



96 x 96 x 62mm

Features :

- PLC with Built-in HMI
- 4 x 16 Characters Display
- Windows based user friendly software for ladder programming and HMI configuration
- IO Expansion Port
- Panel Mount
- RTC available

IO Configuration Table

	MM3030-4
Power supply	18-30V DC
Digital inputs	10
Digital outputs	8 (Transistorized)
Analog inputs	2 Input; Voltage (0-10V) / Current (0-20mA)
RTC	Yes
Communication port	2 Ports : 1. RS485-Slave 2. RS485-Master
Protocol	1. Modbus RTU 2. Modbus RTU for IO610 Expansion
Supported IO expansion module	EXP FLEX 2M

Display Specifications

Display	(Backlight) 4 x 16 characters
No. of keys	15 keys (10 Numeric, 12 user configurable)

Input specifications

Digital input	
Input type	PNP
Input voltage range	11 - 28V DC (abs. max.: 30VDC)
Response time	Programmable upto 1 to 255ms from Front END (Default 10ms; Also depends on Ladder Execution Time)
Isolation	2.5kV

Port 2 (8 Pin Jack)

PIN	Description
1	RS485+ve
2	RS485-ve
3	GND
4	NC
5	NC
6	GND
7	NC
8	NC

Port 2 (6 Pin Jack)

PIN	Description
1	RS485+ve
2	NC
3	NC
4	NC
5	NC
6	RS485-ve

Input specification

Fast Input

No. of Fast Input Channels	3 Channels A) FC0 - IO & I1 Rate / Totalizer B) FC1 - I2 & I3 - Rate / Totalizer C) FC2 - I4 & I5 - Totalizer
Operating Modes / Frequency	Unidirectional / Bidirectional / Quadrature / Dual Uni Modes

Max. Counting Frequency

Input no	Operating mode	Frequency
I0, I1	Uni / Bi / Dual Uni	12kHz (for MM3030-2 MM3030-4)
	Quad	7.5kHz
I2, I3	Uni / Bi / Quad	7.5kHz
I4, I5	Dual Uni	7.5kHz

Minimum Rate Measured	0.06Hz
Maximum Count	32 Bits

Analog section

Input Type	2 Input AIO, AI1
Sensor	Voltage [0-10V], Current [0-20mA] [selectable via jumper]
Resolution	10 Bit
Accuracy	±0.5% of Full Cscale / ±5 Counts whichever greater
Conversion Time	100ms
Linearity	0.1%

Output specifications

OUTPUT SECTION

Transistor rating	O0 & O1 - NPN @ 24V DC 50mA (Fast output) O2 - O7 PNP @ 24V DC 100mA
Isolation	2.5kV
Short circuit protection	Yes
Min. switching time	1ms [Also depends on ladder scan time]
PWM output	2 Channels @ O0 & O1, Pulse Width : Multiples of 1 ms, Duty Cycle : 0.1% Least Count

Output Specifications

Pulse Output	2 Channels @ O0 & O1 50kHz - Programming On & Off Timers in 1 µsec resolution, Programmable No. of Pulse
Isolation	2.5kV

Communication

Communication	RS485 (Slave) RS485 (Master)
Communication Protocol	MODBUS RTU, Proprietary
Connector	RJ25 (Slave) RJ45 (Master)
Supported Expansion	Yes, MODBUS RTU based Devices
Transmission Mode	Half Duplex
Transmission Speed	9600, 19200, 38400, 57600, 115200 bps
Parity	None, Odd, Even
Data Bits	8
Stop Bits	1 or 2
Settable Slave	1 - 255

Functional Features

Timer Operational Modes	On Delay Timer, Off Delay Timer, Up Timer / Down Timer [Special Timer], *1ms Timer & Pulse Timer
Counter	Up Counter, Down Counter & Up / Down Counter [With & without over run]
Other Block	PIDT, Totalizer, Rate totalizer, Hysteresis & Scaling,
Memory Retention	10 years (4KB)
RTC	Yes

