2D Debus & Diebold Meßsysteme GmbH, Alte Karlsruher Str. 8, D-76227 Karlsruhe
Tel.: +49(0)721 94485-0 Fax.: +49(0)721 94485-29

SA-WP0038HQ-000 Wire potentiometer

Function

- Wire potentiometers are designed to convert linear movement into a proportional voltage output using a simple 3-wire, low current operating circuit.
- Ultra small version

Usage

- To measure linear motions, e.g. throttle position, clutch or brake lever travel

Technical specifications

Electrical characteristics		
Measurement ranges	mm	38
Input resistance	kΩ	5
Supply voltage (2D system)	V DC	5
Maximum supply voltage	V DC or AC	20
Accuracy	%FS	±1
Repeatability	%FS	±0.02
Resolution		essentially infinite

Measuring cable		
Max. cable acceleration	G	39
Measuring cable tension	N	1.1
with a deviation of	%	±25

Mechanical characteristics		
Housing material		Aluminum
Weight	g	15
Connector		
Standard		Binder 719, 5PM
options		On request

Life time	
Min. spring cycle-life	5 million

Environmental		
Operating temperature	°C	-40 to +85
Vibration resistance		up to 10 G at 30-2000 Hz max

Ordering information
SA-WP-0038HQ-000

Please note: possible options on customer request

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

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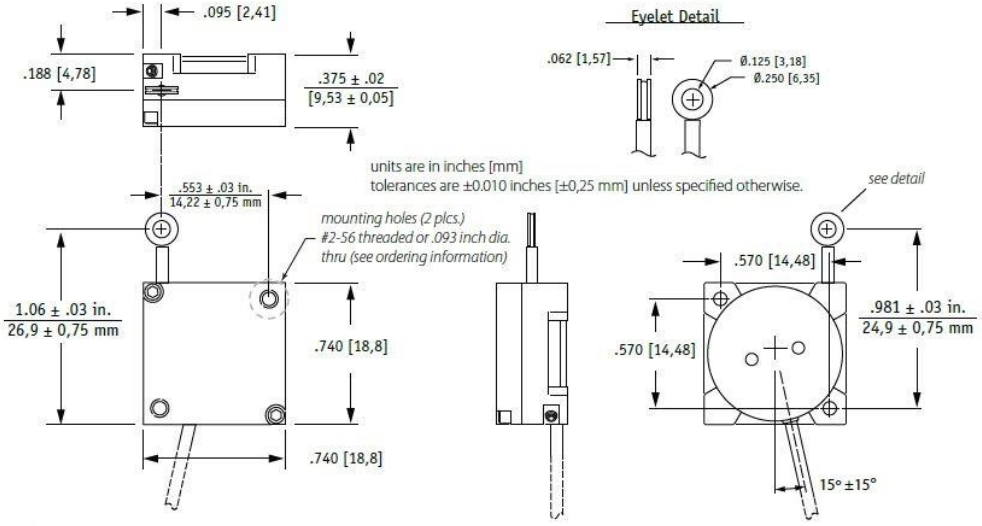
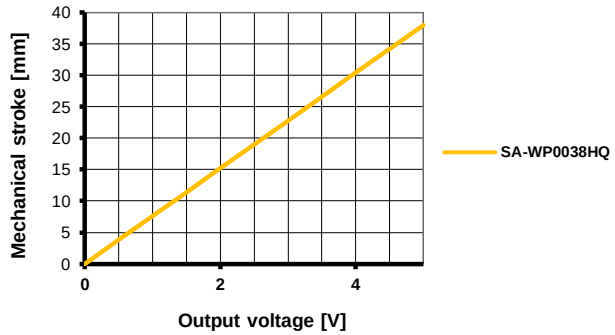
Dimensions



Formulas

	SA-WPxxxxHQ-000		Multiplicator				Offset
12 bit A/D	*Stroke [mm]*	=	*38/4095*	*	*Digits*	-	*0*
16 bit A/D	*Stroke [mm]*	=	*38/65535*	*	*Digits*	-	*0*
Voltage *)	*Stroke [mm]*	=	*7.6*	*	*Volt*	-	*0*



*) You can use the "voltage formula" only, if the voltage supply of the sensor is +5 V

In case of other sensor supplying you must use the following general formula to calculate the physical value:
Stroke[mm] = xxxx / voltage supply * Volt - 0

Remark: Replace the xxxx with the mechanical stroke of your sensor:
→ Value for this sensor is 38 mm (other values on request)

Installation advice

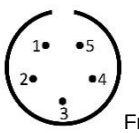
Spring loaded cable:

Avoid free-release of the cable! Prevent over-range of the cable!

Connector layout Connector type

CAN line, Binder 719 5PM

Pin	Name	Description	Color
1	AGND	Analog ground	black
2	Power	Power supply	red
3	n.c.	Not connected	
4	n.c.	Not connected	
5	Signal	Analog signal	green



Front view

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