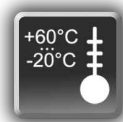
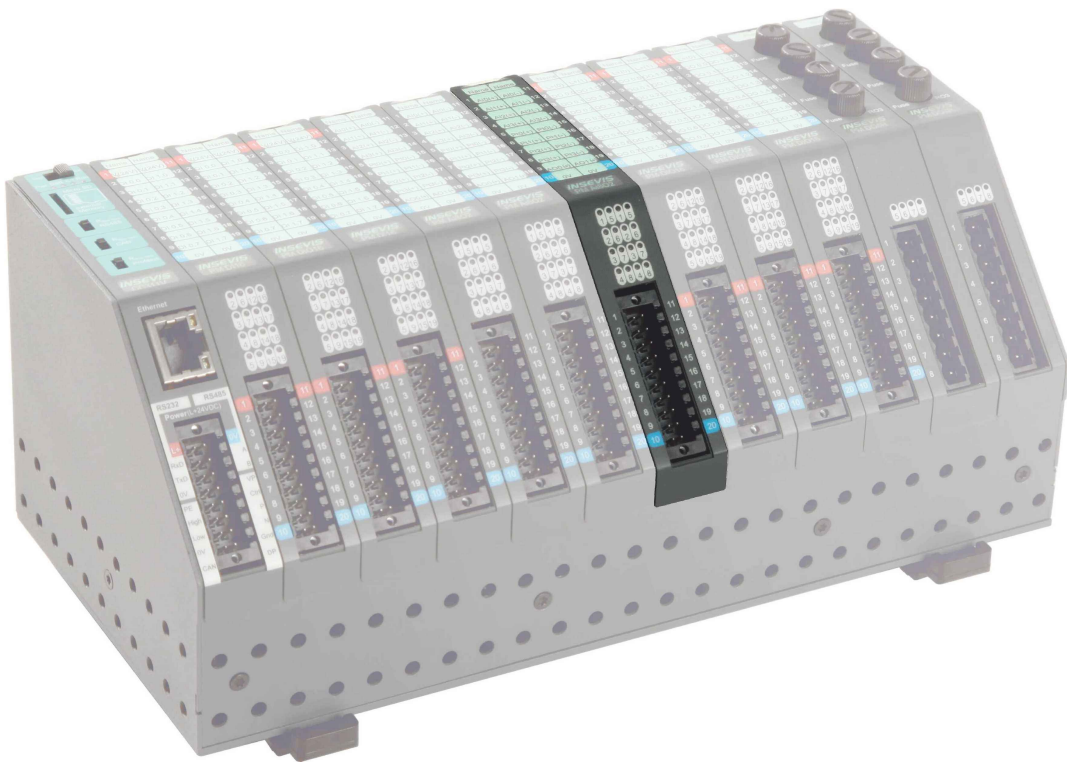


# Product Information

# Periphery module

# PM RTD802



(valid from 06/2012, for all PLCs PC/CCxxxx-03 with OS 2.0.28 and with ConfigStage 1.0.13)

## Description

compact periphery module for

### - 8 analog inputs to be configured by software

- Temperature:
  - PT100,
  - PT1000,
  - NI100,
  - NI1000,
  - KTY81-1xx
- Resistivity survey
  - 200Ω ,
  - 2kΩ
- Voltage:
  - 0 .. 400mV,
  - 0 .. 1V

### 2 analog outputs (0,5 ... 10V)

- Resolution 12 Bit
- green diagnostic LED for each input
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7
- red diagnostic LED for each input for error (sensor-/ broken wire detection)
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7
- insertion stripe with description field for every signal
- cage-clamp connector with self-lock and 2 lift arms

