Precision – Multi–Turn – Sensor DMG24 / xx M Ze

Output signal 0/4…20mA, 0…10V, central fixing M10 x 0,75, xx = 3-,5- or 10-turn
maintenance-free sliding bearing, option IP65, for mechanical adjustment

ALTMANN Potentiometer

The Precision – Multi-Turn Potentiometer DMG24 is used as actual value transmitter for machinery and plant engineering as well as setpoint adjuster and actual value transmitter for apparatus construction and toolbuilding.

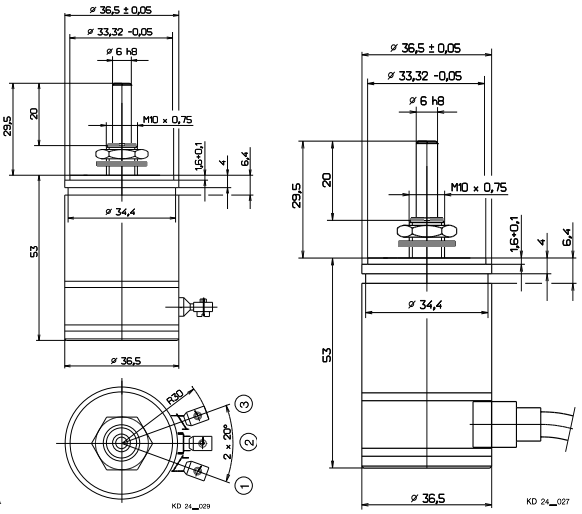
options
protection class IP65
shaft u. central fixing in inch
terminal wires
output signal rising counterclockwisely

mechanical data of the potentiometer

1.1	housing	: aluminium
1.2	shaft	: noble metal ø6^{h9}
1.3	bearing	: maintenance-free sliding bearing
1.4	resistor element	: precision wire winding or hybrid
1.5	slider tap / wiper tap	: single
1.6	housing protection	: IP 60
1.7	class	: according to table
1.8	type of connection	: central fixing M10 x 0,75
1.9	mounted by	: according to table +10°
1.10	mechanical rotation angle	: according to table
1.11	electrical rotation angle	: max. 120 rpm
1.12	rotation speed	: to 0,8 Ncm
1.13	torque	: according to table
	rotation load life	

electrical data of the potentiometer

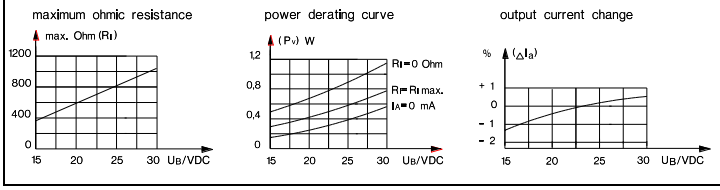
2.1		
2.2	output signal	: 0/4…20 mA ± 0,04 mA, 0…10 V ± 0,03 V
2.3	resistance tolerance	: ± 5% precision wire,: ± 10% hybrid element
2.4	linearity tolerance	: ± 0,25 %
2.5	insulation resistance	: 1000 M-Ohm
2.6	test voltage	: 1000 V
2.7	power rating	: according to table
2.8	slider load current	: precision wire max. 20mA, hybrid element max.10mA
2.9	temperature range	: -25°C till +80°C
	temperature coefficient	: precision wire winding 50 ppm/°C, hybrid 100 ppm/°C



electrical data of transducer

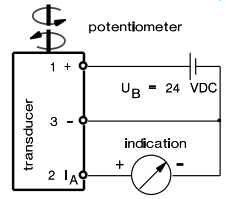
operating voltage U_B	: + 24 VDC -5% + 25%	internal resistance..R_i	: ≤ 1 MΩ
max. ripple of U_B	: 2,5 V_{SS}	linearity error max.	: ± 0,5%
total current	: ca. 16 mA + I_A		
output current..I_A	: 0...20 mA / 4..20 mA	temperature coefficient of	
output voltage U_A	: 0…10 V	output current	: ≤ 0,3 x 10-3/K
residual current...I_A	: ≤ 10 µA		
output current ripple		power derating at	
ripple at 10% U_B	: ≤ 0,3%	80°C amb.temperature P_V	: 0,9 W
ripple at 2% U_B	: ≤ 0,1%	≤ 60°C amb.emperature P_V	: 1,2 W
burden resistance		storage temperature T_U	: - 55 till + 150° C
at U_B 24 V - 5%	: max. 500 Ω	operating temperature T_U	: - 25 till + 80° C

Key electrical data of the transducer



mA 3-wire

terminal plan 0/4...20 mA

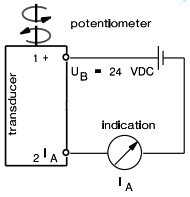


line verification

electrical connection	point	term.	colour
operating voltage	1	+	brown
output current	2	I_A	white
zero VDC	3	-	green

mA 2-wire

terminal plan 0/4...20 mA

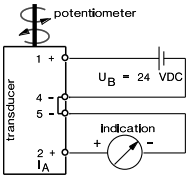


line verification

electrical connection	point	term.	colour
signal input	1	+	brown
signal output	2	I_A	white

mA 4-wire

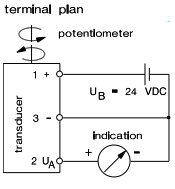
terminal plan transducer 0/4...20 mA



Nr.	colour	function
1	brown	operating voltage
2	white	output current
4	green	zero VDC
5	green	zero VDC

VDC 3-wire

terminal plan



line verification

electrical connection	point	term.	colour
operating voltage	1	+	brown
output current	2	U_A	white
zero VDC	3	-	green

Type	Turn (rotation angle)	Watt	rotation load life
DMG 24 / 10 M Ze DMG 24 / 10 M Ze Hy	10 – turn (3600°)	2,0	1 x 10^6 5 x 10^6
DMG 24 / 05 M Ze	5 – turn (1800°)	1,5	5 x 10^5
DMG 24 / 03 M Ze	3 – turn (1080°)	1,0	3 x 10^5

output signal				
	mA 3-wire	**mA** 2-wire	**mA** 4-wire	**VDC** 3-wire
clamp connection	**0…20mA** **4…20mA**	**4…20mA**	**possible**	**0…10VDC**
cable connection	**0…20mA** **4...20mA**	**4…20mA**	**possible**	**0…10VDC**
terminal block	**0…20mA** **4…20mA**	**4…20mA**	**possible**	**0…10VDC**

*1 Hy = resistor element in Hybrid Technology
*2 **Standard rotation direction:** right

For your information!
Please note that because of missing material availability the wiper could be C7521 material instead of C7701. 25.08.22

Sheet #: Ke2440
Amendment / Print: 29.08.22 / 29.08.22

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