

CONNECT AND PROTECT

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


nvent

SCHROFF

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

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



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

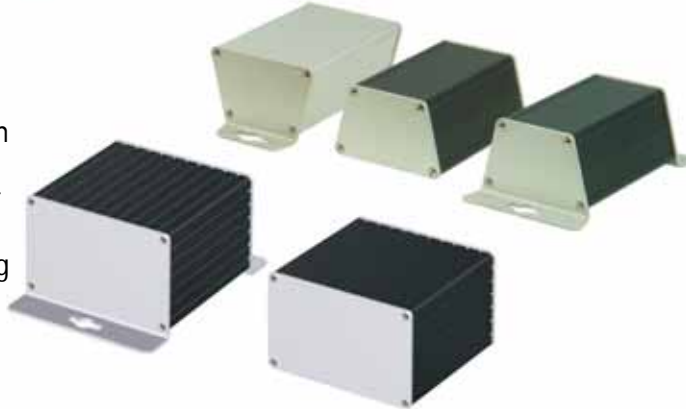
FRAME-TYPE PLUG-IN UNITS

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



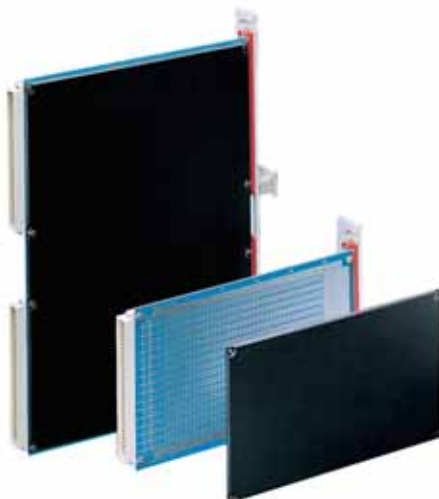
MINIPAC

- 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

Modules – Front panels

OVERVIEW

MAIN KATALOG

- Cabinets 1
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- Accessories for cabinets and wall mounted cases .. 3
- Climate control .. 4
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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

Overview 7.2



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FRONT PANELS, UNSHIELDED

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

Front panels

Unshielded 7.4

Shieldable 7.5

EMC stainless steel

gaskets 7.6

Assembly tool 7.6



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FRONT PANELS SHIELDABLE, FLAT

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



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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

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



FURTHER FRONT PANELS

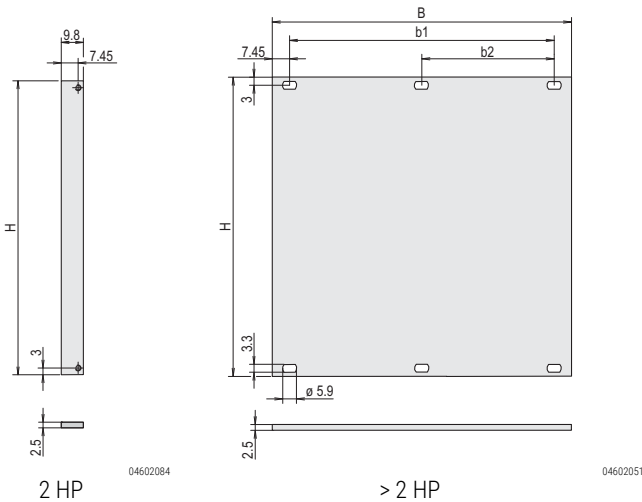
- Hinged/folding front panels
- Front panels with GND/earthing
- Mezzanine front panels
- AdvancedTCA front panels
- MicroTCA front panels
- AdvancedMC front panels



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Modules – Front panels

FRONT PANELS, UNSHIELDED



- 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 Assembly parts, page 7.107

ORDER INFORMATION

Height	H	Width	B	b1	b2	Qty	Anodised, cut edges plain	Anodised	Front anodised, rear colorless chromated
U	mm	HP	mm	mm	mm	1)	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

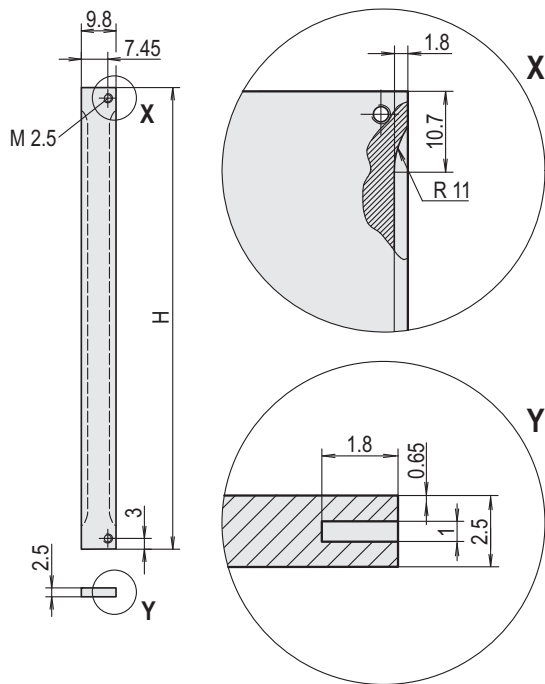
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

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

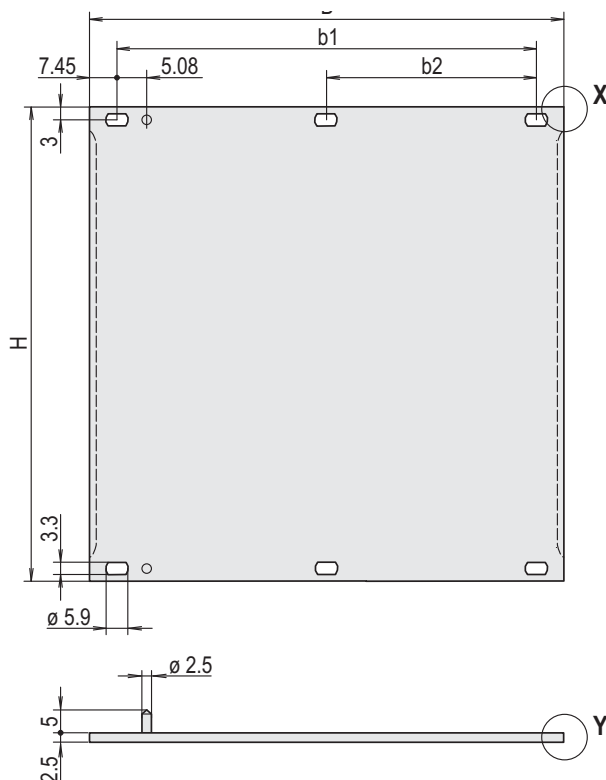
Modules – Front panels

FRONT PANELS, SHIELDABLE



2 HP

04602052



> 2 HP

04608154

- 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

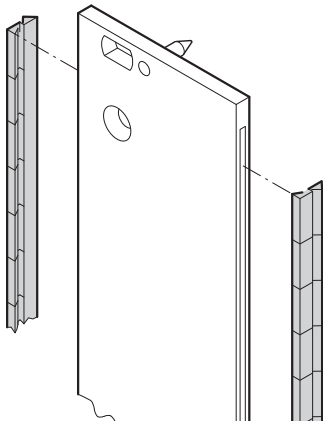
Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

NOTE

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

Modules – Front panels

STAINLESS STEEL EMC GASKET



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

DELIVERY COMPRISES

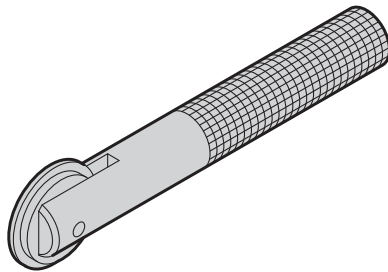
Item	Qty	Description
1	10/100	EMC gasket (stainless steel)

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

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Montagewerkzeug

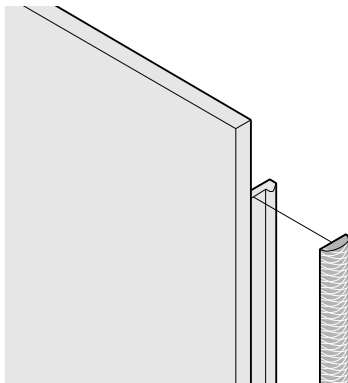


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NOTE

- Please order assembly tool separately

TEXTILE EMC GASKET



- 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

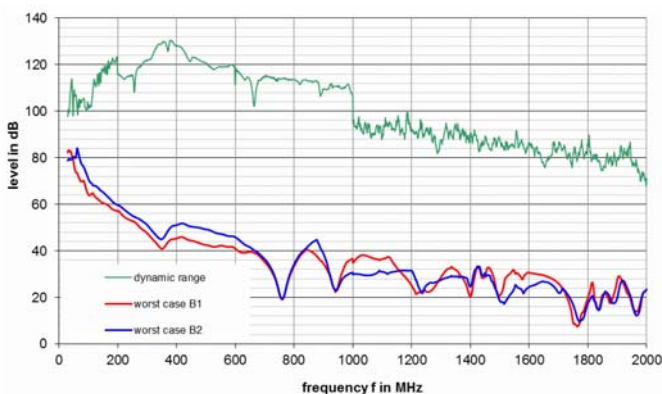
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ORDER INFORMATION

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	-

EMC characteristic (typical, green)

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



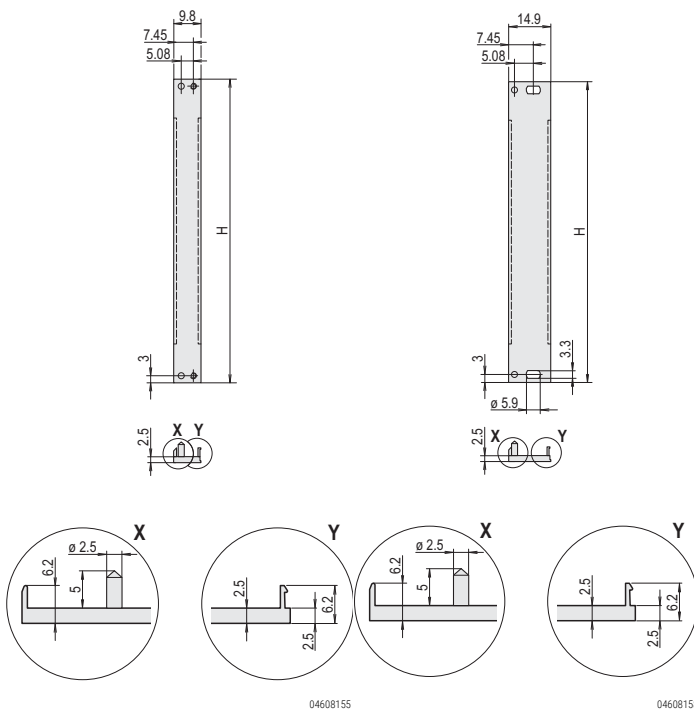
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Modules – Front panels

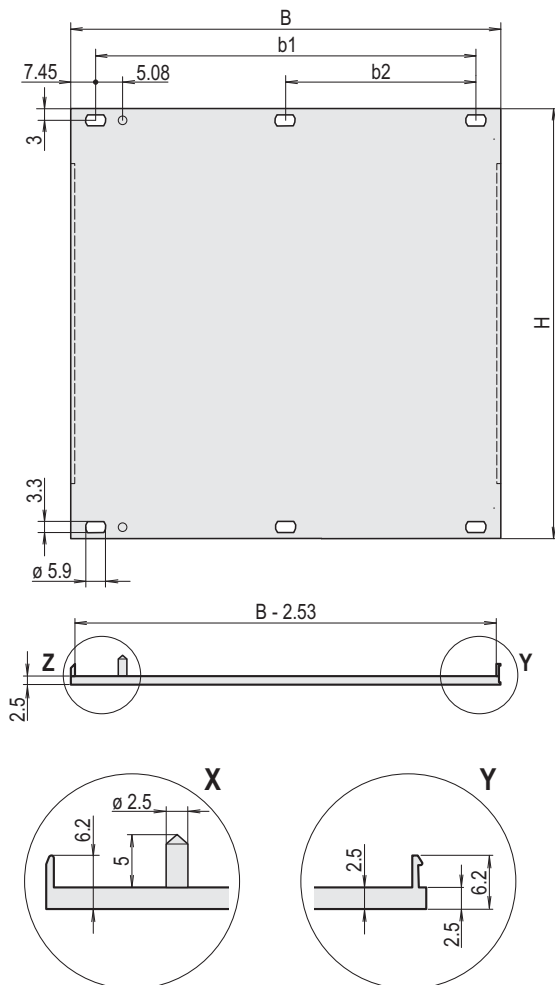
FRONT PANELS, U PROFILE, SHIELDABLE

2 HP

3 U



> 3 HP



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

ORDER INFORMATION

Height H	Width U	B	b1	b2	Align-ment pin	Qty	Part no.	
mm	HP	mm	mm	mm				
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

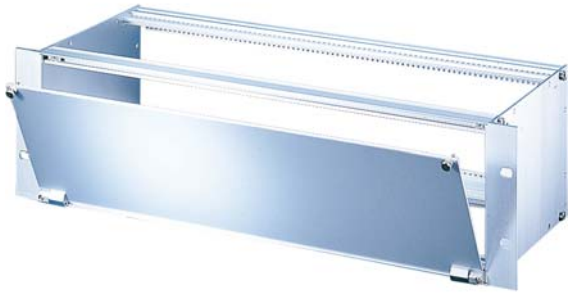
1) Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

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

Modules – Front panels

FRONT PANELS, BOTTOM-HINGED



- 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

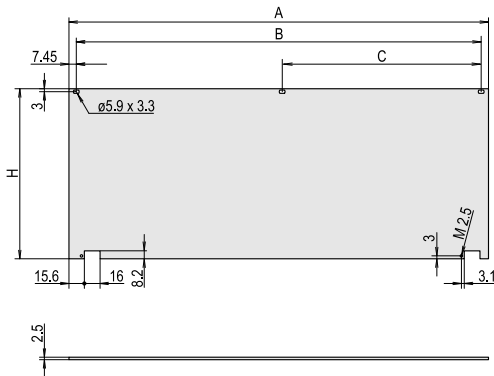
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DELIVERY COMPRISES (kit)

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	2 (28 HP) / 3	Hinge, Zn die-cast, nickel-plated
3	2 / 3 (84 HP)	2 (28 HP) / 3	Sleeve, PA
4	2 / 3 (84 HP)	2 (28 HP) / 3	Collar 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

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Unshielded

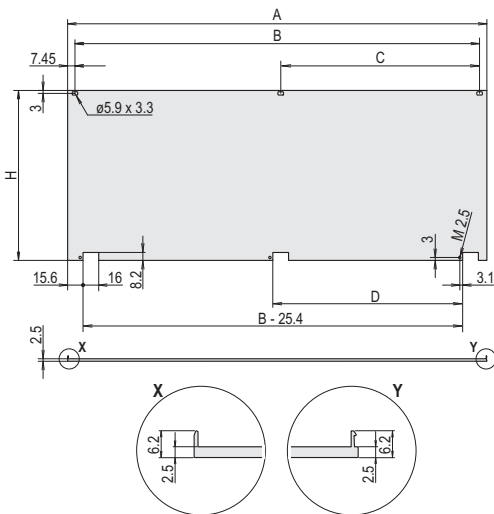


ORDER INFORMATION

Dimensions				
Height	Width	Unshielded	Shielded	
U	HP	Part no.	Part no.	
3	28	20838-280	20848-608	
3	42	20838-271	20848-599	
3	63	20838-272	20848-600	
3	84	20838-273	20848-601	
4	42	20838-277	20848-605	
4	63	20838-278	20848-606	
4	84	20838-279	20848-607	
6	28	-	20848-696	
6	42	20838-274	20848-602	
6	63	20838-275	20848-603	
6	84	20838-276	20848-604	

Shielded

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DIMENSIONS

Dimensions							
Height	Width	A	B	C	D	H	Shielded Part no.
U	HP	mm	mm	mm	mm	mm	
3	28	141.9	127.0	-	-	128.4	20848-608
3	42	213.0	198.1	101.6	86.4	128.4	20848-599
3	63	319.7	304.8	157.5	137.2	128.4	20848-600
3	84	426.4	411.5	203.2	193.0	128.4	20848-601
4	42	213.0	198.1	101.6	86.4	172.9	20848-605
4	63	319.7	304.8	157.5	137.2	172.9	20848-606
4	84	426.4	411.5	203.2	193.0	172.9	20848-607
6	28	141.9	127.0	-	-	261.8	20848-696
6	42	213.0	198.1	101.6	86.4	261.8	20848-602
6	63	319.7	304.8	157.5	137.2	261.8	20848-603
6	84	426.4	411.5	203.2	193.0	261.8	20848-604

Dimensions							Unshielded
Height	Width	A	B	C	H		Part no.
U	HP	mm	mm	mm	mm		
3	28	141.9	127.0	-	128.4		20838-280
3	42	213.0	198.1	-	128.4		20838-271
3	63	319.7	304.8	-	128.4		20838-272
3	84	426.4	411.5	203.2	128.4		20838-273
4	42	213.0	198.1	-	172.9		20838-277
4	63	319.7	304.8	-	172.9		20838-278
4	84	426.4	411.5	-	172.9		20838-279
6	42	213.0	198.1	-	261.8		20838-274
6	63	319.7	304.8	-	261.8		20838-275
6	84	426.4	411.5	203.2	261.8		20838-276

Modules – Front panels

FRONT PANEL, HINGED, SHIELDED



- 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

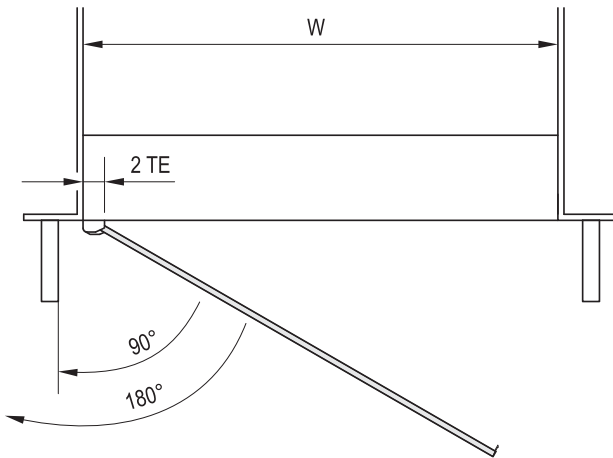
DELIVERY COMPRISES (kit)

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

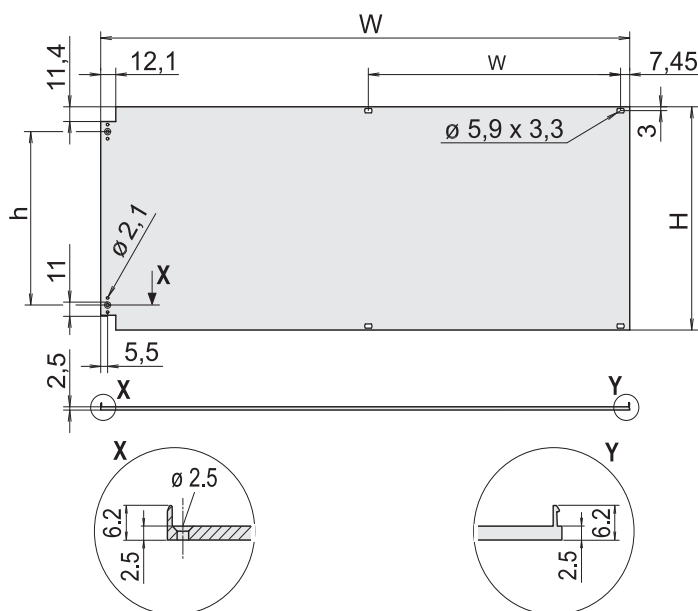
04295002

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



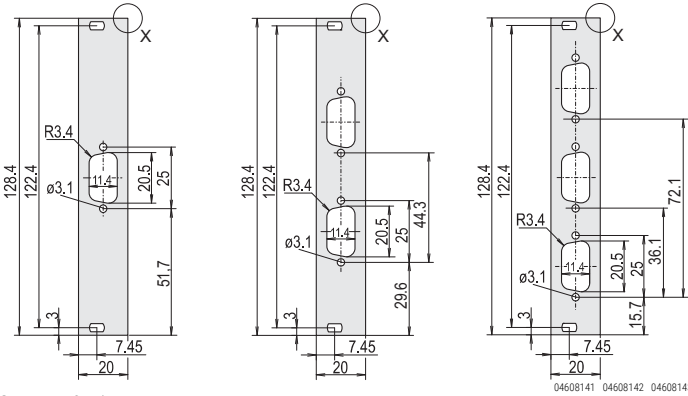
06106053



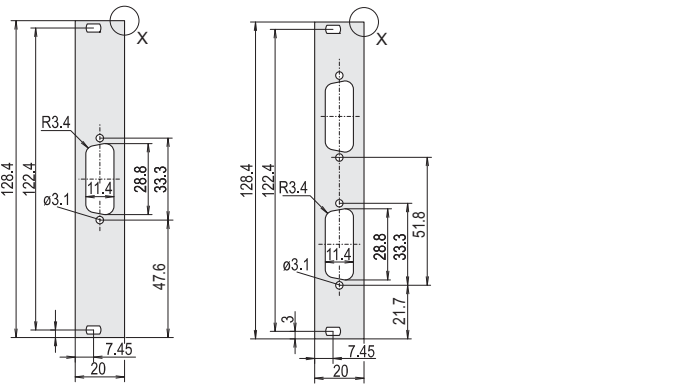
04602081

Modules – Front panels

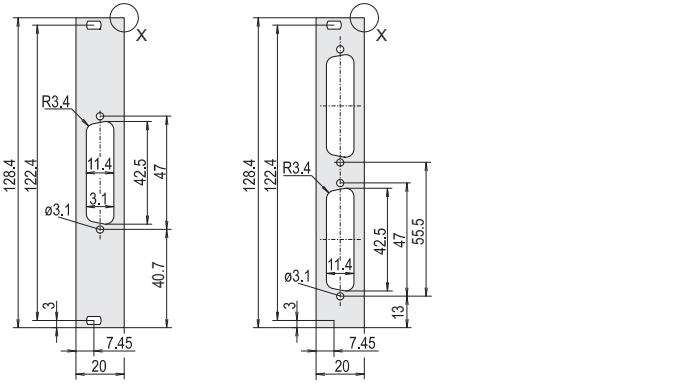
FRONT PANELS FOR D-SUB CONNECTORS



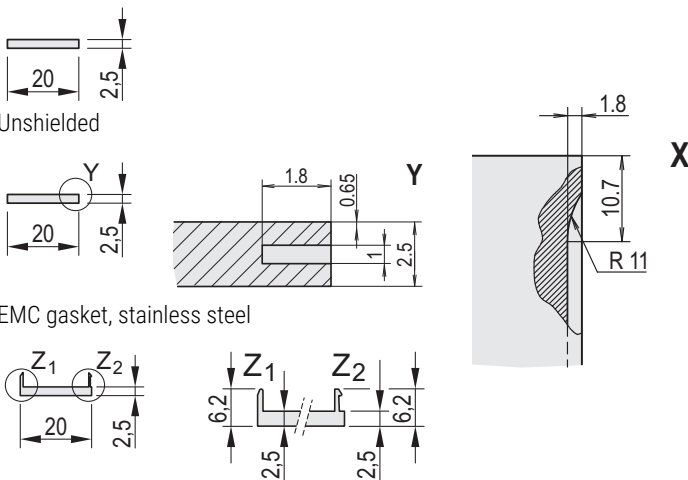
Cut-out 9-pin



Cut-out 15-pin



Cut-out 25-pin



For textile EMC gasket

- 3 U/4 HP
- Aluminium, front anodised, rear iridescent 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 iridescent 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	For EMC gasket	
		Part no.	Stainless steel Part no.	Textile Part no.
		1a	1b	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

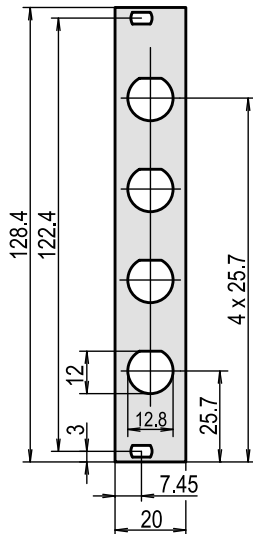
Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple. Pricing is per individual item.

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 iridescent 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

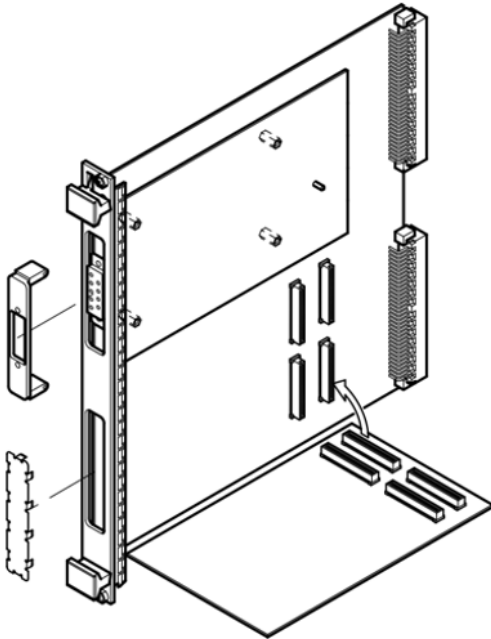
Delivery is exclusively made in Standard Pack Quantity (SPQ): Please order at least 5 pieces or a multiple.
Pricing is per individual item.

NOTE

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

Assemblies – Front panels

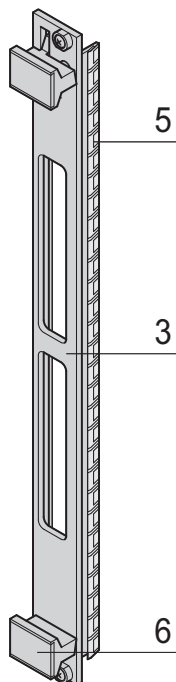
PMC MEZZANINE FRONT PANELS



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



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

MPA44845

- 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 extractor handle, type 1

ORDER INFORMATION

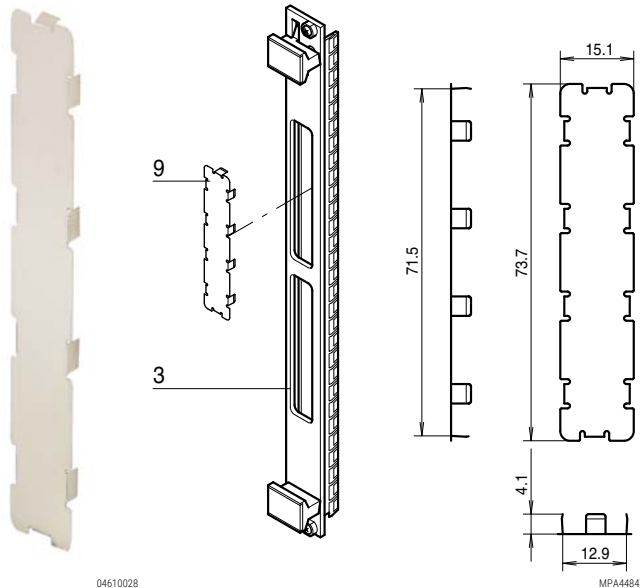
Item	Description	Part No.
3+5+6	Front panel with 2 cut-outs	20897-950

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

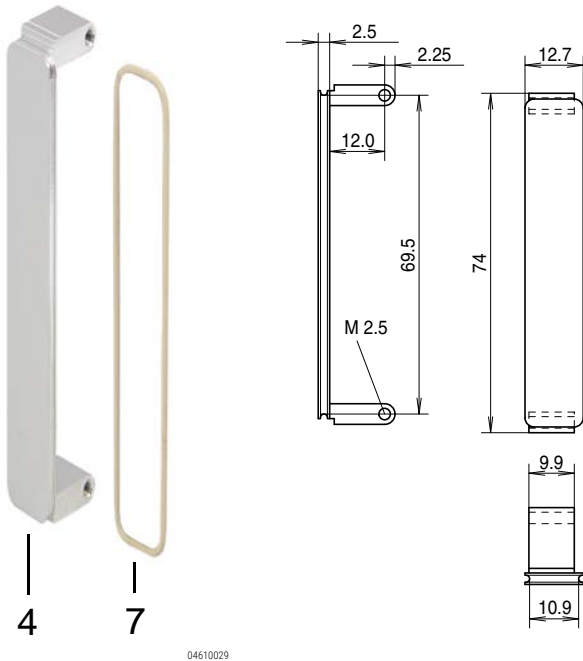
- EMC cover to close unused cut-outs in the PMC mezzanine front panels
- Material stainless steel, 0.2 mm
- Colour: black or bright

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)

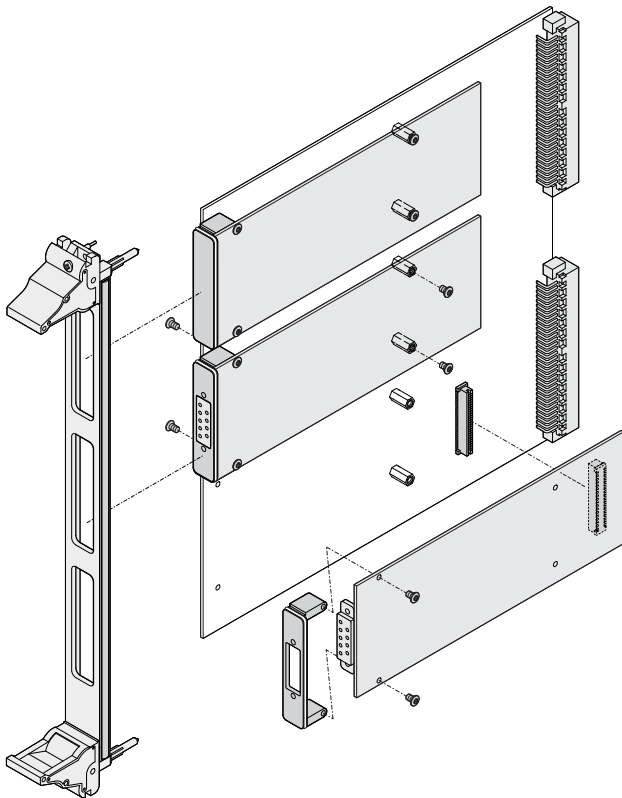
Item	Qty	Description
4	1	PMC bezel for mezzanine front panel, Zn die-cast or Al extrusion
7	1	EMC gasket (O-ring), Cho-Seal

