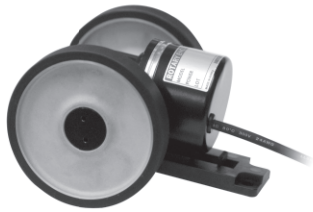
PSC Series

Wheel type encoder



- Wheel type detection structure which is suitable for the measurement of length and speed
- Various measuring range (6 kinds)
- Economical price
- Simple installation structure

Suffix code

Model	Code				Description	
PSC-	□	□	□	□	Wheel type encoder	
Min length measurement	MA				1 m	Please refer to the length measurement code chart
	MB				1 ㎝	
	MC				1 ㎜	
	YA				1 YARD	
	YB				0.1 YARD	
	YC				0.01 YARD	
Output signal		AB			A, B phase output PSC-MA and PSC-YA are A, B phase output. Rests are A, B, Z Phase output	
Output circuit			N		NPN voltage output	
			O		NPN open collector	
			T		Totem pole output	
Power supply voltage				12	12 V DC (5 – 12 V DC)	
				24	24 V DC (12 – 24 V DC)	

Length measurement code chart

Model	Code	Min measuring length	Gear ratio	Circumference of wheel	Number of pulse per 1 revolution
PSC	MA	1 m	4:1	250 ㎜	1 pulse
	MB	1 ㎝	4:1		100 pulse
	MC	1 ㎜	2:1		500 pulse
	YA	1 YARD	4:1	228.6 ㎜ (0.25/Yd)	1 pulse
	YB	0.1 YARD	4:1		10 pulse
	YC	0.01 YARD	4:1		100 pulse

Specification

Electrical specification

Phase difference on output	Phase difference between the A and B : T/4 ± T/8 (1 cycle of A phase = T)	
Response frequency	100 KHz max.	
Rated voltage	5 – 12 V DC (±5 %), 12 – 24 V DC (±5 %)	
Current consumption	60 ㎃ max	
Connection type	Cable extended type	
Control output	Voltage and open collector	Load voltage : max 30 V/load current : max 30 ㎃/Remaining voltage : max 0.4 V
	Totem pole	LOW (Load current : max 30 ㎃/Remaining voltage : max 0.4 V) HIGH (Load current : max 10 ㎃/Remaining voltage : Rated voltage above –1.5 V DC)
Response speed	Max 1 ㎲ (Wire length : 1.5 m Iv sink = 30 ㎃)	

Mechanical specification

Starting torque	Base on wheel friction coefficient
Max permissible revolution	Gear ratio 4:1 – 1,250 r/min, gear ratio 2:1 – 2,500 r/min (※)

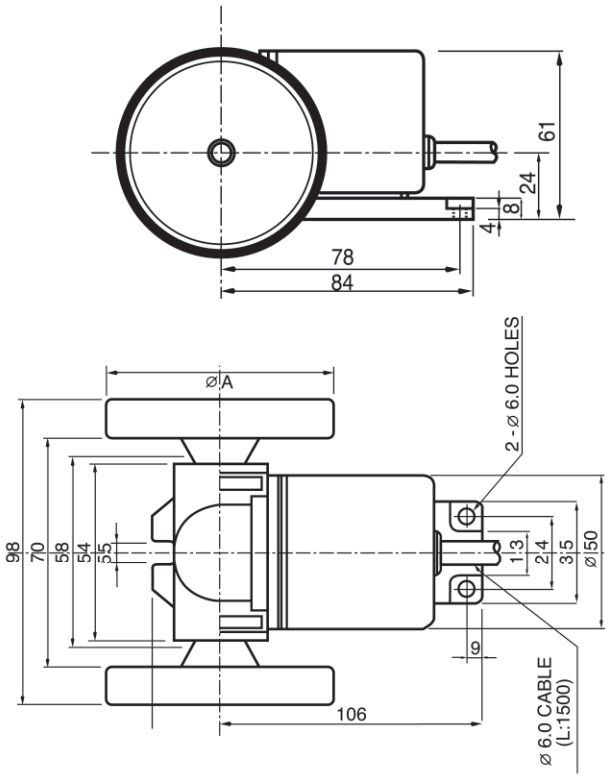
(※) Mechanical endurable maximum revolution.

H
Rotary Encoder

Environmental specification

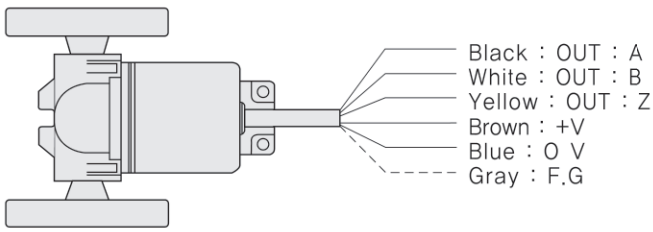
Insulation resistance	Min 500 MΩ (Between the terminal and case)
Dielectric strength	500 V AC (For 1 min in 60 Hz between the terminal and case)
Vibration resistance	10 – 55 Hz (Period for 1 min), Double amplitude : 1.5 ㎜, for 2 hour each in X, Y and Z directions
Shock resistance	735 ㎨ max
Ambient temperature	–10 ~ 70 ℃ (No icing allowed), When storing : –25 ~ 85 ℃
Ambient humidity	35 ~ 70 % RH
Wire specification	Number of strips : 5 P, Thickness : Ø 6.0 ㎜, Length : 1.5 m, Shield cable
Weight	Approx. 625 g

Dimension (Unit : ㎜)



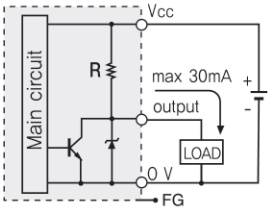
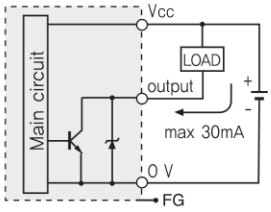
(Note) Please refer to the wheel circumference for the Ø A size

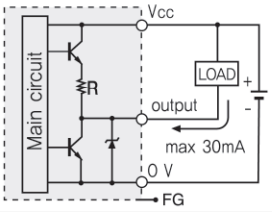
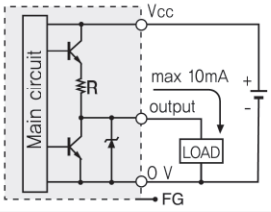
Connection diagram



※ Please insulate the wires that are not used
※ Metal case of encoder and shield line must be earthed (F.G)

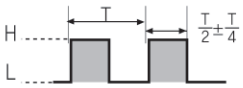
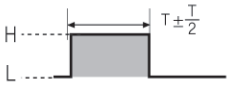
Input/output circuit

NPN voltage output		NPN open collector output	
Encoder internal circuit	Example of external connection	Encoder internal circuit	Example of external connection
			

Totem pole output			
NPN voltage output		NPN open collector output	
Encoder internal circuit	Example of external connection	Encoder internal circuit	Example of external connection
			

Output wave form

■ NPN voltage output, NPN open collector output, Totem pole output

Output	Clockwise(CW)	Counter clockwise(CCW)
OUT A		
OUT B		
OUT Z		

* Clockwise (CW) : Turning to the clockwise direction when looking at from the shaft of the product.
* Counter clockwise (CCW) : Turning to the counter clockwise direction when looking at from the shaft of the product.