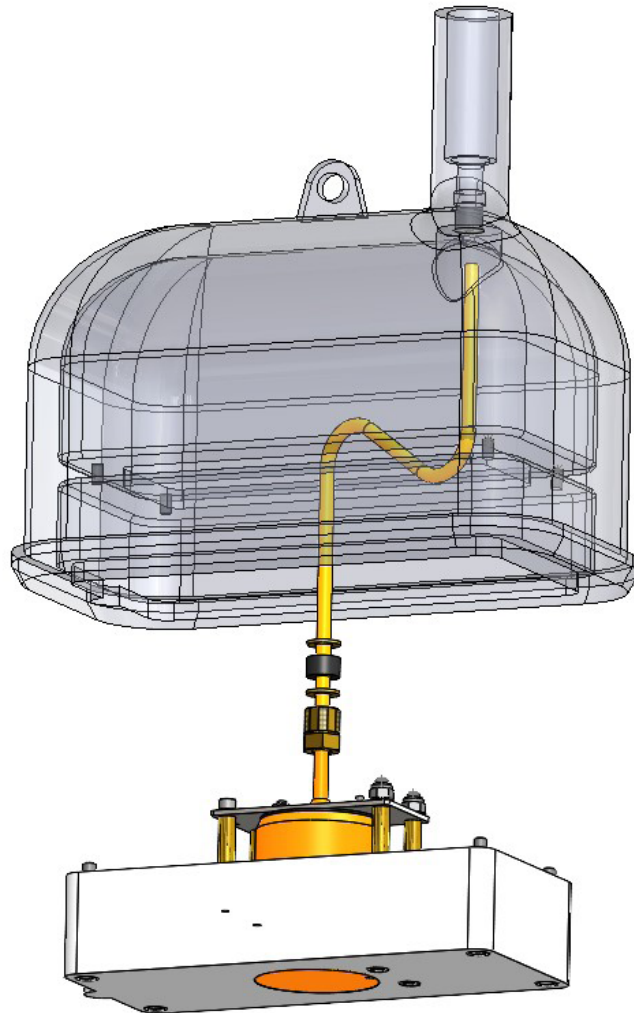


SKIPPER

Installation manual DL2SDR-SA DL2 Doppler Speed log sensor DOLOG 2X replacement



Document no: **DM-D102**
Rev: 03
Date: 2024.11.04

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INTRODUCTION

This document describes how to install a SKIPPER DL2 100mm sensor into an existing DOLOG 2X (DOLOG 21/22/23) tank.

The KIT-DOLOG-M2-SA is a plastic adaptor replacing the steel adaptor.

The sensor replacement is recommended to be performed in dry dock.
It is possible to replace the sensor with vessel afloat.

The replacement will require new DL2 Operator unit, transceiver unit, junction box and sensor. For DL2 Operator unit and Transceiver unit installation instruction, please see DL2 installation manual.

This procedure will mainly cover replacement of DOLOG sensor.

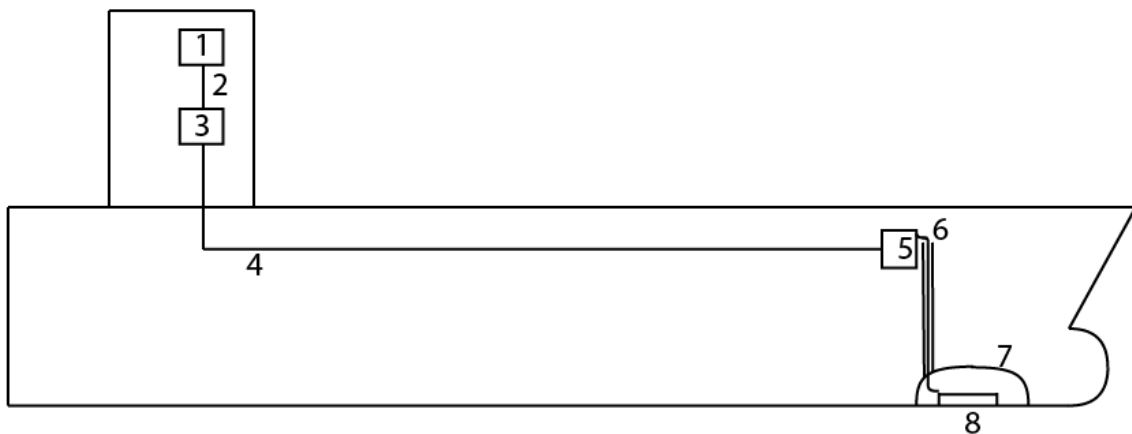
DL2SDR-SA consist of:

- DL2SDR-ZA Sensor DL2. 40m cable with sealed cable end
- KIT-DOLOG-M2-SA Kit DOLOG 2X
- KIT-DOLOG-T1-SA. Kit Mounting tools DOLOG 2X

