

UM-PRO...

Press-drawn section panel mounting bases

Data sheet
104383_en_03

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1 Description

The UM-PRO press-drawn section panel mounting bases are available in three widths (72 mm, 108 mm, and 122 mm). They support fast mounting and a wide range of connection technologies.

Thanks to the use of UL-listed plastic polyamide and the special profile geometry, they are suitable for operating temperatures of up to 100°C and higher mechanical loads.

The low-profile design supports the assembly of flat electronics modules and their mounting on NS 35 DIN rails or directly on the panel.

The top PCB can have components assembled up to the edge and fixed by means of a quick-action mechanism. The connector plugs thereby remain freely accessible for wiring by the end customer.

Covering hoods are available that can be freely positioned.

The electronics modules can be connected together via a bus connector in the lateral element of the press-drawn section.

The UM-PRO housings are compatible with the UMK and UM plug-in modules and have the same PCB dimensions as the press-drawn section housings in the UM 72 / 108 / 122 series.

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The 3D housing data can be found at phoenixcontact.net/products.



Make sure you always use the latest documentation. It can be downloaded at phoenixcontact.net/products.



This document is valid for all products listed in the “Ordering data” on page 4

2 Overview of the UM-PRO products

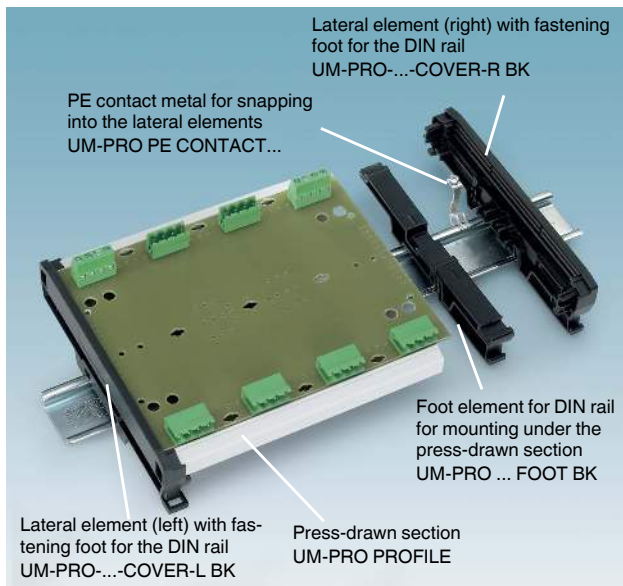


