



Industrial



Test

## 200W and 400W Programmable Power Supplies



| Features                                                       | Benefits                               |
|----------------------------------------------------------------|----------------------------------------|
| • 2U high                                                      | Minimises system rack height           |
| • Built-in USB, RS232 & RS485                                  | Highly flexible system integration     |
| • Optional LAN, GPI & isolated analogue programming interfaces | Choice of additional communications    |
| • Arbitrary function generation                                | Convenient for repeated test processes |
| • 5 year warranty                                              | High reliability                       |

| 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         | 0 - 10               | 0 - 20               | 200           | 5                    | 50                  | 50                   | 80 / 82                   | Yes                               |
| Z10-40         | 0 - 10               | 0 - 40               | 400           | 5                    | 50                  | 50                   | 80 / 82                   | No                                |
| Z20-10         | 0 - 20               | 0 - 10               | 200           | 5                    | 50                  | 30                   | 82 / 84                   | Yes                               |
| Z20-20         | 0 - 20               | 0 - 20               | 400           | 5                    | 50                  | 30                   | 81 / 83                   | Yes                               |
| Z36-6          | 0 - 36               | 0 - 6                | 216           | 5                    | 50                  | 15                   | 83 / 85                   | Yes                               |
| Z36-12         | 0 - 36               | 0 - 12               | 432           | 5                    | 50                  | 15                   | 83 / 85                   | Yes                               |
| Z60-3.5        | 0 - 60               | 0 - 3.5              | 210           | 5                    | 50                  | 8                    | 83 / 85                   | Yes                               |
| Z60-7          | 0 - 60               | 0 - 7                | 420           | 5                    | 50                  | 8                    | 83 / 85                   | Yes                               |
| Z100-2         | 0 - 100              | 0 - 2                | 200           | 8                    | 80                  | 3                    | 83 / 85                   | No                                |
| Z100-4         | 0 - 100              | 0 - 4                | 400           | 8                    | 80                  | 3                    | 84 / 86                   | No                                |

| Factory Installed Options                             |             |
|-------------------------------------------------------|-------------|
|                                                       | Option Code |
| Front panel terminals (60V or 25A max)*               | -L          |
| <b>Only one of the options below can be included:</b> |             |
| GPIB Interface*                                       | -IEEE       |
| Voltage Programming Isolated Analog Interface*        | -IS510      |
| Current Programming Isolated Analog Interface*        | -IS420      |
| LAN Interface (Complies with "LXI" Class C)           | -LAN        |

| Part Number Example |
|---------------------|
| Z10-20-LAN-L        |

\* Requires wide body (105mm) case style

| Accessories                                                |             |
|------------------------------------------------------------|-------------|
|                                                            | Part Number |
| <b>19" Rack Housing</b>                                    |             |
| (Accepts four 105mm width units or six 70mm width units)   | Z-NL100     |
| 70mm Blanking Panel For 19" Rack                           | Z-BP        |
| 105mm Blanking Panel For 19" Rack                          | Z-WBP       |
| <b>Dual/Triple Housing</b>                                 |             |
| (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     |
| British AC Cord                                            | Z-GB        |
| European AC Cord                                           | Z-E         |

