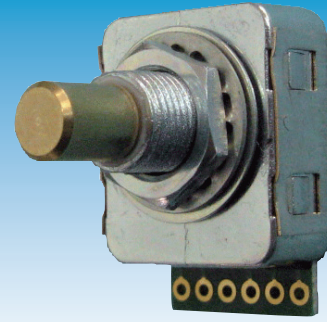


Optical Rotary Encoder



RE25 Series



Outline

RE25 is a VA designed eco friendly – power-saving and low cost with lesser parts – rotary encoder. Its size, mounting procedures and inner-structures have been designed for a wide-array of uses; measurement devices, medical equipments, industrial machineries, telecommunication devices and machine tools.

Features

- Eco friendly:
 - 1) Power-saving
 - 2) Low cost and lesser parts by VA design
 - 3) RoHS compliant
- Thin-line (18.8x25.5x8.9mm) and lightweight (18g)
- Various types of models with options: lead wire with or without connector, clamp for horizontal/vertical mounting
- Long-lasting without “contact chatter” due to its optical switching function
- Waterproofed model available

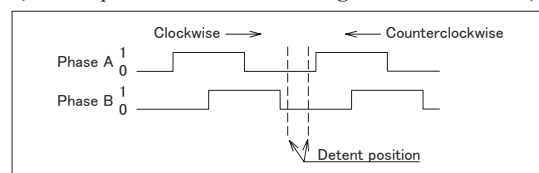
Specifications

1. Electrical and Mechanical specifications		
Items	Rated Value	
Number of pulses	16PPR, 25PPR	
Supply voltage	3.3V±10%	5V±10%
	20mA	10mA
Output signals	Channel A/B: Square Wave CMOS chip	
Output voltage	High	Supply Voltage(3.3V): $-0.3V \leq$, (5V): $-0.5V \leq$
	Low	$\leq 0.4V$
Response frequency	200Hz	
Rotational Torque	Light: S	$4 \pm 1mN \cdot m$
	Standard: C	$6 \pm 2mN \cdot m$
	Medium: M	$10.5 \pm 3.5mN \cdot m$
	High: H	$16 \pm 5mN \cdot m$
Weight	18g	

2. Reliability and Environmental specifications			
Items	Rated Value		
Durability of operating area	Thrust direction	Push	100N
		Pull	50N
	Radial		$1N \cdot m$
Rotational durability	Light: S		1 million strokes (No load)
	Standard: C		
	Medium: M		
	High: H		100 thousand strokes (No load)
Screw Torque	Not more than $1N \cdot m$		
Heat resistance of solder	Solder bit temp.: MAX 350°C	Within 3 seconds for each terminal	
Operating temperature	0°C ~ +55°C 32F ~ 131F		
Storage temperature	- 40°C ~ +85°C - 40F ~ 185F		

