

# 6DOH-12DI-E IOM module

**6 digital outputs & 12 digital 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 6DOH-12DI-E module provides 6 independent 250vac/8A rated digital relay output channels with hand-off-auto override switches and 12 independent digital inputs supporting input voltages up to 24v ac or dc. Each digital input has a pulse counting capability for use in metering applications. Each output has a yellow LED and each input has a configurable bi-colour LED to indicate the current status of the connected device.

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 6DOH-12DI-E 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
- 6 digital output relays with 8A contacts
- Monitored Hand-Off-Auto override switches on each output
- 12 digital inputs 24v ac or dc
- Pulse counting up to 20Hz
- RS485 2-wire Modbus open communications
- Easy address setting using rotary switches
- Bi-colour LED for module status information
- Yellow LED digital output indication
- Bi-colour LED status indication on each input
- Configurable output condition on comms failure
- Presetable hours on and hours off counters



## Specifications

### Digital output data:

▪ number of outputs	6
▪ rated switching voltage	250v ac
▪ rated / inrush current (resistive load)	8A / 12A
▪ maximum power rating	2,000VA
▪ maximum total module current	32A
▪ electrical life expectancy at rated / 2A load	1 x 10 <sup>5</sup> cycles / 4 x 10 <sup>5</sup> cycles @ 23°C & resistive load
▪ mechanical life expectancy	30 x 10 <sup>6</sup> cycles
▪ maximum switching frequency	6 min <sup>-1</sup> at rated current; 1,200 min <sup>-1</sup> at no load
▪ contact material	AgNi 0.15
▪ isolation test voltage (coil to contact)	4 kV
▪ output relay contact configuration	channels 1,2,3,4,5 & 6: change over contacts

### Digital input data:

	<b>24v ac (12v to 28v):</b>	<b>24v dc (10v to 30v)</b>
▪ number of inputs	12	12
▪ logic '0'	<2v	<3v
▪ maximum pulse frequency	10Hz	20Hz
▪ minimum pulse width	50ms	15ms
▪ input resistance	≥ 6kΩ	≥ 6kΩ

### LED status indication:

▪ per digital output	yellow: on or off
▪ per digital input	bi-colour (software configurable): red, green or off
▪ module status	bi-colour: red / green

### Voltage source for inputs:

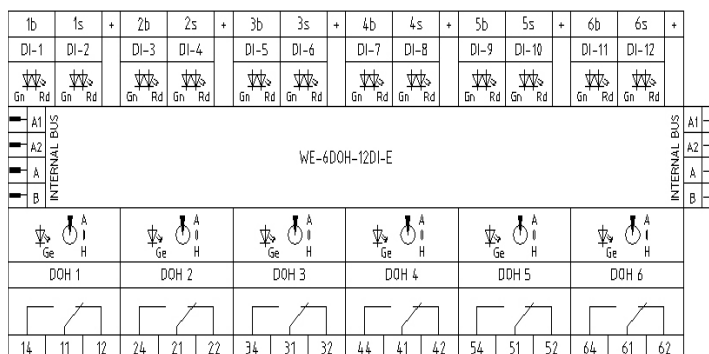
10v to 32v dc at 5ma maximum (to be used only for the inputs on this module)

### 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	275ma ac or 110ma dc
▪ operating temperature range	0°C to +50°C
▪ storage temperature range	-20°C to +70°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	0.2mm <sup>2</sup> to 2.5mm <sup>2</sup> 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)	104mm 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

IOMDIO

6 Digital Outputs with manual override + 12 Digital Inputs

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### Tridium Europe Ltd

1 The Grainstore, Brooks Green Road, Coolham, West Sussex, RH13 8GR, UK  
Telephone: +44 (0) 1403 740290 [www.tridumeurope.com](http://www.tridumeurope.com)