



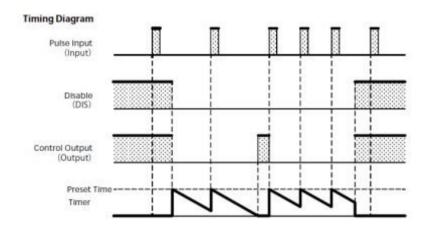
# M13-210 WATCHDOG TIMER M13-211 PULSE FILTER M13-212 LOGIC FILTER



### M13-210 WATCHDOG TIMER

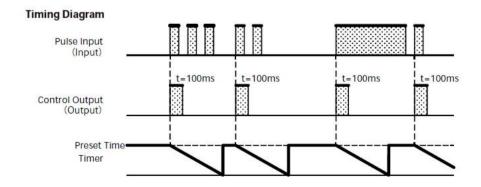
This device monitors the interval of input signal which is taken from output of machines via a Timer.

If there is no signal received within the Preset Time, Timer is stopped and output signal is generated. By disabling input, forced start/stop of the Timer is possible.



### M13-211 PULSE FILTER

This device is a One-shot Timer for signal entering the Pulse Input. Multiple Pulse input received within a Preset Time (0.1s - 999.9s) will generate a one-shot pulse output.



### M13-212 LOGIC FILTER

This device monitors the input pulse, and passes it through as an output only when Input Logic matches Preset Logic.

Supports DIN rail type mounting.

# Pulse Input Logic 1 (Preset = "H") Logic 2 (Preset = "H") Logic 3 (Preset = "H") Logic 4 (Preset = "L")

### **SPECIFICATIONS**

Pulse Output

| Model                    | M13-210  | M13-211                                  | M13-212   |
|--------------------------|--|--|---|
| Function                 | Watchdog Timer   | Pulse Filter                             | Logic Filter  |
| Display                  | 4 digit, 7-Segment LCD Digit Size: 7mm   |  |   |
| Setting Range            | 00:01 to 99.59<br>(mm:ss)  | 0.1 to 999.9 (s)                         | LLLL - HHHH<br>(16 possible logic)                      |
| Input                    | Pulse Input (Input)<br>Disable (DIS)<br>Key Protect (K/P)  | Pulse Input (Input)<br>Key Protect (K/P) | Pulse Input (Input)<br>Logic1 to 4<br>Key Protect (K/P) |
| Input Type               | Non contact / Reed Input : Open Collector Input<br>L<2V (Sink Current: approx. 1mA)                                      |  |   |
| Input Frequency          | 10 Hz (Pulse Input)  |  |   |
| Output                   | Non contact output : NPN open collector (DC30V 100mA max.) Relay output : 1c contact (AC/DC30V 0.5A max.) (M13-210 only) |  |   |
| Output Type              | Hold<br>(Time Stop Output)   | One-Shot<br>(100ms)                      | Hold<br>(Logic Match Output)                            |
| Memory                   | EEPROM (10 years Data Retention; 10,000 Re-write Cycles)   |  |   |
| Power Supply             | 12 to 24VDC (-15%/+10%)  |  |   |
| Power<br>Consumption     | approx. 1.8 W<br>(at 24VDC)  | approx. 0.4W (at 24VDC)                  |   |
| Operating<br>Humidity    | 45 to 85 %RH (Non-condensing)  |  |   |
| Operating<br>Temperature | -10 to 50 °C (Non-freezing)  |  |   |
| Storage<br>Temperature   | -20 to 60°C (Non-freezing)   |  |   |
| Weight                   | approx. 130g approx. 110g  |  |   |

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