AC POWER MONITOR
A3770

The AC Monitor measures the voltage, current and frequency of up to four (4) Single phase single Line AC inputs, two (2) Single Phase Dual Line AC inputs, or one (1) Three phase Three Line AC input. The AC Monitor utilizes dual CAN connections for redundancy.

Product Highlights:
- Capable of Monitoring the following:
  - Four (4) Single Phase Single Line AC Input
  - Two (2) Single Phase Dual Line AC Inputs
  - One (1) Three Phase Three Line AC Input
- Dual CAN BUS Communication

Installation

Depending on the type and number of AC power sources being monitored, the AC Power Monitor requires from one (1) to four (4) Deutsch DT06-4S connectors (Table 1). It is also recommended that 16 AWG wire is used for the connections to the AC sources (Table 2).

Table 1:

<table>
<thead>
<tr>
<th>Deutsch DT06-4S Connector Pins</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AC Line</td>
<td></td>
</tr>
<tr>
<td>2. AC Neutral</td>
<td></td>
</tr>
<tr>
<td>3. AC Current Transformer Input #1</td>
<td></td>
</tr>
<tr>
<td>4. AC Current Transformer Input #2</td>
<td></td>
</tr>
</tbody>
</table>

Table 2:

<table>
<thead>
<tr>
<th>Wire Gauge</th>
<th>Contact Type</th>
<th>Deutsch Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 20</td>
<td>Solid</td>
<td>0462-201-16141</td>
</tr>
<tr>
<td>14 to 18</td>
<td>Stamped/formed</td>
<td>1062-16-0122</td>
</tr>
<tr>
<td>14 to 18</td>
<td>Stamped/formed</td>
<td>1062-16-0144</td>
</tr>
</tbody>
</table>

*Manufacturer reserves the right to change product specification without prior notice. Please refer to our website for the latest details.
**AC Power Monitor Installation #1**
Single 120 VAC/230 VAC (Euro)

- AC Main
- Line
- Neutral
- Ground

![Diagram of AC Power Monitor Installation #1](image1)

**AC Power Monitor Installation #2**
Dual 120/240VAC

- Leg A
- AC Main
- Line
- Neutral
- Ground

- Leg B
- AC Main
- Line
- Neutral
- Ground

![Diagram of AC Power Monitor Installation #2](image2)
**AC Power Monitor Installation #3**

Three Phase VAC (120/208VAC or 230/415VAC)

![AC Power Monitor Diagram]

**Operation**

There are three (3) LED's that are visible through the cover of the AC Power Monitor. The left and right LED's indicate that there is a primary and secondary network connection. The center LED displays the AC Input Power Status (i.e. whether the AC Power monitor is receiving power from the input connectors). The Multi-Function Displays shows the AC voltage (RMS), current and frequency of up to four (4) line inputs; if one or more inputs are not used, that value shall be displayed as zero. The internal temperature of the unit is also displayed.

**CAN Connections**

Two male Micro-C connectors are provided the right side of the AC Monitor for connection to the primary and secondary CAN bus via drop cables.

*NOTE*

Use the shortest drop length possible when connecting the AC Monitor to the CAN backbone. NMEA 2000 spec is maximum 6 meters for drop cables.
Standard AC Power Monitor Screen Layout
The AC Power Monitor page shows the status (voltage, current and frequency) of all AC line inputs. Specific configuration and installation of AC monitors are defined by the boat builder.

![AC Power Monitor Screen Layout](image)

**Maintenance**
The AC Monitor requires no maintenance. Any service or repair issues should be handled by a factory authorized technician.

**General Specifications**

**Electrical**
- AC Voltage Input: 90VAC – 264VAC
- Operating Frequency: 50/60 Hz
- CAN Bus Voltage: +15 VDC (± 0.5)
- Load Equivalence Number (LEN): 1

**Mechanical**
- Dimensions: 7.52” X 8.51” X 2.67”
- CAN Bus Connectors: Two (2) Micro-C Male
- Mounting: 4 each 4 x 0.16 #6 hardware
- Orientation: N/A

**Certifications**
- NMEA 2000
- Lloyd’s Register
- CE
- IEC 60533 Electrical and Electronic Installations in Ships
- IEC 60945 Maritime Navigation and Radio Communication Equipment and Systems

**Environmental**
- Radiated, RF Field Immunity: IEC-61000-4-3
- Electrical Fast Transient/Burst Immunity: IEC 61000-4-4
- Voltage Surge Immunity: IEC 61000-4-5
- Conducted, Immunity: IEC 61000-4-6
- Conducted Emissions: IEC 60945
- Voltage Variation Immunity: IEC 61000-4-11
- Conducted LF Immunity: IEC 61000-4-16
- ESD Immunity: IEC-61000-4-2
- Insulation Resistance: IEC-60092-504
- Operating Temperature: -40°C to +70°C
- Storage Temperature: -40°C to +85°C
- Vibration: IEC-60068-2-6 Test Fc
- Temperature Cycle: IEC 60945
- Humidity: IEC-60068-2-30 Test Db
- Corrosion: IEC 60945
- Weight: 3.6 lbs (1.64 kg) nominal
**Dimensional Specifications:** in. [mm]

**AC Power Monitor**

**A3770**

**Transformer**

**CR8459-2000-N**

For complete detail, please visit the following link: www.crmagnetics.com/Assets/ProductPDFs/CR8400%20Series.pdf