Critical Power from GE

Compact Power Line Shelves
Model: J85480S1

The 1U (1.75") high CPL family of shelves mount in 19-inch wide frames and provide up to 11kW of 48V output power per shelf. There are three or four slots for rectifiers, converters (PEMs). With the exception of L23, these rectifier shelves are capable of utilizing the higher power capacity of the CP2725 rectifier.

- Only 16.81" wide fits inside equipment that is designed into a 19" rack.
- Two DC Outputs may be common or split. Each output bus is rated for 100A with two-hole lug landings for 2 AWG wire (L15 can be 148A at one side with two-hole lug landings for 1 AWG wire).
- Independent IEC-320 AC input for each rectifier.
- Analog, RS485 or dual/redundant I²C communications.
- Adjustable mounting ears for flush or set back positions.
- Stackable up to 8 high with 32 paralleled power supplies.
- Isolated output for common output shelves.

Rectifier Shelves (AC Input, DC Output)

<table>
<thead>
<tr>
<th>List</th>
<th>Max Power</th>
<th># AC Input</th>
<th>AC Input Plug</th>
<th>DC Output Bus</th>
<th>Max Rectifier Size</th>
<th>Features</th>
<th>Ordering Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>8kW</td>
<td>4</td>
<td>IEC-320, C13</td>
<td>Common</td>
<td>CP2000</td>
<td>(±) 54Vdc</td>
<td>108994538</td>
</tr>
<tr>
<td>20</td>
<td>11kW</td>
<td>4</td>
<td>IEC-320, C19</td>
<td>CP2725</td>
<td>(±) 54Vdc, 48.8Vdc</td>
<td>Analog, I²C, RS485</td>
<td>CC109147344</td>
</tr>
<tr>
<td>20A</td>
<td>8kW</td>
<td>2</td>
<td>AMP Power-Blade</td>
<td>Split</td>
<td>CP2000</td>
<td>(±) 54Vdc</td>
<td>1600087352A</td>
</tr>
<tr>
<td>23</td>
<td>8kW</td>
<td>4</td>
<td>IEC-320, C13</td>
<td>Common</td>
<td>CP2000</td>
<td>(±) 54Vdc</td>
<td>CC109150447</td>
</tr>
</tbody>
</table>

PEM Shelves (DC Input, DC Output)

<table>
<thead>
<tr>
<th>List</th>
<th>Capacity</th>
<th># DC Input</th>
<th>DC Input Plug</th>
<th>DC Output Bus</th>
<th>Max PEM Size</th>
<th>Communications Features</th>
<th>Ordering Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>8kW</td>
<td>2</td>
<td>AMP Power-Blade</td>
<td>Split</td>
<td>CP2000</td>
<td>No, Analog, I²C</td>
<td>CC109124764</td>
</tr>
<tr>
<td>15</td>
<td>8kW</td>
<td>2</td>
<td>AMP Power-Blade</td>
<td>Common</td>
<td>CP2500</td>
<td>No, Analog, I²C</td>
<td>1600264406A</td>
</tr>
</tbody>
</table>

Notes:
- Split shelf L21 Vout (-) is split, however Vout (+) is paralleled among the 4 rectifiers. Vout (+) should be grounded.
- All lists, up to 2 shelves can be paralleled for a single I²C line. Up to eight shelves may be paralleled for current shared power delivery.
- All lists, shelf configured set point ensures inter-operability among all rectifiers from CP1800 to CP2725. Rectifiers will proportionately current share relative to their output power capacity.
- All shelves are RoHS 6 compliant. Order should reflect J85480S1LxxZ where xx is the list number and Z indicates compliance to RoHS 6
- L20A must use with CP2725-FB rectifier to get 48.8Vdc output.

