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ME PLC 40...

Multifunctional housing for complex electronics



Data sheet
105504_en_01

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1 Description

The housings of the ME PLC 40... product group consist of a 40-mm wide housing base with much space for the PCB assembly.

The housing base can be combined with various covers. There are connection technology carriers on which the PCB plug-in connectors (FKCN 2.5...) are already premounted. These plug-in connectors have a push-in connection for conductor cross sections up to 2.5 mm².

In addition, a connection technology carrier with RJ45-plug-in connectors and a universal cover are available. The universal cover is especially suited for installing connection systems or display and operating elements. We would be glad to install the required openings for you.

The housings can be snapped onto an NS 105/20 DIN rail.

They can be combined with a DIN rail connector. The bus connectors supplied unmounted and can be equipped with PCBs as needed.

Bus connectors are available with the number of positions 50/40 and 10/10, i.e. 50-pos. in the DIN rail / 40-pos. into the device or otherwise 10-pos. in the DIN rail / 10-pos. into the device.

If you do not need a bus connector, you can also fasten the housing onto two NS 35 DIN rails.



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 data sheet is valid for all products listed on the following page:

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2 Ordering data

Housing

DESCRIPTION	Type	Order no.	Pcs. / pack
Housing base , suitable for 50/40 bus connector, color: light gray	ME PLC 40 B BUS 50/40 GY7035	2201500	10
Housing base , suitable for 10/10 bus connector, color: light gray	ME PLC 40 B BUS 10/10 GY7035	2201499	10
Universal cover , long design, color: light gray	ME PLC 40 CL GY7035	2201505	10
Connection technology carrier , fully assembled with FKCN 2 x 10-pos., cover and release lever, incl. fitted cover Matching PCB plug-in connector: 1 x CCDN 2.5/10-G1 P26 THR (1734355)	ME PLC 40 CT20 GY7035	2201493	10
Connection technology carrier , fully assembled with FKCN 2 x 18-pos., cover and release lever, incl. fitted cover Matching PCB plug-in connector: 1 x CCDN 2.5/18-G1 P26 THR (1734436)	ME PLC 40 CT36 GY7035	2201494	10
Connection technology carrier , fully assembled with FKCN 1 x 10-pos., cover and release lever, incl. fitted cover Matching PCB plug-in connector: MSTBA 2.5/10-G (1757543)	ME PLC 40 CT10 GY7035	2201492	10
Connection technology carrier for RJ45 connection, pre-assembled with cover and release lever; incl. fitted cover and 2 x RJ45 connector plugs	ME PLC 40 CTRJ45 GY7035	2201495	10

Accessories

DESCRIPTION	Type	Order no.	Pcs. / pack
Cover , short design, color: light gray	ME PLC 40 CS GY7035	2201490	10
Cover , short design, color: transparent	ME PLC 40 CS TRANS	2201491	10
Fitted plate , for assembly underneath the cover in short design (ME PLC 40 CS...), color: light gray	ME PLC 40 PL S GY7035	2201497	10
Matrix with defined engagement mechanism, for assembly underneath the cover in short design (ME PLC 40 CS...), color: black	ME PLC 40 MT S BK	2201496	10
Bus connector kit consisting of 50-pos. and 40-pos. plug-in connectors, plastic upper part and base, plus metal clamps for mounting the DIN rail, PCB not included	ME PLC 40 BUS 50/40 KIT BK	2201502	10
Bus connector kit consisting of 2 x 10-pos. plug-in connectors, plastic upper part and base, plus metal clamp for mounting the DIN rail, PCB not included	ME PLC 40 BUS 10/10 KIT BK	2201503	10
End brackets for DIN rail mounting, incl. mounting screws	ME PLC EBT GY7035	2201498	10
DIN rail , unperforated, 105 x 20 mm, galvanized and thick layer passivated, cut to customer-specific length (between 40 mm and 2000 mm) Specify length in [mm] according to order key: quantity / order no. / length (e.g. for 1 x 40 mm long: 1 / 2201508 / 40)	NS 105/20 UNPERF	2201508	1
Coding set , for coding housing base and bus connector			
Drop, color: red	COD PI 4 RD	2201618	100
Rectangle, color: red	COD PI 2 RD	2901877	100
Drop, color: green	COD PI 1 GN	2901864	100
Rectangle, color: green	COD PI 3 GN	2201617	100

3 Overview of the ME PLC Products

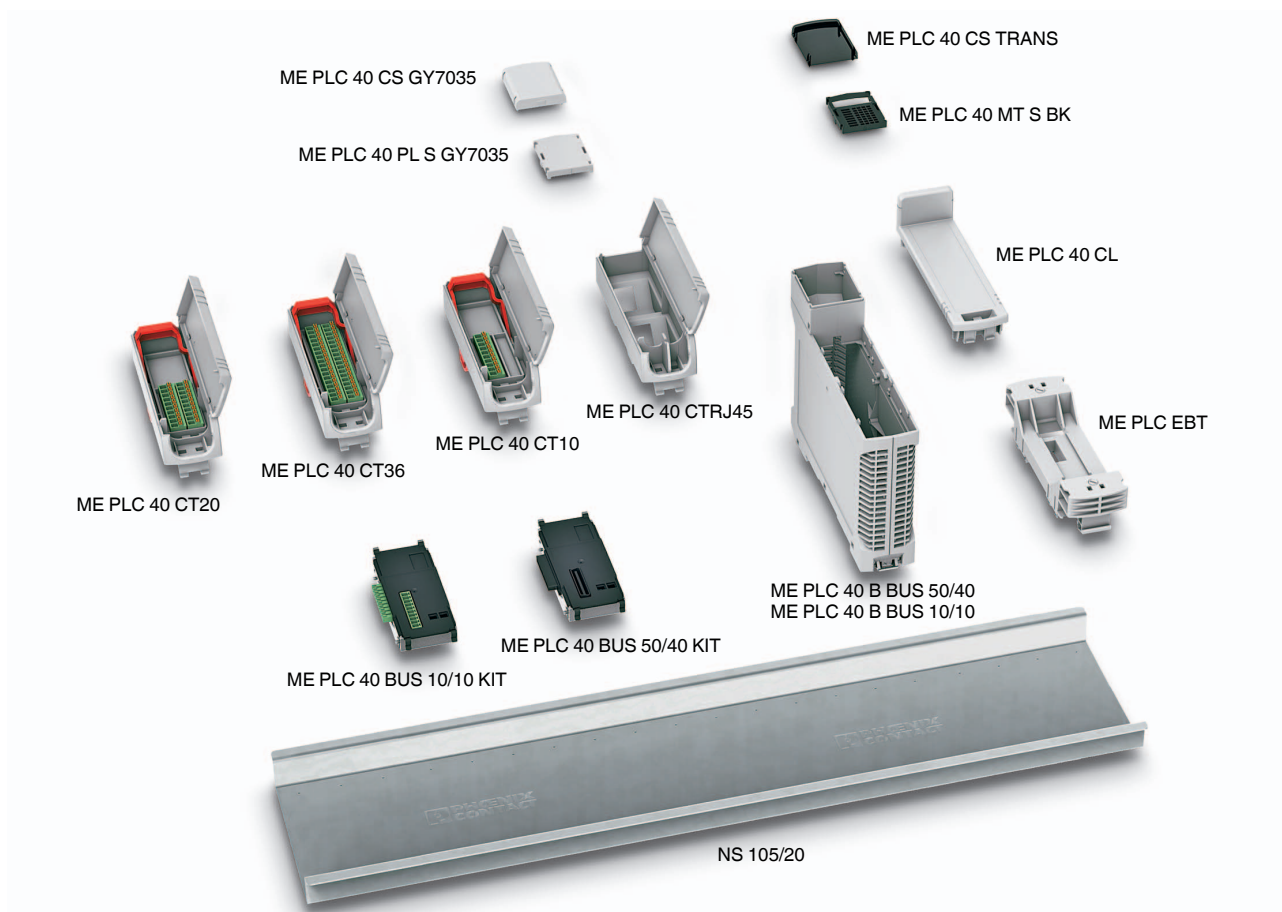



Figure 1 Overview

4 Lower part of the housing

	Housing base , suitable for 50/40 bus connector, color: light gray	ME PLC 40 B BUS 50/40 GY7035	2201500
	Housing base , suitable for 10/10 bus connector, color: light gray	ME PLC 40 B BUS 10/10 GY7035	2201499

