

# Electronic housing BC for distributor boards

The requirements of modern building automation grow constantly and change with regard to comfort, control, intelligent linking of systems and their communication options permanently.

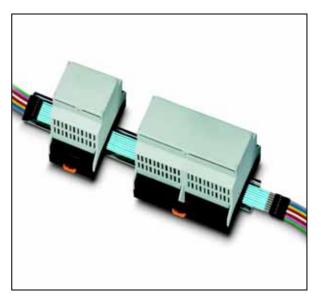
The BC... electronic housings were designed for futureoriented applications in building automation.

Besides the modern design, this housing family offers numerous other features.

The housing complies with DIN 43880, thus guaranteeing problem-free operation in all common distributor boards.

By using the HBUS 16-pos. DIN rail bus connector, connectivity from device to device is established. The cross connector allows power supply, parallel feedthrough as well as serial processing of signals through the PCB.

Plugging in and unplugging of individual devices is possible without breaking up the bussed signals.



## COMBICON Select

The COMBICON search engine with CAD downloading



COMBICON Select – The printed circuit board connection software supports your workflow from the PCB and housing layout to the ordering process with:

- Systematic and fast selection of products
- Seamless Internet-aided engineering with comprehensive CAD download
- Easy-to-use e-shopping functions.

#### select.phoenixcontact.com/combicon

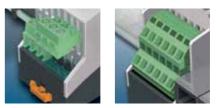
## **Housing features**



Built-in connectivity from device to device

The 16-position DIN rail bus connector provides for both parallel and serial data transmission and power supply.

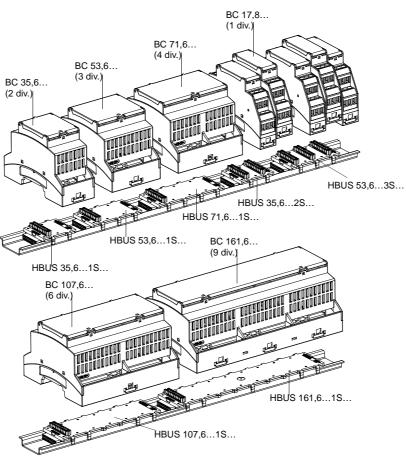
Free choice of the matching PCB technology The BC...U11 housing types with a small terminal space are ideal for COMBICON compact building automation connection systems. If classical connection systems or data plug connectors are to be used, the BC...U22 housing variants with a large terminal space are available.



**Different cover versions for an ideal device design** A captive snap-in cover in the same color as the housing or a transparent hinged cover that can be sealed – the perfect finish for all applications.



Flexible device design Inner PCB guides in all three directions support functional and convenient installation of the electronic system.



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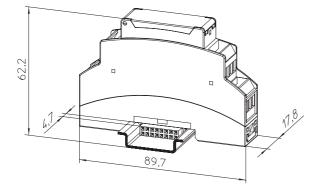
## Electronic housing BC for distributor boards BC 17,8 ... (1 div.)

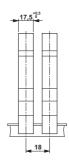


Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 17,8 UT HBUS BK	2896241	10
Housing upper part, for PCB terminal block connection	BC 17,8 OT-MKDSO KMGY	2896092	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 17,8 DKL R KMGY	2896144	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 17,8 DKL S TRANS	2896102	10
DIN rail bus connector, 16-pos., two 18-pos. slots to the PCB	HBUS 35,6-16P-2S BK	2896319	10
DIN rail bus connector, 16-pos., three 18-pos. slots to the PCB	HBUS 53,6-16P-3S BK	2896322	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space	ME B-17,5 MKDSO KMGY	2854115	50
PCB terminal block, for soldering into the PCB Left Right	MKDSO 2,5/3-L KMGY MKDSO 2,5/3-R KMGY	2854102 2854092	50 50
Technical data		•	
sulation material Polycarbonate			
Inflammability class in acc. with UL 94			
Color, housing lower part	Black		
Color, housing upper part	Light gray		

#### Housing dimensional drawing

#### Dimensions for the pitch unit





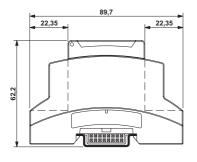
Pitch unit (div.) = 18 mm, in acc. with DIN 43880 Dimensions and tolerances in acc. with DIN 43880

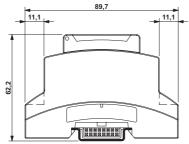
## Electronic housing BC for distributor boards BC 35,6 ... (2 div.)



Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 35,6 UT HBUS BK	2896254	10
Housing upper part, with vents, terminal installation depth 11.1 mm	BC 35,6 OT U11 KMGY	2896034	10
Housing upper part, with vents, terminal installation depth 22.35 mm	BC 35,6 OT U22 KMGY	2896047	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 35,6 DKL R KMGY	2896157	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 35,6 DKL S TRANS	2896115	10
DIN rail bus connector, 16-pos., one 18-pos. slot to the PCB	HBUS 35,6-16P-1S BK	2896283	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 11.1 mm	BC 17,6 BS U11 KMGY	2896186	50
<b>Cover caps</b> for empty terminal space, width 17.6 mm, for terminal installation depth 22.35 mm	BC 17,6 BS U22 KMGY	2896199	50
<b>Cover caps</b> for empty terminal space, width 35.6 mm, for terminal installation depth 11.1 mm	BC 35,6 BS U11 KMGY	2896209	50
<b>Cover caps</b> for empty terminal space, width 35.6 mm, for terminal installation depth 22.35 mm	BC 35,6 BS U22 KMGY	2896212	50
Technical data			
Insulation material	Polycarbonate		
Inflammability class in acc. with UL 94	VO		
Color, housing lower part	Black		
Color, housing upper part	Light gray		

#### Housing dimensional drawing





#### Housing top view



Dimensions and tolerances in acc. with DIN 43880

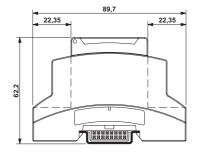
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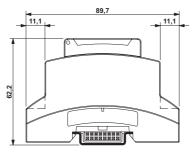
## Electronic housing BC for distributor boards BC 53,6 ... (3 div.)



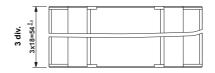
Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 53,6 UT HBUS BK	2896403	10
Housing upper part, with vents, terminal installation depth 11.1 mm	BC 53,6 OT U11 KMGY	2896416	10
Housing upper part, with vents, terminal installation depth 22.35 mm	BC 53,6 OT U22 KMGY	2896429	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 53,6 DKL R KMGY	2896432	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 53,6 DKL S TRANS	2896445	10
DIN rail bus connector, 16-pos., one 18-pos. slot to the PCB	HBUS 53,6-16P-1S BK	2896458	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 11.1 mm	BC 17,6 BS U11 KMGY	2896186	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 22.35 mm	BC 17,6 BS U22 KMGY	2896199	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 11.1 mm	BC 35,6 BS U11 KMGY	2896209	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 22.35 mm	BC 35,6 BS U22 KMGY	2896212	50
Cover caps for empty terminal space, width 53.6 mm, for terminal installation depth 11.1 mm	BC 53,6 BS U11 KMGY	2896225	50
Cover caps for empty terminal space, width 53.6 mm, for terminal installation depth 22.35 mm	BC 53,6 BS U22 KMGY	2896238	50
Technical data	 	arbonate	
Inflammability class in acc. with UL 94	Polycarbonate		
Color, housing lower part	Black		
Color, housing upper part	Light gray		

## Housing dimensional drawing





## Housing top view



Dimensions and tolerances in acc. with DIN 43880

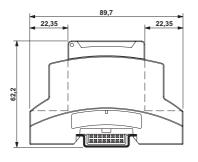
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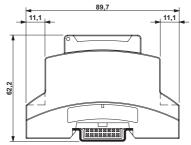
## Electronic housing BC for distributor boards BC 71,6 ... (4 div.)



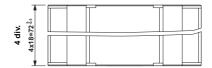
Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 71,6 UT HBUS BK	2896267	10
Housing upper part, with vents, terminal installation depth 11.1 mm	BC 71,6 OT U11 KMGY	2896050	10
Housing upper part, with vents, terminal installation depth 22.35 mm	BC 71,6 OT U22 KMGY	2896063	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 71,6 DKL R KMGY	2896160	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 71,6 DKL S TRANS	2896128	10
DIN rail bus connector, 16-pos., one 18-pos. slot to the PCB	HBUS 71,6-16P-1S BK	2896296	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 11.1 mm	BC 17,6 BS U11 KMGY	2896186	50
<b>Cover caps</b> for empty terminal space, width 17.6 mm, for terminal installation depth 22.35 mm	BC 17,6 BS U22 KMGY	2896199	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 11.1 mm	BC 35,6 BS U11 KMGY	2896209	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 22.35 mm	BC 35,6 BS U22 KMGY	2896212	50
Technical data			
Insulation material	Polycarbonate		
Inflammability class in acc. with UL 94	VO		
Color, housing lower part	Black		
Color, housing upper part	Light gray		

