



Relay Output Module HE400DQM602/ HE400DQM602

SmartStix

**16 Relay Outputs
2 Amp Maximum**

For electronic information including the Electronic Data Sheet (ESD), see www.SmartStix.com. This product has a Programming Reference (SUP0552). HE400 denotes a non-removable terminal strip; HE409 denotes a removable terminal strip.

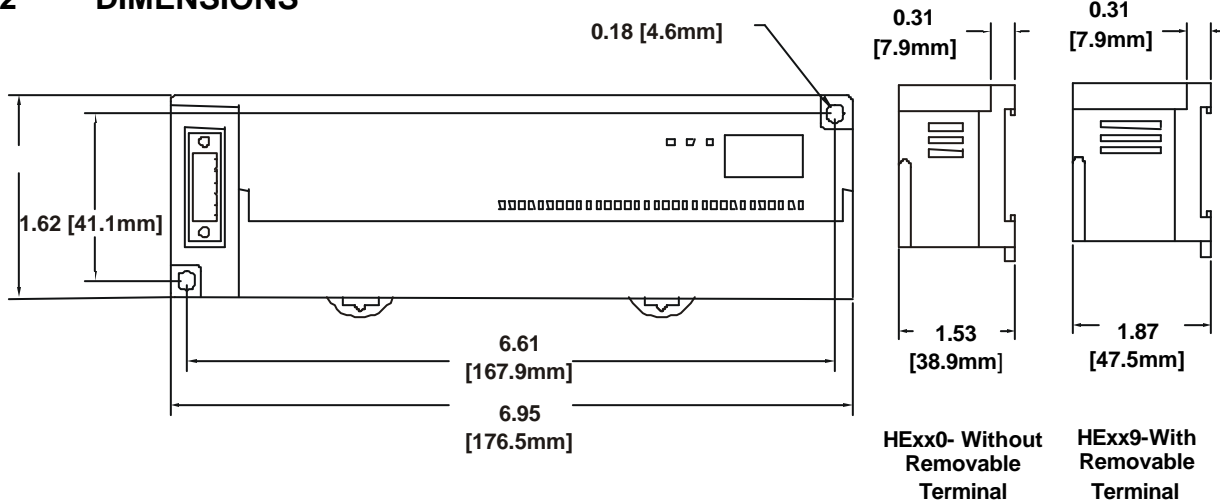
1 SPECIFICATIONS

DQM602 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.
Internal power Consumption (mA)	550mA	External Connections	Terminal block connector (M3 x 6 screws)
Minimum load voltage / Maximum switching frequency	250VAC, 110VDC, 1200 times / hour	Weight	9.91oz. (281 g)
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	9.91oz. (281 g)
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}	-	

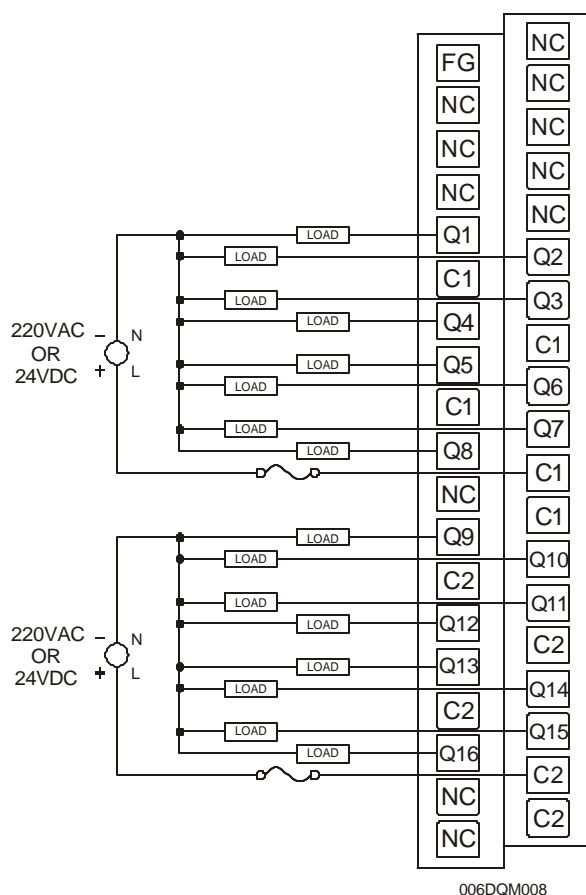
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Shocks				
Maximum shock acceleration	147 m/s ² {15G}			
Duration Time	11 ms.			
Pulse Wave	Half sine wave pulse (3 times in each of X, Y, Z directions)			
Noise Immunity				
Square wave impulse noise	AC: ± 1,500VDC DC: ± 900VDC			
Electrostatic Discharge	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



3 WIRING



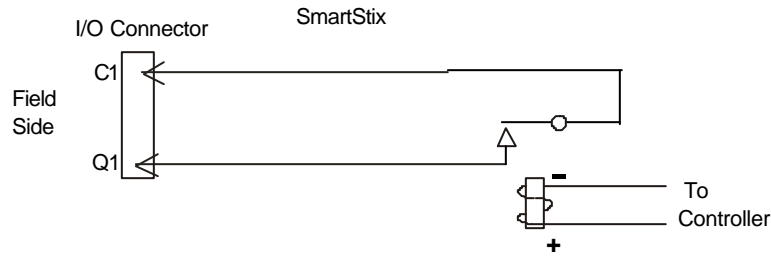
Pin	Signal DQM602
NC*	No Connection (*Do not Connect)
FG	Frame Ground
NC*	No Connection (*Do not Connect)
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
NC	No Connection
Q1	Output 1
Q2	Output 2
C1	Common 1
Q3	Output 3
Q4	Output 4
C1	Common 1
Q5	Output 5
Q6	Output 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

