AC Input /AC Output Module
HE800DIQ722
120 VAC In, Positive Logic
3A Relay Out

1   SPECIFICATIONS

INPUT	DIQ722			DIQ722
Inputs per Module	14		Input Impedance	0.01µF +10K
Commons per Module	3		Isolation (Channel to Common)	1500VDC
Input Voltage Range	120 – 160 VAC		Minimum ON Current	1mA.
Peak Voltage	160VAC		Maximum OFF Current	200µA.
AC Frequency	50 / 60Hz		OFF to ON Response	50ms.
ON Voltage Level	70VAC Min.		ON to OFF Response	50ms.
OFF Voltage level	30VAC Max.			

OUTPUT	DIQ722			DIQ722
Outputs per Module	10 relay		Maximum Leakage Current	5µA
Commons per Module	2		Maximum Inrush Current	3A
Output Type	Relay		Minimum Load	None
Coil Voltage	18-30VDC		OFF to ON Response	6ms. Typical
Contact Voltage	250VAC / 30VDC Max.		ON to OFF Response	0.3ms. Typical
ON Voltage drop	0.2VDC max.		Isolation (Channel to Channel and Channel to Common)	2500VDC
Maximum Load current (resistive) per channel	3A			

General Specifications			
Required Power (Steady State)	0.17W (7mA @ 24VDC)	CE	MAN0005
Required Power (Inrush)	Negligible	UL	SUP0259
Relative Humidity	5 to 95% Non-condensing	Terminal Type	Spring Clamp, Removable
Operating Temperature	0° to 60° Celsius	Weight	9.5 oz.

**MAN0315-04**

2   WIRING

2.1   Input / Output Connector Wiring

OCS Bottom View – Shows Corresponding I/O Pin
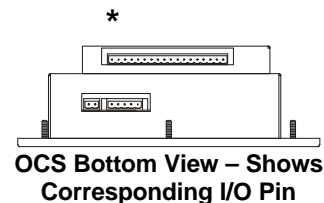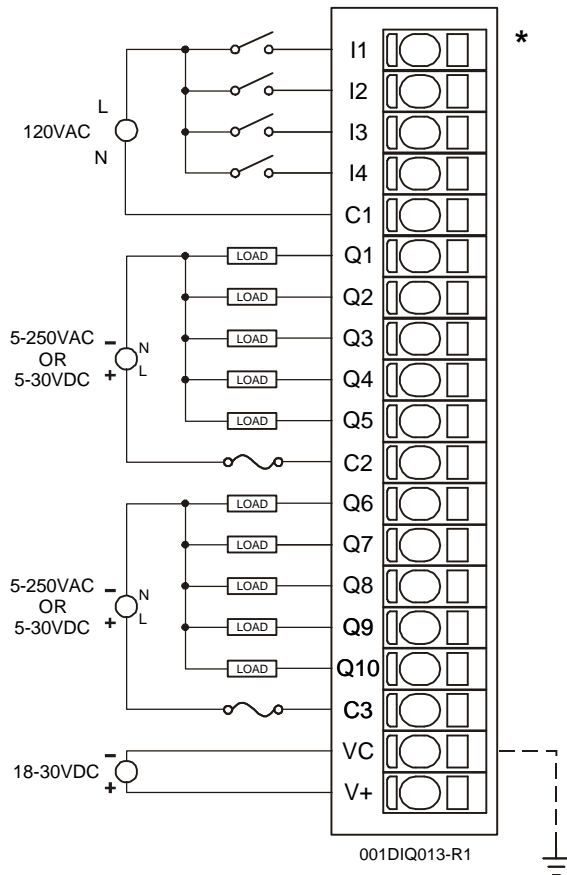
Pin	Signal
	DIQ722
I1	Input 1
I2	Input 2
I3	Input 3
I4	Input 4
C1	Common for Inputs 1,2,3,4
Q1	Output 1
Q2	Output 2
Q3	Output 3
Q4	Output 4
Q5	Output 5
C2	Common for Outputs 1,2,3,4,5
Q6	Output 6
Q7	Output 7
Q8	Output 8
Q9	Output 9
Q10	Output 10
C3	Common for Outputs 6,7,8,9,10
VC	Relay Coil power common, connected to bus common internally.
V+	Relay Coil power + 18 to +30VDC, 90mA max.

