Power Meter Monitor

Business and Mission-

Critical Solutions Provider

PMM061x MODULAR IO

Data Sheet

Model: 061x Modular IO Series
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DECLARATION OF CONFORMITY

This restriction is subject to protect the operational process of the system in the business environment, which will produce, use, and transmit radiofrequency energy. Harmful interference to radio communication could result if instructions to the correct installation and usage were not applied. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device causes a bad effect on the radio / TV signal. The user could preclude that by turning the device on/off.
When this device produces some harmful interference, the user can use the following measure to solve the interference problem:
1-Setting the receiving antenna's direction or location to increase the distance between this device and receiver.
2-Plug in the device's power connector into different circuits of the power outlet with the receiver.
3-If any technical support is needed, the dealer or experienced radio/TV technical personnel must be informed.

TECHNICAL SUPPORT AND SERVICE

Visit Pmm-usa.us to browse FAQs and get further details.
User should collect the following information before submitting technical support and service requests:
- Product name, model and serial number.
- Installed software (operating system, OS version, installed applications and so on).
- Full description of the problem
-Detailed information about every error.

SAFETY INSTRUCTIONS

- Only trained and qualified personnel can install, operate, or maintain the device.
- Before starting the installation, all safety precautions must be read and warning labels affixed to the device must be observed. Doing so protects the device from damage and ensures your safety.
- Safety precautions provided in this document may not cover all safety aspects, note to always remain mindful of safety.
- PMM is not liable for any consequence that results from violation of regulations pertaining to safe operations or safety codes pertaining to design, production, and equipment usage.
- DO NOT use liquids or decontamination spray to clean the device surface and assure that it is totally disconnected while cleaning.
- Take all measures to prevent device drop before or during installation.
- Prior to connecting the device to power source, ensure the source and device voltage and power are 100% matched.
- Keep the cables in a suitable covered place.
- If the device is not used for a long time, shut off the power to avoid the damages by transient overvoltage.
- DO NOT allow any liquid flow into the device; to avoid fire or short circuit.
- The recommended storage temperature range should NOT be less than 30°C OR higher than 85°C.

Warning:

- Read the power source and device inlet carefully.
- Handle device with both hands.
- Clean and maintain the device using recommended, safe and suitable methods.

Caution:

If any unauthorized changes of settings or repairs are done without PMM approval; then user's rights of controlling this device will be canceled.

Contents

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KEY FEATURES

- 32-bit ARM core microcontroller with 48 MHz clock
- Supports Modbus protocol and Meets all industrial standards
- Hot swap redundancy exchange and fail safe ready
- Stand -alone programming or Modular operation modes
- Simple to set up and cost effective
- High speed data reading with high reliability and accuracy
- 1x Ethernet 10/100 port and RS485 port
- Serial port with power surge ±2.5kV isolation protection
- 5000V system/field isolation
- Wide range of power supply options (9-56 VDC)
- Overvoltage and reverse polarity protected
- High precision real time clock (RTC)
- EMI, EMS, EMC and shock protected
- -40 to 80 °C Operating temperature
- 5% to 90% Non-condensing Relative Humidity
- Standard 35mm din rail mounting bracket

DESCRIPTION

PMM061x offers wide range high-quality industrial I/O or mixed analog/digital modules with wide range of options meeting various industrial requirements. The modules connect the field devices (sensors, actuators, etc..) to the processor to swiftly convert between protocols within a network, it supports up to 8 slave devices per communication port on the same network allowing for data transfer in a timely and controlled manner. Thus, facilitating swift and bi-directional communication between sensors and processor on site.
PMM061x modules operate under three operational modes:

- Modular operation mode.
- Fail Safe mode.
- Stand-alone mode.

TARGET APPLICATIONS

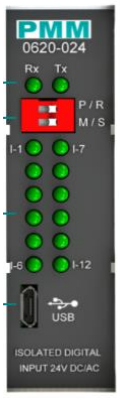
PMM IO modules can perform efficiently and effectively in the substation and industrial applications.

- IO PLC Module
- High speed Data acquisition
- Data logger terminal
- Digital Stand-alone controller
- Power Automation
- Factory Automation and Process Controls
- Process control
- ... and many more.

- PMM061x modular IO series includes input, output or mixed IO modules. The series is divided into main categories each category has high-quality modules. This document provides a glimpse data sheet for each product listed in the series.

1 DIGITAL INPUTS

1.1 PMM0620-024 12x Digital Input 24VDC



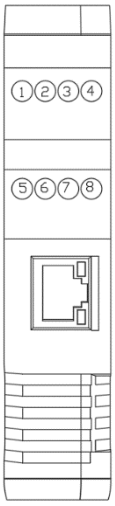
DESCRIPTION

PMM0620-024 is a reliable, and simple to set up digital Input module that has 12 isolated channels. The module receives digital signals from sensors and field devices of 24V range. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0620-024 is widely used in signal interface switching of PLC, single chip or other industrial control board.

