EH...F series electronics housings
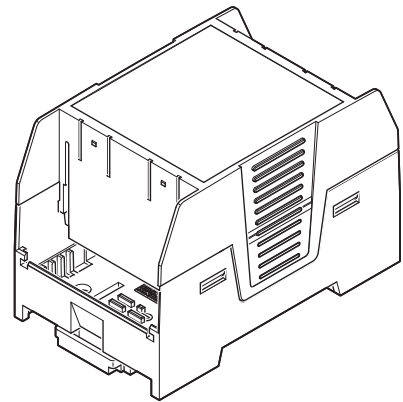
EH...F series electronics housings for universal use, flat design

Data sheet
106461_en_01

1   Description

The electronics housings of the EH...F series consist of a lower housing part that can be combined with three different housing covers. The housing is available in seven overall widths.

The housing covers are snapped onto the lower housing part. They are available with connection technology openings either on one side or on both sides. Closed housing covers are also available. They can be provided with customer-specific openings.

The design as modular electronics housing ensures shock and contamination-proof accommodation of electronics.

Different connection technologies for the PCBs can be integrated in the housing. The PCBs can be mounted horizontally. They also have a large assembly area.

The housings can be snapped onto symmetrical DIN rails according to EN 60715. Wall mounting is also possible.

The housings are available in two material versions, ABS and ABS-PC. The material versions are approved for the flammability ratings HB (ABS) or V0 (ABS-PC) according to UL94.

The housing covers are provided with integrated marking fields for equipment identification.

Figure 1   Housing covers and lower housing part
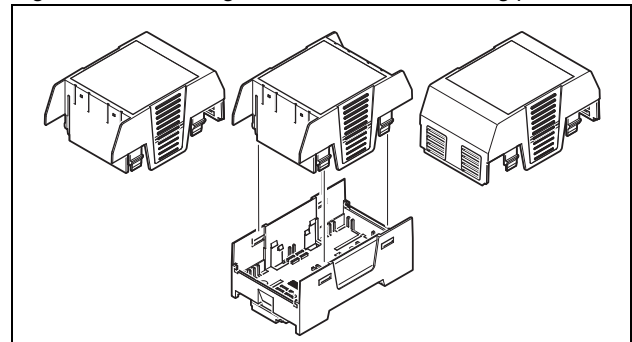
ℹ   3D housing data can be found at phoenixcontact.net/products.

ℹ   Make sure you always use the latest documentation.
The EH... series electronics housings are available in tall and flat design.
The data sheet for the flat design, EH...F, can be found at phoenixcontact.net/qr/2200665.
The data sheet for the tall design, EH..., can be found at phoenixcontact.net/qr/2201248.

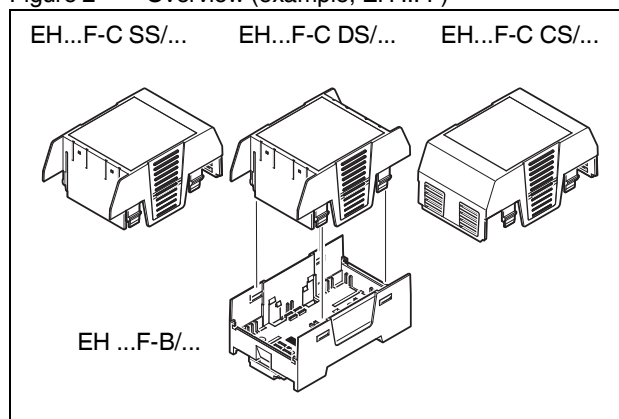ℹ   This data sheet is valid for all products listed from Page 3.

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2   Overview of the EH...F products

Figure 2   Overview (example, EH ... F)

EH...F-C SS/...   EH...F-C DS/...   EH...F-C CS/...

EH ...F-B/...

3   Ordering data

Electronics housings with a width of 22.5 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 22.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 22,5 F-B/ABS GY7035	2200665	10
Material: ABS; color: black, similar to RAL 9005	EH 22,5 F-B/ABS BK9005	2200666	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5 F-B/ABS-PC GY7035	1071148	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5 F-B/ABS-PC BK9005	1071149	10
Housing cover for PCB connection on one side, width 22.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 22,5 F-C SS/ABS GY7035	2200674	10
Material: ABS; color: black, similar to RAL 9005	EH 22,5 F-C SS/ABS BK9005	2201452	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5 F-C SS/ABS-PC GY7035	1071151	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5 F-C SS/ABS-PC BK9005	1074972	10
Housing cover for PCB connection on two sides, width 22.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 22,5 F-C DS/ABS GY7035	2201453	10
Material: ABS; color: black, similar to RAL 9005	EH 22,5 F-C DS/ABS BK9005	2201456	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5 F-C DS/ABS-PC GY7035	1034687	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5 F-C DS/ABS-PC BK9005	1074971	10
Housing cover, closed, width 22.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 22,5 F-C CS/ABS GY7035	2201653	10
Material: ABS; color: black, similar to RAL 9005	EH 22,5 F-C CS/ABS BK9005	2201765	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5 F-C CS/ABS-PC GY7035	1074973	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5 F-C CS/ABS-PC BK9005	1074970	10

Electronics housings with a width of 35 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 35 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 35 F-B/ABS GY7035	2201814	10
Material: ABS; color: black, similar to RAL 9005	EH 35 F-B/ABS BK9005	2201815	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 35 F-B/ABS-PC GY7035	1074877	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 35 F-B/ABS-PC BK9005	1074875	10
Housing cover for PCB connection on one side, width 35 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 35-C SS/ABS GY7035	2201820	10
Material: ABS; color: black, similar to RAL 9005	EH 35-C SS/ABS BK9005	2201821	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 35-C SS/ABS-PC GY7035	1069978	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 35-C SS/ABS-PC BK9005	1069992	10
Housing cover for PCB connection on two sides, width 35 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 35 F-C DS/ABS GY7035	2201826	10
Material: ABS; color: black, similar to RAL 9005	EH 35 F-C DS/ABS BK9005	2201827	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 35 F-C DS/ABS-PC GY7035	1074870	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 35 F-C DS/ABS-PC BK9005	1074857	10
Housing cover, closed, width 35 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 35 F-C CS/ABS GY7035	2201832	10
Material: ABS; color: black, similar to RAL 9005	EH 35 F-C CS/ABS BK9005	2201833	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 35 F-C CS/ABS-PC GY7035	1074866	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 35 F-C CS/ABS-PC BK9005	1074849	10

Electronics housings with a width of 45 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 45 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 45 F-F-B/ABS GY7035	2200474	10
Material: ABS; color: black, similar to RAL 9005	EH 45 F-F-B/ABS BK9005	2200492	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 45 F-B/ABS-PC GY7035	1074969	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 45 F-B/ABS-PC BK9005	1074968	10
Housing cover for PCB connection on one side, width 45 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 45 F-C SS/ABS GY7035	2200789	10
Material: ABS; color: black, similar to RAL 9005	EH 45 F-C SS/ABS BK9005	2201448	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 45 F-C SS/ABS-PC GY7035	1074967	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 45 F-C SS/ABS-PC BK9005	1074964	10
Housing cover for PCB connection on two sides, width 45 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 45 F-C DS/ABS GY7035	2201770	10
Material: ABS; color: black, similar to RAL 9005	EH 45 F-C DS/ABS BK9005	2201771	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 45 F-C DS/ABS-PC GY7035	1074966	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 45 F-C DS/ABS-PC BK9005	1074963	10
Housing cover, closed, width 45 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 45 F-C CS/ABS GY7035	2201769	10
Material: ABS; color: black, similar to RAL 9005	EH 45 F-C CS/ABS BK9005	2201766	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 45 F-C CS/ABS-PC GY7035	1074965	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 45 F-C CS/ABS-PC BK9005	1074956	10

Electronics housings with a width of 52.5 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 52.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 52,5 F-F-B/ABS GY7035	2201816	10
Material: ABS; color: black, similar to RAL 9005	EH 52,5 F-F-B/ABS BK9005	2201817	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 52,5 F-B/ABS-PC GY7035	1074838	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 52,5 F-B/ABS-PC BK9005	1074813	10
Housing cover for PCB connection on one side, width 52.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 52,5 F-C SS/ABS GY7035	2201822	10
Material: ABS; color: black, similar to RAL 9005	EH 52,5 F-C SS/ABS BK9005	2201823	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 52,5 F-C SS/ABS-PC GY7035	1074796	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 52,5 F-C SS/ABS-PC BK9005	1074788	10
Housing cover for PCB connection on two sides, width 52.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 52,5 F-C DS/ABS GY7035	2201829	10
Material: ABS; color: black, similar to RAL 9005	EH 52,5 F-C DS/ABS BK9005	2201828	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 52,5 F-C DS/ABS-PC GY7035	1074802	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 52,5 F-C DS/ABS-PC BK9005	1074755	10
Housing cover, closed, width 52.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 52,5 F-C CS/ABS GY7035	2201835	10
Material: ABS; color: black, similar to RAL 9005	EH 52,5 F-C CS/ABS BK9005	2201834	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 52,5 F-C CS/ABS-PC GY7035	1074794	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 52,5 F-C CS/ABS-PC BK9005	1074754	10

