

IB IL TEMP 8 UTH/RTD-PAC - Temperature module



2701000

<https://www.phoenixcontact.com/in/products/2701000>

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Inline analog input terminal, complete with accessories (connector and marking field), 8 channels, TC (thermocouple), RTD (resistance temperature detector), 2 and 3-conductor connection technology

Product description

The terminal is designed for use within an Inline station. This terminal provides an 8-channel input module with two linear resistance ranges for resistance temperature detectors, and a voltage range for thermocouples. This terminal supports, for example:– Platinum and nickel sensors, e.g. , Pt 100, Pt 1000, Ni 100, and Ni 1000 according to EN 60751 and DIN 43760– All standard thermocouples according to EN 60584-1 and DIN 43710 Communication is via the parameter channel (PCP) or via the process data.

Your advantages

- 8 temperature sensor inputs
- 3-conductor connection for resistance temperature detectors (Pt 100, Ni 100, Pt 1000, Ni 1000, and others)
- 2-conductor connection for thermocouples
- Internal and external detection and compensation of cold junction temperature (configurable)
- Individual current input, 1 A for total current transformer for heating current monitoring
- Scan time: 20 ms (for all channels)
- Maximum 50 Hz/60 Hz suppression
- High precision and noise immunity
- Temperature stability
- High-resolution temperature, voltage, and resistance measurement
- Resistance values (R0) can be preset separately by means of parameterization
- Channels are parameterized independently of one another
- Diagnostic and status indicators
- Channel scout functionality, for optical channel identification during startup

Commercial data

Item number	2701000
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRI
Product key	DRI143
Catalog page	Page 140 (C-6-2019)
GTIN	4046356673594
Weight per piece (including packing)	234 g
Weight per piece (excluding packing)	234 g

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Customs tariff number	85389099
Country of origin	DE

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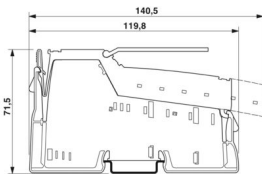


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Technical data

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm

Notes

Note on application

Note on application	Only for industrial use
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Interfaces

Inline local bus

Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

System properties

Module

ID code (dec.)	220
ID code (hex)	DC
Length code (hex)	0A
Length code (dec)	10
Process data channel	160 bit
Input address area	20 Byte
Output address area	20 Byte
Register length	192 bit
Required parameter data	25 Byte
Required configuration data	5 Byte

Input data

Analog

Input name	Analog RTD inputs
Description of the input	Temperature sensor inputs
Number of inputs	8

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Connection method	Spring-cage connection
Connection technology	2-, 3-conductor
A/D converter resolution	16 bit
Sensor types (RTD) that can be used	Pt, Ni sensors, linear resistors
Sensor types that can be used (TC)	B, C, E, J, K, L, N, R, S, T, U, mV input
Data formats	IB IL, S7-compatible
Measuring principle	Successive approximation
Measured value representation	16 bits (15 bits + sign bit)
Process data update	20 ms (with filter time of 20 ms or 100 ms)
	100 ms (with filter time of 400 ms or 1600 ms)

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of delivery	including Inline connectors and marking fields
Operating mode	Process data mode with 10 words, PCP with 2 words

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	1.46 W
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Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 100 mA
	typ. 90 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	typ. 24 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logic), 24 V supply U_{ANA} / I/O	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 ² ... 1.5 mm ²
Conductor cross section flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16
Stripping length	8 mm

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °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 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

