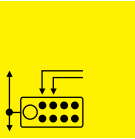


Fieldbus Systems





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Fieldbus System: Profibus

In use for years, Profibus stands for well-engineered fieldbus technology and reliably supports modern manufacturing. As a full-service provider, Balluff offers a wide range of components for optimum Profibus use. Regardless of controller manufacturer, Balluff has the perfect solution in store for you: for efficient field and process communication with simple wiring and fast integration through direct installation in your system and the possibility of fast modifications. Even in harsh environments.

Balluff Profibus solutions are IO-Link capable, allowing you to take advantage of solid IO-Link benefits. Wiring is made even simpler. Integrated diagnostics prevent system failure and the central configuration quickly returns systems to operation. You save time and benefit from real cost advantages.

In addition, Profibus offers investment security, since standard IEC 61158/EN 50170 simplifies expansion of your system.

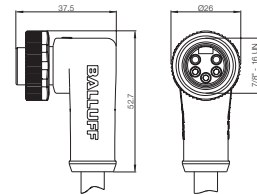
With mature connection technology, Balluff contributes to increased efficiency and growing cost savings.



Connector diagram and wiring	<p>PIN 1: black PIN 2: blue PIN 3: green/yellow PIN 4: brown PIN 5: white</p> <p>1 _____ 2 _____ 3 _____ 4 _____ 5 _____</p>	<p>PIN 1: black PIN 2: blue PIN 3: green/yellow PIN 4: brown PIN 5: white</p> <p>1 _____ 2 _____ 3 _____ 4 _____ 5 _____</p>	
	Type	Female	Female
Supply voltage U_B	300 V DC	300 V DC	
Number of conductors x conductor cross-section	5x1.5 mm ²	5x1.5 mm ²	
Degree of protection as per IEC 60529	IP 68	IP 68	
Ambient temperature T_a	-25...+80 °C	-25...+80 °C	

Cable material	Color	Length	Ordering code	
Part number				
PUR	Black	0.6 m		
PUR	Black	2 m	BCC06HC BCC A315-0000-10-063-PX05A5-020	BCC06HH BCC A325-0000-10-063-PX05A5-020
PUR	Black	5 m	BCC06HE BCC A315-0000-10-063-PX05A5-050	BCC06HJ BCC A325-0000-10-063-PX05A5-050
PUR	Black	10 m	BCC06HF BCC A315-0000-10-063-PX05A5-100	BCC06HK BCC A325-0000-10-063-PX05A5-100
PUR	Black	15 m		

Other cable materials, colors, and lengths on request.