ORDER INFORMATION

PMC mezzanine front panel	Qty/PU	with EMC gasket	without EMC gasket
Material		Part no.	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 x 5 mm, PU 100 pieces			21100-624
EMC gasket O-ring, 1 piece (Standard Pack Quantity 10 pieces)			60835-021

Assemblies – Front panels

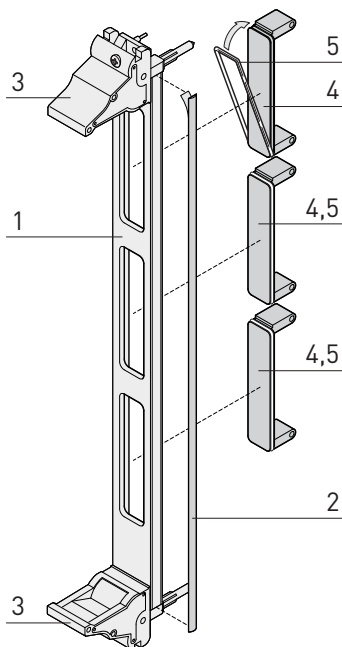
FMC MEZZANINE FRONT PANELS



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		Description
	3 U	6 U	
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

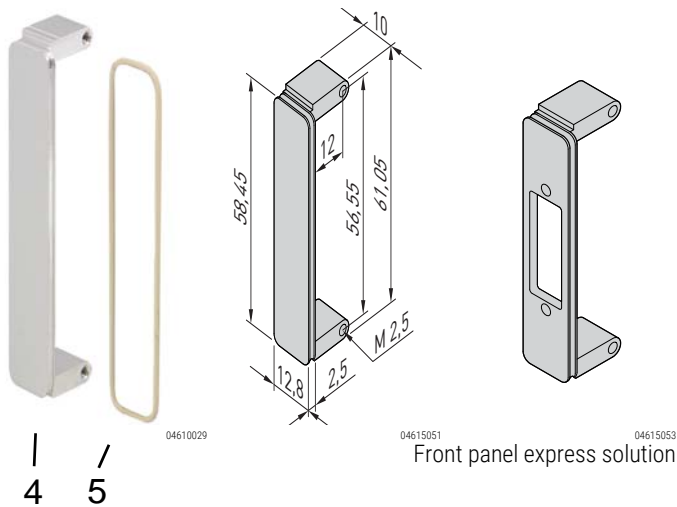
Height	Part no.
U	
3	20836-253
6	20836-254

Accessories

Spacer to mount PMC mezzanine boards	see page 7.15
--------------------------------------	---------------

Assemblies – Front panels

EMC BEZEL FOR FMC MEZZANINE FRONT PANEL CUT-OUTS



- 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

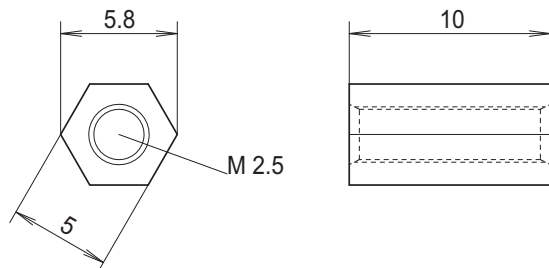
ORDER INFORMATION

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 x 5 mm, PU 100 pieces			21100-624

SPACER TO MOUNT PMC AND FMC MEZZANINE BOARDS

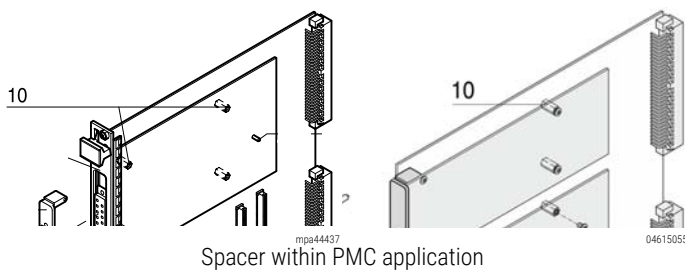


- To provide a standoff between mezzanine boards per the IEEE P1386 or VITA 57.1 specification and the carrier card

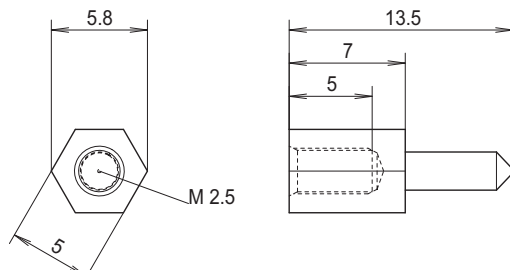
ORDER INFORMATION

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

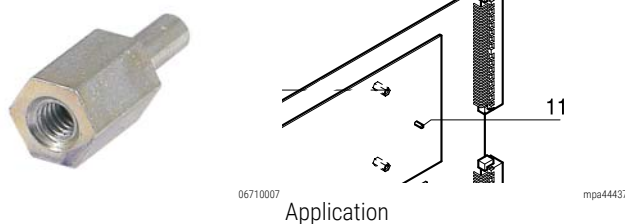


- To prevent accidental damage when fitting mezzanine boards, keying/coding pins are bolted to the VMEbus boards to distinguish between 3.3 V and 5 V operation. The mezzanine boards have a hole drilled in the appropriate position. The keying/coding pin thus ensures that only mezzanine boards with the 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.



Plug-in units – Plug-in units

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**

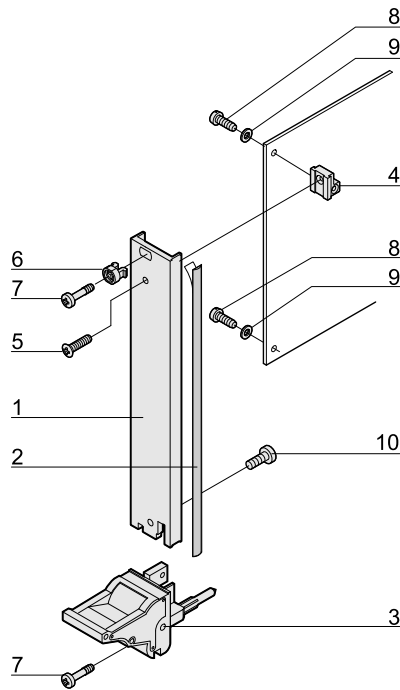
Plug-in units – Plug-in units

Handles for plug-in units		Kit	Individual components	
		Page	Page	
	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	Overview 7.17 Plug-in units with injector and extractor handles
	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	For CompactPCI and VME64x applications 7.18
	For e.g. VMEbus applications Trapeziform extractor handle, type 2	7.33	7.35	For VPX, VXS, CompactPCI and VME64x applications 7.30
	For e.g. VMEbus applications Trapeziform extractor handle, type 1	7.40	7.42	For e.g. VMEbus applications type 2 7.33
	For Multibus® II applications Extractor handle, multibus type II, IEC 60297	–	7.46	For e.g. VMEbus applications type 1 7.40
	For plug-in units in accordance with IEC 60297 Extractor handle in key form 1	–	7.48	For Multibus® II applications 7.46
	For plug-in units in accordance with IEC 60297 Extractor handle in key form 2	–	7.51	For plug-in units in accordance with IEC 60297 7.48
	For plug-in units in accordance with IEC 60297 Static handle	7.54	7.56	For plug-in units in accordance with IEC 60297 7.51
	Accessories for plug-in units Mechanical protection for static trapeziform handle and fixing materials kit	7.64	–	For plug-in units in accordance with IEC 60297 7.54
				Accessories for plug-in units 7.62
				PCB cover 7.64

Plug-in units – for CompactPCI, VME64x

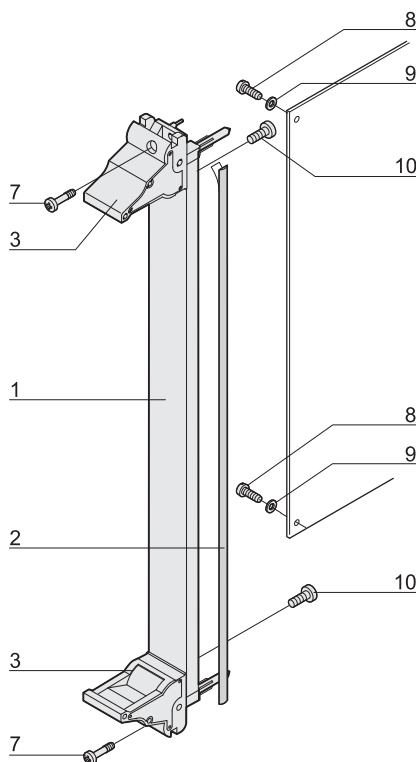
KITS
PLUG-IN UNITS WITH IEL INSERTER/EXTRACTOR HANDLE FOR COMPACTPCI/VME64X APPLICATIONS

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				Description
	3 U		6 U		
	<8HP	≥8HP	<8HP	≥8HP	
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 x 8, St, nickel-plated
6	1	3	-	2	Sleeve, PA, grey
7	2	4	2	4	Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated
8	2	2	2	2	Panhead screw with Torx/slot, M2.5 x 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 x 7, St, nickel-plated

ORDER INFORMATION

Width HP	Part no.	Part no.
	Rear I/O	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

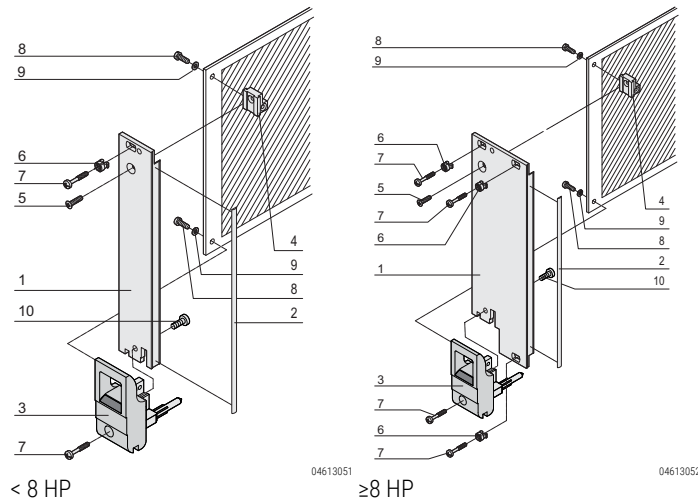
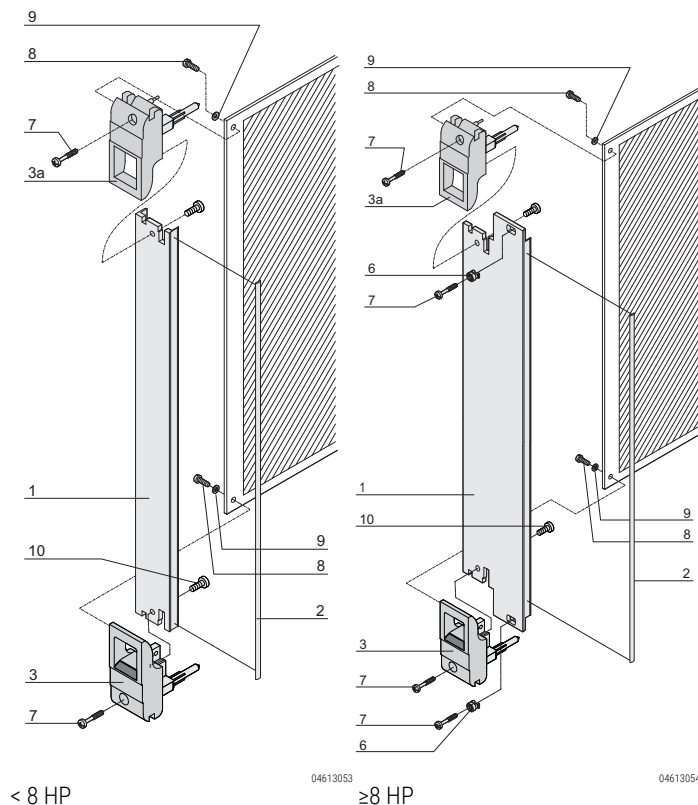
4	-	20848-592
6	-	20848-594
8	-	20848-596
10	-	20848-597
12	-	20848-598

Accessories

Microswitch for handles, CompactPCI/VME64x application PU 10 pieces	20817-606
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- Dimension drawing of front profile see page 7.26
- Description of microswitch see page 7.31

Plug-in units – for CompactPCI, VME64x

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

6 U


- 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	3 U		6 U		Description
	<math>< 8\text{ HP}</math>	$\ge 8\text{ HP}$	<math>< 8\text{ HP}</math>	$\ge 8\text{ HP}$	
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 x 8, St, nickel-plated
6	1	3	-	2	Sleeve, PA, gray
7	2	4	2	4	Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated
8	2	2	2	2	Panhead screw with Torx/slot, M2.5 x 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 x 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

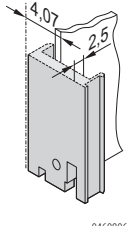
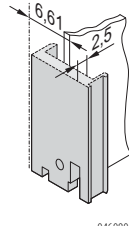
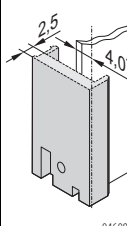
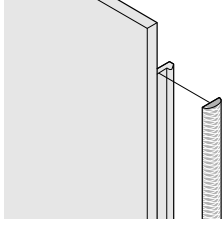
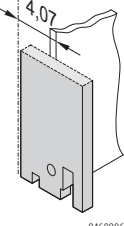
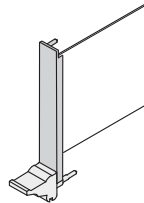
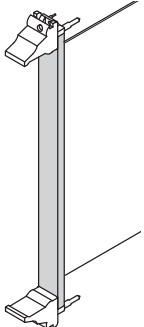
Accessories

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

Plug-in units – for CompactPCI, VME64x

INDIVIDUAL COMPONENTS
FRONT PANELS, U-PROFILES, FOR EXTRACTOR HANDLES, TYPE IEL, IET
ORDER INFORMATION

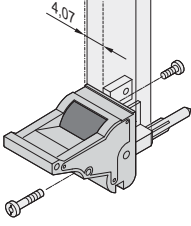
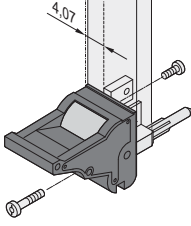
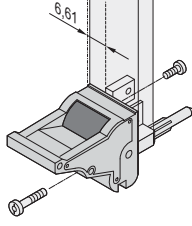
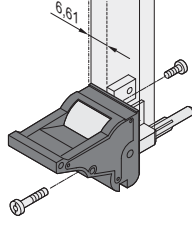
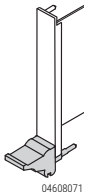
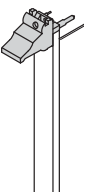
	Front panel, U profile, shieldable			Textile EMC gasket		Front panel, flat, unshielded, front mounting	
	Front mounting	Front mounting, PCB fixing with 0.1" offset	Rear I/O mounting				
							
	04608060	04608062	04608061	BGA45760		04608063	
	Al extrusion, 2.5 mm, front anodised, rear conductive; alignment 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 iridescent 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							
	4	30848-312	30848-426	30848-867	21101-853	21101-854	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	–	–			–
	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							
	4	30848-317	30848-317	30848-317	21101-855	21101-856	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			–
	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

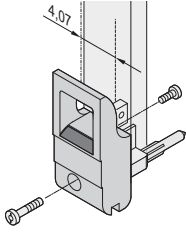
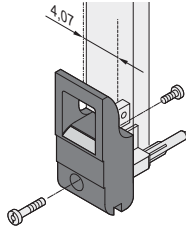
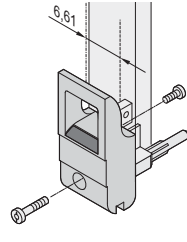
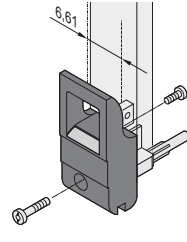
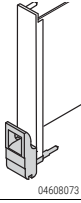
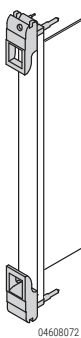
Plug-in units – for CompactPCI, VME64x

INDIVIDUAL COMPONENTS
INSERTER/EXTRACTOR HANDLE, TYPE IEL
ORDER INFORMATION

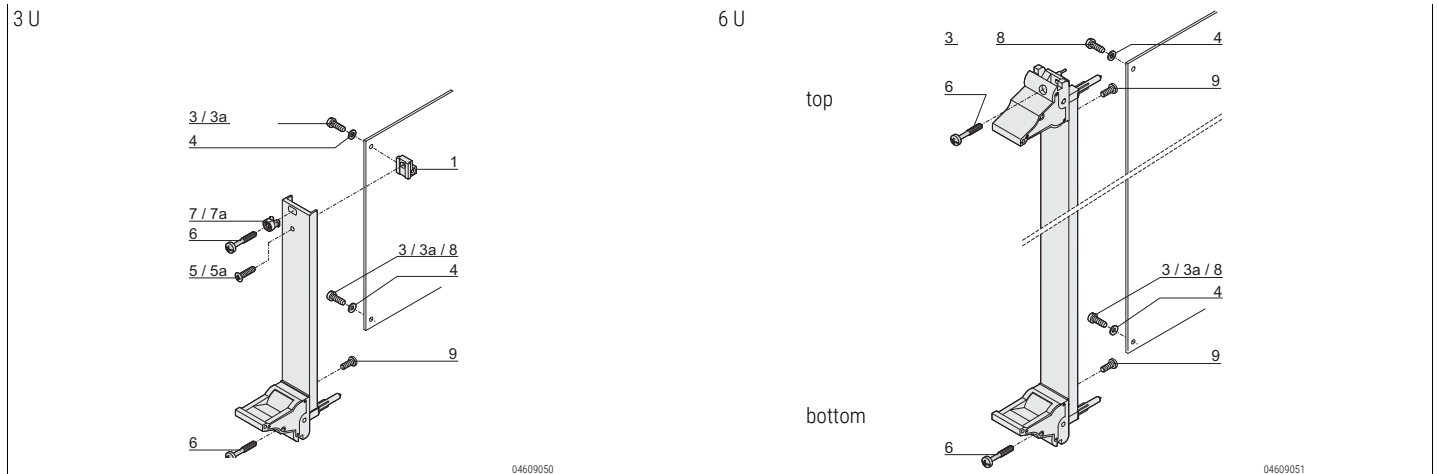
	Inserter/extractor handle, type IEL, board fixing without offset				Inserter/extractor handle, type IEL, board fixing with 0.1" offset						
	lever: light grey, RAL 7035 key: black, RAL 9005		lever: black, RAL 9005 key: light grey, RAL 7035		lever: light grey, RAL 7035 key: black, RAL 9005		lever: black, 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			







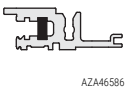




Plug-in units – for CompactPCI, VME64x

INDIVIDUAL COMPONENTS
INSERTER/EXTRACTOR HANDLE, TYPE IET
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			

Plug-in units – for CompactPCI, VME64x

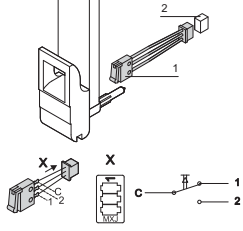
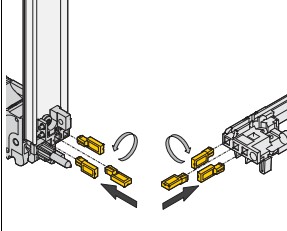
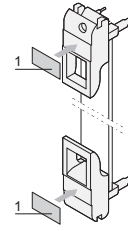
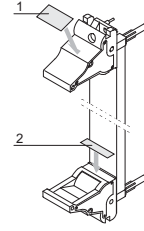
INDIVIDUAL COMPONENTS
INSERTER/EXTRACTOR HANDLES, TYPE IEL/IET, FIXING MATERIAL
ORDER INFORMATION


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

Plug-in units – for CompactPCI, VME64x

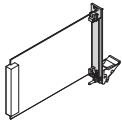
INDIVIDUAL COMPONENTS
INSERTER/EXTRACTOR HANDLES, TYPE IEL/IET, ACCESSORIES
ORDER INFORMATION

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
 <p>bga46314 bga46315</p> <p>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</p>	 <p>04612052</p> <p>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</p>	 <p>04606050</p> <p>Polyester, self-adhesive, white, 1 sheet 210 pieces (Item 1)</p>	 <p>bga46317</p> <p>Polyester, self-adhesive, white, 1 sheet 210 pieces (item 1)</p>	<p>Polyester, self-adhesive, white, 1 sheet 320 pieces (item 2)</p>
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

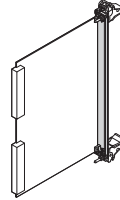
Plug-in units – for CompactPCI, VME64x

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

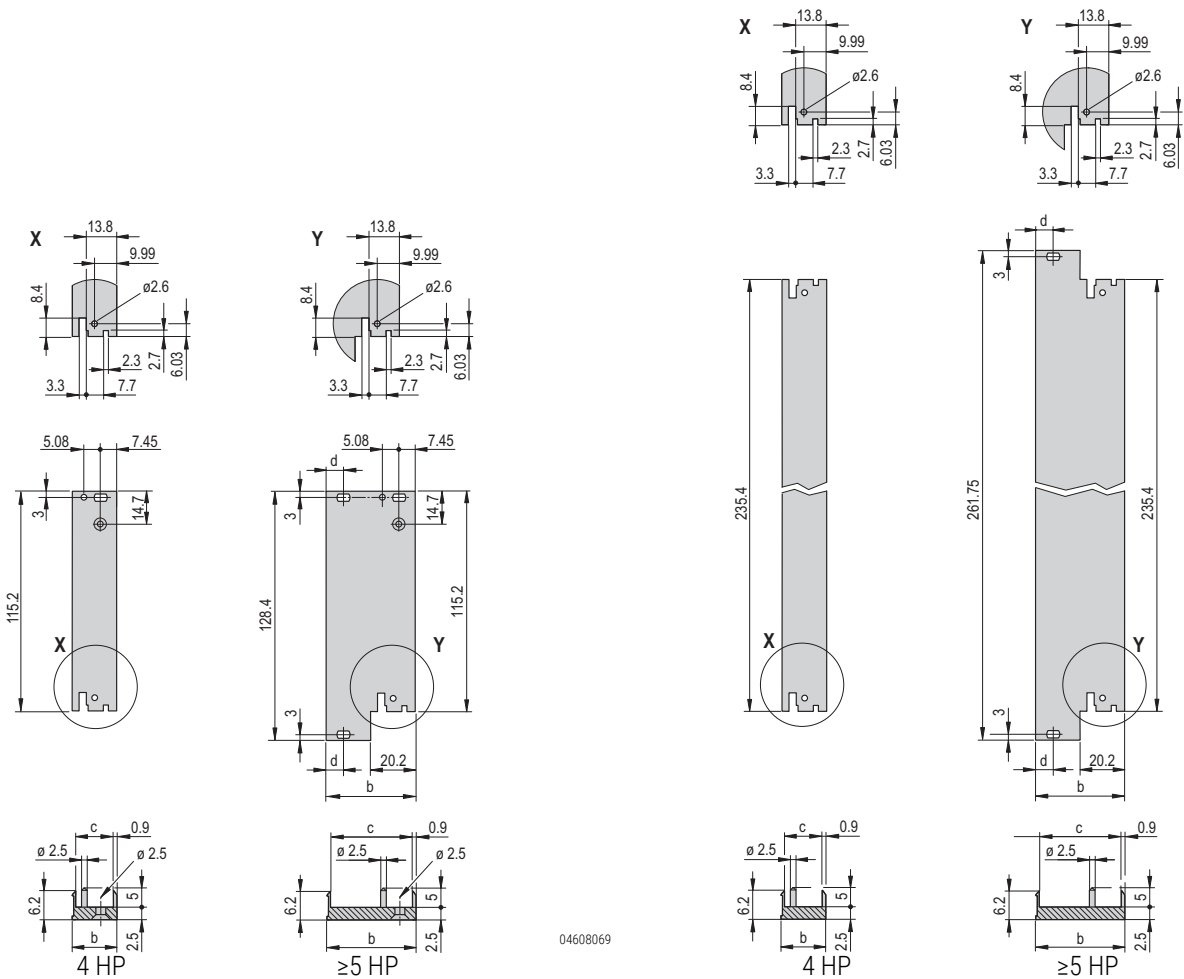
PCB fixing without offset

3 U


04608068

6 U


04608076



04608069

04608075

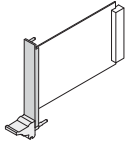
Dimensions table

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

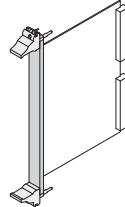
Plug-in units – for CompactPCI, VME64x

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

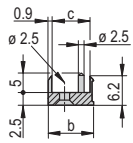
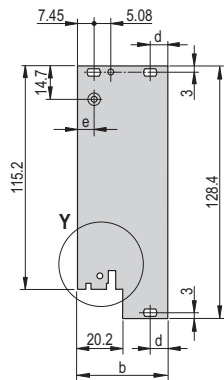
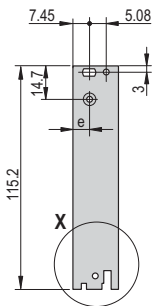
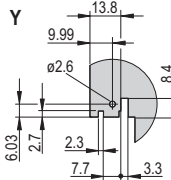
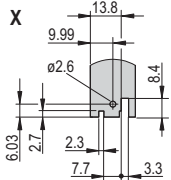
PCB fixing without offset / with 0.1" offset

3 U


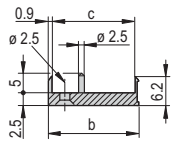
04608067

6 U


04608066

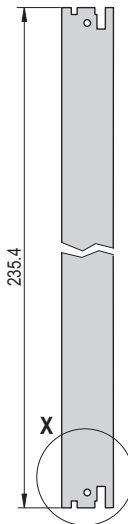


4 HP

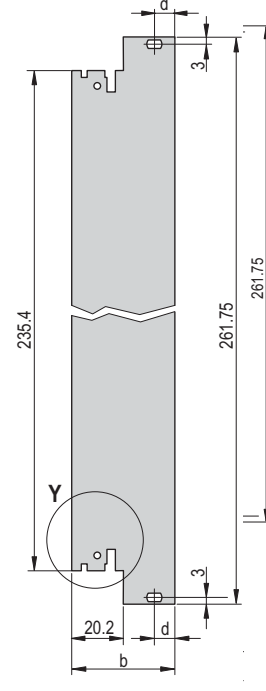
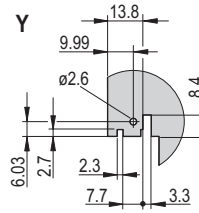
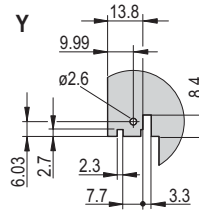


≥5 HP

04608064



4 HP



04608065

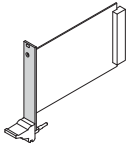
Dimensions table

Width HP	b mm	c mm	d mm	without offset	with 0.1" offset
				e mm	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

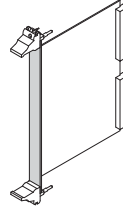
Plug-in units – for CompactPCI, VME64x

DIMENSIONS
FRONT PANELS, INSERTER/EXTRACTOR HANDLES, TYPE IEL/IET, UNSHIELDED

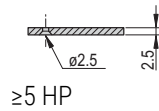
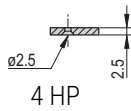
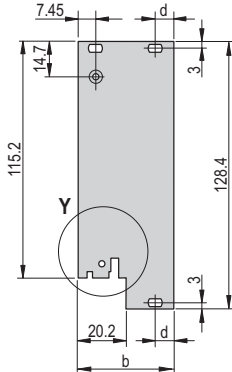
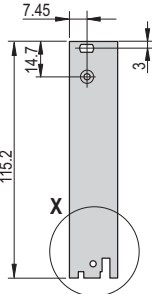
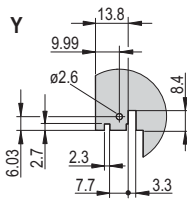
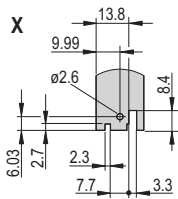
PCB fixing without offset

3 U


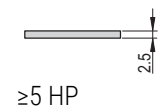
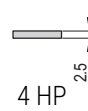
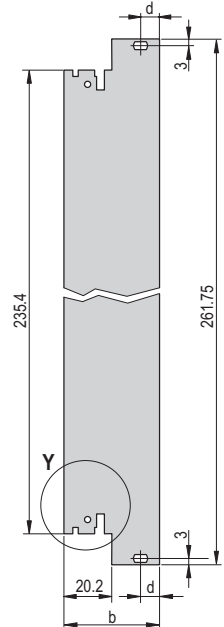
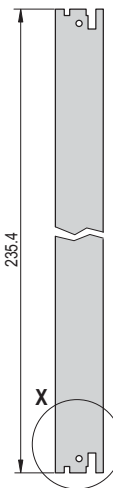
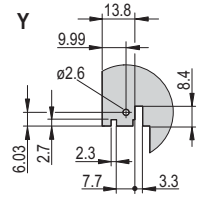
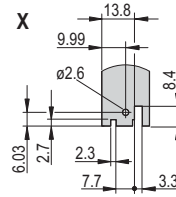
04608080

