

SM-1I

SENSOR BOX CONTAINING ONE INCLINOMETER / ACCELEROMETER WITH 4-20 mA OUTPUT

- Measuring uniaxial acceleration or inclination
- Robust pressure die cast aluminium housing (IP65) with saltwater proof coating
- Sensor and signal conditioner electrically isolated from housing
- Twist free 4-point fastening of rigid, 3.2mm thick base PCB
- Integrated signal conditioner with 4...20mA, 2-wire output
- Temperature drift compensation
- No separate supply voltage necessary
- Output signal calibrated to customer's specifications
- Highly stable sensor supply voltage
- 10V ... 30V terminal voltage
- Programmable dynamic response
- Loop current limitation
- High overload resistance
- Either connection polarity
- Low pass filter with optional choice of cut-off frequency for suppression of interference frequencies



Applications :

- Construction, mining, agricultural machinery,
- Transportation & conveyor systems, ships,
- Operation & Automation technology as well as General mechanical engineering

Technical Specifications :

	SM-1I
Measuring range	Depend on implemented sensors SM-N / SM-NG / SM-B ...
Terminal voltage	10 – 30 Volt
Minimum loop current	2.5mA ... 3.5mA
Maximum loop current	22mA ... 26mA
Output signal loop current	4mA ... 20mA (12mA for sensor zero position)
Adjustable variables	Zero point (12mA), amplification
Maximum load resistance	500 Ohm (24 Volt)
Operating temperature	-40°C ... +85°C
Terminals	3 x 1.5 mm ²
Cable fixing	M12 x 1.5 cable gland, clamping range 6mm ... 7.5mm

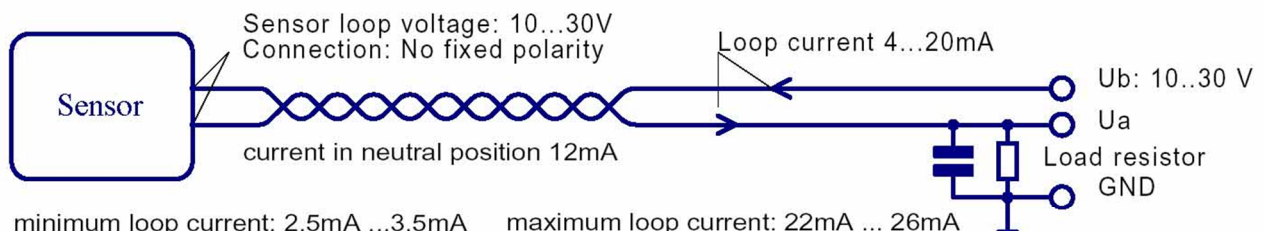
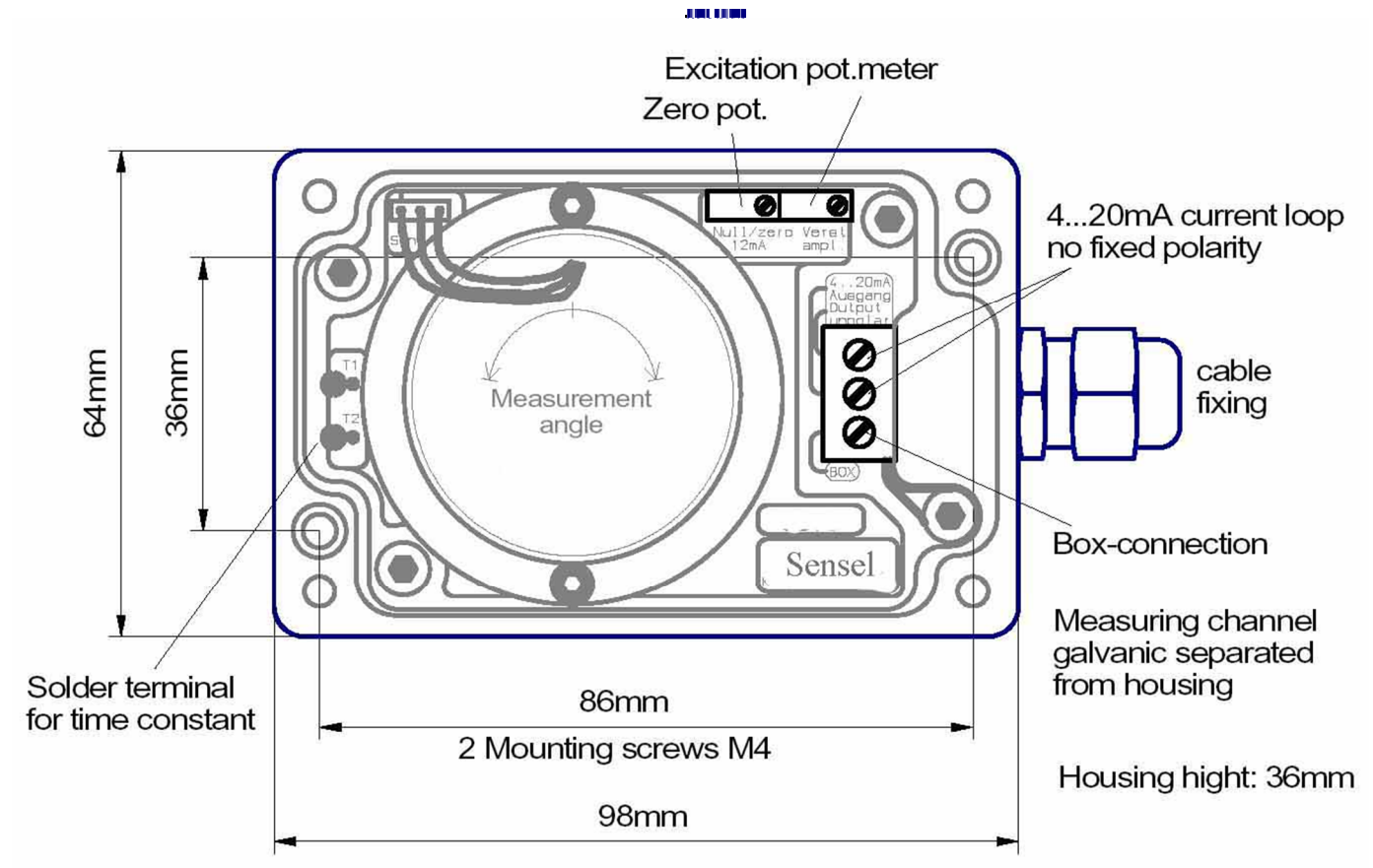
SENSEL MEASUREMENT

