

# Series LVDT-IMAT

## Inductive Displacement Sensor

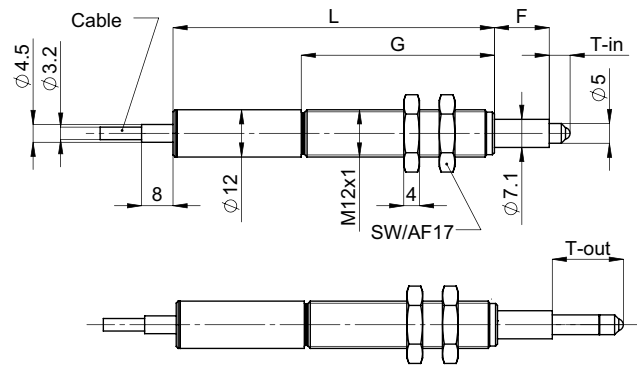
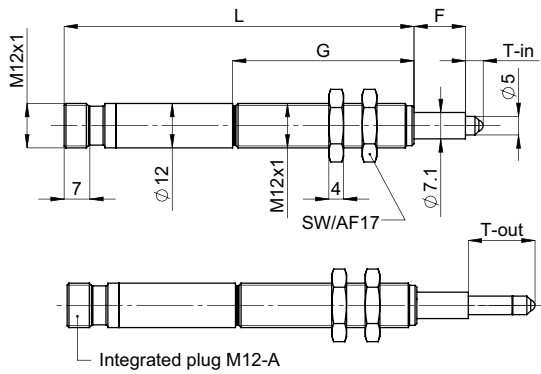
 Housing M12  Spring Function



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

- Housing M12
- Displacement: 2mm up to 20mm
- Degree of protection IP65 (optional IP67, IP68)
- Springfunction

### Drawing



Standard types				Dimensions (mm)				
Type	Armature	Displacement	Connection	L Housing length	G Thread length	F Flange length	T-in Spring return inner position	T-out Spring return outer position
IMAT-2-S	Spring function	±1 (2mm)	Connector	69.5	24	14	5.5	10
IMAT-5-S		±2.5 (5mm)		83.5	38	14	5.5	12
IMAT-10-S		±5 (10mm)		94.5	49	14	5.5	18
IMAT-20-S		±10 (20mm)		124.5	78.5	26.5	5.5	25.5
IMAT-2-K	Spring function	±1 (2mm)	Cable	56.5	24	14	5.5	10
IMAT-5-K		±2.5 (5mm)		70.5	38	14	5.5	12
IMAT-10-K		±5 (10mm)		81.5	49	14	5.5	18
IMAT-20-K		±10 (20mm)		111.5	78,5	24	5.5	25.5

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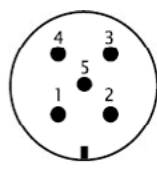
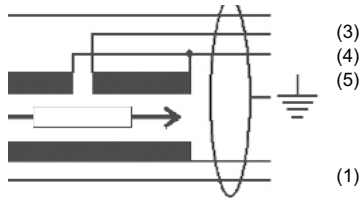
Electrical Specification					
Displacement	±1 (2)	±2 (5)	±5 (10)	±10 (20)	[mm]
Sensitivity	130	105	60	45	[mV/V/mm]
Linearity deviation	< ±0.5 (< ±0.25 optional)				[% F.S.]
Excitation voltage	1..5				[V RMS]
Excitation frequency	1..20				[kHz]
Input resistance typ.	Auf Anfrage On request	90		120	[Ohm]
Input impedance typ.	Auf Anfrage On request	700	460	850	[Ohm]
Output impedance typ.	Auf Anfrage On request	400		650	[Ohm]
Temperature coefficient	±0.2				[% F.S./10K]
Calibrated at	3V RMS / 20 kHz RL = 1MΩ				

Mechanical Specification		
Housing material	Steel nickeling plated	
Core material	Nickel-Iron-Alloy	
Weight (with Cable)	ca. 40	[g]
Weight core	ca.1.5	[g]




Environments		
Rated temperature range	-25..+85	[°C]
Storage temperature range	-40..+85	[°C]
Degree or protection	IP65 (optional IP67, IP68) Connector version: with mounted connector	
Impact resistance	200 g/2ms	DIN IEC68T2-27
Vibration resistance	10g / 2 Hz .. 2 kHz	DIN IEC68T2-6

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Connection			Diagram	Diagram
Function	Cable connection (Cable 1m)	Plug connection		
	Color of cable	PIN		
Primary 1	white	PIN 1		
Primary 2	brown	PIN 2		
Secondary 1	yellow	PIN 3		
Secondary 2	green	PIN 4		
Secondary 1, 2 Center	grey	PIN 5		
Shield	Housing	Housing		

Order code			
Series	Displacement	Connection	Linearity deviation *
IMAT-	20-	S-	
Standard	5 = ±2.5 10 = ±5 20 = ±10	S = Connector K = Cable 1m	*in case of < ±0.5%
Options	Other on request	K2 = Length 2m Other Cable length	±0.25% ±0.1%

Accessories		
<p>Signal Conditioner DIN Rail Mount IMA2-LVDT</p> 	<p>Signal Conditioner Circuit Board Mount IVM-LVDT</p> 	<p>Signal Conditioner IP65 IMK-LVDT</p> 
<p>Connector with cable (2m or 5M)</p> 