

## D1-40A-I

## Analog module with 6 0/4-20 mA input channels (optoisolated)

The D1-40A-I module provides 6 input channels for reading of 0/4-20 mA analogsignals; the double ramp conversion circuitensures are liable reading with a 16 bit resolution and a 0.05 % full scale accuracy; the module does not require calibration and mantains 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.

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OLITERAL SI ECII ICATIONS		
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	<ul> <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> <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-I	
ANALOG INPUTS SPECIFICATIONS		
Sensor type	6 current sensors (from 0 to 20 mA)	
Analog/digital conversion	Double ramp, 16 bit resolution	
Current allowed	From 0 to 25 mA	
Input impedance	246 Ω	
Overall accuracy	$\pm 10\mu$ A	
Acquisition rate	1 s (all the six channels)	
COMMUNICATION INTERFACE SPECIF	ICATIONS	
Communication interface		
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	

