



Relay Output Module

HE450DQM602

16 Relay Outputs

2 Amp Maximum

SmartStix

For electronic information including the GSD File, see www.SmartStix.com.
This product has a Programming Reference (SUP0552).

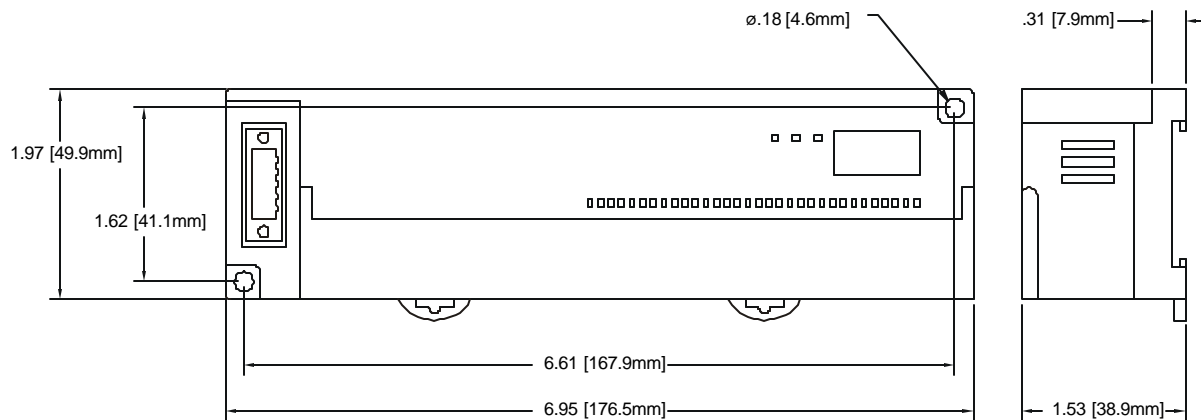
1 SPECIFICATIONS

Relay Outputs			
Number of output points	16	Maximum Load Current (resistive)	2.0A per channel 5.0A per common
Commons per Module	2	OFF to ON Response	10ms. Max.
Rated Load Voltage	24VDC, 220VAC	ON to OFF Response	12ms. Max.
Minimum load voltage / current	5VDC / 1mA	Output Type	N.O.
Minimum load voltage / Maximum switching frequency	250VAC, 110VDC, 1200 times / hour	Common Method	8 points / COM
		Operating Indicator	LED turns on at ON state of output
		External Connections	Terminal block connector (M3 x 6 screws)
General			
Storage Temperature	-25° to 70° C	Pollution degree	2 or lower
Operating Temperature	0° to 55° C	Internal power Consumption (mA)	550mA
Atmosphere	Free from corrosive gases and excessive dust	Cooling method	Self-cooling
Operating and Storage Humidity	5 to 95% Non-condensing	Weight	9.9oz. (282 g)

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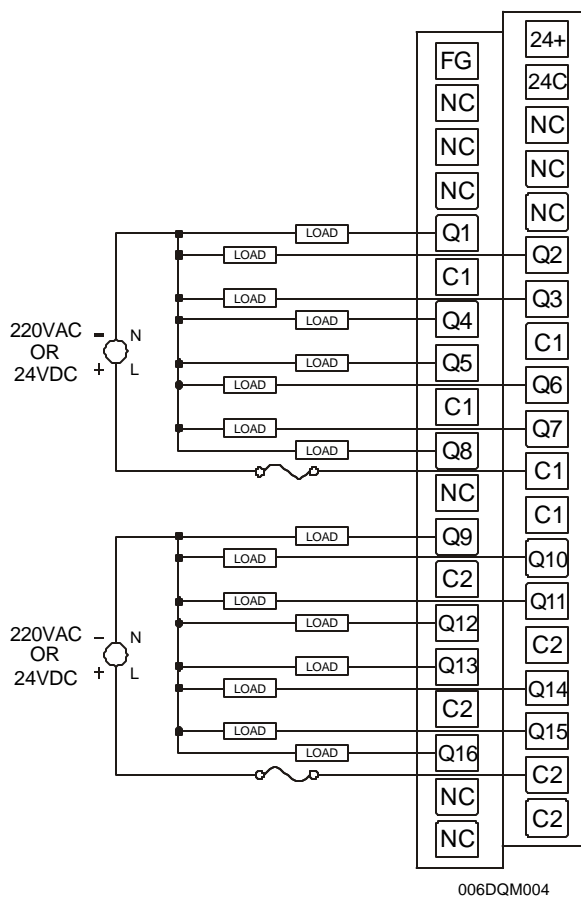
Vibration				
Occasional Vibration				
Frequency	Acceleration	Amplitude	Sweep Count	
10 ≤ f < 57 Hz	-	0.075 mm	10 times in each direction for X,Y,Z	
57 ≤ f ≤ 150 Hz	9.8 m/s ² {1G}	-		
Continuous Vibration				
Frequency	Acceleration	Amplitude	Sweep Count	
10 ≤ f < 57 Hz	-	0.035 mm	10 times in each direction for X,Y,Z	
57 ≤ f ≤ 150 Hz	4.9 m/s ² {0.5G}	-		
Shocks				
Maximum shock acceleration		147 m/s ² {15G}		
Duration Time		11 ms.		
Pulse Wave		Half sine wave pulse (3 times in each of X, Y, Z directions)		
Noise Immunity				
Square wave impulse noise		AC: ± 1,500VDC DC: ± 900VDC		
Electrostatic Discharge		Voltage: 4kV (contact discharge)		
Radiated electromagnetic field		27 – 500MHz, 10V/m		
Fast Transient Burst Noise	Severity level	All power modules	Digital I/Os (Ue ≥ 24V)	Digital I/Os (Ue < 24 V) Analog I/Os Communication I/Os
	Voltage	2 kV	1 kV	0.25 kV

