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Underwriters Laboratories Inc.®

PARKER-HANNIFIN CORP
COMPUMOTOR DIV
MR M DOYLE
5500 BUSINESS PARK DR
ROHNERT PARK CA 94928

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 July 12, 2000
Power Conversion Equipment - Component

PARKER-HANNIFIN CORP COMPUMOTOR DIV **E126076**
5500 BUSINESS PARK DR, ROHNERT PARK CA 94928

Microstepping motor controllers, Models S6, S8, SX6, SX8, SXF6, SXF8.
Model OEM300 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-20, APEX-40, APEX-6152, APEX-6154 may be followed by -120VAC Bias Supply.
Model ZETA Series and OEM Series; ZETA4, ZETA6104, OEMZL4, OEMZL6104, OEMZL6.
Models APEX10, APEX6151.
Models TQ10, TQ10X, TQ10SD may be followed by EHS.
Model, ZETA8, ZETA12, ZETA240 Series, ZETA6104-240, ZETA6108, ZETA6112.
Models, GT may be followed by 6, and followed by -L5, -L8, -U5 or -U8; GV may be followed by 6, and followed by -L3, -U3, -U6 or -U12, GV-H20, 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-L8, GT6-U5, GT6-U8. Drive models may be followed by E, R, -PB, -SC or -IS.
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

Power Level Reference	Input Voltage (V ac)	Output Voltage (V dc)	Output Current (A peak)
GTx-U5	95-132, 190-264	74	5.0
GTx-U8	95-132, 190-264	74	7.5
GTx-L5	95-132	134-186	5.0
GTx-L8	95-132	134-186	8.0

Servo Drive

Power Level Reference	Input Voltage (V ac)	Output Voltage (V dc)	Cont. Output Current (A pk)	Max. Output Current (A pk)
GVx-L3	95-132	134-186	3.0	7.5
GVx-U3	95-264 1Ø	134-373	3.0	7.5
GVx-U6	95-264 1Ø	134-373	6.0	15.0
GVx-U12	95-264 1Ø	134-373	12.0	30.0
#GVx-H20	95-264 1/3Ø	134-373	20.0	50.0

#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:

G	T	6	-	L	5		SC	-	NK
I	II	III		IV	V	VI	VII		VIII

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

RSM/NC:ed
SCDLS

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 -

OS2HA, OS21A, OS22A, OS2HB, OS21B, OS22B, RS31B, RS32B, RS33B, RS42B, RE42B, TS31B, TS32B, TS33B, TS41B, TS42B, TS43B, ZETA57-51, ZETA57-83, ZETA57-102, ZETA83-62, ZETA83-93, and ZETA83-135;

and Servo Models -

SM161A, SM162A, SM231A, SM232A, SM233A, SM161B, SM162B, SM231B, SM232B, SM233B, N0701D, N0701F, N0702E, N0702F, N0703F, N0703G, N0704F, N0704G, N0921F, N0921G, N0922G, N0922J, N0923H, N0923K, N0924J, N0924K, J0701D, J0701F, J0702E, J0702F, J0703F, J0703G, J0921F, J0921G, J0922G, J0922J, J0923H, and J0923K.

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.

VW/LO:hid
SCDLS