

# 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
Catalog page	Page 141 (C-6-2019)
GTIN	4017918894269
Weight per piece (including packing)	96 g
Weight per piece (excluding packing)	67 g
Customs tariff number	85389099
Country of origin	DE

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## Technical data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm

### Notes

#### Utilization restriction

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

#### Inline local bus

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

### System properties

#### Module

ID code (dec.)	127
ID code (hex)	7F
Length code (hex)	02
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Register length	32 bit
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

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Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Note regarding the connection technology	shielded
A/D conversion time	typ. 120 $\mu$ s (per channel)
A/D converter resolution	16 bit
Sensor types (RTD) that can be used	Pt, Ni, KTY, Cu sensors, linear resistors
Measuring principle	Successive approximation
Measured value representation	16 bit two's complement
Linear resistance measuring range	0 $\Omega$ ... 400 $\Omega$ 0 $\Omega$ ... 4 k $\Omega$
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

Type	modular
Product type	I/O component
Product family	Inline
Scope of delivery	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	0.59 W
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## Potentials

Power consumption	typ. 587 mW max. 882 mW
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## 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)

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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
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### Conductor connection

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

### Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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)
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## Mounting

Mounting type	DIN rail mounting
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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

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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