

# Industrial Potentiometer

Type 2123A

## for Angle Measurement, Position Determination, Tolerance Measurements and Continuous Position Sensing

Angle sensors with resistance and collector path of conductive-plastic for the direct angle measurement for position determination, for tolerance and continuous position sensing measurements.

- Outstanding linearity up to  $\pm 0,075\%$
- Long life:  $100 \times 10^6$  movements
- Excellent repeatability  $0,007^\circ$
- Mechanical continuous rotation

### Description

This "industrial-grade" potentiometer has been specially designed for severe working conditions often encountered in industrial applications, because of its waterproof housing and sturdy construction. The shaft passage is sealed by a means of a gland, and the connector comes up to the degree of protection IP65 with the conformable plug.

Housing	Aluminium anodized, shaft passage sealed
Shaft	Stainless steel
Bearings	Stainless steel ball bearings
Resistance element	Conductive plastic
Wiper assembly	Precious metal multi-finger wiper
Electrical connection	5-pin connector



### Technical Data

#### Mechanical Data

Mechanical travel		360, continuous
Permitted shaft loading (axial and radial) static or dynamic force	N	45
Starting torque	N·cm	<1,5
Maximum operational speed	min <sup>-1</sup>	2 000
Weight	g	180

#### Electrical Data

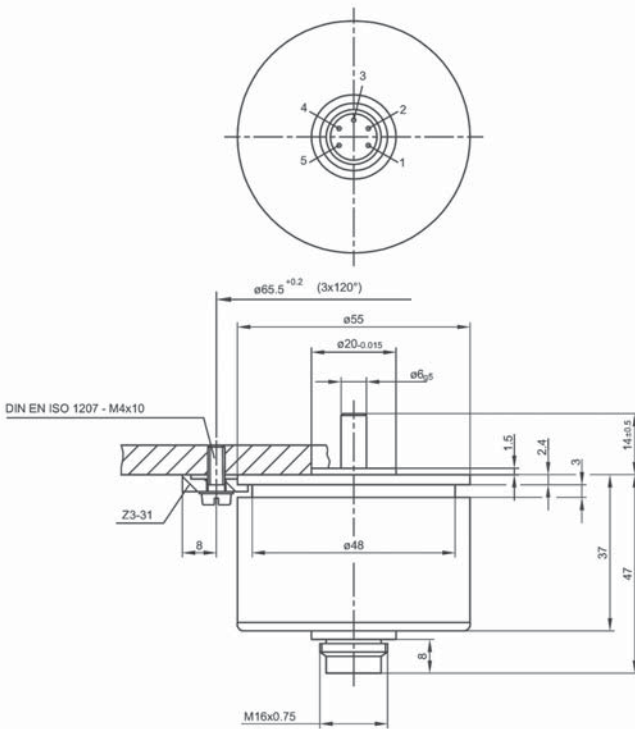
Actual electrical travel	°	355 $\pm$ 2
Nominal resistance	k $\Omega$	5
Linearity, independent	%	$\pm 0,075$
Repeatability	%	0,002 (=0,007 °)
Max. permissible applied voltage	V	42
Max. wiper current in case of malfunction	mA	10
Recommended operating wiper current	$\mu$ A	$\leq 1$

#### Environmental Data

Temperature range	°C	-40 ... 100
Vibration	Hz	5 ... 2 000
Stoss	g	50
	ms	11
Life	Movem.	$100 \times 10^6$
Protection class		IP65 (DIN 40050/IEC529) (with plug EEM 33-70)

**Important:** All the values given in this data sheet for linearity, lifetime and temperature coefficient in the voltage dividing mode are quoted for the device operating with the wiper voltage driving on operational amplifier working as a voltage follower, where virtually no load is applied to the wiper ( $I_w \leq 1 \mu$ A).

## Dimensions



## Included Accessories

- 3 mounting clamps Z3-31

## Accessories (Optional)

- Connecting cable for CoMo Net®/View®/Sys
- Connecting cable for DMF-P family
- Connecting cable for maXYmo family
- Connecting cable for SigMo Sys

## Type

1200A151Asp

1200A151Bsp

1200A151Csp

1200A151Dsp

## Ordering Key

- Industrial Potentiometer  
0 ... 360 °, continuous

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## Schematic



Schematic  
view on the shaft