IB IL TEMP 4/8 RTD-PAC - Temperature module

2863915

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CRA-READY



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

Product description

The terminal is designed for use within an Inline station. This terminal provides an 8-channel input module for resistance temperature detectors.

Your advantages

- Pt, Ni, Cu, KTY sensor types according to DIN and SAMA
- 8 inputs for resistive temperature sensors and linear resistors up to 20 kΩ
- Connection of sensors in 2- and 3-conductor technology
- Communication either via process data or parameter channel (PCP)
- The channels are parameterized independently of one another via the bus system
- Robust inputs ideal for use in harsh industrial environments with electromagnetic interference
- Measured values can be represented in three different formats
- Temperature and resistance measurement in the millisecond range
- Diagnostic and status indicators

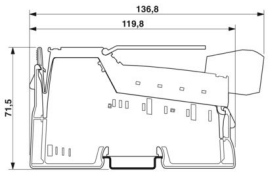
ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2863915
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI143
GTIN	4017918955410
Weight per piece (including packing)	252 g
Weight per piece (excluding packing)	190 g
Customs tariff number	85389099
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	48.8 mm
Height	136.8 mm
Depth	71.5 mm

Notes

Note on application	Only for industrial use
Note on application	As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA.

Mounting

Mounting type	DIN rail mounting

Material specifications

Color (Housing)	green (RAL 6021)

Interfaces

Inline local bus

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

System properties

Programming data

Length code (hex)	05
ID code (dec.)	223
Length code (dec)	05
Process data channel	80 bit
Input address area	10 Byte
Output address area	10 Byte
Parameter channel (PCP)	2 Byte
Register length (bus)	96 bit

Fieldbus data telegram (PROFIBUS)

Required parameter data	31 Byte
Required configuration data	5 Byte

Input data

Analog:

Input name	Analog RTD inputs
Description of the input	Input for resistive temperature sensors
Number of inputs	8
Connection method	Spring-cage connection
Connection technology	2, 3-conductor
A/D conversion time	max. 10 µs
Sensor types (RTD) that can be used	Pt, Ni, KTY, Cu sensors, linear resistors
Tolerance, relative	typ. 0.06 % (Pt 100 with 3-wire connection)
	max. 0.25 % (Pt 100 with 3-wire connection)
	see tables for tolerance values
Tolerance, absolute	typ. ± 0.5 K (Pt 100 with 3-wire connection)
	see tables for tolerance values
Data formats	IB IL, IB ST, S7 compatible
Measuring principle	Successive approximation
Measured value representation	16 bits (15 bits + sign bit)
Linear resistance measuring range	0 Ω ... 400 Ω
	0 Ω ... 20 kΩ
Process data update	6 ms (Up to 230 ms possible depending on operating mode)

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connectors and marking fields
Operating mode	Process data mode with 5 words/1 word PCP
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)

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	1.4 W

Potentials: Communications power (U_L)

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

	typ. 75 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. 55 mA
	typ. 28 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 7.5 V supply (bus logic)/±15.5 V, ±5 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: ±15.5 V, ±5 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)

