

IB IL AO 4/I/4-20-ECO - Analog module



2702497

<https://www.phoenixcontact.com/us/products/2702497>

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Inline, Analog output terminal, Analog outputs: 4, 4 mA ... 20 mA, connection technology: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector

Product description

The terminal is designed for use within an Inline station. It is used to output analog current signals. The output values are depicted in standardized representation format. Inline ECO terminals are approved for the temperature range from 0°C to +55°C. The electronics base and Inline connector are supplied as standard.

Your advantages

- 4 analog output channels
- Connection of actuators in 2-conductor technology
- Current range: 4 mA ... 20 mA
- Data format: standardized representation
- Resolution: 12 bits
- Diagnostic indicator

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 2702497 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DR01 |
| Product key | DRI142 |
| Catalog page | Page 118 (C-6-2019) |
| GTIN | 4055626204499 |
| Weight per piece (including packing) | 84.1 g |
| Weight per piece (excluding packing) | 84.1 g |
| Customs tariff number | 85389099 |
| Country of origin | DE |

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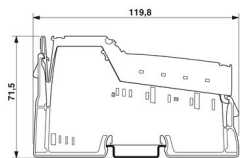


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Technical data

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 12.2 mm |
| Height | 119.8 mm |
| Depth | 71.5 mm |

Interfaces

| | |
|----------------------|--------------------|
| Inline local bus | |
| Number of interfaces | 2 |
| Connection method | Inline data jumper |
| Transmission speed | 500 kbps |

System properties

| | |
|-----------------------------|--------|
| Module | |
| ID code (dec.) | 125 |
| ID code (hex) | 7D |
| Length code (hex) | 04 |
| Length code (dec) | 04 |
| Process data channel | 64 bit |
| Input address area | 0 Byte |
| Output address area | 8 Byte |
| Register length | 64 bit |
| Required parameter data | 1 Byte |
| Required configuration data | 4 Byte |

Output data

| | |
|--|---|
| Analog | |
| Output name | Analog outputs |
| Connection technology | 2-conductor |
| Note regarding the connection technology | shielded, twisted pair |
| Number of outputs | 4 |
| D/A converter resolution | 12 bit |
| Protective circuit | Short-circuit and overload protection; electronic Transient protection; Suppressor diode |

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| | |
|---------------------------------|-----------------------------|
| Data formats | Standardized representation |
| Representation of output values | 16 bits |
| Process data update | < 10 ms |
| Current output signal | 4 mA ... 20 mA |
| Load/output load current output | < 300 Ω |

Product properties

| | |
|----------------------|--|
| Type | modular |
| Product type | I/O component |
| Product family | Inline |
| Scope of delivery | including Inline connector |
| Diagnostics messages | Failure of the internal I/O supply I/O error message sent to the bus coupler |
| | Checksum error I/O error message sent to the bus coupler |

Electrical properties

Potentials

| | |
|-------------------|------------|
| Power consumption | typ. 1.8 W |
| | max. 1.9 W |

Potentials: Communications power (U_L)

| | |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw | max. 50 mA |
| | typ. 40 mA |

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

| | |
|----------------------|--|
| Supply voltage | 24 V DC (via voltage jumper) |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current draw | max. 85 mA |
| | typ. 65 mA |

Electrical isolation/isolation of the voltage ranges

| | |
|---|-------------------------|
| Test voltage: Bus logic (local bus, communications power) | 500 V AC, 50 Hz, 1 min. |
| Test voltage: Analog I/O | 500 V AC, 50 Hz, 1 min. |
| Test voltage: 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 |

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| | |
|------------------|------|
| 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) | 0 °C ... 55 °C (see "Derating" table in the data sheet) |
| 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 % (according to DIN EN 61131-2) |
| Permissible humidity (storage/transport) | 10 % ... 95 % (according to DIN EN 61131-2) |

