

# MC (Minicount)

## Features

- CSA Approved
- Counts Pulse Inputs Up To 10 kHz
- NEMA 4X / IP65 Front Panel
- 1/8 DIN Cutout
- Add & Subtract Capabilities

## Applications:

This totalizing counter is perfect for high speed counting applications where a 6 digit total count is required.

## Specifications:

**Display:** 6 digits, .55" high LED

### Input Power:

110VAC  $\pm 15\%$  or 12 to 15VDC

220VAC  $\pm 15\%$  or 12 to 15VDC.

24VAC  $\pm 15\%$  or 12 to 15VDC.

**Current:** Max. 250mA DC or 6.5 VA at rated AC voltage.

**Sealing:** Front panel sealed to NEMA 4X/IP65 specifications.

**Excitation Voltage:** (AC powered units only) + 12VDC @ 50mA unregulated -10% + 50%.

**Memory:** EEPROM Stores data for 10 years if power lost.

### Input Types:

Standard: INPUT 3

This input is ideal for flowmeters that produce a DC pulse output. Also may be used with KEP 711 series or 715-1 encoders or PD & D series sensors. User can select high or low speed modes for debounce filtering. NOTE: For sinking driver inputs (NPN), use an external pull up resistor (2.2K $\Omega$  to 10k $\Omega$ ) between pin 7 (+12VDC) and inputs used (pin 5 and/or 6).

Up/Down Control: INPUT 5

Count inputs on A, direction control input on B. When input B is "high" (4-30VDC), the count inputs on A will count up. If Input B is low (open or <1 VDC), the count inputs on A will count down. May be used with KEP 715-2 Encoder.

Quadrature: INPUT 9

Accepts pulses 90° out of phase for bidirectional counting. May be used with KEP 716 encoder.

NOTE: The unit will only show rate of one direction (when A precedes B).

NOTE: All inputs can be ordered with mag. input (30 mV) option (see "How To Order").

**Reset:** Rear terminal, 4-30 VDC negative edge triggered.

**Approvals:** CSA File# LR91109-7, CE Approved

## High Speed, LED Electronic Counter

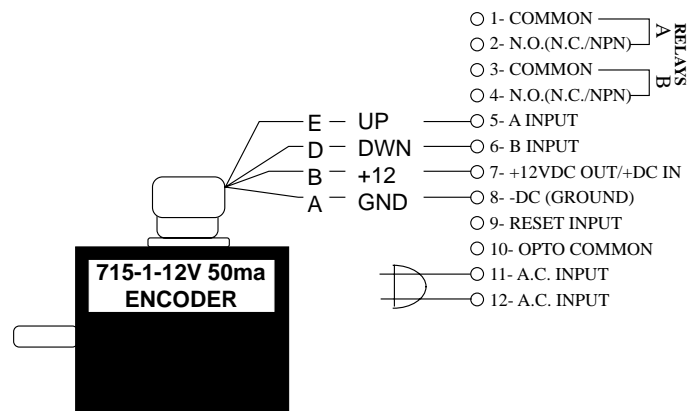


## Typical Application:

### MC Series (MCHA3)

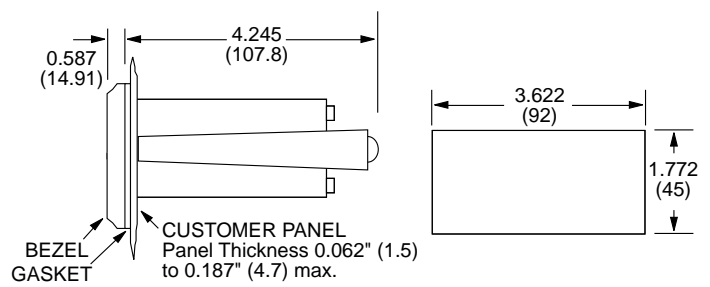
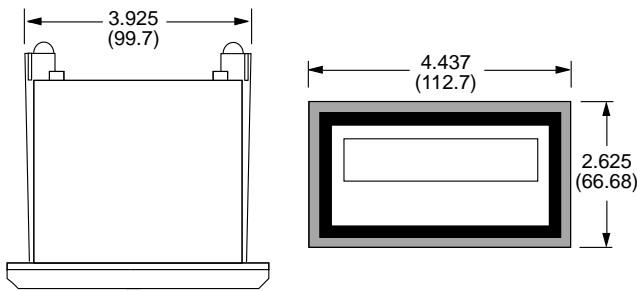
This unit is a dual input, bi-directional totalizer only. This unit does not have presets, outputs or scaling available. Each pulse received on input A or input B equals one count. The Minicount has separate up and down inputs. Pulses on pin 5 (input A) will count up (add); pulses on pin 6 (input B) will count down (subtract), even if the pulses occur simultaneously. Low and high count speed debounce filtering is factory set, output relays are not supplied with this unit. The MC series is perfect for applications where a low cost, bi-directional totalizer is needed.

## TYPICAL WIRING

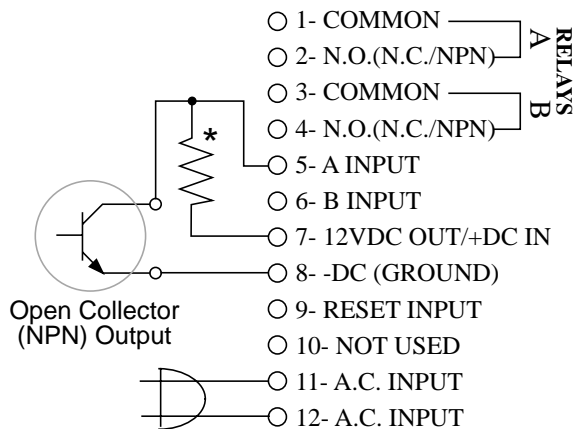


NOTE: Relay outputs are not supplied with MC series.

**Dimensions:**



**Open Collector Wiring:**



\* Pull-up resistor required for open collector (NPN) outputs.  
Use resistor values from 2.2kΩ to 10kΩ.

NOTE: Relay outputs are not supplied with MC series.

**HOW TO ORDER**

<b>EXAMPLE:</b>	<b>MC</b>	<b>H</b>	<b>A</b>	<b>3</b>	<b>1</b>
<b>Series</b>					
<b>Input Speed</b>					
<b>Operating Voltage</b>					
<b>Count Input</b>					
<b>Options</b>					

**MC** = Minicount Counter

**L** = Low speed input debounce filter 40Hz max.  
**H** = High speed input (0 to 9.99 KHz)

**A** = 110 VAC ± 15% or 12 to 15 VDC  
**B** = 220 VAC ± 15% or 12 to 15 VDC  
**C** = 24 VAC ± 15% or 12 to 15 VDC

**3** = Standard, 4-30 VDC simultaneous inputs.  
**3M** = Mag. Input, Input A only, 30mV input (Input B, 4-30V)  
**3MB** = Mag. Input, Inputs A & B, 30mV input  
**5** = 4-30 V pulses on Input A, 4-30 V Direction Control input on Input B.  
**5M** = 30 mV pulses on Input A, 4-30 V Direction Control input on Input B  
**9** = Quadrature, accepts 4-30 V pulses  
**9MB** = Quadrature, accepts 30 mV pulses (A & B)

**1** = RS232 Communications  
**2** = RS422 Communications

**Accessories**

Separate non keyboard panel order #34235  
Separate keyboard panel - order #34237