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

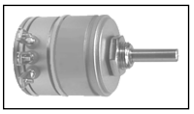
ALTMANN Potentiometer

Mechanical data of potentiometer

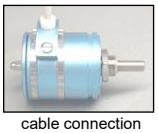
1.1	Housing	: Aluminium
1.2	Shaft	: Stainless steel ø6^{h9}
1.3	Bearing	: Ball bearing / needle bearing
1.4	Resistor element	: see table
1.5	Slider tap / wiper tap	: Noble metal, multiple
1.6	Protection class	: IP64 (at Hv IP65)
1.7	Type of connection	: Clamp-solder connection or cable 3000 m
1.8	Mounted by	: Central fixing M12x1
1.9	Electrical rotation angle	: 345° -1° +2° (with Hv and Asu 330°)
1.10	Mechanical rotation angle	: 345° +5° (with Hv and Asu 330°)
1.11	Rotation speed	: max. 60 rpm
1.12	Torque	: see table
1.13	Rotation direction	: right (standard)
1.14	Rotation load life	: 10x10^6 slider path (360°)

Electrical data of potentiometer

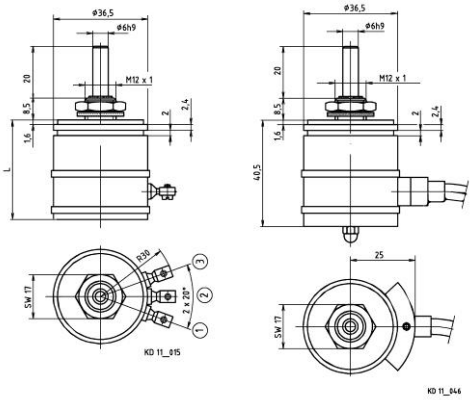
2.1	Output signal	: 0/4…20 mA ± 0,04 mA, 0…10 V ± 0,03 V
2.2	Linearity tolerance	: ± 0,3 %
2.3	Insulation resistance	: 20 M-Ohm
2.4	Test voltage	: 500 V, 50 Hz
2.5	Operating voltage	: max. 30 V
2.6	Power rating	: max. 2 Watt
2.7	Slider load current	: 1 mA (max. lifetime)
2.8	Temperature range	: -50 °C … +100 °C
2.9	Temperature coefficient	: 20 ppm/°C



clamp - solder connection



cable connection



Options

Rotation direction left
Short-circuit tracks
Rotation angle, electrical and mechanical
Shaft special length, continuous
Stop level (mechan. rotation angle 330°)
Stops (rotation angle max. 345°)
Slip coupling
Protection class IP65
Torque 0,1 … 0,2 Ncm
Cable connection, terminal block

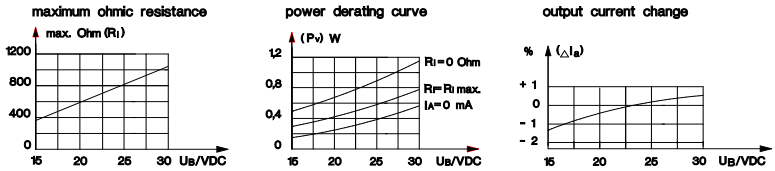
Accessories

Protective housing
Adapter plate
Bellows coupling
Pin coupling
Microswitch
Rotary knob
Scale

Electrical data of the transducer

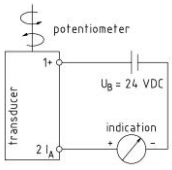
Operating voltage U_B	: + 24 VDC -5 % + 25 %	Internal resistance.R_i	: ≤ 1 MΩ
Max. ripple of U_B	: 2,5 V_{SS}	Linearity error max.	: ± 0,5 %
Total current	: ca. 16 mA + I_A	Temperature coefficient of output current	: ≤ 0,3x10^{-3}K
Output current.I_A	: 0 ... 20 mA / 4 ... 20 mA	Power derating at	
Output voltage.U_A	: 0 … 10 V	80°C amb. temperature P_V	: 0,9 W
Residual current...I_A	: ≤ 10 µA	≤ 60°C amb. temperature P_V	: 1,2 W
Output current ripple		Storage temperature T_U	: - 55 °C … + 150 °C
at 10 % U_B	: ≤ 0,3 %	Operating temperature T_U	: - 25 °C … + 80 °C
at 2 % U_B	: ≤ 0,1 %		
Max. ohmic load (output) at U_B 24 V - 5%.R_L	: max. 500 Ω		

Key electrical data of the transducer



mA 2-wire

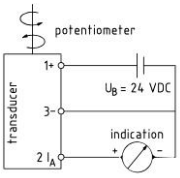
Terminal plan 4…20 mA



Termial plan			
Electrical connection	Point	Term.	Colour
Operating voltage	1	+	brown
Output current	2	I_A	white

mA 3-wire

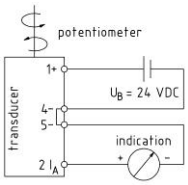
Terminal plan 0/4…20 mA



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

mA 4-wire

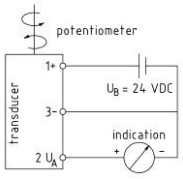
Terminal plan 0/4…20 mA



Terminal plan			
Electrical 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 0…10 V



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

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

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

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