Profibus

Power connection cables 7/8", 5-pin

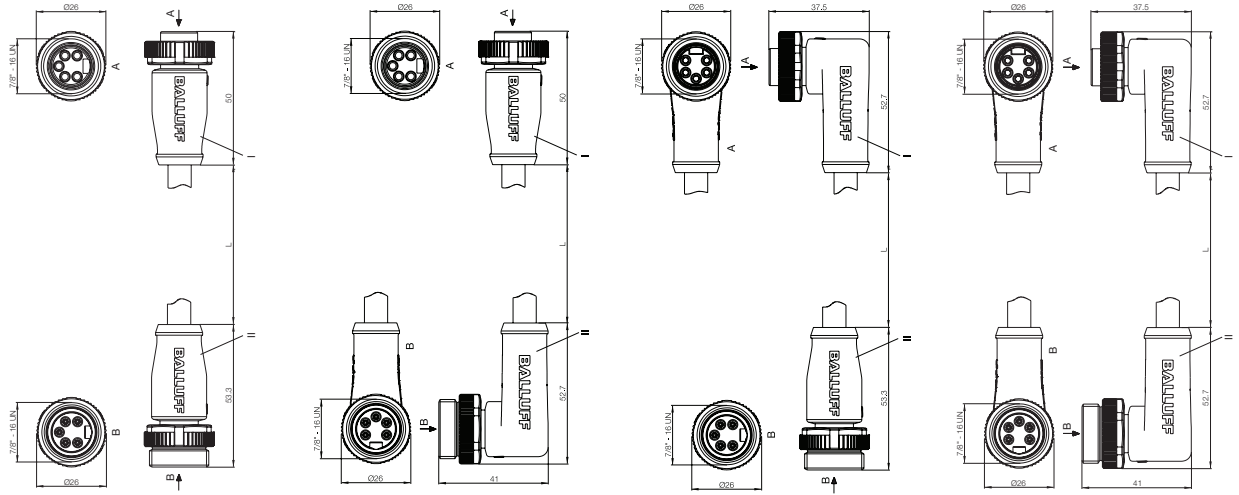


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Devicenet
Ethernet/IP
Unmanaged switches



Female/male	Female/male	Female/male	Female/male
300 V DC	300 V DC	300 V DC	300 V DC
5x1.5 mm ²	5x1.5 mm ²	5x1.5 mm ²	5x1.5 mm ²
IP 68	IP 68	IP 68	IP 68
-25...+80 °C	-25...+80 °C	-25...+80 °C	-25...+80 °C

Ordering code			
Part number			
BCC06FM	BCC06FU	BCC06H1	BCC06H6
BCC A315-A315-30-335-PX05A5-006	BCC A315-A325-30-335-PX05A5-006	BCC A325-A315-30-335-PX05A5-006	BCC A325-A325-30-335-PX05A5-006
BCC06FN	BCC06FW	BCC06H2	BCC06H7
BCC A315-A315-30-335-PX05A5-020	BCC A315-A325-30-335-PX05A5-020	BCC A325-A315-30-335-PX05A5-020	BCC A325-A325-30-335-PX05A5-020
BCC06FP	BCC06FY	BCC06H3	BCC06H8
BCC A315-A315-30-335-PX05A5-050	BCC A315-A325-30-335-PX05A5-050	BCC A325-A315-30-335-PX05A5-050	BCC A325-A325-30-335-PX05A5-050
BCC06FR	BCC06FZ	BCC06H4	BCC06H9
BCC A315-A315-30-335-PX05A5-100	BCC A315-A325-30-335-PX05A5-100	BCC A325-A315-30-335-PX05A5-100	BCC A325-A325-30-335-PX05A5-100
BCC06FT	BCC06H0	BCC06H5	BCC06HA
BCC A315-A315-30-335-PX05A5-150	BCC A315-A325-30-335-PX05A5-150	BCC A325-A315-30-335-PX05A5-150	BCC A325-A325-30-335-PX05A5-150

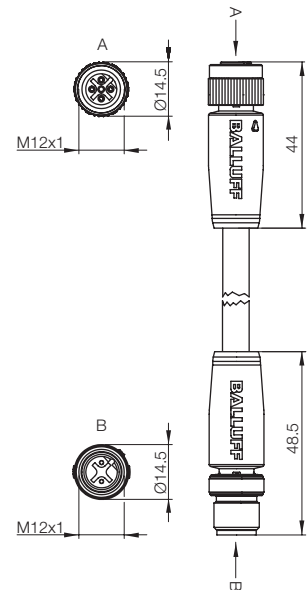
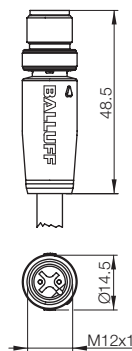
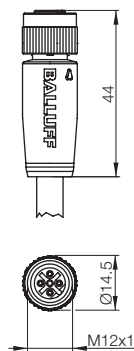




Connector diagram and wiring	<p>Shield on cap nut</p>	<p>Shield on cap nut</p>	
Type	Female	Male	Female/male
Supply voltage U_B	300 V	300 V	300 V
Number of conductors × conductor cross-section	2×0.64 mm ²	2×0.64 mm ²	2×0.64 mm ²
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67
Ambient temperature T_a	-20...+70 °C	-20...+70 °C	-20...+70 °C

