

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Inline, Analog output terminal, Analog outputs: 2, 0 V ... 10 V, -10 V ... 10 V, 0 mA ... 20 mA, 4 mA ... 20 mA, -20 mA ... 20 mA, connection method: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

### Your advantages

- ✓ 2 analog output channels
- ✓ Connection of actuators in 2-wire technology
- ✓ Current ranges: 0 mA ... 20 mA, 4 mA ... 20 mA,  $\pm 20$  mA
- ✓ Voltage ranges: 0 V ... 10 V,  $\pm 10$  V
- ✓ Diagnostic and status indicators



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 639965 |
| GTIN         | 4046356639965                                                                                           |

### 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

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -25 °C ... 55 °C |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C |

# Inline terminal - IB IL AO 2/UI-PAC - 2700775

## Technical data

### Ambient conditions

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

|                               |                                                                                            |
|-------------------------------|--------------------------------------------------------------------------------------------|
| Mounting type                 | DIN rail                                                                                   |
| Net weight                    | 66 g                                                                                       |
| Note on weight specifications | with connector                                                                             |
| 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)                    |
|                               | Short circuit/overload of the outputs Message in the diagnostic code (in the IB IL format) |
|                               | Configuration invalid Message in the diagnostic code (in the IB IL format)                 |

### Interfaces

|                      |                    |
|----------------------|--------------------|
| Designation          | Inline local bus   |
| Number               | 2                  |
| Connection method    | Inline data jumper |
| Transmission speed   | 500 kbps           |
| Transmission physics | Copper             |

### Inline potentials

|                      |                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------|
| Designation          | Communications power ( $U_L$ )                                                               |
| Supply voltage       | 7.5 V DC (via voltage jumper)                                                                |
| Current consumption  | typ. 55 mA                                                                                   |
|                      | max. 65 mA                                                                                   |
| Designation          | 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 consumption  | typ. 24 mA (No-load)                                                                         |
|                      | max. 30 mA (No-load)                                                                         |
|                      | typ. 38 mA (Nominal voltage load ( $U_{OUT1/2} = 10\text{ V}$ , $R_L = 1\text{ k}\Omega$ ))  |
|                      | max. 45 mA (Nominal voltage load ( $U_{OUT1/2} = 10\text{ V}$ , $R_L = 1\text{ k}\Omega$ ))  |
|                      | typ. 65 mA (Nominal current load ( $I_{OUT1/2} = 20\text{ mA}$ , $R_L = 0\text{ }\Omega$ ))  |
|                      | max. 75 mA (Nominal current load ( $I_{OUT1/2} = 20\text{ mA}$ , $R_L = 0\text{ }\Omega$ ))  |
| Power consumption    | typ. 1.32 W (Nominal voltage load ( $U_{OUT1/2} = 10\text{ V}$ , $R_L = 1\text{ k}\Omega$ )) |

### Analog outputs

|                       |             |
|-----------------------|-------------|
| Number of outputs     | 2           |
| Connection technology | 2-conductor |

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

### Technical data

#### Analog outputs

|                                          |                                                                                                                                                                                                                                                       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note regarding the connection technology | shielded                                                                                                                                                                                                                                              |
| Output name                              | Analog outputs                                                                                                                                                                                                                                        |
| D/A conversion time                      | typ. 10 µs                                                                                                                                                                                                                                            |
| D/A converter resolution                 | 12 bit                                                                                                                                                                                                                                                |
| Type of protection                       | Short-circuit and overload protection                                                                                                                                                                                                                 |
|                                          | Transient protection                                                                                                                                                                                                                                  |
| Protective circuit/component             | Electronic                                                                                                                                                                                                                                            |
|                                          | Suppressor diode                                                                                                                                                                                                                                      |
| Data formats                             | IB IL, S7-compatible                                                                                                                                                                                                                                  |
| Representation of output values          | 12 bits (11 bits + sign bit)                                                                                                                                                                                                                          |
| Process data update                      | bus-synchronous                                                                                                                                                                                                                                       |
| Current output signal                    | 0 mA ... 20 mA                                                                                                                                                                                                                                        |
|                                          | 4 mA ... 20 mA                                                                                                                                                                                                                                        |
|                                          | -20 mA ... 20 mA                                                                                                                                                                                                                                      |
| Load/output load current output          | ≤ 450 Ω                                                                                                                                                                                                                                               |
| Voltage output signal                    | 0 V ... 10 V                                                                                                                                                                                                                                          |
|                                          | -10 V ... 10 V                                                                                                                                                                                                                                        |
| Load/output load voltage output          | > 1 kΩ                                                                                                                                                                                                                                                |
| Precision                                | typ. 0.1 % (of output range final value)                                                                                                                                                                                                              |
| Permissible cable length                 | max. 250 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) |