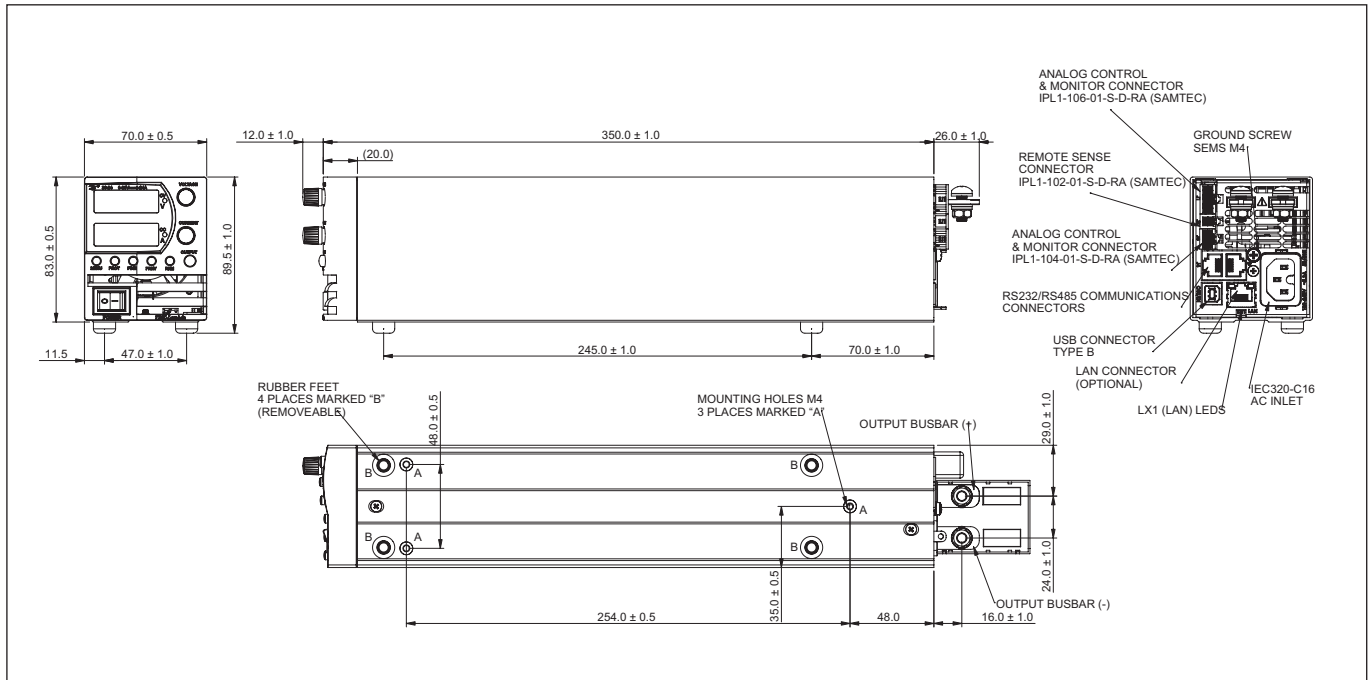
## Specification (See [www.uk.tdk-lambda.com/zplus](http://www.uk.tdk-lambda.com/zplus) for further information)

| 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 five units in master-slave configuration                           |        |        |        |         |
| Input Voltage / Frequency (3)                              | VAC       | 85-265VAC, 47-63Hz                                                       |        |        |        |         |
| Inrush Current                                             | A         | < 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                                          | VAC       | I/P to GND 2kVAC, I/P to O/P 3kVAC, O/P to GND 1380VDC 1 min             |        |        |        |         |
| Insulation Resistance                                      | Ω         | >100MΩ at 25°C & 70%RH                                                   |        |        |        |         |
| Vibration (non operating)                                  | -         | IEC60068-2-64                                                            |        |        |        |         |
| Shock                                                      | G         | <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       | 5                                                                        |        |        |        |         |

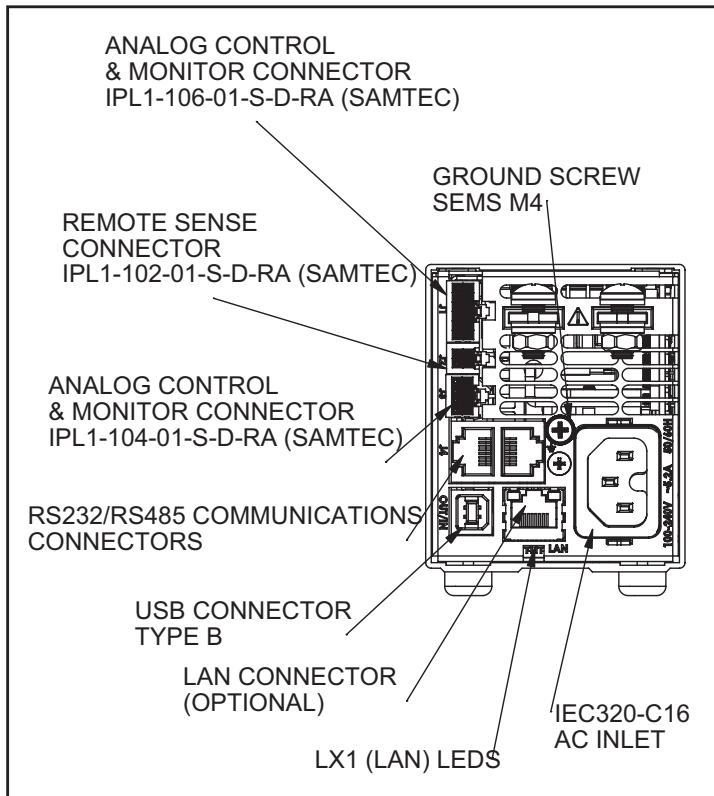
### Notes:

- (1) Recovery to within 0.5% of rated voltage after a load change of 10-90% (Output current 10-100% of Imax)
- (2) During 30 minute warm up time after power on
- (3) Requires IEC 320-C15 connector for mains input

## Outline Drawing Z+ 200W and 400W



## Z+ 200W and 400W Connections



See Longform Datasheet  
for rack & wide body dimensions  
[www.emea.tdk-lambda.com/zplus](http://www.emea.tdk-lambda.com/zplus)

## TDK-LAMBDA EMEA

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## Local Distribution