

## Distributed I/O device - FLM AI 4 SF M12 - 2736453

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The local bus device has 4 analog inputs. Functions: 3 current and 4 voltage measuring ranges, 500 kbaud/2 Mbaud selection, PCP or process data communication, channel-specific diagnostics, short-circuit/overload protection, M12 fast connection technology.

### Product Features

- Flexible power supply concept
- SPEEDCON fast locking system
- Short-circuit and overload protection
- Diagnostic and status indicators
- Consistent connection via M12 connectors



### Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	332.8 g
Custom tariff number	85176200
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Environmental Product Compliance

REACH SVHC	DEHP 117-81-7
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#### Dimensions

Width	70 mm
Height	178 mm
Depth	50 mm
Drill hole spacing	168 mm

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### Technical data

#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	95 %
Permissible humidity (storage/transport)	95 %
Air pressure (operation)	80 Pa ... 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/IP67

#### General

Mounting type	Wall mounting
Net weight	280 g

#### Interfaces

Designation	Fieldline local bus
Connection method	M12 connector, B-coded
Transmission speed	500 kBit/s / 2 MBit/s

#### Power supply for module electronics

Supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC (including ripple)

#### Fieldline potentials

Voltage supply $U_L$	24 V DC (including ripple)
Power supply at $U_L$	max. 4 A
Current consumption from $U_L$	max. 100 mA (At 2 Mbaud)
	typ. 70 mA
Voltage supply $U_S$	24 V DC
Power supply at $U_S$	max. 4 A
Current consumption from $U_S$	typ. 5 mA (plus power supply for sensors)
	max. 400 mA

#### Analog inputs

Input name	Analog inputs
Number of inputs	max. 4 (differential inputs, voltage or current)
Connection method	M12 connector
	2, 4-conductor
Type of protection	Reverse polarity protection
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA

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### Technical data

#### Analog inputs

Voltage input signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V

#### Standards and Regulations

Test section	To I/O 500 V AC
Mechanical tests	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 Load 30g, half sine wave, positive and negative per direction
	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g in each space direction
Connection in acc. with standard	CUL
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

### Classifications

#### eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
eCl@ss 5.1	27250303
eCl@ss 6.0	27242601
eCl@ss 7.0	27242601
eCl@ss 8.0	27242601

#### ETIM

ETIM 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	EC001596
ETIM 5.0	EC001596

#### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404

## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Approvals

#### Approvals

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#### Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized

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#### Ex Approvals


UL Recognized / cUL Recognized / cULus Recognized


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#### Approvals submitted


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### Approval details

UL Recognized 

cUL Recognized 

EAC

cULus Recognized 

### Accessories

#### Accessories

Circular connector (cable-side)

Bus system connector - SACC-M12MSB-5CON-PG9 SH AU - 1507764



Bus system plug-in plug, male straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9

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### Accessories

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Bus system connector - SACC-M12FSB-5CON-PG9 SH AU - 1507777



Bus system connector, female, straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9

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Connector - SACC-M12MSB-5SC SH - 1513570



Connector, 5-position, shielded, Plug straight M12, B-coded, Spring-cage connection, Knurl material: Nickel-plated brass, External cable diameter 4 mm ... 8 mm

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Connector - SACC-M12FSB-5SC SH - 1513596



Connector, 5-position, shielded, Socket straight M12, B-coded, Spring-cage connection, Knurl material: Nickel-plated brass, External cable diameter 4 mm ... 8 mm

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Connector - SACC-M12MRB-5SC SH - 1513583



Connector, 5-position, shielded, Plug angled M12, B-coded, Spring-cage connection, Knurl material: Nickel-plated brass, External cable diameter 4 mm ... 8 mm

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Connector - SACC-M12FRB-5SC SH - 1513606



Connector, 5-position, shielded, Socket angled M12, B-coded, Spring-cage connection, Knurl material: Nickel-plated brass, External cable diameter 4 mm ... 8 mm

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## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Accessories

Connector - SACC-M12MS-5SC M - 1508187



Connector, 5-position, Plug straight M12, A-coded, Spring-cage connection, Knurl material: Zinc die-cast, nickel-plated, External cable diameter 4 mm ... 8 mm

