

## SM-NA

## MINIATURE INCLINOMETER WITH 0 - 5 V OUTPUT

- Measuring range from :  $\pm 5^\circ$ ,  $\pm 10^\circ$ ,  $\pm 30^\circ$ ,  $\pm 45^\circ$ ,  $\pm 70^\circ$
- Integrated sensor electronics including signal conditioner and low-pass filter
- IP 65 Protection
- High measurement accuracy
- Linear output response
- Small cross sensitivity
- High long term stability - virtually infinite lifespan
- Temperature compensated, conditioned 0...5V output signal
- Highly stable internal voltage regulation
- Optional 5 Volt reference voltage output
- Low power consumption
- Protection against reverse supply voltage polarity
- No interference by surrounding electromagnetic fields
- EMC certified CE certified
- Shockproof as without moving mechanical parts
- Hermetically sealed
- Sensor electrically isolated from point of measurement by high quality plastic housing
- Zero point adjustable through  $360^\circ$  using clamping ring



### Applications :

- Measurements of inclinations in Measuring instruments and inspection equipment, in water, land and air vehicles, in automation and safety technology, on cranes and lifting equipment, on robots, in the manufacture of scientific equipment, in medicine and telecommunication as well as navigation systems are typical examples.

### Technical Specifications :

	SM-NA5	SM-NA10	SM-NA30	SM-NA45	SM-NA70
<b>Measuring range</b>	$\pm 5^\circ$	$\pm 10^\circ$	$\pm 30^\circ$	$\pm 45^\circ$	$\pm 70^\circ$
<b>Resolution</b>	$< 0.001^\circ$	$< 0.002^\circ$	$< 0.005^\circ$	$< 0.01^\circ$	$< 0.01^\circ$
<b>Sensitivity (Ub=5V)</b>	400 mV/ $^\circ$	200 mV/ $^\circ$	66.6 mV/ $^\circ$	44.4 mV/ $^\circ$	28.57 mV/ $^\circ$
<b>Output voltage range</b>	2,5V $\pm$ 2V at $\pm 5^\circ$	2,5V $\pm$ 2V at $\pm 10^\circ$	2,5V $\pm$ 2V at $\pm 30^\circ$	2,5V $\pm$ 2V at $45^\circ$	2,5V $\pm$ 2V at $\pm 70^\circ$
<b>Linearity</b>	$< 0.02^\circ$	$< 0.03^\circ$	$< 0.06^\circ$	$< 0.14^\circ$	$< 0.28^\circ$
<b>Sensibilité</b>	$< 2\%$	$< 2\%$	$< 2\%$	$< 2\%$	$< 2\%$
<b>Temperature drift of zero point (Ub=5V)</b>	$\pm 0,002^\circ/\text{K}$	$\pm 0,002^\circ/\text{K}$	$\pm 0,002^\circ/\text{K}$	$\pm 0,003^\circ/\text{K}$	$\pm 0,003^\circ/\text{K}$
<b>Settling time</b>	$< 0,3 \text{ sec}$				
<b>Supply voltage Ub=5V</b>	9V ... 30 VDC / 2mA				
<b>Operating temperature</b>	$-40^\circ\text{C} \dots +85^\circ\text{C}$				
<b>Storage temperature</b>	$-45^\circ\text{C} \dots +90^\circ\text{C}$				
<b>Weight</b>	18.5 gr				
<b>Protection</b>	IP65				
<b>Terminals</b>	3 (4) highly flexible cables, Øca.1mm, length 18cm				

