

File E181848
Project 95NK30863

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REPORT

on

COMPONENT - POWER SUPPLIES FOR USE IN
HAZARDOUS LOCATIONS

Vicor Corporation
Andover, MA

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DESCRIPTION

PRODUCT COVERED:

USL, CNL Flat Pac Series, Model VI, VE or IP, followed by L, M, N, P, Q or R; followed by A, F or U; followed by up to three numbers or letters, which may be Z, Y, O, X, W, V, T, R, M, 1, P, 2, N, 3, L, J, K, 4, H, F, D or B; followed by C, I, M or E; followed by up to three numbers or letters which may be M, P, Q, S, U, V, W, X, Y or Z; followed by two optional digits 00 through 99.

Class I, Groups A, B, C and D, Div. 2 Hazardous Locations only.

GENERAL CHARACTER AND USE:

The Flat Pac Series is built using up to three R/C (QQBK2) Vicor dc-dc output voltage modules which provide primary to secondary isolation. It can be configured by selecting the desired output voltages of the modules and paralleling of similar outputs to provide the output configuration described in the Nomenclature section of this Report (up to three outputs). Units with the same number of modules share the same front end primary circuitry. They are intended to be factory wired within electronic data processing equipment.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL - The power supplies were investigated for compliance with the Standard for Electrical Equipment For Use in Class I and Class II, Division 2 and Class III Hazardous (Classified) Locations, UL 1604, Information Processing and Business Equipment, UL 60950-1:2003, First Edition, , and the Standard for Information Technology Equipment Including Electrical Business Equipment.

CNL - The power supplies were investigated for compliance with Standard C22.2 No. 213-M1987, Non-Incendive Electrical Equipment For Use In Class I, Div. 2 Hazardous Locations.

NOMENCLATURE BREAKDOWN:

Refer to ILL. 14.

ELECTRICAL RATINGS:

Refer to ILL. 14.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

CNL indicates investigation to Canadian Standard C22.2 No. 2130M1987.

USL indicates investigation to United States Standards listed above.

Conditions of Acceptability -

1. The supplies should be installed within an enclosure so that the exposed current-carrying parts (wiring terminals) are suitably enclosed.

2. The Temperature Test should be conducted in the end application to determine a T Code.

3. The need for the following instructions shall be determined in the end application.

- A. SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D.
- B. WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, CLASS II, DIVISION 2.
- C. WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR *THE AREA IS KNOWN TO BE NONHAZARDOUS.
- D. WARNING - EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES.

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VI - a b c c c - d e e e - x x

FlatPAC Family Tree

VI Product Type

VI = VI (Vicor), VI = VE (Vicor RoHs), VI = IP (VJCL), VI = IE (VJCL RoHs)

a Module Configurations

L = 1 module, 1 output	5.0 / 2.5 A
M = Up to 2 modules, 1 output	9.5 / 6.0 A
N = Up to 3 modules, 1 output	13.5 / 8.0 A
P = Up to 2 modules, 2 outputs	9.5 / 6.0 A
Q = Up to 3 modules, 2 outputs	13.5 / 8.0 A
R = Up to 3 modules, 3 outputs	13.5 / 8.0 A

Input Current (Max)

b Input Type

F = Strappable
 A = AutoRanging
 U = Universal

d Product Grade

C = Commercial -20C to 85C	100-120 / 200-240 V, 47-63 Hz
I = Industrial -40C to 85C	100-120 / 200-240 V, 47-440 Hz
M = Military -55C to 85C	100-120 / 200-240 V, 47-440 Hz
E = Economy 0C to 85C	100-120 / 200-240 V, 47-63 Hz

Input Voltage

eee Output Power

Vout ≥ 5V	Vout ≤ 5V
M = 600W	120A
P = 450W	90A
Q = 400W	80A
S = 300W	60A
U = 200W	40A
V = 150W	30A
W = 100W	20A
X = 75W	15A
Y = 50W	10A
Z = 25W	5A

ccc Output voltage (Vdc) Nominal

Z = 2.0	2 = 15.0
Y = 3.3	N = 18.5
O = 5.0	3 = 24.0
X = 5.2	L = 28.0
W = 5.5	J = 36.0
V = 5.8	K = 40.0
T = 6.5	4 = 48.0
R = 7.5	H = 52.0
M = 10.0	F = 72.0
I = 12.0	D = 85.0
P = 13.8	B = 95.0

xx Customer Options / Specials (items d and eee become optional)

BC = BatMOD/Conduction Cooled
 BM = BatMOD
 CC = Conduction Cooled
 LL = Low Leakage version
 xx = 00-99, denotes unique customer labels, testing, or non-safety related component changes, **d** and **eee** are optional
 x may be replaced by -xxx or -xxx to denote 0-999 for non-safety related component changes

Example

VI-PU01-CUX-234
 P = Up to 2 modules, 2 outputs, U = Universal, 0 = 5Vdc, 1 = 12Vdc, C= Commercial product Grade
 U = Output 1 @ 200W, X = Output 2 @ 75W, 234 = Customer Label