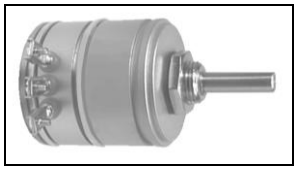
Precision - Rotary - Sensor DP113M Ze

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

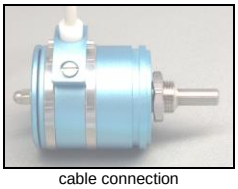
ALTMANN Potentiometer

Mechanical data of potentiometer

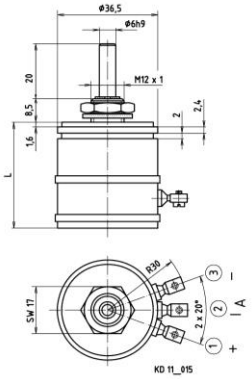
1.1	Housing	: Aluminium
1.2	Shaft	: Stainless steel ø6^{h9}
1.3	Bearing	: Ball bearing / needle bearing
1.4	Resistor element	: According to table
1.5	Slider tap / wiper tap	: Noble metal, multiple
1.6	Housing protection class	: IP 64 (at Hv IP65)
1.7	Type of connection	: Clamp-solder connection or cable 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 10^6 slider path (360°)

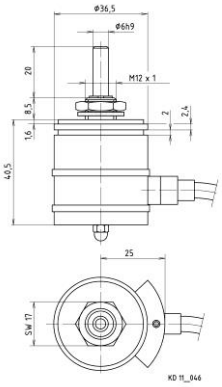


clamp - solder connection



cable connection





Electrical data of potentiometer

2.1	Output signal	: 0/4…20mA ± 0,04 mA, 0…10 V ± 0,03 V
2.2	Linearity tolerance	: ± 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
Linearity min. 0,1%
Shaft special length, continuous
Stop level (mechan. rotation angle 330°)
Stops (rotation angle max. 345 °)
Slip coupling
Protection class IP65
Torque 0,1 to 0,2 Ncm
Cable connection, terminal block

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_{SS}
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..... : ≤ 10 µA
Output current ripple
Ripple at 10% U_B..... : ≤ 0,3%
Ripple at 2% U_B..... : ≤ 0,1%

Max. ohmic load (output)
at U_B 24 V - 5%..R_L..... : max. 500 Ω

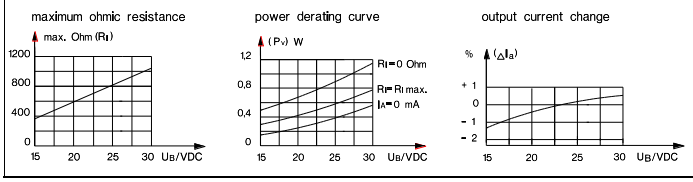
Internal resistance R_i..... : ≤ 1 MΩ
Linearity error max..... : ± 0,5%

Temperature coefficient of
output current..... : ≤ 0,3 x 10-3/K

Power derating at
80°C amb.temperature P_V..... : 0,9 W
≤ 60°C amb.emperature P_V... : 1,2 W

Storage temperature T_U..... : - 55 till + 150° C
Operating temperature T_U..... : - 25 till + 80° C

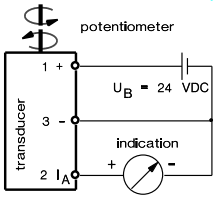
Key electrical data of the transducer



Type	Option	Winding	Torque Ncm	L mm
DP113M Ze		Noble metal	till 0,5 (with Asu 2 to 3)	38,5
DP113M Ze Hv	Stops	Precision wire	6 to 13	60
DP113M D2 Ze		Noble metal	till 1,0 (with Asu 2 to 3)	66,5

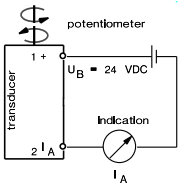
Output signal				
	mA 3-wire	**mA** 2-wire	**mA** 4-wire	**VDC** 3-wire
Clamp connection	0…20mA 4...20mA	4...20mA	**possible**	0...10V
Cable connection	0…20mA 4...20mA	4...20mA	**possible**	0...10V

mA 3-wire



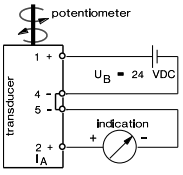
Terminal plan			
Elektrical connection	Point	Term	Colour
Operating voltage	1	+	brown
Output current	2	I_A	white
zero VDC	3	-	green

mA 2-wire



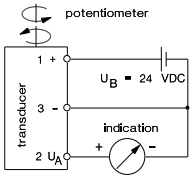
Terminal plan			
Elektrical connection	Point	Term	Colour
Operating voltage	1	+	brown
Output current	2	I_A	white

mA 4-wire



Terminal plan			
Elektrical connection	Point	Term	Colour
Operating voltage	1	+	brown
Output current	2	I_A	white
zero VDC	4	-	green
zero VDC	5	-	yellow

VDC 3-wire



Terminal plan			
Elektrical connection	Point	Term	Colour
Operating voltage	1	+	brown
Output voltage	2	U_A	white
zero VDC	3	-	green

Sheet #: KE1114.DOCX
Amendment/ Print: 26.10.21 / 26.10.21

ALTMANN *Potentiometer*

Herringhauser Straße 29
32051 Herford - Germany

P.O. Box 11 42
32001 Herford - Germany

Phone: 05221/3404-0
Fax : 05221/3404-29

www.potentiometer.de
eMail: info@potentiometer.de

Subject to technical amendments Form.#: 00000000