

**SIDE-POWER**  
Thruster Systems

# PJC-211 S-link Control Panel

**Installation and user's manual  
v1.1.2**

*Keep this  
manual onboard !*



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Made in Norway

# PJC-211

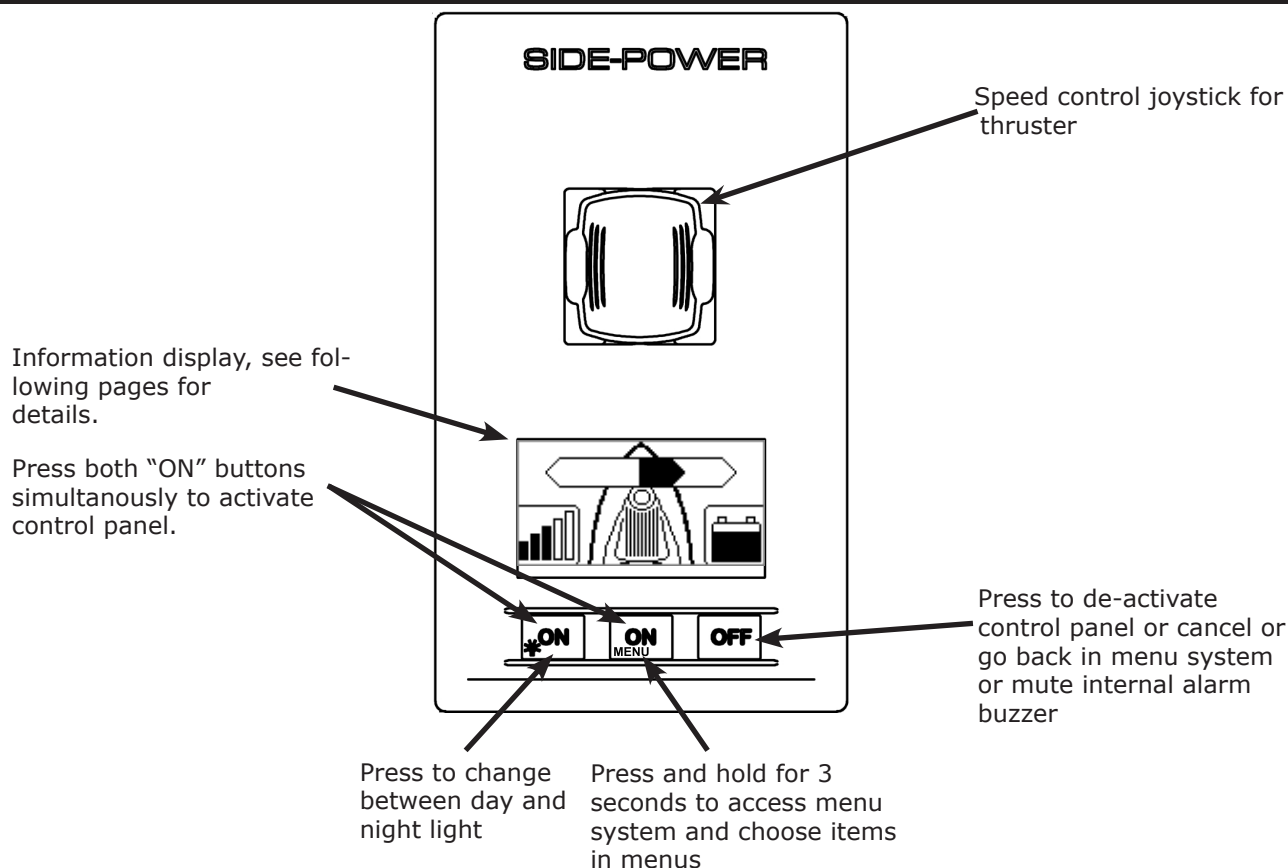
## Control panel with S-link™ CAN-bus connection

