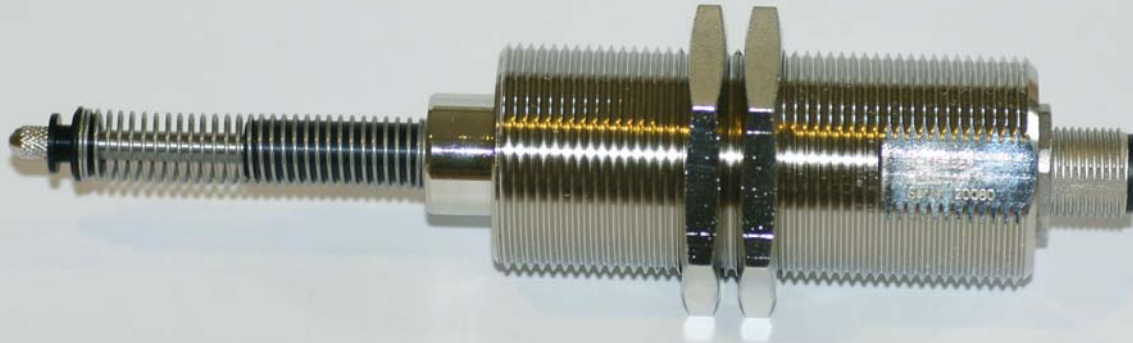


Series SM300



Operating principle:

A nickel iron core will be moved linear inside a coil. The displacement of the core leads to an inductance variation in parts of the coil. That generates more information about the position of the core than a linear variable differential transformer or a half-bridge transformer. The integrated electronic circuit converts this information's into a signal proportional to the displacement of the core.

Standard measuring strokes:

5mm 10m 15mm

Technical data:

Accuracy	< 0.5% or 0.25%
Temperature drift	< 0,01 % / °C
Frequency limit	800 Hz
Temperature range	-20°C up to +85°C
Resistance to shock	250g SRS 20-2000Hz
Resistance to vibration	20g rms (50g peak)
Protection class	IP67*

* Mount mating plug Binder series 713 (IP67)

Current output (SM301..304):

Output signal	0..20 mA or 4..20 mA
Supply current I_B	max. 60 mA
Load resistance R_L	0..500 ohm
Residual ripple	< 0.005 mA _{ss}
Dependence on R_L	< 0.001% at $R_L=100\text{ohm}$
Dependence on U_B	< 0.05% at $U_B = 1V$

Voltage output (SM305..308):

Output signal	± 10 VDC or 0..10 VDC
Supply current I_B	max. 50 mA
Permissible load R_L	>2kohm(shortcircuit proof)
Residual ripple	< 5 mV _{ss}
Residual voltage SM307/308	max. 0,1VDC
Dependence on U_B	< 0.05% at „ $U_B = 1V$ “

Standard versions:

Type	Output	Supply voltage U_b^*	Signal**	Mid
SM301	0 .. 20 mA	20 .. 32 V	increasing	10 mA
SM302			decreasing	
SM303	4 .. 20 mA	20 .. 32 V	increasing	12 mA
SM304			decreasing	
SM305	± 10 V	$\pm 13 .. \pm 16$ V	increasing	0 V
SM306			decreasing	
SM307	0..10 V	20 .. 32 V	increasing	5 V
SM308			decreasing	

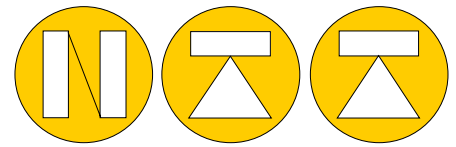
* Pole reversal protection

** Increasing signal by moving the plunger in the direction towards the plug.

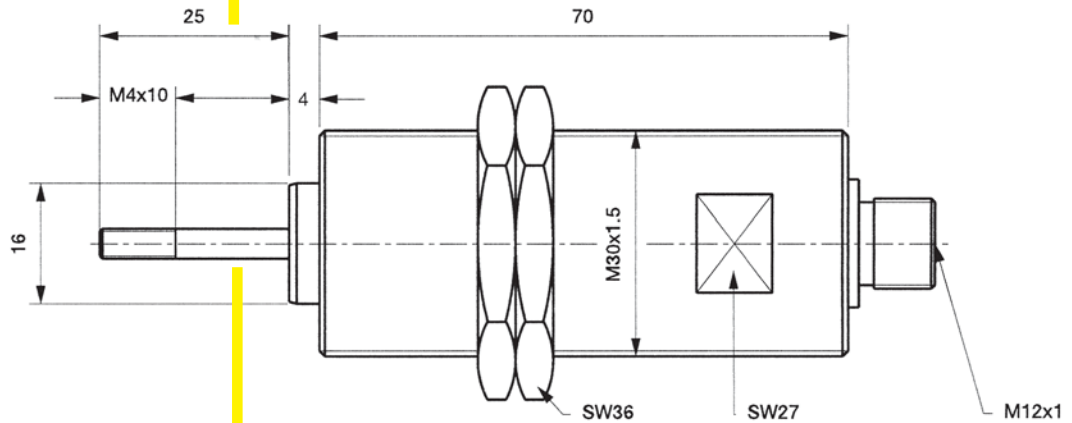
Materials:

Housing	Nickel plated brass
Plunger	Stainless steel
Core	Stainless nickel-iron core
Connector housing	Nickel plated brass
Connector contacts	Gold plated brass

