

## 80-170W Quad Output Power Supplies

### Features

- ◆ Universal Input (85 - 265VAC)
- ◆ Power Factor Corrected
- ◆ Floating Adjustable Fourth Output
- ◆ Low Profile <1U High



### Key Market Segments & Applications



### Specifications

| Model                         |     | ZWQ80<br>-5222                                                                    | ZWQ80<br>-5223 | ZWQ80<br>-5224 | ZWQ80<br>-5225 | ZWQ130<br>-5222                           | ZWQ130<br>-5223 | ZWQ130<br>-5224 | ZWQ130<br>-5225 |
|-------------------------------|-----|-----------------------------------------------------------------------------------|----------------|----------------|----------------|-------------------------------------------|-----------------|-----------------|-----------------|
| Input Voltage                 | -   | 85-265VAC (47-63Hz), 120-370VDC*                                                  |                |                |                |                                           |                 |                 |                 |
| Input Current (1)             | A   | 1.6 / 0.8                                                                         |                |                |                | 2.6 / 1.3                                 |                 |                 |                 |
| Inrush Current (1)            | A   | 14/28                                                                             |                |                |                |                                           |                 |                 |                 |
| Power Factor                  | -   | Meets EN61000-3-2                                                                 |                |                |                |                                           |                 |                 |                 |
| Temperature Coefficient       | -   | <0.02%/°C                                                                         |                |                |                |                                           |                 |                 |                 |
| Max Output Power (convection) | W   | 80                                                                                |                |                |                | 130                                       |                 |                 |                 |
| Max Output Power (forced air) | W   | 104                                                                               | 88.7           | 104            | 104            | 170                                       | 149.6           | 170             | 170             |
| Overpower Protection (2)      | W   | >109                                                                              | >93            | >109           | >109           | >173                                      | >152            | >173            | >173            |
| Minimum Load                  | A   | V1: 0.9A Conv, 1.4A Forced Air                                                    |                |                |                | V1: 1.5A Conv, 2.1A Forced Air            |                 |                 |                 |
| Output Voltage Accuracy       | %   | ±5% for outputs V2 and V3                                                         |                |                |                |                                           |                 |                 |                 |
| Efficiency (Typ)              | %   | 72                                                                                |                |                |                |                                           |                 |                 |                 |
| Hold Up Time (1)              | ms  | 20                                                                                |                |                |                |                                           |                 |                 |                 |
| Leakage Current               | -   | 0.75mA max, 0.2mA (Typ) at 100VAC / 0.44mA(Typ) at 230VAC                         |                |                |                |                                           |                 |                 |                 |
| Remote On / Off               | -   | See installation manual (Not available with /A cover option)                      |                |                |                |                                           |                 |                 |                 |
| Oper Temp (convection cooled) | °C  | -10°C to 60°C, derate linearly to 50% load from 40°C to 60°C. (3)                 |                |                |                |                                           |                 |                 |                 |
| Oper Temp (forced air cooled) | °C  | -10°C to 70°C, derate linearly to 50% load from 50°C to 70°C. (>30cfm airflow)(3) |                |                |                |                                           |                 |                 |                 |
| Storage Temperature           | °C  | -30° to +85°C                                                                     |                |                |                |                                           |                 |                 |                 |
| Humidity (non condensing)     | -   | Operating: 30 - 90% RH; Non-operating 10-95% RH                                   |                |                |                |                                           |                 |                 |                 |
| Withstand Voltage             | -   | I/P~Grnd 2kVAC (20mA), I/P~O/P 3kVAC (20mA), O/P~Grnd 500VAC (100mA) for 1 min.   |                |                |                |                                           |                 |                 |                 |
| Isolation Resistance          | -   | >100M at 25°C & 70%RH, Output to Ground 500VDC                                    |                |                |                |                                           |                 |                 |                 |
| Vibration (non operating)     | -   | 10 - 55Hz (1 minute sweep), 19.6m/s <sup>2</sup> constant X, Y, Z 1 hour          |                |                |                |                                           |                 |                 |                 |
| Shock                         | -   | < 196.1 m/s <sup>2</sup>                                                          |                |                |                |                                           |                 |                 |                 |
| Safety Agency Approvals       | -   | UL60950-1, CSA60950-1, EN60950-1, CE Mark, EN50178                                |                |                |                |                                           |                 |                 |                 |
| Conducted & Radiated EMI      | -   | EN55011, EN55022-B, FCC Class B, VCCI-B                                           |                |                |                |                                           |                 |                 |                 |
| Immunity                      | -   | EN61000-4-2,-3,-4,-5,-6,-8,-11                                                    |                |                |                |                                           |                 |                 |                 |
| Weight (Typ)                  | g   | 550                                                                               |                |                |                | 730                                       |                 |                 |                 |
| Size (W x H x D)              | mm  | 93.5 x 35 x 210 (refer to outline drawing)                                        |                |                |                | 106 x 35 x 225 (refer to outline drawing) |                 |                 |                 |
| Warranty                      | yrs | One Year                                                                          |                |                |                |                                           |                 |                 |                 |

