

Inclinometer for 2 Axes Measurements



FEATURES

- 2 available models: horizontal or vertical mounting
- Based on MEMS technology (non contacting)
- Easy and fast mounting principle
- Drifts due to temperature changes compensated
- Linearity calibration on all the angular range

QUICK REFERENCE DATA

Sensor type	Inclinometer, non contacting
Output type	Cable
Market appliance	Industrial
Dimensions	47.6 mm x 42.6 mm x 12 mm

ELECTRICAL SPECIFICATIONS

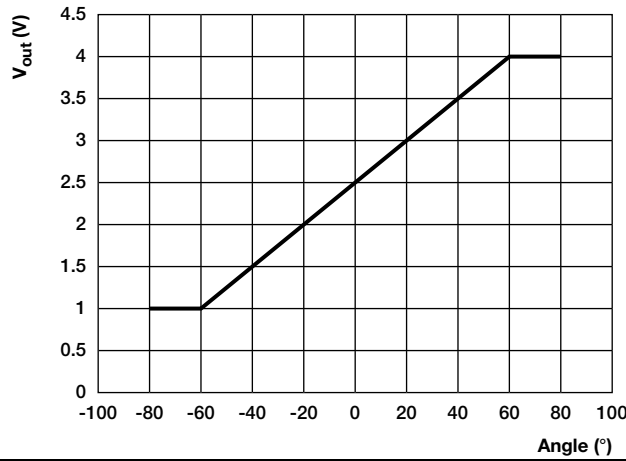
PARAMETER	STANDARD
Supply voltage, V_{supply}	3.3 V \pm 0.3 V with regulator = 6 V to 16 V
Output mode	Analog or PWM or SPI
Electrical output range, V_{out}	for V_{supply} 3.3 V: 1.5 V \pm 1 V for V_{supply} 6 V to 10 V: 2.5 V \pm 1.5 V for V_{supply} 10 V to 16 V: 5 V \pm 4 V
Measurement range	any angle up to 60° max.
Accuracy	horizontal = 0.5° (B) vertical = 1° (A)
No load supply current, I_{supply}	< 40 mA
Over voltage protection on V_{out}	+20 V during 1 s
Reverse voltage protection - output disabled	-20 V
Short circuit protection on V_{out}	10 V permanent
Temperature coefficient	0.05 %/°C
Resolution	12 bits

MECHANICAL SPECIFICATIONS

PARAMETER	
Mounting type	2 oblong holes
Body	plastic
Terminals	cable 4 x 0.25 mm ² ; length: 200 mm min.

ANALOG OUTPUT SPECIFICATIONS

- for 2 axis
- $V_{supply} > 5\text{ V}$

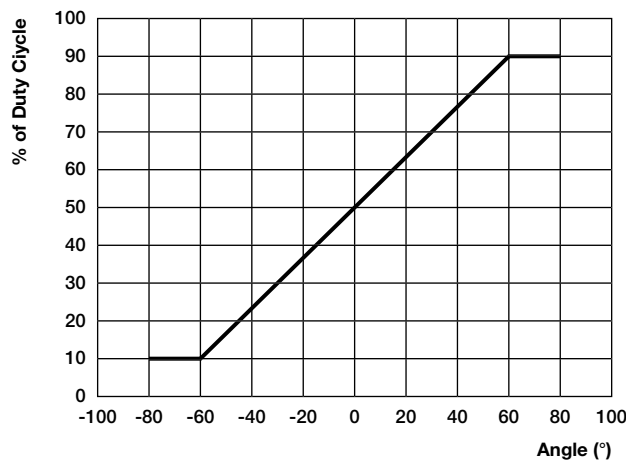
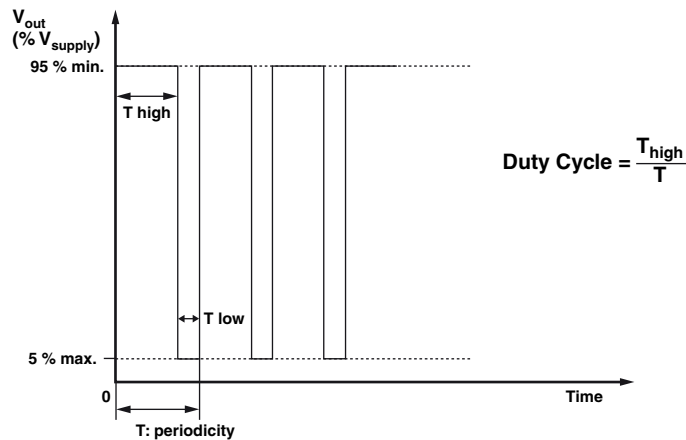


Note

- $Angle = (V_{out} - 2.5) \times 40$

V_{OUT} PWM

- for 2 axis



Note

- $Angle = (\% \text{ of duty cycle} - 50) \times 1.5$

ENVIRONMENTAL SPECIFICATIONS	
Life	unlimited mechanical lifetime
Vibrations	20 g, 10 Hz to 2000 Hz EN60068-2-6
Shocks (1/2 sinus, 11 ms)	50 g EN60068-2-27
Operating temperature range	-45 °C; +105 °C
Storage temperature range	-45 °C; +105 °C
Sealing	IP67 (up to IP68)

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

DIMENSIONS in millimeters			
Blue	signal x	Red	V+
White	Gnd	Yellow	signal y

SAP PART NUMBERING							
INCL	H	B	060	C	11	A	xxxx
MODEL	FEATURES	ACCURACY	ANGLE	OUTPUT TYPE	OUTPUT RANGE	OUTPUT SIGNAL	SPECIAL REQUEST
	H: horizontal V: vertical	B: ± 0.5° only for horizontal A: ± 1° HB or VA	060: 60° xxx: any angle with max. = 60°	C: cable Z: other	11: in = 3.3 V; out = 3 V 21: in = 6 V to 10 V; out = 5 V 22: in = 10 V to 16 V; out = 9 V Z: other	A: analog S: SPI P: PWM	0000



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