6 U


04608079



04608077



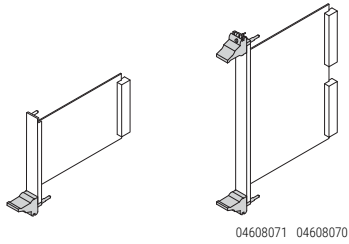
04608078

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

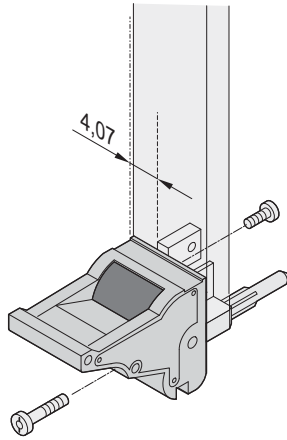
Plug-in units – for CompactPCI, VME64x

DIMENSIONS

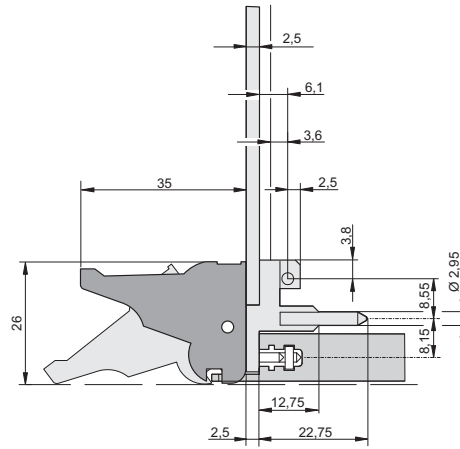
INSERTER/EXTRACTOR HANDLE, TYPE IEL



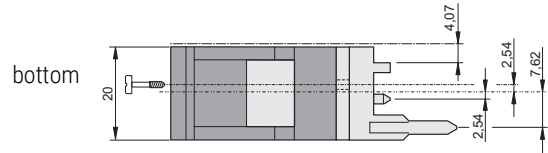
04608071 04608070



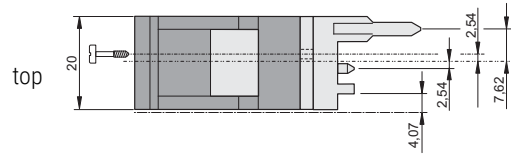
04608050



04603059



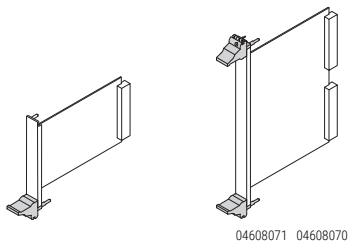
04607053



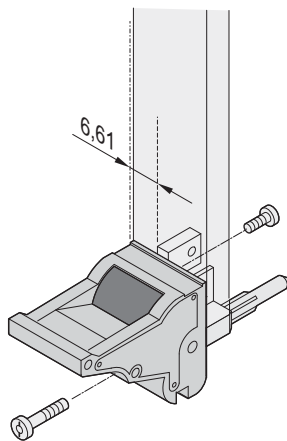
04607054

DIMENSIONS

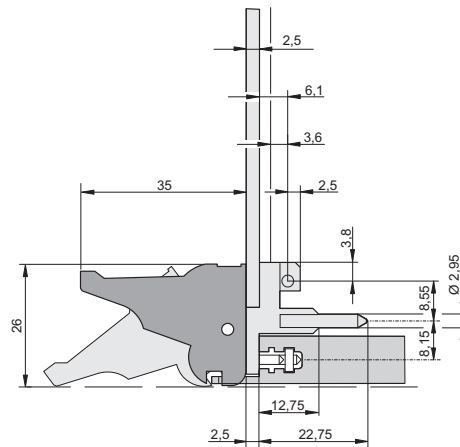
INSERTER/EXTRACTOR HANDLE, TYPE IEL, 0.1" OFFSET



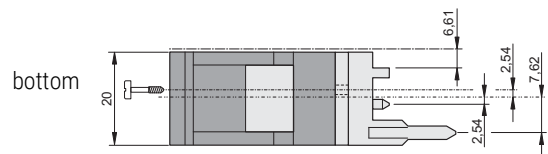
04608071 04608070



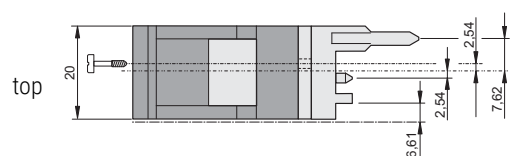
04608051



04603059

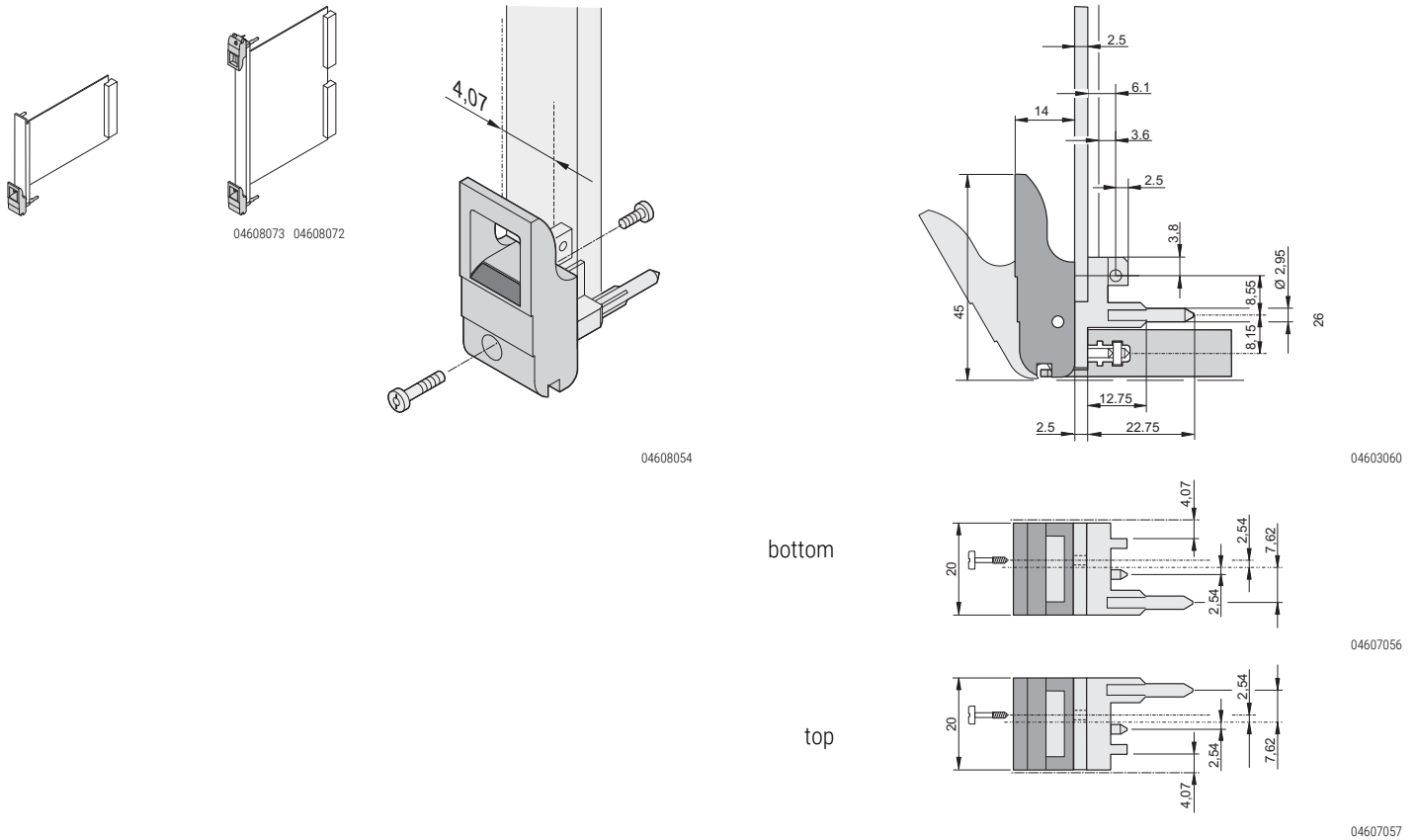
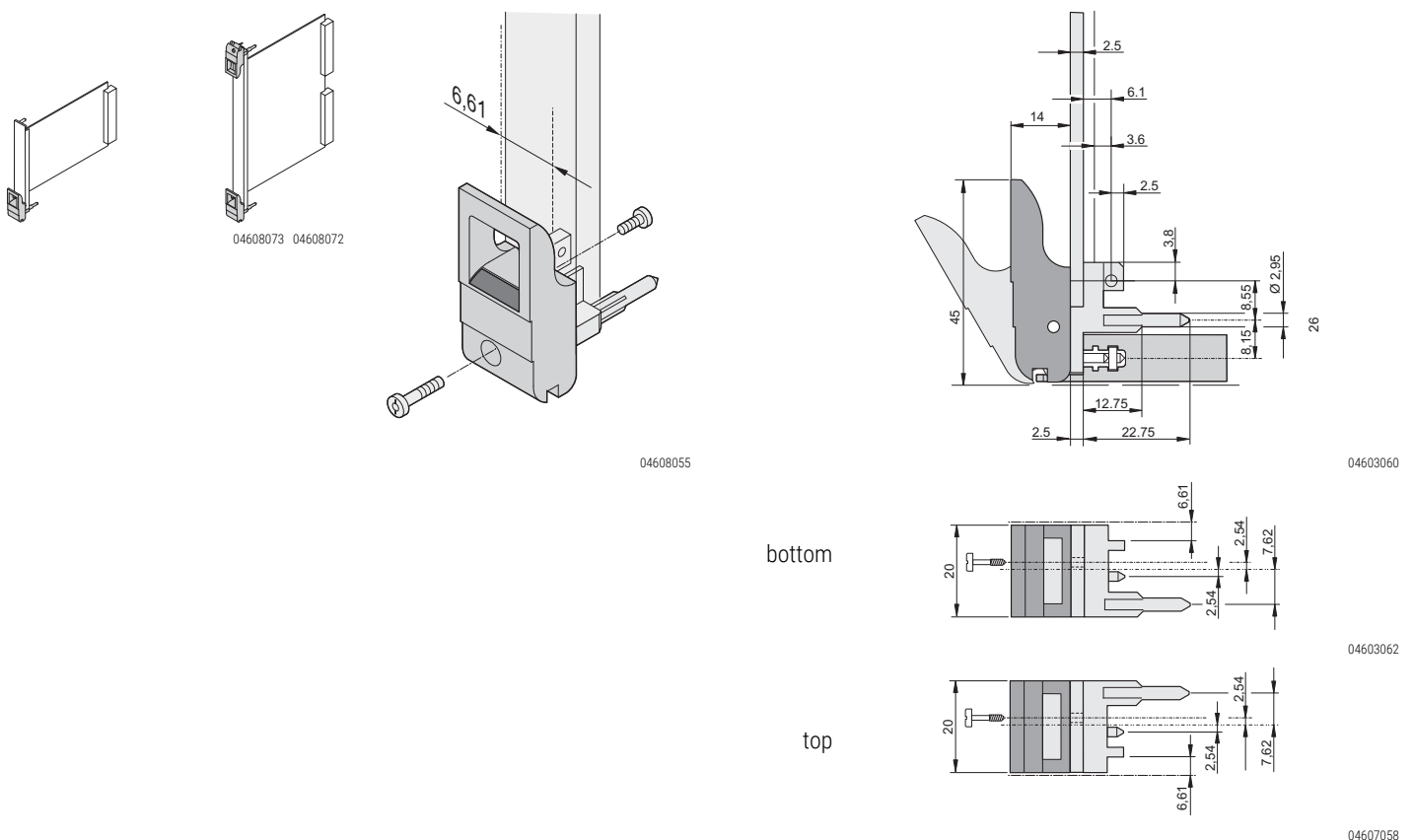


04603061



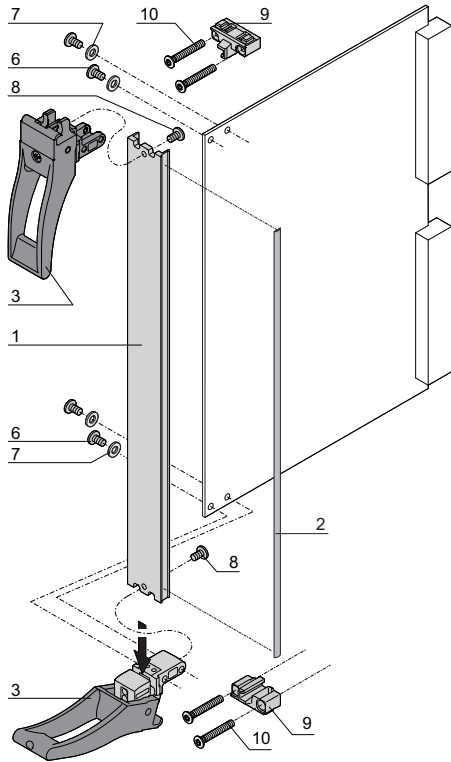
04607055

Plug-in units – for CompactPCI, VME64x

DIMENSIONS
INSERTER/EXTRACTOR HANDLE, TYPE IET

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


Plug-in units – for CompactPCI, VME64x,

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



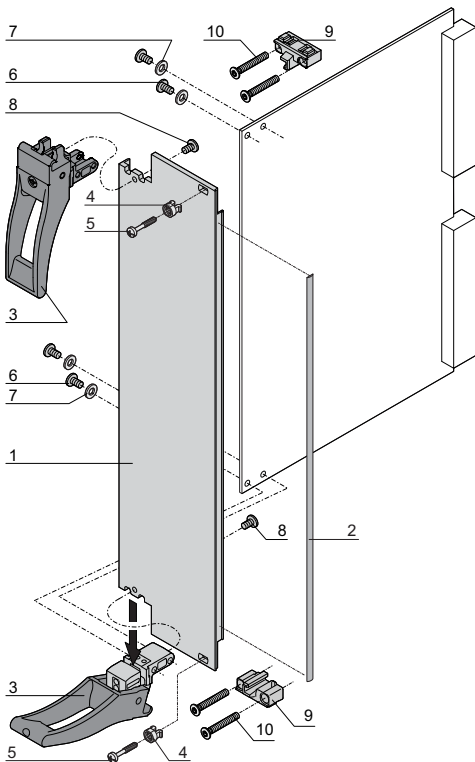
< 8 HP

04613055

- 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		Description
	<8 HP	≥8 HP	
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 × 12.3, St, nickel-plated
6	4	4	Panhead screw with Torx/slot, M2.5 × 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 × 7, St, zinc-plated
9	1	1	XL bearing, zinc diecast, nickel-plated
10	4	4	Countersunk screw with torx M2.5 × 17, St, zinc-plated



≥8 HP

04613056


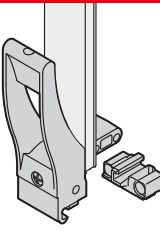
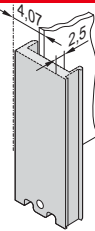
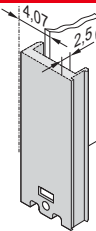
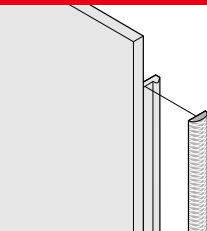
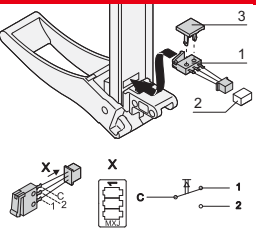
ORDER INFORMATION

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

Plug-in units – for CompactPCI, VME64x,

INDIVIDUAL COMPONENTS
INSERTER/EXTRACTOR HANDLE, TYPE XL, FRONT PANELS, MICROSWITCH

	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			
 <p>04605008</p>	 <p>04608081</p>	 <p>04608082</p>	 <p>04608083</p>	 <p>BGA45760</p>	 <p>04608084 bga46315</p>	
	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 $\geq 20,000$ switching cycles, electr. life $\geq 20,000$ 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

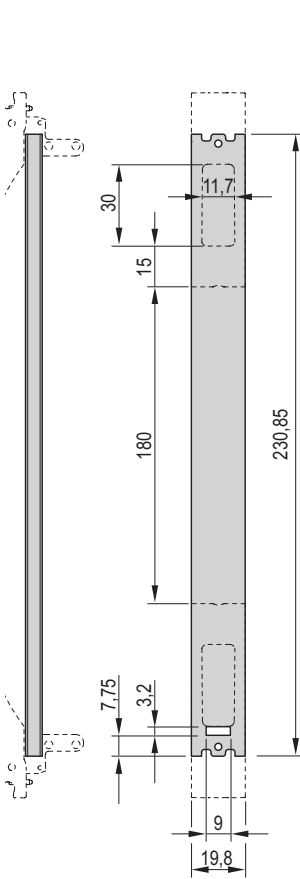
- Please order front panels separately

Plug-in units – for CompactPCI, VME64x,

DIMENSIONS

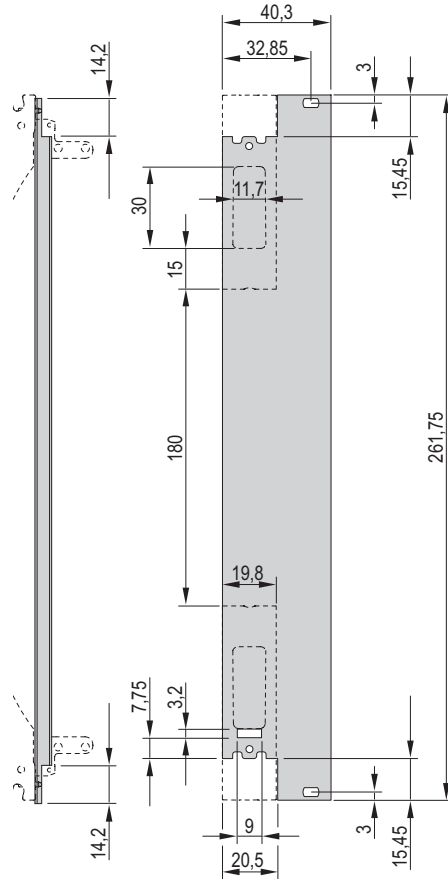
U FRONT PROFILE FOR EXTRACTOR HANDLE TYPE XL, SHIELDABLE

6 U/4 HP



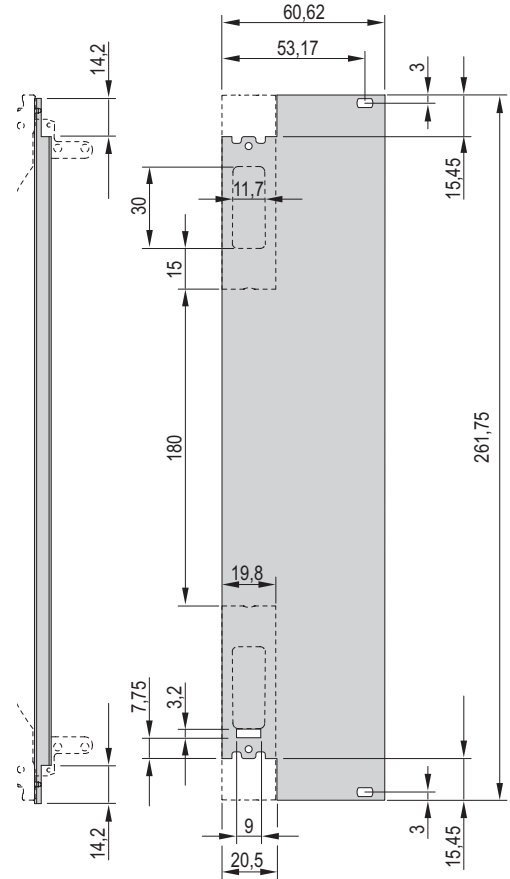
04605053

6 U/8 HP



04605054

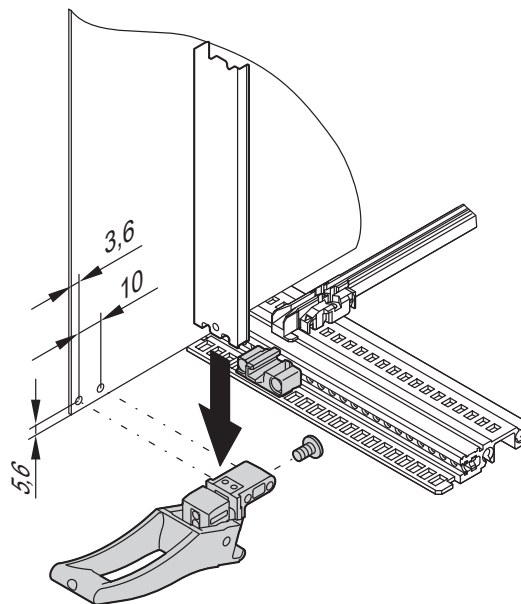
6 U/12 HP



04605055

DIMENSIONS

INSERTER/EXTRACTOR HANDLE, TYPE XL

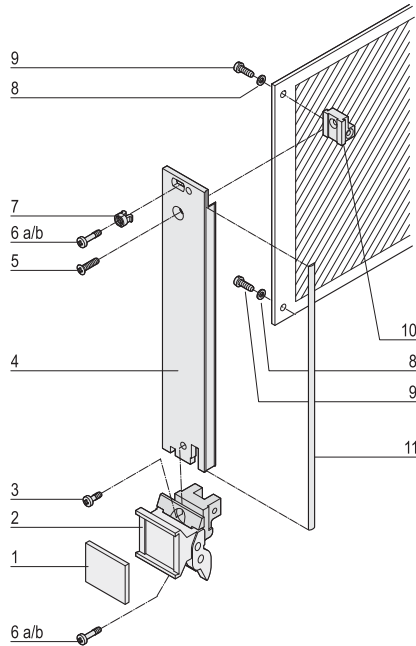


04608113

Plug-in units – for VME

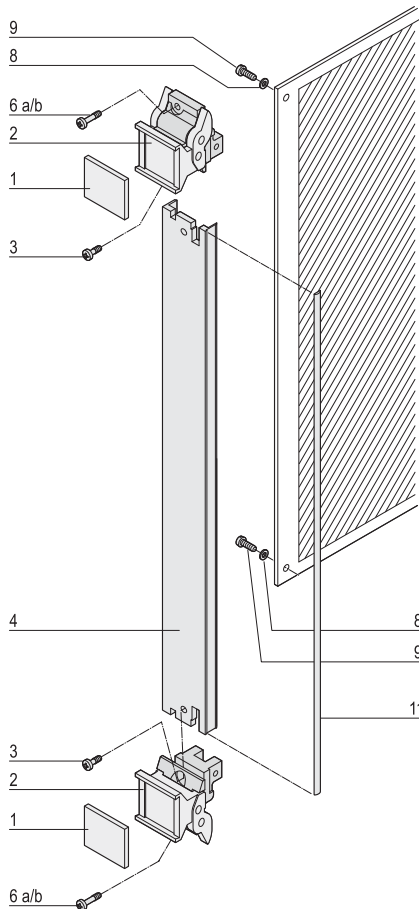
KITS
PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2

3 U



04604050

6 U



04604051

- Shielded

DELIVERY COMPRISES (kit)

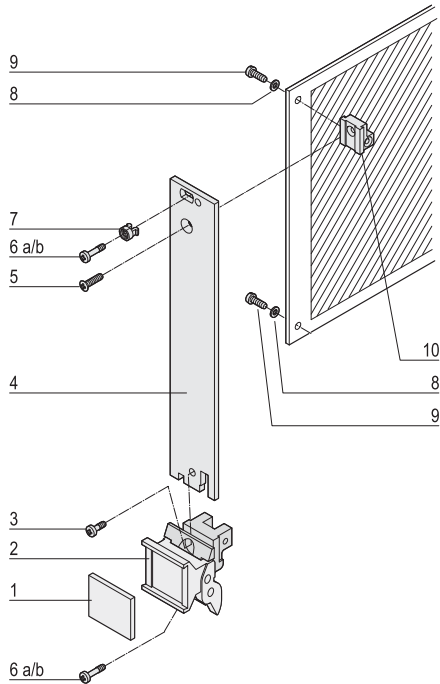
Item	3 U		6 U		Description
	<8HP	≥8HP	<8HP	≥8HP	
1	1	1	2	2	Identification plate, Al, 1.5 mm, anodised, cut edges untreated
2	1	1	2	2	Extractor handle, trapeziform, type 2, lever: PPE, light grey, RAL 7035, block die-cast zinc, nickel-plated, with integrated alignment pin for perforated strip
3	1	1	2	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 x 8, St, nickel-plated
6a	2	4	2	4	Pozidrive collar screw, M2.5 x 12.3, St, nickel-plated,
6b	2	4	2	4	collar screw, Pozidrive/slot, 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	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

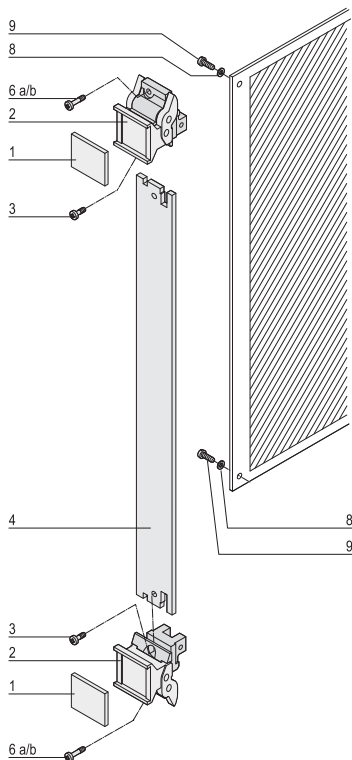
Height	Width	Part no.
U	HP	
3	4	20848-686
3	6	20848-687
3	8	20848-688
3	10	20848-689
3	12	20848-690
6	4	20848-691
6	6	20848-692
6	8	20848-693
6	10	20848-694
6	12	20848-695

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

Plug-in units – for VME

KITS
3 U


04604052

6 U


04604053

PLUG-IN UNITS WITH TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2

- Unshielded

DELIVERY COMPRISES (kit)

Item	3 U		6 U		Description
	<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: iridescent green chromated
5	1	1	-	-	Raised Pozidrive countersunk screw, M2.5 x 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

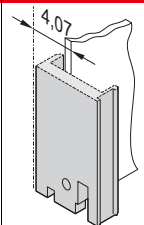
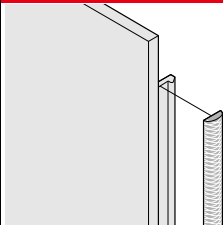
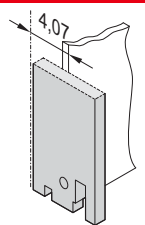
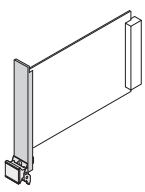
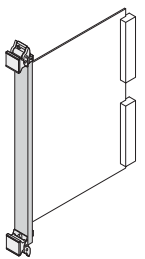
ORDER INFORMATION

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

Plug-in units – for VME

INDIVIDUAL COMPONENTS
U FRONT PROFILES/FRONT PANELS FOR TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2
ORDER INFORMATION

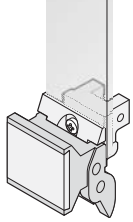
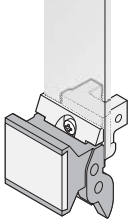
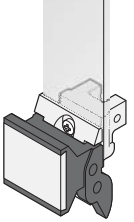
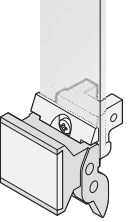
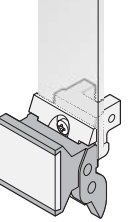
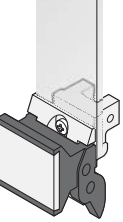
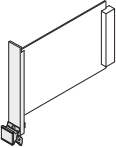
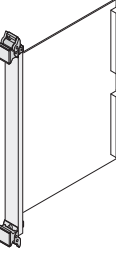
	Front panel, U profile, shieldable	Textile EMC gasket		Front panel, flat, unshielded	
	 <p style="text-align: right;">04608060</p> <p>Al extrusion, 2.5 mm, front anodised, rear conductive; alignment pin pressed-in (3 U only), stainless steel; manufacturing process causes various surface structures to appear between 4 to 12 HP and 14 to 16 HP</p>	 <p style="text-align: right;">BG445760</p> <p>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</p>		 <p style="text-align: right;">04608063</p> <p>Front panel, Al, 2.5 mm, front anodised, rear iridescent green chromated</p>	
Width HP	1 piece (SPQ 5) ¹⁾	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5) ¹⁾	
3 U Height					
 <p style="text-align: right;">04608109</p>	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
6 U Height					
 <p style="text-align: right;">04608107</p>	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

Plug-in units – for VME

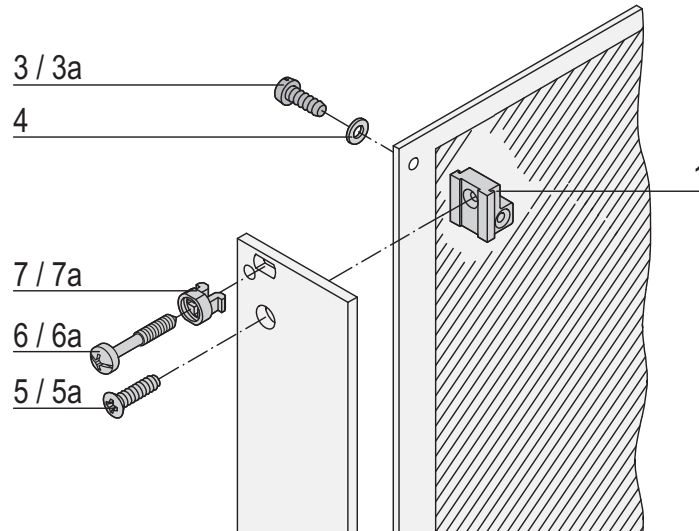
INDIVIDUAL COMPONENTS
EXTRACTOR HANDLE, TRAPEZIFORM, TYPE 2
ORDER INFORMATION

	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
						
	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 x 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 x 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⁾
	3 U Height bottom					
	20817-858	20817-854	20817-856	20817-833	20817-829	20817-831
	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		

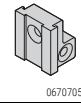
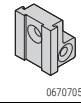