Consult the factory for product availability.
Package Outline

List 4

Lists 14, 15
Rear Views

List 4

Lists 20, 20A, 21, 23

Lists 14, 15

2 Input:
L20, L20A & L21: IEC 320-C20 sockets
L23: IEC 320-C14 sockets
AC Input Connections

Tie-rap secured AC cables for IEC-320 inputs

DC Input Connection – L14, L15 shelf

Housing: AMP 1600798-6 multi-beam XL
Contacts: AMP 1-1600960-8
Wire: 10 ga stranded – 30A rated capacity

<table>
<thead>
<tr>
<th>Pins</th>
<th>Color</th>
<th>Signal</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–2</td>
<td>Black</td>
<td>-48V</td>
<td>1</td>
</tr>
<tr>
<td>3–4</td>
<td>Red</td>
<td>RTN</td>
<td>2</td>
</tr>
<tr>
<td>5–6</td>
<td>Black</td>
<td>-48V</td>
<td></td>
</tr>
<tr>
<td>7–8</td>
<td>Red</td>
<td>RTN</td>
<td></td>
</tr>
</tbody>
</table>

DC Output Connections

- Each Output Bus is rated for 100A and up to 2 gage two-hole lugs. (L15 can be 148A at one side with two-hole lug landings for 1 AWG wire)
- M6 nuts with conical washers provided.
- Touch-Safe plastic covers around output buses.

DC Split Output Bus Option

- Split Vout (-) buses on either side of the shelf. Vout (+) is common to both sections.
- +5V bias maintains I2C communications even during a feeder fault.
- Multiple shelves may not be paralleled together.
**Controllerless Operation**

- Lists 4 and 15 ship with a jumper installed on connector J1 pins 21 and 23. This allows the shelf to be powered without a controller.

- Lists 20, L20A & L23 single output shelves, shorting jumper between J1 pins 19 and 20. Lists 21 split output shelf, second shorting jumper between J1 pins 21 and 22.

- Lists 14 requires cc84836107 connector be installed in J1 to allow the shelf to power up without a controller.

**Notes:**

Jumpers to short ENABLE (turn ON) to Logic_GRD are either in a separate bag or inserted into the J1 signal connector.

Jumper must be removed prior to inserting a mating connector into the J1 housing.

Applications that desire a remote ON/OFF feature should connect ENABLE-A to Logic_GRD via an external switch. For split shelves ENABLE-A control the two leftmost rectifiers and ENABLE-B controls the two rightmost rectifiers.

**L14, L15 J1 Mating connector (pin out is standard 40 position like L4)**

<table>
<thead>
<tr>
<th>Type</th>
<th>Housing</th>
<th>Mating pin</th>
<th>Crimping tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual wire set</td>
<td>AMP 102387-9 RoHS</td>
<td>20-24 AWG: 6-87523-9</td>
<td>91517-1</td>
</tr>
<tr>
<td>40 position Ribbon cable</td>
<td>AMP 1658621-9 e/w</td>
<td>22-26 AWG: 6-87756-8</td>
<td>91517-1</td>
</tr>
<tr>
<td></td>
<td>499252-1 (strain relief) RoHS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This connector set is different because it can accept either a ribbon cable or an individual wire mate.
### Communication Signals: J1 Connector (L4, L14, L15)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POWER_CAP_4</td>
<td>21</td>
<td>Enable side A</td>
</tr>
<tr>
<td>2</td>
<td>POWER_CAP_3</td>
<td>22</td>
<td>SVA</td>
</tr>
<tr>
<td>3</td>
<td>POWER_CAP_2</td>
<td>23</td>
<td>Logic_GRD</td>
</tr>
<tr>
<td>4</td>
<td>POWER_CAP_1</td>
<td>24</td>
<td>Interrupt_1</td>
</tr>
<tr>
<td>5</td>
<td>MOD_PRES_4</td>
<td>25</td>
<td>Reset</td>
</tr>
<tr>
<td>6</td>
<td>MOD_PRES_3</td>
<td>26</td>
<td>Enable Side B</td>
</tr>
<tr>
<td>7</td>
<td>MOD_PRES_2</td>
<td>27</td>
<td>Spacing</td>
</tr>
<tr>
<td>8</td>
<td>MOD_PRES_1</td>
<td>28</td>
<td>Spacing</td>
</tr>
<tr>
<td>9</td>
<td>PFW_4</td>
<td>29</td>
<td>RS_485_Select</td>
</tr>
<tr>
<td>10</td>
<td>PFW_3</td>
<td>30</td>
<td>Shelf_Addr_A</td>
</tr>
<tr>
<td>11</td>
<td>PFW_2</td>
<td>31</td>
<td>Shelf_Addr_B</td>
</tr>
<tr>
<td>12</td>
<td>PFW_1</td>
<td>32</td>
<td>Shelf_Addr_C</td>
</tr>
<tr>
<td>13</td>
<td>SCL_0</td>
<td>33</td>
<td>Shelf_Addr_D</td>
</tr>
<tr>
<td>14</td>
<td>SCL_1</td>
<td>34</td>
<td>Shelf_Addr_E</td>
</tr>
<tr>
<td>15</td>
<td>SDA_0</td>
<td>35</td>
<td>Shelf_Addr_F</td>
</tr>
<tr>
<td>16</td>
<td>SDA_1</td>
<td>36</td>
<td>Shelf_Addr_G</td>
</tr>
<tr>
<td>17</td>
<td>OTW</td>
<td>37</td>
<td>Protocol_S</td>
</tr>
<tr>
<td>18</td>
<td>Margin</td>
<td>38</td>
<td>RS-485+</td>
</tr>
<tr>
<td>19</td>
<td>Fault</td>
<td>39</td>
<td>RS_485-</td>
</tr>
<tr>
<td>20</td>
<td>Interrupt_0</td>
<td>40</td>
<td>Ishare</td>
</tr>
</tbody>
</table>

