

I/O module - ILB IB AI4 AO2 - 2878777

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Inline Block IO analog input/output module, INTERBUS, inputs: 0-20 mA, 4-20 mA, ± 20 mA, 0-5 V, ± 5 V, 0-10 V, ± 10 V, Pt 100, Pt 1000, Ni 1000..., outputs: 0-5 V, ± 5 V, 0-10 V, ± 10 V, 0-20 mA, ± 20 mA, 4-20 mA, 2, 3, 4-wire connection

Product Description

The multifunctional, analog Inline Block IO 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.

Your advantages

- ☒ 2 analog outputs (shielded)
- ☒ 4 analog inputs (shielded)
- ☒ Difference measurement or resistance thermometer (RTD)

RoHS



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 075121
GTIN	4046356075121
Weight per Piece (excluding packing)	560.400 g
Custom tariff number	85389091
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	141 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)	80 kPa ... 108 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	66 kPa ... 108 kPa (up to 3500 m above sea level)
Degree of protection	IP20

General

Mounting type	DIN rail
Color	green
Net weight	465 g

Interfaces

Designation	Inline local bus
Connection method	Inline connector
Transmission speed	500 kbps
Transmission physics	Copper

Inline potentials

Power supply unit	max. 8 A
Supply voltage	24 V DC
Power supply unit	max. 8 A
Current consumption	max. 220 mA (maximum full load)
Designation	Communications power (U _L)
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A
Current consumption	typ. 100 mA
	max. 175 mA (AO-I nominal load)
Designation	Sensor supply (U _S)
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply unit	max. 8 A

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Technical data

Inline potentials

Current consumption	max. 220 mA (maximum full load)
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Analog inputs

Description of the input	Differential input, incl. sensor supply (24 V DC)
Input name	Analog inputs
Number of inputs	max. 4 (Differential inputs, voltage or current can be chosen separately)
Connection method	Spring-cage connection
Connection technology	2, 3, 4-wire (shielded)
A/D conversion time	typ. 180 µs
A/D converter resolution	16 bit
Limit frequency (3 dB)	120 Hz (default for 4.5 ms filter)
	450 Hz (for 1.1 ms filter)
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 Ω
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 kΩ
Number of inputs	4 (differential inputs, voltage)
Type of protection	Electronic short-circuit protection
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 kΩ
Number of inputs	4 (Differential inputs, current)
Type of protection	Electronic short-circuit protection
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	Pt 100, Pt 500, Pt 1000, Ni 100, Ni 1000, Ni 1000 L&G

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Technical data

Analog inputs

Linear resistance measuring range	0 Ω ... 3200 Ω
	0 Ω ... 9500 Ω
Type of protection	Overload protection, short-circuit protection of sensor supply

Analog outputs

Number of outputs	2
Connection method	Spring-cage connection
Connection technology	2-wire (shielded)
Output name	Analog outputs
D/A conversion time	typ. 70 μ s
D/A converter resolution	16 bit
Type of protection	Short-circuit protection of outputs
Protective circuit/component	Electronic
Data formats	IB IL, IB ST, IB RT, standardized representation, S7 compatible
Representation of output values	16 bits (15 bits + sign)
Process data update	17 ms
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Load/output load current output	to 500 Ω
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 k Ω

Standards and Regulations

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
Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

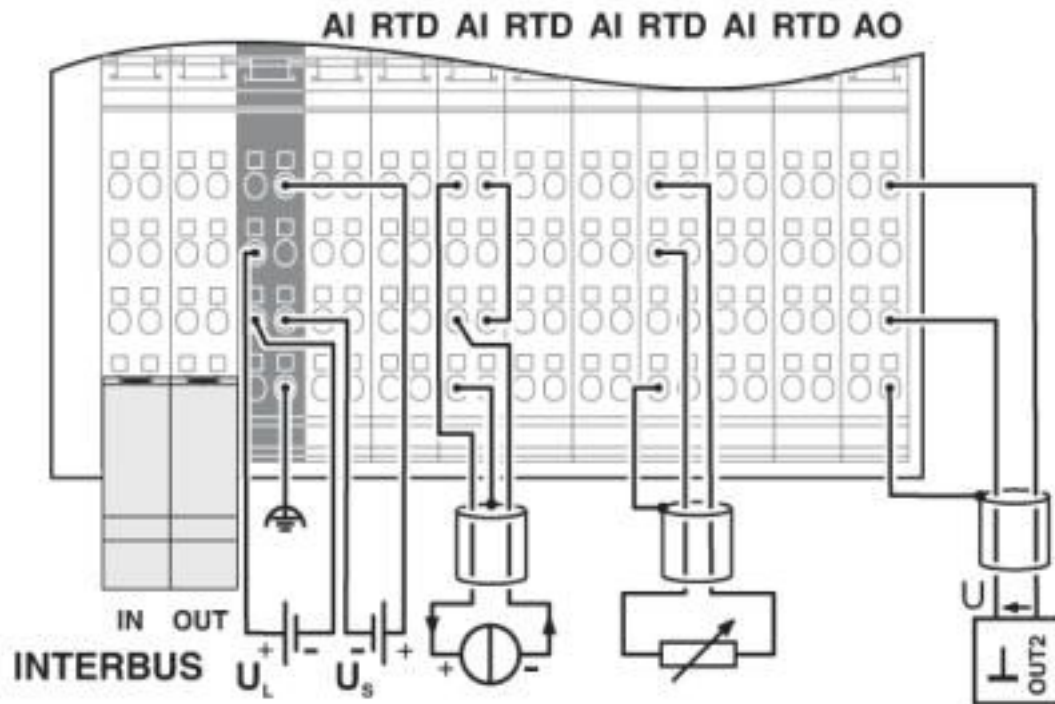
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

