

Type TRI-2

Panorama rudder indicator

Marine bridge instrumentation

4921250043F

- **Approved according to the Marine Equipment Directive**
- **3 extra large, easily-read scales**
- **Readable from up to 5 meters**
- **Black or white scales**
- **Long-life LED illumination**
- **Built-in dimmer**

Application

The panorama rudder indicator type TRI-2 is applied for the indication of the rudder position on the bridge.

The TRI-2 is CE marked for marine, residential, commercial and light industry plus industrial environment.

The TRI-2 is housed in a matt black, waterproof case for deck head suspension.

Equipped with 3 large scales, the TRI-2 ensures a quick and easy reading of the rudder angle from any angle up to 250° and from a distance of up to 5 metres from the indicator.

Scale colour

The indicator is available with 2 types of scales:

- 1) White scales with black figures, division lines and black pointer.
- 2) Black scales, where the figures, division lines and the pointer are yellow, giving the clearest read-out of the pointer position.

On both white and black scales starboard is marked with a green section (to the right), port with a red section (to the left) underneath the division lines.

Illumination

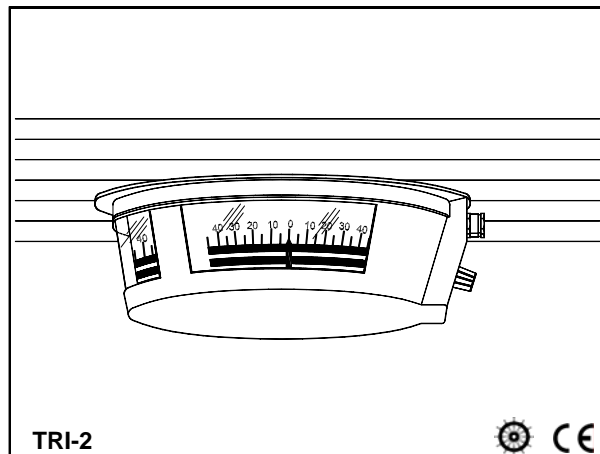
The TRI-2 is equipped with long-life LEDs, ensuring easy and clear reading of the scales in the dim light on the bridge.

White scales are translucent, implying that the division lines and the figures are clearly visible, and that the pointer is seen clearly as a shadow.

On black scales the figures, the division lines and a broad, yellow section underneath these are transilluminated. The pointer is clearly visible as a shadow against this yellow section.

The light intensity can be changed by means of a built-in dimmer, accessible on the rear plate of the indicator.

If remote dimming is preferred, this built-in dimmer may be removed from the indicator (after dismantling of the rear plate) and mounted e.g. in a control panel. A plug for sealing of the hole in the rear plate is included on delivery.



Measuring principle

The indicator consists of a robust moving coil system equipped with 3 pointers mounted on a common shaft.

Technical specifications

Accuracy: Class 1.5 (-10...+15...30...55°C) to EN 60051 and IEC 51.

Temperature: -10...+55°C (nominal)
-25...+70°C (storage)

Measuring ranges:

voltage:	Lowest:	0...4V DC
	Highest:	0...100V DC
	Load:	0.7kΩ/V
current:	Lowest:	-2...0...2V DC
	Highest:	-100...0...100V DC
	Load:	1.4kΩ/V
suppressed current:	Lowest:	0...1mA DC
	Highest:	0...100mA DC
	Load:	3.0V
Scale types:	Lowest:	-1...0...1mA DC
	Highest:	-100...0...100mA DC
	Load:	1.5V
Standard scales:	4...20mA	
	Load:	4.0V

Scale types:

- 1) White scale base
 - with black figures/division lines and black pointer.
- 2) Black scale base
 - with yellow figures/division lines and yellow pointer.

Standard scales: 35...0...35°, 45...0...45°
60...0...60°, 70...0...70°
Others on request.

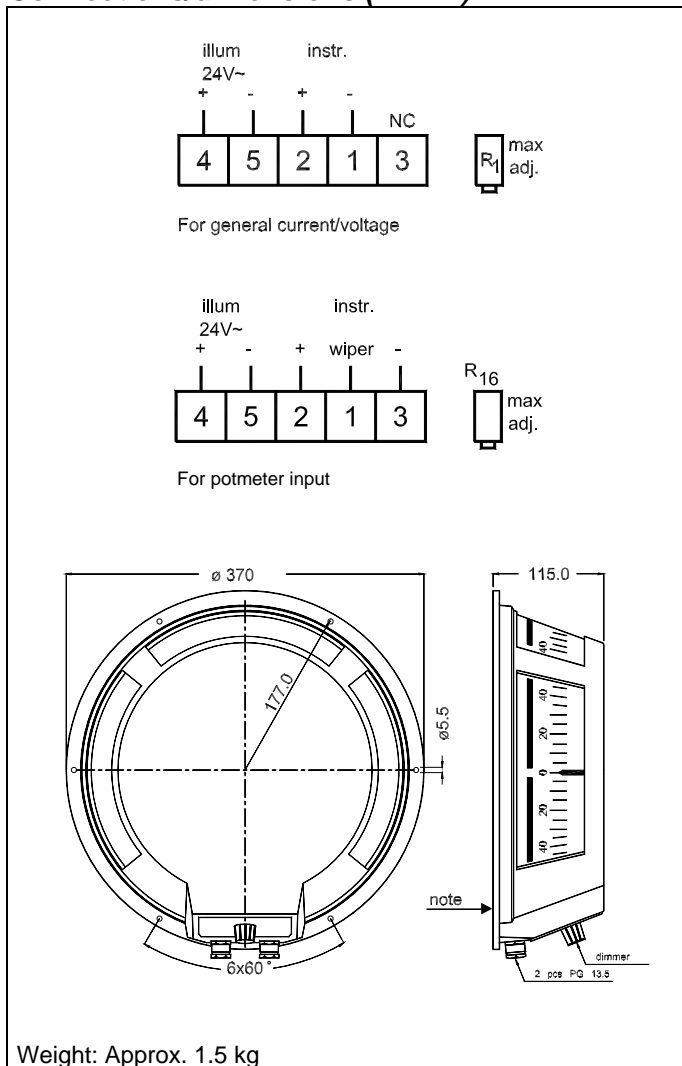
Pointer: Increasing positive input signal moves pointer from left to right (clockwise, CW).

Type TRI-2

Technical specifications

Illumination:	Long-life LEDs.
Dimmer:	Built-in. Can be removed and mounted e.g. in a control panel if remote dimmer is preferred.
Galvanic separation:	2kV - 50Hz - 1 min.
Compass safety distance:	1 m.
Auxiliary voltage:	
illumination:	24V AC/DC -25/+30%.
consumption:	Max. 113mA.
EMC:	To IEC 60945 (1996), EN 50081-1/2, EN 50082-1/2.
Connections:	Built-in screw terminals.
cable dimension:	0.2...2.5 mm ² .
cable entries:	Via two PG 13.5 cable glands. Cable diameter: 11 mm.
Materials:	
plastic housing:	ABS/PC blend. Fire retarding and self-extinguishing to UL94 (V0).
metal parts:	All external metal parts are made out of corrosion-resistant materials.
Protection:	IP54 to IEC 529 and EN 60529.

Connections/dimensions (in mm)



Note: Option:
Cable entry via two PG 13.5 cable glands.

Order specifications

Type – Scale – Scale type – Measuring range

Example:

TRI-2 – 45...0...45° - black - 0...20mA



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DEIF A/S



Due to our continuous development we reserve the right to supply equipment which may vary from the described.