



Smart PLC, Protection relay and Recorder Data Sheet **PR1232**



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Technical data

Analog inputs

General information

Quantity	Up to 48
Input Resolution Sampling rate	16-bit ADC 10 sample/second; Full Isolated
Voltage Input signal Load resistance	DC 0 to 2 V 35 MΩ
Voltage Input signal Load resistance	DC 0 to 10 V 1 MΩ

Type of inputs

Thermocouples

Description	Type	Measuring range	Accuracy ¹
Fe-CuNi	"J"	-210 to +1200 °C	≤ 0.25 % from -100 °C
NiCr-Ni DIN	"K"	-270 to +1372 °C	≤ 0.25 % from -80 °C
NiCr-CuNi	"E"	-270 to +1000 °C	≤ 0.25 % from -80 °C
NiCrSi-NiSi	"N"	-270 to +1300 °C	≤ 0.25 % from -80 °C
Pt10Rh-Pt	"S"	-50 to 1768 °C	≤ 0.25 % from 20 °C
Pt13Rh-Pt	"R"	-50 to 1768 °C	≤ 0.25 % from 50 °C
Pt30Rh-Pt6Rh	"B"	0 to 1820 °C	≤ 0.25 % from 400 °C
W5Re/W26Re	"C"	0 to 2315 °C	≤ 0.25 % from 500 °C
W3Re/W25Re	"D"	0 to 2315 °C	≤ 0.25 % from 500 °C

¹ The accuracy value refers to the maximum measuring range

RTD temperature probe

Description	Connection type	Measuring range
Pt100	2-/3-wire	-200 to +850 °C
JPt100	2-/3-wire	-200 to +600 °C
Cu50	2-/3-wire	-180 to +200 °C
Ni100	2-/3-wire	-60 to +180 °C
TP21	2-/3-wire	-200 to +600 °C
TP23	2-/3-wire	-200 to +600 °C

Voltage, current (standard signals)

Description	Measuring rang
Voltage	-20 to 20 mV
	-100 to 100 mV
	0 to 5 V
	1 to 5 V
	0 to 10 V
	-10 to +10 V
	-1 to +1 V
	0 to 1 V
	0 to 20 V
	-20 to 20 V
	Current
4 to 20 mA	
0 to 20 mA	

Other Types

Frequency	1 ~ 1000 Hz (Resolution 0.01 Hz)
	1K ~ 10 KHz (Resolution 1 Hz)
Binary	0 to 0.5 V = '0' , 0.5 to 24 V = '1'

Analog outputs

Quantity	2
Current	DC 0(4) to 20 mA (Optional PID controller)
Output signal	
Load resistance	

Digital outputs

Quantity	8
Relay	1 to 8
Connector number (back of device)	
Switching capacity	3 A at 120VAC , 3 A at 24 VDC
Relay	9 and 10
Connector number (back of device)	
Switching capacity	10 A at 120 VAC , 7 A at 240 VAC , 5A 240 VDC
SSR	
Open collector	

Interfaces

RS485	
Quantity	1
Baud rate	115200
Protocol	Modbus RTU, ASCII, AFP
Application	Communication with Modbus master/slave

Ethernet Quantity Connector type Transfer rate Protocol Application External inputs Max. cable length	1 RJ45 (socket) Modbus TCP
USB Host Quantity Connector type Standard Application	1 (on front with cover) A (socket) USB 2.0 (high speed) Exclusively for connecting a USB flash drive (FAT32)

Hardware

Type	ARM cortex-M4 dual processor
Sample rating	32 bit at 120 MHz
RAM	64 MB
Min.	8 G flash memory
Data backup	Internal SD card

Screen

Type	TFT color screen/touchscreen (resistive) with LED backlight
Size	12.1"
Resolution	800 × 600 pixels (VGA)
Number of colors	Full color
Frame rate	60 Hz (type)
Brightness setting	Adjustable on the device
Screen saver (switch-off)	After waiting period or control signal

Electrical data

Voltage supply	AC 100 to 240 V +10/-15 %, 50 / 60 Hz DC 24 V +20/-20 %
Power consumption	Up to 30W
Electrical connection	On the back via Phoenix terminal

Case

Case type	Made of steel sheet
Front frame dimensions	240 mm x 290 mm
Mounting depth	210 mm
Panel cut-out	214 mm x 185 mm
Panel thickness	52 mm