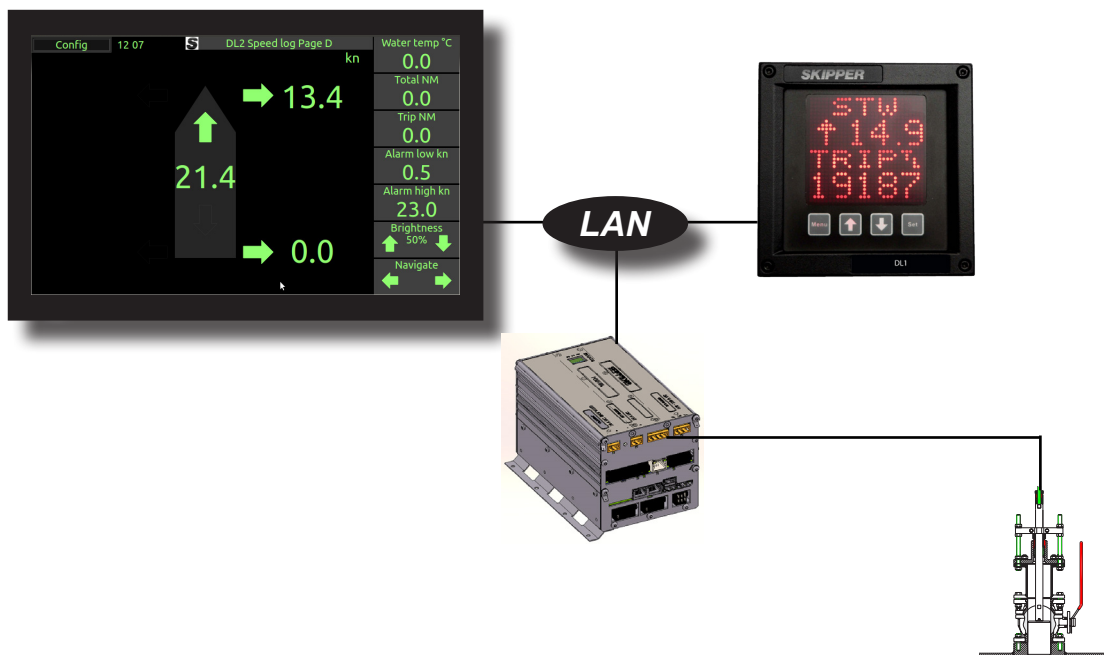


# SKIPPER DL21



Navigational Doppler speedlog for vessels >50.000GT



*The new SKIPPER DL 21 is a speed log, working on the Doppler principle, providing Speed through water (STW) and Speed over ground (SOG) in 2 axis.*

*The DL21 Speed Log is designed for ships over 50.000 GT with simultaneous and independent measurement of speed through water and speed over ground to comply with the requirements of MSC.334(90), amendments to performance standards for devices to measure and indicate speed and distance.*

SKIPPER Electronics manufacture marine electronics for the merchant fleet as well as the fishing fleet, based on experience, research and tradition. Our products are known worldwide for reliability, sophistication and good value for money.

#### **Features:**

- Sensor with 2 independent Doppler speed logs. DL1 +DL2*
- Electronic unit with all required I/O + new IBS ready LAN communication.*
- Control unit with touch screen + Compact display.*

The DL21 present the critical parameters on 2 independent screens and can be interfaced with bridge systems and repeaters. The DL 21 can also present distance traveled, depth and water temperature.

Doppler technology is commonly considered the gold standard of speed measurement as it measures remotely, (away from the effects caused by the vessel itself) and once installed, it operates even with considerable organic growth on the transducer.

The DL 21 can measure the speed of the vessel through the water at all times, and over the bottom nearing 150 m of water.

The system includes a single sensor mounted in a Sea Valve.

# SKIPPER

# DL21



Navigation Doppler speedlog for vessels >50.000GT

Comply with the requirements of MSC.334(90), Amendments to performance standards for devices to measure and indicate speed and distance.

