



# FURUNO®

## DOPLER SPEED LOG

### Model DS-50

- Complies with IMO Resolution A.478(XII), IEC 1023 and other national regulations
- Displays ship's fore-aft, port-starboard speeds 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 new 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 ARPA, 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-1517b

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 IEC1162 data

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

## ENVIRONMENT (IEC 945 test method)

Temperature:  $-15^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$

## POWER SUPPLY

115/230 VAC

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

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

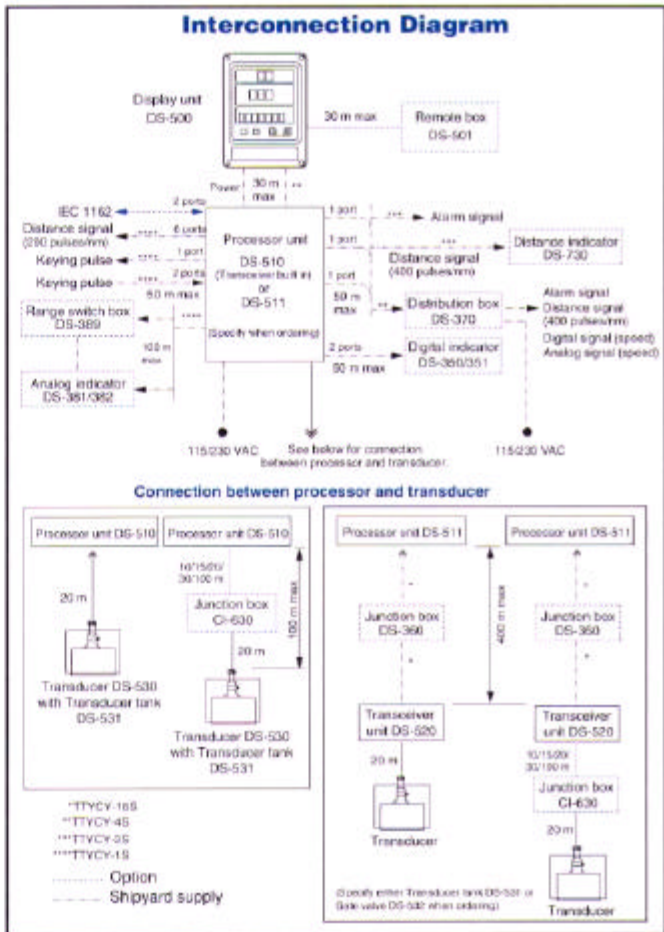
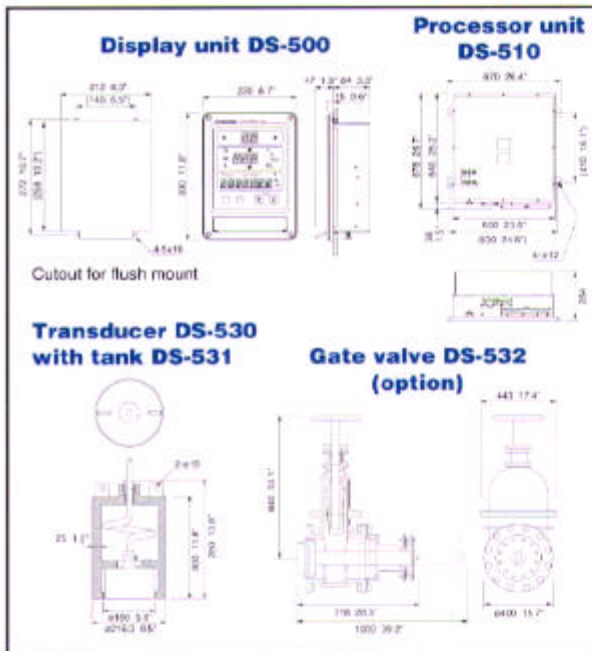
1. Main display unit DS-500
2. Processor unit DS-510 (Transceiver built in)
3. Transducer DS-530 with 20 m cable
4. Transducer tank DS-531
5. Installation materials and spare parts

### 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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