

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
Weight per Piece (excluding packing)	100.000 g
Custom tariff number	85389091
Country of origin	Germany

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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	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
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
	Peripheral fault 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)

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Technical data

Inline potentials

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
	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 μ s (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 logics) / functional earth ground 500 V AC 50 Hz 1 min.
	24 V analog supply (analog I/O) / functional earth 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

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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Classifications

eCl@ss

eCl@ss 4.0	27250303
eCl@ss 4.1	27250303
eCl@ss 5.0	27250303
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
UNSPSC 12.01	43201404
UNSPSC 13.2	32151602

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
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Approvals

cUL Recognized



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 140324

cULus Recognized



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 mm² - 4 mm², AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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 mm² - 4 mm², AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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 mm² - 4 mm², 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

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 mm² - 4 mm², AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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 mm² - 4 mm², AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

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 mm² - 4 mm², AWG: 24 - 12, width: 10.4 mm, color: gray, mounting type: NS 35/7,5, NS 35/15, NS 32

Labeling panel

Labeling field - IB IL FIELD 2 - 2727501

Labeling field, width: 12.2 mm



Plug

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



Inline shield connector

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Accessories

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



Inline shield connector

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