IB IL TEMP 2 RTD-PAC - Temperature module

2861328

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Inline, Temperature measurement terminal, Analog RTD inputs: 2, connection technology: 2-, 3-, 4-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

Product description

The terminal is designed for use within an Inline station. It is used to acquire signals from resistive temperature sensors. The terminal supports all common platinum and nickel sensors according to DIN EN 60751 and SAMA. Cu10, Cu50, and Cu53 sensors as well as KTY81 and KTY84 sensors are also supported. The measuring temperature is represented by 16-bit values in two process data words (one word per channel).

Your advantages

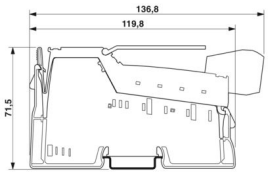
- 2 inputs for resistive temperature sensors
- Pt, Ni, Cu, KTY sensor types according to DIN and SAMA
- Connection of sensors in 2-, 3-, and 4-conductor technology
- The channels are parameterized independently of one another via the bus system
- Measured values can be represented in three different formats
- Measured value acquisition with a resolution of 16 bits

Commercial data

Item number	2861328
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI143
GTIN	4017918894269
Weight per piece (including packing)	86 g
Weight per piece (excluding packing)	67 g
Customs tariff number	85389099
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm

Notes

Note on application

Note on application	Only for industrial use

Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.

Material specifications

Color (Housing)	green (RAL 6021)

Interfaces

Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps

System properties

Programming data (LocalbusSlave)

Length code (hex)	02
ID code (dec.)	127
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Parameter channel (PCP)	0 Byte
Register length (bus)	32 bit

Fieldbus data telegram

Required parameter data	6 Byte

Required configuration data	4 Byte

Input data

Analog:

Input name	Analog RTD inputs
Description of the input	Input for resistive temperature sensors
Number of inputs	2
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Note regarding the connection technology	shielded
A/D conversion time	typ. 120 µs (per channel)
A/D converter resolution	16 bit
Sensor types (RTD) that can be used	Pt, Ni, KTY, Cu sensors, linear resistors
Tolerance, relative	see tables for tolerance values
Tolerance, absolute	typ. ± 0.26 K (Pt 100 with 3-wire connection)
	see tables for tolerance values
Measuring principle	Successive approximation
Measured value representation	16 bit two's complement
Linear resistance measuring range	0 Ω ... 400 Ω
	0 Ω ... 4 kΩ
Process data update	32 ms (both channels use 3-conductor technology)
	20 ms (one channel in 2-conductor technology and one channel in 4-conductor technology)
	20 ms (both channels in 2-conductor technology)

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Installation location	Control cabinet
Scope of supply	including Inline connector and labeling field
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

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	0.9 W

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA
	typ. 43 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. 18 mA
	typ. 11 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 7.5 V supply (bus logics)/24 V analog supply (analog I/O)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logic)/functional ground	500 V AC, 50 Hz, 1 min
Test voltage: 24 V analog supply (analog I/O)/functional ground	500 V AC, 50 Hz, 1 min

Connection data

Connection technology

Connection name	Inline connector

Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.08 mm² ... 1.5 mm²
Conductor cross-section AWG	28 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

