

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 Vykon HVAC 2HILO module provides 4 independent 240vac/8A rated digital relay outputs configured as two pairs of channels which are suitable for high/low control applications. Each output channel has a pair of digital input channels for contactor run and alarm status.

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

Engineering

Configuration and engineering of the 2HILO module is performed using Vykon HVAC.

Typical applications

Typical applications include building automation control systems.

Vykon HVAC Digital I/O module 2HILO DATA SHEET



Features

- 4 digital output relays with 8A contacts
- Hand-off-auto override switches on outputs
- 8 digital inputs 24v ac or dc
- DIN rail or direct mounting
- 24V ac or dc power operation
- Supports RS485 2-wire Modbus Open Communication network
- Easy address setting using rotary switches
- Bi-colour LED for module status information
- Yellow LED status indication per output
- 2 LCD displays for channel status

Vykon HVAC 2HILO module 2 pair outputs / 8 inputs

Ordering information: VY- 2HILO

Output data:

number of outputs	4
rated switching voltage	240v 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	> 4 x 10 ⁵ cycles / > 16 x 10 ⁵ cycles
mechanical life expectancy	> 30 x 10 ⁶ cycles
maximum switching frequency	6 min ⁻¹ at rated current; 1200 min ⁻¹ at no load
contact material	AgNi
isolation test voltage (coil to contact)	4 kV
output relay contact configuration	channels 1,2,3 & 4: change over contacts

Input data:

number of inputs	8	ac:	8	dc:	8
rated input voltage	24v (12v to 28v)		24v (12v to 28v)		24v (10v to 30v)
logic '0'	<2v		<2v		<2v
maximum frequency	5Hz		5Hz		5Hz
minimum pulse width	50ms		50ms		50ms
input impedance	30,000Ω		30,000Ω		30,000Ω

Voltage source for inputs:

10v to 32v dc at 8ma maximum (voltage depends on load)

Status indication:

per relay output	yellow LED: on or off
module status	bi-colour LED: green-normal operation; blinking red-communications error
per pair of output relays	LCD display

Bus data:

bus protocol	Modbus RTU
bus interface	RS485, half duplex, non isolated
bus topology	multidrop
bus length maximum	500m
bus nodes maximum	64
bus speed	19,200 bps
bus line termination	integrated termination resistors, activate via jumper (default: off)
bus protection	built-in transient protection
bus connector	pluggable male & female integrated connectors (modules mounted with zero spacing)
bus split connector (not included)	pluggable male or female screw connector. 0.2mm ² to 1.0mm ² insulation stripping length 7mm
bus cabling	twisted pair (use STP in industrial environments)

General data:

module power supply	20v to 28v ac or dc
module current	275ma ac or 110ma dc
protection circuit	reverse power supply voltage protection
operating temperature range	0°C to +50°C
storage temperature range	-20°C to +70°C
DIN-VDE regulations	DIN-EN 50178: 1997 / DIN-VDE 0110 pollution degree 2, over voltage category III
electromagnetic compatibility	CE in compliance
conductor cross section	0.2mm ² to 1.5mm ² 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)	88mm x 95mm x 60mm
isolating material / flammability class	Housing: Noryl. Terminals: Polyamid 6.6 V0 / UL94-V0
protection degree (DIN 40050)	IP 20

