

8 analogue inputs for local or remote serial connection to a JACE® controller

Overview

The IOM range of I/O modules are designed for use as local I/O within motor control cabinets or as remote I/O connected via RS485 Modbus. Typical applications include building automation control systems.

The 8AI module provides 8 independent analogue input channels which can be used with a wide variety of voltage, current and resistive temperature detector (RTD) devices.

The IP20 rated module may be plugged together with other IOM modules and fitted onto standard TS35 DIN rail or fitted directly onto a backplate using screw fixings. The cascadable design allows power and 2-wire RS485 Modbus communications to connect through without any extra wiring.

Modbus address setting is by rotary switches which are easily accessible underneath the top cover. A bi-colour LED indicates the communications status. The 8AI module has one 2-wire RS485 port supporting a Modbus communications network connection to a JACE® controller.



Key features

- DIN rail or direct mounting
- 24v ac or dc power operation
- 8 analogue inputs 0 to 10v / 0(4) to 20ma / RTD
- RS485 2-wire Modbus open communications
- Easy address setting using rotary switches
- Bi-colour LED for module status information
- Scaled temperature values
- Sensor wire-break detection
- Presetable cable resistance offset



Specifications

Analogue input data:

- number of inputs: 8
- range (v / i / RTD): 0v to 10v dc / 0(4)ma to 20ma dc / -40°C to +120°C
- resolution (v / i / RTD(Ni1000 & Pt1000)): 10mV / 20ua / 0.1°C
- accuracy (v / i / RTD(Ni1000, Pt1000)): $\pm(10\text{mv} + 0.3\% \text{ of measured value}) / \pm(20\text{ua} + 0.4\% \text{ of measured value}) / \pm 0.4^\circ\text{C}, \pm 0.6^\circ\text{C}$
- input resistance (0v to 10v dc): resistance type: fixed: 200,000Ω
- input resistance (0(4)ma to 20ma dc): resistance type: plug-in resistor: 250Ω $\pm 0.1\%$ (provided bagged in carton)
- current loop input arrangement: not a source of current for the loop
- reference resistance (RTD): resistance type: plug-in resistor: sensor dependent $\pm 0.1\%$ (default fitted: 40,000Ω for RTD -40 to +120°C)
optional plug-in resistor for RTD(Ni1000 & Pt1000): 5,110Ω $\pm 0.1\%$ (provided bagged in carton)

LED status indication:

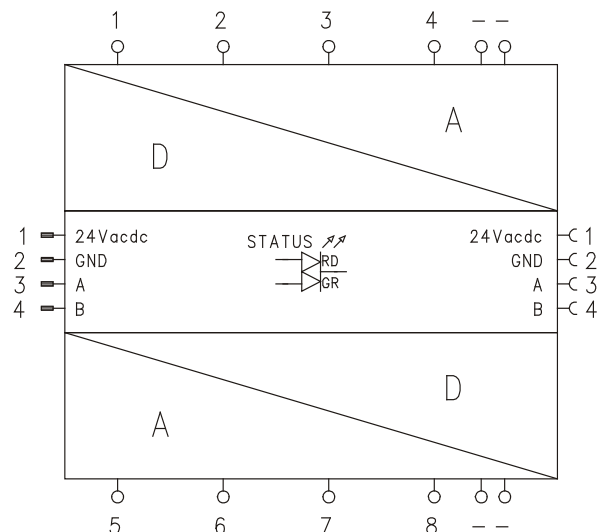
- module status: bi-colour: red / green

Bus data:

- bus protocol: Modbus RTU
- bus interface: RS485, half duplex, non isolated
- bus topology: multidrop
- bus length maximum: 500m
- bus speed: 19,200 bps
- bus line termination: integrated termination resistor (220Ω); activate via jumper (default: off)
- bus protection: built-in transient protection
- bus connector: pluggable male & female integrated connectors (modules mounted with zero spacing)
- bus cabling: Shielded Twisted Pair (STP)

General data:

- module power supply: 20v to 28v ac or dc
- module current: 125ma ac or 50ma dc
- operating temperature range: 0°C to +50°C
- storage temperature range: -20°C to +70°C
- CE marking: EMC directive 2004/108/EC according requirements of EN 55011 and EN 61326-1
- conductor cross section: 0.2mm² to 2.5mm² screw clamp connection
- insulation stripping length: 6mm
- mounting: DIN-rail TS35 (35mm x 7.5mm) or direct mounting by M3 fixing
- installation position: any
- assembly: up to 15 in a row with zero spacing
- module size (l x w x h-TS35 / direct): 53mm x 95mm x 60mm / 58mm
- insulating material / flammability class: Housing: Noryl. Terminals: Polyamid 6.6 V0 / UL94-V0
- protection degree (DIN 40050): IP 20
- installation guide: for mounting and I/O wiring details please refer to the IOM Installation guide
- communications guide: for Modbus communications details please refer to the IOM Module Communications guide



How to Order

Product Code	Description
IOMAIP	8 Analogue Inputs

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