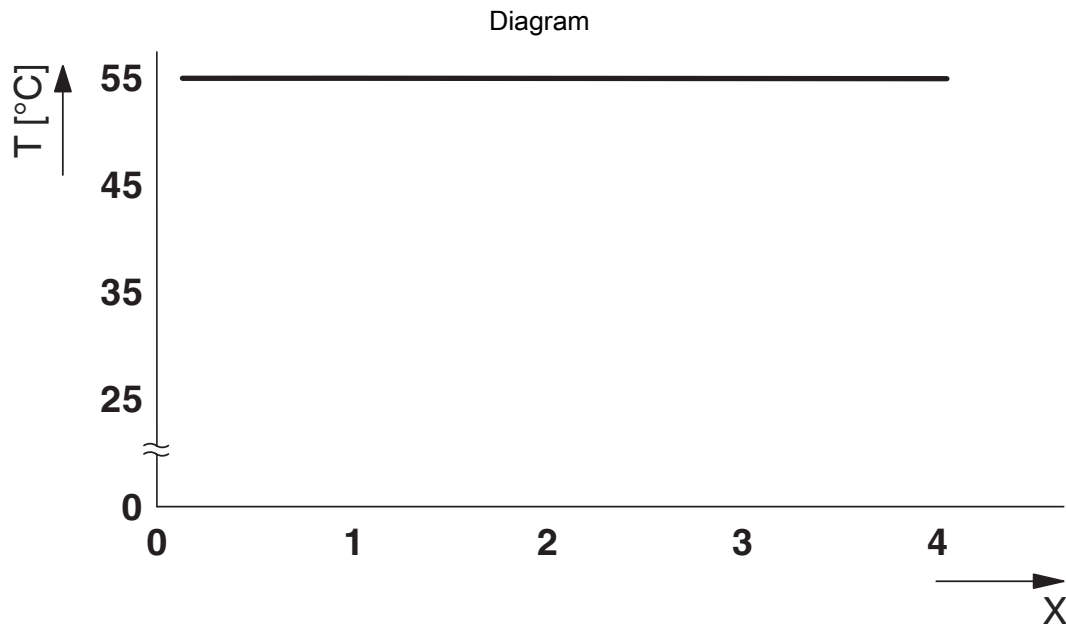
Standards and regulations

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

Mounting

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

Drawings



Derating with active convection

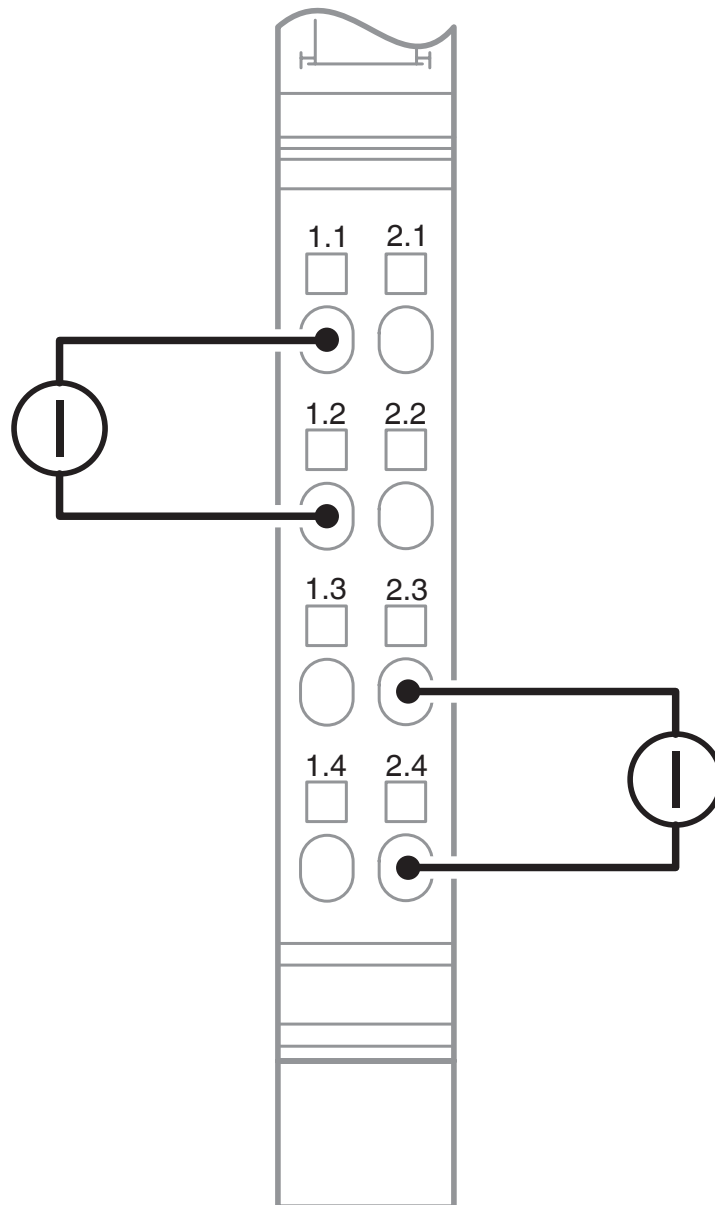
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Connection diagram