### Product features

- For proportional thruster control with the new Power Controlled DC-thrusters
- Finger tip control speed control with purpose designed joysticks
- Back-lit LCD display with instant feedback
  - System status
  - Amount of thrust & direction of thrust
  - Thruster temperature/remaining run time
  - Battery supply voltage to thrusters
  - Monitoring of Automatic Mainswitch (informs if the fuse has blown or the manual override is activated)
- Interactive multi-language menus
- CAN-Bus communication with thrusters and accessories
- Plug & play cables, waterproof and compact connectors
- Diagnostics via panel
- Built-in audible alarm "buzzer"
- Connector for external "buzzer"/loud audible alarms
- Supports Side-Power retractable thrusters with or without Speed Control



DO NOT connect any other control equipment to the S-link controlled products except Side-Power original S-link products or via a Side-Power supplied interface product made for interfacing with other controls. Any attempt to directly control or at all connect into the S-link control system without the designated and approved interface, will render all warranties and responsibilities for the complete line of Side-Power products connected void and null. If you are interfacing by agreement with Sleipner and through a designated and approved interface, you are still required to also install an original Sidepower control panel to enable efficient troubleshooting if necessary



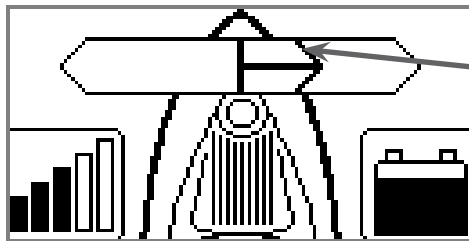
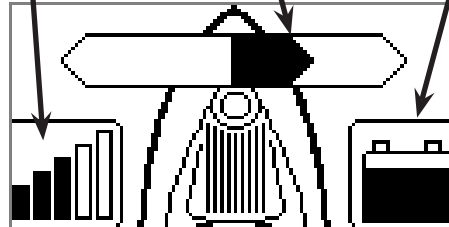
## DISPLAY IN NORMAL USE:

### Bow thruster information

Remaining run time of thruster based on the electric motors heat at present. As bars empties you have less run time left.

Thrust power and direction

Battery supply performance based on delivered voltage to thruster. As the battery empties, you have less power and less run time left

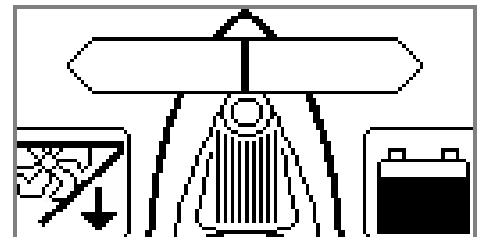


Indicating amount of thrust set by other control units in the system, i.e additional PJC-212/211 panels, 8700 Retract panel, input via 8730 S-link external switch interface (remote control, foot switches etc.)

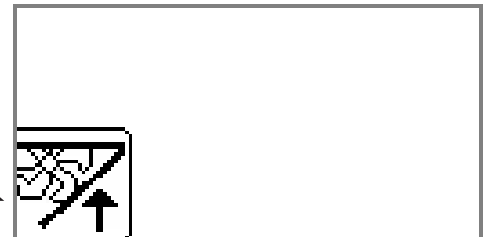
If two or more units is set to run the thruster in opposite direction, this information will not be shown. Alarms are ignored for 3 seconds after turning panel ON.

## SPECIFIC INFORMATION WHEN USED IN A SYSTEM WITH SR-SERIES RETRACTABLE THRUSTERS

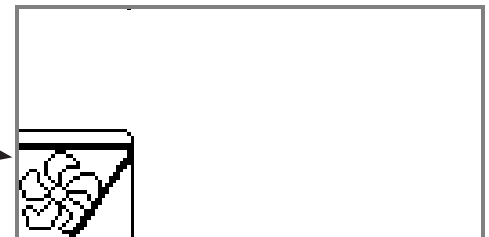
Symbol shown when the thruster deploys



Symbol shown when the thruster retracts



Symbol shown when the thruster is in position OUT



When the thruster is deployed and no input is given via the joysticks/buttons over a 10 second period, the panel will give a audible signal every 10th second to tell that the thruster is still deployed.