Electronics housings with a width of 67.5 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 67.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 67,5 F-F-B/ABS GY7035	2200519	10
Material: ABS; color: black, similar to RAL 9005	EH 67,5 F-F-B/ABS BK9005	2200520	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 67,5 F-B/ABS-PC GY7035	1074952	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 67,5 F-B/ABS-PC BK9005	1074951	10
Housing cover for PCB connection on one side, width 67.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 67,5 F-C SS/ABS GY7035	2201097	10
Material: ABS; color: black, similar to RAL 9005	EH 67,5 F-C SS/ABS BK9005	2201447	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 67,5 F-C SS/ABS-PC GY7035	1074949	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 67,5 F-C SS/ABS-PC BK9005	1074942	10
Housing cover for PCB connection on two sides, width 67.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 67,5 F-C DS/ABS GY7035	2201773	10
Material: ABS; color: black, similar to RAL 9005	EH 67,5 F-C DS/ABS BK9005	2201772	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 67,5 F-C DS/ABS-PC GY7035	1074950	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 67,5 F-C DS/ABS-PC BK9005	1074945	10
Housing cover, closed, width 67.5 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 67,5 F-C CS/ABS GY7035	2201774	10
Material: ABS; color: black, similar to RAL 9005	EH 67,5 F-C CS/ABS BK9005	2201775	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 67,5 F-C CS/ABS-PC GY7035	1074947	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 67,5 F-C CS/ABS-PC BK9005	1074946	10

Electronics housings with a width of 70 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 70 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 70 F-F-B/ABS GY7035	2201819	10
Material: ABS; color: black, similar to RAL 9005	EH 70 F-F-B/ABS BK9005	2201818	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 70 F-B/ABS-PC GY7035	1074753	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 70 F-B/ABS-PC BK9005	1074752	10
Housing cover for PCB connection on one side, width 70 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 70 F-C SS/ABS GY7035	2201825	10
Material: ABS; color: black, similar to RAL 9005	EH 70 F-C SS/ABS BK9005	2201824	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 70 F-C SS/ABS-PC GY7035	1074751	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 70 F-C SS/ABS-PC BK9005	1074749	10
Housing cover for PCB connection on two sides, width 70 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 70 F-C DS/ABS GY7035	2201830	10
Material: ABS; color: black, similar to RAL 9005	EH 70 F-C DS/ABS BK9005	2201831	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 70 F-C DS/ABS-PC GY7035	1074750	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 70 F-C DS/ABS-PC BK9005	1074748	10
Housing cover, closed, width 70 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 70 F-C CS/ABS GY7035	2201836	10
Material: ABS; color: black, similar to RAL 9005	EH 70 F-C CS/ABS BK9005	2201837	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 70 F-C CS/ABS-PC GY7035	1074747	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 70 F-C CS/ABS-PC BK9005	1074746	10

Electronics housings with a width of 90 mm

Description	Type	Item No.	Pcs./Pkt.
Lower housing part with vents and base latch for DIN rail mounting, width 90 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 90 F-F-B/ABS GY7035	2200663	10
Material: ABS; color: black, similar to RAL 9005	EH 90 F-F-B/ABS BK9005	2200664	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 90 F-B/ABS-PC GY7035	1074941	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 90 F-B/ABS-PC BK9005	1074938	10
Housing cover for PCB connection on one side, width 90 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 90 F-C SS/ABS GY7035	2201282	10
Material: ABS; color: black, similar to RAL 9005	EH 90 F-C SS/ABS BK9005	2201388	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 90 F-C SS/ABS-PC GY7035	1074935	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 90 F-C SS/ABS-PC BK9005	1075103	10
Housing cover for PCB connection on two sides, width 90 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 90 F-C DS/ABS GY7035	2201778	10
Material: ABS; color: black, similar to RAL 9005	EH 90 F-C DS/ABS BK9005	2201779	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 90 F-C DS/ABS-PC GY7035	1074934	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 90 F-C DS/ABS-PC BK9005	1074882	10
Housing cover, closed, width 90 mm			
Material: ABS; color: light gray, similar to RAL 7035	EH 90 F-C CS/ABS GY7035	2201777	10
Material: ABS; color: black, similar to RAL 9005	EH 90 F-C CS/ABS BK9005	2201776	10
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 90 F-C CS/ABS-PC GY7035	1074933	10
Material: ABS-PC; color: black, similar to RAL 9005	EH 90 F-C CS/ABS-PC BK9005	1074880	10

Accessories

Description	Type	Item No.	Pcs./Pkt.
Filler plug for unoccupied terminal points, width 22.5 mm			
Suitable for **EH 45 F**, **EH 67,5 F**, and **EH 90 F**			
Without vents			
Material: ABS; color: light gray, similar to RAL 7035	EH 22,5-FP/ABS GY7035	2201843	50
Material: ABS; color: black, similar to RAL 9005	EH 22,5-FP/ABS BK9005	2201842	50
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5-FP/ABS-PC GY7035	1071139	50
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5-FP/ABS-PC BK9005	1071144	50
With vents			
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 22,5 F-FP/ABS-PC GY7035	1074622	50
Material: ABS-PC; color: black, similar to RAL 9005	EH 22,5 F-FP/ABS-PC BK9005	1074664	50
Filler plug for unoccupied terminal points, width 17.5 mm			
Suitable for **EH 35 F**, **EH 52,5 F**, and **EH 70 F**			
Without vents			
Material: ABS; color: light gray, similar to RAL 7035	EH 17,5-FP/ABS GY7035	2201840	50
Material: ABS; color: black, similar to RAL 9005	EH 17,5-FP/ABS BK9005	2201841	50
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 17,5-FP/ABS-PC GY7035	1071142	50
Material: ABS-PC; color: black, similar to RAL 9005	EH 17,5-FP/ABS-PC BK9005	1071147	50
With vents			
Material: ABS-PC; color: light gray, similar to RAL 7035	EH 17,5 F-FP/ABS-PC GY7035	1074611	50
Material: ABS-PC; color: black, similar to RAL 9005	EH 17,5 F-FP/ABS-PC BK9005	1074614	50
Thermal transfer label, material provided on rolls (1 roll = 200 labels), suitable for the marking field on the side of the lower housing part	EML (44x53)R-ME	0828156	1

4   Material

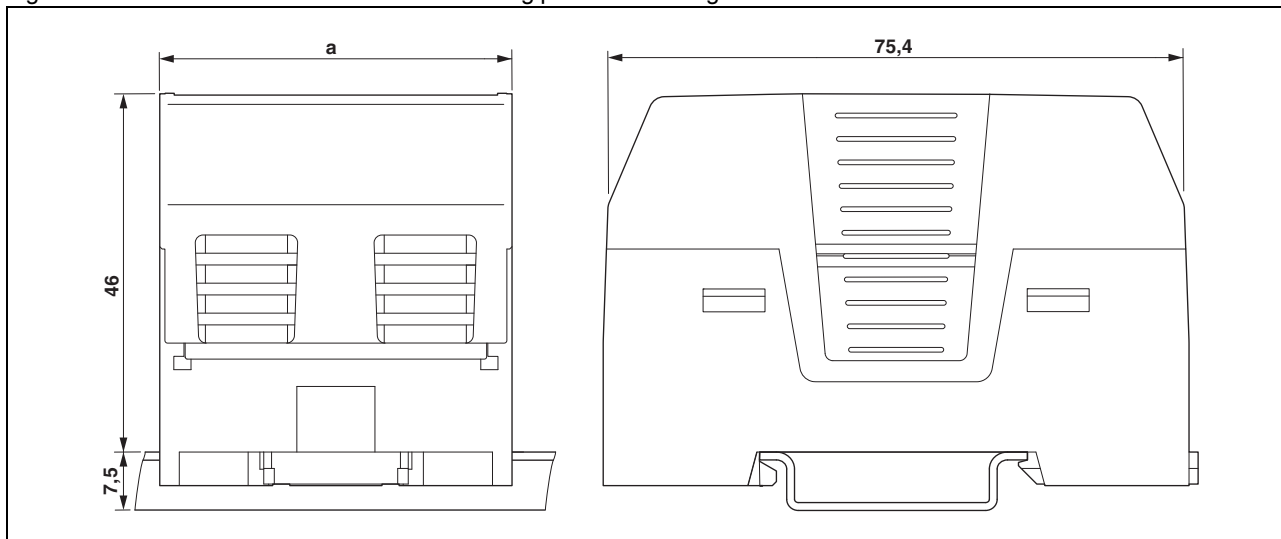| Housing design	
Material: ABS	
Flammability rating in accordance with UL 94	HB
Material: ABS-PC	
Flammability rating in accordance with UL 94	V0