Cable material	Color	Length	Ordering code			
			Part number			
PUR		Violet	0.6 m		BCC0A12 BCC M415-M412-3B-329-PS72N1-006	
PUR		Violet	1 m		BCC0A13 BCC M415-M412-3B-329-PS72N1-010	
PUR		Violet	2 m	BCC070Y BCC M415-0000-1B-031-PS72N1-020	BCC0A0Y BCC M412-0000-2B-031-PS72N1-020	BCC0A14 BCC M415-M412-3B-329-PS72N1-020
PUR		Violet	5 m	BCC070Z BCC M415-0000-1B-031-PS72N1-050	BCC0A0Z BCC M412-0000-2B-031-PS72N1-050	BCC0A15 BCC M415-M412-3B-329-PS72N1-050
PUR		Violet	10 m	BCC0710 BCC M415-0000-1B-031-PS72N1-100	BCC0A10 BCC M412-0000-2B-031-PS72N1-100	BCC0A16 BCC M415-M412-3B-329-PS72N1-100
PUR		Violet	15 m		BCC0A17 BCC M415-M412-3B-329-PS72N1-150	
PUR		Violet	20 m		BCC0A18 BCC M415-M412-3B-329-PS72N1-200	

Other cable lengths on request.



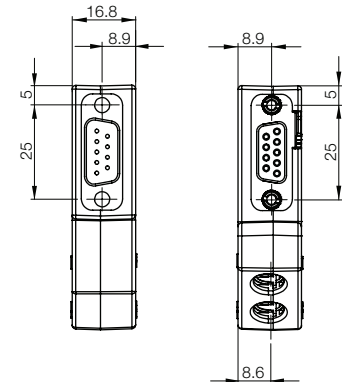
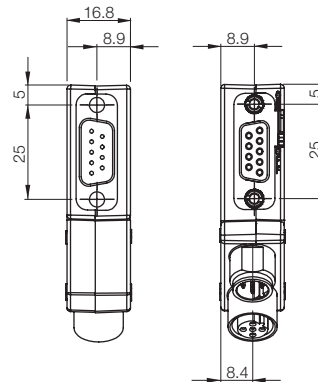
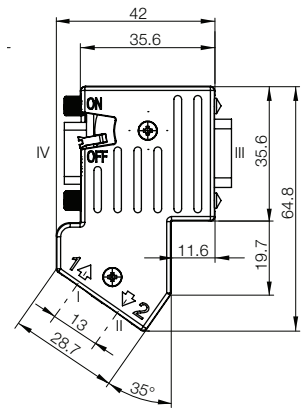
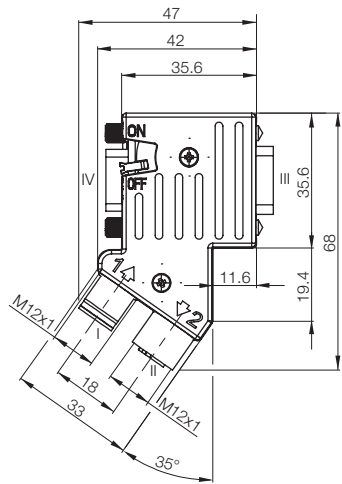
Profibus

Bus plug with switchable terminating resistor



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Connector diagram and wiring	 	
	Type	Female/male
Connector type	Sub D/M12	Male Sub D / female Sub D
Supply voltage U_B	30 V	30 V
Degree of protection as per IEC 60529	IP 67	IP 30
Ambient temperature T_a	-20...+70 °C	-20...+70 °C
	Ordering code	
	Part number	
Cable outlets, right-angle	BCC0C0Y BCC D259-M414-M415-U0029-000-C011	BCC0C10 BCC D279-0000-E0-000-65X4N1-000-C011
Cable outlets, straight	BCC0C0Z BCC D269-M414-M415-U0029-000-C011	BCC0C11 BCC D289-0000-E0-000-65X4N1-000-C011