*Limited only 4Nos

Functional Specifications :

Programming Method	Software for Ladder Programming and HMI Configuration
Memory	Data Memory : 16 KB Code Memory : 351 KB Upload Memory 96 KB
Max. no. of Objects	5000 (As per memory)
Minimum Scan Time	200 sec
Typical Scan Time	1ms (Also depends on ladder programming)

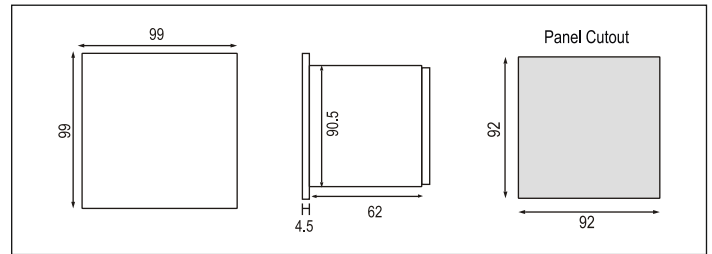
Environmental Specifications

Temperature	Operating 0 to 50°C Storage : -20 to 70°C
Humidity (non - condensing)	95% RH
Weight	350gms

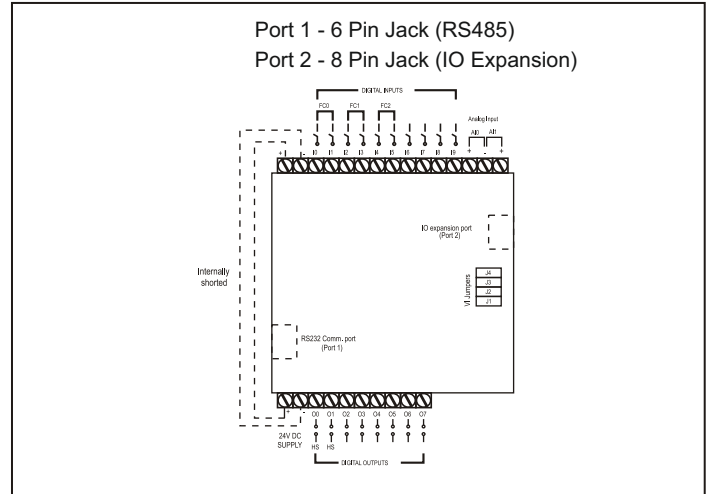
Auxiliary Supply Specification

Supply Voltage	24V DC (±20%)
Power Consumption	20W at 25°C
Source	24V DC, 50mA

Dimensions (in mm)



Terminal Connections



Jumper setting for voltage & Current selection for Analog channels

Jumper No	Description
J1	For Voltage Channel 0
J2	For Voltage Channel 0
J3	For Voltage Channel 1
J4	For Voltage Channel 2

Ordering Information

Product Code	Description	Certification
MM3030-4	PLC – 10DI, 8DO, 2AI & 24VDC – RTC, Modbus Expansion -24VDC	CE RoHS in Process

Accessories (To be ordered separately)

Downloading cable	AC-USB-RS485-03
Power Supplies	RPS60-24-CE-RoHS
Relay modules	
1) RLYMD-1-S4-1CO-24VDC	4 Channel 1 change over relay module
2) RLYMD-1-S4-2CO-24VDC	4 Channel 2 change over relay module
3) RLYMD-2-S8-1CO-24VDC	8 Channel 1 change over relay module
4) RLYMD-2-S8-2CO-24VDC	8 Channel 2 change over relay module
5) ERLYMD-2-1-S8-1CO -24VDC	8 Channel 1 change over communication based relay module
ACH-004 (RJ25 Cable)	
Networking	
AC-IOEXP-03 (Expansion Adaptor)	
AC-USB-RS485-02 (USB to RS485 Cable)	