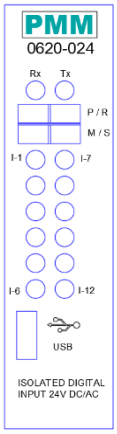
SPECIFICATIONS

Signal type	Voltage
Voltage signal type	24V DC
Input characteristic	High-Side switching
Input current per channel	10mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



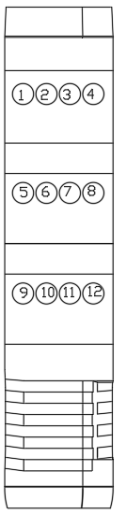
1. D+ (RS485)
2. D- (RS485)
3. Common
4. Common
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth



OPERATION

PMM0620-024 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module should pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input transfer through the module.

BOTTOM VIEW

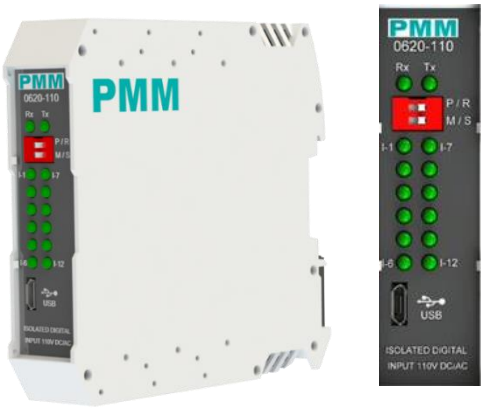


1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Input 09
10. Input 10
11. Input 11
12. Input 12

CONNECTION / DIGRAM

PMM0620-024 has 12 isolated input channels. In order to connect the first digital input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 12 channels.

1.2 PMM0620-110 12 x Digital Input 110VDC/VAC

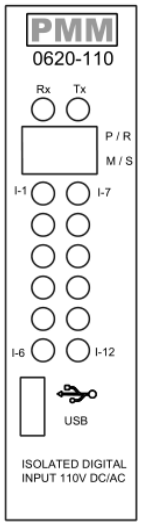


DESCRIPTION

PMM0620-110 is a reliable, and simple to set up digital Input module that has 12 isolated channels. The module receives digital signals from sensors and field devices of 110VDC/AC range. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0620-110 is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Voltage signal type	110V DC/AC
Input characteristic	High-Side switching
Input current per channel	5mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



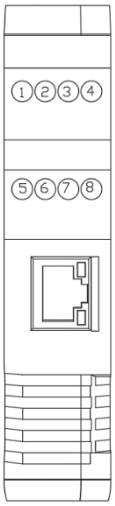
OPERATION

PMM0620-110 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input transfer through the module.

CONNECTION / DIGRAM

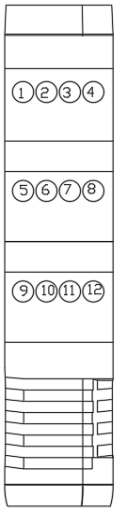
PMM0620-110 has 12 isolated input channels. In order to connect the first digital input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 12 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. Common
4. Common
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Input 09
10. Input 10
11. Input 11
12. Input 12

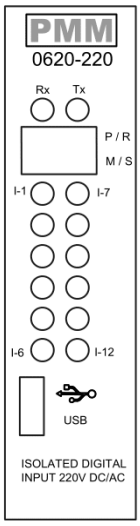
1.3 PMM0620-220 12 x Digital Input 220VAC

DESCRIPTION

PMM0620-220 is a reliable, and simple to set up digital Input module that has 12 isolated channels. The module receives digital signals from sensors and field devices of 220 VAC range. Then, the module converts the signal to 0-5 V scale to make the signals compatible with the CPU. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0620-220 is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Voltage signal type	220V AC
Input characteristic	High-Side switching
Input current per channel	5mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



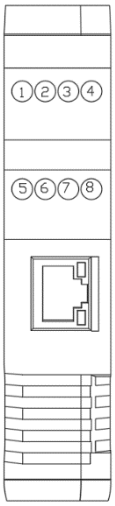
OPERATION

PMM0620-220 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input transfer through the module.

CONNECTION / DIGRAM

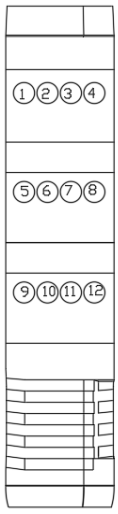
PMM0620-220 has 12 isolated input channels. In order to connect the first digital input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 12 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. Common
4. Common
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Input 09
10. Input 10
11. Input 11
12. Input 12

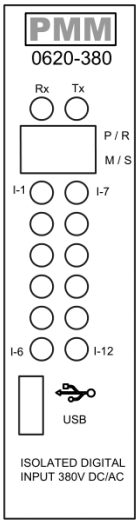
1.4 PMM0620-380 12 x Digital Input 380VAC

DESCRIPTION

PMM0620-380 is a reliable, and simple to set up digital Input module that has 12 isolated channels. The module receives digital signals from sensors and field devices of 380V AC range. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0620-380 is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Voltage signal type	380V AC
Input characteristic	High-Side switching
Input current per channel	5mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



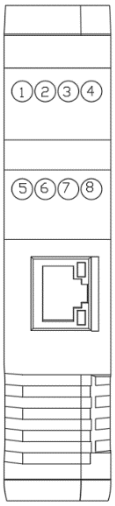
OPERATION

PMM0620-220 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input transfer through the module.