### Control Interface Connection (J1 - AMP 499913-9)

Analog single-shelf applications can be addressed using the first 24 pins of controller.

I²C and RS_485 serial communications require pins 25 through 39 of controller connector J1.

Ishare (pin 40) is required for multi-shelf current sharing. If all serial addressing pins (30-36) are referenced to 48_OUT (-).

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### Communication Signals: J2 Connector (L4, L15, except split shelf L14)

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PFW_4</td>
<td>18</td>
<td>Enable Side B</td>
</tr>
<tr>
<td>2</td>
<td>PFW_3</td>
<td>19</td>
<td>Spacing</td>
</tr>
<tr>
<td>3</td>
<td>PFW_2</td>
<td>20</td>
<td>Spacing</td>
</tr>
<tr>
<td>4</td>
<td>PFW_1</td>
<td>21</td>
<td>RS_485_Select</td>
</tr>
<tr>
<td>5</td>
<td>SCL_0</td>
<td>22</td>
<td>Shelf_Addr_B</td>
</tr>
<tr>
<td>6</td>
<td>SCL_1</td>
<td>23</td>
<td>Shelf_Addr_C</td>
</tr>
<tr>
<td>7</td>
<td>SDA_0</td>
<td>24</td>
<td>Shelf_Addr_D</td>
</tr>
<tr>
<td>8</td>
<td>SDA_1</td>
<td>25</td>
<td>Shelf_Addr_E</td>
</tr>
<tr>
<td>9</td>
<td>OTW</td>
<td>26</td>
<td>Shelf_Addr_F</td>
</tr>
<tr>
<td>10</td>
<td>Margin</td>
<td>27</td>
<td>Shelf_Addr_G</td>
</tr>
<tr>
<td>11</td>
<td>Fault</td>
<td>28</td>
<td>Shelf_Addr_H</td>
</tr>
<tr>
<td>12</td>
<td>Interrupt_0</td>
<td>29</td>
<td>Protocol_S</td>
</tr>
<tr>
<td>13</td>
<td>Enable side A</td>
<td>30</td>
<td>RS-485+</td>
</tr>
<tr>
<td>14</td>
<td>SVA</td>
<td>31</td>
<td>RS_485-</td>
</tr>
<tr>
<td>15</td>
<td>Logic_GRD</td>
<td>32</td>
<td>Ishare</td>
</tr>
<tr>
<td>16</td>
<td>Interrupt_1</td>
<td>33</td>
<td>Spare</td>
</tr>
<tr>
<td>17</td>
<td>Reset</td>
<td>34</td>
<td>Spare</td>
</tr>
</tbody>
</table>

---

### Multi-shelf Connection (J2 - AMP 499913-8)

J2 to J1 Ribbon Cable Assembly 648730245

J1 Ribbon Cable Assembly 648730245

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Communication Signals: J1 Connector (L20, L20A, L21, L23)

