

## SA-APS02-000

## Angle potentiometer

### Function

- Angle potentiometer's are designed to convert angular movement into a proportional voltage output using a simple 3-wire, low current operating circuit.

### Usage

- To measure angular motions, e.g. steering angle

### Features

- High operation life of  $50 \times 10^6$  full turns
- Easy to mount and adjust
- Snap-on head mounting



### Technical specifications

#### Performance

Turning angle (electrical).....	308 °
Turning angle (mechanical).....	360 °
Operation life.....	> $50 \times 10^6$ full turns
Linearity.....	± 0.3 %
Supply voltage.....	5 V
Output voltage.....	0-5 V
Resistance.....	5 kΩ

#### Environmental data

Ambient operating range.....	-40 to 100 °C
Humidity.....	5 to 95 %


#### Vibration resistance

Shock.....	40 G
.....	10 ms
Vibration tested at.....	12 G
.....	1000 Hz

#### Mechanical Characteristics

Dimensions (over all).....	Ø48 x 31.3 mm
Weight.....	32 g
Housing material.....	HQ plastics
Cable & Connector:	
wire cross-section.....	3 x 0.14 mm <sup>2</sup>
type.....	PUR-cable
length.....	100 mm
connector type.....	Binder 719 5PM

#### Calibration

 Use the formulas on 2<sup>nd</sup> page to calculate the physical values

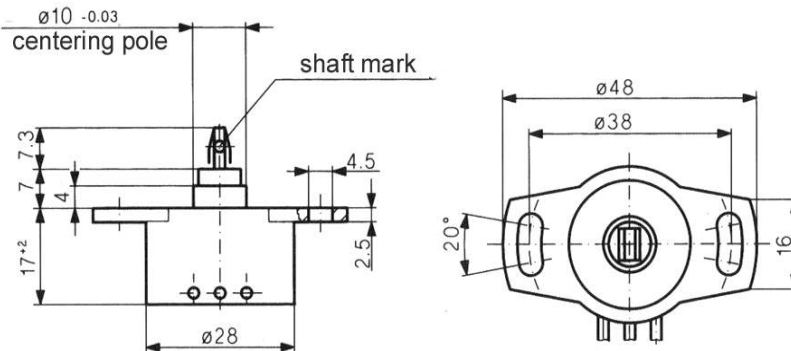
#### Ordering information

Art.No.:..... SA-APS02-000

## SA-APS02-000

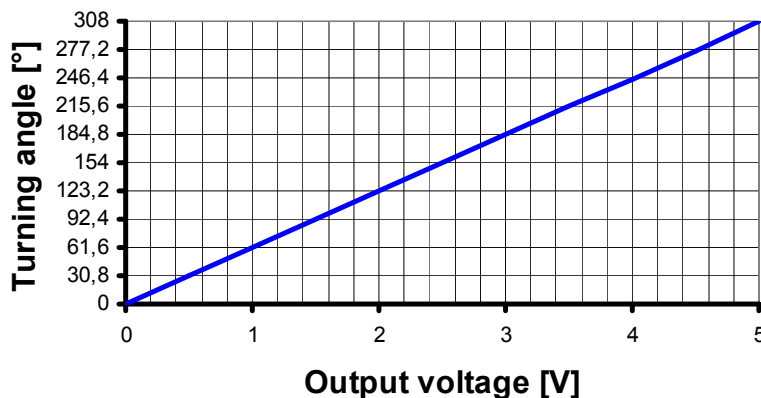
## Angle potentiometer

### Dimensions



### Formula

	SA-APS02-000	Multiplicator	Offset
12 Bit A/D	Turning Angle [°]	= 308 / 4095	* Digits - 0
16 Bit A/D	Turning Angle [°]	= 308 / 65535	* Digits - 0
Voltage	Turning Angle [°]	= 61.6	* Volt - 0



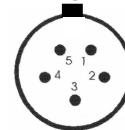
### Connector layout

#### Analog-line (Standard)

Pin	Name	Description	Color (standard)
1	AGND	Analog Ground	black
2	+5V	Power supply	red
3	n.c.	Not connected	-
4	n.c.	Not connected	-
5	Signal	Analog signal	white

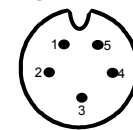
### Connector type

#### Mating plug



Binder 719, 5 PF  
(front side)

#### Plug at sensor



Binder 719, 5 PM  
(front side)



Possible options on customer request !

#### Please note:

For the first order of special customer options please use the following order code: **SA-APS02-000**  
 After the first order you will get from 2D a uniquely order code for your next orders.