Connector - SACC-M12FS-5SC M - 1508200



Connector, 5-position, Socket straight M12, A-coded, Spring-cage connection, Knurl material: Zinc die-cast, nickel-plated, External cable diameter 4 mm ... 8 mm

### Data cable preassembled

Bus system cable - SAC-5P-M12MSB/ 2,0-900 - 1507065



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on free cable end, Cable length: 2 m

Bus system cable - SAC-5P-M12MSB/ 5,0-900 - 1507078



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on free cable end, Cable length: 5 m

Bus system cable - SAC-5P-M12MSB/10,0-900 - 1507081



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on free cable end, Cable length: 10 m

## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Accessories

Bus system cable - SAC-5P-M12MSB/15,0-900 - 1507094



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on free cable end, Cable length: 15 m

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Bus system cable - SAC-5P- 2,0-900/M12FSB - 1507117



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, free cable end, on Socket straight M12, B-coded, Cable length: 2 m

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Bus system cable - SAC-5P- 5,0-900/M12FSB - 1507120



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, free cable end, on Socket straight M12, B-coded, Cable length: 5 m

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Bus system cable - SAC-5P-10,0-900/M12FSB - 1507133



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, free cable end, on Socket straight M12, B-coded, Cable length: 10 m

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Bus system cable - SAC-5P-15,0-900/M12FSB - 1507146



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, free cable end, on Socket straight M12, B-coded, Cable length: 15 m

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## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Accessories

Bus system cable - SAC-5P-M12MSB/ 0,3-900/M12FSB - 1507162



Bus system cable, INTERBUS (16 Mbps), 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

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Bus system cable - SAC-5P-M12MSB/ 0,5-900/M12FSB - 1507175



Bus system cable, INTERBUS (16 Mbps), 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

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Bus system cable - SAC-5P-M12MSB/ 1,0-900/M12FSB - 1507188



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, Cable length: 1 m

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Bus system cable - SAC-5P-M12MSB/ 2,0-900/M12FSB - 1507191



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, Cable length: 2 m

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Bus system cable - SAC-5P-M12MSB/ 5,0-900/M12FSB - 1507201



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, Cable length: 5 m

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## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Accessories

Bus system cable - SAC-5P-M12MSB/10,0-900/M12FSB - 1507214



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, Cable length: 10 m

Bus system cable - SAC-5P-M12MSB/15,0-900/M12FSB - 1507227



Bus system cable, INTERBUS (16 Mbps), 5-position, PUR halogen-free, green RAL 6017, shielded, Plug straight M12, B-coded, on Socket straight M12, B-coded, Cable length: 15 m

### Device parameterization

Software - AX+ BASIC - 2985068



Software CD for FDT container for integrating device DTMs (free download)

Software - AX DTM LIB - 2988065



DTM library

### Sensor/actuator cable

Sensor/Actuator cable - SAC-5P-MS/ 2,0-186 SCO - 1518326



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on free cable end, Cable length: 2 m

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### Accessories

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Sensor/Actuator cable - SAC-5P-MS/ 5,0-186 SCO - 1518339



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on free cable end, Cable length: 5 m

Sensor/Actuator cable - SAC-5P-MS/10,0-186 SCO - 1518342



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on free cable end, Cable length: 10 m

Sensor/Actuator cable - SAC-5P-MS/15,0-186 SCO - 1518355



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on free cable end, Cable length: 15 m

Sensor/Actuator cable - SAC-5P- 2,0-186/FS SCO - 1518368



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, A-coded, Cable length: 2 m

Sensor/Actuator cable - SAC-5P- 5,0-186/FS SCO - 1518371



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, A-coded, Cable length: 5 m

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### Accessories

Sensor/Actuator cable - SAC-5P-10,0-186/FS SCO - 1518384



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, A-coded, Cable length: 10 m

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Sensor/Actuator cable - SAC-5P-15,0-186/FS SCO - 1518397



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, free cable end, on Socket straight M12 SPEEDCON, A-coded, Cable length: 15 m

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Sensor/Actuator cable - SAC-5P-MS/ 0,3-186/FS SCO - 1518407



