

Manual Pulse Generator



RE45B series



Outline

RE45B series are optical manual pulse generator developed for NC machine tools

Features

- Eco friendly: RoHS compliant
- Comfortable wide knob
- Various Options
- Printing Logo type on the wheel cover upon request
- Long life use

Specifications

Application	5V input	2V input	Differential line	Photo coupler
Power Voltage	DC5V±10%	DC12V±10%	DC5V±10%	DC10.8V to 26.4V
Current power (pull up)	≤ 80mA	≤ 60mA	≤ 150mA (90mA typ)	≤ 60mA
Current power (Open collector)	≤ 30mA	≤ 40mA		
Output	330Ω Pull-up or Open collector	2.2KΩ Pull-up or Open collector	RS-422A (Line driver) Terminating register at receiver :100Ω/phrase	Open collector (Current output type)
Output voltage	1 level: (Power voltage -0.5V) ≤			1 level: Transistor/ON
Output voltage (pull up)	0 level: ≤ 0.4V (No-load)			0 level: Transistor/OFF
Collector voltage	≤ DC30V			≤ 30V
Collector voltage (Open collector)	≤ 40mA			≤ 50mA
Pulse per revolution	100pulse/100Click or 25pulse/100Click			
Click torque	A,B,C : 8 ~ 16mN.m D: 32 ~ 64mN.m			
Rotational Durability	Over a million rotations			
Water resistance	D type only: 2m water resistant (2h) (Do not push or rotate under the water)			
Operating Temperature	-10°C		~	60°C
	14F			140F

Part number designation

RE45B A 1 R 5 B
 ① ② ③ ④ ⑤

① Type

A: With φ 80 dial / mounted by 3 nuts
C: With φ 66 dial / mounted by 1 nut
D: Without Dial

② Number of pulses

1: 100PPR
2: 25PPR

③ Output

R: Voltage Output
O: Open Collector
D: Line Driver

④ Supply Voltage

5: 5V
1: 12V
2: 24V

⑤ Dial Knob (color:black)

B: 15mm, with Tosoku logo
C: 15mm, without logo
D: 15mm, with customer logo
H: 24mm with Tosoku logo
J: 24mm without logo
K: 24mm, with customer logo

Models	Supply		Pulse Per Revolution
RE45B_1R5	5V	5V	100PPR
RE45B_1R1	12V	12V	100PPR
RE45B_1O5	5V	OC	100PPR
RE45B_1O1	12V	OC	100PPR
RE45B_1O2	24V	OC*	100PPR
RE45B_1D5	5V	Differential Line*	100PPR
RE45B_2R5	5V	5V	25PPR
RE45B_2R1	12V	5V*	25PPR
RE45B_2O5	12V	OC	25PPR
RE45B_2O1	12V	OC	25PPR
RE45B_2O2	24V	OC*	25PPR
RE45B_2D5	5V	Differential Line*	100PPR

*Differential Line: Connect with terminating resistance 100Ω (Based on RS-422 line receiver).

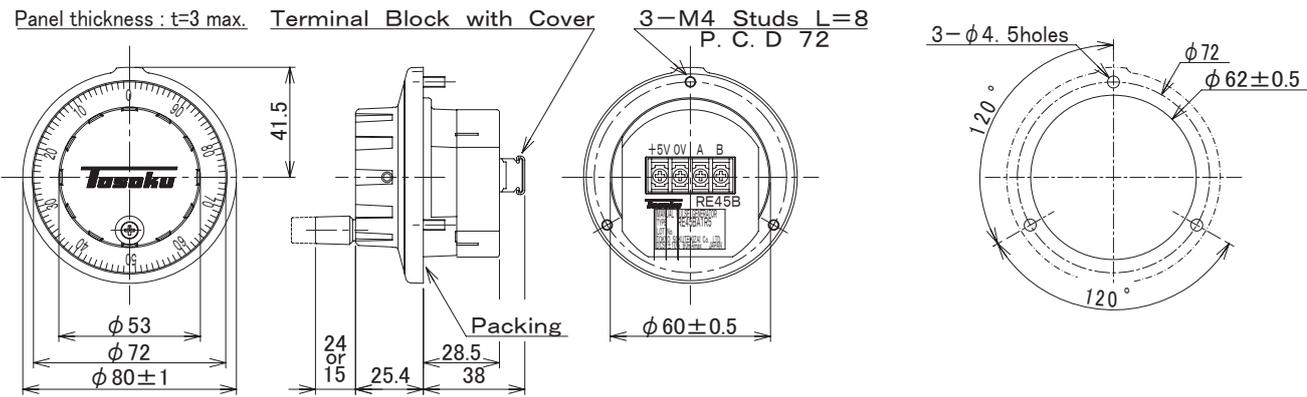
*5V: Supply voltage=12V, Output voltage=5V

