32 Digital Outputs

HE400DQM701/ HE409DQM701

24VDC Out , Negative Logic

HE409DQM706

24VDC Out , Positive Logic

SmartStix

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

DQM701 / 706 Outputs					
Number of output points		32	**External Power Supply**	**Voltage**	24VDC ± 10%(ripple voltage: 4Vp-p or less)
Commons per Module		2		**Current**	30mA (TYP, All points ON)
Operating Voltage		24VDC	**OFF to ON Response**		2ms.
Rated Load Voltage		24VDC	**ON to OFF Response**		2ms.
Max. Load Current per channel	**DQM 701**	0.1A Max. per output 2A per common	**Output Type**	**DQM 701**	Sinking
	DQM 706	0.5A Max. per output 3A per common		**DQM 706**	Sourcing
OFF Leakage Current		0.1mA or less	**Common Method**		16 points / COM
Max. Inrush Current per channel	**DQM 701**	0.4A, 10ms.	**Operating Indicator**		LED turns on during ON state of output
	DQM 706	1A, 10ms	**External connections**		Terminal block connector (M3 x 6 screws)
Maximum Voltage Drop during ON circuit		1.5VDC(0.5A)	**Isolation methods**		Photo Coupler
Internal power Consumption (mA)		380mA	**Weight**	**DIM701**	8.47 (240g)
				DIM706	10.22 (290g)

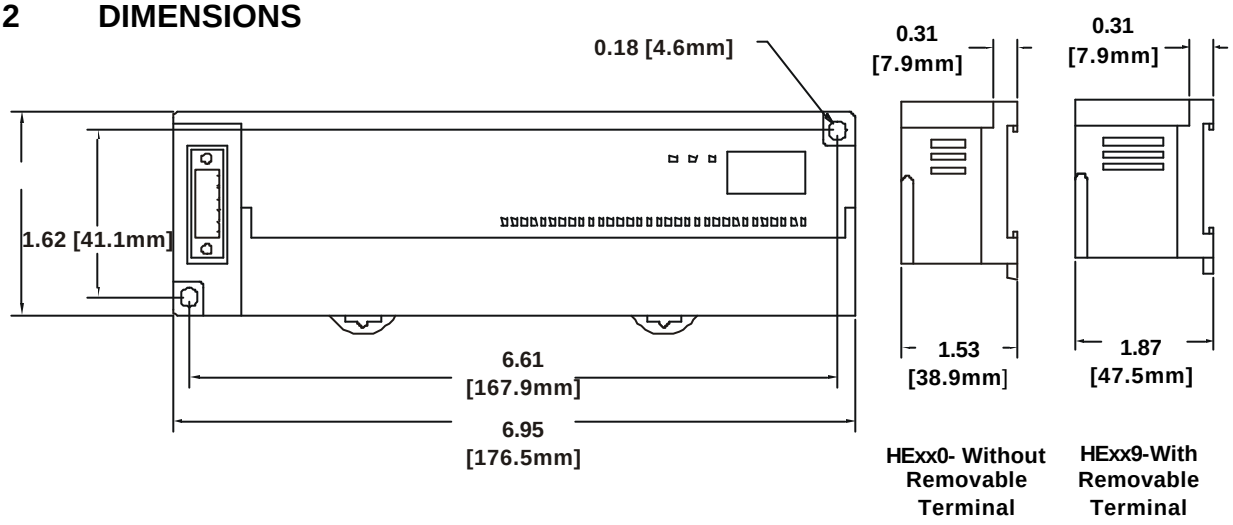
General				
Storage Temperature	-25° to 70° C	**Pollution degree**		2 or lower
Operating Temperature	0° to 55° C	**Internal power Consumption (mA)**		380mA
Atmosphere	Free from corrosive gases and excessive dust	**Cooling method**		Self-cooling
Operating and Storage Humidity	5 to 95% Non-condensing	**Weight**	**DQM701**	8.47 oz. (240g)
			DQM706	10.22 oz. (290g)

