

## Inline terminal - IB IL TEMP 2 UTH-XC-PAC - 2701216

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Inline XC, Temperature measurement terminal, Analog UTH inputs: 2 (Thermocouples or linear voltage), connection method: 2-wire, transmission speed in the local bus: 500 kbps, Extreme conditions version, degree of protection: IP20, including Inline connector and labeling field

The figure shows the standard item

### Product Description

The terminal is designed for use within an Inline station. This terminal can be used to acquire signals from standard thermocouples. It supports 13 different types of thermocouples according to DIN EN 60584-1 and DIN 43710, as well as a linear voltage input of -15 mV to +85 mV.

### Your advantages

- ✓ 2 differential inputs for thermocouples or linear voltage
- ✓ 1 input for an external cold junction, Pt 1000 or Ni 1000
- ✓ The channels are parameterized independently of one another via the bus system
- ✓ Internal detection and compensation of cold junction temperature (can be parameterized)
- ✓ Absolute and differential temperature measurement (can be parameterized)
- ✓ Pt 1000 sensor in the vicinity of the connection terminal blocks of the thermocouple inputs for internal measurement of the cold junction temperature
- ✓ Measured values can be represented in three different formats
- ✓ Can be used under extreme ambient conditions
- ✓ Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- ✓ Coated PCBs



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356727846

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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# Inline terminal - IB IL TEMP 2 UTH-XC-PAC - 2701216

## Technical data

### Dimensions

Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C (Standard)
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)
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	105 g
Note on weight specifications	with connector
Operating mode	Process data operation with 2 words
Diagnostics messages	Failure of the internal I/O supply I/O error message sent to the bus coupler
	Failure of or insufficient communications power $U_L$ I/O error message sent to the bus coupler
	I/O error Error message in the process data
	User error Error message in the process data

### Interfaces

Designation	Inline local bus
No. of channels	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. 43 mA
	max. 60 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. 11 mA

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### Technical data

#### Inline potentials

	max. 18 mA
Power consumption	typ. 587 mW

#### Analog inputs

Number of inputs	2 (Thermocouples or linear voltage)
Input name	Analog UTH inputs
Description of the input	Inputs for thermocouples or linear voltage
Connection method	Inline connector
Connection technology	2-wire
Note regarding the connection technology	Shielded compensating line for TC with encapsulated sensors
Sensor types that can be used (TC)	U, T, L, J, E, K, N, S, R, B, C, W, HK
Measuring principle	Successive approximation
Measured value representation	16 bits (15 bits + sign bit)
A/D conversion time	typ. 120 µs (per channel)
Process data update	max. 30 ms (For both channels)
Type of protection	Surge protection (TC channels)

#### 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.

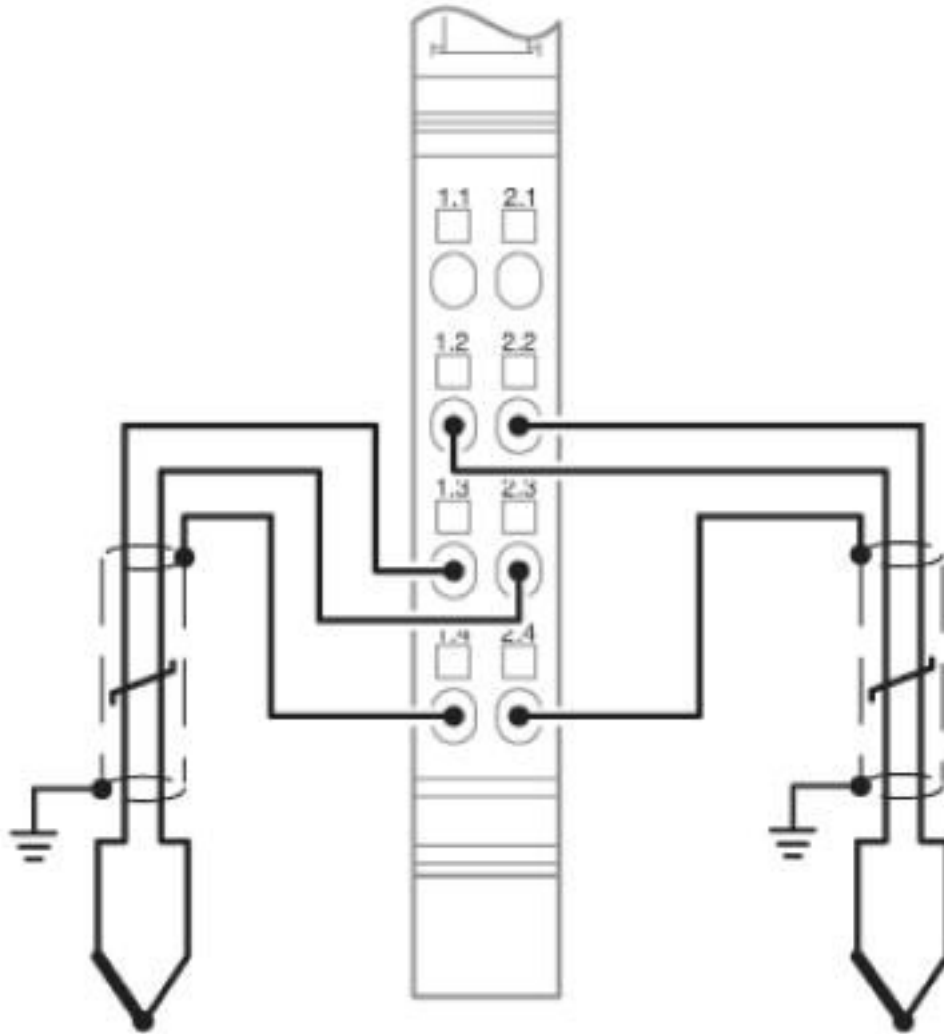
#### Standards and Regulations

Connection in acc. with standard	CUL
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

