

Micropulse Transducers

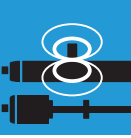


Accessories Contents

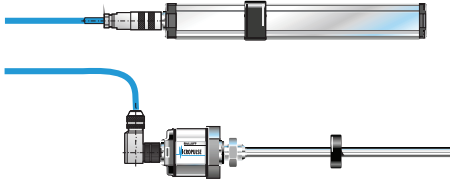
Accessories

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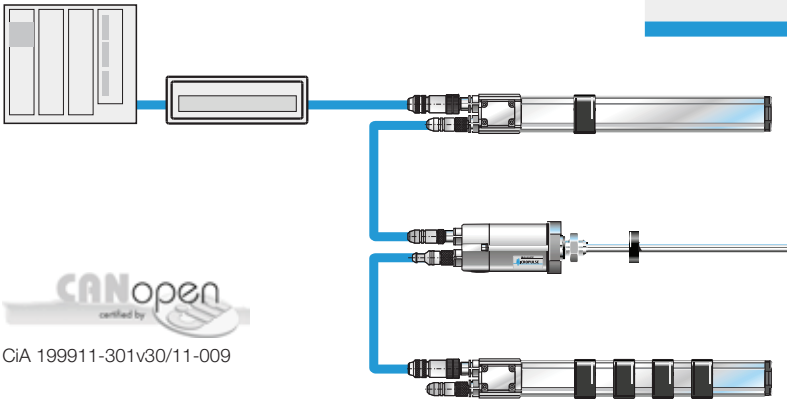
MICROPULSE[®]



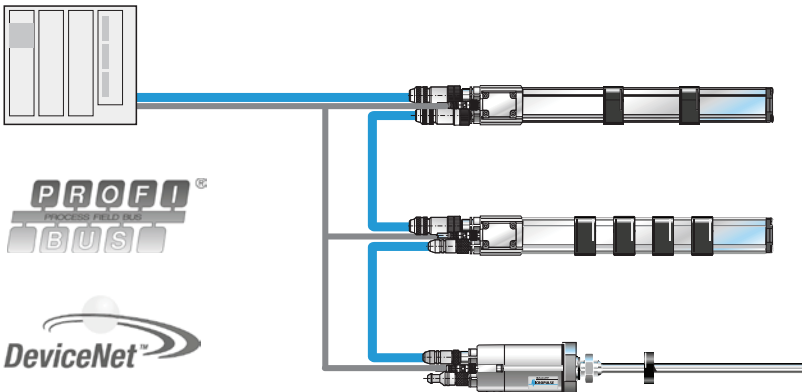
Connector for analog, pulse and SSI interfaces




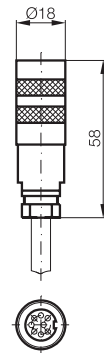
Connectors for CANopen



Connectors for Profibus DP and DeviceNet interfaces








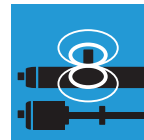
for Series	BTL_...-S 32																			
Design	soldered contacts Straight, female																			
Ordering code	BKS-S 32M																			
Part number	BKS-S 32M-__																			
Crimped contacts																				
Solder connection	max. 0.75 mm ²																			
Housing material	Nickel-plated CuZn																			
Contact	CuZn																			
Contact surface	0.8 µm Au																			
Cable strain relief	PG 9																			
Cable diameter	6...8 mm																			
Cable	Lif2Y-FC-11Y- 0																			
Number of conductors x conductor cross-section	8x0.25 mm ²																			
Degree of protection as per IEC 60529	IP 67 (when screwed into place)																			
View of female solder side	 <table border="1" data-bbox="1228 862 1340 1041"> <thead> <tr> <th>PIN</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>YE</td></tr> <tr><td>2</td><td>GY</td></tr> <tr><td>3</td><td>PK</td></tr> <tr><td>4</td><td>RO</td></tr> <tr><td>5</td><td>GN</td></tr> <tr><td>6</td><td>BU</td></tr> <tr><td>7</td><td>BN</td></tr> <tr><td>8</td><td>WH</td></tr> </tbody> </table>	PIN	Color	1	YE	2	GY	3	PK	4	RO	5	GN	6	BU	7	BN	8	WH	
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8	WH																			



Accessories

Connectors for analog, pulse and SSI interfaces

BTL_...-S 32 crimped contacts Straight, female	BTL_...-S 32 soldered contacts Angled, female	BTL_...-S 32 soldered contacts Straight, male	BTL_...-S32	BTL_...-S32																																																																																										
BKS-S 32M-C	BKS-S 33M	BKS-S 78M	BKS-S232	BKS-S233																																																																																										
BKS-S 32M-C-__	BKS-S 33M-__	BKS-S 78M-00	BKS-S232-PU-__	BKS-S233-PU-__																																																																																										
max. 0.5 mm ²																																																																																														
Nickel-plated CuZn CuZn	max. 0.75 mm ² Nickel plated ZnAlCu1 CuZn	max. 0.75 mm ² Nickel-plated CuZn CuZn	PUR CuZn	PUR CuZn																																																																																										
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6...8 mm	6...8 mm	6...8 mm																																																																																												
Lif2Y-FC-11Y-0	Lif2Y-FC-11Y-0		LifgY+LifgY, FC-11Y	LifgY+LifgY, FC-11Y																																																																																										
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Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and CD

