



MAS G048 Inclinometer

General description:

The MAS G048 inclinometer unit is an electronic angle measurement system, intended for Trim and/or Heel measurements on board any vessel. The angle measurement is performed upon the signal from a solid state gravity sensor. This signal is amplified, and converted into 4 - 20 mA standard loop. Mount the box or unit either vertically or horizontally on bulkhead or in a panel. Mount the box or unit longitudinal or across.

Likewise both longitudinal and cross mounting will be possible, whether Trim or Heel measuring is desired.

The inclinometer has 3 ranges:

- $\pm 1.5^\circ$
- $\pm 4.5^\circ$
- $\pm 45^\circ$

Selection is easily done by means of jumper setting.

Installation of the inclinometer:

Due to the sensitive angle measuring nature of this device, the inclinometer unit must be mounted with care:

- Mount the box or unit vertically.
- Mount on a rigid construction longitudinal or across.

- If possible, mount in locations with fairly stable ambient temperature (e.g. in accommodation quarters).
- With reference to even keel, the horizontal edge of the unit has to be mounted within $\pm 5^\circ$.

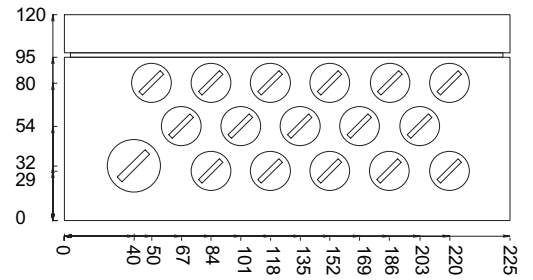
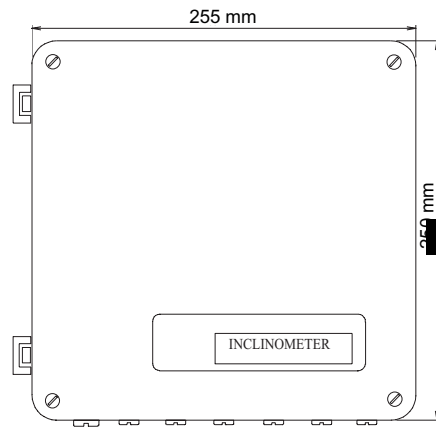
Combination details:

Each combination is specified as follows:	
MAS G048B-1:	Single inclinometer intended for Trim or Heel (intended for mounting in an existing panel).
MAS G048B-2:	Single inclinometer intended for Trim or Heel. Incorporated in a polyester box.
MAS G048B-3:	Dual inclinometer intended for Trim or Heel. Incorporated in a polyester box.

Type:	MAS G048B-1	MAS G048B-2	MAS G048B-3
Supply voltage:	24 VDC -25/+30%		
Power consumption:	Max. 1 W		
Ambient temperature:	-25/+65° C		
Output signal:	4-20 mA (12±8 mA)		
Linear range:	±45°		
Accuracy 10-40° C:	±0.015° (±0.26 mm/m)		
Enclosure:			
- Case:	-	Polyester (grey)	Polyester (grey)
- Sealing:	-	IP 65	IP 65
- Dimension mm:	110 x 75 x 50	250 x 255 x 120	250 x 255 x 120
- Glands entry:	-	1 pcs. PG21 and 16 pcs. PG13.5	1 pc. PG21 and 16 pcs. PG13.5
Weight kg:	1.5	4.25	4.45
Mounting:	Bulkhead/ mounted in an existing panel	Bulkhead	Bulkhead

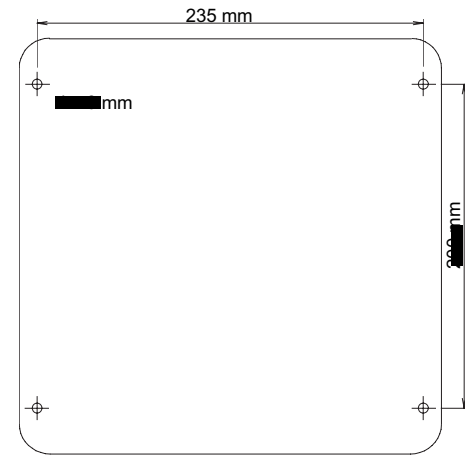
Mounting instructions:

Outline drawing.

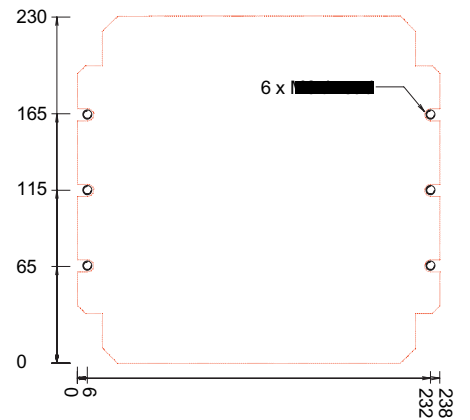


Blind plugs: 2 pcs PG 21/ 26 pcs 13.5 PG.

Interface box.

