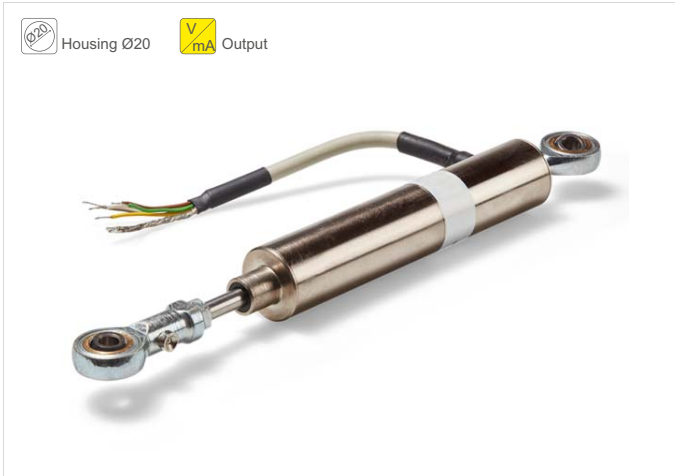


Series LVDT-ISDG

Displacement Sensor, integrated signal conditioner

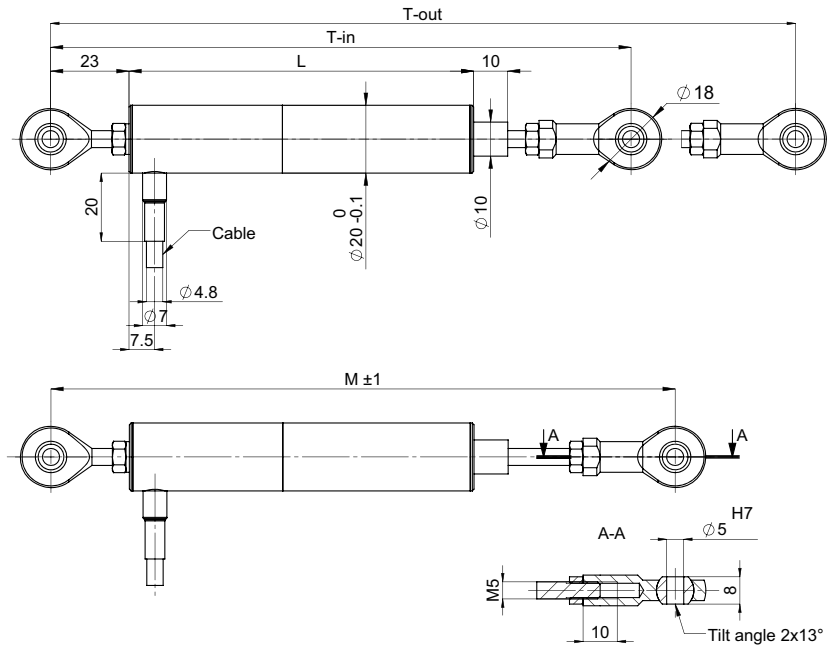


 Housing Ø20  mA Output

The displacement sensors operate according to the principle of a differential transformer.

- For rough environment
- Displacement: 2mm up to 200mm
- Degree of protection IP65 (optional IP67, IP68)
- Housing Diameter 20mm

Drawing



| Standard types | | | | Dimensions [mm] | | | |
|------------------|---------------|-------------------|------------|----------------------|----------------------------|-----------------------|-----------------------------|
| Type | Armature | Displacement | Connection | L1 Housing length | T-in Arm inner position | M Middle of stroke | T-out Arm outer position |
| ISDG-2-K-24XX | Plain Bearing | ± 1 (2mm) | Cable | 87 | 163 | 173 | 182 |
| ISDG-5-K-24XX | | ± 2.5 (5mm) | | 87 | 163 | 173 | 182 |
| ISDG-10-K-24XX | | ± 5 (10mm) | | 101 | 170 | 183 | 196 |
| ISDG-20-K-24XX | | ± 10 (20mm) | | 140 | 204 | 219 | 235 |
| ISDG-50-K-24XX | | ± 25 (50mm) | | 185 | 250 | 280 | 310 |
| ISDG-100-K-24XX* | | ± 50 (100mm) | | 320 | 384 | 443 | 515 |
| ISDG-200-K-24XX* | | ± 100 (200mm) | | 490 | 570 | 678 | 785 |

* See the note on the last page

Series LVDT-ISDG

Displacement Sensor, integrated signal conditioner



| Electrical Specification | | | | | | | | |
|-------------------------------|--|----------|---------|----------|----------|-----------|------------|--------------|
| Displacement | ±1 (2) | ±2.5 (5) | ±5 (10) | ±10 (20) | ±25 (50) | ±50 (100) | ±100 (200) | [mm] |
| Linearity deviation | < ±0.5 (< ±0.25 optional) | | | | | < ±1 | On request | [% F.S.] |
| Supply voltage | 24 (±20%) / ±15 (±5%) | | | | | | | [VDC] |
| Current consumption (no load) | ±20/20 (±40/40 current output) | | | | | | | [mA] |
| Output signal | 0..5 V / ±5 V / 0..10 V / ±10 V* / 0..20 mA / 4..20 mA | | | | | | | |
| Output load | >10 kOhm voltage output / <500 Ohm current output | | | | | | | |
| Output noise (Ripple) | <10 | | | | | | | [mV RMS] |
| Cut of frequency (-3 dB) | 100 | | | | | | | [Hz] |
| Temperature coefficient | ±0.4 | | | | | | | [% F.S./10K] |

| Mechanical Specification | | | | | | | | |
|--------------------------|------------------------|-----|-----|-----|-----|-----|--|-----|
| Housing material | Steel nickeling plated | | | | | | | |
| Core material | Nickel-Iron-Alloy | | | | | | | |
| Weight (with Cable) | 155 | 180 | 195 | 245 | 305 | 510 | | [g] |

| Environments | | | |
|---------------------------|-----------------------------------|--|----------------|
| Rated temperature range | 0 .. +70 (optional -25 .. +85) | | [°C] |
| Storage temperature range | -30 .. +80 | | [°C] |
| Degree of protection | IP65 (optional IP67, IP68) | | |
| Impact resistance | 100g, 2ms | | DIN IEC68T2-27 |
| Vibration resistance | 10g / 2 Hz .. 2 kHz | | DIN IEC68T2-6 |

| Electrical Connection | | |
|-----------------------|------------------------|-----------------------|
| Cable 1m (wire color) | Supply voltage ±15 VDC | Supply voltage 24 VDC |
| yellow | -15 VDC | N.C. |
| brown | +15 VDC | +24 VDC |
| white | Signal GND | |
| green | Output | |
| grey | Excitation GND | |
| Shield | Housing | |

Series LVDT-ISDG

Displacement Sensor, integrated signal conditioner

| Order code | | | | | |
|------------|---|--------------------|-----------------------------|--|------------------------------|
| Series | Displacement | Connection | Exec. Voltage | Output signal | Lin.-Tolerance* |
| ISDG- | 20- | K- | 24 | 10 | |
| Standard | 2 = 2mm 5 = 5mm 10 = 10mm 20 = 20mm 50 = 50mm 100 = 100mm 200 = 200mm | K = Cable (1meter) | 24 = 24 VDC 15 = ±15 VDC | 05 = 0..5 VDC 10 = 0..10 VDC 55 = ±5 VDC 11 = ±10 VDC 20 = 0..20 mA 42 = 4..20 mA | *If less than ±0.5% required |
| Options | Other on request | Length K2 = 2m | | | ±0.25% ±0.1% |

| Accessories | | | |
|--|--|--|--|
| Mounting bock for Ø 20 mm | Mounting flange for Ø 20 mm | | |
|  |  | | |

Note

The following applies to the 100mm and 200mm displacement versions:

For horizontal installation, the sensor housing must be additionally stabilized and axial alignment must be ensured. Otherwise the sensor could bend from its own weight! Use of 3 mounting blocks is recommended.