Filling level sensor SF

Accessories

Connectors

Evaluation units

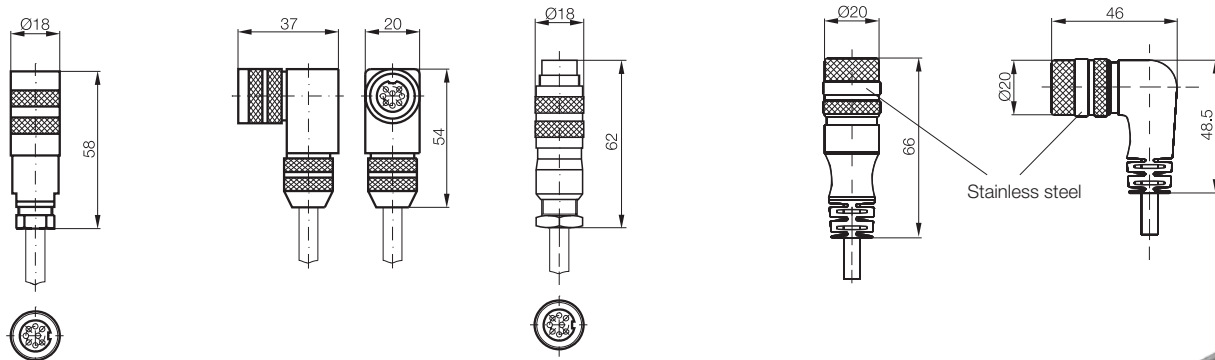
Profibus modules P111

BUS interface modules



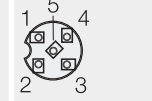

Digital display

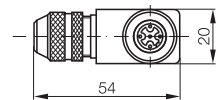
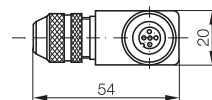
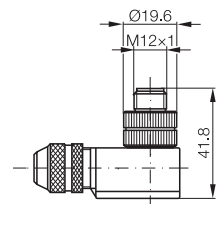
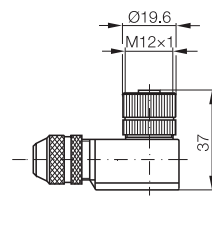
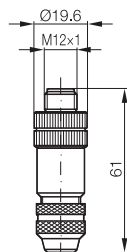
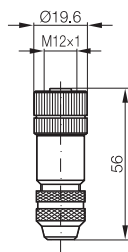
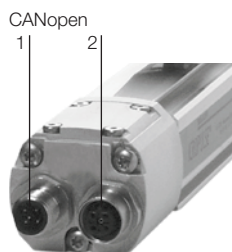
CAM controller

Basic information and definitions



Please include the cable length with the part number.
Code 00 for user-assembly (please use shielded cable).
Code 05, 10, 15, 20, 25, 30 m for finished cable assembly.


Connectors for Series	BKS-S92-00	BKS-S94-00	BKS-S93-00	BKS-S95-00																																																
Design	BTL_-H___-S92/S93/S94	BTL_-H___-S92/S93/S94	BTL_-H___-S92/S93/S94	BTL_-H___-S92/S93/S94																																																
Design	Screw terminals	Screw terminals	Screw terminals	Screw terminals																																																
Design	5-pin, female	5-pin, male	5-pin, female	5-pin, male																																																
Part number	BKS-S92-00	BKS-S94-00	BKS-S93-00	BKS-S95-00																																																
Screw terminal	max. 0.75 mm ²	max. 0.75 mm ²	max. 0.75 mm ²	max. 0.75 mm ²																																																
Housing material	Nickel-plated CuZn	Nickel-plated CuZn	Nickel-plated CuZn	Nickel-plated CuZn																																																
Contact	CuZn	CuZn	CuZn	CuZn																																																
Contact surface	0.8 µm Au	0.8 µm Au	0.8 µm Au	0.8 µm Au																																																
Cable strain relief	PG 9	PG 9	PG 9	PG 9																																																
Cable diameter	6...8 mm	6...8 mm	6...8 mm	6...8 mm																																																
Number of conductors x conductor cross-section																																																				
Degree of protection as per IEC 60529	IP 67 (when screwed into place)	IP 67 (when screwed into place)	IP 67 (when screwed into place)	IP 67 (when screwed into place)																																																
Knurled ring																																																				
Finish																																																				
O-ring																																																				
Resistor																																																				
Coding	A	A	A	A																																																
Slot on transducer	1	2	1	2																																																
View of female coupling side	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_GND</td> </tr> <tr> <td>2</td> <td>+24 V</td> </tr> <tr> <td>3</td> <td>GND (0 V)</td> </tr> <tr> <td>4</td> <td>CAN_HIGH</td> </tr> <tr> <td>5</td> <td>CAN_LOW</td> </tr> </tbody> </table>	PIN	Signal	1	CAN_GND	2	+24 V	3	GND (0 V)	4	CAN_HIGH	5	CAN_LOW	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_GND</td> </tr> <tr> <td>2</td> <td>+24 V</td> </tr> <tr> <td>3</td> <td>GND (0 V)</td> </tr> <tr> <td>4</td> <td>CAN_HIGH</td> </tr> <tr> <td>5</td> <td>CAN_LOW</td> </tr> </tbody> </table>	PIN	Signal	1	CAN_GND	2	+24 V	3	GND (0 V)	4	CAN_HIGH	5	CAN_LOW	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_GND</td> </tr> <tr> <td>2</td> <td>+24 V</td> </tr> <tr> <td>3</td> <td>GND (0 V)</td> </tr> <tr> <td>4</td> <td>CAN_HIGH</td> </tr> <tr> <td>5</td> <td>CAN_LOW</td> </tr> </tbody> </table>	PIN	Signal	1	CAN_GND	2	+24 V	3	GND (0 V)	4	CAN_HIGH	5	CAN_LOW	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>CAN_GND</td> </tr> <tr> <td>2</td> <td>+24 V</td> </tr> <tr> <td>3</td> <td>GND (0 V)</td> </tr> <tr> <td>4</td> <td>CAN_HIGH</td> </tr> <tr> <td>5</td> <td>CAN_LOW</td> </tr> </tbody> </table>	PIN	Signal	1	CAN_GND	2	+24 V	3	GND (0 V)	4	CAN_HIGH	5	CAN_LOW
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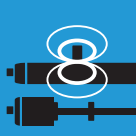


Slot 3
Power supply for DeviceNet:
BKS-S48-15-CP... page 239

Accessories

Connectors for CANopen and DeviceNet interfaces

BKS-S92-TA1 BTL_-H_-_-S92	BKS-S137-19-PC-... BTL_-H_-_-S92/S93/S94	BKS-S151-19-PC-... BTL_-H_-_-S92/S93/S94	BKS-S94-R01 BTL_-H_-_-S92/S93/S94	BKS-S92-16/GS92-_-_ BTL_-H_-_-S92/S93/S94												
T-splitter, 2 × female, 1 × male BKS-S92-TA1	5-pin, female BKS-S137-19-PC-...	5-pin, male BKS-S151-19-PC-...	Terminating resistor, male BKS-S94-R01	Male/female extension BKS-S92-16/GS92-_-_												
PA CuZn Ni	PUR CuZn 0.8 µm Au	PUR CuZn 0.8 µm Au	TPU CuZn 0.8 µm Au	PUR CuZn 0.8 µm Au												
	5×0.25 mm ² IP 67 CuZn 2.5 µm Ni HBR	5×0.25 mm ² IP 67 CuZn 2.5 µm Ni Viton		5×0.34 mm ² IP 67 CuZn 2.5 µm Ni Viton												
A 1*	A 1	A 2	121 ohms A 2	A 1/2												
			 <table border="1"> <thead> <tr> <th>PIN</th> <th>Signal</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> </tr> <tr> <td>3</td> <td>-</td> </tr> <tr> <td>4</td> <td>121 ohms</td> </tr> <tr> <td>5</td> <td>-</td> </tr> </tbody> </table>	PIN	Signal	1	-	2	-	3	-	4	121 ohms	5	-	
PIN	Signal															
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3	-															
4	121 ohms															
5	-															



Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and and CD

Filling level sensor SF

Accessories

Connectors

Evaluation units

Profibus P111 modules

BUS interface modules

Digital display CAM controller

Basic information and definitions



*Only for BTL5-H1...-M-P/B-S92

Please include the cable length with the part number.