## for 2-wire RTDs

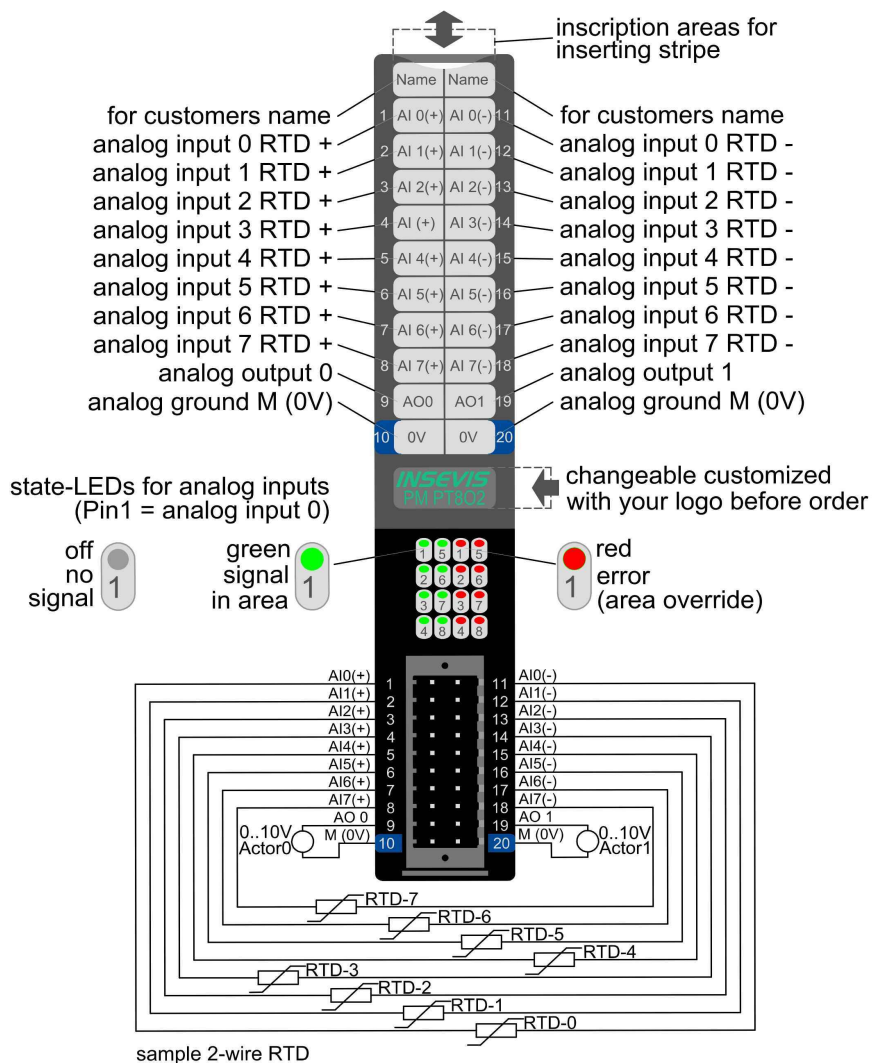
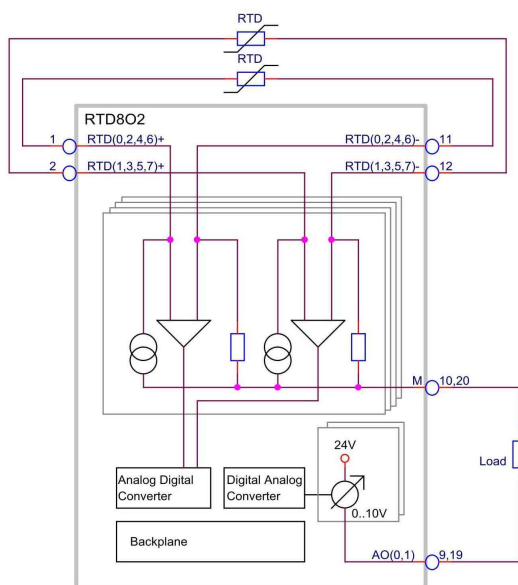


Figure above: Description and wiring of all connections of periphery module RT802 with 2-wire RTDs



above: block diagram of RTD802 for 2-wire RTDs

Input		
Start address:	128	
End address:	143	
Channel	Address	Type
Channel 1:	128	PT100 (2-wire)
Channel 2:	130	PT100 (3-wire)
Channel 3:	132	PT100 (4-wire)
Channel 4:	134	PT1000 (2-wire)
Channel 5:	136	PT1000 (3-wire)
Channel 6:	138	PT1000 (4-wire)
Channel 7:	140	NI100 (2-wire)
Channel 8:	142	NI100 (3-wire)
Output		
Start address:	128	
End address:	131	

above: configuration block of start-/ end addresses of RTD802-i/o's (in words) in the ConfigStage