2 DIMENSIONS



006ACC002

3 WIRING



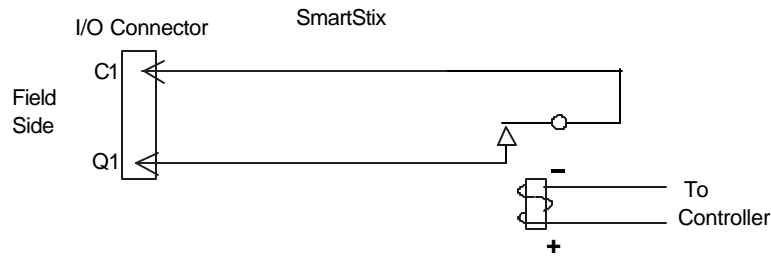
Pin	Signal DQM602
24+	+24V Power Supply
24C	Power Supply Return
FG	Frame Ground
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
Q1	Output 1
Q2	Output 2
C1	Common 1
Q3	Output 3
Q4	Output 4
C1	Common 1
Q5	Output 5
Q6	Output 6
C1	Common 1
Q7	Output 7
Q8	Output 8
C1	Common 1
NC	No Connection
C1	Common 1
Q9	Output 9
Q10	Output 10
C2	Common 2
Q11	Output 11
Q12	Output 12
C2	Common 2
Q13	Output 13
Q14	Output 14
C2	Common 3
Q15	Output 15
Q16	Output 16
C2	Common 2
NC	No Connection
C2	Common 2
NC	No Connection

Warning: To protect the module and associated wiring from load faults, use external fuse (5 A) as shown.

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 0 through 15 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.

4 INTERNAL WIRING



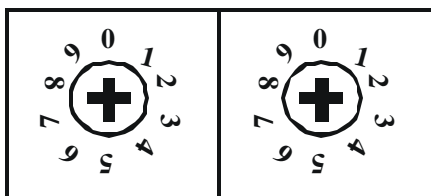
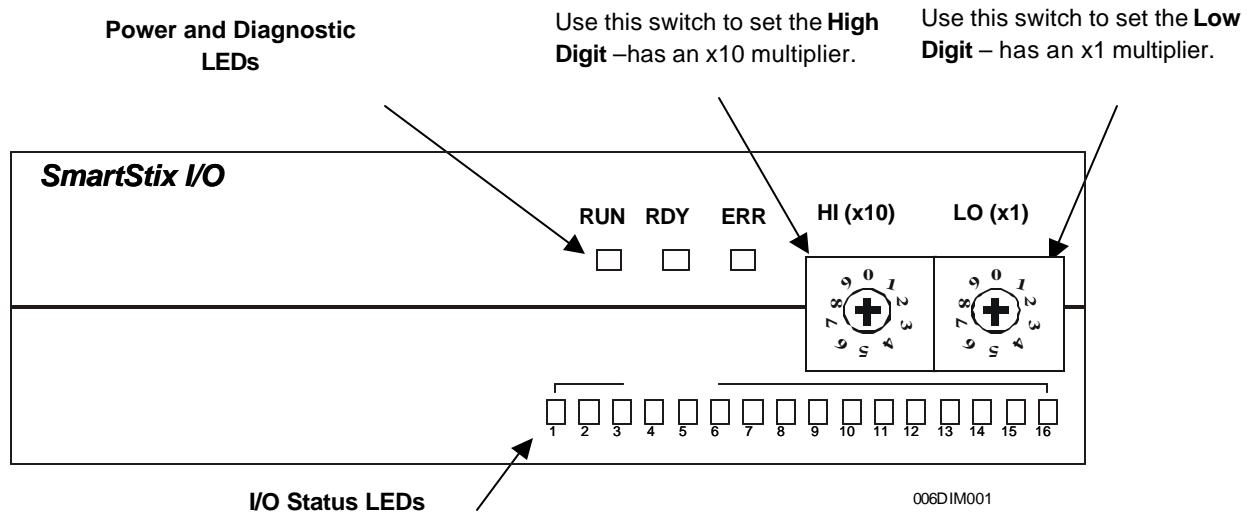
Specification for transient voltage suppressors (transorbs) used on output circuitry is 400VDC, bi-directional 400 watts.