Profibus

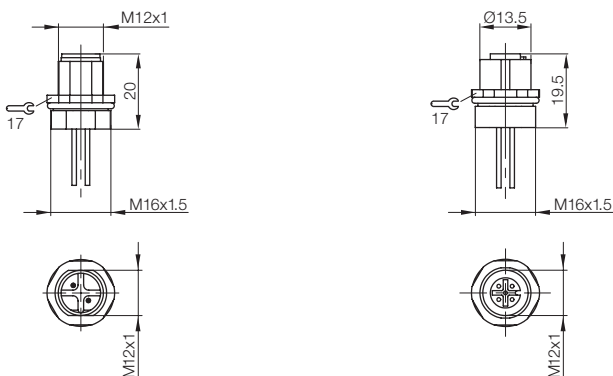
Flange plug and socket



Connector diagram and wiring		
	1 _____ 2 _____ 3 _____ 4 _____ 5 _____	1 _____ 2 _____ 3 _____ 4 _____ 5 _____
Supply voltage U_B	125 V	125 V
Number of conductors × conductor cross-section	2×0.25 mm ²	2×0.25 mm ²
Degree of protection as per IEC 60529	IP 68	IP 68
Ambient temperature T_a	-25...+85 °C	-25...+85 °C

Cable length	Ordering code	
	Part number	
0.2 m	BCC0E40	BCC0E3Z
	BCC M452-0000-2B-RM080-002	BCC M455-0000-1B-RM080-002

Other cable lengths on request.





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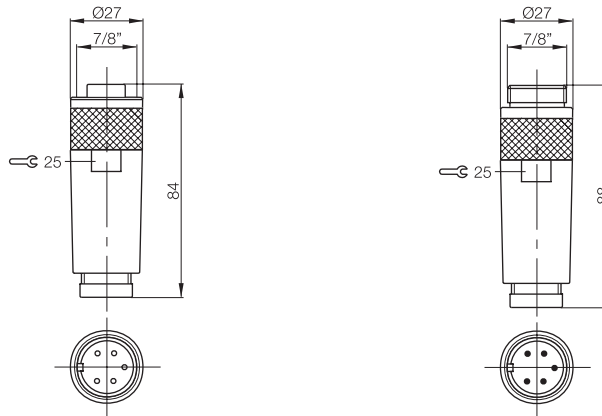
Power plug connector, 7/8", 5-pin



Connector diagram and wiring		
Type	Female	Male
Supply voltage U _B	300 V	300 V
Number of conductors × conductor cross-section	5 × max. 1.5 mm ²	5 × max. 1.5 mm ²
Degree of protection as per IEC 60529	IP 67	IP 67
Ambient temperature T _a	-25...+80 °C	-25...+80 °C

Cable material	Color	Ordering code	
Cable dia.		Part number	
PUR	Black	BCC070E	BCC070J
6...8 mm		BCC A335-0000-10-000-51X5A5-000	BCC A335-0000-20-000-51X5A5-000
PUR	Black	BCC070F	BCC070K
8...10 mm		BCC A335-0000-10-000-61X5A5-000	BCC A335-0000-20-000-61X5A5-000
PUR	Black	BCC070H	BCC070L
10...12 mm		BCC A335-0000-10-000-71X5A5-000	BCC A335-0000-20-000-71X5A5-000

Other cable diameters on request.



