Fidelix

FX-AO-8
8 channel analogue control module

> 8 analogue outputs
> DIN-rail mounting
> Programmable default output values
> Individually detachable connectors

Connect and control

The 8 channel output module is used to generate voltage controlling signals.
Its 8 individually configurable channels are all short circuit protected, have customisable minimum and maximum voltage outputs, and have configurable safeguard values in case of a break in communication.
Connect the module to one of our outstations to control your field equipment fast and accurately.

Technical features

Size (with DIN-rail clamps):	123mm x 90mm (x 65mm height)
Operating voltage:	20-26VDC
Operating temperature:	0 to +50°C
Maximum output current:	20 mA
Output voltage:	0-10 VDC

Modbus address: The address of the AO-8 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)
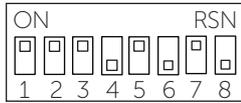
Modbus speed: The AO-8 module communicates, using the Modbus RTU protocol over a serial RS485 connection with 8 databits, no parity and 1 stop bit. To set the Modbus speed at which the module sends and receives data, set

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

dip-switch 1 and 2 as indicated in the table on the right. 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 modules own terminating resistance by closing the built-in jumper next to the Modbus connectors.

Outputs: To provide a ground level for the output ports, connect a jumper cable from connector "C" (GND in) to connector "D" (GND ref. AO), giving a ground connection to the even numbered connectors. If needed, another ground level can be connected to connector "D". Bear in mind however, that there is only one ground level for all AO outputs.

Use analogue outputs to generate voltage controlling signals. All outputs are short circuit protected, and can be individually set to send out signals from 0-10V. In the software on the outstation you can change the minimum and maximum voltage to any desired value.

The maximum standard output current is 10 mA, and can be doubled to 20 mA for each channel individually by closing the jumpers next to the connector.

Each channel can be set in the software to preserve its last output value, or to change to any other desired value in case of a rupture in communication.

Connection example: