

# IB IL AO 1/SF-PAC - Analog module



2861315

<https://www.phoenixcontact.com/us/products/2861315>

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Inline, Analog output terminal, Analog output: 1, 0 V ... 10 V, 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 connectors and marking fields

## Product description

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

## Your advantages

- 1 analog output for the connection of either voltage or current signals
- Connection of actuators in 2-conductor technology
- Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA
- Voltage range: 0 V ... 10 V
- Process data update including conversion time of the digital/analog converter < 1 ms

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2861315       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DR01          |
| Product key                          | DRI142        |
| GTIN                                 | 4017918894252 |
| Weight per piece (including packing) | 169.4 g       |
| Weight per piece (excluding packing) | 126 g         |
| Customs tariff number                | 85389091      |
| Country of origin                    | DE            |

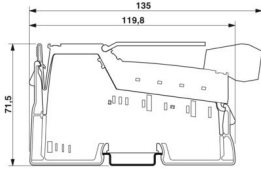
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## Technical data

### Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 24.4 mm  |
| Height              | 135 mm   |
| Depth               | 71.5 mm  |
| Note on dimensions  | Housing dimensions   |

### Notes

#### Note on application

|                     |                         |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

#### Utilization restriction

|            |   |
|------------|---|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---|

### Material specifications

|                 |                  |
|-----------------|------------------|
| Color (Housing) | green (RAL 6021) |
|-----------------|------------------|

### Interfaces

#### Inline local bus

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

### System properties

#### Programming data (LocalbusSlave)

|                         |        |
|-------------------------|--------|
| Length code (hex)       | 01     |
| ID code (dec.)          | 125    |
| Length code (dec)       | 01     |
| Process data channel    | 16 bit |
| Input address area      | 0 Byte |
| Output address area     | 2 Byte |
| Parameter channel (PCP) | 0 Byte |
| Register length (bus)   | 16 bit |

#### Fieldbus data telegram (PROFIBUS)

|                         |        |
|-------------------------|--------|
| Required parameter data | 4 Byte |
|-------------------------|--------|

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|                             |        |
|-----------------------------|--------|
| Required configuration data | 4 Byte |
|-----------------------------|--------|

## Output data

Analog:

|  |                                  |
|--|----------------------------------|
| Output name                              | Analog output                    |
| Connection technology                    | 2-conductor                      |
| Note regarding the connection technology | shielded                         |
| Number of outputs                        | 1                                |
| D/A converter resolution                 | 16 bit                           |
| Protective circuit                       | Transient protection of outputs  |
| Representation of output values          | 16-bit straight binary           |
| Process data update                      | < 1 ms                           |
| Current output signal                    | 0 mA ... 20 mA<br>4 mA ... 20 mA |
| Load/output load current output          | < 500 $\Omega$                   |
| Voltage output signal                    | 0 V ... 10 V                     |
| Load/output load voltage output          | > 2 k $\Omega$                   |

## Product properties

|                      |   |
|----------------------|---|
| Product type         | I/O component   |
| Product family       | Inline  |
| Type                 | modular   |
| Scope of supply      | including Inline connectors and marking fields  |
| Operating mode       | Process data mode with one word   |
| Diagnostics messages | Failure of or insufficient communications power $U_L$ 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 | 1.85 W |
|---|--------|

Potentials: Communications power ( $U_L$ )

|                |                               |
|----------------|-------------------------------|
| Supply voltage | 7.5 V DC (via voltage jumper) |
| Current draw   | max. 40 mA<br>typ. 30 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. 65 mA<br>typ. 50 mA   |

Electrical isolation/isolation of the voltage ranges

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

### 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)                    |

### Mechanical test

|  |     |
|--|-----|
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | 5g  |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27              | 25g |

## Standards and regulations

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

## Mounting

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

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## Drawings

Dimensional drawing



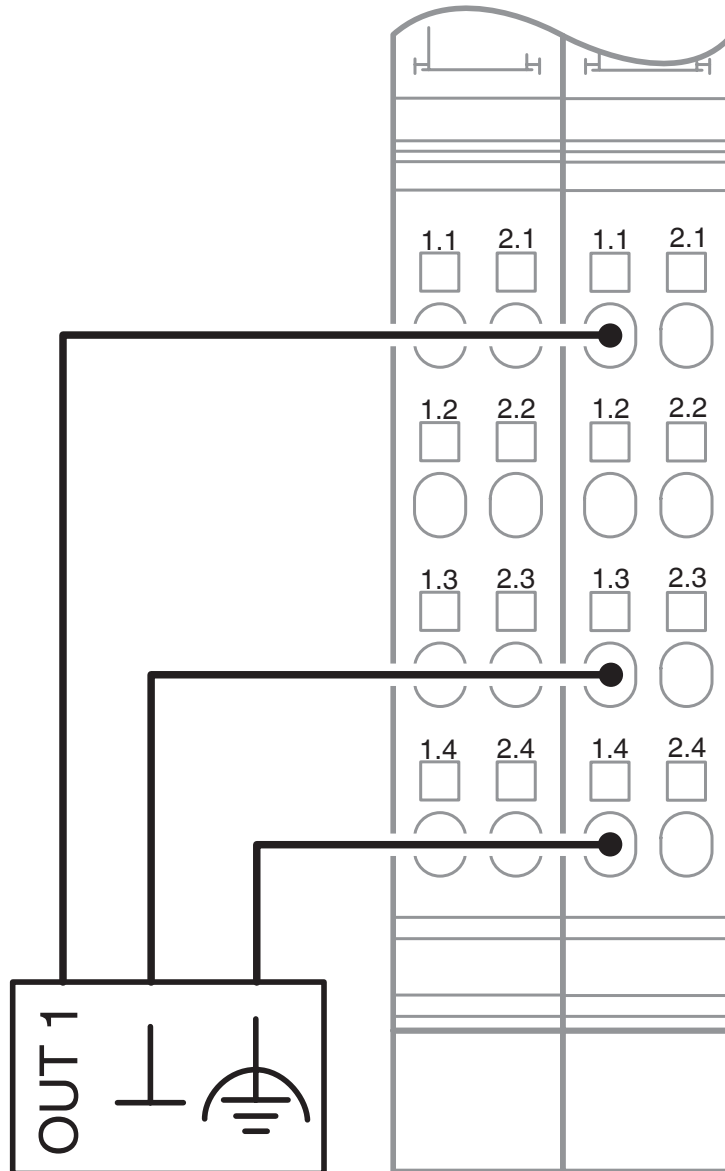
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Connection diagram

