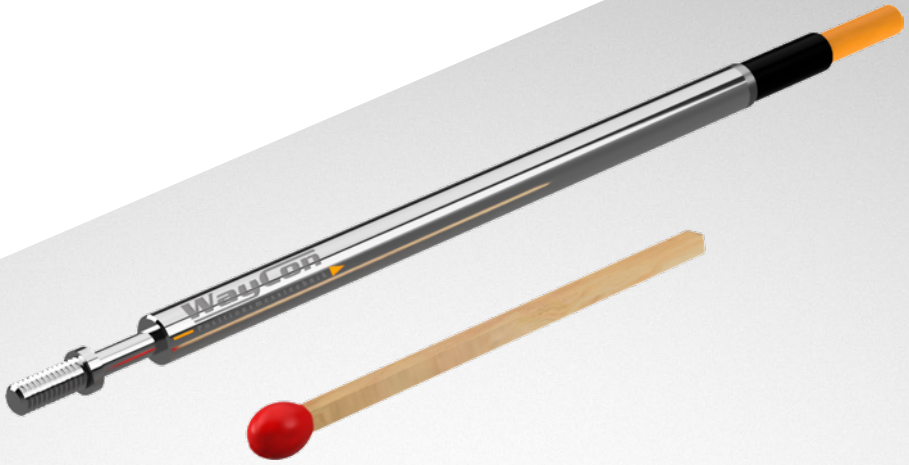
INDUCTIVE SENSOR LVDT

Links to further documents for this series:
Installation guide



LVISM SERIES

Key-Features:
- *Miniature sensor with housing Ø 4 mm*
- *Unguided rod with thread M2.5*
- *Measurement ranges 2, 5 and 10 mm*
- *Linearity ±0.5 %, optional ±0.35 %*
- *Output with external electronics: 0...10 V, 4...20 mA*
- *Protection class IP65*
- *Operating temperature -25...+85 °C*

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TECHNICAL DATA SENSOR

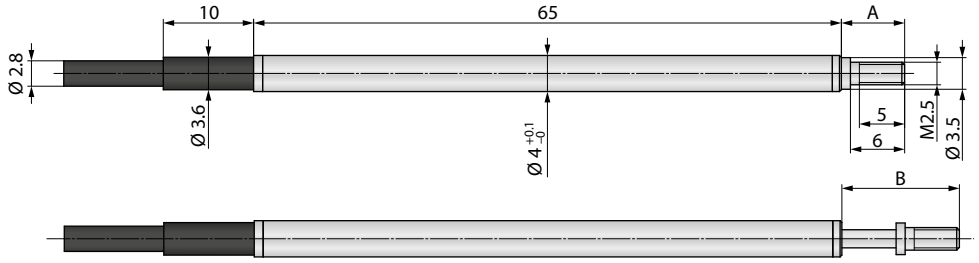
Measurement range	[mm]	2	5	10
Linearity [1]	[% F.S.]	< ±0.5 / optional: < ±0.35		
Sensitivity	[mV/V/mm]	60		
Calibrated at		4 V_{RMS} / 7 kHz / RL = 1 MΩ		
Excitation voltage	[V_{RMS}]	4		
Excitation frequency	[kHz]	40		
Input resistance typ.	[Ω]	120		
Input impedance typ.	[Ω]	610		
Output impedance typ.	[Ω]	520		
Connection		Cable output 1 m, axial, 5 poles		
Protection class		IP65		
Operating temperature	[°C]	-25...+85		
Storage temperature	[°C]	-40...+85		
Temperature coefficient zero signal	[% F.S./K]	±0.02		
Shock resistance		200 g, 2 ms (DIN IEC68T2-27)		
Vibration resistance		10 g, 2...2000 Hz (DIN IEC68T2-6)		
Housing		Nickel plated steel		
Core		Nickel iron alloy		
Core weight	[g]	1.5		

