

## Application Brief: Selecting the Appropriate Fuse Rating When Installing the 120A SI ACR

When installing Blue Sea Systems 120A SI ACR, PN 7610, use this chart to select the appropriate wire size and fuse rating.

| Wire sizing and fuse rating chart (AWG) |                    |             |
|---|--------------------|-------------|
| Charging Amps                           | Minimum wire size* | Fuse rating |
| 60                                      | #6                 | 80 Amps     |
| 80                                      | #4                 | 110 Amps    |
| 100                                     | #2                 | 150 Amps    |
| 120                                     | #1                 | 175 Amps    |

| Wire sizing and fuse rating chart (Metric) |                    |              |
|--|--------------------|--------------|
| Charging Amps                              | Minimum wire size* | Fuse rating  |
| 50   | 10mm <sup>2</sup>  | 75/80 Amps   |
| 70   | 16 mm <sup>2</sup> | 80/90 Amps   |
| 90   | 25 mm <sup>2</sup> | 125/130 Amps |
| 110  | 35 mm <sup>2</sup> | 150 Amps     |
| 120  | 50 mm <sup>2</sup> | 150/175 Amps |

\*Larger wire sizes may be required to minimize voltage drop in long wire runs.

Fuses installed between ACR terminals A and B, and each battery positive are to prevent a hazard if there is damage to the wires from the batteries to the ACR. Therefore, the fuses should be placed as close as possible to the batteries so that most of the wire is protected.

Since these fuses connect directly to batteries, choose fuse types that have sufficient AIC for your battery bank. Ideal fuses for this application are: ANL fuses 100A - PN 5125, 130A – PN 5126, 150A - PN 5127, and Terminal Fuses 90A – PN 5182, 100A - PN 5183, 125A – PN 5184, and 150A - PN 5185. (Terminal Fuses are available in September.)

### Typical 120 Amp SI Automatic Charging Relay Installation