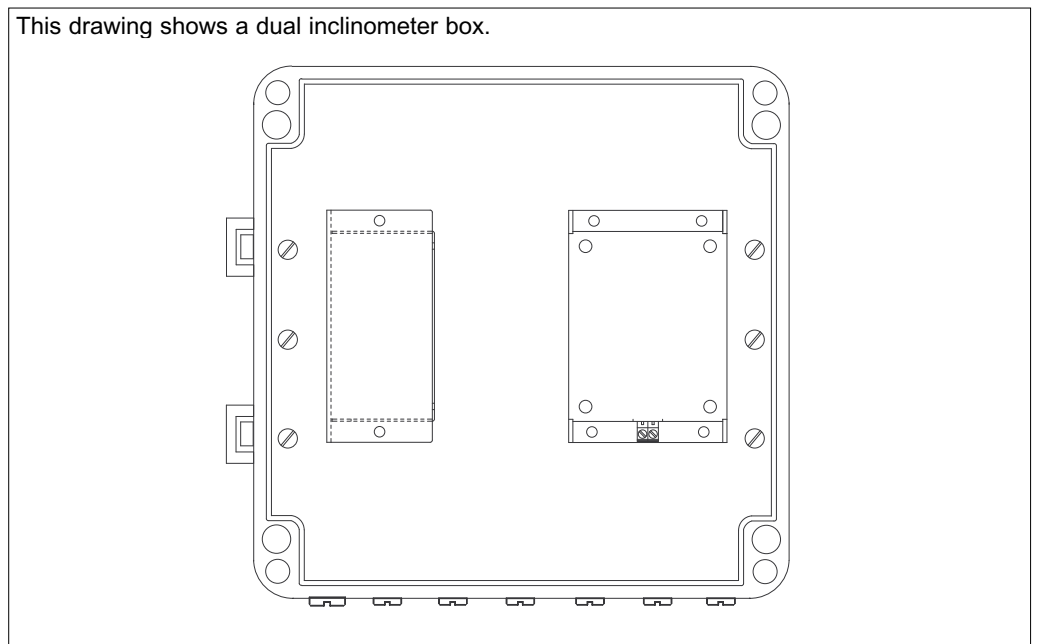


Bottom plate.



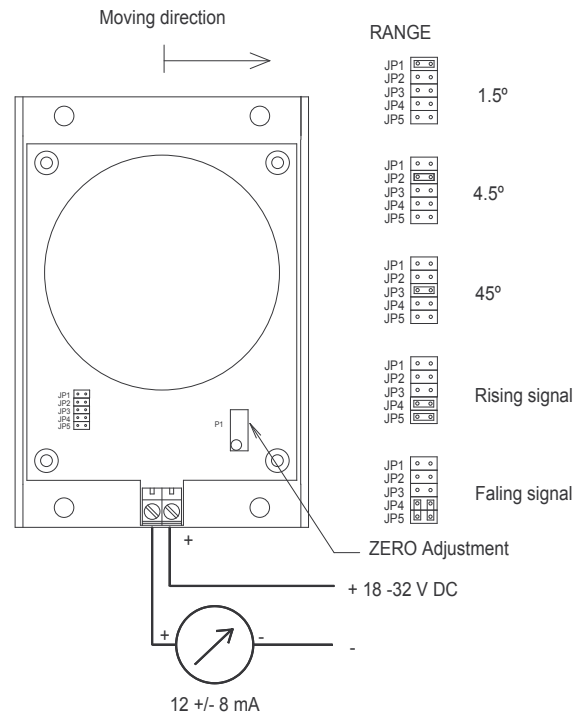
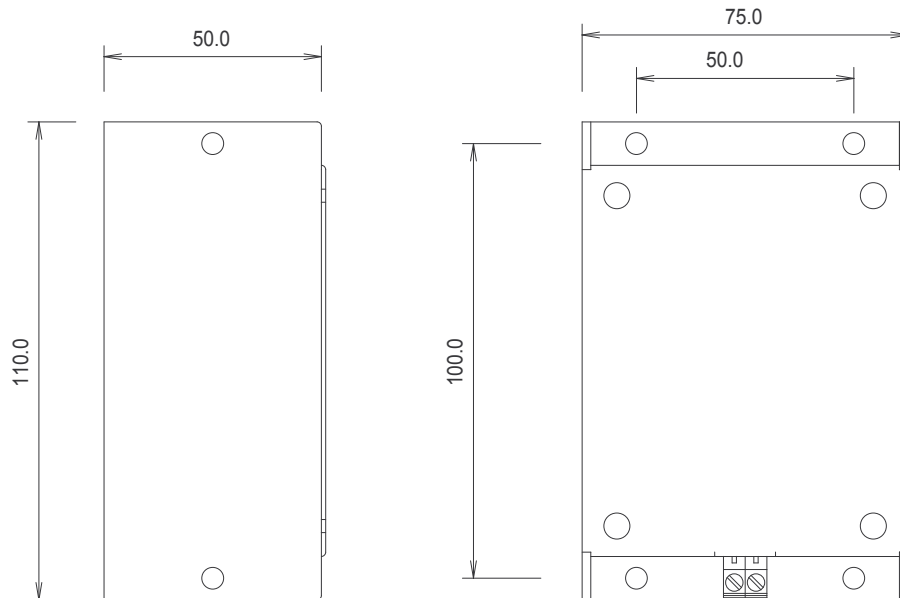
Location of components:

This drawing shows a dual inclinometer box.



Calibration procedure:

- Connect power supply and signal cables according to the drawing under point 2.4.1.
- Select the desired range (1.5, 4.5, or 45 degrees) by means of simple jumper setting.
- When the vessel is steady, and on even keel, apply power (allow 1 min. for warm up) and rotate the inclinometer(s) to null position (12 ± 0.2 mA).
- If the rotation polarity is wrong, it is necessary to shift the position of jumper jp4 and jp5.
- Remember to secure mounting screws and re-check null position/signal.
- Adjustment to 12.00 mA is done by means of the trim potentiometer P1, located on the PCB (printed circuit board).


Main dimensions:


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