4.1 Outer dimensions of the housing base

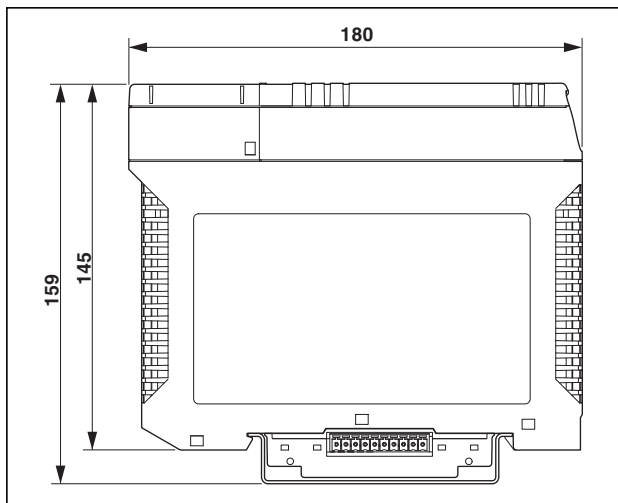


Figure 2 Housing base, side view

4.2 Inner dimensions of the housing base

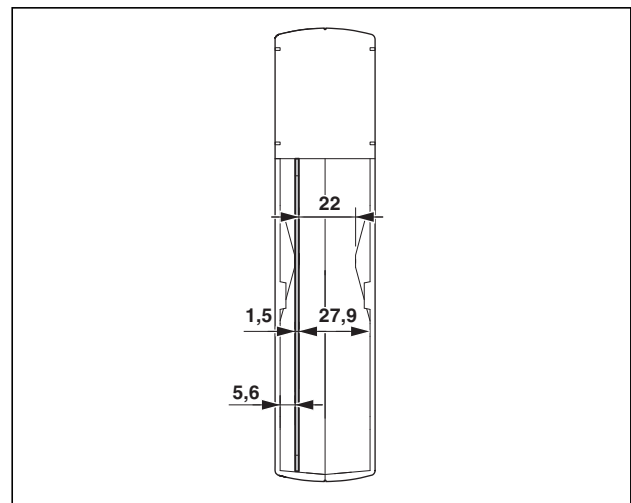


Figure 4 Housing base, internal view

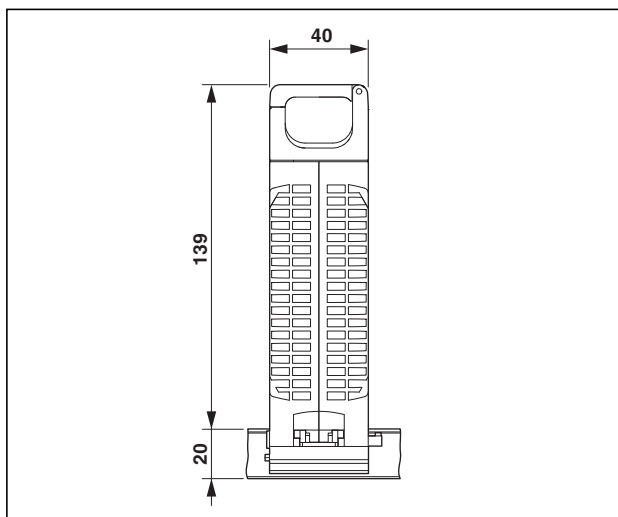


Figure 3 Housing base, front view

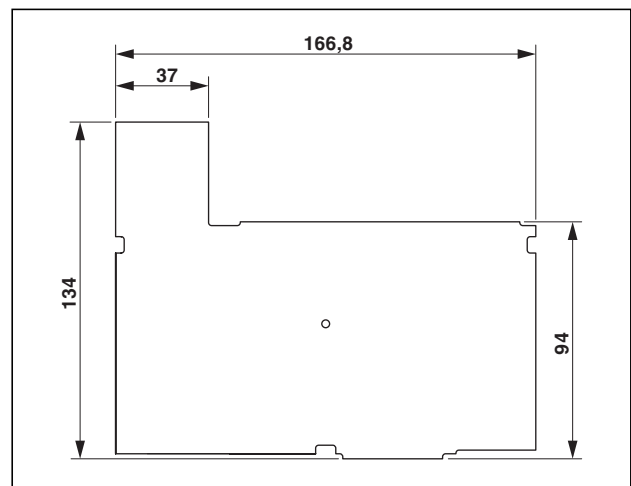


Figure 5 Maximum dimensions of the PCB of the housing



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

5 Connection technology carrier

5.1 Connection of the conductors to the PCB plug-in connector (push-in connection)

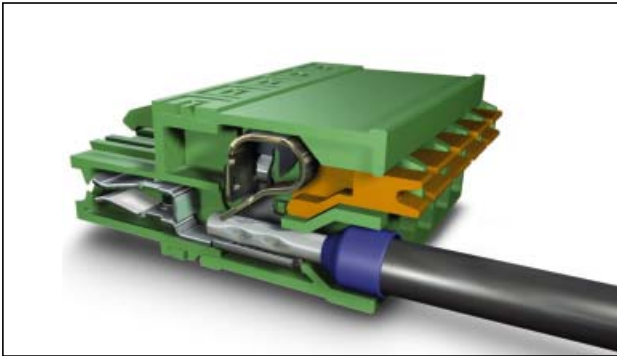


Figure 6 Push-in connection

1.5 mm² conductor cross section ... 2.5 mm², rigid or with ferrule

- Insert the stripped wire into the round opening of the terminal block without using a tool.

Wires with a smaller cross section or stranded conductors without ferrule

- To release the spring, push in the orange pushbutton with a screwdriver.

Dismantling

- For release, push in the orange pushbutton with a screwdriver.

5.2 Place the connection technology carrier on the housing base

- Swivel the red lever to the right.
- Hook in the two engagement noses of the connection technology carrier into the openings of the housing base.

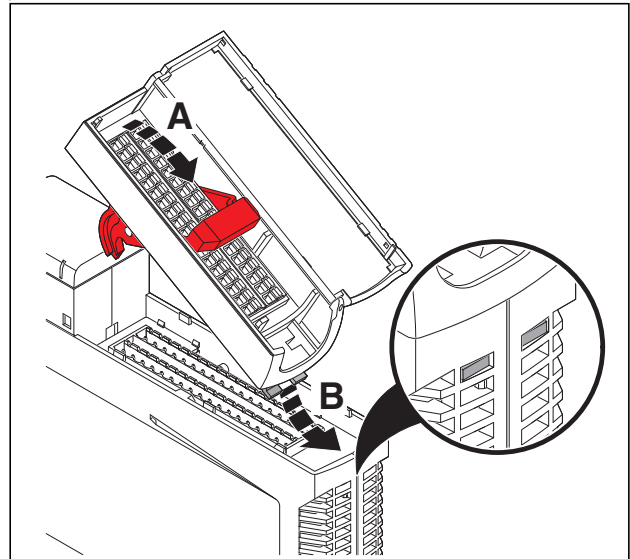


Figure 7 Snap in

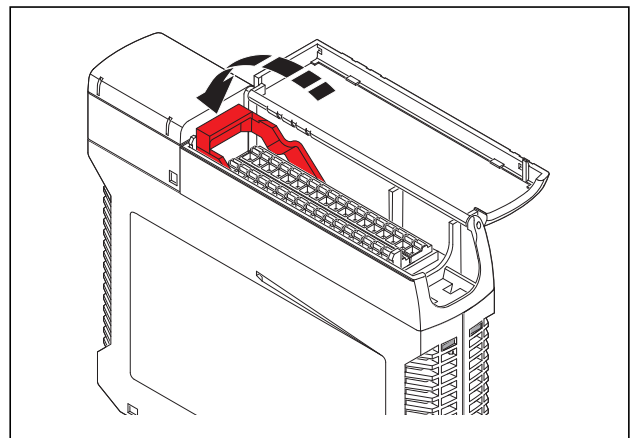

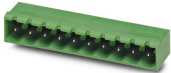


Figure 8 Close

- Swivel the lever back to the left. The connection technology carrier slides into the housing. If that does not go easily, check the seating of the engagement noses.