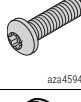

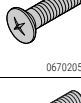
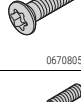
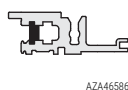
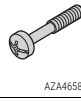
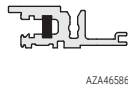
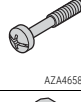
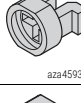

1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

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

Plug-in units – for VME

INDIVIDUAL COMPONENTS
FIXING MATERIAL FOR TRAPEZIFORM EXTRACTOR HANDLE, TYPE 2
ORDER INFORMATION


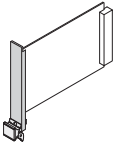
bga46045

Fixing material	Item		Required quantity				Qty/PU	Part no.	
			3 U		6 U				
			< 8 HP	≥ 8 HP	< 8 HP	≥ 8 HP			
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	6	 AZA46586	 AZA46586	1	3	–	2	100	21100-748
Slotted Pozidrive collar screw M2.5 × 12.3, St, nickel-plated	6a	 AZA46586	 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 steel	7a	 aza45934	1	3	–	2	100	21100-662	

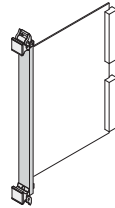
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

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

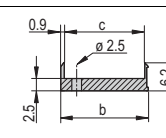
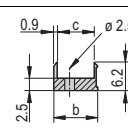
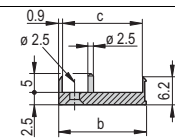
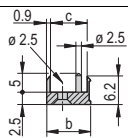
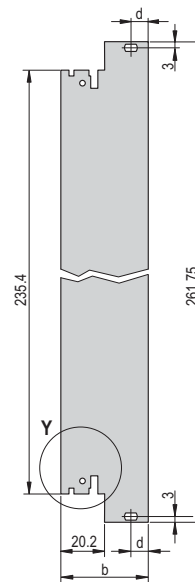
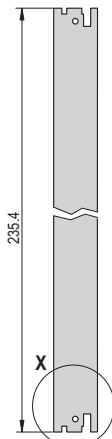
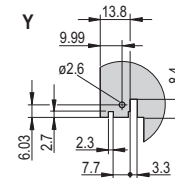
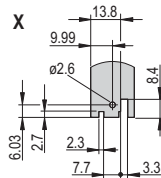
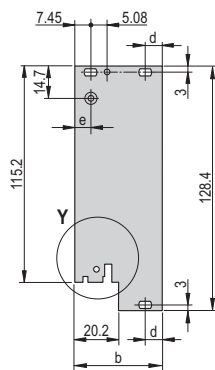
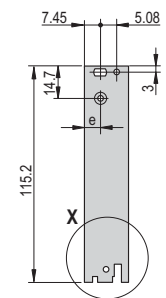
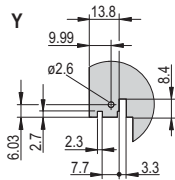
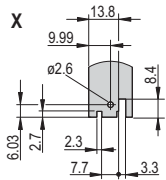
Plug-in units – for VME

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


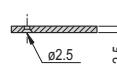
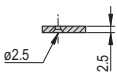
04608109

6 U


04608107



shieldable



unshielded

4 HP

≥5 HP

04608064 04608077

4 HP

≥5 HP

04608065 04608078

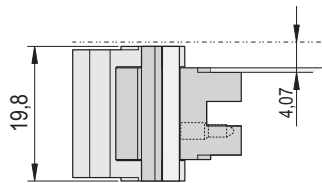
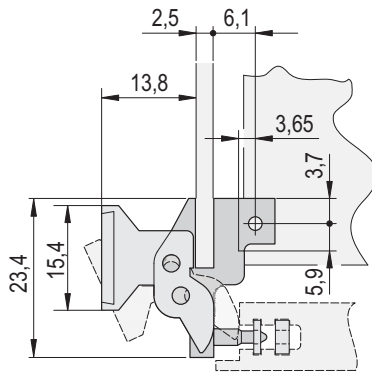
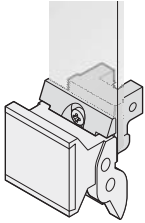
Dimensions table

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

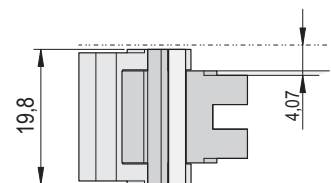
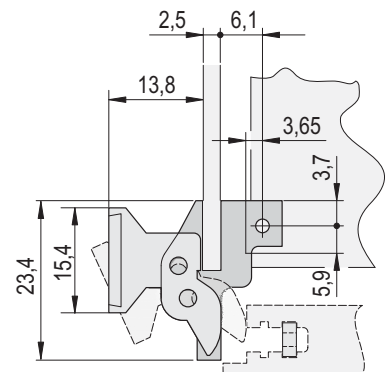
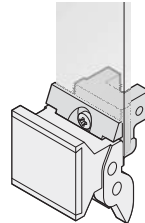
Plug-in units – for VME

DIMENSION DRAWINGS EXTRACTOR HANDLE, TRAPEZIFORM, TYPE 2

with alignment pin



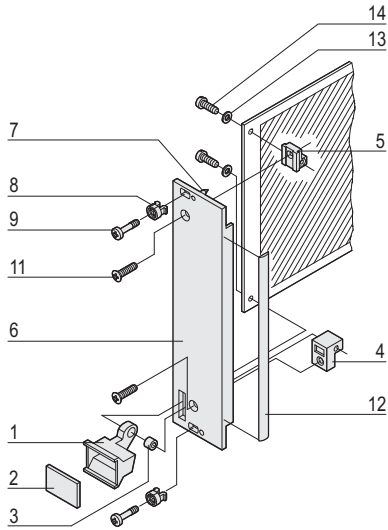
without alignment pin



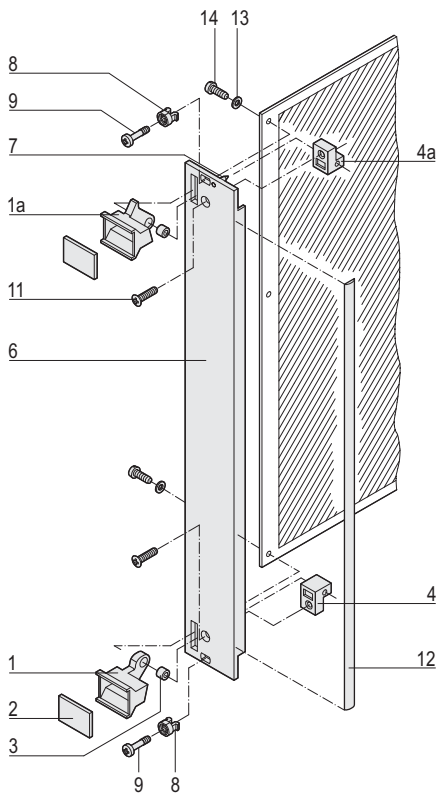
Plug-in units – for VME

KITS

3 U



6 U



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

- 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	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 x 12.3, front panel width up to 7 HP
9	4	4		Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 x 12.3, front panel width from 8 HP
11	1	2		Raised countersunk panhead screw, M2.5 x 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 x 10

04602058

ORDER INFORMATION

Width	3 U	6 U
HP	Part no.	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

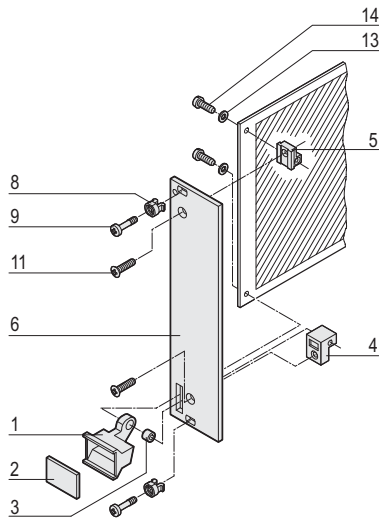
04602059

Plug-in units – for VME

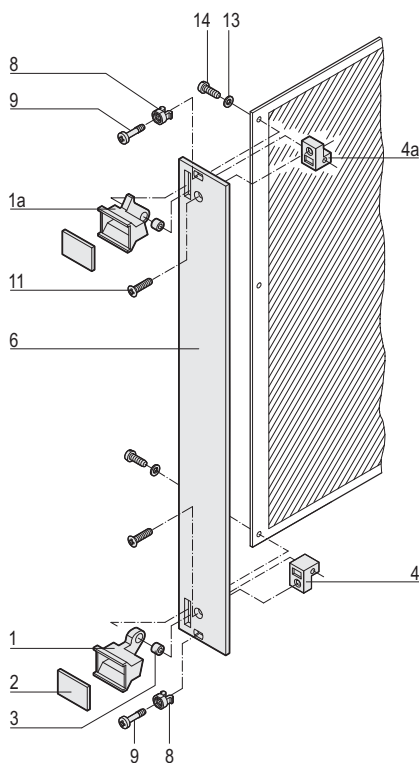
KITS

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

3 U



6 U



- 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		Description
	3 U	6 U	
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 iridescent 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 x 11 and 12.3, front panel width up to 7 HP
9	4	4	Collar screw, Pozidrive/slot, St, nickel-plated, M2.5 x 11 and 12.3, front panel width from 8 HP
11	1	2	Raised countersunk panhead screw, M2.5 x 8
13	2	2	Washer, A2.7, DIN 125
14	2	2	Pozidrive flathead screw, St, nickel-plated, M2.5 x 10

ORDER INFORMATION

Width HP	3 U		6 U	
	Part no.	Part no.	Part no.	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

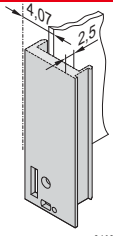
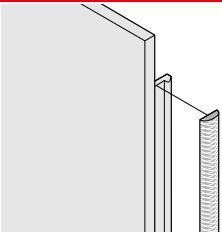
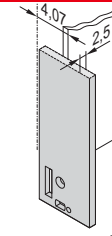
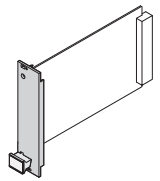
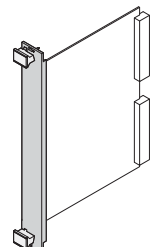
- Dimension front panel see page 7.45

Plug-in units – for VME

INDIVIDUAL COMPONENTS

FRONT PANELS AND EMC GASKETS, FOR TRAPEZOIDAL EXTRACTOR HANDLE, TYPE 1

ORDER INFORMATION

	Front panel, U profile, shieldable	Textile EMC gasket		Front panel, unshielded	
	 <p>04608091</p> <p>Al profile, front anodised, rear conductive, alignment pin pressed-in, stainless steel</p>	 <p>BGA45760</p> <p>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</p>		 <p>04608092</p> <p>front panel, Al, 2.5 mm, front anodised, rear iridescent green chromated</p>	
Width HP	1 piece (SPQ 5) ¹⁾	PU 10 pieces	PU 100 pieces	1 piece (SPQ 5) ¹⁾	
3 U Height					
 <p>04608117</p>	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					
 <p>04608116</p>	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

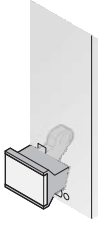
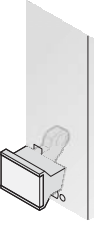
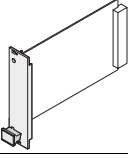
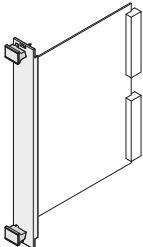
Part no. includes one packing unit (PU); delivery is exclusively made in PU

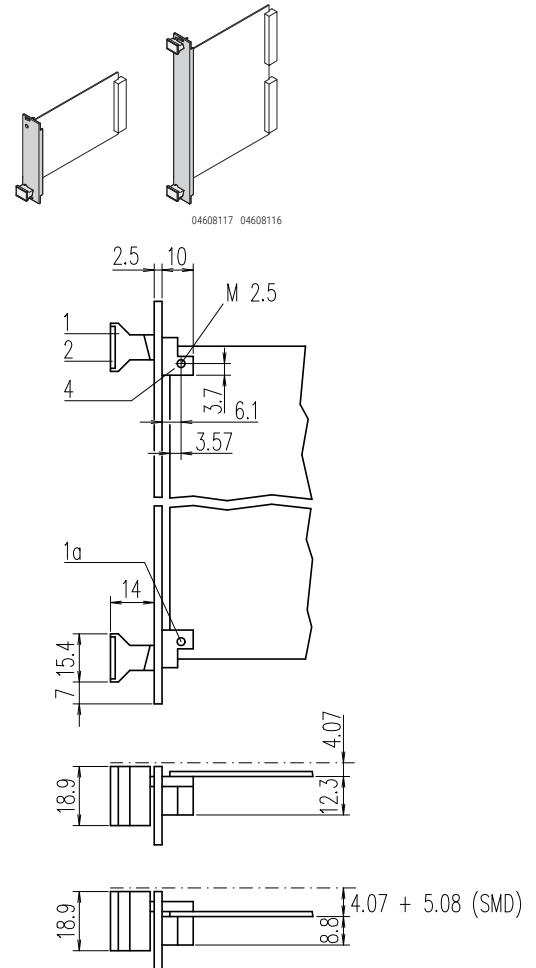
Plug-in units – for VME

INDIVIDUAL COMPONENTS

TRAPEZIFORM EXTRACTOR HANDLES, TYPE 1

ORDER INFORMATION

	Trapeziform extractor handle	
	black	grey
		
	04608093	04608094
	<p>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</p>	
Width HP	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾
	3 U Height	
	top	
	20817-329	20817-327
	6 U Height	
	top	
	20817-330	20817-328
	bottom	
	20817-329	20817-327



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

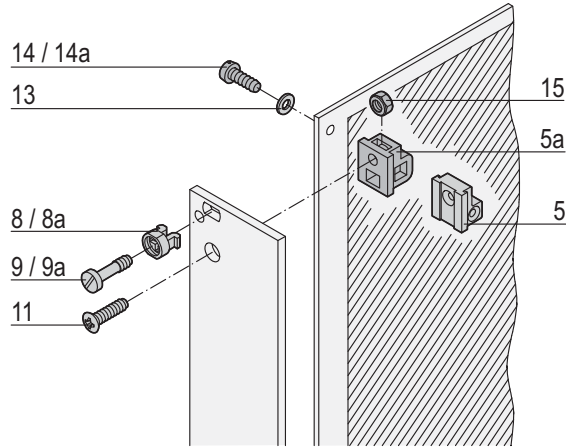
bga42556

Plug-in units – for VME












INDIVIDUAL COMPONENTS

FIXING MATERIAL FOR TRAPEZIFORM EXTRACTOR HANDLE, TYPE 1

ORDER INFORMATION

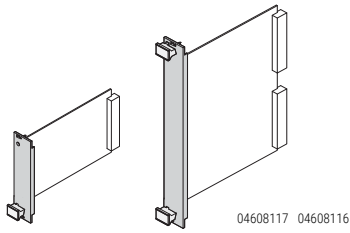


bga42545

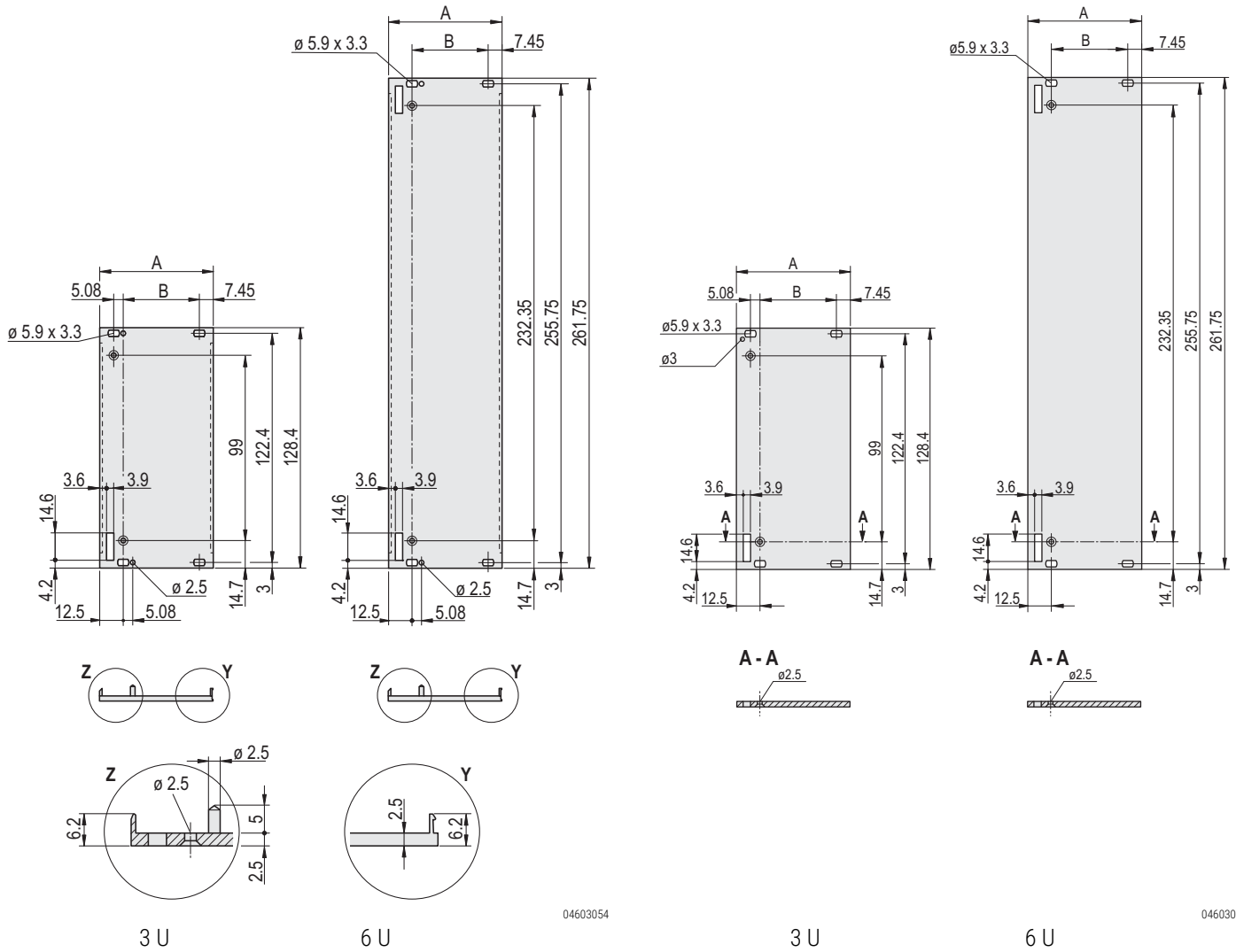
Fixing material	Item	Image	Required Qty				Qty/PU	Part no.
			3 U		6 U			
			< 8 HP	≥ 8 HP	< 8 HP	≥ 8 HP		
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5		1	2	2	4	1 piece (SPQ 10) ¹⁾	60807-181
Board support, plastic, PBT, UL 94 V-0, grey, with recess for hexagon nut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

Plug-in units – for VME

DIMENSIONS
FRONT PANELS FOR TRAPEZOIDAL EXTRACTOR HANDLES, TYPE 1, SHIELDED/UNSHIELDED


04608117 04608116



04603054

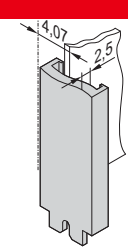
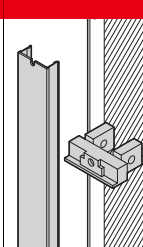
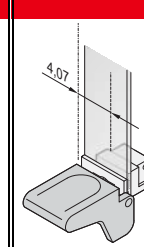
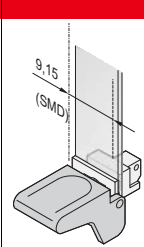
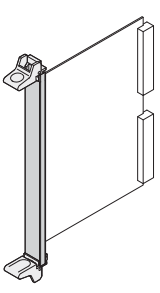
04603063

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

Plug-in units – for Multibus II

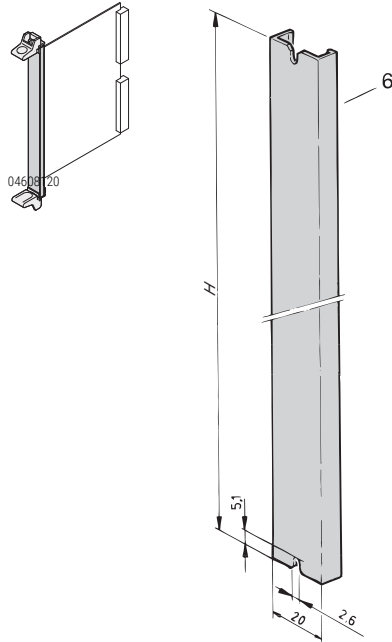
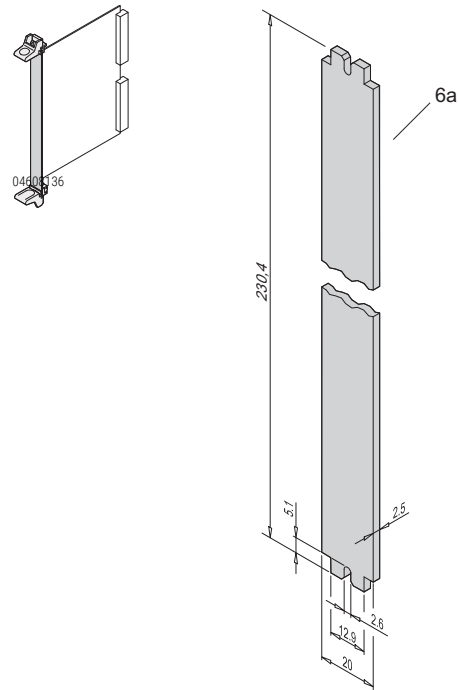
INDIVIDUAL COMPONENTS
FRONT PANELS/EXTRACTOR HANDLES FOR MULTIBUS® II, SYMMETRICAL/SMDVERSION
ORDER INFORMATION

	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	
	 Al extrusion, 1 mm 04608095	 for fixing D-Sub connectors 50-pin, thread on front UNC4/40; required quantity: for 6 U 1x, for 9 U 2x 04608098	 04608098	 04608099 04608108	
	Width HP	1 piece (SPQ 5) ¹⁾	1 piece (SPQ 10) ¹⁾	1 piece (SPQ 10) ¹⁾	
 04608120	6 U Height		6 U Height		
	4	30829-001	60829-008	top	20829-011 20829-004
				bottom	20829-011 20829-003
	9 U Height		9 U Height		
	4	30829-007	60829-008	top	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

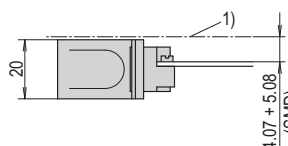
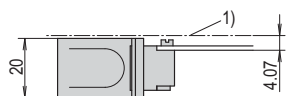
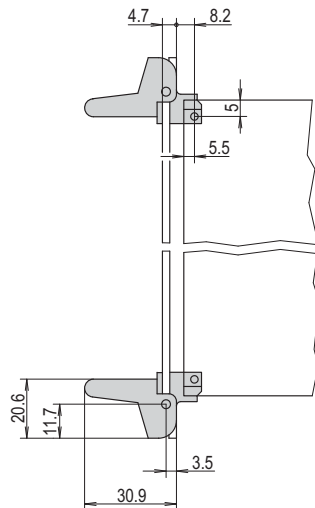
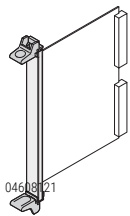
DIMENSION DRAWINGS FRONT PANELS, U PROFILE / FRONT PANEL FOR MULTIBUS® II

6/9 U

6 U

Dimensions table

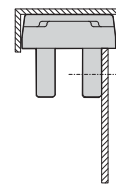
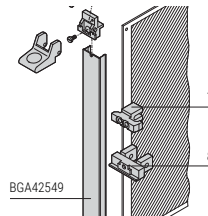
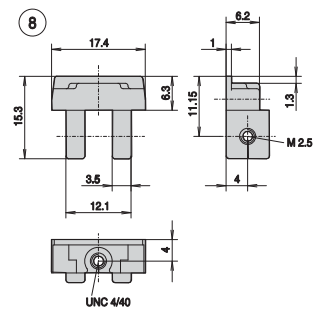
Height U	Height mm
6	230.4
9	363.7

A4-2580

BGA46120

DIMENSIONS
EXTRACTOR HANDLES, MOUNTING BLOCK FOR MULTIBUS® II


gba42579


for D-Sub connector (50 pin)


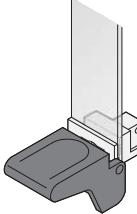
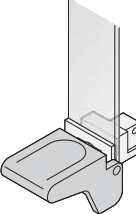
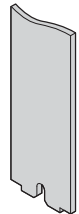
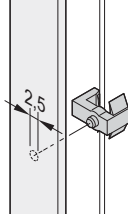
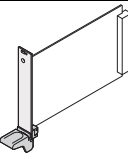
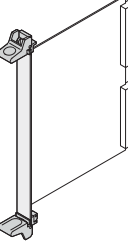
BGA42585

Plug-in units – for IEC 60297, key form 1

INDIVIDUAL COMPONENTS

EXTRACTOR HANDLES IN KEY FORM 1

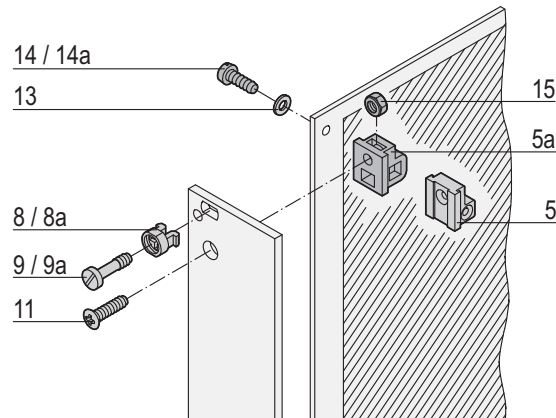
ORDER INFORMATION

	Extractor handle		Front panel	Fixing clip
	black	grey		
				
	04608101	04608102	04608103	bga#2544
	<p>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</p>		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
	3 U Height bottom			
04608123	20817-345	20817-325	–	–
	6 U Height top			
04608122	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

Plug-in units – for IEC 60297, key form 1

INDIVIDUAL COMPONENTS
FIXING MATERIAL FOR EXTRACTOR HANDLE IN KEY FORM 1
ORDER INFORMATION


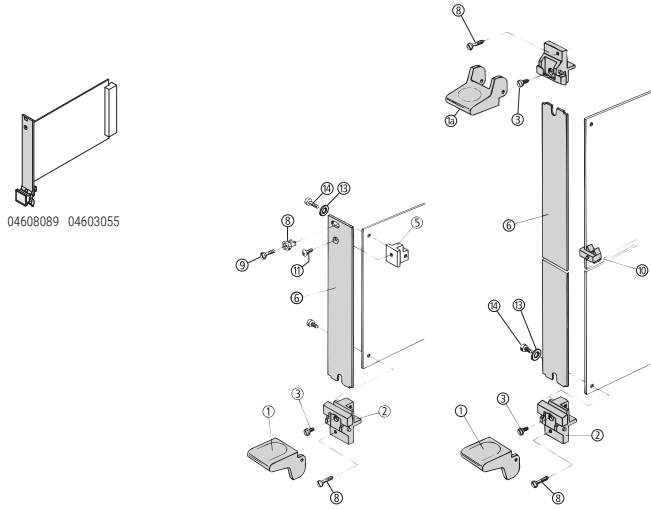
bga42545

Fixing material	Item	Image	Required Qty		Qty/PU	Part no.
			3 U	6 U		
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5		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		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		1	–	100	21100-464
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steel	8a		1	–	100	21100-662
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	9		2	2	100	21100-748
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	9a		2	2	100	21101-101
Raised Pozidrive countersunk screw M2.5 x 8, St, nickel-plated	11		1	–	100	21100-429
Washer 2.7 DIN 125, St, nickel-plated, 100 pieces	13		2	2	100	21100-721
Pozidrive panhead screw M2.5 x 10, St, nickel-plated for item 5	14		2	2	100	21101-220
Pan head screw, self-tapping 2.5 x 8, St, zinc-plated for item 5b	14a		1	–	100	21100-710
Hexagon nut M2.5, nickel-plated steel for item 5b	15		3	6	100	21100-144

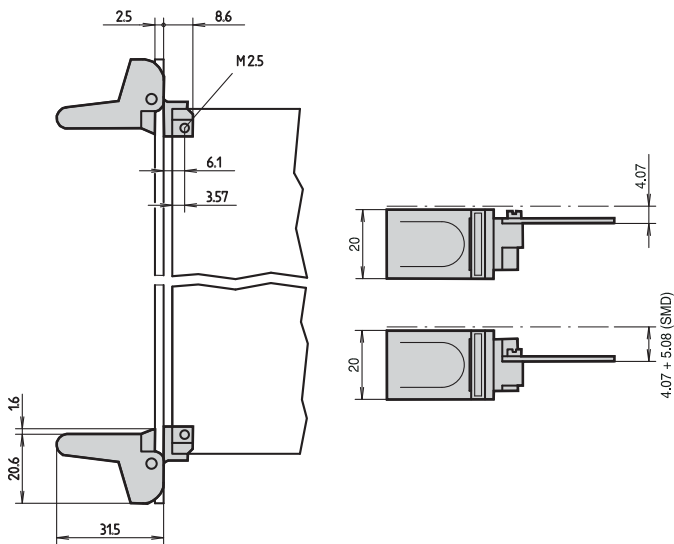
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Plug-in units – for IEC 60297, key form 1