5 External dimensions

5.1 Lower housing part with housing cover

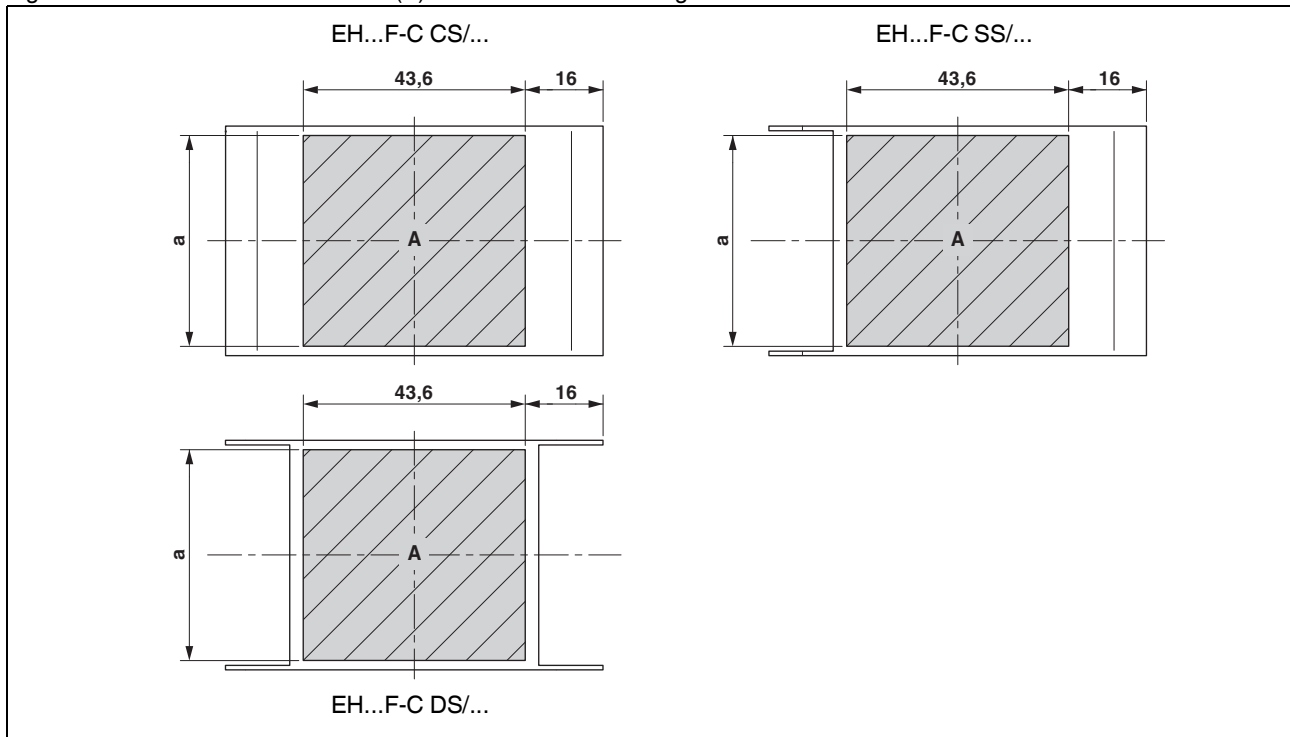Figure 3 External dimensions of lower housing part with housing cover

Dimensions for	a
EH 22,5 F	22.7 mm
EH 35 F	35.7 mm
EH 45 F	45.2 mm
EH 52,5 F	52.7 mm
EH 67,5 F	67.7 mm
EH 70 F	70.2 mm
EH 90 F	90.2 mm

5.2 Housing cover (breakouts and marking field)

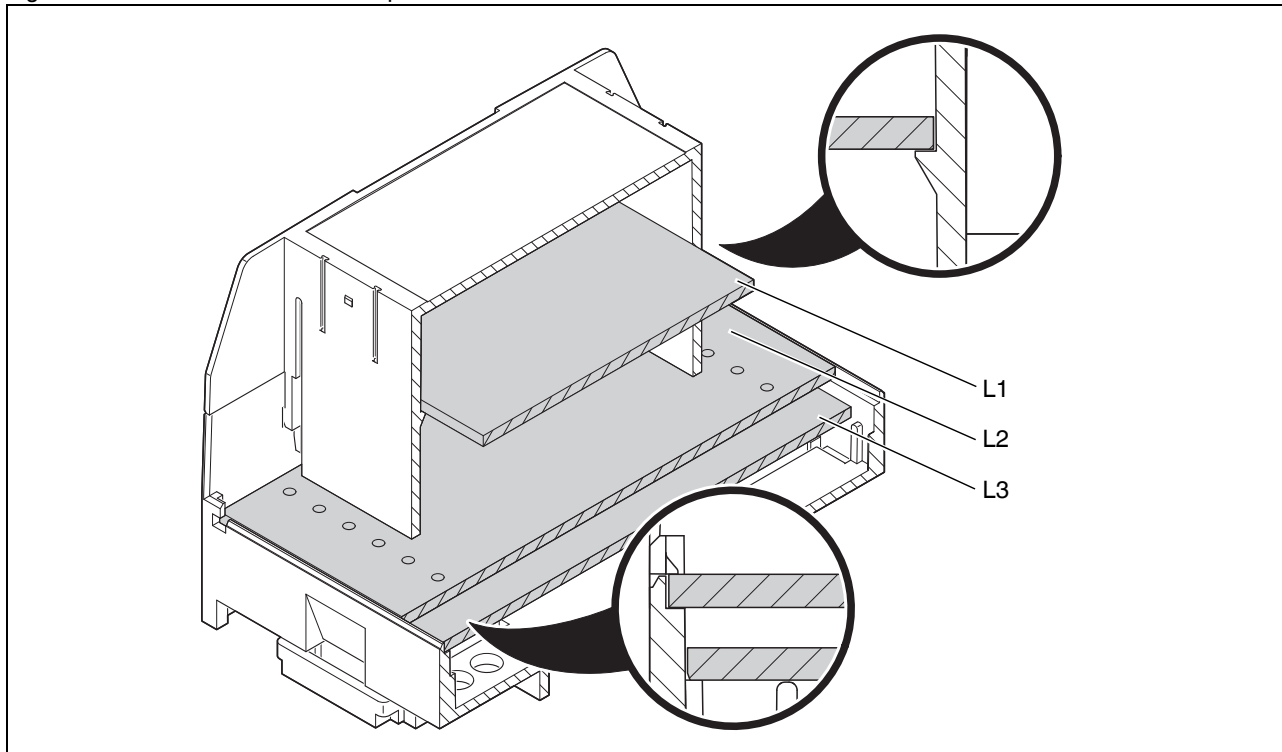Figure 4   Maximum useable area (A) for breakouts or markings

Dimensions for	a
EH 22,5 F	18.9 mm
EH 35 F	31.4 mm
EH 45 F	41.4 mm
EH 52,5 F	48.9 mm
EH 67,5 F	63.9 mm
EH 70 F	66.4 mm
EH 90 F	86.4 mm

6 PCB arrangement

6.1 PCB, horizontal, L1-L3

Figure 5   Horizontal installation options for the PCB

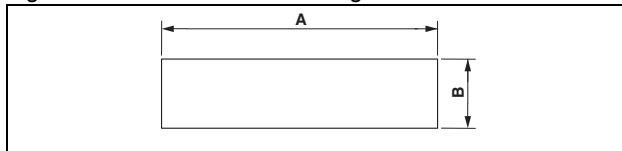## 6.2 Inner dimensions with L1-L3

Figure 6   Horizontal installation of the PCB
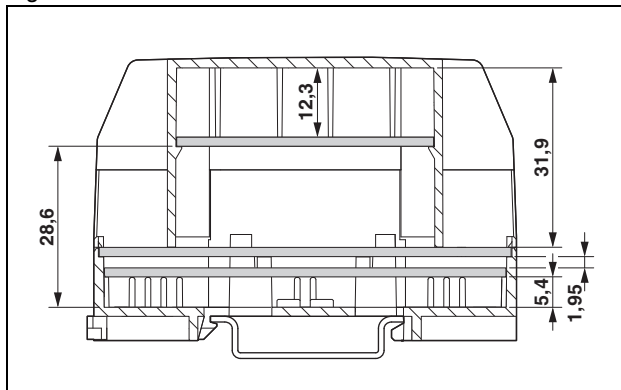
7 PCBs, dimensional drawings

