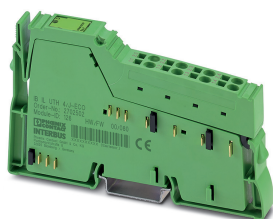


## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

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Inline ECO, Temperature measurement terminal, Analog UTH inputs: 4 (Type J), 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 J thermocouples according to DIN EN 60584-1. 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: -210 °C ... +1200 °C
- Connection of sensors in 2-conductor technology
- Diagnostic information in the process data word
- Diagnostic indicator



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626206059

### 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

## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

### Technical data

#### Ambient conditions

Ambient temperature (operation)	0 °C ... 55 °C
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	69 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. 38 mA
	max. 55 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. 32 mA
	max. 39 mA
Power consumption	typ. 1.05 W (total)

#### Analog inputs

Input name	Analog UTH inputs
Description of the input	Differential inputs
Number of inputs	4 (Type J)
Connection method	Inline connector
Connection technology	2-conductor
Note regarding the connection technology	shielded
Sensor types that can be used (TC)	J

# Inline function terminal - IB IL UTH 4/J-ECO - 2702502

## Technical data

### Analog inputs

Measuring principle	Sigma/Delta process
Measured value representation	16 bits (15 bits + sign bit)
A/D conversion time	typ. 120 ms
A/D converter resolution	24 bit
Process data update	< 10 ms
Type of protection	Transient protection of inputs

### 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

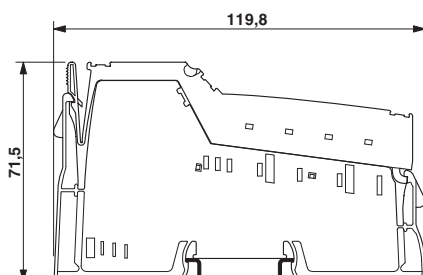
Immunity to ESD	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion 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: $\pm 1$ kV/ $\pm 1$ kV (symmetrical/asymmetrical), shielded I/O cables: $\pm 1$ 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)

### Environmental Product Compliance

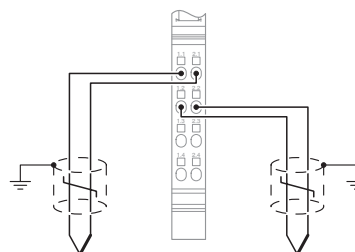
REACH SVHC	Lead 7439-92-1
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## Drawings

Dimensional drawing



Connection diagram



Connecting the sensors

# Inline function terminal - IB IL UTH 4/J-ECO - 2702502

## 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 9.0	27242601

### ETIM

ETIM 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	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
UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

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### Approval details

## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

### Approvals

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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cULus Listed			
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### Accessories

#### Accessories

#### Feed-through terminal block

Thermoelectric voltage terminal block pair - MTKD-FE/CUNI - 3100046



Thermoelectric voltage terminal block pair, TC type J, nom. voltage: 400 V, nominal current: 1 A, 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

#### Installation terminal block

Connection terminal block - AKG 4 GNYE - 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

Connection terminal block - AKG 4 BK - 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

#### Labeling panel

## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

### Accessories

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, DIN VDE 0611-4: 1991-02, material: Copper, tin-plated, color: silver

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### Pick-off terminal block

Connection terminal block - AK 4 - 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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### 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

## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

### Accessories

Shield connection clamp - SK 14 - 3025176



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

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Shield connection clamp - SK 20 - 3025189



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

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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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## Inline function terminal - IB IL UTH 4/J-ECO - 2702502

### 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

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