

SA-APS04-000

Angle potentiometer

Function

- Angle potentiometer's are designed to convert angular movement into a proportional voltage output using a simple low current operating circuit.

Usage

- To measure linear rotations

Features

- High operation life of $> 5 \times 10^8$ full turns
- Easy to mount and adjust



Technical specifications

Performance

Turning angle	
electrical.....	300 ± 5 °
mechanical (w/o stop)....	360 °
Operation life.....	$> 5 \times 10^8$ full turns
Linearity.....	± 0.2 %

Electrical characteristics

Supply voltage.....	5 V
Output voltage.....	0-5 V
Resistance.....	10 k Ω
Resistance tolerance.....	± 15 %
Linearity tolerance.....	± 2 %
Capacity@+40°C.....	0.2 W
Capacity@+105°C.....	0 W
Leakage resistance.....	1000 M Ω

Environmental data

Ambient operating range.....	-40 to 100 °C
Humidity.....	5 to 95 %
Sealing class.....	IP 65

Mechanical characteristics

Dimensions (over all).....	$\varnothing 13 \times 15$ mm
Weight.....	12 g
Torque:	
maximum.....	0.2 Ncm
operation.....	< 0.2 Ncm
End play of axis (max.).....	0.2 mm
Radial play of axis (max.).....	0.1 mm
Rotational speed (max.).....	500 U/min
Bearing type.....	floating
Housing material.....	anodized brass


Cable & Connector

wire cross-section.....	3×0.14 mm ²
type.....	PUR-cable
length.....	1200 mm
connector (standard).....	Binder 719 5, 5PM

Vibration resistance

Vibration tested at.....	10 G
with a frequency of	@50 Hz

Calibration

 Use the formulas on 2nd page to calculate the physical values

Ordering information

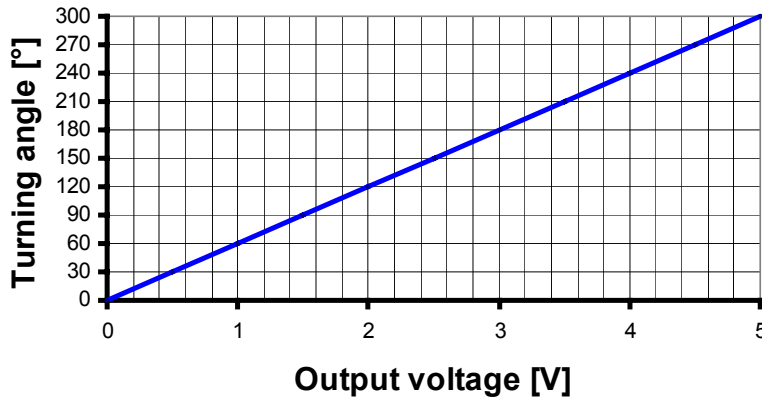
Art.No.:..... SA-APS04-000

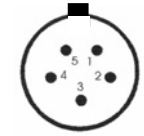
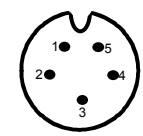
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Formula

	SA-APS04-000		Multiplicator		Offset
12 Bit A/D	Turning Angle [°]	=	300 / 4095	*	Digits - 0
16 Bit A/D	Turning Angle [°]	=	300 / 65535	*	Digits - 0
Voltage	Turning Angle [°]	=	60	*	Volt - 0



Connector layout					Mating plug	Connector at sensor
	Pin	Name	Description	Color		
Analog-line Binder 719, 5pin	1	AGND	Analog Ground	black	 Binder 719, 5 PF (front side)	 Binder 719, 5 PM (front side)
	2	+5V	Power supply	red		
	3	n.c.	Not connected	-		
	4	n.c.	Not connected	-		
	5	Signal	Analog signal	white		



Possible options on customer request !

Please note:

For the first order of special customer options please use the following order code: **SA-APS04-000**
 After the first order you will get from 2D a uniquely order code for your next orders.