RTD-box TR1200 IP (Ethernet) 7XV5662–8AD10

General Description

The RTD box TR1200 IP has 12 sensor inputs and can by using these measure up to 12 temperatures with Pt 100 sensors.

Three conductor sensors are supported. For two conductor operation compensation of the measured conductor resistance is possible via a corresponding setting.

All settings on the TR1200 IP can be done through 3 keys on the front of the device or in a Web-browser (e.g. Internet Explorer).

If Ni100 or Ni120 sensors are applied the measured values have to be adapted in the protection device. The 7SK80 supports this with its integrated RTD functionality.

The measured value output to the protection device is done via Ethernet network with RJ45 connectors.

Note: The SIPROTEC 4 system interface with EN100 module does not support the temperature detection of the RTD box TR1200 IP.

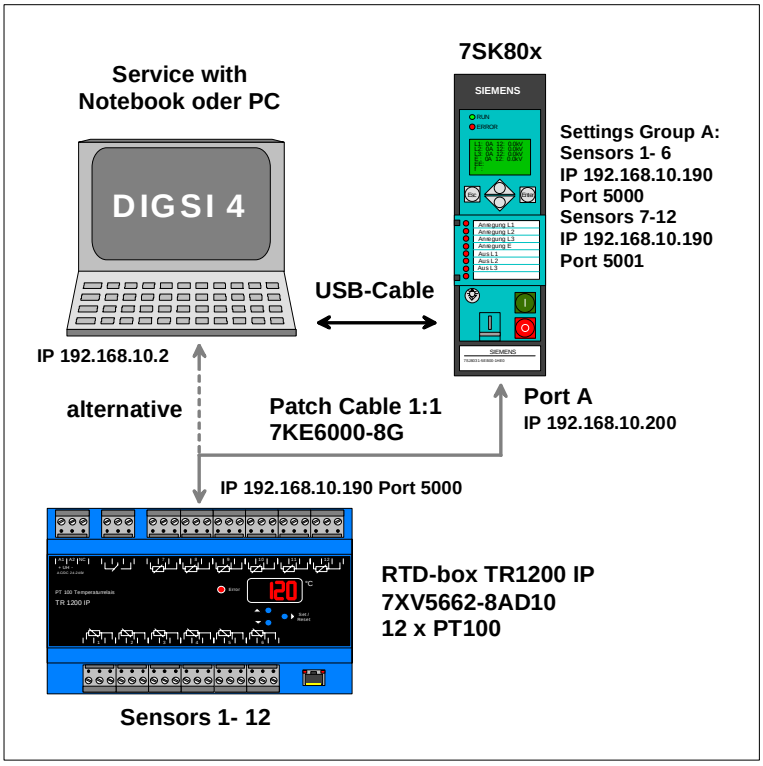
Application: Get up to 12 measured values with a TR1200 IP

To get up to 12 measured values one RTD box TR1200 IP is connected connected via a double screened CAT5 patch cable (1:1 or crossed over) directly to the protection device (e.g. 7SK80x / Port A).

The protection device is set using DIGSI 4 running on a Notebook via the USB-front interface.

The RTD box TR1200 IP is set either through the front keys or by using a Web Browser running on the Notebook via the Ethernet interface. For this purpose the patch cable must be un-plugged from the protection device and then re-plugged into the Notebook.

Tip: If during commissioning a common switch is temporarily inserted using three patch cables, the protection device can be set from a PC using DIGSI 4 in parallel with the TR1200 IP.



Detailed information (e.g. settings of thermo functions in the devices, protocols etc.) may be obtained from the applicable device manuals and the extensive application description of the TR 800 Web operation together with SIPROTEC devices in the Internet.

www.siprotec.com -> Accessories -> 7XV5662-xAD.

Technical data

Control voltage Us:	AC/DC 24-240 V, 0/45...65 Hz, < 5VA	
	DC: 20.4...297 V, AC: 20.4...264 V	
Relay output:	1 change-over contact (CO)	
Switching voltage	max. AC 415 V	
Switching current	max. 5 A	
Breaking capacity	max. 2000 VA (resistive load)	
	max. 120 W at DC 24 V	
Reduction factor at cos φ 0.7	0.5	
UL electrical ratings:	250 V ac, 3 A, general use	
	240 V ac, 1/4 hp, 2.9 FLA	
	120 V ac, 1/10 hp, 3.0 FLA	
	C 300	
	D300 1 A 240 VAC	
Nominal operating current Ie:		
AC15	Ie = 1 A	Ue = 400 V
	Ie = 2 A	Ue = 250 V
DC13	Ie = 2 A	Ue = 24 V
	Ie = 0.2 A	Ue = 125 V
	Ie = 0.1 A	Ue = 250 V
Recommended series fuse	T 3.15 A (gL)	
Contact service life, mech.	1 x 10^7 operating cycles	
Contact service life, electr.	1 x 10^5 operating cycles at AC 250 V / 5 A	
	2 x 10^5 operating cycles at AC 250 V / 3 A	
	6 x 10^5 operating cycles at AC 250 V / 1 A	

Temperature measurement:

Measurement time sensor	0.25…3s (dependent on the number of sensors)
Measurement time sensor	0.25…30s (for measurement cycle of one sensor)
Measurement range	-199°…850°C
Resolution	1°C

Sensor connection

12x Pt 100 acc EN 60751, connection of Ni100 and Ni120 sensors possible. Conversion of the measured values must be performed in the evaluation unit.

