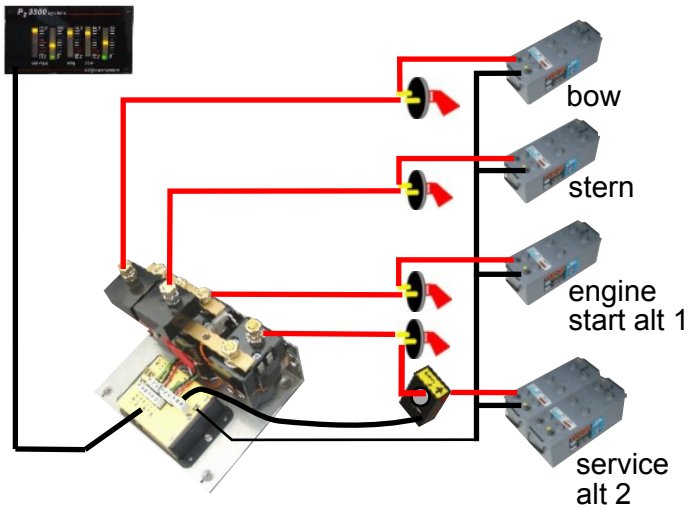
Powercentre

data sheet	P2831
issue date	12/09/13

data sheet twin engine, four bank, start, service, bow and stern

12 volt …. P2831 part number …. 12731-800

24 volt …. P2841 part number …. 12741-800



contactor current rating

continuous ……..... 200 amp @ 40 mV / contact / 100 A
engine start ……..... 400 amp intermittent
surge ……..…… 800 amp

operation ……..…. bi-directional split charge, standard

connect voltage bow .. 13.8V / 27.6V stern 13.9V / 27.8V
drop-out voltage …….. 13.0V / 26.0V

adjustment ……..... contactor engagement and drop out

protection ……. waterproof to IP66

display

type ……..... 10 dot bar-graph x 8

engine …… battery voltage
service …….. battery voltage and net amps, charge & discharge
bow …….. battery voltage and charge amps.
stern ……..... battery voltage and charge amps.

ammeter shunts …….. 3 integral Hall effect shunts

emergency link start … includes button to engage link start timed period.

system protection . . 5 internal PTC fuses, auto re-set

size / weight

contactor .. ……..... 175 x 140 x 135 mm / 1.9 Kgs

display ……..... 175 x 60 x 50 mm / 100 gms

standard pre-fitted options

bow contactor drop out with bow thruster use ……..... forces bow thruster to use local battery, avoiding charge system overload.

stern contactor drop out with stern thruster use …… forces stern thruster to use local battery, avoiding charge system overload.

emergency link start ….. allows engine to be started from service battery bank, timed engagement, remote switch.

split charge contactors

The system employs heavy duty contactors, these carry far higher loads than typical VSR relays, making them ideal for emergency engine starting. They also feature a high fault current rupture rating (300 amp to UL508), allowing the disconnection of high current loads at low voltage. The contacts are sealed to IP66, making them suitable for operation in a marine environment, protecting contacts from corrosion and avoiding flash from open contactor units.

emergency link start allows the engine to be started from the service bank for timed period, if the engine battery has a low capacity.

operating voltage units are normally set to standard switching voltages, we are happy to set modules to customer requirements, or they can be adjusted on site. Alternate voltages can be supplied to order, please contact technical section.

Operation the engines are wired to allow both engines to start from a single battery bank, the alternators are split to allow the engine 1 (alt 1) to charge the starter battery bank and then connects the bow battery at 13.8 volt, then the stern battery at 13.9 volt, when this reaches a set voltage the third contactor closes to allow charge to the service battery. The engine 2 alternator is permanently connected to the service battery. The system allows for either alternator to charge all the battery banks, thus if one alternator fails, the remaining one will charge all battery banks. A suitable secondary charge source connected to the service battery bank can charge both engine start, bow and stern battery.

options to order

contact rating …….. 100 and 350 amp
coil voltage …….. 12 volt DC to 48 volt DC

fresh water gauge …….. display can be supplied to read fresh water tank level on ammeter bar-graph, includes sensor.

remote bow shunt …… . shunt monitors net charge and discharge for bow battery, it also picks up local battery positive voltage.

remote stern shunt ….. . shunt monitors net charge and discharge for stern battery, it also picks up local battery positive voltage.

display options …… custom display with digital readout in addition to bar-graph, amps & volts.

