

Inline terminal - IB IL AI 4/U-PAC - 2700459

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Inline analog input terminal, complete with accessories (connector and labeling field), inputs: 0-10 V, ± 10 V, 2-wire connection method

The figure shows version: IB IL AI 4/I-PAC

Why buy this product

- 4 analog, bipolar input channels for the connection of voltage signals
- Connection of sensors in 2-wire technology
- Voltage ranges: 0 V ... 10 V, ± 10 V
- Mean-value generation of the inputs
- Process data update of all channels in 250 μ s
- Diagnostic and status indicators



Key commercial data

| | |
|--------------------------------------|---|
| Packing unit | 1 pc |
| GTIN |  4 046356 566537 |
| Weight per Piece (excluding packing) | 88.0 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 |
|-------------------------|---|

Dimensions

| | |
|--------------------|--------------------|
| Width | 12.2 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |
| Note on dimensions | Housing dimensions |

Ambient conditions

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Technical data

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 55 °C |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C |
| Permissible humidity (operation) | 10 % ... 95 % (according to DIN EN 61131-2) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (according to DIN EN 61131-2) |
| 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) |
| Degree of protection | IP20 |

General

| | |
|---------------------------------|---|
| Weight | 88 g |
| Note on weight specifications | with connector |
| Mounting type | DIN rail |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Test section | 5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min |
| | 5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min |
| | 7.5 V supply (bus logic), 24 V supply U_{ANA} / I/O 500 V AC 50 Hz 1 min |
| | 7.5 V supply (bus logic), 24 V supply U_{ANA} /functional earth ground 500 V AC 50 Hz 1 min |
| | I/O / functional earth ground 500 V AC 50 Hz 1 min |
| Conformance with EMC directives | Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge |
| | Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m |
| | Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; supply lines DC: ± 1 kV/ ± 1 kV (symmetrical/asymmetrical); shielded I/O cables: ± 1 kV |
| | Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V |
| | Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class A |
| Diagnostics messages | Failure of the internal I/O supply I/O error message sent to the bus coupler |
| | I/O supply failure Message in the diagnostic code (in the IB IL format) |
| | Overrange or underrange Message in the diagnostic code (in the IB IL format) |
| | Configuration invalid Message in the diagnostic code (in the IB IL format) |

Interfaces

| | |
|-----------------|------------------|
| Fieldbus system | Lokalbus |
| Designation | Inline local bus |

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Technical data

Interfaces

| | |
|----------------------|--------------------|
| Connection method | Inline data jumper |
| Transmission speed | 500 kBit/s |
| Transmission physics | Copper |

Power supply for module electronics

| | |
|----------------------------|----------------------------|
| Communications power U_L | 7.5 V (via voltage jumper) |
|----------------------------|----------------------------|

Inline potentials

| | |
|------------------------------------|-------------------------------|
| Communications power U_L | 7.5 V DC (via voltage jumper) |
| | typ. 55 mA |
| I/O supply voltage U_{ANA} | 24 V DC |
| Current consumption from U_{ANA} | typ. 30 mA |
| Power consumption | typ. 0.94 W (total) |

Analog inputs

| | |
|---|---|
| Number of inputs | 4 (differential inputs, voltage) |
| Connection method | 2-wire |
| Input name | Analog inputs |
| A/D conversion time | max. 6.5 μ s |
| Resolution A/D | 12 bit |
| Type of protection | Overload protection |
| Protective circuit/component | \pm 30 V DC, maximum |
| Data formats | IB IL, S7-compatible |
| Measured value resolution | 12 bits (11 bits + sign bit) |
| Measured value representation | 12 bits (11 bits + sign bit) |
| Voltage input signal | 0 V ... 10 V |
| | -10 V ... 10 V |
| Filtering | None or mean-value generation over 4, 16, or 32 measured values |
| Number of inputs | 4 (differential inputs, voltage) |
| Open circuit response | Goes to 0 V |
| Voltage input signal | 0 V ... 10 V (Default) |
| | -10 V ... 10 V |
| Input resistance of voltage input | typ. 324 k Ω |
| Common mode voltage range signal - ground | max. 50 V |

Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27250303 |
| eCl@ss 4.1 | 27250303 |
| eCl@ss 5.0 | 27250303 |
| eCl@ss 5.1 | 27242601 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 6.0 | 27242601 |
| eCl@ss 7.0 | 27242601 |
| eCl@ss 8.0 | 27242601 |

ETIM

| | |
|----------|----------|
| 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

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

cULus Listed

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Accessories

Accessories

Installation terminal block

Connection terminal block - AKG 4 GNYE - 0421029



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: green-yellow

Connection terminal block - AKG 4 BK - 0421032



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: black

Neutral conductor rail

Neutral busbar - NLS-CU 3/10 SN 1000MM - 0402174



PEN conductor busbar, 3mm x 10 mm, length: 1000 mm

Pick-off terminal block

Connection terminal block - AK 4 - 0404017



Connection terminal block, Connection method Screw connection, Load current : 41 A, Cross section: 0.5 mm² - 6 mm², Width: 7 mm, Color: silver

Shield connection clamp

Shield connection terminal block - SK 8 - 3025163



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

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Accessories

Shield connection terminal block - SK 14 - 3025176



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Shield connection terminal block - SK 20 - 3025189



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Shield connection terminal block - SK 35 - 3026463



Shield connection clamp, for shield on busbars, contact resistance < 1 mOhm

Support

Support bracket - AB-SK - 3025341



Support bracket for busbars

Support bracket - AB-SK 65 - 3026489



Support bracket, Bracket for busbars, set every 20 cm, Length: 95.5 mm, Width: 6.2 mm, Color: gray

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Accessories

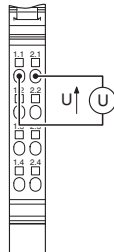
Support bracket - AB-SK/E - 3026476

Support bracket, Bracket for busbars, set every 20 cm, Length: 10 mm, Width: 56 mm, Height: 20 mm, Color: silver



Drawings

Connection diagram



Dimensioned drawing