## Description

compact periphery module for

### - 8 analog inputs to be configured by software

Temperature:  
PT100,  
PT1000,  
NI100,  
NI1000,  
KTY81-1xx  
Resistivity survey  
200Ω ,  
2kΩ  
Voltage:  
0 .. 400mV,  
0 .. 1V

### 2 analog outputs (0,5 ... 10V)

• Resolution 12 Bit

• green diagnostic LED for each input

- LED 1 for AI0
- LED 2 for AI1
- LED 3 for AI2
- ...
- LED 8 for AI7

• red diagnostic LED for each input for error (sensor-/ broken wire detection)

- LED 1 for AI0
- LED 2 for AI1
- LED 3 for AI2
- ...
- LED 8 for AI7

• insertion stripe with description field for every signal

• cage-clamp connector with self-lock and 2 lift arms

## for 3-wire RTDs

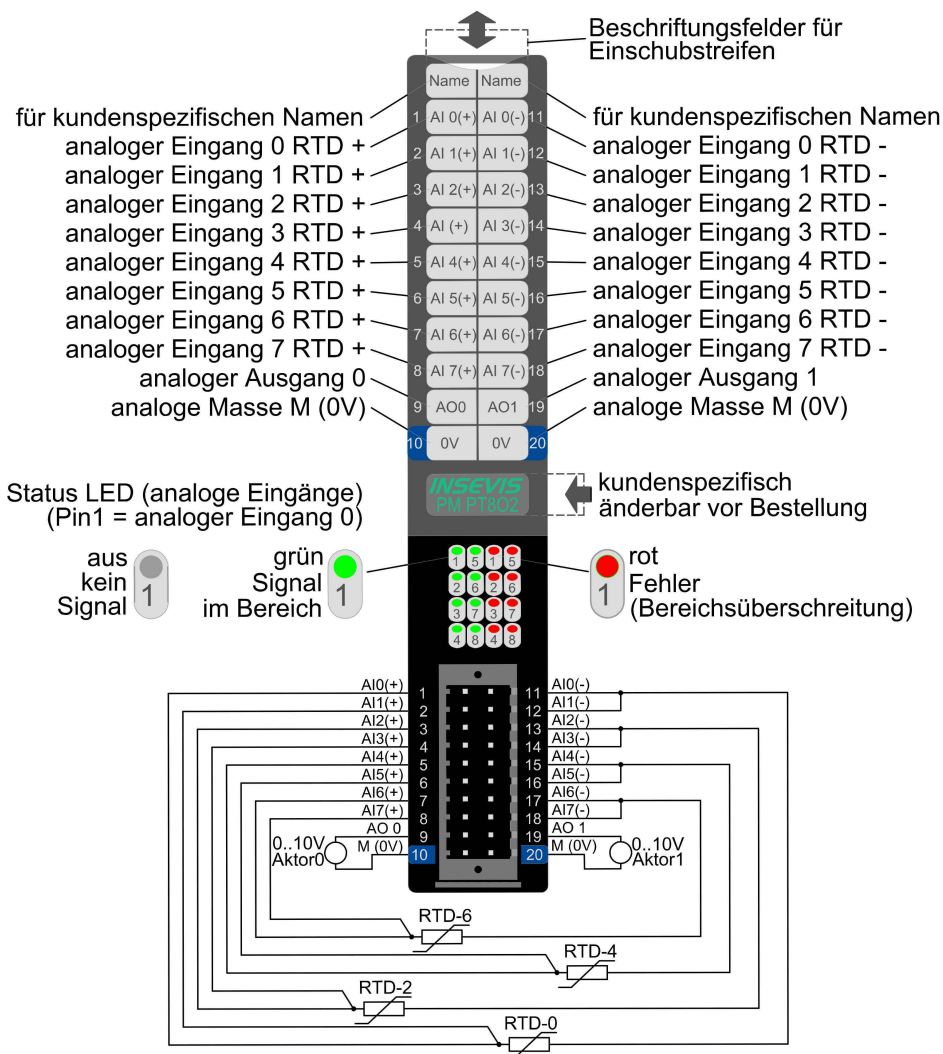
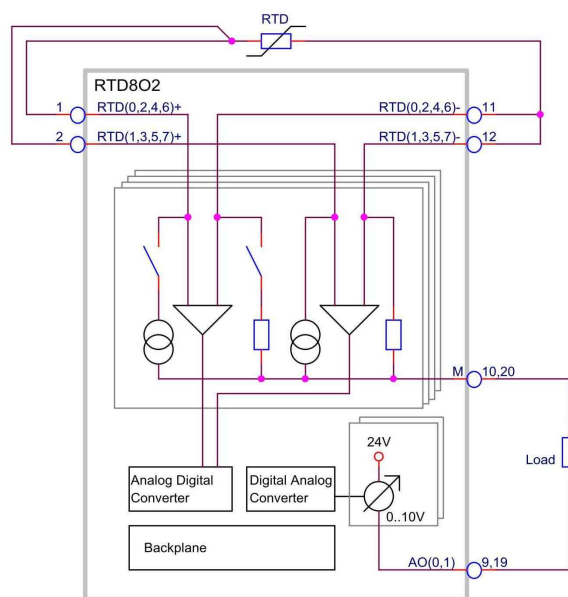
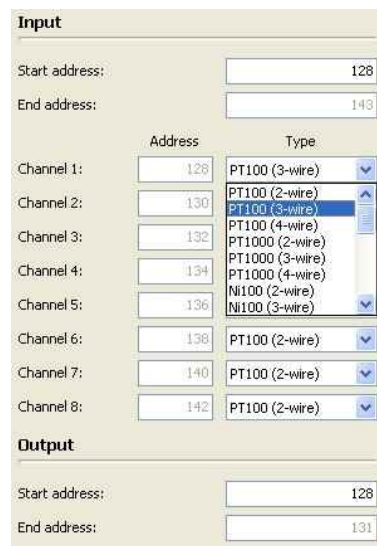