7.1 PCB dimensions, horizontal, L1-L3
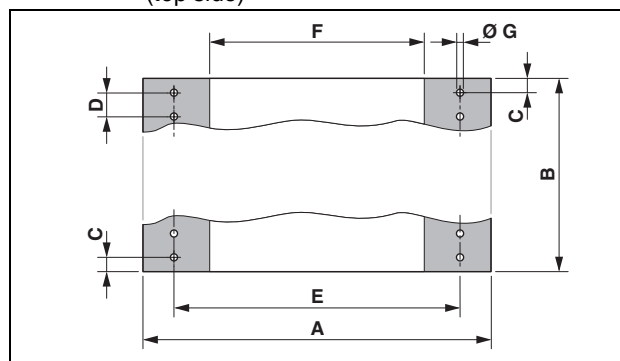
Figure 7 Dimensional drawing of horizontal PCB

† for connection technology MKDSH, MSTBV, MCV, and PST

7.2 Connection technology with housing cover DS

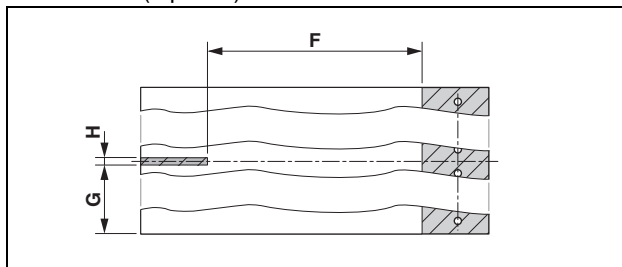Figure 8 Connection technology with housing cover DS (top side)

	Dimensions for	A	B
EH 22,5 F	PCB L1	45.6 mm	18.3 mm
	PCB L2 *	73.1 mm	18.5 mm
	PCB L3†	71.0 mm	18.5 mm
EH 35 F	PCB L1	45.6 mm	30.7 mm
	PCB L2 *	73.1 mm	31.0 mm
	PCB L3†	71.0 mm	31.0 mm
EH 45 F	PCB L1	45.6 mm	40.7 mm
	PCB L2 *	73.1 mm	41.0 mm
	PCB L3†	71.0 mm	41.0 mm
EH 52,5 F	PCB L1	45.6 mm	48.2 mm
	PCB L2 *	73.1 mm	48.5 mm
	PCB L3†	71.0 mm	48.5 mm
EH 67,5 F	PCB L1	45.6 mm	63.2 mm
	PCB L2 *	73.2 mm	63.5 mm
	PCB L3†	71.0 mm	63.5 mm
EH 70 F	PCB L1	45.6 mm	65.7 mm
	PCB L2 *	73.2 mm	66.0 mm
	PCB L3†	71.0 mm	66.0 mm
EH 90 F	PCB L1	45.6 mm	85.7 mm
	PCB L2 *	73.2 mm	86.0 mm
	PCB L3†	71.0 mm	86.0 mm

* for connection technology MKDS and PST

Connection technology	For connector	D	E	F	G
MKDS 3/...		5.08	60.80		1.4
MKKDSH 3/...		5	52.90		1.3
MSTBV 2,5 (5)	MVSTBW (5)		63.35		1.4
MSTBV 2,5 (5.08)	MVSTBW (5.08)		63.35	43.6	1.4
MSTBV 2,5 (5.08)	MSTB (5.08)	5.08	58.00		1.4
MSTBV 2,5 (5.08)	FKCT (5.08)		62.20		1.4
PST 1,3/...-5,0		5	55.50		1.5
MCV 1,3/...-G-3,81		3.81	59.30		1.4

	EH...	22,5 F		35 F		45 F		52,5 F		67,5 F		70 F		90 F	
Connection technology	For connector	C	*	C	*	C	*	C	*	C	*	C	*	C	*
MKDS 3/...		1.63		2.80		2.72		3.93		3.81		2.52		4.90	
MKKDSH 3/...		1.75		3.00		3.00		4.25		4.25		3.00		5.50	
MSTBV 2,5 (5)	MVSTBW (5)														
MSTBV 2,5 (5.08)	MVSTBW (5.08)		4		6		8		9		12		13		17
MSTBV 2,5 (5.08)	MSTB (5.08)	1.63		2.80		2.72		3.93		3.81		2.52		4.90	
MSTBV 2,5 (5.08)	FKCT (5.08)														
PST 1,3/...-5,0		1.75		3.00		3.00		4.25		4.25		5.50	12	5.50	
MCV 1,3/...-G-3,81		1.63	5	2.165	8	3.355	10	3.295	12	2.48	16	3.83	12	4.205	17

* Maximum no. of pos.

7.3 Connection technology with housing cover SS

Figure 9   Connection technology with housing cover SS (top side)

	F	**G**	**H**
EH 22,5 F	43.6 mm	–	–
EH 35 F	43.6 mm	14.80 mm	1.4 mm
EH 45 F	43.6 mm	19.50 mm	2.0 mm
EH 52,5 F	43.6 mm	23.30 mm	1.9 mm
EH 67,5 F	43.6 mm	30.75 mm	2.0 mm
EH 70 F	43.6 mm	32.00 mm	2.0 mm
EH 90 F	43.6 mm	42.00 mm	2.0 mm

7.5 Keep-out areas, lower side

Figure 11   Lower side for all PCBs (keep-out areas)
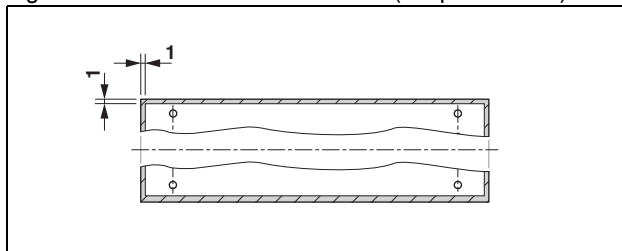
 Keep-out area, no components at these positions

7.4 Connection technology with housing cover CS

Figure 10   Connection technology with housing cover CS (top side)

8 Connection technology

H = horizontal Number of positions	GN = green BK = black GY7035 = light gray	PCB connection technology					
		PCB terminal block		Headers			
		5.08 mm pitch MKDS 3/…	5 mm pitch MKKDSH 3/…	5 mm pitch PST 1,3/…	5 mm pitch MSTBV 2,5/…	5.08 mm pitch MSTBV 2,5/…	3.81 mm pitch MCV 1,5/…
		See section 8.1	See section 8.4	See section 8.5	See section 8.2	See section 8.3	See section 8.6
EH 22,5 F							
H 4	GN	1712805	1721045		1753479	1758034	
	BK	1729069		1933202		1758801	
5	GN						1803455
EH 35 F							
H 6	GN	1701144	1721045		1753518	1758050	
	BK			1933228	1755286	1758788	
	GY7035					1703841	
8	GN						1803484
EH 45 F							
H 8	GN	1712708	1703283		1753550	1758076	
	BK	1871762		1933244	1755309	1759431	
	GY7035						
10	GN						1803507
EH 52,5 F							
H 9	GN	1707331			1753576	1758089	
	BK			1933257		1820742	
12	GN						1803523
EH 67,5 F							
H 12	GN	1714308			1753631	1758115	
	BK			1933286			
16	GN						1803565
EH 70 F							
H 13	GN				1753657	1758128	
	BK			1933299			
16	GN						1803565
EH 90 F							
H 17	GN				1753738	1758160	
	BK			1935556			

ℹ️ Other versions with different numbers of positions or in colors such as light gray or black can be provided on request.

