

# Incremental Non provincial line type Rotary Encoder

SROI42-2500P□-P6C-W□-5V

SROI42-2500P□-P6S□-W□-5V

## SPECIFICATION



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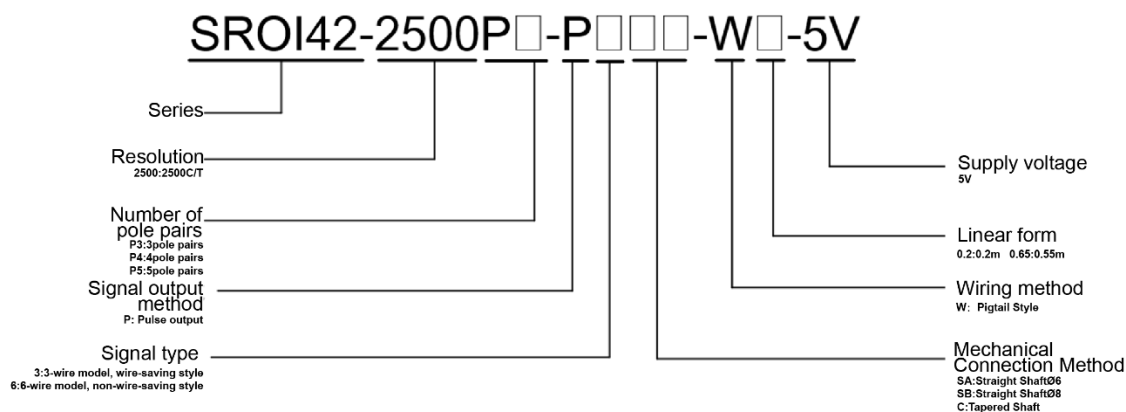
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## 1. Summary Info

Reagle Sensing SROI42 incremental Non provincial line type 2500-line encoder products currently fall into three categories, as follows:

Model Series	Features	Installation Features
SROI42-2500P□-P6C-W□-5V	Resolution: 2500 C/T;	Tapered ShaftΦ9(1:10)
SROI42-2500P□-P6SA-W□5V	Pole Pairs: 3 /4 /5	Straight ShaftΦ6
SROI42-2500P□-P6SB-W□-5V	Linear Type: 0.2m /0.65m	Straight ShaftΦ8

## 2. Naming convention



## 3. Technical Specifications

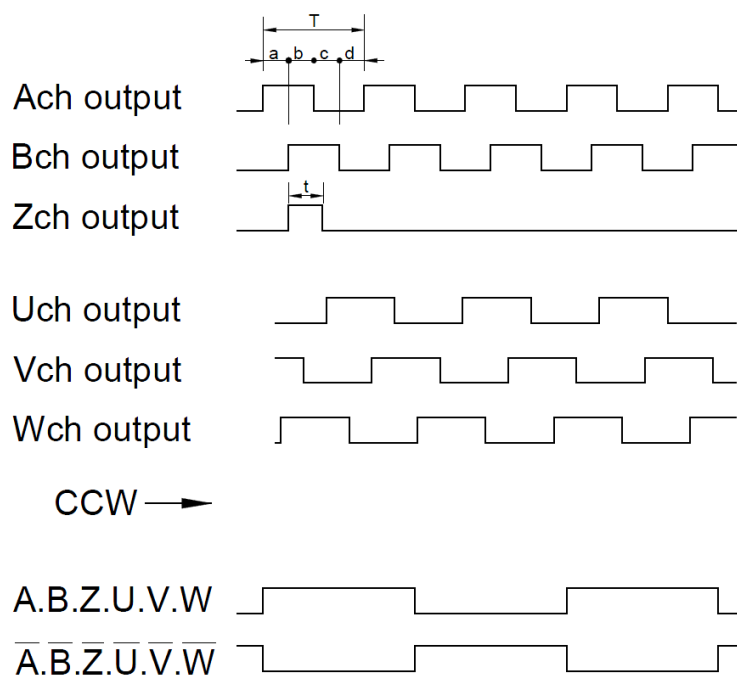
Model	SROI42-2500P□-P6C-W□-5V SROI42-2500P□-P6SA-W□-5V SROI42-2500P□-P6SB-W□-5V
Resolution	2500 C/T
Communication frequency	≤250KHz
Input shaft allowable deviation	Axial :Tapered Shaft±0.3mm    Straight Shaft Unrestricted Axial play :<0.2mm Radial :±0.1mm                  Radial play :<0.05mm Tilt:<0.1°
Main shaft speed	≤6000rpm