Figure 1 Overview of lateral and foot elements for DIN rail mounting

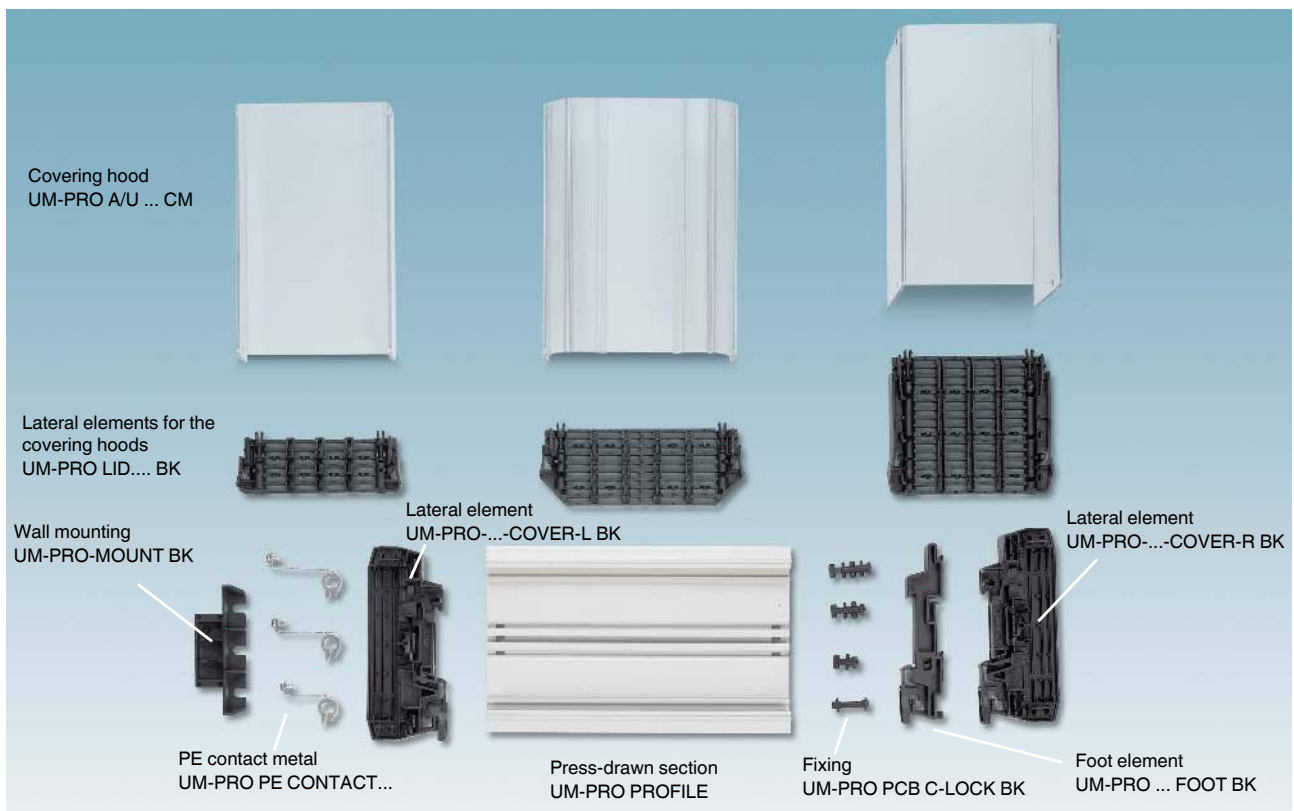


Figure 2 Overview of all products in the UM-PRO series

Covering hood and wall mounting

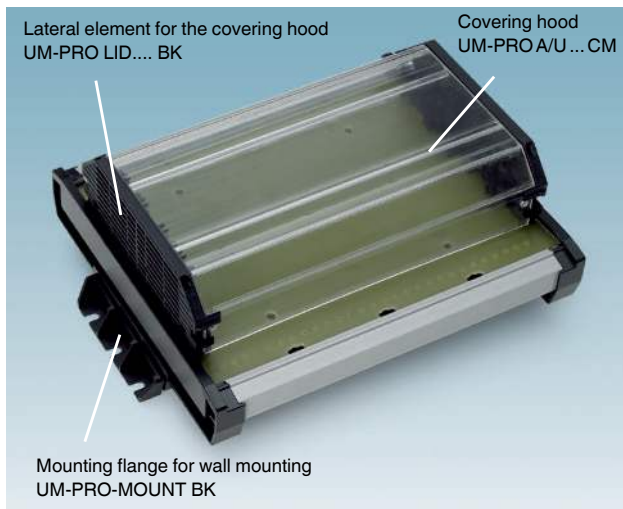


Figure 3 Overview of the covering hood and wall mounting

- The covering hood can be snapped onto the base PCB.
- The covering hood is locked with lateral elements which are snapped on.
- The covering hood can be mounted horizontally or vertically on the base PCB.
- The lateral elements of the covering hood have slots for additional PCBs or displays.
- The lateral elements have vents to which a fan can also be attached using screws.
- Hood offset for the base PCB (IP30).

Lateral element with bus connector

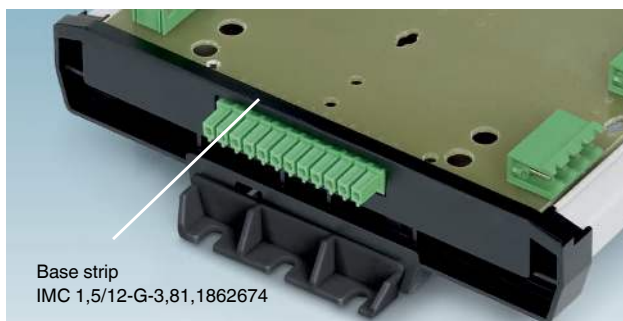


Figure 4 Lateral element with bus connector for communication with adjacent modules

The electronics modules can be connected together via a bus connector in the lateral element of the press-drawn section.

Fixing the PCB

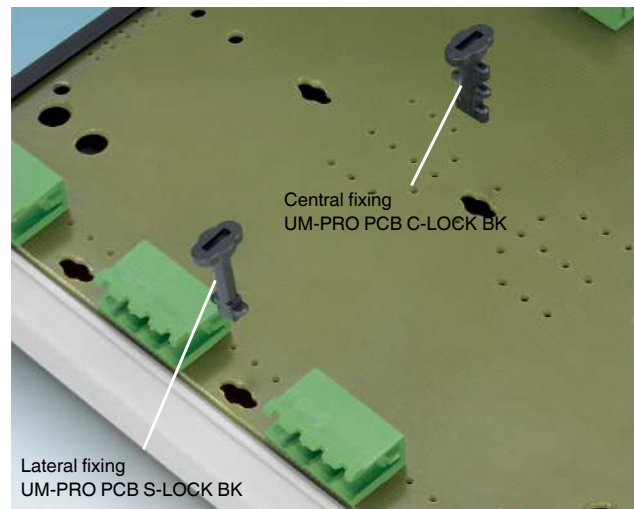


Figure 5 Add-on elements for fixing the PCB

The base PCBs can be installed in the press-drawn section in three heights. There are fixing elements for each height which secure the PCB in the center or at the edge.

The top PCB can have components assembled up to the edge and fixed by means of a quick-action mechanism.

PE contact metal

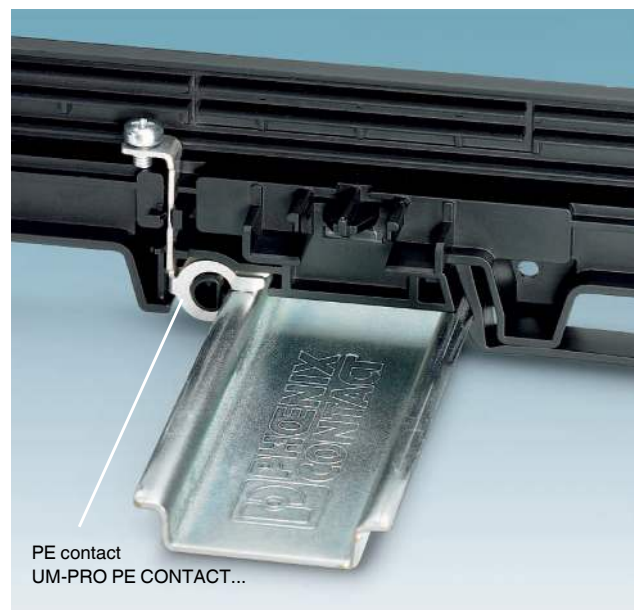


Figure 6 PE contact metal for snapping into the lateral element of the press-drawn section

