

**SPECIFICATIONS OF MARINE RADAR
MODEL1815**

1 ANTENNA UNIT

- 1.1 Antenna type Patch array
- 1.2 Radiator length 18-inch
- 1.3 Horizontal beam width 5.2°
- 1.4 Vertical beam width 25°
- 1.5 Sidelobe -20 dB or less (within ±20° of main-lobe)
-25 dB or less (outside ±20° of main-lobe)
- 1.6 Rotation 24 rpm

2 TRANSCEIVER MODULE (CONTAINED IN ANTENNA UNIT)

- 2.1 Tx frequency 9410±30 MHz
- 2.2 Radiation type P0N
- 2.3 Output power 4 kW
- 2.4 Duplexer Ferrite circulator
- 2.5 Intermediate frequency 60 MHz
- 2.6 Range scale, Pulse length (PL) and Pulse repetition rate (PRR)

Range (NM)	PL (μs)	PRR (Hz approx.)
0.0625 to 1.5	0.08	360
1.5 to 2	0.3	360
3 to 36	0.8	360

- 2.7 Minimum range 25 m
- 2.8 Range resolution 25 m
- 2.9 Range accuracy 1 % of range in use or 0.01 NM, whichever is greater
- 2.10 Bearing resolution 5.2°
- 2.11 Bearing accuracy ±1°

3 DISPLAY UNIT

- 3.1 Screen type 8.4-inch color LCD, 640 (V) x 480 (H) dots, VGA
- 3.2 Effective radar diameter 128 mm
- 3.3 Brightness 0.27 to 600 cd/m² typical (16 steps)
- 3.4 Range scales and Ring interval

Range scale (NM)	0.0625	0.125	0.25	0.5	0.75	1	1.5	2	3	4	6	8	12	16	24	36
Ring interval (NM)	0.03125	0.0625	0.125	0.125	0.25	0.25	0.5	0.5	1	1	2	2	3	4	6	12
Number of rings	2	2	2	4	3	4	3	4	3	4	3	4	4	4	4	3

- 3.5 Marks Heading line, Bearing scale, Range ring, Tuning indicator, Cursor, North mark, Variable range marker (VRM), Electric bearing line (EBL), Target alarm zone, Zoom window, Waypoint mark*, Origin mark*
- 3.6 Alphanumeric indication Range, Range ring interval, Display mode (H UP/ C UP/ N UP/ TM/ TRUE VIEW), Off-center (OFFCENT (M/A/C)), Heading data*, Target trails, Tuning indicator, Target alarms, Echo stretch (ES),

Echo average (EAV), Electric bearing line (EBL), Vector time*, Range and bearing to cursor or cursor position*, Interference rejecter (IR), Auto anti-clutter (A/C Auto), Variable range marker (VRM), Navigation data*(position, speed, course), TT/AIS/ships target data*

*: external data required

4 INTERFACE

- 4.1 Number of ports
 - NMEA 3 ports (IEC61162-2, I/O: 2, I: 1)
 - Contact closure 1 port (output for external buzzer, 0.3 A max.)
- 4.2 Data sentences
 - Input ALR, BWC, BWR, DBT, DPT, DTM, GGA, GLL, GNS, GSA, GSV, HDG, HDT, HDM, MTW, MWV, RMB, RMC, THS, TTM, VDM, VHW, VTG, VWR, VWT, XTE, ZDA
 - Output ACK, RSD, TLL, TTM

5 POWER SUPPLY

- 5.1 Antenna unit 12-24 VDC: 2.0-1.0 A (stand-by: 0.8-0.4 A)
- 5.2 Display unit 12-24 VDC: 1.2-0.6 A (antenna unit not connected)

6 ENVIRONMENTAL CONDITIONS

- 6.1 Ambient temperature
 - Antenna unit -25°C to +55°C (storage: -30°C to +70°C)
 - Display unit -15°C to +55°C (storage: -30°C to +70°C)
- 6.2 Relative humidity 95% or less at +40°C
- 6.3 Degree of protection
 - Antenna unit IP26
 - Display unit IP56
- 6.4 Vibration IEC 60945 Ed.4

7 UNIT COLOR

- 7.1 Antenna unit N9.5 (cover), PANTONE2945C (bottom)
- 7.2 Display unit N2.5