

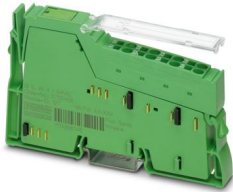
IB IL AI 4/I-PAC - Analog module



2700458

<https://www.phoenixcontact.com/be/products/2700458>

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Inline, Analog input terminal, Analog inputs: 4, 0 mA ... 20 mA, 4 mA ... 20 mA, connection technology: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

Your advantages

- 4 analog differential input channels for connecting current signals
- Connection of sensors in 2-conductor technology
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA
- Mean-value generation of the inputs
- Process data update of all channels in 250 μ s
- Diagnostic and status indicators

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2700458 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DRI141 |
| Product key | DRI141 |
| Catalog page | Page 135 (C-6-2019) |
| GTIN | 4046356566544 |
| Weight per piece (including packing) | 89,4 g |
| Weight per piece (excluding packing) | 66 g |
| Customs tariff number | 85389091 |
| Country of origin | DE |

Technical data

Dimensions

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

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.) | 127 |
| ID code (hex) | 7F |
| Length code (hex) | 04 |
| Length code (dec) | 04 |
| Process data channel | 64 bit |
| Input address area | 8 Byte |
| Output address area | 8 Byte |
| Register length | 64 bit |
| Required parameter data | 10 Byte |
| Required configuration data | 5 Byte |

Input data

Analog: General

| | |
|--------------------------|------------------------------|
| Input name | Analog inputs |
| Description of the input | Differential inputs, current |
| Number of inputs | 4 |
| A/D conversion time | max. 6.5 µs |
| A/D converter resolution | 12 bit |

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| | |
|--------------------------------|---|
| Connection method | Inline connector |
| Connection technology | 2-conductor |
| Current input signal | 0 mA ... 20 mA 4 mA ... 20 mA |
| Input resistance current input | typ. 113 Ω |
| Data formats | IB IL, S7-compatible |
| Filtering | None or mean-value generation over 4, 16, or 32 measured values |
| Limit frequency (3 dB) | 300 Hz |
| Measured value resolution | 13 bits (12 bits + sign bit) |
| Measured value representation | 13 bits (12 bits + sign bit) |

Product properties

| | |
|----------------------|---|
| Product type | I/O component |
| Product family | Inline |
| Type | modular |
| Scope of delivery | including Inline connector and labeling field |
| 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) |

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 | 7.68 W |
|---|--------|

Potentials

| | |
|-------------------|---------------------|
| Power consumption | typ. 0.94 W (total) |
|-------------------|---------------------|

Potentials: Communications power (U_L)

| | |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw | max. 60 mA typ. 55 mA |

Potentials: Supply of analog modules (U_{ANA})

| | |
|----------------------|--|
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 35 mA typ. 30 mA |

Electrical isolation/isolation of the voltage ranges

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| | |
|---|-------------------------|
| Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics) | 500 V AC, 50 Hz, 1 min. |
| Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics) | 500 V AC, 50 Hz, 1 min. |
| 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: I/O/functional ground | 500 V AC, 50 Hz, 1 min. |

Connection data

Connection technology

| | |
|-----------------|------------------|
| Connection name | Inline connector |
|-----------------|------------------|

Conductor connection

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

Inline connector

| | |
|-----------------------------------|--|
| Connection method | Spring-cage connection |
| Conductor cross section, rigid | 0.08 mm ² ... 1.5 mm ² |
| Conductor cross section, flexible | 0.08 mm ² ... 1.5 mm ² |
| 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) |
|------------------|---------------------------------------|