Electro-mechanical relays comply with IEC1131-2.

5 SWITCHES

Setting Address Switches:

Profibus addresses are set using the decimal number system from 1 to 99. Set a unique Network ID by inserting a small Phillips screwdriver into the two *identical* switches as shown in the example.



Close-up of Switches

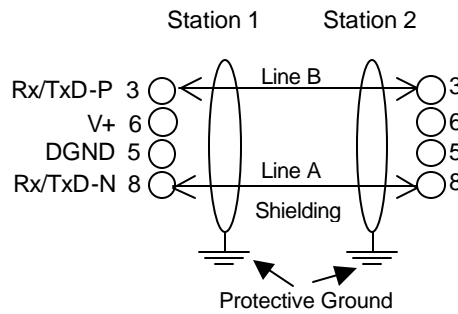
6 LEDS

Communication LED	MEANING
RUN	Displays the status of the power
RDY	Displays the communication status of the communication module
ERR	Displays abnormal condition of communication module

7 NETWORK CABLE

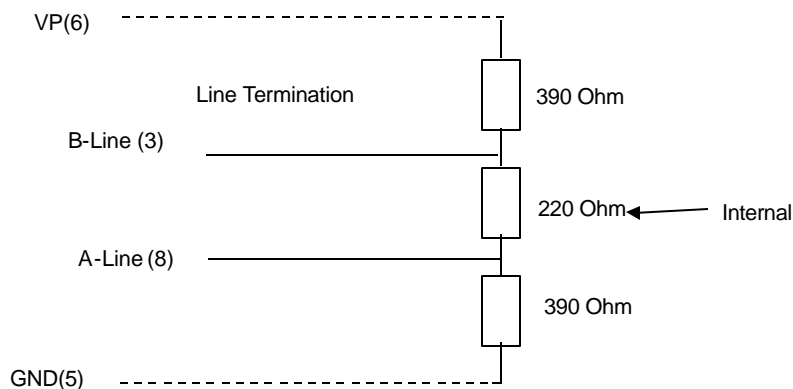
For detailed network information, refer to www.profibus.org.

- a. A SmartStix module uses a 9-pin D-sub plug connector for its DP port. The pin assignment of the plug connector and the wiring are shown below.



- b. It is necessary to terminate both ends of the network. Both terminations must have power to them to insure proper operation of the network. The following diagram illustrates the correct connection for the termination resistors. The diagram is for illustrative purposes only.

Note: Cabling and connectors need to be PTO-approved to achieve the desired performance results.



- c. The shield braiding (and if present, the shield foil) must be connected to protective ground on both sides and must have good conductivity via shield clamps that cover as large an area as possible. In addition, it is recommended that the data lines be kept separate from all high-voltage cables.

8 INSTALLATION / SAFETY

- a. All applicable codes and standards need to be followed in the installation of this product.
- b. For I/O wiring (discrete), use the following wire type or equivalent: Belden 9918, 18 AWG or larger.



Warning: Consult user documentation.



Warning: Electrical Shock Hazard.

9 TECHNICAL ASSISTANCE

For assistance, contact Technical Support at the following locations:

North America:

(317) 916-4274

www.heapg.com

Europe:

(+) 353-21-4321-266

www.horner-apg.com