

## Inductive Displacement Transducer

### Series SM26

- Stroke up to 200 mm
- Housing diameter 12mm
- External electronic modules
- Gauge type with return spring available
- Protection class IP66
- Accuracy 0,5% or 0,25%



#### Construction and operating principle:

A nickel-iron core will be moved linear inside of a coil form. The displacement of the core leads to an inductance variation in both coils. An external electronic circuit converts the variation into a signal proportional to the displacement.

#### Standard measuring strokes in mm:

24	40	60	100	150	200
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#### Standard dimensions and masses:

stroke mm	L1 mm	L2 mm	transducer	plunger
24	42	100	40a	20a
40	50	140	50a	25a
60	60	170	65a	25a
100	80	270	110a	35a
150	105	350	135a	45a
200	130	500	175a	56a

L1: Plunger in central position

#### Standard version:

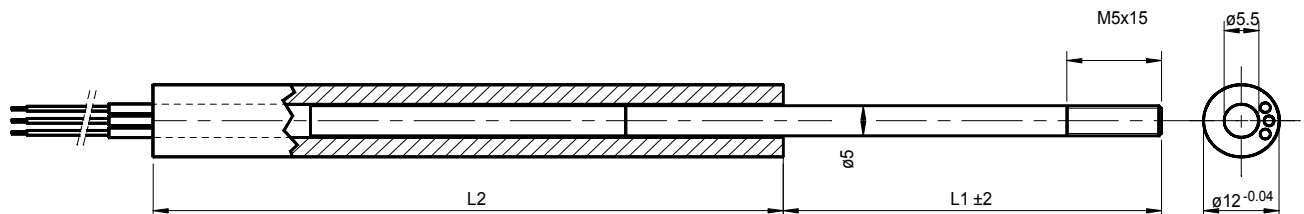
SM260	with kynar leads AWG28
SM260 ..S	with plug

#### Technical data:

(using our electronic modules)

Accuracy	< 0,5% or 0,25%
Temperature drift	< 0,01% / °C
Temperature range with plug	-40°C to +85°C
Temperature range with kynar leads	-40°C to +100°C
Resistance to shock	250a SRS 20-2000Hz
Resistance to vibration	20a rms (50a peak)
Protection class	IP66

#### Model SM260 (with 3x 300mm kynar leads AWG28)



**SM260 Gauge:**

**Standard measuring strokes in mm:**

24	40	60	100
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**Standard version:**

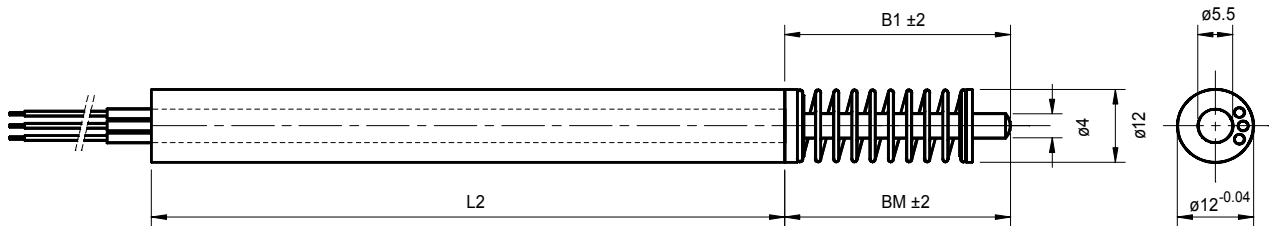
SM260 ..ST	with plug
SM260 ..KT	with kynar leads AWG28

**Dimensions and masses:**

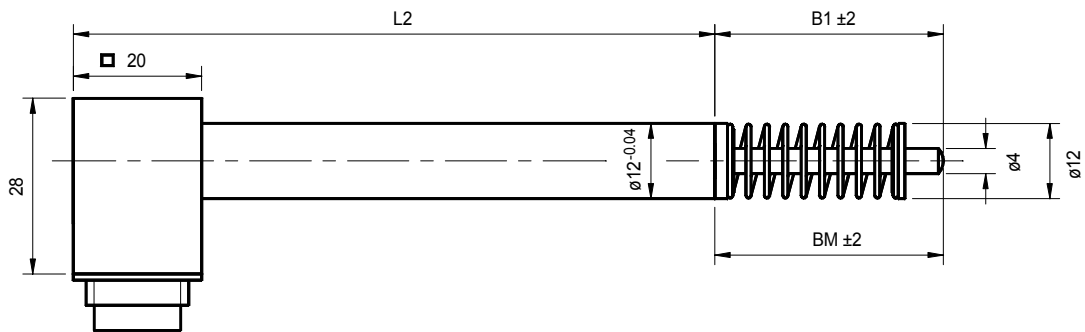
stroke mm	BM mm	B1 mm	Over-travel mm	FM N
24	45	63	8	~4
40	70	98	7	~4
60	75	110	2	~4
100	140	198	11	~4

