



# FURUNO®

## DOPPLER SPEED LOG

### Model DS-50

- Complies with IMO Resolution A.478 (XII), A.824 (19), IEC 1023 and other national regulations
- Displays ship's fore-aft and port-starboard speeds along with distance run and keel clearance
- Highly precise and stable measurement by using advanced three-beam transmission technology
- Compact display unit for ease of installation
- Auto mode for continuous readout of ship's speed
- A variety of analog/digital speed indicators are optionally available for monitoring at a remote location
- Signal outputs of analog/digital speed data and distance run for external equipment



The FURUNO DS-50 is a Doppler Speed Log designed to meet the IMO Resolution, IEC specifications and other national regulations. Its three-beam transmission reduces the effect of pitch and roll for high accuracy and enables the measurement of port-stbd speed as well as fore-aft speed. Keel clearance information is provided to assist with shallow water navigation.

The DS-50 measures and displays the ship's over-the-ground or through-the-water speed based on the Doppler effect. Speed data can be output to

external equipment such as ARPAs, INS and IBS. There are three operation modes: Ground-tracking, Water-tracking and Auto. The Auto mode continuously displays ship's speed, switching between Ground-tracking and Water-tracking automatically.

The DS-50 consists of a display unit, processor and transducer. The compact design of the display unit allows flexible installation on the bridge. For monitoring at remote locations, analog and digital indicators are optionally available.



The future today with FURUNO's electronics technology.

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Catalogue No. M-1517c

TRADE MARK REGISTERED  
MARCA REGISTRADA

# SPECIFICATIONS OF DS-50

## DISPLAY UNIT

- Two-digit LED for display of port-stbd speed
- Three-digit LED for display of fore-aft speed
- Seven-digit LED for display of distance run/keel clearance

## ULTRASONIC FREQUENCY

440 kHz

## NUMBER OF BEAMS

3 beams for dual axis speed indication

## MEASURING RANGE AND ACCURACY

### Ship's speed

- Fore-Aft: -10.0 to 40.0 knots
- Port-Stbd: -9.9 to 9.9 knots

### Measurable depth of ship's speed

- Ground tracking: 1 to 200 m below hull bottom
- Water tracking: 2 to 25 m below hull bottom
- Total distance run: 0 to 99999.99 nm

### Accuracy

- Ship's speed:  $\pm 1\%$  or  $\pm 0.1$  kt, whichever is greater
- Distance run:  $\pm 1\%$  or  $\pm 0.1$  nm, whichever is greater
- Keel clearance:  $\pm 1\%$  or  $\pm 0.1$  m, whichever is greater (At 1,500 m/s sound velocity)

## INPUT/OUTPUT SIGNALS

**Input** 2 ports for external keying pulse

### Output

- Ship's speed 3 ports\* (Digital)
- 1 port (Analog)
- Distance signal 1 port\* (400 pulses/nm)
- 6 ports with contact closure signal at 200 pulses/nm
- Alarm signal 1 port\*
- Keying pulse 1 port