*OC: For photo coupler only, Supply voltage 12 ~ 24V

Dimensions (mm)

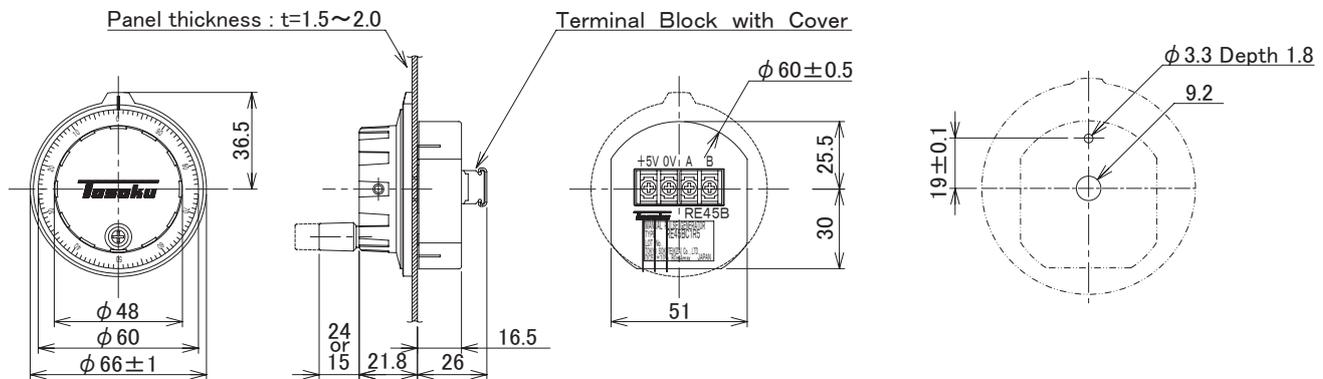
● Type A (with 80 ϕ dial / mounted by 3 nuts)

■ Type A, Mounting hole dimensions (mm)

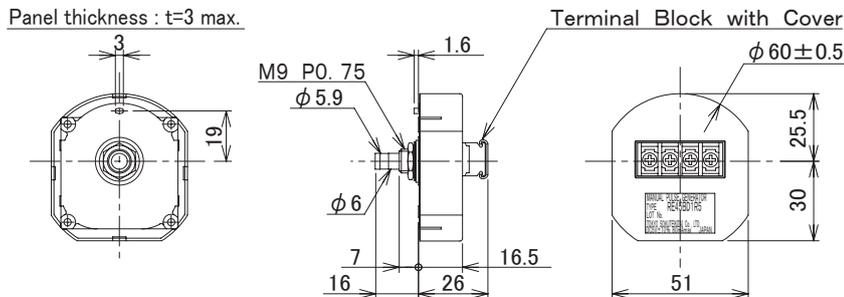


● Type C (with 66 ϕ dial / mounted by 1 nut)

■ Type C,D, Mounting Hole Dimension (mm)

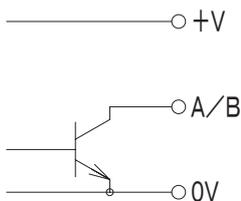


● Type D (without dial)

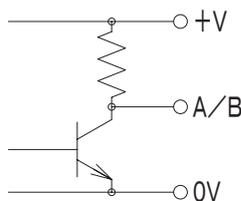


■ Circuitry

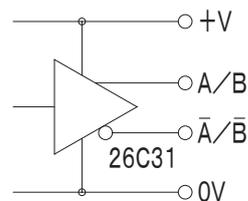
● Open collector (code:O)



● Voltage Output (code:R)



● Line Driver (code:D)



■ Output Waveform

- 1) Turning the shaft clockwise would generate the signal A when the signal B outputs a low voltage (0);
- 2) Rotating the shaft counter-clockwise would generate the signal A when the signal B outputs a high voltage(1);

