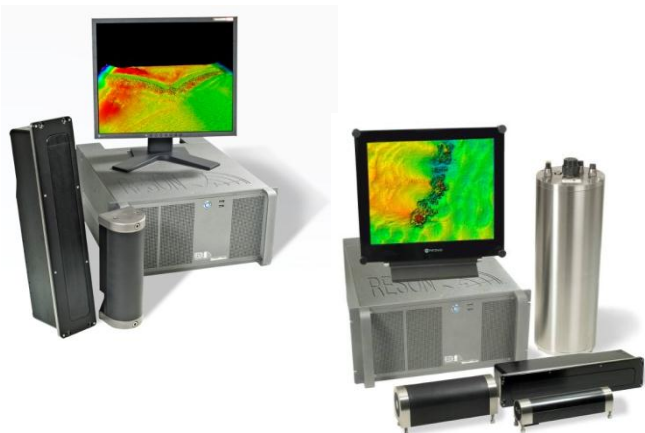




SeaBat 7125 SV2 / ROV2

Quick Reference Guide*



SeaBat 7125 SV2 / ROV2 Sonar System

The SeaBat 7125 SV2 / ROV2 dual-frequency echosounder systems for surface vessels and ROVs:

- Depth rating: 25m or 6000m
- Frequency: 200/400kHz
- Ping rate: Up to 50Hz (range dependent)
- Range: Up to 750m (200kHz)
- Power requirements: 100-230VAC, 50/60Hz, 550W typical (1000W max.)
- Operating temperature wet end: -2° to +35°
- Operating temperature dry end: -15° to +45°

Projector Units

TC 2181 200/400kHz (SV)	
Height	86.6mm $\pm$ 0.1mm
Width	93.1mm $\pm$ 0.2mm
Depth	280.0mm $\pm$ 0.4mm
Weight in air	4.5kg $\pm$ 0.4kg

TC 2160 400kHz (ROV)	
Height	77.0mm $\pm$ 0.7mm
Width	62.0mm $\pm$ 0.2mm
Depth	285.0mm $\pm$ 0.3mm
Weight in air	2.75kg $\pm$ 0.5kg

TC 2163 200kHz (ROV)	
Height	115.0mm $\pm$ 0.1mm
Width	100.0mm $\pm$ 0.2mm
Depth	280.0mm $\pm$ 0.4mm
Weight in air	7.5kg $\pm$ 0.5kg

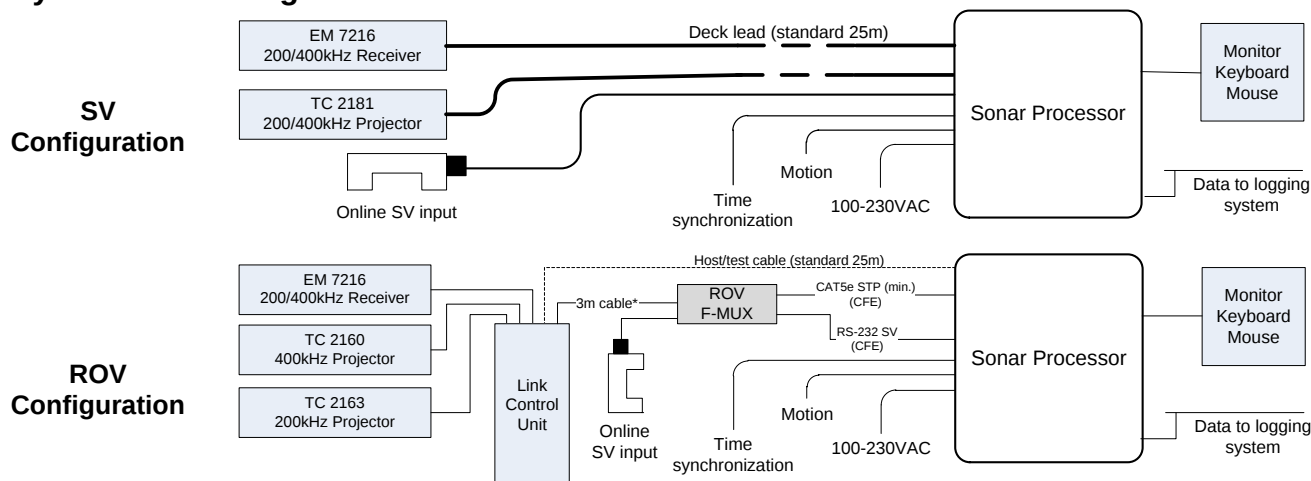
Receiver Unit

EM 7216 200/400kHz	
Height	137.5mm $\pm$ 0.50mm
Length	496.0mm $\pm$ 0.30mm
Depth	102.0mm $\pm$ 0.15mm
Weight in air	10.7kg $\pm$ 1.0kg

Standard Cables

Projector to processor (25m)	Bend radius: 73mm
Receiver to processor (25m)	Bend radius: 127mm
Projector to LCU (3m)	Bend radius: 90mm
Receiver to LCU (3m)	Bend radius: 90mm
Processor to LCU (25m)	Bend radius: 130mm
LCU to ROV (3m)	Bend radius: 130mm

System Block Diagram

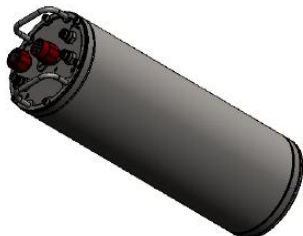


* RESON recommends installation of supplied bulkhead connector into ROV F-MUX pressure housing (CFE).