PREPARE SPEED LOG REPLACEMENT

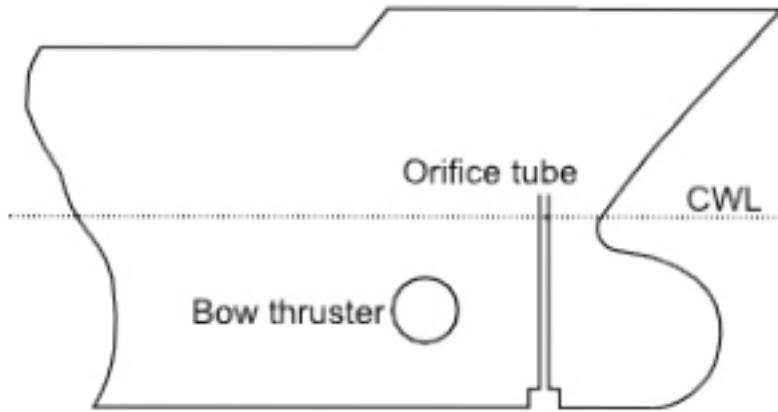
The DOLOG speed log to be replaced consist of the following main parts:

- 1: Operator Unit.
To be replaced by SKIPPER2 Operator unit
- 2: Cable from operator unit to Electronic unit.
To be replaced by ethernet cable
- 3: Electronic unit
To be replaced by DL2 Electronic unit JB70D2-SA
- 4: Cable Electronic unit to terminal box.
May be reused for DL2
- 5: Terminal box.
To be replaced by JB12 terminal box.
- 6: Sensor cable
To be replaced by DL2 sensor cable
- 7: DOLOG tank
To be reused for installation of DL2SDR-SA sensor.
- 8: DOLOG sensor
To be replaced by DL2SDR-SA sensor

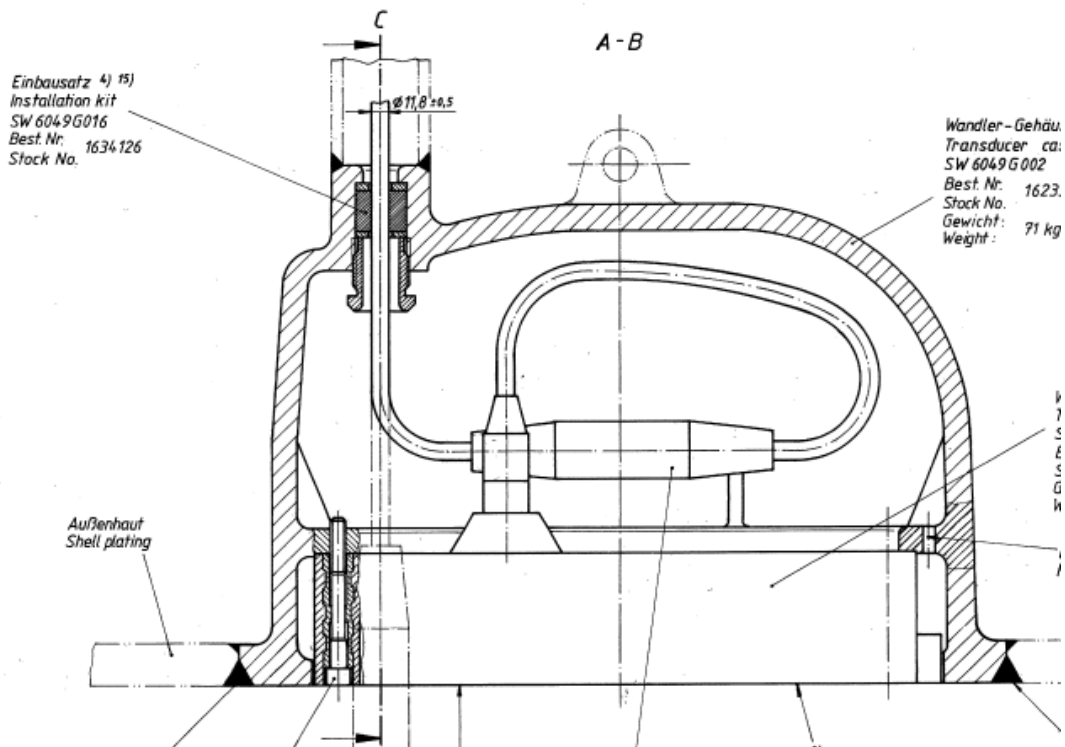


The sensor cable pipe (orifice tube) on the housing is part of the ship hull and has to reach above waterline (CWL=Construction water line.)

If sensor is replaced by diver in water this construction will enable water to come into the orifice tube construction but will stop at the level of water line.