5.3 Connection technology carrier CT10

	Connection technology carrier , fully assembled with FKCN 1 x 10-pos., cover and release lever, incl. fitted cover	ME PLC 40 CT10 GY7035	2201492
		Matching PCB plug-in connector	MSTBA 2.5/10-G

5.3.1 Dimensional drawing PCB fragment and drilling diagram CT10

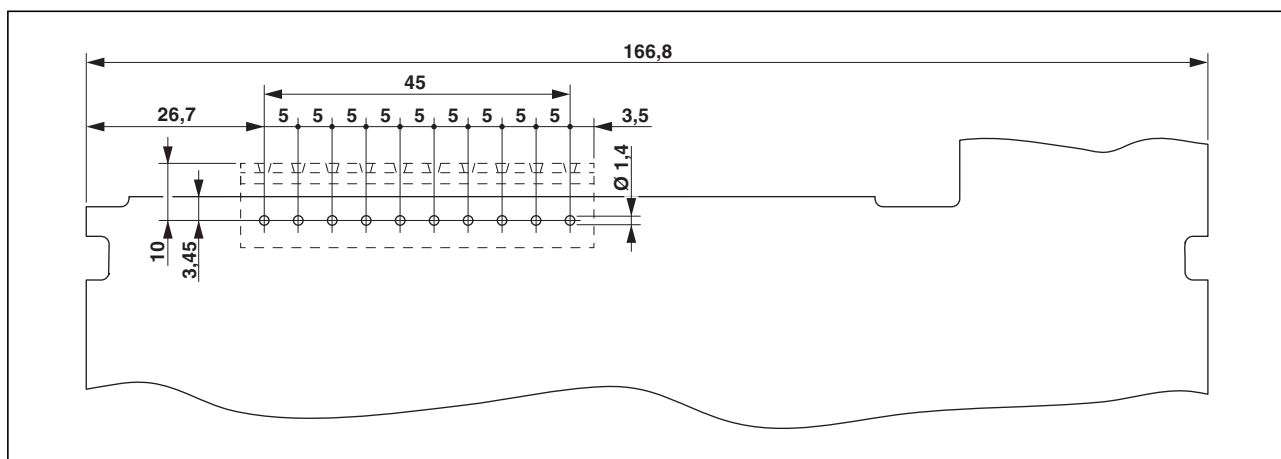


Figure 9 Dimensional drawing of the PCB of the housing when using the connection technology carrier CT10



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

5.3.2 PCB plug-in connector for CT10

To connect the connection technology carrier ME PLC 40 CT10 to the PLC, you need the PCB plug-in connector MSTBA 2.5/10-G.

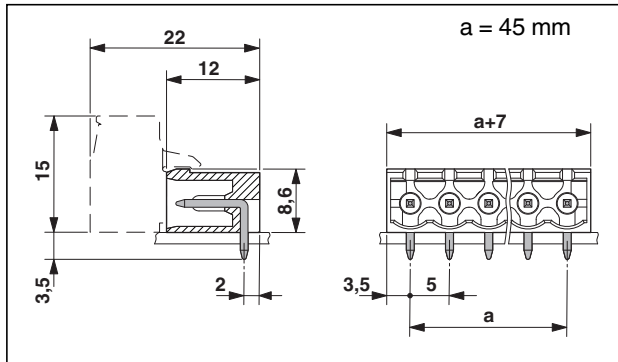


Figure 10 Dimensions MSTBA 2.5/10-G

MSTBA 2.5/10-G, 1757543



Dimensions / Positions

Length	12 mm
Pitch	5 mm
Dimension a	45 mm
No. of positions	10
Pin dimensions	1 x 1 mm
Hole diameter	1.4 mm

Technical data

Range of articles	MSTBA 2.5/...-G-...
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/2)	320 V
Rated voltage (II/2)	400 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	12 A
Nominal voltage U_N	250 V
Maximum load current	12 A
Insulation material	PBT
Inflammability class in acc. with UL 94	V0
Color	green
Nominal voltage, UL/CUL Use Group B	300 V
Nominal current, UL/CUL Use Group B	15 A
Nominal voltage, UL/CUL Use Group D	300 V
Nominal current, UL/CUL Use Group D	15 A

5.4 Connection technology carrier CT20

	Connection technology carrier , fully assembled with FKCN 2 x 10-pos., cover and release lever, incl. fitted cover	ME PLC 40 CT20 GY7035	2201493
		Matching PCB plug-in connector	CCDN 2.5/10-G1 P26 THR

5.4.1 Dimensional drawing PCB fragment and drilling diagram CT20

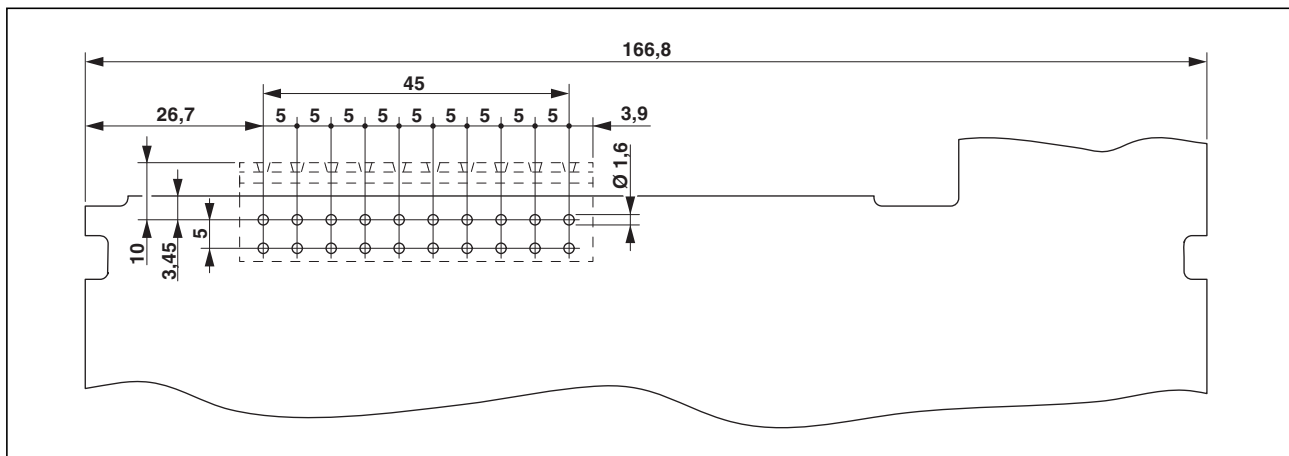


Figure 11 Dimensional drawing of the PCB of the housing when using the connection technology carrier CT20



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

5.4.2 PCB plug-in connector for CT20

To connect the connection technology carrier ME PLC 40 CT20 with the PLC, you need the PCB plug-in connector CCDN 2.5/10-G1 P26 THR.

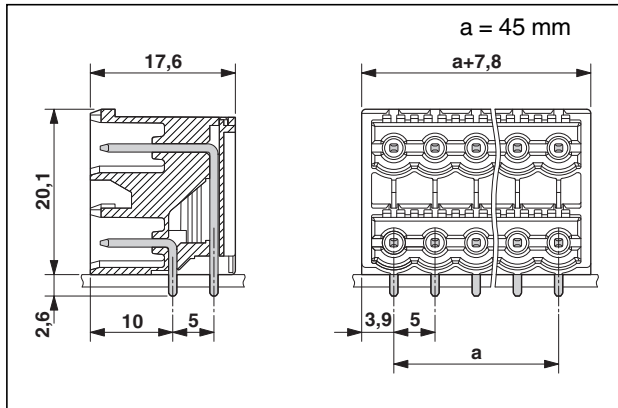


Figure 12 Dimensions CCDN 2.5/10-G1 P26 THR

CCDN 2.5/10-G1 P26 THR, 1734355



Dimensions / Positions

Length	17.6 mm
Pitch	5 mm
Dimension a	45 mm
No. of positions	10
Pin dimensions	1 x 1
Hole diameter	1.6 mm

Technical data

Range of articles	CCDN 2.5/..-G1-THR
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/2)	400 V
Rated voltage (II/2)	400 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	12 A
Nominal voltage U_N	320 V
Maximum load current	12 A
Insulation material	LCP
Inflammability class in acc. with UL 94	V0
Color	black

5.5 Connection technology carrier CT36

	Connection technology carrier , fully assembled with FKCN ME PLC 40 CT36 GY7035 2 x 18-pos., cover and release lever, incl. fitted cover	2201494
	 Matching PCB plug-in connector	CCDN 2.5/18-G1 P26 THR 1734436