* This quick reference guide is not intended as a substitute for the Operator's Manual (provided on a USB key).

Link Control Unit (for ROV)

The LCU provides the bidirectional link between the sonar head assembly and the sonar processor:



LCU	
Diameter	174.0mm $\pm$ 0.3mm
Length	538.0mm $\pm$ 0.3mm
Weight in air (titanium)	23.5kg $\pm$ 0.5kg
Weight in water	12.0kg $\pm$ 0.5kg

Sonar Processor

The sonar processor manages data flow and signal processing:



Sonar processor	
Height	221.5mm $\pm$ 0.7mm
Width	478.0mm $\pm$ 0.7mm
Depth	556.8mm $\pm$ 0.7mm
Weight	25.6kg $\pm$ 1.0kg (SV) 22.1kg $\pm$ 1.0kg (ROV)

LCU Connections (ROV)

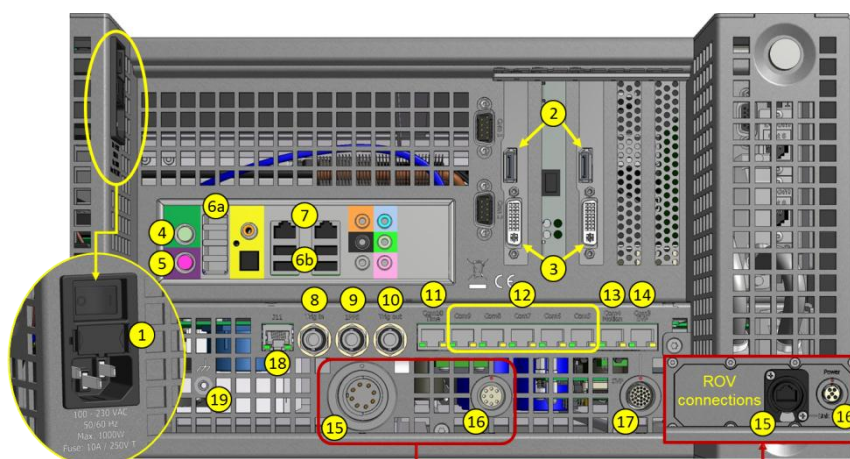


J1: LCU to processor cable
J2: Receiver to LCU cable
J3: 200kHz projector to LCU cable
J4: 400kHz projector to LCU cable
J5: Service connector

Unused connectors should be sealed with dummy plugs.

Do **not** open the Fill valve (for RESON use only!).

Sonar Processor Rear Panel Connections



1) Power input and switch	2) Monitor output (2 display ports)
3) Monitor output (2 DVI ports)	4) Mouse
5) Keyboard	6a) USB (x4)
	6b) USB (x4) (left ones not for keyboard)
7) Ethernet (x2)	8) Trigger in
9) 1PPS input	10) Trigger out
11) Time marker serial port w/LED	12) Serial ports with LED (x5)
13) Motion sensor serial port w/LED	14) Alternate SVP serial port
15) Receiver connection or Host cable data connection	16) Projector connection ⚠ or Host cable power connection
17) Main SVP serial port with power	18) Do not use (for debug only)
19) Protective earth screw for equipotential connection	

Personal Safety



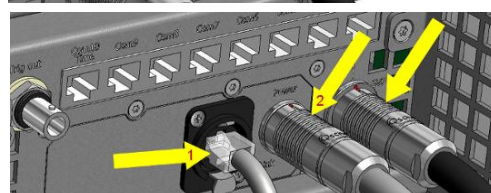
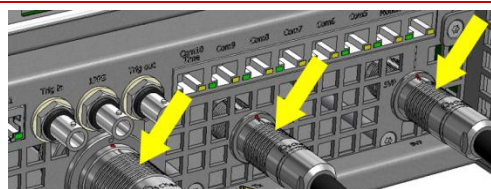
The projector connection (SV system) must be handled with great care as the output power voltage is hazardous to human safety.

Do **not** pull out the cable with power on.



