

# MULTI-FUNCTION MICROPROCESS RPM & LINE-SPEED CONTROLLER METER (PULSE INPUT)

**MODEL MMRH**



## ■ FEATURES

- Accuracy 0.03% F.S.
- Measuring Pulse(TTL,CMOS), Magnetic pick-up signal
- Accepts input rates up to 200KHz
- Accept input rates 50/500/200000 CPS can be modified
- Dual input math function B-A,B/A,(B/A-1),1-(B/A),B/(A+B)
- Display type of RPM or line-speed can be modified
- Input pulse of revolution can be modified (1~99999pulse/revolution)
- Four alarm function (optional)
- 16 bit DAC analog output function (optional)
- Digit RS-485 interface function (optional)

1:MODEL:MMRH-□□□□□

NO	Input Type	NO	Alarm output	NO	Alarm output	NO	Analog output	NO	RS-485	NO	Aux.POWER
A	Pulse (PNP) (5V)	0	None	5	One (Transistor NPN)	N	None	N	None	A	AC/DC18~60V
B	Pulse (NPN) (12V)	1	One (Relay)	6	Two (Transistor NPN)	I	DC4~20mA	Y	RS-485	B	AC/DC90~260V
C	Pulse (PNP) (12V)	2	Two (Relay)	7	Three(Transistor NPN)	V	DC0~10V	*Modbus mode *256 nodes on bus		*Less 4VA for AC/DC input	
D	Magnetic pick-up(30mV~30V)	3	Three(Relay)	8	Four(Transistor NPN)	T	DC4~20mA				
F	AC50~600V	4	Four(Relay)	*Transistor output(Photo couple of open-collector,Max.DC30V/40mA)		R	SPECIFIED	*Two-wire transmitter (Exciting voltage DC10~36V)			
O	SPECIFIED	*Relay contact(AC250V-5A,DC30V-7A)									

## 2:SPECIFICATION

- Measuring accuracy : 0.03% F.S. (23±5°C)
- Count input type : Jump-pin selectable current sourcing(NPN) or current sinking (PNP)
- Count input trigger levels : High level:  $V_{IH}=DC4\sim30V$ (pulse)  
High level:  $V_{IH}=AC30mV\sim30V$ (Magnetic pick-up)  
Low level:  $V_{IL}=DC0\sim2V$ (pulse)  
Low level:  $V_{IL}=AC0mV\sim20mV$ (Magnetic pick-up)
- Max.count rates : <200KHz (One input type)  
<100KHz (Two input type)  
<1KHz (Magnetic pick-up/AC50~600V)
- Sampling time : 10 cycles/sec. (>10Hz)  
f cycles/sec. (<10Hz)
- Readout (compare)range : 0 to 99999 digit adjustable
- Diameter setting : 0 to 9.9999M
- Alarm action : HI or Lo adjustable
- Transistor output type : Photo couple of open-collector (Max.DC30V/40mA)
- Relay contact output : AC 250V-5A, DC 30V-7A
- Analog output resolution : 16 bit DAC (isolating)
- Response time : < 250ms(0~90%)
- Output drive capability : < 10mA for voltage mode  
< 10V for current mode  
<[(V+)-7.5V]/20mA for two-wire mode
- Output ripple (p-p) : < 0.1% F.S.
- RS-485 address : "01"~"FF"(0~255)
- RS-485 baud rate : 38400/19200/9600/4800/2400 selective
- Display : Red high efficiency LEDs high 14.22mm (0.56")
- Sensor power supply : 12VDC±3%(<60mA)
- Memory mode : Non-volatile E<sup>2</sup> PROM memory
- Dielectric strength : 2KVac/1 min. (input/power/display)  
1600Vdc (input/output)
- Operating condition : 0~50°C (20 to 90% RH non-condensed)
- Storage condition : 0~70°C (20 to 90% RH non-condensed)
- CE EMC Certification : EN 55022:1998/A1:2000 Class A  
EN 61000-3-2:2000  
EN 61000-3-3:1995/A1:2001  
EN 55024:1998/A1:2001

## 3:OUTSIDE DIMENSION AND CONNECTION DIAGRAM

