ComPAC™
DC-DC Switchers

50 to 600 Watts; 1 to 3 outputs

Features

- RoHS Compliant (VE versions)
- Inputs 24, 48, and 300 Vdc
- Any output: 1 to 95 Vdc
- Meets EN55022 Class A conducted emissions (See Notes)
- cULus, cTÜVus (60950-1)
- CE marked (LVD)
- 80 – 90% efficiency
- Up to 10 W/cubic inch
- Master disable
- Overvoltage shutdown

Product Highlights

ComPAC delivers up to 600 W from one, two, or three outputs in a package just 0.99″ (25,2 mm) in height with the field proven performance, high efficiency and high reliability inherent in Vicor's component level power converters. ComPAC meets conducted emissions of EN55022 Class A. ComPAC is offered with input voltage ranges optimized for industrial and telecommunication applications and provides extended input overvoltage capability, undervoltage lockout, and master disable.

Packaging Options

Conduction Cooled Models Available Add "-CC" to the end of the part number. *(Consult factory for details.)*
Extended heat sink available add "–H1" to end of part number.

ComPAC Configuration Chart

Substitute VE– for VI– for RoHS compliant versions

Configuration	Output Power	# of Modules	Dimensions
Single Output			
VI-LC	50 – 200 W	1	8.6" x 2.5" x 0.99" (218,4 x 63,5 x 25,2 mm)
VI-MC	100 – 400 W	2	8.6" x 4.9" x 0.99" (218,4 x 124,5 x 25,2 mm)
VI-NC	300 – 600 W	3	8.6" x 7.3" x 0.99" (218,4 x 185,4 x 25,2 mm)
Dual Output			
VI-PC	100 – 400 W	2	8.6" x 4.9" x 0.99" (218,4 x 124,5 x 25,2 mm)
VI-QC	150 – 600 W	3	8.6" x 7.3" x 0.99" (218,4 x 185,4 x 25,2 mm)
Triple Output			
VI-RC	150 – 600 W	3	8.6" x 7.3" x 0.99" (218,4 x 185,4 x 25,2 mm)

Input Voltage

Nominal	Input Range Full Power	Maximum Power [a]	Low Line 75% Max. Power	Transient [b]
1 = 24 V	21 – 32 V	(1)	18	36
W = 24 V	18 – 36 V	(1)	n/a	n/a
3 = 48 V	42 – 60 V	(2)	41	72
N = 48 V	36 – 76 V	(2)	n/a	n/a
6 = 300 V	200 – 400 V	(2)	188	425

[a]

Max. Output Per Module	5 V Outputs	>5 V Outputs	<5 V Outputs
(1)	150 W	150 W	30 A
(2)	200 W	200 W	40 A

[b] Transient voltage for one second

Output Voltage

Z = 2 V	**2** = 15 V
Y = 3.3 V	**N** = 18.5 V
0 = 5 V	**3** = 24 V
X = 5.2 V	**L** = 28 V
W = 5.5 V	**J** = 36 V
V = 5.8 V	**K** = 40 V
T = 6.5 V	**4** = 48 V
R = 7.5 V	**H** = 52 V
M = 10 V	**F** = 72 V
1 = 12 V	**D** = 85 V
P = 13.8 V	**B** = 95 V

Product Grade Temps. °C

Grade	Operating	Storage
E =	–10 to +85	–20 to +100
C =	–25 to +85	–40 to +100
I =	–40 to +85	–55 to +100
M =	–55 to +85	–65 to +100

Temperatures apply to product case.

Output Power/Current

$V_{OUT} \geq 5$ V	$V_{OUT} < 5$ V
Y = 50 W	**Y** = 10 A
X = 75 W	**X** = 15 A
W = 100 W	**W** = 20 A
V = 150 W	**V** = 30 A
U = 200 W	**U** = 40 A

Output Power/Current

$V_{OUT} \geq 5$ V	$V_{OUT} < 5$ V
W = 100 W	**W** = 20 A
V = 150 W	**V** = 30 A
U = 200 W	**U** = 40 A
S = 300 W	**S** = 60 A
Q = 400 W	**Q** = 80 A

Output Power/Current

$V_{OUT} \geq 5$ V	$V_{OUT} < 5$ V
S = 300 W	**S** = 60 A
P = 450 W	**P** = 90 A
M = 600 W	**M** = 120 A

COMPAC SPECIFICATIONS

(typical at T_{BP} = 25°C, nominal line and 75% load, unless otherwise specified, VNOM is factory set output voltage and INOM is maximum rated output current.)

