

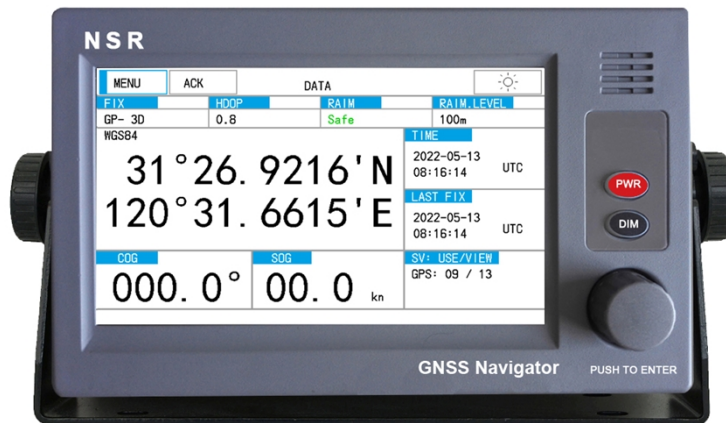
# GNSS EQUIPMENT

## NGR-1000/NGR-3000

NSR's new generation of IMO GNSS:

- Large 7 inch color LCD
- Touch screen operation
- Port for BAM system/INS connection
- GPS, BDS, GLONASS
- DGPS with NSR beacon
- Type approval with DNV (MED), CCS and VR

|          |         |
|----------|---------|
| NGR-1000 | CCS, VR |
| NGR-3000 | DNV     |



- Comprehensive navigation data displays.
- Storage for up to 999 waypoints and 30 routes.
- 7 inch, color LCD, touch screen operation with adjustable brilliance.
- Dedicate port for BAM system/INS connection.
- 3 GNSS data outputs.
- A DGPS Beacon Unit (NDG-100) may be connected to the NGR-1000/NGR-3000 to add DGPS function.
- Meets the requirements of relative IMO and IEC regulation & standards, including IMO MSC.112 (73), IMO MSC.302 (87), IEC 61108-1, IEC 62923-1, IEC 62923-2 etc.



## SPECIFICATIONS

### ● GNSS RECEIVER

- Receiving System: 50 channels parallel
- RX Frequency: GPS L1, GLONASS L1, BDS B1
- RX Code: C/A code
- Position Accuracy: Approx. 2.5m, 95% of the time,  
horizontal dilution of position (HDOP)  $\leq 4$
- Tracking Velocity: 999 kts
- Position-fixing Time: Warm start: 45 seconds  
Cold start: 60 seconds
- Position Update Interval: 1 second

### ● DISPLAY SECTION

- Display: 7 inch, color LCD, touch screen operation
- Fix Mode: GPS/GLONASS/BDS
- Alerts: Lost of Position, HDOP > 4, DGNSS lost

### ● INPUT/OUTPUT DATA

- Output Data: RS422, max 3 ports,  
Baud Rate 4800/9600/19200/38400 bps
- Sentences: GNS, GBS, GGA, RMC, VTG, ZDA, DTM, etc.
- BAM/INS Connection: IN/OUT, RS422

### ● POWER SUPPLY:

DC 24V (range 12 ~ 36 V), 0.25 ~ 0.50 A

### ● ENVIRONMENTAL CONDITIONS

- Ambient Temperature: Antenna Unit: -25°C ~ +70°C  
Main Unit: -15°C ~ +55°C
- Relative Humidity: 95% at 40°C
- IP Grade: IP66 (Antenna Unit)  
IP22 (Main Unit)

### ● OTHERS

- Size: 145 (H) × 264 (W) × 83 (D) mm
- Weight: 1.25 kg (Main Unit)

## EQUIPMENT LIST

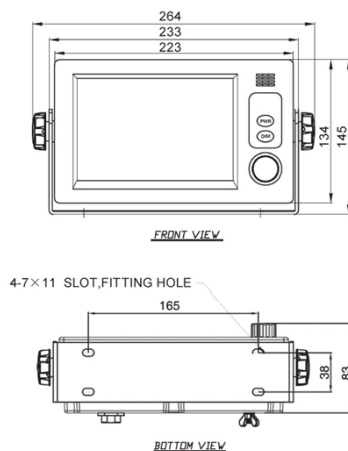
### ● STANDARD

- GNSS Navigator 1 set
- GNSS Antenna with Cable 1 pc
- Installation Materials 1 set

### ● OPTIONS

- Beacon Unit (DGPS Beacon & Antenna) 1 set
- Flush Mount Bracket 1 pc
- NMEA Distribution Box 1 set
- AC/DC PSU 1 pc

## SIZE DIMENSION



## SYSTEM DIAGRAM

