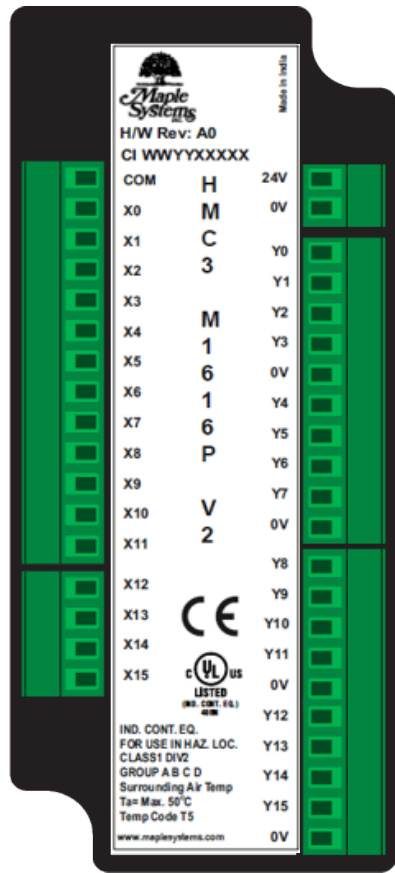


HMC3-M1616P-V2

Quick Start Guide



HMC3-M1616P-V2: 16 Bi-directional type inputs, 2 high speed. 16 PNP type transistor outputs and 1 PWM.

For more information, please refer to the MAPware-7000 Programming Manual, available in software help section and/or you can download from the Maple Systems website.



For More Information, visit <https://www.maplesystems.com>

SPECIFICATIONS

| | |
|---------------------------------|---|
| Power Supply | |
| Voltage Rating | 24VDC ($\pm 15\%$), 12V from base |
| Power Rating | Input/channel: 24VDC, 5mA typical Output/Channel: 250mA @ 24VDC |
| Isolation | Optical Isolation for all I/O points. High isolation voltage (BV= Greater than 1.5kV) |
| Local I/O Specification | |
| Number of Inputs | 16 Inputs Bi-directional Type |
| Input Design | According to EN 61131-2 Type 1 |
| ON Voltage | Min.: 15VDC, Max.: 30VDC |
| OFF Voltage | Min.: -3VDC, Max.: 5VDC |
| Nominal Input Voltage | 24VDC |
| Nominal Input Current | 5mA typical |
| Input Response Time | ON: 10msec, OFF: 10msec |
| Input Impedance | 4.8k Ω |
| High Speed Inputs | 2 pairs, X0-X1, X2-X3 |
| Max Input Frequency | 200kHz |
| Max Input Count | 4,294,967,295 (32-bit) |
| Number of Outputs | 16 PNP Type transistor Outputs |
| ON Output Voltage | Min ON: 22VDC, Max. ON: 30VDC (Voltage across load) |
| OFF Output Voltage | Min OFF: 0.2VDC Max. OFF: 1VDC |
| Nominal Output Voltage | 30VDC |
| Nominal Output Current | 250mA type/channel, 2A @ 230VAC |
| Output Response Time | ON: 10msec, OFF: 10msec |
| Nominal Load Max. | 96 Ω /6W (resistive) @ 24VDC 6VA (inductive, unity power factor) |
| High Speed Output (PWM) | 1, Y0 |
| Max. o/p frequency | 1kHz |
| PWM Duty Cycle | 0 to 100% |
| Analog I/O Specification | |
| Analog Input Total Channels | 2 Input channels (16 bit resolution) |
| Input Type | 0-20mA, 4-20mA & 0-10VDC, 0-5VDC |
| Analog Output Total Channels | 1 Output channels (12 bit resolution) |
| Output type | 0-20mA, 4-20mA and 0-10VDC, 0-5VDC |
| Accuracy | $\pm 0.2\%$ of full scale @ 25°C |