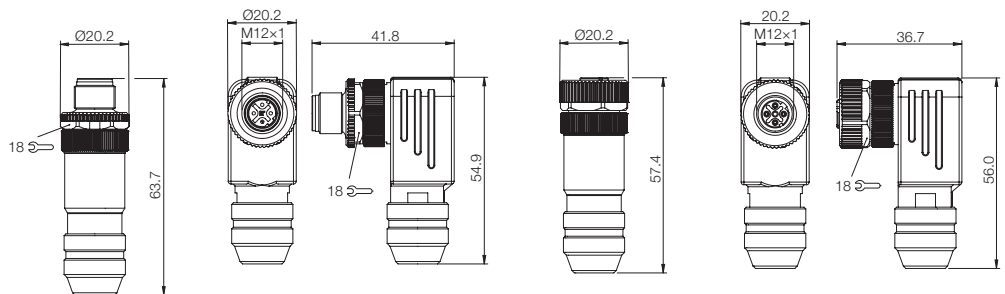
Profibus

Bus plug connector, M12, 5-pin, B-coded, Customized assembly, shieldable



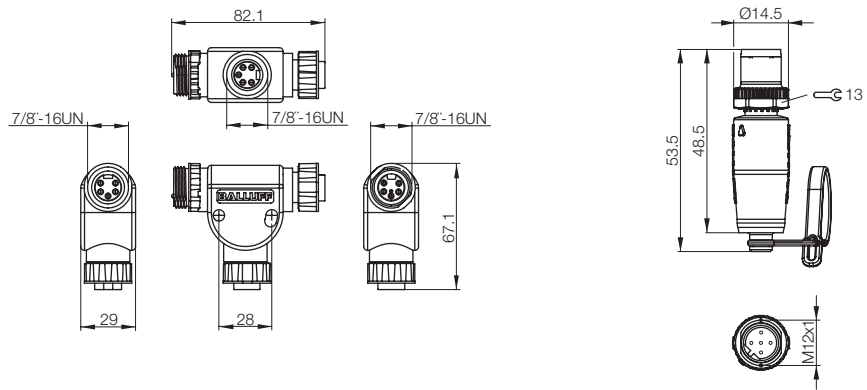
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Connector diagram and wiring				
Plug connector	M12	M12	M12	M12
Version	B-coded	B-coded	B-coded	B-coded
Type	Male	Male	Female	Female
Ordering code	BCC0714	BCC0716	BCC0715	BCC0717
Part number	BCC M475-0000-2B-000-01X575-000	BCC M485-0000-2B-000-01X575-000	BCC M475-0000-1B-000-01X575-000	BCC M485-0000-1B-000-01X575-000
Supply voltage U_B	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Number of conductors × conductor cross-section	5× max. 0.75 mm ²	5× max. 0.75 mm ²	5× max. 0.75 mm ²	5× max. 0.75 mm ²
Min. cable diameter	Max. 8.0 mm	Max. 8.0 mm	Max. 8.0 mm	Max. 8.0 mm
Connection	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Degree of protection as per IEC 60529	IP 67	IP 67	IP 67	IP 67
Ambient temperature T_a	-25...+85 °C	-25...+85 °C	-25...+85 °C	-25...+85 °C
Housing material	CuZn	CuZn	CuZn	CuZn
Shielded design	Yes	Yes	Yes	Yes





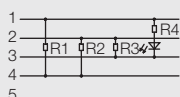
<p>Connector diagram and wiring</p>			
<p>Configuration</p>	<p>7/8" power distributor</p>	<p>M12 terminating resistor</p>	
<p>Version</p>	<p>Standard, 5-pin</p>	<p>5-pin, B-coded</p>	
<p>Type</p>	<p>Female/male</p>	<p>Male</p>	
<p>Ordering code</p>	<p>BCC0AA7</p>	<p>BCC0718</p>	
<p>Part number</p>	<p>BCC A315-A315-A315-T0023-000</p>	<p>BCC M415-0000-2B-R01</p>	
<p>Supply voltage U_B</p>	<p>300 V AC</p>	<p>10...30 V DC</p>	
<p>Degree of protection as per IEC 60529</p>	<p>IP 67</p>	<p>IP 67</p>	
<p>Ambient temperature T_a</p>	<p>-40...+90 °C</p>	<p>-40...+85 °C</p>	
<p>Housing material</p>	<p>Plastic</p>	<p>Plastic</p>	



Profibus Bus terminating resistor



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M12 terminating resistor
5-pin, B-coded
Male

