

# IB IL AO 2/U/BP-PAC - Analog module



2861467

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Inline, Analog output terminal, Analog outputs: 2, 0 V ... 10 V, -10 V ... 10 V, connection technology: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

## Product description

The terminal is designed for use within an Inline station. It is used to output analog voltage signals.

## Your advantages

- 2 analog output channels
- Connection of actuators in 2-conductor technology
- Voltage ranges: 0 V ... 10 V,  $\pm 10$  V
- Output values can be represented in two different formats
- Behavior of the outputs in the event of an error can be configured
- Process data update including conversion time of the digital/analog converter < 1 ms
- Very good output driver characteristics, making it also suitable for long actuator cables

## Commercial data

Item number	2861467
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI142
Catalog page	Page 143 (C-6-2019)
GTIN	4017918894382
Weight per piece (including packing)	94 g
Weight per piece (excluding packing)	48 g
Customs tariff number	85389099
Country of origin	DE

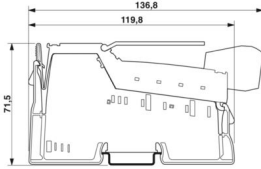
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## Technical data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm

### Notes

#### Utilization restriction

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

CCcex note	Use in potentially explosive areas is not permitted in China.
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### Interfaces

#### Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

### System properties

#### Module

ID code (dec.)	91
ID code (hex)	5B
Length code (hex)	02
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Register length	32 bit
Required parameter data	6 Byte
Required configuration data	5 Byte

### Output data

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## Analog

Output name	Analog outputs
Output description	Single-ended
Connection technology	2-conductor
Note regarding the connection technology	shielded
Number of outputs	2
D/A conversion time	< 100 ns
Protective circuit	Transient protection of outputs
Data formats	IB IL, IB ST
Representation of output values	16 bits (15 bits + sign)
DAC resolution	13 bit
Process data update	< 1 ms
Voltage output signal	0 V ... 10 V -10 V ... 10 V
Load/output load voltage output	> 2 k $\Omega$
Permissible cable length	max. 500 m (The specifications refer to nominal operation after complying with installation instructions. The specifications refer to the following reference cable type: Shielded power station cable: LiYCY; 2 x 2 x 0,5 mm <sup>2</sup> ; VDE0812)

## Product properties

Type	modular
Product type	I/O component
Product family	Inline
Scope of delivery	including Inline connector and labeling field
Diagnostics messages	Failure of or insufficient communications power U <sub>L</sub> I/O error message sent to the bus coupler

## Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

## Electrical properties

Maximum power dissipation for nominal condition	1.8 W
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## Potentials

Power consumption	typ. 0.68 W (No-load) typ. 0.85 W (Full load (R <sub>L</sub> = 2 k $\Omega$ ))
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## Potentials: Communications power (U<sub>L</sub>)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 40 mA typ. 33 mA

## Potentials: Supply of analog modules (U<sub>ANA</sub>)

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)

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Current draw	max. 35 mA (Full load ( $R_L = 2 \text{ k}\Omega$ ))
	max. 28 mA (No-load)
	typ. 25 mA (Full load ( $R_L = 2 \text{ k}\Omega$ ))
	typ. 18 mA (No-load)

## Electrical isolation/isolation of the voltage ranges

Test voltage: 7.5 V supply (bus logic), 24 V supply $U_{ANA}$ / I/O	500 V AC, 50 Hz, 1 min.
Test voltage: 7.5 V supply (bus logic), 24 V supply $U_{ANA}$ / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.

## Connection data

### Connection technology

Connection name	Inline connector
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### Conductor connection

Connection method	Spring-cage connection
Conductor cross section rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16
Stripping length	8 mm

### Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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## Classifications

### ECLASS

ECLASS-11.0	27242601
ECLASS-12.0	27242601
ECLASS-13.0	27242601

### ETIM

ETIM 9.0	EC001596
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC

Lead 7439-92-1

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)