AFP

Smart PLC, Protection relay and Recorder Data Sheet
PR5618

Arman Fara Pajoohan Co.

Technical data

Analog inputs

General information

Quantity	16
Input Resolution Sampling rate	16-bit ADC 1 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
Current Input signal Type	4~20, 0~20, 0~5 mA Loop Powered* (2 wire)

*Optional

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	0 to 5 mA
	4 to 20 mA
	0 to 20 mA

Other Types

Frequency	1 to 10 KHz
Binary	0 to 0.5 V ='0' , 0.5 to 24 V = '1'

Analog outputs

Quantity	2
Current Output signal Load resistance	 DC 0(4) to 20 mA (Optional PID controller) < 300 Ω

Digital outputs

Quantity	8
Relay Connector number (back of device) Switching capacity	 1 to 8 3 A at 120VAC, 3 A at 24VDC
Relay Connector number (back of device) Switching capacity	 9 and 10 10 A at ١٢٠VAC, 7 A at 240VAC, 5A 240VDC
SSR	
Open collector	

Interfaces

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

Ethernet	
Quantity	1
Connector type	RJ45 (socket)
Transfer rate	
Protocol	Modbus TCP
Application	
External inputs	
Max. cable length	

USB Host	
Quantity	1 (on front with cover)
Connector type	A (socket)
Standard	USB 2.0 (high speed)
Application	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	14.225 cm (5.6")
Resolution	640 × 480 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 15W
Electrical connection	On the back via Phoenix terminal

Case

Case type	Made of steel sheet
Front frame dimensions	144 mm x 144 mm
Mounting depth	200 mm
Panel cut-out	$138^{+1.0}$ mm × $138^{+1.0}$ mm
Panel thickness	3.4 mm