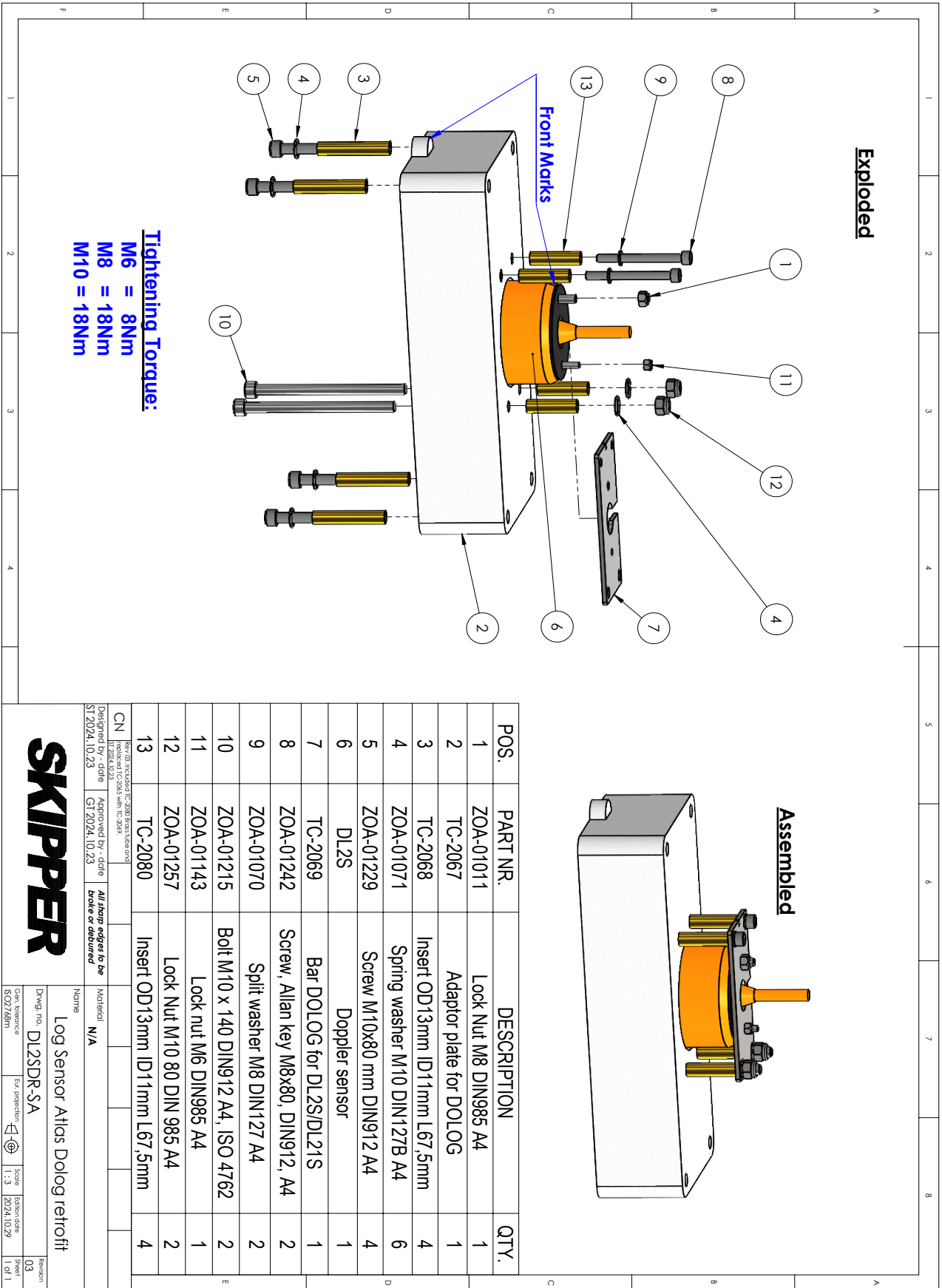


The pipe has a watertight gasket in both ends.



INSTALLING SENSOR ADAPTOR KIT

Install the sensor into the DOLOG adaptor as described in drawing.
Sensor forward (ahead) mark to be correctly positioned.



SKIPPER

Log Sensor Atlas Dolog retrofit

Design no.	DL2SDR-SA	Scale	1:3	Edition date	2024.10.29	revision	03
Gen. reference	ISO27489m	For preparation				Sheet	1 of 1

REMOVE OLD DOLOG SENSOR

Before old DOLOG is removed please prepare DOLOG sensor cable to be removed.

- Cable end unscrewed from terminal box.
- A long rope fastened to cable end. This rope will be used for pulling up the new DL2SDR-SA sensor cable later.

Unscrew the 4 screws with a 8mm Allen key.

There are 2 levels of threads.