3 Ordering data

3.1 Press-drawn sections and covering hoods

Description	Type	Order No.	Pcs. / Pkt.
Press-drawn section cut to customer-specific length, color: light gray (similar to RAL 7035)	UM-PRO PROFILE*	2200148	1
Lateral element with mounting foot for NS 35 DIN rails, with groove for accommodating PE contact metal, can be inserted in UM-PRO profiles, color: black (similar to RAL 9005)			
Version: left, width: 72 mm	UM-PRO 72 COVER-L BK	2200151	10
Version: left, width: 108 mm	UM-PRO 108 COVER-L BK	2200155	10
Version: left, width: 122 mm	UM-PRO 122 COVER-L BK	2200158	10
Version: right, width: 72 mm	UM-PRO 72 COVER-R BK	2200152	10
Version: right, width: 108 mm	UM-PRO 108 COVER-R BK	2200156	10
Version: right, width: 122 mm	UM-PRO 122 COVER-R BK	2200159	10
Covering hood , height: 24 mm, high-temperature-resistant PC material, 73 mm wide (internal dimensions: 69 mm) suitable for UM-PRO 108/122	UM-PRO A/U N73 CM*	2200310	1
Covering hood , height: 34 mm, high-temperature-resistant PC material, 92 mm wide (internal dimensions: 88 mm) suitable for UM-PRO 122	UM-PRO A/U 92 CM*	2200312	1
Covering hood , height: 63.2 mm, high-temperature-resistant PC material, overall width: 73 mm (internal dimensions: 69 mm) suitable for UM-PRO 108/122	UM-PRO A/U 73 CM*	2200311	1
Lateral element for the covering hood			
Version for UM-PRO A/U N73 CM, 73 mm wide	UM-PRO LID-73N BK	2200174	10
Version for UM-PRO A/U 92 CM, 92 mm wide	UM-PRO LID-92 BK	2200172	10
Version for UM-PRO A/U CM, 73 mm wide	UM-PRO LID-73 BK	2200173	10

* Please observe the order key, see ^{3.3}

3.2 Accessories

Description	Type	Order No.	Pcs. / Pkt.
Foot element for DIN rails, for mounting under the press-drawn section			
Width: 72 mm	UM-PRO 72 FOOT BK	2200153	10
Width: 108 mm	UM-PRO 108 FOOT BK	2200157	10
Width: 122 mm	UM-PRO 122 FOOT BK	2200160	10
PE contact , for snapping into the lateral elements			
Version for top PCB level L1	UM-PRO PE CONTACT L1	2200161	20
Version for middle PCB level L2	UM-PRO PE CONTACT L2	2200162	20
Version for bottom PCB level L3	UM-PRO PE CONTACT L3	2200163	20
Fixing for PCBs			
Version for top PCB L1, lateral, black	UM-PRO PCB S-LOCK BK	2200168	100
Version for top PCB L1, central, black	UM-PRO PCB C-LOCK L1 BK	2200164	50
Version for middle PCB L2, central, black	UM-PRO PCB C-LOCK L2 BK	2200165	50
Version for bottom PCB L3, central, black	UM-PRO PCB C-LOCK L3 BK	2200166	50
Mounting flange , for direct wall mounting, color: black	UM-PRO MOUNT BK	2200171	10
Self-adhesive marker strips , unprinted, white, continuous, height: 5 mm, 1 roll = 90 mm	SK 5,0 WH:REEL	0805221	1
Base strip , for the cross connection of modules, nominal current: 8 A, rated voltage (III/2): 160 V, number of positions: 12, pitch: 3.81 mm, color: green, contact surface: tin, mounting type: soldering	IMC 1,5/12-ST-3,81	1862674	50

3.3 Order key

Order key for press-drawn section

Quantity	Order No.	Press-drawn section width	Length [cm]	Color
1	2200148	UM-PRO 72	22.5	GY7035
		UM-PRO 72 = 72 mm	Min. 3.0 cm	GY7035 = Light gray
		UM-PRO 108 = 108 mm	Max. 100.0 cm	
		UM-PRO 122 = 122 mm		

The **area available for assembly** is reduced by 3 mm at both edges of the press-drawn sections.

In order to determine the **length of the press-drawn section**, subtract 1.62 cm from the PCB length.

The **overall length of the module** is equal to the PCB length plus 4 mm (for the lateral elements).

Ordering example:

For a PCB of 160 x 107.5 x 1.5 mm, the profile length is:

160 mm - 16.2 mm = 143.8 mm

2200148 / UM-PRO 108 / 14.4 / GY7035

Order key for the covering hood

Quantity	Order No.	Width of cover [mm]	Length [cm]
1	2200311	AU 73	8.4
	2200310	AU N73 = 73 mm	Min. 3.0 cm
	2200311	AU 73 = 73 mm	Max. 100.0 cm
	2200312	AU 92 = 92 mm	

4 Technical data

General data

Housing material	Polyamide
Ambient temperature (operation)	-40°C ... +100°C
Inflammability class according to UL 94	V0

5 Dimensions



The 3D housing data can be found at phoenixcontact.net/products.

5.1 Dimensions of the press-drawn sections

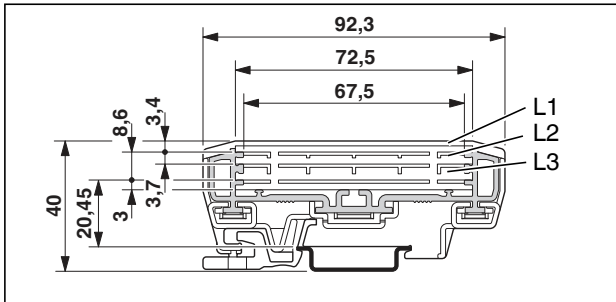


Figure 7 Dimensions of UM-PRO 72

The PCB can be installed at three different heights (L1, L2, and L3).