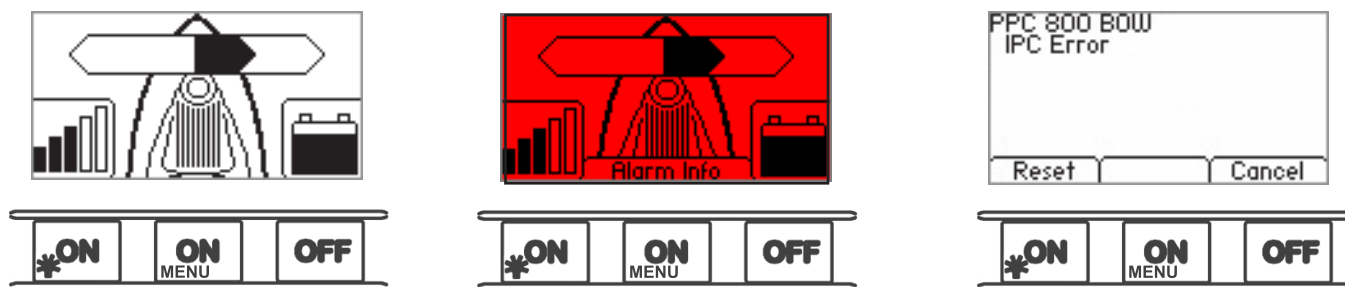
## FIRST TIME SETUP

After installation of a S-link thrusters system, a **SCAN SYSTEM** procedure to setup control panels, thrusters and additional equipment must be completed before the system can be used.

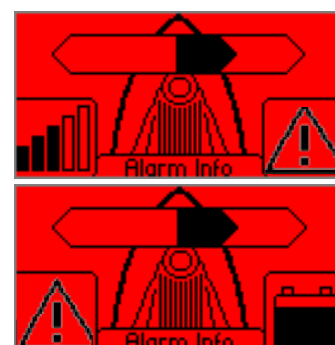
## DISPLAY WHEN ALARMS:

When there is a problem or a fault, the panel will show this alarm situation by the LCD display blinking in red color.

The panel will also change to show "Alarm Info" beneath the "boat", indicating that by pressing the corresponding button (centre ON) you will get information about what the problem is (example below).



If the problem is that the voltage delivered from the batteries are too low for the thruster to be allowed to run, this is shown directly on the display by the battery that is not delivering being replaced by the alarm sign (see example below).



If the issue is something else, the alarm signal will replace the remaining run time indicator for the thruster / system that is causing the alarm.

### VOLTAGE & TEMPERATURE WARNINGS:

**Voltage below 9.3V/17.5V** (12V/24V system) **or temperature above 90°C** (80°C for PPC800 FW V1.013 or older/ SR150000 FW V1.006 or older)



**Voltage below 8.9V/16.3V** (12V/24V system) **or temperature above 100°C** (90°C for PPC800 FW V1.013 or older/ SR150000 FW V1.006 or older)



**Voltage below 8.5V/15V** (12V/24V system) **or temperature above 115°C** (100°C for PPC800 FW V1.013 or older/ SR150000 FW V1.006 or older): Red backlight in display and three beeps every 2.4 seconds (also in external buzzer if fitted)



**If the thruster enters an alarm state - Voltage below 8 Volts (both 12 and 24 Volt systems) or temperature above 130°C (110°C for PPC800 FW V1.013 or older/ SR150000 FW V1.006 or older):** Continuous beeps. Temperature must drop below 115°C (100°C for PPC800 FW V1.013 or older) before the thruster can be operated again.



## SPECIFIC ALARMS WHEN USED IN A SYSTEM WITH SR-SERIES RETRACTABLE THRUSTERS

Alarm shown when the thruster is obstructed while deploying.  
The internal buzzer will sound.  
Buzzer can be muted by pressing the "OFF" button



Alarm shown when the thruster is obstructed while retracting.  
SR130-210 and SRHx will show the angle the retract is stuck at. 0 degree is when the retract is out, and from 80-100 degree when retract is in.

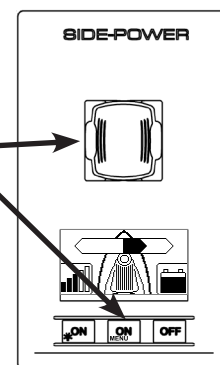


## MENU SYSTEM:

Access menu system by pressing Menu button (middle 'ON' button) for 3 seconds

Move around in menus by using joysticks

Follow instructions on the screen and press buttons as indicated on LCD screen



### LANGUAGE

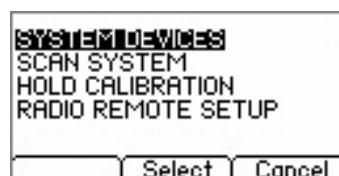
Choose language by moving bow joystick:  
English, Norwegian, German, French, Spanish and Italian.