Actuator connection

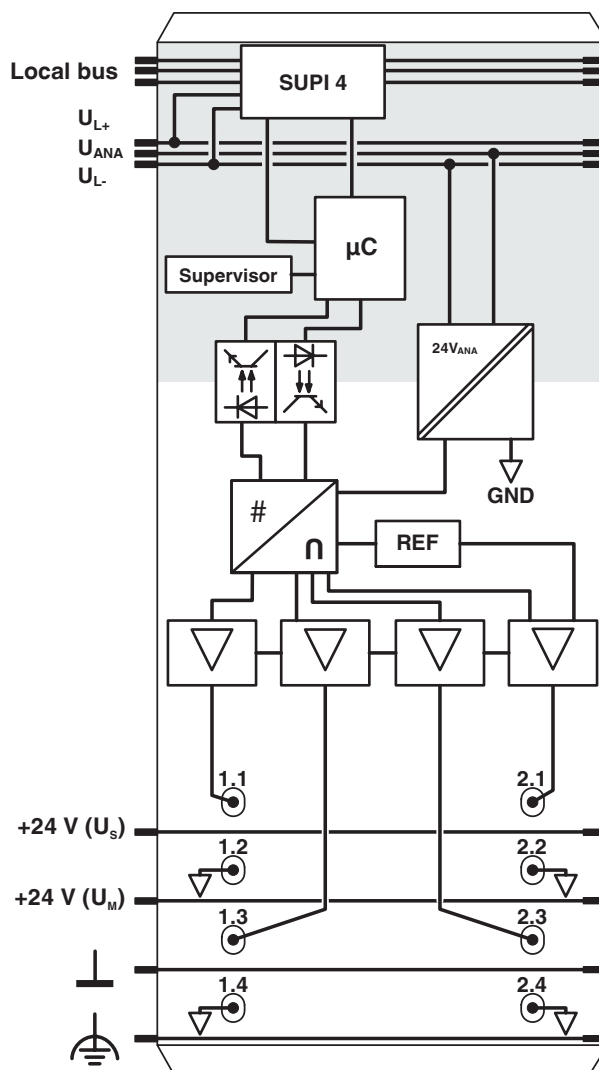
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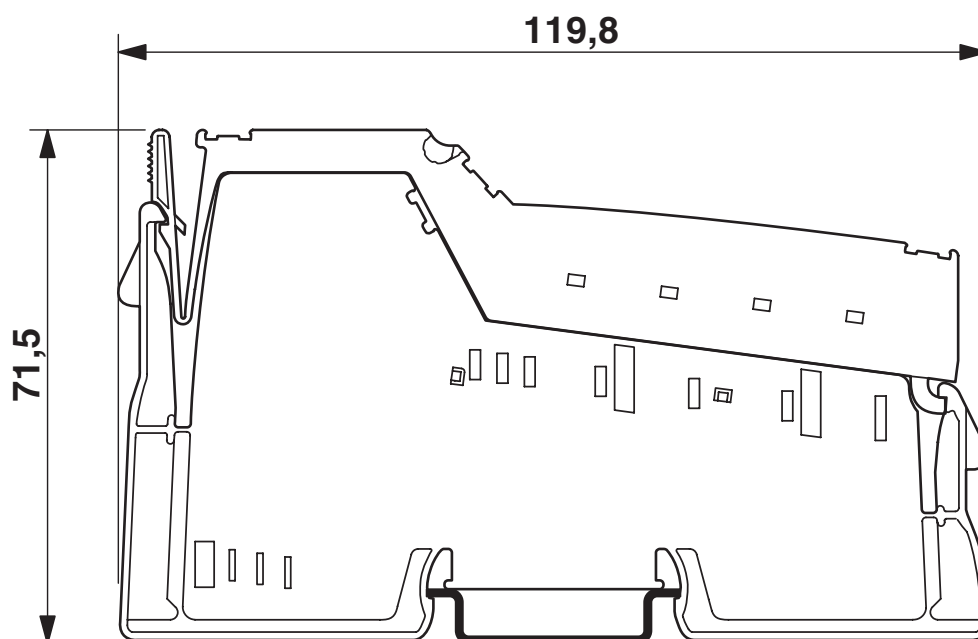