8.1 PCB terminal block, soldered, pitch 5.08 for PCB L2

Assembly: soldering
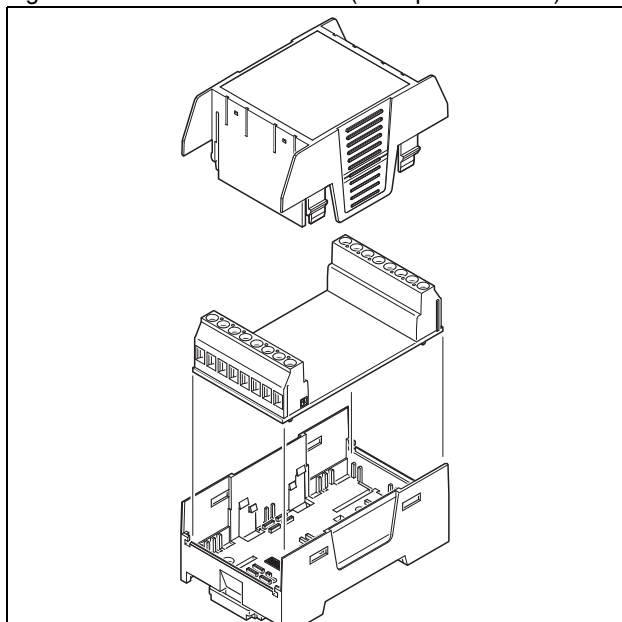
Figure 12   PCB terminal block (example: 1712708)

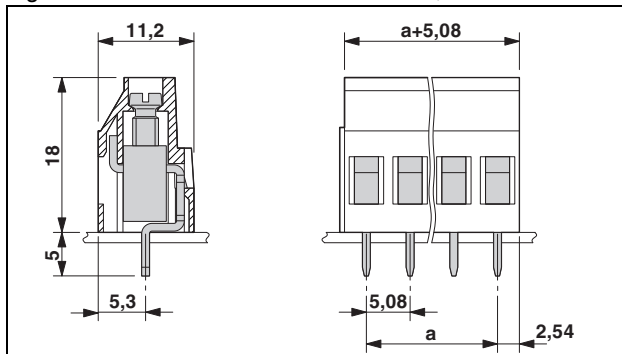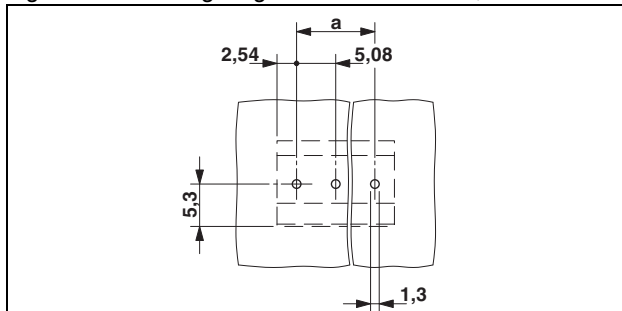Figure 13   Dimensions of MKDS 3/...-5,08

Figure 14   Drilling diagram of MKDS 3/...-5,08

MKDS 3/...-5,08

Dimensions	
Length	11.2 mm
Height	18 mm
Pitch	5.08 mm
Pin dimensions	0.9 mm x 0.9 mm
Drilling hole diameter	1.3 mm

Item		Dimension a	No. of pos.
MKDS 3/ 4-5,08	1712805	15.24 mm	4
MKDS 3/ 4-5,08 BK	1729069	15.24 mm	4
MKDS 3/ 6-5,08	1701144	25.40 mm	6
MKDS 3/ 8-5,08	1712708	35.56 mm	8
MKDS 3/ 8-5,08 BK	1871762	35.56 mm	8
MKDS 3/ 9-5,08	1707331	40.64 mm	9
MKDS 3/ 12-5,08	1714308	55.88 mm	12

Technical data	
Insulation material group	I
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Rated voltage (III/3)	250 V
Rated voltage (III/2)	400 V
Rated voltage (II/2)	630 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	24 A
Nominal cross-section	2.5 mm^2
Maximum load current, with a 4 mm^2 conductor cross-section	28 A
Insulating material	PA
Flammability rating in accordance with UL 94	V0
Solder pin surface	Sn
Internal cylindrical gauge	A3
Stripping length	8 mm
Screw thread	M3
Tightening torque, minimum	0.5 Nm
Tightening torque, maximum	0.6 Nm

8.2 Plug-in header, pitch 5, for PCB L3

Contact surface: tin. Assembly: soldering
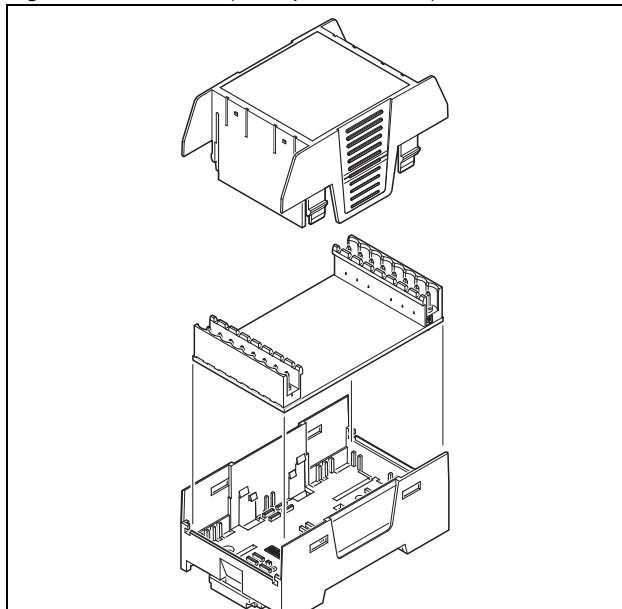
Figure 15   Header (example, 1753550)
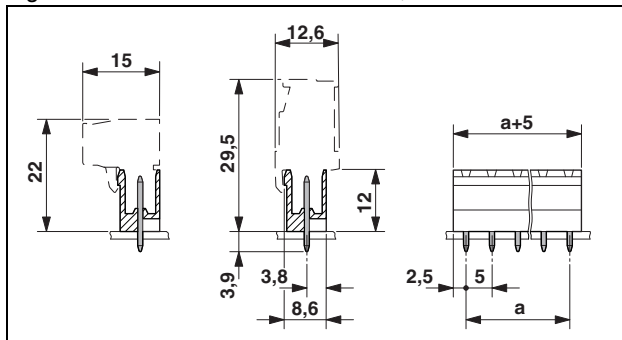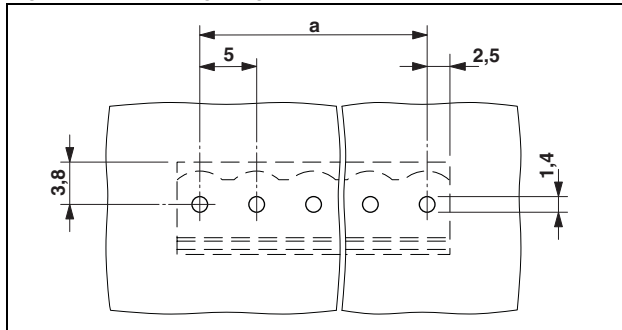

Figure 16   Dimensions of MSTBV 2,5/...-G

Figure 17   Drilling diagram of MSTBV 2,5/...-G

MSTBV 2,5/...-G

Dimensions	
Length	8.6 mm
Pitch	5 mm
Pin dimensions	1 mm x 1 mm
Drilling hole diameter	1.4 mm

Item		Dimension a	No. of pos.
MSTBV 2,5/ 4-G	1753479	15 mm	4
MSTBV 2,5/ 6-G	1753518	25 mm	6
MSTBV 2,5/ 6-G BK	1755286	25 mm	6
MSTBV 2,5/ 8-G	1753550	35 mm	8
MSTBV 2,5/ 8-G BK	1755309	35 mm	8
MSTBV 2,5/ 9-G	1753576	40 mm	9
MSTBV 2,5/12-G	1753631	55 mm	12
MSTBV 2,5/13-G	1753657	60 mm	13
MSTBV 2,5/17-G	1753738	80 mm	17

Technical data	
Insulation material group	I
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Rated voltage (III/3)	320 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	630 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	12 A
Maximum load current	12 A
Insulating material	PA
Flammability rating in accordance with UL 94	V0

Suitable connectors
PCB connector with screw connection
MVSTBW 2,5/...-ST (pitch 5)
MVSTBW 2,5/...-STEH (pitch 5)
PCB connector with spring connection
FKCT 2,5/...-ST (pitch 5)

Accessories		
Keying cap for header pin	MSTB-BL,	1755477
Coding section	CR-MSTB,	1734401
Coding profile	CP-MSTB,	1734634

