



D1-100

Digital module with 48...192 isolated input channels

The D1-100 module is specifically designed to allow collection of a large number of digital signals within a small space; 1 to 4 external units, connected to the D1-100 module by means of a flat cable, provide 48...192 digital input channels; all inputs are ground active type with optical isolation and a status signalling led; 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 15) can be set through microswitches; the module is suited for mounting on a DIN rail.

GENERAL SPECIFICATIONS

Power supply	From 18 to 36 Vdc, 130 mA @ 24 Vdc (with 4 D1-10 modules)
Power supply protections	Against 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
Insulation	Between digital inputs and power supply section: 3000 V
Signalling leds	Power on, self-test, inputs status, serial tx, serial rx
Mounting mode	DIN EN50022 rail
Dimensions	D1-100: 150L x 110H x 60P mm, D1-10: 140L x 85H x 60P mm
Weight	D1-100: 300 g, D1-10: 230 g
Ordering code	D1-100, D1-10

DIGITAL INPUTS SPECIFICATIONS

Inputs	48 each D1-10 board
Input type	Optoisolated, common ground
Voltage levels	Active state: from 0 to 4 V, non active state: from 15 to 36 V
Current sourced	6 mA @ 0 V
Detectable pulse duration	Not less than 256 ms
Connection type	Screw type, 3.81 mm step, for maximum AWG 16 wire

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 15v (selectable by dip-switches)
485/422 lines protections	Against surge

FUNCTIONAL SPECIFICATIONS

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