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Find the *TDK-Lambda Vega-Lite 550* at our website: ***Click HERE***



Vega-Lite Series

550 - 900 Watts

Modular power solution

- Industry Leading Flexibility
- 1 to 11 outputs
- Voltages from 1.8 to 56V
- Current up to 60 Amps
- Worldwide approvals & CB report
- Medical approval option
- 3 Year Warranty

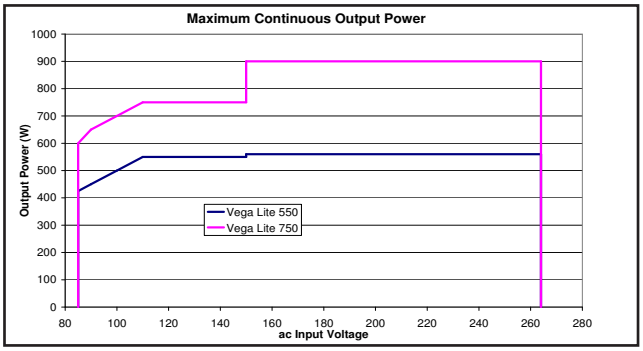
Key Market Segments & Applications

Instrumentation	Broadcast
Medical	ATE
Automation	Industrial Computing
Security	Lifesciences/Laboratory
Network Servers and Routers	

Features and Benefits

Features	Benefits
• Modular Construction	• Maximum flexibility
• Worldwide Safety Approvals	• Supports Global use

INPUT	
Voltage Range	85 - 264Vac
Frequency	47 - 63Hz (440Hz with reduced PFC - consult factory)
Inrush Current	<40A at 25°C and 264Vac (cold start)
Fuse	16A / 250Vac High Breaking Capacity, Fast Acting (not user accessible)
Leakage Current	1.5mA max at 264Vac & 63Hz (medical version also available)
Power Factor	0.99 typical



OUTPUT		
Voltage / Current	See module tables	
Turn on Delay	1.5s max	at 90Vac & 100% rated output power
Rise Time	<50ms	to 90% of voltage, monotonic rise above 10%
Turn on Overshoot	<5% or 250mV	Load type dependant, no overshoot with resistive load
Efficiency	75%	typical at 230Vac & 100% rated power, configuration dependent
Hold up	16ms min	at 100Vac & 100% rated output power
Ripple & Noise	<1%	(or 50mV if higher) Pk- Pk, using EIAJ test method & 20MHz bandwidth
Voltage Accuracy	<1%	of set Voltage
Remote Sense	Yes	Standard on single output modules, max 0.75V total line drop Option for twin output modules
Minimum Load	No	on any output
Temperature Coefficient	<0.02%	of rated voltage per °C
Load Regulation	<0.5% or 25mV	for 0-100% load change
Line Regulation	<0.1%	for 100 - 264Vac input change
Cross Regulation	<0.2%	for 100% load change on any other output
Transient Response Recovery	<6% or 300mV	of set voltage for 50% load change (above 25% load)
	500μs	for recovery to 1% or 100mV of set voltage
Over Voltage Protection	120 - 130%	of set voltage for outputs > 4.1V (Tracking OVP)
	140 - 150%	of set voltage for outputs < 4.1V (Tracking OVP)
	120 - 150%	of max rated output (Fixed OVP)
Over Current Protection	105 - 125%	of rated current, constant current characteristic
Short Circuit Protection	<150%	of rated current, when output voltage <1%
Over Temperature Protection	Yes	Shuts down all outputs and fan. Cycle ac off / on to reset
		Note 1 shutdown temp varies according to ambient, output power and input V 2 ac fail signal (if fitted) provides 5ms warning of thermal shutdown

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OUTPUT VOLTAGES (single modules)