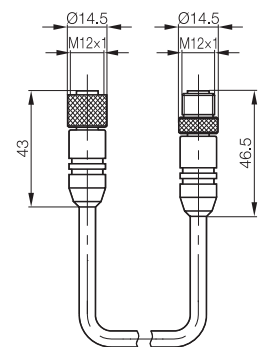
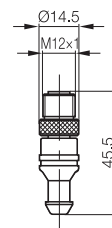
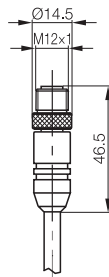
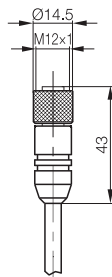
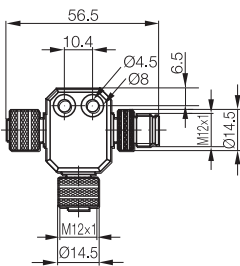
02 = Length of 2 m
05 = Length of 5 m
10 = Length of 10 m

Please include the cable length with the part number.

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Please include the cable length with the part number.

02 = Length of 2 m
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10 = Length of 10 m



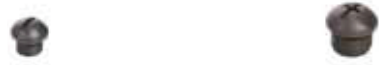
Please order the clear view cover separately.

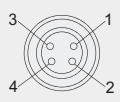
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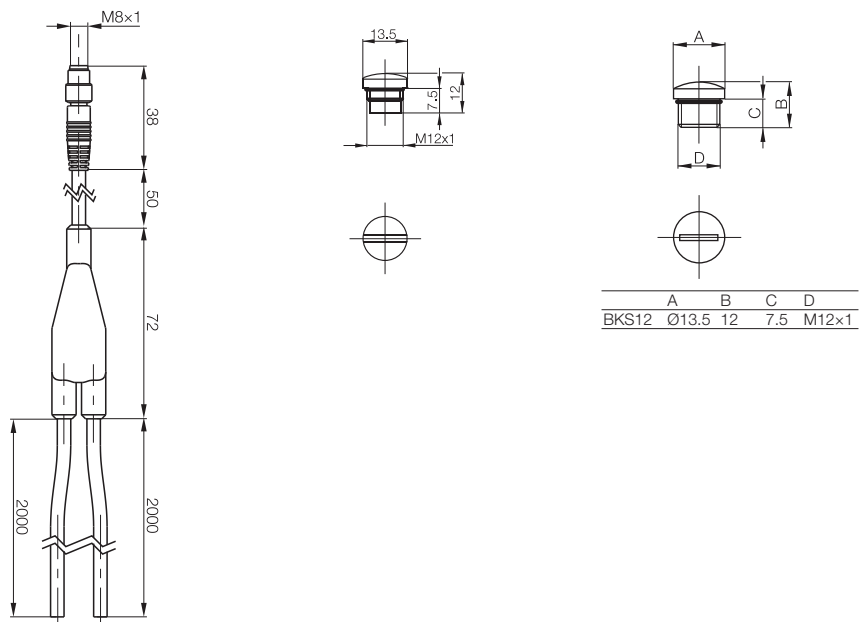


Accessories

M8 Y-connectors for CANopen



Connectors	1×M8 straight/2×3-wire	M12 locking screw	M12 locking screw
Description	Y-connector		
Design	Connector		
Use	Splitter boxes	IP 65 screw plug for unused ports	IP 65 screw plug for unused ports
Ordering code		BAM0114	BAM00K7
Part number	BKS-S 75-TB4-05-PU-00,05/02/02	BKS 12-CS-01	BKS 12-CS-00
Supply voltage U_S	10...30 V DC		
Number of conductors × conductor cross-section	4×0.34 mm ²		
Connection	Molded-in		
Degree of protection as per IEC 60529	IP 67		
Ambient temperature range T_a	-25...+85 °C	-20...+80 °C	-20...+80 °C
Housing material	PUR	Nickel-plated CuZn	Plastic
View of female/male side	 <p>PIN 1: brown PIN 2: white PIN 3: blue PIN 4: black</p>		



Accessories

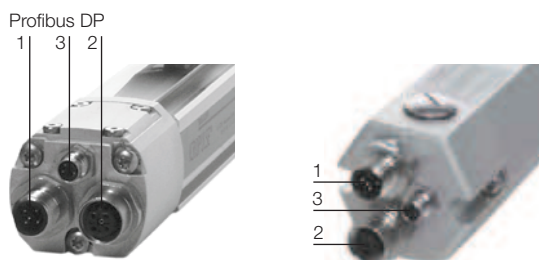
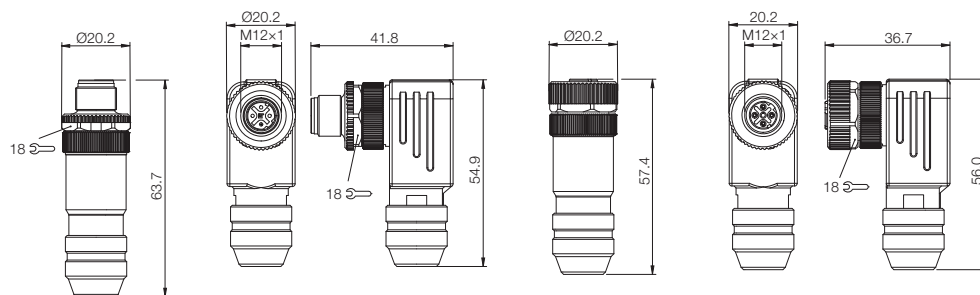
Connectors for Profibus DP



Connectors	M12	M12	M12	M12
Design	B-coded	B-coded	B-coded	B-coded
	5-pin	5-pin	5-pin	5-pin
Use	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_s	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Number of conductors × conductor cross-section	5x max. 0.75 mm ²	5x max. 0.75 mm ²	5x max. 0.75 mm ²	5x max. 0.75 mm ²
Cable diameter	6...8 mm	6...8 mm	6...8 mm	6...8 mm
Connection	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Degree of protection as per IEC 60529	IP 67 (when screwed into place)	IP 67 (when screwed into place)	IP 67 (when screwed into place)	IP 67 (when screwed into place)
Ambient temperature range 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*
Coding	B	B	B	B
Slot on transducer	2	2	1	1
View of female/male side				

