		21101-914

NOTE

- Fixing clips are required for mounting the perforated covers; please order separately

Frame type plug-in units – Kits

OVERVIEW

MAIN KATALOG

Cabinets 1

Wall mounted cases 2

Accessories for cabinets and wall mounted cases . . 3

Climate control . . 4

Electronics cases 5

Subracks/ 19" chassis 6

Front panels, plug-in units 7

Systems 8

Power supply units 9

Backplanes 10

Connectors, front panel component system 11

Appendix 12

04807002

19" modules are mechanical components that serve to carry one or more circuit boards. The boards housed in a module are thus combined into a larger electronic function unit that is self-contained and testable. Mechanical dimensions conform to IEC 60297-3-101 / IEEE 1101.1/11 standards, i.e. the so-called 19" standard. These function units are integrated into the subrack or case; their dimensions likewise form a component of IEC 60297-3-101 / IEEE 1101.1/11.

The dimension obligations of the standard give only little freedom for individual design of frame type plug-in units. The aim is therefore to make optimum use of what freedoms regarding dimensions it does allow, e.g.

- to maximise the internal space of a plug-in unit and thus create maximum space for electronic components, or
- to ensure optimal EMC shielding with minimum loss of mounting space to the shielding components

Standards

- IEC 60297-3-101 / IEEE 1101.1/11

Width	5 HP		6 HP		7 HP		8 HP		10 HP		12 HP		14 HP		21 HP		28 HP		42 HP	
Height in U	3	6	3	6	3	6	3	6	3	6	3	6	3	6	3	6	3	6	3	6
Frame-type plug-in units PRO	–	–	–	–	–	–	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Frame type plug-in units PRO with cooling fins	–	–	–	–	–	–	–	–	–	–	x	x	x	x	x	x	–	–	–	–
Frame-type plug-in units PRO with hood	x	x	x	x	x	x	–	–	x	x	x	x	x	x	–	–	–	–	–	–
HF frame-type plug-in units	–	–	–	–	x	–	–	–	x	–	x	–	x	–	x	–	x	–	–	–

Frame type plug-in units – Kits

OVERVIEW

FRAME-TYPE PLUG-IN UNITS TO HOUSE PRINTED BOARDS

- **For PCBs in euroboard format**
- **Kits or configuration from single components**
- **Front panels: unshielded or EMC shielded**

04808008

FRAME-TYPE PLUG-IN UNITS PRO

- Kit or configuration from single components in 3 U and 6 U, 8 ... 42 HP
- Shielded and unshielded versions
- Side panel with/without cooling fins
- For one or several PCBs or one or several connectors
- Various possibilities for combining the individual components

04808009

PLUG-IN UNITS PRO WITH HOOD

- Kit in 3 U and 6 U, 5 ... 14 HP
- Shielded and unshielded versions
- For one PCB with one connector

04892005

HF FRAME-TYPE PLUG-IN UNITS

- Kit or configuration from single components in 3 U, 7 ... 28 HP
- For shielding against high-frequency radiation
- Tube with cooling fins, in extruded aluminium
- For one or more PCBs, one or more connectors

SERVICEPLUS

e.g. individual configuration and assembly
e.g. modification (special colours)
e.g. customised solutions with modified frame-type plug-in units (special sizes)

Overview **7.64**

Introduction: Product features, product comparison **7.66**

Frame type plug-in units PRO

Frame type plug-in units PRO, shielded/ unshielded **7.68**

Frame-type plug-in units PRO with hood, unshielded **7.85**

HF plug-in units

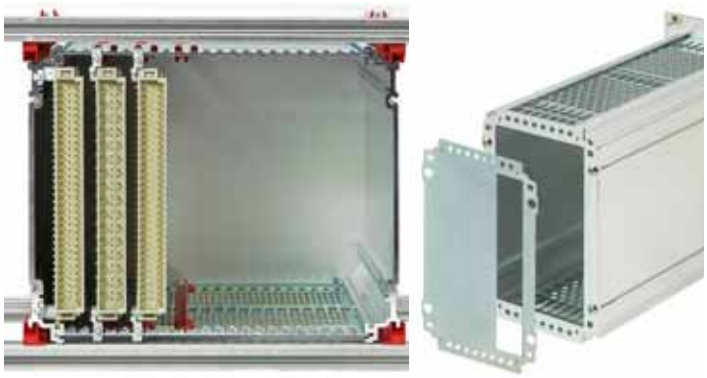
Kits 3 U **7.89**

ServicePLUS configuration **7.90**

Accessories for plug-in units see page 7.52

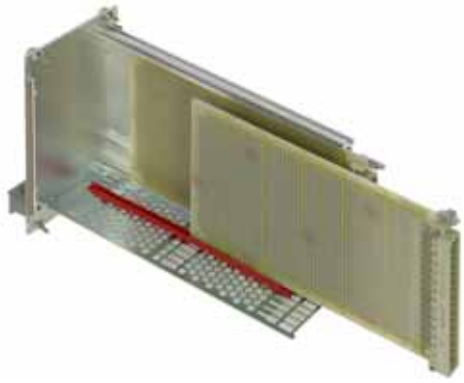
Frame type plug-in units

THE NEW GENERATION



04808013 04808014

Rear view: frame type plug-in unit mounted in subrack



04808012

Board for slot 1 fixes to the side panel; further boards are fixed with guide rails

04808011 04808016

Sliding cover plates

The frame type plug-in units conform to IEC 60297-3-101.
They serve to house standardized PCBs and bulky components.
Because of the standardized assembly dimensions the frame type plug-in units can be mounted on guide rails, to be pushed into the subrack, in any order and using any plug-in unit.
The robust Al extrusion construction is especially suited for heavy components and the rough handling as "Field Replaceable Unit".

Details

The EMC version of the front panel was improved for frequencies over 1 GHz by using a conductive textile gasket and a robust U-shaped front panel

Push-in cover plates for quick fitting

Handles to be bolted-on from the front, easy mounting

Optimised air flow rate thanks to slender extruded side panels and large perforation areas in the cover plates, a perforation degree of up to 65 % is possible

3 cover plate versions (solid, perforated, perforated for guide rail mounting)

Width of frame-type plug-in units from 8 HP

To achieve a higher airflow rate, exceptionally slender guide rails are used to fix the boards

From slot 2 guide rails can be positioned in HP grid

Easy fixing of the boards in the frame-type plug-in units;
only 2 x 1 screws per board are needed to fix the boards

3 rear panel variants (solid, for one DIN connector, for multiple DIN connectors)

The flat rear panel enables simple reworking (e.g. punching); the rear panel can be removed without removing the PCBs

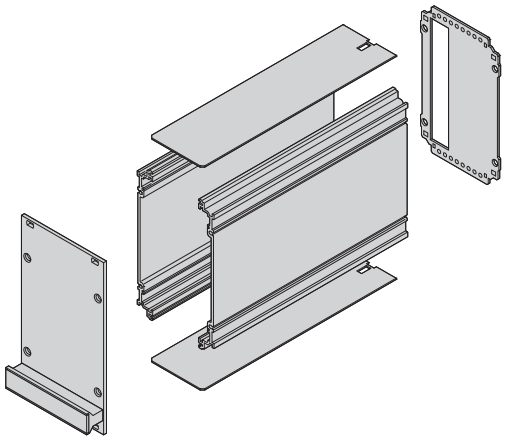
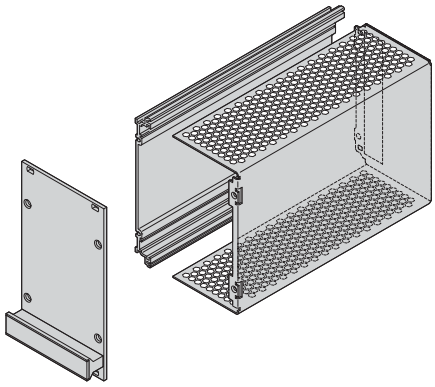
For better EMC contacting between rear panel and cover plate and to increase the stability of broad frame-type plug-in units, a rear panel retainer is available

Use of Torx screws for secure machine mounting

Note:
Frame type plug-in units cannot be combined with guide rails for CompactPCI or VME64x applications (width 4 HP)

Frame type plug-in units

COMPARISON: FRAME-TYPE PLUG-IN UNITS PRO/FRAME-TYPE PLUG-IN UNITS PRO WITH HOOD

Frame-type plug-in units PRO	Frame-type plug-in units PRO with hood (shielded)
 04808125	 04808115
For one or multiple PCBs	Only for one PCB
Modular, at least 6 components (front panel, 2 side panels, 2 cover plates, rear panel)	Only 3 components (front panel, left hand side panel, hood with integrated rear panel)
Identical front panel and front handle	Identical front panel and front handle
Identical left hand side panel (Al extrusion)	Identical left hand side panel (Al extrusion)
Side panel on right hand side (Al extrusion)	Hood on right hand side (Al sheet)
Separate rear panel	Hood includes rear panel
Widths from 8 HP to 42 HP	Widths from 5 HP to 14 HP
Guiding in subrack/case with 4 guide rails; left and right side panels	Guiding in subrack/case with 2 guide rails; left side panel
3 rear panel variants (for one DIN connector, for multiple DIN connectors, rear panel without cut-out)	1 rear panel variant (for one DIN connector)

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO

FRAME TYPE PLUG-IN UNITS PRO, 3 U KITS, FRONT PANEL SHIELDED (TEXTILE GASKET)

04811007

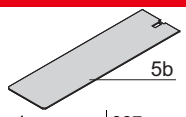
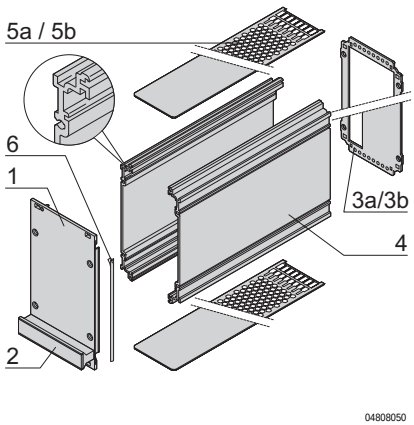
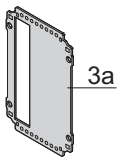
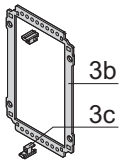
Illustration shows 12 HP width, side panel depth 167 mm

- Extruded side panels with groove to rigth and left, to insert a PCB (board position in accordance with standard in left side panel only)
- 2 board depths: 160 mm and 220 mm
- 2 cover plate versions
  - with perforation, for guide rails (5a, airflow rate approx. 60 %); please order guide rails separately
  - Without perforation (5b)
- 2 rear panel versions
  - With cut-out for one connector (3a, in accordance with EN 60603-2, DIN 41612)
  - With cut-out for multiple connectors (3b, in accordance with EN 60603-2, DIN 41612)

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Front panel, U profile anodised, rear conductive, alignment pin pressed-in
2	1	Handle, grey, PPE, UL 94 V-1
3a	1	Rear panel, St, zinc-plated, 1.5 mm, with cut-out for one connector, incl. PCB fixing (slot 1)
3b	1	Rear panel, St, zinc-plated, 1.5 mm, with cut-out for multiple connectors, incl. PCB fixing (slot 1 and slot 2), incl. 2 guide rails rear panel fastener
3c	2	
4	2	Side panel, Al extrusion, colourless passivated, with groove for one PCB
5a	2	Cover plate, St, zinc-plated, 1.0 mm, with perforation
5b	2	Cover plate, St, zinc-plated, 1.0 mm, without perforation
6	1	EMC sealing (textile)
7	1	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				 04808055		04808054	
				167 mm deep	227 mm deep	167 mm deep	227 mm deep
		U	HP	Part no.	Part no.	Part no.	Part no.
 04808050	 04808052	3	8	**24813-408**	**24813-458**	**24813-208**	**24813-258**
		3	10	**24813-410**	**24813-460**	**24813-210**	**24813-260**
		3	12	**24813-412**	**24813-462**	**24813-212**	**24813-262**
		3	14	**24813-414**	**24813-464**	**24813-214**	**24813-264**
		3	21	**24813-421**	**24813-471**	**24813-221**	**24813-271**
		3	28	**24813-428**	**24813-478**	**24813-228**	**24813-278**
		3	42	**24813-442**	**24813-492**	**24813-242**	**24813-292**
	 04808053	3	8	–	–	**24813-308**	**24813-358**
		3	10	–	–	**24813-310**	**24813-360**
		3	12	–	–	**24813-312**	**24813-362**
		3	14	–	–	**24813-314**	**24813-364**
		3	21	–	–	**24813-321**	**24813-371**
		3	28	–	–	**24813-328**	**24813-378**
		3	42	–	–	**24813-342**	**24813-392**

- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc.
see from page 7.74

Frame type plug-in units PRO

FRAME TYPE PLUG-IN UNITS PRO, 6 U KITS, FRONT PANEL SHIELDED (TEXTILE GASKET)

Illustration shows 12 HP width, side panel depth 167 mm

- Extruded side panels with groove to rigth and left, to insert a PCB (board position in accordance with standard in left side panel only)
- 2 board depths: 160 mm and 220 mm
- 2 cover plate versions
  - With perforation, for guide rails (5a, airflow rate approx. 60 %),
  - please order guide rails separately
  - Without perforation (5b)
- 2 rear panel versions
  - With cut-out for one connector (3a; in accordance with EN 60603-2, DIN 41612)
  - With cut-out for multiple connectors (3b; in accordance with EN 60603-2, DIN 41612)
  - 6 U has cut-outs for connectors at top and bottom

DELIVERY COMPRISES (Kit)

Item	Qty	Description
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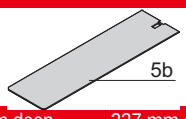
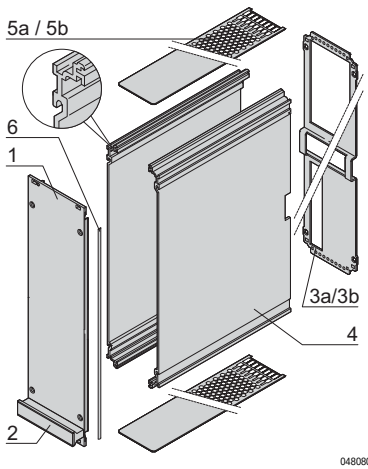
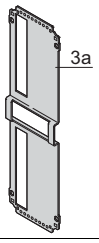
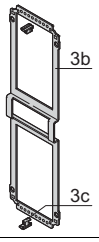
3b	1	Rear panel, St, zinc-plated, 1.5 mm, with cut-out for multiple connectors, incl. PCB fixing (slot 1 and slot 2), incl. 2 guide rails rear panel fastener
3c	2	
4	2	Side panel, Al extrusion, colourless passivated, with groove for one PCB
5a	2	Cover plate, St, zinc-plated, 1.0 mm, with perforation
5b	2	Cover plate, St, zinc-plated, 1.0 mm, without perforation
6	1	EMC sealing (textile)
7	1	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				 04808055		04808054	
		U	HP	167 mm deep Part no.	227 mm deep Part no.	167 mm deep Part no.	227 mm deep Part no.
 04808056	 04808117	6	8	**24813-908**	**24813-958**	**24813-708**	**24813-758**
		6	10	**24813-910**	**24813-960**	**24813-710**	**24813-760**
		6	12	**24813-912**	**24813-962**	**24813-712**	**24813-762**
		6	14	**24813-914**	**24813-964**	**24813-714**	**24813-764**
		6	21	**24813-921**	**24813-971**	**24813-721**	**24813-771**
		6	28	**24813-928**	**24813-978**	**24813-728**	**24813-778**
		6	42	**24813-942**	**24813-992**	**24813-742**	**24813-792**
	 04808059	6	8	–	–	**24813-808**	**24813-858**
		6	10	–	–	**24813-810**	**24813-860**
		6	12	–	–	**24813-812**	**24813-862**
		6	14	–	–	**24813-814**	**24813-864**
		6	21	–	–	**24813-821**	**24813-871**
		6	28	–	–	**24813-828**	**24813-878**
		6	42	–	–	**24813-842**	**24813-892**

- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc.
see from page 7.74

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO

FRAME-TYPE PLUG-IN UNITS PRO, 3 U KITS, FRONT PANEL UNSHIELDED

04811009

Illustration shows 12 HP width, side panel depth 167 mm

- Extruded side panels with groove to rigth and left, to insert a PCB (board position in accordance with standard in left side panel only)
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3c	2	
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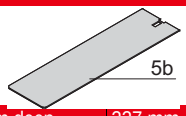
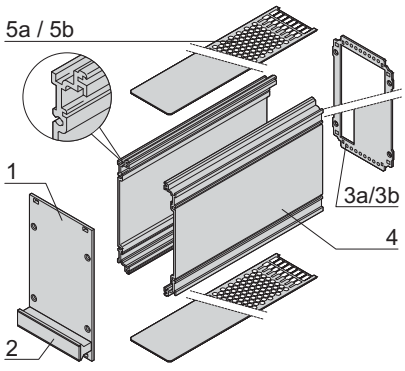
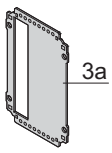
5a	2	Cover plate, St, zinc-plated, 1.0 mm, with perforation
5b	2	Cover plate, St, zinc-plated, 1.0 mm, without perforation
6	1	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				 5b 04808055		5a 04808054	
		U	HP	167 mm deep Part no.	227 mm deep Part no.	167 mm deep Part no.	227 mm deep Part no.
 5a / 5b, 1, 3a/3b, 4, 2 04808051	 3a 04808052	3	8	**24812-408**	**24812-458**	**24812-208**	**24812-258**
		3	10	**24812-410**	**24812-460**	**24812-210**	**24812-260**
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	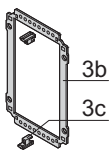 3b, 3c 04808053	3	8	–	–	**24812-308**	**24812-358**
		3	10	–	–	**24812-310**	**24812-360**
		3	12	–	–	**24812-312**	**24812-362**
		3	14	–	–	**24812-314**	**24812-364**
		3	21	–	–	**24812-321**	**24812-371**
		3	28	–	–	**24812-328**	**24812-378**
		3	42	–	–	**24812-342**	**24812-392**

- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc. see from page 7.74

Frame type plug-in units PRO

FRAME TYPE PLUG-IN UNITS PRO, 6 U KITS, FRONT PANEL UNSHIELDED

Illustration shows 12 HP width, side panel depth 167 mm

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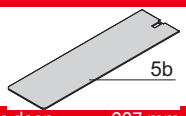
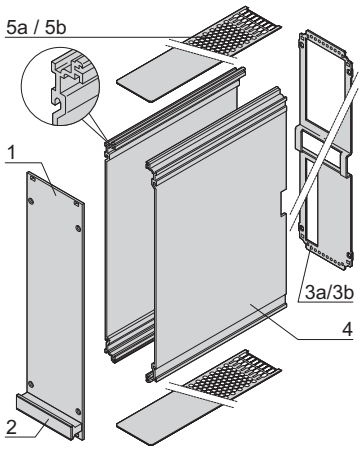
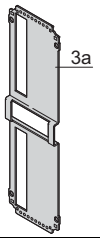
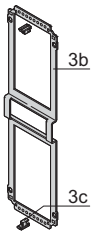
5a	2	Cover plate, St, zinc-plated, 1.0 mm, with perforation
5b	2	Cover plate, St, zinc-plated, 1.0 mm, without perforation
6	1	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				 5b 04808055		5a 04808054	
		U	HP	167 mm deep Part no.	227 mm deep Part no.	167 mm deep Part no.	227 mm deep Part no.
 5a / 5b, 1, 2, 3a/3b, 4 04808057	 3a 04808117	6	8	**24812-908**	**24812-958**	**24812-708**	**24812-758**
		6	10	**24812-910**	**24812-960**	**24812-710**	**24812-760**
		6	12	**24812-912**	**24812-962**	**24812-712**	**24812-762**
		6	14	**24812-914**	**24812-964**	**24812-714**	**24812-764**
		6	21	**24812-921**	**24812-971**	**24812-721**	**24812-771**
		6	28	**24812-928**	**24812-978**	**24812-728**	**24812-778**
		6	42	**24812-942**	**24812-992**	**24812-742**	**24812-792**
	 3b, 3c 04808059	6	8	–	–	**24812-808**	**24812-858**
		6	10	–	–	**24812-810**	**24812-860**
		6	12	–	–	**24812-812**	**24812-862**
		6	14	–	–	**24812-814**	**24812-864**
		6	21	–	–	**24812-821**	**24812-871**
		6	28	–	–	**24812-828**	**24812-878**
		6	42	–	–	**24812-842**	**24812-892**

- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc.
see from page 7.74

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO

FRAME TYPE PLUG-IN UNIT PRO KITS, SIDE PANEL WITH COOLING FINS, FRONT PANEL SHIELDED

04812018

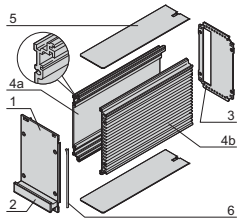
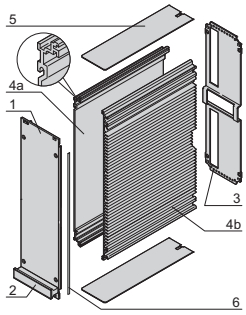
Illustration shows 12 HP width, side panel depth 167 mm

- Right side panel with cooling fins to improve heat dissipation; left side panel extrusion with groove to insert a PCB (board position in accordance with standard in left side panel only)
- 2 board depths: 160 mm and 220 mm
- Cover plate without perforation
- With cut-out for one connector in accordance with EN 60603-2, DIN 41612
- With 10 W installed heat dissipation loss the internal temperature falls by approx. 5°C

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Front panel, U profile anodised, rear conductive, alignment pin pressed-in
2	1	Handle, grey, PPE, UL 94 V-1
3	1	Rear panel, St, zinc-plated, 1.5 mm, with cut-out for one connector, incl. PCB fixing (slot)
4a	2	Side panel, left, Al extrusion, clear passivated, with groove for one PCB
4b	2	Side panel, right, Al extrusion, clear passivated, with cooling fins
5	2	Cover plate, St, zinc-plated, 1.0 mm
6	1	EMC sealing (textile)
7	1	Assembly kit

ORDER INFORMATION

	Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
 04812058	3	14	24813-164	–
	3	21	24813-171	–
 04812060	6	14	24813-664	24813-614
	6	21	24813-671	24813-621

NOTE

- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc.
see from page 7.74

Frame type plug-in units PRO

FRAME TYPE PLUG-IN UNITS PRO KITS, SIDE PANEL WITH COOLING FINS, FRONT PANEL UNSHIELDED

04812008

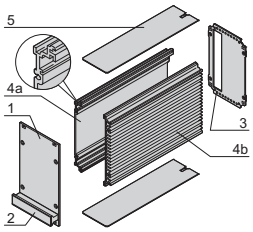
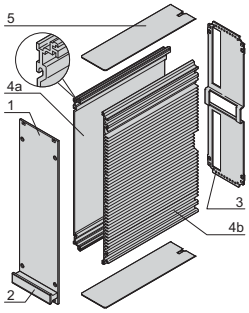
Illustration shows 12 HP width, side panel depth 167 mm

- Right side panel with cooling fins to improve heat dissipation; left side panel extrusion with groove for insertion of a PCB (board position in accordance with standard in left side panel only)
- 2 board depths: 160 mm and 220 mm
- Cover plate without perforation
- With cut-out for one connector in accordance with EN 60603-2, DIN 41612
- With 10 W installed heat dissipation loss the internal temperature falls by approx. 5°C

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, anodised, cut edges plain
2	1	Handle, grey, PPE, UL 94 V--1
3	1	Rear panel, St, zinc-plated, 1.5 mm, with cut-out for one connector, incl. PCB fixing (slot 1)
4a	2	Side panel, left, Al extrusion, clear passivated, with groove for one PCB
4b	2	Side panel, right, Al extrusion, clear passivated, with cooling fins
5	2	Cover plate, St, zinc-plated, 1.0 mm
6	1	Assembly kit

ORDER INFORMATION

	Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
 04812059	3	12	24812-162	–
	3	14	24812-164	–
	3	21	24812-171	–
 04812061	6	12	24812-662	24812-612
	6	14	24812-664	24812-614
	6	21	24812-671	24812-621

NOTE

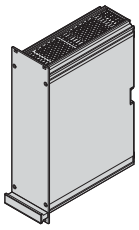
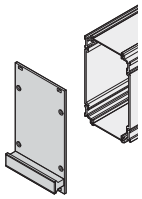
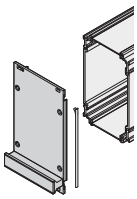
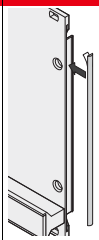
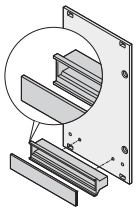
- Description of individual components, guide rails, dimension drawings, other combinations cover plates/rear panels etc.
see from page 7.74

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS

FRONT PANELS, FRONT HANDLES

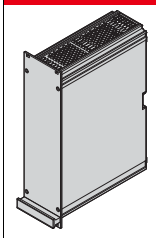
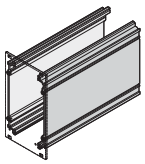
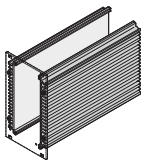
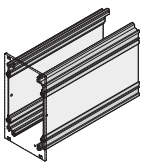
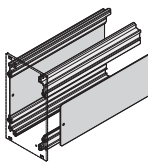
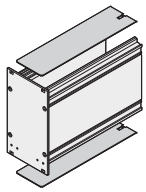
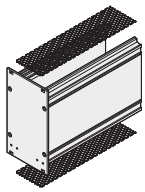
	Front panel	Shieldable front panel, U profile			Trapeziform handle, grey (without extraction function)	
	unshielded	Front panel	Textile EMC gasket		Grey	Black
	 04808124	 04808060	 04808061	 04808062	 04808063	
Supplied quantity for assembly of 5 frame type plug-in units	Al, 2.5 mm, front anodised, rear anodised, cut edges blank	Al extrusion, alignment pin pressed-in, front anodised, rear conductive	always fixed laterally on the front panel, in the groove of the profile, textile gasket, core: foam, sleeve: textile cladding with CuNi coating, UL 94 V-0, temperature range -40 ... 70 °C		handle: PPE, UL 94 V-1; identification plate: Al, 1.5 mm, anodised, cut edges plain; please order clip separately (included in mounting kit for five plug-in units or individual parts) 7.77	
	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]
	3 U Height PCB depth 160 mm					
8	**34812-108**	**34813-108**	**21101-853**	**21101-854**	**20808-062**	**20808-083**
10	**34812-110**	**34813-110**			**20808-004**	**20808-085**
12	**34812-112**	**34813-112**			**20808-064**	**20808-086**
14	**34812-114**	**34813-114**			**20808-065**	**20808-087**
21	**34812-121**	**34813-121**			**20808-066**	**20808-088**
28	**34812-128**	**34813-128**			**20808-067**	**20808-089**
42	**34812-142**	**34813-142**			**20808-068**	**20808-091**
	PCB depth 220 mm					
8	**34812-108**	**34813-108**	**21101-853**	**21101-854**	**20808-062**	**20808-083**
10	**34812-110**	**34813-110**			**20808-004**	**20808-085**
12	**34812-112**	**34813-112**			**20808-064**	**20808-086**
14	**34812-114**	**34813-114**			**20808-065**	**20808-087**
21	**34812-121**	**34813-121**			**20808-066**	**20808-088**
28	**34812-128**	**34813-128**			**20808-067**	**20808-089**
42	**34812-142**	**34813-142**			**20808-068**	**20808-091**
	6 U Height PCB depth 160 mm					
8	**34812-608**	**34813-608**	**21101-855**	**21101-856**	**20808-062**	**20808-083**
10	**34812-610**	**34813-610**			**20808-004**	**20808-085**
12	**34812-612**	**34813-612**			**20808-064**	**20808-086**
14	**34812-614**	**34813-614**			**20808-065**	**20808-087**
21	**34812-621**	**34813-621**			**20808-066**	**20808-088**
28	**34812-628**	**34813-628**			**20808-067**	**20808-089**
42	**34812-642**	**34813-642**			**20808-068**	**20808-091**
	PCB depth 220 mm					
8	**34812-608**	**34813-608**	**21101-855**	**21101-856**	**20808-062**	**20808-083**
10	**34812-610**	**34813-610**			**20808-004**	**20808-085**
12	**34812-612**	**34813-612**			**20808-064**	**20808-086**
14	**34812-614**	**34813-614**			**20808-065**	**20808-087**
21	**34812-621**	**34813-621**			**20808-066**	**20808-088**
28	**34812-628**	**34813-628**			**20808-067**	**20808-089**
42	**34812-642**	**34813-642**			**20808-068**	**20808-091**
Dimensions see page	7.81	7.81			7.82	7.82

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS — SIDE PANELS, COVER PLATES, GUIDE RAILS

	Extruded side panel		Extruded side panel with cooling fins		Side panel, corner profile and side plate		Cover plate	
	Left	Right	Left	Right	Corner profile	Side plate	Without perforation	With perforation
	 04808124	 04808065	 04811050		 04808066	 04808067	 04808068	 04808070
Supplied quantity for assembly of 5 frame type plug-in units	Al extrusion, colourless passivated, with groove for one PCB; 3 U symmetrical; 6 U asymmetrical, right and left side panel different) Side panels with and without cooling fins can be combined		Al extrusion, colourless passivated, with groove for one PCB; 3 U symmetrical; 6 U asymmetrical Side panels with and without cooling fins can be combined		Al extrusion, colourless passivated, with groove for one PCB, please order side plate separately	St, 1 mm, zinc-plated, is inserted into side panel rear angle	St, 1.0 mm, zinc-plated; PCB only possible in slot 1	St, 1.2 mm, Al, airflow rate in perforated area approx. 65 %; PCB only possible in slot 1
	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 5)[1]	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]
	3 U Height PCB depth 160 mm							
8	**34812-100** 1 piece (SPQ 10)[1]	**34812-100** 1 piece (SPQ 10)[1]	**34812-200**	**34812-200**	**34812-102**	**34812-103**	**34812-408**	**34812-958**
10							**34812-410**	**34812-960**
12							**34812-412**	**34812-962**
14							**34812-414**	**34812-964**
21							**34812-421**	**34812-971**
28							**34812-428**	**34812-978**
42							**34812-442**	**34812-992**
	PCB depth 220 mm							
8	**34813-100** 1 piece (SPQ 10)[1]	**34813-100** 1 piece (SPQ 10)[1]	**34813-200**	**34813-200**	**34813-102**	**34813-103**	**34813-408**	**34813-958**
10							**34813-410**	**34813-960**
12							**34813-412**	**34813-962**
14							**34813-414**	**34813-964**
21							**34813-421**	**34813-971**
28							**34813-428**	**34813-978**
42							**34813-442**	**34813-992**
	6 U Height PCB depth 160 mm							
8	**34812-600** 1 piece (SPQ 5)[1]	**34812-601** 1 piece (SPQ 5)[1]	–	**34812-701**	**34812-102**	**34812-603**	**34812-408**	**34812-958**
10							**34812-410**	**34812-960**
12							**34812-412**	**34812-962**
14							**34812-414**	**34812-964**
21							**34812-421**	**34812-971**
28							**34812-428**	**34812-978**
42							**34812-442**	**34812-992**
	PCB depth 220 mm							
8	**34813-600** 1 piece (SPQ 5)[1]	**34813-601** 1 piece (SPQ 5)[1]	–	**34813-701**	**34813-102**	**34813-603**	**34813-408**	**34813-958**
10							**34813-410**	**34813-960**
12							**34813-412**	**34813-962**
14							**34813-414**	**34813-964**
21							**34813-421**	**34813-971**
28							**34813-428**	**34813-978**
42							**34813-442**	**34813-992**
Dimensions see page	7.79	7.79	7.79	7.79	7.80	7.80	7.84	7.84

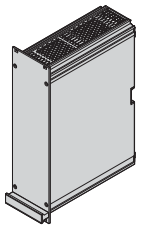
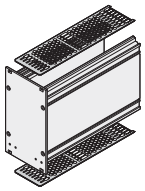
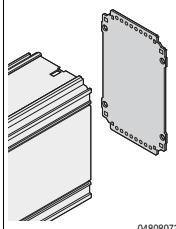
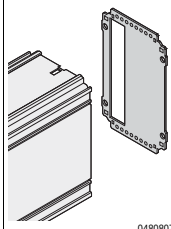
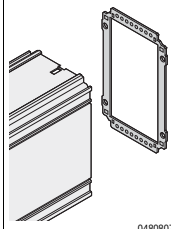
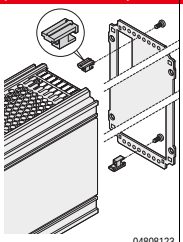
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS

