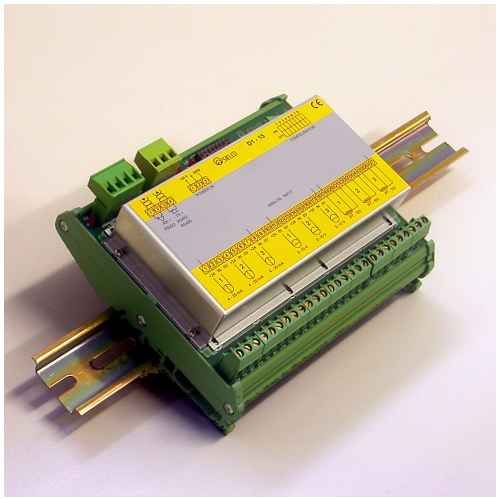

# D1-15

## Analog module with 6 V/mA and 3 Pt100 input channels

The D1-15 module provides 9 input channels for reading of 6 analog signals (0-10 V or 0/4-20 mA) and 3 temperatures through Pt100 sensors (3 wire), 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 mantains 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 31) 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 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 □ | • Radio frequency emissions: EN55011 Group 1 Class A<br>• Conducted emissions: EN55011 Group 1 Class A<br>• Radio frequency immunity: ENV50140 10 V/m AM from 80 to 1000 MHz<br>• 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 | D1-15 |

### ANALOG INPUTS SPECIFICATIONS

| | |
|---|---|
| Sensor type | • 3 Pt100 sensors, IEC 751, 3 wires<br>• 6 voltage sensors (from 0 to 10 V) or current sensors (from 0 to 20 mA), individually selectable by jumpers |
| Power supply for external sensors | 24 Vdc, maximum current 100 mA |
| Analog/digital conversion | Ramp, 15 bit resolution |
| Current shunt resistor | 249 Ω |
| Maximum inputs ratings | 310 Ω (Pt100 inputs), 15 V (voltage inputs), 45 mA (current inputs) |
| Overall Accuracy | ±0.05 % full scale |
| Acquisition rate | 1 s (all the nine channels) |
| Maximum line resistance | 20 Ω |
| 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 31 (selectable by dip-switches) |
| 485/422 lines protections | Against surge |

### FUNCTIONAL SPECIFICATIONS

| | |
|---|---|
| Watch-dog | Hardware |

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