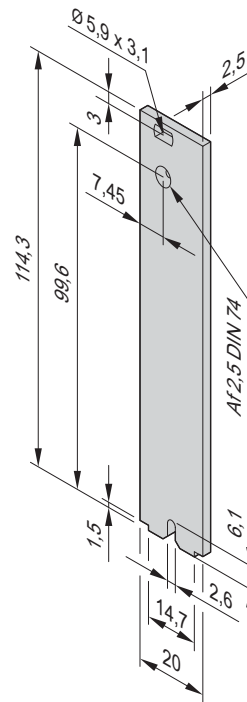
DIMENSIONS EXTRACTOR HANDLES/FRONT PANELS KEY FORM 1



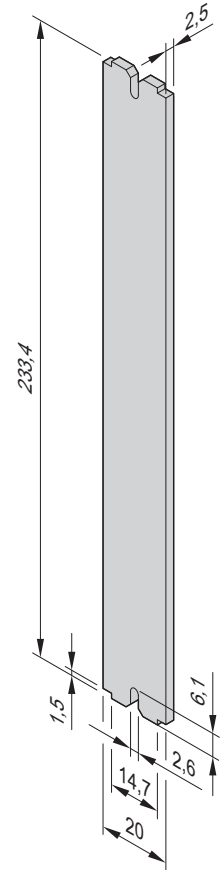
04608089 04603055



04603056



3 U



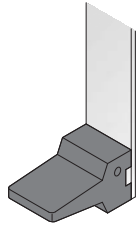

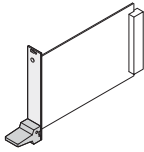
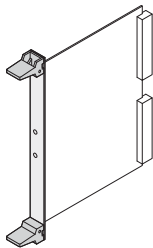
6 U

04603057

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

INDIVIDUAL COMPONENTS EXTRACTOR HANDLES IN KEY FORM 2

ORDER INFORMATION

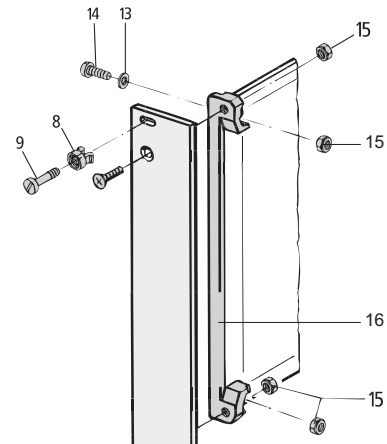
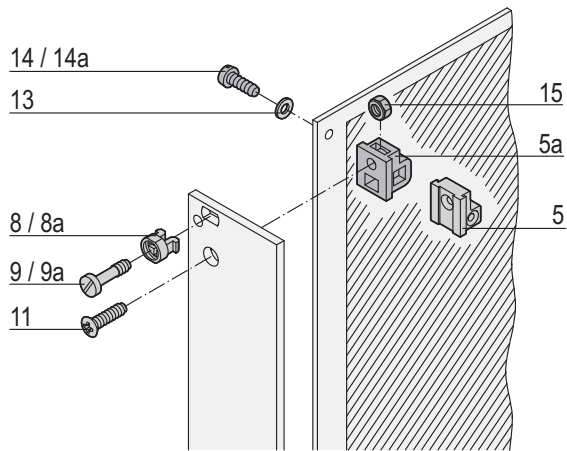
	Extractor handle black	Front panel
	 04608104 extractor handle, PBT, UL 90 V-0; bearing Zn die-cast, nickel- plated; incl. assembly kit for handle mounting	 04608106 Al, 2.5 mm; available on request
	Width HP	1 piece (SPQ 10) ¹⁾
 04608124	3 U Height top	20808-137 -
 04608125	6 U Height top	20808-137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













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

INDIVIDUAL COMPONENTS FIXING MATERIAL FOR EXTRACTOR HANDLES, KEY FORM 2

FIXING MATERIAL FOR EXTRACTOR HANDLES, KEY FORM 2

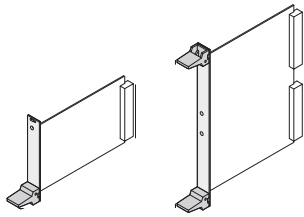


bga42545 04608137

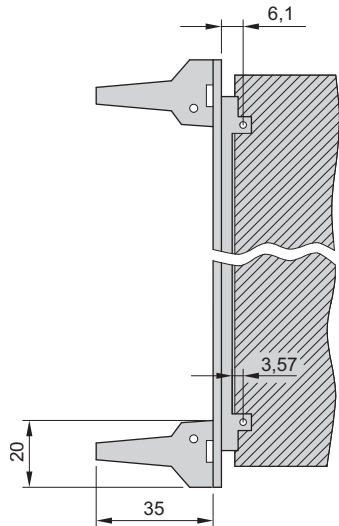
Fixing material	Item	Image	Required Qty		Qty/PU	Part no.
			3 U	6 U		
Board support, die-cast zinc, with thread M2.5, for front panel and PCB fixing	5		1	2	1 piece (SPQ 10) ¹⁾	60807-181
Board support, plastic, PBT, UL 94 V-0, grey, with recess for hexagon nut M2.5, for fixing front panel	5a		1	2	1 piece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

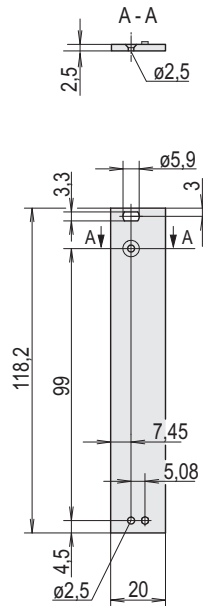
Plug-in units – for IEC 60297, key form 2

DIMENSIONS
HANDLES/FRONT PANELS KEY FORM 2


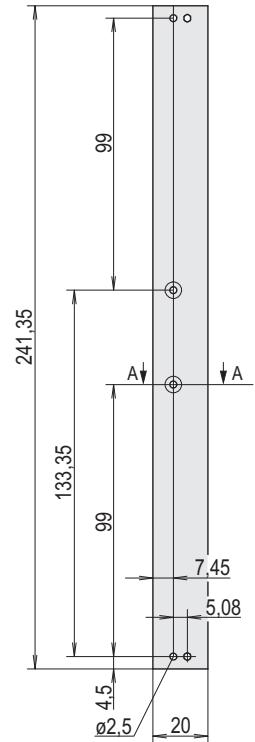
04608124 04608125



BGA42573

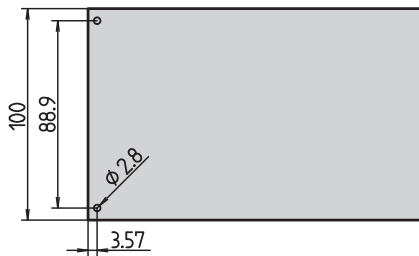


3 U

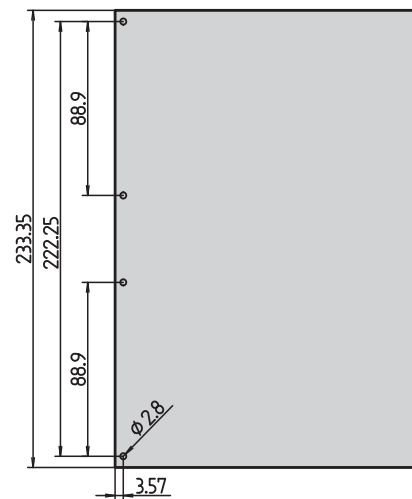


6 U

BGA42578

DIMENSIONS
DRILL HOLE DIMENSIONS ON THE PCB KEY FORM 2
3 U


BGA43076

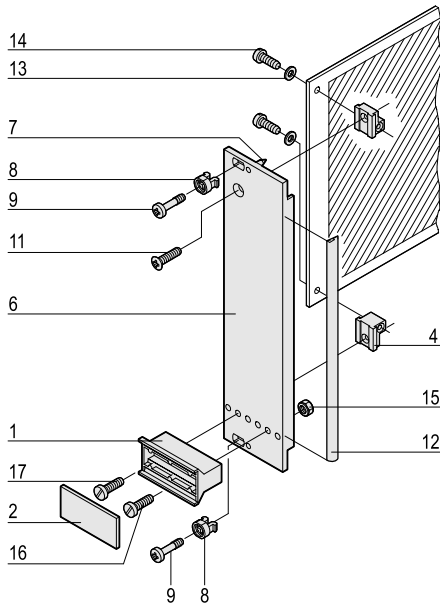
6 U


BGA43077

Plug-in units – for IEC 60297, trapeziform

KITS
PLUG-IN UNIT WITH STATIC TRAPEZIFORM HANDLE

3 U



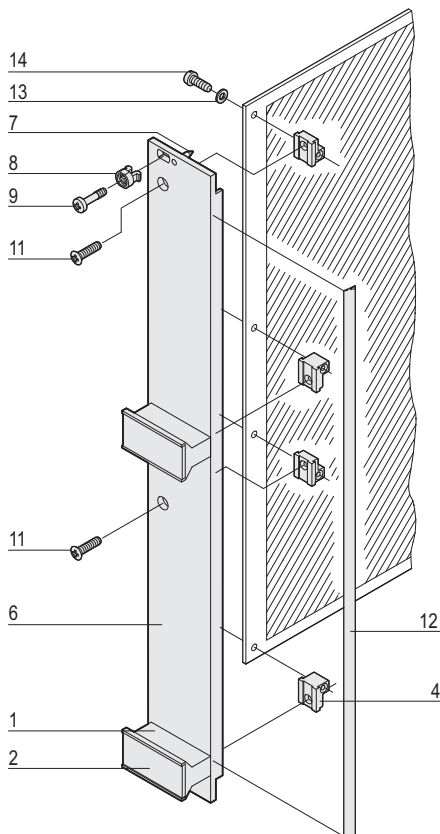
- Front panel, U-profile, shielded
- Handle without extraction function

DELIVERY COMPRISES

Item	Qty	3 U	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 x 11 and 12.3, front panel width up to 7 HP
9	4	4		Pozidrive/slotted collar screw, St, nickel-plated, M2.5 x 11 and 12.3, front panel width from 8 HP
11	1	2		Raised countersunk screw, St, nickel-plated, M2.5 x 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 x 10
15	1	2		Hexagon nut, St, nickel-plated, M2.5
16	1	2		Pozidrive flathead screw, St, nickel-plated, M2.5 x 12
17	1	2		Pozidrive flathead screw, St, nickel-plated, M2.5 x 16

04602062

6 U


ORDER INFORMATION

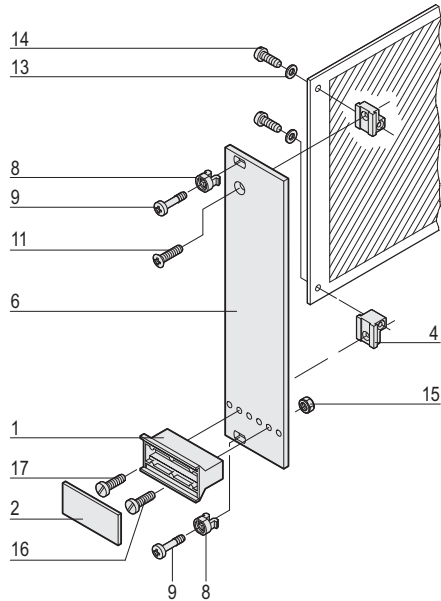
Width	3 U	6 U
HP	Part no.	Part no.
3	20848-663	20848-671
4	20848-664	20848-672
5	20848-665	20848-673
6	20848-666	20848-674
7	20848-667	20848-675
8	20848-668	20848-676
10	20848-669	20848-677
12	20848-670	20848-678

04602063

Plug-in units – for IEC 60297, trapeziform

KITS
PLUG-IN UNIT WITH STATIC TRAPEZIFORM HANDLE

3 U



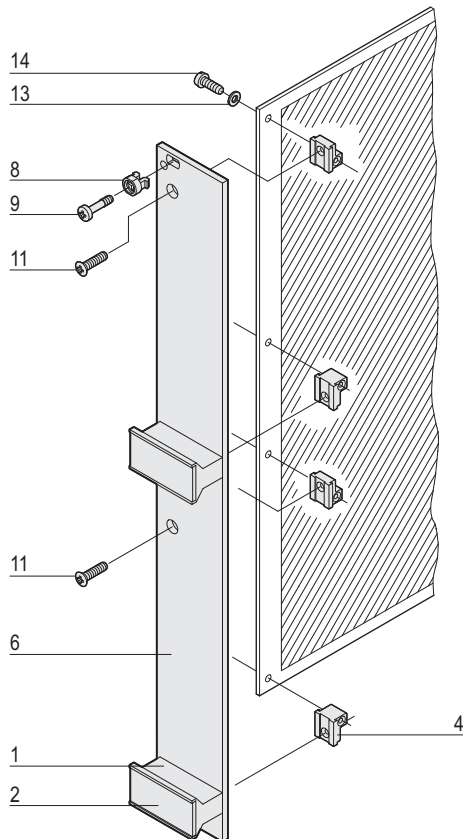
04602064

- 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 iridescent 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

6 U



04602065

ORDER INFORMATION

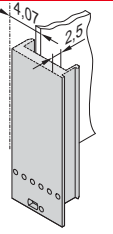
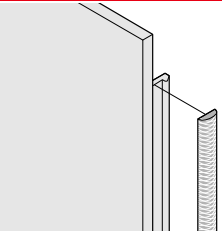
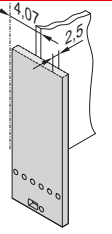
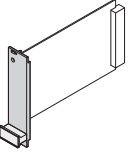
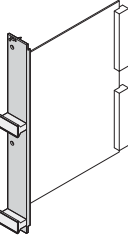
Width HP	3 U	6 U
	Part no.	Part no.
3	20818-017	20809-507
4	20818-018	20818-025
5	20818-019	20818-026
6	20818-020	20818-027
7	20818-021	20818-162
8	20818-022	20818-028
10	20818-023	20818-029
12	20818-024	20818-120

Plug-in units – for IEC 60297, trapeziform

INDIVIDUAL COMPONENTS

FRONT PANELS FOR STATIC CANTILEVER HANDLES

ORDER INFORMATION

	Front panel, U-profile, shieldable		Front panel unshielded		
	Front panel, U-profile	Textile EMC gasket			
	 <p>04608130</p> <p>Al extrusion, front anodised, rear conductive, alignment pin pressed-in, stainless steel</p>	 <p>bga45760</p> <p>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</p>	 <p>04608131</p> <p>front panel, Al 2.5 mm; front anodised; rear iridescent green chromated</p>		
Width HP	1 piece (SPQ 5) ¹⁾	PU 10 pieces	PU 100 pieces		
	3 U Height				
 <p>04608126</p>	3	30849-086		30847-602	
	4	30849-087		30847-603	
	5	30849-088		30847-604	
	6	30849-089	21101-853	21101-854	30847-605
	7	30849-090			30847-606
	8	30849-091			30847-607
	10	30849-092			30847-608
12	30849-093			30847-609	
	6 U Height				
 <p>04608127</p>	3	30849-097		30847-625	
	4	30849-098		30847-626	
	5	30849-099		30847-627	
	6	30849-100	21101-855	21101-856	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

Plug-in units – for IEC 60297, trapeziform

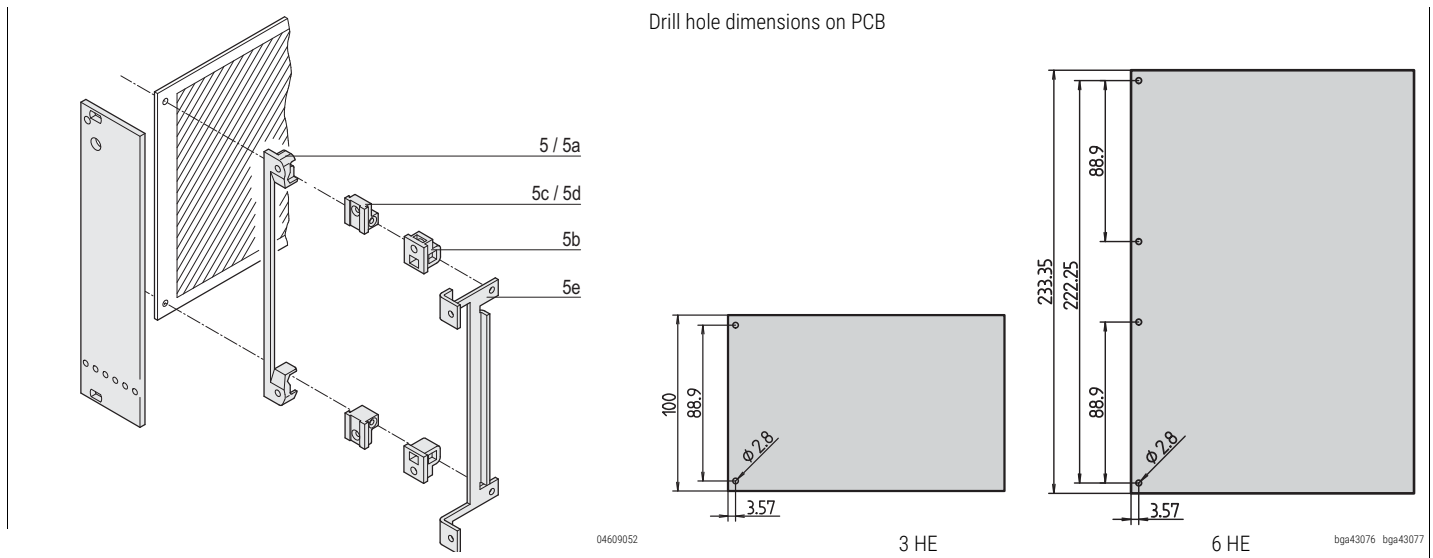
INDIVIDUAL COMPONENTS
STATIC TRAPEZIFORM HANDLE
ORDER INFORMATION

	Plastic handle in trapeziform			Al profile handle		
	Trapeziform handle black	Trapeziform handle grey	Fixing clip	Handle	Fixing part for Al profile handle	Square nut
	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	-	-		
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); please order at least the SPQ quantity or a multiple

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

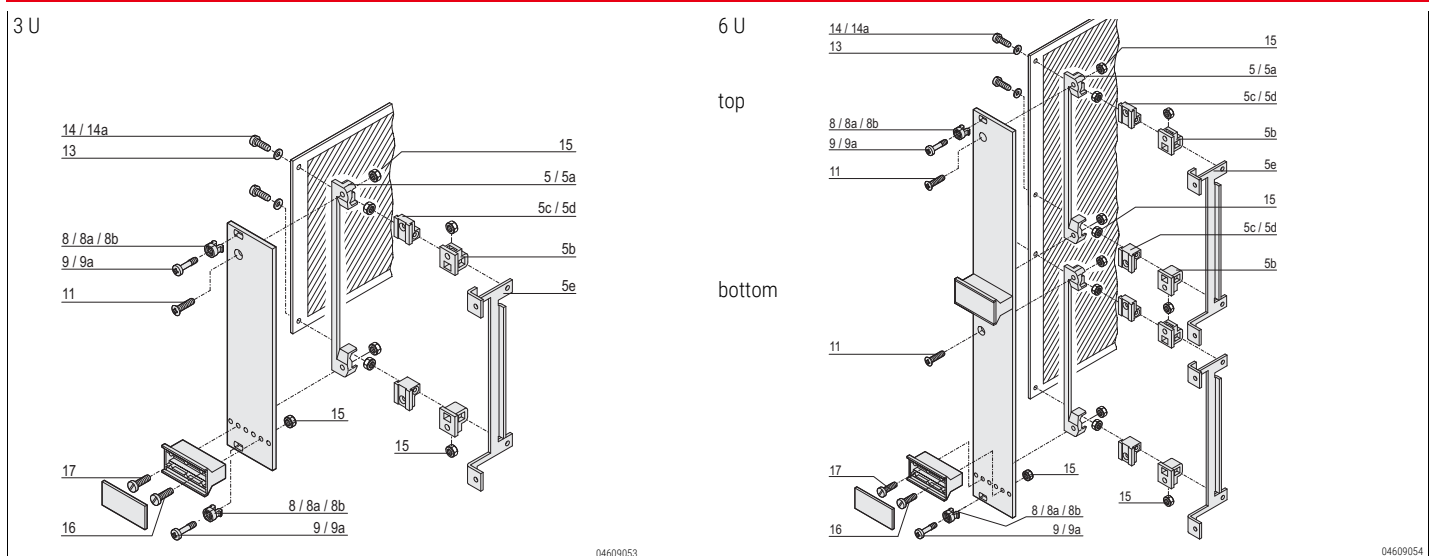
Plug-in units – for IEC 60297, trapeziform

INDIVIDUAL COMPONENTS
PCB BRACKET FOR STATIC TRAPEZIFORM HANDLE


	Item	Required Qty	3 HE		6 HE		Part no.
			3 U	6 U	Qty/PU		
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


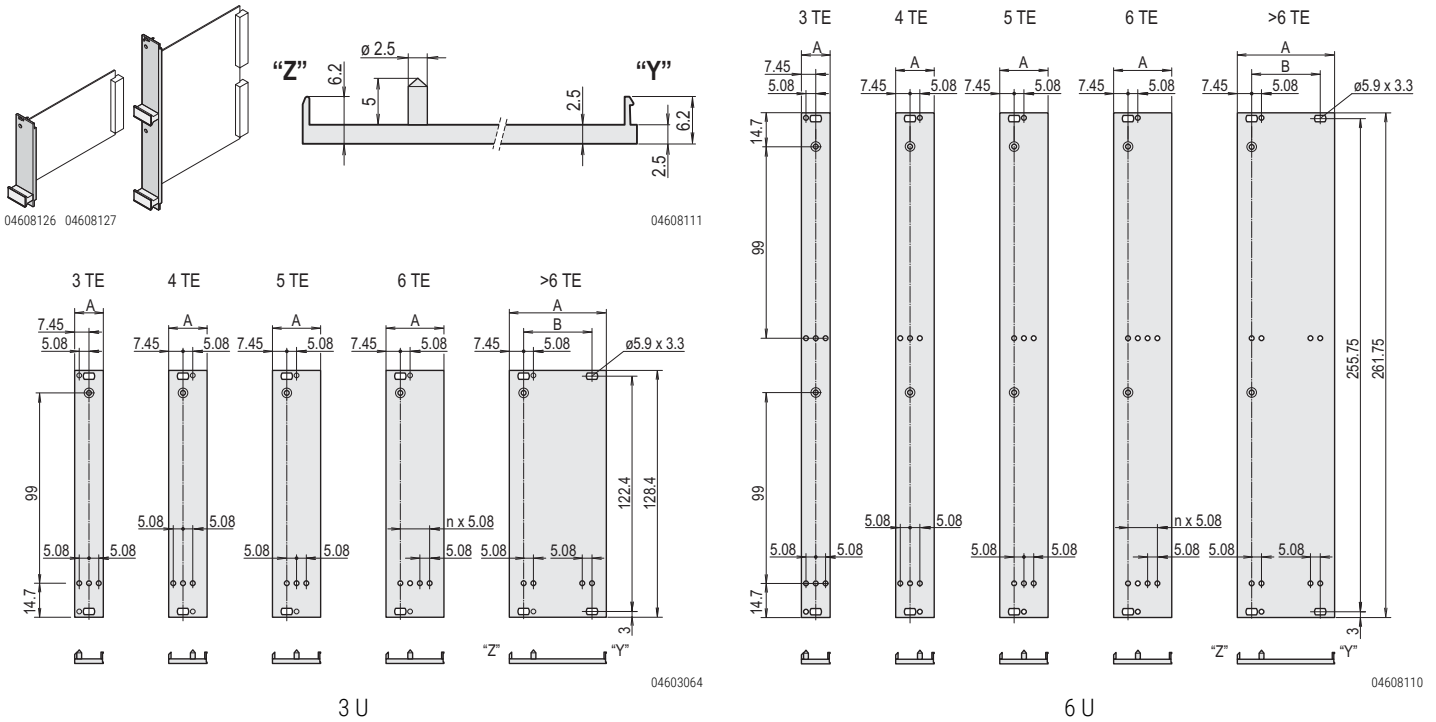
04609053

04609054

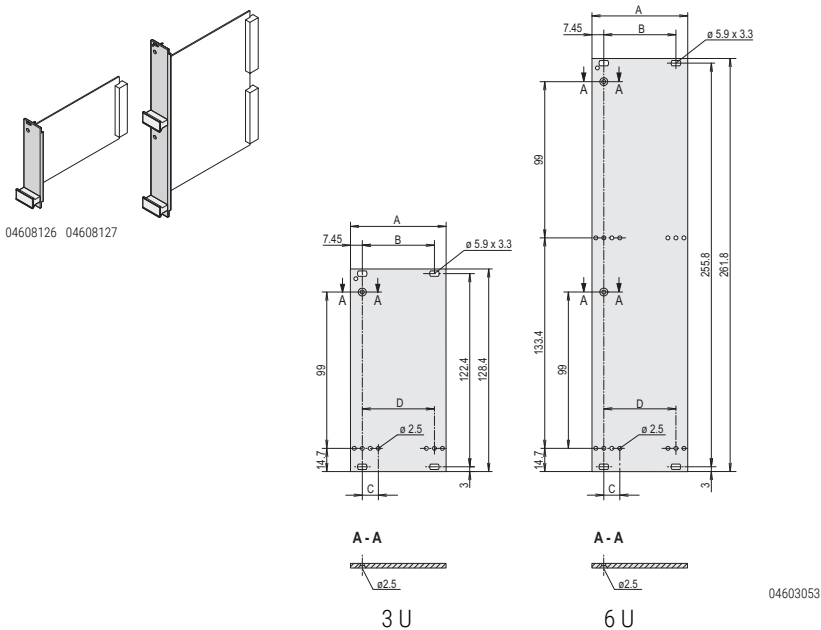
	Item	Image	Required Qty		Qty/PU		Part no.	
			3 U < 8 HP	3 U ≥ 8 HP	6 U < 8 HP	6 U ≥ 8 HP		
Plastic sleeve, for form hole 5.9 x 3.3 PA, UL 90 V-2, grey	8		2	4	2	4	100	21100-464
Metal sleeve, for form hole 5.9 x 3.3, press-in Stainless steel	8		2	4	2	4	100	21100-662
Metal sleeve, for form hole 5.9 x 3.3,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

Plug-in units – for IEC 60297, trapeziform

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

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

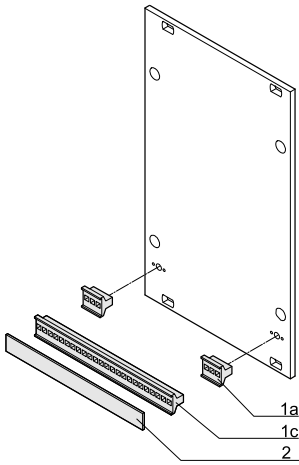
DIMENSIONS
FRONT PANELS FOR STATIC TRAPEZIFORM HANDLE

Dimensions table

Width HP	A mm	B mm	C mm	D 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

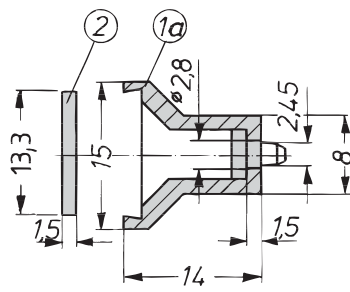
Plug-in units – for IEC 60297, trapeziform

DIMENSIONS
STATIC PLASTIC HANDLES, TRAPEZIFORM
Dimensions table

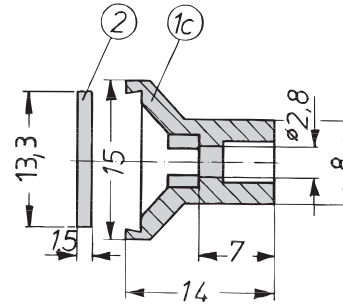
Item	Width	
	HP	mm
1a	3	13.8
1a	4	18.9
1c	5	24.0
1c	6	29.0
1c	7	34.1
1c	8	39.2
1c	9	44.3
1c	10	49.4
1c	12	59.6
1c	14	69.7
1c	21	105.2
1c	28	140.8
1c	40	201.8
1c	42	212.0
1c	61	308.5



BGA46447



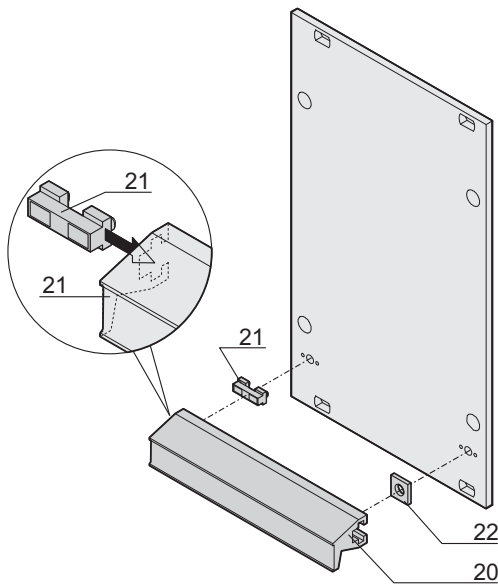
A4-328a



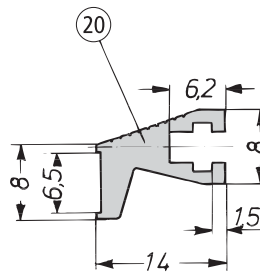
A4-328c

DIMENSIONS
ALUMINIUM EXTRUSION HANDLES
Dimensions table

Item	Width	
	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



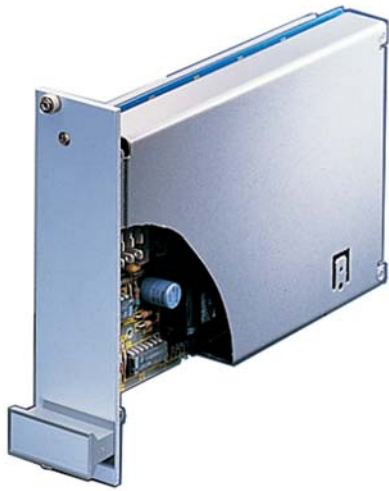
04602069



A4-328d

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



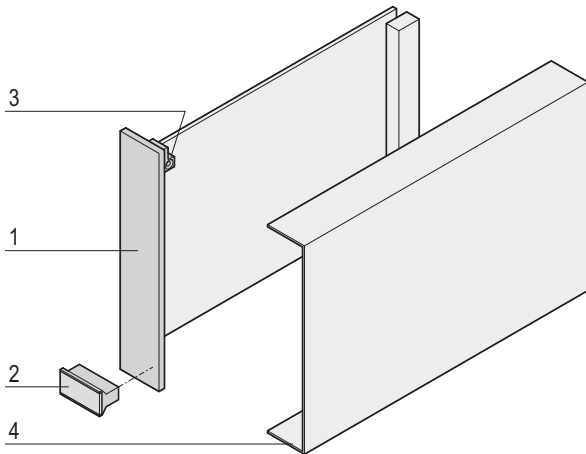
04692003

Handles
with extraction function



04692005

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



04602077

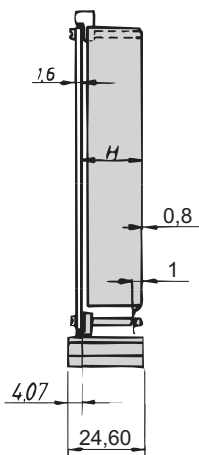
- Usable connectors in accordance with EN 60603 (DIN 41612):
Construction type B, C, D, F, H, R;

DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, front: anodised, rear: iridescent 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 extractionfunction	Plug-in unit with extractionfunction
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



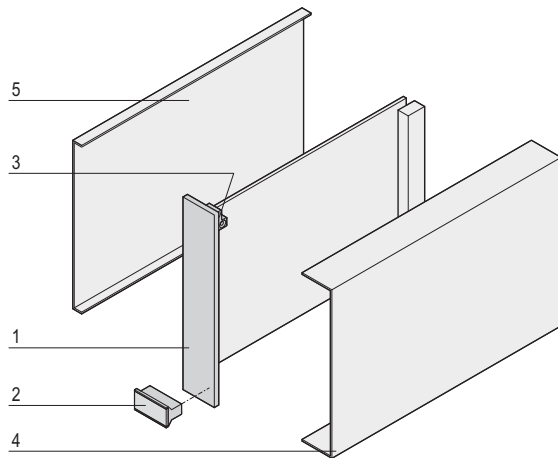
a4-237

NOTE

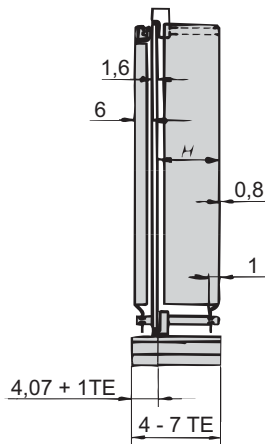
- Keying/coding with separate keying/coding strip is not possible
- Please order shielding plates separately

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: iridescent 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

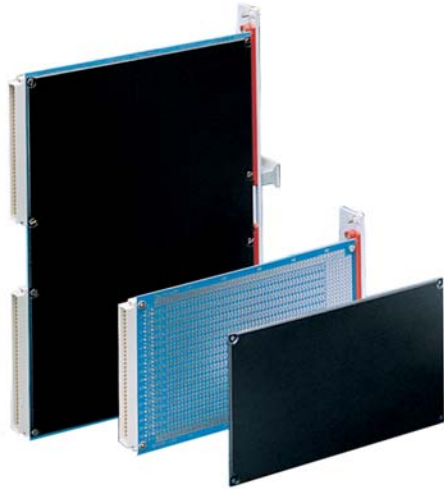
Width	H	Plug-in unit without extraction function	Plug-in unit with extraction function
HP	mm	Part no.	Part no.
4	9.60	20809-495	–
5	14.70	20809-496	20809-511
6	19.80	20809-497	20809-512
7	24.90	20809-498	20809-513
Item 4 Shielding panel component side for 4 HP front panel width, stainless steel, 0.8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

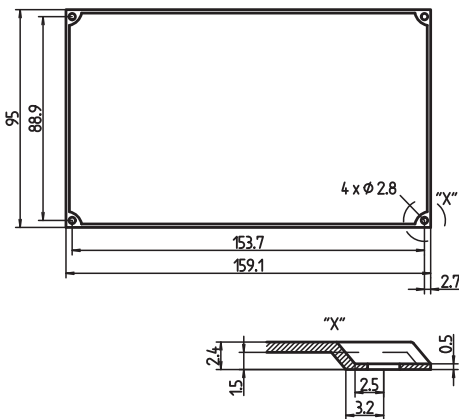
- Keying/coding with separate keying/coding strip is not possible
- Where the shielding plate is used for the solder side, the PCB is offset to the right by 1 HP

Plug-in units – with mechanical shielding

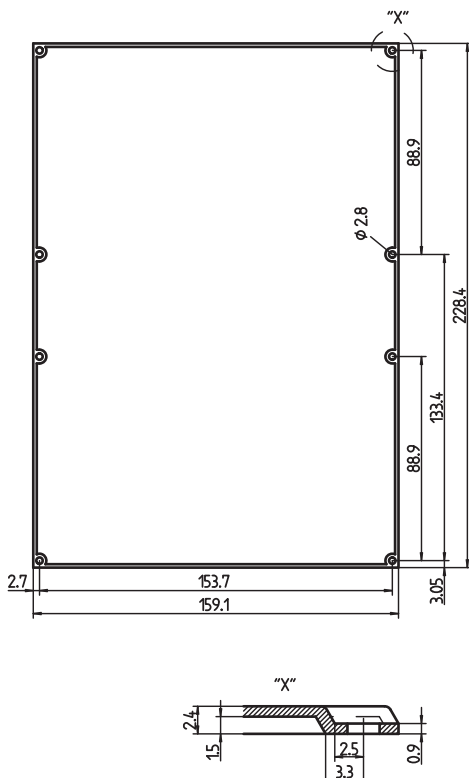
PCB COVER FOR EUROBOARDS



For PCBs 100 x 160 mm



For PCBs 233.35 x 160 mm



- 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

11092008

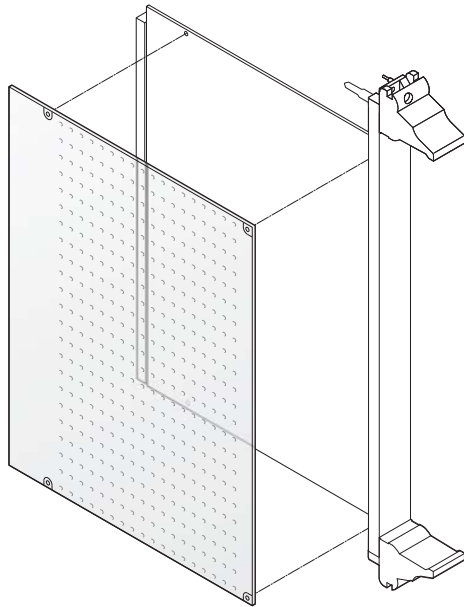
SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: please order at least 10 pieces of PCB covers or a multiple

LKA40520

LKA30451

Plug-in units – with mechanical shielding

PCB COVER FOR COMPACTPCI



- 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

12303051

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

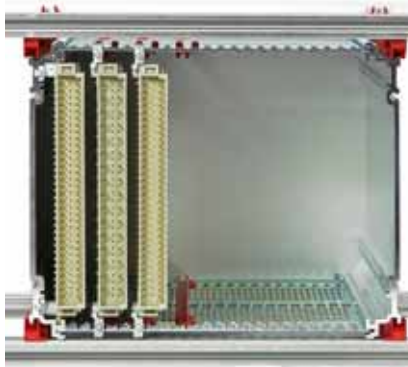
Kits 3 U 7.89

ServicePLUS
configuration 7.90

Accessories for plug-in units
see page 7.52

Frame type plug-in units

THE NEW GENERATION



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

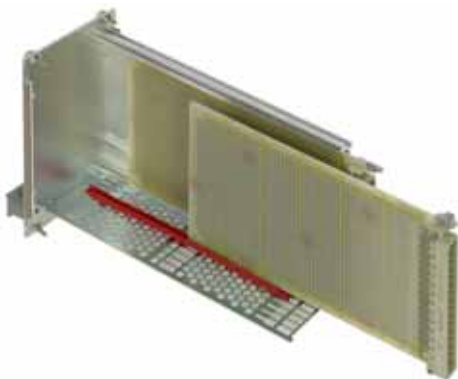


04808013 04808014

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



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

04808012

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)



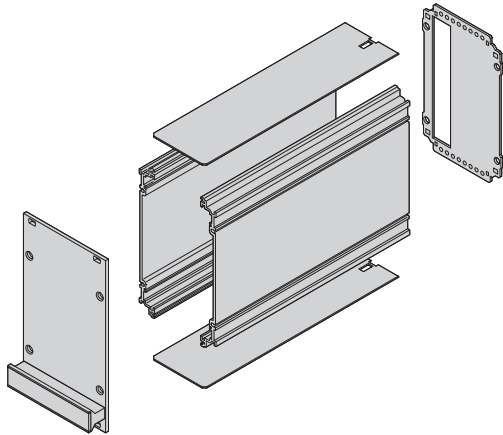
Sliding cover plates

04808011 04808016

Frame type plug-in units

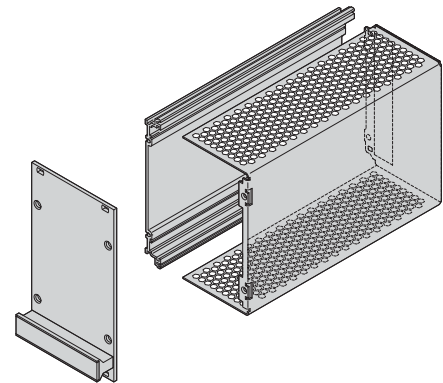
COMPARISON: FRAME-TYPE PLUG-IN UNITS PRO/FRAME-TYPE PLUG-IN UNITS PRO WITH HOOD

Frame-type plug-in units PRO



04808125

Frame-type plug-in units PRO with hood (shielded)



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)

Frame type plug-in units PRO

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



Illustration shows 12 HP width, side panel depth 167 mm

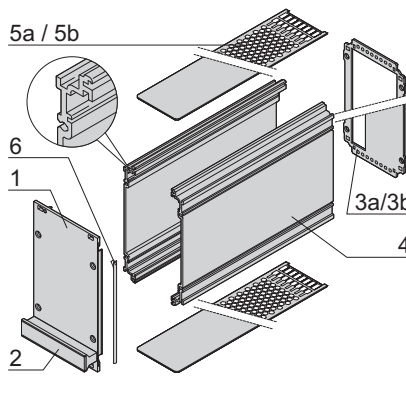
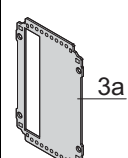
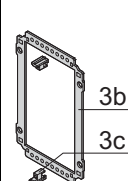
04811007

- Extruded side panels with groove to right 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	
				167 mm deep	227 mm deep	167 mm deep	227 mm deep
		U	HP	Part no.	Part no.	Part no.	Part no.
		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
		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

04811008

- Extruded side panels with groove to right 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
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		
				167 mm deep	227 mm deep	167 mm deep	227 mm deep	
		U	HP	Part no.	Part no.	Part no.	Part no.	
		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	
			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

Frame type plug-in units PRO

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



Illustration shows 12 HP width, side panel depth 167 mm

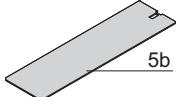
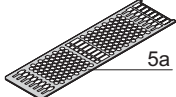
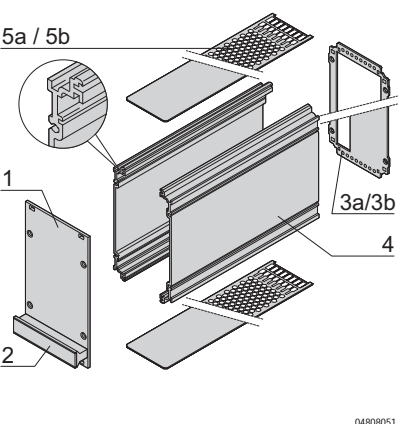
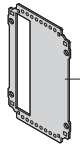
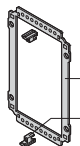

04811009

- Extruded side panels with groove to right 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 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, Al, 2.5 mm, anodised, cut edges plain
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	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				167 mm deep Part no.	227 mm deep Part no.	167 mm deep Part no.	227 mm deep Part no.
							
		U	HP				
	  	3	8	24812-408	24812-458	24812-208	24812-258
		3	10	24812-410	24812-460	24812-210	24812-260
		3	12	24812-412	24812-462	24812-212	24812-262
		3	14	24812-414	24812-464	24812-214	24812-264
		3	21	24812-421	24812-471	24812-221	24812-271
		3	28	24812-428	24812-478	24812-228	24812-278
		3	42	24812-442	24812-492	24812-242	24812-292
		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

04811010

- Extruded side panels with groove to right 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 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
1	1	Front panel, Al, 2.5 mm, anodised, cut edges plain
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	Assembly kit

ORDER INFORMATION

	Rear panel	Height	Width	Cover plate without perforation		Cover plate with perforation, for guide rails	
				167 mm deep	227 mm deep	167 mm deep	227 mm deep
		U	HP	Part no.	Part no.	Part no.	Part no.
		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
		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

Frame type plug-in units PRO

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



Illustration shows 12 HP width, side panel depth 167 mm

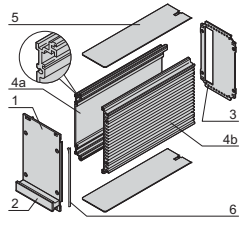
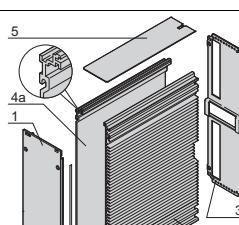
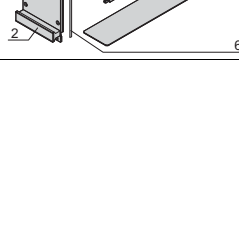

04812018

- 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.
 <p>04812058</p>	3	14	24813-164	–
 <p>04812058</p>	3	21	24813-171	–
 <p>04812060</p>	6	14	24813-664	24813-614
 <p>04812060</p>	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



- 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

Illustration shows 12 HP width, side panel depth 167 mm

04812008

ORDER INFORMATION

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

04812059

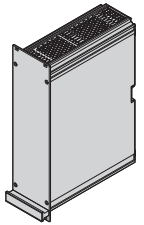
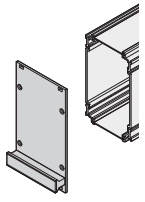
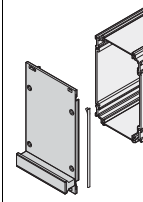
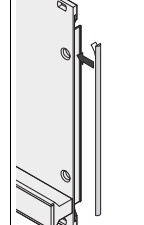
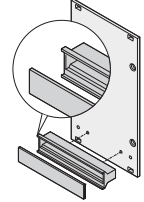
04812061

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 ServicePLUS

INDIVIDUAL COMPONENTS
FRONT PANELS, FRONT HANDLES


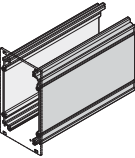
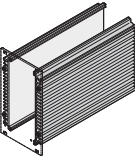
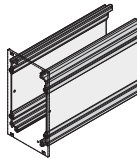
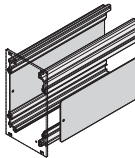
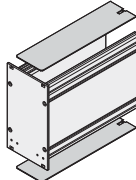
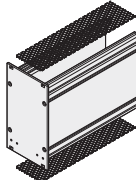
	Front panel		Shieldable front panel, U profile		Trapeziform handle, grey (without extraction function)	
	unshielded		Front panel	Textile EMC gasket	Grey	Black
 04808124  04808060  04808061  04808062  04808063	Al, 2.5 mm, front anodised, rear anodised, cut edges blank	Al extrusion, alignment pin pressed-in, 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	
	Supplied quantity for assembly of 5 frame type plug-in units	1 piece (SPQ 5) ¹⁾	1 piece (SPQ 5) ¹⁾	PU 10 pieces	PU 100 pieces	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

INDIVIDUAL COMPONENTS

SIDE PANELS, COVER PLATES, GUIDE RAILS

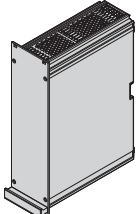
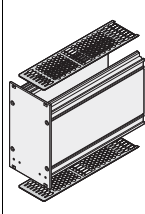
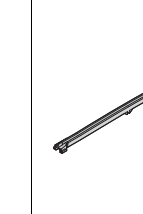
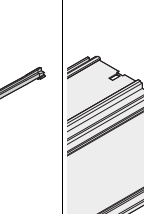
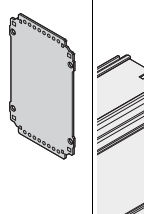
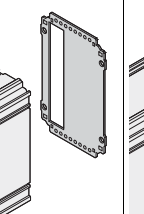
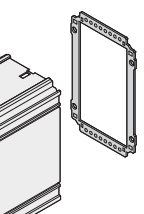
	Extruded side panel		Extruded side panel with cooling fins		Side panel, corner profile and side plate		Cover plate					
	Left	Right	Left	Right	Corner profile	Side plate	Without perforation	With perforation				
 <p>04808124</p> <p>Supplied quantity for assembly of 5 frame type plug-in units</p>	 <p>04808065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

Frame type plug-in units PRO ServicePLUS

INDIVIDUAL COMPONENTS

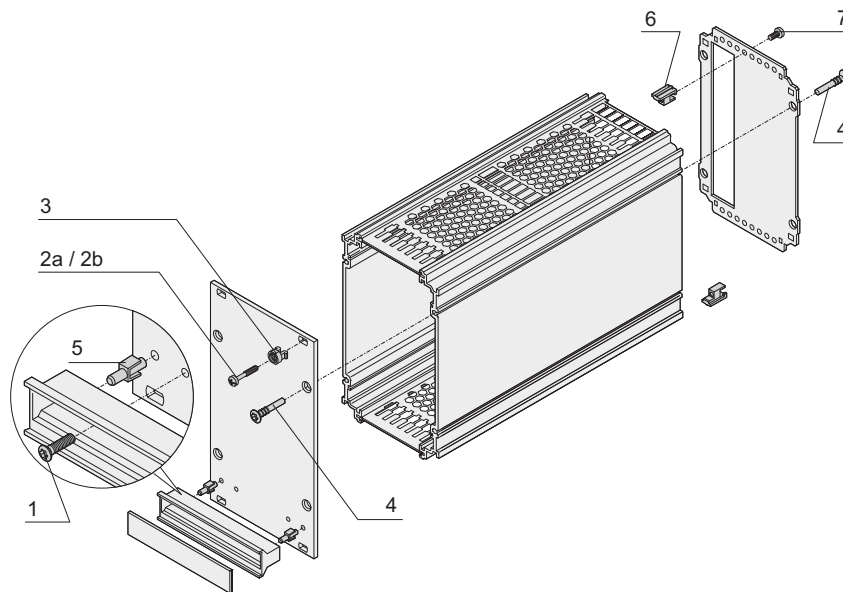
REAR PANELS, ASSEMBLY MATERIAL

	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	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	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	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
3 U Height							
PCB depth 160 mm							
8	34812-908	24812-101	34813-208	34812-208	34812-308	24812-401	24812-100
10	34812-910		34813-210	34812-210	34812-310		
12	34812-912		34813-212	34812-212	34812-312		
14	34812-914		34813-214	34812-214	34812-314		
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	24812-101	34813-208	34812-208	34812-308	24812-401	24812-100
10	34813-910		34813-210	34812-210	34812-310		
12	34813-912		34813-212	34812-212	34812-312		
14	34813-914		34813-214	34812-214	34812-314		
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	24812-101	34813-708	34812-708	34812-808	24812-401	24812-100
10	34812-910		34813-710	34812-710	34812-810		
12	34812-912		34813-712	34812-712	34812-812		
14	34812-914		34813-714	34812-714	34812-814		
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	24812-101	34813-708	34812-708	34812-808	24812-401	24812-100
10	34813-910		34813-710	34812-710	34812-810		
12	34813-912		34813-712	34812-712	34812-812		
14	34813-914		34813-714	34812-714	34812-814		
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

INDIVIDUAL COMPONENTS
FIXING MATERIAL (100 PIECES)


04808085

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		2	Assembly of handle on front panel	100	24560-179
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	2a		4 / 6*	 Mounting of front panel on horizontal rail with threaded insert pushed in to front	100	21100-748
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	2b		4 / 6*	 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		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		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		2	Alignment aid for handle on front panel	100	21101-239
Rear panel fastener Zn die-cast	6		2	To stabilise rear panel with wide frame-type plug-in units	100	24812-402
Torx panhead screw M2.5 x 10, St, nickel-plated	7		2	To fix rear panel fastener or board fixing	100	24560-148
Board support (slot 1) Zn die-cast			2	Board support (slot 1) see page 7.78	50 pairs	24812-202
Board support (from slot 2) Zn die-cast			2	Board support (from slot 2) see page 7.78	50 pairs	24812-302
Torx panhead screw M2.5 x 6, St, nickel-plated			2	Is needed for board fixing without connector see page 7.78	100	24560-178

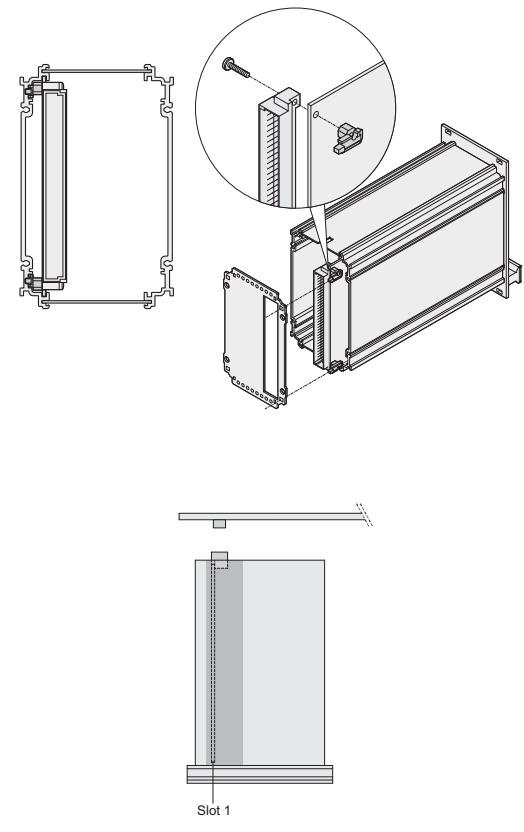
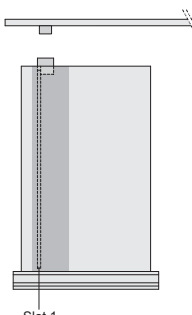

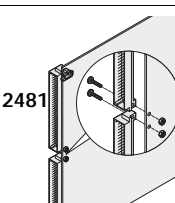
* on 42 HP EMC shielded frame type plug-in units

- Further collar screws and sleeves see page 7.107

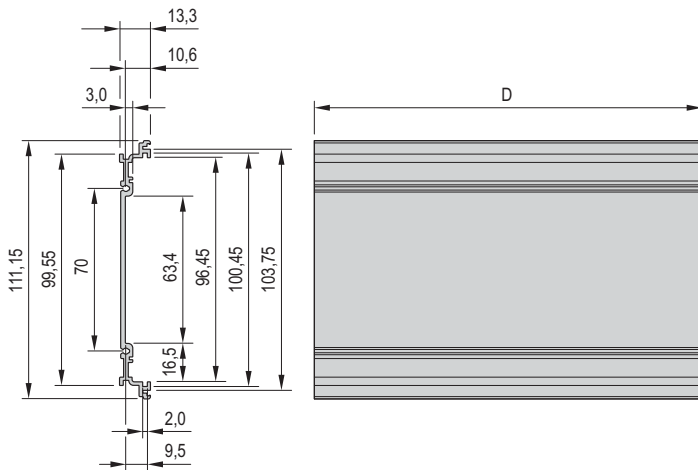
Frame type plug-in units PRO ServicePLUS

INDIVIDUAL
COMPONENTS

BOARD FIXING

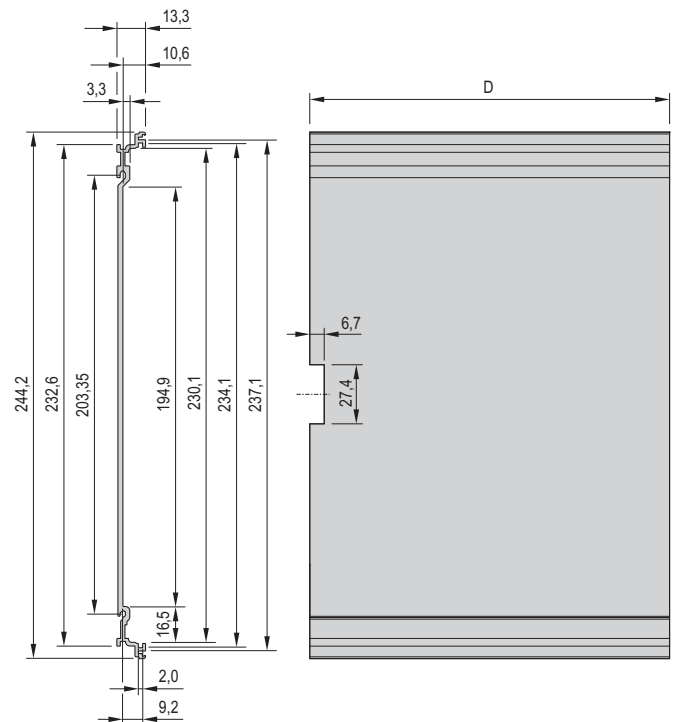
	Board fixing slot 1	Board fixing from slot 2		
	 <p style="text-align: center;">Slot 1</p> <p style="text-align: center;"><small>04808118 04808109 04808129</small></p> <p>Zn die-cast, Torx panhead screw M2.5 x 10; PCB is pushed into the guiding groove of the left side panel/ side panel rear angle, is fixed with rear panel</p>	 <p style="text-align: center;">Slot 1 Slot 2 Slot 3</p> <p style="text-align: center;">Slot 1 Slot 2 Slot 3</p> <p style="text-align: center;"><small>04808119 04808110 bga42785 kaa46417</small></p> <p>Zn die-cast, Torx panhead screw M2.5 x 10; PCB is pushed into guide rail, is fixed with rear panel</p>		
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	<p>24560-1</p>  <p style="text-align: center;"><small>aza45940</small></p>	-	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)	<p>2481</p>  <p style="text-align: center;"><small>04808120</small></p>	24812-600		

Frame type plug-in units PRO

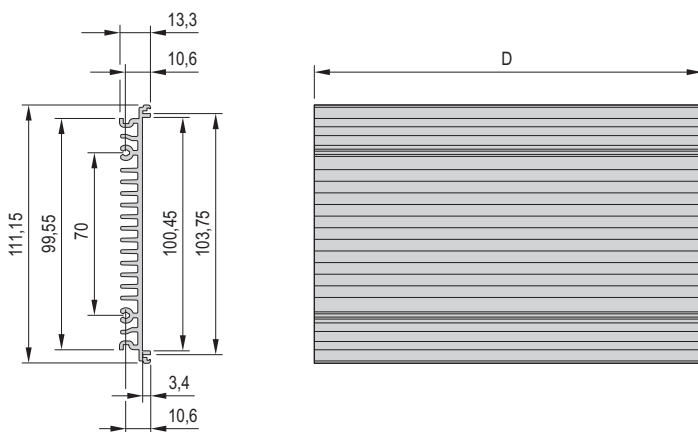
DIMENSIONS
SIDE PANEL WITHOUT COOLING FINS
3 U