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bar-graph

The display allows real time charge monitoring of both volts and amps for all batteries, plus it provides a battery level guide to both battery banks. By employing LED bar-graphs all voltages and amperages can be viewed with out the need for selector switch, or waiting for a display to scroll through. Critical battery voltage levels have red LED's to give visual warning, even when not close to display. The ammeter bar-graphs have a bi-colour LED's that shows polarity of current, green for charge, red for discharge, again providing instant warning if a problem

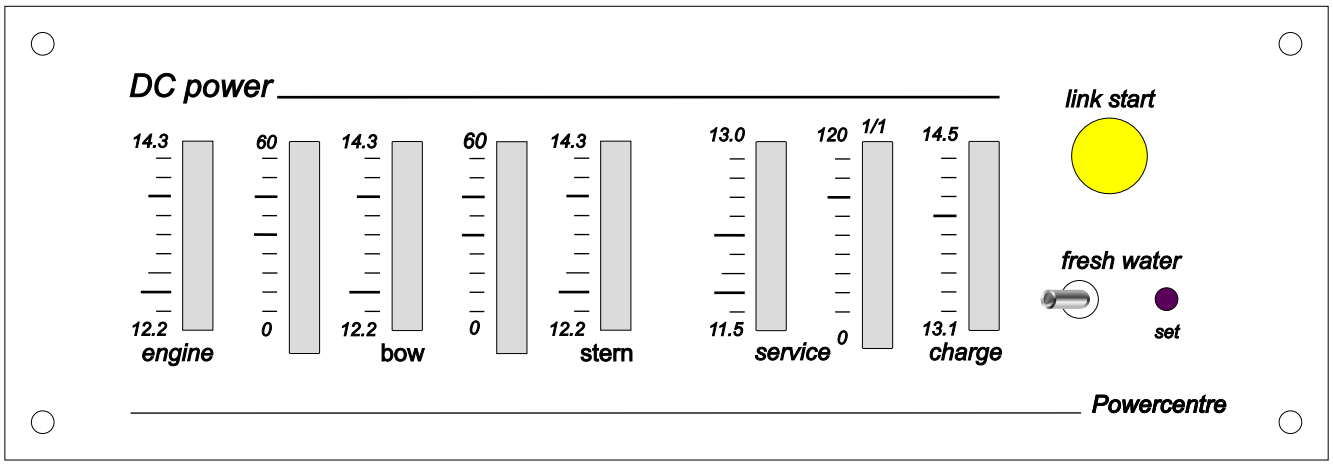
When charging batteries, the optimum recharge level for a system is when the voltage is at maximum and the current is low, easy to see as the bar-graphs are next to each other. At this point the batteries will not be taking any more significant charge, so motoring for longer is now only consuming fuel and money.

High voltage alarm, drives a audio alarm to indicate high charge voltage level, normally set at 15 volt, other values can be supplied factory set.

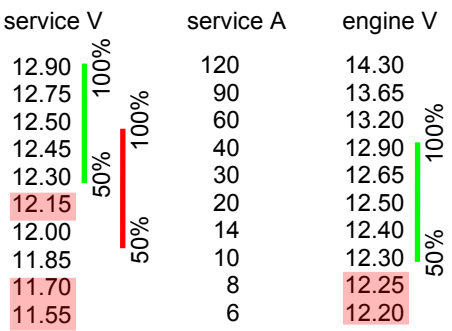
The display can be supplied to display the fresh water tank level on the ammeter bar-graph, it only requires the sensor head to be fitted to water tank. The system has the provision to set gauge reading to match the fresh water tank level.

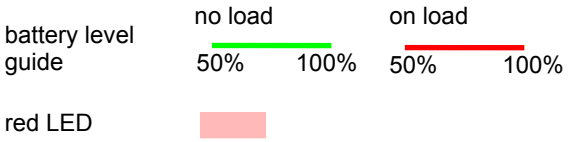
The display only requires connecting a 8 way data cable matching colour to colour, no shunts or cable modifications required.

standard display unit ***full size 175 mm x 60 mm x 50 mm deep***



display read-out





display options

The bar-graph can be supplied to order with alternate display values to suit a particular charging system, see ***display options*** allowing the display to be matched to the intended use,

logarithmic scale provides a extended scale in the low half, allowing low current monitoring of the completion of charge, or current drain during use. While the initial high charge current can be monitored on the upper high section.

linear scale, is used for monitoring charge current, or high discharge loads, the meter scale is uniform over the full meter range.

digital readout for all functions can be supplied to supplement the bar-graph display, allowing detail examination of volts or amps.

For non standard options please contact technical section.

alternate display scaling

log scale		linear scale	
60	240	100	200
45	175	90	180
30	125	80	160
20	80	70	140
15	60	60	120
10	40	50	100
7	28	40	80
5	20	30	60
4	16	20	40
3	12	10	20

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