CONNECTION / DIGRAM

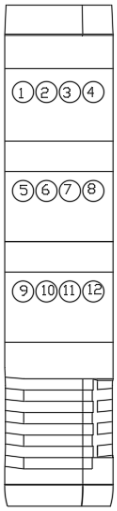
PMM06120-380 has 12 isolated input channels. In order to connect the first digital input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 12 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. Common
4. Common
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

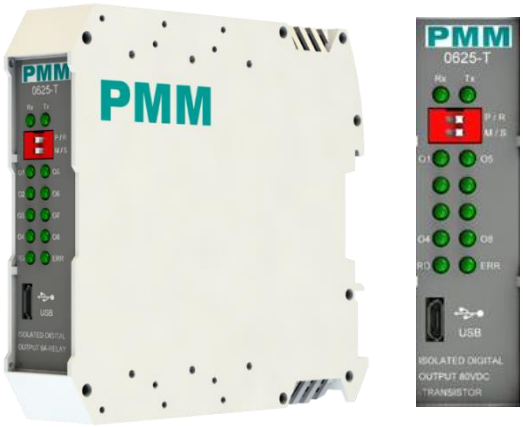
BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Input 09
10. Input 10
11. Input 11
12. Input 12

2 DIGITAL OUTPUT

2.1 PMM0625-T 8 x Transistor Digital Output

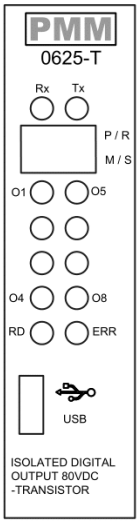


DESCRIPTION

PMM0625-T is a reliable digital output module with 8 (80VDC) transistor isolated channels. The module sends digital signals from the CPU to the field actuators. Each output can be individually switched on or off and can handle up to 5A In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0625-T is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Voltage signal type	80VDC
Output characteristic	High-Side switching
Output current per channel	5A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

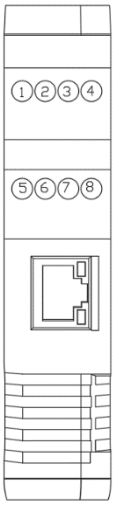


Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 12x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. 01-08 indicators will start to glow green to indicate digital output transfer through the module.

CONNECTION / DIGRAM

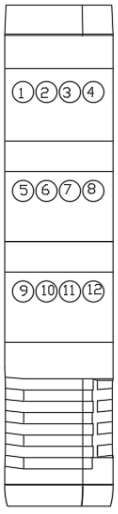
PMM0625-T has 8 isolated output channels. In order to connect the first digital output, connect the positive terminal to output01 pin and connect the negative terminal to common pin. Connection is the same for all output channels up to 8 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. GND
4. Master command
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. output 01
2. output 02
3. output 03
4. output 04
5. output 05
6. output 06
7. output 07
8. output 08
9. VCC
10. COM1
11. VCC
12. COM 2

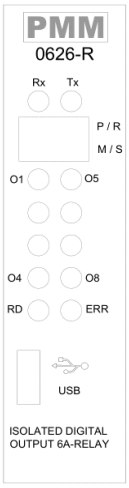
2.2 PMM0626-R 8 x Relay NO Digital Output

DESCRIPTION

PMM0626-R is a reliable relay digital output module with 8 isolated channels. The module sends digital signals from the CPU to the field actuators. This module used when a higher drive capability is required, or when isolation between outputs is required. Each output can be individually switched on or off and can handle up to 6A. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0626-R is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Switching Voltage	(400VAC , 125VDC) Max
Output characteristic	Dry contact (NO)
Output current per channel	6A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



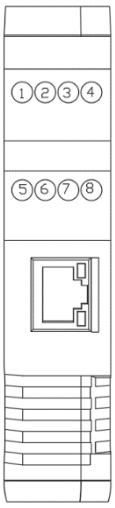
OPERATION

PMM0626-R operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
There are 12x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. 01-08 indicators will start to glow green to indicate digital output transfer through the module.

CONNECTION / DIGRAM

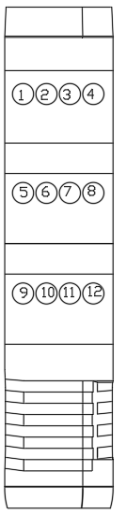
PMM0626-R has 8 isolated output channels. In order to connect the first digital output, connect the positive terminal to output01 pin and connect the negative terminal to common pin. Connection is the same for all output channels up to 8 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. Common
4. Common
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Output 01
2. Output 02
3. Output 03
4. Output 04
5. Output 05
6. Output 06
7. Output 07
8. Output 08
9. Output 09
10. Output 10
11. Output 11
12. Output 12

2.3 PMM0627-R 4 x Relay NO/NC Digital Output

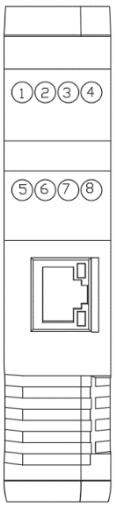
DESCRIPTION

PMM0627-R is a reliable two-ways relay digital output module with 4 isolated channels. The module sends digital signals from the CPU to the field actuators. This module used when a higher drive capability is required, or when isolation between outputs is required. Each output can be individually switched on or off and can handle up to 6A. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0627-R is widely used in signal interface switching of PLC, single chip or other industrial control board.