**Pin out**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>POWER_CAP_1</td>
<td>16</td>
<td>SDA_1</td>
</tr>
<tr>
<td>2</td>
<td>POWER_CAP_2</td>
<td>17</td>
<td>Fault</td>
</tr>
<tr>
<td>3</td>
<td>POWER_CAP_3</td>
<td>18</td>
<td>Alert#_0</td>
</tr>
<tr>
<td>4</td>
<td>POWER_CAP_4</td>
<td>19</td>
<td>Enable side B</td>
</tr>
<tr>
<td>5</td>
<td>MOD_PRES_1</td>
<td>20</td>
<td>Logic_GRD</td>
</tr>
<tr>
<td>6</td>
<td>MOD_PRES_2</td>
<td>21</td>
<td>Enable Side A</td>
</tr>
<tr>
<td>7</td>
<td>MOD_PRES_3</td>
<td>22</td>
<td>Logic_GRD</td>
</tr>
<tr>
<td>8</td>
<td>MOD_PRES_4</td>
<td>23</td>
<td>Alert#_1</td>
</tr>
<tr>
<td>9</td>
<td>PFW_1</td>
<td>24</td>
<td>5VA</td>
</tr>
<tr>
<td>10</td>
<td>PFW_2</td>
<td>25</td>
<td>OTW</td>
</tr>
<tr>
<td>11</td>
<td>PFW_3</td>
<td>26</td>
<td>Reset</td>
</tr>
<tr>
<td>12</td>
<td>PFW_4</td>
<td>27</td>
<td>Iso. barrier n/c</td>
</tr>
<tr>
<td>13</td>
<td>SCL_0</td>
<td>28</td>
<td>Iso. barrier n/c</td>
</tr>
<tr>
<td>14</td>
<td>SCL_1</td>
<td>29</td>
<td>Shelf_Addr_B</td>
</tr>
<tr>
<td>15</td>
<td>SDA_0</td>
<td>30</td>
<td>Shelf_Addr_A</td>
</tr>
</tbody>
</table>

Control Interface cable (part # CC848854034)

Communication Signals: J2 Connector (L20, L20A, L21, L23)

**Pin out**

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SCL_0</td>
<td>8</td>
<td>Alert#_1</td>
</tr>
<tr>
<td>2</td>
<td>SCL_1</td>
<td>9</td>
<td>Isolation n/c</td>
</tr>
<tr>
<td>3</td>
<td>SDA_0</td>
<td>10</td>
<td>Isolation n/c</td>
</tr>
<tr>
<td>4</td>
<td>SDA_1</td>
<td>11</td>
<td>Ishare - B</td>
</tr>
<tr>
<td>5</td>
<td>Alert#_0</td>
<td>12</td>
<td>Ishare - A</td>
</tr>
<tr>
<td>6</td>
<td>5VA</td>
<td>13</td>
<td>8V_INT - B</td>
</tr>
<tr>
<td>7</td>
<td>Logic_GRD</td>
<td>14</td>
<td>8V_INT - A</td>
</tr>
</tbody>
</table>

Shelf-to-shelf cable connection (part # CC848848952)

Notes:

Shelf addressing, 8V_INT, and current share are referenced to the most negative power output Vout(-) of the shelf. For paralleled shelves the Vout(-) terminations must be tied together in order to ensure proper operation of these functions. Modules could get damaged if this connection is not made.

For address A2=0, connect a voltage divider between 8V_INT_x [149K] and Vout(-)_x[10K]. The midpoint of the two resistors should be connected to Shelf_Addr_x. For A2=1, connect Shelf_Addr_x to Vout(-). For all other signals refer to the rectifier data sheet.

