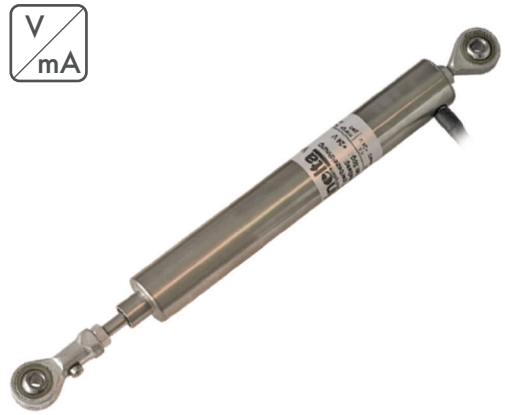
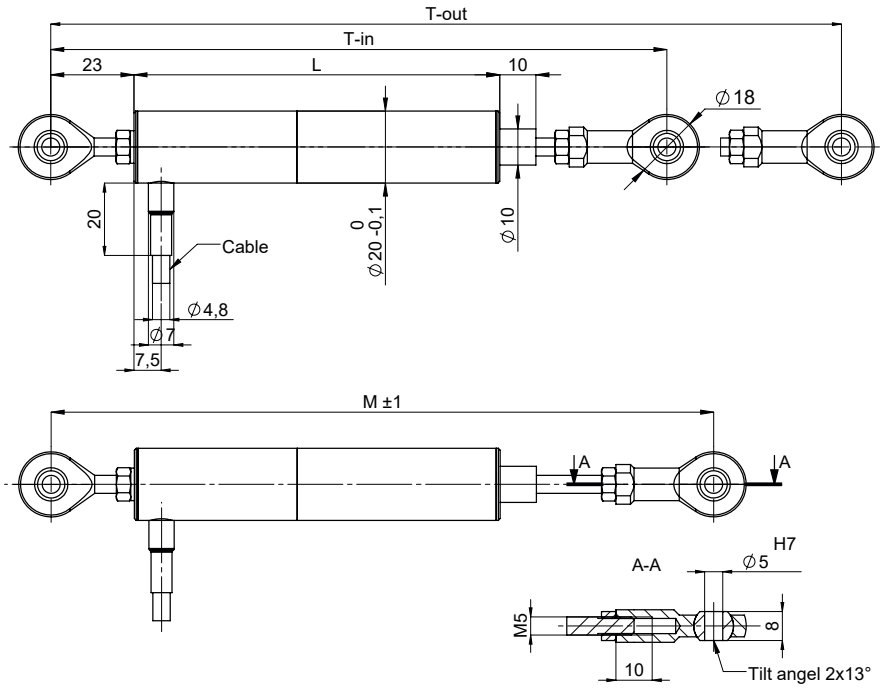


Displacement sensor, LVDT with bearing guided armature, swivel head with spherical calotte, high accuracy and almost infinite resolution. A signal conditioner is integrated.

we customise sensors

- *For rough environment*
- *Measurement range: 2mm up to 200mm*
- *Degree of protection IP65 (optional IP67, IP68)*
- *Housing diameter 20mm*

Dimensions



All dimension in mm

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

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	±15 (±5%) / 24 (±20%)							VDC
Current consumption	±20/20 (±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 off frequency (-3 dB)	100							Hz
Temperature coefficient	±0,4							% F.S./10K

Mechanical Specification								
Housing material	*Steel, nickel-plated*							
Core material	*Nickel-iron-alloy*							
Weight (with cable)	155	180	195	245	305	510		g

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Environments		
Rated temperature range	0 .. +70 at low humidity, not freezing	°C
Storage temperature range	-30 .. +80	°C
Degree of protection	IP65 (optional IP67, IP68)	
Impact resistance	100 g, 2ms	DIN IEC68T2-27
Vibration resistance	10g / 2 Hz .. 2 kHz	DIN IEC68T2-6

Connection		
Function		*Cable connection (Cable length 1m)*
±15 VDC *Supply voltage*	±24 VDC *Supply voltage*	*Colour of cable*
-15 VDC	N.C.	*yellow*
+15 VDC	+24 VDC	*brown*
Signal GND		*white*
Output		*green*
Excitation GND		*grey*

Order code							
Series	*int. electronics*	*Operation*	*Displacement mm*	*Connection*	*Supply voltage*	*Output signal*	*Linearity deviation**
IS	D = DC	G = *rod-end bearings*	2 = ±1 5 = ±2,5 10 = ±5 20 = ±10 50 = ±25 100 = ±50 200 = ±100	K = cable	15 = ±15 VDC 24 = 24 V DC	05 = 0..5 VDC 10 = 0..10 VDC 55 = ±5 VDC 11 = ±10 VDC 20 = 0..20 mA 42 = 4..20 mA	*in case of < ±0,5%
Ordering example: LVDT-ISDG20-K-2410							

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Options

- Improved linearity tolerance (< 0,25%)
- Other cable length on request (standard = 1m)
- Extended temperature range (-25°C .. +85°C)
- Protection degree IP67, IP68
- Individual calibration service
- Signal conditioner (external)
- Operation (spring, unguided armature)
- Other rod end bearing on request
- More options on request

Mechanical Accessories

Mountingbock for Ø 20mm	*Mountingflange for Ø 20mm*	

Note

*Please note the following note for the type with **100mm displacement:** For a horizontal installation, the sensor housing must be stabilized additional-ly. An axial alignment must be ensured. Otherwise the sensor could bend due to its own weight! We recommend to use 3 mounting bocks.*

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All data in the data sheet are general product descriptions. Application-related deviations are the responsibility of the user. Subject to change without notice at any time.