IB IL RTD 4/PT100-ECO - Temperature module

2702499

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CRA-READY



Inline, Temperature measurement terminal, Analog RTD inputs: 4 (Pt 100), connection technology: 2-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector; The product is being prepared for compliance with the Cyber Resilience Act (CRA).

Product description

The terminal is designed for use within an Inline station. It is used to acquire signals from resistive temperature sensors. The measured values are depicted in standardized representation format. Inline ECO terminals are approved for the temperature range from 0°C to +55°C. The electronics base and Inline connector are supplied as standard.

Your advantages

- 4 analog inputs
- Connection of sensors in 2-conductor technology
- Supported sensors: Pt 100
- Data format: standardized representation
- Diagnostic information in the process data word

ELEKTROGERÄTE RÜCKNAHME

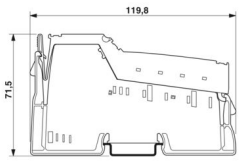
Commercial data

Item number	2702499
Packing unit	1 pc

Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI143
GTIN	4055626203195
Weight per piece (including packing)	83.6 g
Weight per piece (excluding packing)	69 g
Customs tariff number	85389099
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm

Notes

Note on application

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

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

System properties

Programming data

Length code (hex)	04
ID code (dec.)	126
Length code (dec)	04
Process data channel	64 bit
Input address area	8 Byte
Output address area	0 Byte
Parameter channel (PCP)	0 Byte

Register length (bus)	64 bit

Fieldbus data telegram (PROFIBUS)

Required parameter data	1 Byte
Required configuration data	4 Byte

Input data

Analog:

Input name	Analog RTD inputs
Description of the input	Inputs for resistive temperature sensors
Number of inputs	4 (Pt 100)
Connection method	Inline connector
Connection technology	2-conductor
Note regarding the connection technology	shielded
A/D conversion time	typ. 120 ms
A/D converter resolution	24 bit
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Tolerance, relative	typ. 0.2 % (of upper range value, at T_A = 25°C)
Data formats	Standardized representation
Input filter	Digital filter
Input filter time	120 ms (per channel)
Nominal value of the current sources	1 mA (pulsed current, the data is valid during the sampling phase)
Process data update	< 10 ms
Protective circuit	Overload protection; max. ±40 V DC, 1 min.
	Transient protection; Suppressor diode

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Installation location	Control cabinet
Scope of supply	including Inline connector
Special properties	The product is being prepared for compliance with the Cyber Resilience Act (CRA)
Diagnostics messages	Failure of the internal I/O supply I/O error message sent to the bus coupler
	Checksum error I/O error message sent to the bus coupler

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	0.95 W

Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 85 mA
	typ. 56 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. 14 mA
	typ. 7.3 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: Bus logic (local bus, communications power)	500 V AC, 50 Hz, 1 min
Test voltage: Analog I/O	500 V AC, 50 Hz, 1 min
Test voltage: 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)	0 °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

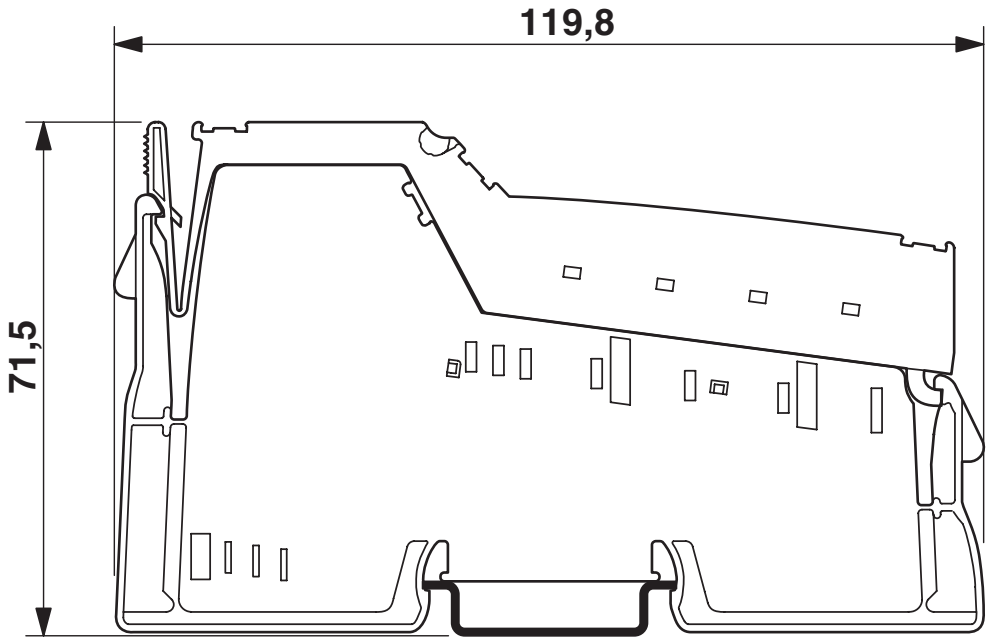
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	25g