#### Electrical isolation

|              |                                                                                 |
|--------------|---------------------------------------------------------------------------------|
| Test section | 7.5 V supply (bus logics)/24 V analog supply (analog I/O) 500 V AC 50 Hz 1 min. |
|              | 7.5 V supply (bus logic)/functional ground 500 V AC 50 Hz 1 min.                |
|              | 24 V analog supply (analog I/O)/functional ground 500 V AC 50 Hz 1 min.         |

#### Standards and Regulations

|                                    |                                                                                                                                                                                                                  |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunity to ESD                    | 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                                             |
| Immunity to EF                     | 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                                                                       |
| Immunity to burst                  | 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                                                                                         |
| Immunity to surge                  | Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; DC: ±0.5 kV/±1 kV(symmetrical/unsymmetrical) supply cables; shielded I/O cables: ±1 kV |
| Immunity to conducted interference | 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                                                                             |
| Interference emission              | Noise emission test as per EN 61000-6-4 Class A                                                                                                                                                                  |

# Inline terminal - IB IL AO 2/UI-PAC - 2700775

## Technical data

### Standards and Regulations

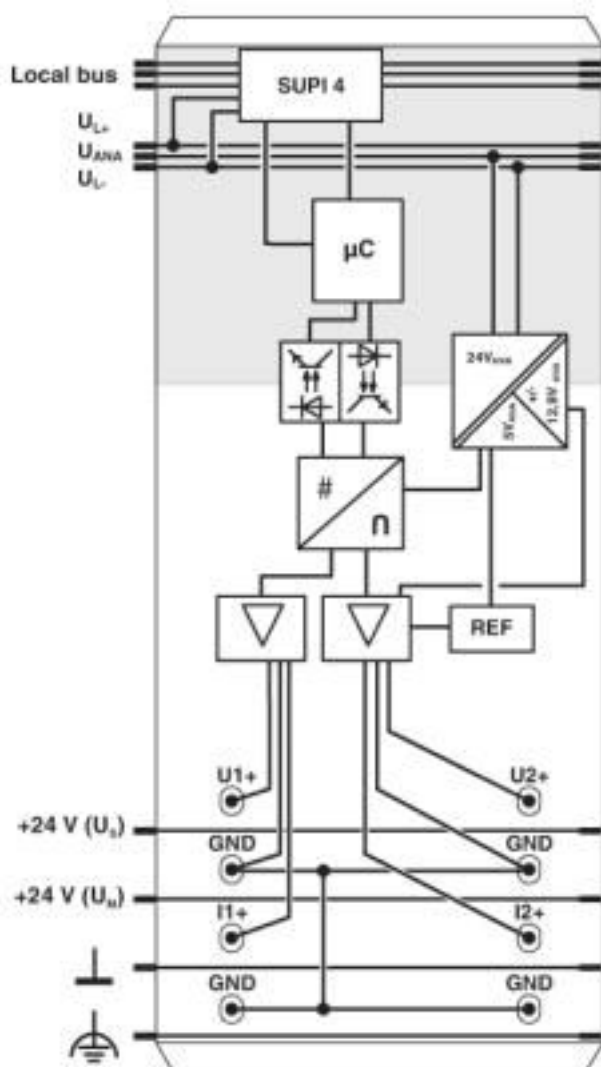
|                  |                                       |
|------------------|---------------------------------------|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |
|------------------|---------------------------------------|