5.5.1 Dimensional drawing PCB fragment and drilling diagram CT36

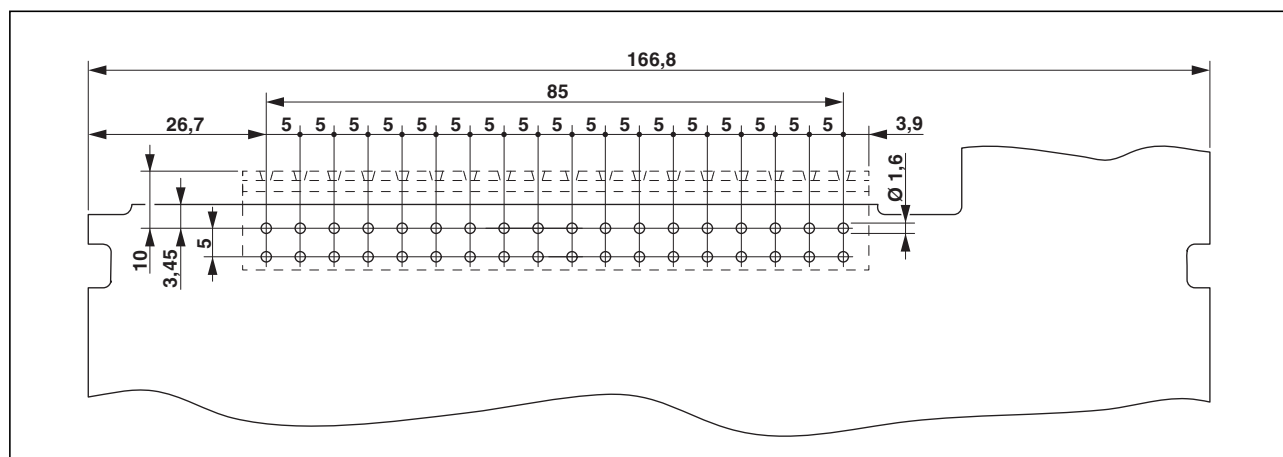


Figure 13 Dimensional drawing of the PCB of the housing when using the connection technology carrier CT36



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

5.5.2 PCB plug-in connector for CT36

To connect the connection technology carrier ME PLC 40 CT36 to the PLC, you need the PCB plug-in connector CCDN 2.5/18-G1 P26 THR.

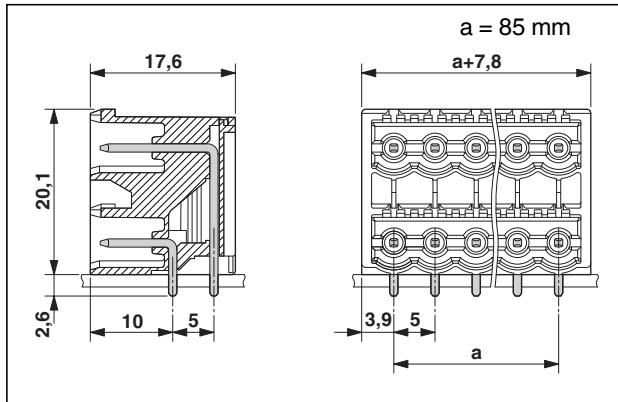


Figure 14 Dimensions CCDN 2.5/18-G1 P26 THR

CCDN 2.5/18-G1 P26 THR, 1734436

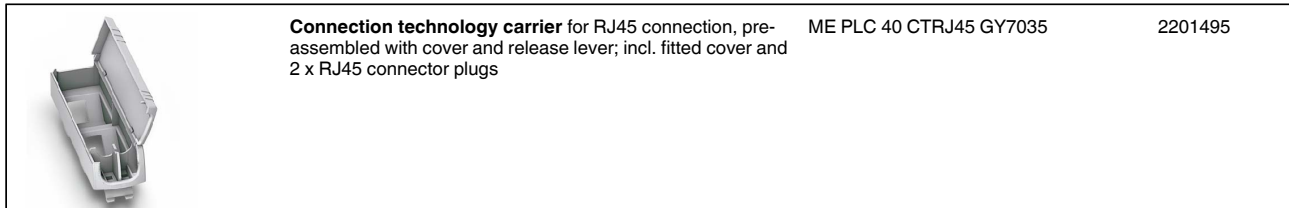
Dimensions / Positions

Length	17.6 mm
Pitch	5 mm
Dimension a	85 mm
No. of positions	18
Pin dimensions	1 x 1
Hole diameter	1.6 mm

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/2)	400 V
Rated voltage (II/2)	400 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	12 A
Nominal voltage U_N	320 V
Maximum load current	12 A
Insulation material	LCP
Inflammability class in acc. with UL 94	V0
Color	black

5.6 Connection technology carrier RJ45



5.6.1 Dimensional drawing PCB fragment and drilling diagram RJ45

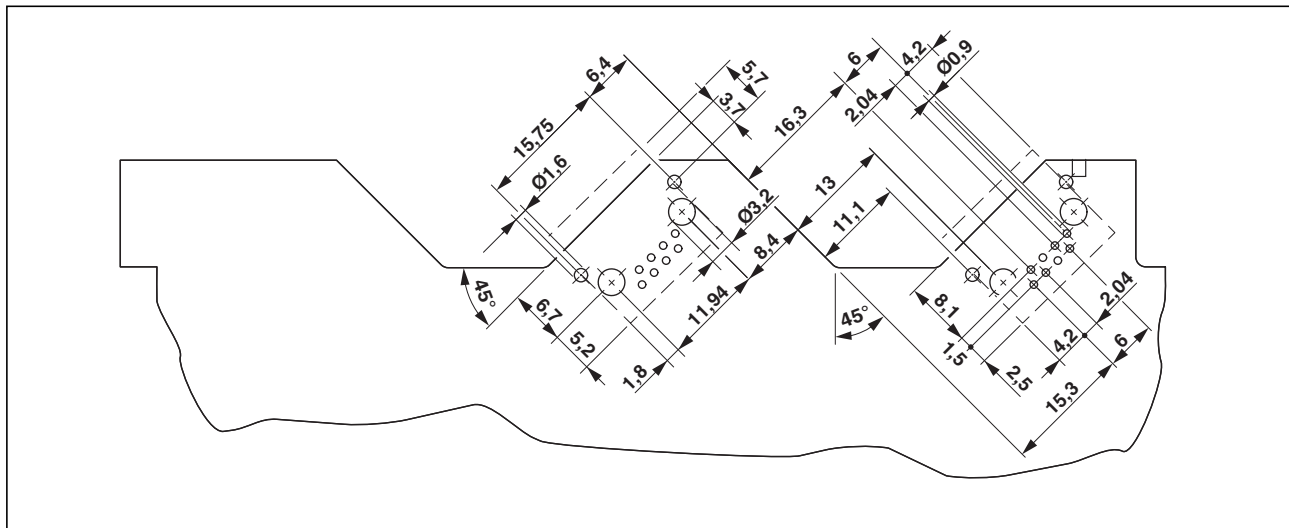


Figure 15 Dimensional drawing of the PCB housing when using the connection technology carrier RJ45



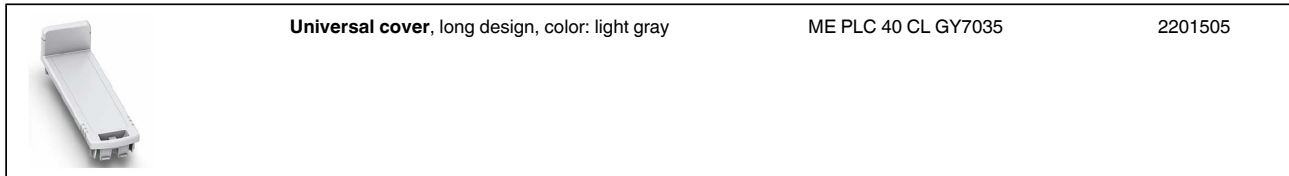
The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

Technical data

Connector type	RJ45
Contact type	Socket
Number of contacts	8
Number of locations	8
Number of ports	1
LAN type	CAT6A
Contact connection	Push-through assembly, perpendicular