Output Voltage	Module Width (Slots)							
	1 slot		1.5 slots		2 slots		3 slots	
	Module	Current	Module	Current	Module	Current	Module	Current
1.8V	1.8C1S	35A	1.8D1LS	50A	1.8E1S	60A		
2V	2C1S	35A	2D1LS	50A	2E1S	60A		
3.3V	3.3C1S	35A	3.3D1LS	50A	3.3E1S	60A		
5V	5L1S	35A	5D1HS	50A	5E2S	60A		
6.5V	6.5B2S	25A	6.5D2S	45A	6.5E2S	60A		
12V	12C3S	18A	12D3S	24A	12E3LS	40A		
15V	15C3S	18A	15D3S	24A	15E4S	30A		
18V	18C4S	14A	18D4S	18A	18E4S	30A		
24V	24C5S	10A	24D5S	15A	24E5HS	25A		
28V	28C5S	10A	28D5S	15A	28E5HS	25A		
36V	36HH5/4S	4.5A			36BB4S	10A		
48V	48HH5/4S	4.5A			48C5B4S	10A	48DD5S	15A

OUTPUT VOLTAGES (twin modules) - all 1 slot width

		Channel 1					
	Output Voltage	5V / 12A	12V / 10A	15V / 10A	18V / 5A	24V / 5A	28V / 5A
Channel 2	**1.8V / 8A**	5/1.8H1H/1LS					
	2V / 8A	5/2H1H/1LS					
	3.3V / 8A	5/3.3H1H/1LS					
	5V / 8A		12/5H3/1HS	15/5H3/1HS	18/5H5/1HS	24/5H5/1HS	28/5H5/1HS
	12V / 6A	5/12H1H/3S	12/12H3/3S	15/12H3/3S	18/12H5/3S	25/12H5/3S	28/12H5/3S
	15V / 6A	5/15H1H/3S	12/15H3/3S	15/15H3/3S	18/15H5/3S	25/15H5/3S	28/15H5/3S
	18V / 4.5A				18/18H5/4S	24/18H5/4S	28/18H5/4S
	24V / 4.5A				18/24H5/4S	24/24H5/4S	28/24H5/4S

OUTPUT VOLTAGES (single modules)

Module	Adjustment Range (Volts)			Amps	Slots
C1S	1.8	-	3.4	35	1
D1LS	1.8	-	3.8	50	1.5
E1S	1.8	-	3.4	60	2
L1S	4.2	-	5.1	35	1
D2S	3.8	-	7.5	45	1.5
D1HS	3.9	-	5.1	50	1.5
E2S	3.8	-	7.5	60	2
B2S	5	-	8	25	1
C3S	9.1	-	15	18	1
D3S	8	-	15	24	1.5
E3LS	8	-	12.5	40	2
D4S	14	-	18	18	1.5
E4S	14	-	19	30	2
C4S	16.3	-	21.5	14	1
C5S	21.6	-	30	10	1
D5S	21	-	28	15	1.5
E5HS	24	-	28	25	2
HH5/4S	32.5	-	48	4.5	1
BB4S	32.6	-	40	10	2
C5B4S	43	-	48	10	2
DD5S	42	-	56	15	3

TWIN OUTPUT MODULES

Module	V1 Adjustment Range (Volts)			Amps	V2 Adjustment Range (Volts)			Amps	Slots
H1H/1LS	3.9	-	5.1	12	1.8	-	3.4	8	1
H1H/3S	3.9	-	5.1	12	9.1	-	15.5	6	1
H3/1HS	9.1	-	15.5	10	3.9	-	5.1	8	1
H3/3S	9.1	-	15.5	10	9.1	-	15.5	6	1
H5/1HS	16.2	-	28	5	3.9	-	5.1	8	1
H5/3S	16.2	-	28	5	9.1	-	15.5	6	1
H5/4S	16.2	-	28	5	16.3	-	24	4.5	1

Options - Single output Modules*		Options - Twin Output Modules*	
N	Output Inhibit, Module Good Current Sharing	N	Output Inhibit, Module Good, Remote Sense
		R	Remote Sense Only

