

FLS IB M12 DIO 4/4 M12-2A


Order No.: 2736026



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The stand-alone device for INTERBUS has 4 digital inputs and 4 digital outputs each with a load capacity of 2 A. The M12 connection is established using fast connection technology. The 24 V DC supply is protected against short circuit and overload.



Commercial data	
GTIN (EAN)	 4 017918 899646
sales group	L001
Pack	1 pcs.
Customs tariff	85176200
Catalog page information	Page 351 (AX-2009)

Product notes

WEEE/RoHS-compliant since:
12/07/2009



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Product description

This device is used for digital signal acquisition and output.

Technical data

General data

Width	60 mm
Height	178 mm
Depth	49.3 mm
Drill hole spacing	168 mm
Weight	340 g
Mounting type	Wall mounting
Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (storage/transport)	95 %
Air pressure (operation)	80 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Degree of protection	IP65/67
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Test section	24 V supply (bus logics) / FE 500 V AC 50 Hz 1 s
	24 V supply (bus logics) / Digital inputs (sensor supply / I/O) 500 V AC 50 Hz 1 s
	24 V supply (bus logics) / Digital outputs (actuator supply) 500 V AC 50 Hz 1 s
	24 V supply (bus logics) / Incoming remote bus 500 V AC 50 Hz 1 s
	24 V supply (bus logics) / Outgoing remote bus 500 V AC 50 Hz 1 s
	Digital inputs (sensor supply / I/O) / FE 500 V AC 50 Hz 1 s
	Digital inputs (sensor supply) / Digital outputs (actuator supply) 500 V AC 50 Hz 1 s
	Digital inputs (sensor supply / I/O) / Incoming remote bus 500 V AC 50 Hz 1 s
	Digital inputs (sensor supply / I/O) / Outgoing remote bus 500 V AC 50 Hz 1 s
	Digital outputs (actuator supply) / FE 500 V AC 50 Hz 1 s
	Digital outputs (actuator supply) / Incoming remote bus 500 V AC 50 Hz 1 s
	Incoming remote bus / FE 500 V AC 50 Hz 1 s
	Incoming remote bus / Outgoing remote bus 500 V AC 50 Hz 1 s
	Outgoing remote bus / FE 500 V AC 50 Hz 1 s
	Outgoing remote bus / FE 500 V AC 50 Hz 1 s

Interface

Fieldbus system	INTERBUS
Name	Remote bus
Type of connection	2 M12 plug connectors, B-coded
Designation connection point	Copper cable
Transmission speed	500 kBaud
Number of positions	5

Power supply for module electronics

Type of connection	M12 plug connectors, (A-coded)
Name	U_L
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC IEC 61131-2 (including ripple)

Fieldline potential routing

Voltage supply U_L	24 V DC
Power supply at U_L	max. 4 A
Current consumption from U_L	Typ. 60 mA max. 100 mA
Voltage supply U_S	24 V DC
Power supply at U_S	max. 4 A
Current consumption from U_S	Typ. 10 mA (plus sensor current) max. 500 mA
Voltage supply U_{A11}	24 V DC
Power supply at U_{A11}	max. 4 A
Current consumption at U_{A11}	Typ. 6 mA (plus actuator current) max. 4 A
Voltage supply U_{A12}	24 V DC
Power supply at U_{A12}	max. 4 A
Current consumption at U_{A12}	Typ. 6 mA (plus actuator current) max. 4 A

Digital inputs

Input name	Digital inputs
Type of connection	M12 male connector
Connection method	2, 3, 4-wire
Number of inputs	4

Protective circuit	Protection against polarity reversal
Filter time	3 ms
Input characteristic curve	IEC 61131-2 type 1
Input voltage	24 V DC
Input voltage range "0" signal	-30 V DC ... 5 V DC
Input voltage range "1" signal	13 V DC ... 30 V DC
Nominal input current at U_{IN}	5 mA

Digital outputs

Output name	Digital outputs
Type of connection	M12 male connector
Connection method	2, 3-wire
Number of outputs	4
Protective circuit	Short-circuit protection
Output voltage	24 V DC
Maximum output current per channel	2 A
Nominal load, inductive	48 VA (1.2 H, 12 Ω)
Nominal load, lamp	48 W
Nominal load, ohmic	48 W

Certificates / Approvals



Certification CUL, GOST, UL

Certification Ex: CUL-EX, UL-EX

Accessories

Item	Designation	Description
Cable/conductor		
1509487	SAC-4P- 2,0-186/M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12, A-coded, Cable length: 2 m

