

## I/O module - ILB S3 AI4 AO2-2TX - 2692076

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Inline Block IO Analog I/O module, Sercos III, inputs: 0-20 mA, 4-20 mA,  $\pm 20$  mA, 0-5 V,  $\pm 5$  V, 0-10 V,  $\pm 10$  V, Pt 100, Pt 1000, Ni 1000..., outputs: 0-5 V,  $\pm 5$  V, 0-10 V,  $\pm 10$  V, 0-20 mA,  $\pm 20$  mA, 4-20 mA, 2-, 3-, 4-wire connection

### Product description

The multifunctional, analog Inline Block I/O modules can be used universally. The four inputs either offer the difference measured between analog current / voltage signals or the option of connecting resistance thermometers (RTDs). Furthermore, the current or voltage actuators can be connected at the two outputs. In addition, all channels are equipped with shield connections as a standard and are provided with the 2, 3 or 4-conductor system. The analog signals are made available with a resolution of 16 bits.

The plugs can be labeled using hinged labeling fields. The fields have insert cards that can be labeled individually to suit the application. Additionally, there is the proven ZBFM-6... Zack marker strip for labeling the terminal points.

### Product Features

- Short-circuit-proof outputs
- 2 shielded analog signal outputs with 4 voltage and 3 current ranges
- Sensor supply with channel-specific integrated short-circuit and overload protection
- Adjustable filter times
- 4 voltage measuring ranges and 3 current measuring ranges
- 4 shielded analog differential signal inputs or 4 universal RTD inputs
- Connection of actuators in 2-wire technology
- Connection of sensors in 2, 3, and 4-wire technology



### Key commercial data

Packing unit	1 pc
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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## Technical data

### Dimensions

Width	156 mm
Height	136.8 mm
Depth	57 mm

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 85 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
Air pressure (operation)	70 kPa ... 108 kPa (up to 3500 m above mean sea level)
Air pressure (storage/transport)	70 kPa ... 108 kPa (up to 3500 m above mean sea level)
Degree of protection	IP20

### General

Weight	465 g
Mounting type	DIN rail
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Test section	Sercos III/logic area 500 V AC 50 Hz 1 min
	Sercos III/analog I/O 500 V AC 50 Hz 1 min
	Sercos III/communications power 500 V AC 50 Hz 1 min
	Sercos III/initiator supply 500 V AC 50 Hz 1 min
	Sercos III/functional earth ground 500 V AC 50 Hz 1 min
	Logic/analog I/O 500 V AC 50 Hz 1 min
	Logic area/initiator supply 500 V AC 50 Hz 1 min
	Logic area/functional earth ground 500 V AC 50 Hz 1 min
	Analog I/O/communications power 500 V AC 50 Hz 1 min
	Analog I/O/initiator supply 500 V AC 50 Hz 1 min
	Functional earth ground/analog I/O (isolating distance) 500 V AC 50 Hz 1 min
	Functional earth ground/communications power 500 V AC 50 Hz 1 min
	Functional earth ground/initiator supply 500 V AC 50 Hz 1 min
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g

### Interfaces

Fieldbus system	Sercos
Designation	Inline local bus
Connection method	RJ45 socket, shielded
Transmission speed	100 MBit/s

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## Technical data

### Interfaces

Transmission physics	Copper
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### Inline potentials

Communications power $U_L$	24 V DC
Power supply at $U_L$	max. 8 A
Current consumption from $U_L$	max. 220 mA (AO-I nominal load)
Segment supply voltage $U_S$	24 V DC
Power supply at $U_S$	max. 8 A
Current consumption from $U_S$	max. 220 mA (Maximum full load)

### Axiline potentials

### Analog inputs

Number of inputs	max. 4 (Differential inputs, voltage or current can be chosen separately)
Connection method	Spring-cage connection
	2, 3, 4-wire (shielded)
Input name	Analog inputs
A/D conversion time	typ. 180 $\mu$ s
Resolution A/D	16 bit
Limit frequency (3 dB)	120 Hz (default for 4.5 ms filter)
	450 Hz (for 1.1 ms filter)
Data formats	IB IL, S7-compatible
Measured value resolution	16 bits (15 bits + sign bit)
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	typ. 107 $\Omega$
Voltage input signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	typ. 276 k $\Omega$
Number of inputs	4 (differential inputs, voltage)
Type of protection	Overload protection, short-circuit protection of sensor supply
Open circuit response	Goes to 0 V
Voltage input signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V

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## Technical data

### Analog inputs

Input resistance of voltage input	typ. 276 kΩ
Number of inputs	4 (differential inputs, current)
Type of protection	Short-circuit protection for the sensor supply
Open circuit response	Going to 0 mA; open-circuit detection from 4 mA ... 20 mA
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	typ. 107 Ω
Number of inputs	4
Input name	Analog RTD inputs
Sensor types (RTD) that can be used	Pt100, Pt500, Pt1000, Ni100, Ni1000, Ni1000 L&G
Linear resistance measuring range	0 Ω ... 3200 Ω
	0 Ω ... 9500 Ω
Protective circuit	Overload protection, short-circuit protection of sensor supply

### Analog outputs

Number of outputs	2
Connection method	Spring-cage connection
	2-wire (shielded)
Output name	Analog outputs
D/A conversion time	typ. 70 μs
D/A resolution	16 bit
Type of protection	Short-circuit protection of outputs
Process data update	17 ms
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Voltage output signal	0 V ... 5 V
	-5 V ... 5 V
	0 V ... 10 V
	-10 V ... 10 V
Load/output load voltage output	> 2 kΩ

## Classifications

eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303

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## Classifications

### eCl@ss

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

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

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#### Approvals submitted

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#### Approval details

UL Listed 
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## Approvals

cUL Listed

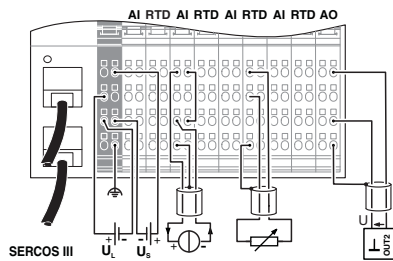
UL Listed

cUL Listed

cULus Listed

## Drawings

Connection diagram



Dimensioned drawing