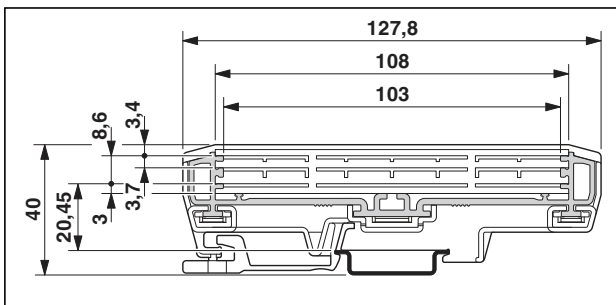


Figure 8 Dimensions of UM-PRO 108

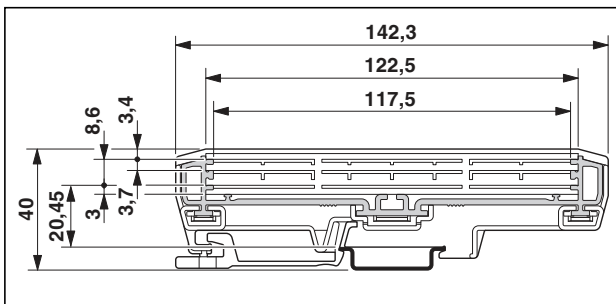


Figure 9 Dimensions of UM-PRO 122

5.2 Dimensions of the covering hoods

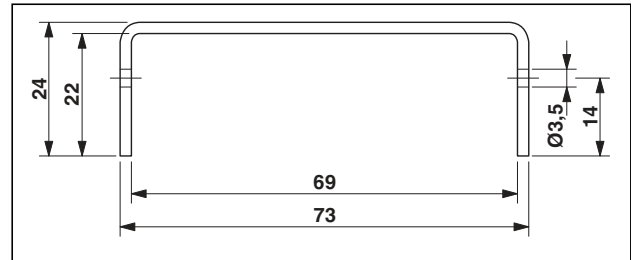


Figure 10 Dimensions of UM-PRO A/U N73 CM

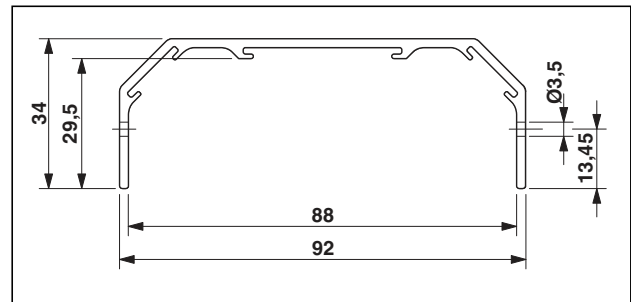


Figure 11 Dimensions of UM-PRO A/U 92 CM

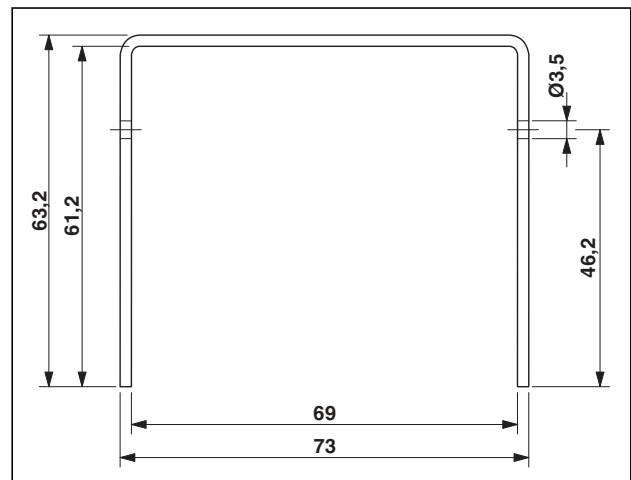


Figure 12 Dimensions of UM-PRO A/U 73 CM

6 PCB dimensions

6.1 Base PCB L1 (top level)

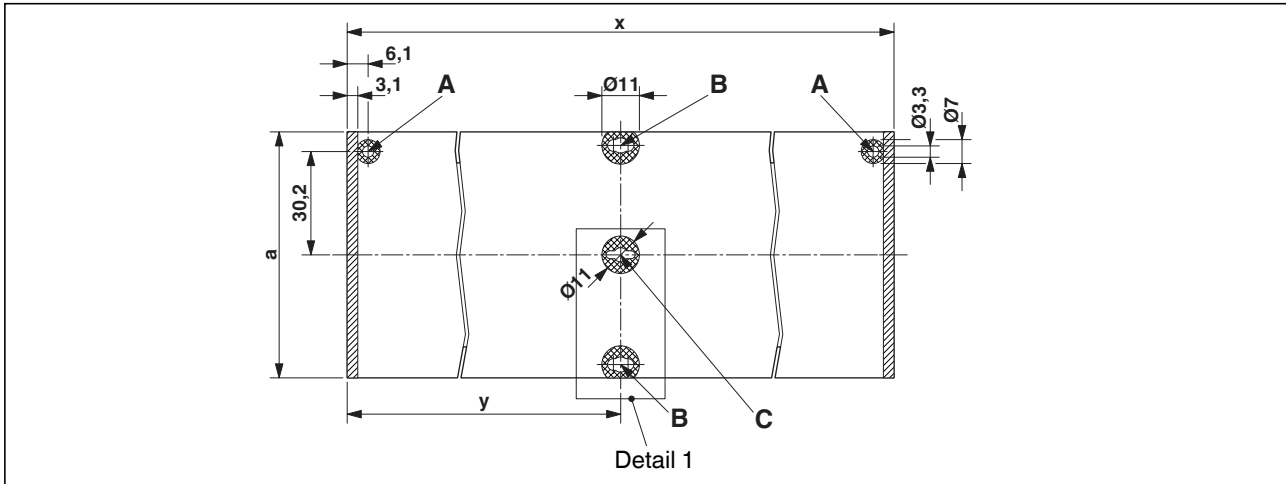


Figure 13 Base PCB L1, component side

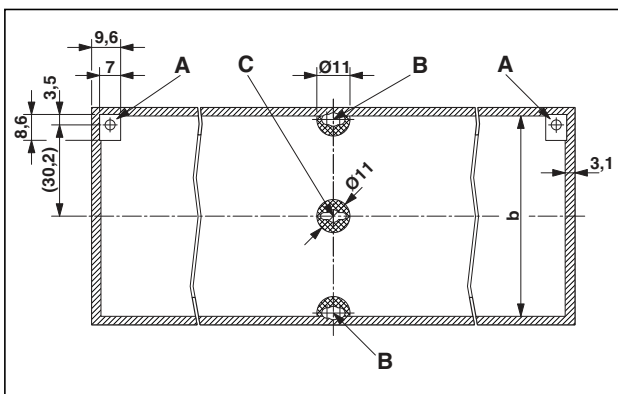


Figure 14 Base PCB L1, bottom

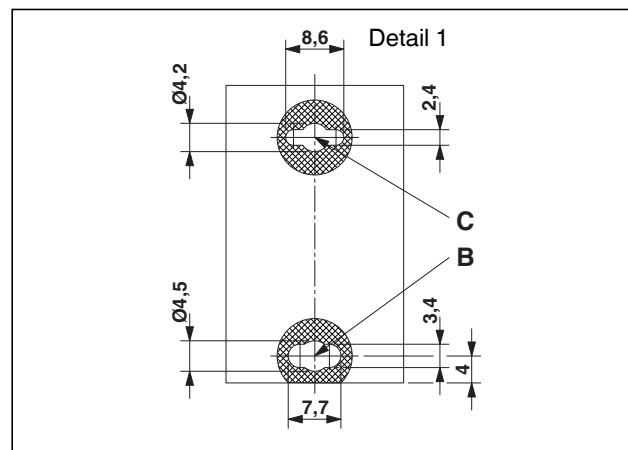



Figure 15 Cutouts for fixing

PCB thickness	1.4 ... 1.8 mm
	Keep-out zone, no components at these positions
A	Drill hole for PE contact (optional)
B	Cutout for lateral fixing of PCBs (UM-PRO PCB S-Lock)
C	Cutout for central fixing of PCBs (UM-PRO PCB C-Lock)
y	Position of the cutout for fixing [at least 8.6 mm, maximum x minus 8.6 mm]

Dimensions for	a	b	x
UM-PRO 72	72	66.4	Length of the PCB
UM-PRO 108	107.5	101.9	
UM-PRO 122	122	116.4	