SETUP

### SETUP

Use joystick to choose function  
Select: Opens selected function  
Cancel: Returns to Main Menu



#### SYSTEM DEVICES

View all devices connected to S-Link and manually change setup values.

Slide between devices with the joystick to see device information as location, thruster direction, retract type, firmware version and serial number.

Edit: Change location to BOW, STERN, BOW-STB or STERN-STB, thruster direction to Normal or Inverted or retract type. For Automatic main switch 1 8977 and interface 8730, you can only change location. Use joystick to alter values.

#### Location:

Can change selected device location between BOW, STERN, BOW-STB or STERN-STB.

(use BOW-STB on second bow thruster and STERN-STB on second stern thruster)

#### Direction:

Can change thruster direction to Normal or Inverted. Change this value if the thruster is running in the wrong direction. For PPC800, SR61242 or SR150000 only.

#### Function:

Setup function types.

For PPC800 SR61242 & SR150000 only.

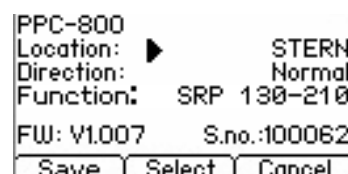
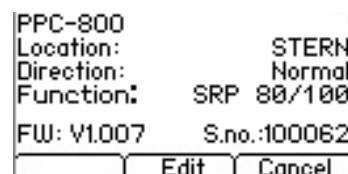
SR ON/OFF: Retract thruster without speed controller (PPC800), SR61242 or SR150000.

SEP 30-240: Tunnel speed thruster, PPC800 without retract.

SRP 80/100: Retract SR61242 with PPC800, both devices needs to be set to SRP 80/100.

SRP 130-210: Retract SR150000 with PPC800, both devices needs to be set to SRP 130-210.

SRH: On/Off Hydraulic retract with crossover and no need for PHC024 controller.





SETUP  
(cont.)

SRHP: Proportional Hydraulic retract. This needs the PHC024 controller.

SRVP 80/100: Retract SR150000 with PPC800, both devices needs to be set to SRVP 80/100.

# NB!

**WHEN INSTALLING A RETRACT THRUSTER WITH SPEED CONTROL (PPC800), DO NOT TRY TO RUN THE THRUSTER UNTIL YOU HAVE COMPLETED THE ENTIRE SETUP PROCEDURE CORRECTLY!**

# NB!

This is to prevent damage to the thruster caused by running the thruster while the retract mechanism is not fully opened.

**Save:** Saves changes and quit editing.

**Select:** Switch between Location, Retract and Retract settings.

**Cancel:** Cancel operation without saving changes.

Cancel: Returns to "SETUP" -menu.

## SCAN SYSTEM

After selecting "SCAN SYSTEM" the display shows "SCANNING SYSTEM PLEASE WAIT!" for a few seconds while the panel is scanning the S-link bus for attached equipment. This scan can take up to 15 seconds.

After a completed system scan, the thruster with its associated AMS will be shown. Use the joystick to toggle between bow and stern thruster information.

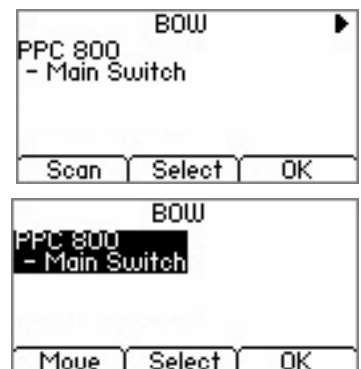
**Scan:** Re-Scan the S-link bus

**Select:** Select thruster. Selected thruster will be highlighted and can be run with the designated joystick to confirm its location

**Move:** Moves the selected thruster assignment from bow to stern/stern to bow

**OK:** Saves changes and returns to SETUP-menu

Any changes made will be relayed to all other installed panels



## RADIO REMOTE SETUP

Adjusts the amount of thrust which the ON/OFF remote control will run at. Use joysticks to adjust applied thrust