Signal connector part numbers

(AMP – as specified or equivalent)

<table>
<thead>
<tr>
<th>Connector</th>
<th>Positions</th>
<th>On shelf</th>
<th>Ribbon cable</th>
<th>Individual wires</th>
<th>Crimping tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td>30</td>
<td>5102159-7</td>
<td>1658621-7 header</td>
<td>102387-7 header</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>102320-1 latch</td>
<td>1-499252-2 retainer</td>
<td>6-87756-8 pin*</td>
</tr>
<tr>
<td>J2</td>
<td>14</td>
<td>5102159-2</td>
<td>1658621-2 header</td>
<td>102387-2 header</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>102320-1 latch</td>
<td>499252-9 retainer</td>
<td>6-87756-8 pin</td>
</tr>
</tbody>
</table>
### Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Max</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Input Current, per module</td>
<td>15A</td>
<td>20A</td>
<td>IEC-320, C13 type&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>DC Input Current, per module</td>
<td>60A</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmable output set point</td>
<td>42Vdc</td>
<td>58Vdc</td>
<td>Minimum 44Vdc via hardware marginning</td>
</tr>
<tr>
<td>Max Output Current J85480S1</td>
<td>200A</td>
<td></td>
<td>lugs for 2/1 ga wires, 2/1 pairs, 100A/148A max&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>Output Terminations</td>
<td></td>
<td></td>
<td>M6 threaded studs on 5/8-inch centers</td>
</tr>
</tbody>
</table>

### Environmental

- **Operating Temperature Range**
  - -40°C to 65°C for UL recognition and 45°C for VDE certification
- **Operating Relative Humidity**
  - 0 - 95% (non-condensing)
- **Storage Temperature Range**
  - -40°C to 85°C
- **EMC**
  - FCC, EN 55022, CISPR22, Level A, conducted and radiated
- **Immunity**
  - FCC and CISPR22 (EN55022) Class A2

### Safety/Standards Compliance

- **Safety Standards**
  - UL1950, EN60950 (IEC950), CSA*234/950
- **Certification Marks**
  - Lists 14,15,20A,21,23: VDE,
  - UL Recognized (Canada and U.S.)
  - Lists 4: VDE,
  - UL Listed (Canada and U.S.)

### Notes:

<sup>1</sup> IEC320 – C13 plugs are rated for 10A international and 15A in North America

<sup>2</sup> IEC320 – C19 plugs are rated for 16A international and 20A in North America