Figure above: Description and wiring of all connections of periphery module RT802 with 3-wire RTDs



above: block diagram of RTD802 for 3-wire RTDs



above: configuration block of start-/ end addresses of RTD802-i/o's (in words) in the ConfigStage

## Description

compact peripheral module for

### - 8 analog inputs to be configured by software

Temperature:  
 PT100,  
 PT1000,  
 NI100,  
 NI1000,  
 KTY81-1xx  
 Resistivity survey  
 200Ω ,  
 2kΩ  
 Voltage:  
 0 .. 400mV,  
 0 .. 1V

### 2 analog outputs (0,5 ...10V)

- Resolution 12 Bit

- green diagnostic LED for each input
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7

- red diagnostic LED for each input for error (sensor-/ broken wire detection)
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7

- insertion stripe with description field for every signal

- cage-clamp connector with self-lock and 2 lift arms

## for 4-wire RTDs

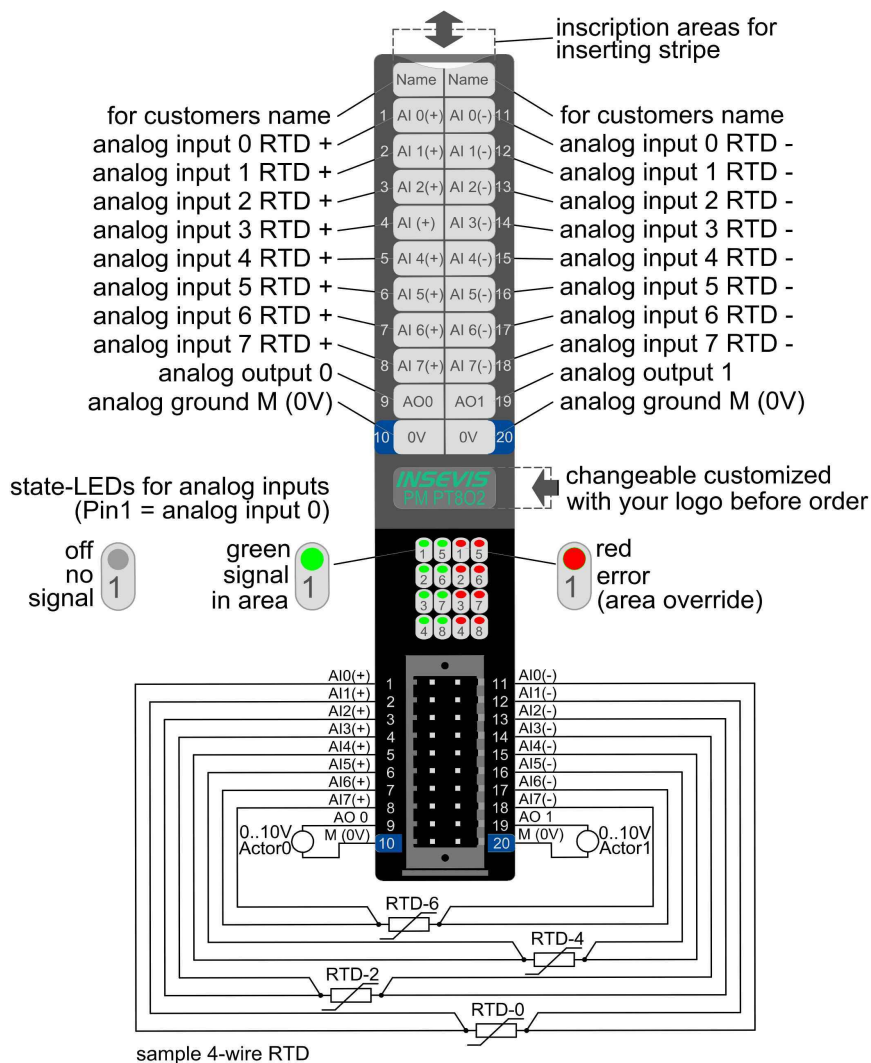
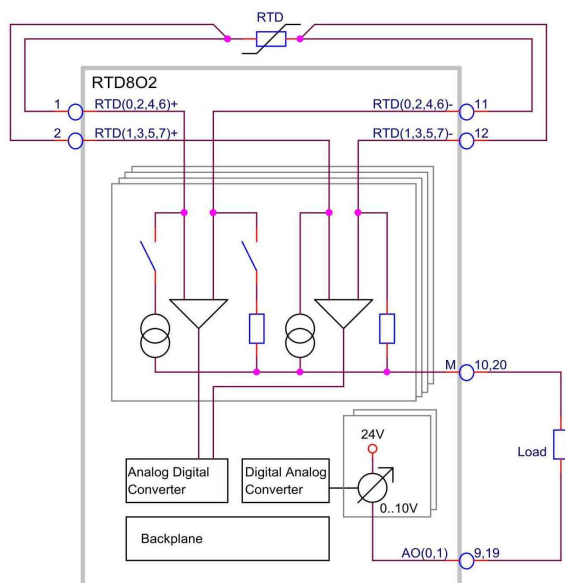
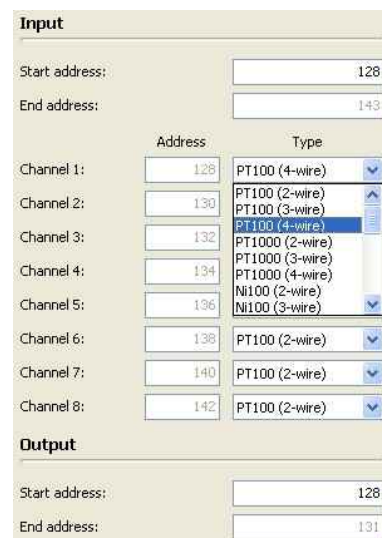


Figure above: Description and wiring of all connections of peripheral module RTD802 with 4-wire RTDs



above: block diagram of RTD802 for 4-wire RTDs



above: configuration block of start-/ end addresses of RTD802-i/o's (in words) in the ConfigStage

## Description

compact periphery module for

### - 8 analog inputs to be configured by software

Temperature:  
 PT100,  
 PT1000,  
 NI100,  
 NI1000,  
 KTY81-1xx  
 Resistivity survey  
 200Ω ,  
 2kΩ  
 Voltage:  
 0 .. 400mV,  
 0 .. 1V