5.7 Universal cover CL



5.7.1 Dimensional drawing PCB CL

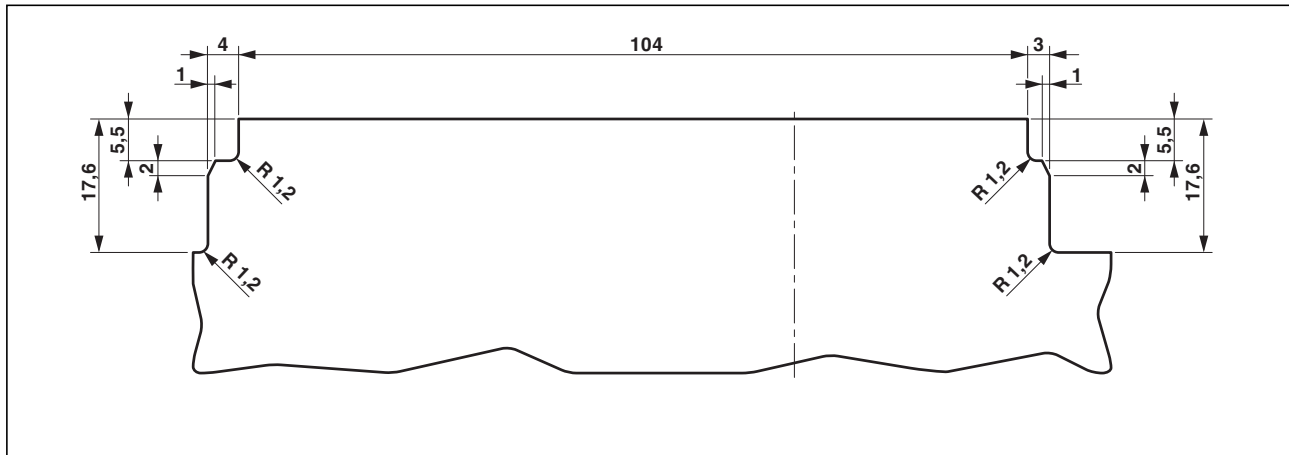


Figure 16 Dimensional drawing of the PCB of the housing when using the universal cover CL

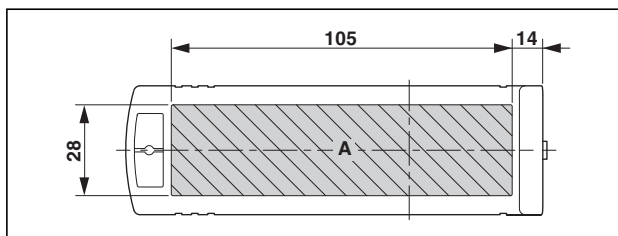


Figure 17 Maximum useable area for break-outs (A)

The middle lines in Figure 16 and Figure 17 refer to the location in the housing base.



We can gladly make openings for any of your display or operating elements.

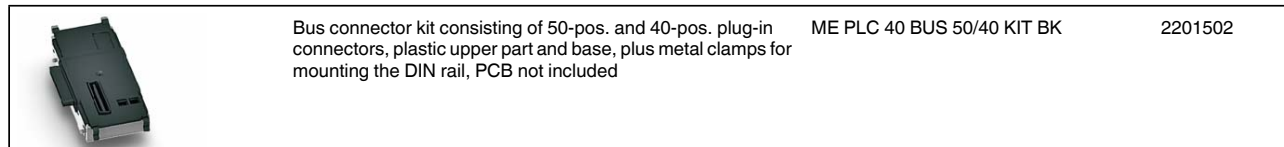


The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

6 Bus connector set

6.1 Bus connector 50/40



6.1.1 Overview of the set 50/40

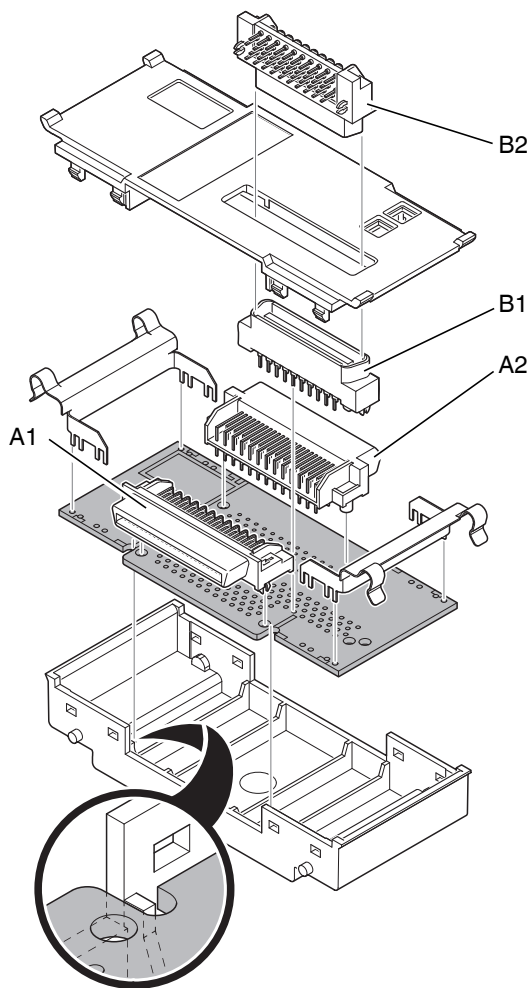


Figure 18 Overview set 50/40

6.1.2 Mounting

- Solder the plug-in connectors A1, A2, and B1 onto your PCB.
- Solder the two metal terminals onto your PCB.



Observe the proper orientation of the PCB when inserting it into the housing. The housing base has raised supports on one side. The PCB side with the cut-out belongs on this side.

- Insert the PCB.
- Put the top and bottom parts together.
- Solder the plug-in connector B2 to the PCB of the housing base ME PLC 40 B BUS 50/40 GY7035, 2201499.

6.1.3 Coding

You have the option to codify the bus connector and the housing. This should prevent a housing being accidentally plugged onto the wrong bus connector.

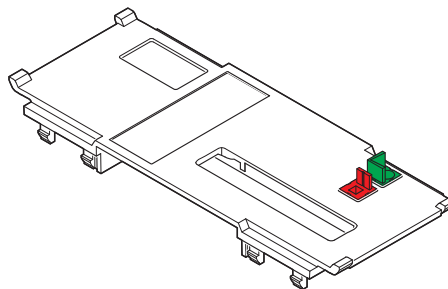


Figure 19 Coding option

Coding sets in rectangular and drop form are available (see "Ordering data" on page 3).

- Plug one part of the coding set into the opening of the bus connector.
- The counter-part goes into the housing.