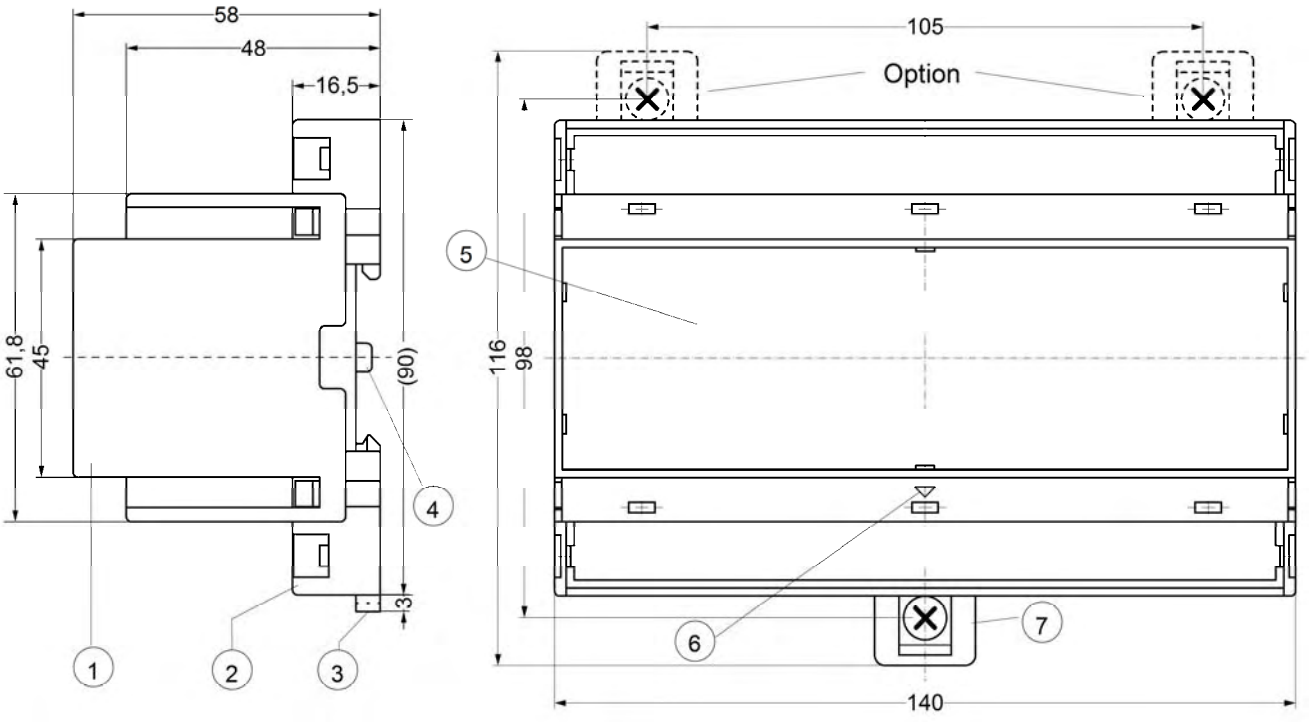
	Measurement range °C		Short-circuit Ohm	Interruption Ohm	Sensor resistance + line resistance Ohm
Sensor	min	max	<	>	max
Pt 100	-199	860	15	400	500

Tolerance	±0.5 % of measurement ±1 K
Sensor current	≤ 0.8 mA
Temperature drift	<0.04°C/K

Ethernet interface	
Transmission speed	10 MBit/s
IP address	Standard: 192.168.1.100, adjustable
Subnetwork mask	Standard: 255.255.255.0, adjustable
UDP port	Standard: 5000 (5001), adjustable
Max cable length	20m when using CAT 5 patch cable
Max response time RTD / Modbus	< 700 µs
Test conditions	EN 61010
Rated impulse withstand voltage	4000 V
Surge category	III
Pollution level	2
Rated insulation voltage Ui	300 V
Operating time	100 %
Permissible ambient temperature during operation	-20 °C ... +65 °C EN 60 068-2-2 dry heat
EMC - noise immunity	EN 61000-6-2
EMC - noise emission	EN 61000-6-4
Galvanic insulation	
Control voltage – Measurement input	DC 3820 V
Ethernet - Control voltage – Measurement input	DC 500V
Housing	Type V8, distribution board
Dimensions (W x H x D)	140 x 90 x 58 mm
Front-to-back size / Width 55 mm / 8 TE	
Wiring connection single strand	each 1 x 1.5 mm^2
Finely stranded with wire end ferrule	each 1 x 1.0 mm^2
Starting torque	
of the terminal screw	0.5 Nm (3.6 lb.in)
Protection class housing / terminals	IP 30 / IP20
Mounting position	Arbitrary
Mounting	Snap-on fastening standard rail 35 mm acc EN 60715 or Fasten with screws (with 2 additional bars)
Weight:	Approx. 350 g

Technical changes may take place

Construction V8



1 cover
2 base
3 bar for snap mounting
4 latch for sealing
5 front panel
6 position downward
7 for fixing to wall with screws, Ø 4,2 mm.

Ordering data

Product name	Order No.:
RTD-Box TR1200 IP	**7 X V 5 6 6 2 - 8 A D 1 0**
Distributed Input-box for 12 RTD-connection Pt100	
Rail mounting plastic, Protection class IP21	
1 Ethernet Interface for communication with SIPROTEC devices for measurements and fault reports.	
Wide range power supply AC / DC 24-240V	

Responsible for technical content
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