(1) 100/200VAC

(2) Avoid prolong operation in overload

(3) /A version - additional derating, see installation manual

\*Safety certified for AC input only

| Model Selector |        |             |                          |              |                           |                   |                   |                   |            |
|----------------|--------|-------------|--------------------------|--------------|---------------------------|-------------------|-------------------|-------------------|------------|
| Model          | Output | Voltage (V) | Voltage Adjust Range (V) | Convect. (A) | Peak or Forced Air (A)(4) | Max Load Reg (mV) | Max Line Reg (mV) | Ripple Noise (mV) | OVP (V)(5) |
| ZWQ80-5222     | V1     | 5           | 5.0-5.25                 | 8.0          | 10.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 12          | 11.4-12.6                | 3.0          | 4.0                       | 300               | 48                | 150               | 13.8-16.2  |
| ZWQ80-5223     | V1     | 5           | 5.0-5.25                 | 8.0          | 10.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 3.3         | 2.0-3.63                 | 7.0          | 9.0                       | 100               | 20                | 120               | 3.79-4.95  |
| ZWQ80-5224     | V1     | 5           | 5.0-5.25                 | 8.0          | 10.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 24          | 22.8-25.2                | 1.5          | 2.0                       | 400               | 96                | 200               | 27.6-32.4  |
| ZWQ80-5225     | V1     | 5           | 5.0-5.25                 | 8.0          | 10.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 2.0          | 2.5                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 5           | 2.0-5.25                 | 7.0          | 9.0                       | 100               | 20                | 120               | 5.7-7.0    |
| ZWQ130-5222    | V1     | 5           | 5.0-5.25                 | 15.0         | 19.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 12          | 11.4-12.6                | 4.0          | 5.0                       | 300               | 48                | 150               | 11.4-12.6  |
| ZWQ130-5223    | V1     | 5           | 5.0-5.25                 | 15.0         | 19.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 3.3         | 2.0-3.63                 | 10.0         | 12.0                      | 100               | 20                | 120               | 3.79-4.95  |
| ZWQ130-5224    | V1     | 5           | 5.0-5.25                 | 15.0         | 19.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 24          | 22.8-25.2                | 2.0          | 2.5                       | 400               | 96                | 200               | 27.6-32.4  |
| ZWQ130-5225    | V1     | 5           | 5.0-5.25                 | 15.0         | 19.0                      | 100               | 20                | 120               | 5.7-7.0    |
|                | V2     | +12/15*     | +12/+15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V3     | -12/15*     | -12/-15                  | 4.0          | 5.0                       | 300               | 48                | 150               | 16.5-22.5  |
|                | V4     | 5           | 2.0-5.25                 | 10.0         | 12.0                      | 100               | 20                | 120               | 5.7-7.0    |

\* User selectable via connector or PCB. Outputs are floating from V1 & V4. Can be connected in series for 24/30V.

| Other Industrial Products |                                           |
|---------------------------|-------------------------------------------|
| ZWS/ZWD                   | 5W to 480W Single and dual output         |
| SC                        | 30W to 120W Single, dual, & triple output |
| NV                        | 175 to 700W Single and multiple output    |
| HWS                       | 15 to 1500W Single output                 |

- (4) The peak current draw must not exceed a 10 sec. duration with a duty cycle of 35%.
- (5) An overvoltage condition on any output will shut down all outputs, the power supply must be re-set by cycling the AC input.

| Options |                       |
|---------|-----------------------|
| Suffix  | Description           |
| blank   | No cover or L Bracket |
| /L      | L Bracket             |
| /A      | Cover and L Bracket   |

For Additional Information, please visit  
<https://product.tdk.com/info/en/products/power/index.html>