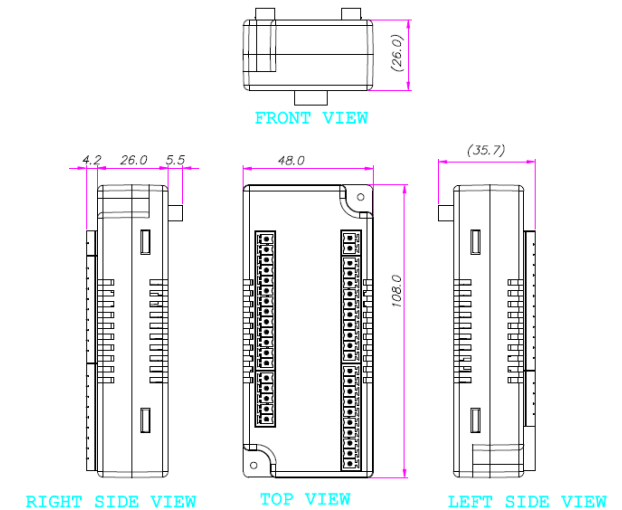
[Note: HMC3 I/O Module V2 Series only compatible with HMC2000/HMC4000 Series Base Model]

SPECIFICATIONS

| | |
|------------------------------------|-----------------------------------|
| Environment & Approvals | |
| Operating Temperature** | 0 to 60°C |
| Storage Temperature | -20 to 85°C |
| Humidity | 10 to 90% (Non-Condensing) |
| Short Circuit Protection | Yes |
| Product Dimensions | 48mm x 108mm x 35.7mm (W x H x D) |
| Approvals | CE, UL |

** Operating temperature: For UL 0 to 50°C

Dimension Details



PANEL MOUNTING

Mounting with base models:

With the expansions, while unpacking the unit, user will find two screws already attached with base bottom case. Fix the expansion with the HMI as shown below with these screws. Fix the Expansion connector with the expansion female connector given on base HMI. Apply torque 0.1Nm while fixing with base unit.

Mounting with 4.3" base model:



Mounting with 7" and 10.1" base model:

For 7" and 10.1" HMI models, the procedure of mounting expansions is same. Only instead of horizontal mounting, expansions will mount in vertical directions.

Hence, accordingly these bases are having facility to add 3 and 5 expansions at a time respectively. Examples are shown here.

Mounting with 7" base model:



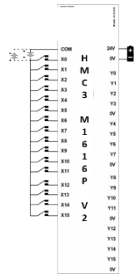
Mounting with 10.1" base model:



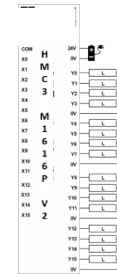
[Note: All Pictures shown are for illustration purpose only. Actual product size may vary.]

WIRING DIAGRAM

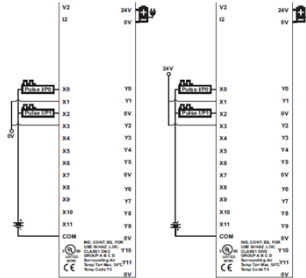
Digital Inputs



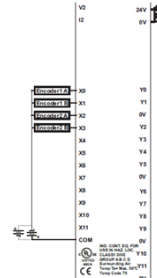
Digital Output



HSC Single Phase



HSC Quadrature



WARNING

- This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or non-hazardous locations only.
- WARNING – EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.
- WARNING – EXPLOSION HAZARD - Substitution of components may impair suitability for Class I, Division 2.
- The list of materials used in the construction of these devices with name of sealed device - generic name of the material and the supplier's name and type designation.
- It is recommended that the user periodically inspect the sealed devices used, for any degradation of properties and replace the device if any degradation is found.

Technical Support:

- For Technical support, please contact Maple Systems along with the unit serial number and revision number written on the address sticker of the unit.
- Also, provide information of the application used. Usually, including your application also provides a lot of help. If possible, e-mail the application to Maple Systems.

REVISION HISTORY

| Rev. | Description | Date |
|------|-----------------|------------|
| 00 | Initial Release | 10/18/2022 |
| 01 | Updated Release | 04/18/2024 |

Maple Systems reserves the right to change or discontinue specifications and features without prior notice. To view the latest and updated datasheets/manuals please visit www.maplesystems.com.