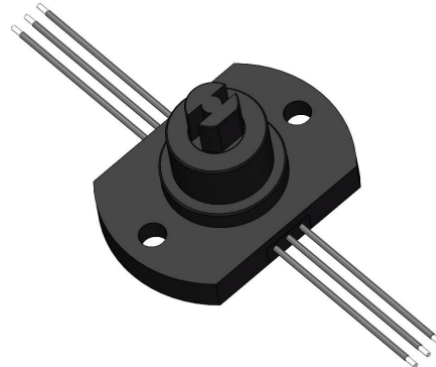




With mounting pins



Without mounting pins

ALTERNATIVE TO elobau 424Z series angle sensor (30°-120°)

Interchangeability to be confirmed against the selection data. elobau® is a trademark of elobau GmbH & Co. KG; the model is cited only to indicate interchangeability. Gudao is not affiliated with elobau.

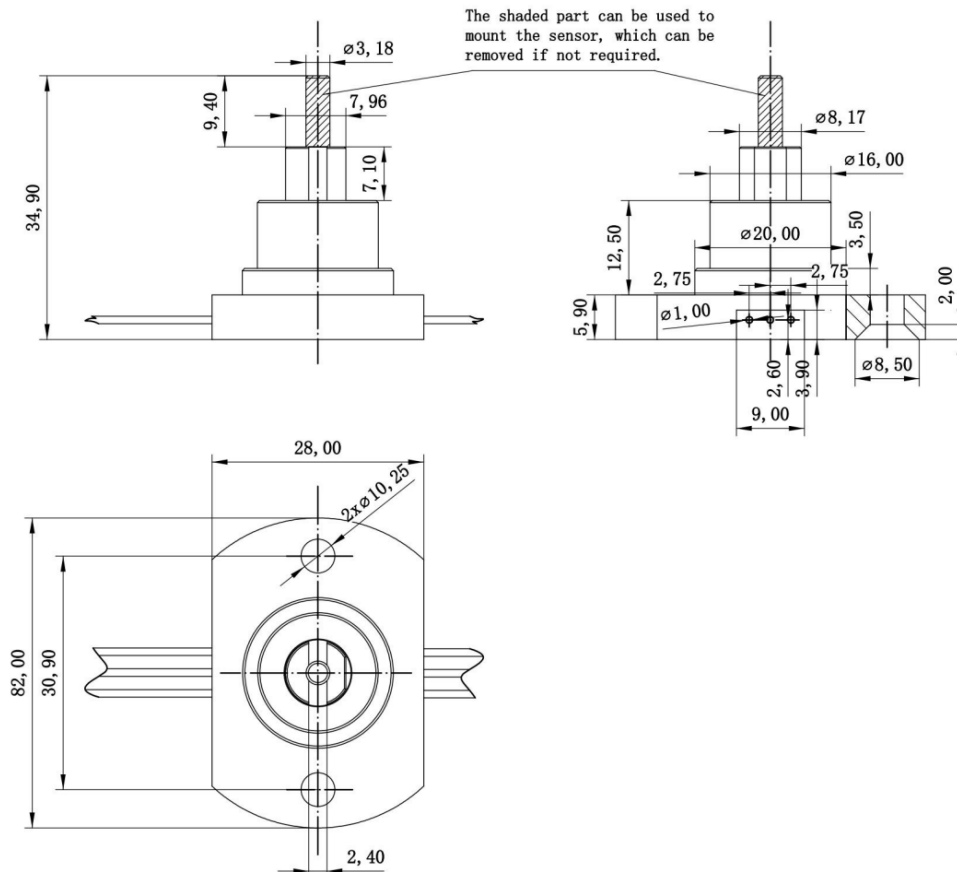
Overview

GD-868Z measures the rotation of a shaft or pivot point – for example a steering axle, boom joint, pedal or linkage on mobile machinery. A magnet on the rotating shaft is read by a Hall IC without any contact, so there is no wiper track to wear out. The measuring range is selectable from 30° to 120°, and a dual output version is available for safety-relevant functions.

Key features

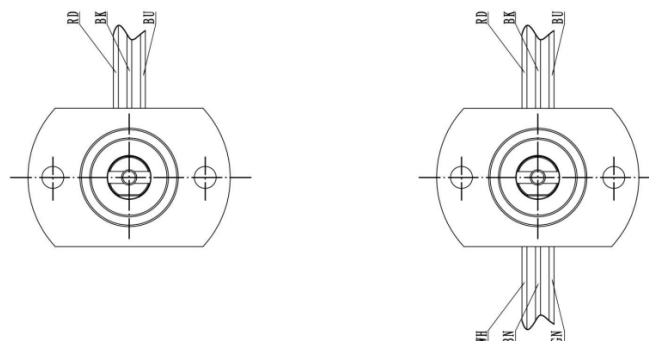
- Contactless Hall-effect measurement – no wear, long service life
- Measuring range 30°, 45°, 60°, 90° or 120°
- Ratiometric 0.5–4.5 V output, 2.5 V at centre position, 0.1° resolution
- Single output, or dual output (parallel or opposite) for redundancy
- IP67 housing in PBT, operating temperature –40 °C to +85 °C
- Compact flange with or without mounting pins

Dimensions



Dimensions in mm (decimal comma). The shaded locating pins can be removed when not required.

Wiring



Cable exit - single output (left), dual output (right)

Wire colour	Single output (E)	Dual output (P / G)
Red (RD)	Supply +5 V	Supply 1 +5 V
Blue (BU)	Signal output	Signal output 1
Black (BK)	GND	GND 1
White (WH)	-	Supply 2 +5 V
Green (GN)	-	Signal output 2
Brown (BN)	-	GND 2

Electrical data

Supply voltage	5 V DC (4.5–5.5 V)
Current consumption	10 mA per channel
Output signal	Ratiometric 0.5–4.5 V DC; 2.5 V at centre / zero position
Number of outputs	1, or 2 (redundant)
Signal direction	E: CCW · P: CCW / CCW · G: CCW / CW
Resolution	0.1°
Update rate	2000 Hz
Minimum load resistance	10 kΩ
Reverse-polarity protection	Yes; outputs short-circuit proof
Temperature coefficient	typ. ±250 ppm/K
Typical linearity error	±0.2° (≤±15°) · ±0.4° (≤±25°) · ±1.0° (≤±35°) · ±2.0° (≤±45°) · ±5.0° (≤±60°)
EMC	Not yet certified. Testing to the standard required by the application (e.g. ISO 13766-1, EN ISO 14982) can be arranged per project.

Mechanical and environmental data

Housing material	PBT
Bearing	Plastic plain bearing
Mechanical stop	Yes, at approx. 180°
Permissible shaft load	None (axial and radial 0 N) – drive the shaft via a coupling, not a lever

Fastening screw torque	1 N·m
Protection class	IP67
Operating / storage temperature	−40 °C to +85 °C
Cable	Stranded wires, 0.5 m; −40 °C to +105 °C (fixed installation)

Ordering code

GD-868Z - **E** - **120**

Series

GD-868Z = axial Hall angle sensor

Output

E = single output, CCW

P = dual output, parallel (CCW / CCW)

G = dual output, opposite (CCW / CW)

Measuring range

030 = 30°

045 = 45°

060 = 60°

090 = 90°

120 = 120°

Example: GD-868ZE120 = single output, counter-clockwise rising signal, 120° measuring range.

Installation notes

- Do not apply axial or radial force to the shaft; use a flexible or slotted coupling.
- Align the sensor shaft with the rotation axis before tightening the screws (1 N·m).
- Fix the cable along the machine so that it is not pulled or bent at the cable exit.