- Threads in tank
- Threads in sensor

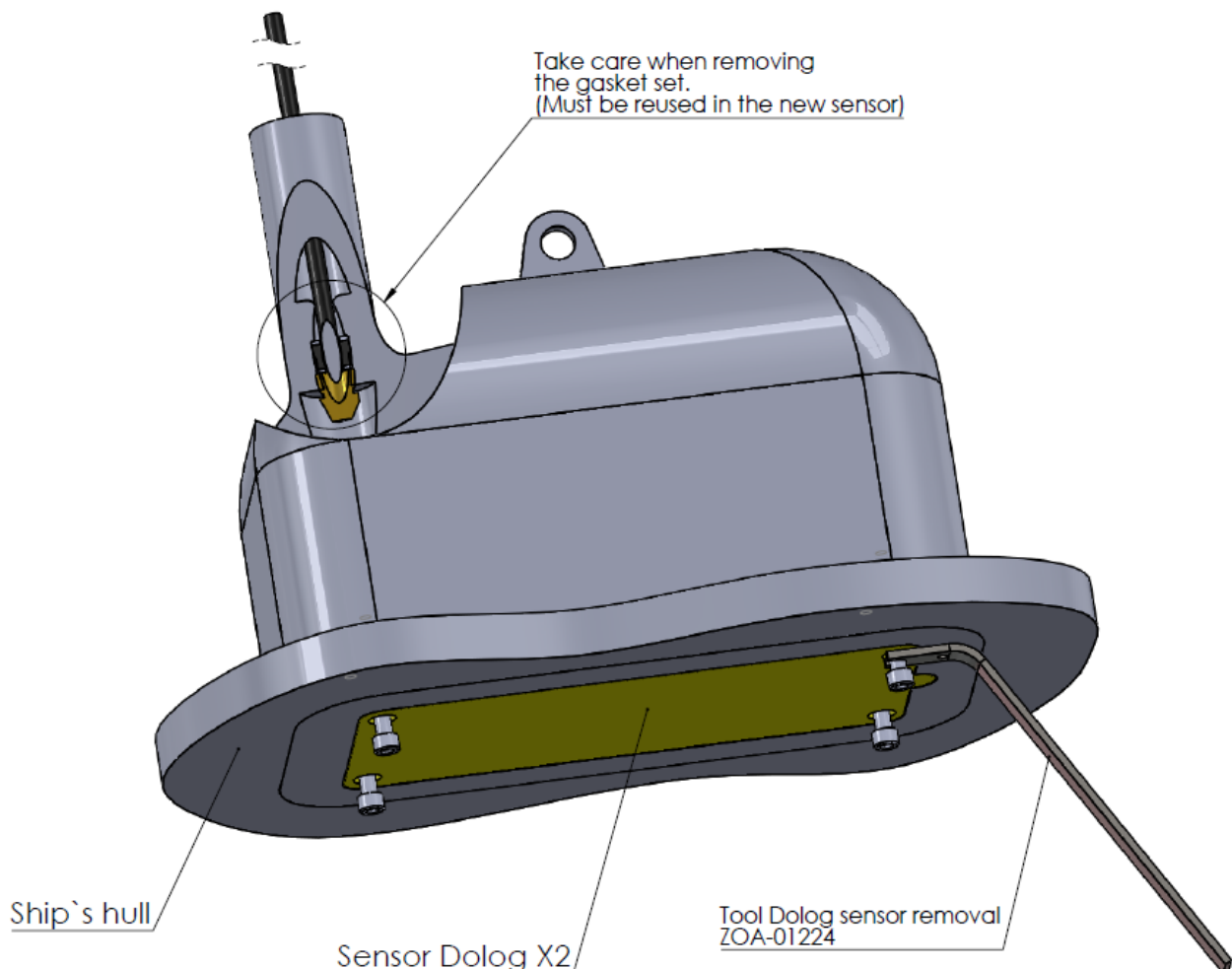
Only unscrew the tank threads so the screw hang in sensor as described in below picture

The sensor is now loose but most probably stuck. To force the sensor out of tank use the removal tool or similar. When loosened, disconnect cable plug.

Use a crow foot 36 mm, 1/2 inch extension and ratchet to unscrew 36 mm nut inside tank. Store the 36mm nut and gaskets in a safe place for reuse on SKIPPER sensor.

Pull out cable and bring cable with rope to a dry place. The rope is now going all the way from top of tank pipe, through pipe and tank and to the dry place.

NOTE; Take care when removing the gasket set - this kit does not contain replacement.



PREPARE SENSOR FOR INSTALLATION

Install the 36 mm nut and gasket onto the 40 m cable of new DL2SDR-SA sensor.

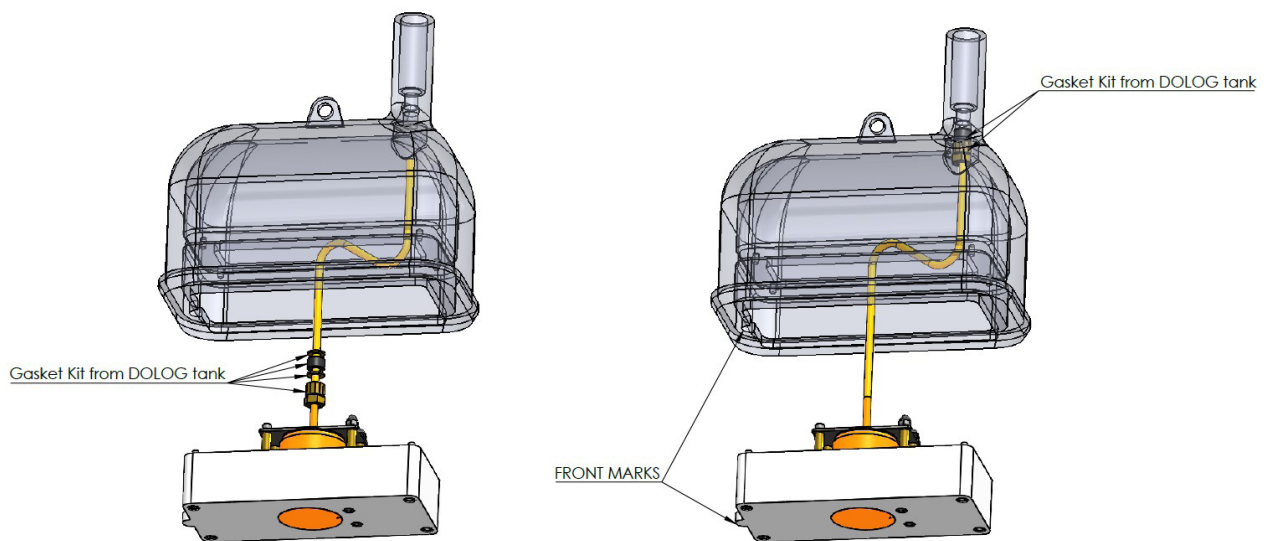
NOTE If installed by diver with vessel afloat:

The sensor cable is now going to be lowered into salt water.

To avoid salt water to penetrate into cable during diving operation the cable end is sealed.

Fasten the rope to new DL2SDR-SA sensor cable end.

The new sensor cable may now be pulled up the tank pipe. Fasten gasket and 36 mm nut.



INSTALL SENSOR INTO DOLOG TANK

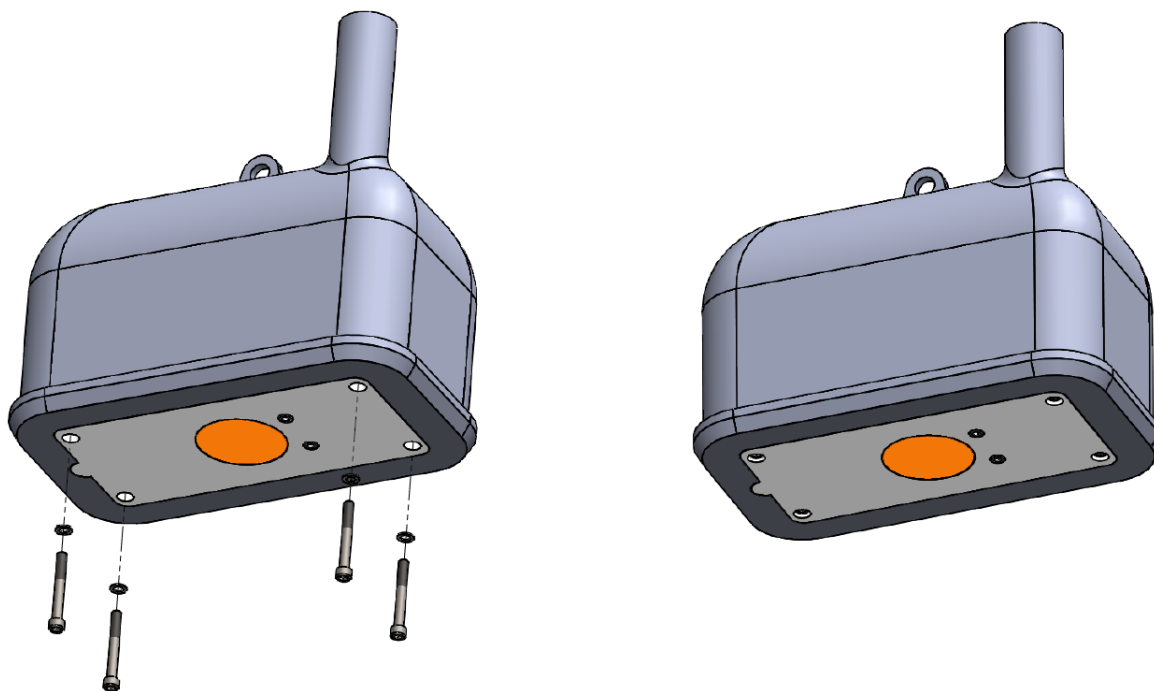
Lift the sensor into the dolog tank Fasten with 4 x screw M10x80.

The 2 x threaded bolts M10x400 and wing nuts included in the KIT-DOLOG-T1-SA kit may be used to lift the sensor into the dolog tank.

Raise the complete sensor with help of the 2 x wing nuts. When in upper position fasten the 2 x M10x80 mm screws.

When sensor is raised and secured with 2 x Screws M10 x 80 mm.

Remove the 2 x 400 mm threaded bolts. Fasten the next 2 x M10x80 mm screws were threaded bolts are removed.



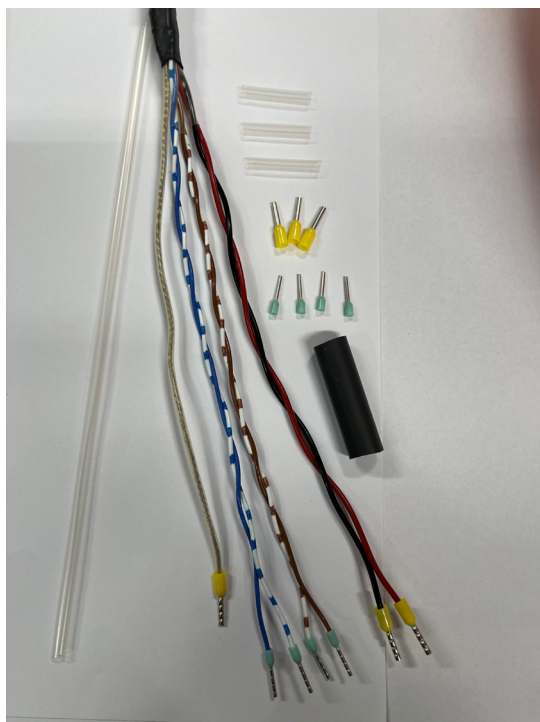
CONNECT SENSOR CABLE

DL2SDR-ZA speed log sensor are supplied with a water tight cable end to avoid water intrusion into cable when/if replaced by diver.