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 0.3 m

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Sensor/Actuator cable - SAC-5P-MS/ 0,5-186/FS SCO - 1518410



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 0.5 m

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Sensor/Actuator cable - SAC-5P-MS/ 1,0-186/FS SCO - 1518423



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 1 m

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## Distributed I/O device - FLM AI 4 SF M12 - 2736453

### Accessories

Sensor/Actuator cable - SAC-5P-MS/ 2,0-186/FS SCO - 1518436



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 2 m

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Sensor/Actuator cable - SAC-5P-MS/ 5,0-186/FS SCO - 1518449



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 5 m

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Sensor/Actuator cable - SAC-5P-MS/10,0-186/FS SCO - 1518452



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 10 m

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Sensor/Actuator cable - SAC-5P-MS/15,0-186/FS SCO - 1518465



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 15 m

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Sensor/Actuator cable - SAC-5P-MS/ 0,13-186/FS SCO - 1518481



Sensor/Actuator cable, 5-position, PUR, black-gray RAL 7021, Plug straight M12 SPEEDCON, A-coded, on Socket straight M12 SPEEDCON, A-coded, Cable length: 0.13 m

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### Accessories

Sensor/Actuator cable - SAC-5P-MSB/0,13-PUR/FSB SCO SH - 1518478



Sensor/Actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12 SPEEDCON, B-coded, on Socket straight M12 SPEEDCON, B-coded, Cable length: 0.13 m

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### Terminal marking

Zack Marker strip, flat - ZBF 12:UNBEDRUCKT - 0809735

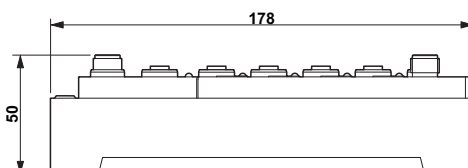


Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into flat marker groove, for terminal block width: 12 mm, Lettering field: 5.15 x 12.15 mm

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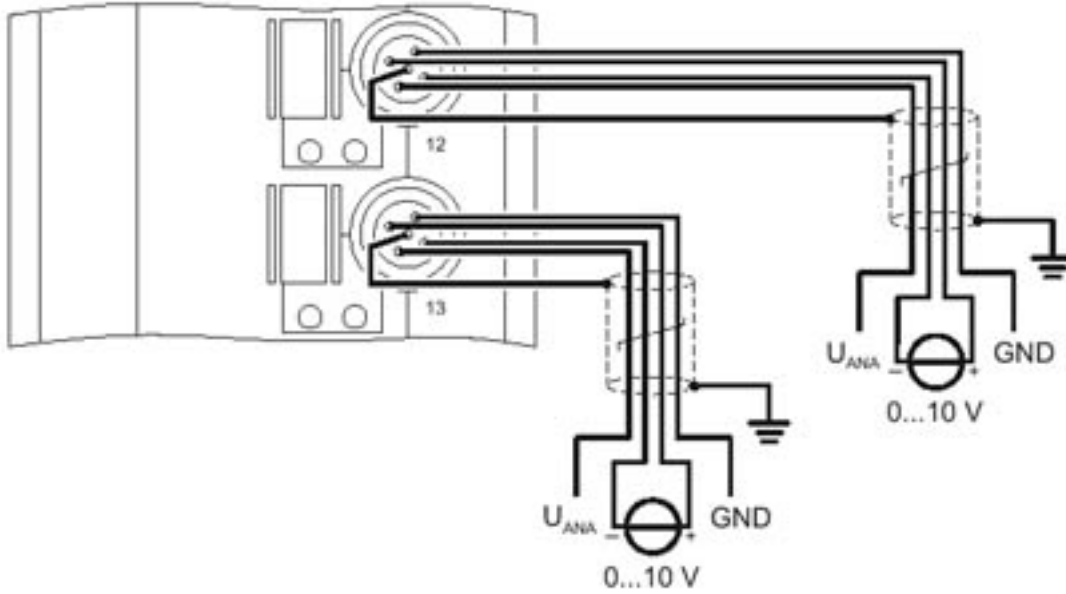
### Drawings

Dimensional drawing



## Distributed I/O device - FLM AI 4 SF M12 - 2736453

Connection diagram



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