*Knurled ring used for shielding

Previously BKS-S 105-00	Previously BKS-S 106-00	Previously BKS-S 103-00	Previously BKS-S 104-00
00,3 = Length of 0.3 m	00,3 = Length of 0.3 m	00,3 = Length of 0.3 m	00,3 = Length of 0.3 m
02 = Length of 2 m	02 = Length of 2 m	02 = Length of 2 m	02 = Length of 2 m
05 = Length of 5 m	05 = Length of 5 m	05 = Length of 5 m	05 = Length of 5 m
10 = Length of 10 m	10 = Length of 10 m	10 = Length of 10 m	10 = Length of 10 m



Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and CD

Filling level sensor SF

Accessories

Connectors

Evaluation units

Profibus P111 modules

BUS interface modules

Digital display CAM controller

Basic information and definitions



Connector for M12. 5-pin, B-coded for Profibus DP

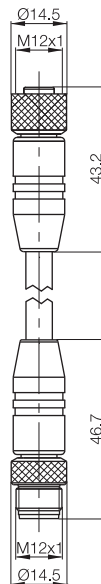
Connector diagram and wiring		
Configuration		
Design		
Use	Female/male	Female
Supply voltage U_s	300 V	300 V
Cable material	PUR	PUR
Color	Violet	Violet
Number of conductors × conductor cross-section	2×0.38 mm ²	2×0.38 mm ²
Degree of protection as per IEC 60529	IP 67	IP 67
Ambient temperature range T_a	-25...+80 °C	-25...+80 °C
Housing material	PUR	PUR
Knurled ring	Nickel-plated CuZn	Nickel-plated CuZn
Coding	B	B
Slot on transducer	1/2	1

Ordering code	Cable length 0.6 m	BCC070M	
Part number		BCC M415-M415-3B-329-PS72N1-006	
Ordering code	Cable length 1 m	BCC070N	
Part number		BCC M415-M415-3B-329-PS72N1-010	
Ordering code	Cable length 2 m	BCC070P	BCC070Y
Part number		BCC M415-M415-3B-329-PS72N1-020	BCC M415-0000-1B-031-PS72N1-020
Ordering code	Cable length 5 m	BCC070R	BCC070Z
Part number		BCC M415-M415-3B-329-PS72N1-050	BCC M415-0000-1B-031-PS72N1-050
Ordering code	Cable length 10 m	BCC070T	BCC0710
Part number		BCC M415-M415-3B-329-PS72N1-100	BCC M415-0000-1B-031-PS72N1-100
Ordering code	Cable length 15 m	BCC070U	
Part number		BCC M415-M415-3B-329-PS72N1-150	
Ordering code	Cable length 20 m	BCC070W	
Part number		BCC M415-M415-3B-329-PS72N1-200	
Ordering code			
Part number			



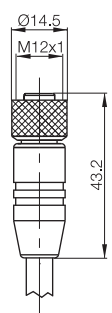
Previously BKS-S103/GS103-CP-__

- 00,3 = Length of 0.3 m
- 02 = Length of 2 m
- 05 = Length of 5 m
- 10 = Length of 10 m



Previously BKS-S103-CP-__

- 00,3 = Length of 0.3 m
- 02 = Length of 2 m
- 05 = Length of 5 m
- 10 = Length of 10 m






Please order the clear view cover separately!
Order designation: BTL5-A-CP01-K



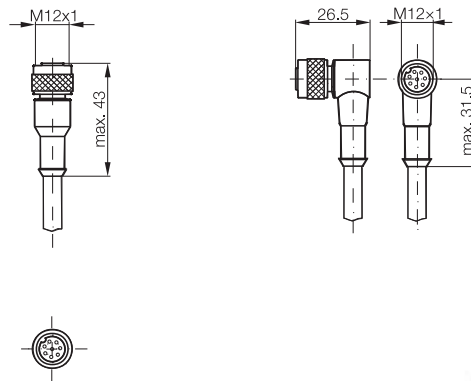
Accessories

M12 female straight and right-angle connectors, 8-pin, customized assembly

Connectors for Series	BKS-S115-PU-__ BTL_-...-S115	BKS-S116-PU-__ BTL_-...-S115	BKS-S115-00 BTL_-...-S115																																																						
Design	8-pin, straight, female	8-pin, angled, female	8-pin, female																																																						
Ordering code																																																									
Part number	BKS-S115-PU-__	BKS-S116-PU-__	BKS-S115-00																																																						
Ambient temperature range T _a																																																									
Housing material	PUR	PUR	Nickel-plated CuZn																																																						
Contact	CuZn	CuZn	CuZn																																																						
Contact surface	0.8 µm Au	0.8 µm Au	0.8 µm Au																																																						
Degree of protection as per IEC 60529	IP 67 (when screwed into place)	IP 67 (when screwed into place)	IP 67 (when screwed into place)																																																						
Knurled ring	CuZn	CuZn	CuZn																																																						
Finish	2.5 µm Ni	2.5 µm Ni																																																							
O-ring	Viton	Viton	Viton																																																						
Cable	Molded-on PUR	Molded-on PUR																																																							
Number of conductors x conductor cross-section	8x0.25 mm ²	8x0.25 mm ²	max. 0.75 mm ²																																																						
Version	LIYY-CF11Y	LIYY-CF11Y																																																							
Conductor configuration	14x0.15 mm	14x0.15 mm																																																							
Cable diameter D	6.6 ±0.2 mm	6.6 ±0.2 mm	6...8 mm																																																						
Min. bending radius	dynamic 5x D, static 2x D	dynamic 5x D, static 2x D																																																							
Coding																																																									
Slot on transducer																																																									
Pin assignments																																																									
View of socket	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>YE</td></tr> <tr><td>2</td><td>GY</td></tr> <tr><td>3</td><td>PK</td></tr> <tr><td>4</td><td>RD</td></tr> <tr><td>5</td><td>GN</td></tr> <tr><td>6</td><td>BU</td></tr> <tr><td>7</td><td>BN</td></tr> <tr><td>8</td><td>WH</td></tr> </tbody> </table>	PIN	Color	1	YE	2	GY	3	PK	4	RD	5	GN	6	BU	7	BN	8	WH	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>YE</td></tr> <tr><td>2</td><td>GY</td></tr> <tr><td>3</td><td>PK</td></tr> <tr><td>4</td><td>RD</td></tr> <tr><td>5</td><td>GN</td></tr> <tr><td>6</td><td>BU</td></tr> <tr><td>7</td><td>BN</td></tr> <tr><td>8</td><td>WH</td></tr> </tbody> </table>	PIN	Color	1	YE	2	GY	3	PK	4	RD	5	GN	6	BU	7	BN	8	WH	 <table border="1"> <thead> <tr> <th>PIN</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>YE</td></tr> <tr><td>2</td><td>GY</td></tr> <tr><td>3</td><td>PK</td></tr> <tr><td>4</td><td>RD</td></tr> <tr><td>5</td><td>GN</td></tr> <tr><td>6</td><td>BU</td></tr> <tr><td>7</td><td>BN</td></tr> <tr><td>8</td><td>WH</td></tr> </tbody> </table>	PIN	Color	1	YE	2	GY	3	PK	4	RD	5	GN	6	BU	7	BN	8	WH
PIN	Color																																																								
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Please include the cable length with the part number.