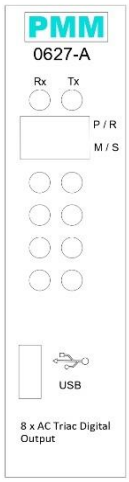
SPECIFICATIONS

Signal type	Voltage
Switching Voltage	(400 VAC, 125VDC) Max
Output characteristic	Dry contact (NO/NC)
Output current per channel	6A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



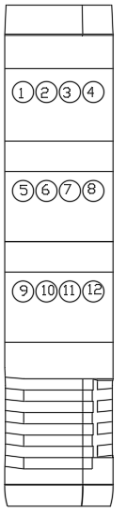
1. D+ RS485
2. D- RS485
3. PH01
4. PH02
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth



OPERATION

PMM0627-R operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 10x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital output transfer through the module.

BOTTOM VIEW



1. Output 01
2. Output 02
3. Output 03
4. Output 04
5. Output 05
6. Output 06
7. Output 07
8. Output 08
9. N
10. N
11. N1
12. N1

CONNECTION / DIGRAM

PMM0627-R has 8 isolated output channels. In order to connect the first digital output, connect the positive terminal to output01 pin and connect the negative terminal to common pin. Connection is the same for all output channels up to 8 channels.

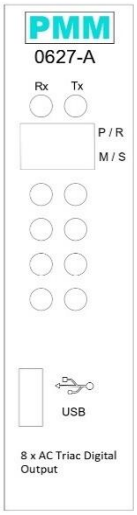
2.4 PMM0627-A 8 x AC Triac Digital Output

DESCRIPTION

PMM0627-A is a reliable two-ways relay digital output module with 8 x Isolated AC (Triac 6A) channels. The module sends digital signals from the CPU to the field actuators. This module is used when a higher drive capability is required, or when isolation between outputs is required. Each output can be individually switched on or off and can handle up to 6A. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0627-A is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

Signal type	Voltage
Voltage signal type	600V
Output current per channel	6A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



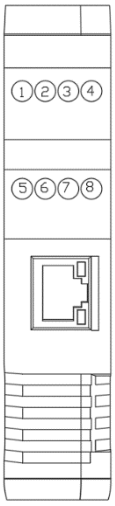
OPERATION

PMM0627-A operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 10x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital output transfer through the module.

CONNECTION / DIGRAM

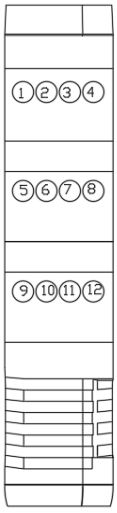
PMM0627-A has 8 isolated output channels. In order to connect the first digital output, connect the positive terminal to output01 pin and connect the negative terminal to common pin. Connection is the same for all output channels up to 8 channels.

TOP VIEW



1. D+ RS485
2. D- RS485
3. PH01
4. PH02
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

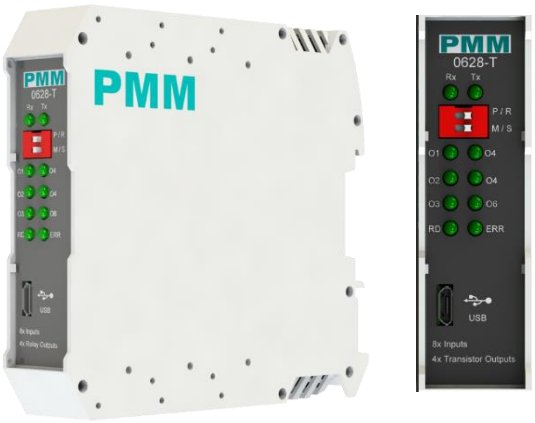
BOTTOM VIEW



1. Output 01
2. Output 02
3. Output 03
4. Output 04
5. Output 05
6. Output 06
7. Output 07
8. Output 08
9. N
10. N
11. N1
12. N1

3 MIXED DIGITAL IO

3.1 PMM0628-T 8x inputs / 4 x Transistor outputs



DESCRIPTION

PMM0628-T is an innovative, and simple to set up 8x inputs / 4 x Transistor outputs isolated module. The module receives digital signals from sensors and field devices of various ranges (24VDC/110VDC/AC, 220 and 380VAC) based on client's requirements. As well as, the module sends digital signals from the CPU controlling the field actuators. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0628-T is widely used in signal interface switching of PLC, single chip or other industrial control board.