**OK:** Saves changes and returns to "SETUP"-menu

**Cancel:** Returns to "SETUP"-menu without saving changes

Any changes made will be relayed to 8730 INTERFACE units with Firmware 1.203 or newer







INFO

## INFO

The info selection is a service screen. Choose the Info screen if you wish to check your system. When in this screen you will be able to run the thrusters individually with the joysticks or simultaneously with the "Hold" function. You will be able to see two screens by pressing the "more" button

1st screen : Control panel info:

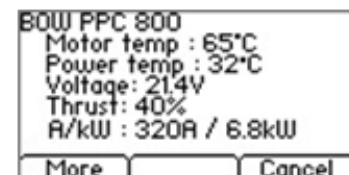
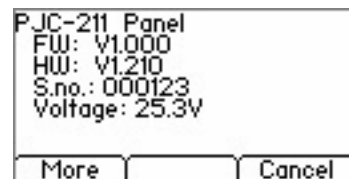
- Firmware and Hardware version
- Serial number
- S-link voltage

2nd screen: Bow thruster information

- Motor temperature
- Speed controller (PPC800) temperature
- Actual voltage
- Thrust percentage it is running at
- Current consumption & watt at present.

More: Changes to next information page

Cancel: Returns to main menu



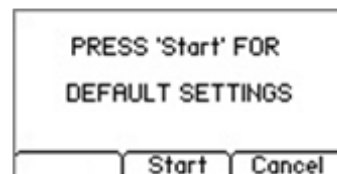
DEFAULT

## DEFAULT SETTINGS

Reset all settings to factory default - follow instructions on screen

Start: Resets system to default factory settings

Cancel: Returns to main menu without changes



PANEL

## PANEL SETUP

### BACKLIGHT LEVEL

Set level of panel backlight in daylight mode, 1-5

### NIGHTLIGHT - COLOR

Select color of backlight in nightlight mode:  
GREEN, BLUE, RED, WHITE

### NIGHTLIGHT - LEVEL

Set level of panel backlight in nightlight mode, 1-3

### TIMER AUTO OFF

Set the time from last use to auto panel shutdown.  
Set from 5-60 minutes in 5 minute steps or OFF (panel will not turn off automatically)

OK: Saves changes and returns to main menu

Select: Selecting parameter

Cancel: Returns to main menu without saving changes

Use joystick to change values up or down.

