

Precision – Rotation – Angle Sensor F25RM

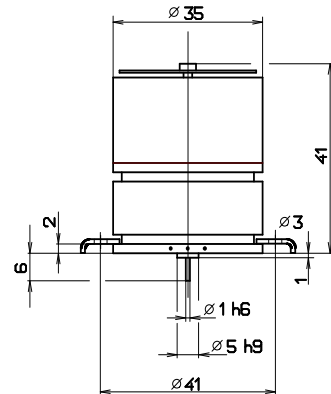
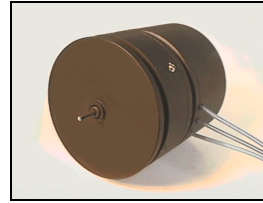
Output signal 0/4...20 mA, 0...10V, 2 or 3-wire-connection (measuring transducer)

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mechanical data of the low torque potentiometer

- 1.1 housing..... : aluminium
- 1.2 shaft..... : stainless steel $\varnothing 1\text{mm}$
- 1.3 bearing..... : jewel bearing
- 1.4 resistor element..... : noble metal winding
- 1.5 slider / wiper tap..... : noble metal, double
- 1.6 housing protection class..... : IP 60
- 1.7 type of connection..... : terminal wires 200 mm
- 1.8 mounted by..... : clamping claws (scope of delivery)
- 1.9 mechanical rotation angle.... : $290^\circ +5^\circ$
- 1.10 electrical rotation angle..... : $270^\circ -1 + 2^\circ$
- 1.11 rotation speed..... : max. 1 rps
- 1.12 torque..... : 0,002 to 0,003 Ncm
- 1.13 rotation load life..... : 50×10^6 slider path (360°)
- 1.14 rotation direction..... : left (standard)



electrical data of the low torque potentiometer

- 2.1 output signal..... : 0/4...20 mA $\pm 0,04$ 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. 1,5 Watt
- 2.7 slider load current..... : 1 mA (max., load life)
- 2.8 temperature range..... : -50°C till $+100^\circ\text{C}$
- 2.9 temperature coefficient..... : 20 ppm/ $^\circ\text{C}$

options

short-circuit tracks
rotation direction right
rotation angle, electrical and mechanical
shaft: special length, continuous
stops (rotation angle max. 350°)
rotation angle 360°
suitable for oil-filled instruments

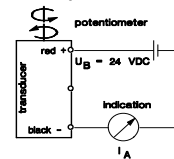
torque 0,001 Ncm
2-wire connection
3-wire connection
0 - 10 V
F25ZM160 dial surface mounting $\varnothing 160$
F25ZM100 dial surface mounting $\varnothing 100$

accessories

outer housing
mounting set
couplings

mA 2-wire

terminal plan 4...20mA

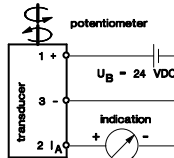


line verification

electrical connection	point	term.
operating voltage	red	+
indication peak	black	-

mA 3-wire

terminal plan 0/4...20 mA

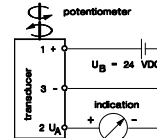


line verification

electrical connection	point	term.	colour
operating voltage	1	+	red
output current	2	I _A	yellow
zero VDC	3	-	black

VDC 3-wire

terminal plan 0...10V



line verification

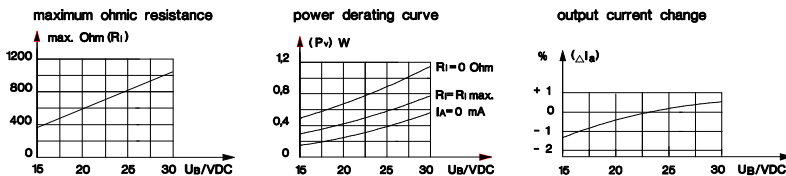
electrical connection	point	term.	colour
operating voltage	1	+	red
output voltage	2	U _A	yellow
zero VDC	3	-	black

electrical data of the transducer

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

Order#	Type	Signal
104902	F25RM A2	4...20mA
	F25RM A3	0...20mA
	F25RM A3	4...20mA
	F25RM V3	0...10 Volt

Key electrical data of the transducer



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Order #: according to table

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