MAN0526-04

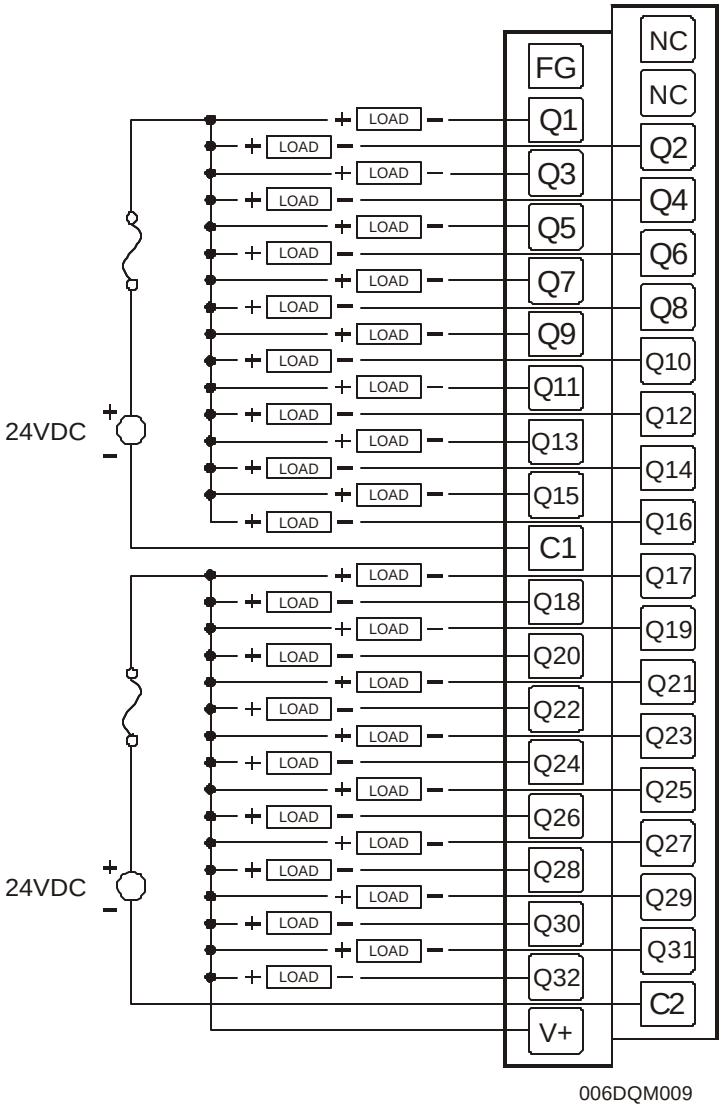
Vibration			
Occasional Vibration			
Frequency	**Acceleration**	**Amplitude**	**Sweep Count**
10 ≤ f < 57 Hz	-	0.075 mm	10 times in each direction for X,Y,Z
57 ≤ f ≤ 150 Hz	9.8 m/s^2{1G}	-	
Continuous Vibration			
Frequency	**Acceleration**	**Amplitude**	**Sweep Count**
10 ≤ f < 57 Hz	-	0.035 mm	10 times 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