41, rue des laitières – 94300 VINCENNES - FRANCE

Tél. : 01 56 88 25 78 - www.sensel-measurement.fr - contact@sensel-measurement.com

S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

Dimensions and Measuring direction with SM-NG inclinometer :



minimum loop current: 2,5mA ... 3,5mA maximum loop current: 22mA ... 26mA

$U_{bmin} = 10V + \text{voltage drop along cable} + \text{voltage drop across load at 20mA}$

$U_{bmin} = 10V + (20mA \cdot R(\text{cable})) + (20mA \cdot R(\text{load}))$

(100m transmission wire $2 \times 0,14mm^2$:)0,6V + (100 Ohm load :)2V + 10V = $U_{bmin} = 12,6V$

(2km transmission cable $2 \times 0,5mm^2$:)3,2V + (500 Ohm load :)10V + 10V = $U_{bmin} = 23,2V$

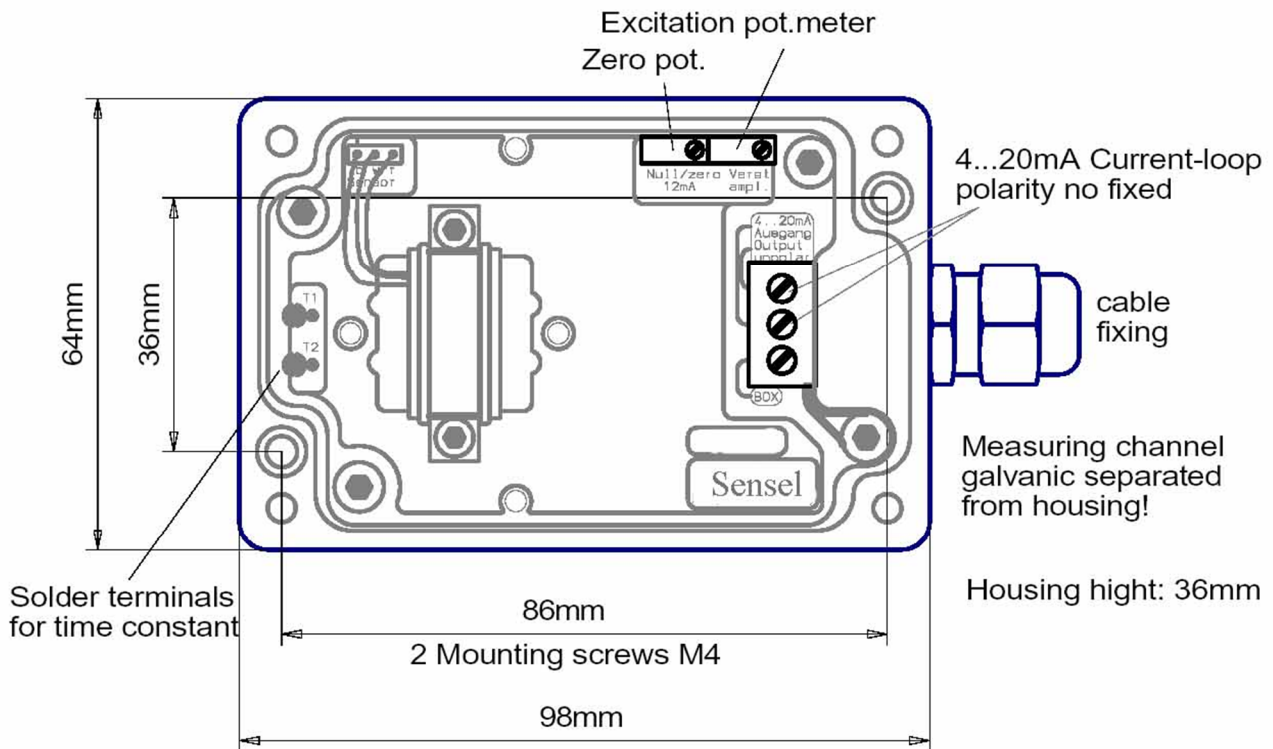
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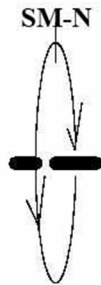
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Dimensions and Measuring directions with SM-N, SM-B :



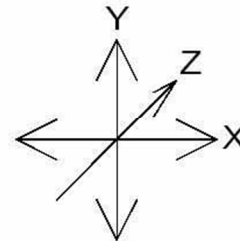
Measuring
level and
directions:



Angle-zero can be
+. -turned in
both directions

Cable output from
the sensor box
can be as shown
from the right or
from the left or
top of the box.

SM- B, BDK



Acceleration measuring
can direct mounted in
X, Y and Z-Direction with
+.- measuring direction in
X and Y direction

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