#### Housing dimensional drawing





#### Housing top view



Dimensions and tolerances in acc. with DIN 43880

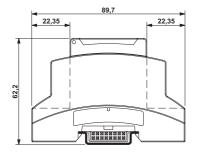
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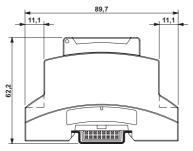
## Electronic housing BC for distributor boards BC 107,6 ... (6 div.)



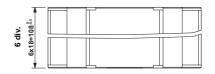
Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 107,6 UT HBUS BK	2896270	10
Housing upper part, with vents, terminal installation depth 11.1 mm	BC 107,6 OT U11 KMGY	2896076	10
Housing upper part, with vents, terminal installation depth 22.35 mm	BC 107,6 OT U22 KMGY	2896089	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 107,6 DKL R KMGY	2896173	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 107,6 DKL S TRANS	2896131	10
DIN rail bus connector, 16-pos., one 18-pos. slot to the PCB	HBUS 107,6-16P-1S BK	2896306	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 11.1 mm	BC 17,6 BS U11 KMGY	2896186	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 22.35 mm	BC 17,6 BS U22 KMGY	2896199	50
<b>Cover caps</b> for empty terminal space, width 35.6 mm, for terminal installation depth 11.1 mm	BC 35,6 BS U11 KMGY	2896209	50
<b>Cover caps</b> for empty terminal space, width 35.6 mm, for terminal installation depth 22.35 mm	BC 35,6 BS U22 KMGY	2896212	50
Cover caps for empty terminal space, width 53.6 mm, for terminal installation depth 11.1 mm	BC 53,6 BS U11 KMGY	2896225	50
<b>Cover caps</b> for empty terminal space, width 53.6 mm, for terminal installation depth 22.35 mm	BC 53,6 BS U22 KMGY	2896238	50
Technical data			
Insulation material		arbonate	
Inflammability class in acc. with UL 94	V0		
Color, housing lower part	Black		
Color, housing upper part	Ligh	nt gray	

Housing dimensional drawing





#### Housing top view



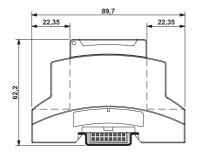
Dimensions and tolerances in acc. with DIN 43880

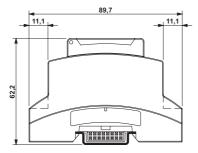
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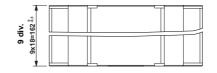
## Electronic housing BC for distributor boards BC 161,6 ... (9 div.)



Description	Туре	Order No.	Pcs./Pkt.
Housing lower part	BC 161,6 UT HBUS BK	2278500	10
Housing upper part, with vents, terminal installation depth 11.1 mm	BC 161,6 OT U11 KMGY	2278513	10
Housing upper part, with vents, terminal installation depth 22.35 mm	BC 161,6 OT U22 KMGY	2278526	10
Housing cover, with the housing upper part with captive locking, in housing color	BC 161,6 DKL R KMGY	2278539	10
Housing cover, hinged, can be sealed, transparent, incl. fitted cover	BC 161,6 DKL S TRANS	2278542	10
DIN rail bus connector, 16-pos., one 18-pos. slot to the PCB	HBUS 161,6-16P-1S BK	2278555	10
Power connector for DIN rail bus connector, socket strip	BL2-2,54/16-ST	2896335	50
Power connector for DIN rail bus connector, pin strip	SL2-2,54/16-ST	2896348	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 11.1 mm	BC 17,6 BS U11 KMGY	2896186	50
Cover caps for empty terminal space, width 17.6 mm, for terminal installation depth 22.35 mm	BC 17,6 BS U22 KMGY	2896199	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 11.1 mm	BC 35,6 BS U11 KMGY	2896209	50
Cover caps for empty terminal space, width 35.6 mm, for terminal installation depth 22.35 mm	BC 35,6 BS U22 KMGY	2896212	50
Cover caps for empty terminal space, width 53.6 mm, for terminal installation depth 11.1 mm	BC 53,6 BS U11 KMGY	2896225	50
Cover caps for empty terminal space, width 53.6 mm, for terminal installation depth 22.35 mm	BC 53,6 BS U22 KMGY	2896238	50
Technical data		arbonate	
Inflammability class in acc. with UL 94 Color, housing lower part Color, housing upper part	V0 Black Light gray		