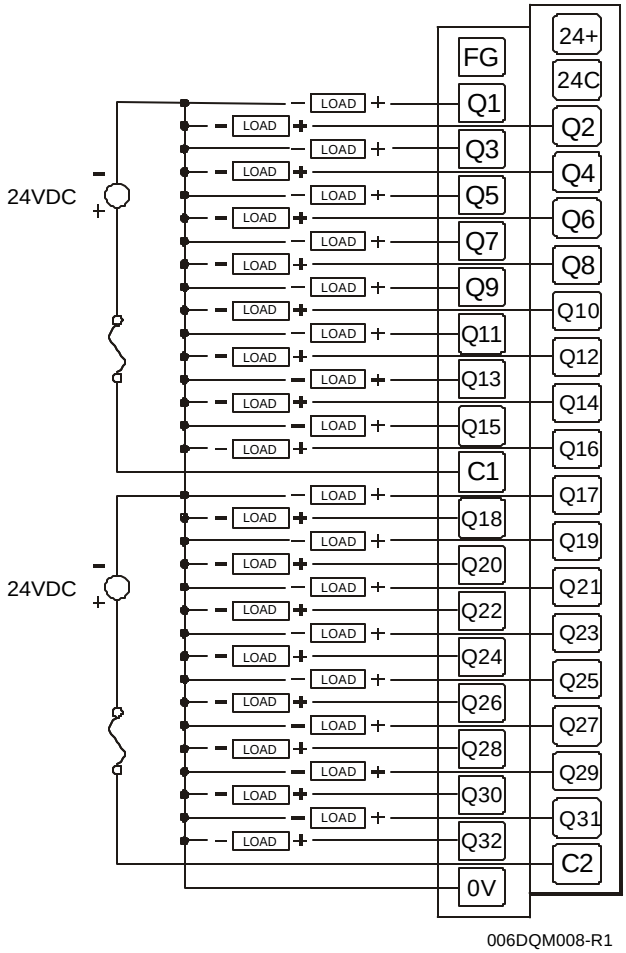
3 WIRING



006DQM009

Note: For proper operation, C1 and C2 must be tied together.

Pin	Signal
	DQM701
NC*	No Connection (*Do not Connect)
FG	Frame Ground
NC*	No Connection (*Do not Connect)
Q1	Output 1
Q2	Output 2
Q3	Output 3
Q4	Output 4
Q5	Output 5
Q6	Output 6
Q7	Output 7
Q8	Output 8
Q9	Output 9
Q10	Output 10
Q11	Output 11
Q12	Output 12
Q13	Output 13
Q14	Output 14
Q15	Output 15
Q16	Output 16
C1	Isolated Common 1
Q17	Output 17
Q18	Output 18
Q19	Output 19
Q20	Output 20
Q21	Output 21
Q22	Output 22
Q23	Output 23
Q24	Output 24
Q25	Output 25
Q26	Output 26
Q27	Output 27
Q28	Output 28
Q29	Output 29
Q30	Output 30
Q31	Output 31
Q32	Output 32
C2	Isolated Common 2
V+	Isolator Power



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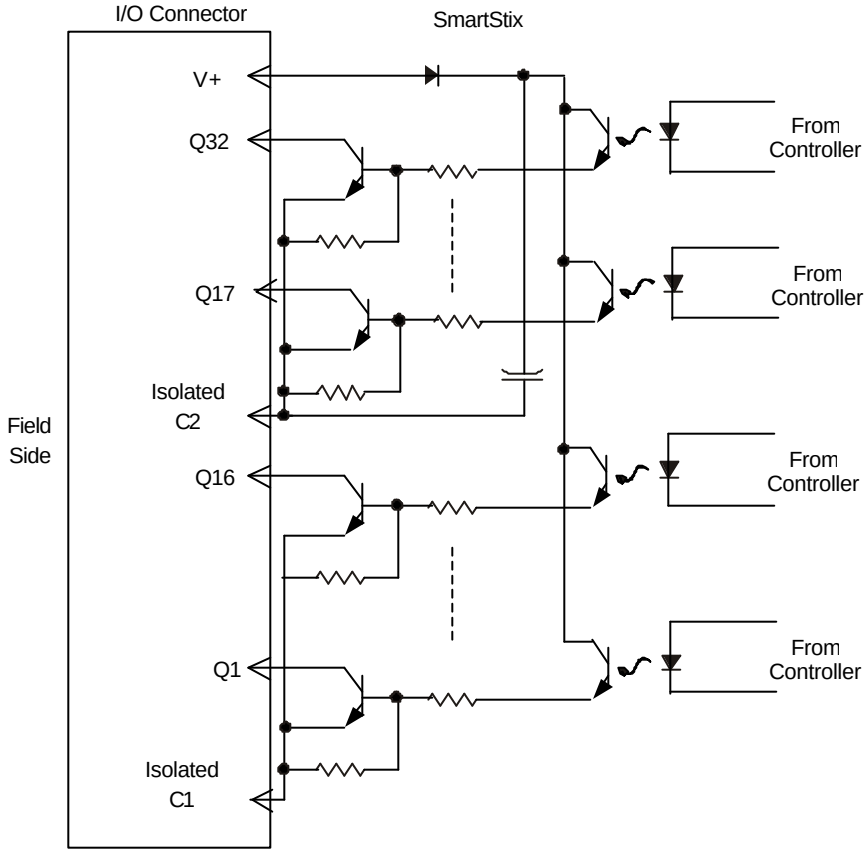
Note: If desired, C1 and C2 can use a single supply.

