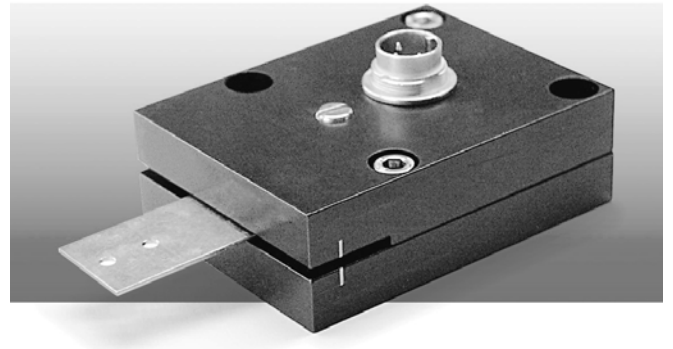


## Inductive Slot Transducer

### Series SM48

- Through passing measuring vane
- Several measuring vane possible
- Stroke up to 20mm
- Integral electronic circuit
- Protection class IP66
- accuracy 0.5%



#### Construction and operating principle:

The slot transducer contains two coil systems facing each other but separated by an air gap. The measuring vane changes the magnetic coupling of the coil systems. The integral electronic circuit is mounted in an anodised aluminium housing.

#### Standard-stroke

20mm

#### Standard versions

Type	output	Supply voltage $U_B$ *	signal**	mid
SM481	0 .. 20 mA	20 .. 32 V	increasing	10 mA
SM482			decreasing	
SM483	4 .. 20 mA	20 .. 32 V	increasing	12 mA
SM484			decreasing	
SM485	± 10 V	±13.. ±16 V	increasing	0 V
SM486			decreasing	

\* Pole reversal protection

\*\* Increasing signal by moving the measuring vane from left to the right side.

**Note:** Unless otherwise stated, all values are valid at +20°C Ambient temperature and 30 VDC or ±15 VDC supply voltage, starting 10 minutes after switch-on.

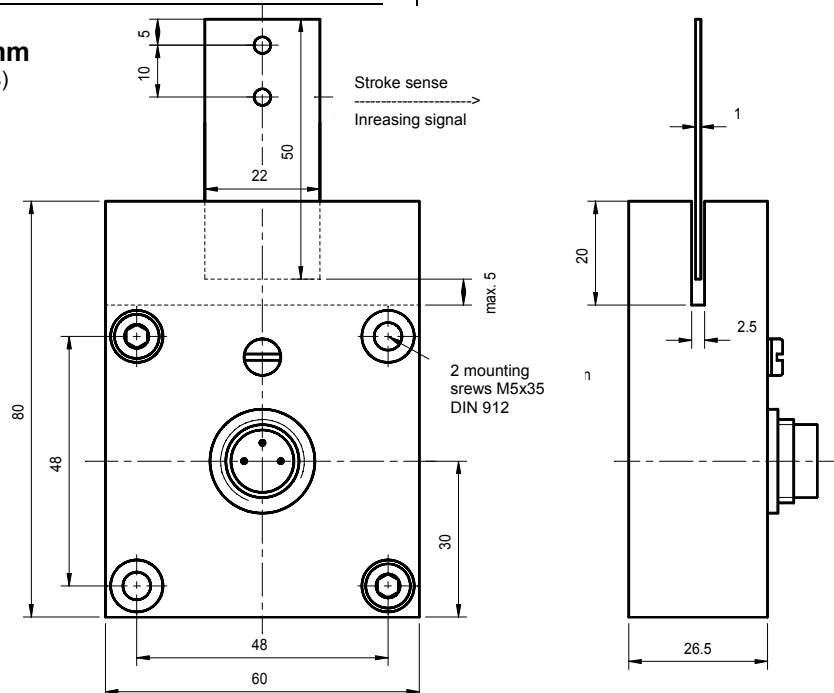
#### Technical data:

accuracy	< 0,5%
Temperatur drift	< 0,01% / °C
Temperatur range	-20°C bis +85°C
Measurement frequency	800Hz
Resistance to shock	20g SRS 20-2000Hz
Resistance to vibration	3g rms (20g Spitze)
Protection class	IP66 *

\* with mounted mating plug Bi 723.M

#### Dimensions in mm

( Plug 3-pins or 4-pins)



**Current output (SM481 / SM483):**

Output signal	0..20 mA or 4..20 mA
Supply current $I_B$	max. 60 mA
Load resistance $R_L$	0..500 $\Omega$
Residual ripple	< 0,005 mA <sub>SS</sub>
Dependence on $R_L$	< 0,001% for $\Delta R_L = 100\Omega$
Dependence on $V_s$	< 0,05% for $\Delta U_B = 1V$
Max. output current	25 mA

**Voltage output (SM485):**

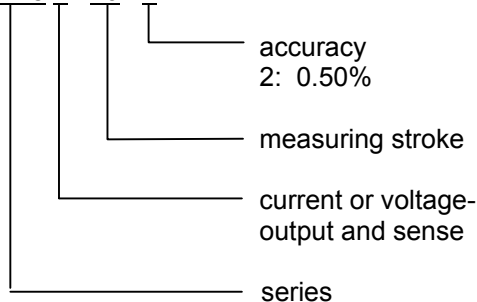
Output signal	$\pm 10$ VDC
Supply current $I_B$	max. 50 mA
Permissible load $R_L$	$\geq 2$ k $\Omega$ (short-circuit proof)
Residual ripple	< 5 mV <sub>SS</sub>
Dependence on $V_s$	< 0,05% for $\Delta U_B = 1V$

**Materials and masses**

housing	Alu, black anodised
Measuring vane	copper
plug shell / connector shell	brass nickel-plated
Mass	~250g
Contacts	Gold-plated

**Order code**

SM48 1 . 20 . 2



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

**For example SM481.20.2**

transducer series 48, output 0-20mA,  
20mm stroke, accuracy 0.5%

**additional versions:**

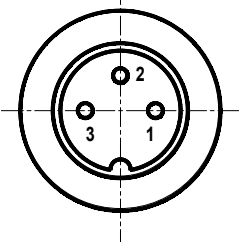
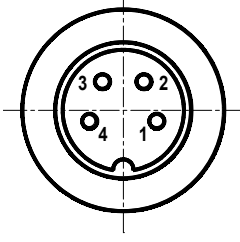
- different supply voltage and output signals
- Cable output with Pg-fastener .K

**Mating plugs**

- IP40: Binder Ser. 681 3PS/4PS  
Metal case  
(must be orderd separately)
- IP66: Binder Ser. 723M 3PS/4PS  
Metal case with outer ring connected to ground  
(must be orderd separately)

**Electrical connections on plug**

(View to the plug at transducer)

3-pol. SM481/483	4-pol. SM485
	
Cable color 1: + $U_B$ red 2: - $U_B$ (0V) black 3: $I_A$ (output) brown	1: + $U_B$ 2: 0V 3: - $U_B$ 4: $U_A$ (output)

**Cable output .K****accessories**

Additional measuring vanes	SM907.480
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**example for use**

exact positioning of a machine table