REAR PANELS, ASSEMBLY MATERIAL

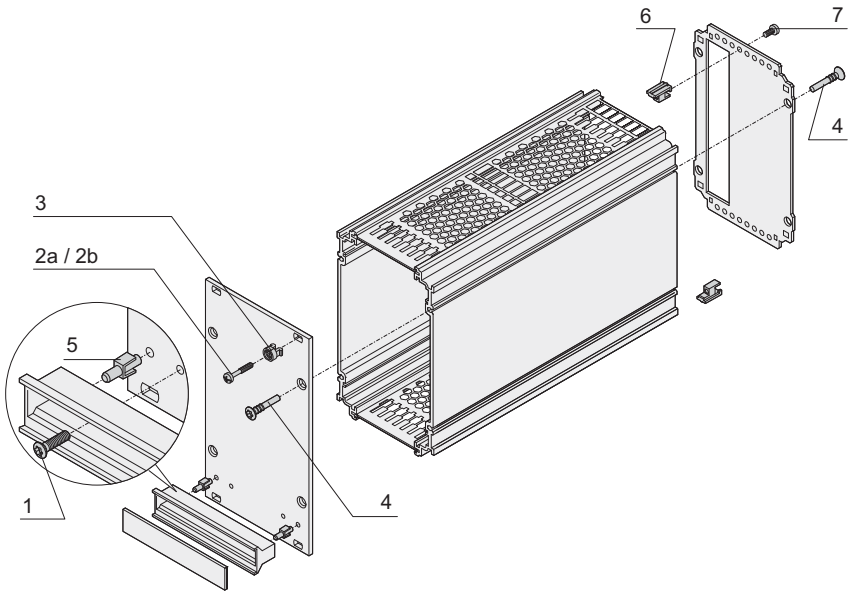
	With perforation for guide rails		Rear panel			Rear panel fastener	Assembly kit
	Cover plate	Guide rail	Without cut-out	Cut-out for one connector	Cut-out for multiple connectors	for connection of rear panel with cover plate	
	 04808124	 04808069	04808074	 04808073	 04808071	 04808072	 04808123	for mounting five 3 U or 6 U frame type plug-in units from ServicePLUS components: front panel, rear panel, side panel, cover plate and handle, description see page 7.77
Supplied quantity for assembly of 5 frame type plug-in units	St, 1.0 mm, zinc-plated; air flow rate in perforated area approx. 60 %; please order snap-in guide rails separately	PBT, UL 94 V-0, red, groove width 2 mm, PCB fixing required from slot 2, see page 7.78	St, 1.5 mm, zinc-plated	St, 1.5 mm, zinc-plated	St, 1.5 mm, zinc-plated, for EN 60603 (DIN 41612) connectors, types: B, C, D, F, H, Q, R, S	10 rear panel fasteners, Zn die-cast; 10 fixing screws; not suitable for cover plate with perforation	
	1 piece (SPQ 10)[1]	PU 10 pieces	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	1 piece (SPQ 5)[1]	PU 1 kit	PU 1 kit
	3 U Height						
	PCB depth 160 mm						
8	**34812-908**		**34813-208**	**34812-208**	**34812-308**		
10	**34812-910**		**34813-210**	**34812-210**	**34812-310**		
12	**34812-912**		**34813-212**	**34812-212**	**34812-312**		
14	**34812-914**	**24812-101**	**34813-214**	**34812-214**	**34812-314**	**24812-401**	**24812-100**
21	**34812-921**		**34813-221**	**34812-221**	**34812-321**		
28	**34812-928**		**34813-228**	**34812-228**	**34812-328**		
42	**34812-942**		**34813-242**	**34812-242**	**34812-342**		
	PCB depth 220 mm						
8	**34813-908**		**34813-208**	**34812-208**	**34812-308**		
10	**34813-910**		**34813-210**	**34812-210**	**34812-310**		
12	**34813-912**		**34813-212**	**34812-212**	**34812-312**		
14	**34813-914**	**24812-101**	**34813-214**	**34812-214**	**34812-314**	**24812-401**	**24812-100**
21	**34813-921**		**34813-221**	**34812-221**	**34812-321**		
28	**34813-928**		**34813-228**	**34812-228**	**34812-328**		
42	**34813-942**		**34813-242**	**34812-242**	**34812-342**		
	6 U Height						
	PCB depth 160 mm						
8	**34812-908**		**34813-708**	**34812-708**	**34812-808**		
10	**34812-910**		**34813-710**	**34812-710**	**34812-810**		
12	**34812-912**		**34813-712**	**34812-712**	**34812-812**		
14	**34812-914**	**24812-101**	**34813-714**	**34812-714**	**34812-814**	**24812-401**	**24812-100**
21	**34812-921**		**34813-721**	**34812-721**	**34812-821**		
28	**34812-928**		**34813-728**	**34812-728**	**34812-828**		
42	**34812-942**		**34813-742**	**34812-742**	**34812-842**		
	PCB depth 220 mm						
8	**34813-908**		**34813-708**	**34812-708**	**34812-808**		
10	**34813-910**		**34813-710**	**34812-710**	**34812-810**		
12	**34813-912**		**34813-712**	**34812-712**	**34812-812**		
14	**34813-914**	**24812-101**	**34813-714**	**34812-714**	**34812-814**	**24812-401**	**24812-100**
21	**34813-921**		**34813-721**	**34812-721**	**34812-821**		
28	**34813-928**		**34813-728**	**34812-728**	**34812-828**		
42	**34813-942**		**34813-742**	**34812-742**	**34812-842**		
Dimensions see page	7.84	7.83	7.82	7.82	7.82		

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple
Part no. includes one packing unit (PU); delivery is exclusively made in PU

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS

FIXING MATERIAL (100 PIECES)



Fixing parts	Item		Required quantity per plug-in unit	Description	Qty/PU	Part no.
Fixing parts for mounting the module in subrack or case						
Torx panhead screw, M2.5 x 10, St, zinc-plated, self-forming thread	1	aza45940	2	Assembly of handle on front panel	100	**24560-179**
Pozidrive/slotted collar screw M2.5 × 11, St, nickel-plated	2a	aza46586	4 / 6* 06107050	Mounting of front panel on horizontal rail with threaded insert pushed in to front	100	**21100-748**
Pozidrive/slotted collar screw M2.5 × 12.3, St, nickel-plated	2b	aza46586	4 / 6* 06107051	Front panel is fitted to horizontal rail with threaded insert pushed in to rear in the standard position	100	**21101-101**
Plastic sleeves for form hole 5.9 x 3.3, PA, UL 94 V-2, grey	3	aza45933	4 / 6*	Is needed to fix collar screws	100	**21100-464**
Fixing parts for mounting the module						
Torx raised countersunk panhead screw 3 x 20, St, nickel-plated	4	06708052	8	Assembly of front panel and rear panel on extruded side panel/rear extrusion of side panel	100	**24812-501**
Fixing clip for trapeziform plastic handle PPE UL 94 V 0, black	5	04608090	2	Alignment aid for handle on front panel	100	**21101-239**
Rear panel fastener Zn die-cast	6	04808128	2	To stabilise rear panel with wide frame-type plug-in units	100	**24812-402**
Torx panhead screw M2.5 × 10, St, nickel-plated	7	aza45940	2	To fix rear panel fastener or board fixing	100	**24560-148**
Board support (slot 1) Zn die-cast		04808126	2	Board support (slot 1) see page 7.78	50 pairs	**24812-202**
Board support (from slot 2) Zn die-cast		04808127	2	Board support (from slot 2) see page 7.78	50 pairs	**24812-302**
Torx panhead screw M2.5 × 6, St, nickel-plated		aza45940	2	Is needed for board fixing without connector see page 7.78	100	**24560-178**

* on 42 HP EMC shielded frame type plug-in units

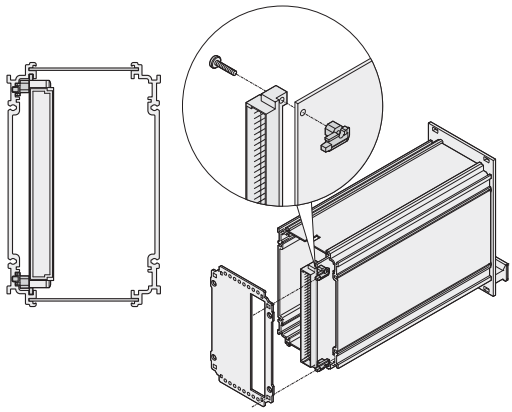
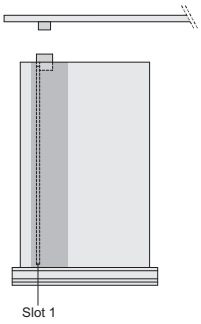
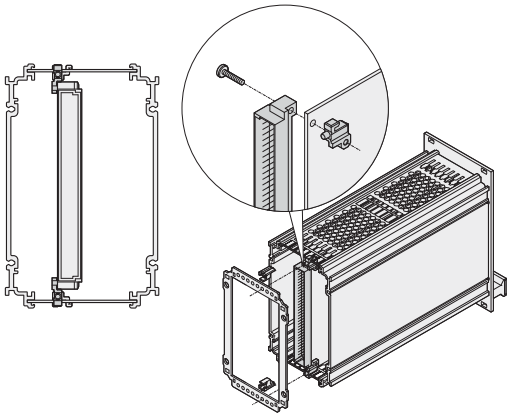
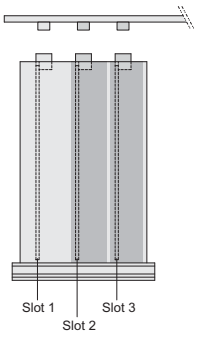
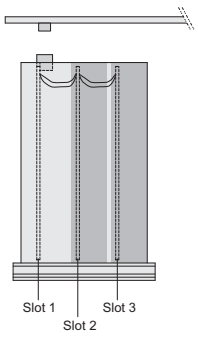
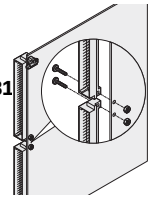
- Further collar screws and sleeves see page 7.107

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS

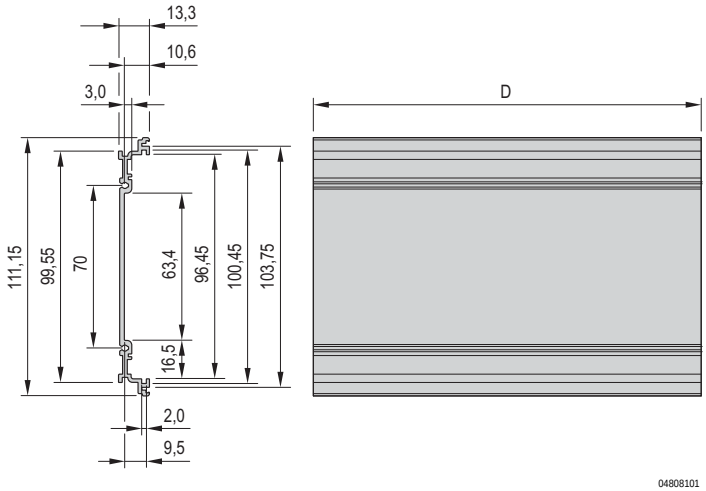
BOARD FIXING

	Board fixing slot 1	Board fixing from slot 2	
	  04808118 04808109 04808129 Zn die-cast, Torx panhead screw M2.5 x 10; PCB is pushed into the guiding groove of the left side panel/ side panel rear angle, is fixed with rear panel	 With connector from slot 2  Without connector from slot 2  04808119 04808110 bga42785 kaa46417 Zn die-cast, Torx panhead screw M2.5 x 10; PCB is pushed into guide rail, is fixed with rear panel	
Height	PU 5 pair	PU 5 pair	
3 U	**24812-201**	**24812-301**	
6 U	**24812-201**	**24812-301**	
Assembly kits		With connector from slot 2	Without connector from slot 2
Torx panhead screw, M2.5 x 6, St, nickel-plated, PU 100 pieces; is needed for board fixing without connector	**24560-1** aza45940	–	**24560-178**
Connector mounting on PCB, for 6 U frame type plug-in units (centre) Torx panhead screw M2.5 x 10, nut M2.5; PU 10 pieces (screw + nut)	**2481**  04808120	**24812-600**	

