ROTARY ENCODER

S Series / C Series / O Series / A Series

Tubular shaft is attachable to the axis.

Unlike shaft encoder, rotary encoder doesn't require coupling.
It fits in a device and reads axial rotation with high accuracy.

Variety of lineups for measuring length and angles

There are four sizes for machinery axis rotation; large, medium, small, extra small are available.
Three kinds of rotary encoders equipped with sexagesimal system.

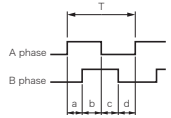
Easy to attach and strongly build.

Adapting tubular shaft saves space and simplifies.
High durability for sever circumstances, and the strong casing protects from dust.
Available for many purposes.

■ Specifications

		For measuring length			For measuring angle
Series		S	C	O	A
Number of pulses		100 125 150 400 500 600	100 125 150 400 500 600	100 125 150 400 500 600	2160 5400
Outside diameter		ϕ23(+0.15/+0.10)	ϕ35(+0.15/+0.10)	ϕ23	ϕ12
Power source		DC4.5～13 V, 60 mA or less			
Output phase		A/B phase			
Output form		Voltage output, Pull-up resistor 2 kΩ			Voltage output (Complementary output)
Output capacity		Residual voltage : 0.7 V or less Sink current : 30 mA or less			
Output pressure-resistance		—			
Output phase difference		90°±45°			
Permissible rotational speed		700 min^{-1}			200 min^{-1}
Start torque		50 × 10^{-3} N・m	80 × 10^{-3} N・m	250 × 10^{-3} N・m	50 × 10^{-3} N・m
Moment of inertia		255 gcm^2	1.2 $kgcm^2$	245 gm^2	100 gcm^2
Permissible axis load	Radial	9.8 N(1 kgf)			19.6 N(2 kgf)
	Thrust	9.8 N(1 kgf)			39.2 N(4 kgf)
Operating temperature range		0～45 ℃			
Operating humidity range		35～90 % RH(No humidity)			
Storage temperature range		−20～80 ℃			
Vibration resistance		With 39.2 m/s^2(4G), 30 minutes			
Impact resistance		With 490 m/s^2(50G)			
Protection structure		IP50		IP64	IP50
Weight(with cable)		400 g	600 g	500 g	400 g
Forwarding distance		15 m or less			
Connecting cable		2 m ϕ5.3 (DIN8P with connector)			
RoHS		Compliant			

■ Output waveform



a,b,c,d=T/4±T/8

■ Connecting cable

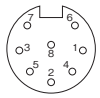
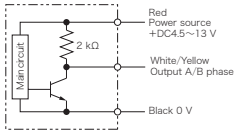


Figure seen from the cable side

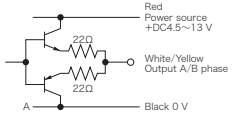
Pin No.	Signal name	Line color
1	B phase	Yellow
5	A phase	White
6	Power supply	Red
7	0 V	Black
8	Shield	Shield

■ Output multi-phase circuit diagram

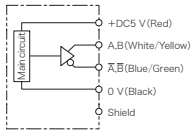
Voltage output type
S, C, O



Voltage output type
(Complementary output)



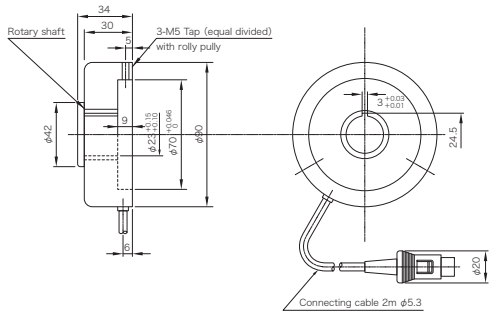
Output multi-phase circuit diagram
(Line driver output type)



26LS31 (Equivalence)

■ Outline drawing

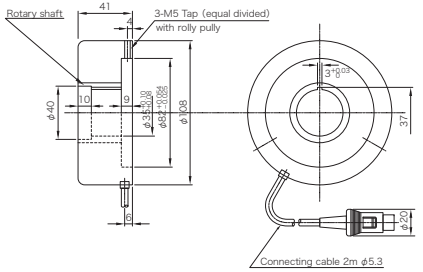
S Series



■ Outline drawing

C Series

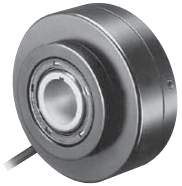
Build to order

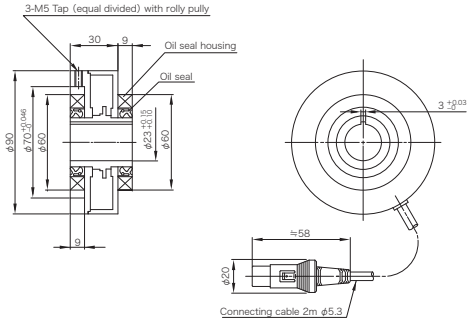


■ Outline drawing

O Series

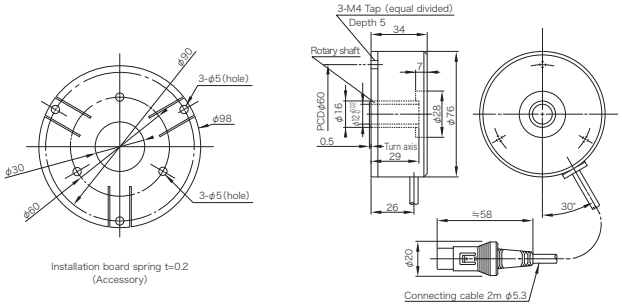
Build to order





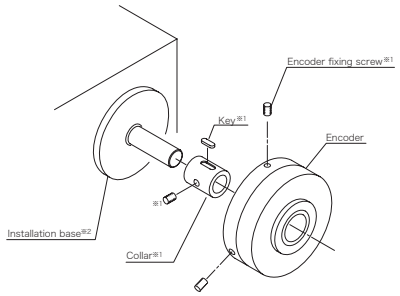
■ Outline drawing

A series

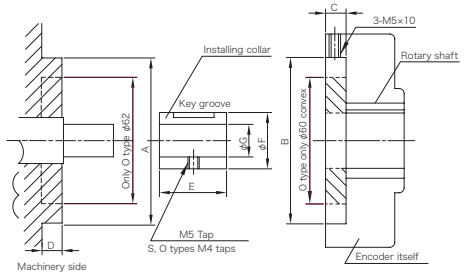


■ Installation method

S series
C series
O series



※1 Only S, C, O series are the accompanying items
※2 Please prepare for yourself.



Installation size and color (Accessory) size

Size / Series	A	B	C	D	E	F	G	Key
S・O	$\phi 70^{g6}$	$\phi 70^{H8}$	9	8 or more	24	$\phi 23^{-0.1}_{-0.15}$	$\phi 8$	$3^{\square} - 12\ell$ Keys with both round ends
C	$\phi 82^{g6}$	$\phi 82^{H8}$	9	8 or more	24	$\phi 35^{-0.1}_{-0.15}$	$\phi 9$	$3^{\square} - 12\ell$ Keys with both round ends

※ G is processed with uneven on the end. Please process to adjust to the size of shafting.

■ Installation procedure

A series