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

Standards and regulations

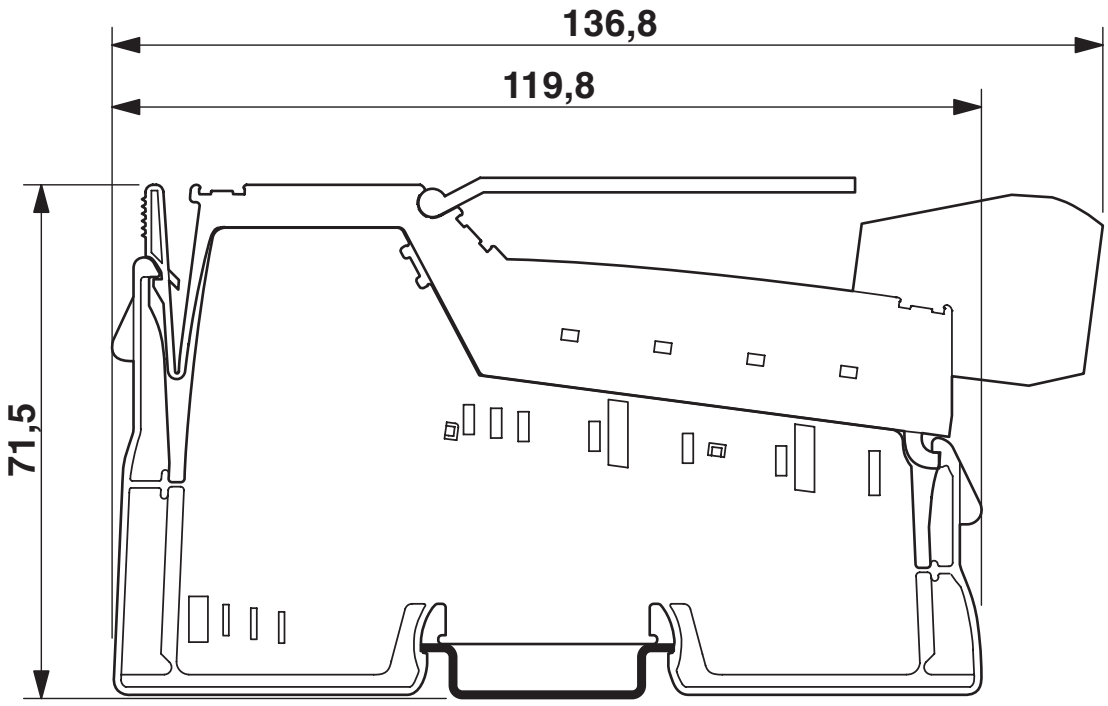
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Mounting

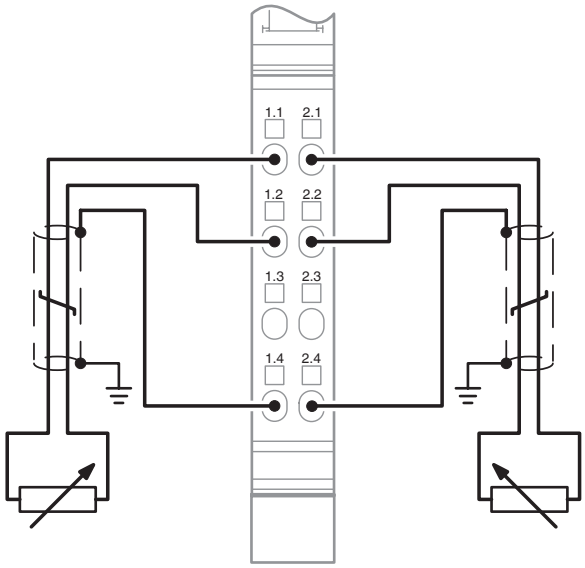
Mounting type	DIN rail mounting

Drawings

Dimensional drawing



Connection diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2861328

DNV GL
Approval ID: TAA00000BN

BV
Approval ID: 20977/C1 BV

BSH
Approval ID: 658a

RINA
Approval ID: ELE121121XG

ABS
Approval ID: 22-2226444-PDA

cULus Recognized
Approval ID: E140324

LR
Approval ID: LR23398855TA

cUL Listed
Approval ID: E256199

UL Listed
Approval ID: E256199

cULus Listed
Approval ID: E199827

Classifications

ECLASS

ECLASS-13.0	27242601
ECLASS-15.0	27242601

ETIM

ETIM 10.0	EC001596

UNSPSC

UNSPSC 21.0	32151600

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-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	14d2f97e-cfd0-4f19-a29a-b4435b4dfc30

EF3.1 Climate Change

CO2e kg	8.251 kg CO2e

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com