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

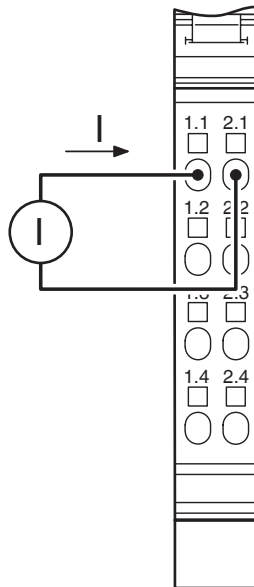
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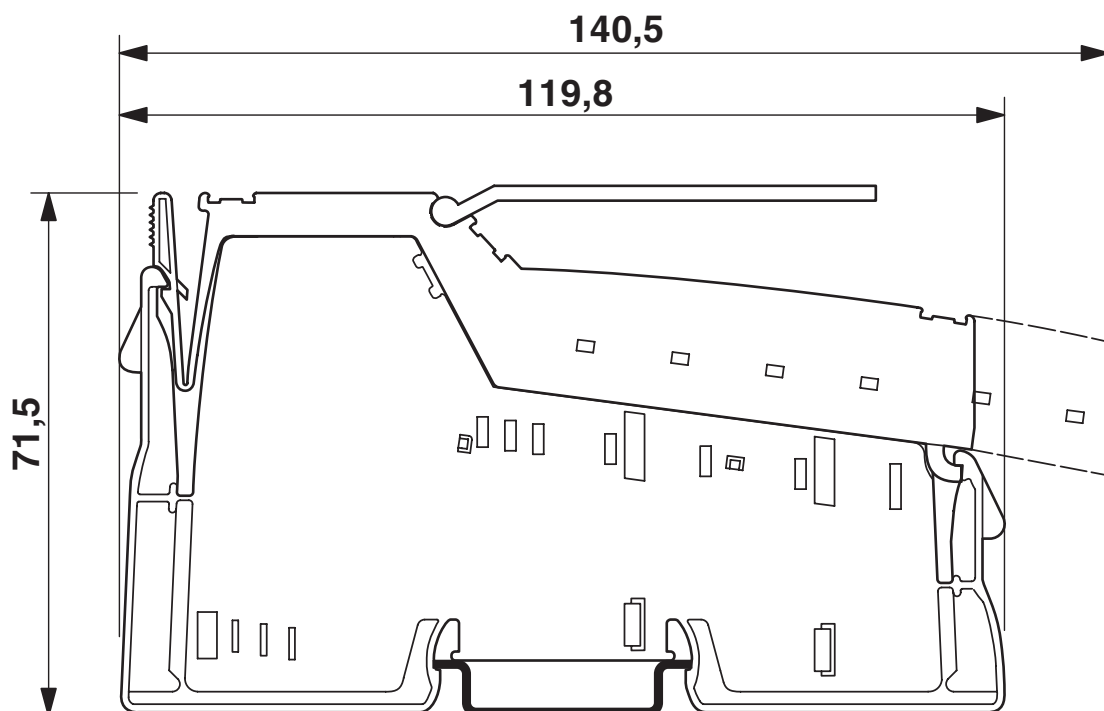
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Drawings

Connection diagram



Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/be/products/2700458>



EAC

Approval ID: TR TS_D_01921-19



UL Listed

Approval ID: FILE E 140324



cUL Listed

Approval ID: FILE E 140324

cULus Listed

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001596 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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Environmental product compliance

EU RoHS

| | |
|---|----------------------------------|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 15, 15(a), 7(a), 7(c)-I, 7(c)-II |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|--------------------------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 96f75740-8cdf-48dd-a88f-cd21f850a933 |

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Accessories

SK 8 - Shield connection clamp

3025163

<https://www.phoenixcontact.com/be/products/3025163>



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

SK 14 - Shield connection clamp

3025176

<https://www.phoenixcontact.com/be/products/3025176>



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

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SK 20 - Shield connection clamp

3025189

<https://www.phoenixcontact.com/be/products/3025189>



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

SK 35 - Shield connection clamp

3026463

<https://www.phoenixcontact.com/be/products/3026463>



Shield connection clamp, for shield on busbars, contact resistance <math>< 1 \text{ m}\Omega</math>

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AB-SK - Support bracket

3025341

<https://www.phoenixcontact.com/be/products/3025341>

Support bracket for busbars



AB-SK 65 - Support bracket

3026489

<https://www.phoenixcontact.com/be/products/3026489>

Support bracket, Bracket for busbars, set every 20 cm, width: 6.2 mm, height: 95.5 mm, number of positions: 1, color: gray, mounting type: DIN rail mounting



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AB-SK/E - Support bracket

3026476

<https://www.phoenixcontact.com/be/products/3026476>

Support bracket, Bracket for busbars, set every 20 cm, depth: 20 mm, width: 56 mm, height: 10 mm, diameter: 4.5 mm, number of positions: 2, color: silver, mounting type: Direct mounting



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

0402174

<https://www.phoenixcontact.com/be/products/0402174>

Neutral busbar, DIN VDE 0611-4: 1991-02, material: Copper, tin-plated, color: silver



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AK 4 - Connection terminal block

0404017

<https://www.phoenixcontact.com/be/products/0404017>



Connection terminal block, connection method: Screw connection, Rated cross section: 4 mm², cross section: 0.5 mm² - 6 mm², mounting: Neutral busbar, color: silver

AKG 4 GNYE - Connection terminal block

0421029

<https://www.phoenixcontact.com/be/products/0421029>



Connection terminal block, nom. voltage: 300 V, nominal current: 41 A, connection method: Screw connection, Rated cross section: 4 mm², cross section: 0.5 mm² - 6 mm², mounting: Neutral busbar, color: green-yellow

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AKG 4 BK - Connection terminal block

0421032

<https://www.phoenixcontact.com/be/products/0421032>



Connection terminal block, nom. voltage: 300 V, nominal current: 41 A, connection method: Screw connection, Rated cross section: 4 mm², cross section: 0.5 mm² - 6 mm², mounting: Neutral busbar, color: black

IB IL SCN-8 - Inline connector

2726337

<https://www.phoenixcontact.com/be/products/2726337>

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



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IB IL FIELD 2 - Marking field

2727501

<https://www.phoenixcontact.com/be/products/2727501>

Marking field, width: 12.2 mm



ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/be/products/0809492>

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems, CMS-P1-PLOTTER, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72



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PHOENIX CONTACT nv/sa
Minervastraat 10-12
1930 Zaventem-Keiberg II
+32 (0)2/723 98 11
info@phoenixcontact.be