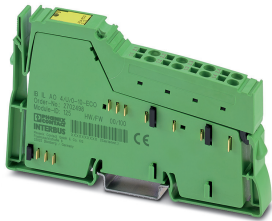


## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

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Inline ECO, Analog output terminal, Analog outputs: 4, 0 V ... 10 V, connection method: 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 voltage 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
- Voltage range: 0 V ... 10 V
- Data format: standardized representation
- Resolution: 12 bits
- Diagnostic indicator



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 204475
GTIN	4055626204475
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85389099
Country of origin	Germany

### Technical data

#### Note

## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm

#### Ambient conditions

Ambient temperature (operation)	0 °C ... 55 °C (see "Derating" table in the data sheet)
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

Mounting type	DIN rail
Color	green
Net weight	83.5 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
	Checksum error I/O error message sent to the bus coupler

#### Interfaces

Designation	Inline local bus
Number	2
Connection method	Inline data jumper
Transmission speed	500 kbps

#### Inline potentials

Designation	Communications power ( $U_L$ )
Supply voltage	7.5 V DC (via voltage jumper)
Current consumption	typ. 60 mA
	max. 70 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. 35 mA

## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

### Technical data

#### Inline potentials

	max. 45 mA
Power consumption	typ. 1.3 W

#### Analog outputs

Number of outputs	4
Connection technology	2-conductor
Note regarding the connection technology	shielded, twisted pair
Output name	Analog outputs
D/A converter resolution	12 bit
Type of protection	Short-circuit and overload protection
	Transient protection
Protective circuit/component	Electronic
	Suppressor diode
Data formats	Standardized representation
Representation of output values	16 bits
Process data update	< 10 ms
Voltage output signal	0 V ... 10 V
Load/output load voltage output	> 2 kΩ
Precision	typ. 0.1 %
	max. 0.3 %

#### Electrical isolation

Test section	Bus logic (local bus, communications power) 500 V AC 50 Hz 1 min.
	Analog I/O 500 V AC 50 Hz 1 min.
	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, supply lines DC: ±1 kV/±0,5 kV (symmetrical/asymmetrical), 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
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

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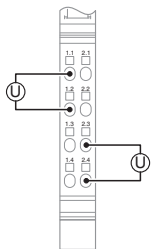
## Technical data

### Environmental Product Compliance

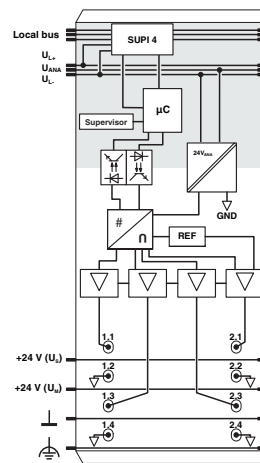
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Connection diagram



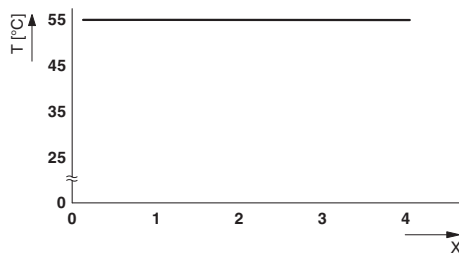
Block diagram



Actuator connection

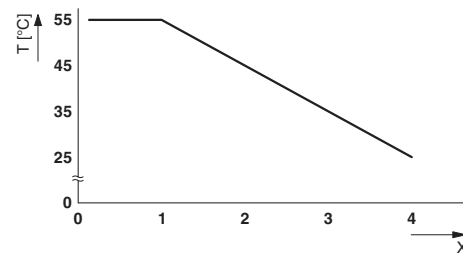
Internal wiring of the terminal points

Diagram



Derating with active convection

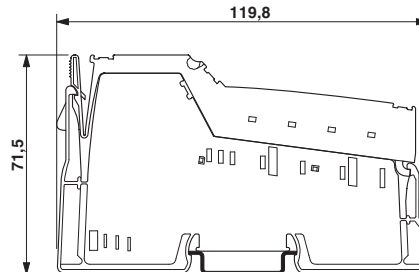
Diagram



Derating without active convection

# Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27242601
eCl@ss 11.0	27242601
eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
eCl@ss 5.1	27242601
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	EC002498
ETIM 5.0	EC001596
ETIM 6.0	EC001596
ETIM 7.0	EC001596

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602

# Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

## Classifications

### UNSPSC

UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / UL Listed / cUL 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 238705
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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 238705
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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 238705
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## Accessories

### Accessories

Installation terminal block

## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

### 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

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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

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### Labeling panel

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



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### 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

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### Pick-off terminal block

## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

### Accessories

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

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### Plug

Inline connector - IB IL SCN-8 - 2726337



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

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### Shield connection clamp

Shield connection clamp - SK 8 - 3025163



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

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Shield connection clamp - SK 14 - 3025176



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

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Shield connection clamp - SK 20 - 3025189



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



## Inline terminal - IB IL AO 4/U/0-10-ECO - 2702498

### Accessories

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Shield connection clamp - SK 35 - 3026463



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

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### Support

Support bracket - AB-SK - 3025341



Support bracket for busbars

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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

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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

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