Standards and regulations

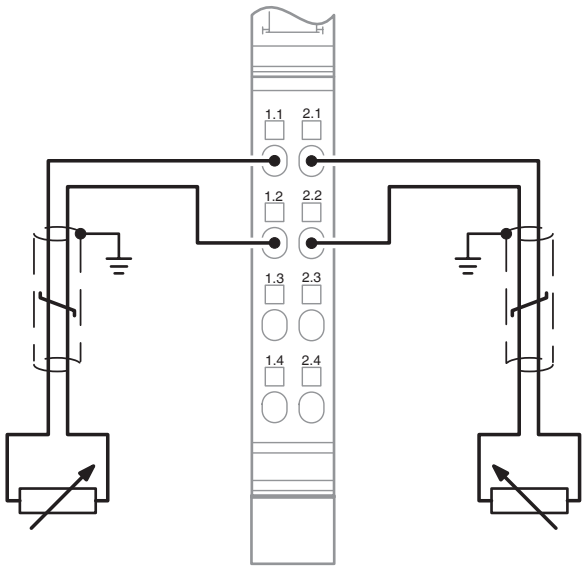
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Drawings

Dimensional drawing

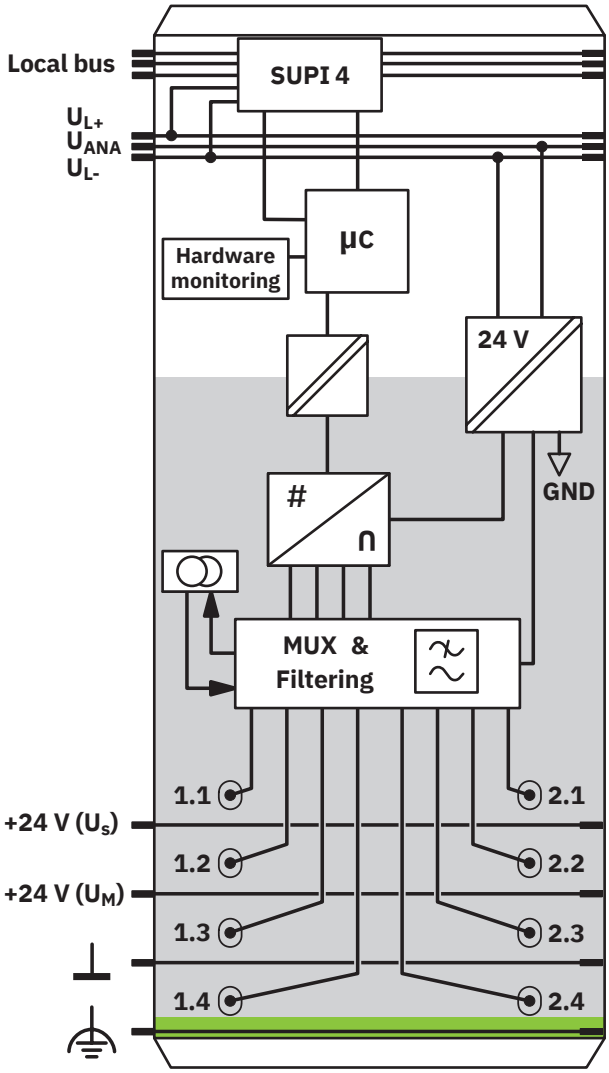


Connection diagram



Connecting the sensors

Block diagram



Internal wiring of the terminal points

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2702499

cULus Listed
Approval ID: E238705

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, 7(c)-II

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	fef5791c-bf83-4f47-964d-423d176f33a0

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