



16 Digital Outputs
HE400DQM601 / HE409DQM601
 24VDC Out, Negative Logic
HE409DQM606
 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.

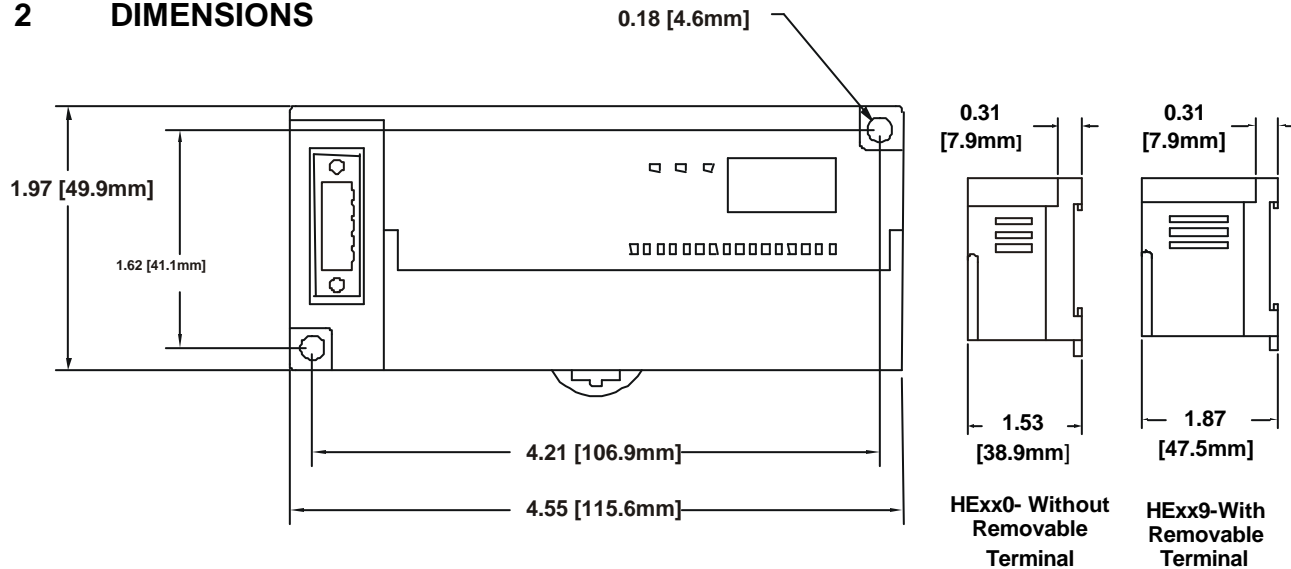
1 SPECIFICATIONS

| DQM601 / DQM606 Outputs | | | | | |
|--|---------------|---------------------------------------|----------------------|--|--|
| Number of output points | 16 | External Power Supply | Voltage | 24VDC \pm 10%(ripple voltage: 4Vp-p or less) | |
| Commons per Module | 1 | | 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 601 | 0.1A Max. per output 2A per common | Output Type | DQM 601 | Sinking |
| | DQM 606 | | | DQM 606 | Sourcing |
| OFF Leakage Current | 0.1mA or less | Common Method | | 16 points / COM | |
| Max. Inrush Current per channel | DQM 601 | 0.4A, 10ms. | Operating Indicator | | LED turns on during ON state of output |
| | DQM 606 | 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) | 280 | Weight | DQM601 | 5.7 oz. (161g) | |
| | | | DQM606 | 6.7 oz. (191g) | |

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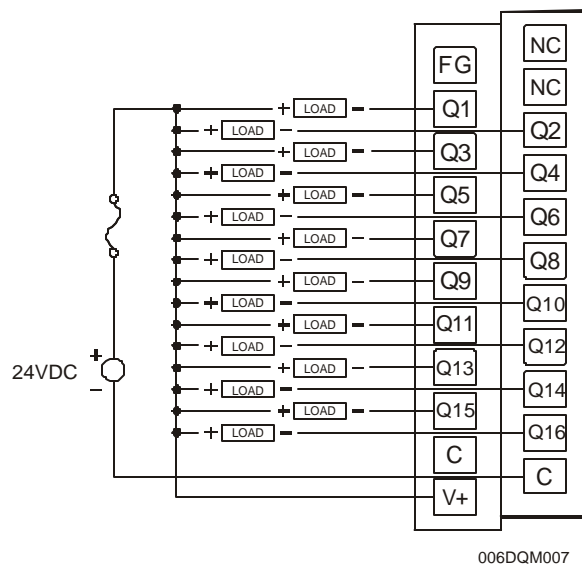
| Vibration | | | | |
|--------------------------------|-----------------------------|--|--------------------------------------|---|
| Occasional Vibration | | | | |
| Frequency | Acceleration | Amplitude | Sweep Count | |
| 10 ≤ f < 57 Hz | - | 0.075 mm | 10 times in each direction for X,Y,Z | |
| 57 ≤ 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