■ INPUT SPECIFICATIONS

	E-Grade			C-, I-, M-Grade				
Parameter	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**
24 V	21	24	32	21	24	32	Vdc	See Fusing Information on Page 3
24 V Wide	18	24	36	18	24	36	Vdc	
48 V	42	48	60	42	48	60	Vdc	
48 V Wide	36	48	76	36	48	76	Vdc	
300 V	200	300	400	200	300	400	Vdc	
No load power dissipation [a]	1.35		2	1.35		2	Watts	
Master disable input current [a] (Absolute max., 20 mA)	4			4			mA	Sink or source to disable optocoupler (See Section 18 ComPAC Technical Description in VI-200/VI-J00 Applications Manual)
Quiescent Input current logic disable [a]		7	10		7	10	mA	Current drawn from source when disabled

[a] For MC, PC series, multiply value by 2; for NC, QC, RC series, multiply value by 3.

■ OUTPUT SPECIFICATIONS (Applies to each output individually)

	E-Grade			C-, I-, M-Grade				
Parameter	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Units**	**Test Conditions**
Set point accuracy		1%	2%		0.5%	1%	VNOM	
Load / line regulation			0.5%		0.05%	0.2%	VNOM	LL to HL, 10% to full load
Load / line regulation			1%		0.2%	0.5%	VNOM	LL to HL, no load to full load
Output temperature drift		0.02			0.01	0.02	%/°C	Over rated temperature range
Long term drift		0.02			0.02		%/1 k hrs.	
Output ripple								
2 V, 3.3 V			150		60	100	mVp-p	20 MHz bandwidth
5 V			250		100	150	mVp-p	20 MHz bandwidth
10 – 48 V			3%		0.75%	1.5%	VNOMp-p	20 MHz bandwidth
Output voltage trimming [a]	50%		110%	50%		110%	VNOM	
Total remote sense compensation [a]	0.5			0.5			Volts	0.25 V maximum allowable drop in –Out lead
OVP set point		125%		115%	125%	135%	VNOM	Recycle power to restart
Current limit	105%		135%	105%		125%	INOM	Automatic restart
Short circuit current [b]	20%		140%	20%		130%	INOM	

[a] 10 V, 12 V and 15 V outputs, trim range ± 10%. Consult factory for wider trim range.
[b] Output voltages of 5 V or less incorporate foldback current limiting, outputs greater than 5 V incorporate straight line current limiting.

CONFIGURABLE SPECIFICATIONS (Cont.)

■ THERMAL CHARACTERISTICS

	E-Grade			C-, I-, M-Grade				
Parameter	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Units**	**Test Conditions**
Efficiency		78 – 88%			80 – 90%			for 5 V outputs and higher
Shut down temp. — case [a]	90	95	105	90	95	105	°C	Cool and recycle power to restart
Operating temp. — case			85			85	°C	See Thermal Curves

[a] Shut down temperature threshold is above maximum operating temperature. For over temperature protection, external means of disable should be employed below maximum operating temperature.

■ ISOLATION CHARACTERISTICS

	E-Grade			C-, I-, M-Grade				
Parameter	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Unit**	**Test Conditions**
Isolation								
Input to output	4,242			4,242			Vdc	
Output to case	707			707			Vdc	
Input to case	2,121			2,121			Vdc	

■ MECHANICAL SPECIFICATIONS

	E-Grade			C-, I-, M-Grade				
Parameter	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**	**Units**	**Test Conditions**
Weight [a]	19.2			19.2			Ounces	
	544			544			Grams	

[a] For MC, PC series, multiply value by 2; for NC, QC, RC series, multiply value by 3.

■ FUSING INFORMATION

Input Voltage	**24 V**	**48 V**	**300 V**
LC series (200 W)	10 A	7 A	2 A
MC, PC series (400 W)	20 A	15 A	4 A
NC, QC, RC series (600 W)	35 A	25 A	6 A

CONFIGURABLE SPECIFICATIONS (Cont.)

■ AGENCY APPROVALS

Safety Standards	Markings	Notes
ANSI / ISA 12.12.01 - 2012, C22.2 No. 213-M1987	cURus	
UL / CSA / EN / IEC 60950-1	cURus, cTÜVus,CE Marked	Low Voltage Directive and RoHS Recast Directive as applicable.

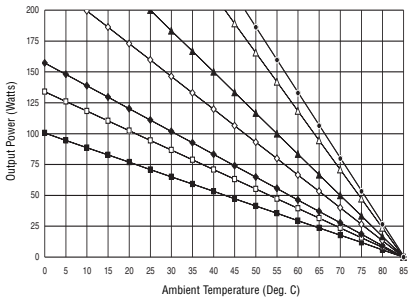
■ EMI / EMC Characteristics (Performed on selected samples representative of the ComPac product family.)

