



**Relay Output Module**  
**HE800DQM902**  
**20 Relay Outputs**  
**2.5 Amp Maximum**



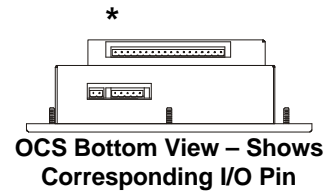
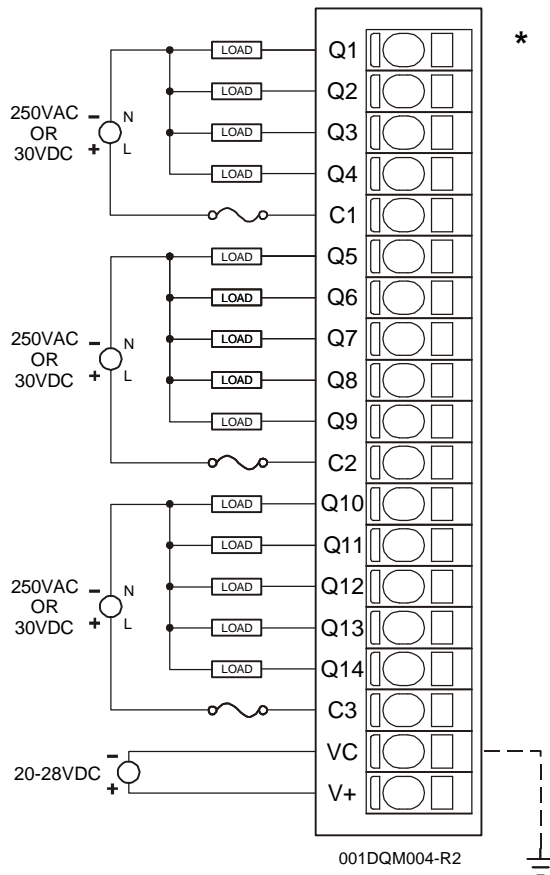
**1 SPECIFICATIONS**

Outputs per Module	20 N.O. Relay	Maximum Load Current (resistive) per channel	2.5A
Commons per Module	5	Maximum Inrush Current	3A
Output Points Consumed	24	OFF to ON Response	10ms. Max.
Isolation (Common to Common, Common to Bus)	500VDC	ON to OFF Response	10ms. Max.
Coil Operating Voltage	20-28VDC	Terminal Type	Spring Clamp, Removable
Output Type	N.O.	Relative Humidity	5 to 95% Non-condensing
Required Power (Steady State)	0.024W (1mA @ 24VDC)	Operating Temperature	0° to 60° Celsius
Required Power (Inrush)	Negligible	CE	MAN0005
ON Voltage Level	0.15V	UL	SUP0259
Maximum Load Voltage	250 VAC, 30VDC Max.	Weight	10.5 oz. (298 g)

MAN0371-02

## 2 SPECIFICATIONS

### 2.1 Output Wiring (P1) – Outputs 1 – 14



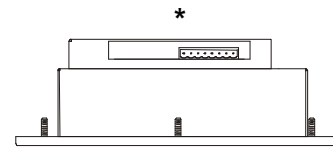
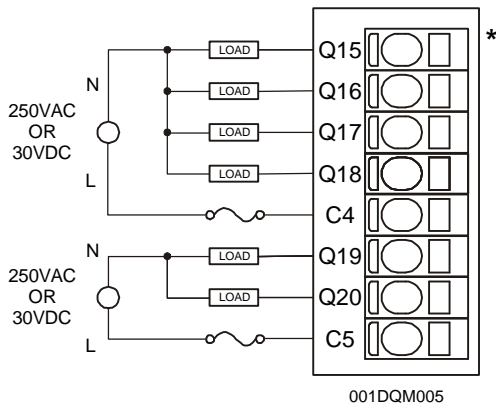
Pin	Signal
<b>DQM902 OUTPUT</b>	
Q1	Output 1
Q2	Output 2
Q3	Output 3
Q4	Output 4
C1	Common 1 (Isolated)
Q5	Output 5
Q6	Output 6
Q7	Output 7
Q8	Output 8
Q9	Output 9
C2	Common 2 (Isolated)
Q10	Output 10
Q11	Output 11
Q12	Output 12
Q13	Output 13
Q14	Output 14
C3	Common 3 (Isolated)
VC	Coil Power Common
V+	Coil Voltage +

**Warning:** To protect the module and associated wiring from load faults, use external fuse (**4 A**) as shown. **This warning affects DQM902, Revisions B 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 14 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.

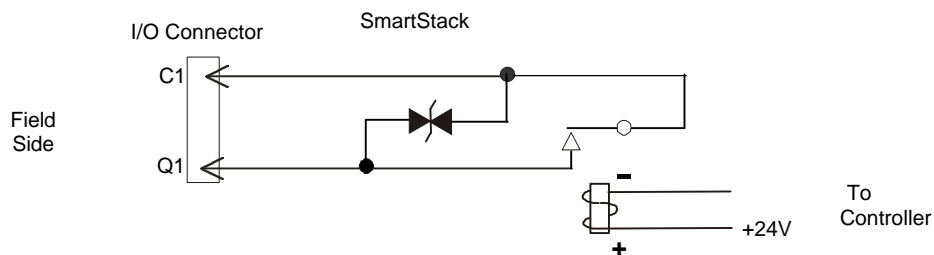
2.2 Output Wiring (P2) – Outputs 15-20



OCS Top View – Shows Corresponding I/O Pin

Pin	Signal
	DQM902 OUTPUT
Q15	Output 15
Q16	Output 16
Q17	Output 17
Q18	Output 18
C4	Common 4 (Isolated)
Q19	Output 19
Q20	Output 20
C5	Common 5 (Isolated)

3 INTERNAL WIRING



Specification for transient voltage suppressors (transorbs) used on output circuitry is 400VDC, bi-directional 400 watts.

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.

## 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.

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.

When found on the product, the following symbols specify:



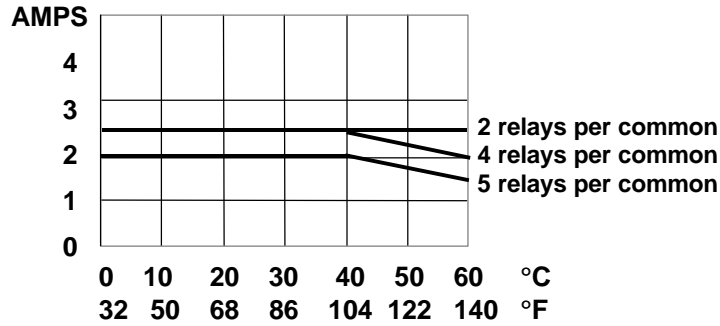
**Warning:** Consult user documentation.



**Warning:** Electrical Shock Hazard.

## 6 OUTPUT CHARACTERISTICS

**Derating Chart for DQM902**



**Note:** Do not exceed 10A on any one common.

Typical Relay Life (DQM902)		
Voltage and Load Type	Load Current	
	1 Amp	2 Amp
30VDC Resistive	35K	12K
250VAC Resistive	30K	10K

## 7 TECHNICAL ASSISTANCE

Please contact the following locations for technical support.

**North America:**

(317) 916-4274 or visit our website at [www.heapg.com](http://www.heapg.com).

**Europe:**

(+) 353-21-4321-266

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