* see configuring guide

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SAFETY APPROVALS					
	Date	**Amendments**		**Date**	**Amendments**
EN 60950-1	2006		EN 61010-1	2001	
UL 60950-1	2003		IEC 61010-1*	2001	
CSA22.2 No 60950-1	2003		IEC 60601-1*	1988	A1, A2
IEC 60950-1*	2005		EN 60601-1a	1990	A1, A2, A13
CE Mark	LV Directive 2006/95/EC (EN60950-1)		UL 60601-1a	2003	with revisions 2006
* CB Certificate and report available on request			a - Only for 'L' type leakage variants Check with technical Sales for status of approvals		

ISOLATION					
Input to Output	Reinforced	4kV (ac), 5.7kV (dc) type tested, production tested to 4.3kVdc.			
Input to Earth	Basic	2.3 kV (dc)	Output to Output / Output to Earth	Operational	200 V (dc)

EMISSIONS BS EN61000-6-3:2001 (Residential, Commercial & Light Industrial Supply), also complies with BS EN61000-6-4:2001			
Radiated Electric Field	EN55022	Class B (as per CISPR.22)	See application note for details. Only for 'S' type leakage versions
Conducted Emissions	EN55022	Class B (as per CISPR.22)	Only for 'S' type leakage versions. 'L' types meet Class A
Conducted Harmonics	EN61000-3-2	Compliant to Class A	
Flicker	EN61000-3-3	Compliant	

IMMUNITY BS EN61000-6-2:2001 (Industrial Environment), also complies with BS EN61000-6-1:2001				**Criteria**
Electrostatic Discharge	EN61000-4-2	Level 4	Air discharge 15kV Contact discharge 8kV	A
Electromagnetic Field	EN61000-4-3	Level 3	10V/m (tested to 12V/m)	A
Fast / Burst Transient	EN61000-4-4	Level 4	Input 4kV Outputs 2kV Tested at 5kHz and 100kHz	A
Surge Immunity	EN61000-4-5	Level 3	Line to Line 1kV (tested to 1.1kV) Line to Earth 2kV (tested to 2.2kV)	A
Conducted RF Immunity	EN61000-4-6	Level 3	10V (tested to 12V)	A
Power Frequency Magnetic Field	EN61000-4-8	Level 4	30A Continuous	A
Voltage Dips, Variation, Interruptions	EN61000-4-11	Class 3		A B for 5s interruptions

ENVIRONMENT	
Temperature	0° to 65° operational, -40° to 70°C storage (max 12 months)
Derating	50°C to 65°C derate each output by 2.5% per °C
Low Temperature Start-up	-20°C
Humidity	5-95% RH non condensing
Shock	±3 x 20*g* shocks in each plane, total 18 shocks 20*g* shock = 11ms (±0.5ms), half sine conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987 conforms to MIL-STD-810E/F, Method 516.5, Pro I, IV, VI
Vibration	Single axis 10 - 500Hz at 2*g* (sweep and endurance at resonance) in all 3 planes Conforms to EN60068-2-6, IEC68-2-6 Conforms to MIL-STD-810E, Method 514.4, Pro I, Cat 1, 9
Altitude	5,000 metres operational / non operational
Pollution	Degree 2, Material group 3
IP Rating	IP 10

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Vega-Lite Configuring Guide

The extensive range of output modules and options make it possible to achieve all popular combinations of Volts and Amps. The 'online' configurator is the best way to achieve the optimum configuration, however you can also create your own Vega configuration from this datasheet by using the guide below.