Standards and regulations

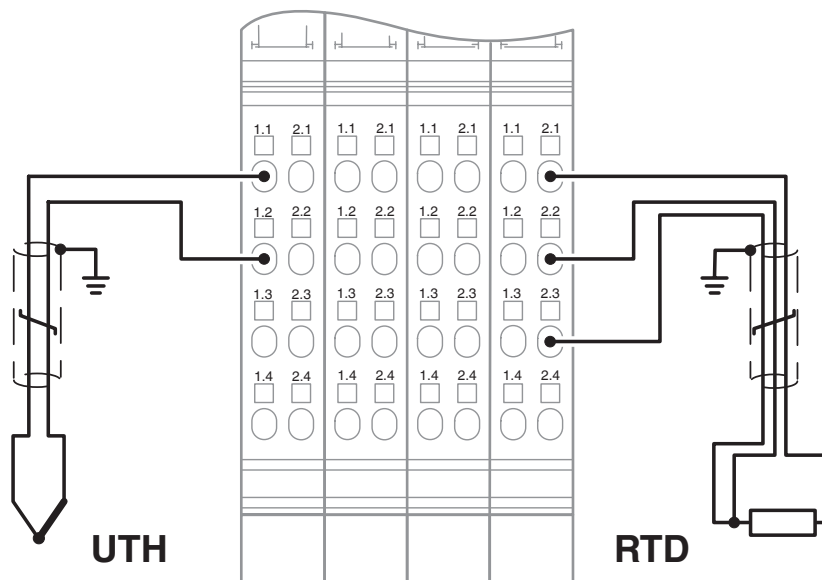
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

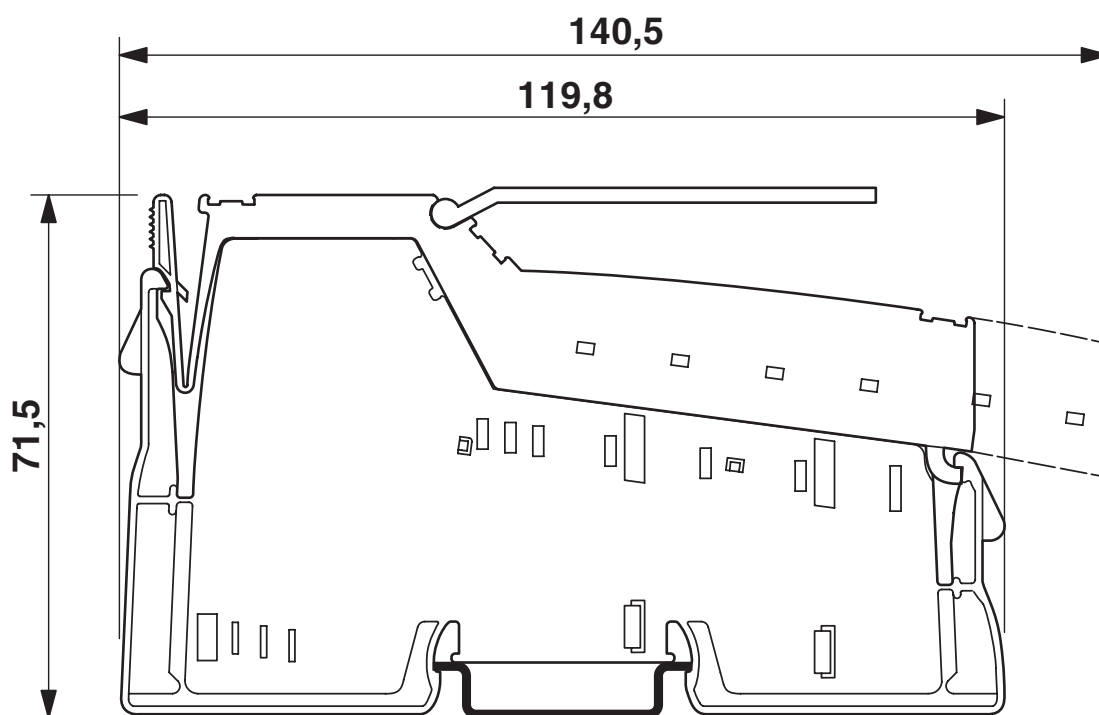
Mounting type	DIN rail mounting
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Drawings