Output Waveform

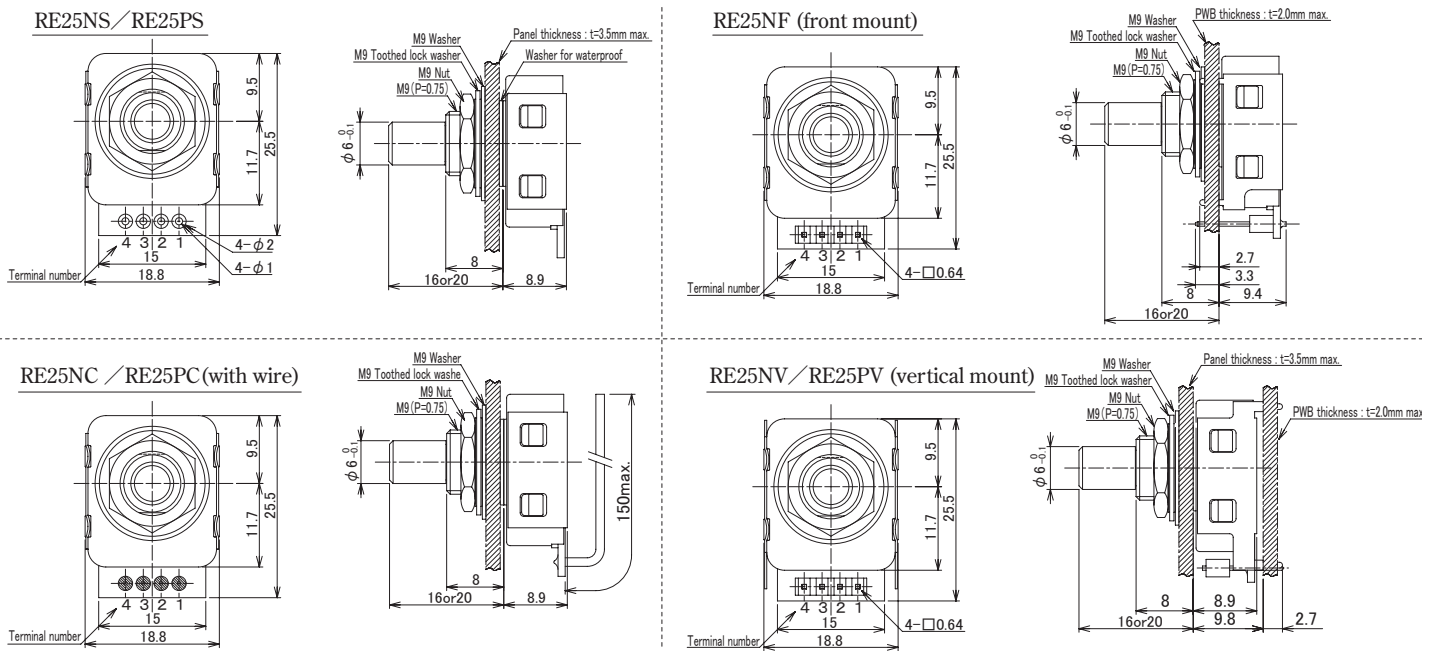
- 1) Turning the shaft clockwise will generate the signal A when the signal B outputs a low voltage (0);
- 2) Rotating the shaft counter-clockwise will generate the signal A when the signal B outputs a high voltage (1);
- 3) Detent positions are where both signal A and B are low (0).



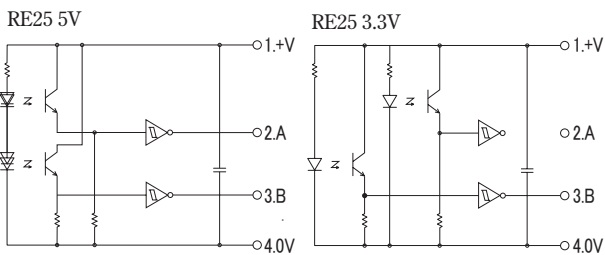
Part Number Designation

Series	RE25	N	S	25	C	20	R	A	
	Waterproof			Pulse				Power Voltage	
N	No			16	16PPR			A	5V
P	Yes			25	25PPR			B	3.3V
	Wiring				Ckck	Rotation Torque			Shaft Shape
S	Standard				S	4mN · m		R	Round
C	With wire				C	6mN · m			Shaft length
F	Front Mount				M	10.5mN · m		16	16mm
V	Vortical Mount				H	16mN · m		20	20mm
					Non	W/O	$\leq 4mN \cdot m$		

Dimensions (mm)



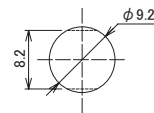
Circuitry



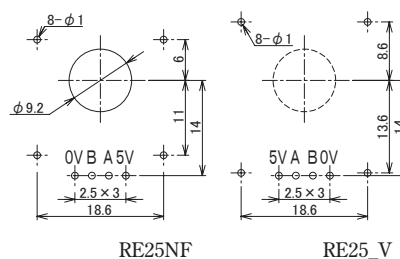
Terminal number

1	3.3V/5V	Supply
2	A	Signal A
3	B	Signal B
4	0V	Ground

Mounting hole dimensions (mm)



PWB mounting hole dimensions (mm)



Precautions

Wiring	Use buffering amplifier when extending lead wire over 30cm.
Soldering	Do not put a load on the terminal area during and immediately after soldering.
Operation	Do not use flow/reflow soldering machines.
Power	Use under specified power voltage and connect properly.
Waterproofing	Do not fasten tighter with the torque of more than 1.5N · m.

Warranty

- 1 year from the date of shipment.