### Environmental Product Compliance

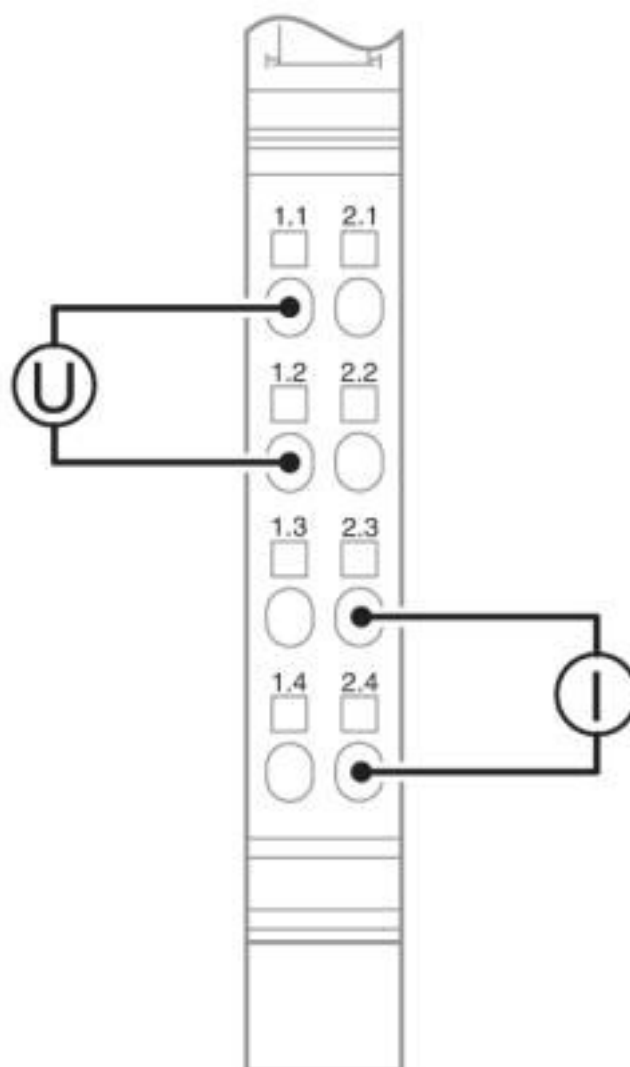
|            |                                                         |
|------------|---------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                          |
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

