



## Analogue indicator with stepper motor principle

### Features

- Exact indication due to high accuracy class
- Bright, uniform LED scale and optionally pointer illumination for optimum reading
- Direct connection of all standard measuring signals (current, voltage, frequency, temperature)
- Compact and robust design in various sizes with glass fibre reinforced plastic casing and a high resistance against salt spray for harsh ambient conditions
- Customer-specific scales (design, measuring range, logos etc.), even for small quantities
- Options include non-linear scale division, scale spreading, customised zero position etc.
- Fulfil the requirements of the DIN EN 50155 for railway technology and all common ship classification societies



### Integrated directional rotation detection

Optionally, two speed sensors or a dual sensor (two sensors in one enclosure) can be connected to this device without the need for any additional electronics. The indicator detects the direction of rotation based on the phase angle of both sensor signals and visualises it in combination with the speed on the scale (right/left stop).

The indicators can be equipped with several additional functions, e. g. control functionality for sensor failure and power supply failure (Live-Zero) or Minimum-Maximum value indication. Scale, scale background colour, scale graduation as well as pointer colour and pointer illumination can be adapted to customised specifications.

### Benefits of analogue indication

- ✓ Optimal readability even at large distance and sharp angles, regardless of daytime or direct sunlight
- ✓ Higher life cycle compared to displays
- ✓ Direct connection without the need of any additional measuring transducers
- ✓ No complex parameterization needed
- ✓ Cost advantage during the whole period of use

### Technical data (extract)

Design	Round or square
Sizes	Round: Ø60 mm, Ø80 mm, Ø100 mm oder Ø130 mm Square: 72x72 mm, 96x96 mm, 144x144 mm
Input signals	Current: 0 ... 20 mA; 4 ... 20 mA; -20 ... +20 mA Voltage: 0 ... 10 VDC; 2 ... 10 VDC; -10... +10 VDC Frequency: 0,2 Hz ... 140 kHz Pt100/Pt1000: -30 ... 600 °C NTC thermistor: H1: 40 ... 120 °C; H2: 5 ... 70 °C; H3: 114 ... 200 °C
Accuracy class	EN 60051 and IEC 51-1: better than 0.5 % referred to the measuring range
Operating temp.	IEC 60068-2-1/2: -25 °C ... +70 °C
Protection class	DIN EN 60529: Casing front IP66, IP67 and IP68