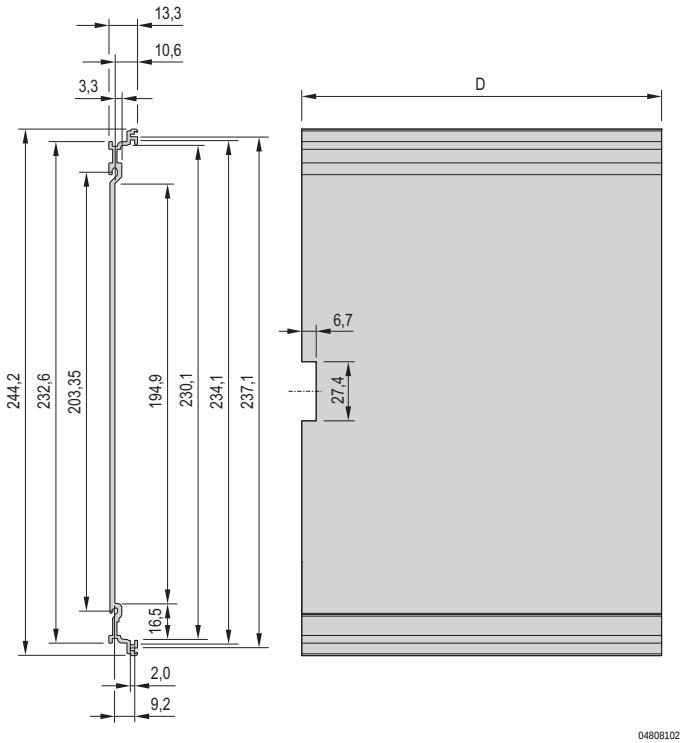
Frame type plug-in units PRO

DIMENSIONS SIDE PANEL WITHOUT COOLING FINS

3 U



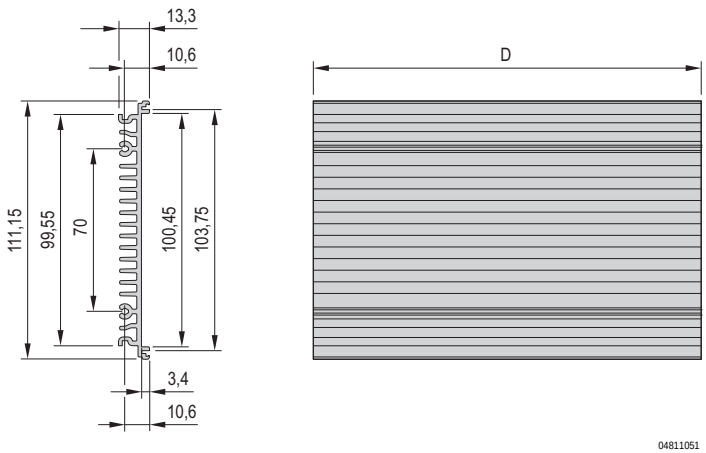
6 U



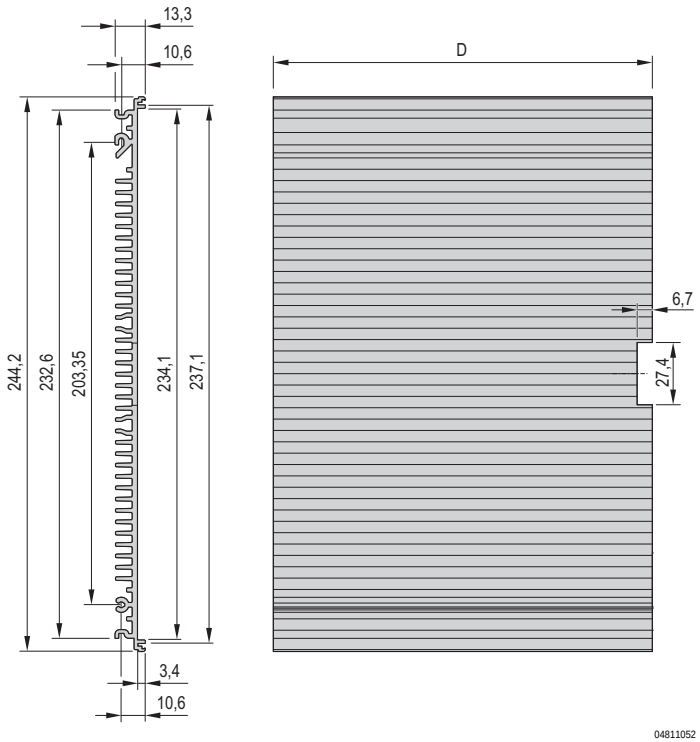
Depth = 167/227 mm

DIMENSIONS SIDE PANEL WITH COOLING FINS

3 U



6 U

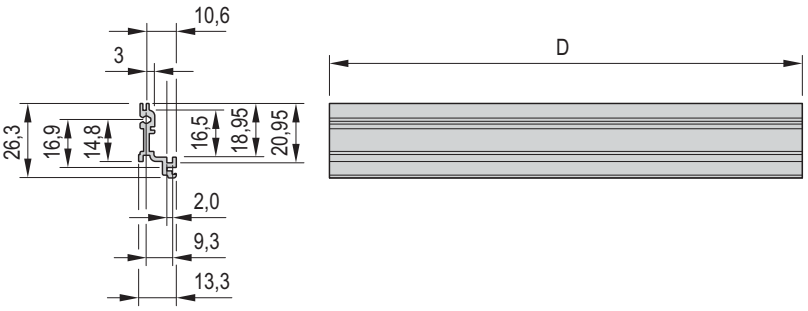


Depth = 167/227 mm

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO

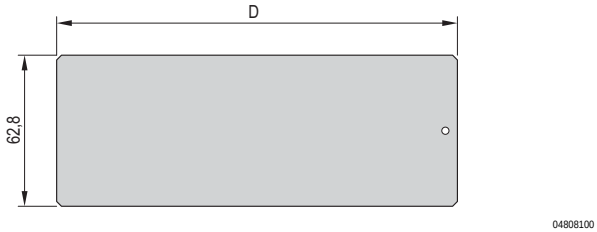
DIMENSIONS SIDE PANEL REAR ANGLE



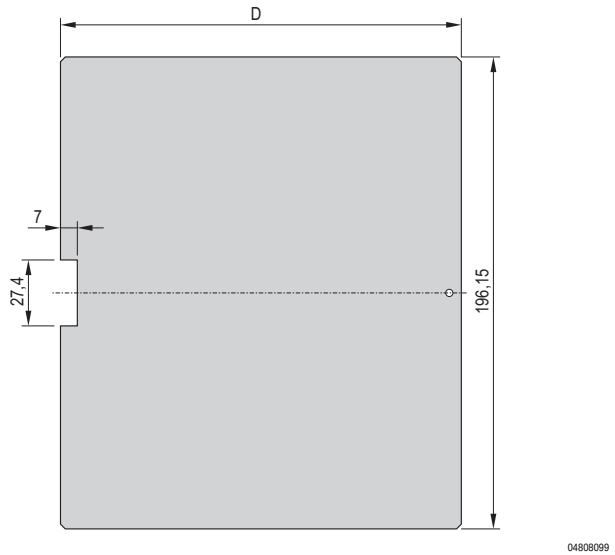
Depth = 167/227 mm

DIMENSIONS SIDE PLATE

6



3 U for side panel rear angle



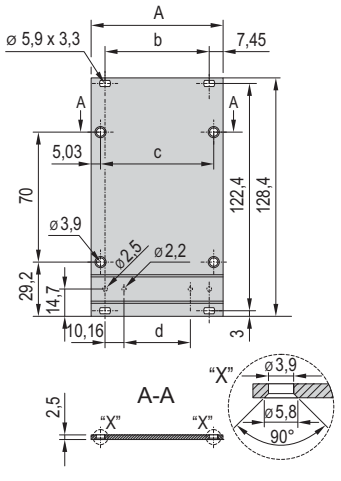
6 U for side panel rear angle

Frame type plug-in units PRO

DIMENSIONS FRONT PANELS

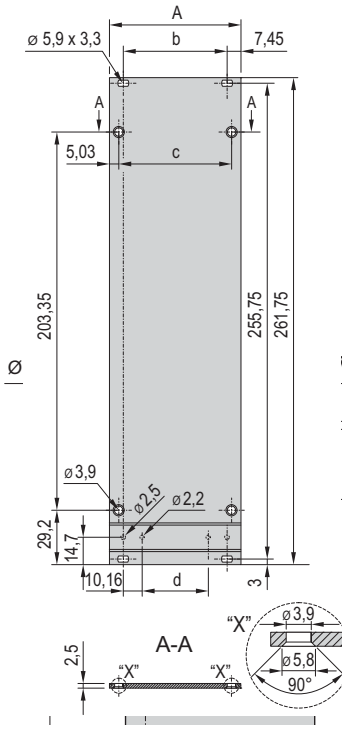
Unshielded

3 U



04808086

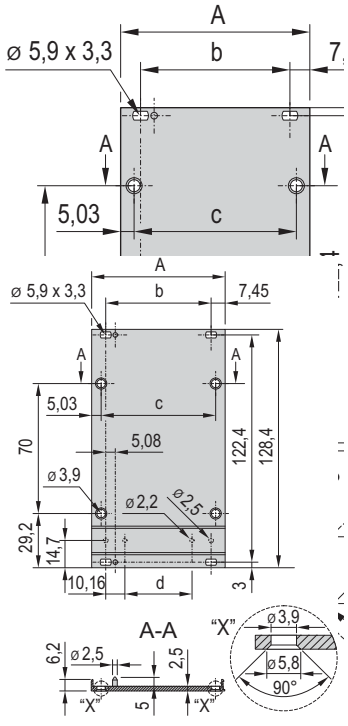
6 U



04808087

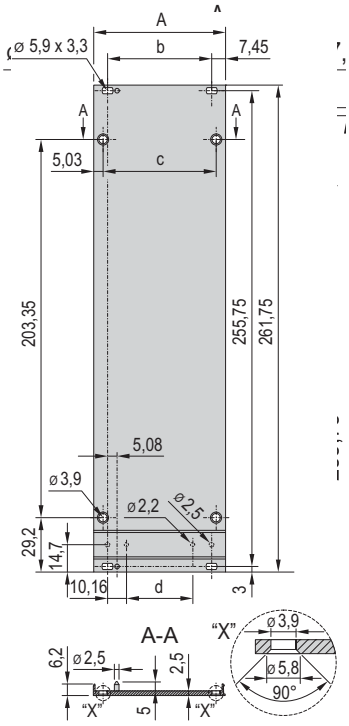
Shieldable, for EMC textile gasket

3 U



04808088

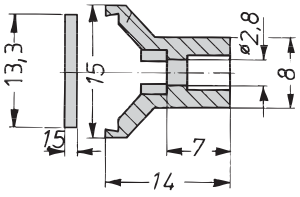
6 U



04808089

Width	A mm	b mm	c mm	d mm
8 HP	40.30	25.40	30.24	5.08
10 HP	50.46	35.56	40.40	15.24
12 HP	60.62	45.72	50.56	25.40
14 HP	70.78	55.88	60.72	35.56
21 HP	106.34	91.44	96.28	71.12
28 HP	141.90	127.00	131.84	106.68
42 HP	213.02	198.12	202.96	177.80

Dimensions Front handle



A4-328e

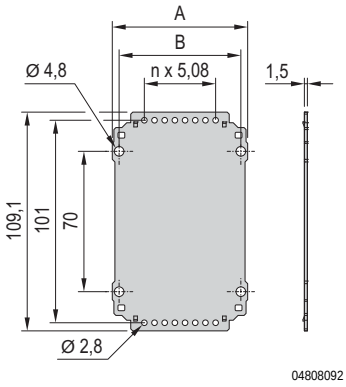
Dimensions table	
Width HP	Width mm
8 HP	39.2
10 HP	49.4
12 HP	59.6
14 HP	69.7
21 HP	105.2
28 HP	140.8
42 HP	212.0

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO

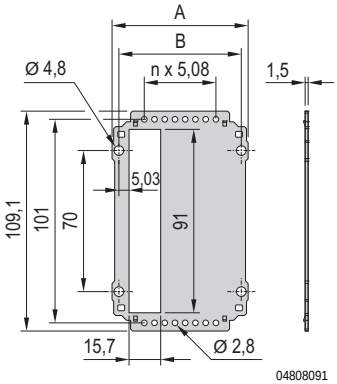
DIMENSIONS REAR PANEL 3 U

Without cut-out



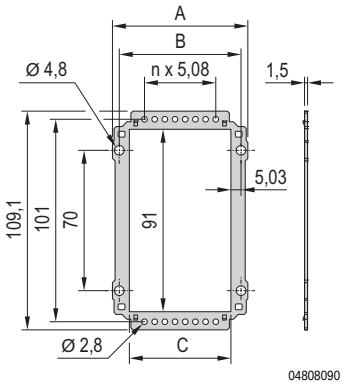
04808092

For one connector



04808091

For multiple connectors



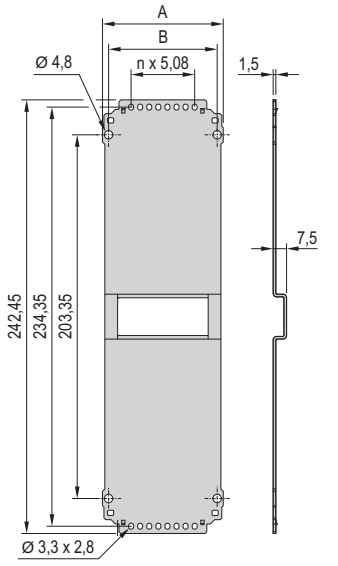
04808090

Dimensions table

HP	A mm	B mm	C mm	n
8 HP	37.04	30.24	20.18	1
10 HP	47.20	40.40	30.34	3
12 HP	57.36	50.56	40.50	5
14 HP	67.52	60.72	50.66	7
21 HP	103.08	96.28	86.22	14
28 HP	138.64	131.84	121.78	21
42 HP	209.76	202.96	192.90	35

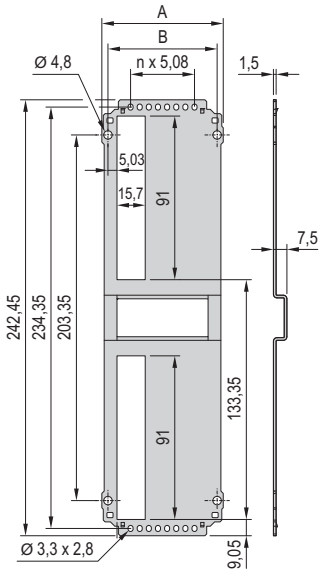
DIMENSIONS REAR PANEL 6 U

Without cut-out



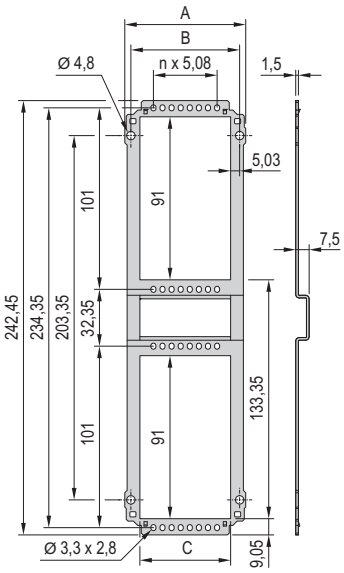
04808095

For one connector



04808094

For multiple connectors



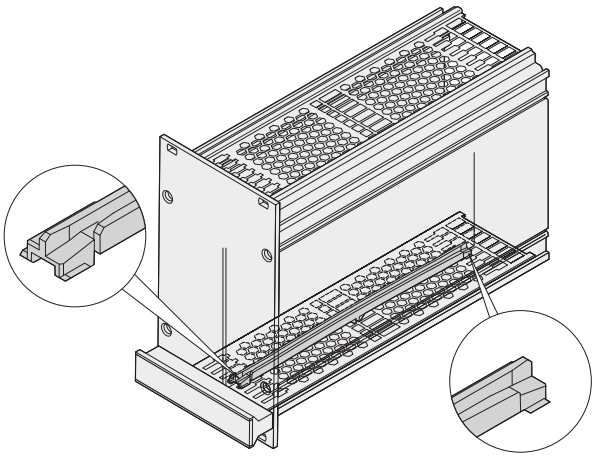
04808093

Dimensions table

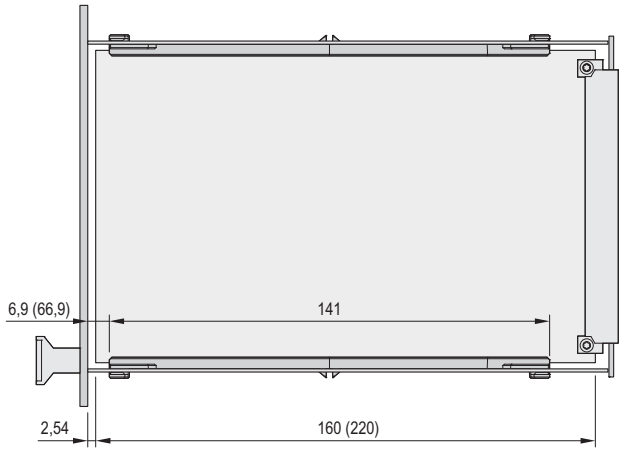
HP	A mm	B mm	C mm	n
8 HP	37.04	30.24	20.18	1
10 HP	47.20	40.40	30.34	3
12 HP	57.36	50.56	40.50	5
14 HP	67.52	60.72	50.66	7
21 HP	103.08	96.28	86.22	14
28 HP	138.64	131.84	121.78	21
42 HP	209.76	202.96	192.90	35

Frame type plug-in units PRO

DIMENSIONS GUIDE RAIL



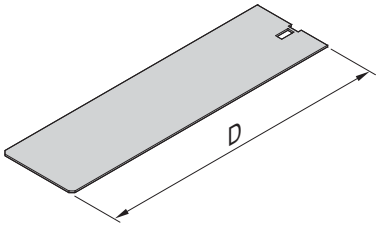
04808096



04808088

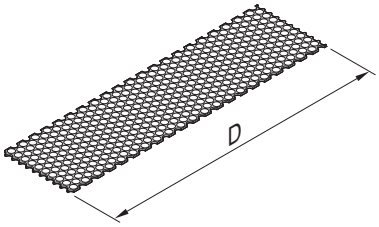
DIMENSIONS COVER PLATES

without perforation



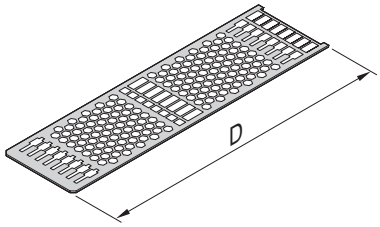
04808104

with perforation



04808106

for guide rail mounting



04808105

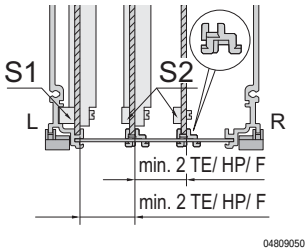
D = 167/227 mm

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

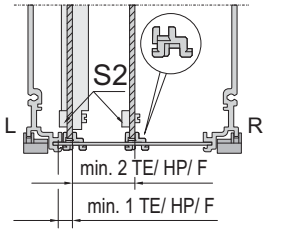
Frame type plug-in units PRO

DIMENSIONS MOUNTING INSTRUCTIONS FOR GUIDE RAILS IN FRAME TYPE PLUG-IN UNITS

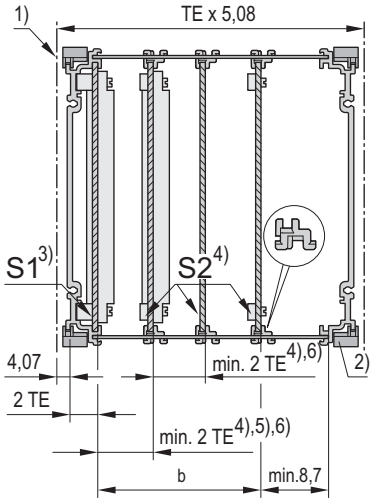
Slot 1 + slot 2



Slot 2



Front view



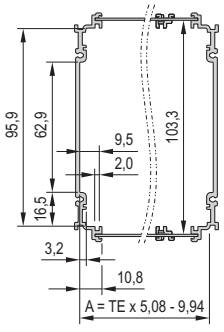
- Mounting pitch for guide rails: 1 HP
- Min. distance between 2 guide rails: 2 HP

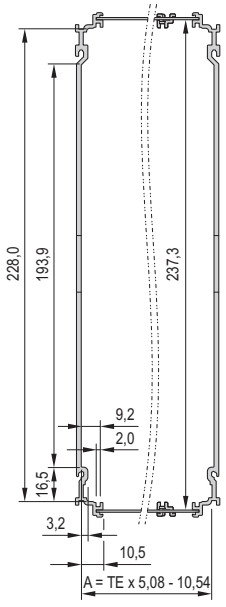
Width of frame type plug-in unit	b	Max. number of PCBs mountable	
HP	mm	slot 1	from slot 2
8	–	1	1
	5.08	–	1 5)
10	10.16	1	1 6)
	15.24	–	2 5)6)
12	20.32	1	2 6)
	25.40	–	3 5) 6)
14	30.48	1	3 6)
	35.56	–	4 5) 6)
21	71.12	1	7 6)
	66.04	–	7 5) 6)
28	101.60	1	10 6)
	106.68	–	11 5) 6)
42	172.72	1	17 6)
	177.80	–	18 5) 6)