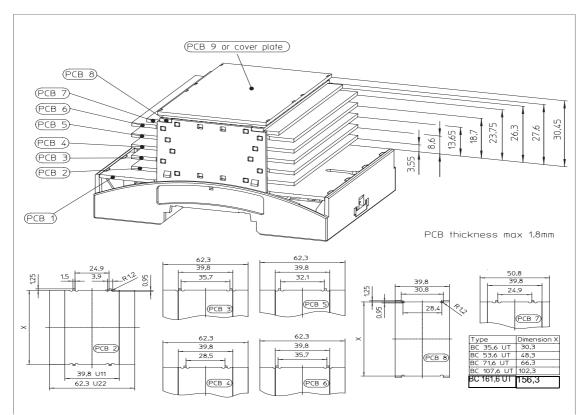




Dimensions and tolerances in acc. with DIN 43880

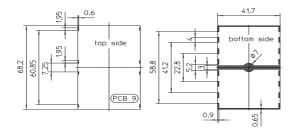
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## Overview of the PCB plugging possibilities (horizontal PCBs) and PCB dimensions for PCB 2 - 8



## PCB dimensions for PCB 9

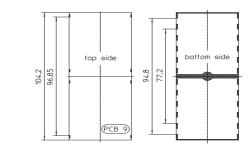
for electronic housing BC 71,6...



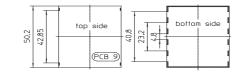
for electronic housing BC 35,6...



for electronic housing BC 107,6...

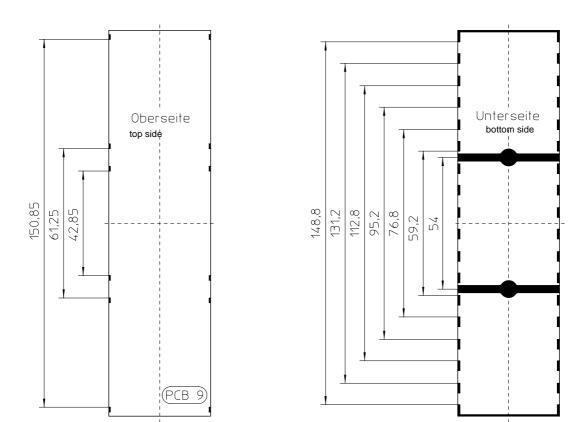


for electronic housing BC 53,6...



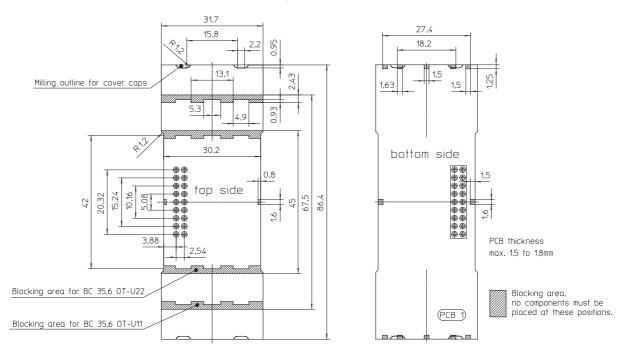
## PCB dimensions for PCB 9

for electronic housing BC 161,6

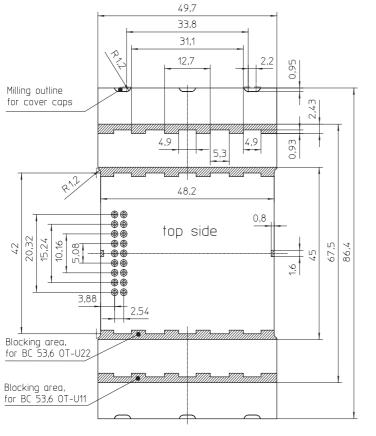


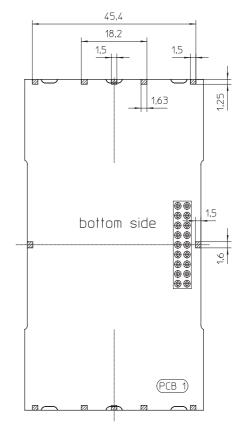
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## PCB dimensions for PCB 1 for electronic housing BC 35,6...



