



ORIENT & PLUS

STABILIZATION, TRUE NORTH ALIGNER AND GEOREFERENCING SYSTEM FOR CIVIL ENGINEERING

Underground & Surface Drilling - Ground Engineering Applications - Platform Monitoring & Stabilization, Mobile Mapping, Unmanned vehicles guidance & Stabilization





FIBER-OPTIC BASED INERTIAL MEASUREMENT UNIT

Civil Engineering, Drilling & Mining

GEM ELETTRONICA developed specific Tools for Surface and Under-ground Projects in the field of Mining and Civil Engineering.

ORIENT and **ORIENT PLUS** meet the most demanding industrial engineers requirements removing human setup errors.

Thanks to the absence of moving parts and high reliability technology, the system does not require any maintenance or recalibration and ensures long life in extreme environments.

Configuration A



Configuration B



ORIENT

ORIENT PLUS

Azimuth Accuracy - Sec (Lat) RMS

0.15°

Roll / Pitch

0.1° RMS

Azimuth Accuracy - Sec (Lat) RMS

0.075°

Roll / Pitch

0.05° RMS

Settling time

< 5 min

Range

0° ÷ 360° Heading range - ± 60° Roll / Pitch range

MTBF

>150.000 hours



Environmental conditions

Operating temperature -15°C to +55°C

Storage temperature -40°C to +80°C

Damp heat up to 95% at 40°C

Vibrations Sine wave, 1g from 15Hz to 100Hz on three axis

Waterproof in accordance with IP66 standard

Electromagnetic interference Fully compliant to EN55022 and EN55024

Power Supply Fiber-Optic Gyrocompass

Supply 24 VDC -10% +30%

Power consumption Typical 12 W (24 V, 0.5 A)

Protection Against over-voltage, low voltage and inversion of polarity

Power consumption < 15 W

Protection Against over-voltage, low voltage and inversion of polarity

Interfaces

Input 3 serial

Output 7 serial

Output protocol IEC61162, Binary

I/O serial RS422 or RS232

Ethernet/Bluetooth Optional

Output rate 0.025 Hz to 100 Hz
(user-defined)

Weight and Dimensions

Width 322 mm

Depth 177 mm

Height 167.5 mm

Weight 6.8 Kg

DU68-27 Repeater



Display Unit

Display size color 6.5" Touch Screen

Display colours 256

Display resolution 640 x 480 pixel (VGA)

Display type Transflective color TFT LCD

Weight and Dimensions

Width 224 mm

Depth 148 mm

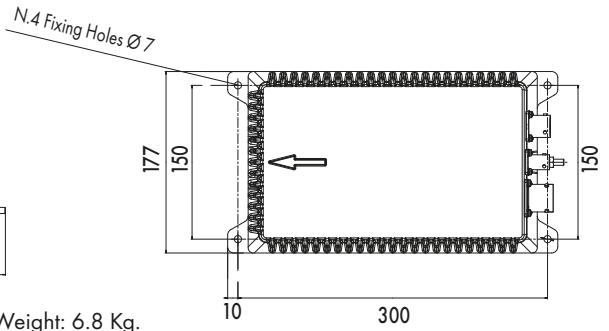
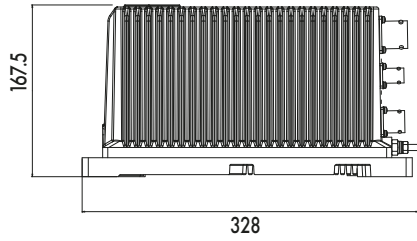
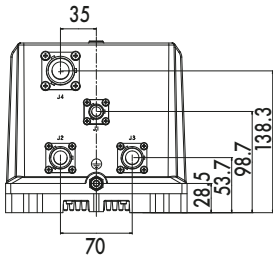
Height 214 mm

Weight 1.2 Kg

OUTLINE DRAWING

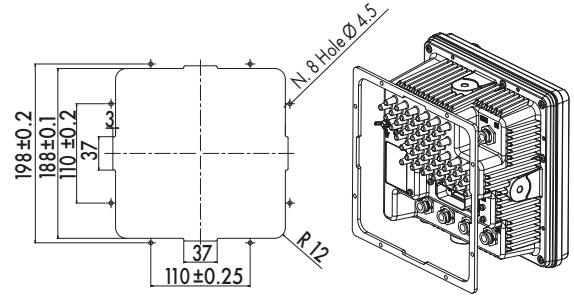
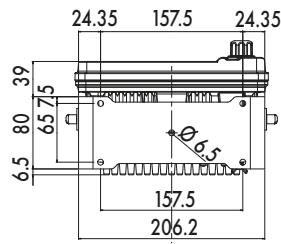
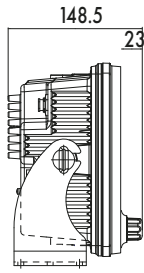
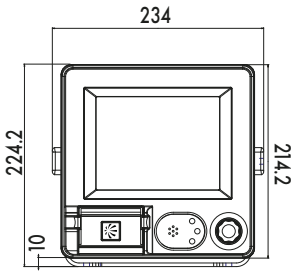
dimensions in mm.

FIBER-OPTIC INERTIAL UNIT



Estimated Weight: 6.8 Kg.

7" DISPLAY UNIT DU68-27



Estimated Weight: 1.2 Kg



This brochure should not be considered a contractual offer to sell. The specifications given herein may be changed by the manufacturer, GEM ELETTRONICA, without notice.



inertial@gemrad.com

marketing@gemrad.com - gemrad.com

