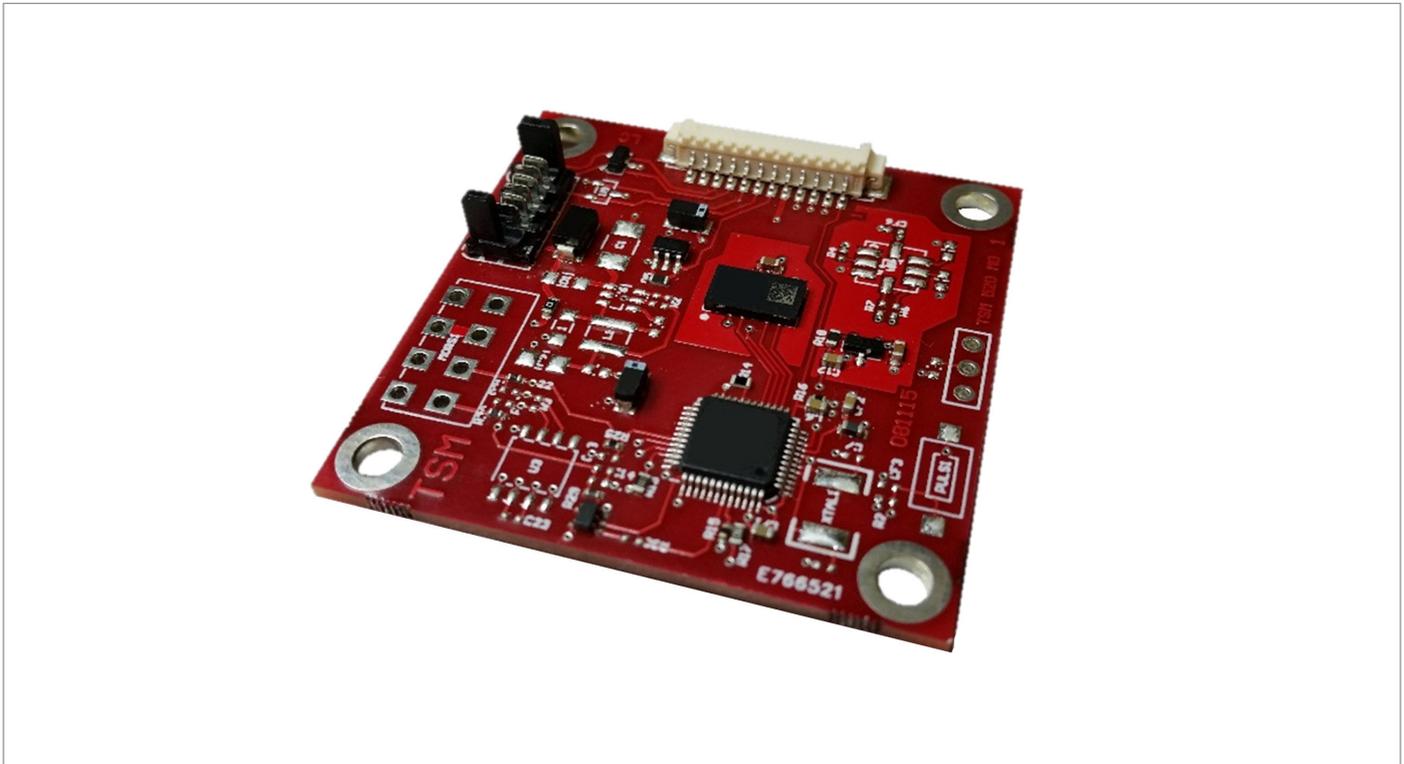


TLX100

INCLINATION SENSOR

MEMS technology with High resolution



DATASHEET - Rev.3- 18012018



CHARACTERISTICS

MEMS technology
Stable accuracy over whole temperature range
Resolution up to 0,01°
PCB inclinometer
Digital or analog output
Small size 45X45mm

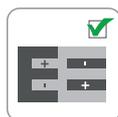


ADVANTAGES

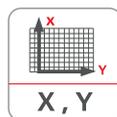
Fast installation
Compact dimensions
High accuracy at economic prices
Temperature compensated
Low power consumption
Autozero function (only on request)



Shock/vibration resistant



Reverse polarity protection



X, Y
Horizontal version



Analog
Analog output



TTL
Serial
Transistor-transistor logic



MEMS
MEMS sensors technology



Cost saving



RoHS
compliant
Directive 2011/65/EU



EU
conformity

TLX100

INCLINATION SENSOR

MEMS technology with High resolution



PRODUCT DESCRIPTION

The inclinometer Model TLX100 is a dual axis inclinometer with excellent performance for use in wheel alignment machine the working principle is based on a MEMS sensor with high performance in terms of resolution, long term stability and temperature characteristics.

This dual axis inclinometer was developed to satisfy the technological, assembling, maintenance needs of automotive wheel-testing machines ensuring a high degree of stability over time.



