

# mL-MFU8

## PROGRAMMABLE TIMER & COUNTER WITH OUTPUT

### FEATURES

- 6 digits Process (PV) and 6 digits Set (SV) Value Display
- Operation with 2 Set Value
- Reset, Pause and ChA-ChB Counting Inputs
- Configurable Counter I “Totalizer Counter”, Batch Counter, Timer, Chronometer, Frequency meter and Tachometer Functions
- Programmable Time Bases for Timer and Chronometer (Second, Minute , Hour )
- Operation with Automatic and Manual Reset
- Output Module System
- PNP/NPN Type Operation
- INC , DEC , INC I INC , INC I DEC , UP I DOWN, x1 I x2 I x4 Counting with Phase Shifting Property in Counter Function
- Multiplication Coefficient and Decimal Point Position
- Different Alarm Alternatives in Frequency meter and Cycle Measuring Functions
- Absolute or Offset Operation in Counter Function
- RS-232 (standard) or RS-485 (optional) Serial Communication with Modbus ASCII or RTU Protocol



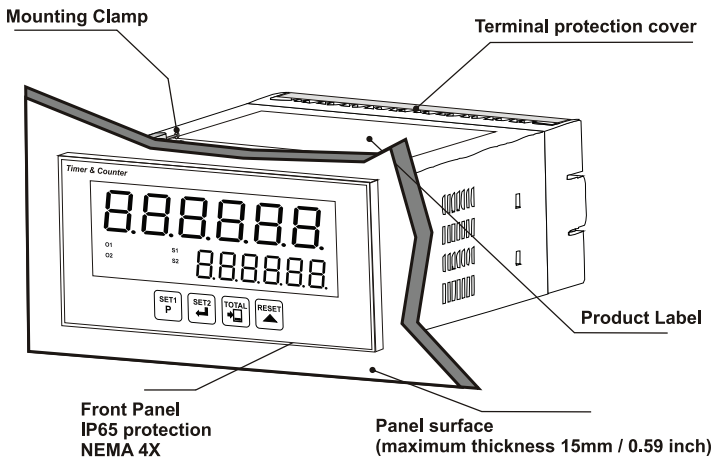
### SPECIFICATIONS

Device Type	Programmable Timer & Counter
Housing & Mounting	96mm x 48mm x 86.5mm 1/8 DIN 43700 plastic housing for panel mounting. Panel cut-out is 92x46mm. Type-1 Enclosure Mounting.
Protection Class	IP65 at front, IP20 at rear.
Weight	Approximately 0.21 Kg.
Environmental Ratings	Standard, indoor at an altitude of less than 2000 meters with none condensing humidity
Storage / Operating Temp.	-40° C to +85° C / 0° C to +50° C
Storage / Operating Humidity	90 % max. (None condensing)
Installation	Fixed installation
Over Voltage Category	II
Pollution Degree	II, office or workplace, none conductive pollution
Operating Conditions	Continuous
Supply Voltage and Power	100 - 240 VAC (standard): 50/60 Hz. (-15% / +10%) 6VA 24 VDC (optional): (-15% / +10%) 6W
Electrical Characteristics	
Of Digital Inputs	Rated voltage: 16 VDC @ 5mA Maximum continuous permissible voltage : 30 VDC Logic 1 minimum level : 3 VDC Logic 0 maximum level : 2 VDC
Maximum Input Frequency	For Counter / “Totalizer Counter” and Batch Counter ; If P <sub>ro-0</sub> I = 0 , 1 , 2 ; 6000Hz If P <sub>ro-0</sub> I = 3 , 4 ; 4000Hz If P <sub>ro-0</sub> I = 5 , 6 ; 3500Hz If P <sub>ro-0</sub> I = 7 ; 2000Hz For Frequncymeter / Tachometer ; 10kHz Max 30 Hz ( P <sub>ro-0</sub> I ≠ 000000, debounce)
Timer Accuracy	Tolerance (25°C): +/- 30 ppm Aging: +/- 5 ppm / year Timing resolution dependent on selected time base Allow for electromechanical relay response time when used (typically 30mSec)
Output Modules	2 Relay Output Modules (3A@250V AC) 100.000 operation (Full Load)
Standard Communication	RS-485 Communication Module
Communication Protocol	MODBUS-RTU, MODBUS-ASCII
Process Display	13 mm Red 6 digit LED display
Set Display	8 mm Green 6 digit LED display
Led Indicators	SV1 (Set1 value), SV2 (Set2 value) , O1 / 2 (Control or Alarm Output ) LEDs