6.2 Base PCB L2 + L3 (middle and bottom level)

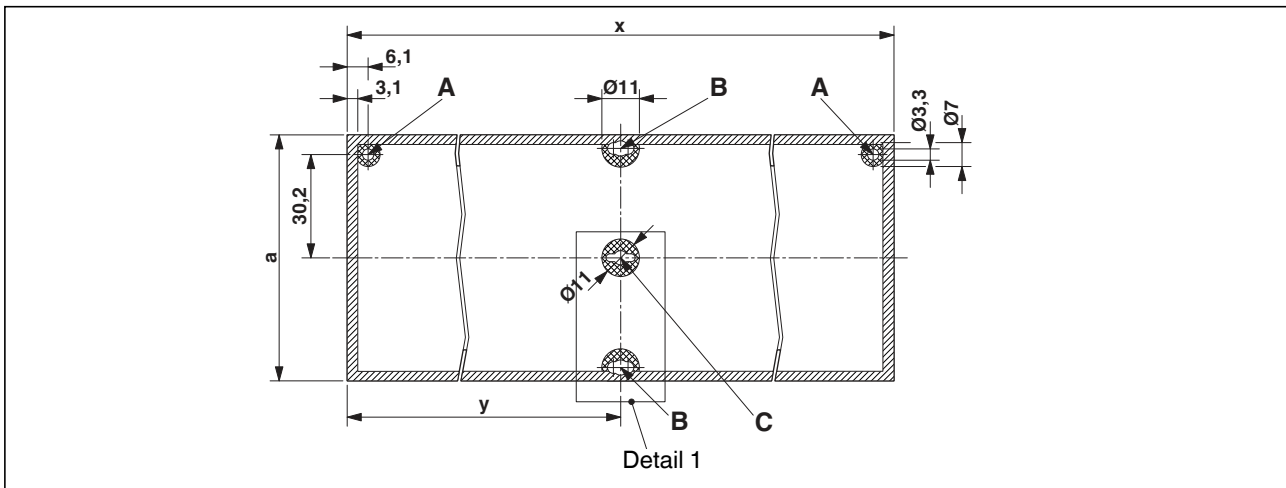


Figure 16 Base PCB L2 + L3, component side

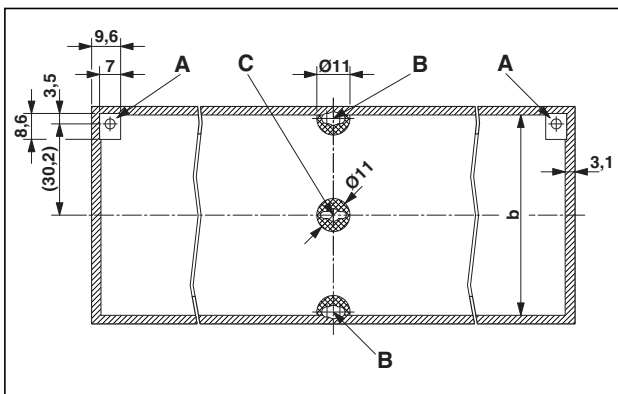


Figure 17 Base PCB L2 + L3, bottom

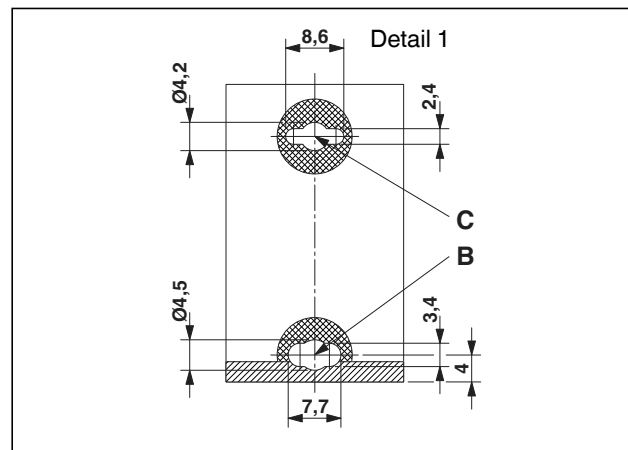



Figure 18 Cutouts for fixing

PCB thickness	1.4 ... 1.8 mm
	Keep-out zone, no components at these positions
A	Drill hole for PE contact (optional)
B	Cutout for lateral fixing of PCBs (UM-PRO PCB S-Lock)
C	Cutout for central fixing of PCBs (UM-PRO PCB C-Lock)
y	Position of the cutout for fixing [at least 8.6 mm, maximum: Length of the PCB minus 8.6 mm]

Dimensions for	a	b	x
