Model Selection Chart

Model Number	Nominal Input Voltage	Input Range	Compatible DC-DC Converter	Converter
VI-A11-CU/VE-A11-CU	$24V_{DC}$	21 – $32V_{DC}$	VI-21x-Cx and VI-J1x-Cx	C–grade
VI-AWW-CU/VE-AWW-CU	$24V_{DC}$	18 – $36V_{DC}$	VI-2Wx-Cx and VI-JWx-Cx	C–grade
VI-A33-CQ/VE-A33-CQ	$48V_{DC}$	42 – $60V_{DC}$	VI-23x-Cx and VI-J3x-Cx	C–grade
VI-ANN-CQ/VE-ANN-CQ	$48V_{DC}$	36 – $76V_{DC}$	VI-2Nx-Cx and VI-JNx-Cx	C–grade
VI-A66-CQ/VE-A66-CQ	$300V_{DC}$	200 – $400V_{DC}$	VI-26x-Cx and VI-J6x-Cx	C–grade

Note: For alternative product grades change the "C" in the part number to "E", "I", or "M".

Specifications

(typical at T_{BP} = 25°C, nominal line and 75% load, unless otherwise specified)

OUTPUT CHARACTERISTICS

Parameter		Min	Typ	Max	Units	Test Conditions/Notes
Clamp voltage						
$24V_{DC}$ input		36.0		44.0	V_{DC}	–A11– models
		40.5		50.0	V_{DC}	–AWW– models
$48V_{DC}$ input		62.0		71	V_{DC}	–A33– models
		80.0		90.0	V_{DC}	–ANN– models
$300V_{DC}$ input		400		435	V_{DC}	–A66– models
Output power						
24V models				250	Watts	Output of IAM
48V models				510	Watts	Output of IAM
300V models				510	Watts	Output of IAM
Internal voltage drop						
$24V_{DC}$		0.6		0.85	V_{DC}	
$48V_{DC}$		0.6		0.95	V_{DC}	
$300V_{DC}$		1.7		3.5	V_{DC}	
Overload protection						
$24V_{DC}$ input	–AWW–	20			Amps	Foldback threshold; auto recovery with latched shut down after 2ms
	–A11–	15			Amps	
$48V_{DC}$ input	–ANN–	20			Amps	
	–A33–	15			Amps	
$300V_{DC}$ input	–A66–	4			Amps	

Specifications (Cont.)

ISOLATION CHARACTERISTICS

Parameter	Min	Typ	Max	Units	Test Conditions
Input to base		1,500		V_{RMS}	1 minute
Output to base		1,500		V_{RMS}	1 minute

THERMAL CHARACTERISTICS

Parameter	Min	Typ	Max	Units	Test Conditions
Efficiency		97		%	
Baseplate to sink		0.14		°C/Watt	
Operating temperature, baseplate			100	°C	See product grade specifications
Storage temperature			125	°C	See product grade specifications

MECHANICAL SPECIFICATIONS

Parameter	Min	Typ	Max	Units	Test Conditions
Weight		3.0 (85)		ounces (grams)	

PRODUCT GRADE SPECIFICATIONS

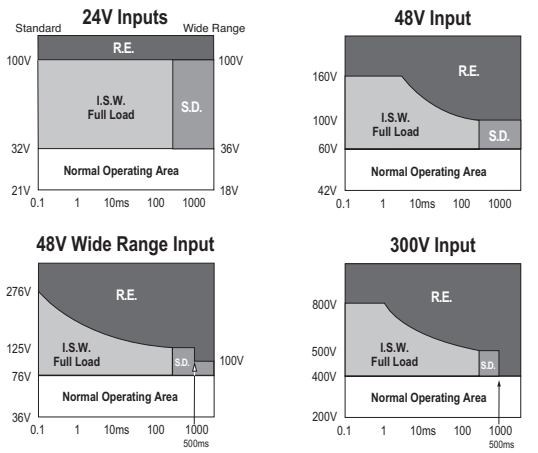
Parameter	E	C	I	M
Storage Temp. (Baseplate)	–20°C to +105°C	–40°C to +105°C	–55°C to +105°C	–65°C to +105°C
Operating Temp. (Baseplate)	–10°C to +100°C	–25°C to +100°C	–40°C to +100°C	–55°C to +100°C

EMI CHARACTERISTICS

EMI/RFI (conducted emissions)	Meets Bellcore TR-TSY-000513, Issue 2, Rev. 1 (24 and 48V Input); British Telecom BTR 2511, Issue 2 (24 and 48V Input); FCC Part 15, Class A, EN55022 Class B

TRANSIENT PROTECTION

	Meets Bellcore TA-TSY-001003, Issue 1, 9/89 British Telecom BTR 2511, IEC61000-4-5 Level 2 (VI-A66 only)



I.S.W.: Input surge withstand (no disruption of performance)
R.E.: Ratings exceeded
S.D.: Shut down

Figure 1 *— Safe operating area based on input voltage of IAM (1% duty cycle max., Zs=0.5Ω, for short duration transient capability refer to specifications.)*