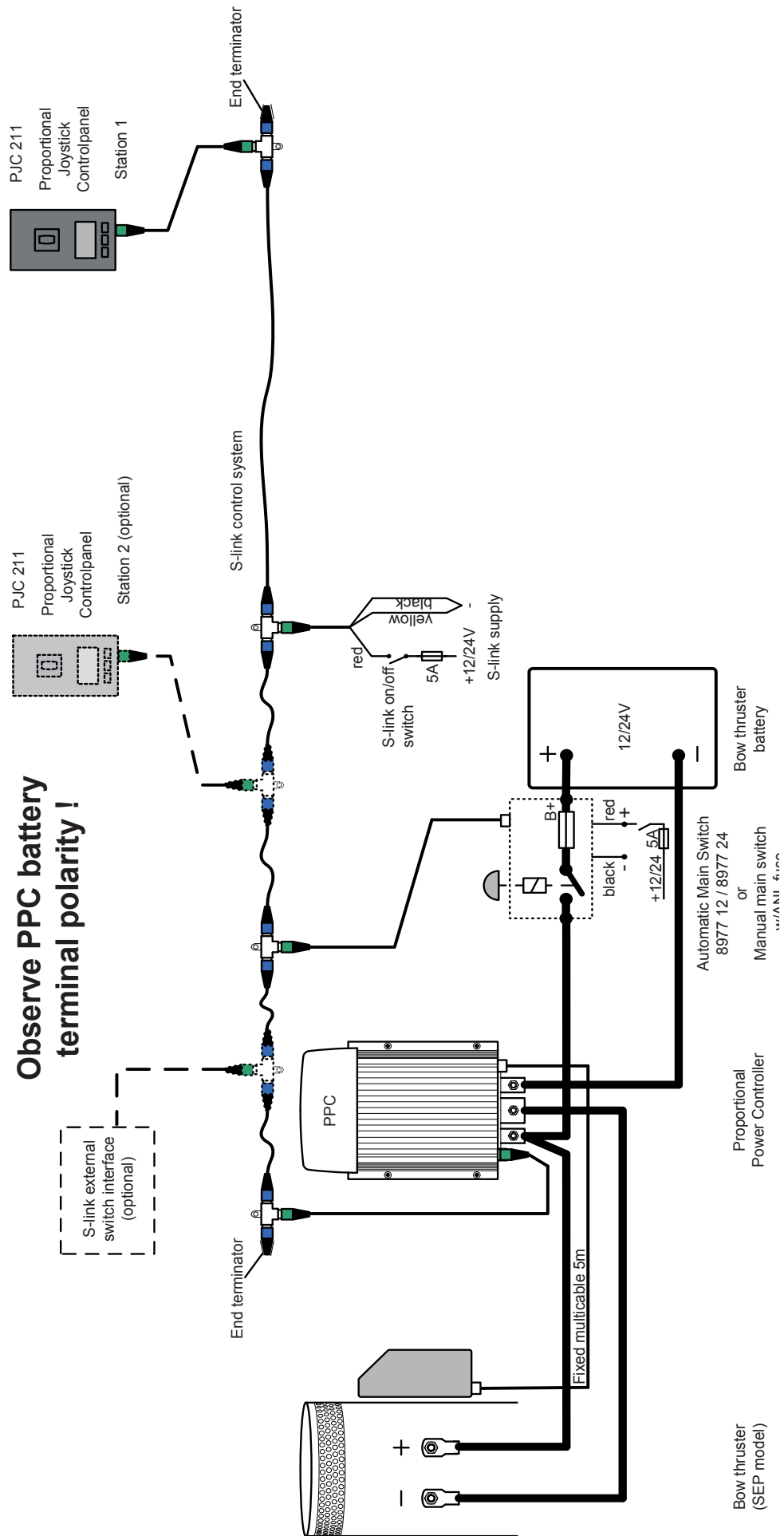


## Error message overview

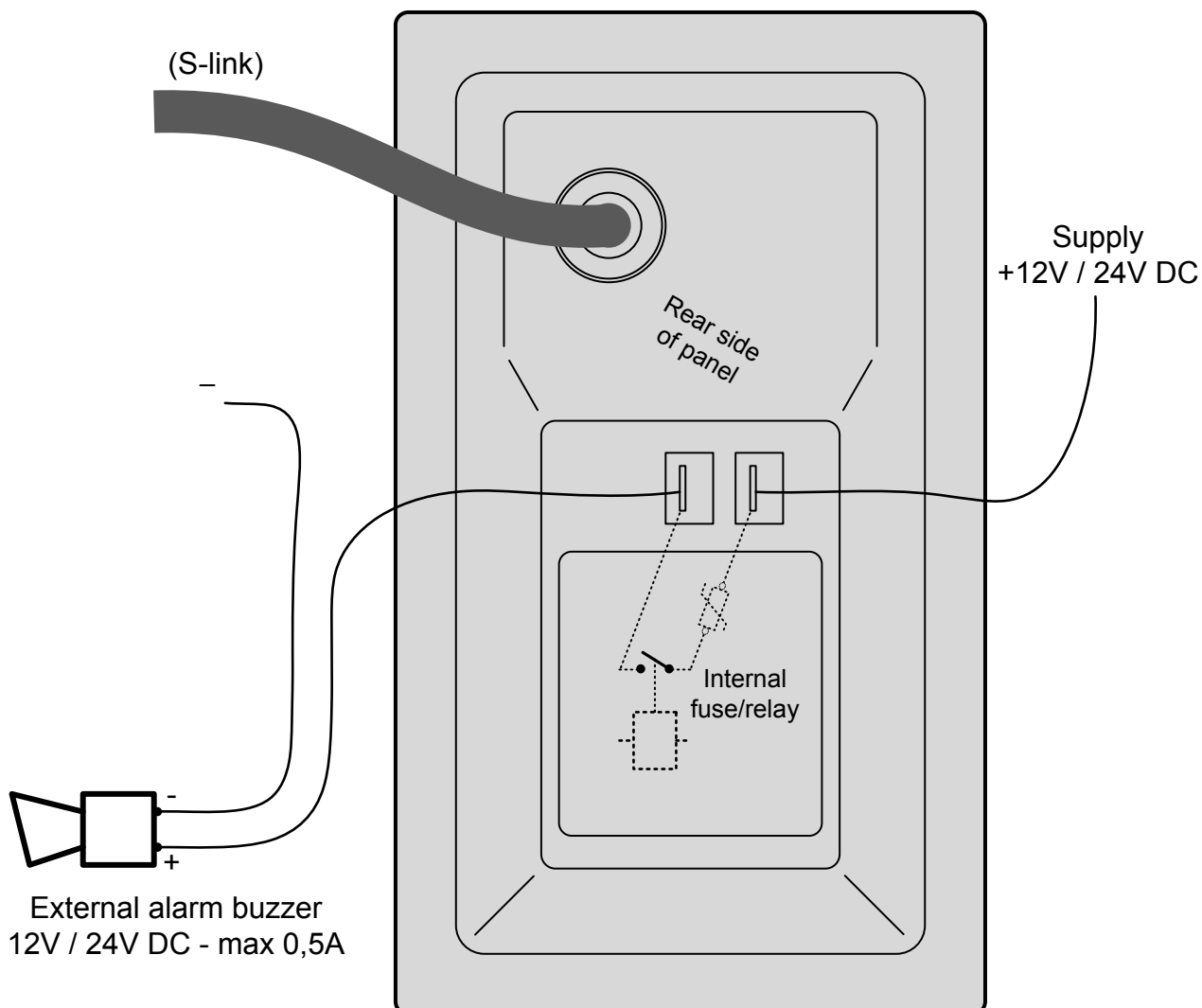
Errors shown in display	PPC 800	AMS 8977	SR80 SR100	SR130 SR170 SR210 SRV80 SRV100 SRH	Description	Action
Motor Overcurrent	X				Motor current over 1400A	Thruster must be serviced by authorized personel, reset or PPC800 power OFF/ON
Motor Overtemp	X			X	Motor temperature have been over 130°C (110°C for PPC800 FW 1.013 or older/ SR150000 FW1.006 or older)	Motor cool down below 115°C (100°C for PPC800 FW 1.013 or older/SR150000 FW1.006 or older)
Controller Overtemp	X				PPC800 temperature have been over 80°C	PPC800 cool down below 45°C
Controller Overtemp				X	SR150000 temperature have been over 80°C	SR150000 cool down below 45°C
Low Voltage	X		X	X	Low voltage on Motor	Recharge battery, reset or device power OFF/ON
Termoswitch	X		X	X	Motor temperature over 130°C (110°C for PPC800 FW 1.013 or older)	Motor cool down below 115°C (100°C for PPC800 FW 1.014 or older)
IPC Error	X		X	X	Motor relay faulty	Turn off thruster battery main switch. Thruster must be serviced by authorized personel, power off resets alarm.
Critical Error	X				PPC800 fail	PPC800 must be sendt for service
Low Motor Current	X				No power to thruster	Check thruster connections or motor dead!
Motor Contactor	X			X	No current on motor relay coil	Check motor relay connections, short circuit or relay dead!
System Error	X	X	X	X	Fatal error	System must be serviced by authorized personnel
No S-Link Comm	X	X	X	X	No communication with device	Check S-link and power connections
Motor Temp Sensor	X				Motor temperature sensor fail	Check for an open circiut on the temp sensor on the motor
Supply Voltage Fault		X			No power	Check power connections
Fuse Blown		X			Fuse blown	Replace fuse or check if main cable from battery and main cable to thruster has been switched
Manual Override		X			Main switch manually overridden	Pull main switch
Motion OUT Fault			X	X	Retract obstructed while deploying	Turn off all panels. Go for lower speed/deeper water and retry.
Motion IN Fault			X	X	Retract obstructed while retracting	Turn panel on and manually override main switch. Remove obstruction and try again.
Actuator Fault			X	X	Actuator not getting any power.	Check actuator connection or power to actuator.
Pos.Sensor Fault				X	Retract position sensor fail	Check position sensor cables and for sensor damage.
In Service Mode				X	Retract Controller in Service Mode	Check dipswitch setting on retract control box.