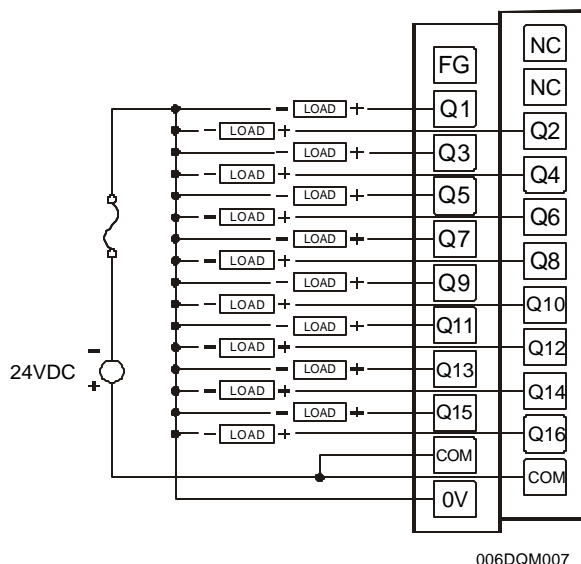


3 WIRING

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



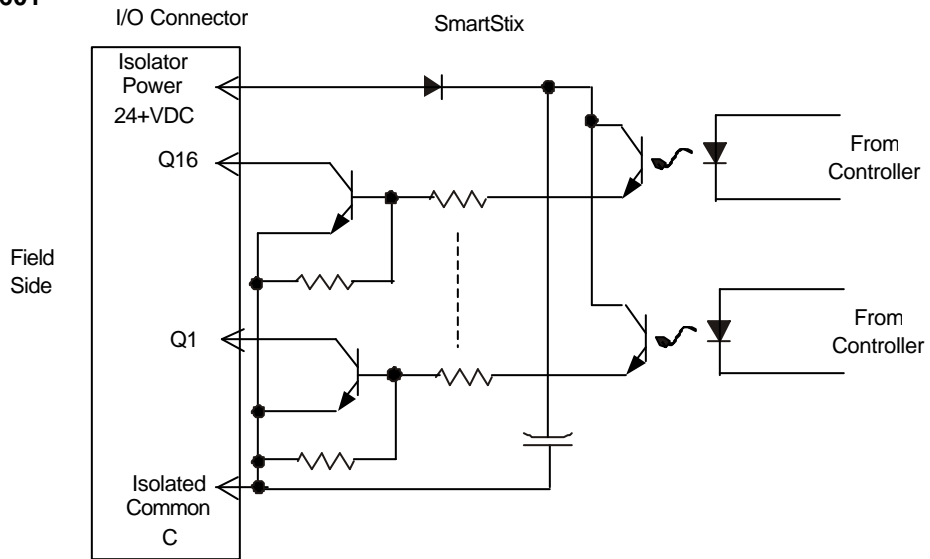
| Pin | Signal |
|-----|------------------------------------|
| | DQM601 |
| NC* | No Connection (*Do not Connect) |
| FG | Frame Ground |
| NC* | No Connection (*Do not Connect) |
| Q1 | Output 1 |
| Q2 | Output 2 |
| Q3 | Output 3 |
| Q4 | Output 4 |
| Q5 | Output 5 |
| Q6 | Output 6 |
| Q7 | Output 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 |
| C | Isolated Common |
| C | Isolated Common |
| V+ | Isolator Power |