TE = HP = F
1) Division line
2) Guide rail rotated by 180° from standard position
3) The first PCB is held in the extruded side panel, corresponds to standard position (slot 1)
4) All additional PCBs are fitted into guide rails (from slot 2)
5) Min. 1 HP where slot 1 is not used (slot 2)
6) Dependent on construction of connector used (not every connector allows a 2 HP fitting)

DIMENSIONS MOUNTING SPACE FRAME-TYPE PLUG-IN UNIT 3 U/6 U

Front view





DIMENSIONS TABLE

Height	Width	A
U	HP	mm
3	8	30.70
3	10	40.86
3	12	51.02
3	14	61.18
3	21	96.74
3	28	132.30
3	42	203.42
6	8	30.10
6	10	40.26
6	12	50.42
6	14	60.58
6	21	96.14
6	28	131,70
6	42	202.82

Frame type plug-in units PRO with hood

FRAME TYPE PLUG-IN UNITS PRO WITH HOOD, 3/6 U, FRONT PANEL SHIELDED (TEXTILE GASKET)

04808007

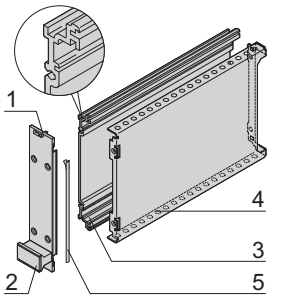
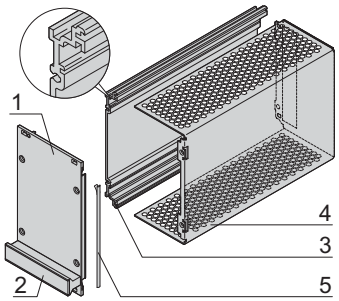
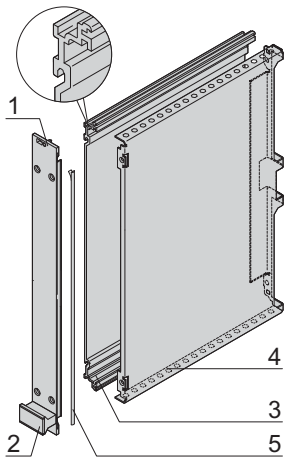
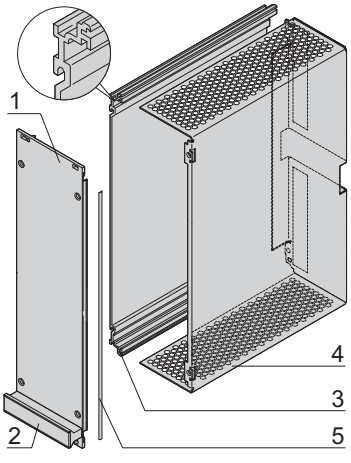
Illustration shows 12 HP width, side panel depth 167 mm

- Protects a PCB against mechanical damage and deflects electrostatic discharge; for euroboard formats
- Suitable in all subracks and these cases: ratiopacPRO/-air, propacPRO and compacPRO
- Useable connectors in accordance with EN 60603-2 (DIN 41612)
- 2 depths, for 160 mm and 220 mm boards

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front panel, U profile, 2.5 mm, front anodised, rear conductive, alignment pin pressed-in
2	1	Handle, grey, PPE, UL 94 V-1
3	1	Side panel, Al extrusion, colourless passivated, with groove for one PCB
4	1	Hood, Al, 1 mm, with perforation, rear panel integrated
5	1	EMC textile gasket
6	1	Assembly kit (incl. PCB fixing for slot 1)

ORDER INFORMATION

5 HP	6 ... 14 HP	Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
 04808075	 04808113	3	5	**24813-005**	**24813-055**
		3	6	**24813-006**	**24813-056**
		3	7	**24813-007**	**24813-057**
		3	10	**24813-010**	**24813-060**
		3	12	**24813-012**	**24813-062**
		3	14	**24813-014**	**24813-064**
 04808076	 04808114	6	5	**24813-505**	**24813-555**
		6	6	**24813-506**	**24813-556**
		6	7	**24813-507**	**24813-557**
		6	10	**24813-510**	**24813-560**
		6	12	**24813-512**	**24813-562**
		6	14	**24813-514**	**24813-564**

- Dimension drawings see from page 7.88

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO with hood

PLUG-IN UNITS PRO WITH HOOD, 3/6 U, FRONT PANEL UNSHIELDED

04808002

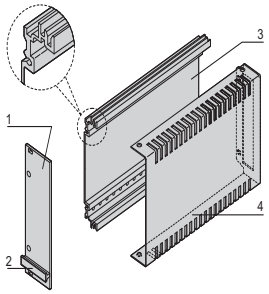
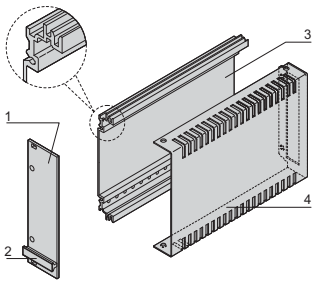
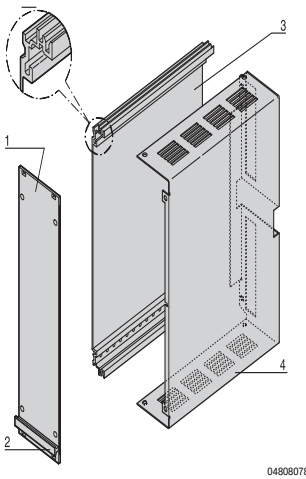
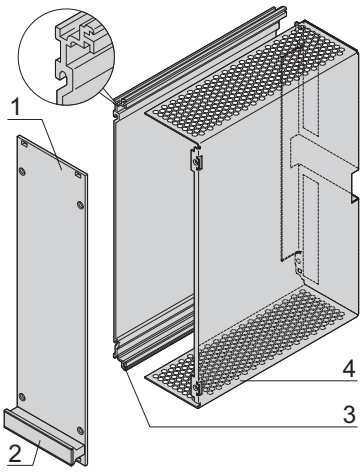
Illustration shows 12 HP width, side panel depth 167 mm

- Protects a PCB against mechanical damage and deflects electrostatic discharge; for euroboard formats
- Suitable in all subracks and these cases: ratiopacPRO/-air, propacPRO and compacPRO
- Useable connectors in accordance with EN 60603-2 (DIN 41612)
- 2 depths, for 160 mm or 220 mm board

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, anodised, cut edges plain
2	1	Handle, grey, PPE, UL 94 V-1
3	1	Side panel, Al extrusion, colourless passivated, with groove for one PCB
4	1	Hood, Al, 1 mm, with perforation, rear panel integrated
5	1	Assembly kit (incl. PCB fixing for slot 1)

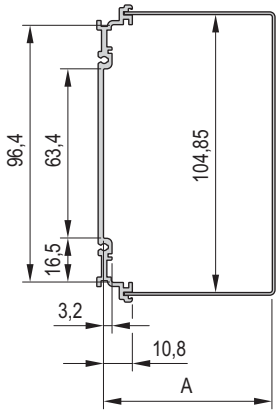
ORDER INFORMATION

5 HP	6 ... 14 HP	Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
 04808077	 04808115	3	5	**24812-005**	**24812-055**
		3	6	**24812-006**	**24812-056**
		3	7	**24812-007**	**24812-057**
		3	10	**24812-010**	**24812-060**
		3	12	**24812-012**	**24812-062**
		3	14	**24812-014**	**24812-064**
 04808078	 04808116	6	5	**24812-505**	**24812-555**
		6	6	**24812-506**	**24812-556**
		6	7	**24812-507**	**24812-557**
		6	10	**24812-510**	**24812-560**
		6	12	**24812-512**	**24812-562**
		6	14	**24812-514**	**24812-564**

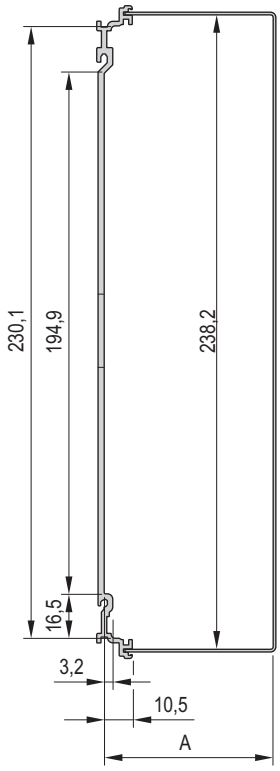
- Dimension drawings see from page 7.88

Frame type plug-in units PRO with hood

DIMENSIONS CROSS-SECTION FRAME-TYPE PLUG-IN UNITS PRO WITH HOOD 3 U/6 U



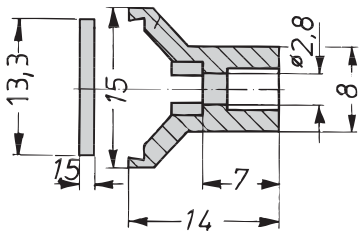
04808080



04808082

Height U	Width HP	A mm
3	5	17.52
3	6	22.60
3	7	27.68
3	10	42.92
3	12	53.08
3	14	63.24
6	5	17.22
6	6	22.30
6	7	27.38
6	10	42.62
6	12	57.78
6	14	62.94

DIMENSIONS FRONT HANDLE



a4-328e

DIMENSIONS TABLE

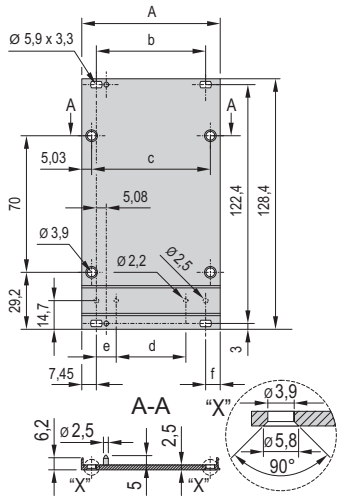
Width HP	Width mm
5	24.0
6	29.0
7	34.1
10	49.4
12	59.6
14	69.7

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

Frame type plug-in units PRO with hood

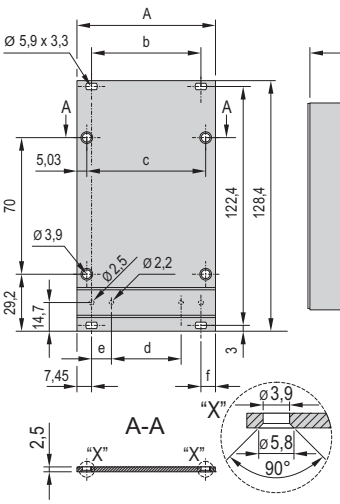
DIMENSIONS 3/6 U FRAME-TYPE PLUG-IN UNITS PRO WITH HOOD

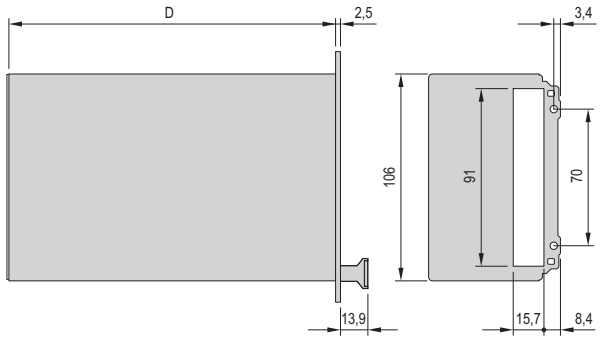
3 U Front panel shieldable



04808052

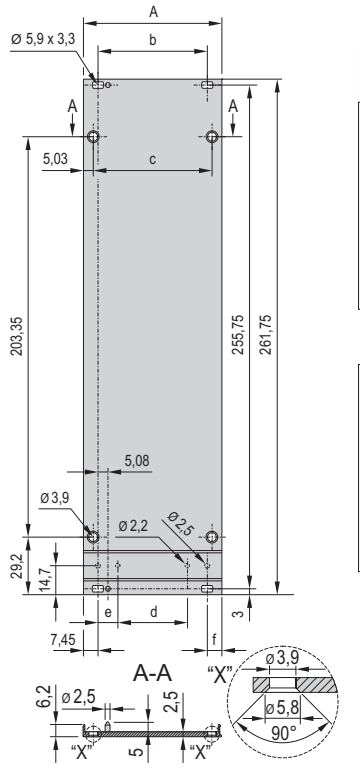
Front panel unshielded





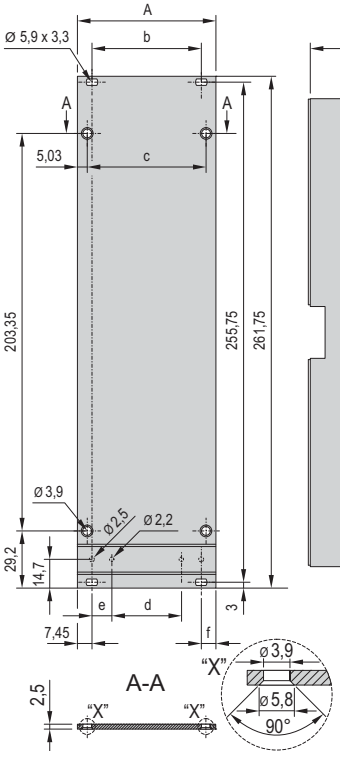
04808111

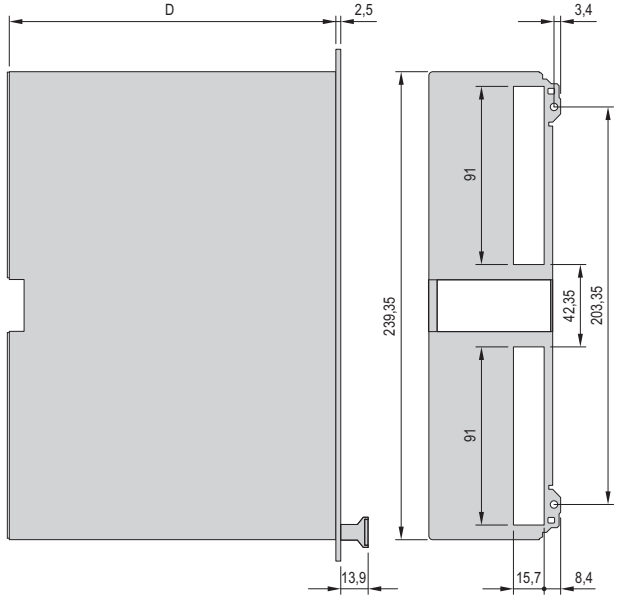
6 U Front panel shieldable



04809053

Front panel unshielded

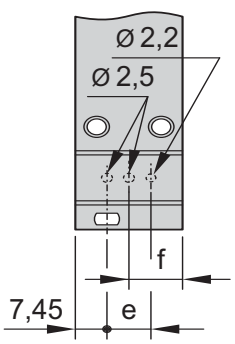




04808112

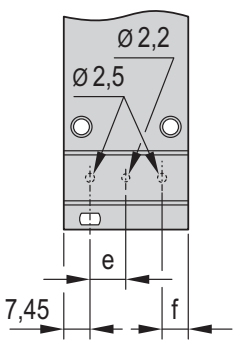
Front panel

5 HP



04809067

6 + 7 HP



04809066

Dimensions table							
5	25.06	-	15.00	-	10.16	12.53	167 mm/ 227 mm
6	30.14	-	20.08	-	10.16	7.45	
7	35.22	-	25.16	-	10.16	7.45	
10	50.46	35.56	40.40	15.24	10.16	7.45	
12	60.62	45.72	50.56	25.40	10.16	7.45	
14	70.78	55.88	60.72	35.56	10.16	7.45	

HF frame type plug-in units

HF FRAME TYPE PLUG-IN UNITS, 3 U KITS, FRONT PANEL SHIELDED

- With high shielding from high-frequency radiation
- To accept boards in HP grid increments
- Solid body on all sides, with cooling fins

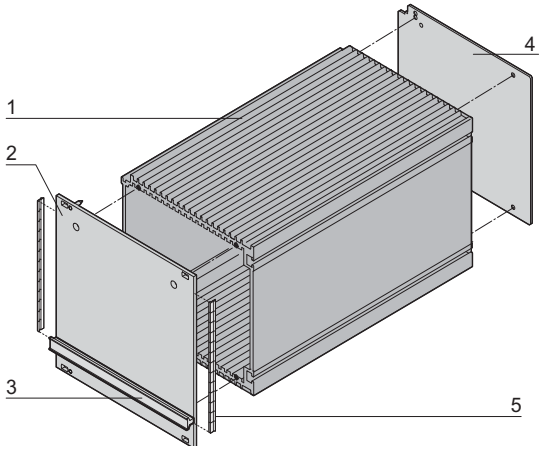
DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Body tube, Al extrusion, black anodised, cut edges plain
2	1	Front panel, Al, 2.5 mm, with lateral grooves for EMC gasket (stainless steel), alignment pin pressed-in, front anodised, rear iridescent green chromated
3	1	Plastic handle, trapeziform, PPE, grey, identification plate, Al, anodised, cut edges plain
4	1	Rear panel, Al, 1.5 mm, etched without cut-outs
5	2	EMC gasket (steel, stainless)
6	1	Assembly kit