UM-PRO 72	72	66.4	Length of the PCB
UM-PRO 108	107.5	101.9	
UM-PRO 122	122	116.4	

6.3 Drilling diagram for base PCB L3 with bus connector

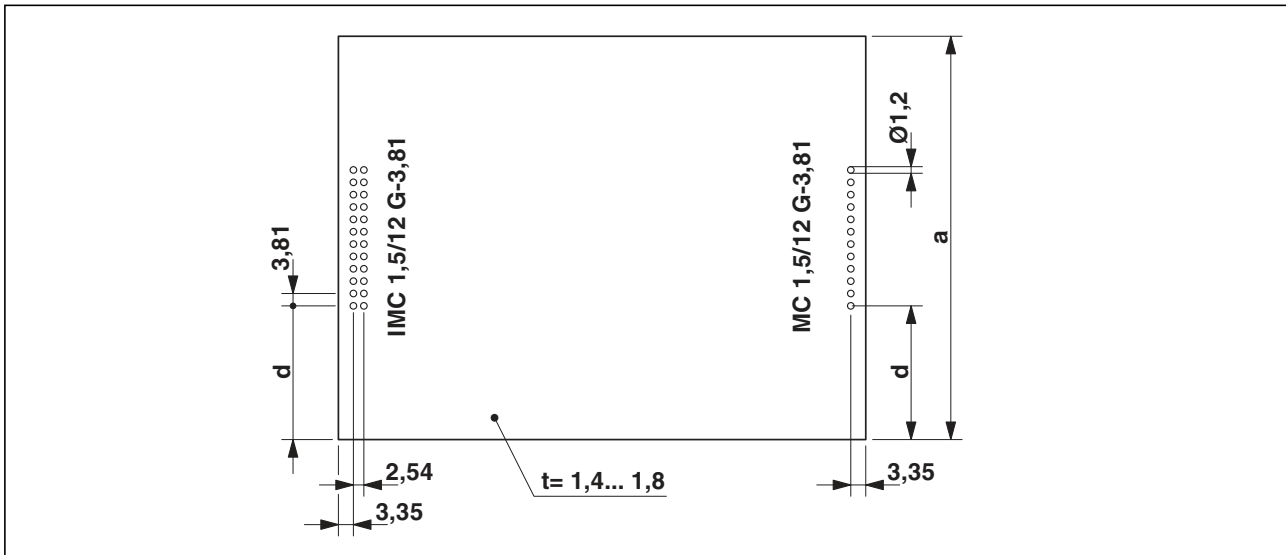


Figure 19 Base strip 1862674 (placement example)

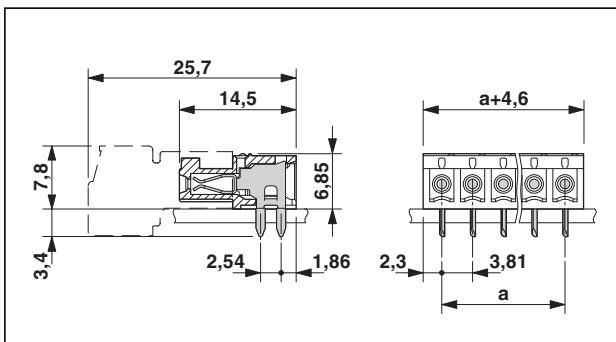


Figure 20 Dimensions of base strip 1862674

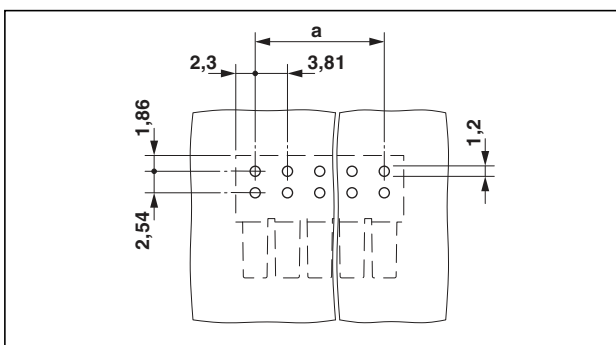


Figure 21 Drilling diagram for base strip 1862674

IMC 1,5/12-G-3,81 - 1862674

Dimensions / positions

Length x height	14.5 x 6.85 mm
Pitch	3.81 mm
Dimension a	41.91 mm
Number of positions	12
Pin dimensions	0.8 x 0.8 mm
Pin spacing	2.54 mm
Hole diameter	1.2 mm

