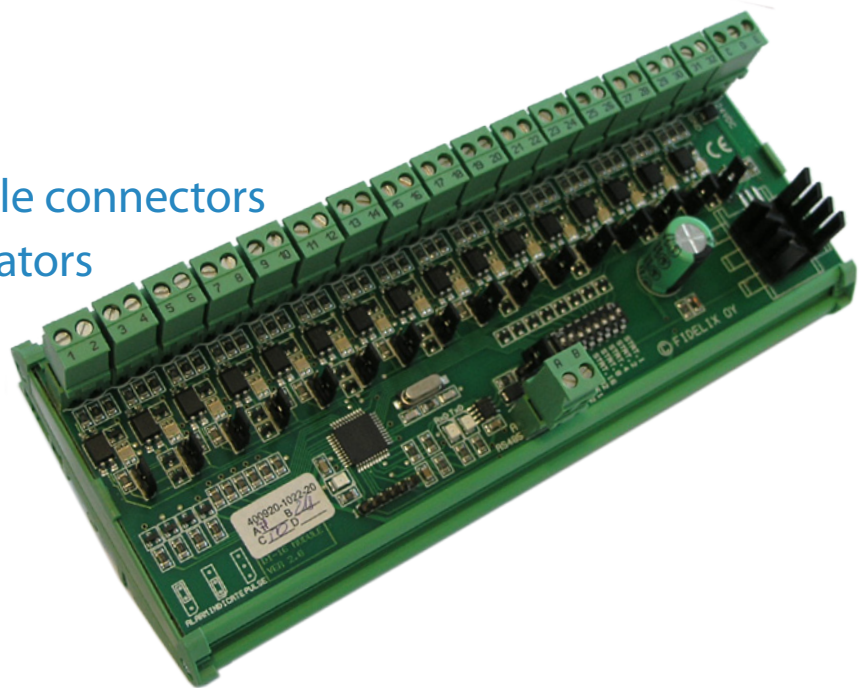


- »» 16 digital inputs
- »» DIN-rail mounting
- »» Individually detachable connectors
- »» Bi-coloured LED indicators



## Connect and know

The 16 channel digital input module is used to read and detect digital signals for indication, alarm, or impulse measurement purposes, or to detect whether or not a cable is still intact (security loops). Each channel can be individually set, and has a green and red LED to show the current status of each point as soon as you see the module.

Connect the module to one of our outstations to get fast, accurate and precise readings.

### *Technical features*

Size (with DIN-rail clamps): 205mm x 90mm (x 65mm height)

Operating voltage: 20-26VDC

Operating temperature: 0 to +50°C

Input loop current: 2.5 mA at 24 VDC per active loop

Input loop voltage: 20-48 VDC

**Modbus address:** The address of the DI-16 module is set by changing the position of dip-switches 3-8. Each dip-switch represents a binary value, as indicated on the module: dip-switch 3 (ST32) = 32, dip-switch 4 (ST16) = 16, dip-switch 5 (ST8) = 8, dip-switch 6 (ST4) = 4, dip-switch 7 (ST2) = 2, dip-switch 8 (ST1) = 1.



*Example: To set the Modbus address of the module to 42, set dip-switches 3, 5 and 7 to ON, and dip-switches 4, 6 and 8 to OFF. (dip-switch 3 = 32, dip-switch 5 = 8, dip-switch 7 = 2. 32+8+2 = 42)*




**Modbus speed:** The DI-16 module communicates using the Modbus RTU protocol over a serial RS485 connection. To set the Modbus speed at which the module sends and receives data, set dip-switch 1 and 2 as indicated in the table on the right.

| Comm. speed | Dip-switch 1 | Dip-switch 2 |
|-------------|--------------|--------------|
| 9 600 bps   | OFF          | OFF          |
| 19 200 bps  | OFF          | ON           |
| 38 400 bps  | ON           | OFF          |
| 57 600 bps  | ON           | ON           |

On the last module in the Modbus loop, the loop must be closed by connecting a 120 Ω resistor between the A and the B side of the RS-485 loop. This can be done using the module's own terminating resistance by closing the built-in jumper next to the Modbus connectors.

**Indications:** To provide a tension for measuring the input ports, connect a jumper cable from connector "E" (24VDC in) to connector "D" (20-48 VDC+ ref.), setting that tension to the even numbered connectors, through a 10 kΩ resistor. If needed, another voltage level can be connected to connector "D". Bear in mind however, that there is only one ground level for the module and the connectors.

Using the jumper on the small pins, the functioning of the LED indicator can be configured as follows:

-  • Connect pins 1 and 2 to make the LED indicator function as indication, switching the LED off if the loop is open and ON (green) if the loop is closed, regardless of the "open or closed contact" setting in the software on the outstation.
-  • Connect pins 2 and 3 to connect an alarm. An open or closed circuit can be configured in the software on the outstation. The LED indicator will go off and on or blink green or red according to the alarm status.
-  • Leave all three small pins free for impulses detection. The LED indicator will light up during the detection of the impulses, which can be individually configured for each input between 5-1275 ms in the software on the outstation.

Accepted resistance for open circuits: 50 kΩ - ∞ (parallel) at 24 VDC, for closed circuits: 0-1 kΩ (serial) at 24 VDC.

