Photoelectric high-precision absolute value encoder GDS60-PB
Parallel output user manual

★Before using the encoder, please read the following instructions and use it correctly!

Mechanical spec.		Electrical spec.	
Max. speed	6000 RPM	Power supply	5V
Shaft load	Axial 40N, radial 100N	Current consumption	< 300mA (24Vdc)no-load
impact	1000m/s²(6ms),about 100g	output	16-bit synchronous parallel signal (Gray code)
Anti-vibration	200m/s²(10-2000Hz) about 20g	resolution	1/65536FS
Allow axial jump	±1.5mm	IP	IP65 或 IP68
Allow radial jump	±0.2mm	accuracy	0.01°
structure	60mm outer diameter, solid shaft, or hollow shaft	Operating temp.	-40℃~100℃
Connection Type	30-core shielded cable or aviation connector	Storage temp.	-40℃~85℃

Reliable and patented

- Rugged bearing structure with safety-lock design provides higher anti-vibration and anti-installation error
- IP68 protection grade and wide working temperature range -40℃...+100℃
- With permanent power-off memory function

Performance optimization

- High precision, data refresh about 200us
- Read data directly through I/O port

Wiring

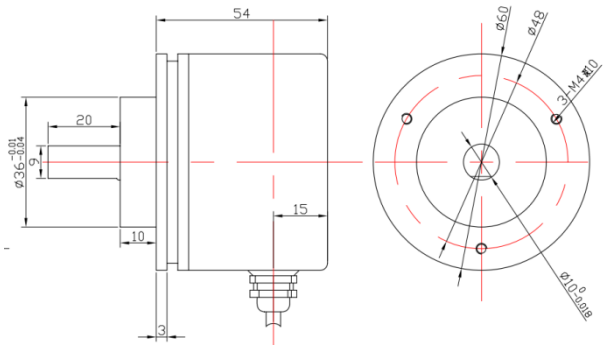
color	output	color	output	color	output
		Orange/3	Bit 7	Red/2	Bit 15
		Purple/1	Bit 8	Red/3	Bit 16
Black/3	Bit 1	Purple/2	Bit 9		
Green/1	Bit 2	Purple/3	Bit 10		
Green/2	Bit 3	Yellow/1	Bit 11	Gray/1	Reset note1
Green/3	Bit 4	Yellow/2	Bit 12	Brown/1	5Vdc
Orange/1	Bit 5	Yellow/3	Bit 13	White/1	GND 0V
Orange/2	Bit 6	Red/1	Bit 14	Blue/1	Direction note2

Note:

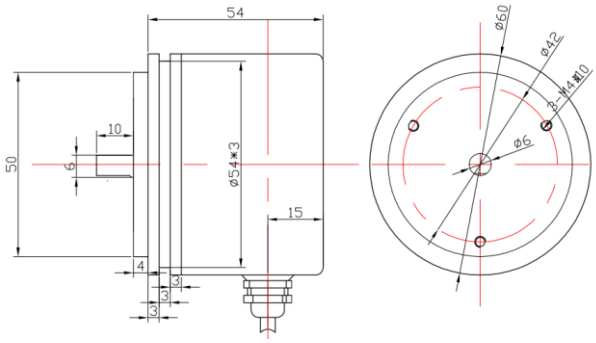
1. Reset: reset the current value to zero when connected 5V+ more than 1 second.
2. Forward and reverse: data increase counterclockwise when connected to 5V+
3. Maximum output 50mA per bit
4. High level effective.

Installation dimensions (Unit: mm)

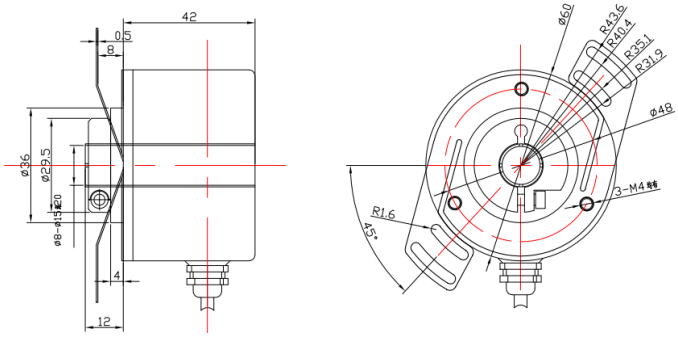
a. Clamping & synchro flange(default)



b. Synchro flange

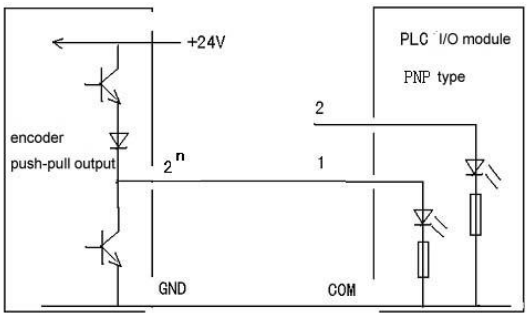


C. Hollow shaft

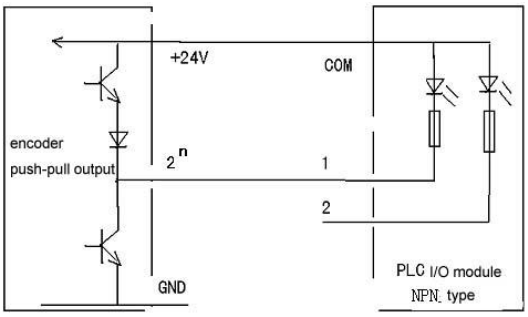


Signal output

GDS60-PB parallel push-pull output of the output signal(PNP as default), and the PLC input module (I / O) connections as shown below:



PNP-tyep connection



NPN-tyep connection

Extensions [Blue/Brown]: When connected to a high level of data increases counterclockwise; when clockwise, please connect the wire to the power ground (GND 0V)

Note:

* The encoder is a precision instrument, do not knock or bump encoders, gently, carefully use;
* Guaranteed encoder supply in the range 5Vdc and do isolation to prevent large-scale electric power grid to start the encoder produces shock;
* In the environment of strong electromagnetic interference, the signal line is best to use a dedicated line, such as double-shielded twisted pair cable can be ordered from the Company;
* Encoder signal line should be well grounded: close, both ends of the cable shielding should be grounded within two meters; greater distance encoder grounded metal enclosure, the encoder comes with cable shielding vacant, signal extension cable shielding in signal receiving end single-grounded; If the signal cable longer or outdoor use, signal cables should put metal iron pipe and metal pipe at both ends of the ground to use;
* Encoder protection class IP65, waterproof to use, but do not flooding the encoder shaft.