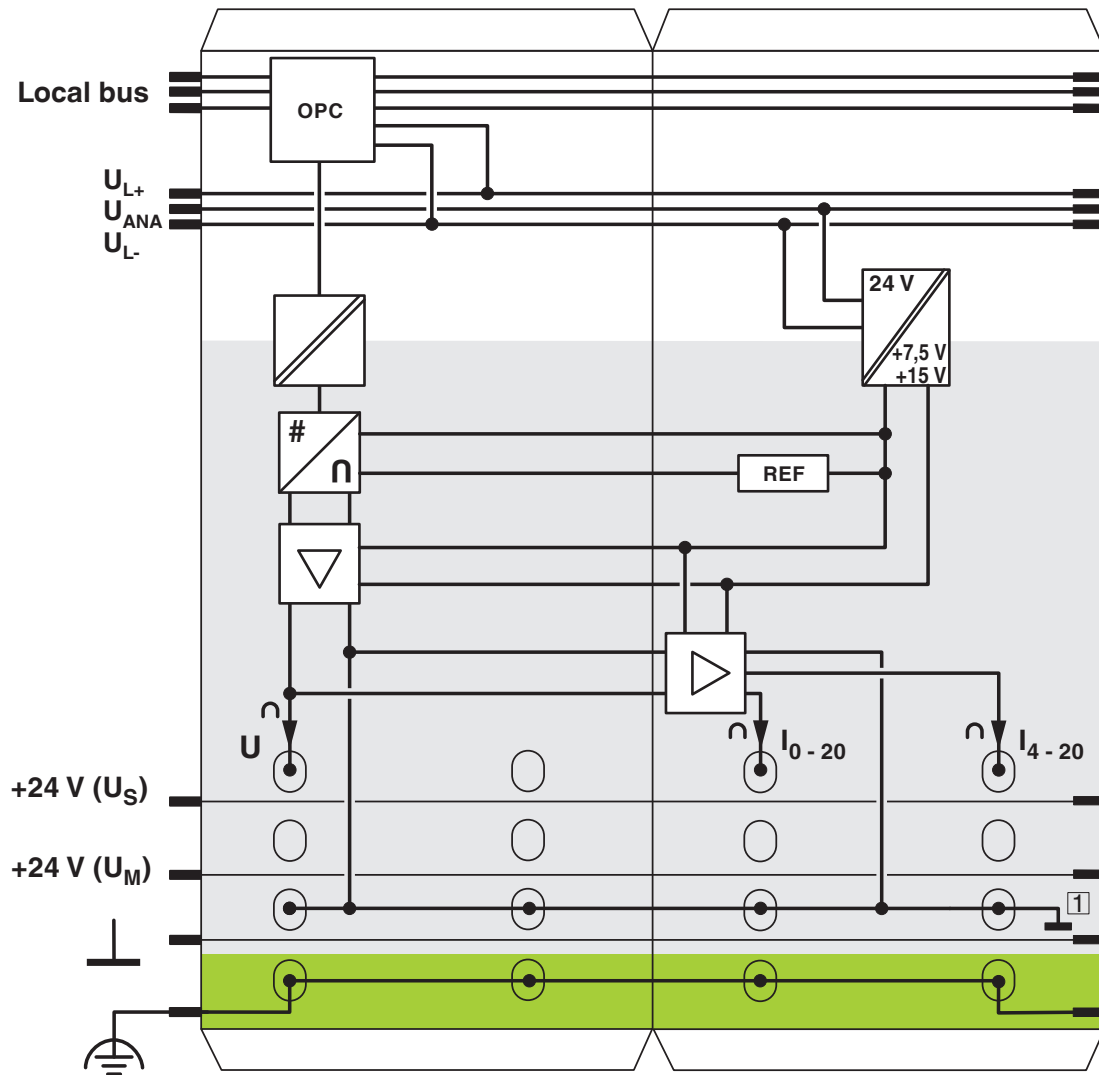


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Block diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2861315>



**cULus Recognized**  
Approval ID: E140324



**cULus Recognized**  
Approval ID: E140324



**cULus Listed**  
Approval ID: E199827



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242601 |
| ECLASS-15.0 | 27242601 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001596 |
|-----------|----------|

### UNSPSC

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

## Environmental product compliance

### EU RoHS

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

### 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)  |
|                                     | 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1) |
| SCIP                                | 9306643c-ac2b-4f47-98ee-e603ec7de1f1                        |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 7.199 kg CO2e |
|---------|---------------|