BCC0719

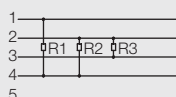
BCC M415-0000-2B-R02

10...30 V DC

IP 67

-40...+85 °C

Plastic



M12 terminating resistor

5-pin, B-coded

Female

BCC0C6E

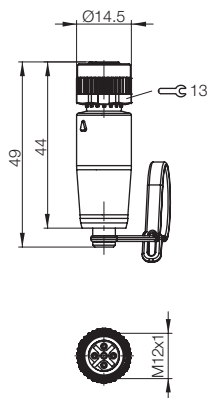
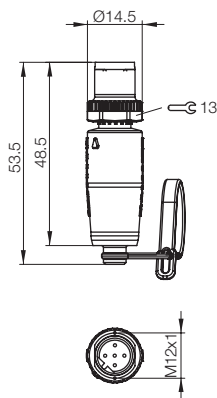
BCC M415-0000-1B-R01

10...30 V DC

IP 67

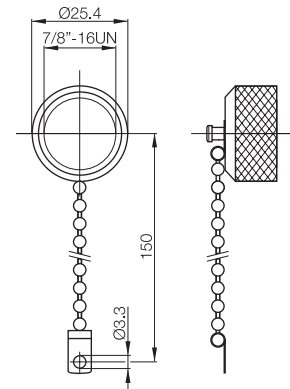
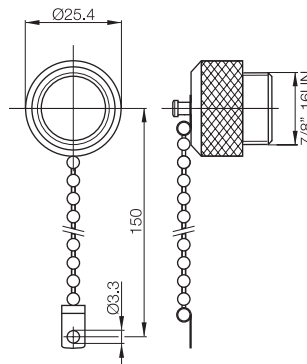
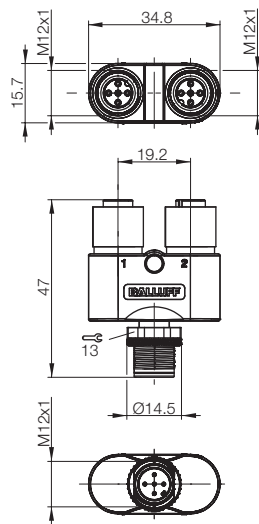
-40...+85 °C

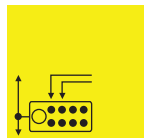
Plastic





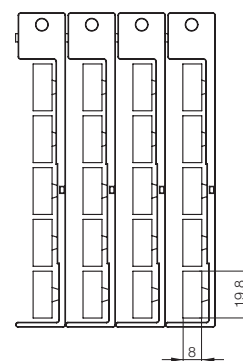
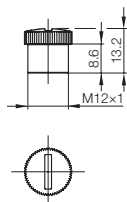
Connector diagram and wiring			
Description	T splitter	Screw plug 7/8"	Screw plug 7/8"
Use	2x M12 female to 1x M12 male	Cover for the power ports	Cover for the power ports
Ordering code	BCC089P	BAM012T	BAM012U
Part number	BCC M415-M415-M415-U0003-000	BKS-7/8-CS-00-A	BKS-7/8-CS-00-I
Supply voltage U_b	125 V		
Rated operating current I_e	4 A		
Degree of protection as per IEC 60529	IP 67		
Ambient temperature T_a	-25...+80 °C	-20...+80 °C	-20...+80 °C
Housing material	PA 6.6 + GF	Nickel-plated CuZn	Nickel-plated CuZn





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Description	Screw plug M12	Tamperproof cover	Marking sleeve	Label set
Use	IP 65 screw plug for unused ports	with 4 openings	For labeling connectors	Labeling the ports for modules BNI PBS..., BNI PNT..., BNI DNT..., BNI EIP..., BNI CCL...
Ordering code	BAM01C2	BAM01J0		BAM01AT
Part number	BAM CS-XA-002-M12-A	BAM FK-NI-PBS-01-C	BAM IA-CC-002-01	BNI ACC-L01-000
Ambient temperature T _a	-20...+80 °C			
Housing material	Plastic			Plastic



3-wire connector BCC; see the chapter "Connectors and Cables" beginning on **page 270**.