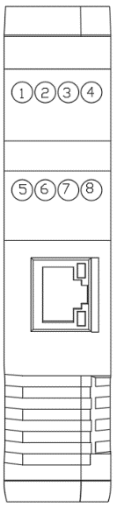
INPUT SPECIFICATIONS

Signal type	Voltage
Voltage signal type	24VDC/110VDC/AC, 220VAC, or380VAC
Input characteristic	High-Side switching
Input current per channel	10mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

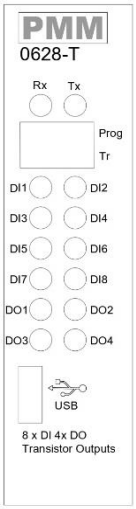
OUTPUT SPECIFICATIONS

Signal type	Voltage
Voltage signal type	80VDC
Output characteristic	High-Side switching
Output current per channel	5A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



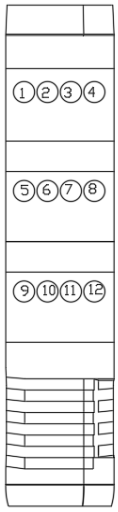
1. D+ RS485
2. D- RS485
3. Input com
4. Input com
5. VDC+ (9-56)
6. VDC- (9-56)
7. Output com
8. Output VCC



OPERATION

PMM0628-T operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input/output transfer through the module.

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Output 09
10. Output 10
11. Output 11
12. Output 12

CONNECTION / DIGRAM

PMM0628-T has 8 isolated input and 4 output channels. In order to connect the first I/O, connect the positive terminal to input01/output01 pin and connect the negative terminal to input/output common pin. Connection is the same for all I/O channels up to 8 channels.

3.2 PMM0628-R 8x inputs / 4 x Relay outputs

DESCRIPTION

PMM0628-R is an innovative, and simple to set up 8x inputs / 4 x relay outputs isolated module. The module receives digital signals from sensors and field devices of various ranges (24VDC/110VDC/AC, 220VDC/AC, and 380VDC/AC) based on client's requirements. As well as, the module sends through the digital signals from the CPU controlling the field actuators. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU. PMM0628-R is widely used in signal interface switching of PLC, single chip or other industrial control board.

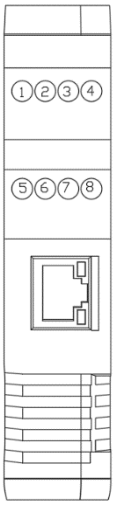
INPUT SPECIFICATIONS

Signal type	Voltage
Voltage signal type	24VDC/110VDC/AC, 220/ or 380V AC
Input characteristic	High-Side switching
Input current per channel	10mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

OUTPUT SPECIFICATIONS

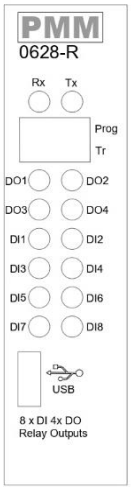
Signal type	Voltage
Voltage signal type	(400 VAC , 125VDC) Max
Output characteristic	Dry contact (NO)
Output current per channel	6A
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



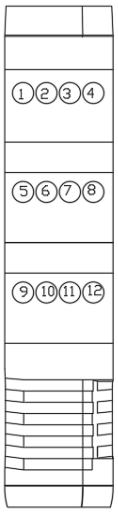
1. D+ RS485
2. D- RS485
3. Input com
4. Input com
5. VDC+ (9-56)
6. VDC- (9-56)
7. Output com
8. Output com

OPERATION



PMM0628-R operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate digital input/output transfer through the module.

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. Output 09
10. Output 10
11. Output 11
12. Output 12

CONNECTION / DIGRAM

PMM0628-R has 8 isolated input and 4 output channels. In order to connect the first I/O, connect the positive terminal to input01/output01 pin and connect the negative terminal to input/output common pin. Connection is the same for all I/O channels up to 8 channels.

4 ANALOG INPUT

4.1 PMM0630- 8 x AI (16bit, V, C, PT)

DESCRIPTION

PMM0630 is an innovative, and simple to set up 8 x 16bit Analog input module. The module receives analog signals from sensors and field devices and performs analog to digital conversion (ADC) with 16-bit resolution operating at a throughput of 500 kSPS. PMM0630 can be used in many applications as the connected sensors or field devices could be current, voltage or PT sensors. PMM0630 is widely used in Power Automation, Protection Relays and PLC Analog Input Modules. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.

SPECIFICATIONS

Input signal type	Voltage, current and PT
Signal range	0-5 V, 4-20mA
Resolution	16 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

OPERATION

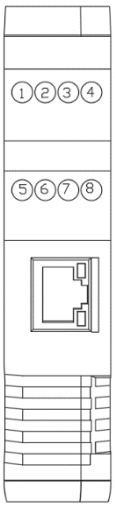
PMM0630 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.

Moreover, there are 2x LED indicators at the front panel. PWR LED for power indication and RUN LED for code execution indication.