TECHNICAL DATA

HF plug-in unit	Thermal resistance K/W	
HP	Depth = 167 mm	Depth = 227 mm
7	1.68	1.51
10	1.62	1.46
12	1.56	1.40
14	1.50	1.35
21	1.06	0.95
28	0.94	0.85

ORDER INFORMATION



Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
3	7	**20809-529**	**20809-536**
3	10	**20809-530**	**20809-537**
3	12	**20809-531**	**20809-538**
3	14	**20809-532**	**20809-539**
3	21	**20809-533**	**20809-540**
3	28	**20809-534**	**20809-541**

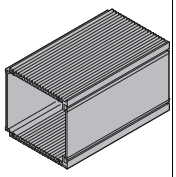
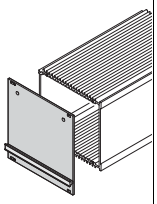
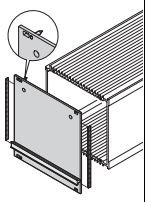
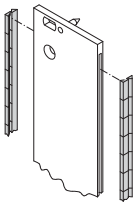
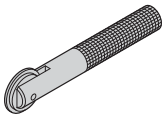
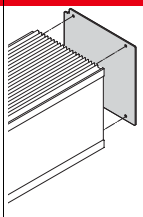
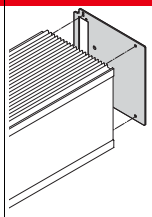
NOTE

- Dimension drawings see from page 7.94

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

HF frame type plug-in units ServicePLUS

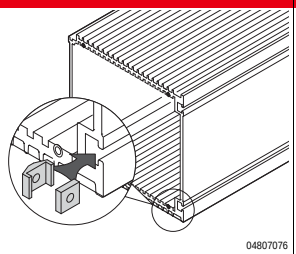
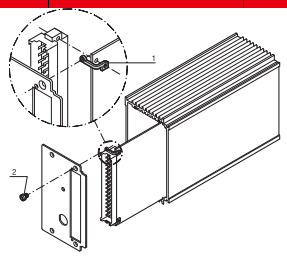
ORDER INFORMATION

		HF body tube	Shieldable front panel, with handle	Shieldable front panel, with handle			Rear panel	
				for EMC gasket (stainless steel)	EMC gasket (stainless steel)	Assembly tool	without cut-out	with cut-out
		 KAA45832	 KAA45831	 04807074	 bga45760	 aza45937	 04807075	 KAA45834
		Al extrusion, black anodised, cut edges plain	Al, 2.5 mm, front anodised, rear iridescent green chromated; static handle, grey, PPE, UL 94 V-1	Al, 2.5 mm, front anodised, rear iridescent green chromated, with lateral grooves for stainless steel EMC gasket (please order separately), alignment pin pressed-in, trapeziform handle, grey, PPE, UL 94 V-1	inserted laterally into the grooves of the front panel	to mount the EMC gasket (stainless steel)	Al, 1.5 mm, etched	Al, 2.5 mm, etched, cut-out for connector types EN 60603 (DIN 41612); 7 HP: B, C, D, R; 10 - 28 HP: B, C, D, R, F, H, MF, MH
Height U	Width HP	1 piece (SPQ 5)[1)]	1 piece (SPQ 5)[1)]	1 piece (SPQ 5)[1)]	PU 100 pieces	1 piece	1 piece (SPQ 5)[1)]	1 piece (SPQ 5)[1)]
		PCB depth 160 mm						
3	7	**30809-667**	**20838-001**	**20838-093**	**21101-705**	**24560-270**	**30809-635**	**30809-641**
	10	**30809-677**	**20838-002**	**20838-094**			**30809-636**	**30809-642**
	12	**30809-675**	**20838-003**	**20838-095**			**30809-637**	**30809-643**
	14	**30809-673**	**20838-004**	**20838-096**			**30809-638**	**30809-644**
	21	**30809-671**	**20838-005**	**20838-097**			**30809-639**	**30809-645**
	28	**30809-669**	**20838-006**	**20838-098**			**30809-640**	**30809-646**
		PCB depth 220 mm						
3	7	**30809-668**	**20838-001**	**20838-093**	**21101-705**	**24560-270**	**30809-635**	**30809-641**
	10	**30809-678**	**20838-002**	**20838-094**			**30809-636**	**30809-642**
	12	**30809-676**	**20838-003**	**20838-095**			**30809-637**	**30809-643**
	14	**30809-674**	**20838-004**	**20838-096**			**30809-638**	**30809-644**
	21	**30809-672**	**20838-005**	**20838-097**			**30809-639**	**30809-645**
	28	**30809-670**	**20838-006**	**20838-098**			**30809-640**	**30809-646**
		Depth 1000 mm (without thread for front panel and rear panel)						
3	7	**30809-679**	–	–	–	–	–	–
	10	**30809-698**						
	12	**30809-699**						
	14	**30809-680**						
	21	**30809-681**						
	28	**30809-682**						
Dimensions see page		7.93	7.94				7.93	

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

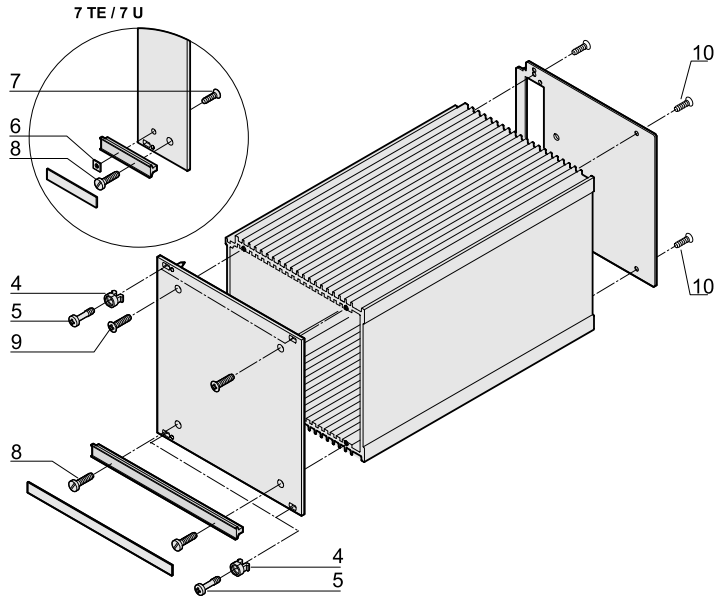
ORDER INFORMATION

		Slide nut		Fixing for PCBs			Fixing material for one HF frame type plug-in unit
		M 2.5	M 3	Individual components		Complete assembly kit	
				top	bottom		
		 04807076		 KAA45843			
		width across flats (WAF) 7, for insertion into HF body tube, top and bottom, provides lateral fixing (on right)		bracket (stainless steel), 1.5 mm; please order retention screws separately		bracket top and bottom (stainless steel), 1.5 mm; incl. two cheesehead screws M2.5 x 4	for complete assembly of a 3 U HF frame type plug-in unit: front panel, rear panel and handle, description see page 7.92
Height U	Width HP	PU 100 pieces	PU 100 pieces	1 piece (SPQ 10)[1]	1 piece (SPQ 10)[1]	PU 1 kit	PU 1 kit
3	7	**21100-112**	**21100-289**	**30809-701**	**30809-700**	**21101-937**	**21100-105**
	10						
	12						
	14						
	21						
	28						
Accessories							
Cheesehead screw M2.5 × 4, St, nickel-plated, PU 100 pieces		–	–	**21100-431**	**21100-431**	–	–

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Part no. includes one packing unit (PU); delivery is exclusively made in PU

ORDER INFORMATION



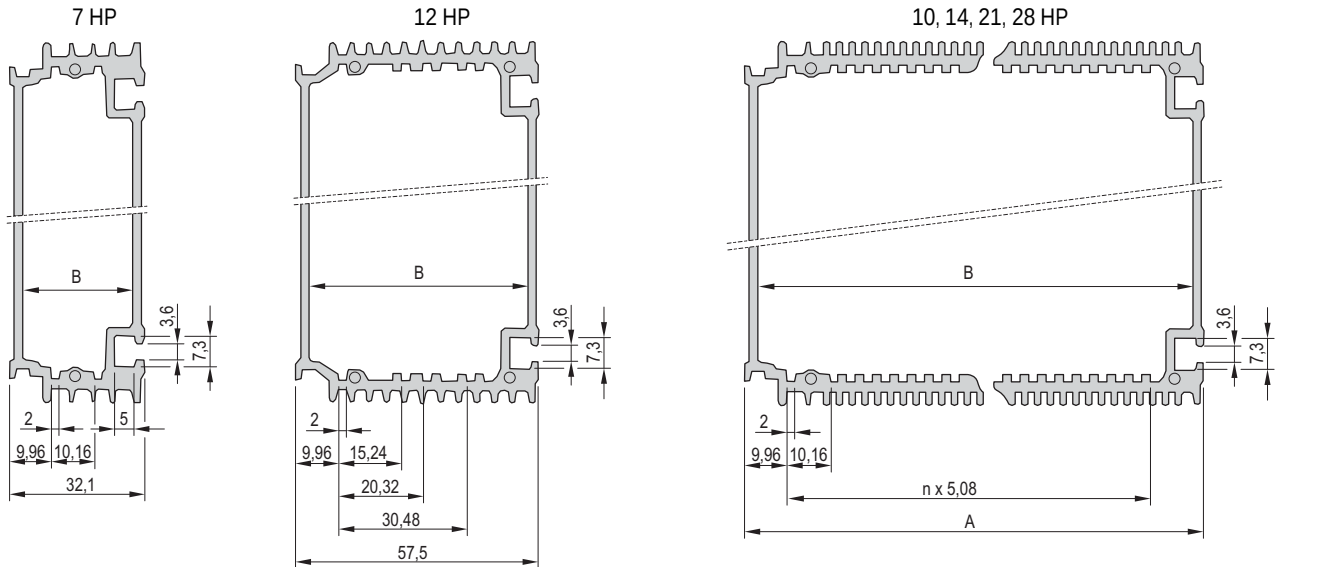
Description	Item		Required quantity per plug-in unit		Description	Qty/PU	Part no.
Fixing parts for mounting the module in subrack or case							
Plastic sleeve for form hole 5.9 x 3.3, PA, UL 94 V-2, grey	4	aza45933	2 at 7 HP 4 at > 7 HP		Front panel is fitted to horizontal rail with threaded insert pushed in to front	100	**21100-464**
Pozidrive/slotted collar screw M2.5 × 11, St, nickel-plated	5	aza46586	2 at 7 HP 4 at > 7 HP	06107050	Front panel is fitted to horizontal rail with threaded insert pushed in to front	100	**21100-748**
Pozidrive/slotted collar screw M2.5 × 12.3, St, nickel-plated	5	aza46586	2 at 7 HP 4 at > 7 HP	06107051	Front panel is fitted to horizontal rail with threaded insert pushed in to rear in the standard position	100	**21101-101**
Fixing parts for mounting the module							
Square nut DIN 562, M2.5,St, nickel-plated	6	06705050	1 at 7 HP		To mount handle on front panel	100	**21100-359**
Pozidrive countersunk screw M2.5 × 12, St, nickel-plated	7	aza45177	1 at 7 HP		To mount handle on front panel	100	**21100-507**
Slotted cheesehead screw M2.5 × 16, St, nickel-plated	8	aza45467	1 at 7 HP 2 at > 7 HP		To mount handle and front panel on HF body tube	100	**21100-150**
Raised Pozidrive countersunk panhead screw M2.5 × 8, St, nickel-plated	9	06702056	2		To mount front panel on HF body tube	100	**21100-429**
Pozidrive countersunk screw M2.5 × 6, St, nickel-plated	10	06702056	4		To mount rear panel on HF body tube	100	**21100-515**

NOTE

- Further collar screws and sleeves see page 7.107

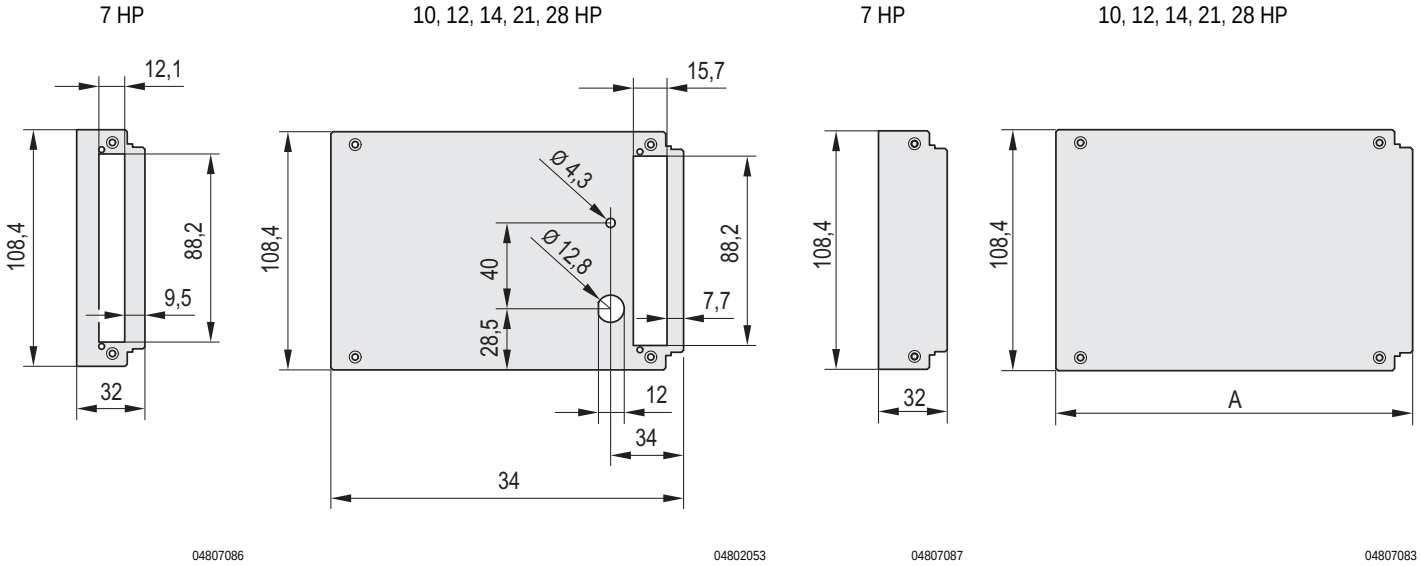
HF frame type plug-in units

DIMENSIONS HF BODY TUBE



Dimensions table						
Dimension mm	7 HP	10 HP	12 HP	14 HP	21 HP	28 HP
n	–	3 × 5.08	–	7 × 5.08	14 × 5.08	21 × 5.08
A	–	47.34	–	67.66	103.22	138.78
B	26.34	41.58	51.74	61.90	97.46	133.02

DIMENSIONS REAR PANEL WITH/WITHOUT CUT-OUT FOR CONNECTOR



Dimensions table	
Width	A mm
7 HP	32.00
10 HP	47.24
12 HP	57.40
14 HP	67,40
21 HP	103.12
28 HP	136.68

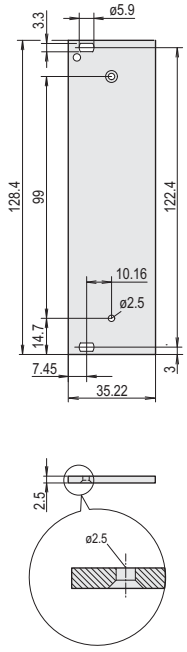
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