TECHNICAL DATA ELECTRONICS

		DIN rail electronics LVA3	**Cable electronics LVC2**
Output		0...10 V / 4...20 mA	
Noise	[mV_{RMS}]	<2	
Supply	[VDC]	18...26	
Current consumption (without load)	[mA]	<80 (at 24 V)	
Isolation voltage	[VDC]	500	
Isolation resistance at 500 VDC	[GΩ]	10	
Cut-off frequency		max. 10 % of excitation frequency	
Sensor supply	[V_{RMS}]	4	
Carrier frequency	[kHz]	7	
Protection class		IP40	IP64 [1] / optional: IP67
Operating temperature	[°C]	-25...+85	
Storage temperature	[°C]	-25...+85	
Temperature coefficient	[% F.S./K]	<±0.015	
Mounting		DIN rail	2 x mounting holes M4 or 4 x mounting feet
Housing		Polyamide PA6.6	Aluminium (powder-coated)

[1] When using the mounting holes, the LVC2 housing must be properly closed again to maintain the IP64 protection class.

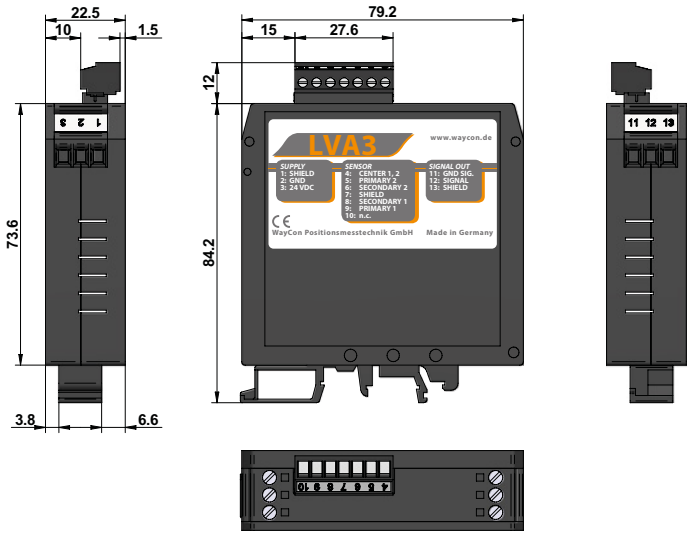
TECHNICAL DRAWING SENSOR



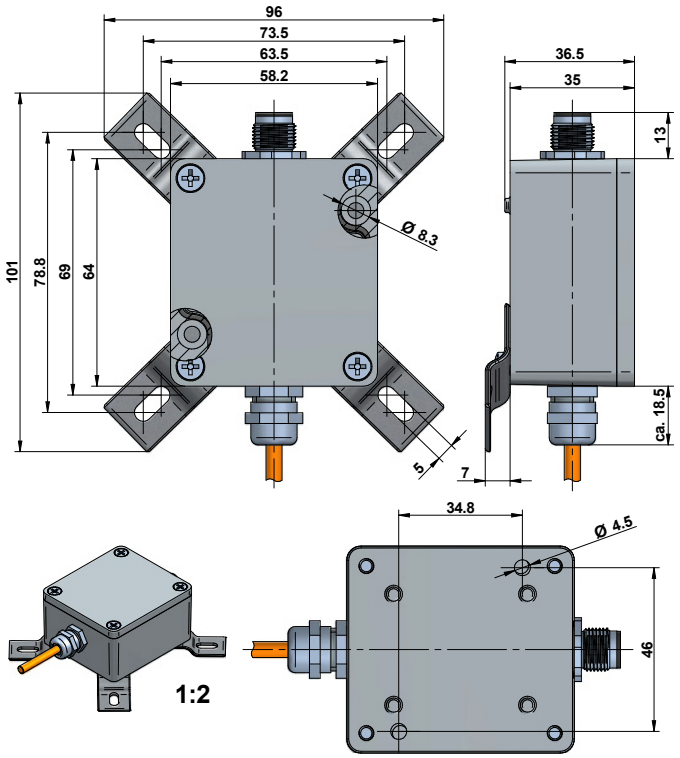
Measurement range		2	5	10
Rod inner position	A	7		
Centre of stroke ±1	B	13		

