

SERIES: APR120



- 1 UNIVERSAL INPUT
- 2 RELAY OUTPUTS
- SHORT DEPTH OF 20 cm
- WATER & DUST PROOF (IP65)
- RS-485 COMMUNICATION (OPTION)
- RETRANSMISSION OUTPUT (OPTION)
- PROGRAMMING SOFTWARE (OPTION)
- DATA ARCHIVING IN COMPUTER (OPTION)
- PRINTS ALARM OCCURRENCE WITH TIME
- PRINTS DATE, TIME, SCALING, CHART SPEED, INPUT SIGNAL
- RETRANSMISSION OUTPUT SIGNAL ISOLATION
- 2 BINARY INPUTS TO CONTROL CHART FEED
- PASSWORD PROTECTED OPERATION



INTRODUCTION

Indumart APR120 series Strip Chart Recorders are 144 x 144 mm instruments which record one analogue input, such as thermocouple, RTD, current, voltage or resistance on a 100 mm-wide roll or Z-fold chart paper.

These recorders are equipped with two indicating relays for ON/OFF control or for setting the threshold alarms. Optionally, they may be ordered with one galvanically isolated analogue retransmission output.

Chart annotation is a standard feature for the APR120 Series recorders. It prints time, date, scaling, chart speed and process variable. It also prints alarm occurrence with time on the chart to simplify trace interpretation.

Nine chart speeds are available between 5 and 3600 mm/h. The user may set the chart rolling at a desired speed and with the aid of two binary inputs, elect to START/STOP the chart or to alter the chart speed to another set value. Additionally, the recorder may be turned on/off with its main switch without discounting the power supply.

The recorder has four keys and an LCD indicator for fast and easy programming. Programming software is also available for remote configuration via a computer and the configuration parameters can be tamper-proof by means of a password.

The RS-485 communication is an optional feature of the APR120 recorders, which enables archiving of the data to a computer.

Input Type	Measuring Range	Min. Subrange
Current	0...±50 mA	1 mA
Voltage < 10 V	0...±9999 mV	5 mV
Voltage ≥ 10 V	0...±50 V	5 V
"J" thermocouple	-200...1200°C	100°C
"K" thermocouple	-200...1370°C	130°C
"N" thermocouple	-200...1300°C	200°C
"E" thermocouple	-200...1000°C	160°C
"R" thermocouple	0...1760°C	540°C
"S" thermocouple	0...1760°C	570°C
"T" thermocouple	-200...400°C	110°C
"B" thermocouple	400...1820°C	1000°C
Pt100 RTD	-200...850°C	50°C
Pt500 RTD	-200...850°C	50°C
Pt1000 RTD	-200...850°C	50°C
Ni100 RTD	-60...180°C	50°C
Cu100 RTD	-50...180°C	50°C
Potentiometer	50...9999 Ω	50 Ω
Resistance	0...9999 Ω	50 Ω

SPECIFICATIONS

Number of Inputs	1 analogue
Recording Mode	Continuous
Accuracy	0.5%
Recording Paper	Roll or Z-fold tape (DIN16230); 100 mm width and 16 m long
Paper Feed Speed	5, 10, 20, 60, 120, 300, 600, 1200 and 3600 mm/h
Input Type	Thermocouple, RTD, VDC, mV DC, mA DC, resistance, potentiometer
Input Sampling	≤2 seconds
Input Impedance	50 Ω for mA inputs ≥250 kΩ for ≥ 10 V
Binary Input	2 inputs; 0 or 5...24 V/0.02A; Switching over the paper feed
Output (option)	mA / Voltage retransmission; 4...20 mA, 0...20 mA, 0...5 mA with < 250 Ω load resistance
Current	
Voltage	0...5 V, 1...5 V, 0...10 V with > 500 Ω load resistance
Alarm	2 relays; N.O. or N.C.
Contact Rating	0.5 A @ 125 VAC or 30 VDC/AC 0...100% of the scale adjustable
Contact Hysteresis	0.5% to 1.5% of the scale
Supply Voltage	90...253 VAC, 45...65 Hz (std.) 18...30 VDC (option)
Power Consumption	<15 VA
Communication	RS-485 MODBUS (option)
Baud Rate	300...115200 bits/s
Front Panel Sealing	IP-65
Operating Temp.	0...+50°C; -20...70°C without pen
Servicing Safety	According to IEC61010-1
Installation	Category II
Pollution	Level 2
Electromagnetic	
Emission	EN50081-2
Immunity	EN50082-1
Dimensions	144 x 144 x 202 mm (WxHxD)
Panel Cutout	138 x 138 mm
Weight	3.5 kg

ORDER CODES

Model **APR120** -

ANNOTATION

With Printer (std.)

SUPPLY VOLTAGE

90...253 VAC

18...30 VDC

CONFIGURATION

Standard Parameters (std.)

Custom Configuration

INPUT SIGNAL

According to the Range Table

Custom

OUTPUT SIGNAL

Without Output

0...5 mA

0...20 mA

4...20 mA

0...5 V

1...5 V

0...10 V

Special

CONFIGURATION PROGRAM

Without Configuration Program

With Configuration Program (RS-485)

DATA ARCHIVING IN COMPUTER

Without Program

With Program (RS-485)

SCALE GRADUATION

Blank Scale

0...100% Graduation

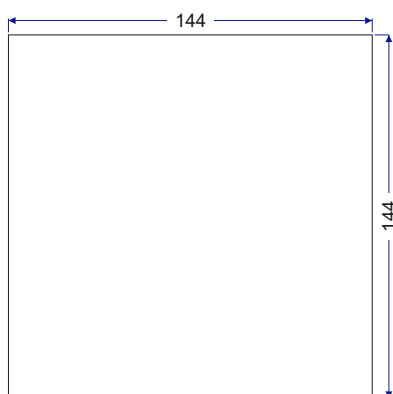
EXECUTION

Standard

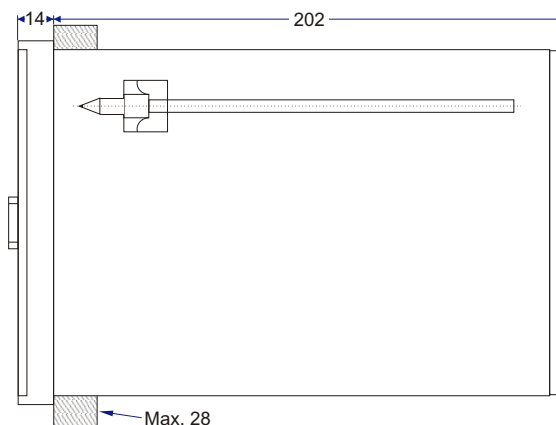
Custom

DIMENSIONS (mm)

Front View



Side View



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