HF frame type plug-in units

DIMENSIONS FRONT PANELS

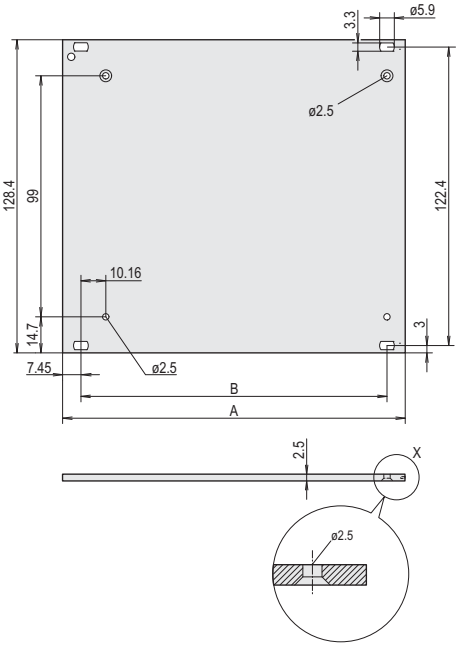
Unshielded

7 HP



KAA43073

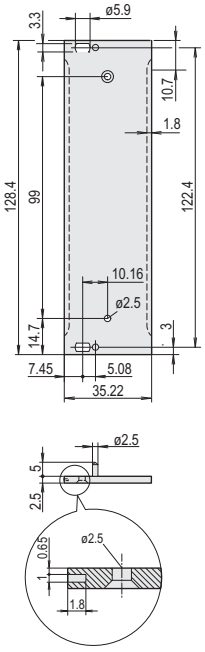
10, 12, 14, 21, 28 HP



04807084

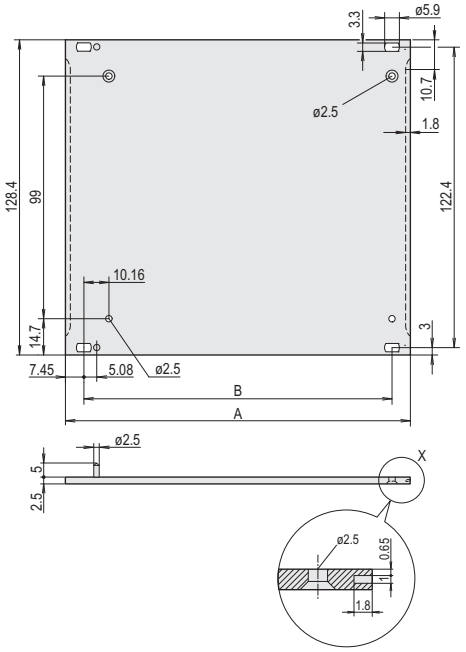
Shieldable, slotted for EMC stainless steel gasket

7 HP



04807085

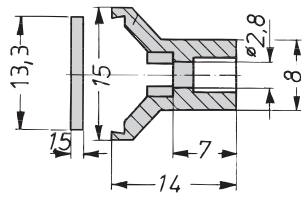
10, 12, 14, 21, 28 HP



04803052

Dimensions table		
Width	A	w
	mm	mm
7 HP	32.22	–
10 HP	50.46	35.56
12 HP	60.62	45.72
14 HP	70.78	55.88
21 HP	106.34	91.44
28 HP	141.90	127.00

DIMENSIONS FRONT HANDLE



A4-328e

Dimensions table	
Width	Width
HP	mm
10 HP	49.4
12 HP	59.6
14 HP	69.7
21 HP	105.2
28 HP	140.8

HF frame type plug-in units

ADAPTOR FOR HORIZONTAL RAIL MOUNTING

04812021

11395007

Example: horizontal rail adaptor with lip for 19" PSU

- For fitting of e.g. subracks, wall mounted cases, frame type plug-in units or PSUs on a horizontal rail with lip
- Adaptor is bolted to the desired product and can then be clipped onto the lipped horizontal rail (DIN 43880)

DELIVERY COMPRISES

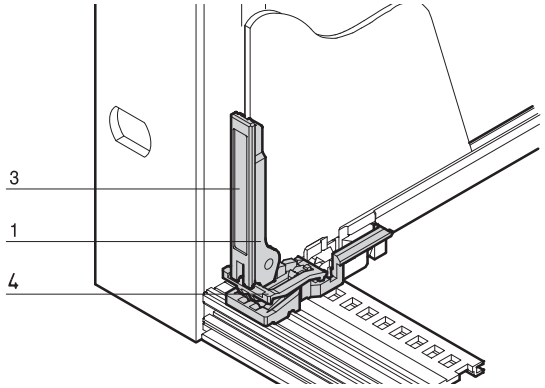
Item	Qty	Description
1	1	Adaptor, Al extrusion, length 160 mm
1	1	Fixing material

ORDER INFORMATION

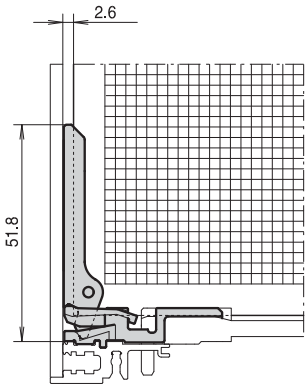
Description	Part no.
Adaptor for horizontal rail mounting	**11000-002**

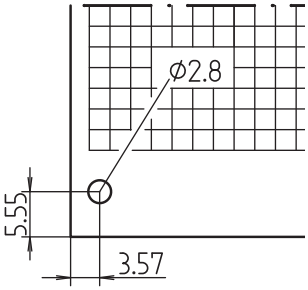
Modules – PCB accessories

PCB HANDLE C



BPA45909





BPA45910 BPA45910

- For europacPRO, multipacPRO, ratiopacPRO, propacPRO and compacPRO
- Mounts behind front panel
- Insertion and extraction
- Can be labelled
- In accordance with IEC 60297-3-102

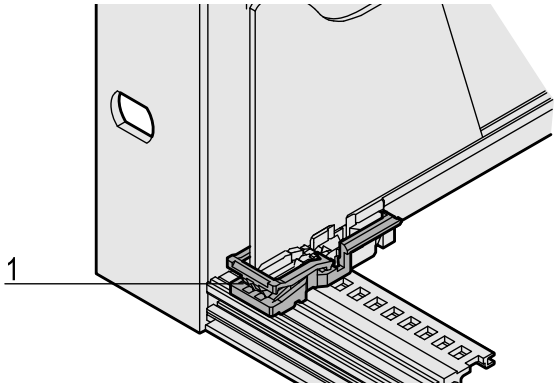
ORDER INFORMATION

Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB handle C	PBT, UL 94 V-0	red	10	**24560-378**
3	Identification strip (1 sheet = 438 pieces)	Polyester film, self-adhesive	white/ matt	1	**60817-228**

NOTE

- Minimum spacing of guide rail 3 HP
- for board thickness 1.6 mm
- Please order PCB retainer C separately

PCB RETAINER C



06002057

- For europacPRO, multipacPRO, ratiopacPRO, propacPRO and compacPRO
- Can also be used without PCB handle
- Application on top and bottom horizontal rail with "accessory" type guide rail

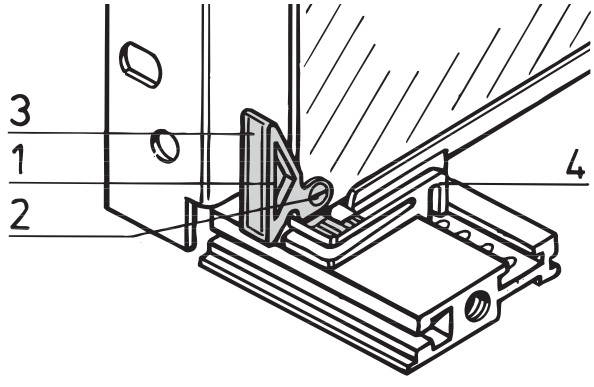
ORDER INFORMATION

Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB retainer C	PBT, UL 94 V-0	red	10	**24560-377**

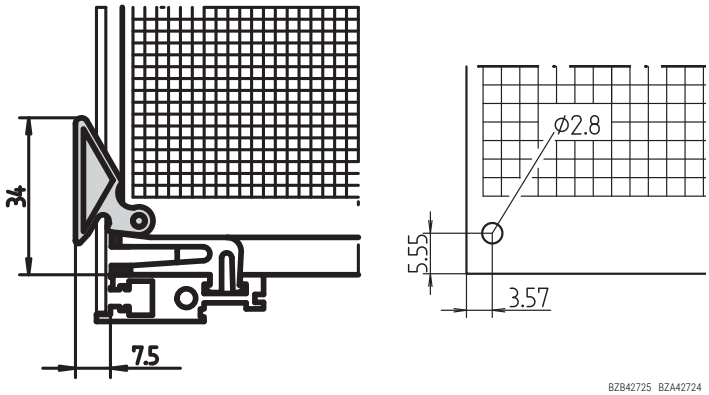
NOTE

- Minimum spacing of guide rail 3 HP
- Cannot be used with propac, compac, inpac cases

PCB HANDLE B1



B42729



BZB42725 BZA42724

- For bolting or riveting to 1.6 mm PCBs (top and bottom)
- Extraction function only
- Can be labelled

ORDER INFORMATION

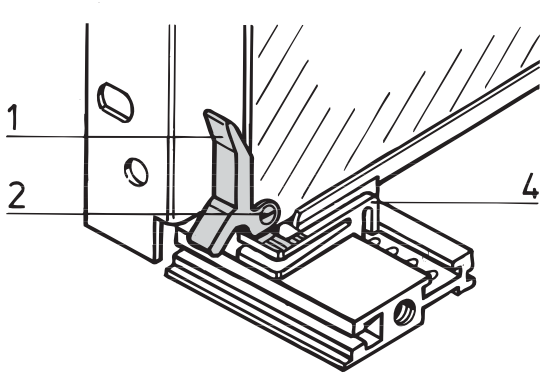
Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB handle, bolt-on	PBT, UL 94 V-0	red	1 piece (SPQ 10)	**60817-067**
1a	PCB handle for rivet fitting	PBT, UL 94 V-0	red	1 piece (SPQ 10)	**60817-072**
2	Countersunk screw	St, nickel-plated, DIN 965	–	100	**21100-515**
2a	Tubular rivet	Brass, DIN 7340	–	100	**21100-076**
3	Indentification strip	Polyester film, self-adhesive	white	100	**21100-569**

SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces PCB handles or a multiple

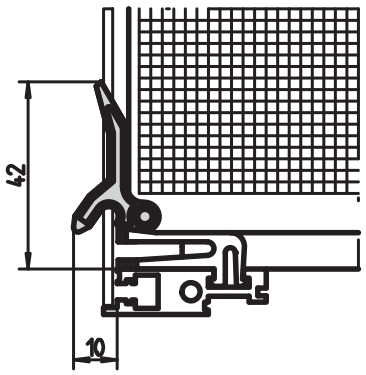
NOTE

- Can be used with PCB retainer B1, B2, see page 7.104

PCB HANDLE B2



BZA46427



BZB42726

- For bolting to PCBs (1.6 mm); can only be used on bottom horizontal rail
- Extraction function only
- Can be labelled

ORDER INFORMATION

Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB handle	PBT, UL 94 V-0	red	1 piece (SPQ 10)	**60817-055**
2	Slotted cheesehead screw, M2.5 × 6	St, nickel-plated	–	100	**21100-146**

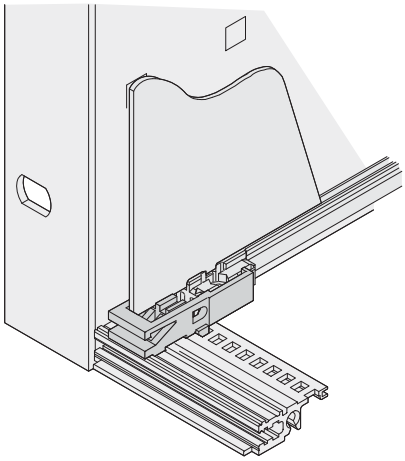
SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces printed circuit board handles or a multiple

NOTE

- Can be used with PCB retainer B1, B2, see page 7.104

Modules – PCB accessories

PCB RETAINER B1, B2



06109050

- For fixing PCB
- Can also be used without PCB handle
- Application on top and bottom horizontal rail
- Suitable for PCB handles B1 and B2

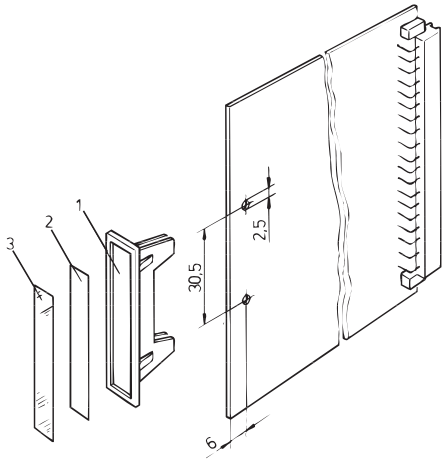
ORDER INFORMATION

Description	Material	Colour	Qty/PU	Part no.
PCB retainer B1, B2	PPO, UL 94 V-0	red	10	**24560-381**

NOTE

- Groove width 2 mm

PCB HANDLE, SNAP-ON



A3261

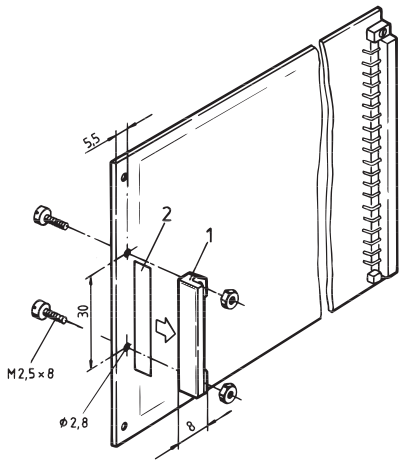
- For board thickness 1.6 mm

ORDER INFORMATION

Item	Description	Material	Colour	Qty	Part no.
1	PCB handle, can be locked	PPE, UL 94 V-1	grey	1 piece (SPQ 10)	**60800-039**
1	PCB handle, can be locked	PPE, UL 94 V-1	red	1 piece (SPQ 10)	**60800-045**
Transparent strips Item 3, 50 x 5 x 0.3 mm, PU 100 pieces					**69000-007**

SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces PCB handles or a multiple

PCB HANDLE, CAN BE BOLTED/RIVETED



A4-1302

- For board thickness 1.6 mm

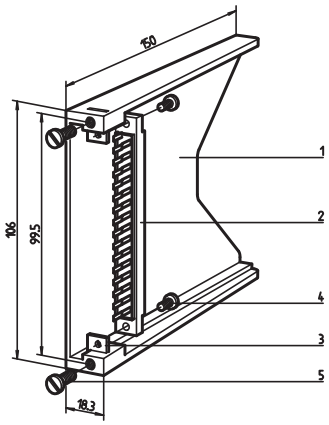
ORDER INFORMATION

Item	Description	Material	Colour	Qty	Part no.
1	PCB handle, can be bolted/riveted	PC	yellow	1 piece (SPQ 10)	**60817-050**
2	PCB handle, can be bolted/riveted	PC	red	1 piece (SPQ 10)	**60817-051**
1	PCB handle, can be bolted/riveted	PC	green	1 piece (SPQ 10)	**60817-052**
Identification strip Item 2, carton, white, 37.5 x 7 x 0.15 mm, 1 sheet = 105 pieces					**69000-969**
Pozidrive panhead screw M2.5 x 8, St, nickel-plated, PU 100 pieces					**21101-069**
Hexagonal nut A 2.5, nickel-plated, PU 100 pieces					**21100-144**
Tubular rivet, form B (roundhead) B 2.5 x 0.25 x 5, St/brass, raw, DIN 7340, PU 100 pieces					**21100-459**

SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces PCB handles or a multiple

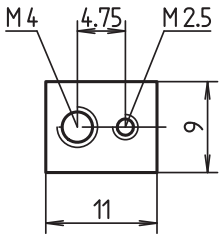
Modules – PCB accessories

PCB POCKET



LKA42605

Retention bracket (DIN 41612)



LKA42606

- Accepts PCBs in euroboard format, 100 × 160 mm
- For female connectors to EN 60603 (DIN 41612)

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	PCB pocket, PBT (P), grey, UL 94 V-0
3	2	Retention bracket, St, 2 mm, nickel-plated
4	2	Cheesehead screw M2.5 × 6, St, nickel-plated
5	2	Cheesehead screw M4 × 12, St, nickel-plated

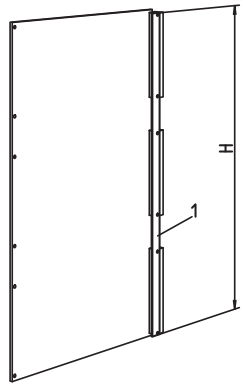
ORDER INFORMATION

Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB pocket	PBT (P)	grey	1	**20800-032**

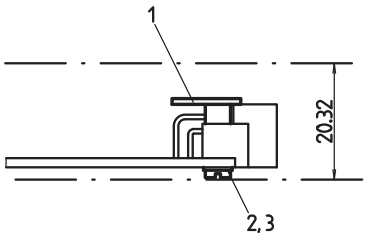
NOTE

- Connector (item 2) see page 11.2

PCB STRENGTHENING (9 U)