6.1.4 Dimensional drawing PCB 50/40

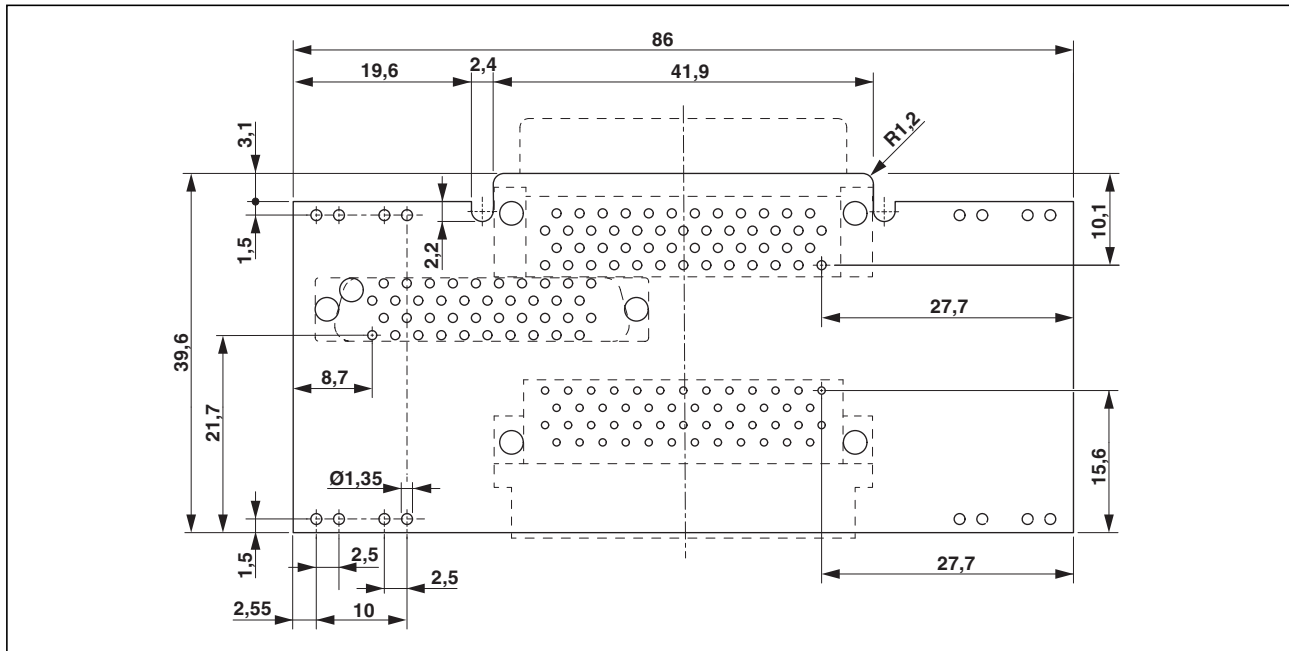


Figure 20 Dimensional drawing of the PCB for the bus connector set 50/40



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

6.1.5 50-pos. plug-in connector (A1) for 50/40

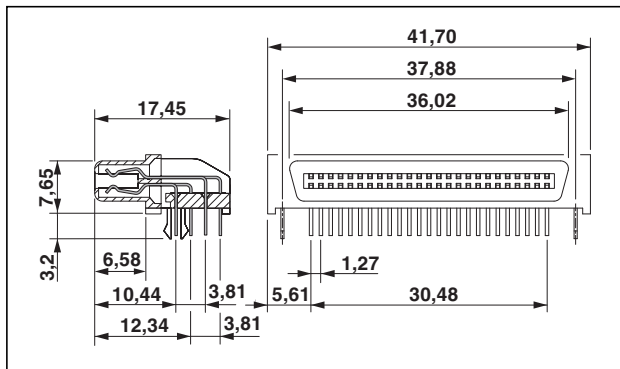


Figure 21 Dimensions A1, 50-pos

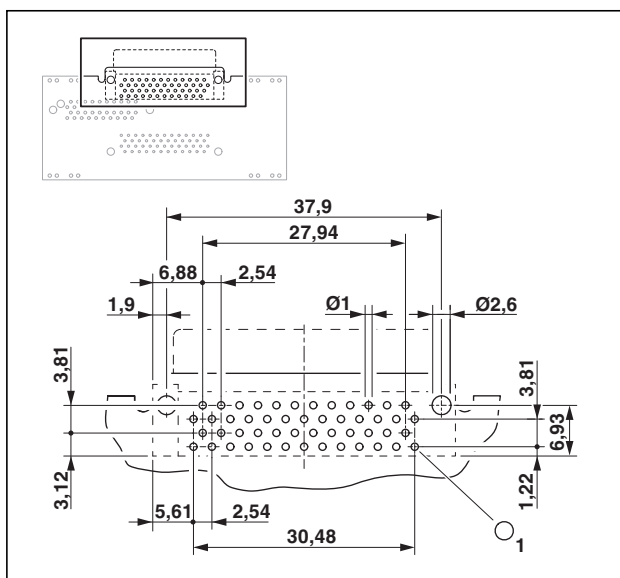


Figure 22 Drilling diagram A1, 50-pos.



The precise location of the plug-in connectors on the PCB can be found in Figure 20 on page 16.

A1

Dimensions / Positions

Pitch	1.27 mm
Width	41.70 mm
No. of positions	50
Number of rows	4
Orientation	Perpendicular
Hole diameter	1.0
Length of the solder pin	2.80 mm
Recommended thickness of the PCB	1.60 mm

Technical data

Current per connection	1 A, maximum
Voltage	30 V
Inflammability class in acc. with UL 94	V0
Color	black
Temperature range, operating	-55°C ...+105°C

Solder connection

Type of contact	Soldering method
Lead-free	SMC & Wave capable (TH only)
Duration at maximum processing temperature	5 s
Cycles at maximum processing temperature	1, maximum
Processing temperature	maximum 270°C

6.1.6 50-pos. plug-in connector (A2) for 50/40

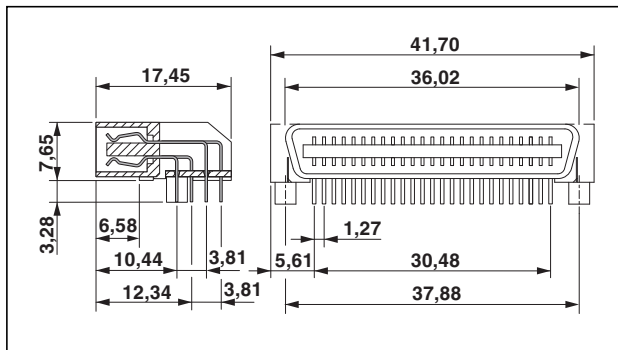


Figure 23 Dimensions A2, 50-pos.

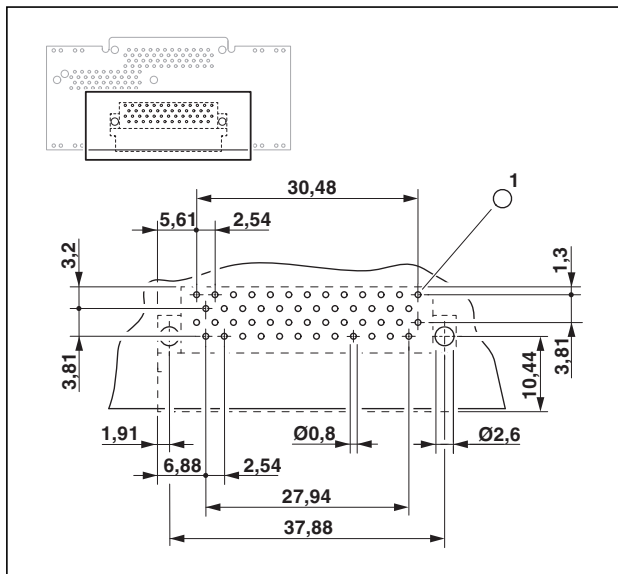


Figure 24 Drilling diagram A2, 50-pos.



The precise location of the plug-in connectors on the PCB can be found in Figure 20 on page 16.

A2

Dimensions / Positions

Pitch	1.27 mm
No. of positions	50
Number of rows	4
Orientation	Perpendicular
Hole diameter	0.8 mm
Length of the solder pin	2.79 mm
Recommended thickness of the PCB	1.60 mm

Technical data

Current per connection	1 A, maximum
Voltage	30 V
Inflammability class in acc. with UL 94	V0
Color	black
Temperature range, operating	-40°C ...+105°C

Solder connection

Type of contact	Soldering method
Lead-free	SMC & Wave capable (TH only)
Duration at maximum processing temperature	5 s
Cycles at maximum processing temperature	1, maximum
Processing temperature	maximum 270°C

6.1.8 40-pos. plug-in connector (B2) for contacting in the bus connector set 50/40

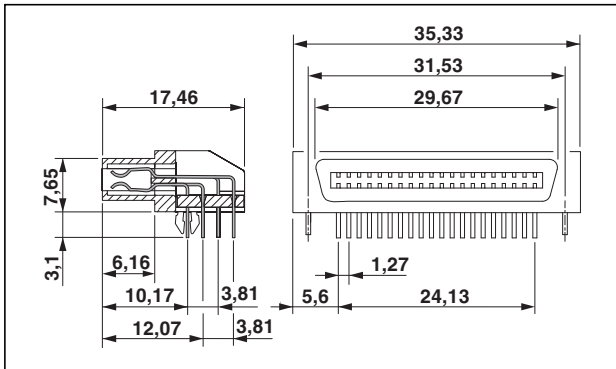


Figure 27 Dimensions B2, 40-pos.

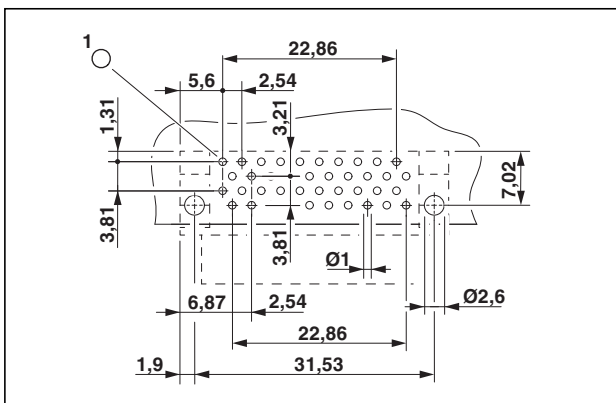


Figure 28 Drilling diagram B2, 40-pos.