Technical data

Insulation material group	I
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV
Rated voltage (III/3)	160 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	320 V
Connection according to standard	EN-VDE
Nominal current I_N	8 A
Maximum load current	8 A
Insulation material	PA
Inflammability class according to UL 94	V0
Color	Green

6.4 Drilling diagram for base PCB with covering hood and lateral element

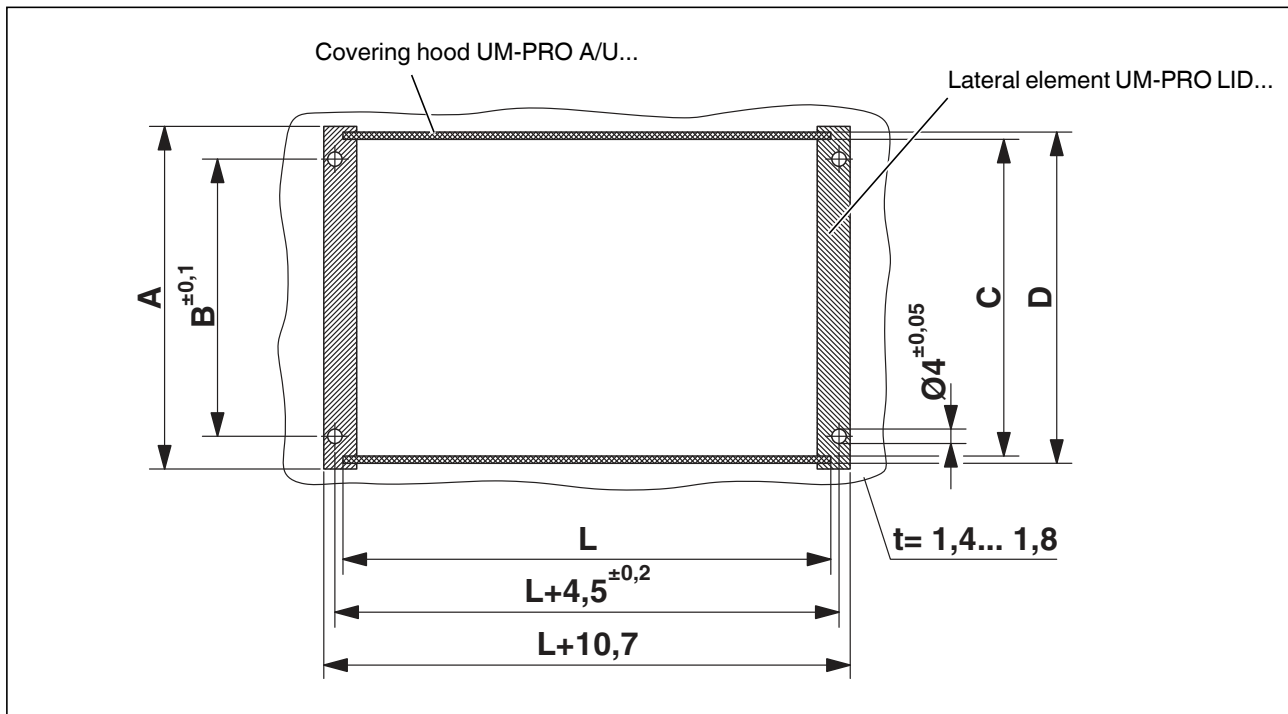


Figure 22 Drilling diagram for the base PCB with covering hood and UM-PRO LID... lateral element

PCB thickness 1.4 ... 1.8 mm



Keep-out zone, no components at these positions

Dimensions for	A	B	C	D	L
UM-PRO LID-73N BK	76 mm	58 mm	69 mm	73 mm	Length of the PCB
UM-PRO LID-73 BK	76 mm	58 mm	69 mm	73 mm	
UM-PRO LID-92 BK	95 mm	77 mm	88 mm	92 mm	

7 Mounting

7.1 PCBs in the covering hood – vertical



NOTE: A maximum of four PCBs can be mounted.

Attaching the lateral elements

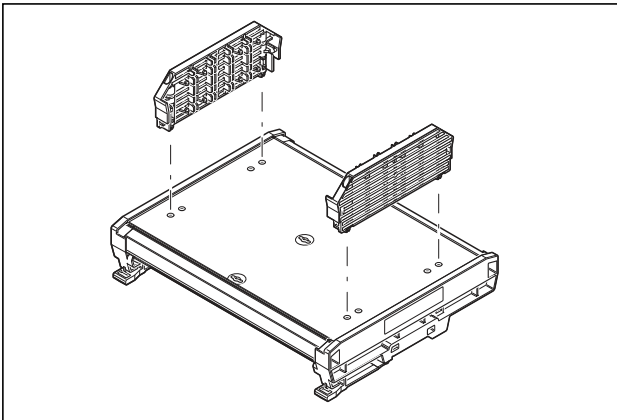


Figure 23 Attaching the lateral elements

- Attach the lateral elements to the base PCB using two security elements.

Mounting the PCBs

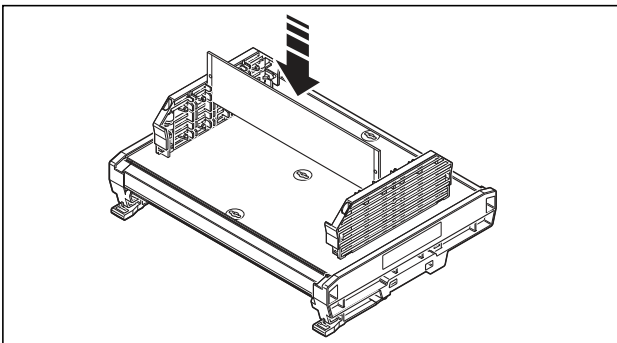


Figure 24 PCBs, vertical

- Insert the PCB so that it latches into the lateral elements.

