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Stocking Distributor

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[TDK-Lambda Americas, Inc.](#)
[Z20-20-U](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

TDK-Lambda

Z+ Series

200-800W Programmable Power Supplies

Features

- ◆ 2U high
- ◆ Built-in USB, RS-232 & RS-485 Interface
- ◆ Optional LAN, GPIB & Isolated Analog Programming
- ◆ Bench or Rack Mount
- ◆ Constant Current or Voltage Modes
- ◆ Five Year Warranty

Key Market Segments & Applications



Model Selector

Model	Voltage Adjust Range	Current Adjust Range	Max Power (W)	Ripple 5Hz-1MHz (mV)	Noise 20MHz BW (mV)	Ripple 5Hz-1MHz (mA)	Efficiency % (100-200VAC)	Front Panel Output Jacks (Option)
Z10-20-U	0 - 10	0 - 20	200	5	50	50	80 / 82	Yes
Z10-40-U	0 - 10	0 - 40	400	5	50	50	80 / 82	Yes
Z10-60-U	0 - 10	0 - 60	600	6.25	75	75	80 / 82	Yes
Z10-72-U	0 - 10	0 - 72	720	6.25	75	75	80 / 82	Yes
Z20-10-U	0 - 20	0 - 10	200	5	50	30	82 / 84	Yes
Z20-20-U	0 - 20	0 - 20	400	5	50	30	81 / 83	Yes
Z20-30-U	0 - 20	0 - 30	600	6.25	75	45	82 / 84	Yes
Z20-40-U	0 - 20	0 - 40	800	6.25	75	45	82 / 84	Yes
Z36-6-U	0 - 36	0 - 6	216	5	50	15	83 / 85	Yes
Z36-12-U	0 - 36	0 - 12	432	5	50	15	83 / 85	Yes
Z36-18-U	0 - 36	0 - 18	648	6.25	75	22	84 / 85	Yes
Z36-24-U	0 - 36	0 - 24	864	6.25	75	22	84 / 85	Yes
Z60-3.5-U	0 - 60	0 - 3.5	210	5	50	8	83 / 85	Yes
Z60-7-U	0 - 60	0 - 7	420	5	50	8	83 / 85	Yes
Z60-10-U	0 - 60	0 - 10	600	6.25	75	12	83 / 85	Yes
Z60-14-U	0 - 60	0 - 14	840	6.25	75	12	83 / 85	Yes
Z100-2-U	0 - 100	0 - 2	200	8	80	3	83 / 85	No
Z100-4-U	0 - 100	0 - 4	400	8	80	3	84 / 86	No
Z100-6-U	0 - 100	0 - 6	600	10	100	4.5	84 / 86	No
Z100-8-U	0 - 100	0 - 8	800	10	100	4.5	84 / 86	No

Options

	Option Code
Front panel terminals (60V or 24A max)*	-L
Front panel insulated output sockets (100V or 24A max)*	-L2
Only one of the options below can be included:	
GPIB Interface*	-IEEE
Voltage Programming Isolated Analog Interface*	-IS510
Current Programming Isolated Analog Interface*	-IS420
LAN Interface	-LAN

Part Number Example

Z10-20-LAN-L-U

*Requires wide body (105mm) case style

Accessories

	Part Number
19" Rack Housing	
(Accepts four 105mm width units or six 70mm width units)	Z-NL100
Blanking Panel for 19" Rack (70mm)	Z-BP
Blanking Panel for 19" Rack (105mm)	Z-WBP
Dual/Triple Housing	
(Accepts two 105mm case units or three 70mm case units)	Z-NL200
Serial Link Cable (One is included with each power supply)	Z-RJ45
Communication Cable RS485	Z-485-9
Communication Cable RS232	Z-232-9
North American Line Cord (One included with -U suffix)	Z-U

TDK-Lambda

Z+ Series

Specifications (See website for detailed specifications)