Equipment Safety

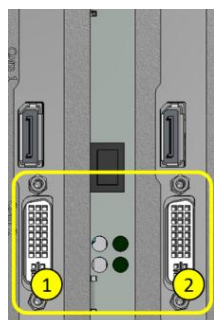
- To disconnect the **receiver/projector/SVP cable** from the sonar processor (SV system), hold on the groove part of the connector (at the arrows) and pull gently outwards.
- On the **host cable** (ROV systems), first disconnect the **RJ-45 cable** (at the left arrow 1) from the sonar processor, then the **power cable** by holding on the groove part of the connector (at the left arrow 2) and pulling gently outwards.
- When removing the **display port cable** from the sonar processor, press the button (at the arrow) on the connector to disconnect.
- Do **not** pull directly on the cords, as this will damage both cables and sonar processor.



Sonar Processor to Monitor Connections

The monitor connections to the sonar processor **MUST** be done as described below. Connections are achieved using DVI-I or display port connectors. Monitors can be cloned from within Windows®, although it is possible to clone a display port output by first converting to DVI-D and then using a DVI-D splitter (for details on cloning monitors, see the Operator's Manual).

DVI Ports

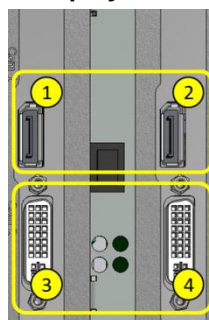


DVI and Analog Monitor Connections

One monitor:
Use port 1
Two monitors:
Use ports 1 and 2

Note! For analog monitors, first add a DVI to analog adaptor to the DVI-I connector.

Display Ports



Display Port Connections

One monitor:
Use port 1
Two monitors:
Use ports 1 and 2

Plus 2 DVI Connections

Three monitors:
Use ports 1, 2, and 3
Four monitors:
Use ports 1, 2, 3, and 4

Note! The display ports cannot be converted to analog monitors; however, adaptors are supplied to convert to DVI-D signals. (Observe that DVI-D and DVI-I connectors are slightly different.)

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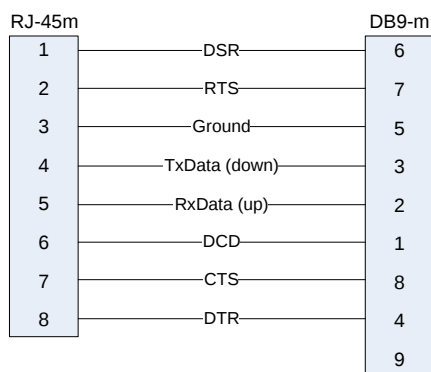
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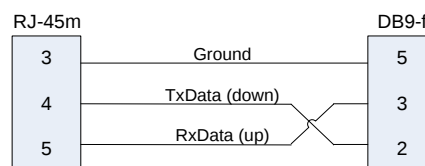
Serial Data Input

- The SeaBat 7125 SV2 / ROV2 uses RJ-45 connectors as inputs for COM3 to COM10. Four **RJ-45 to DB9-m adaptors** are supplied to allow existing DB9 interface cables.

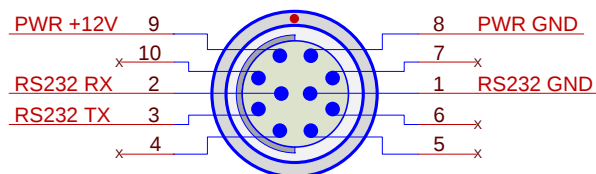
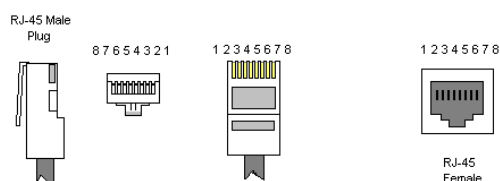


- Connect the SVP to either “COM3 SVP” (item 14) **OR** “SVP” (item 17) which also provides power for the SVP. The pinout of the Fischer connector at the sonar processor is as shown. For wiring to the SVP, see the appropriate product manual.

- To connect **directly from the RJ-45 connector to a DTE device** bypassing the adaptor the following connections can be used.



- The layout of a RJ-45 connector is as shown.



Fischer connector reference: S105A062-130

System Host Cable (ROV configurations)

Wet-End DBH13 Connection	Function	Host Cable Core	Dry-End Connections	Function
1	RTN/0VDC	Black	1 (host power)	LCU supply
2	Shield	Shield	Chassis (host power)	
3	RTN/0VDC	White	2 (host power)	LCU supply
4	TP4	Brown	8 (RJ-45)	Bidirectional data
5	TP4	White/Brown	7 (RJ-45)	
6	TP1	Blue	4 (RJ-45)	
7	TP1	White/Blue	5 (RJ-45)	
8	TP2	Orange	2 (RJ-45)	
9	TP2	White/Orange	1 (RJ-45)	
10	TP3	Green	6 (RJ-45)	
11	TP3	White/Green	3 (RJ-45)	
12	48VDC	Red	3 (host power)	LCU supply
13	48VDC	Green	4 (host power)	LCU supply

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