Your most recent listing is shown below. Please review this information and report any inaccuracies to the UL Engineering staff member who handled your project.

For information on placing an order for UL Listing Cards in a 3 x 5 inch format, please refer to the enclosed ordering information.

NMMS2
Power Conversion Equipment - Component
July 12, 2000

PARKER-HANNIFIN CORP COMPUMOTOR DIV
5500 BUSINESS PARK DR, ROHNERT PARK CA 94928

E126076

Microstepping motor controllers. Models 56, 58, SX6, SX8, SXF6, SXF8.
Model OEM4300 may be prefixed with CP and suffixed with AR Power Module; Models OEM750 Drive, OEM750X Drive Indexer may be followed by suffixes “-M2” and/or “-RC”; Drive, Models OEM670, Models OEM675, OEM770, may be followed by “SD”, “T”, “X” Drive;
Models OEM750, OEM750X may be followed by “RC”.
Models APEX-30, APEX-40, APEX-6152, APEX-6154 may be followed by -120VAC Bias Supply.
Model ZETA Series and OEM Series; ZTEA4, ZTEA6104, OEMZLA, OEMZL6104, OEMZLA.
Models APEX10, APEX6151.
Models TQ10, TQ10K, TQ10SD may be followed by EHS.
Model, ZTEA8, ZTEA12, ZTEA20 Series, ZTEA6104-240, ZTEA6108, ZTEA6112.
Models, GT may be followed by 5, and followed by -L5, -L8, -U5 or -U8; GV may be followed by 6, and followed by -L3, -U3, -U6 or -U12,
GV-H2, GV-H20E, GV6-H20E, GPDM.
Models GV-L3, GV-U3, GV-U6, GV-U12, GV6-L3, GV6-U3, GV6-U6, GV6-U12, GT-L5, GT-L8, GT-U5, GT-U8, GT6-L5, GT6-U5,
GT6-U8. Drive models may be followed by L, R, -PB, -SC or -LB.
Marking: Company name and model designation.

See General Information Preceding These Recognitions
For use only in equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.
DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Power Conversion Equipment, Gemini Series. Specific models included in the section are as follows:

Model: GVx-L3, GVx-U3, GVx-U6, GVx-U12, GVx-H20
Model: GTx-L5, GTx-L8
Model: GT-U5, GT-U8
Model: GPDM
Drive models "x" may be replaced by blank, "6" or "6K", see nomenclature. Drive models may be followed by E, R, -PB, -SC or IS.

ELECTRICAL RATINGS:

Stepper Drives

<table>
<thead>
<tr>
<th>Power Level Reference</th>
<th>Input Voltage (V ac)</th>
<th>Output Voltage (V dc)</th>
<th>Output Current (A peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTx-U5</td>
<td>95-132, 190-264</td>
<td>74</td>
<td>5.0</td>
</tr>
<tr>
<td>GTx-U8</td>
<td>95-132, 190-264</td>
<td>74</td>
<td>7.5</td>
</tr>
<tr>
<td>GTx-L5</td>
<td>95-132</td>
<td>134-186</td>
<td>5.0</td>
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<tr>
<td>GTx-L8</td>
<td>95-132</td>
<td>134-186</td>
<td>8.0</td>
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</table>

Servo Drive

<table>
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<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>GVx-L3</td>
<td>95-132</td>
<td>134-186</td>
<td>3.0</td>
<td>7.5</td>
</tr>
<tr>
<td>GVx-U3</td>
<td>95-264 10</td>
<td>134-373</td>
<td>3.0</td>
<td>7.5</td>
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<tr>
<td>GVx-U6</td>
<td>95-264 10</td>
<td>134-373</td>
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<td>GVx-U12</td>
<td>95-264 10</td>
<td>134-373</td>
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<td>95-264 1/30</td>
<td>134-373</td>
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<td>50.0</td>
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</tbody>
</table>

*Gemini Power Dissipation Module, Model GPDM
*Rated 400 V dc, 25 A
Addition of "6" or "6K" to Model nomenclature does not affect electrical ratings.
NOMENCLATURE:

I. Drive:
   G (Gemini)

II. Type:
   V: Servo Motor Drive
   T: Step Motor Drive

III. Control:
   6: 6000-Based Motor Indexer
   6K: 6K-Based Motor Indexer
   Blank

IV. Input Voltage Level:
   H (High): 240 V
   L (Low): 120 V
   U (Universal): 120/240 V

V. Output Motor Current:
   For GT: 5 = 5 A; 8 = 8 A
   For GV: 3 = 3 A; 6 = 6 A; 12 = 12 A; 20 = 20 A

VI. Feedback Option:
   E: Encoder/Hall
   R: Resolver
   Blank

VII. Data Bus:
   IS, PB, SC, or Blank

VIII. Ship Kit Option:
   -NK or Blank
ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE’S USE):

For use in products where the acceptability of the combination is determined by Underwriters Laboratories Inc., CNR indicates investigation to Canadian Standard C22.2, No. 14.

Conditions of Acceptability - When installed in the end-use equipment, the following are among the considerations to be made:

1. These components have been judged on the basis of the required spacings in the Standard for Industrial Control Equipment, UL 508 and CSA Standard C22.2, No. 14, which covers the end-use product for which the components were designed.

2. The device shall be installed in compliance with the enclosure, mounting, spacing, casualty, markings, and segregation requirements of the end-use application.

3.* The Short Circuit Test have been evaluated, and is not required in the end-product.

4. The input and motor connections have not been evaluated for field wiring and should be considered in the end-product.

5. These motor controllers have been evaluated for specific motors only. The motors with which the Gemini motor controllers were evaluated are:

Stepper Models -

and Servo Models -

VW/LO: kj
SCDLS
6. These motor controllers have not been evaluated for overspeed protection or for overload protection. The controller should be used with manufacturer motors, which incorporate thermal protection.

7. Back-Up 24 V power supply shall meet the limited voltage, limited energy requirement per UL 508C.

8. The units were tested in a temperature controlled oven without an overall enclosure. To obtain the maximum temperatures, the oven temperature was increased until the drive shut-down due to overtemperature. A Normal Operation Test should be conducted in the end-product to insure that the device does not nuisance trip.