

SPECIFICATIONS OF THE DOPPLER SPEED LOG DS-80

1 GENERAL

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|-----|-------------------|---|
| 1.1 | Speed range | Fore-Aft: -10.0 to +40 kn through-the-water |
| 1.2 | Distance run | 0.00 to 999,999.99 NM through-the-water |
| 1.3 | Working depth | Water depth greater than 3 m beneath the keel |
| 1.4 | Working frequency | 1.0 MHz |
| 1.5 | Speed accuracy | 1.0% or 0.1 kn whichever is the greater |
| 1.6 | Distance accuracy | 1.0% or 0.1 NM whichever is the greater |

Note: Accuracy is subject to shallow water effects, to the effect of wind, current and tide, and sensor location. Any ultrasonic equipment having the same frequency may interfere with speed measurement. The Doppler Log transducer should be installed apart from the transducers of such kind of equipment.

2 DISPLAY UNIT

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|-----|----------------|---|
| 2.1 | Display | Character size 15 or 21 mm H on monochrome LCD |
| 2.2 | Indication | |
| | Ship's speed | Fore: ▲**.* kn (+40.0 kn max.)
Aft: ▼**.* kn (-10.0 kn max.) |
| | Distance run | *****.** NM |
| 2.3 | Other function | Diagnostic check |

3 INTERFACE

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|-----|---------------------|--|
| 3.1 | Serial signal | |
| | Output: | 2 ports; VBW, VLW in IEC 61162-1 (NMEA 0183 Ver 2.0) |
| | Input: | 1 port; IEC 61162 (NMEA 0183 Ver 2.0) |
| 3.2 | Digital signal | 2 ports; speed/distance for digital indicator |
| 3.3 | Analog signal | Speed signal for Analog display: 2 port
-3.3 mA to 10 mA/ -10 kn to +30 kn
Analog current output: 1 port
4 mA to 20 mA/ -10 kn to 30 kn
Analog voltage output: 1 port
-3.3 V to 10 V/ -10 kn to 30 kn |
| 3.4 | Distance run output | 2 ports; Contact closure each 0.005 NM, 30 VDC: 0.2 A, forward speed, pulse length: 1.0ms |
| 3.5 | System check signal | 1 port, 30 VDC: 0.2 A, default: closed |

4 POWER SOURCE

100/110/115/200/220/230 VAC:1.5/0.7 A max, 1 phase, 50-60 Hz

5 ENVIRONMENTAL CONDITION

- 5.1 Ambient temperature
 - Analog display 0°C to +50°C
 - Others -15°C to +55°C (units for protected area)
- 5.2 Relative humidity 95% at 40°C
- 5.3 Vibration IEC 60945
- 5.4 Category of equipment
 - Display unit/Distance indicator/Transceiver unit:
 - for protected area
 - Transducer: for submerged use, 600 kPa x 12 h
 - Distributor/Terminal box: for protected area

6 COATING COLOR

- 6.1 Display unit Chassis: 2.5GY5/1.5, Panel: N3.0
- 6.2 Others 2.5GY5/1.5

7 COMPASS SAFE DISTANCE

- 7.1 Display unit/Digital Indicator/Digital distance indicator
 - Standard: 0.50 m, Steering: 0.40 m
- 7.2 Transceiver unit Standard: 2.05 m, Steering: 1.40 m
- 7.3 Distribution box Standard: 3.10 m, Steering: 2.10 m
- 7.4 Terminal box Standard: 0.65 m, Steering: 0.45 m

SAFETY PRECAUTION

- There is no unit giving rise to a dose rate > 0.5 mrem/h at 50 mm.
- There is no harmful radiation from the screen.
- All units of this equipment comply with EMC requirements in IEC 60945, as required by IMO Res. A.813 (19).