The following parts are supplied:

- Parts to prepare connector end after diving operation is finished.
(The original cable end is supplied as a reference)



Tightening Torque:
M6 = 8Nm
M8 = 18Nm
M10 = 18Nm

POS.	PART NR.	DESCRIPTION	QTY.
1	TC-2067	Adaptor plate for DOLOG	1
2	TC-2068	Insert OD13mm ID11mm L67,5mm	4
3	ZOA-01071	Spring washer M10 DIN127B A4	6
4	ZOA-01229	Screw M10x80 mm DIN912 A4	4
5	TC-2069	Bar DOLOG for DL2S/DL21S	1
6	ZOA-01011	Lock Nut M8 DIN985 A4	1
7	ZOA-01242	Screw, Allan key M8x80, DIN912, A4	2
8	ZOA-01070	Split washer M8 DIN127 A4	2
9	ZOA-01215	Bolt M10 x 140 DIN912 A4, ISO 4762	2
10	ZOA-01257	Lock Nut M10 80 DIN 985 A4	2
11	TC-2080	Insert OD13mm ID11mm L67,5mm	4

TC-DOLOG-2X (2024.10.22)
 Rev. 00
 ST 2024.11.04

Designed by - date: ST 2024.10.22

Approved by - date: GI 2024.10.22

All sharp edges to be broke or deburred

Name: N/A

Kit for Atlas Dolog 2X replacement.
 DL2S sensor
 KIT-DOLOG-M2-SA

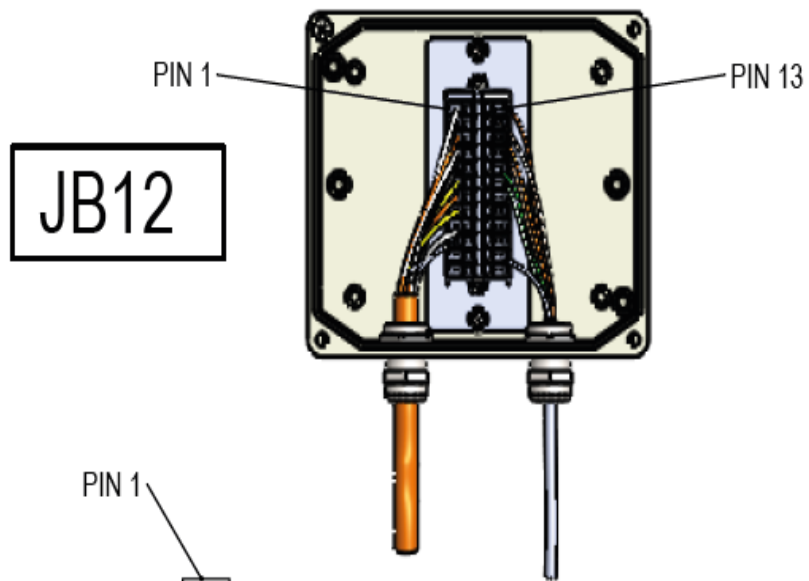
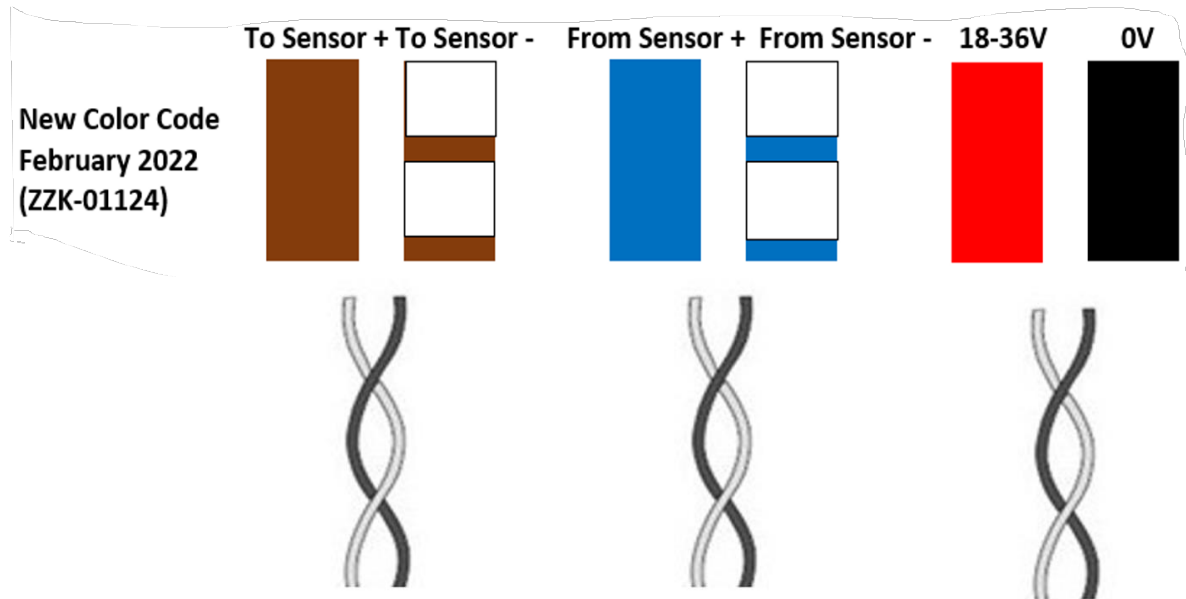
Gen. reference: ISO2768M