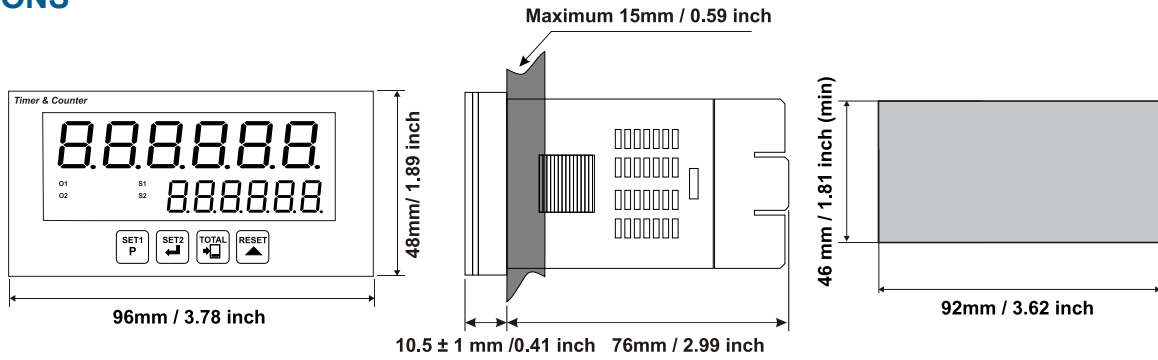
### DESCRIPTION

The mL-MFU8 Programmable Timer & Counter can be used in package machines, production and quality control rollers, in cutting and processing machine of glass, plastic, marble, sheet, iron, fabric all measuring and controlling of dimension, count, total count, speed, cycle, productivity, time and can be adapted easily to all mechanical construction and automation system. They can be used in many application with their control outputs, serial communication unit and output modules.

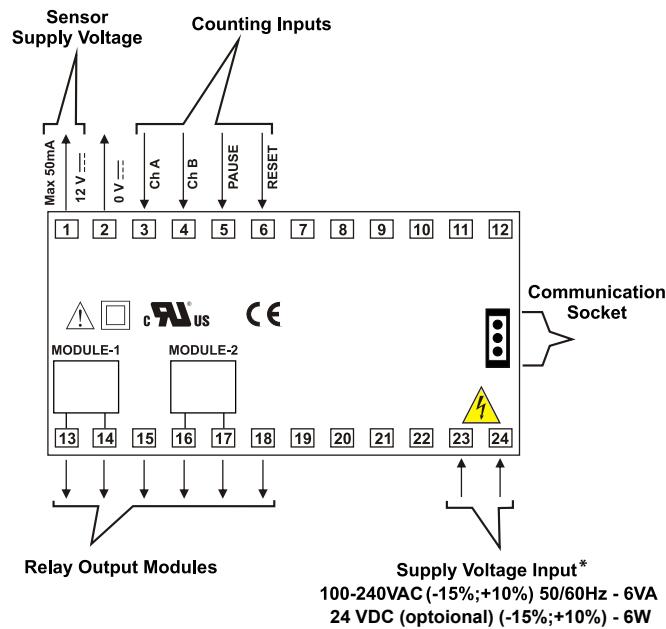
### GENERAL DESCRIPTION



## DIMENSIONS



## WIRING



\* External Fuse is recommended (1A T)

## ORDERING INFORMATION

Model Number	Description
mL-MFU8	Programmable Timer & Counter with Output 115 VAC ( $\pm 15\%$ ) 50/60Hz - 1.5VA RS485 Serial Communication 2 Relay Outputs (3A @ 250 VAC ~ Resistive Load)
24VDC	Add 24VDC to Part Number for 24VDC (6W) Supply Voltage
<b>Accessories</b>	
mL-MFU8-gasket	Neoprene Gasket to Provide NEMA4X Panel Mount Seal
mL-RS485-cable	RS485 Serial Communication Cable