TECHNICAL DRAWING ELECTRONICS

DIN rail electronics LVA3



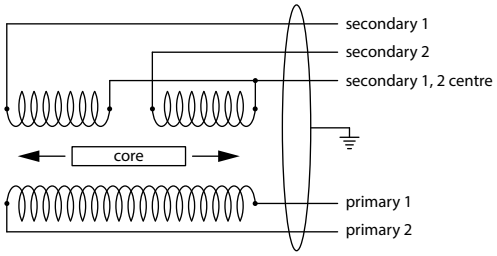
Cable electronics LVC2



ELECTRICAL CONNECTION

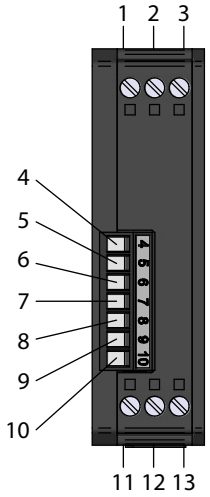
Sensor LVISM

Function	Cable colour
Primary 1	BK
Primary 2	BU
Secondary 1	YE
Secondary 2	GN
Secondary 1, 2 centre	WH
Shield	Housing



DIN Rail Electronics LVA3

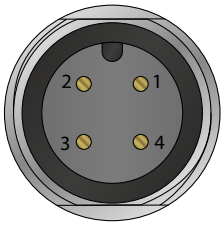
Function	Terminal
Shield	1
GND_{supply}	2
+V	3
Centre 1, 2	4
Primary 2	5
Secondary 2	6
Shield	7
Secondary 1	8
Primary 1	9
n. c.	10
GND_{signal}	11
Signal	12
Shield	13



Cable Electronics LVC2

Function	Connector output	Connection cable K4P...
+V	Pin 1	BN
Signal	Pin 2	WH
GND_{Supply}	Pin 3	BU
GND_{Signal}	Pin 4	BK

Connector M12, male



ORDER CODE SENSOR LVISM

LVISM – □ – □ – □

Measurement range [mm] 2 / 5 / 10	e. g. 5
Connection Cable output 1 m, axial, 5 poles	KA01

-	**Linearity** Standard: linearity ±0.5 % [1]
L35	Improved linearity ±0.35 % [2]

ORDER CODE ELECTRONICS LVA3

LVA3 – □ – □ – □ – □ – □

Supply 24 VDC	24
Output signal Voltage 0...10 V Current 4...20 mA	10V 420A
Sensor supply 4 V	4

2.5	**Sensitivity** 250 mV (for range 2 mm)
6	600 mV (for range 5 mm)
12	1200 mV (for range 10 mm)

7	**Carrier frequency** 7 kHz

ORDER CODE ELECTRONICS LVC2

LVC2 – □ – □ – □ □ – □ – □ □ – □

Supply 24 VDC	24
Output signal Voltage 0...10 V Current 4...20 mA	10V 420A
Sensor supply 4 V	4
Carrier frequency 7 kHz	7

- IP67	**Protection class** Standard IP64 Improved protection class IP67
S	**Connection to supply** [1] Connector M12, 4 poles
K	**Connection to sensor** Sensor cable, permanently connected [2]
2.5 6 12	**Sensitivity** 250 mV (for range 2 mm) 600 mV (for range 5 mm) 1200 mV (for range 10 mm)

[1] further on request.
[2] cable length standard 1 m. Further on request.

ACCESSORIES

Cable with connector (female) M12, 4 poles, shielded	
K4P2M-S-M12	2 m, straight connector
K4P5M-S-M12	5 m, straight connector
K4P10M-S-M12	10 m, straight connector

Cable with connector (female) M12, 4 poles, shielded	
K4P2M-SW-M12	2 m, angular connector
K4P5M-SW-M12	5 m, angular connector
K4P10M-SW-M12	10 m, angular connector

Digital displays for sensors with analog output, 2 channel	
WAY-AX-S	Touch screen, supply: 18...30 VDC
WAY-AX-AC	Touch screen, supply: 115...230 VAC

For more information and options please refer to the WAY-AX data sheet.

Subject to change without prior notice.

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