- 02 = Length of 2 m
- 05 = Length of 5 m
- 10 = Length of 10 m
- 15 = Length of 15 m
- 20 = Length of 20 m
- 25 = Length of 25 m



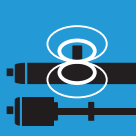
Adapter BKS-S115 to BKS-S 32
Ordering code
BKS-S115/GS32-PU-00.2

Accessories

M12 female straight and angled connector, 8-pin, user-configurable for VARAN and EtherCAT



M12 female, straight, 8-pin BCC04MC BCC M478-0000-1A-000-43X834-000 -25...+85° C CuZn	M12 female, angled, 8-pin BCC050F BCC M488-0000-1A-000-43X834-000 -25...+85° C CuZn	M12/M18 Y-plug splitter BCC0CK4 BCC_M418-M314-M415-V0038-000 -25...+85° C TPU CuZn Galv. Au IP 67 (when screwed into place) GD-Zn NBR
IP 67 (when screwed into place)	IP 67 (when screwed into place)	
8x0.14...0.25 mm ²	8x0.14...0.25 mm ²	
4...8 mm	4...8 mm	
		I = A, III = D C



Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and CD

Filling level sensor SF

Accessories

Connectors

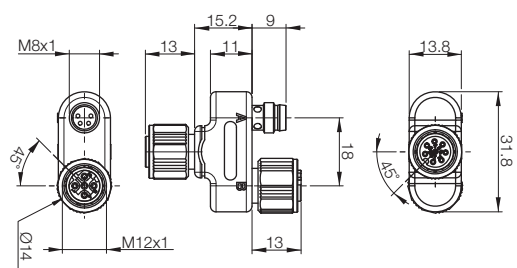
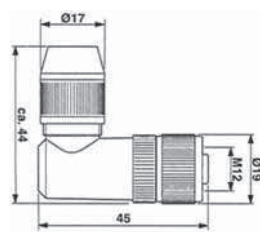
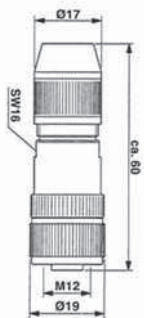
Evaluation units

Profibus P111 modules

BUS interface modules

Digital display CAM controller

Basic Information and Definitions



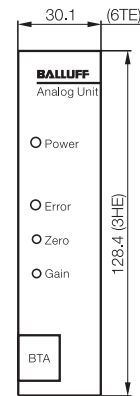
Accessories

Analog evaluation units

Features

- The evaluation units are configured in a Eurocard format for use in 19" racks and card holders / top-hat rail fitting.
- The measured values are updated at a frequency of max. 2 kHz, so that the current position can be captured with negligible lag even at high speeds.
- High resolution (down to 0.01 mm) provided by microcontroller-controlled digitizing.
- Data format can be switched between binary, BCD or gray (only BTM-H) in parallel.
- SSI data format (only BTM-H).
- Interference-free data transmission between evaluation unit and transducer provided by RS485/422 differential drivers, with cable lengths up to 500 m.
- Error output immediately reports a cable break, defect or missing Magnet.

Series	BTA-A	
Output signal	Travel signal	Analog
	velocity	Analog
Input interface (transducer)	P	
Part number	BTA-A1_ _ _ _ _	
Features	Resolution 0.1 mV/0.2 μA, LED function indicator, Zero point adjustment 15%, Span adjustment 15%, Velocity output, Error output (relay)	
Transducer nominal stroke	50...5500 mm	
Design	Edge connector, 32-pin, DIN 41612 F, 19" plug-in card	
Supply voltage	20...28 V DC	
Current consumption	130 mA at 24 V DC	
Operating temperature	0...60 °C	
Update time for standard	1 kHz	
Interface	Analog voltage	
Output signals	Displacement signals	0...10 V and 10...0 V
	Velocity	±10 V at ±2.5 m/s
Accessories (please order separately)	Card holder 48-pin Form F/627164	



Micropulse analog evaluation unit

Please enter code for output signal and nominal stroke in the part number.

Micropulse digital evaluation unit

Please enter code for output signal and nominal stroke in the part number.

Ordering example:

BTA-A1_ _ _ _ _

Output signal

Nominal stroke

- 0 Rising (for C and E) only for current output
- 7 Falling (for C and E) only for current output
- 1 Rising/falling only for voltage output

Transducer in [mm]

Accessories

Analog and digital evaluation units

	BTA-C	BTA-E	BTA-G
	Analog	Analog	Analog
	Analog	Analog	Analog
	P	P	P
	BTA-C1_--_--	BTA-E1_--_--	BTA-G1_--_--
	Resolution 0.1 mV/0.2 μ A, LED function indicator, Zero point adjustment 15%, Span adjust 15%, Velocity output, Error output (relay)	Resolution 0.1 mV/0.2 μ A, LED function indicator, Zero point adjustment 15%, Span adjust 15%, Velocity output, Error output (relay)	Resolution 0.1 mV/0.2 μ A, LED function indicator, Zero point adjustment 15%, Span adjustment 15%, Velocity output, Error output (relay)
	50...5500 mm	50...5500 mm	50...5500 mm
	Edge connector, 32-pin, DIN 41612 F, 19" plug-in card	Edge connector, 32-pin, DIN 41612 F, 19" plug-in card	Edge connector, 32-pin, DIN 41612 F, 19" plug-in card
	20...28 V DC	20...28 V DC	20...28 V DC
	130 mA at 24 V DC	130 mA at 24 V DC	130 mA at 24 V DC
	0...60 °C	0...60 °C	0...60 °C
	1 kHz	1 kHz	1 kHz
	Analog voltage, current	Analog voltage, current	Analog voltage
	0...10 V and 10...0 V, 0...20 mA	0...10 V and 10...0 V, 4...20 mA	-10...+10 V and +10...-10 V
	\pm 10 V at \pm 2.5 m/s	\pm 10 V at \pm 2.5 m/s	\pm 10 V at \pm 2.5 m/s
	Card holder 48-pin Form F/627164	Card holder 48-pin Form F/627164	Card holder 48-pin Form F/627164



Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and CD

Filling level sensor SF

Accessories

Connectors

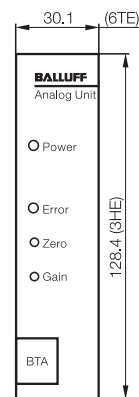
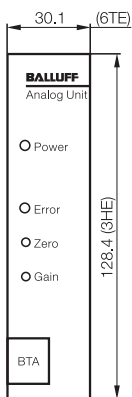
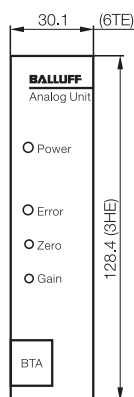
Evaluation units

Profibus P111 modules

BUS interface modules

Digital display CAM controller

Basic Information and Definitions



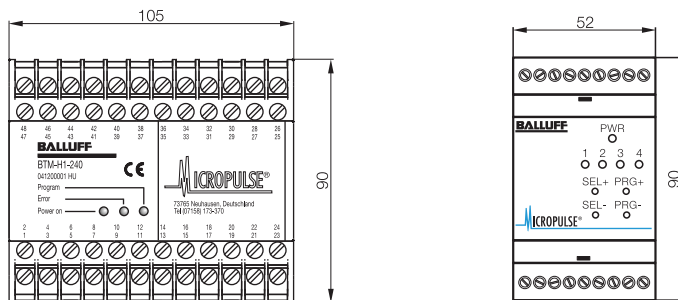
Series	BTM-H1	BTM-1
Output signal Travel signal velocity	digital	Analog Analog
Input interface (transducer)	P	P
Part number	BTM-H1-_-_-_-	BTM-1-_-_-_-
Features	Resolution of 0.01 mm, 0.025 mm, 0.1 mm, 1 mm, BCD, binary, Gray code, zero point adjustment, direction signal, DATA READY, min./max. programming, ENABLE, DATA HOLD, bus-compatible, Error output. Replaces evaluation units: BTA-D, BTA-H, BTA-P	16-bit resolution Up to 4 magnets on a single transducer can be processed individually. Analog velocity output. 100% programmable measuring range, error output
Transducer nominal stroke	50...5500 mm	25...4000 mm
Design	Plastic housing for mounting on standard top-hat rail EN 50022-35	Plastic housing for mounting on standard top-hat rail EN 50022-35
Supply voltage	20...28 V DC	20...28 V DC
Current consumption	Max. 500 mA	Max. 300 mA
Operating temperature	0...60 °C	0...70 °C
Update time for standard	2 kHz	2 kHz
Interface	Digital 22-bit parallel BCD, binary, Gray code, 24-bit synchronous serial (SSI) Gray code	Analog, voltage or current see Ordering code
Output signals Travel signals	Digital TTL 5 V DC (BTM-H1-340) PNP source driver, 24 V DC (BTM-H1-240)	Analog, voltage or current see ordering code
velocity		Analog ± 10 V programmed to 1000 mm/s, adjustable over a range of 50 mm/s...10 m/s
Accessories (please order separately)		

Micropulse digital evaluation unit

Please enter code for output signal and nominal stroke in the part number.

Micropulse analog module

Please enter code for output signal and version in the part number.



Ordering examples:

BTM-H1-_-_-

Output driver

- 240 Source driver (PNP with short circuit protection 10...30 V) and 24-bit synchronous serial data transmission (SSI)
- 340 Tri-state TTL output and 24-bit synchronous serial-data transmission (SSI)

BTM-1-_-_-

Output signal

- A 0...10 V, 10...0 V
-10...10 V, 10...-10 V
- E 4...20 mA, 20...4 mA
0...20 mA, 20...0 mA

Versions

- 101 1 analog output, 1 magnet
- 102 2 analog outputs, 2 magnets
- 103 3 analog outputs, 3 magnets
- 104 4 analog outputs, 4 magnets

BTM-1-102-VM1000

Output signal

- A 0...10 V, 10...0 V
-10...10 V, 10...-10 V
- E 4...20 mA, 20...4 mA
0...20 mA, 20...0 mA

Versions

- 1 Analog output
- 2 Magnet with speed

Speed

± 10 V at a speed of 1000 mm/s

Accessories

Profibus modules P111 for BTL

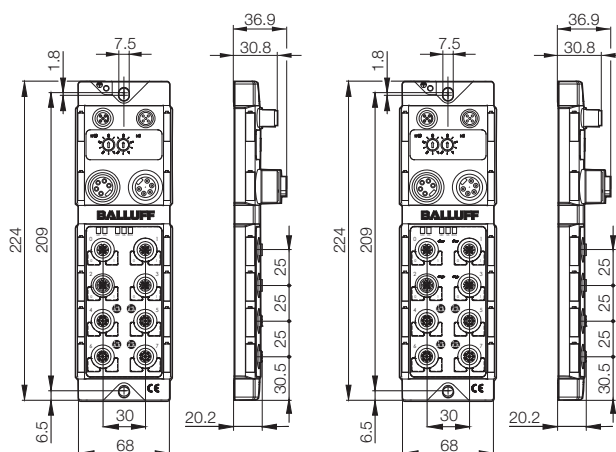


Fieldbus Design	Profibus 4x P111 or M1	Profibus 4x P111 or M1	Micropulse transducers
Ordering code	BNI001A	BNI002H	Profile P
Part number	BNI-PBS-551-000-Z001	BNI-PBS-552-000-Z001	Profile PF
Supply voltage U_S	18...30 V DC	18...30 V DC	Profile AT
Function indicator	BUS RUN	BUS RUN	Profile BIW
Fault function indicator	Red LED		Rod
Power-on indicator	V_A , V_S , undervoltage	V_A , V_S , undervoltage	Compact rod and AR rod
Connection: Fieldbus	M12, B-coded	M12, B-coded	Rod EX, T redundant and CD
Supply voltage connection	7/8", 5-pin, female and male	7/8", 5-pin, female and male	Filling level sensor SF
Connection: I/O ports	M12, A-coded, 5-pin, female	M12, A-coded, 5-pin, female	Accessories
Connection: P111 port	M12, A-coded, 8-pin, female	M12, A-coded, 8-pin, female	Connectors
No. of I/O ports	8	8	Evaluation units
No. of digital inputs	8		Profibus P111 modules
No. of analog inputs		4	BUS interface modules
Outputs	0	0	Digital display CAM controller
No. of P111 inputs	4	4	
Max. load current for sensors/channel	1 A	1 A	
Port status indicator (signal status)	Yellow LED	Yellow LED	
Port diagnostic indicator (overload)	Red LED	Red LED	
Total current U_{Sensor}	9 A	9 A	
Degree of protection as per IEC 60529	IP 67 (when screwed into place)	IP 67 (when screwed into place)	
Operating temperature T_a	0...+55 °C	0...+55 °C	
Weight	Approx. 735 g	Approx. 735 g	
Fastener	2 mounting holes	2 mounting holes	
Dimensions (LxWxH)	224x68x36.9	224x68x36.9	
Housing material	Nickel-plated GD-Zn, matt finish	Nickel-plated GD-Zn, matt finish	

Profibus modules P111 are an elegant, cost-effective solution from Balluff.