## Specifications

|                        | DL21   |   |
|------------------------|--|---|
|                        | SOG+STW 2-axis   | STW 1-axis  |
| Operating Frequency    | 270-284 kHz  | 700-730 kHz   |
| Speed range            | +45 to - 10 kn Longitudal<br>+/- 25knot Transversal  | +/-50 knots   |
| Bottom track           | 1-150 meters   | NA  |
| Water track            | <3m (2-12m)  | <3m (2-12m)   |
| Aft transversal speed  | Yes  | NA  |
| Accuracy (better than) | 0.2 knots or 2% whatever greater   | 0.2 knots or 2% whatever greater                                      |
| Temperature accuracy   | <1 °C  | <1 °C   |
| <b>Control unit</b>    | CU-M001-SA<br>9" Touch display<br>240*155mm.<br>Ethernet   | CD402CU -SA<br>LED display.<br>144*144mm<br>Ethernet                  |
| <b>Electronic unit</b> | JB70D21<br>Combined but electrically isolated<br>SOG+STW 2-axis and STW 1-axis.<br>Dimensions: 115*115*180mm |   |
| Com. with control unit | LAN  | LAN   |
| NMEA output            | VBW, VLW, MTW, VHW,<br>XDR, ALR, ALF, ALC,<br>HBT, DPT   | VBW, VLW, MTW,<br>VHW, XDR, ALR                                       |
| NMEA input             | ACK, ACN, DDC,<br>VTG, ZDA, GGA ROT,<br>PSKPRSTT (Trip reset)  | ACK, DDC, VTG, ZDA,<br>GGA  |
| Pulse output           | Yes  | Yes   |
| Analog output          | No (future option)   | Yes   |
| Alert                  | High/low Speed alert,<br>Power failure alert, system<br>failure alert  | High/low Speed alert,<br>Power failure alert,<br>system failure alert |
| Power supply           | AC 115 - 230 V 50/60 Hz,<br>and/or DC 24 V.<br>Max 60W   | DC 24V.<br>Max 60W  |
| <b>Sensor</b>          | DL21SG. combined but electrically isolated DL2 and<br>DL1. 100mm   |   |
| Sea Valves             | Single bottom, Double bottom   |   |
| IP rating              | IP22 Control unit<br>IP22 Electronic unit<br>IPX7 Sensor unit  |   |
| Accessories            | CD401MR-SB Multirepeater.<br>IR300 Speed repeater(with aft speed),<br>Dimming Control                        |   |
| Classification         | IMO  |   |

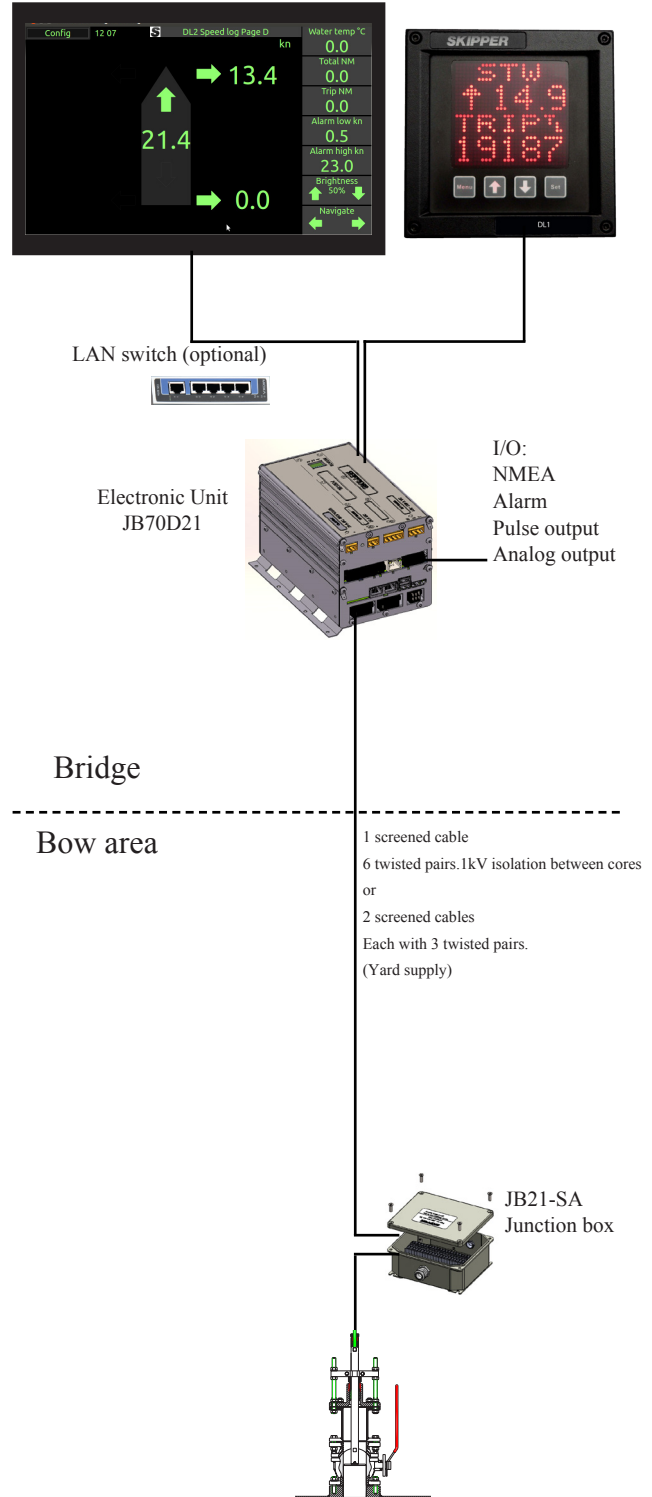
### SKIPPER Electronics AS

Enebakkveien 150  
P. O. Box 151, Manglerud  
0612 Oslo  
Norway

E-mail: sales@skipper.no  
Telephone: +47 23 30 22 70  
Telefax : +47 23 30 22 71  
Co. reg. no: NO-965378847 -MVA  
www.skipper.no

Date: 2015.05.06

## Overview



DL21 Doppler Sensor.  
Consist of:  
STW 1-axis sensor  
SOG+STW 2-axis sensor  
Installed in 100mm Sea Valve