Depth = 167/227 mm

04808101

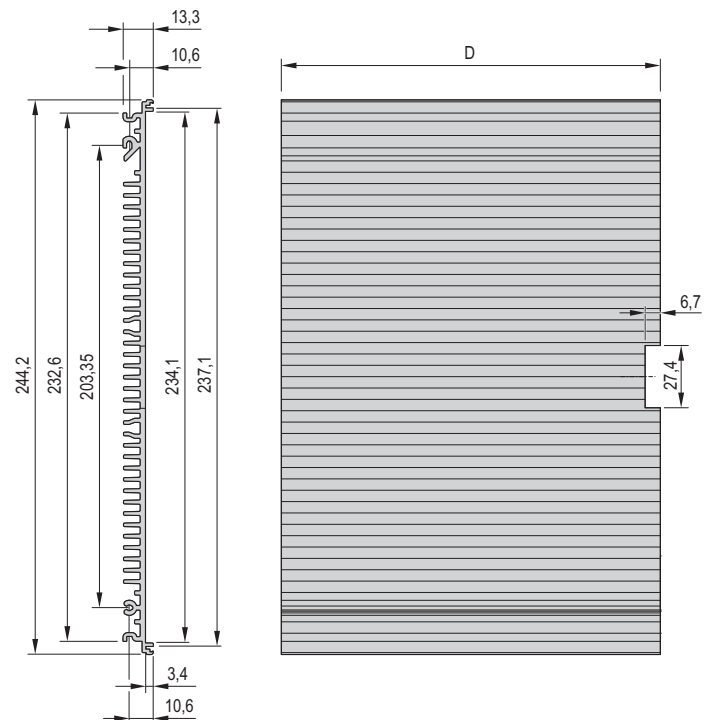
6 U


04808102

DIMENSIONS
SIDE PANEL WITH COOLING FINS
3 U


Depth = 167/227 mm

04811051

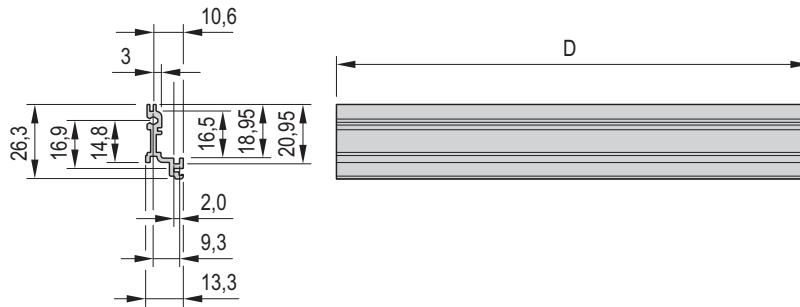
6 U


04811052

Frame type plug-in units PRO

DIMENSIONS

SIDE PANEL REAR ANGLE

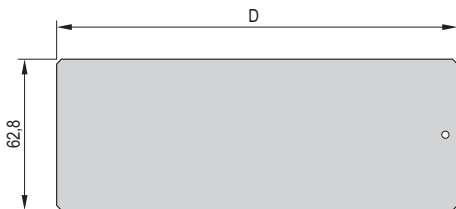


Depth = 167/227 mm

04808103

DIMENSIONS

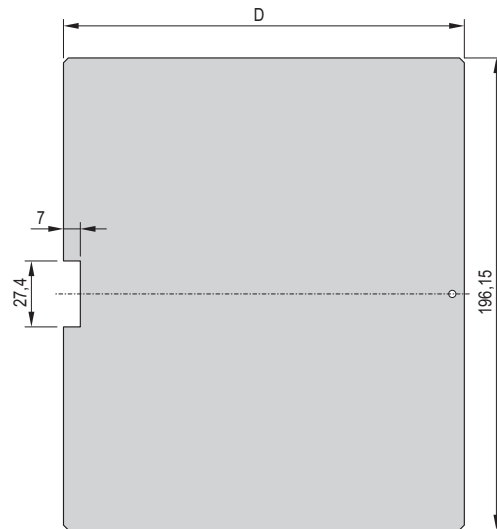
SIDE PLATE



3 U for side panel rear angle

04808100

6

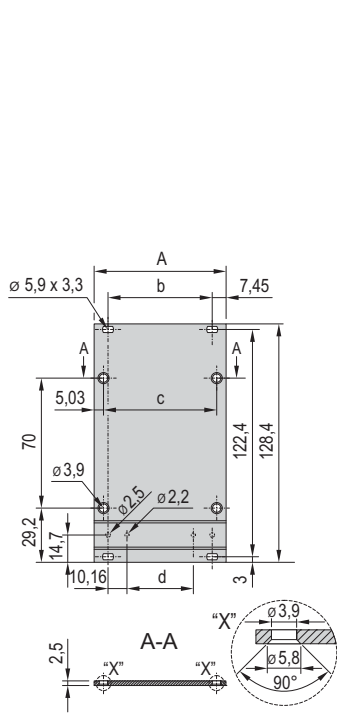


6 U for side panel rear angle

04808099

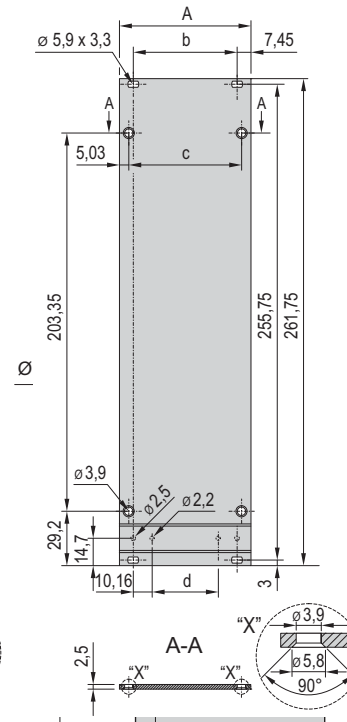
Frame type plug-in units PRO

DIMENSIONS
FRONT PANELS

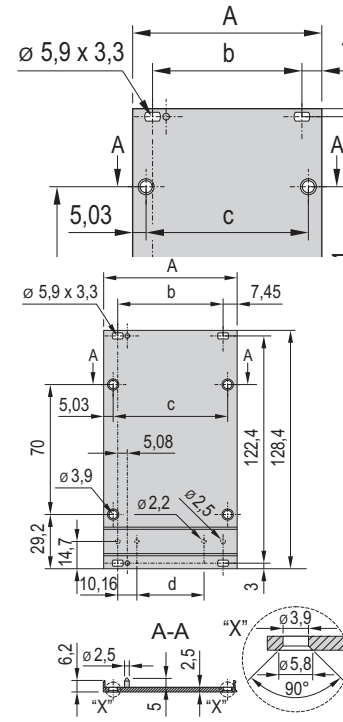
 Unshielded
3 U


04808086

6 U

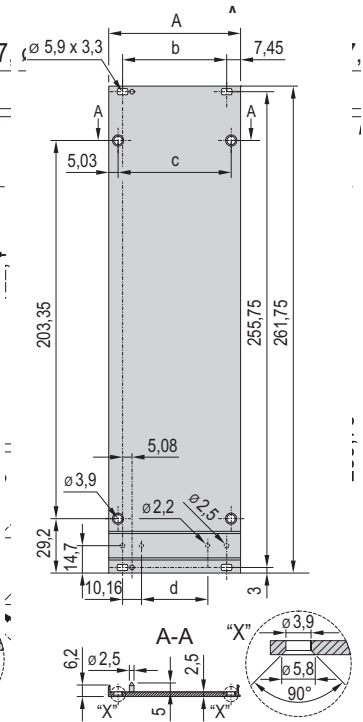


04808087

 Shieldable, for EMC textile gasket
3 U


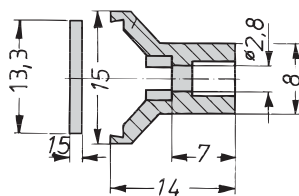
04808088

6 U



04808089

	A	b	c	d
Width	mm	mm	mm	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

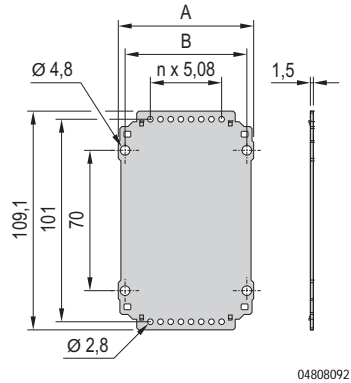
Width	Width
HP	mm
8 HP	39.2
10 HP	49.4
12 HP	59.6
14 HP	69.7
21 HP	105.2
28 HP	140.8
42 HP	212.0

Frame type plug-in units PRO

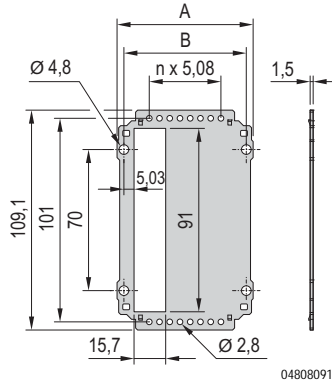
DIMENSIONS

REAR PANEL 3 U

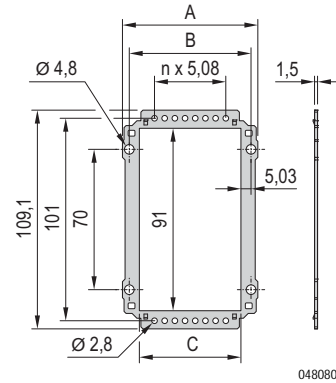
Without cut-out



For one connector



For multiple connectors



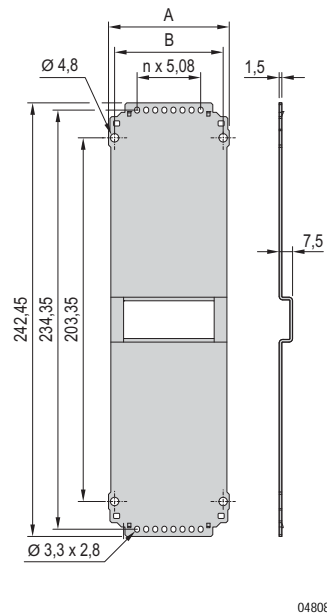
Dimensions table

	A	B	C	n
HP	mm	mm	mm	
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

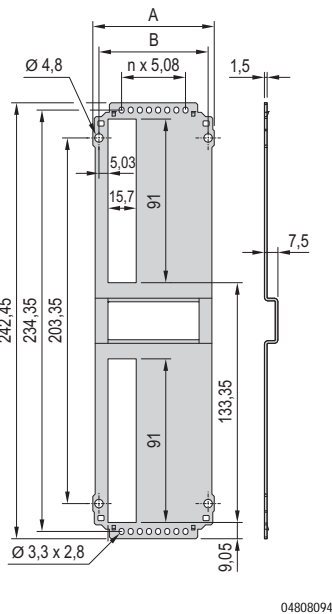
DIMENSIONS

REAR PANEL 6 U

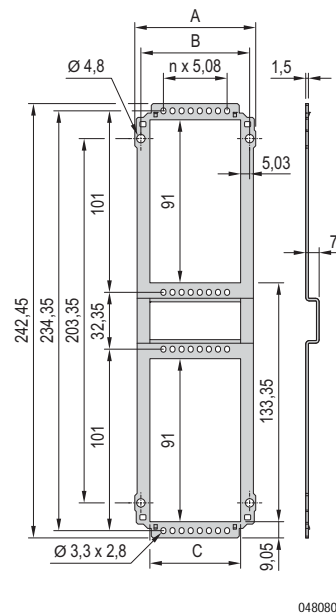
Without cut-out



For one connector



For multiple connectors



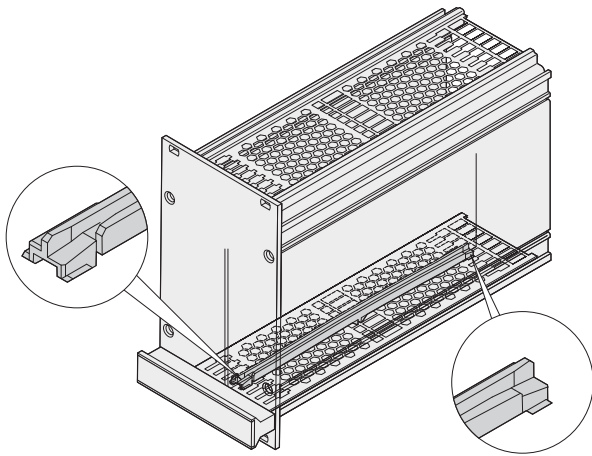
Dimensions table

	A	B	C	n
HP	mm	mm	mm	
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

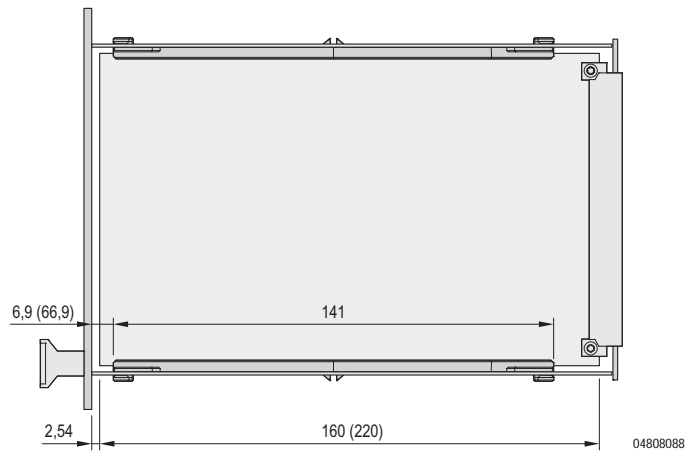
Frame type plug-in units PRO

DIMENSIONS

GUIDE RAIL



04808096

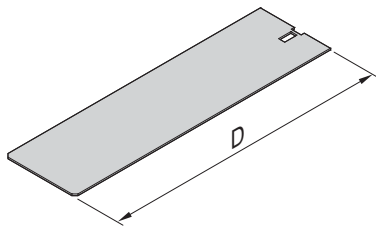


04808088

DIMENSIONS

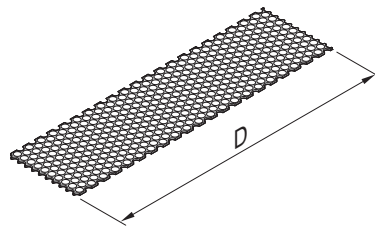
COVER PLATES

without perforation



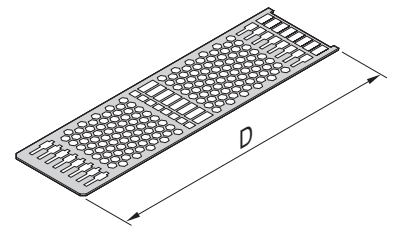
04808104

with perforation



04808106

for guide rail mounting



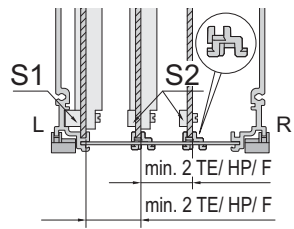
04808105

D = 167/227 mm

Frame type plug-in units PRO

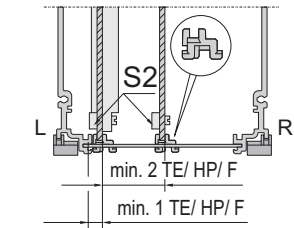
DIMENSIONS
MOUNTING INSTRUCTIONS FOR GUIDE RAILS IN FRAME TYPE PLUG-IN UNITS

Slot 1 + slot 2



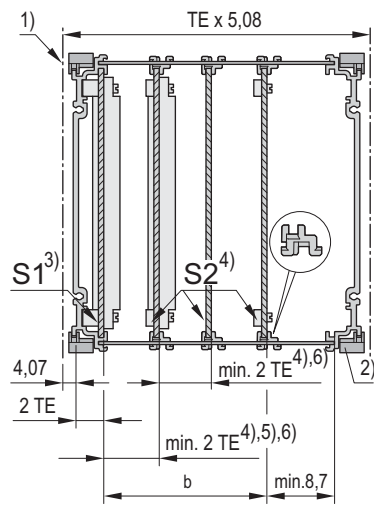
04809050

Slot 2



04809051

Front view



04808107

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

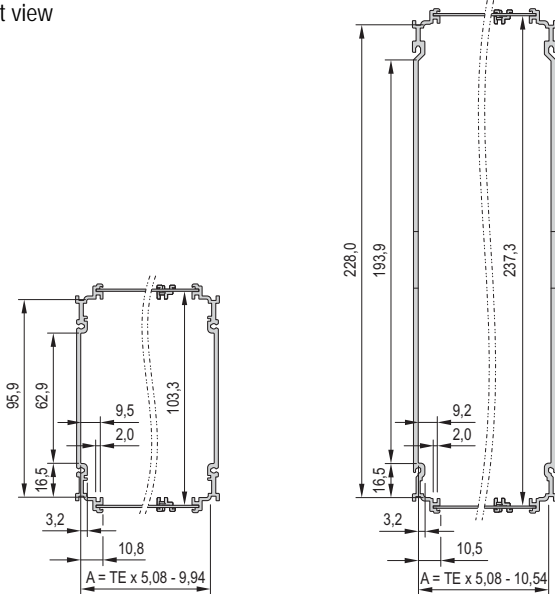
Width of frame type plug-in unit HP	b mm	Max. number of PCBs mountable	
		slot 1	from slot 2
8	5.08	1	1
10	10.16	1	1 ⁵⁾
12	15.24	1	2 ⁵⁾⁶⁾
14	20.32	1	2 ⁶⁾
14	25.40	1	3 ⁵⁾⁶⁾
14	30.48	1	3 ⁶⁾
14	35.56	1	4 ⁵⁾⁶⁾
21	71.12	1	7 ⁶⁾
21	66.04	1	7 ⁵⁾⁶⁾
28	101.60	1	10 ⁶⁾
28	106.68	1	11 ⁵⁾⁶⁾
42	172.72	1	17 ⁶⁾
42	177.80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



04808097

04808098

DIMENSIONS TABLE

Height U	Width HP	A 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)



Illustration shows 12 HP width, side panel depth 167 mm

04808007

- 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	Width	Depth = 167 mm	Depth = 227 mm	
		U	HP	Part no.	Part no.	
<p>04808075</p>	<p>04808113</p>	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	
	<p>04808114</p>	<p>04808114</p>	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

Frame type plug-in units PRO with hood

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



Illustration shows 12 HP width, side panel depth 167 mm

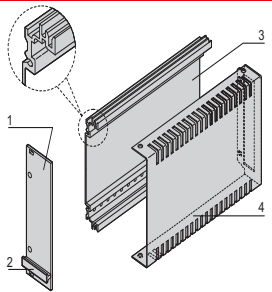
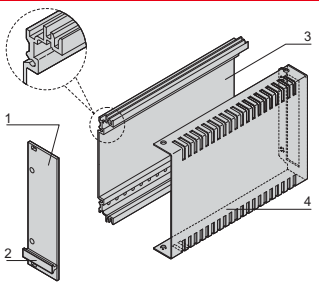
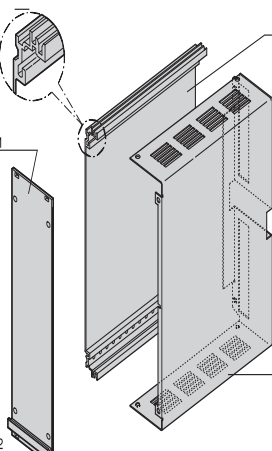
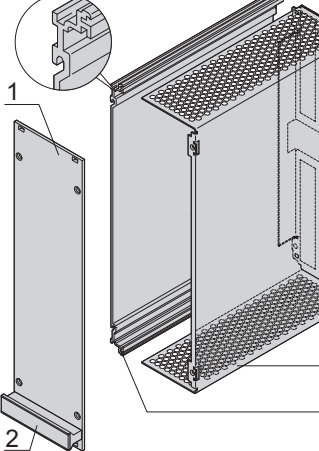
04808002

- 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)

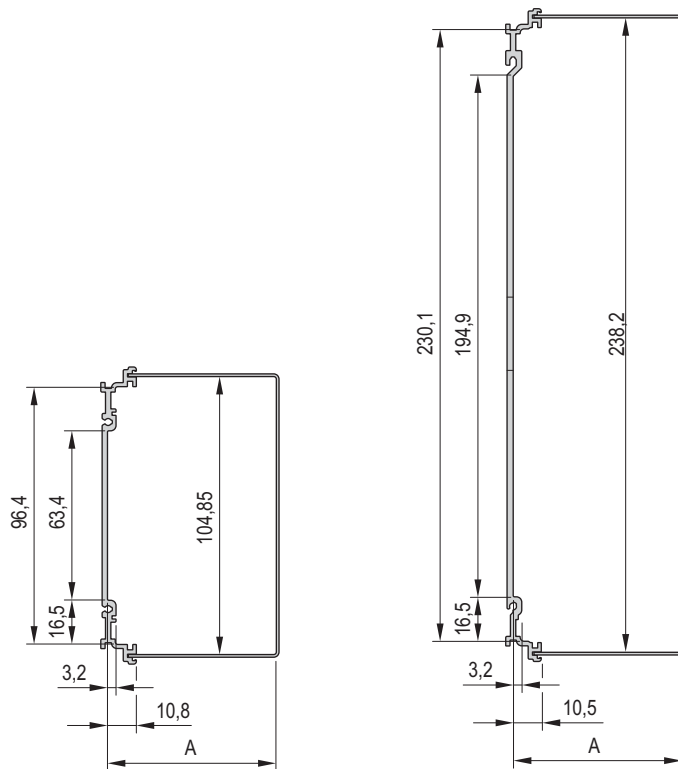
Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, anodised, cut edges plain
2	1	Handle, grey, PPE, UL 94 V-1
3	1	Side panel, Al extrusion, colourless passivated, with groove for one PCB
4	1	Hood, Al, 1 mm, with perforation, rear panel integrated
5	1	Assembly kit (incl. PCB fixing for slot 1)

ORDER INFORMATION

5 HP	6 ... 14 HP	Height U	Width HP	Depth = 167 mm Part no.	Depth = 227 mm Part no.
		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
		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

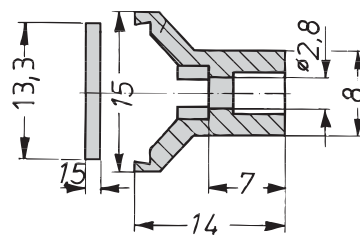
Frame type plug-in units PRO with hood

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
<hr/>		
6	5	17.22
6	6	22.30
6	7	27.38
6	10	42.62
6	12	57.78
6	14	62.94

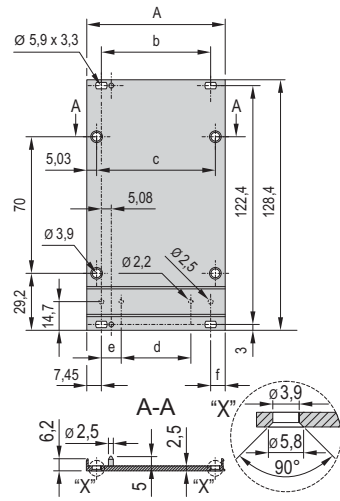
DIMENSIONS
FRONT HANDLE


a4-328e

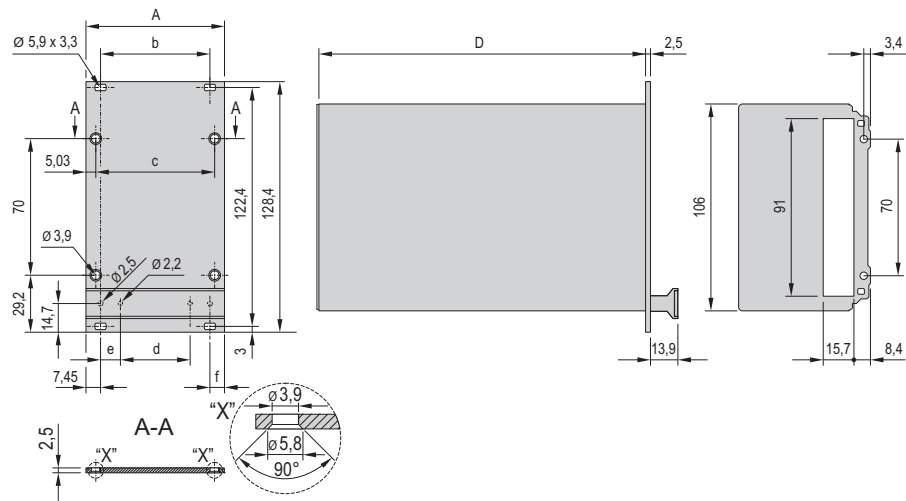
DIMENSIONS TABLE

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

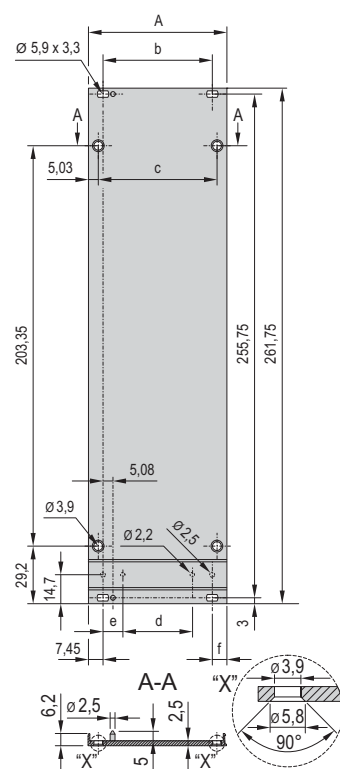
Frame type plug-in units PRO with hood

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


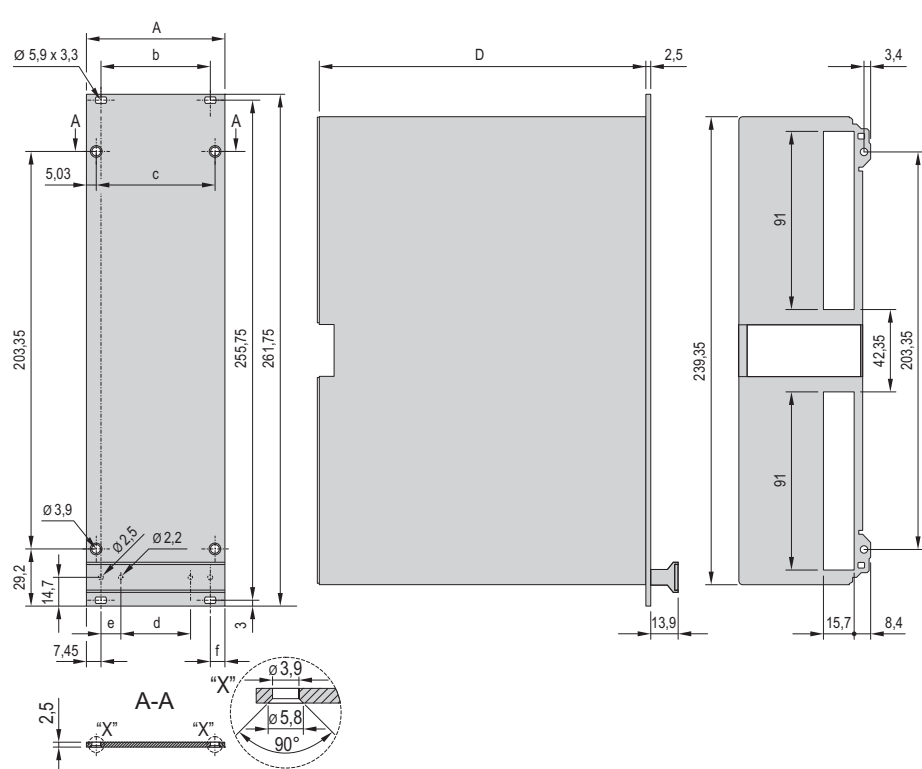
04808052

3 U Front panel unshielded


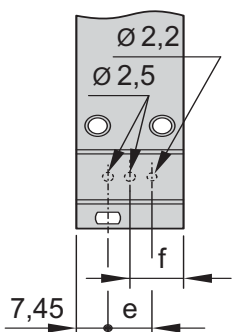
04808111

6 U Front panel shieldable


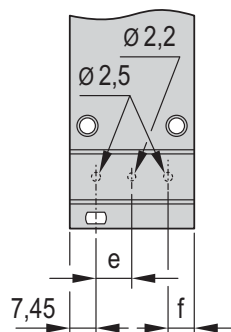
04809053

6 U 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



04892005

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

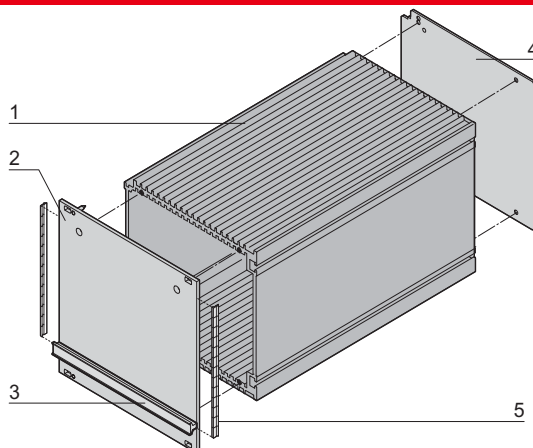
DELIVERY COMPRISES (kit)

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	
	Depth = 167 mm	Depth = 227 mm
HP		
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



04802050

Height	Width	Depth = 167 mm	Depth = 227 mm
U	HP	Part no.	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

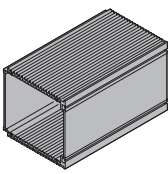
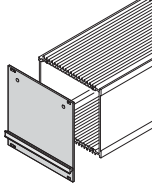
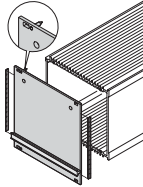
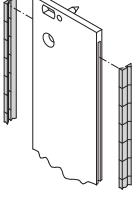
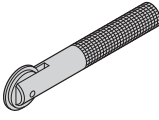
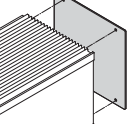
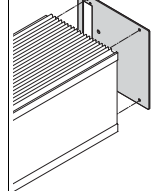
- Dimension drawings see from page 7.94

HF frame type plug-in units ServicePLUS

INDIVIDUAL COMPONENTS

HF BODY TUBE, FRONT PANELS WITH HANDLE, REAR PANELS

ORDER INFORMATION

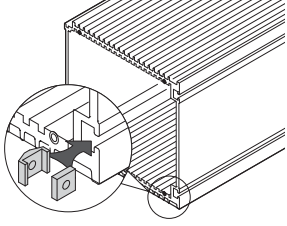
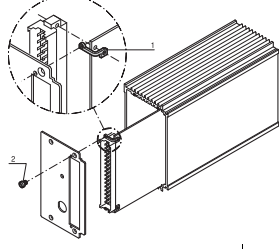
		HF body tube	Shieldable front panel, with handle	Shieldable front panel, with handle		Assembly tool	Rear panel	
				for EMC gasket (stainless steel)	EMC gasket (stainless steel)		without cut-out	with cut-out
		 KAA45832	 KAA45831	 04807074	 bga45760	 aza45937	 04807075	 KAA45834
		Al extrusion, black 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

HF frame type plug-in units

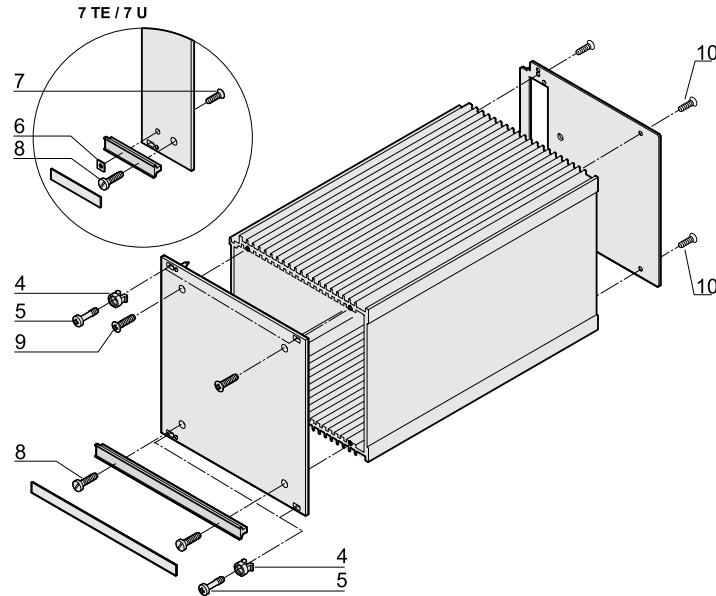
INDIVIDUAL COMPONENTS
SLIDE NUTS, FIXING FOR PCBs, MOUNTING KIT
ORDER INFORMATION

