



GEM elettronica



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



Guidance, Navigation and Positioning

www.gemrad.com



FIBER-OPTIC BASED INERTIAL MEASUREMENT UNIT

Civil Engineering, Drilling & Mining

GEM elettronica developed specific Tools for Surface and Underground 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	Roll / Pitch	Azimuth Accuracy - Sec (Lat) RMS	Roll / Pitch
0.15°	0.1° RMS	0.075°	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

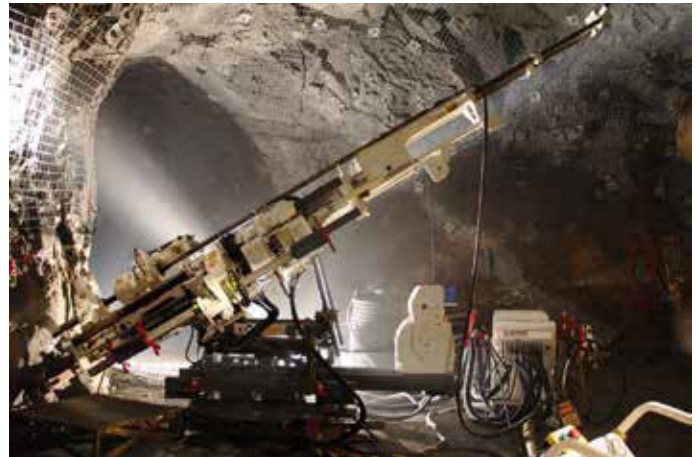
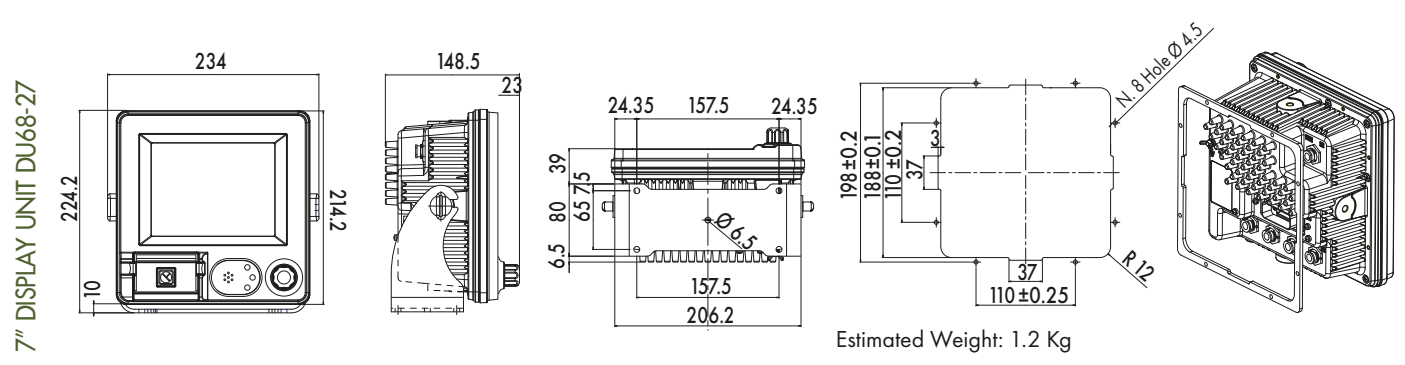
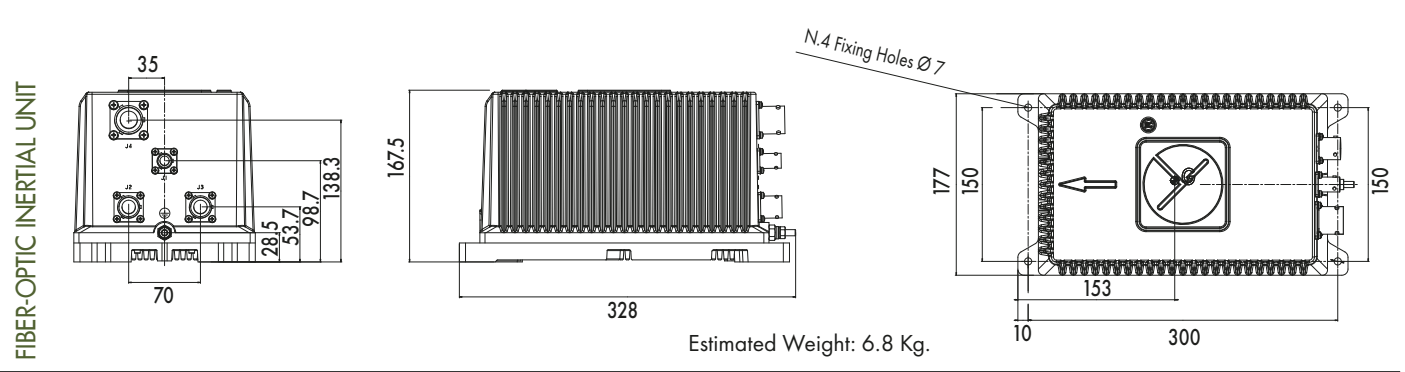
Display size	color 6.5" Touch Screen
Display colours	256
Display resolution	640 x 480 pixel (VGA)
Display type	Transflective color TFT LCD

Weight and Dimensions

Width	224 mm
Depth	148 mm
Height	214 mm
Weight	1.2 Kg

OUTLINE DRAWING

dimensions in mm.



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.



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