Model		Z10	Z20	Z36	Z60	Z100
Load Regulation	CV	2mV + 0.01% of rated voltage over 0 - 100% load change				
Line Regulation	CV	2mV + 0.01% of rated voltage over a 85 - 132 or 170 - 265VAC line change				
Recovery Time (1)	CV	1ms				
Temperature Coefficient	CV	30ppm/°C following 30 minute warm up				
Temperature Stability	CV	0.02% of rated voltage over 8 hours following 30 minute warm up time				
Warm up Drift (2)	CV	<0.05% of rated voltage + 2mV of rated output voltage				
Up programming response time (10-90% or 90-10% of Vmax)	CV	15ms	30ms	30ms	50ms	50ms
Down programming resp time (CV) (10-90% or 90-10% of Vmax)	Full load	10ms	30ms	30ms	50ms	50ms
Down programming resp time (CV) (90-10% of Vmax)	Zero load	190ms	200ms	250ms	310ms	900ms
Load Regulation	CC	5mA + 0.01% of rated current over 0 - 100% Vout change				
Load Regulation thermal drift	CC	< 0.05% of rated current over 30 minutes after load change				
Line Regulation	CC	2mA + 0.01% of rated current over a 85 - 132 or 170 - 265VAC line change				
Temperature Coefficient	CC	100ppm/°C of rated current after 30 minute warm up time				
Temperature Stability	CC	0.05% of rated current over 8 hours following 30 minute warm up time				
Warm up Drift (2)	CC	<±0.1% of rated current				
Vout & Iout programming & readback resolution	Digitally	< 0.012% of rated voltage/current				
Vout & Iout programming & readback accuracy	Digitally	< 0.05% of rated voltage, < 0.1% of rated current				
Voltage & Current Programming	Analog	By either Voltage (0-5V or 0-10V) or Resistance (0-5k or 0-10k)				
Voltage & Current Monitoring	Analog	0-5V or 0-10V Voltage (user selectable), ±1% accuracy				
Overvoltage Shutdown (user programmable)	V	0.5 - 12	1 - 24	2 - 40	5 - 66	5 - 110
Overtemperature Protection	-	User selectable - latched or non-latching				
Display - Voltage	-	4 digits. Accuracy 0.5% of rated voltage or current ±1 count				
Remote On/Off	-	By applied voltage or dry contact relay (user selectable logic)				
Output Good	-	Open Collector, Low on fail				
Remote Sense Compensation (per wire)	V	1	1	2	3	5
Communication Interface	-	RS232, RS485 & USB standard, IEEE488 (GPIB) & LAN optional				
Series Operation	-	Up to two identical units (with external diodes)				
Parallel Operation	-	Up to six units in master-slave configuration				
Input Voltage / Frequency (3)	-	85-265VAC, 47-63Hz				
Inrush Current	-	< 25A				
Hold Up Time (Typical)	ms	16ms				
Power Factor Correction	-	Complies with EN61000-3-2 Class A (0.99 typ)				
Operating Temperature	°C	0 - 50°C				
Storage Temperature	°C	-20 to +85°C				
Humidity (non condensing)	%RH	Operating: 10 - 90%RH, Storage 10 - 95%RH				
Cooling	-	Internal temperature controlled fan				
Withstand Voltage	-	I/P to GND 2kVAC, I/P to O/P 3kVAC, O/P to GND 1380VDC 1 min				
Insulation Resistance	-	>100M at 25°C & 70%RH				
Vibration (non operating)	-	IEC60068-2-64				
Shock	-	<20G, half sine, 11ms. IEC60068-2-27				
Safety Agency Certifications	-	UL61010-1, EN61010-1, IEC61010 (Designed to meet UL/EN60950-1)				
Immunity	-	IEC61326 (Designed to meet EN55022 / EN55024)				
Conducted & Radiated EMI	-	EN55022-B, FCC part 15-B, VCCI-B				
Size (H x W x D) (Excluding handles and busbars)	mm	Standard body 83 x 70 x 350mm; Wide Body 83 x 105 x 350mm				
Weight	kg	Standard body 1.9kg; Wide Body 2.4kg				
Warranty	yrs	Five Years				

Notes:

- (1) Recovery to within 0.5% of rated voltage after a load change of 10-90% (Output current 10-100% of Imax)
- (2) Over 30 minute warm up time after power on
- (3) Derate for 85-100 VAC; Z10-72-U (66A), Z20-40-U (36A), Z36-24-U (20A), Z60-14-U (12.5A), Z100-8-U (7.5A)

For Additional Information, please visit
us.tdk-lambda.com/lp/products/zplus-series.htm

