



### SeaBat T-Series Rackmount

The SeaBat T20-R and T50-R multi-frequency multibeam sonar systems for surface vessels:

- Depth rating: 50m
- Frequency: 190-420kHz
- Ping rate: Up to 50Hz (range dependent)
- Range: Up to 575m (200kHz)
- Power requirements: 100-230VAC, 50/60Hz, up to 390W<sup>1</sup> max.
- Operating temperature wet end: -2° to +36°
- Operating temperature dry end: -5° to +45°

### Rack-mounted Sonar Processor (RSP)

RSP	
Height	88.0mm
Width	478.0mm
Depth	461.6mm
Weight	12.3kg-13.8kg

Sonar interface and processing functions combined into one unit.

### Projector Unit

T20 / T50: TC2181 200-400kHz	
Height	86.6mm
Length	280.0mm
Depth	93.1mm
Weight in air	5.4kg
Weight in water	3.4kg

### Standard Cables

Projector to RSP		
Bend radius	73mm (minimum)	
Cable length	T20: 10m	T50: 25m
Receiver to RSP		
Bend radius	100mm (minimum)	
Cable length	T20: 10m	T50: 25m

### Receiver Units

T20: EM7219 200-400kHz	
Height	123.2mm
Length	254.0mm
Depth	102.0mm
Weight in air	5.0kg
Weight in water	2.2kg

T50: EM7218 200-400kHz	
Height	90.7mm
Length	460.0mm
Depth	102.0mm
Weight in air	8.2kg
Weight in water	3.9kg

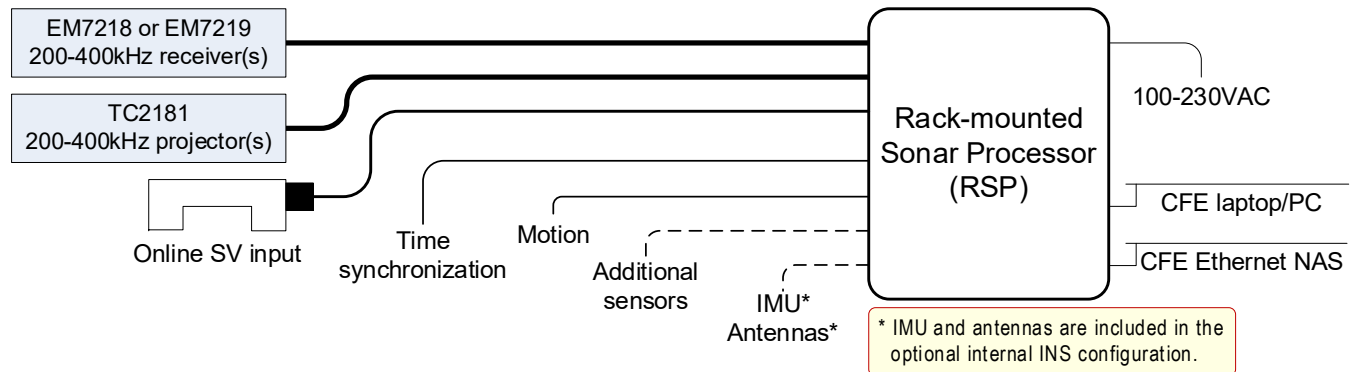
### Wet-End Brackets

	T20	T50
Width (projector end)	98.0mm	
Width (receiver end)	262.0mm	468.0mm
Depth	391.0mm	
Weight in air, bracket	1.7kg	2.5kg
Weight in air, bracket + wet end (excl. cables)	12.1kg	16.1kg

\* This Quick Reference Guide is not intended as a substitute for the Operator's Manual (provided on a USB key).

<sup>1</sup> 390W max. is for the INS configuration with dual head.

### System Block Diagram

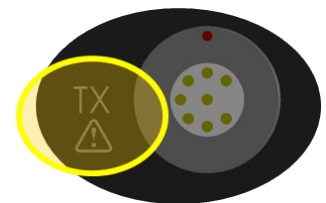


### Personal Safety



The projector connection 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 **projector/receiver/SVP cable** from the RSP, hold on the groove part of the connector (at the arrows) and pull gently outwards.
- Do **not** pull directly on the cords, as this will damage both cables and the RSP.
- Do **not** bend the cables beyond the recommended limits when positioning the cables. Flexing the cable to less than the specified bend radius will damage the cable.



- Female wet-end connectors** must be **lubricated** at regular intervals even if not mated/unmated, or every 5 matings to avoid damaged male connectors (as shown here). Use Molykote® 44 Medium as included in your delivery.

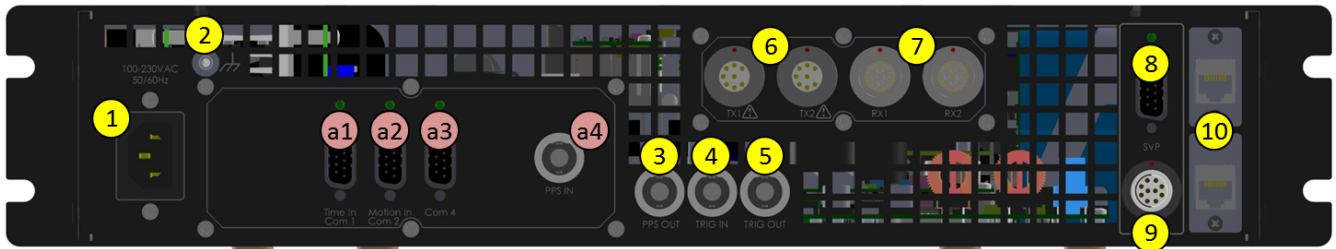


### Use and Disclosure of Data

EU Uncontrolled Technology:

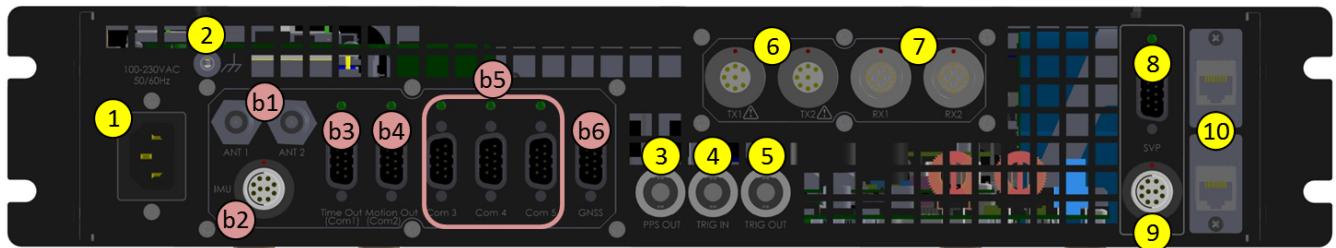
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### RSP – Rear Panel Connections



1) Mains power input 100-230VAC	8) Alternate SVP serial port w/LED (COM 3)
2) Protective earth screw for equipotential connection	9) Main SVP serial port with power
3) 1PPS out	10) Ethernet for laptop/PC Ethernet for NAS
4) Trigger in	a1) Time in serial port UTC/ZDA w/LED
5) Trigger out	a2) Motion in serial port w/LED
6) Projector connection(s) ⚠	a3) COM 4 serial port w/LED (RS-232) (ship's heading)
7) Receiver connection(s)	a4) 1PPS in

### RSP INS Configuration – Rear Panel Connections



1) Mains power input 100-230VAC	9) Main SVP serial port with power
2) Protective earth screw for equipotential connection	10) Ethernet for laptop/PC Ethernet for NAS
3) 1PPS out	b1) Antennas 1 and 2
4) Trigger in	b2) IMU
5) Trigger out	b3) Time out serial port UTC/ZDA w/LED
6) Projector connection(s) ⚠	b4) Motion out serial port w/LED
7) Receiver connection(s)	b5) COM 3-5 configurable serial ports w/LED
8) Alternate SVP serial port w/LED (COM 3)	b6) GNSS serial port

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### Operator Laptop/PC – Minimum Requirements

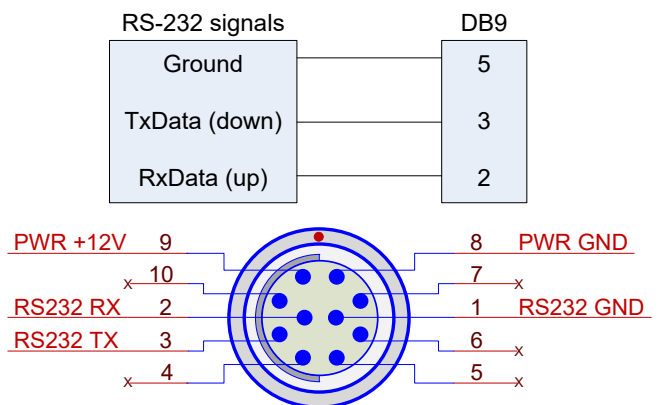
These are the minimum requirements for the customer-furnished laptop/PC, which should be sufficient to run both Sonar User Interface and Teledyne PDS\*:

- CPU: high-end quad core processor
- Gb Ethernet
- Graphic card: with OPENGL support and 1GB memory, e. g. NVidia GeForce GTX 4xx
- 8GB RAM memory
- Hard disk: 1 x 500GB
- Windows 10 (64 bit mandatory)

### Serial Data Input

- The RSP uses DB9 connectors as inputs for COM 1 to COM 4 (or for the INS configuration, COM 1 to COM 5 and the GNSS port).
- Handshake and control wires have been looped to ensure that devices with flow control/handshake can send data to the rack-mounted sonar processor.
- Connect the SVP to either “COM 3” (item 8) **OR** “SVP” (item 9) which also provides power for the SVP. The pinout of the Fischer connector at the processor is as shown. For wiring to the SVP, see the appropriate product manual.

- The pin assignments of the DB9 connector:



Fischer connector reference: S105A062-130

### Setup of SeaBat T-Series Rackmount System\*

- Connect the SeaBat T20-R/T50-R to the network.
  - Factory default is 10.11.10.1 for LAN 1 and 10.11.10.2 for LAN 2 (limited configurable between 10.11.10.2 and 10.11.10.9<sup>2</sup>).
  - Factory default is 10.11.10.11 for the optional INS.
- The connection from the operator laptop/PC to the RSP is done via the SUI.
  - Go to the Hardware pane, and click the Sonar address drop-down menu. The T20-R/T50-R system can be identified by its serial no. next to the IP address. Find the serial no. on the front of the RSP.

\* For further details, please refer to the appropriate manual.

<sup>2</sup> Fixed IP only, full range with DHCP assigned IP.