

Pro Latch R - Latching Relays

80 - 240A Models

The Pro Latch R is a versatile latching relay with 4 major operational modes. The benefit of using a latching style relay over a conventional relay is down to the efficiency of the relays. Conventional relays use up to as much as 0.5A to stay closed circuited. However, the latching relay does not use any current to stay closed. This is ideal for low harvest systems that include wind and solar. The 4 major operational modes are discussed below:

More Efficient. Latching relay technology is more efficient than conventional relays as they consume no power to stay closed. The only minor current drawn is via the software (0.5mA).

Models:
80A / 160A / 240A
12V and 24V.

IP66 Waterproof. The Pro Latch R is built to IP66, which is the highest level of waterproof and ingress proof rating.

Ideal for **Solar** and **Wind** technology. Along with other low harvest energy sources.

Operational Mode 1.
Bidirectional Charging Mode.
This mode allows activation of the Pro Latch R at both sides of the relay - ideal for normal between battery charging. Activation voltages are **on** at 13.3V and **off** at 13.0V.

Operational Mode 2.
Battery Protection Mode.
This mode allow the user to protect the battery from excessive charging and discharging. The **on** voltage is 12.0V and the **off** is 12.3V.

Operational Mode 3.
Engine Start Protect.
This mode allow the user to protect the start battery from discharging beyond a point whereby they can no longer start the engine when cranking. The **on** voltage is 12.6V and the **off** is 12.4V.

Operational Mode 4
Unidirectional Charging Mode.
This mode allows for relay activation on one side of the relay only. Very similar to mode 1 without the bidirectionality. **On** at 13.3V and **off** at 13.0V.

12V or 24V Auto select. The Pro Latch R's can detect whether you have a 12V or 24V system and shall conduct its operation accordingly.



Intelligent switching algorithms. All operational modes switch the relay between on and off positions. There is a time and history element to when the relay changes position, it not a simple voltage threshold switch. This is designed to prevent unnecessary relay chatter and inefficiencies.

Remote Control



54mm hole cut

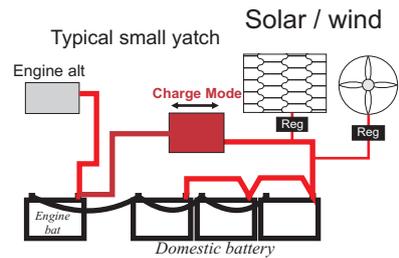
Pro Latch R Remote Control Functions

- 1) Input Voltage.
- 2) Output Voltage.
- 3) Optional water proof display, encapsulated electronics.
- 4) Various over ride to allow lights to be switched on for safety. (only available with remote).
- 5) Sleep: power saver function.
- 6) Audible alarm stop.
- 7) Audible alarm disconnect.
- 8) Back light option on/off.
- 9) Background light colour change depending on function.
- 10) Relay circuit opened or closed indicator.
- 11) High Voltage trip alarm and low voltage warning.

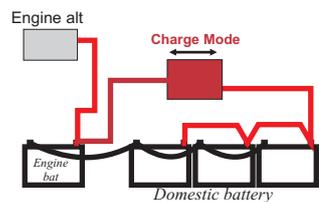
Remote control allows access to all the relevant information, the panel comes complete with a 5 metre telephone type extension lead. The remote is in a standard 54mm threaded housing. This is an optional product and is not required for the operation of the main product.