PCB dimensions for PCB 1 for electronic housing BC 53,6...



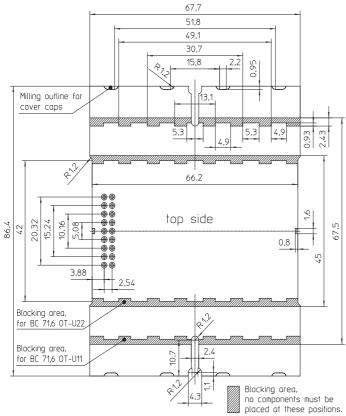


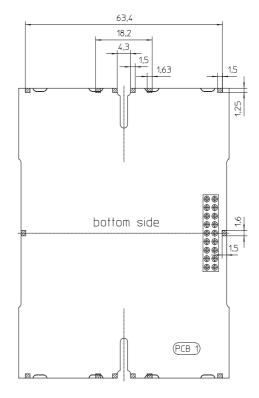
Blocking area, no components must be placed at these positions.

PCB thickness 1,5 to 1,8mm

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## PCB dimensions for PCB 1 for electronic housing BC 71,6...



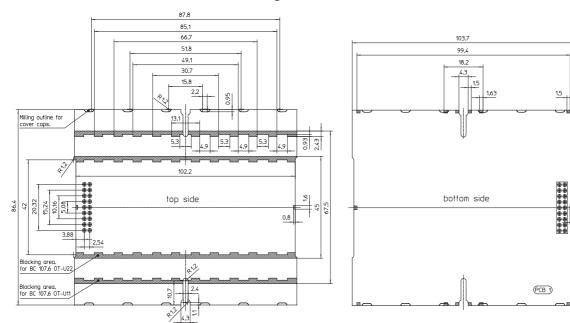


1.25

1,5

PCB thickness max. 1,5 to 1,8mm

## PCB dimensions for PCB 1 for electronic housing BC 107,6...

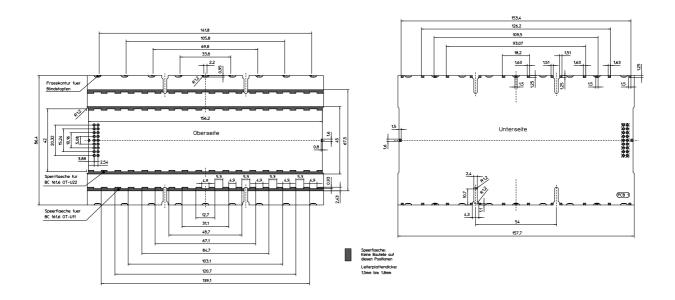




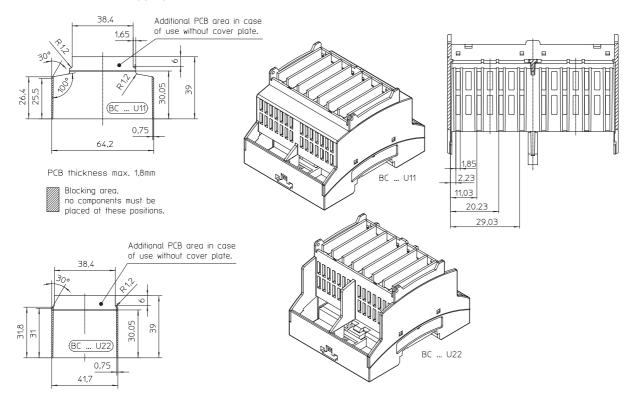
PCB thickness 1,5 to 1,8mm

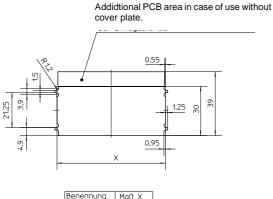
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## PCB dimensions for PCB 1 for electronic housing BC 161,6...



