

## Small digital tachometer T9Z-6

Technical Manual

Version number: EN-V1-03



### About us

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Thank you very much for choosing TMCON products,  
In order to better use this product, please read the following before using.

## ■ Safety precautions

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### Attention

Do not touch the terminals while power is on, otherwise minor injuries may occur due to electric shock.



Do not allow metal objects, conductors, debris (such as cuttings) from installation work, moisture, or other foreign matter to enter the digital controller, the setup tool ports, or between the pins on the connectors on the Setup Tool cable. Otherwise it may cause electric shock, short circuit or machine malfunction.



Do not use the product where subject to flammable or explosive gas. Otherwise, it may cause mild injury due to the explosion.



Never disassemble, modify, or repair the product or touch any of the internal parts. Otherwise, it may cause mild electric shock, fire, and equipment failure.



This equipment is an open processing controller. Do not use it in a control cabinet where fire may occur. When using more than 2 open-circuit switches, please turn off all switches before repair inspection, so that the product is in a power-off state.



## ■ Main features

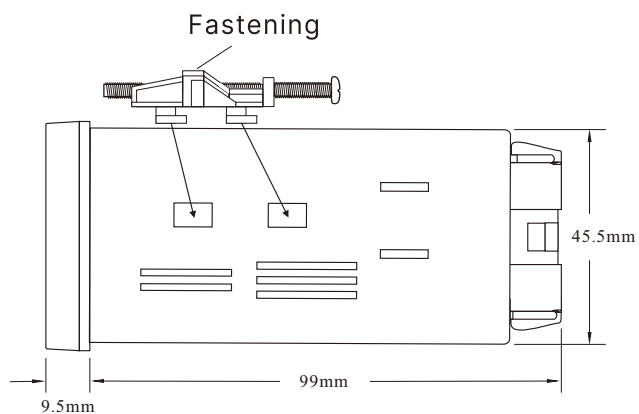
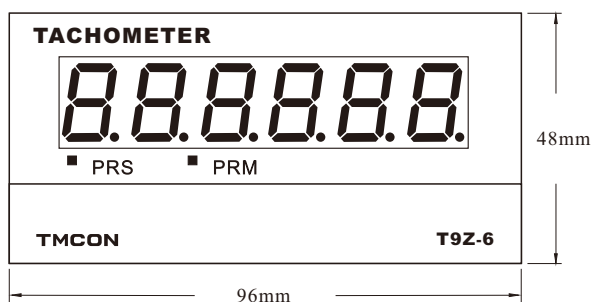
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- DIN 48×96mm standard size, 0.52-inch LED digital tube display.
- 6 digit speed display dedicated instrument.
- Can choose the number of gears for 1 circle, 1 circle/gear: 1/1, 1/10, 1/30, 1/60.
- RPS and RPM speed units can be selected.
- High performance switching power supply design ensures stable operation of microcomputers.
- Strong anti-interference performance, precise and reliable measurement.