CONNECTION / DIGRAM

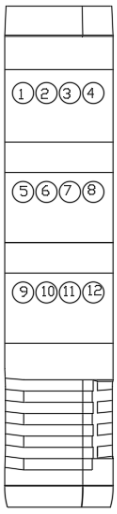
PMM0630 has 8 isolated input channels. In order to connect the first analog input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 8 channels.

TOP VIEW



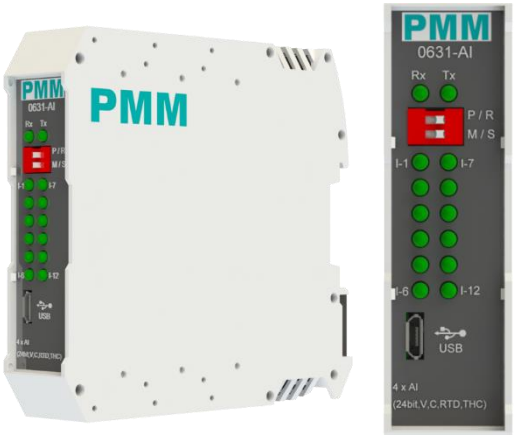
1. D+ RS485
2. D- RS485
3. R+ DP2
4. R+ DP3
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. GND
10. V ref voltage
11. GND
12. GND

4.2 PMM0631- 4 x AI (24bit, V, C, RTD, THC)



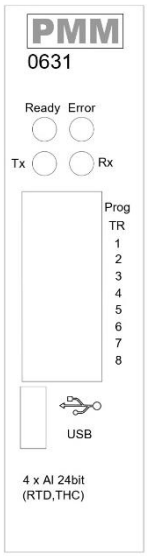
DESCRIPTION

PMM0631 is an innovative, and simple to set up 4 x 24bit analog input module. The module receives analog signals from sensors and field devices and performs analog to digital conversion (ADC) with 24-bit resolution operating at a throughput of 2 kSPS. PMM0631 can be used in many applications as the connected sensors or field devices could be current, voltage or temperature measurements sensors such as RTD and thermocouples. PMM0631 is widely used temperature and pressure measurements, flow meters, factory automation and process control applications.

In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.

SPECIFICATIONS

Input signal type	Voltage, current, RTD and Thermocouples
Signal range	0-5 V, 4-20mA
Resolution	24 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



OPERATION

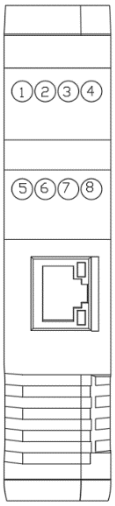
PMM0631 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.

Moreover, there are 14x LED indicators at the front panel. Rx and Tx will start to blink green if there is data transmission over RS485. Other indicators will start to glow green to indicate analog input transfer through the module.

CONNECTION / DIGRAM

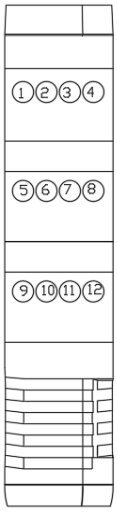
PMM0631 has 4 isolated analog input channels. In order to connect the first analog input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 4 channels.

TOP VIEW



1. D+ RS485
2. D- RS485
3. GND
4. 2.5 Reference
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Input 05
6. Input 06
7. Input 07
8. Input 08
9. + 5V
10. + 5V
11. GND
12. GND

4.3 PMM0632- 8 x AI (12bit, Flex AI)

DESCRIPTION

PMM0632 is a reliable, and simple to set up 8 x 12bit Flex Analog Input module. It is useful and could be used for many industrial applications as the module is software configurable input/output solution that either sends to the CPU the received analog signals from sensors and field devices directly or sends analog signals from the CPU to field actuators through connection with signal conditioner based on the functional code. The AI/AO signals are either voltage signals (0-3.3V) or current (4-20mA).
The voltage AI/AO signals are directly connected with the CPU. However, to convert the current signals to voltage the dip switch must be turned on. The dip switch has eight pins, the user can configure any of them individually based on how many current inputs/outputs are needed.

SPECIFICATIONS

Input signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	12 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

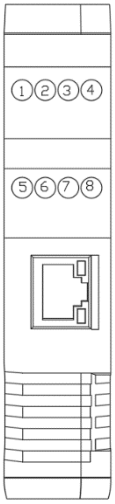
OPERATION

PMM0632 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 4x LED indicators at the front panel. 1x LED for power indication ,1x LED for code execution indication, 1x LED for Tx and 1x LED for Rx for communication over RS485 port indication.

CONNECTION / DIGRAM

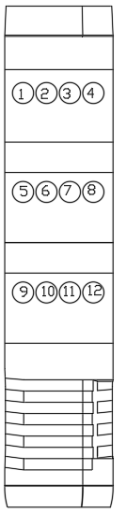
PMM0632 has 8 isolated input channels. In order to connect the first analog input, connect the positive terminal to Input01 pin and connect the negative terminal to common pin. Connection is the same for all input channels up to 8 channels.