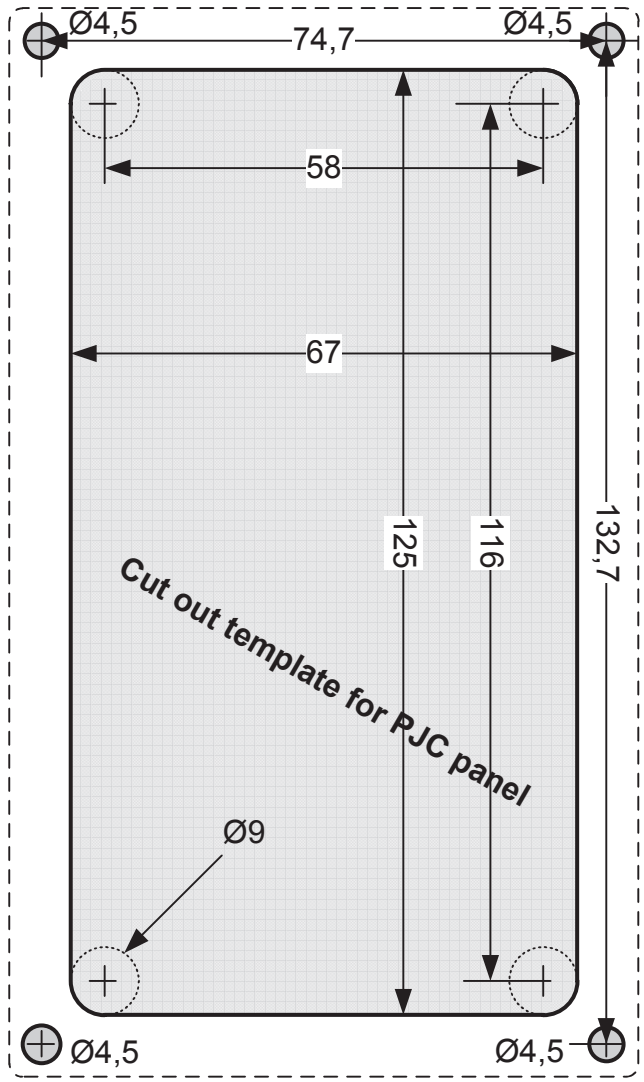
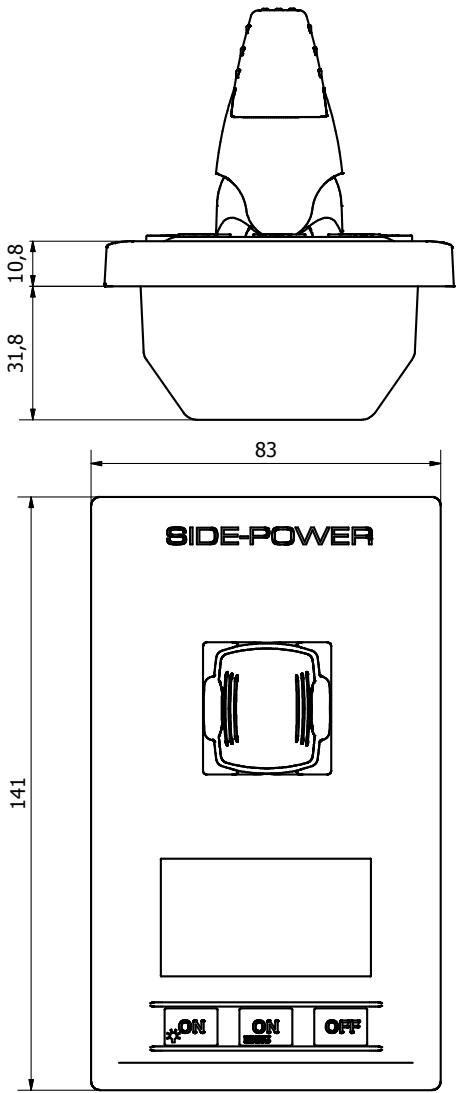
## Sample S-link system



## Connections for optional external buzzer/audible alarm



Measurements



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