### Drawings

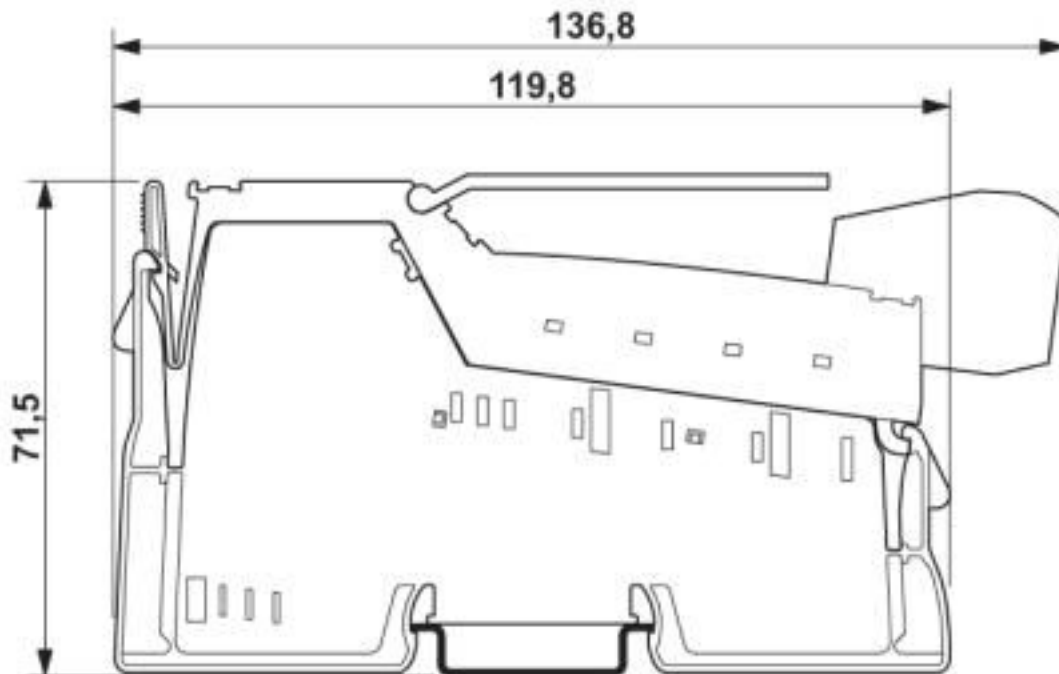
# Inline terminal - IB IL TEMP 2 UTH-XC-PAC - 2701216

Connection diagram



# Inline terminal - IB IL TEMP 2 UTH-XC-PAC - 2701216

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	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	EC001599
ETIM 5.0	EC001596
ETIM 6.0	EC001596
ETIM 7.0	EC001596

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172015

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## Classifications

### UNSPSC

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 Recognized / cUL Recognized / cULus Recognized

#### Ex Approvals

### Approval details

UL Recognized		<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
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cUL Recognized		<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
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cULus Recognized			
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## Accessories

### Accessories

#### Feed-through terminal block

Thermoelectric voltage terminal block pair - MTKD-CU/CUNI - 3100059



Thermoelectric voltage terminal block pair, TC type T, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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### Accessories

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#### 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, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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#### Thermoelectric voltage terminal block pair - MTKD-NICR/CUNI - 3100075



Thermoelectric voltage terminal block pair, TC type E, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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#### Thermoelectric voltage terminal block pair - MTKD-NICR/NI - 3100062



Thermoelectric voltage terminal block pair, TC type K, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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#### Thermoelectric voltage terminal block pair - MTKD-E-CU/A-CU - 3100091



Thermoelectric voltage terminal block pair, TC type R, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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#### Thermoelectric voltage terminal block pair - MTKD-S-CU/E-CU - 3100101



Thermoelectric voltage terminal block pair, TC type B, nom. voltage: 400 V, nominal current: 1 A, connection method: Screw connection, number of connections: 4, number of positions: 2, cross section: 0.2 mm<sup>2</sup> - 4 mm<sup>2</sup>, AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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### Labeling panel

## Inline terminal - IB IL TEMP 2 UTH-XC-PAC - 2701216

### Accessories

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



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### Plug

Inline shield connector - IB IL SCN 6-SHIELD-TWIN - 2740245



Inline shield connector

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Inline shield connector - IB IL SCN-6 SHIELD - 2726353



Inline shield connector

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### Terminal marking

Insert strip - ESL 62X10 - 0809492

Insert strip, Sheet, white, unlabeled, can be labeled with: Office printing systems: Laser printer, mounting type: insert, lettering field size: 62 x 10 mm, Number of individual labels: 72



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[3G2A5IA122](#) [3G2A5LK010E](#) [3G2A5OA223](#)