1509490	SAC-4P- 5,0-186/M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12, A-coded, Cable length: 5 m
1509500	SAC-4P-10,0-186/M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12, A-coded, Cable length: 10 m
1509513	SAC-4P-15,0-186/M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12, A-coded, Cable length: 15 m
1509526	SAC-4P-M12MS/ 0,3-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 0.3 m
1509539	SAC-4P-M12MS/ 0,5-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 0.5 m
1509542	SAC-4P-M12MS/ 1,0-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 1 m
1509445	SAC-4P-M12MS/ 2,0-186	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Free conductor end, Cable length: 2 m
1509555	SAC-4P-M12MS/ 2,0-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 2 m
1509458	SAC-4P-M12MS/ 5,0-186	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Free conductor end, Cable length: 5 m
1509568	SAC-4P-M12MS/ 5,0-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 5 m
1509461	SAC-4P-M12MS/10,0-186	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Free conductor end, Cable length: 10 m
1509571	SAC-4P-M12MS/10,0-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 10 m
1509474	SAC-4P-M12MS/15,0-186	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Free conductor end, Cable length: 15 m
1509584	SAC-4P-M12MS/15,0-186/ M12FS	Sensor/Actuator cable, 4-position, PUR, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 15 m
1507117	SAC-5P- 2,0-900/M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 2 m
1507120	SAC-5P- 5,0-900/M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 5 m

1507133	SAC-5P-10,0-900/M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 10 m
1507146	SAC-5P-15,0-900/M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 15 m
1507162	SAC-5P-M12MSB/ 0,3-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 0.3 m
1507175	SAC-5P-M12MSB/ 0,5-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 0.5 m
1507188	SAC-5P-M12MSB/ 1,0-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 1 m
1507065	SAC-5P-M12MSB/ 2,0-900	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Free conductor end, Cable length: 2 m
1507191	SAC-5P-M12MSB/ 2,0-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 2 m
1507078	SAC-5P-M12MSB/ 5,0-900	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Free conductor end, Cable length: 5 m
1507201	SAC-5P-M12MSB/ 5,0-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 5 m
1507081	SAC-5P-M12MSB/10,0-900	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Free conductor end, Cable length: 10 m
1507214	SAC-5P-M12MSB/10,0-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 10 m
1507094	SAC-5P-M12MSB/15,0-900	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Free conductor end, Cable length: 15 m
1507227	SAC-5P-M12MSB/15,0-900/ M12FSB	Bus system cable, INTERBUS, 5-position, PUR, halogen-free, Green RAL 6017, shielded, Plug, straight M12, B-coded, on Socket, straight M12, B-coded, Cable length: 15 m

General

2698834	FLS SYS INST UM	User Manual, German, for installing Fieldline devices
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Marking

0809735	ZBF 12:UNBEDRUCKT	Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer
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2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White
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Plug/Adapter

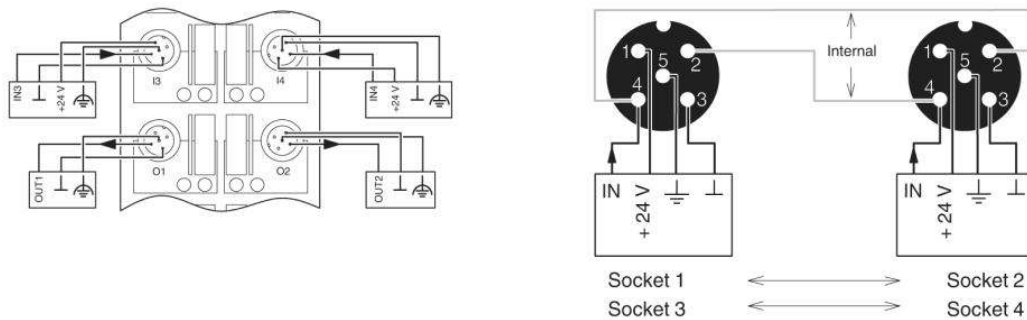
1510722	SAC-4P-M12Y/2X0,3-PUR/M12FS VP	Sensor/Actuator cable, 4-position, PUR, halogen-free, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded and Socket, straight M12, A-coded, Cable length: 0.3 m
1507777	SACC-M12FSB-5CON-PG9 SH AU	Bus system plug connector, female, straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9
1507764	SACC-M12MSB-5CON-PG9 SH AU	Bus system plug connector, male straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9

Protection and sealing elements

1680539	PROT-M12	An M12 screw plug for the unoccupied M12 sockets of the sensor/ actuator cable, boxes and flush-type connectors
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Diagrams/Drawings

Connection diagram



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