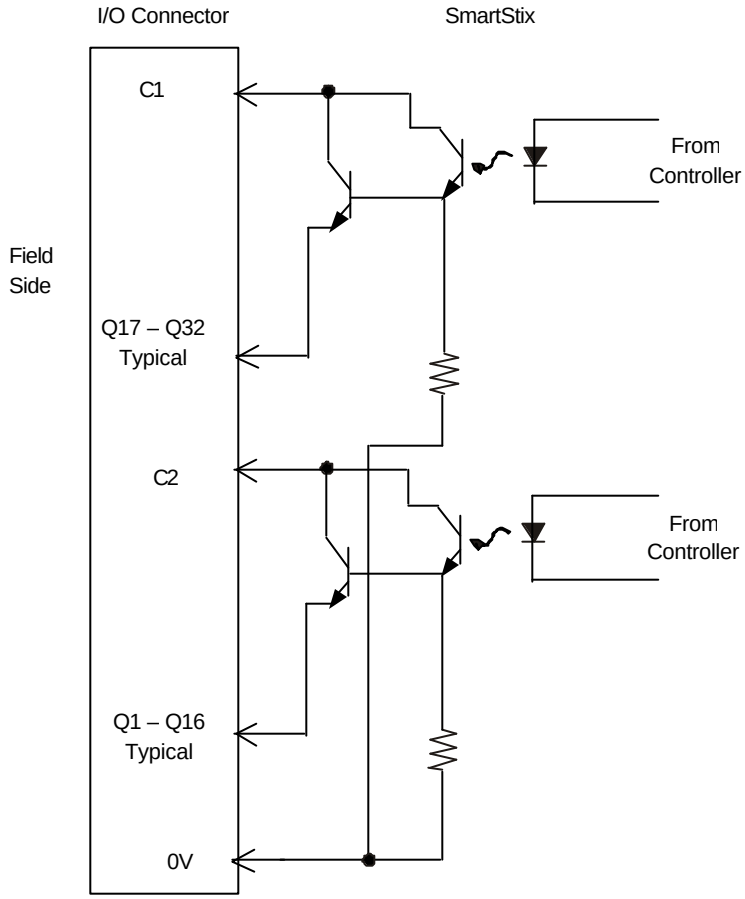
Pin	Signal
	DQM706
24	24V +
FG	Frame Ground
24C*	24V Common (*Do not Connect)
Q1	Output 1
Q2	Output 2
Q3	Output 3
Q4	Output 4
Q5	Output 5
Q6	Output 6
Q7	Output 7
Q8	Output 8
Q9	Output 9
Q10	Output 10
Q11	Output 11
Q12	Output 12
Q13	Output 13
Q14	Output 14
Q15	Output 15
Q16	Output 16
C1	Isolated Common 1
Q17	Output 17
Q18	Output 18
Q19	Output 19
Q20	Output 20
Q21	Output 21
Q22	Output 22
Q23	Output 23
Q24	Output 24
Q25	Output 25
Q26	Output 26
Q27	Output 27
Q28	Output 28
Q29	Output 29
Q30	Output 30
Q31	Output 31
Q32	Output 32
C2	Isolated Common 2
0V	Isolated Power Negative