DATASHEET - Rev.3 - 18012018



PRODUCT CODE

TLX100.	a	b	c	d	e	← ORDER CODE
---------	----------	----------	----------	----------	----------	--------------

a	Power supply
1	← = 5 V DC (only for 1,2,3 output)
2	← = 9 ... 30 V DC

b	Measurement direction
0	← = Dual axes

c	Range
XXX	← = ± angle deg. for double axes*

d	Output
1	← = TTL
2	← = 0,5 ... 4,5 V DC
3	← = 0 ... 5 V DC
4	← = 0 ... 10 V DC
5	← = 1 ... 7 V DC

e	Type of connection
5	← = Molex connector cod. 90325-0006

* = value of 010 means range ±10°

TLX100

INCLINATION SENSOR

MEMS technology with High resolution

TECHNICAL SPECIFICATION

Measuring range	$\pm 1^\circ$ to $\pm 60^\circ$ for horizontal version
Linearity	$< \pm 0,2 \% \text{ FS}$
Resolution	$0,01^\circ$
Temp. range compensation	$0^\circ \dots +50^\circ$ (custom on request)
Temperature coefficient	$0,002 \text{ } ^\circ\text{C}$
Temperature range	$-40^\circ\text{C} \dots +85^\circ\text{C}$ [$-40^\circ\text{F} \dots +185^\circ\text{F}$]
Weight	approx. 9 g [0.31 oz]
Shock resistance	acc. to EN 60068-2-27 30 G, 11 ms
Vibration resistance	acc. to EN 60068-2-6 10 ... 500 Hz

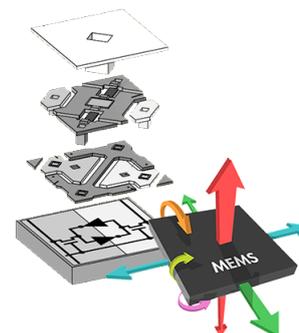
ELECTRICAL CHARACTERISTICS

Power supply	9 ... 30 V DC
Reverse polarity protection	YES
Connection technology	Molex 92315-0610, Picoflex female connector, 6-pin cable 100 mm (TSM cod. 9T300233)
Electromagnetic compatibility	acc. to EN 61000-6-2, EN 61000-6-4

OPERATING PRINCIPLE

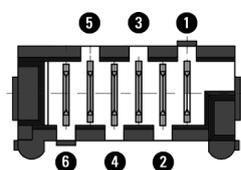
Operating principle

MEMS (acronym for Micro Electro Mechanical Systems) technology enables both electronic circuits and opto-mechanical devices to incorporate on the same silicon substrate, using manufacturing technologies similar to those used for the implementation of integrated circuits.



DATASHEET - Rev.3- 18012018

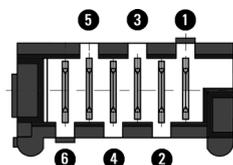
TTL ELECTRICAL CONNECTION



Pinout

1	+Vin
2	RX
3	GND
4	n.c.
5	n.c.
6	TX

ANALOG ELECTRICAL CONNECTION



Pinout

1	+Vin
2	n.c.
3	GND
4	V out X
5	V out Y
6	n.c.

TLX100

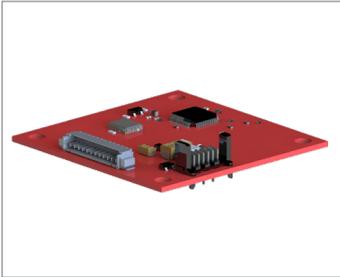
INCLINATION SENSOR

MEMS technology with High resolution



DIRECTION AXES

Dual axes

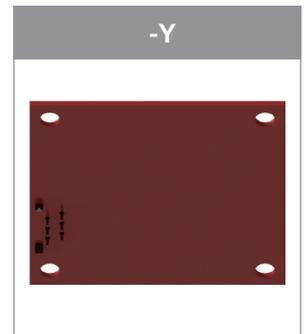
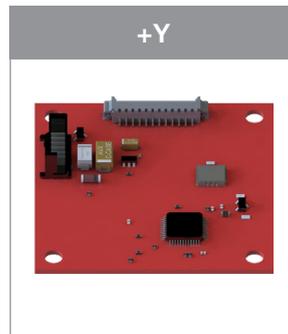
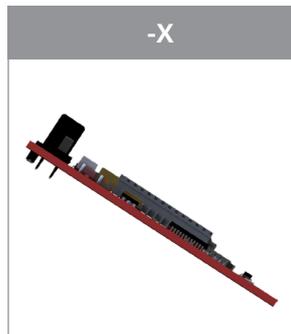


TSM dual axes TLX100 inclination sensor

The 2-dimensional inclination sensor must be mounted with the base plate in horizontal position, i.e. parallel to the horizontal line.

The sensor can be inclined both towards the X and Y axis at the same time.

For each axis a separate measured value is provided.



DIMENSIONS [mm]

