



D1-15P

Analog module with 6 Pt100 input channels

The D1-15P module provides 6 input channels for reading of temperature through 2 or 3 wire Pt100 sensors, with automatic compensation of the cable resistance; the ramp conversion circuit ensures a reliable reading with a 15 bit resolution and a 0.05 % full scale accuracy; the module does not require calibration and maintains its characteristics of accuracy; an internal watch-dog circuit ensures a non-stop operation; interface type (RS422 or RS485), communication protocol (Modbus ASCII or RTU) and address (from 1 to 63) can be set through microswitches; the module is suited for mounting on a DIN rail.

GENERAL SPECIFICATIONS

Power supply	From 18 to 36 Vdc, 70 mA @ 24 Vdc
Power supply protections	Against surge, voltage peaks and polarity inversion
Operating environment	Temperature: from 0 to 70 °C, relative humidity: from 25 to 85 % (non condensing)
Operating atmosphere	Without corrosive gas
Storage temperature	From -20 to 80 °C (without ice)
Electromagnetic compatibility <input type="checkbox"/>	<ul style="list-style-type: none"> • Radio frequency emissions: EN55011 Group 1 Class A • Conducted emissions: EN55011 Group 1 Class A • Radio frequency immunity: ENV50140 10 V/m AM from 80 to 1000 MHz • Conducted immunity: ENV50141 10V/m AM from 0.15 to 80 MHz
IP grade	Connectors: IP20, enclosure: IP20
Signalling leds	Power on, self-test, serial tx, serial rx
Mounting mode	DIN EN50022 rail
Dimensions	150L x 110H x 60P mm
Weight	350 g
Ordering code	D1-15P

ANALOG INPUTS SPECIFICATIONS

Sensor type	6 Pt100 sensors, IEC 751, 2 or 3 wires
Analog/digital conversion	Ramp, 15 bit resolution
Maximum Pt100 resistance	310 Ω
Maximum line resistance	20 Ω
Overall Accuracy	±0.05 % full scale
Acquisition rate	1 s (all the six channels)
Full scale temperature range	From -199.9 to 500 °C

COMMUNICATION INTERFACE SPECIFICATIONS

Communication interface	EIA RS485 or RS422 (selectable by jumper)
Communication speed	9600 or 19200 baud (selectable by dip-switches)
Communication protocol	Modbus ASCII or Modbus RTU (selectable by dip-switches)
Device address	From 1 to 63 (selectable by dip-switches)
485/422 lines protections	Against surge, short circuits and voltage peaks
Pull-up and pull-down resistors	10 kΩ

FUNCTIONAL SPECIFICATIONS

Watch-dog	Hardware
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