The modules have a robust metal housing designed for use in harsh industrial environments and capable of withstanding extremely high mechanical stresses. The module is fitted with four interdependent ports for Micropulse transducers BTL with a P111 or M1 pulse interface. A maximum of 16 magnets can be used per BTL port. The maximum nominal stroke is 7500 mm. Four additional ports can be configured with digital or analog sensors, depending on the version.

You can achieve maximum functionality and cost efficiency for fieldbus integration by combining Micropulse transducers BTL with Profibus modules P111.



Basic Information and Definitions

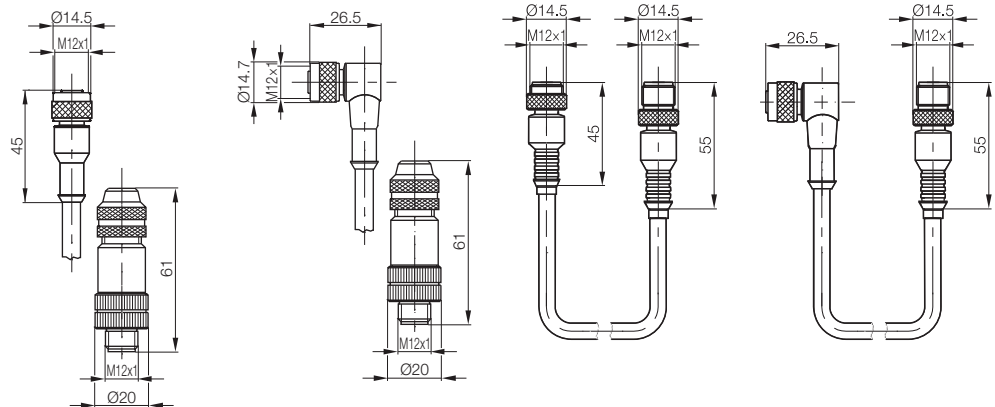


All modules include four screw plugs and a label set.

Profibus modules P111 for BTL

Design	8-pin, female	8-pin, female	8-pin, pin, female	8-pin, pin, female
Use	8-pin, pin for Profibus modules BNI-PBS 0-3 BTL	8-pin, pin for Profibus modules BNI-PBS 0-3 BTL	for Profibus modules BNI-PBS 0-3 BTL	for Profibus modules BNI-PBS 0-3 BTL
Part number	BIS Z-501-PU1-_-_/E	BIS Z-502-PU1-_-_/E	BIS Z-501-PU1-_-_/M	BIS Z-502-PU1-_-_/M
Connector	M12	M12	M12	M12
Cable diameter	6.9 mm	6.9 mm	6.9 mm	6.9 mm
Degree of protection* as per IEC 60529	IP 67 when attached	IP 67 when attached	IP 67	IP 67
Number of conductors × conductor cross-section	8×0.25 mm ²	8×0.25 mm ²	8×0.25 mm ²	8×0.25 mm ²
Ambient temperature range	-40...+85 °C	-40...+85 °C	-40...+85 °C	-40...+85 °C
Plug in	BKS-S117-00	BKS-S117-00		
M12 pin scope of delivery				
Cable	One end molded-in, other end pigtailed	One end molded-in, other end pigtailed	Both ends molded-on	Both ends molded-on

* When plugged in



Please include the cable length with the part number:

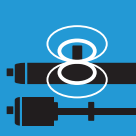
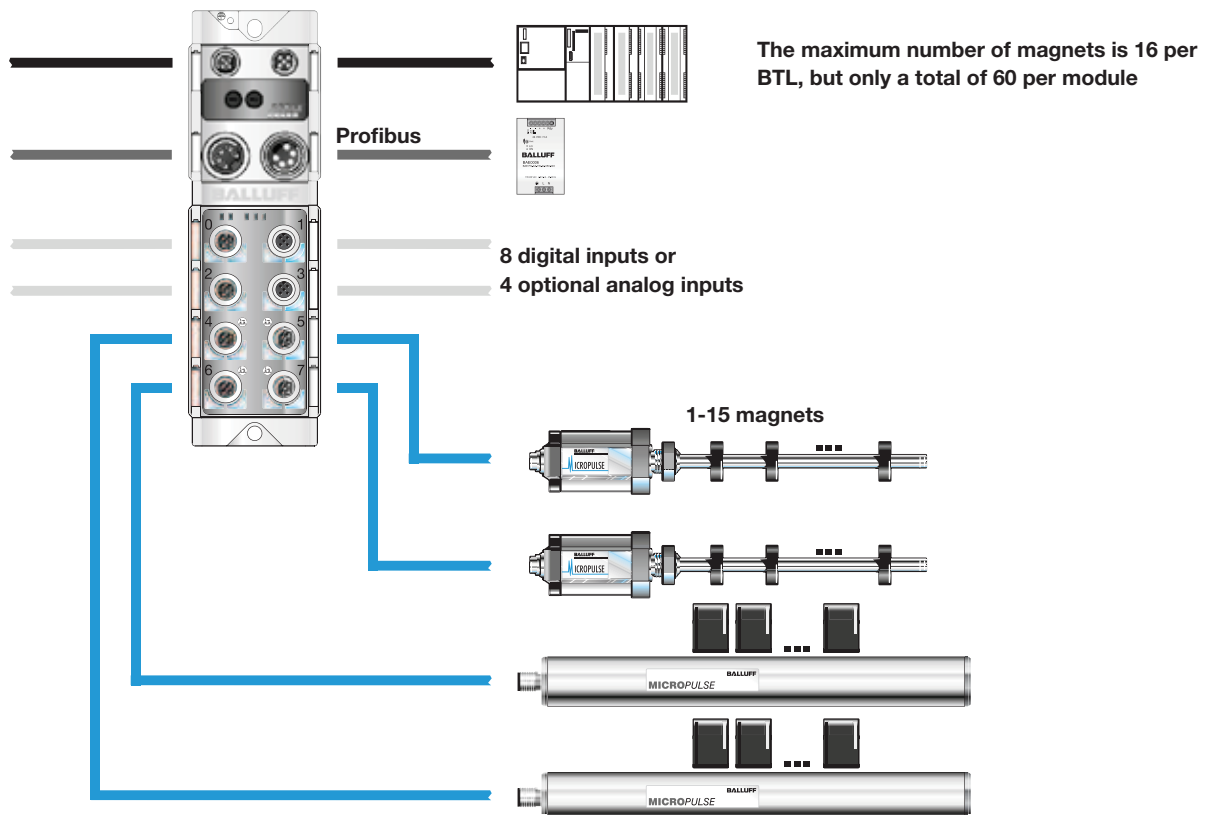
0,5 = Length 5 m
 10 = Length 10 m
 20 = Length 20 m
 25 = Length 25 m
 50 = Length 50 m