Eur. protection:

Scale:

Edition date: 2024.11.04

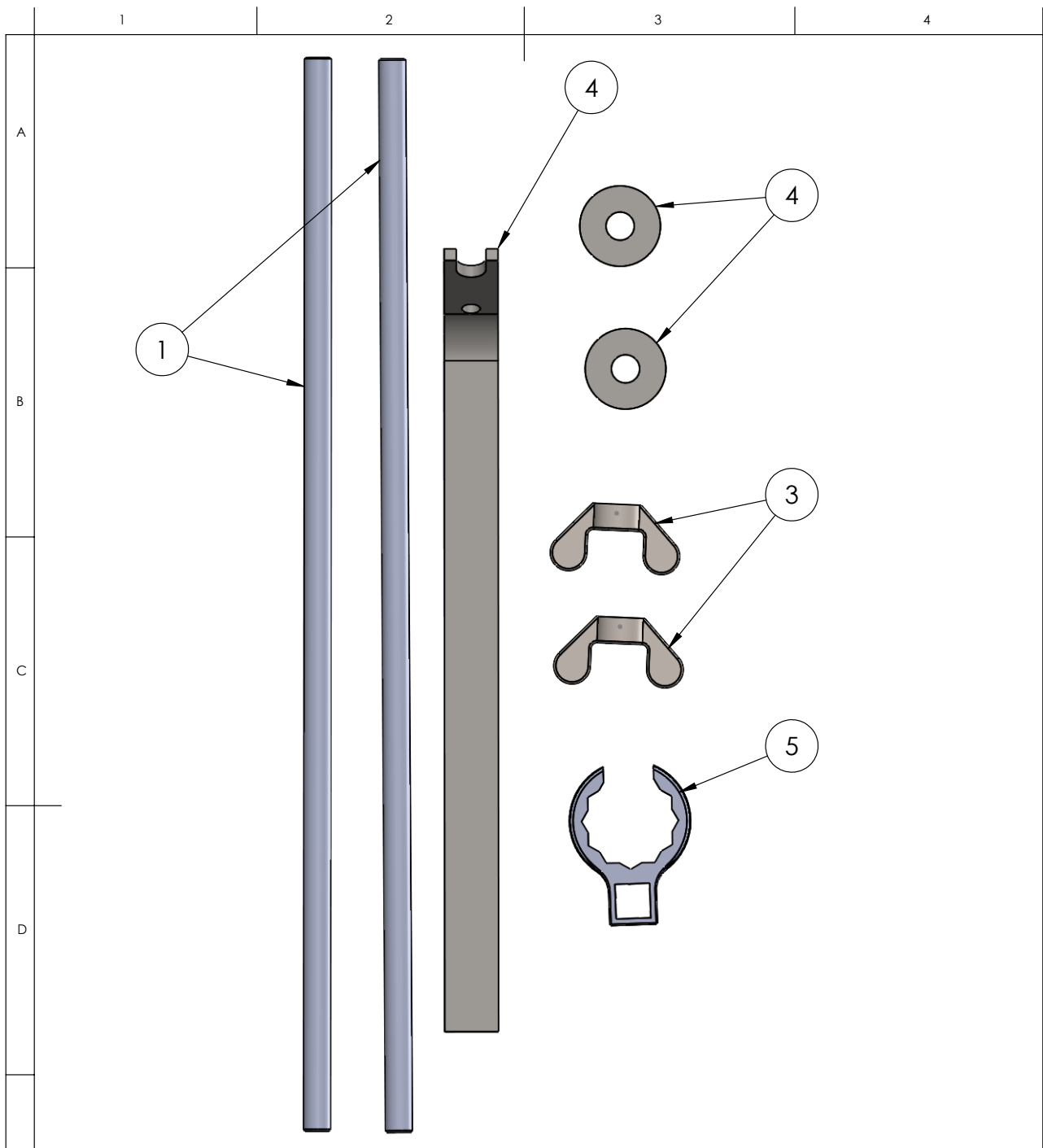
Revision: 00
 Sheet: 2 of 2





PIN 1

01	+24V SENSOR
02	0V SENSOR
03	From Sensor +
04	From Sensor -
05	To Sensor +
06	To Sensor -
07	SCREEN

