

# FLS CO M12 DIO 4/4 M12-2A

Order No.: 2736071




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The stand-alone device for CANopen® 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.

CANopen

## Commercial data

GTIN (EAN)	 4 017918 904548
sales group	L031
Pack	1 pcs.
Customs tariff	85176200
Catalog page information	Page 251 (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

### 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
	24 V supply (bus logics) / Digital inputs (sensor supply) 500 V AC 50 Hz 1 min
	24 V supply (bus logics) / Digital outputs (actuator supply) 500 V AC 50 Hz 1 min
	FE / Digital inputs (sensor supply) 500 V AC 50 Hz 1 min
	FE / Digital outputs (actuator supply) 500 V AC 50 Hz 1 min
	Digital inputs (sensor supply) / Digital outputs (actuator supply) 500 V AC 50 Hz 1 min

### Interface

Fieldbus system	CANopen
Name	CANopen
Connection method	2 M12 plug connectors, A-coded
Transmission speed	Maximum 1 Mbaud automatic detection
	10, 20, 50, 125, 250, 500, 1000 kBit/s (Automatic baud rate detection)
Transmission physics	Copper cable with optional power supply in acc. with CAN standard
Address area assignment	1 ... 126, adjustable
Number of positions	5

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**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

### 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

### 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, 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
1507476	SAC-5P- 2,0-920/M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Free conductor end, on Socket, straight M12, A-coded, Cable length: 2 m
1507489	SAC-5P- 5,0-920/M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Free conductor end, on Socket, straight M12, A-coded, Cable length: 5 m
1507492	SAC-5P-10,0-920/M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Free conductor end, on Socket, straight M12, A-coded, Cable length: 10 m
1507502	SAC-5P-15,0-920/M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Free conductor end, on Socket, straight M12, A-coded, Cable length: 15 m
1507528	SAC-5P-M12MS/ 0,3-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 0.3 m
1507531	SAC-5P-M12MS/ 0,5-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 0.5 m
1507544	SAC-5P-M12MS/ 1,0-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 1 m

1507421	SAC-5P-M12MS/ 2,0-920	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Free conductor end, Cable length: 2 m
1507557	SAC-5P-M12MS/ 2,0-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 2 m
1507434	SAC-5P-M12MS/ 5,0-920	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Free conductor end, Cable length: 5 m
1507560	SAC-5P-M12MS/ 5,0-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 5 m
1507447	SAC-5P-M12MS/10,0-920	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Free conductor end, Cable length: 10 m
1507573	SAC-5P-M12MS/10,0-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 10 m
1507450	SAC-5P-M12MS/15,0-920	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Free conductor end, Cable length: 15 m
1507586	SAC-5P-M12MS/15,0-920/ M12FS	Bus system cable, 5-position, PUR halogen-free, Violet, RAL 4001, shielded, Plug, straight M12, A-coded, on Socket, straight M12, A-coded, Cable length: 15 m

#### Marking

0809735	ZBF 12:UNBEDRUCKT	Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer
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#### Plug/Adapter

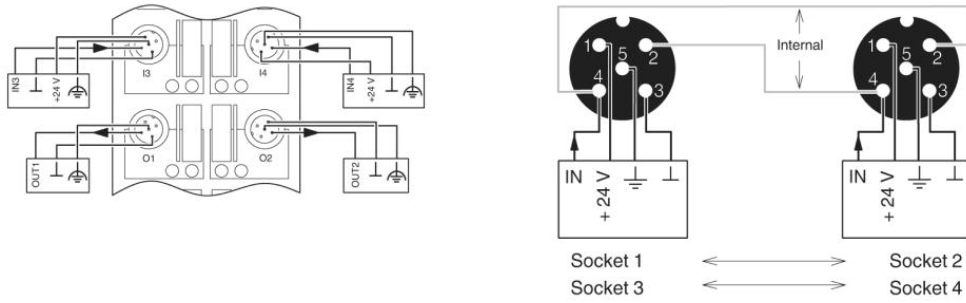
1510722	SAC-4P-M12Y/2X0,3-PUR/ M12FS VP	Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Plug, straight M12, A-coded, on Socket, straight M12, A-coded and Socket, straight M12, A-coded, Cable length: 0.3 m
1507816	SAC-5P-M12MS CAN TR	Terminating resistor CANopen/DeviceNet™ M12
1507793	SAC-M12T/2XM12 CAN	Bus system T-connector, 5-pos., DeviceNet™/CANopen, M12 socket to M12 socket and M12 plug
1508365	SACC-M12FS-5CON-PG 9 SH AU	Bus system plug connector, female straight, 5-pos., M12, shielded, gold-plated contacts, A-coded, screw connection, metal knurl, cable screw connection Pg9
1508352	SACC-M12MS-5CON-PG 9 SH AU	Bus system plug connector, male, straight, 5-pos., M12, shielded, gold-plated contacts, A-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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