



## D1-40A-V

Analog module with 6 0-5 V input channels (optoisolated)

The D1-40A-V module provides 6 input channels for reading of 0-5 V analog signals; the double ramp conversion circuit ensures reliable reading with a 16 bit resolution and a 0.05 % full scale accuracy; the module does not require calibration and maintains its characteristics of accuracy; analog inputs, power section and communication interface are optically isolated; 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 9 to 36 Vdc, 100 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"> <li>• Radio frequency emissions: EN55011 Group 1 Class A</li> <li>• Conducted emissions: EN55011 Group 1 Class A</li> <li>• Radio frequency immunity: ENV50140 10 V/m AM from 80 to 1000 MHz</li> <li>• Conducted immunity: ENV50141 10V/m AM from 0.15 to 80 MHz</li> </ul>
IP grade	Connectors: IP20, enclosure: IP20
Insulation	<ul style="list-style-type: none"> <li>• Between analog inputs and power supply section: 500 V</li> <li>• Between analog inputs and 485/422 section: 1000 V</li> <li>• Between power supply and 485/422 sections: 1500 V</li> </ul>
Signalling leds	Power on, self-test, serial tx, serial rx
Mounting mode	DIN EN50022 rail
Dimensions	175L x 120H x 65P mm
Weight	360 g
Ordering code	D1-40A-V

### ANALOG INPUTS SPECIFICATIONS

Sensor type	6 voltage sensors (from 0 to 5 V)
Analog/digital conversion	Double ramp, 16 bit resolution
Voltage allowed	From -1 to 6 V
Input impedance	20 kΩ
Overall accuracy	± 5 mV
Acquisition rate	1 s (all the six channels)

### COMMUNICATION INTERFACE SPECIFICATIONS

Communication interface	EIA RS485 or RS422 (selectable by dip-switches)
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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