8.3   Plug-in header, pitch 5.08, for PCB L3

Contact surface: tin. Assembly: soldering
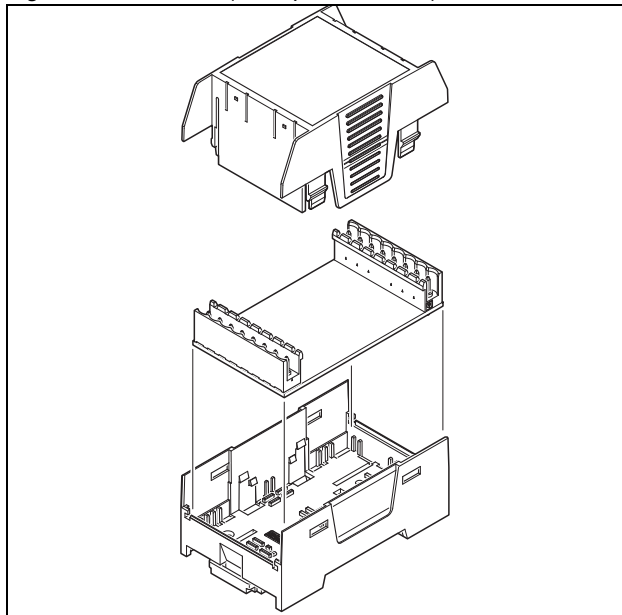
Figure 18   Header (example, 1758076)

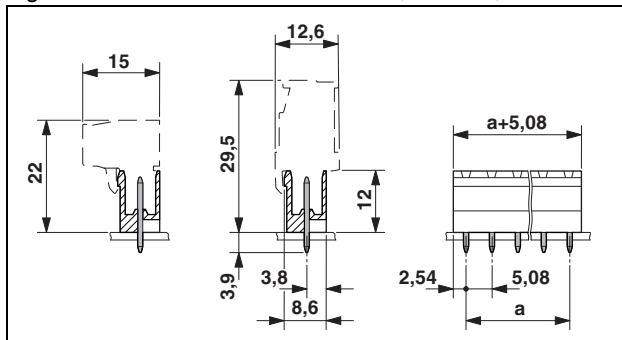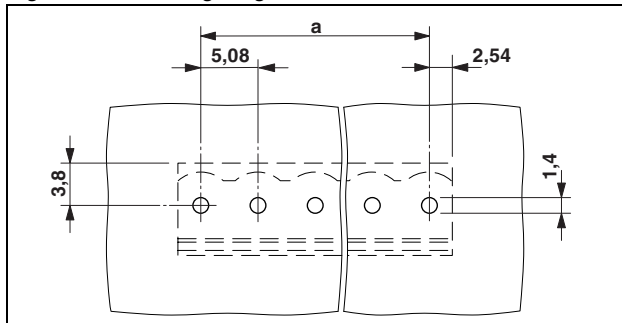Figure 19   Dimensions of MSTBV 2,5/...-G-5,08

Figure 20   Drilling diagram of MSTBV 2,5/...-G-5,08

MSTBV 2,5/...-G-5,08

Dimensions	
Length	8.6 mm
Pitch	5.08 mm
Pin dimensions	1 mm x 1 mm
Drilling hole diameter	1.4 mm

Item		Dimension a	No. of pos.
MSTBV 2,5/ 4-G-5,08	1758034	15.24 mm	4
MSTBV 2,5/ 4-G-5,08 BK	1758801	15.24 mm	4
MSTBV 2,5/ 6-G-5,08	1758050	25.40 mm	6
MSTBV 2,5/ 6-G-5,08 BK	1758788	25.40 mm	6
MSTBV 2,5/ 6-G-5,08 GY7035	1703841	25.40 mm	6
MSTBV 2,5/ 8-G-5,08	1758076	35.56 mm	8
MSTBV 2,5/ 8-G-5,08 BK	1759431	35.56 mm	8
MSTBV 2,5/ 9-G-5,08	1758089	40.64 mm	9
MSTBV 2,5/ 9-G-5,08 BK	1820742	40.64 mm	9
MSTBV 2,5/ 12-G-5,08	1758115	55.88 mm	12
MSTBV 2,5/ 13-G-5,08	1758128	60.96 mm	13
MSTBV 2,5/ 17-G-5,08	1758160	81.28 mm	17

Technical data	
Insulation material group	I
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Rated voltage (III/3)	320 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	630 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	12 A
Maximum load current	12 A
Insulating material	PA
Flammability rating in accordance with UL 94	V0

Suitable connectors	
PCB connector with screw connection	
MVSTBW 2,5/...-ST-5,08	
MVSTBW 2,5/...-STEH-5,08	
PCB connector with spring connection	
FKCT 2,5/...-ST-5,08	

Accessories	
Keying cap for header pin	MSTB-BL, 1755477
Coding section	CR-MSTB, 1734401
Coding profile	CP-MSTB, 1734634

8.4 PCB terminal block, soldered, pitch 5 for PCB L3

Assembly: soldering

Several PCB terminal blocks can be mounted in rows onto the PCB on each housing side.

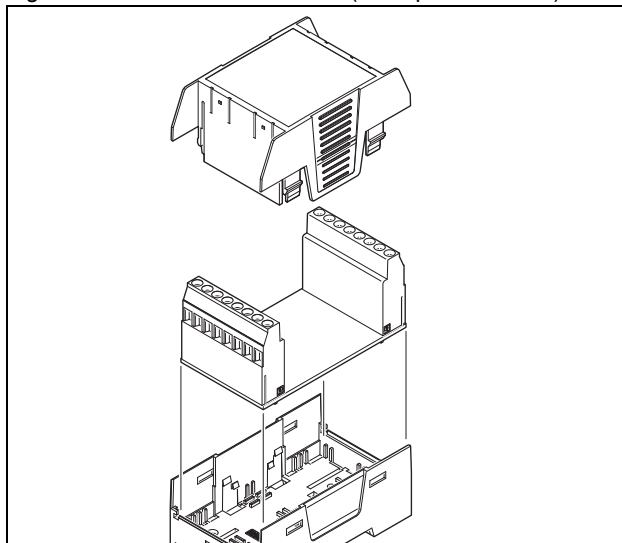Figure 21   PCB terminal block (example: 1703283)
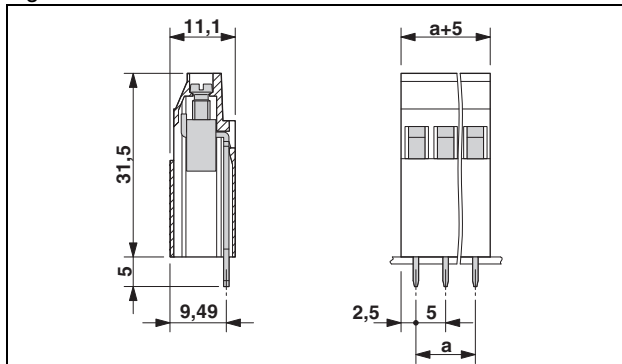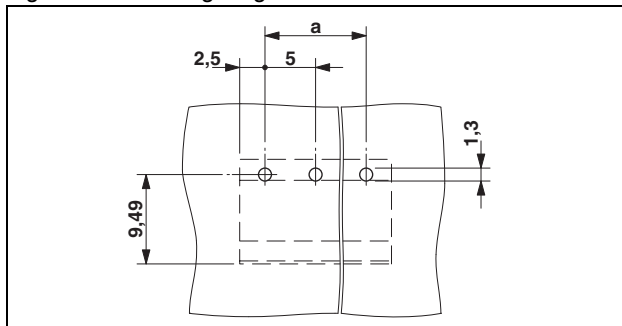
Figure 22   Dimensions of MKKDSH 3/...

Figure 23   Drilling diagram of MKKDSH 3/...

MKKDSH 3/...

Dimensions	
Length	11.1 mm
Pitch	5 mm
Number of positions	2
Pin dimensions	0.9 mm x 0.9 mm
Drilling hole diameter	1.3 mm

Item		Dimension a	No. of pos.
MKKDSH 3/ 2	1721045	5 mm	2
MKKDSH 3/ 8	1703283	35 mm	8

Technical data	
Insulation material group	I
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Rated voltage (III/3)	250 V
Rated voltage (III/2)	400 V
Rated voltage (II/2)	630 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	24 A
Nominal cross-section	2.5 mm²
Maximum load current, with a 4 mm² conductor cross-section	24 A
Insulating material	PA
Flammability rating in accordance with UL 94	V0
Solder pin surface	Sn
Internal cylindrical gauge	A3
Stripping length	7 mm
Screw thread	M3
Tightening torque, minimum	0.5 Nm
Tightening torque, maximum	0.6 Nm

