PLC - Fixed IO Configuration

MM3032-2



96 x 96mm

Features:

- PLC with Built-in HMI
- 2 x 16 character LCD display (backlit)
- 1 channel high-speed input (up to 5 kHz)
- RS-485 communication - Modbus RTU protocol
- Serial printing support*
- Windows-Based software for Ladder programming and HMI configuration

Technical specifications

Display specifications	MM3032-2-0-0-230V V2	MM3032-2-0-0-24V V2
Display type	LCD (backlit)	
No of characters	2 lines x 16 characters	
Font size	5 x 7mm	
No. of keys	8 keys (6 user configurable)	
No of IO slots	-	
Digital input specifications		
No. of Inputs	8 (includes 1 fast input channel)	
Input type	PNP	
Voltage range	5 - 30V DC	
Input current	2mA @12V	
Debounce time	Programmable 1 - 255ms (default: 10ms)	
Isolation (Power ↔ Input)	Yes	
Isolation (CPU ↔ Input)	No	
Timer accuracy	Protection against polarity inversion	
Timer Accuracy	Typical 2m sec (based on ladder scan time) & 100µ sec for fast input	
Fast input		
No. of channels	1 (DI0 & DI1)	
Max speed	5kHz	
Operating mode	Unidirectional / Bidirectional / Quadrature / Dual Uni (5kHz for all) / None	
Analog input specifications		
No. of channels	2 (AI0 & AI1)	2 AI0 + 1 NTC
Input type	Voltage (0 - 10V) / Current (0 - 20mA)	Voltage (0 - 10V) / Current (0 - 20mA) and NTC
Accuracy	±0.5% FS or 100 µA	±0.5% FS or 100 µA (±2% FS for NTC)
Resolution	12 bits	
Conversion time	100ms	
Linearity	0.1%	
Max non-destructive input	31mA	
Channel-to-channel isolation	No	
Reverse polarity protection	Yes	
Input impedance	0-10V - 330KΩ, 0-20mA - 100Ω	
Digital output specifications		
No. of outputs	6 (SPST relay, 2 common lines)	
Contact rating	5A @250V AC (resistive load), 5A @30V DC (resistive load)	
Relay type	5 - 30V DC	
Input current	SPST	

Short circuit protection	Yes	Yes
Isolation (CPU ↔ Output)	Yes	
Isolation (Output ↔ Output)	NA	NA
Polarity inversion protection	Yes	Yes
Response time	10ms	
Mechanical life	5 million operations	
Analog output specifications		
No. of channels	1	
Output range	0-10V DC	
Resolution	12 bits	
Load limit	>=1kΩ	
Digital resolution	0.0-100.0% = 0-10.000V DC	
Conversion time	10ms	
Isolation (CPU ↔ Output)	NO	
Isolation (Output ↔ Output)	NA	
Output error @ 25 °C	±0.25% of full scale	
Linearity	0.10%	
Programming & Memory		
Programming software	Windows-Based Ladder & HMI configuration	
Program memory	240KB	
Data memory	32KB	
EEPROM	2KB	
Upload memory	Not available	
Max HMI objects	5000 (subject to memory availability)	
Min scan time	200µs	
Typical scan time	1ms (depends on ladder logic complexity)	
Functional features		
Timer operational modes	On delay, Off delay, Special timer (Up / Down), Pulse timer, 1ms timer*	
Counter modes	Up counter, Down counter, Up / Down counter, Special [Up / Down] counter	
Other functional blocks	Totalizer, Rate totalizer, Hysteresis, Scaling, PIDT	
Memory retention	10 years (1kB)	
Real-Time clock (RTC)	NA	
Functional features		
Timer operational modes	On delay, Off delay, Special timer (Up / Down), Pulse timer, 1ms timer*	
Counter modes	Up counter, Down counter, Up / Down counter, Special [Up / Down] counter	
Other functional blocks	Totalizer, Rate totalizer, Hysteresis, Scaling, PIDT	
Memory retention	10 years (1kB)	
Real-Time clock (RTC)	NA	
Communication specifications		
Communication port	RS485 [Slave]	
Communication protocol	MODBUS RTU	
Connector	RJ25 Port	
Transmission mode	Half Duplex	
Transmission speed	2400, 4800, 9600, 19200, 38400, 57600, 115200 bps	
Data bits	7 or 8	
Parity	None, Odd, Even, Space, Mark	
Stop bits	1 or 2	
Environmental specifications		
Operating temperature	0 °C to 55 °C	
Storage temperature	-20 °C to 60 °C	
Humidity	10% to 95% RH (non-condensing)	
IP rating	IP 50 (front)	

Mechanical specifications		
Weight	350 gm	
Mounting	DIN Rail & Panel mountable	
Dimensions		
Auxiliary supply specifications		
Supply voltage	With retention: 90 - 270V AC @50/60 Hz	DC input option: 18-30V DC
Inrush current		
Power consumption	7VA	7W
Polarity inversion protection	Yes	Yes
Isolation (Power ↔ Communication)	Yes	Yes
Source supply output	24V DC, 50mA	24V DC, 50mA

Note: A maximum of 25 variables of type VAR_IN_OUT and VAR_OUTPUT (each 32-bit) can be retained when operating at 110V.

Accessories (To be ordered separately)

AC-USB-RS485-03	Downloading cable (6 Pin RJ25 Jack)
ACH-004	(6 Pin to 6 Pin RJ25 Jack) Network cable
AC-IOEXP-03	Expansion adapter
AC-USB-RS485-02	Communication cable (2 wire)
Power supplies	RPS60-24-CE-RoHS
Downloading cable	AC-USB-RS485-03
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