BM: Plunger in central position    B1: Plunger full out  
 FM: Springiness in central position

**Model SM260 ..T (with 3x 300mm kynar leads AWG28)**

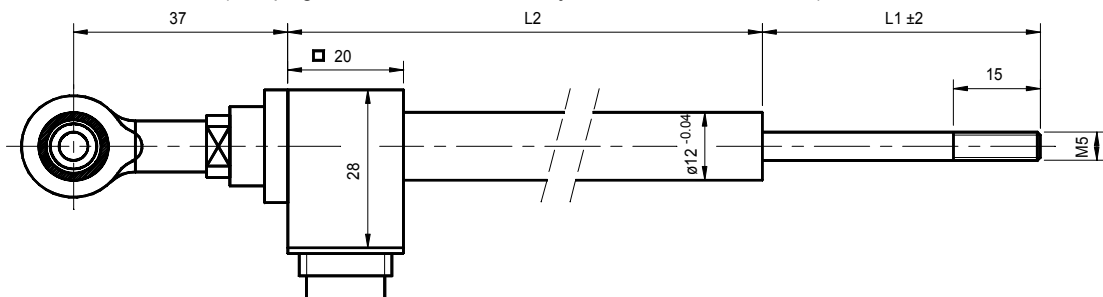


**Model SM260 ..ST (with plug, Binder Ser.723)**

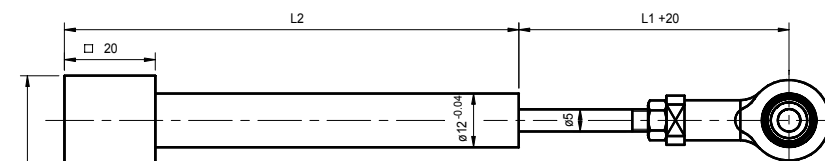


**Other versions:**

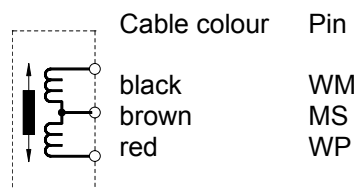
**Model SM260 ..SH (with plug, Binder Ser.723 and ball joint M5 on end of the case)**



**Model SM260 ..GK (IP67 with ball joint and Pg9-fastener with cable 3x 0.56mm²)**



**Electrical connections:**



**Sensitivity:**

(using our electronic modules)

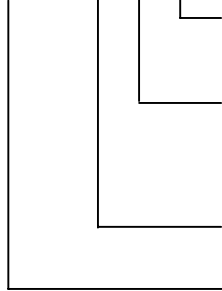
Measuring stroke	mV / mm ( $\pm 10\%$ )
24 mm	175
40 mm	110
60 mm	100
100 mm	55
150 mm	45
200 mm	30

**Materials:**

External and internal tube	Stainless steel
Plunger	Stainless steel
Core	Stainless nickel iron alloy
Connector case	Alu, black anodised
Connector contacts	Gold plated
Spring plate	Alu, black anodised
Spring	Stainless steel

**Order code**

SM260 . 12 . 2 . T



T: Gauge  
 S: Plug

Accuracy:  
 1: 0.25%  
 2: 0.50%

Measuring stroke

Series

Order codes for customer specified versions will be named at plant.

**Example: SM260.60.2**

Displacement transducer Series 260, 60mm measuring stroke, accuracy 0.5%, 300mm kynar wires

**Excitation and signal processing**

SM10: Oscillator / Demodulator in metal case

SM11: SM10 on Eurocard

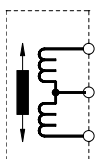
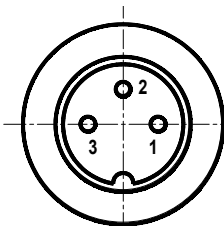
SM12: Oscillator / Demodulator without case  
 2 channels

SM14: Eurocard up to 7 channels

**Additional versions:**

- Ball joint on the plunger or/and at the case
- Gauge with measuring wheel

**Electrical connections:**

Kynar leads 3 channel AWG28	3-channel plug Binder Ser. 723 (view to the plug at transducer)
<p>Colour of leads</p>  <p>red black blue</p>	
<p>electrical connection:</p> <p>red: WM                      black: MS                      blue: WP</p>	<p>electrical connection:</p> <p>1: WM                      2: MS                      3: WP</p>

**Mounting block SM906.260**

(incl. 2 mounting screws M4x25 DIN912 VA)