8.5   Pin strip, pitch 5 for PCB L3

Contact surface: tin. Assembly: soldering

Voltage and current depend on the installed plug-in terminal. The value of the weaker component is always valid. The pin strip is made of high-temperature proof plastic. This makes it suitable for the reflow process.
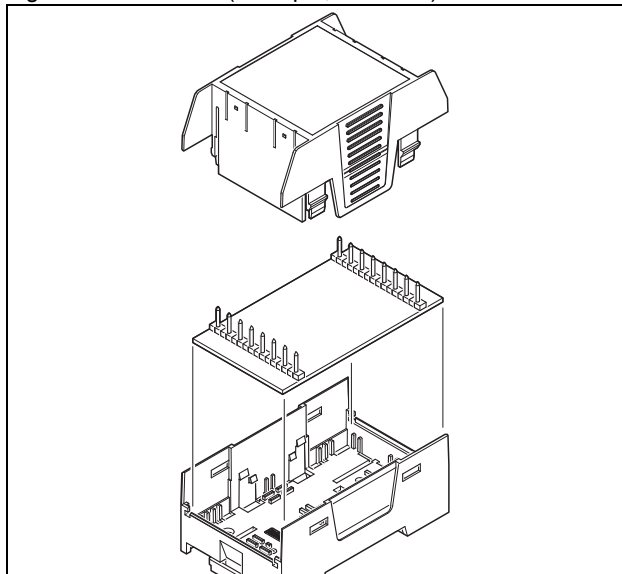
Figure 24   Header (example, 1933244)
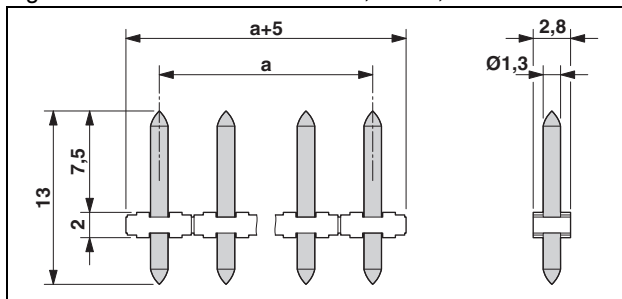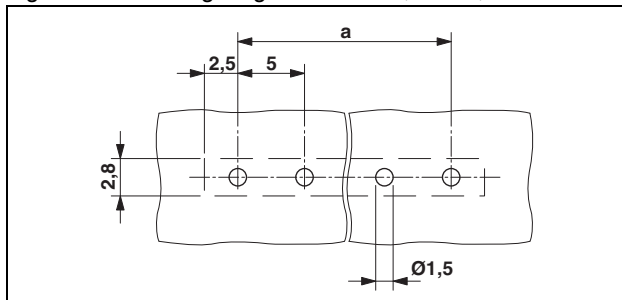

Figure 25   Dimensions of PST 1,3/ ...-5,0

Figure 26   Drilling diagram of PST 1,3/ ...-5,0

PST 1,3/...-5,0

Dimensions	
Length	2.8 mm
Pitch	5 mm
Pin dimensions	1.3 mm
Drilling hole diameter	1.5 mm

Item		Dimension a	No. of pos.
PST 1,3/ 4-5,0	1933202	15 mm	4
PST 1,3/ 6-5,0	1933228	25 mm	6
PST 1,3/ 8-5,0	1933244	35 mm	8
PST 1,3/ 9-5,0	1933257	40 mm	9
PST 1,3/12-5,0	1933286	55 mm	12
PST 1,3/13-5,0	1933299	60 mm	13
PST 1,3/17-5,0	1935556	80 mm	17

Technical data	
Insulation material group	IIIa
Rated surge voltage (III/3)	4 kV
Rated surge voltage (III/2)	4 kV
Rated surge voltage (II/2)	4 kV
Rated voltage (III/3)	250 V
Rated voltage (III/2)	320 V
Rated voltage (II/2)	400 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	12 A[*]
Maximum load current	12 A[*]
Insulating material	PA
Flammability rating in accordance with UL 94	V0

[*]   Depends on the male connector used; observe derating

Suitable connectors
PCB connection terminal block with screw connection PT 1,5/... (e.g., 1755606)

8.6 Header, pitch 3.81 for PCB L3

Contact surface: tin. Assembly: soldering
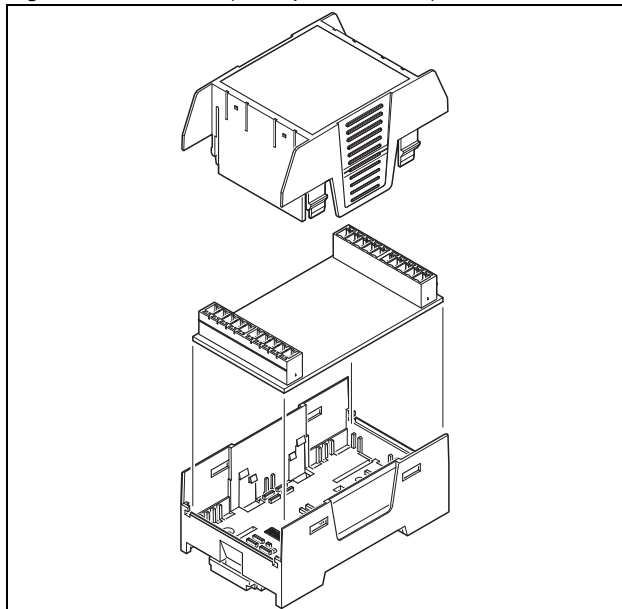
Figure 27   Header (example, 1803507)

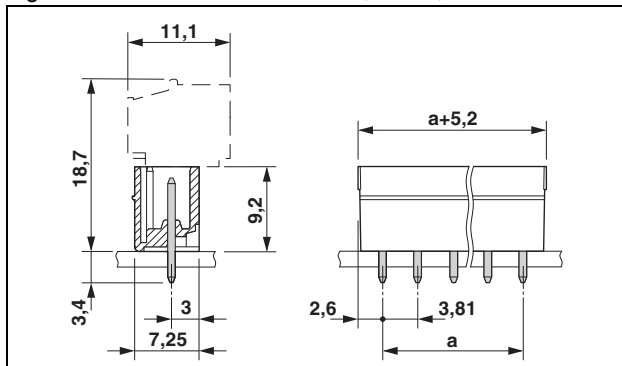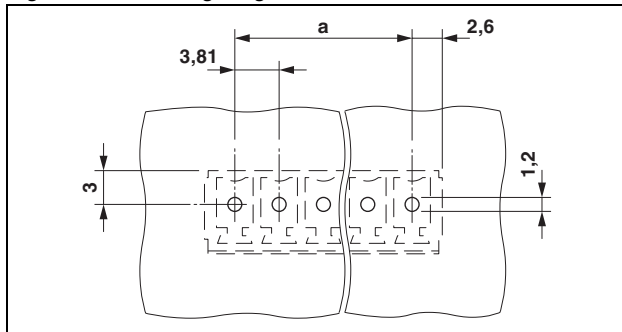
Figure 28   Dimensions of PST 1,3/ ...-5,0

Figure 29   Drilling diagram of PST 1,3/ ...-5,0

MCV 1,3/...-G-3,81

Dimensions	
Length	7.25 mm
Pitch	3.81 mm
Pin dimensions	0.8 mm x 0.8 mm
Drilling hole diameter	1.2 mm

Item		Dimen-sion a	No. of pos.
MCV 1,5/ 5-G-3,81	1803455	15.24 mm	5
MCV 1,5/ 8-G-3,81	1803484	26.67 mm	8
MCV 1,5/10-G-3,81	1803507	34.29 mm	10
MCV 1,5/12-G-3,81	1803523	41.91 mm	12
MCV 1,5/16-G-3,81	1803565	57.15 mm	13

Technical data	
Insulation material group	IIIa
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)	250 V
Connection in accordance with standard	EN-VDE
Nominal current I_N	8 A[*]
Maximum load current	8 A[*]
Insulating material	PBT
Flammability rating in accordance with UL 94	V0

   [*]   Observe derating

Suitable connectors	
PCB connector with screw connection	
MCVR 1,5/... (e.g., 1827156)	
PCB connector with spring connection	
FMC 1,5/... (e.g., 1745920)	

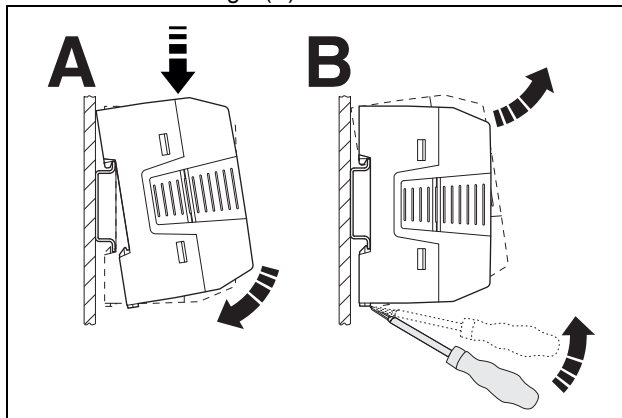| Accessories	
Marker card	SK 3,81/2,8:FORTL.ZAHLEN, 0804109
Coding profile	CP-MSTB, 1734634

9 Mounting the housing

9.1 Mounting on a DIN rail

The housing is supplied with a base latch for DIN rail mounting as standard.