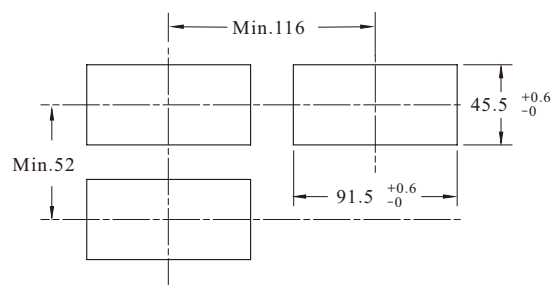
## ■ Technical reference

Models	T9Z-6
Functional categories	Display dedicated type tachometer
External dimension (mm)	48(high)×96(wide)×99(depth)
Hole size (mm)	45(high)×92(wide)
Power supply	AC100~240V 50/60Hz or AC/DC12~24V (The default delivery is 100~240V, If you need 12~24V, please declare the voltage at the time of ordering)
Permissible voltage range	85~110%
Power consumption	About 4.8VA (AC240V) , about 3VA (DC24V)
Display mode	Single row LED digital tube display
Display range	0~999999 (6-digit)
Counting speed	1KHz
Measuring range	0.1Hz~1KHz
Detect rotation range	3~60000 rpm (1 pulse/rotation)
Measurement accuracy	± 0.2% FS. ± 1 digit max (23 ± 5°C)
Update Display Period	1 second
Input signal	Counting signal
Input method	PNP ( Voltage input ) : High (logic) level: 4.5 to 30VDC Low (logic) level: 0 to 2VDC (Input resistance: approx 4.7KΩ) *If the NPN sensor input needs to be externally connected with a 2KΩ resistor
Auxiliary power output	12VDC ± 10% 100mA Max
Insulation withstand voltage	AC2000V 50/60Hz 1min
Usage environment	Temperature -10~+60°C (not freezing or exposed), humidity: 25~85% RH

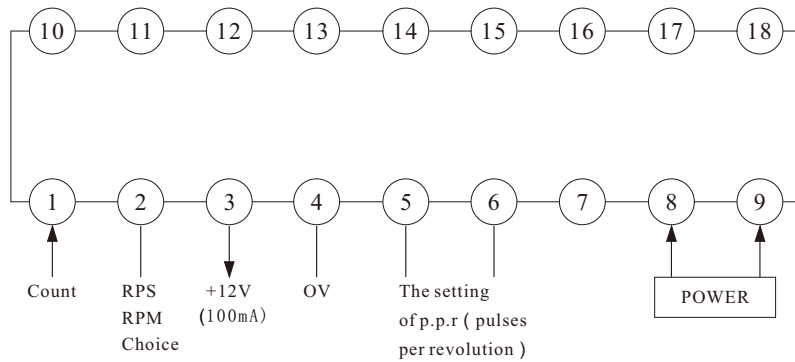
## ■ Dimensions (mm) and installation instructions



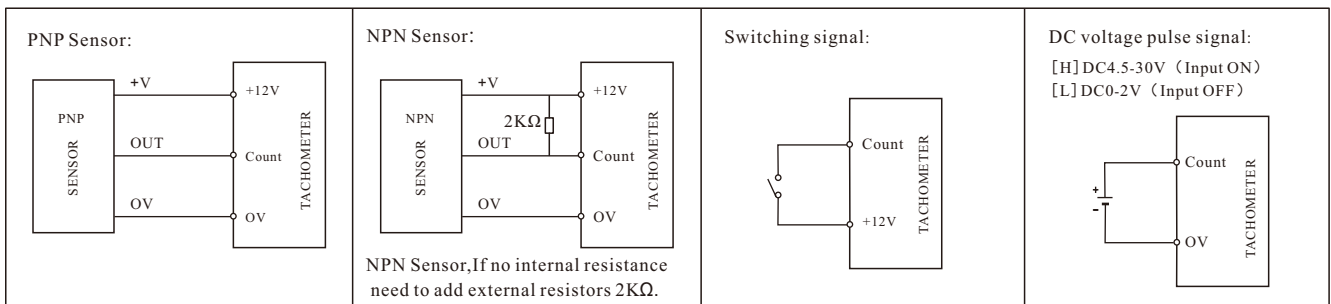
panel cut-out:







# ■ Wiring diagram



## Count signal input connection:



## ■ Function instructions

The setting of P.P.R	Auto-Zero time (seconds)	Minimum speed	Connected by wiring pin
1/60	2	0.5	 (4、5、6 All connections)
1/30	3	0.6	 (4、6 Connection)
1/10	4	1.5	 (4、5 Connection)
1/1	10	6	 (All is not connected)

1:T9Z-6 “R.P.M” and “R.P.S” functions can be set,"R.P.S" need to connect the 2,4.“R.P.M” not connected 2,4.

2:At the low rate(less 10 R.P.M),if adapt one signal per revolution,then the sampling time will be too long(over 6 seconds)that the meter may judge the operation holding still and reset to zero.Thus, try to increase the sensing time(eg.use the disk)and then match P.P.R.if operate at low raet.After that,all of the problems can be overcome and also can raise th response speed.

3:Change the instrument function, need to re-power, to take effect.