4 INTERNAL WIRING

a. DQM701

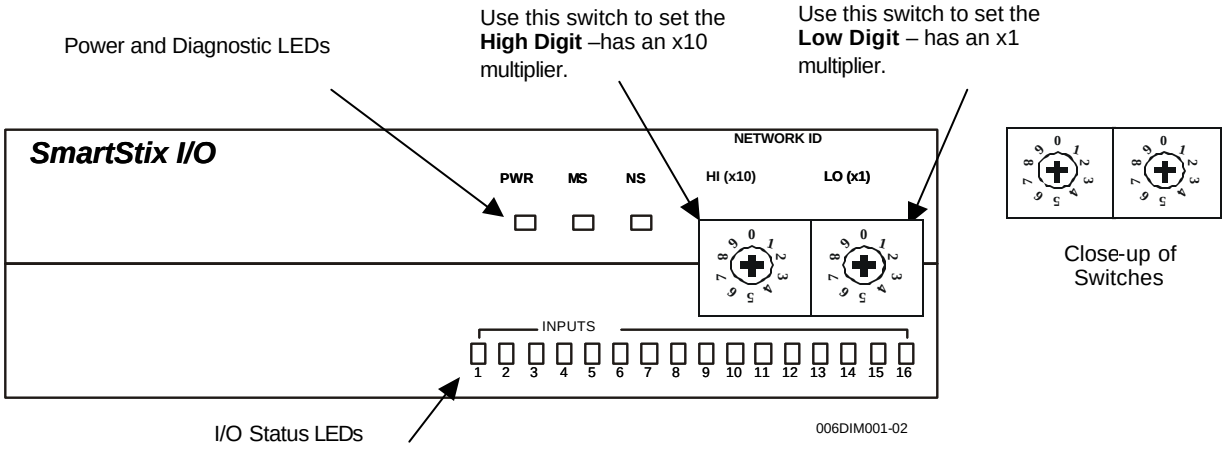


b. DQM706



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			

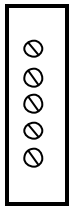
6 LEDS

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

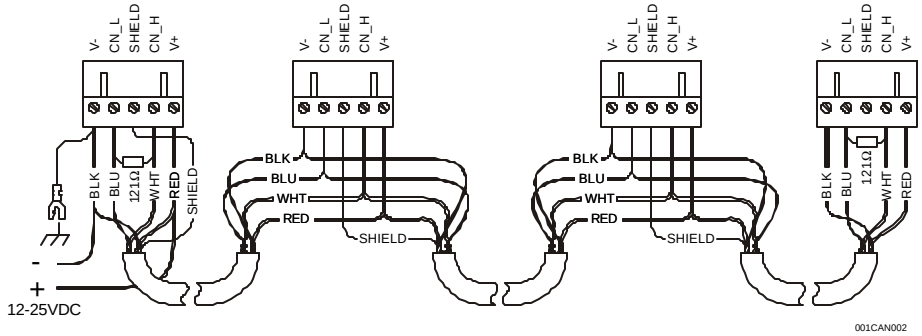
7 NETWORK CABLE

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



	Pin	Description
RED	1	V+
WHT	2	CAN_H
SHD	3	Shield
BLU	4	CAN_L
BLK	5	V-

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



CAN Wiring

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

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.
c. For detailed installation information, refer to www.odva.org.

Warning: Consult user documentation.

Warning: Electrical Shock Hazard.

9 TECHNICAL ASSISTANCE

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(317) 916-4274
www.heapg.com

Europe:
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www.horner-apg.com