Parameter	Notes
Conducted Emissions EN 55022, class A	3 Module configurations may require additional filter components under certain line and load conditions to comply with EN55022 class A.
ESD IEC 61000-4-2 level 4	Top, Bottom and Sides

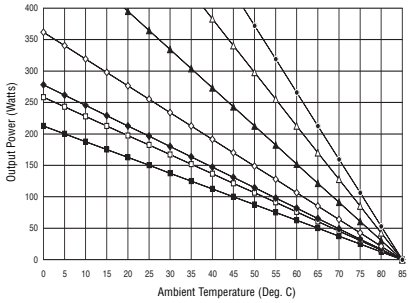
THERMAL CURVES

FREE AIR — 50 LFM — 100 LFM — 250 LFM — 500 LFM — 750 LFM — 1000 LFM

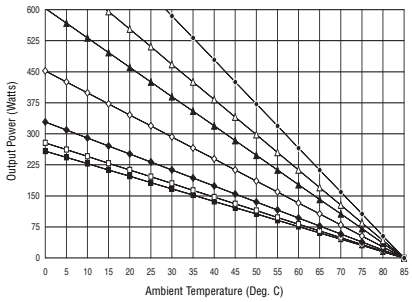
2 V to 7.5 V Output, Standard heat sink



LC Series

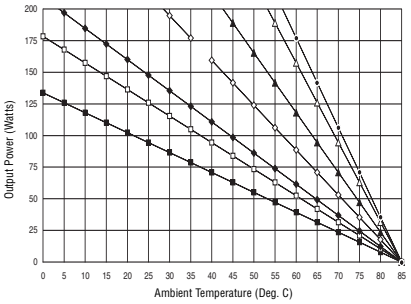


MC, PC Series

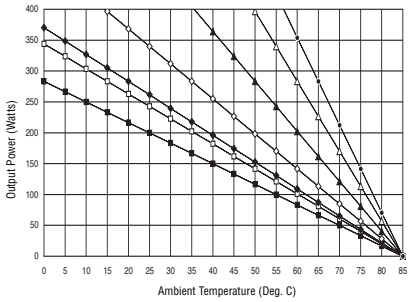


NC, QC, RC Series

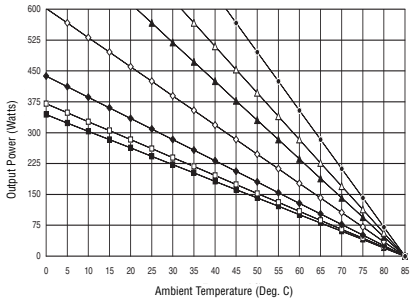
10 V to 95 V Output, Standard heat sink



LC Series

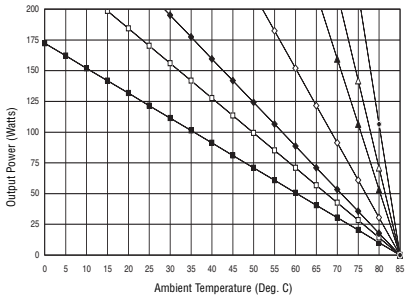


