

# IB IL UTH 4/L-ECO - Inline function terminal



2702504

<https://www.phoenixcontact.com/us/products/2702504>

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Inline ECO, Temperature measurement terminal, Analog UTH inputs: 4 (Type L), 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. This terminal can be used to acquire signals from standard thermocouples. The terminal supports type L thermocouples according to DIN EN 43710. The measured 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 differential inputs for thermocouples
- Measuring range: -200 °C ... +900 °C
- Connection of sensors in 2-conductor technology
- Diagnostic information in the process data word
- Diagnostic indicator

## Commercial data

Item number	2702504
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	DR01
Product key	DRI143
Catalog page	Page 119 (C-6-2019)
GTIN	4055626206202
Weight per piece (including packing)	87.7 g
Weight per piece (excluding packing)	69 g
Customs tariff number	85389099
Country of origin	DE

# IB IL UTH 4/L-ECO - Inline function terminal

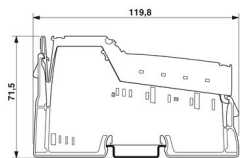


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## Technical data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm

### Material specifications

Color	green
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### Interfaces

Inline local bus	
No. of channels	2
Connection method	Inline data jumper
Transmission speed	500 kbps

### System properties

Module	
ID code (dec.)	126
ID code (hex)	7E
Length code (hex)	04
Length code (dec)	04
Process data channel	64 bit
Input address area	8 Byte
Output address area	0 Byte
Register length	64 bit
Required parameter data	1 Byte
Required configuration data	4 Byte

### Input data

Analog	
Input name	Analog UTH inputs
Description of the input	Differential inputs
Number of inputs	4 (Type L)
Connection method	Inline connector

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2702504

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Connection technology	2-conductor
Note regarding the connection technology	shielded
A/D conversion time	typ. 120 ms
A/D converter resolution	24 bit
Sensor types that can be used (TC)	L
Measuring principle	Sigma/Delta process
Measured value representation	16 bits (15 bits + sign bit)
Process data update	< 10 ms
Protective circuit	Transient protection of inputs

## Product properties

Type	modular
Product type	I/O component
Product family	Inline ECO
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. 1.05 W (total)
	max. 1.35 W (total)

### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 55 mA
	typ. 38 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. 39 mA
	typ. 32 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
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### Conductor connection

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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

## 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)	0 °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 % (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)
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## Mounting

Mounting type	DIN rail mounting
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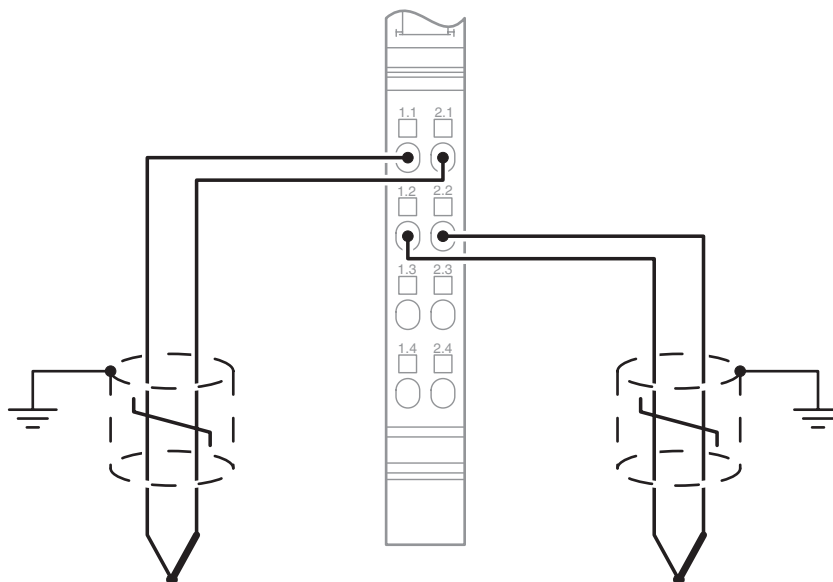
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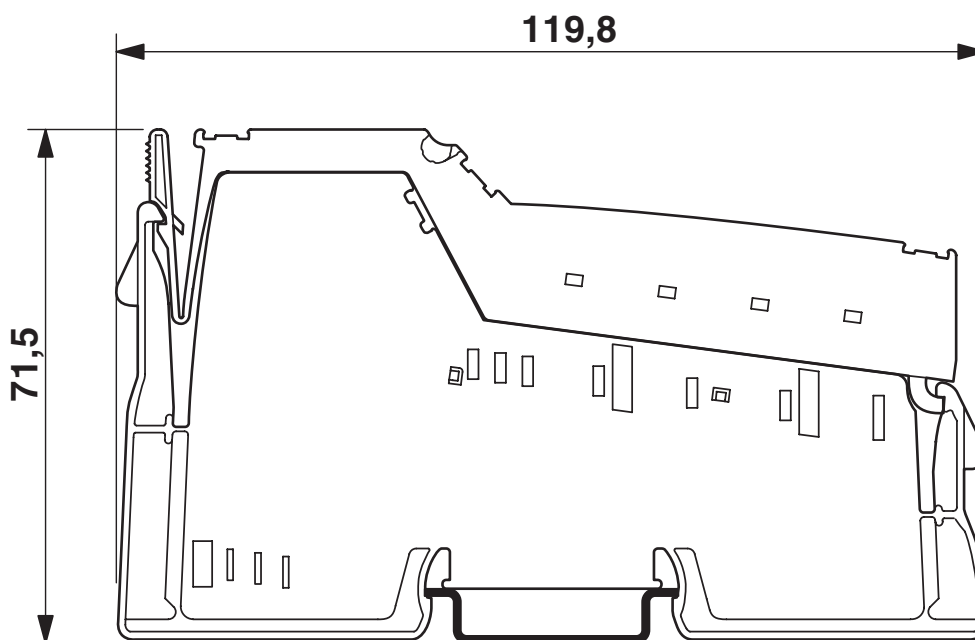
## Drawings

Connection diagram



Connecting the sensors

Dimensional drawing



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## Classifications

### ECLASS

ECLASS-11.0	27242601
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### ETIM

ETIM 7.0	EC001596
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### UNSPSC

UNSPSC 21.0	32151602
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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  $< 1 \text{ m}\Omega$

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### 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  $< 1 \text{ m}\Omega$

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## 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



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## 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



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## 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 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: Neutral busbar, color: silver

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## 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 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: Neutral busbar, color: green-yellow

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## AKG 4 BK - Connection terminal block

0421032

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



Connection terminal block, nom. voltage: 300 V, nominal current: 41 A, connection method: Screw connection, Rated cross section: 4 mm<sup>2</sup>, cross section: 0.5 mm<sup>2</sup> - 6 mm<sup>2</sup>, mounting: Neutral busbar, color: black

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## 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

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Marking field, width: 12.2 mm



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## MTKD-FE/CUNI - Thermoelectric voltage terminal block pair

3100046

<https://www.phoenixcontact.com/us/products/3100046>



Thermoelectric voltage terminal block pair, TC type J, nom. voltage: 400 V, nominal current: 1 A, number of connections: 4, number of positions: 2, connection method: Screw connection, 1 level, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, mounting type: NS 35/7,5, NS 35/15, NS 32, color: gray

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