<sup>3</sup> L15 can be 148A at one side output with two-hole lug landings for 1 AWG wire
### Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
<th>Comcode</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blank Slot Fillers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Office White</td>
<td></td>
<td>CC848822263</td>
<td></td>
</tr>
<tr>
<td>Raven Black</td>
<td></td>
<td>CC848781534</td>
<td>All</td>
</tr>
<tr>
<td>Graphite</td>
<td></td>
<td>CC848825233</td>
<td></td>
</tr>
<tr>
<td><strong>Extensions and mounting brackets</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1U high extension bracket kit for 23&quot; cabinets (includes two brackets and mounting hardware)</td>
<td>CC84884803</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>2U high extension bracket kit for 23&quot; cabinets (includes two brackets and mounting hardware)</td>
<td>848683009</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td><strong>Cables / Connectors for J85480S1 Shelves</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ribbon cable for attaching a controller to the power shelf ~ 10 ft. One end mates into J1 the other end not terminated.</td>
<td>848738245</td>
<td>L4</td>
<td></td>
</tr>
<tr>
<td>Individual wire ser cable for attaching a controller to the power shelf ~ 6 ft. One end mates into J1 the other end not terminated.</td>
<td>CC848854034</td>
<td>L20, L20A, L21, L23</td>
<td></td>
</tr>
<tr>
<td>Cable set from J1 of the shelf to the CPL Interface Board</td>
<td>CC848848960</td>
<td>L20, L20A, L21, L23</td>
<td></td>
</tr>
<tr>
<td>Inter-shelf connector for daisy-chaining shelves ~ 9 in between J1 of 2nd and J2 of 1st shelf</td>
<td>848738253</td>
<td>L4</td>
<td></td>
</tr>
<tr>
<td>Inter-shelf cable set for interconnecting J2 signals between shelves</td>
<td>CC848848952</td>
<td>L20, L20A, L21, L23</td>
<td></td>
</tr>
<tr>
<td>2 AWG DC output cable set ~ 10 ft (1 RED and 1 BLACK cable)</td>
<td>848748987</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>1 AWG DC output cable set ~ 10 ft (1 RED and 1 BLACK cable)</td>
<td>8600279027P</td>
<td>L15</td>
<td></td>
</tr>
<tr>
<td>AC Input cable: High temperature IEC 320 C13 straight over-mold (one end), NEMA5-15P plug (one end), 14 AWG, 10 ft</td>
<td>CC848776105</td>
<td>L4</td>
<td></td>
</tr>
<tr>
<td>AC input cable: IEC 320 C13 plug (one end), other end not terminated, 14 AWG, 14 ft,</td>
<td>847861192</td>
<td>L4, L23</td>
<td></td>
</tr>
<tr>
<td>AC input cable: IEC320 C19 straight plug (one end), other end not terminated</td>
<td>CC848847368</td>
<td>L20, L20A, L21</td>
<td></td>
</tr>
<tr>
<td>AC input cable: IEC320 C19 right angle plug (one end), other end not terminated</td>
<td>848713376</td>
<td>L20, L20A, L21</td>
<td></td>
</tr>
<tr>
<td>DC input cable ~ 4 ft</td>
<td>CC848794908</td>
<td>L14, L15</td>
<td></td>
</tr>
<tr>
<td>Shorting jumper for J1 connector ENABLE for single output shelf (see locating picture)</td>
<td>AMP 881545-2</td>
<td>L4, L15</td>
<td></td>
</tr>
<tr>
<td>J1 connector ENABLE jumper for split shelf</td>
<td>CC848836107</td>
<td>L14</td>
<td></td>
</tr>
<tr>
<td>M6 screw with conical washer</td>
<td>901377010</td>
<td>L20, L20A, L21, L23</td>
<td></td>
</tr>
<tr>
<td><strong>Pulsar Controllers for J85480S1 Shelves</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NE843G</td>
<td>1U standalone Controller (Display, DB9 craft port and RJ45 ethernet)</td>
<td>CC109139358</td>
<td></td>
</tr>
<tr>
<td><strong>Cables for Pulsar Controllers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NE843G to CP Shelf Cable Kit (includes 2ft power and communication cable)</td>
<td>CC109144820</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J4 Output Alarm Cable 50ft – 24ga solid twisted pair</td>
<td>CC848817635</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J4 Output Alarm Cable 150ft – 24ga solid twisted pair</td>
<td>CC848817643</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J3 Input Alarm Cable 50ft – 24ga Stranded</td>
<td>CC848817651</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J3 Input Alarm Cable 150ft – 24ga Stranded</td>
<td>CC848817668</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Support Tools

<table>
<thead>
<tr>
<th>Support Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Graphical User Interface</strong></td>
<td>This program exercises the various commands and functions available via the I²C interface of the power supply. Two independent GUIs can demonstrate the two independent I²C multiplexed lines. Find out who is in control, take over control. The GUI has an automated polling feature and records all state changes in a time stamped automated fashion. Monitoring of the power system is therefore trivial for long periods of time.</td>
</tr>
<tr>
<td><strong>Interface Board</strong></td>
<td>This board can be used independently or in combination with the GUI interface. LEDs display the status of the analog signals and dip switches change the signal state to the power supply. In addition, two connectors are provided for interfacing to the two I²C lines of the power supplies.</td>
</tr>
<tr>
<td><strong>Total Communications Solution</strong></td>
<td>This is a nuts and bolts complete hardware solution that starts from either the USB or RS232 port of a computer and ends with a cable set that connects into the J1 signal connector of the shelf. In between is the interface board and a commercially available converter that translates the computer signals into I²C and vice versa. The converter is an MIIC-202 IPort manufactured by Micro Computer Control (mcc-us.com).</td>
</tr>
</tbody>
</table>
Safety Symbols and Guidelines

Read and understand all instructions before attempting any installation of this product. When installing, operating, or maintaining the J85480S1 Power System, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons. Such precautions include the following:

This symbol identifies the need to refer to the equipment instructions for important information.

This symbol identifies the presence of hazardous AC or DC voltages or hazardous energy levels. In the context of this product:
- The DC output cables contain electrical energy levels capable of causing heating and arcing if shorted to metal objects. Make connections with the power disconnected.
- Hazardous AC voltage and DC electrical energy is contained within the enclosure of the power shelf. No user or field serviceable parts inside.

This symbol is used to identify safety earth ground connection points within the equipment.