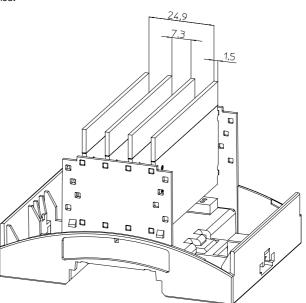
## Overview of PCB plugging possibilities and PCB dimensions for vertical PCBs





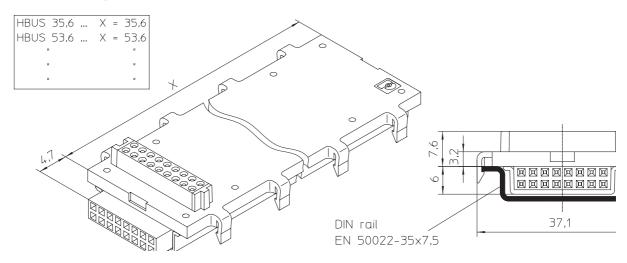


Leiterplattendicke max. 1,8mm



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## Dimensional diagram of DIN rail bus connectors HBUS



## Circuit diagram of DIN rail bus connectors HBUS

Article HBUS 53,6-16P-3S

Article	HBUS	35,6-16P-2S

<u>²</u> _ <u>1</u>		μů	ΰų	1 2
<u>4</u> 3	ΰĴ	Ų Ų	Ϋ́́	<u> </u>
<u>غ</u> <u>ع</u>	μ̈́	μ̈́	μ̈́ΰ	5 6
\$_3	ů 7 Ů Ų	ů 7 Ů Ů	μ̈́́	7 8
<u>الم</u>	μμ	μ̈́μ		
<u>ل</u> ا م	12 11 12 11	12 11 U U	12 11 U U	11 12
14 B	14 13 U U	14 13 U U		13 14
*	150 15b	150 150 U	150 15b U U	15 16
	160 160	16a 16b	16a 16b Ļ	
	160 165 Ļ Ļ	169 t <u>p</u>	160 160 Ų Ų	

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\$	μ <sup>°</sup>	ů 7 Ů Ų	7 8
12, 2	μ̈́μ̈́	ůů	9,10
12 11	12 11 U U	12 11 U U	11 12
14 13	μ̈́μ̈́	μ̈́ΰ	13 14
16 15	15a 15b Ļ Ļ	150 150 U U	15 16
	160 16b	16a 16b	

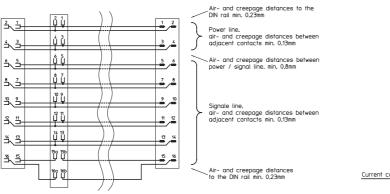
Air- and creepage distances to the DIN rail min. 0.23mm Power line, air- and creepage distances between adjacent contacts min. 0.13mm

Air- and creepage distances between power / signal line, min. 0,8mm

Signale line, air- and creepage distances between adjacent contacts min. 0,13mm

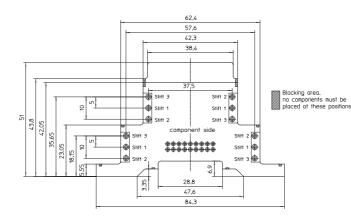
Air- and creepage distances to the DIN rail min. 0,23mm

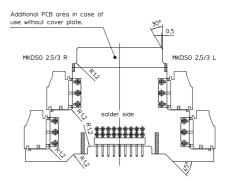
Article: HBUS 35,6-16P-1S HBUS 53,6-16P-1S HBUS 71,6-16P-1S HBUS 107,6-16P-1S

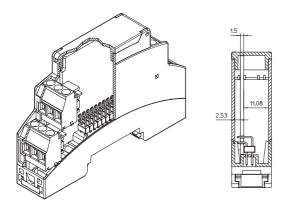


Current carrying capacity 3A per contact however total current max. 25A

## PCB arrangement and dimensional diagram for electronic housing BC 17,8









Dimensional diagram of plug connector on horizontal PCB (PCB 1 in BC 35,6 to BC 107,6) for contacting in the DIN rail bus connector HBUS

5,2 max.

4,65

Ő

(PCB 1)

Raster 2,54

pitch 2,54

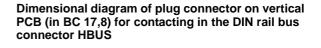
Stiftleiste, max. 2x9 polig

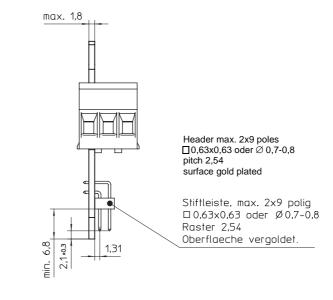
Oberflaeche vergoldet Header max. 2x9 poles

□0,63x0,63 oder Ø 0,7-0,8

surface gold plated

□0,63x0,63 oder Ø0,7-0,8





TNR: 102981-01-en/15.04.08 © PHOENIX CONTACT 2006