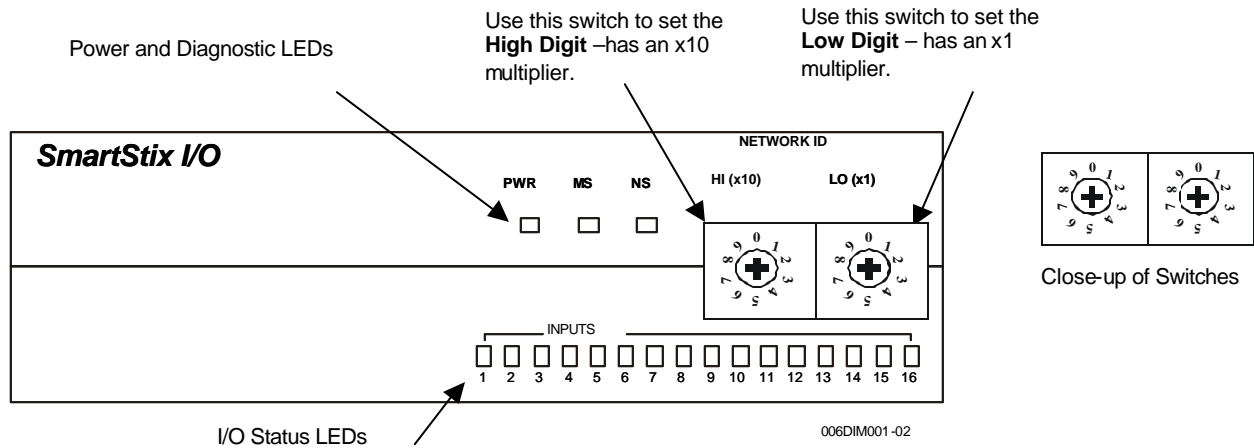


Specification for transient voltage suppressors (transorbs) used on output circuitry is 400VDC, bi-directional 400 watts.

Electro-mechanical relays comply with IEC1131-2.

5 SWITCHES

DeviceNet MAC IDs are set using the decimal number system from 0 to 63. Set a unique ID by inserting a small Phillips screwdriver into the two *identical* switches.



Decimal (Dec) to Hexadecimal (Hex) Conversion					
Dec	Hex		Dec	Hex	
	HI	LO		HI	LO
0	0	0	33	2	1
1	0	1	34	2	2
2	0	2	35	2	3
3	0	3	36	2	4
4	0	4	37	2	5
5	0	5	38	2	6
6	0	6	39	2	7
7	0	7	40	2	8
8	0	8	41	2	9
9	0	9	42	2	A
10	0	A	43	2	B
11	0	B	44	2	C
12	0	C	45	2	D
13	0	D	46	2	E
14	0	E	47	2	F
15	0	F	48	3	0
16	1	0	49	3	1
17	1	1	50	3	2
18	1	2	51	3	3
19	1	3	52	3	4
20	1	4	53	3	5
21	1	5	54	3	6
22	1	6	55	3	7
23	1	7	56	3	8
24	1	8	57	3	9
25	1	9	58	3	A
26	1	A	59	3	B
27	1	B	60	3	C
28	1	C	61	3	D
29	1	D	62	3	E
30	1	E	63	3	F
31	1	F			
32	2	0			

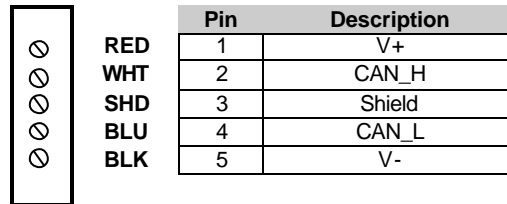
6 LEDS

The Communication LEDs display the status of the communication module.

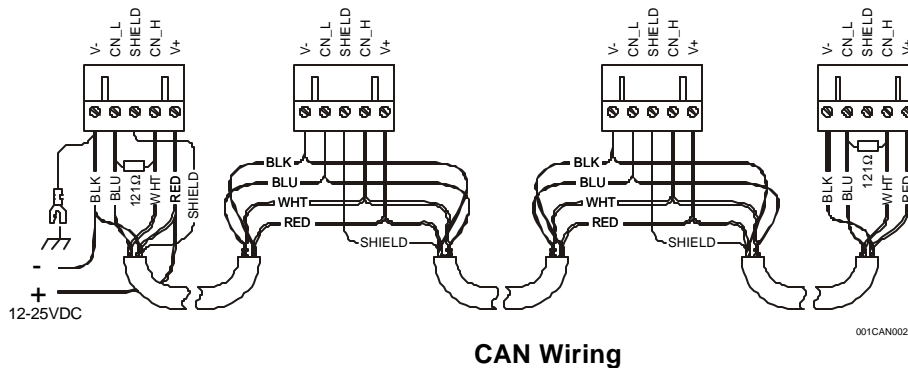
Communication LED	Meaning
PWR	Displays status of power
MS	Displays the status of interface between communication module and CPU module
NS	Displays the status of the network of communication module

7 NETWORK CABLE

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



Recommended Cable	
Thick: (Max Distance = 500m)	Belden 3082A
Thin: (Max Distance = 100m)	Belden 3084A



Note: 12 - 24VDC must be supplied to the network.

8 INSTALLATION / SAFETY

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



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