TOP VIEW



1. D+ (RS485)
2. D- (RS485)
3. V reference
4. Earth
5. V DC+ (9-56)
6. V DC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. In/Out 01
2. In/Out 02
3. In/Out 03
4. In/Out 04
5. In/Out 05
6. In/Out 06
7. In/Out 07
8. In/Out 08
9. GND
10. VCC 5V
11. GND
12. VCC 5V

5 ANALOG OUTPUT

5.1 PMM0635- 8 x AO (12bit, V, C)

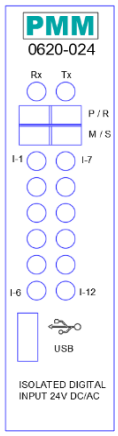
DESCRIPTION

PMM0635 is a reliable and robust architecture analog output module with 8 x 12bit isolated channels. The module sends digital signals from the CPU controlling the field actuators. In addition, it is software-configurable input/output module and it contains four 13-bit DACs, one per channel, and 16-bit Σ-Δ ADC. These options give a lot of flexibility in choosing functionality for analog output, analog input, digital input, resistance temperature detector (RTD), and thermocouple measurements.
PMM0635 is widely used in Process control, Factory automation, Motor drives, Building control systems.

SPECIFICATIONS

Output signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	12 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

OPERATION

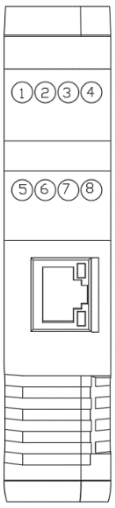


PMM0635 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 4x LED indicators at the front panel. 1x LED for power indication ,1x LED for code execution indication, 1x LED for Tx and 1x LED for Rx for communication over RS485 port indication.

CONNECTION / DIGRAM

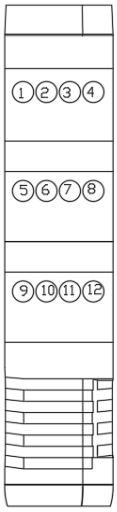
PMM0635 has 8 isolated output channels. In order to connect the first analog output, connect the positive terminal to output01 pin and connect the negative terminal to GND pin. Connection is the same for all output channels up to 8 channels.

TOP VIEW



1. D+ RS485
2. D- RS485
3. External reference 1
4. External reference 2
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Output 01
2. Output 02
3. Output 03
4. Output 04
5. Output 05
6. Output 06
7. Output 07
8. Output 08
9. GND
10. GND
11. GND
12. GND

5.2 PMM0636- 4 x AO (16bit, V, C)

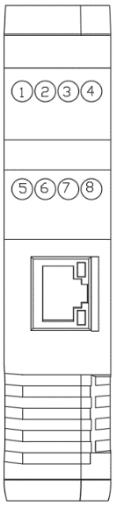
DESCRIPTION

PMM0636 is a reliable analog reliable and robust architecture analog output module with 4 x 16bit isolated channels. The module sends digital signals from the CPU controlling the field actuators. This module used when a higher drive capability is required, or when isolation between outputs is required. In addition, the isolation feature provides high protection against ground potential differences between field signals and the CPU.
PMM0626-R is widely used in signal interface switching of PLC, single chip or other industrial control board.

SPECIFICATIONS

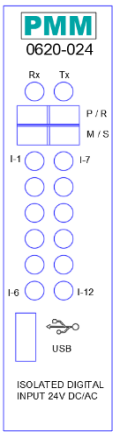
Output signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	16 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



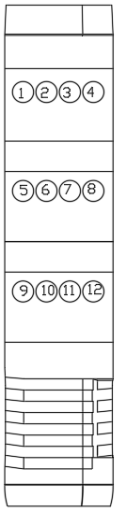
1. Common
2. Earth
3. D+ RS485
4. D- RS485
5. Common
6. VDC+ (9-56)
7. VDC- (9-56)
8. Common

OPERATION



PMM0636 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.
Moreover, there are 4x LED indicators at the front panel. 1x LED for power indication ,1x LED for code execution indication, 1x LED for Tx and 1x LED for Rx for communication over RS485 port indication.

BOTTOM VIEW



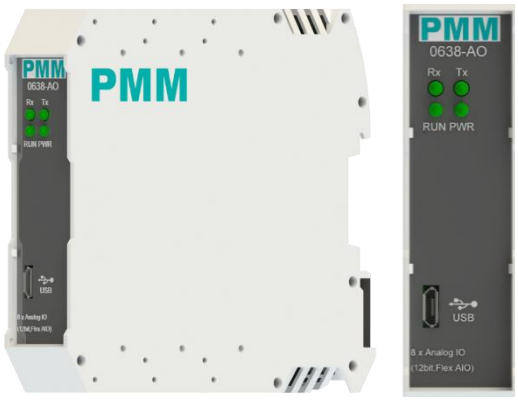
1. Output 01
2. Output 02
3. Output 03
4. Output 04
5. Output 05
6. Output 06
7. Output 07
8. Output 08
9. Output 09
10. Output 10
11. Output 11
12. Output 12

CONNECTION / DIGRAM

PMM0636 has 4 isolated output channels. In order to connect the first analog output, connect the positive terminal to output01 pin and connect the negative terminal to common pin. Connection is the same for all output channels up to 4 channels.

