

# Precision - Rotary - Sensor DP113M Ze

Output signal 0/4...20 mA, 0...10V, 2, 3 or 4-wire-connection, rotation direction standard: right, central fixing M12 x 1

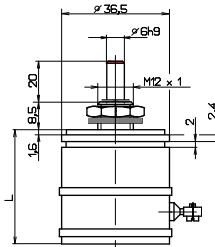


## mechanical data of potentiometer

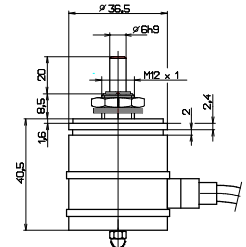
- 1.1 housing..... : aluminium
- 1.2 shaft..... : stainless steel  $\varnothing 6^{h9}$
- 1.3 bearing..... : ball bearing / needle bearing
- 1.4 resistor element..... : according to table
- 1.5 slider tap / wiper tap..... : noble metal, multiple
- 1.6 housing protection class..... : IP 64
- 1.7 type of connection..... : clamp-solder connection or cable 3000m
- 1.8 mounted by..... : central fixing M12 x 1
- 1.9 electrical rotation angle..... : 345° (with Hv and Asu 330°)
- 1.10 mechanical rotation angle..... : 345° (with Hv and Asu 330°)
- 1.11 rotation speed..... : max. 60 rpm
- 1.12 torque..... : according to table
- 1.13 rotation direction..... : right (standard)
- 1.14 rotation load life..... : 10 x 10<sup>6</sup> slider path (360°)



clamp - solder connection

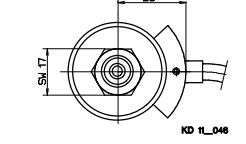
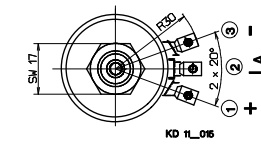


cable connection



## electrical data of potentiometer

- 2.1 output signal..... : 0/4...20mA  $\pm 0,04$  mA, 0...10 V  $\pm 0,03$  V
- 2.2 linearity tolerance..... :  $\pm 0,3\%$
- 2.3 insulation resistance..... : 20 M-Ohm
- 2.4 test voltage..... : 500 V, 50 Hz
- 2.5 operating voltage..... : max. 30 V
- 2.6 power rating..... : max. 2 Watt
- 2.7 slider load current..... : 1 mA (max. lifetime )
- 2.8 temperature range..... : -50°C till +100°C
- 2.9 temperature coefficient..... : 20 ppm/°C



## options

rotation direction left  
short-circuit tracks  
rotation angle, electrical and mechanical  
shaft: special length, continuous  
stops (rotation angle max. 345°)

slip coupling  
protection class IP65  
torque 0,1 to 0,2 Ncm  
cable connection, terminal block

stop level (mech. rotation angle 330°)

## accessories

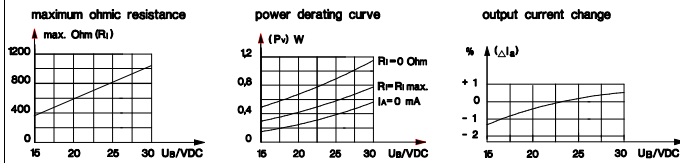
protective housing  
adapter plate  
bellows coupling  
pin coupling  
microswitch

rotary knob  
scale

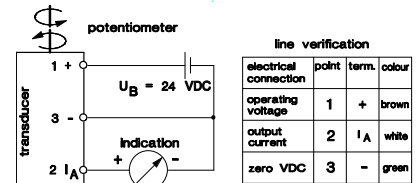
## electrical data of transducer

- operating voltage  $U_B$ ..... : + 24 VDC -5% + 25%
- max. ripple of  $U_B$ ..... : 2,5 V<sub>SS</sub>
- total current..... : ca. 16 mA +  $I_A$
- output current  $I_A$ ..... : 0...20 mA / 4...20 mA
- output voltage  $U_A$ ..... : 0...10 V
- residual current  $I_A$ ..... :  $\leq 10 \mu A$
- output current ripple
- ripple at 10%  $U_B$ ..... :  $\leq 0,3\%$
- ripple at 2%  $U_B$ ..... :  $\leq 0,1\%$
- max. ohmic load (output) at  $U_B$  24 V - 5%.....  $R_L$ ..... : max. 500  $\Omega$
- internal resistance  $R_i$ ..... :  $\leq 1$  M $\Omega$
- linearity error max..... :  $\pm 0,5\%$
- temperature coefficient of output current..... :  $\leq 0,3 \times 10^{-3}/K$
- power derating at 80°C amb.temperature  $P_V$ ..... : 0,9 W
- $\leq 60^\circ C$  amb.temperature  $P_V$ ..... : 1,2 W
- storage temperature  $T_U$ ..... : - 55 till + 150° C
- operating temperature  $T_U$ ..... : - 25 till + 80° C

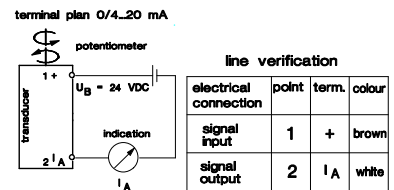
## Key electrical data of the transducer



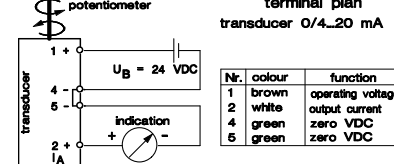
## mA 3-wire



## mA 2-wire



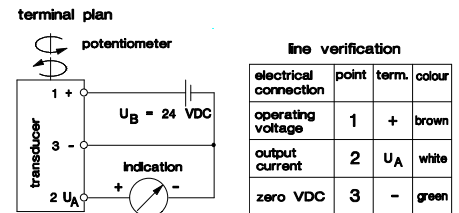
## mA 4-wire



## output signal

	mA 3-wire	mA 2-wire	mA 4-wire	VDC 3-wire
clamp connection	0...20mA 4...20mA	4...20mA	possible	0...10V
cable connection	0...20mA 4...20mA	4...20mA	possible	0...10V

## VDC 3-wire



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