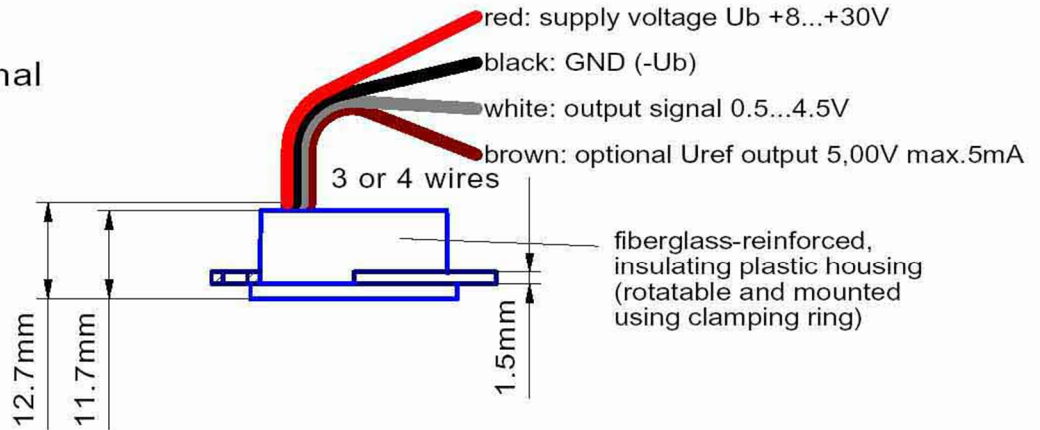
### SENSEL MEASUREMENT

41, rue des laitières – 94300 VINCENNES - FRANCE

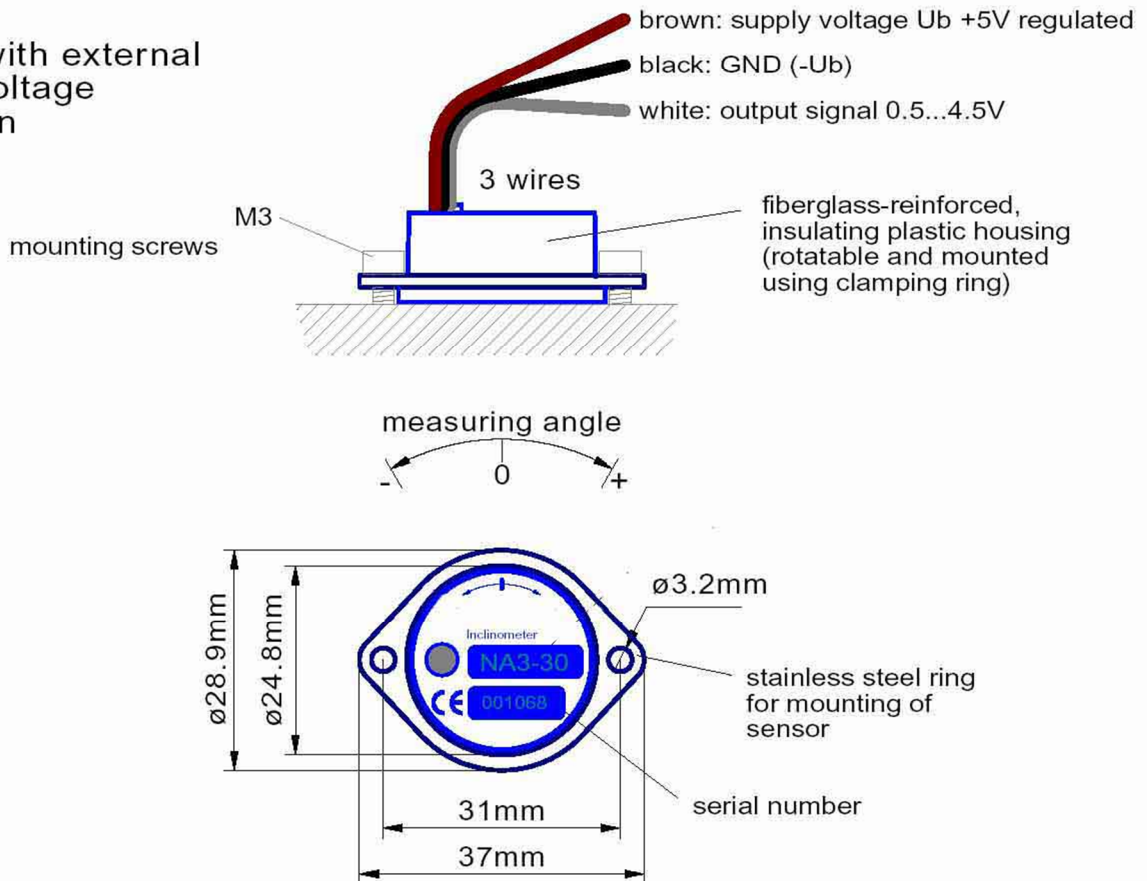
Tél. : 01 56 88 25 78 - [www.sensel-measurement.fr](http://www.sensel-measurement.fr) - [contact@sensel-measurement.com](mailto:contact@sensel-measurement.com)  
S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

**Connections & Dimensions (in mm.):**

Sensor with internal  
supply voltage  
regulation



Sensor with external  
supply voltage  
regulation



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