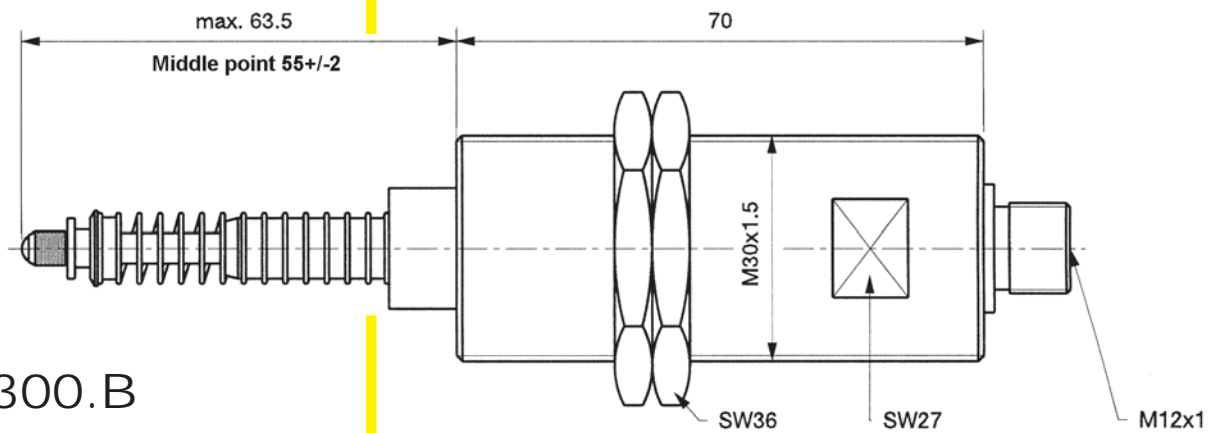
Note: Unless otherwise stated, all values are valid at +20°C ambient temperature and 30V DC or $\pm 15V$ DC supply voltage, starting 10 minutes after switch-on.



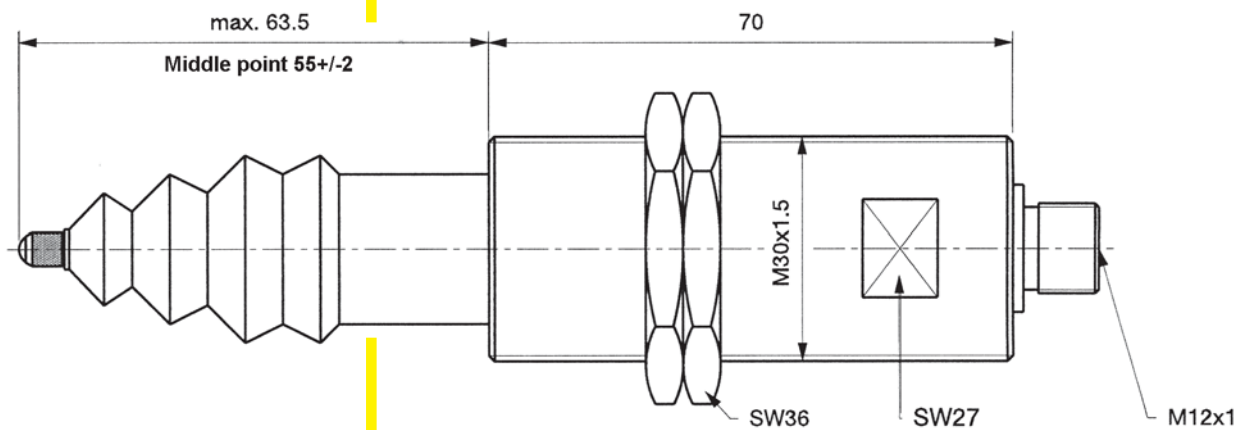
SM300 Standard



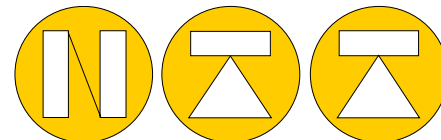
SM300.T
Return spring & ball tip



SM300.B
Spring, bellow & ball tip



Inductive displacement transducer Series SM300



NORDIC TRANSDUCER

Electrical connections on plug

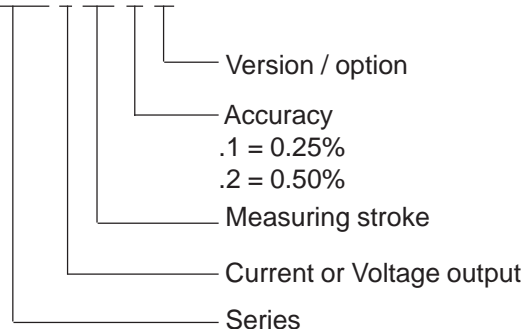
Binder series 713 as standard part of the supply

(View to the plug at transducer)

3 Wire system for model 301,302, 303,304,307,308	4 wire system for model 305 & 306
1: $+U_B$ 2: not used 3: I_A / U_A (Output) 4: $-U_B$	1: $+U_B$ 2: $0V$ 3: U_A (Output) 4: $-U_B$

ORDER CODE

SM30 3 .15 .2 .T



Example: **SM303.15.2.T**

Serie 303, output 4-20mA (increasing)
 15mm stroke,
 accuracy 0.5%,
 T return spring

300 Versions / options

B = Protection bellow
 T = Return spring
 K = Cable outlet PG9
 KP = Cable PUR type
 .2 = 0.50% linearity (300.xx.2)
 .1 = 0.25% linearity (300.xx.1)



Binder 713 series

Circular female connector with M12x1
 Metal thread locking ring
 Degree of protection IP67
 Cable assembly possible
 Screw termination, not shielded



Binder 713 series

Circular female angled connector with
 M12x1 plastic thread locking ring
 Degree of protection IP67
 Cable assembly possible
 Screw termination, not shielded

OPTION:

713 series

Circular connector with M12x1 screw-locking
 Metal housing with 360° EMC protected
 shielding.

X04 = 423 Series IP68 angle metallic made.

423 99 5606 75 03