Mechanical test

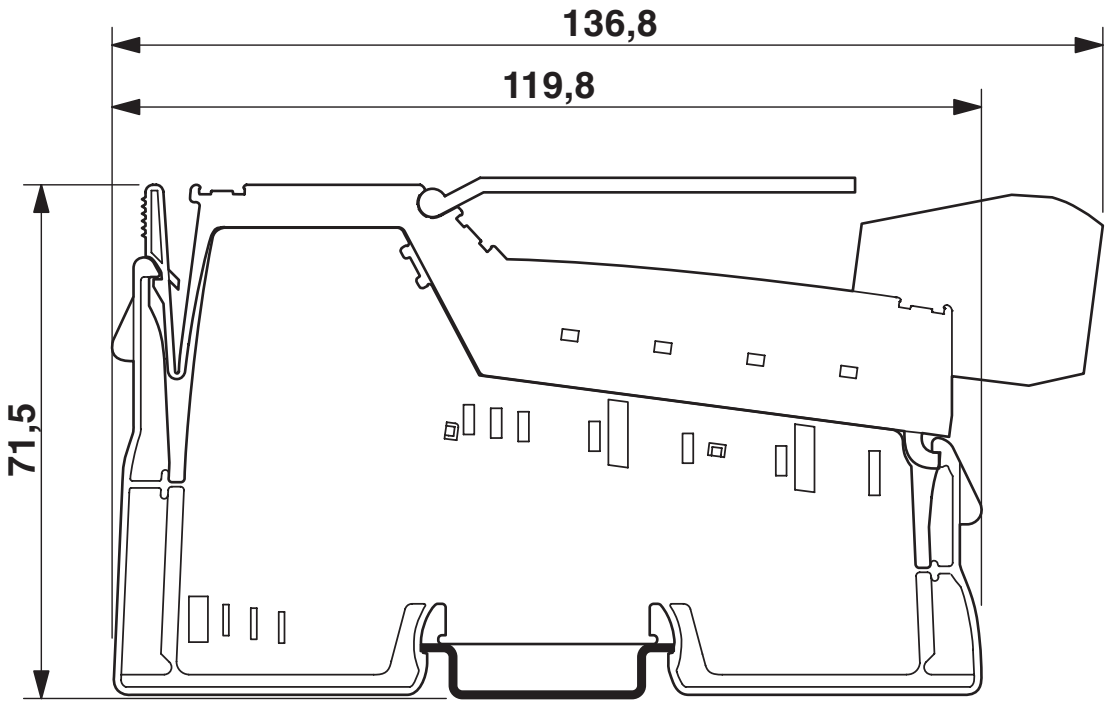
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	25g

Standards and regulations

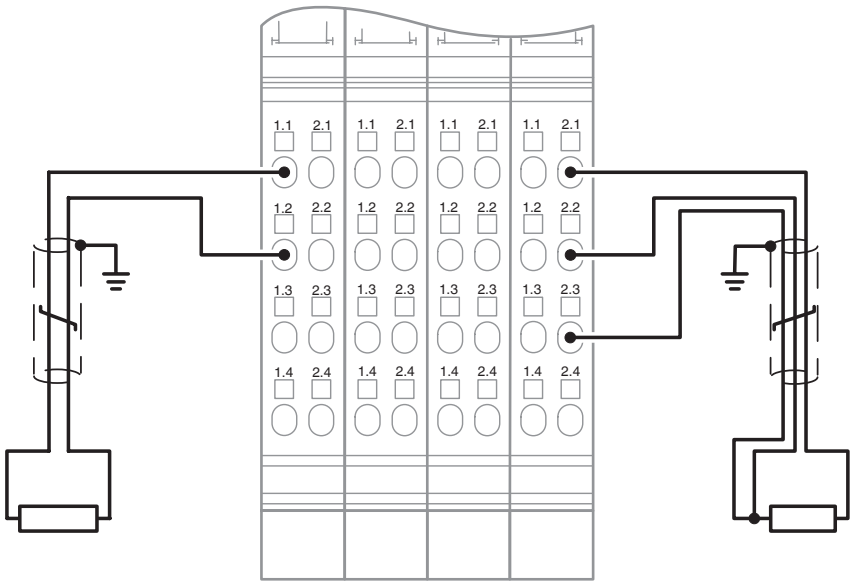
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Drawings

Dimensional drawing



Connection diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2863915

LR
Approval ID: LR23398855TA

BV
Approval ID: 21595/C1 BV

BSH
Approval ID: 658a

RINA
Approval ID: ELE121121XG

ABS
Approval ID: 22-2226444-PDA

cULus Listed
Approval ID: E140324

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	dae4fed0-e9ce-45d3-91ec-9dd18731cb15

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