CERTIFICATE OF COMPLIANCE

Certificate Number	20120831-E181848
Report Reference	E181848-19960719
Issue Date	2012-AUGUST-31
Issued to:	VICOR CORP 25 FRONTAGE RD ANDOVER, MA 01810
This is to certify that representative samples of	COMPONENT - POWER SUPPLIES FOR USE IN HAZARDOUS LOCATIONS See Addendum Page
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	ANSI/ISA 12.12.01 - Nonincendive Electrical Equipment CAN/CSA C22.2 No. 213 Non-incendive Electrical Equipment
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Recognized Component Marks for the U.S. and Canada should be considered as being covered by UL's Recognition and Follow-Up Service and meeting the appropriate U.S. and Canadian requirements.

The UL Recognized Component Mark for the U.S. generally consists of the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark: , may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual recognitions. The UL Recognized Component Mark for Canada consists of the UL Recognized Mark for Canada: and the manufacturer's identification and catalog number, model number or other product designation as specified under "Marking" for the particular Recognition as published in the appropriate UL Directory.

The final acceptance of the component is dependent upon its installation and use in complete equipment submitted to UL LLC.

Look for the UL Recognized Component Mark on the product.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20120831-E181848
Report Reference	E181848-19960719
Issue Date	2012-AUGUST-31

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Class I, Groups A, B, C and D, Division 2 only.

ComPac Series, Model No. VI, followed by L, M, N, P, Q or R, followed by C, followed by 1, W, 3, N or 6, 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.

William R. Carney

William R. Carney, Director, North American Certification Programs

UL LLC

File E181848
Project 95NK30863

July 19, 1996

REPORT

on

COMPONENT - POWER SUPPLIES FOR USE IN HAZARDOUS LOCATIONS

Vicor Corporation
Andover, MA

D E S C R I P T I O N

PRODUCT COVERED:

* **USR, CNR - Class I, Groups A, B, C and D, Division 2 only.**

Component - Power supplies, ComPac Series, Model No. VI, followed by L, M, N, P, Q or R, followed by C, followed by 1, W, 3, N or 6,
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.

*

NOMENCLATURE BREAKDOWN:

Refer to ILL. 2.

ELECTRICAL RATINGS:

Refer to ILL. 2.

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

USR indicates investigation to US Standards ANSI/ISA 12.12.01-2012, and the Standard for Information Technology Equipment, UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements).

* **CNR** indicates investigation to Canadian Standard C22.2 No. **213-M1987.**

Use - For use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

* This power supply consists **of** various R/C power supplies mounted on a printed wiring board with additional front end circuitry. Primary to secondary isolation is provided by these various R/C power supplies.

Conditions of Acceptability -

*1. **This component has been judged on the basis of the required spacings in the Standard for Information Technology Equipment, UL 60950-1, 2nd Edition, 2007-03-27 (Information Technology Equipment - Safety - Part 1: General Requirements) CSA C22.2 No. 60950-1-07, 2nd Edition, 2007-03 (Information Technology Equipment - Safety - Part 1: General Requirements), which would cover the component itself if submitted for unrestricted Listing, Fourth Edition of the Standard for Information Processing and Business Equipment, UL 478, and Power Supplies, UL 1012.**

*2. **This power supply shall be installed in compliance with the enclosure, mounting, creepage, clearance, casualty, markings and segregation requirements of the end-use application.**

*3. **The need for conducting leakage current tests is to be determined as part of the end-product evaluation.**

4. **This power supply has only been evaluated for use in a pollution Degree 2 environment.**

5. **Secondary outputs 2 V - 48 V comply with SELV requirements. Secondary outputs 52 V - 95 V are non SELV outputs.**

6. **The base plate temperature of each DC/DC module should be monitored.**

7. **A baseplate temperature of 85°C should not be exceeded.**

8. **The input and output connectors have not been evaluated for field connections and are only intended for connection to mating connectors of internal wiring inside the end-use machine. The acceptability of these and the mating connectors relative to secureness, insulating materials, and temperature shall be considered.**

9. **These units shall be provided with external primary fuses.**

10. **The following is the maximum primary fuse value acceptable:**

Output Power	Nominal Input, dc	Fuse Size
200 W	24 V	10 A
200 W	24 V (wide)	12 A
200 W	48 V	7 A
200 W	300 V	2 A
400 W	24 V	20 A
400 W	48 V	15 A
400 W	300 V	4 A
600 W	24 V	30 A
600 W	48 V	25 A
600 W	300 V	6 A

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

12. 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 HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.

    B. WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, 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.

Company: Vicor Corporation, 25 Frontage Road Andover, MA 01810 USA

VI - a C b c c c - d e e e - f f
ComPAC Family Tree

VI = Product Type

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

a = Module Configurations

L =	1UP Single (1module, 1 output)
M =	2UP Single (2 modules, 1 output)
N =	3UP Single (3 modules, 1 output)
P =	2UP Dual (2 modules, 2 outputs)
Q =	3UP Dual (3 modules, 2 outputs)
R =	3UP Triple (3 modules, 3 outputs)

b = Input Voltage (Vdc)

Nominal	Range		Max (A)
1 = 24	21-32	@	26.7
W = 24	18-36	@	31.2
2 = 28	18-50	@	28.0
3 = 48	42-60	@	18.0
N = 48	36-76	@	15.6
6 = 300	200-400	@	3.9

C = Constant, designates ComPAC family

d = Product Grade

C	=	Commercial	-20C to +85C
I	=	Industrial	-40C to +85C
M	=	Military	-55C to +85C
E	=	Economy	0C to +85C

eee = Output Power

M =	600W
P =	450W
Q =	400W
S =	300W
U =	200W
V =	150W
W =	100W
X =	75W
Y =	50W
Z =	25W

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
1 = 12.0	D = 85.0
P =13.8	B = 95.0

ff = Factory assigned code (optional)

Non-safety related, any alphanumeric combination
-CC = Conduction Cooled
-H1 = Extended heat sink

Example

VI-PC601-CUX-23
P = 2Up (2 modules, 2 outputs), 6 = 300 V Input, 0 = 5V output, 1 = 12Vdc output
C= Commercial product Grade, U = 200W output, X = 75W output, 23 = Customer Code