

Serie / Series LVDT-ISAL „KD“

Induktiver Wegsensor / Displacement Sensor



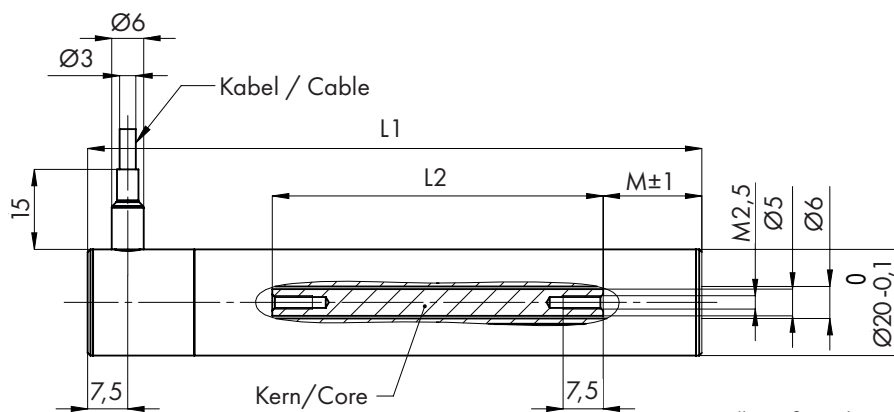
Wegsensor mit Kerndurchführung durch den kompletten Sensor. Mechanische Bewegungen lassen sich so durch den Sensor hinweg übertragen. Bei senkrechter Einbaulage und Gefahr von Feuchtniederschlag entsteht keine Staunässe.

Displacement sensor with through guided armature through the complete sensor. Mechanical movements can thus be transmitted through the sensor. In case of a vertical installation position and risk of damp precipitation, no waterlogging occurs.



- Durchgangsbohrung / Kerndurchführung
- Messweg von 2 mm bis 200 mm
- Schutzart IP65
- Gehäusedurchmesser 20 mm
- With throughshaft
- Measurement range: 2mm up to 200mm
- Degree of protection IP65
- Housing diameter 20mm

Abmessungen / Dimensions



Alle Maßangaben in mm / All dimension in mm

| Standardtypen / Standard types | | | | Abmessungen / Dimensions mm | | |
|--------------------------------|-------------------------|-------------------------|-------------------------|--------------------------------------|--------------------------------------|----------------------------------------|
| Typ Type | Geberstange Armature | Messweg Displacement | Anschluss Connection | L1 Gehäuselänge Housing length | L2 Gehäuselänge Housing length | M Mitte Messweg Middle of stroke |
| ISAL-2-KD | Ungeführt Unguided | ±1 (2mm) | Kabel Cable | 51 | 17 | 9 |
| ISAL-5-KD | | ±2,5 (5mm) | | 62 | 23 | 11,5 |
| ISAL-10-KD | | ±5 (10mm) | | 76 | 30 | 15 |
| ISAL-20-KD | | ±10 (20mm) | | 115 | 62 | 18,5 |
| ISAL-50-KD | | ±25 (50mm) | | 160 | 80 | 32 |
| ISAL-100-KD | | ±50 (100mm) | | 295 | 130 | 74,5 |
| ISAL-200-KD | | ±100 (200mm) | | 465 | 230 | 109,5 |

| Elektrische Spezifikation / Electrical Specification | | | | | | | | |
|------------------------------------------------------|------------------------------|----------|---------|----------|----------|-----------|------------|------------------|
| Messweg Displacement | ±1 (2) | ±2,5 (5) | ±5 (10) | ±10 (20) | ±25 (50) | ±50 (100) | ±100 (200) | mm |
| Empfindlichkeit Sensitivity | 76 | 82 | 43 | 34 | 27 | 12,2 | 7 | mV/V/mm |
| Linearitätsabweichung Linearity deviation | < ±0,5 (< ±0,25 optional) | | | | | < ±1 | | % F.S. |
| Erregerspannung Excitation voltage | 1..10 | | | | | | | V _{RMS} |
| Erregerfrequenz Excitation frequency | 0,5..5 | | | | | | | kHz |
| Primärwiderstand typ. Input resistance typ. | 332 | 69 | 97 | 175 | 221 | 460 | 820 | Ohm |
| Primärimpedanz typ. Input impedance typ. | 790 | 134 | 188 | 345 | 369 | 2240 | 5770 | Ohm |
| Ausgangsimpedanz typ. Output impedance typ. | 900 | 170 | 118 | 360 | 525 | 2140 | 5060 | Ohm |
| Temperaturkoeffizient Temperature coefficient | ±0,2 | | | | | | | % F.S./10K |
| Kalibrierung bei Calibrated at | 5V RMS / 2,5 kHz RL = 1MΩ | | | | | | | |