MC, PC Series

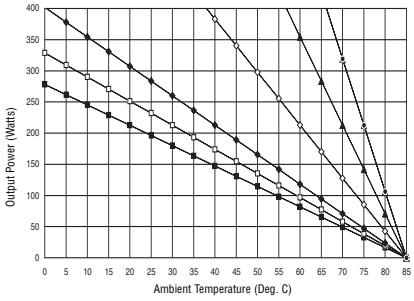


NC, QC, RC Series

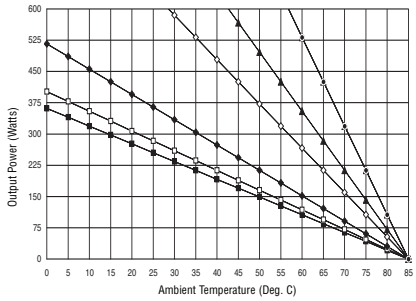
2 V to 7.5 V Output , H1 heat sink



LC Series

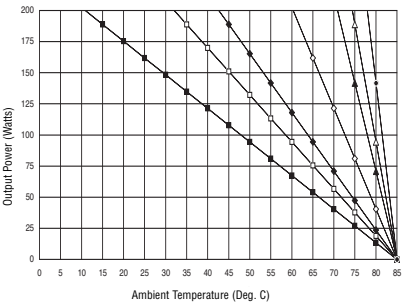


MC, PC Series

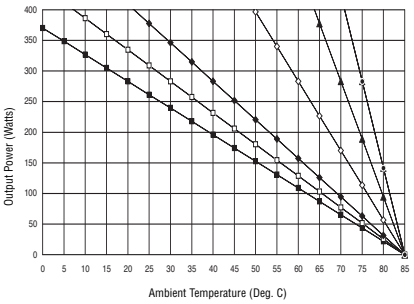


NC, QC, RC Series

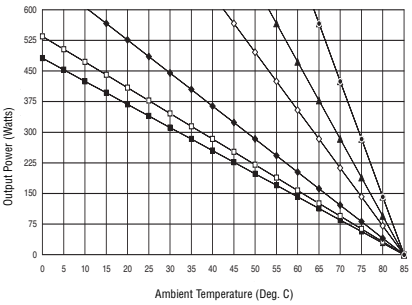
10 V to 95 V Output, H1 heat sink



LC Series



MC, PC Series

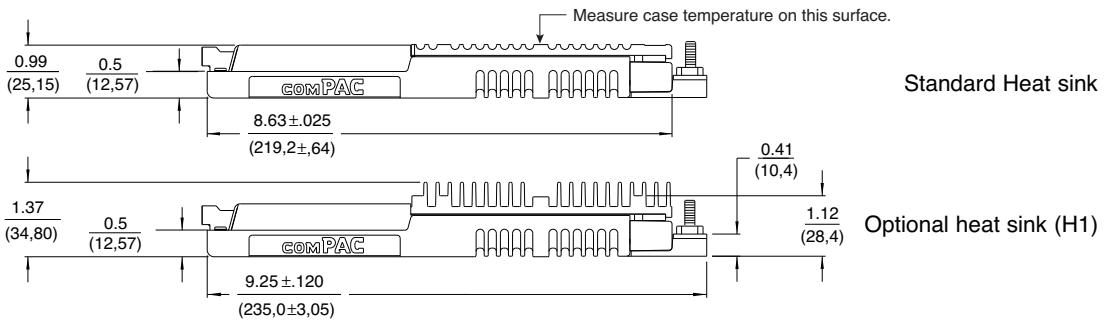


NC, QC, RC Series

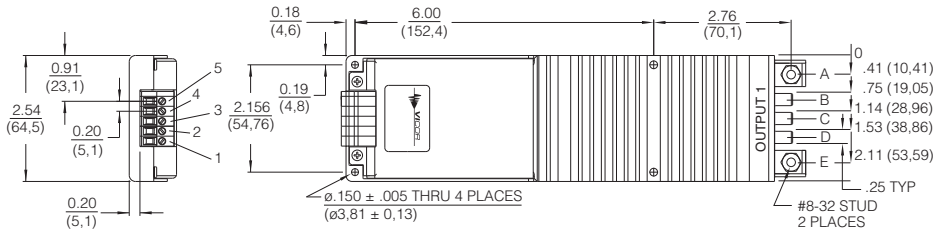
MECHANICAL DRAWINGS

ALL MODELS

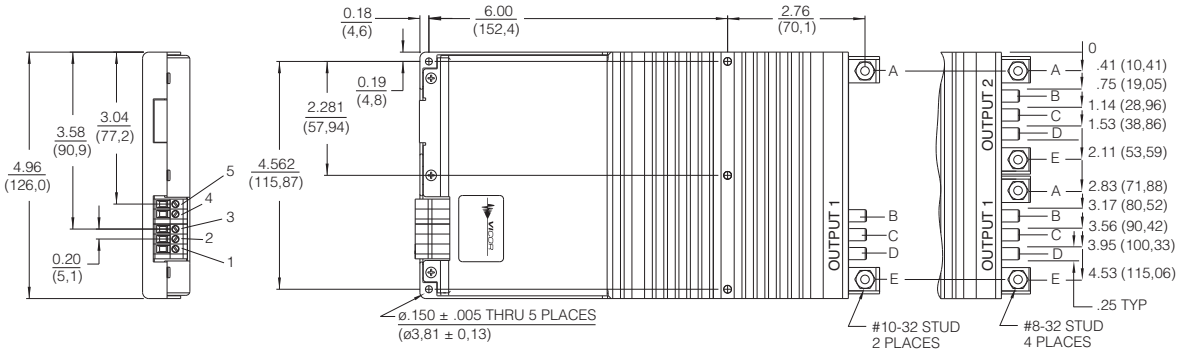
INPUTS	
1	Ground
2	-Input
3	+Input
4	Disable-
5	Disable+
OUTPUTS	
A	+Output
B	+Sense
C	Trim
D	-Sense
E	-Output