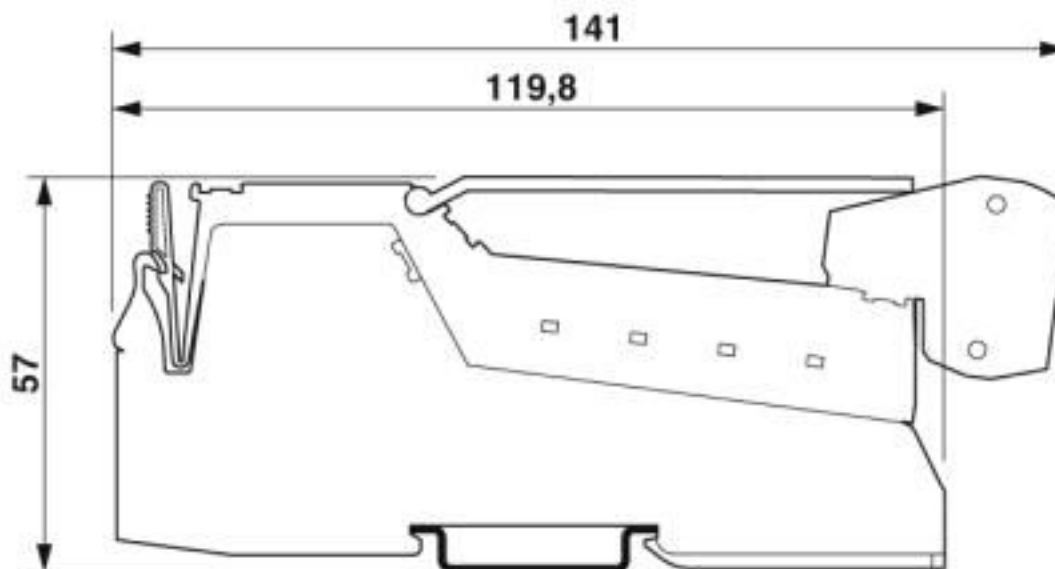
Drawings

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Connection diagram



Dimensional drawing



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Classifications

eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
eCl@ss 5.1	27242600
eCl@ss 6.0	27242600
eCl@ss 7.0	27242601
eCl@ss 8.0	27242601
eCl@ss 9.0	27242601

ETIM

ETIM 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	EC001596
ETIM 5.0	EC001596
ETIM 6.0	EC001596

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602
UNSPSC 19.0	32151602

Accessories

Accessories

End block

End clamp - CLIPFIX 35-5 - 3022276



Quick mounting end clamp for NS 35/7,5 DIN rail or NS 35/15 DIN rail, with marking option, with parking option for FBS...5, FBS...6, KSS 5, KSS 6, width: 5.15 mm, color: gray

Labeling panel

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Accessories

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



Plug

Inline shield connector - IB IL SCN 6-SHIELD-TWIN - 2740245



Inline shield connector

Inline shield connector - IB IL SCN-6 SHIELD - 2726353



Inline shield connector

Inline connector - IB IL SCN-8 - 2726337



Connector, for digital 1, 2 or 8-channel Inline terminals

Inline shield connector - IB IL SCN-6 SHIELD-CP - 2863151



Shield connector, for INTERBUS connection

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Accessories

Terminal marking

Insert strip - ESL 62X10 - 0809492



Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72

Flat zack marker sheet - ZBFM 6/WH:UNBEDRUCKT - 0803618



Flat zack marker sheet, Sheet, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into flat marker groove, for terminal block width: 6.2 mm, lettering field size: 5 x 5.5 mm, Number of individual labels: 100