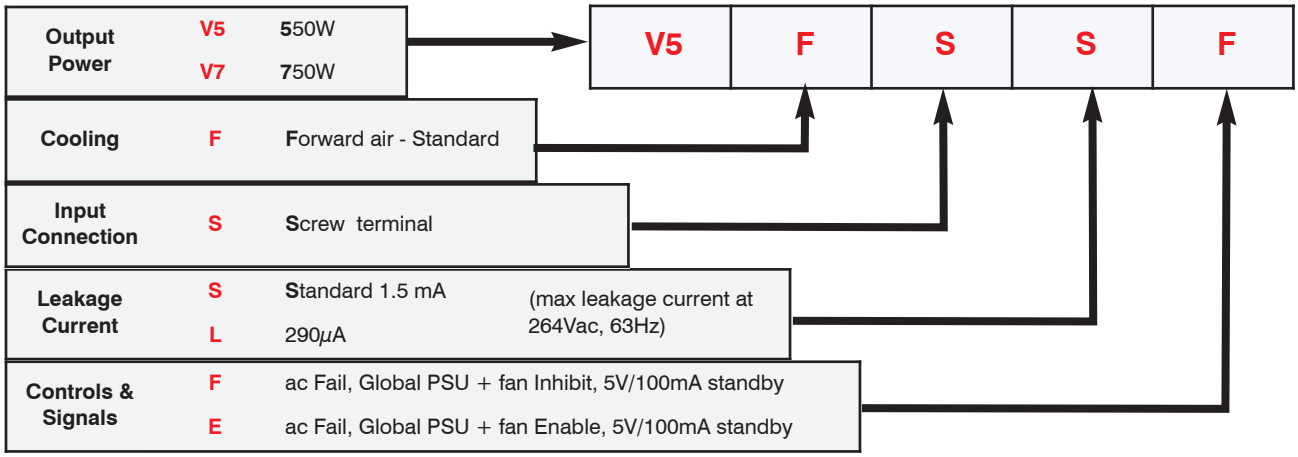
Web Configurator

1 Visit **http://www.emea.tdk-lambda.com**, select 'Vega Configurator' and follow the online instructions.
2 Enter your required Volts / Amps, and any additional functions (if required)
3 Enter preferred type of cooling, input connection, lower leakage current (if required) and controls & signal functions, (if required)
4 Configurator will select the most suitable modules and options and give a unique part number.

Configuring from Datasheet

1 Calculate total output power to determine Vega 550W (560W at 150 Vac and above) or 750W (900W at 150Vac and above) and select converter, then select required Cooling, Connection, Leakage Current and Controls/Signals from the following table:-

