

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 4AOH-3DO module provides 4 independent analogue output channels with hand- auto override switches and setting potentiometers. Each output has a yellow LED. The module also provides 3 independent 250vac/8A rated digital relay output channels each with change over contact configuration.

The IP20 rated module may be plugged together with other modules on standard TS35 DIN rail or direct mounting; 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.

Connectivity

The 4AO 3DO module has one 2-wire RS485 port supporting a Modbus communications network connection to the JACE® controller.

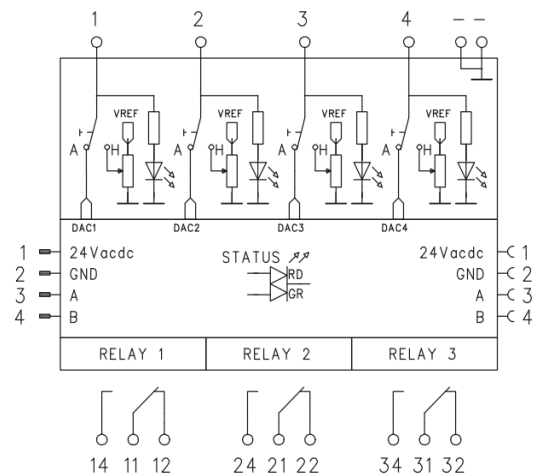
Modules can be networked via TCP, RS485 or mixed networking.

Engineering

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

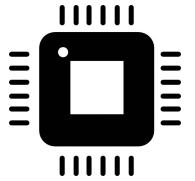
Applications

BMS and monitoring.



Features

- ▶ 4 analogue outputs 0 to 10v dc
- ▶ Hand-auto override switches and setting potentiometer on each analogue output
- ▶ 3 digital outputs with change over contacts
- ▶ DIN rail or direct mounting
- ▶ 24v ac or dc power operation
- ▶ Supports RS485 2-wire Modbus Open Communication network
- ▶ Failsafe outputs to predefined state on communications failure
- ▶ Bi-colour LED for module status information
- ▶ Yellow LED indication per analogue output



Output data:

number of outputs	4 Analogue / 3 Digital
analogue output range	0-10v
maximum load per digital channel	<10ma
rated switching voltage	250v ac
rated / inrush current (resistive load)	8A / 12A
maximum total module current	24A
electrical life expectancy at rated / 2A load	1 x 10 ⁵ cycles / 4 x 10 ⁵ cycles @ 23°C & resistive load
mechanical life expectancy	30 x 10 ⁶ cycles

LED status indication:

per digital output	yellow: on or off
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
module current	275ma ac or 110ma 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