Shaft Diameter	straight shaft $\varnothing 6/\varnothing 8\text{mm}$ Tapered Shaft $\varnothing 9\text{ mm}$ Taper 1:10
Moment of inertia	$\approx 0.66\text{kg}\cdot\text{mm}^2$
Weight	$\approx 0.09\text{ kg}$ (0.65 m Line) $\approx 0.07\text{ kg}$ (0.20 m Line)
Rotor angular acceleration	$\leq 10000\text{rad/s}^2$
Vibration	Between 10 and 55Hz, maintain amplitude of 1.5mm. Between 55 and 2000Hz, acceleration is $98\text{m/s}^2$ . 2 hours per axis for XYZ, totaling 6 hours.
Mechanical shock	Shock acceleration of $980\text{m/s}^2$ , 11 milliseconds. 3 impacts per direction, totaling 18 impacts.
Operating Temperature/ Storage Temperature	$-40^\circ\text{C}\sim+105^\circ\text{C}$
Relative Humidity	$\leq 90\%$ ( $40^\circ\text{C}/21\text{ days}$ , based on EN 60068-2-78); No condensation
Enclosure Protection Rating	IP 40
Electromagnetic Compatibility	Compliant with IEC 61800-3 standards
Output Format	Line Driver 26C31
ESD Resistance	4kV Contact Discharge
Magnetic Interference Resistance	Common Mode Magnetic Field Suppression

#### 4. Electrical Parameters

Items		T=25°C		
		Min.	Typ.	Max.
Main power supply voltage		4.75 V	5V	5.25V
Main power supply Current (Typ)		--	55mA	--
Differential Level	High	2.4V	--	--
	Low	--	--	0.5V
Edge Change Time		--	--	100ns
Insulation resistance		10M $\Omega$	--	--
Insulation Voltage Withstand		AC500V 1min		