Please include the cable length with the part number:

00,5 = Length 0.5 m
 01 = Length 1 m
 02 = Length 2 m
 05 = Length 5 m

Accessories

Profibus modules P111 for BTL



Micropulse transducers

Profile P

Profile PF

Profile AT

Profile BIW

Rod

Compact rod and AR rod

Rod EX, T redundant and CD

Filling level sensor SF

Accessories

Connectors

Evaluation units

units

Profibus P111 modules

BUS interface modules

Digital display CAM controller

Basic Information and Definitions



BUS interface modules WAGO/Phoenix Contact

WAGO digital pulse interface 750-635 for BTL5-P1-__ or BTL6-P1-__-

The digital pulse interface was developed for connecting Micropulse transducers (BTL5-P1-...). The RS422 interface ensures quick and interference-free signal transmission with a resolution down to 1 µm. The absolute position of the Micropulse transducer is sent to the supervisory controller as a 24-bit value.

The controller can perform a zero point shift and configure the number of magnets.

The bus terminal with a digital pulse interface can be operated by all bus drivers of the WAGO-I/O-SYSTEM 750, except the Economy variants.

Interfaces

- Inter-Bus
- Profibus DP
- CANopen
- DeviceNet
- Ethernet TCP/IP
- Modulbus
- CC-Link

Resolution: 1 µm Number of magnets configurable (1...4)

Further technical details and orders from:

WAGO
 Kontakttechnik GmbH
 Hansastrasse 27
 32423 Minden
 Phone +49 571 887-0
 Fax +49 571 887-169
 E-mail: info@wago.com
www.wago.com

Phoenix Contact IMPULSE-IN terminal for BTL5-P1-__ or BTL6-P1-__-

The IB IL IMPULSE-IN is a terminal from the Inline product family by Phoenix Contact and is used for evaluating Micropulse transducers with a pulse interface.

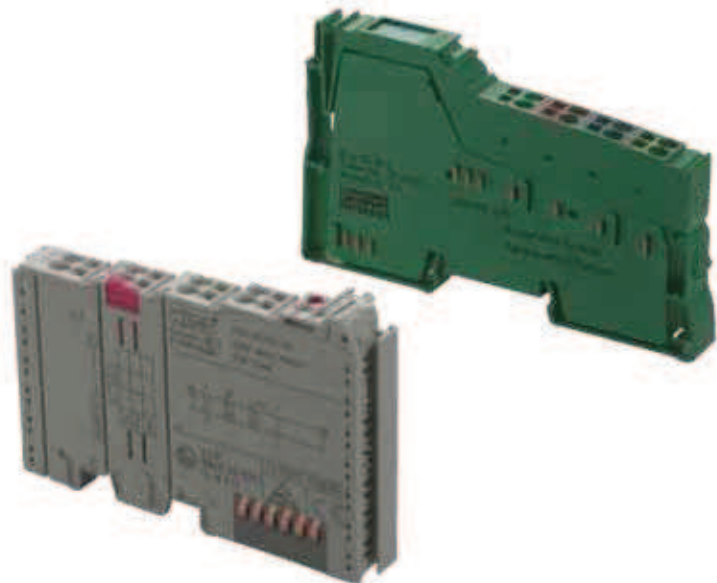
The IMPULSE-IN terminal enables particularly cost-effective solutions because it senses the positions using a low-cost pulse interface. In addition, the pulse interface has the advantage of real time capability, making it especially suitable for applications with position or bearing control.

Interfaces:

- Inter-Bus
- Profibus DP
- CANopen
- DeviceNet
- Ethernet

Further technical details and orders from:

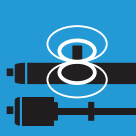
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Accessories

Digital display, CAM controller

Series	BDD-UM 3023	BDD-AM 10-1-P	BDD-AM 10-1-SSD	BDD-CC 08-1-P	BDD-CC 08-1-SSD
	Digital display for analog input signals	Digital display for BTL5-P with P Interface	Digital display for BTL5-S with SSD interface	CAM controller for BTL5-P with P Interface	CAM controller for BTL5-S with SSD interface
Part number	BDD-UM 3023	BDD-AM 10-1-P	BDD-AM 10-1-SSD	BDD-CC 08-1-P	BDD-CC 08-1-SSD
Features	<ul style="list-style-type: none"> ■ 4-digit display with leading sign ■ LED display, 14 mm-high, red 7-segment digits ■ Programmable decimal point ■ 12-bit AC/DC converter ■ Measurement range selection ■ Voltage input of 0...10 V ■ Current input of 0/4...20 mA ■ Scalable display range 	<ul style="list-style-type: none"> ■ 7 1/2-digit display with leading sign ■ LED display, 14 mm-high, red 7-segment digits ■ Scalable measured values ■ Variable decimal point setting ■ Adjustable zero point ■ Supply voltage of 10...32 V ■ 2 programmable relay outputs, each as limit switch/comparator ■ Cam ■ 2-point controller ■ 1 configurable input ■ External zeroing ■ Retention of the display value ■ Insulated DIN housing for mounting in front panel (clamp included in the scope of delivery) 	<ul style="list-style-type: none"> ■ 8 programmable outputs ■ 8 directional switching points possible ■ LED display, six 14-mm high red 7-segment digits ■ Switching points can be monitored using the LEDs on front panel ■ 300 switching points can be distributed over up to 15 programs ■ Adjustable top dead center/zero point shift ■ Dynamic dead time compensation for each individual switching point ■ Multiple BDD-CC 08 units can be wired in parallel ■ Integrated transducer supply voltage 300 mA, 24 V ■ Insulated DIN housing for mounting in front panel (clamp included in the scope of delivery) 		



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Profile PF

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