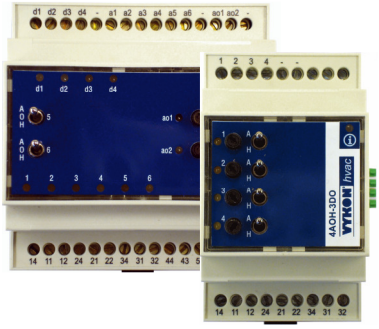
Vykon HVAC I/O Modules - Summary DATA SHEET



Product Overview

The Vykon HVAC 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. The wide variety of modules enables cost-effective use in a range of applications, and LED's plus Hand/Off/Auto switches on some varieties help with commissioning. The IP20 rated modules may be plugged together on standard DIN rail or direct mounting; the cascadable design allows power and 2-wire RS485 Modbus communications to connect through without any extra wiring.

Connectivity

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

Engineering

Configuration and engineering of each module is performed using Vykon HVAC.

Module varieties

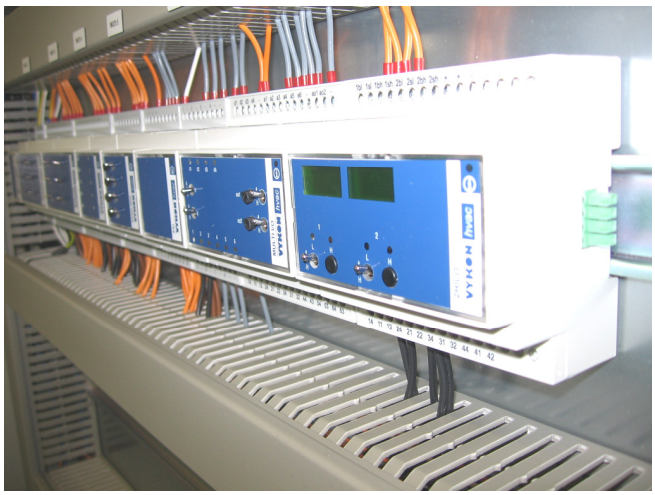
The following module varieties are available:

- 10 Digital Input
- 8 Analogue Input
- 4 Digital Output
- 4 Analogue Output & 3 Digital Output
- 6 Digital Output & 12 Digital Input
- 2 HILO Output
- 4 DI, 6AI, 6DO, 2AO Multi-function
- Power & RS485 connection: CON & CON-R

To simplify wiring and reduce the risk of misconnection the CON and CON-R modules are used in association with the I/O modules.

Features

- **7 different Digital Input, Digital Output, Analogue Input, Analogue Output I/O module varieties**
- **Multi-function I/O module varieties available**
- **Power and communications connection to each module supplied from the CON and CON-R modules**
- **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**
- **Easy address setting using rotary switches**



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IO Modules - Summary
DATA SHEET

General data:

module power supply	20v to 28v ac or dc
module current	various between 30ma and 310ma ac or 10ma and 125ma dc
operating / storage temperature	0℃ to +50℃ / -20℃ to +70℃
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	0.2 – 2.5 mm^2 screw clamp connection
insulation stripping length	6 mm
mounting / installation position	DIN-rail TS35 (35mm x 7.5mm) or direct mounting by M3 fixing / Any position
assembly	up to 15 in a row with zero spacing
insulating material	Housing: Noryl. Terminals: Polyamid 6.6 V0
flammability class	UL94-V0
protection degree (DIN 40050)	IP 20

Bus data:

bus protocol / interface / speed	Modbus RTU / RS485, half duplex, non isolated / 19,200 bps
bus topology / max. length / bus nodes maximum	Multidrop / 500m / 64
bus line termination	integrated termination resistor (220Ω); activate via jumper (default: off)
bus protection	built-in transient protection

Module varieties:

I/O types	Order reference	DI	AI	DO	DOH	AOH	Comments
4AOH-3DO	IOMADO			3		4	3 x change over contacts
8AI	IOMAIP		8				input configuration via hardware configuration block
6DOH-12DI	IOMDIO	12			6		3 x change over contacts + 3 x normally open contacts
10DI	IOMDIP	10					bi-colour LED per input
4DO	IOMDOP			4			4 x change over contacts
MULTI IO	IOMMUL	4	6	4	2	2	mixture module
2HILO	IOM2HL	8		4			4 x change over contacts configured as 2 HI-LO switching pairs

Key to I/O types

DI	24v ac/dc or volt-free contact (VFC)
AI	0-10v or 0-20mA or resistive temperature detector (RTD)
DO	relay – 250v ac, 16A resistive, max power rating 4,000va
DOH	relay – 250v ac, 8A resistive, max power rating 2,000va with hand-off-auto switch
AOH	0-10v with hand-auto switch and adjustable setting potentiometer output

Connector module varieties:

Module	Order reference	Comments
CON	IOMCON	power and network connection for “IOMxxx” modules with network protection and termination (note: one required per network)
CON-R	IOMCNR	power and network connection for additional “IOMxxx” module locations

How to Order

Module	Order reference
4AOH-3DO	**IOMADO**
8AI	**IOMAIP**
6DOH-12DI	**IOMDIO**
10DI	**IOMDIP**
4DO	**IOMDOP**
MULTI IO	**IOMMUL**
2HILO	**IOM2HL**
CON	**IOMCON**
CON-R	**IOMCNR**


4AOH-3DO


8AI


6DOH-12DI


10DI


4DO


MULTI I/O


2HILO


CON


CON-R

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