**Input/Output** 2 ports for IEC61162 data

\* For those needing more ports, Distribution box DS-370 is optionally available

## ENVIRONMENT (IEC 60945 test method)

Temperature: -15°C to +55°C

## POWER SUPPLY

115/230 VAC

## EQUIPMENT LIST (Specify type of processor unit when ordering)

### Standard for installation with DS-510 (Transceiver unit built in)

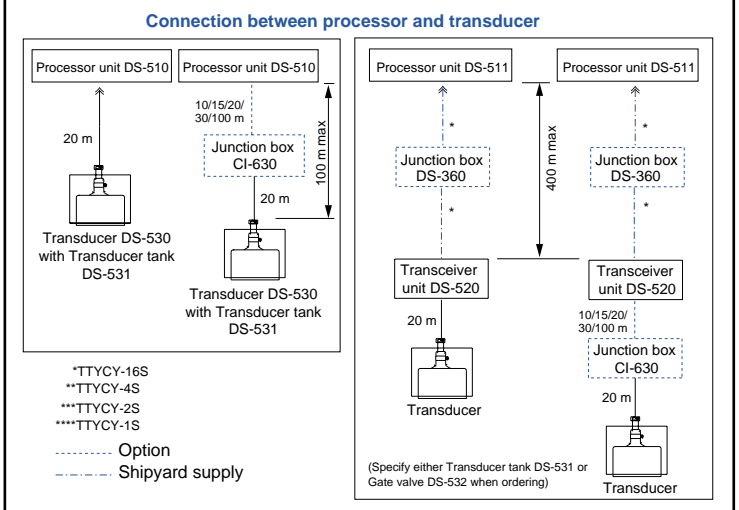
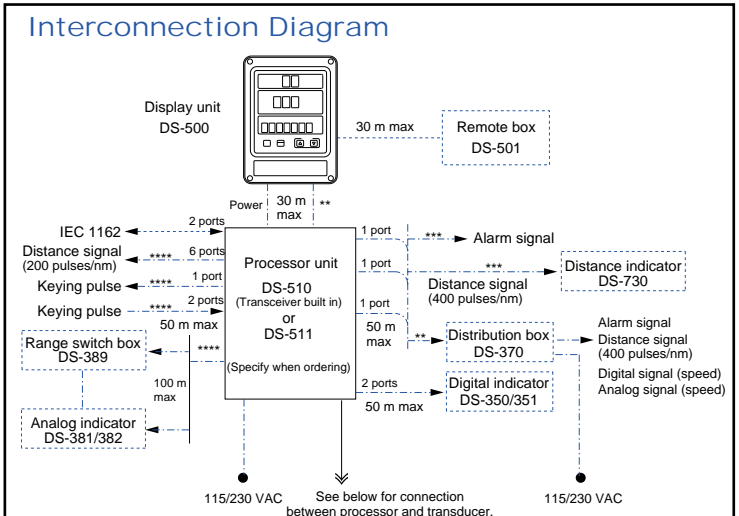
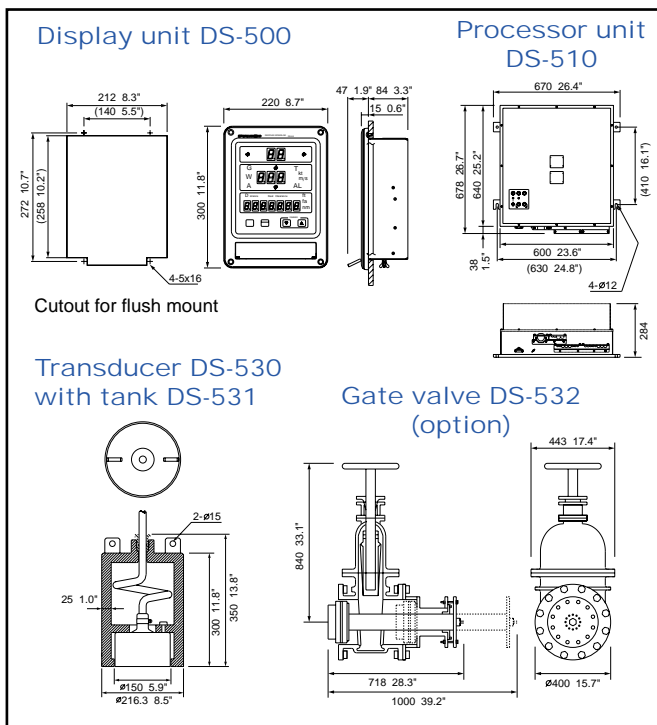
1. Main display unit DS-500
2. Processor unit DS-510 (Transceiver built in)
3. Transducer DS-530 with 20 m cable
4. Transducer tank DS-531
5. Installation materials and spare parts

### Standard for installation with DS-511 (Transceiver unit separated)

1. Main display unit DS-500
2. Processor unit DS-511
3. Transducer DS-530 with 20 m cable
4. Transducer tank DS-531 or Gate valve DS-532 (specify when ordering)
5. Transceiver unit DS-520
6. Installation materials and spare parts

### Optional (Common)

1. Analog indicator DS-381/382
2. Digital indicator DS-350 (LCD display, waterproof)/351 (LED display)
3. Distance indicator DS-730
4. Distribution box DS-370
5. Range switch box DS-389
6. Junction box DS-360
7. Junction box CI-630
8. Extension cable between DS-510-CI-630/DS-520-CI-630 66S1067 (10, 15, 20, 30 or 100 m)
9. Remote box DS-501 for Main display



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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