**DO NOT CONNECT
GROUND TO HOUSING**



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ZOA-01225	Thread bolt M10 x 400mm	2
3	ZOA-01226	Wing nut M10 DIN315 4 EZ CR3+	2
4	ZOA-01224	Tool Dolog sensor removal	1
4	ZOA-01228	Washer M10 DIN9021 steel	2
5	ZOA-01227	Crow foot 36 mm	1

F	CN	xx-xxx xx Date							
	Designed by - date	Checked by	Approved by - date	Material					
	ST 2015.02.06	GT	G.T 2015.02.10	As parts					
				Name Kit Mounting tools Dolog 2X					
Drwg. no. KIT-DOLOG-T1-SA					Revision				
Gen. tolerance ISO2768m					Eur. projection 	Scale 1:2	Edition date 2015.02.06	Sheet 1 of 1	

9) Straahlfläche des Wandlers muß parallel zur CWL liegen.
Asiilmittel zur Fahrminung 0 bis 0,5°
Kippwinkel um die Längsachse ±0,5°
Transducer face must be parallel to CWL.
Angle of attack relative to sailing direction 0 to 0,5°
Angle of attack about longitudinal axis ± 0,5°
Weitere Angaben siehe SW 6049 G.002, B2 3) SW 6049 G.002 B2 3)

Falls erforderlich:
Kabelschutzhülle zerlegbar durchgehend
Wasserdichte Anbringung des Verwirrer
relativ zur Wasserlinie
and intermediate strut
If necessary:
Protective pipe for cable (capable of being dismantled)
all the way from cable gland to distribution box
(electr. and meas. protection)

10) Gehäusewerkstoff: GS - C 25 DIN 7245:
Material of casing: C = 0,23% Ni, 0,5 bis 0,08%, Cr = 0,23%, Si 0,3 bis 0,06%

11) Zulagekasten:
Genehmigt: Gern. Lloyd 13/01/77 - 18/99

12) Zulagekasten:
Genehmigt: Gern. Lloyd 13/01/77 - 18/99
**13) Gießerei: Gern. Lloyd 13/01/77 - 18/99
**14) Hersteller: Mjøsa Kva Jern og Metall AS
**15) Gießdatum: 27.06.85
**16) Gießort: ØSTRE SKIØLD
**17) Hersteller: Mjøsa Kva Jern og Metall AS
**18) Gießdatum: 27.06.85
19) Gießort: ØSTRE SKIØLD************

1) Zurichten des Kabeleinkendes in dem Verteilerkasten
Line-up the cable end in the distribution box
2) Gießdatum: 27.06.85
3) Gießort: ØSTRE SKIØLD
4) Die Strahlfläche darf nicht gestrichen werden.
Transducer face must not be painted.

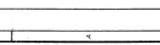
1) Gehäusegröße
Dimensions of casing
**2) Zulagekasten: Gern. Lloyd 13/01/77 - 18/99
3) Zulagekasten: Gern. Lloyd 13/01/77 - 18/99
4) Zulagekasten: Gern. Lloyd 13/01/77 - 18/99
5) Zulagekasten: Gern. Lloyd 13/01/77 - 18/99
6) Zulagekasten: Gern. Lloyd 13/01/77 - 18/99**

1) Die untere Kante des Wandlers-Gehäuses muß fluchtig mit der Bodenplatte bzw. Verkleidung bündig sein.
The lower edge of the transducer casing must all around be flush with the bottom plating or fairing.
2) Das Gehäuse ist vor dem Einschweißen auf 80°C - 120°C vorzuwärmen.
Casing must be preheated to 80°C... 120°C before welding.

1) Vor dem Auslösen Wandler-Gehäuse-Einsatz (Tank) und Kabelschutzhülle
auslösen, Handhabung im Wasser prüfen.
Before undoing check transducer casing installation (tank) and
protective pipe for water-tightness, check cable with connector for
insulation.

Einsatz und Messung nach Blatt 2
For installation and measurement, see sheet 2

Reproduktionsmaßstab



REPRODUCTION SCALE

Einbausatz (1) 1)
Installation kit
Best. Nr. 1634126
Stück No. 1634126

Wandler-Gehäuse (1) 1) 1)
Transducer casing
Best. Nr. 1623383
Stück No. 1623383
Gewicht: 71 kg

Wandler (1) 1)
Transducer
Best. Nr. SW 6049 G 001
Best. Nr. 1723463
Stück No. 1723463
Gewicht: 10 kg

Stekhsattel (1) 4)
Cable with connector
SW 6049 G 003 oder SW 6049 G 009
25 m Stück No. 1723384
25 m Stück No. 1723384

Schweißen (1) 1)
To be welded

Zylinderschraube (1) 1)
New socket head screw
A 160
10,5
(DIN 912-M10)
Best. Nr. 1224460
Stück No. 1224460

SW 6049 0 000 EZI DEJ

Artikel-Nr.: 1723384
 Stückzahl: 1
 Material: 1723384
 Beschriftung: 1723384
 Zeichnung: 1723384
 Version: 1723384
 Datum: 1723384
 Blatt: 1723384
 Blattzahl: 1723384

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