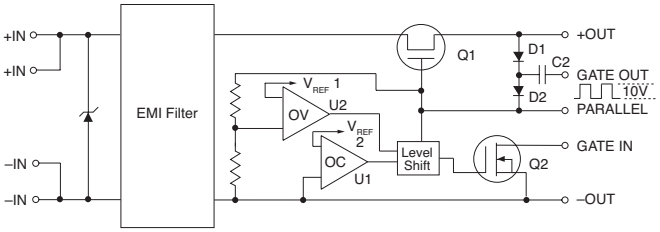


Figure 2 *— Block diagram of Input Attenuator Module (IAM)*

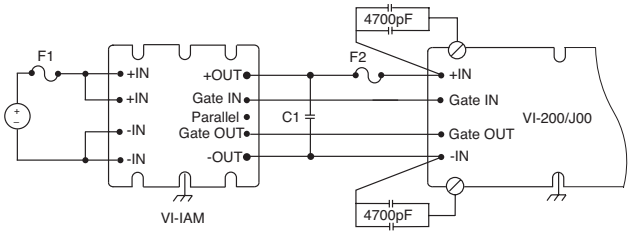


Figure 3 *— Typical connection diagram. For recommended fuse (F2) see VI-200 / VI-J00 application manual.*

Input Voltage	Recommended Fuse
24V	20A / 32V (AGC-20)
24V "W"	20A / 36V (AGC-20)
48V	20A / 60V (3AB-20)
48V "N"	20A / 80V (3AB-20)
300V	5A / 250V Bussman PC-Tron

Table 1 *— Recommended F1 fusing based on input voltage (see Figure 3)*

Input Voltage	Maximum Capacitance[a]
$24V_{DC}$ (21 – 32V)	470µF
$24V_{DC}$ (18 – 36V)	470µF
$48V_{DC}$ (42 – 60V)	220µF
$48V_{DC}$ (36 – 76V)	120µF
$300V_{DC}$ (200 – 400V)	27µF

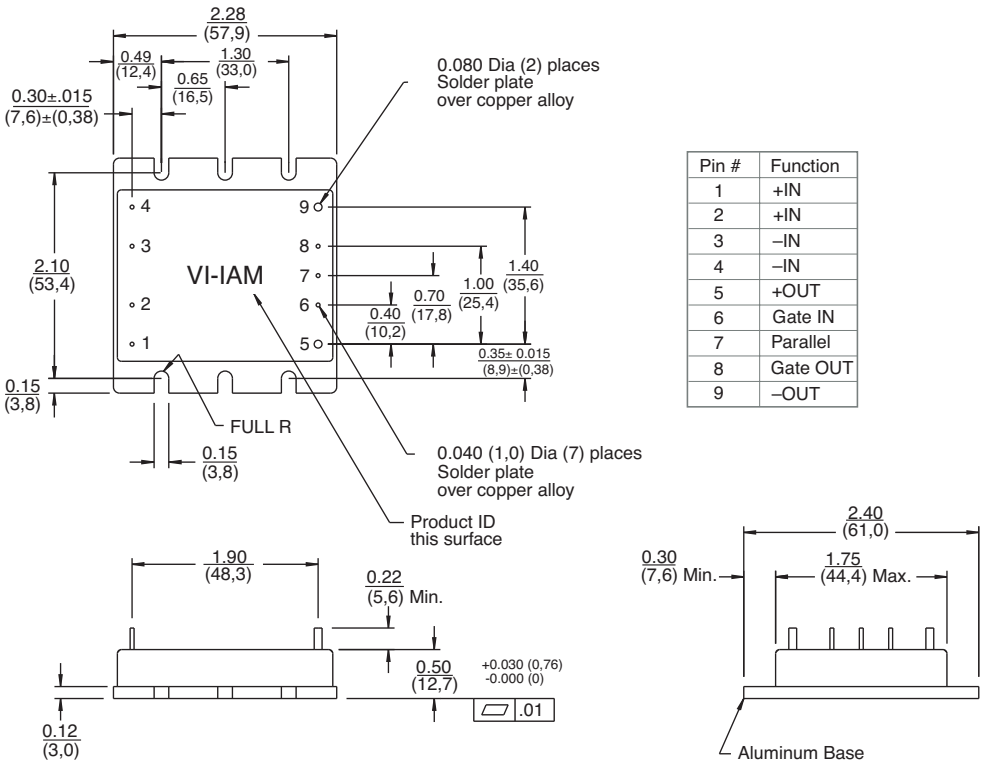
[a] Capacitance should be distributed across the input of each DC-DC converter. (C1, Figure 3)

Table 2 *— Recommended distributed capacitance on input of DC-DC converter(s)*

Storage

Vicor products, when not installed in customer units, should be stored in ESD safe packaging in accordance with ANSI/ESD S20.20, "Protection of Electrical and Electronic Parts, Assemblies and Equipment" and should be maintained in a temperature controlled factory/warehouse environment not exposed to outside elements controlled between the temperature ranges of 15°C and 38°C. Humidity shall not be condensing, no minimum humidity when stored in an ESD compliant package.

MECHANICAL DRAWING



Pin #	Function
1	+IN
2	+IN
3	–IN
4	–IN
5	+OUT
6	Gate IN
7	Parallel
8	Gate OUT
9	–OUT

Note: For alternate packaging options refer to the mechanical drawing page of vicorpower.com

Vicor's comprehensive line of power solutions includes high density AC-DC and DC-DC modules and accessory components, fully configurable AC-DC and DC-DC power supplies, and complete custom power systems.

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