Figure 30 Snapping the housing onto the DIN rail (A) and removing it (B)

Mounting

- Place the device onto a grounded 35 mm DIN rail from above so that the upper housing keyway hooks onto the top edge of the DIN rail (A).
- Holding the device by the housing cover, carefully push it toward the mounting surface.
- Once the snap-on foot has audibly snapped onto the DIN rail, check that it is attached securely.

Removal

- Use a suitable screwdriver to release the locking mechanism on the snap-on foot of the device (B).
- Hold onto the device by the housing cover and carefully tilt it upwards.
- Carefully lift the device off the DIN rail.

9.2 Mounting on a mounting surface

The housing can be supplied with a base latch for wall mounting on customer request.
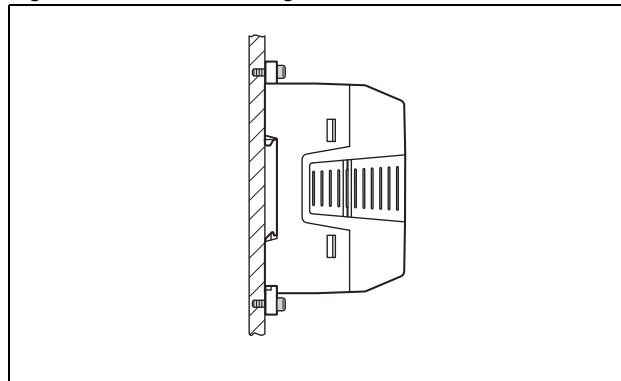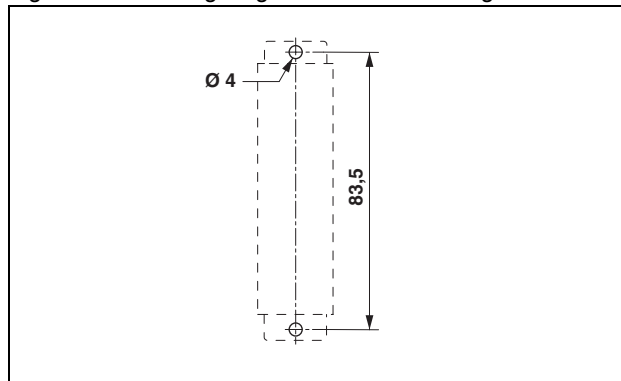
Figure 31 Wall mounting

Figure 32 Drilling diagram for wall mounting

9.3   Mounting the housing cover
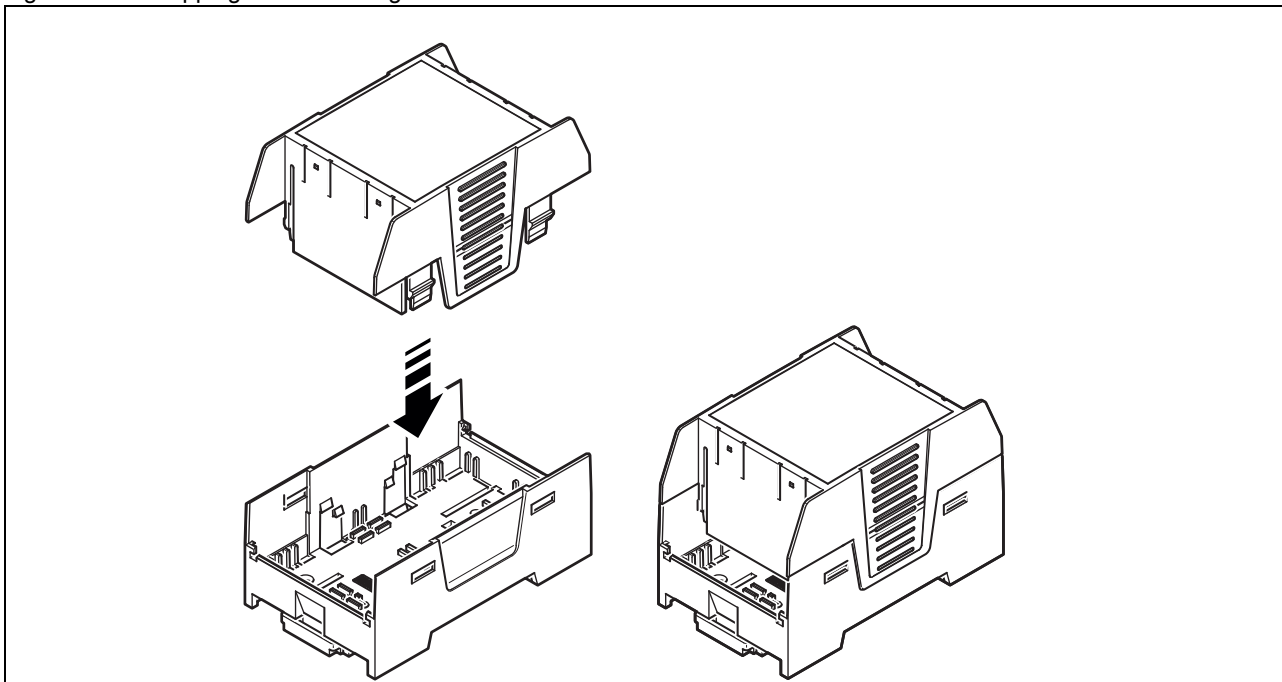
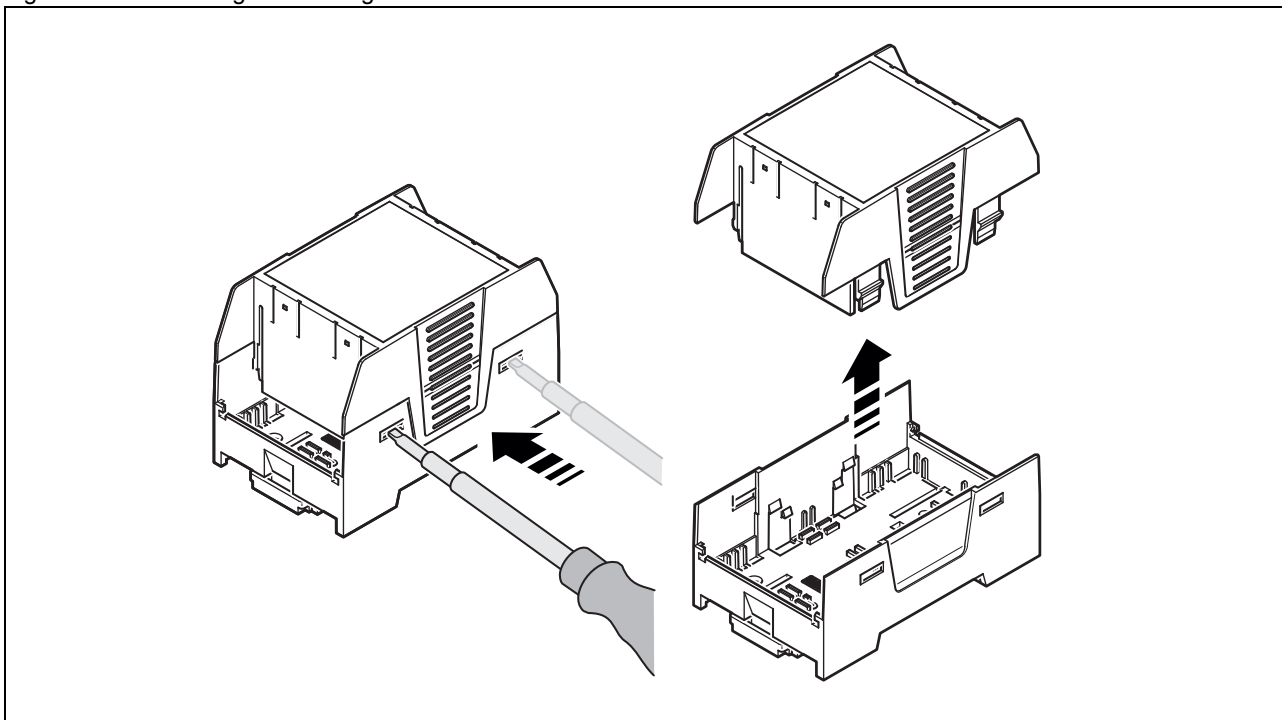Figure 33   Snapping on the housing cover

Figure 34   Releasing the housing cover

9.4 Mounting the filler plugs

Figure 35   Mounting the filler plugs