001DIQ013-R1

Warning: To protect the module and associated wiring from load faults, use external **(10 A)** fuse(s) as shown. **This warning affects DIQ722, Revisions C or higher.**

Warning: Connecting high voltage to any I/O pin may cause high voltage to appear at other I/O pins.
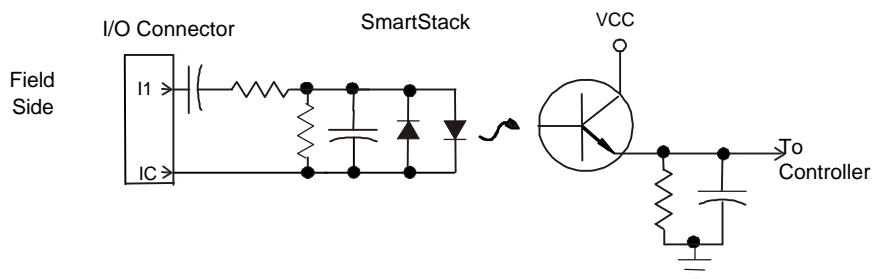
Warning: Wiring the line side of the AC source to loads connected to outputs 1 through 10 and the neutral side of the AC source to the output common(s) would create a Negative Logic condition, which may be considered an unsafe practice.
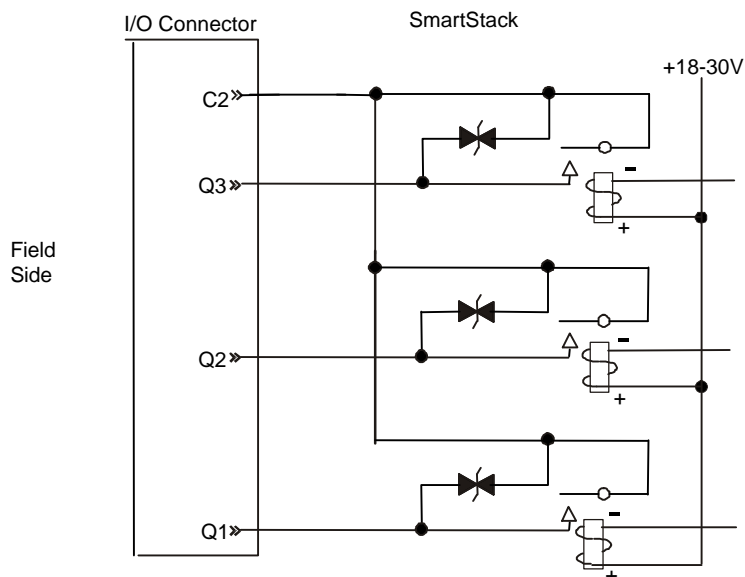
2.2   Input Connector Wiring

001DIQ014

**OCS Top View – Shows
Corresponding I/O Pin**
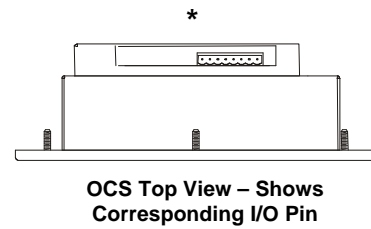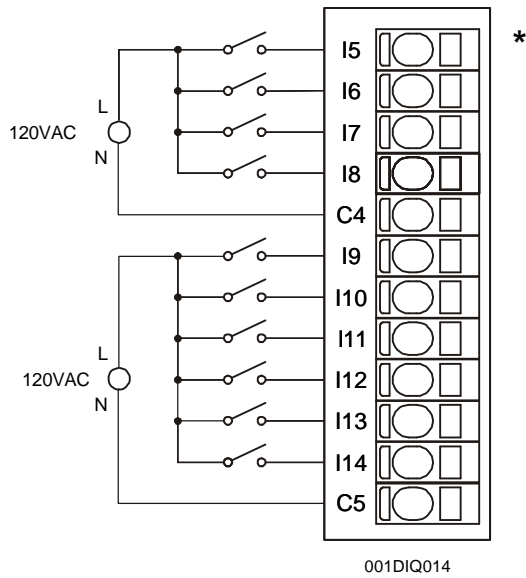
Pin	Signal
	DIQ722
I5	Input 5
I6	Input 6
I7	Input 7
I8	Input 8
C4	Common for Inputs 5,6,7,8
I9	Input 9
I10	Input 10
I11	Input 11
I12	Input 12
I13	Input 13
I14	Input 14
C5	Common for Inputs 9,10,11,12,13,14

3   INTERNAL SCHEMATIC DRAWINGS

This Data Sheet is published individually & also as a part of the SmartStack Supplement (SUP0246-05).
Information is subject to change without notice.   SmartStack is a trademark of Horner APG, LLC.

Specification for transient voltage suppressors (transorbs) used on output circuitry is 400V bi-directional 400W.

Note: Electro-mechanical relays comply with IEC1131-2.

4   CONFIGURATION

Note: The status of the I/O can be monitored in Cscape Software.

Preliminary configuration procedures that are applicable to all SmartStack™ Modules are located in the Control Station Hardware Manual (MAN0227).

Selecting the **I/O Map** tab provides information about the I/O registers, which are assigned to a specific SmartStack™ Module and where the module is located in the point map. The I/O Map is determined by the model number and location within the SmartStack™. The I/O Map is not edited by the user.

The **Module Setup** is used in applications where it is necessary to change the default states of the outputs when the controller (e.g., OCS100) enters idle/stop mode. The default turns the outputs OFF when the controller enters idle/stop mode. By selecting the Module Setup tab, each output can be set to either turn ON, turn OFF or to hold the last state. Generally, most applications use the default settings.

Warning: The default turns the outputs OFF when the controller enters idle/stop mode. To avoid injury of personnel or damages to equipment, exercise extreme caution when changing the default setting using the **Module Setup** tab.

