

## 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 243 (AX-2011)

### Product notes

WEEE/RoHS-compliant since:  
06/02/2008



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### Product description

This device is used for digital signal acquisition and output.

**Technical data**

<b>General data</b>	
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
Connection method	2 M12 plug connectors, B-coded
Designation connection point	Copper cable
Transmission speed	500 kBaud
Number of positions	5

### Power supply for module electronics

Connection method	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
Connection method	M12 male connector 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
Connection method	M12 male connector
	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 $\Omega$ )
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
<b>Cable/conductor</b>		
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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink: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, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 15 m

**General**

2698834	FLS FLM 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**

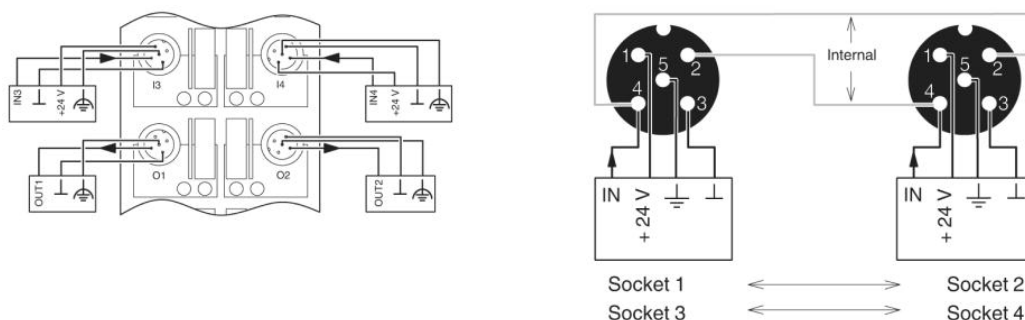
1510722	SAC-4P-M12Y/2X0,3-PUR/M12FS VP	Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Plug, straightLink:M12, A-coded, on Socket, straight M12, A-coded and Socket, straight M12, A-coded, Cable length: 0.3 m
1507777	SACC-M12FSB-5CON-PG9 SH AU	Bus system plug connector, female, 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



**Address**

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