

Model SM3 Tachometer



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INSTRUCTION MANUAL

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

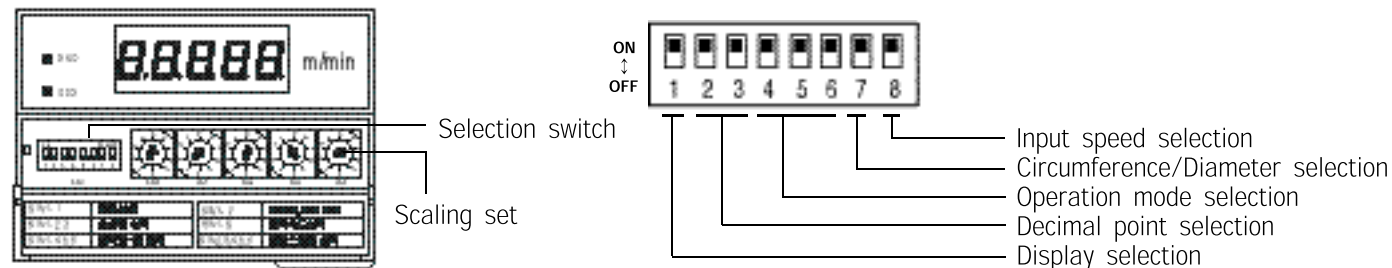
MAIN PRODUCTS

- DIGITAL : Temperature controller, Counter/timer, Tachometer/Panel Meter
- SENSOR : Proximity Switch/Photo Electric Sensor, Rotary Encoder/Optical Fiber Sensor, R.T.D/Thermo Couple
- ANALOG : Timer/Temperature Controller

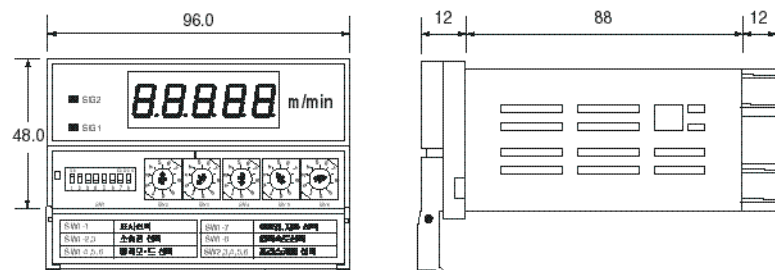
Specification

Classification	SM3
Power supply	AC 100 ~ 240V ± 10%, 50/60Hz
Power consumption	Approx 5VA
Dielectric strength	AC 2000V for 1 minute
Insulation resistance	Min. 20MΩ at DC 500V
Noise immunity	2KV/μs
Digital display	7 segment LED, 5 digits
Range	1 ~ 99999rpm
Display cycle	in every 0.5 sec. < 0.5 sec. < input cycle + 0.2 sec.
Power to sensor	Max. DC 12V 50mA
Decimal point	Set by front selection Switch
Pulse/Rotation	1 pulse/ 10 pulses convertible
Input	30cps. 10kcps. Voltage H : 4~30V, L : 0~2V 1kΩ. Active high (ON-state in 12V connection)
Operation mode	7 modes
Ambient temperature/humidity	-10 ~ 55°C, 85%RH Max.

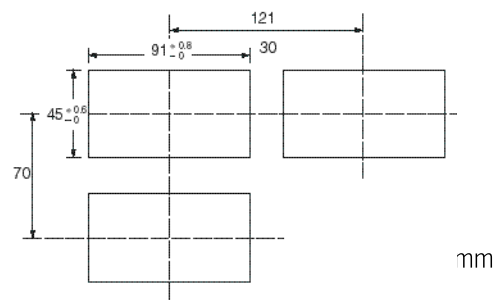
Functional description (Dip switch)



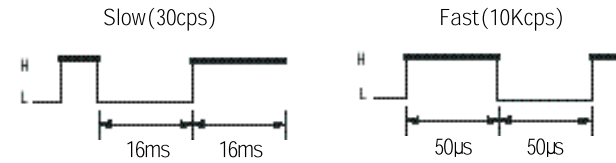
Dimension



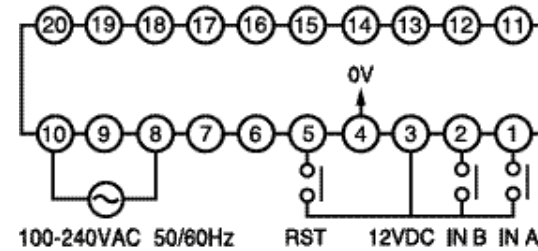
Panel cutout



Pulse width



Connection



Dip switch set

Display selection

ON	OFF	S/W	1 ~ 99999rpm	30 ~ 99999rpm
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	ON	OFF

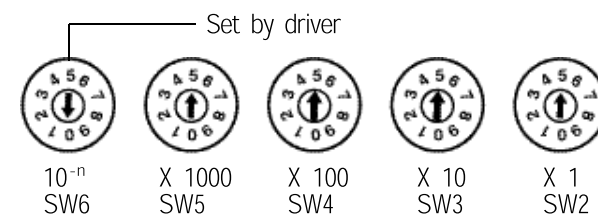
Decimal point selection

ON	OFF	S/W	99999	9999.9	999.99	Moving point
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	ON	OFF	ON	OFF
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2	ON	ON	OFF	OFF

Free scale function

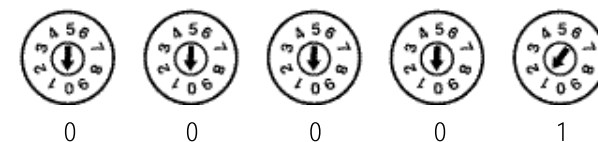
$$\text{Measuring value} \times \text{scaling} = \text{Display value}$$

Free scale value can be set in the range of maximum $9999 \times 10^0 = 9999$ and minimum $1 \times 10^{-5} = 0.00001$ with a 5 digit value.

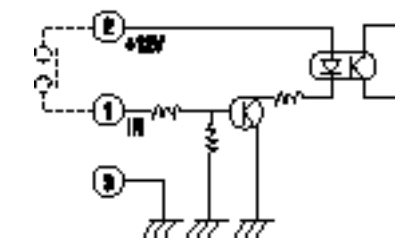


(Note) In case of setting in 10^{-7} , numerical index of "n" should be set by a digit of 0 upto 5. Setting of a digit over 6, display to be shown as error message 「Err-3」

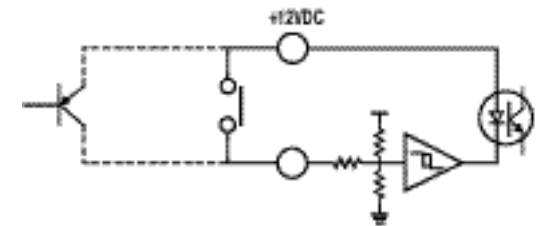
* Normal mode without scaling :
→ $1 \times 10^0 = 1$



Input (INA, INB)



Reset input



Operation mode selection



S/W	MODE1	MODE2	MODE3	MODE4	MODE5	MODE6	MODE7
4	OFF	ON	OFF	ON	OFF	ON	OFF
5	OFF	OFF	ON	ON	OFF	OFF	ON
6	OFF	OFF	OFF	OFF	ON	ON	ON

Circumference / Diameter selection

S/W	Diameter	Circumference
7	ON	OFF

Input speed selection

S/W	High	Low
8	OFF 30 ~ 10Kcps (1 ~ 99999rpm)	ON Max. 30cps (1 ~ 1800rpm)

Please ON Reset the power after select the switch 8