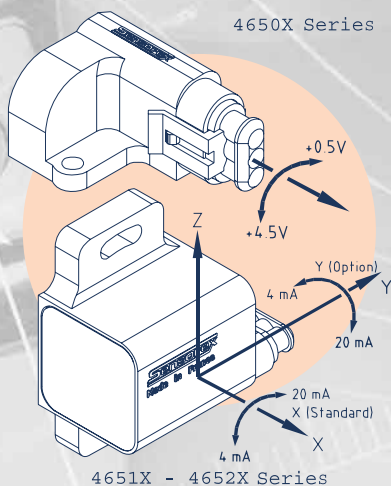


# LOW COST SINGLE / DUAL AXIS IP67 INCLINOMETER : SX46500 SERIES



## SPECIFICATIONS

- SX4650X series :
  - Horizontal mounting
  - Single axis model
  - 5VDC Power supply
  - 0/5VDC output
- SX4651X & 4652X series :
  - Vertical mounting
  - Single or dual axis model
  - 9/30VDC power supply
  - 4/20mA output
- Very low power consumption
- Very good resistance to its environment : IP67 protection index



## GENERAL DESCRIPTION

The SX46500 inclinometer series, available in single and dual axis version (2 perpendicular axis), are easy to integrate in any mechanical system thanks to their compact and robust housing, and are especially dedicated to outdoor measurements, with a very high IP67 protection index.

Their main characteristics are :

- Horizontal or vertical mounting with no need of special tooling.
- IP67, moulded Superseal connection, resistant to dust/water projection and high pressure washing.
- Insensitive to external vibrations situated above a 5 or 10 Hz frequency (according to model).
- Good long term Zero stability :
  - < 0.02° at ambient T°.
  - 0.1° angle variation for 0 to + 70°C Temperature variation.
  - 0.2° angle variation for - 25 to + 80° Temperature variation.
- Typical resolution < 0.016° for ± 20° range, and 0.072° for ± 90° range.
- The sensor's high level (0/5VDC or 4/20mA) output is proportionnal to the sine of the angle.

## APPLICATIONS

- Tilt measurement for trucks during loading/unloading/operation.
- Safety shutoff for cranes and dumpers.
- Platform levelling.