### 2 analog outputs (0,5 ... 10V)

- Resolution 12 Bit
- green diagnostic LED for each input
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7
- red diagnostic LED for each input for error (sensor-/ broken wire detection)
  - LED 1 for AI0
  - LED 2 for AI1
  - LED 3 for AI2
  - ...
  - LED 8 for AI7
- insertion stripe with description field for every signal
- cage-clamp connector with self-lock and 2 lift arms

## for voltage measurement

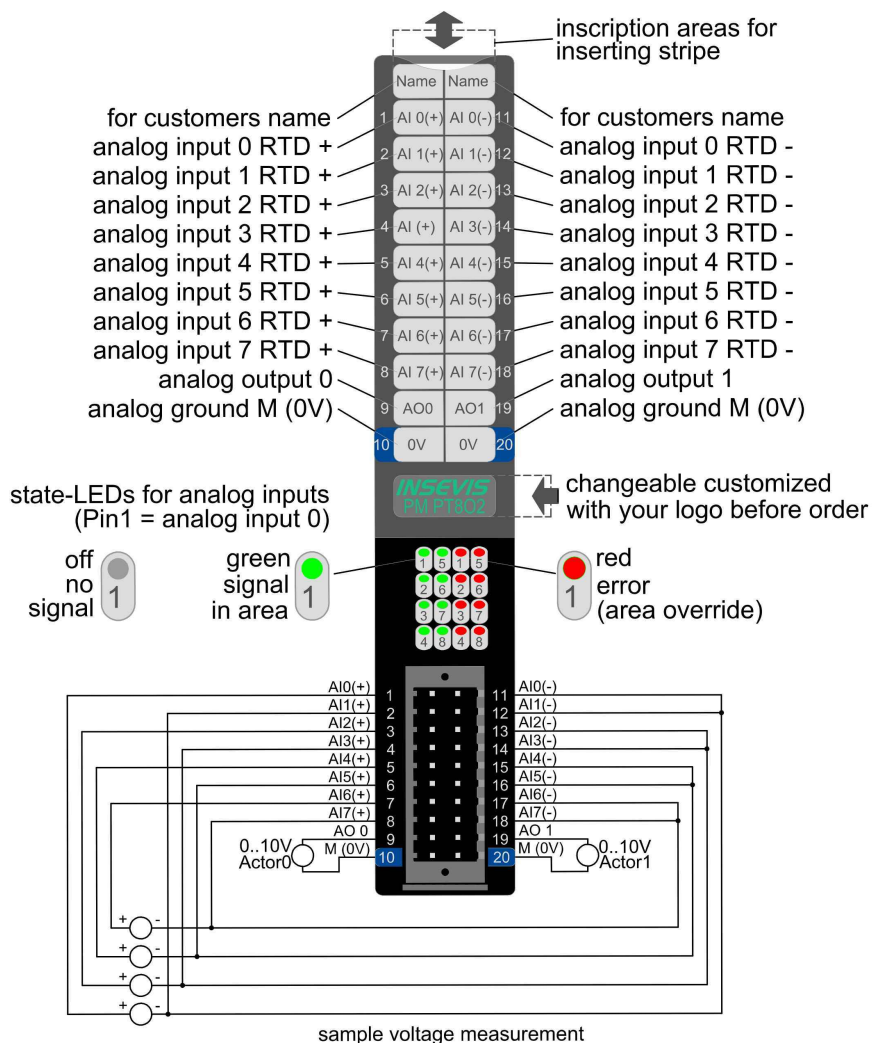
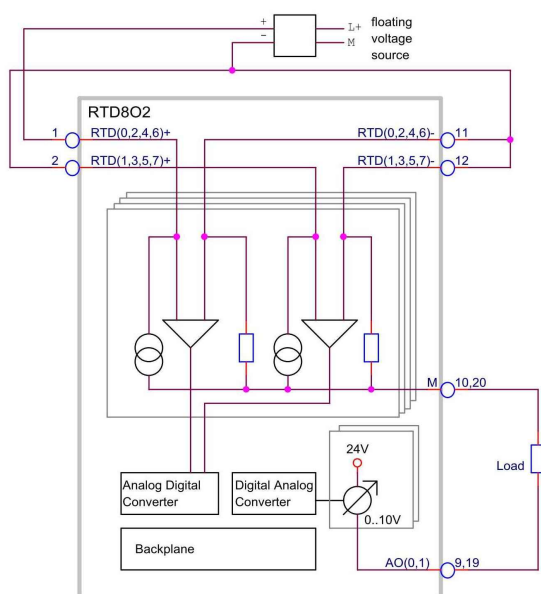