Product Labeling

Follow all warnings and instructions marked on the product. Some of the safety symbols used with the CP1800 Rectifier and J85480S1 Shelf may include the following. They may also be accompanied by instructions:

Mounting and Installation

- This product shall be installed in compliance with mounting requirements for the ultimate application.
- This product must be installed, serviced, and operated only by skilled and qualified personnel who have the necessary knowledge and practical experience with electrical equipment and who understand the hazards that can arise when working on this type of equipment. This product is intended for use in a Restricted Access Location.
- This equipment is to be used in controlled environments (an area where the humidity is maintained at levels that cannot cause condensation on the equipment, the contaminating dust is controlled, and the steady-state ambient temperature is within the range specified).
- This equipment has been evaluated for use in a continuous ambient temperature of up to 55°C and the application environment should not exceed 55°C.
- The CE mark if provided on the product is applied to show conformance to the requirements outlined in the European Union’s Low Voltage Directive (72/73/EEC) and EMC Directive (89/336/EEC), as amended by the CE Mark Directive (93/68/EEC).
- The J85480S1 shelf, when used with the CP1800 rectifiers, has been evaluated for hot swapping.
- A separate protective Earthing terminal is provided at the reach of the shelf
  - the building installation shall provide a means for connection to protective earth; and
  - the equipment is to be connected to that means; and
- a SERVICE PERSON shall check whether or not the socket-outlet from which the equipment is to be powered provides a connection to the building protective earth. If not, the SERVICE PERSON shall arrange for the installation of a PROTECTIVE EARTHING CONDUCTOR from the separate protective Earthing terminal to the protective earth wire in the building.
Output Connections

• All field wiring should comply with the U.S. National Electrical Code (NEC) and/or applicable local codes/standards.
• Routing of the DC output cables should guarantee that cables are not in contact with sources of heat and surfaces that may damage the cable insulation.
• The DC output is not provided with a fuse or circuit breaker suitable for branch circuit protection. Therefore, the power shelf should be mounted in the same rack or cabinet as the equipment being powered. Use interconnecting power cables suitable for the application and sized to carry the rated output current. The interconnecting cables should be capable of carrying the overload current and short circuit current without damage or risk of fire.
• The output for the system is SELV and has available power greater than 240VA.
• Insulation on output field-wired conductors should be rated no less than 90°C. Wiring internal to enclosed equipment cabinets should be rated at 105°C (minimum). The provided DC output cords (red and black wires) are rated for 105°C.
• Before opening the insulating cover to gain access to load and ground connections, ensure all power supplies are disconnected from the AC MAINS.

AC Input Connections

• AC branch circuits to this equipment must be protected with fuses or circuit breakers sized as required by the U.S. National Electric Code (NEC) and/or local codes. Up to four AC mains power cords are required to power the shelf (one for each rectifier). Each power cord should be connected to a separate AC mains branch circuit with an overcurrent protector rated at no more than 20A.
• The power supply mains inlet may be used as the means to provide AC protective earthing.
• An accessible AC disconnect/protection device to remove AC power from the equipment in the event of an emergency must be provided. An accessible socket-outlet/receptacle installed near the equipment is also acceptable as a disconnect.
• The equipment is powered by multiple AC inputs (one per rectifier). Disconnect all AC sources of power before servicing.
• These units are to be used with TN-S power systems only.

German Safety Guidelines

Installationsanleitung

• Alle Ausgänge des Gerätes erfüllen die Anforderungen für SELV nach IEC/EN60950-1.

ACHTUNG:
Hoher Ableitstrom Vor Anschluss an den Versorgungsstromkreis unbedingt Erdungsverbindung herstellen

• Das Produkt ist zum Gebrauch in einer Umgebungstemperatur von max. 55°C bestimmt.
• Die Gerätestecker des Produktes sind dazu bestimmt, eine sichere Erdung des Gerätes herzustellen.
• Das Produkt ist zum Gebrauch in einer Umgebung mit Verschmutzungsgrad 2 nach IEC/EN60950 bestimmt.
• Die Netzteile des Gerätes können während des Betriebes einzeln ausgetauscht werden (Hot Swapping).
Contact Us

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