2 Select Output Modules and Options from the Available Output Voltages tables.

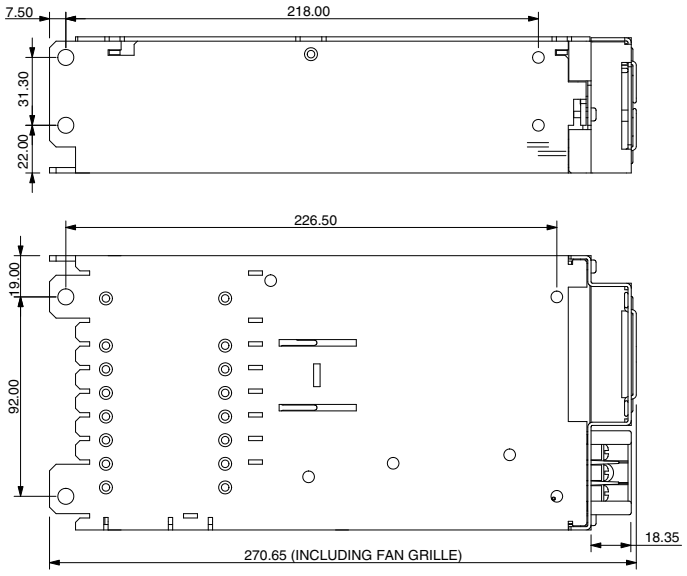


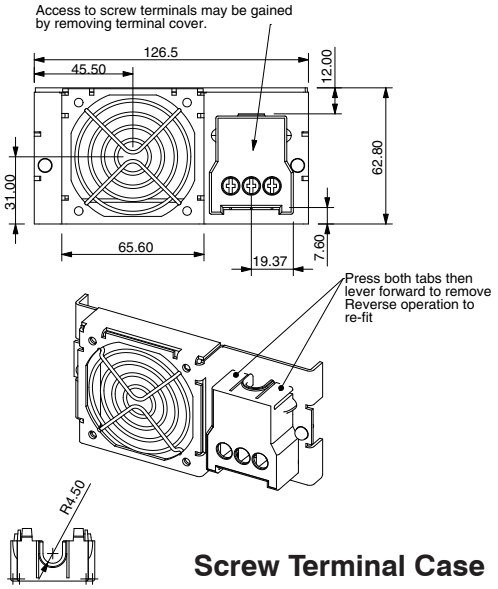
Example - if you require 5V / 18A with output inhibit : -
a) select 5L1S as closest match for voltage and current
b) add suffix N for output inhibit eg **5L1SN**
c) repeat for other outputs

Ensure you do not select more than a total of 5 slots width of module. This will create a complete product description eg:-
V5FSSF 5L1SN 12/12H3/3S 24C5S which represents a four output 550W Vega with Forward air, Screw input terminals, 1.5mA Earth Leakage, ac Fail, Global Inhibit & 5V / 100mA aux supply.
Output 1 = 5V / 35A with output inhibit, Module Good and Current Share option
Output 2 = 12V / 10A
Output 3 = 12V / 6A
Output 4 = 24V / 10A

3 **Contact TDK-Lambda to validate configuration and issue a part number.**

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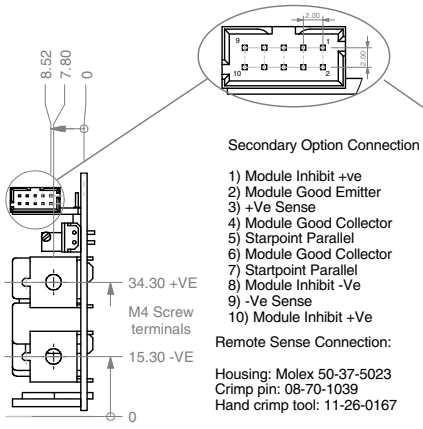




Screw Terminal Case

8 x M4 Customer fixings

Max thread penetration:- 4.5mm

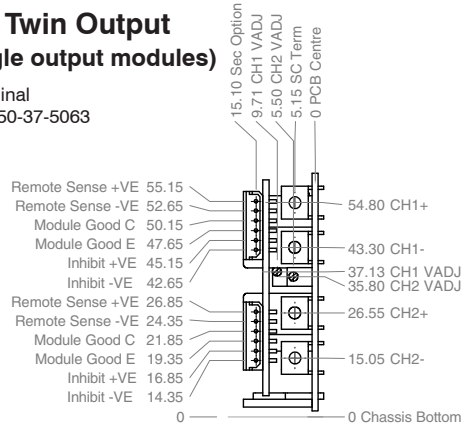


Single Slot Single Output
(except HH type modules)

Dual Slot Single Output

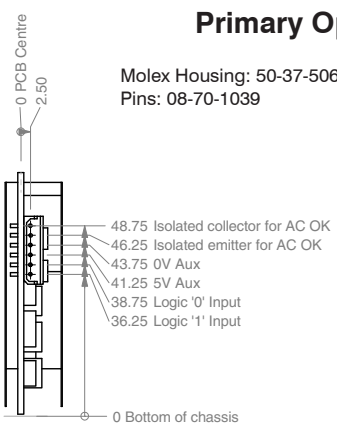
Single Slot Twin Output
(and HH type single output modules)

Module: - M3 screw terminal
Option: Molex Housing: 50-37-5063
Pins: 08-70-1039



Primary Option

Molex Housing: 50-37-5063
Pins: 08-70-1039



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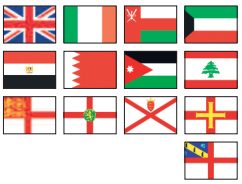
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