



Notes:

1. This drawing is schematic so items are not necessarily in their correct positional relationship to each other.
2. Cable type is multi-strand PVC insulated 600V Tri-rated 105°C BS6231.
3. Cable sizes given are for cables bunched unenclosed in ambient air max 30°C. In conditions other than this, apply appropriate rating factors.
4. The volt drop in any cable or part of the installation may not exceed 5% - check cable sizes from manufacturers information and formula below.
5. Check circuit breaker sizes from manufacturers information. Do NOT install as shown without checking.
6. Joint boxes are non-metallic watertight.
7. Terminal blocks at switch panel & in joint boxes are to be rail-mounted & individually numbered.
8. Cables terminating in internal light fittings shall be fitted with silicone sleeves.
9. Cables terminating in external light fittings shall have tinned copper conductors or final terminations shall be tinned.
10. Check "Heat" and "Start" cable sizes from engine loom. Push button switches can replace OEM heat/start key switch.
11. Wire colour codes on the electrical drawings (though not necessarily in final installation):

12V DC Positive —
 12V DC Negative —

- P Electric pump
- L Light (without switch)
- / Float switch (float on)
- S Push switch
- M/A Manual-Off-Auto switch
- W Watertight socket
- 40² Wire size (nom. cross section area in sq mm)
- C Circuit Breaker 12V DC:
ETA Type 412 (25A); Type 413 (30A...50A); Type 452 (60A...100A) & Type 447 (125A...400A).

The formula to calculate volt drop (as a percentage) is as follows:

$$= \frac{2 \cdot I \cdot L \cdot 100}{U \cdot s} \%$$

Where:

- = Volt Drop
- = Current in Amps
- L = Length of cable in Metres
- = conductivity (for copper = 58)
- U = Rated Voltage in Volts
- s = Cable cross-section in mm²

Note:

The original design of this vessel has gimballed oil lamps as the principal lighting source while cruising and only a single 10A interior lighting circuit is shown. Depending on the number of interior lights fitted and their power, additional lighting circuits may be required. Do not increase the rating of a lighting circuit beyond 10A as most fittings are not rated above this – in fact multiple 5A circuits would be preferable.

Be sure to calculate voltage drops for lighting. Even though individual loads are often low, cable lengths can be quite extended, which will require larger cable sizes than the circuit breaker rating or the appliance rating would suggest. This also applies to mast and navigation lighting

- P = Bilge Pump
- AP = Autopilot
- FWP = Fresh Water Pump
- SP = Shower Pump

Note:

Nav. Lights under Power = Port and Stbd Lamps, 225° Mast Lamp and 135° Stern Lamp.
 Nav. Lights under Sail = Tri-colour Masthead Lamp.
 Nav. Lights at Anchor = 360° White Lamp at Masthead (bottom part of Tri-white).

BUT check current regulations as these can change.

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