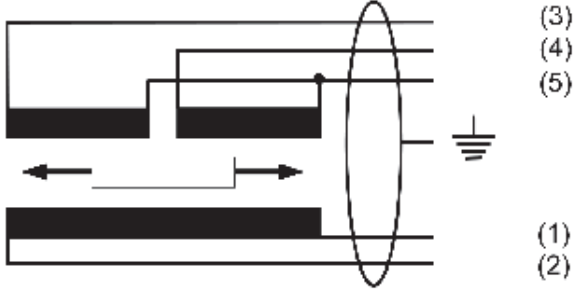
| Mechanische Spezifikation / Mechanical Specification | | | | | | | | |
|------------------------------------------------------|---------------------------------------------|--------|---------|---------|---------|----|----|---|
| Gehäusematerial Housing material | Stahl, vernickelt Steel, nickel-plated | | | | | | | |
| Kernmaterial Core material | Nickel-Eisen-Legierung Nickel-iron-alloy | | | | | | | |
| Gewicht (mit Kabel) Weight (with cable) | 85/65 | 100/80 | 120/100 | 175/155 | 230/210 | | | g |
| Gewicht Kern Weight core | 2 | 3,2 | 4,5 | 10 | 13 | 22 | 39 | g |

| Umgebungsbedingungen / Environments | | |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Nenntemperaturbereich Rated temperature range | -35 .. +120 bei geringer Luftfeuchte, nicht gefrierend at low humidity, not freezing | °C |
| Lagerungstemperaturbereich Storage temperature range | -55 .. +120 | °C |
| Schutzart Degree of protection | IP65 (optional IP67, IP68) (nicht für Ausführung KD, Steckerversion nur gesteckt) (not available for „KD“ version, only with mounted plug) | |
| Schockfestigkeit Impact resistance | 200 g, 2ms | DIN IEC68T2-27 |
| Vibrationsfestigkeit Vibration resistance | 10g / 2 Hz .. 2 kHz | DIN IEC68T2-6 |

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| Anschlussbelegung / Connection | |
|----------------------------------------------------------------------------------|----------------------------------------------|
| Kabelfarbe (Kabellänge 1 Meter) Colour of cable (Cable length 1 meter) | Signal Signal |
| rot red | Primär 1 Primary 1 |
| schwarz black | Primär 2 Primary 2 |
| orange orange | Sekundär 1 Secondary 1 |
| gelb yellow | Sekundär 2 Secondary 2 |
| weiß white | Sekundär 1, 2 Mitte Secondary 1, 2 Centre |
| Gehäuse Housing | Schirm Shield |



| Bestellcode / Order code | | | | | |
|-----------------------------------------------------|-------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------|
| Serie Series | ext. Elektronik ext. electronics | Betätigung Operation | Messweg mm Displacement mm | Anschluss Connection | Linearitätsabweichung* Linearity deviation* |
| IS | A = AC | L = ungeführte Ge- berstange Unguided armature | 2 = ±1 5 = ±2,5 10 = ±5 20 = ±10 50 = ±25 100 = ±50 200 = ±100 | KD = Kabel/cable (1 meter) durchgehende Ge- berstange / armature on both sides | * nur wenn < ±0,5% * in case of < ±0,5% |
| Bestellbeispiel / Ordering example: LVDT-ISAL100-KD | | | | | |

| Optionen / Options |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Andere Kabellänge auf Anfrage (Standard = 1 m) / Other cable length on request (standard = 1 m) Ausführung mit Steckeranschluss (5-polig, Typ Binder) / Plug connection (5-pin, Type Binder) Bessere Linearitätstoleranz (< 0,25%) / Improved linearity tolerance (< 0,25%) Schutzart IP67, IP68 / Protection degree IP67, IP68 Individuelle Kalibrierungen / Individual calibration service Sensorsignalverstärker (intern, extern) / Signal conditioner (internal, external) Kabelauszug mit Durchgangsbohrung (KD) / Cable connection with through hole (KD) Druckfeste Einbauarmatur für Hydraulikzylinder / Compression proved mounting assembly for hydraulic cylinder Betätigung (Taster) / Operation (spring return) Weitere Optionen auf Anfrage / More options on request |

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Mechanisches Zubehör / Mechanical Accessories

| | | |
|----------------------------------------------------|-------------------------------------------------------|--|
| | | |
| Montagebock für Ø 20 mm Mountingbock for Ø 20mm | Klemmflansch für Ø 20 mm Mountingflange for Ø 20mm | |

Elektronisches Zubehör / Electronical Accessories

| | | | | |
|--------------------------------------|------------------------------|---------------------------------------|------------------------------|---------------------------------------------------------------------------------|
| Messverstärker Signal conditioner | | | | |
| Serie / Series | IMA2-LVDT | IVM2-LVDT | IMK-LVDT | IMK-LVDT-OEM |
| | Hutschiene DIN Rail Mount | Platinenmodul Circuit board module | Gehäuse IP65 IP65 housing | Gehäuse IP65 IP65 housing Kundenseitig einstellbar Customer-adjustable |