7.2 PCBs in the covering hood – horizontal



NOTE: A maximum of two PCBs can be mounted.

Mounting the PCBs

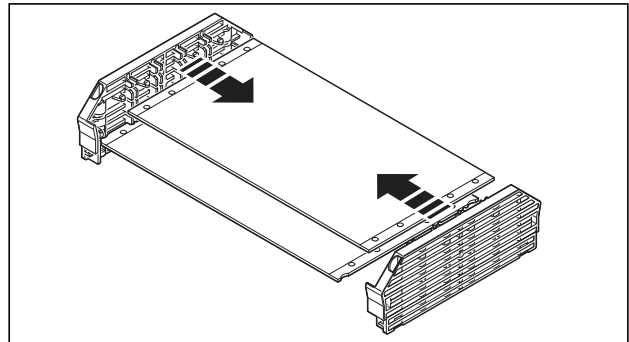


Figure 25 PCBs, horizontal

- Latch the PCB to the lateral elements.

Attaching the lateral elements

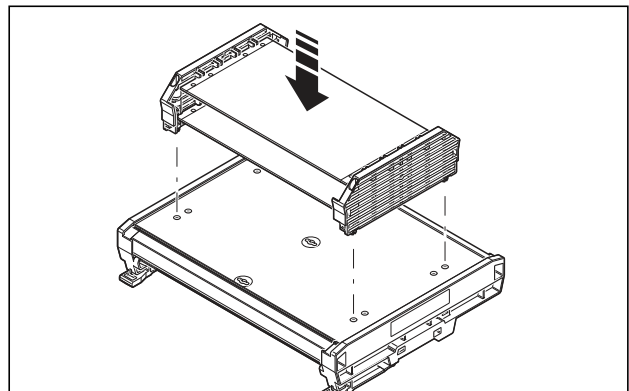


Figure 26 Attaching the lateral elements

- Attach the lateral elements to the base PCB using two security elements.

7.3 Mounting the covering hood

- Attach the lateral elements with or without PCBs (see 7.1 or 7.2).

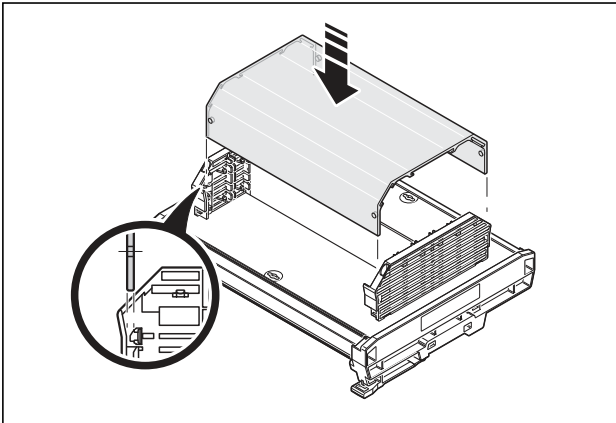


Figure 27 Fitting the covering hood

- Fit the covering hood so that it engages with a click.

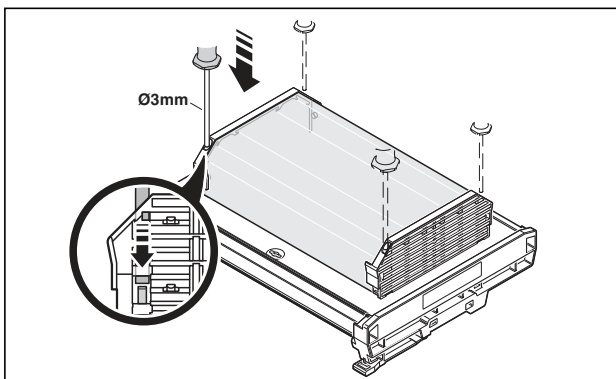


Figure 28 Latching the covering hood

Recommended tool: prong \varnothing 3 mm.

- To latch the lateral elements, push the four security elements into the base PCB.

7.4 Removing the covering hood

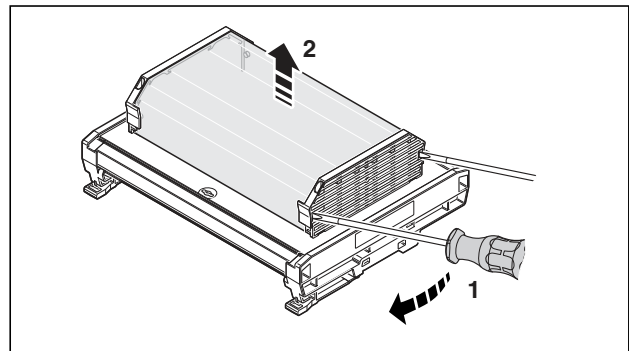


Figure 29 Removing the covering hood

- To remove the covering hood, first lever each latch out of the four bore holes.

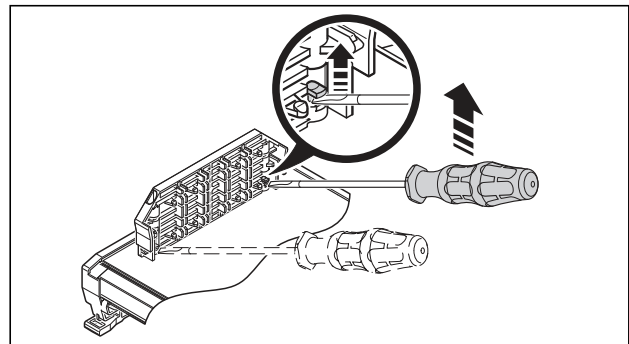


Figure 30 Removing the lateral elements

- To remove the lateral elements, first lever each latch out of the four bore holes.