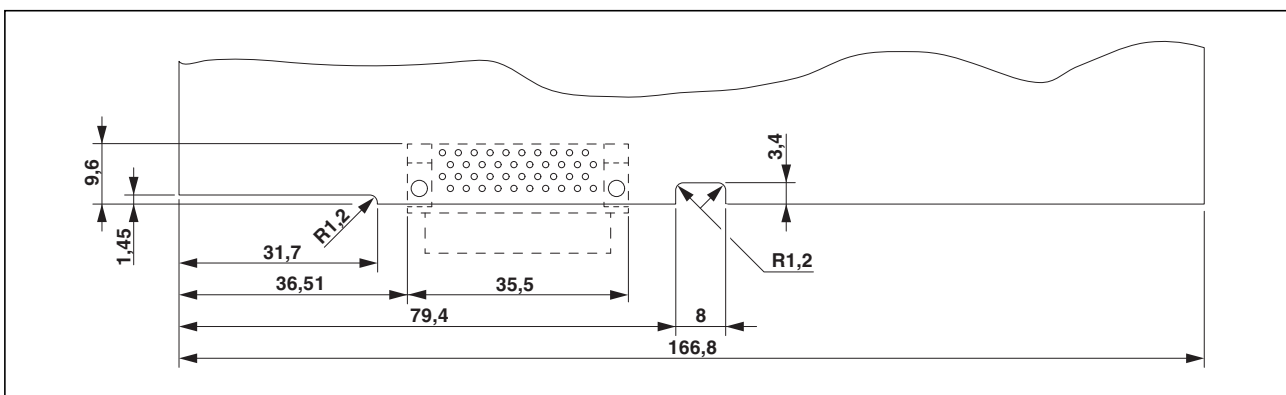


Figure 29 Dimensional drawing of the PCB of the housing (2201500) with plug-in connector (B2)

B2

Dimensions / Positions

Pitch	1.27 mm
No. of positions	40
Number of rows	4
Orientation	Perpendicular
Hole diameter	1.0 mm
Length of the solder pin	3.10 mm
Recommended thickness of the PCB	1.60 mm

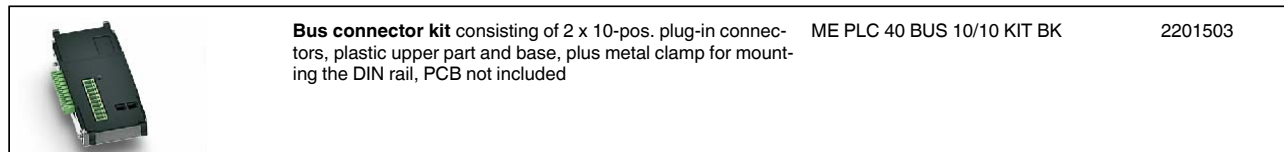
Technical data

Current per connection	1 A, maximum
Voltage	250 V AC
Insulation material	LCP
Inflammability class in acc. with UL 94	V0
Color	black

Solder connection

Lead-free soldering process	Yes
-----------------------------	-----

6.2 Bus connector 10/10



6.2.1 Overview of the set 10/10

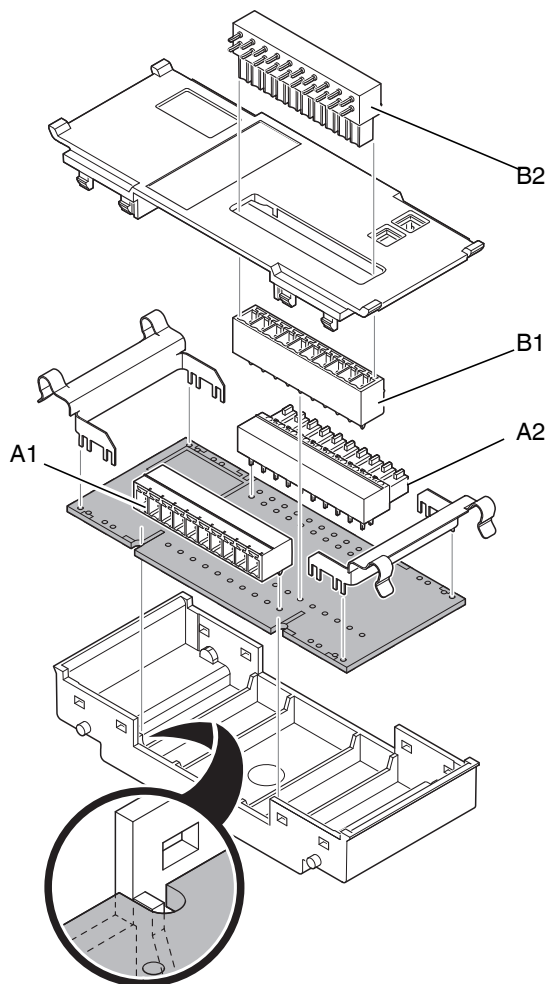


Figure 30 Overview of the set 10/10

6.2.2 Mounting

- Solder the plug-in connectors A1, A2, and B1 onto your PCB.
- Solder the two metal terminals onto your PCB.



Observe the proper orientation of the PCB when inserting it into the housing. The housing base has raised supports on one side. The PCB side with the cut-out belongs on this side.

- Insert the PCB.
- Put the top and bottom parts together.
- Solder the plug-in connector B2 to the PCB of the housing base ME PLC 40 B BUS 10/10 GY7035, 2201500.

6.2.3 Coding

You have the option to codify the bus connector and the housing. This should prevent a housing being accidentally plugged onto the wrong bus connector.

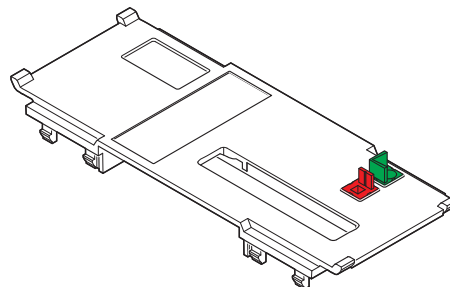


Figure 31 Coding option

Coding sets in rectangular and drop form are available (see "Ordering data" on page 3).

- Plug one part of the coding set into the opening of the bus connector.
- The counter-part goes into the housing.

6.2.4 Dimensional drawing PCB 10/10

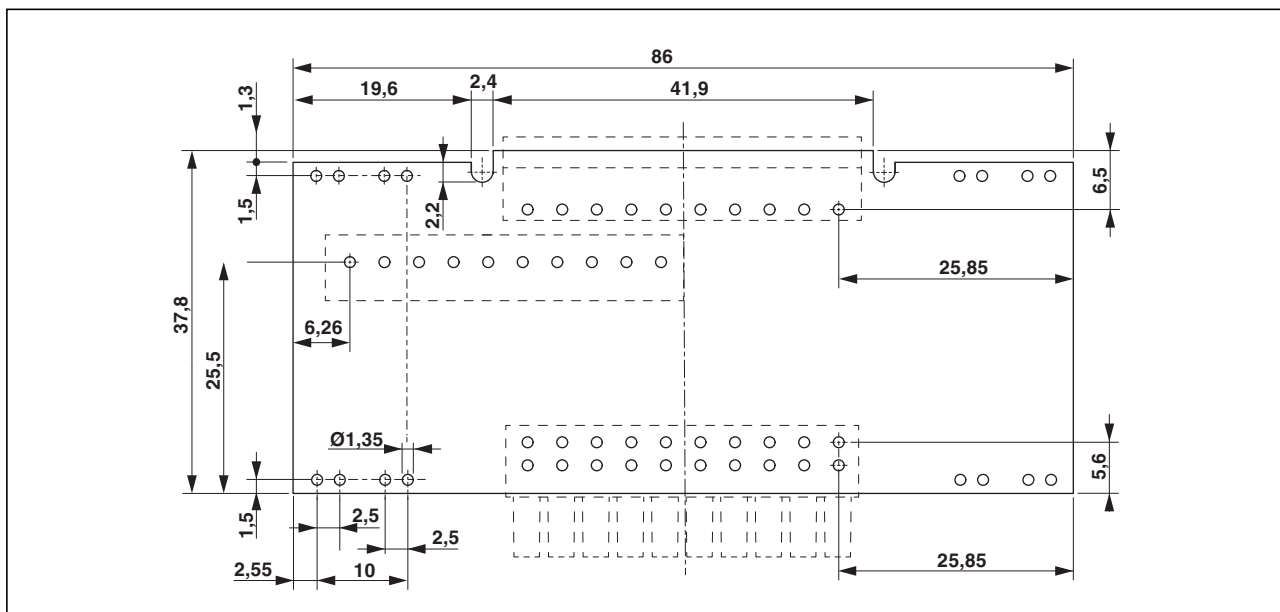


Figure 32 Dimensional drawing of the PCB for the bus connector set 10/10



The detailed PCB contour and the locked areas can be found in the 3D housing data.