LKA42609



LKA42593

- Protects large PCBs from bending
- Creates an additional crossbar (corresponding to IEEE recommendations, P 896, Nubus, Multibus® II etc.) that links all connectors mecanically
- Fixing points match connectors to EN 60603 (DIN 41612), types B, R, C and D

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	PCB strengthening, Al extrusion, anodised, cut edges plain; separator, stainless steel, riveted on
2	6	Cheesehead screw M 2.5 × 12, St, nickel-plated
3	6	Washer 2.6, St, nickel-plated

ORDER INFORMATION

Description	Height H mm	Part no.
For 9 U PCBs	361.6	**20809-441**

PCB COVERS

11092008

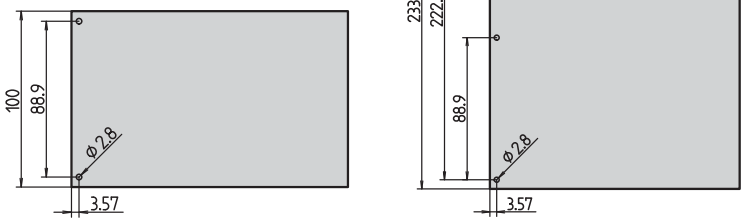
- Covers to protect solder side of board, see page 7.62

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

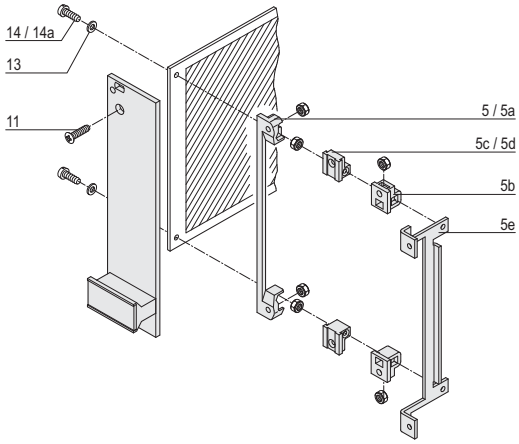
INDIVIDUAL COMPONENTS PCB SUPPORT FOR STATIC TRAPEZIFORM HANDLE

FIXING PARTS FOR EXTRACTOR HANDLES IN KEY FORM 2

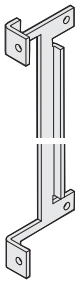
Drill hole dimensions on PCB



3 HE 6 HE bga43076 bga43077



bza46430

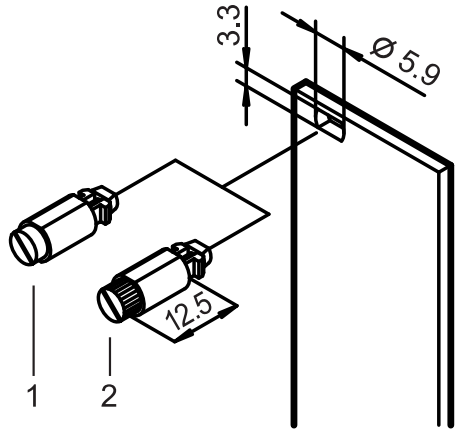
Fixing parts	Item		Required quantity 3 U	Required quantity 6 U	Qty/PU	Part no.
PCB bracket 4 clearance holes for front panel/PCB fixing, 4 recesses for hexagon nuts; PBT, UL 94 V-0, red	5	AZA45177	1	2	1 piece (SPQ 10)[1)]	**60807-011**
PCB bracket 4 threads M2.5 for front panel/PCB fixing, PBT, UL 94 V-0, grey, 1 piece	5a		1	2	1 piece (SPQ 10)[1)]	**60807-211**
PCB bracket Clearance hole for front panel fixing, with recess for hexagon nut, drill hole for self-tapping screw for PCB fixing, PBT, UL 94 V-0, grey, 1 piece	5b	AZA45177	2	4	1 piece (SPQ 10)[1)]	**60807-183**
PCB bracket 2 threads M2.5 for front panel/PCB fixing, die-cast zinc, 1 piece	5c	06707050	2	4	1 piece (SPQ 10)[1)]	**60807-181**
PCB bracket Thread M2.5 for front panel fixing, clearance hole for PCB fixing, die-cast zinc, 1 piece	5d	06707050	2	4	1 piece (SPQ 10)[1)]	**60807-203**
PCB bracket 4 threads M2.5 for fixing front panel/PCB for recessed PCB mounting (20 mm), mounting depth 192.24 mm, St, zinc-plated; not for europacPRO, multipacPRO, ratiopacPRO, propacPRO or compacPRO, 1 piece	5e	 AZA46586	1	2	1 piece (SPQ 10)[1)]	**30808-871**

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

ASSEMBLY PARTS

- Quick-release fasteners
- Sleeves
- Screws
- Cage nuts
- Tools

QUICK-RELEASE FASTENERS



06702062

- Vibration and shock proof
- 1/4 rotary lock with defined stop
- Detection of fastening position through slot position

DELIVERY COMPRISES

Qty	Description
1	Locking pin, St, locking, Zn die-cast
1	Press-in sleeve, POM

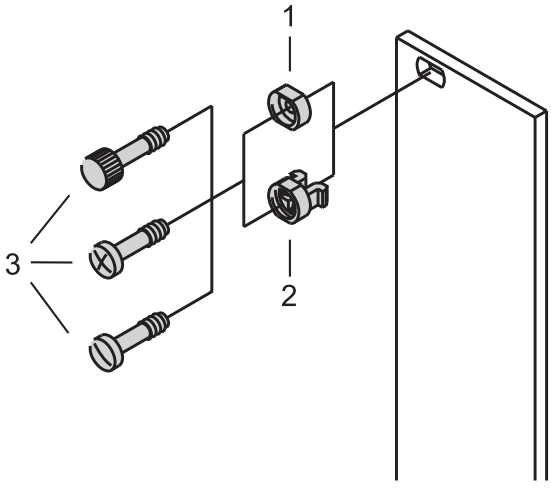
ORDER INFORMATION

Item	Description	Qty/PU	Part no.
1	With slotted head, grey	100	**21101-847**
1	With slotted head, black	100	**21101-848**
2	With knurled and slotted head, grey	100	**21101-849**
2	With knurled and slotted head, black	100	**21101-850**

NOTE

Quick-release fasteners: mounting without threaded insert

SLEEVES



06702061

ORDER INFORMATION

Item	Description	Application	Qty/PU pieces	Part no.
2	Plastic sleeve, PA, grey	for unshielded front panels	100	**21100-464**
2	Plastic sleeve, PA, black	for unshielded front panels	100	**21100-591**
1	Metal sleeve, brass, nickel-plated	for shielded front panels	10	**21100-659**
1	Metal sleeve, brass, nickel-plated	for shielded front panels	100	**21100-660**
1	Metal sleeve, brass, black	for shielded front panels	10	**21100-885**
1	Metal sleeves, stainless steel	for shielded front panels	10	**21100-661**
1	Metal sleeves, stainless steel	for shielded front panels	100	**21100-662**
Accessories				
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated, PU 100 pieces				**21100-748**
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated, PU 100 pieces				**21101-101**

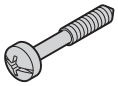
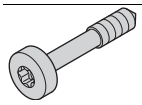
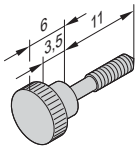
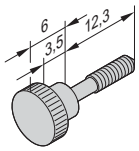
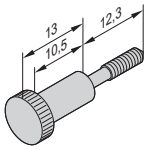
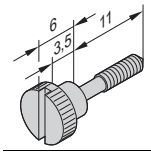
NOTE

- Metal sleeves must be pressed-in into front panels
- Sleeve does not fit 2 HP wide front panels

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

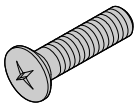
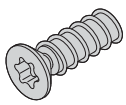
Modules – Assembly parts

COLLAR SCREWS

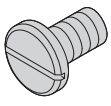
	Description	Material	Dimension	Qty/PU	Part no.
 AZA46586	Pozidrive/slotted collar screw	St, nickel-plated	M2.5 x 11	100	**21100-748**
		St, zinc-plated, black	M2.5 x 11	100	**21100-749**
		Stainless steel, with slot	M2.5 x 11	100	**21101-323**
		St, nickel-plated	M2.5 x 12.3	100	**21101-101**
		St, zinc-plated, black	M2.5 x 12.3	100	**21101-102**
		Stainless steel	M2.5 x 12.3	100	**21101-906**
 AZA45941	Torx collar screw	St, nickel-plated	M2.5 x 12.3	100	**21101-782**
		St, zinc-plated, black	M2.5 x 12.3	100	**21101-783**
 06709050	Collar screw with knurled head	Brass, nickel-plated	M2.5 x 11	50	**21100-268**
 06709051		Brass, nickel-plated	M2.5 x 12.3	100	**21101-749**
 06709052		Brass, nickel-plated	M2.5 x 12.3	100	**21101-909**
 06709053	Slotted collar screw with knurled head	Brass, nickel-plated	M2.5 x 11	100	**21101-106**

Modules – Assembly parts

COUNTERSUNK SCREWS

	Description	Material	Dimension	Qty/PU	Part no.
aza45182	Pozidrive countersunk screw	St, nickel-plated	M2.5 x 6	100	**21100-515**
		St, nickel-plated	M2.5 x 12	100	**21100-507**
AZA46585	Torx countersunk screw	St, zinc-plated	M4 x 5	100	**24560-139**
		St, zinc-plated	M4 x 14	100	**24560-145**
 06702056	Raised Pozidrive countersunk screw	St, nickel-plated	M2.5 x 8	100	**21100-429**
		St, nickel-plated	M2.5 x 10	100	**21100-500**
		St, zinc-plated, black	M2.5 x 10	100	**21100-649**
		St, nickel-plated	M3 x 8	100	**21100-542**
		St, zinc-plated, black	M3 x 8	100	**21100-648**
 06707057	Torx countersunk screw, self-tapping	St, zinc-plated	2.5 x 7.7	100	**24560-158**

SCREWS FOR PLUG-IN UNITS

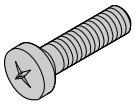
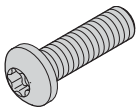
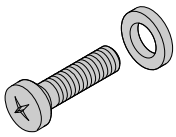
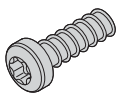

06706053

ORDER INFORMATION

Description	Qty/PU	Part no.
Slotted flathead screw, 6-32 UNC x 6	100	**21100-712**

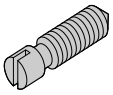
Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

PANHEAD SCREWS

	Description	Material	Dimension	Qty/PU	Part no.
 06702057	Pozidrive panhead screw	St, nickel-plated	M2.5 x 5	100	**21101-314**
		St, nickel-plated	M2.5 x 6	100	**21101-219**
		St, nickel-plated	M2.5 x 8	100	**21101-069**
		St, nickel-plated	M2.5 x 10	100	**21101-220**
		St, nickel-plated	M2.5 x 12	100	**21101-221**
		St, nickel-plated	M2.5 x 16	100	**21101-222**
		St, zinc-plated	M5 x 12	100	**21100-788**
 AZA45940	Torx panhead screw	St, zinc-plated	M2.5 x 6	100	**24560-159**
		St, nickel-plated	M2.5 x 7	100	**24560-147**
		St, nickel-plated	M2.5 x 10	100	**24560-148**
		St, nickel-plated	M2.5 x 12	100	**24560-161**
		St, nickel-plated	M2.5 x 14	100	**24560-162**
		St, zinc-plated	M4 x 6	100	**24560-135**
		St, zinc-plated	M4 x 6	100	**24560-151**
		St, zinc-plated	M4 x 10	100	**24560-155**
		St, zinc-plated	M4 x 14	100	**24560-130**
 06702051	Screw + securing washer (PA)	St, nickel-plated	M2.5 x 12	100	**21100-777**
 06707058	Torx panhead screw, self-tapping	St, zinc-plated, black	2.5 x 7.3	100	**24560-157**
		St, zinc-plated	2.5 x 9.3	100	**24560-141**

Modules – Assembly parts

GRUB SCREWS

	Description	Material	Dimension	Qty/PU	Part no.
		Stainless steel	M2.5 x 9	100	**21101-359**
 06702053	Grub screw	St, nickel-plated	M2.5 x 8	100	**21100-276**
		St, zinc-plated	M3.0 x 8	100	**21100-646**

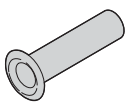
WASHERS

	Description	Material	Dimension	Qty/PU	Part no.
		Plastic, PA	2.7 x 5 x 1	100	**21101-121**
AZA45178	Washer	Plastic, PA	2.8 x 6,3 x 2	100	**21101-964**
		St, nickel-plated	A2.7 DIN 125	100	**21100-721**
AZA45180	Shakeproof washer	St, nickel-plated	A 2.6	100	**21100-142**

NUTS

	Description	Material	Dimension	Qty/PU	Part no.
AZA43239	Hexagon nut	St, nickel-plated	M2.5	100	**21100-144**
06707050	Square nut	St, nickel-plated	M2.5	100	**21100-359**
AZA45921	Square nut	St, zinc-plated	M4	100	**24560-140**

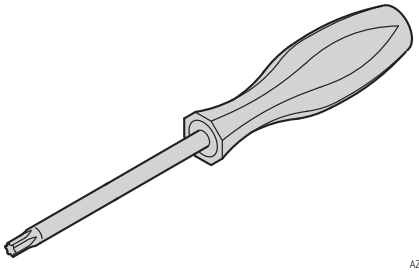
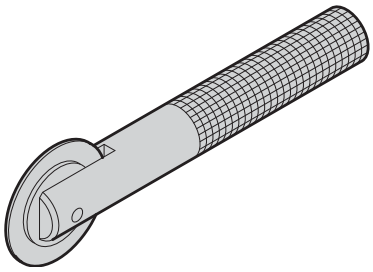
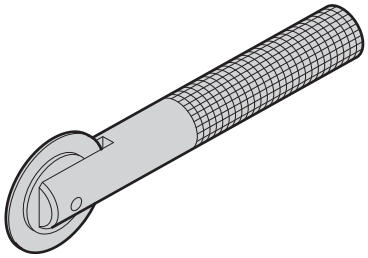
TUBULAR RIVET

	Description	Material	Dimension	Qty/PU	Part no.
 06706050	Tubular rivet, form B (roundhead)	St/brass, raw	B 2.5 x 0.25 x 5	100	**21100-459**

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

ASSEMBLY TOOLS

ORDER INFORMATION

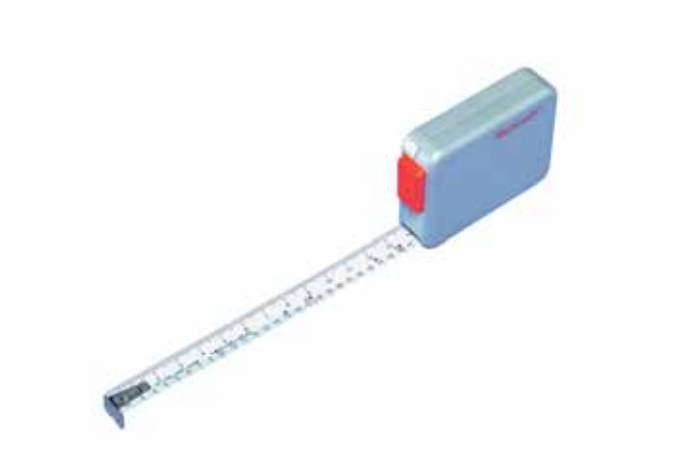
	Description	Application	Dimension	Qty/PU	Part no.
 AZA45925	Torx screwdriver	For M2.5 screw	T8	1	**64560-026**
		For M4 screw	T20	1	**64560-027**
 aza45938	Assembly tool	Exclusively to fix stainless steel EMC gaskets in horizontal rails	–	1	**24560-271**
 aza45937	Assembly tool	To fix stainless steel EMC gaskets on front panels with lateral slot	–	1	**24560-270**

NOTE

- Assembly tool to insert keying/coding pegs in guide rails is available on request

Modules – Assembly parts

MEASURING TAPE



32506001

- Measuring tape with cm, U-, HP-division (length 2 m)
- Plastic housing, metal measuring tape with automatic collection

ORDER INFORMATION

Description	Qty/PU	Part no.
Measuring tape	1	**89009-001**

Part number in bold face type: ready for despatch within 2 working days
Part number in normal type: ready for despatch within 10 working days

North America

Warwick, RI, USA
Tel +1.800.525.4682
San Diego, CA, USA
Tel +1.800.854.7086

Europe, Middle East & India

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Tel +33 3 88 90 64 90
Warsaw, Poland
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Great Britain
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Lainate, Italy
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