Figure above: Description and wiring of all connections of PM RT802 for voltage measurement





above: block diagram of RTD802 for voltage measurement

Input		
Start address:	128	
End address:	143	
Channel	Address	Type
Channel 1:	128	PT100 (4-wire)
Channel 2:	130	0...300 Ohm (3-wire)
Channel 3:	132	0...300 Ohm (4-wire)
Channel 4:	134	0...2k Ohm (2-wire)
Channel 5:	136	0...2k Ohm (3-wire)
Channel 6:	138	0...400mV
Channel 7:	140	0...1V
Channel 8:	142	Not available
Output		
Start address:	128	
End address:	131	

above: configuration block of start-/ end addresses of RTD802-i/o's (in words) in the ConfigStage

Technical data			
Operating temperature range Storage temperature range Dimensions W x H x D (mm) Weight	-20°C ... +60°C (without condens.) -30°C ... +80°C 20 x 108 x 70 mm ca. 150 g	Load voltage L+ Current consumption Power dissipation	24V DC (10V ... 30V DC, connected by device supply) 50 mA (max.) 1,2 W (max.)
Connection technology	unlockable connector with self-lock and 2 lift-arms (cage clamp technology) for cross section up to max. 1mm <sup>2</sup>	Wire length unshielded (max.) shielded (max.)	30 m 100 m
Analog inputs	8	valid voltage between inputs and A-GND (max.)	0 V ... +24 V DC
Input area (nominal values)	PT100: -50°C ... 600°C PT1000: -50°C ... 250°C Ni100: -50°C ... 250°C Ni1000: -50°C ... 150°C KTY81/1xx: -50°C ... 150°C 0 ... 300 Ω, 0... 2 kΩ	Error message during override metering area	adjustable diagnosis- and limit value alert on request
Override area	20 mA ... 23 mA	Broken wire detection	by overrun / shortfall of metering area
Diagnostic LEDs	8 green: signal in valid area 8 rot: short circuit no displaying broken wires and open inputs	Access of sensor	2- or 4- wire, symmetric
Input resistance	500 Ω (typ.) metering area PT100	Value number format	0,1°C for temperature metering area, 0,1° Ω for resistor metering area, 0000 ... 6C00 (hexadecimal) for voltage metering area
Metering principle / conversion principle	successive approximation	Specify (based on input area)	< 1%
Sampling cycle time = Integration time	adjustable 1ms ... 35767 ms default: 100 ms (=Net frequency filter 50Hz and 60Hz)	Resolution	12 Bit
Analog outputs	2	Value number format	0000 ... 6C00 (hexadecimal)
Output area (nominal values)	0,5 ... 10V	Short cut protection	yes
Override area	0 ... 11V	Short cut current (typ.)	32 mA
Resolution	12 Bit	Setting time:	response time τ (typ) 1,5 ms
Load resistance against A-GND	1kΩ (max.)	Specify (based on output area)	< 1%

## Documentation and samples

	web: <a href="http://www.insevis.com">www.insevis.com</a>		web: <a href="http://www.insevis.com">www.insevis.com</a>
	register: download:		Products / Periphery TI-PM RTD8O2.pdf
	register: download:		It will be provided documented samples for all functions to be downloaded free of charge.

## Ordering data module

Identification	Order-no.	Packaging unit
Periphery module <b>RTD802</b>	PM-RTD802-02	PU: 1 piece

## Ordering data accessoires

Identification	Order-no.	Packaging unit
Connector 2x10pin	E-CON20-00	PU: 1 piece
Inserting stripe for description fields, 2x11 fields *	E-LABES22-00	PU: 20 pieces
Inserting stripe V for logo and identification for rear side	E-LABV-00	PU: 100 pieces

\* (1x already part of first deliveries scope)

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