The 3D-CAD download can be found at phoenixcontact.net/products.

6.2.5 10-pos. base strip (A1) for 10/10

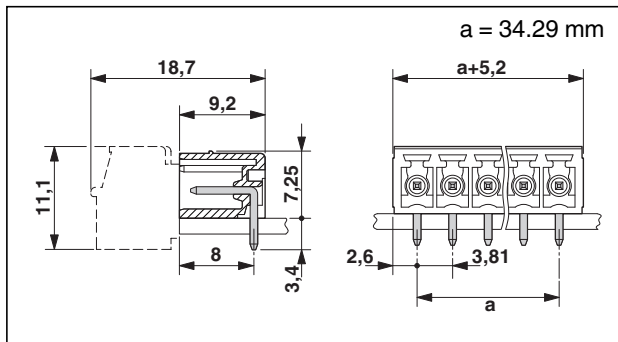


Figure 33 Dimensions MC 1.5/10-G-3.81

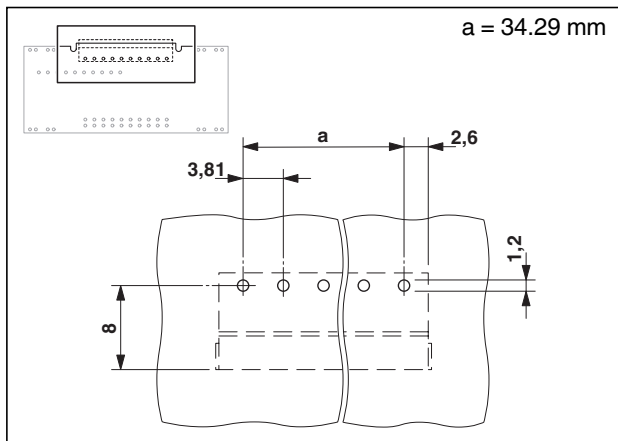


Figure 34 Drilling diagram MC 1.5/10-G-3.81



The precise location of the plug-in connectors on the PCB can be found in Figure 32 on page 22.

MC 1.5/10-G-3.81,1803358

Dimensions / Positions

Length	9.2 mm
Pitch	3.81 mm
Dimension a	34.29 mm
No. of positions	10
Pin dimensions	0.8 x 0.8 mm
Hole diameter	1.2 mm

Technical data

Range of articles	MC 1.5/..-G
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/2)	160 V
Rated voltage (II/2)	250 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	8 A
Nominal voltage U_N	160 V
Maximum load current	8 A
Insulation material	PBT
Inflammability class in acc. with UL 94	V0
Color	green
Nominal voltage, UL/CUL Use Group B	300 V
Nominal current, UL/CUL Use Group B	8 A
Nominal voltage, UL/CUL Use Group D	300 V
Nominal current, UL/CUL Use Group D	8 A

6.2.6 10-pos. base strip (A2) for 10/10

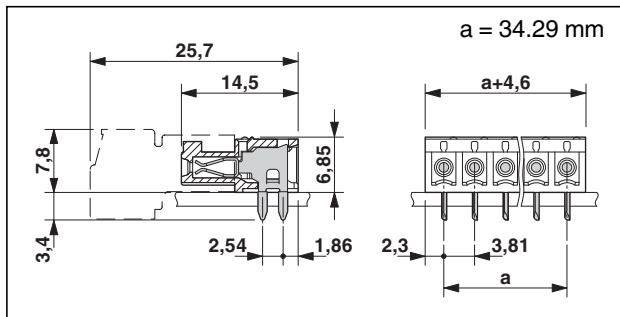


Figure 35 Dimensions IMC 1.5/10-G-3.81

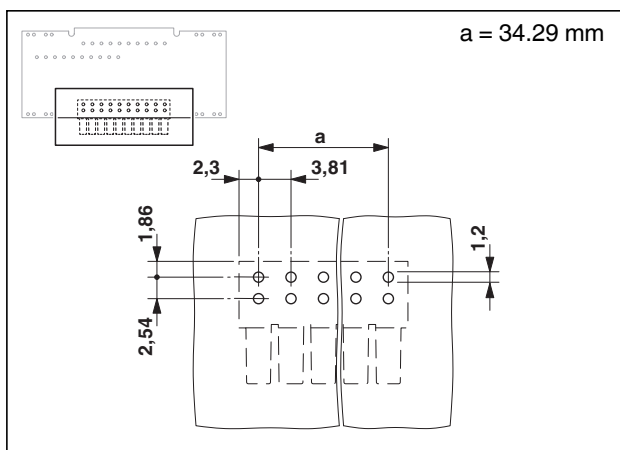


Figure 36 Drilling diagram IMC 1.5/10-G-3.81



The precise location of the plug-in connectors on the PCB can be found in Figure 32 on page 22.

IMC 1.5/10-G-3.81, 1862658

Dimensions / Positions

Length	14.5 mm
Pitch	3.81 mm
Dimension a	34.29 mm
No. of positions	10
Pin dimensions	0.8 x 0.8 mm
Hole diameter	1.2 mm

Technical data

Range of articles	IMC 1.5/..-G
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/2)	160 V
Rated voltage (II/2)	320 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	8 A
Nominal voltage U_N	160 V
Maximum load current	8 A
Insulation material	PA
Inflammability class in acc. with UL 94	V0
Color	green
Nominal voltage, UL/CUL Use Group B	300 V
Nominal current, UL/CUL Use Group B	8 A
Nominal voltage, UL/CUL Use Group D	300 V
Nominal current, UL/CUL Use Group D	8 A

6.2.7 10-pos. base strip (B1) for 10/10

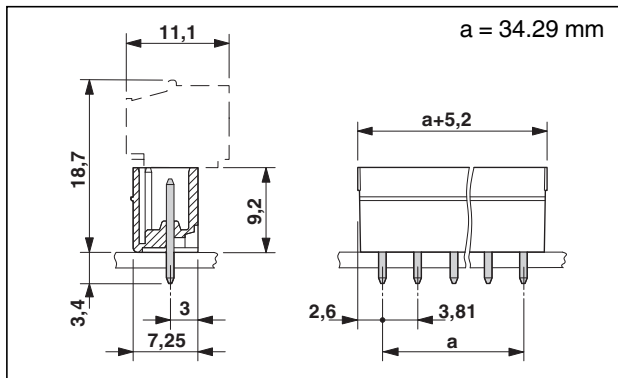


Figure 37 Dimensions MCV 1.5/10-G-3.81

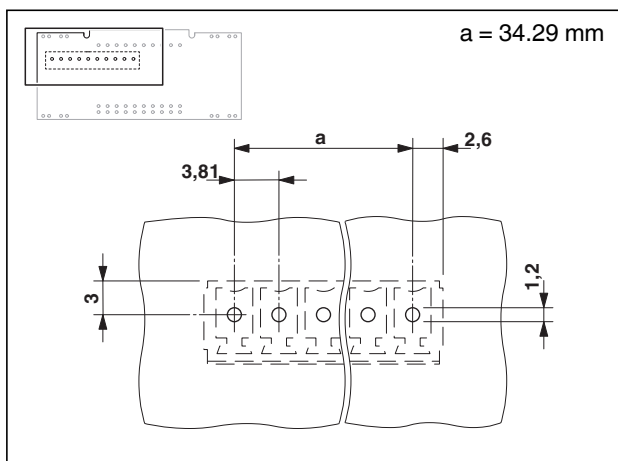


Figure 38 Drilling diagram MCV 1.5/10-G-3.81



The precise location of the plug-in connectors on the PCB can be found in Figure 32 on page 22.

MCV 1.5/10-G-3.81, 1803507

Dimensions / Positions

Length	7.25 mm
Pitch	3.81 mm
Dimension a	34.29 mm
No. of positions	10
Pin dimensions	0.8 x 0.8 mm
Hole diameter	1.2 mm

Technical data

Range of articles	MCV 1.5/..-G
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/2)	160 V
Rated voltage (II/2)	250 V
Connection in acc. with standard	EN-VDE
Nominal current I_N	8 A
Nominal voltage U_N	160 V
Maximum load current	8 A
Insulation material	PBT
Inflammability class in acc. with UL 94	V0
Color	green
Nominal voltage, UL/CUL Use Group B	300 V
Nominal current, UL/CUL Use Group B	8 A
Nominal voltage, UL/CUL Use Group D	300 V
Nominal current, UL/CUL Use Group D	8 A