Block diagram

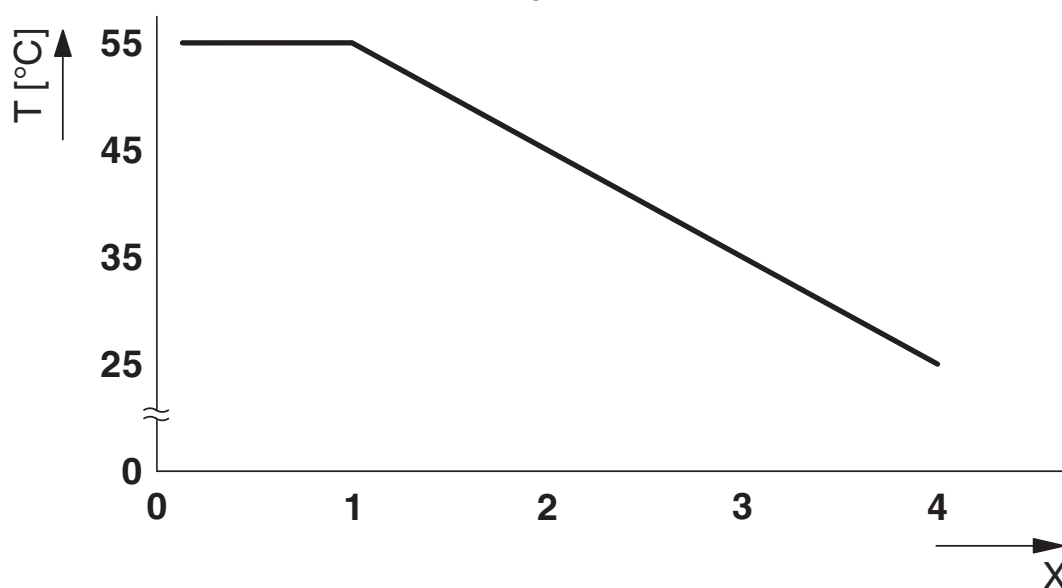


Internal wiring of the terminal points

Dimensional drawing



Diagram



Derating without active convection


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Approvals

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UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC001596 |
|----------|----------|

UNSPSC

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

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Environmental product compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

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Accessories

SK 8 - Shield connection clamp

3025163

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



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

SK 14 - Shield connection clamp

3025176

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



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

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SK 20 - Shield connection clamp

3025189

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



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

SK 35 - Shield connection clamp

3026463

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



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

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AB-SK - Support bracket

3025341

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Support bracket for busbars



AB-SK 65 - Support bracket

3026489

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

Support bracket, Bracket for busbars, set every 20 cm, length: 95.5 mm, 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/us/products/3026476>

Support bracket, Bracket for busbars, set every 20 cm, length: 10 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/us/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/us/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/us/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

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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/us/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/us/products/2727501>

Marking field, width: 12.2 mm



ESL 62X10 - Insert strip

0809492

<https://www.phoenixcontact.com/us/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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