		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		
		 <p>width across flats (WAF) 7, for insertion into HF body tube, top and bottom, provides lateral fixing (on right)</p>		 <p>bracket (stainless steel), 1.5 mm; please order retention screws separately</p>		<p>bracket top and bottom (stainless steel), 1.5 mm; incl. two cheesehead screws M2.5 x 4</p>	
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 10 12 14 21 28	21100-112	21100-289	30809-701	30809-700	21101-937	21100-105
Accessories							
Cheesehead screw M2.5 x 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

HF frame type plug-in units

INDIVIDUAL COMPONENTS
FIXING MATERIAL (100 PIECES)
ORDER INFORMATION


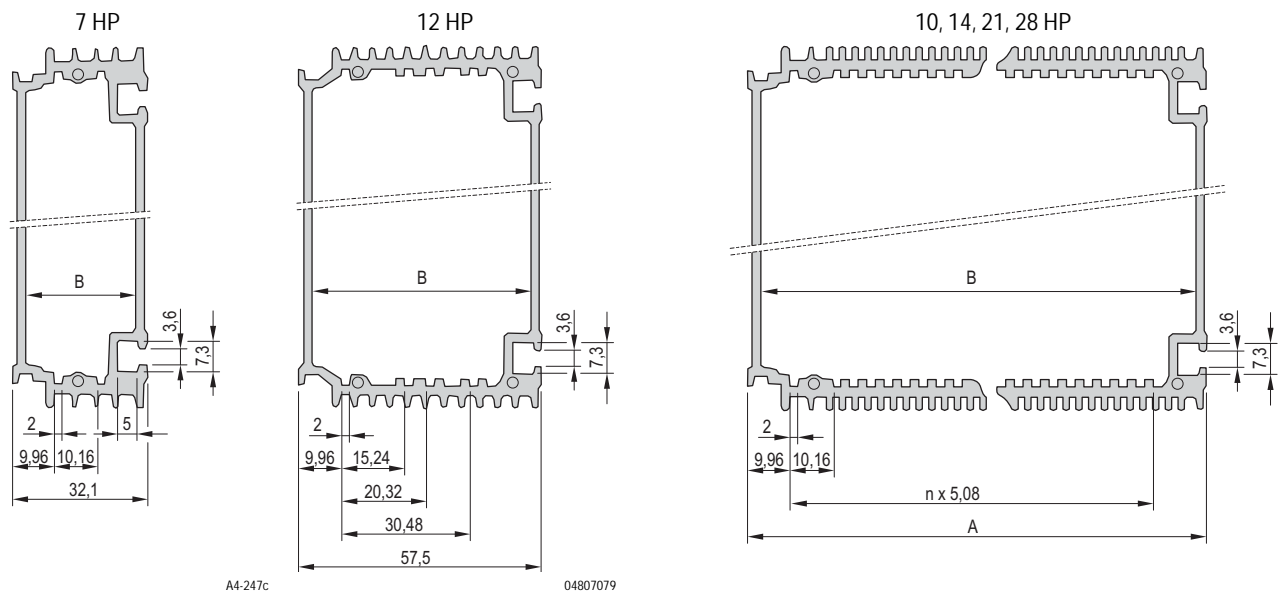
04802054

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		2 at 7 HP		Front panel is fitted to horizontal rail with threaded insert pushed in to front	100	21100-464
			4 at > 7 HP				
Pozidrive/slotted collar screw M2.5 x 11, St, nickel-plated	5		2 at 7 HP		Front panel is fitted to horizontal rail with threaded insert pushed in to front	100	21100-748
			4 at > 7 HP				
Pozidrive/slotted collar screw M2.5 x 12.3, St, nickel-plated	5		2 at 7 HP		Front panel is fitted to horizontal rail with threaded insert pushed in to rear in the standard position	100	21101-101
			4 at > 7 HP				
Fixing parts for mounting the module							
Square nut DIN 562, M2.5, St, nickel-plated	6		1 at 7 HP		To mount handle on front panel	100	21100-359
Pozidrive countersunk screw M2.5 x 12, St, nickel-plated	7		1 at 7 HP		To mount handle on front panel	100	21100-507
Slotted cheesehead screw M2.5 x 16, St, nickel-plated	8		1 at 7 HP		To mount handle and front panel on HF body tube	100	21100-150
			2 at > 7 HP				
Raised Pozidrive countersunk panhead screw M2.5 x 8, St, nickel-plated	9		2		To mount front panel on HF body tube	100	21100-429
Pozidrive countersunk screw M2.5 x 6, St, nickel-plated	10		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

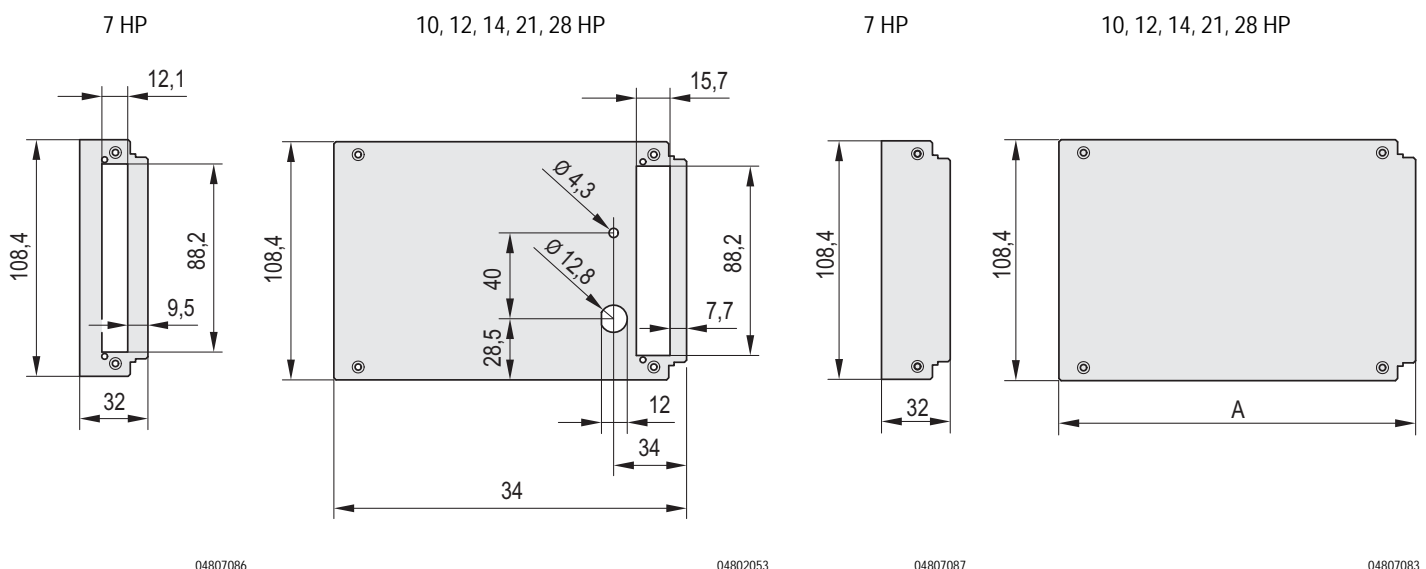
DIMENSIONS
HF BODY TUBE


A4-247c

04807079

A4-247a

Dimensions table						
Dimension	7 HP	10 HP	12 HP	14 HP	21 HP	28 HP
mm						
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


04807086

04802053

04807087

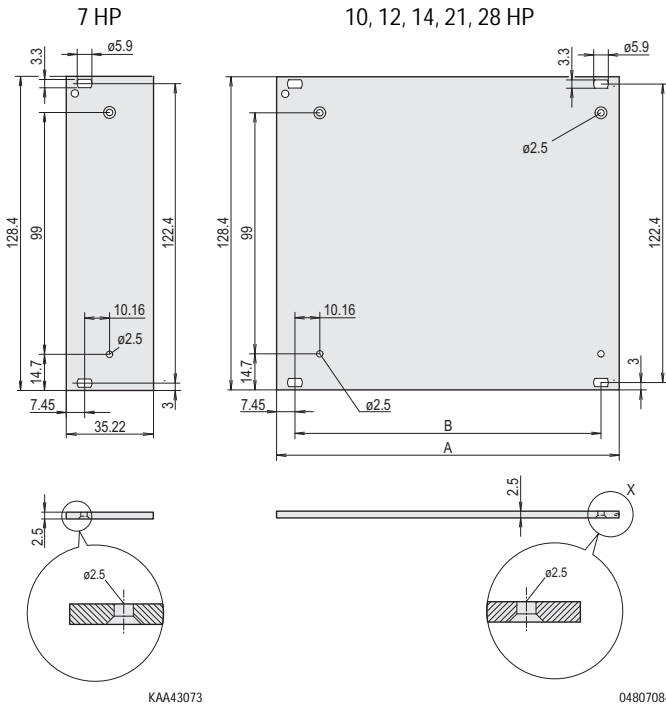
04807083

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

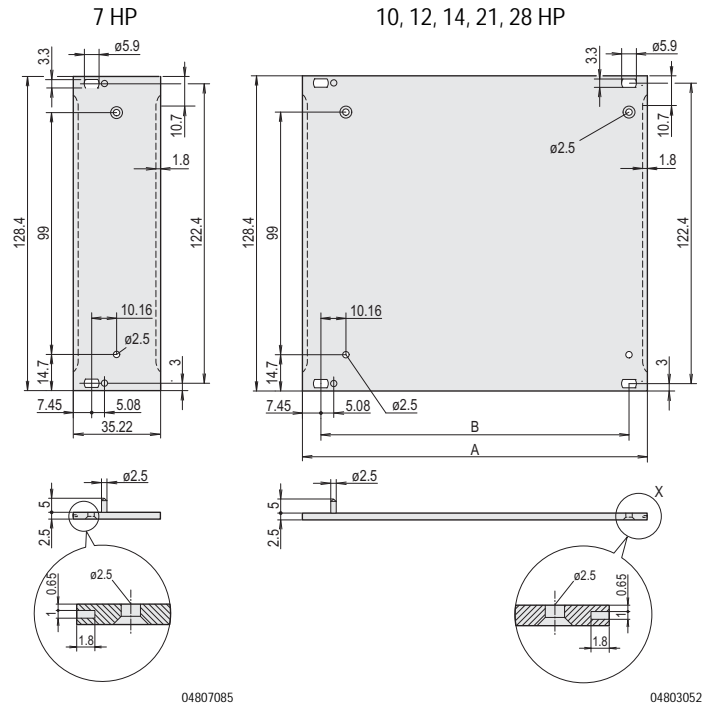
HF frame type plug-in units

DIMENSIONS
FRONT PANELS

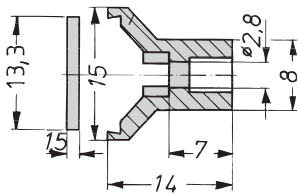
Unshielded



Shieldable, slotted for EMC stainless steel gasket



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



- 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

04812021

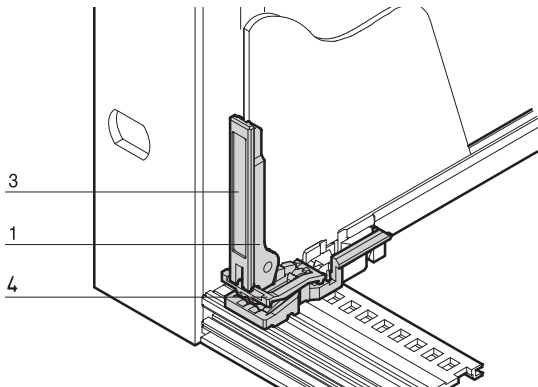


Example: horizontal rail adaptor with lip for 19" PSU

11395007

Modules – PCB accessories

PCB HANDLE C

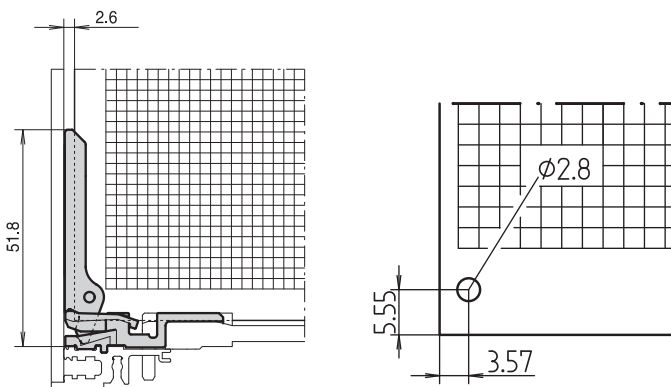


- For europacPRO, multipacPRO, ratiopacPRO, propacPRO and compacPRO
- Mounts behind front panel
- Insertion and extraction
- Can be labelled
- In accordance with IEC 60297-3-102

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

BPA45909

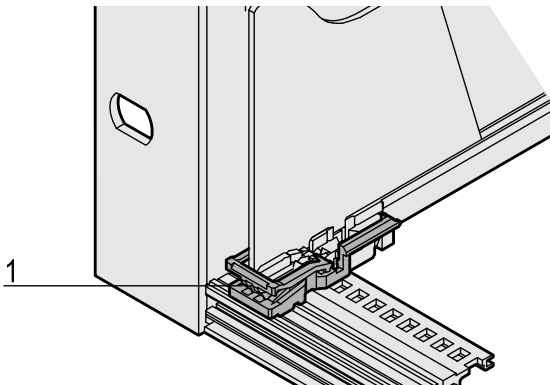


BPA45910 BPA45910

NOTE

- Minimum spacing of guide rail 3 HP
- For board thickness 1.6 mm
- Please order PCB retainer C separately
- Can only be used together with guide rail for accessories

PCB RETAINER C



- 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

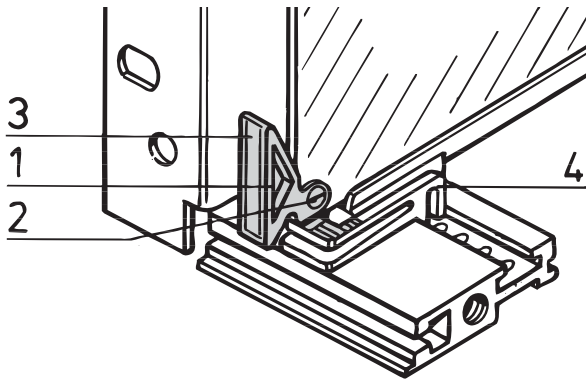
06002057

NOTE

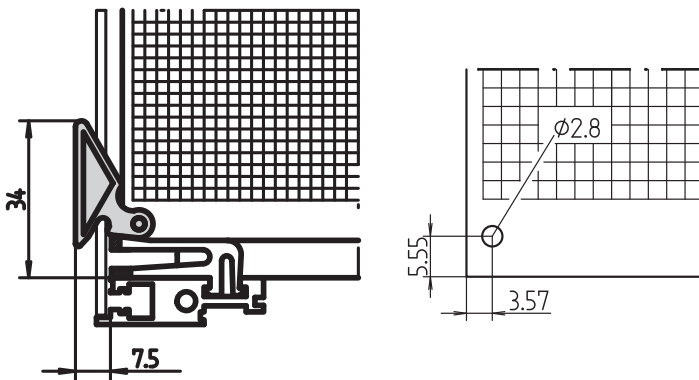
- Minimum spacing of guide rail 3 HP
- Cannot be used with propac, compac, inpac cases

Modules – PCB accessories

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

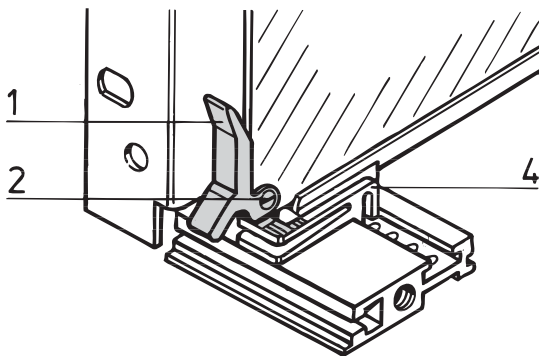
Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB handle, bolt-on	PBT, UL 94 V-0	red	1 piece (SPQ 10)	60817-067
1a	PCB handle for rivet fitting	PBT, UL 94 V-0	red	1 piece (SPQ 10)	60817-072
2	Countersunk screw	St, nickel-plated, DIN 965	–	100	21100-515
2a	Tubular rivet	Brass, DIN 7340	–	100	21100-076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

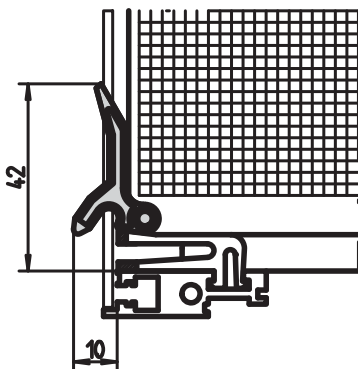
NOTE

- 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 x 6	St, nickel-plated	–	100	21100-146

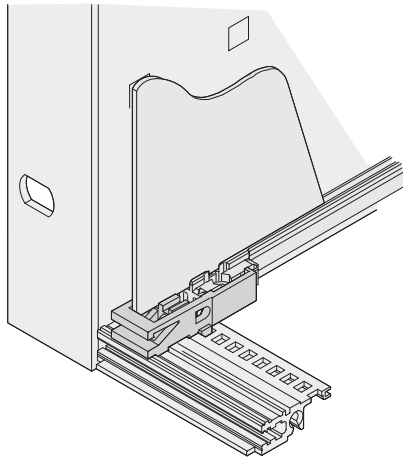
SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces printed circuit board handles or a multiple

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

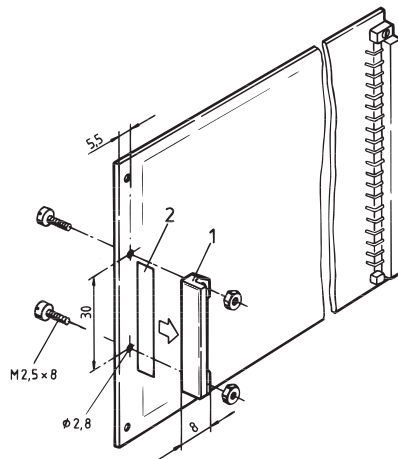
ORDER INFORMATION

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, 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 × 7 × 0.15 mm, 1 sheet = 105 pieces

Pozidrive panhead screw M2.5 × 8, St, nickel-plated, PU 100 pieces

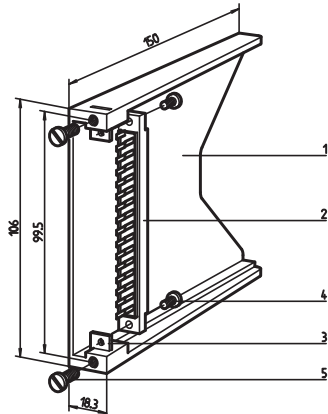
Hexagonal nut A 2.5, nickel-plated, PU 100 pieces

Tubular rivet, form B (roundhead) B 2.5 × 0.25 × 5,
St/brass, raw, DIN 7340, PU 100 pieces

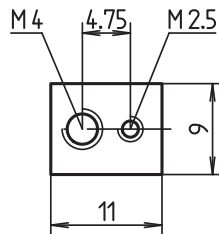
SPQ (standard pack quantity): Part number includes 1 piece,
but delivery is exclusively made in standard pack quantity:
Please order at least 10 pieces PCB handles or a multiple

Modules – PCB accessories

PCB POCKET



Retention bracket (DIN 41612)



- 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

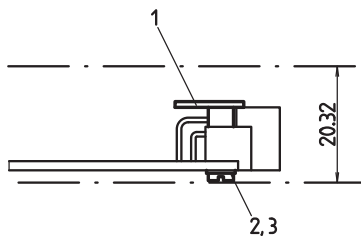
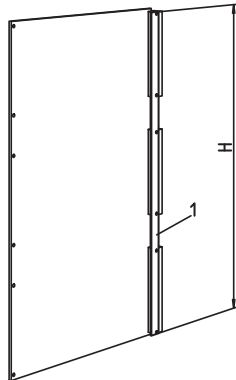
LKA42605

NOTE

- Connector (item 2) see page 11.2

LKA42606

PCB STRENGTHENING (9 U)



- Protects large PCBs from bending
- Creates an additional crossbar (corresponding to IEEE recommendations, P 896, Nubus, Multibus® II etc.) that links all connectors mechanically
- 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

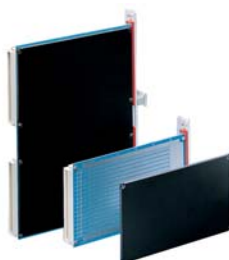
LKA42609

ORDER INFORMATION

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

LKA42593

PCB COVERS



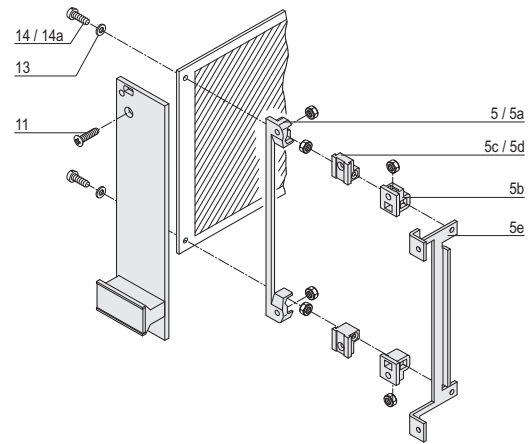
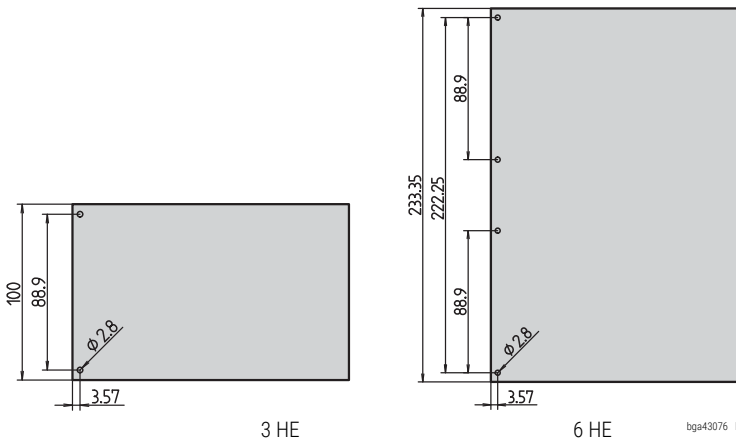
- Covers to protect solder side of board, see page 7.62







Modules – PCB accessories

INDIVIDUAL COMPONENTS PCB SUPPORT FOR STATIC TRAPEZIFORM HANDLE

FIXING PARTS FOR EXTRACTOR HANDLES IN KEY FORM 2

Drill hole dimensions on PCB



Fixing parts	Item	Image	Required quantity		Qty/PU	Part no.
			3 U	6 U		
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	 <small>AZA45177</small>	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	 <small>AZA45177</small>	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	 <small>06707050</small>	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	 <small>06707050</small>	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	 <small>AZA46586</small>	1	2	1 piece (SPQ 10) ¹⁾	30808-871

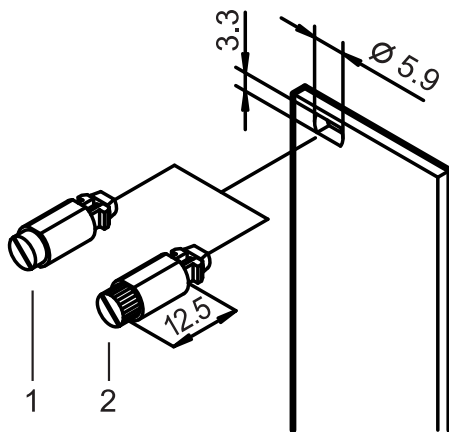
1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple

Modules – Assembly parts

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

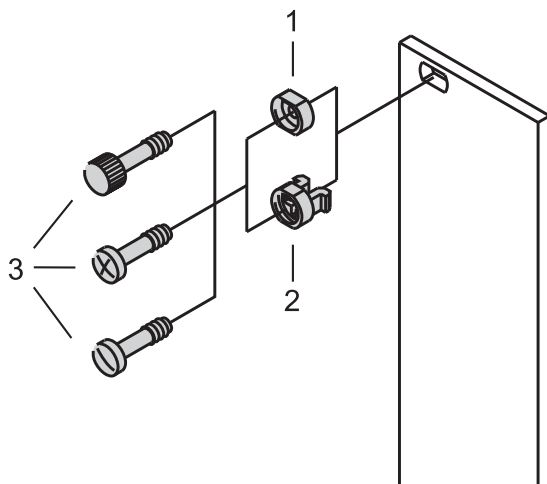
ORDER INFORMATION

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

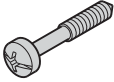
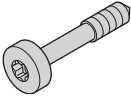
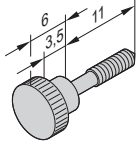
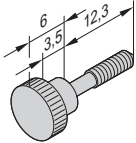
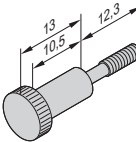
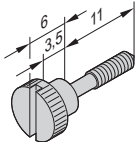
Pozidrive/slotted collar screw M2.5 × 11, St, nickel-plated, PU 100 pieces	21100-748
Pozidrive/slotted collar screw M2.5 × 12.3, St, nickel-plated, PU 100 pieces	21101-101

NOTE

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

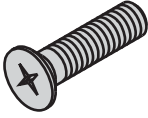

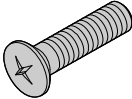
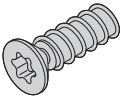
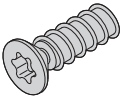
Modules – Assembly parts

COLLAR SCREWS

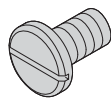
Description	Material	Dimension	Qty/PU	Part no.
 <p>Pozidrive/slotted collar screw</p> <p>AZA46586</p>	St, nickel-plated	M2.5 x 11	100	21100-748
	St, zinc-plated, black	M2.5 x 11	100	21100-749
	Stainless steel, with slot	M2.5 x 11	100	21101-323
	St, nickel-plated	M2.5 x 12.3	100	21101-101
	St, zinc-plated,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

Modules – Assembly parts

COUNTERSUNK SCREWS

Description	Material	Dimension	Qty/PU	Part no.
 PoziDrive countersunk screw <small>az245182</small>	St, nickel-plated	M2.5 x 6	100	21100-515
	St, nickel-plated	M2.5 x 12	100	21100-507
 Torx countersunk screw <small>AZA46585</small>	St, zinc-plated	M4 x 5	100	24560-139
	St, zinc-plated	M4 x 14	100	24560-145
 Raised PoziDrive countersunk screw <small>06702056</small>	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
 Torx countersunk screw, self-tapping <small>06707057</small>	St, zinc-plated, black	M3 x 8	100	21100-542
	St, zinc-plated, black	M3 x 8	100	21100-648
 Torx countersunk screw, self-tapping <small>06707057</small>	St, zinc-plated	2.5 x 7.7	100	24560-158

SCREWS FOR PLUG-IN UNITS



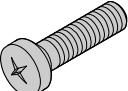
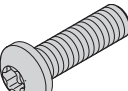
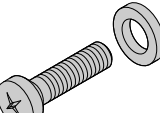
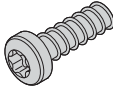
06706053

ORDER INFORMATION

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

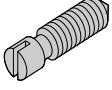
Modules – Assembly parts

PANHEAD SCREWS



Description	Material	Dimension	Qty/PU	Part no.
 <p>Pozidrive panhead screw</p> <p>06702057</p>	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
 <p>Torx panhead screw</p> <p>AZA45940</p>	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
 <p>Screw + securing washer (PA)</p> <p>06702051</p>	St, nickel-plated	M2.5 x 12	100	21100-777
	St, zinc-plated, black	2.5 x 7.3	100	24560-157
 <p>Torx panhead screw, self-tapping</p> <p>06707058</p>	St, zinc-plated	2.5 x 9.3	100	24560-141

Modules – Assembly parts




GRUB SCREWS

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

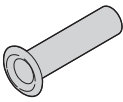
WASHERS

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

NUTS

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

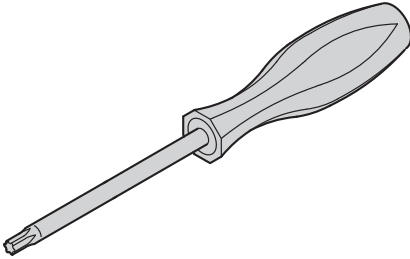
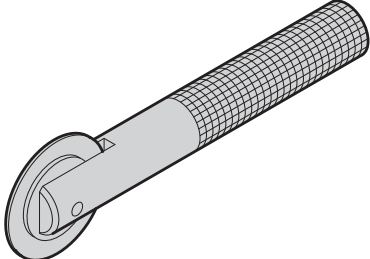
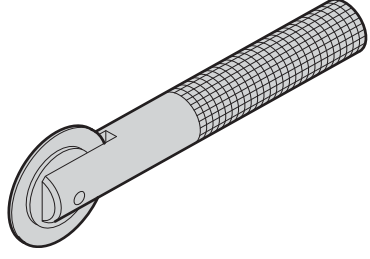
TUBULAR RIVET

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

Modules – Assembly parts

ASSEMBLY TOOLS

ORDER INFORMATION

Description	Application	Dimension	Qty/PU	Part no.
 <p>AZA45925</p> <p>Torx screwdriver</p>	For M2.5 screw	T8	1	64560-026
	For M4 screw	T20	1	64560-027
 <p>azb45938</p> <p>Assembly tool</p>	Exclusively to fix stainless steel EMC gaskets in horizontal rails	–	1	24560-271
 <p>azb45937</p> <p>Assembly tool</p>	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



- 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

32506001

North America

Warwick, RI, USA

Tel +1.800.525.4682

San Diego, CA, USA

Tel +1.800.854.7086

Europe, Middle East & India

Straubenhardt, Germany

Tel +49 7082 794 0

Betschdorf, France

Tel +33 3 88 90 64 90

Warsaw, Poland

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Hemel Hempstead,

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