## 5. Output Phase Difference



$$T = \frac{360^\circ}{2500}$$

$$a. b. c. d = \frac{T}{4} \pm \frac{T}{8}$$

$$t = T \pm \frac{T}{2}$$

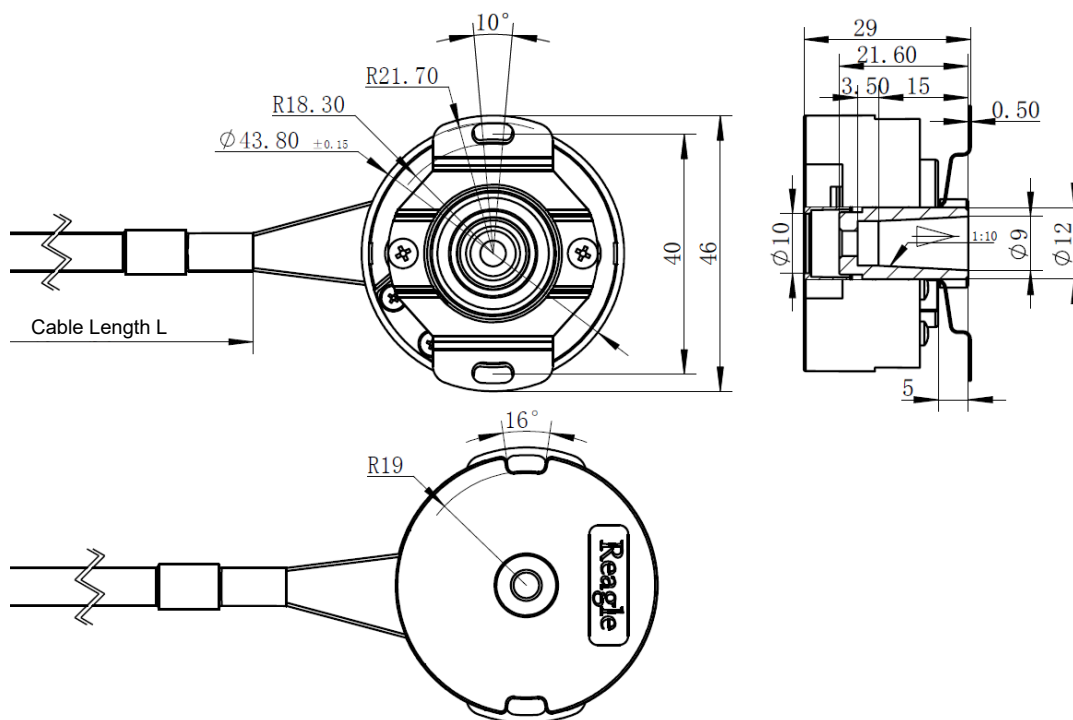
## 6. Cable Definition

Cable color	Definition
Red	+5V
Black	GND
Blue	A+
Blue-Black	A-
Green	B+
Green-Black	B-
Yellow	Z+

Yellow-Black	Z-
Brown	U+
Brown-Black	U-
Gray	V+
Gray-Black	V-
White	W+
White-Black	W-
Shielding	PE

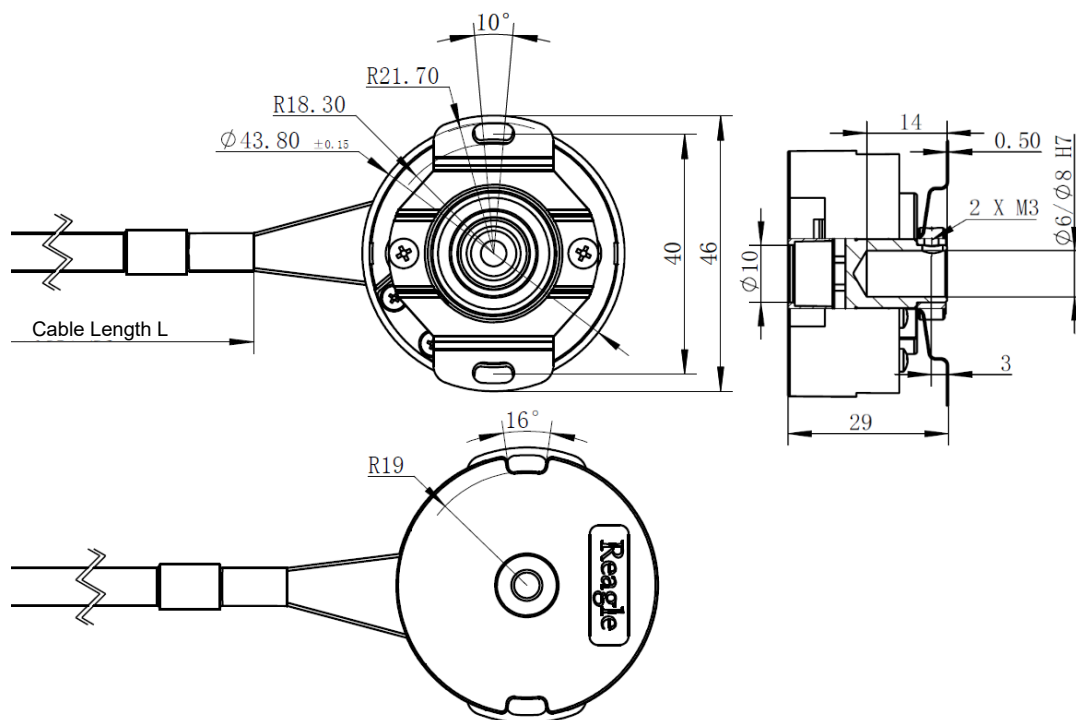
## 7. Mechanical Specifications

### 7.1 SROI42-2500P□-P6C-W□-5V Tapered Shaft



【Note】 The above refers to the default connecting plate.

## 7.2 SRO142-2500P□-P6S□-W□-5V Straight Shaft



【Note】 The above refers to the default connecting plate.

## 8. Configuration Description

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Ordering codes are detailed in the " REAGLE SENSING Incremental Photoelectric Encoder Ordering Instructions."

### Revision History

Date	Version Number	Modification Details or Changes	
		Location	Content
20210831	V1.0	/	New Version
20240611	V1.2		Ordering codes are detailed in the "REAGLE SENSING Incremental Photoelectric Encoder Ordering Instructions."



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