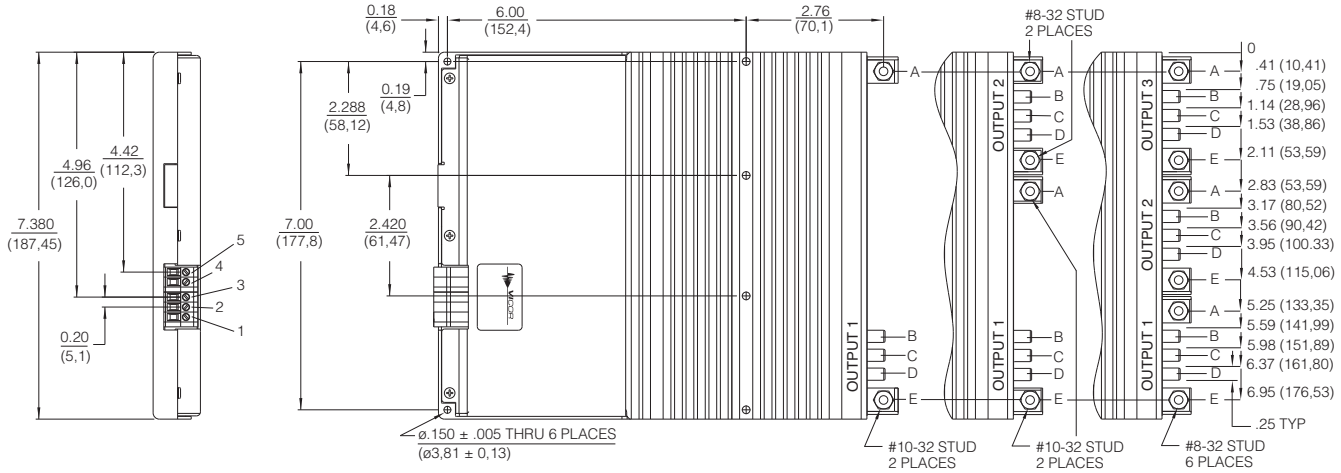
LC SERIES



MC, PC SERIES

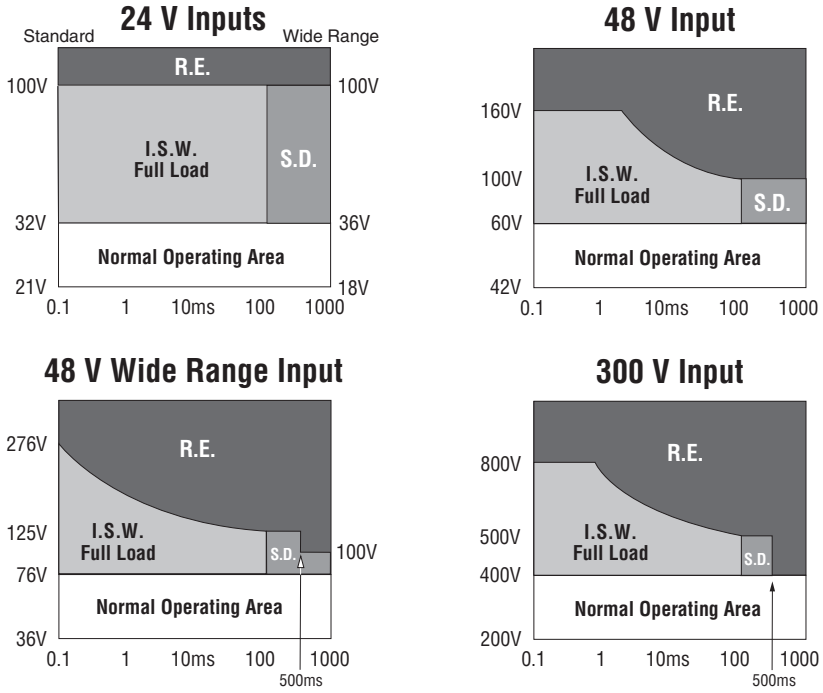


NC, QC, RC Series



LONG TERM SAFE OPERATING AREA CURVES

(1% duty cycle max., Z_s = .5 , for short duration transient capability refer to specifications)



I.S.W.: Input surge withstand, no degradation of performance. **R.E.:** Ratings Exceeded **S.D.:** Shutdown

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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Данный компонент на территории Российской Федерации

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