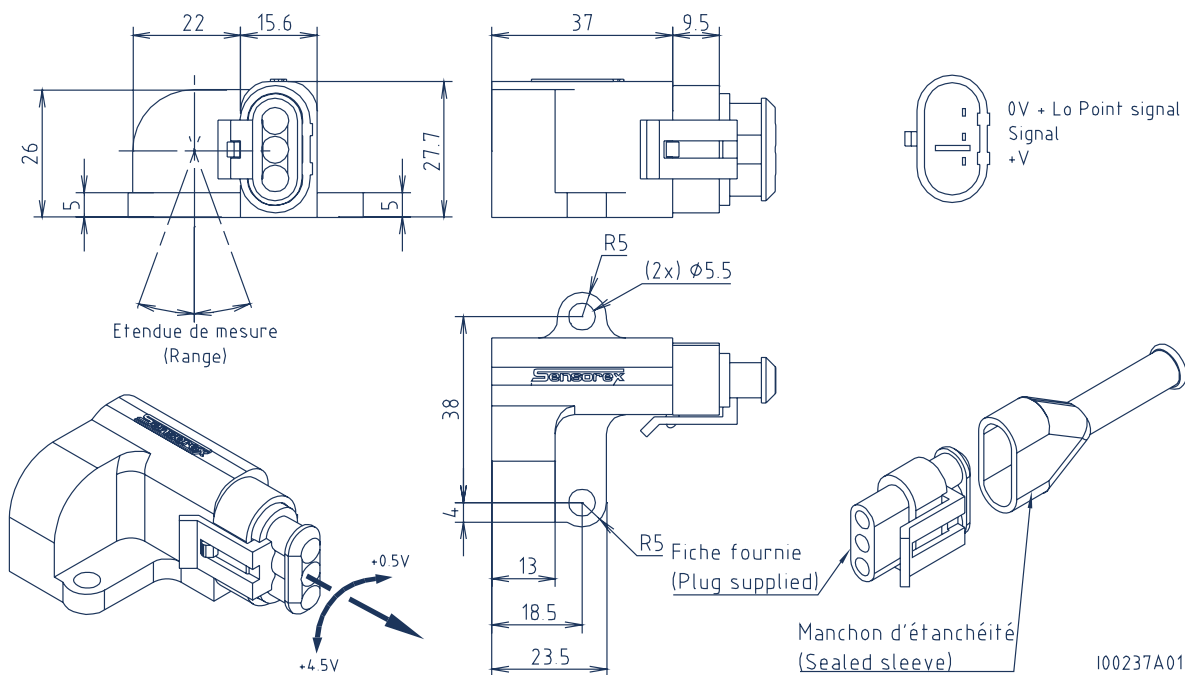
## GENERAL SPECIFICATIONS

	4650X Series	4651X-4652X Series	
Range	$\pm 20^\circ ; \pm 90^\circ$	$\pm 20^\circ ; \pm 90^\circ$	
Excitation voltage	5 VDC $\pm$ 0.25 VDC	9 to 30 V (non regulated)	
Consumption	< 2 mA typical	< 10 mA typical (1 axis)	
Output voltage (proportionnal to the sine)	0.5/4.5 VDC $\pm$ 1.5 %	4/20 mA $\pm$ 0.7 %	
Zero signal	P. supply / 2 ( $\pm$ 0.3 VDC)	12 mA $\pm$ 0.1 mA	
Linearity error (least squares)	$\pm$ 1 % full scale	$\pm$ 0.5 % full scale	
Electrical noise	2 mVrms typical / 5 mVrms max	2 mVrms typical / 5 mVrms max	
Minimum resistive/capacitive charge	20 Kohms/20 nF	10 Kohms/20 nF	
Bandwidth (at -3dB)	5 Hz	10 Hz	
Cross-axis sensitivity	5 %	5 %	
Perpendicular error (double axis version)	/	< 0.5°	
Thermal zero drift	- 25° to + 85 °C - 40° to + 85 °C	$\pm$ 1.7° $\pm$ 2°	$\pm$ 0.6° $\pm$ 0.8°
Thermal sensitivity drift	- 25° to + 85 °C - 40° to + 85 °C	$\pm$ 2.5 % $\pm$ 3 %	/ $\pm$ 1 %
Operating Temperature range	- 40° to + 85 °C	- 40° to + 85 °C	
Shocks	200 g/11 ms	200 g/11 ms	
Vibrations	10 grms (20 to 2000 Hz) sinus	20 grms(20 to 2000 Hz) sinus	
Protection	IP67	IP67	
Mounting	2 x M5 screws	2 x M6 screws	
Connection	AMP «Superseal» plug (3 pins)	AMP «Superseal 1.5» (5 pins)	
Weight	35 g (with plug)	150 g (with plug)	

## SELECTION GUIDE

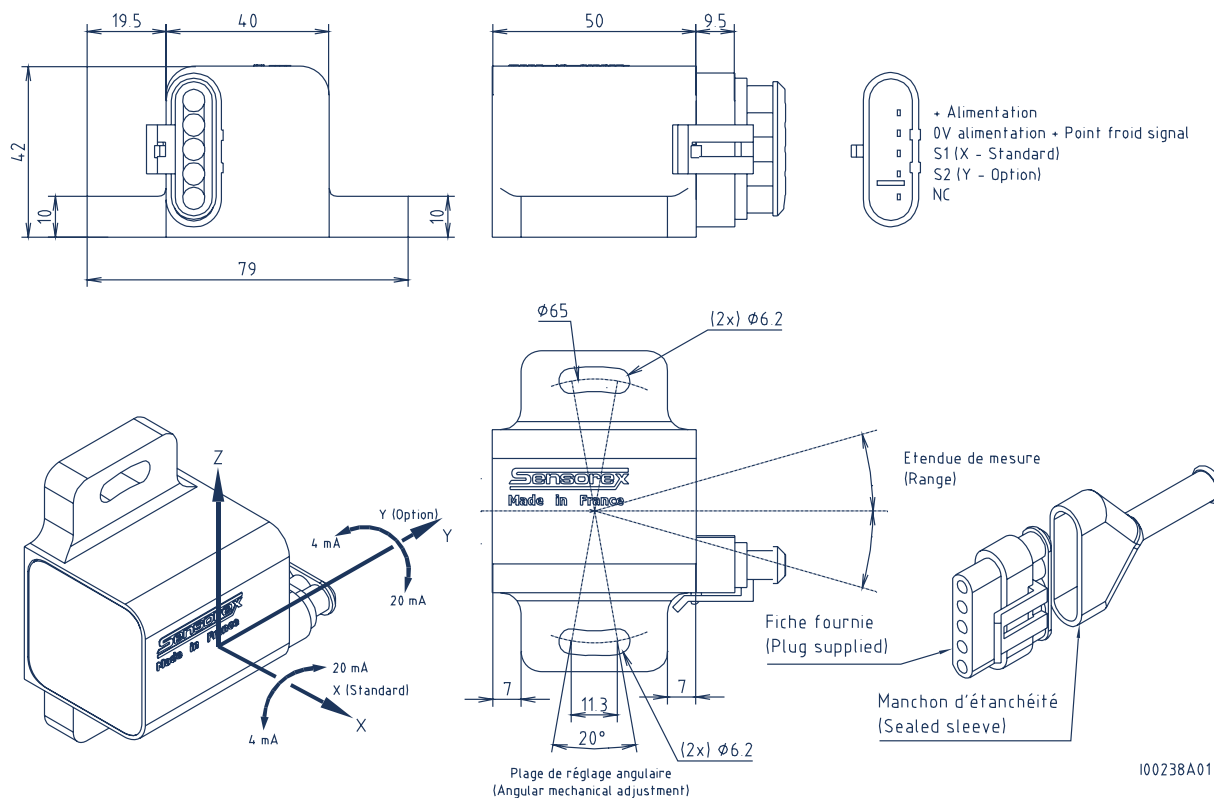
Range	$\pm 20^\circ$	$\pm 90^\circ$	$\pm 20^\circ$	$\pm 90^\circ$
	0/5 VDC output	0/5 VDC output	4-20 mA output	4-20 mA output
Single-axis	46502 	46509 	46512 	46519 
Dual-axis	/	/	46522 	46529 

## INTERFACE DRAWING SX4650X SERIES



4,6 mm < cable gland diameter sleeve < 5 mm

## INTERFACE DRAWING SX4651X - 4652X SERIES



6,5 mm < cable gland diameter sleeve < 7 mm