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5   INSTALLATION / SAFETY

> **Warning:** Previous versions of this product provided internal fuses on the output circuits (relay contacts). Due to CE Low Voltage Directive (LVD) marking requirements, these fuses have been removed and replaced with solid wire. Therefore, it is now the responsibility of the user of this equipment to ensure that adequate fusing is installed *externally* on each relay output circuit.

> **Warning:** Remove power from the OCS controller, CAN port, and any peripheral equipment connected to this local system before adding or replacing this or any module.

a. All applicable codes and standards are to be followed in the installation of this product.
b. Use the following wire type or equivalent: Belden 8917, 16 AWG or larger.

When found on the product, the following symbols specify:

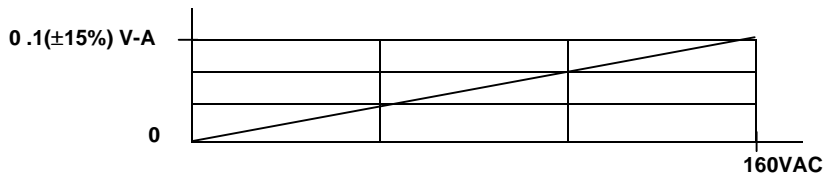| **Warning:** Consult user documentation. | **Warning:** Electrical Shock Hazard. |

For detailed installation information, refer to Chapter Two in the Control Station Hardware Manual (MAN0227). A handy checklist is provided that covers panel box layout requirements and minimum clearances.

6   INPUT / OUTPUT CHARACTERISTICS

Digital Input Chart

Derating Chart for DIQ722
(Each group of 5)

AMPS/CHANNEL
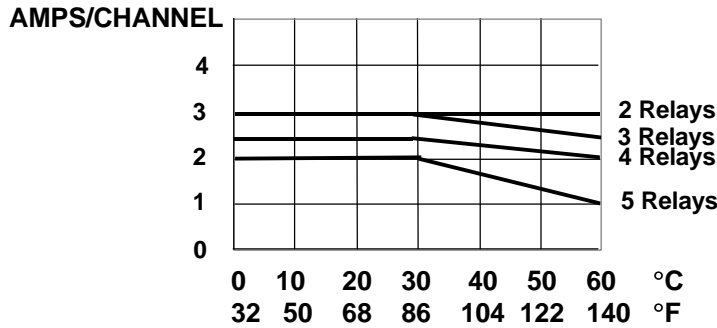
			Typical Relay Life		
Voltage (Resistive)	**No Load**	**Load Current**			
		1 Amp	**2 Amp**	**3 Amp**	
30VDC	20 Million	600K	250K	125K	
125VAC		750K	300K	150K	
250VAC		500K	200K	100K	

The following applies to applications in which two-wire proximity switches are used as sensors for discrete AC inputs. For these applications, an external resistor *or* resistor/capacitor combination must be added to each input as shown below. The resistor provides a small current to power the proximity switch. The resistor is not required for other types of proximity switches.

120VAC: 15K ohm, 2W resistor *or* 0.22μF metallized film capacitor rated for 120VAC service in series with 470 ohm, 0.5W resistor
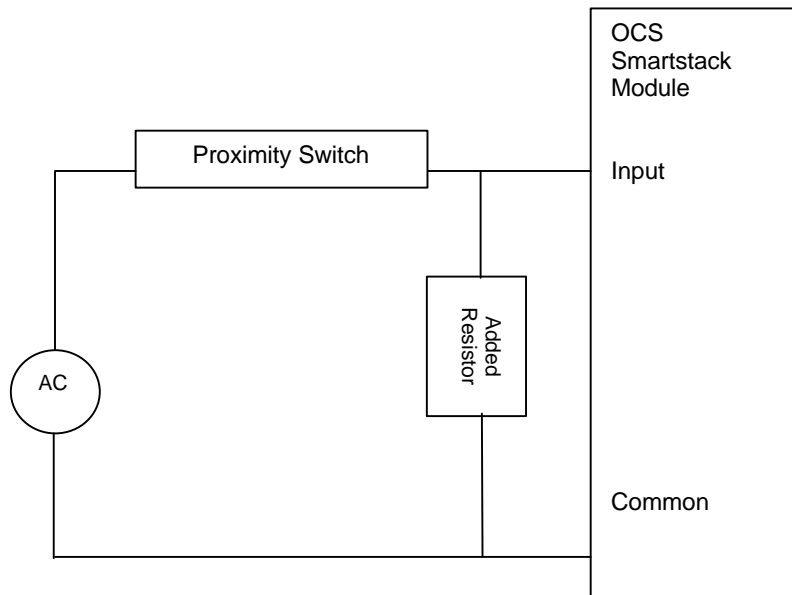
7   TECHNICAL SUPPORT

For assistance, contact Technical Support at the following locations:

North America:
(317) 916-4274 or visit our website at www.heapg.com.

Europe:
(+) 353-21-4321-266

NOTES