Examples of common applications for the Pro Latch R

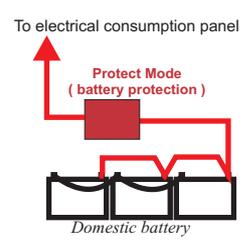
Bidirectional charging relay



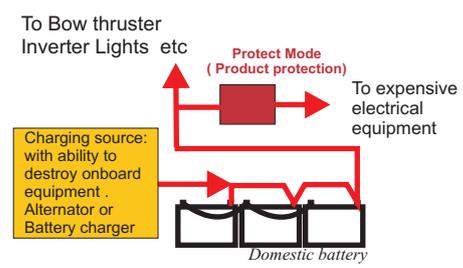
Bidirectional charging relay



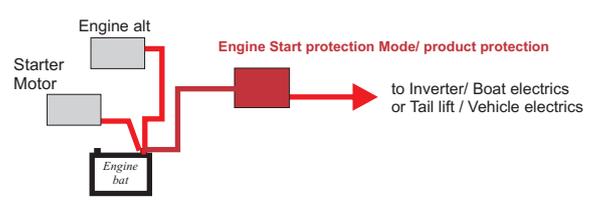
Battery protection



Product protection mode

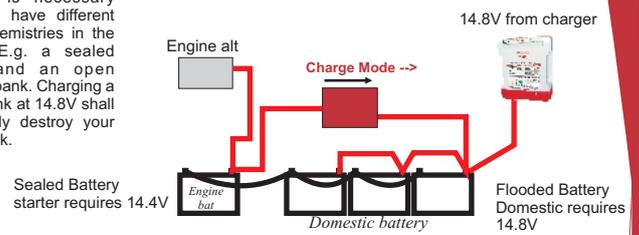


Engine Starter Battery Protection Mode



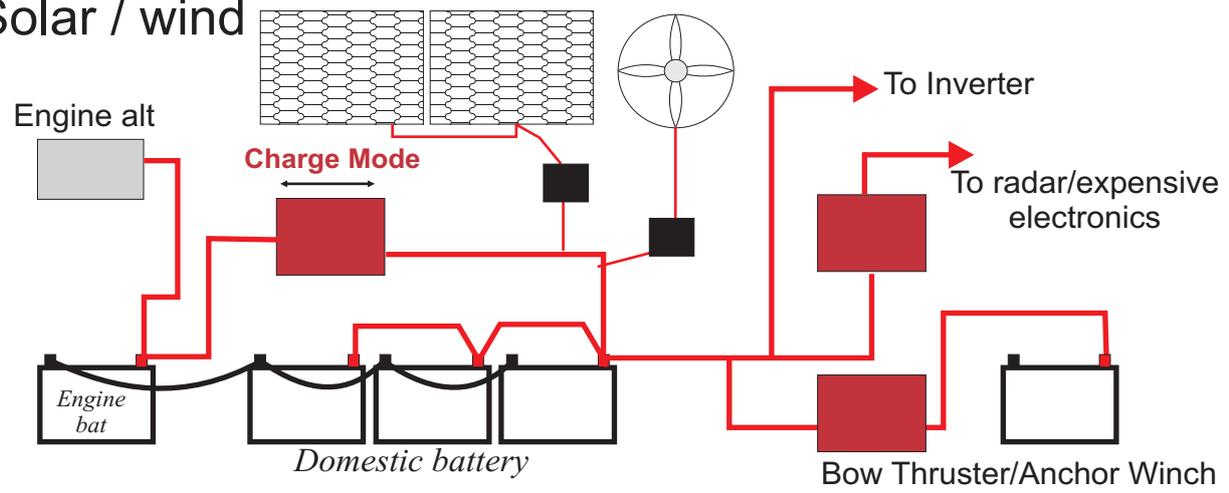
Uni Directional Charging

Sometimes uni directional charging is necessary when you have different battery chemistries in the system. E.g. a sealed starter and an open domestic bank. Charging a sealed bank at 14.8V shall prematurely destroy your starter bank.



Multiple use on small boat

Solar / wind



Code	Continuous Current	Max Intermittent Current	Quiescent Current mA	Input voltage	Output stud	Preset voltage Battery protect	(can be adjusted if required) Starter Protect	Charging mode
LR80	80A	500	0.5	12/24 auto	6 mm	Off 10.9V on 12.8V	Off 12.4V on 13V	on 13.3 off 12.9
LR160	160A	1000	0.5	12/24 auto	8 mm	Off 10.9V on 12.8V	Off 12.4V on 13V	on 13.3 off 12.9
LR240	240A	1500	0.5	12/24 auto	8 mm	Off 10.9V on 12.8V	Off 12.4V on 13V	on 13.3 off 12.9
LRB80	80A	500	0.5	B = Budget: Relay only available with a fixed/non adjustable factory setting, non-programmable				
LRR	Latching relay remote with 5 metres of cable, for longer use standard telephone cable extension.							