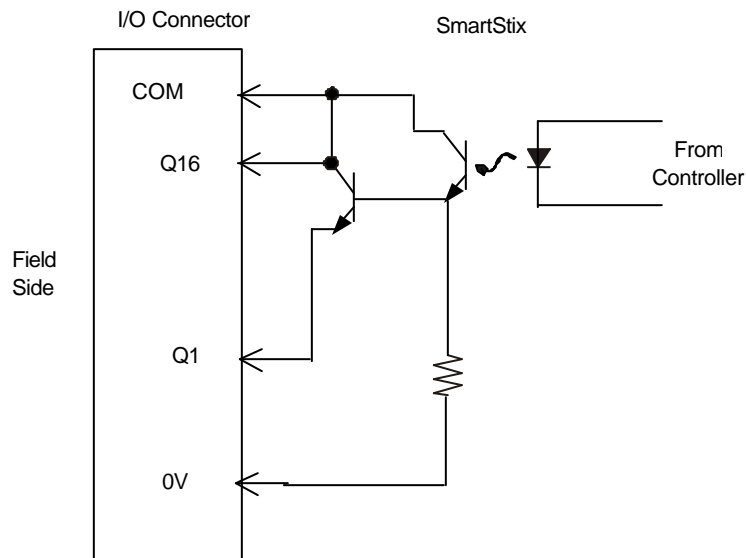
| Pin | Signal |
|-----|------------------------------------|
| | DQM606 |
| NC* | No Connection (*Do not Connect) |
| FG | Frame Ground |
| NC* | No Connection (*Do not Connect) |
| Q1 | Output 1 |
| Q2 | Output 2 |
| Q3 | Output 3 |
| Q4 | Output 4 |
| Q5 | Output 5 |
| Q6 | Output 6 |
| Q7 | Output 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 |
| COM | Isolated Common |
| COM | Isolated Common |
| 0V | Isolated Power Negative |

4 INTERNAL WIRING

a. DQM601

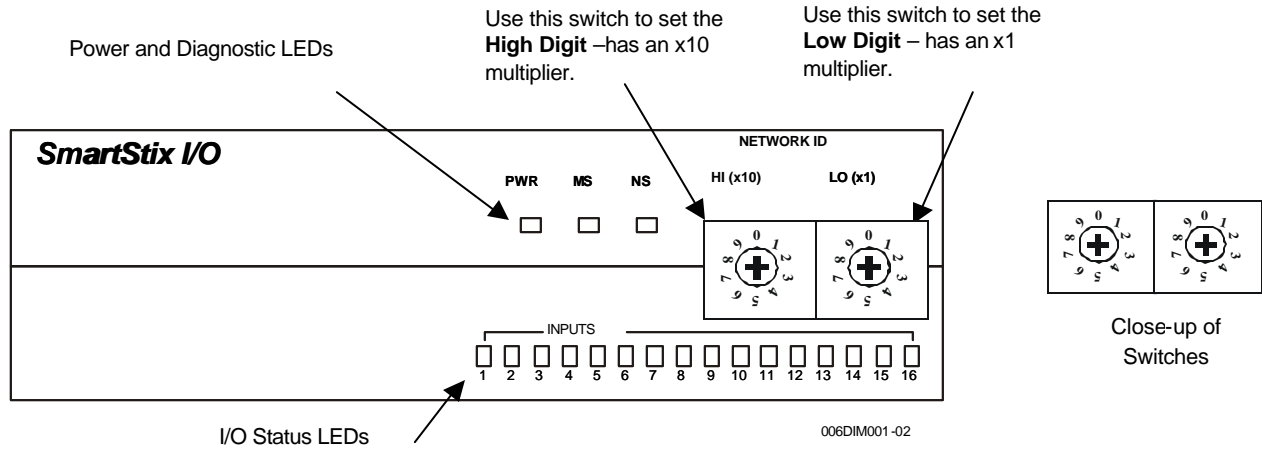


b. DQM606



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.

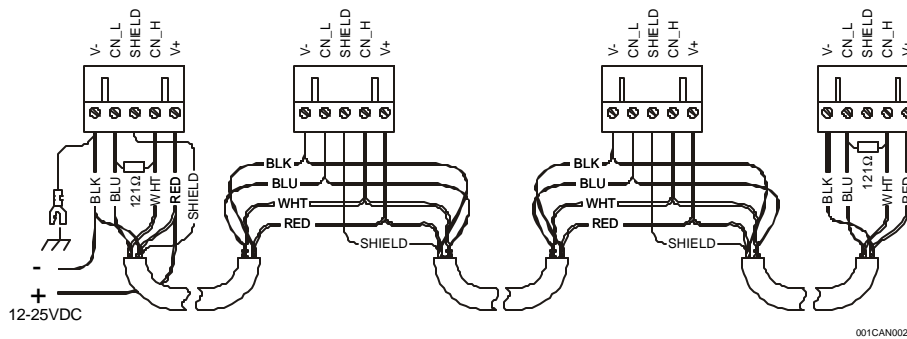
| Communication LED | Meaning |
|-------------------|--|
| PWR | Displays status of power |
| MS | Displays the status of interface between communication module and CPU module |
| NS | Displays the status of the network of communication module |

7 NETWORK CABLE

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

| Pin | Description |
|-----|-------------|
| 1 | V+ |
| 2 | CAN_H |
| 3 | Shield |
| 4 | CAN_L |
| 5 | V- |

| 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 network 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

NOTES