

4AOH-3DO IOM module

4 analogue & 3 digital outputs 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 4AOH-3DO module provides 4 independent analogue output channels with hand-auto override switches and setting potentiometers. Each analogue 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 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 4AOH-3DO 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
- 4 analogue outputs 0v to 10v dc
- Monitored Hand-Auto override switches and setting potentiometer on each analogue output
- 3 digital outputs with change over contacts
- RS485 2-wire Modbus open communications
- Easy address setting using rotary switches
- Bi-colour LED for module status information
- Yellow LED analogue output indication
- Analogue output channel overload monitor
- Configurable output condition on comms failure



Specifications

Analogue output data:

- number of outputs 4
- output range 0v to 10v dc
- load resistance per channel >1k Ω
- maximum load current per channel <10ma
- resolution 10mv
- conversion error \pm (30mv + 0.5% of measured value)
- temperature coefficient 0.02%/ $^{\circ}$ C (typical)

Digital output data:

- number of outputs 3
- rated switching voltage 250v ac
- rated / inrush current (resistive load) 8A / 12A
- maximum power rating 2,000VA
- maximum total module current 24A
- electrical life expectancy at rated / 2A load 1 x 10⁵ cycles / 4 x 10⁵ cycles @ 23 $^{\circ}$ C & resistive load
- mechanical life expectancy 30 x 10⁵ cycles
- maximum switching frequency 6 min⁻¹ at rated current; 1,200 min⁻¹ at no load
- contact material AgNi 0.15
- isolation test voltage (coil to contact) 4 kV
- output relay contact configuration channels 1,2 & 3: change over contacts

LED status indication:

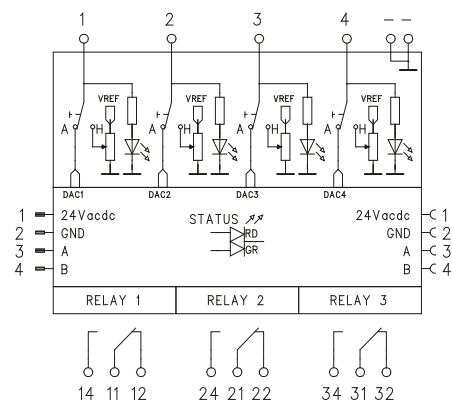
- per analogue output yellow: intensity relative to output voltage; V<1.5v=off
- module status bi-colour: red / green

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 (220 Ω); 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 240ma ac or 95ma dc
- operating temperature range 0 $^{\circ}$ C to +50 $^{\circ}$ C
- storage temperature range -20 $^{\circ}$ C to +70 $^{\circ}$ C
- CE marking Low voltage directive (LVD) 2006/95/EC according requirements of EN 50178
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
for Modbus communications details;
please refer to the IOM Module Communications guide
- communications guide



How to Order

Product Code

Description

IOMADO 4 Analogue Outputs with manual override + 3 Digital Outputs

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Page 2/2
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