


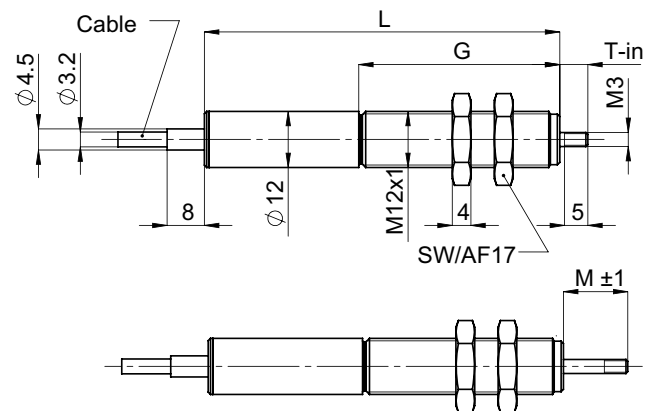
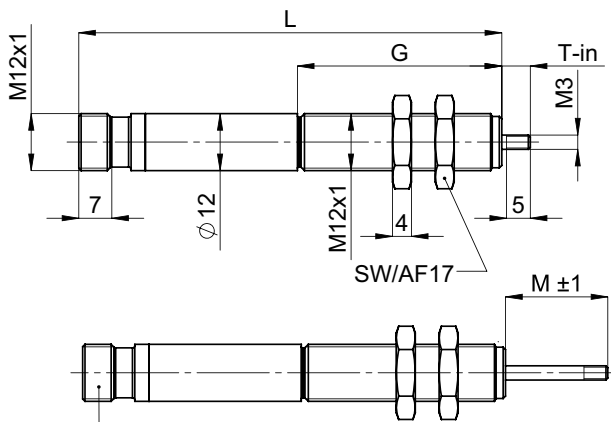
M12 Housing M12  Output



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)
- Unguided armature

Drawing



Standard types				Dimensions (mm)			
Type	Armature	Displacement	Connection	L Housing length	G Thread length	T-in Armature inner position	M Middle of stroke
IMAL-2-S	Unguided	± 1 (2mm)	Connector	64	18	6	8.5
IMAL-5-S		± 2.5 (5mm)		78	32	6	15.5
IMAL-10-S		± 5 (10mm)		89	43	6	14
IMAL-20-S		± 10 (20mm)		119	73	6	21
IMAL-2-K	Unguided	± 1 (2mm)	Cable	51	18	6	8.5
IMAL-5-K		± 2.5 (5mm)		65	32	6	15.5
IMAL-10-K		± 5 (10mm)		76	43	6	14
IMAL-20-K		± 10 (20mm)		106	73	6	21

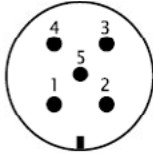
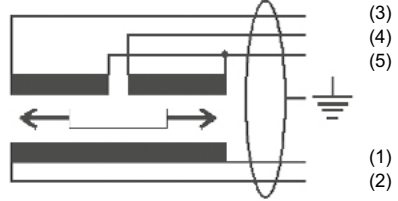
Electrical Specification					
Displacement	±1 (2)	±2.5 (5)	±5 (10)	±10 (20)	[mm]
Sensitivity	130	105	60	45	[mV/V/mm]
Linearity deviation	< ±0.25	< ±0.5 (optional < ±0.25)		< ±0.5	[% F.S.]
Excitation voltage	1..5				[V RMS]
Excitation frequency	1..20				[kHz]
Input resistance typ.	On request	90		120	[Ohm]
Input impedance typ.	On request	700	460	850	[Ohm]
Output impedance typ.	On request	400		650	[Ohm]
Temperature coefficient	±0.2				[% F.S./10K]
Calibrated at	3V RMS / 20 kHz / RL=1MOhm				

Mechanical Specification		
Housing material	steel blue zinc-plated	
Core material	Nickel-iron-alloy	
Weight (with Plug)	ca. 40	[g]
Weight core	ca. 1.5	[g]




Environments		
Rated temperature range	-25..+85	[°C]
Storage temperature range	-40..+85	[°C]
Degree of 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

Series LVDT-IMAL

Inductive Displacement Sensor

Connection				
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 *
IMAL-	20-	S-	
Standard	2 = ± 1 5 = ± 2.5 10 = ± 5 20 = ± 10	S = Connector K = Cable 1m	*in case of $< \pm 0.5\%$
Options	Other on request	Other Cable length K2 = Length 2m	$\pm 0.25\%$ $\pm 0.1\%$

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> 