## Drawings

Block diagram

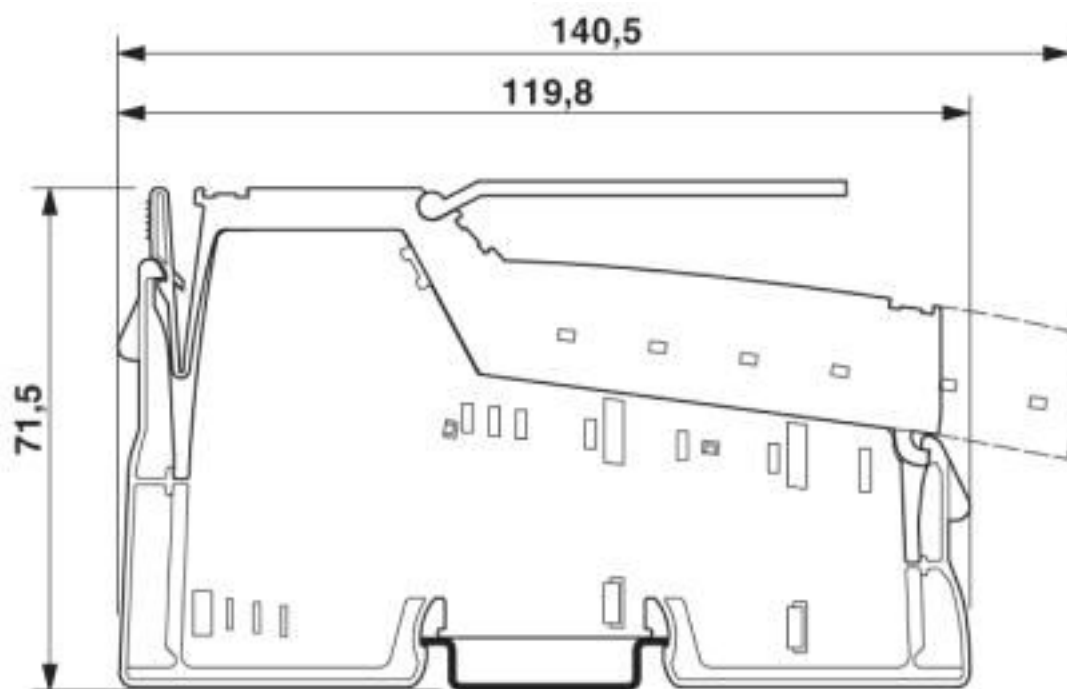


Connection diagram



## Inline terminal - IB IL AO 2/UI-PAC - 2700775

Dimensional drawing



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242601 |
| eCl@ss 11.0   | 27242601 |
| eCl@ss 4.0    | 27250300 |
| eCl@ss 4.1    | 27250300 |
| eCl@ss 5.0    | 27250300 |
| eCl@ss 5.1    | 27242600 |
| eCl@ss 6.0    | 27242600 |
| eCl@ss 7.0    | 27242601 |
| eCl@ss 8.0    | 27242601 |
| eCl@ss 9.0    | 27242601 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001596 |
| ETIM 4.0 | EC001596 |
| ETIM 5.0 | EC001596 |
| ETIM 6.0 | EC001596 |
| ETIM 7.0 | EC001596 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 43172015 |
| UNSPSC 7.0901 | 43201404 |

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

### Classifications

#### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 11    | 43172015 |
| UNSPSC 12.01 | 43201404 |
| UNSPSC 13.2  | 32151602 |
| UNSPSC 18.0  | 32151602 |
| UNSPSC 19.0  | 32151602 |
| UNSPSC 20.0  | 32151602 |
| UNSPSC 21.0  | 32151602 |

### Approvals

#### Approvals

##### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

##### Ex Approvals

#### Approval details

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|            |                                                                                     |                                                                                                                                                       |               |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

|     |                                                                                     |               |
|-----|-------------------------------------------------------------------------------------|---------------|
| EAC |  | EAC-Zulassung |
|-----|-------------------------------------------------------------------------------------|---------------|

|              |                                                                                     |
|--------------|-------------------------------------------------------------------------------------|
| cULus Listed |  |
|--------------|-------------------------------------------------------------------------------------|

### Accessories

#### Accessories

Installation terminal block

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

### Accessories

Connection terminal block - AKG 4 GNYE - 0421029



Connection terminal block, connection method: Screw connection, load current: 41 A, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, 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 mm<sup>2</sup> - 6 mm<sup>2</sup>, width: 7 mm, color: black

---

### Neutral conductor rail

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



Neutral busbar, width: 10 mm, height: 3 mm, DIN VDE 0611-4: 1991-02, material: Copper, tin-plated, length: 1000 mm, color: silver

---

### 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 mm<sup>2</sup> - 6 mm<sup>2</sup>, width: 7 mm, color: silver

---

### Shield connection clamp

Shield connection clamp - SK 8 - 3025163



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

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

### Accessories

Shield connection clamp - SK 14 - 3025176



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

---

Shield connection clamp - SK 20 - 3025189



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

---

Shield connection clamp - SK 35 - 3026463



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

---

### 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, number of positions: 1, color: gray

---

## Inline terminal - IB IL AO 2/UI-PAC - 2700775

### 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, number of positions: 2, color: silver

---

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>