

Product Overview

The eBMS/IO range of I/O modules are designed for use as local I/O within motor control cabinets or as remote I/O connected via TCP or RS485 Modbus.

The eBMS/IO 8AI module supports 8 independent analogue inputs 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 modules on standard TS35 DIN rail or direct mounting; the cascable 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.

Connectivity

The 8AI module has one 2-wire RS485 port supporting a Modbus communications network connection to the JACE® controller.

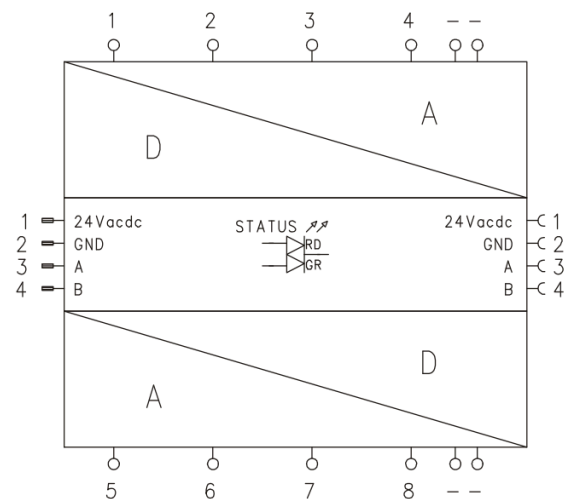
Modules can be networked via TCP, RS485 or mixed networking.

Engineering

Can be engineered via any system with a Modbus interface. Palette files available for Tridium AX and N4

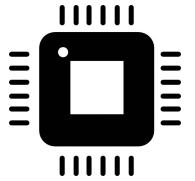
Applications

Typical applications include building automation control systems and monitoring.



Features

- ▶ 8 analogue inputs 0-10v/ 4-20ma / RTD
- ▶ DIN rail or direct mounting
- ▶ 24v ac or dc power operation
- ▶ Supports RS485 2-wire Modbus
- ▶ Easy address setting using rotary switches
- ▶ Bi-colour LED for module status information



Input data

number of inputs	8
range (V / I / RTD)	0vt to 10vdc / 0(4)ma to 20ma DC / -40°C to +120°C
resolution (V / I / RTD)	10mV / 20ua / 0.1°Ca
accuracy (V / I / RTD)	$\pm(10\text{mv} + 0.3\%$ of measured value) / $\pm(20\text{ua} + 0.4\%$ of measured value) / $\pm 0.4^\circ\text{C}$, $\pm 0.6^\circ\text{C}$
input resistance (0v to 10v dc)	resistance type: fixed: 200,000 Ω
input resistance (0(4)ma to 20ma dc)	resistance type: plug-in resistor: 250 Ω $\pm 0.1\%$ (resistor not provided)
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: 5k11 for RTD -40 to +120°C)

LED status indication:

module status	bi-colour: red / green
---------------	------------------------

Communications

bus protocol	Modbus RTU
bus interface	RS485, half duplex, non isolated
bus topology	multidrop
bus speed	19200 bps
bus line termination	integrated termination and biasing resistors

General

module power supply	20v to 28v ac or dc
operating temperature range	0°C to +50°C
CE marking	EMC directive 2004/108/EC according requirements of EN 55011 and EN 61326-1
mounting	DIN-rail TS35 (35mm x 7.5mm) or direct mounting by M3 fixing
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