Connection diagram



Dimensional drawing



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Classifications

ECLASS

ECLASS-11.0	27242601
ECLASS-12.0	27242601
ECLASS-13.0	27242601

ETIM

ETIM 9.0	EC001596
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	02e13784-2e73-49e9-ab3e-c33b82c76127

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Accessories

IB IL SCN-8 - Inline connector

2726337

<https://www.phoenixcontact.com/in/products/2726337>

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



SKS 8 - Shield connection terminal block

3240210

<https://www.phoenixcontact.com/in/products/3240210>

Shield connection terminal block, for applying the shield to busbars



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SK 8 - Shield connection terminal block

3025163

<https://www.phoenixcontact.com/in/products/3025163>



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

SCC 15-NS35 - Shield connection terminal block

1019443

<https://www.phoenixcontact.com/in/products/1019443>



Shield connection terminal block, number of positions: 1, connection method:
Spring-cage connection, mounting type: NS 35/7,5, NS 35/15, color: black

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AB/SKS - Support bracket

3240224

<https://www.phoenixcontact.com/in/products/3240224>

Support bracket for busbars



AB-SK/E - Support bracket

3026476

<https://www.phoenixcontact.com/in/products/3026476>

Support bracket, Bracket for busbars, set every 20 cm, depth: 20 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/in/products/0402174>



Neutral busbar, DIN VDE 0611-4: 1991-02, color: silver

IL CP - Coding star

2742683

<https://www.phoenixcontact.com/in/products/2742683>



Coding profile, is inserted into the slot on the Inline terminal, red insulating material

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IB IL FIELD 8 - Marking field

2727515

<https://www.phoenixcontact.com/in/products/2727515>

Marking field, width: 48.8 mm



EMT (62X46)R - Insert label

0800059

<https://www.phoenixcontact.com/in/products/0800059>



Insert label, for marking Inline modules from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: insert, Number of individual labels: 250, text field height: 46 mm, text field width: 62 mm

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IB IL FIELD 2 - Marking field

2727501

<https://www.phoenixcontact.com/in/products/2727501>

Marking field, width: 12.2 mm



EMT (62X10)R - Insert label

0800057

<https://www.phoenixcontact.com/in/products/0800057>



Insert label, for marking Inline modules from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMaster 300/600, THERMOMARK X1.2, mounting type: insert, Number of individual labels: 500, text field height: 10 mm, text field width: 62 mm

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ZBF 6:UNBEDRUCKT - Zack Marker strip, flat

0808710

<https://www.phoenixcontact.com/in/products/0808710>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 6.2 mm, Number of individual labels: 10, text field height: 6.15 mm, text field width: 5.15 mm

UCT-TMF 6 - Marker for terminal blocks

0828746

<https://www.phoenixcontact.com/in/products/0828746>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: latching, for terminal block width: 6.2 mm, Number of individual labels: 60, text field height: 4.7 mm, text field width: 5.4 mm

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UC-TMF 6 - Marker for terminal blocks

0818140

<https://www.phoenixcontact.com/in/products/0818140>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 6.2 mm, Number of individual labels: 80, text field height: 5.1 mm, text field width: 5.6 mm

ZBF 12:UNBEDRUCKT - Zack Marker strip, flat

0809735

<https://www.phoenixcontact.com/in/products/0809735>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 12 mm, Number of individual labels: 5, text field height: 12.15 mm, text field width: 5.15 mm

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UCT-TMF 12 - Marker for terminal blocks

0829214

<https://www.phoenixcontact.com/in/products/0829214>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: latching, for terminal block width: 12 mm, Number of individual labels: 30, text field height: 4.7 mm, text field width: 11.2 mm

UC-TMF 12 - Marker for terminal blocks

0819233

<https://www.phoenixcontact.com/in/products/0819233>



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: latching, for terminal block width: 12 mm, Number of individual labels: 40, text field height: 5.1 mm, text field width: 11.45 mm

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