6 MIXED ANALOG IO

6.1 PMM0638- 8 x Analog IO (12bit, Flex AIO)

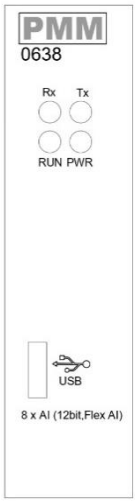


DESCRIPTION

PMM0638 is a reliable and robust architecture software-configurable input/output module with 8 x 12bit isolated channels. The module either sends to the CPU the received analog signals from sensors and field devices directly or sends analog signals from the CPU controlling field actuators. Software configuration gives a lot of flexibility in choosing functionality for analog output, analog input. PMM0638 is widely used in Process control, Factory automation, Motor drives, Building control systems.

INPUT/OUTPUT SPECIFICATIONS

Input/Output signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	12 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45



OPERATION

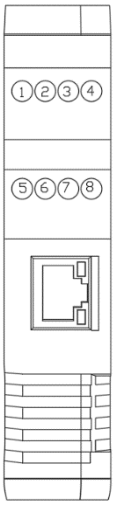
PMM0638 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.

Moreover, there are 4x LED indicators at the front panel. 1x LED for power indication ,1x LED for code execution indication, 1x LED for Tx and 1x LED for Rx for communication over RS485 port indication.

CONNECTION / DIGRAM

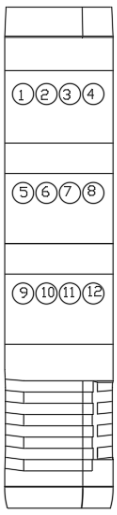
PMM0638 has 8 isolated I/O channels. In order to connect the first analog I/O, connect the positive terminal to input01/output01 pin and connect the negative terminal to GND pin. Connection is the same for all I/O channels up to 8 channels.

TOP VIEW



1. D+ RS485
2. D- RS485
3. External reference 1
4. External reference 2
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

BOTTOM VIEW



1. Input 01
2. Input 02
3. Input 03
4. Input 04
5. Output 01
6. Output 02
7. Output 03
8. Output 04
9. GND
10. GND
11. GND
12. GND

6.2 PMM0639- 4 x Analog IO and 4 x Digital IO (12bit, Flex IO)

DESCRIPTION

PMM0639 is a reliable and robust architecture software-configurable input/output digital or analog module with 12bit resolution isolated channels. The module either sends to the CPU the received digital/analog signals from sensors and field devices directly or sends digital/analog signals from the CPU controlling field actuators. Software configuration gives a lot of flexibility in choosing functionality for analog output, analog input. PMM0639 is widely used in Process control, Factory automation, Motor drives, Building control systems.

DIGITAL INPUT SPECIFICATIONS

Signal type	Voltage
Voltage signal type	0-5 V
Input characteristic	High-Side switching
Input current per channel	10mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

ANALOG INPUT SPECIFICATIONS

Input signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	12 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

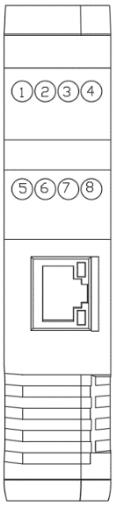
DIGITAL OUTPUT SPECIFICATIONS

Signal type	Voltage
Voltage signal type	0-5 V
Output characteristic	Dry contact
Output current per channel	10mA
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

ANALOG OUTPUT SPECIFICATIONS

Output signal type	Voltage, current
Signal range	0-5 V, 4-20mA
Resolution	12 bits
Isolation	5000V system/field
Power supply	9-56 VDC
Degree of protection	IP45

TOP VIEW



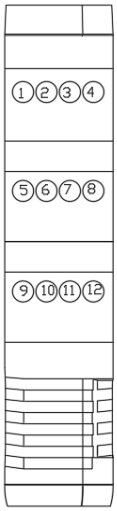
1. D+ RS485
2. D- RS485
3. External reference 1
4. V ref
5. VDC+ (9-56)
6. VDC- (9-56)
7. Earth
8. Earth

OPERATION

PMM0639 operates under three operational modes. Modular operation mode as the module is connected to a PLC by RS485 and implement specific function assigned by the PLC. Fail Safe mode as the module can be pre-programmed in case of lost connection with the PLC to carry on its function effectively. Furthermore, the module can be programmed as stand-alone module working as PLC and controlling the field devices.

Moreover, there are 4x LED indicators at the front panel. 1x LED for power indication ,1x LED for code execution indication, 1x LED for Tx and 1x LED for Rx for communication over RS485 port indication.

BOTTOM VIEW



1. CH1
2. CH2
3. Output 01
4. Output 02
5. Input 01
6. Input 02
7. Input 07
8. Input 08
9. GND
10. GND
11. GND
12. GND

CONNECTION / DIGRAM

PMM0639 has 12 isolated I/O channels. In order to connect the first analog I/O. Connect the positive terminal to input01/output01 pin and connect the negative terminal to common pin. Connection is the same for all I/O channels up to 12 channels.