

This manual primarily describes precautions required in installing wiring and handling. When using the tachometer, please refer to the pertinent catalog for detailed information.



REDINGTON COUNTERS INC.

**HINTS ON CORRECT USE**

Model 7631

**INPUT VOLTAGE**

The application of excessive voltage to count and power input terminals causes destruction of internal parts. Never apply higher voltage than shown below.

- Count input 30VDC
- Power Supply 24VDC

**NOTE AT SETTING PRESCALE FUNCTION AND NUMBER**

When opening cover to prescale, do not allow foreign matter to enter.

**HOW TO CHOOSE PRESCALE NUMBER**

Model 7631

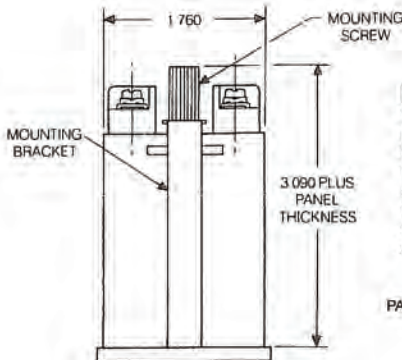
Below is the case when indication is set to show in rpm or rps, using rotary encoder as an input device.

As counter has no unit indication on front panel, please stick the attached label for rpm or rps indication.

SPECIFICATION OF ENCODER	SET VALUE	DISPLAY
PULSE/REV.		
1	OFF 060	RPM
2	OFF 030	RPM
10	OFF 006	RPM
20	OFF 003	RPM
30	OFF 002	RPM
60	OFF 001	RPM
120	ON 002	RPM
180	ON 003	RPM
240	ON 004	RPM
300	ON 005	RPM
360	ON 006	RPM
420	ON 007	RPM
480	ON 008	RPM
540	ON 009	RPM
600	ON 010	RPM
1	ON 001	RPS
2	ON 002	RPS
10	ON 010	RPS
20	ON 020	RPS
30	ON 030	RPS
40	ON 040	RPS
60	ON 060	RPS
120	ON 120	RPS
180	ON 180	RPS
240	ON 240	RPS
300	ON 300	RPS
360	ON 360	RPS
420	ON 420	RPS
480	ON 480	RPS
540	ON 540	RPS
600	ON 600	RPS

**DIMENSIONS**

Model 7631

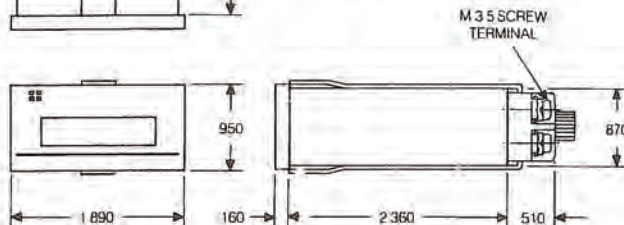


**HOW TO MOUNT**

Model 7631

Insert the unit in the mounting panel from the front and manually tighten the counter from the rear by using the accessories (mounting bracket and mounting screws). Care should be taken not to use other screws or tools such as cutting pliers, which may damage the counter by excessive tightening.

PANEL OPENING 1.770 x 875



**AVAILABLE TYPE**  
Model 7631 TACHOMETER

Type	Maximum Counting Speed	Full Scale	Power Supply Voltage	Count Input Voltage	Indication at No Input
7631—5PIDC	10 kcps	10000 (gate time 1 sec)	5 to 24VDC	5 to 30VDC	0

**PRESCALE FUNCTIONS AND SETTINGS**

Model 7631

**MAIN FUNCTIONS**

This counter indicates divided or multiplied number of input pulses.

**HOW TO OPEN THE COVER**

Push the upper side of housing then the cover opens and the setting switches appear. Push the cover down to close.

**SETTING OF DIVIDE/MULTIPLY FUNCTION**

Set the DIVIDE/MULTIPLY function using DIVIDE/MULTIPLY switch

- DIVIDE "ON" side (front side)
- MULTIPLY "1" side (rear side)

**SETTING OF DIVIDE/MULTIPLY NUMBER**

Set the number using the rotary switches

**HOW TO SET**

These settings can be done by screwdriver. Setting is possible during power is ON or power is OFF.

**FACTORY SET**

Function is set to "DIVIDE" and the number is set to "001"

**INDICATION ERROR**

The indication error will occur according to the resolution of rotary encoder.

Ex. 1

resolution of rotary encoder less than 60 P/r

indication unit rpm

Prescale setting and indication error for 18 P/r rotary encoder are as follows:  
"60" 18 = 3.33 + Prescale setting MULTIPLY "003"

$$\text{Indication error} + \frac{3 - 3.33}{3.33} = -0.099 = -9.99(\%)$$

Indication is about 10% less than the actual value.

Ex. 2

resolution of rotary encoder: above 60 P/r

indication unit: rpm

Prescale setting and indication error for 150 P/r rotary encoder are as follows:  
150 "60" = 2.5

(i) Prescale setting: DIVIDE "003"

$$\text{indication error} + \frac{1 - 1}{3 - 2.5} = -0.167 = -16.7(\%)$$

Indication is about 17% less than the actual value.

(ii) Prescale setting: DIVIDE "002"

$$\text{indication error} + \frac{1 - 1}{2 - 2.5} = 0.25 = 25\%$$

Indication is about 25% more than the actual value.

**INPUT CONNECTIONS**

Model 7631

