

## 40-60W Single, Dual & Triple Output DIN Mount DC-DC Converters

### Features

- ◆ DIN Rail Mount Version of TDK-Lambda's PX Series
- ◆ 1600VDC Input to Output Isolation
- ◆ Wide Operating Temperature Range
- ◆ Internally Protected
- ◆ All In One Package



### Key Market Segments & Applications



Industrial



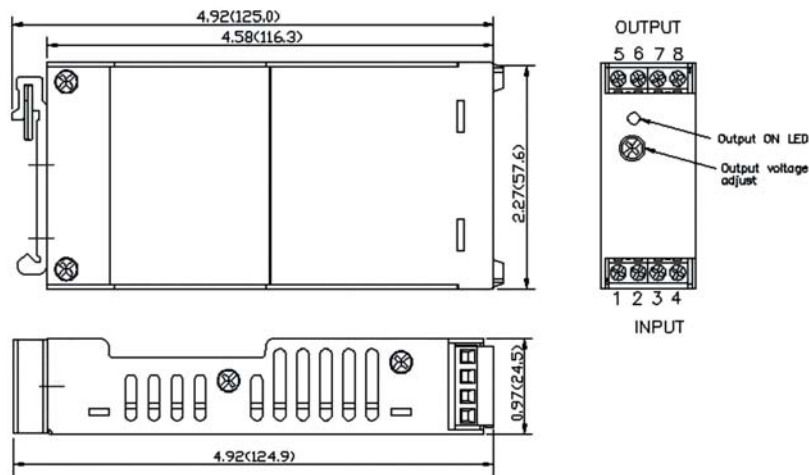
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### Specifications

| Model                                |                | DPX40                                                                                    | DPX60 |
|--------------------------------------|----------------|------------------------------------------------------------------------------------------|-------|
| Max Output Power                     | W              | 40W                                                                                      | 60W   |
| Efficiency                           | %              | 85% typical at nominal input & full load                                                 |       |
| Voltage Accuracy                     | %              | Single, Dual & Triple Main $\pm 1\%$ , Triple auxiliaries $\pm 5\%$                      |       |
| Volt. Adjust. (Single Output Only)   | %              | $\pm 10\%$                                                                               |       |
| Minimum Load, each output (1)        | %              | Single output 0%, Dual & Triple outputs 10%                                              |       |
| Line Regulation                      | %              | Single / Dual $\pm 0.5\%$ , Triple (main) $\pm 1\%$ , (auxiliaries) $\pm 5\%$            |       |
| Load Regulation (10% to 100%)        | %              | Single $\pm 0.5\%$ , Dual $\pm 1\%$ , Triple (main) $\pm 2\%$ , (auxiliaries) $\pm 5\%$  |       |
| Cross Regulation (25% to 100%)       | %              | Triple (main) $\pm 1\%$ , Dual / Triple (auxiliaries) $\pm 5\%$                          |       |
| Start up time                        | ms             | 100ms typ.                                                                               |       |
| Remote on/off (ref. to neg. input)   | -              | Positive Logic: ON: Open or 3.5-12V, OFF: Short or $< 1.2V$                              |       |
| Temperature Coefficient              | %/ $^{\circ}C$ | $< \pm 0.02\%/^{\circ}C$                                                                 |       |
| Operating Temperature                | $^{\circ}C$    | $-40$ to $85^{\circ}C$ , derate linearly to 20% load from $60^{\circ}C$ to $85^{\circ}C$ |       |
| Storage Temperature                  | $^{\circ}C$    | $-40$ to $85^{\circ}C$                                                                   |       |
| Thermal Shock                        | -              | MIL-STD-810D                                                                             |       |
| Relative Humidity                    | %RH            | 5 to 95%RH (non condensing)                                                              |       |
| Trans. Resp.(25% step load chng.)    | ms             | 250 $\mu$ s recovery                                                                     |       |
| Overvolt. Protection (Zener clamp)   | -              | 5V: 6.2V, 12V: 15V, 15V: 18V                                                             |       |
| Overcurr. & Short Circuit Protection | -              | Typically at 150%, hiccup with self recovery                                             |       |
| Input Surge Volt. (Max. for 100ms)   | -              | 12V input: 36V, 24V input: 50V, 48V input: 100V                                          |       |
| Isolation Voltage                    | VDC            | 1600VDC minimum                                                                          |       |
| Isolation Resistance                 | $\Omega$       | $10^9$ Ohms minimum                                                                      |       |
| Typical Switching Frequency (Fixed)  | kHz            | 300kHz (typ)                                                                             |       |
| Shock & Vibration                    | -              | MIL-STD-810F                                                                             |       |
| Conducted & Radiated Emissions       | -              | EN55022 Level B                                                                          |       |
| Immunity                             | -              | EN61000-4-2, -3, -4, -5, -6 Pref Criteria A                                              |       |
| Safety Agency Approval               | -              | CE Mark                                                                                  |       |
| Size (W x H x L)                     | in(mm)         | 0.96 x 2.27 x 4.92" (24.5 x 57.6 x 125mm)                                                |       |
| Weight                               | g              | 182g                                                                                     |       |
| Warranty                             | yrs            | Two Years                                                                                |       |

1. No load operation will not damage the unit

## Outline Drawing



## Model Selector

| Output Voltage (V) | Output Current (A) | Input Voltage (VDC) | Model        | Ripple & Noise (Pk to Pk mV) | Max Load Cap (uF) |
|--------------------|--------------------|---------------------|--------------|------------------------------|-------------------|
| Single Outputs     |                    |                     |              |                              |                   |
| 5V                 | 8A                 | 9.5 - 36VDC         | DPX4024WS05  | 50mV                         | 13600uF           |
| 12V                | 3.33A              | 9.5 - 36VDC         | DPX4024WS12  | 75mV                         | 2360uF            |
| 15V                | 2.67A              | 9.5 - 36VDC         | DPX4024WS15  | 75mV                         | 1510uF            |
| 5V                 | 8A                 | 18 - 75VDC          | DPX4048WS05  | 50mV                         | 13600uF           |
| 12V                | 3.33A              | 18 - 75VDC          | DPX4048WS12  | 75mV                         | 2360uF            |
| 15V                | 2.67A              | 18 - 75VDC          | DPX4048WS15  | 75mV                         | 1510uF            |
| 5V                 | 12A                | 18 - 36VDC          | DPX6024S05   | 75mV                         | 20400uF           |
| 12V                | 5A                 | 18 - 36VDC          | DPX6024S12   | 100mV                        | 3550uF            |
| 15V                | 4A                 | 18 - 36VDC          | DPX6024S15   | 100mV                        | 2300uF            |
| 5V                 | 12A                | 36 - 75VDC          | DPX6048S05   | 75mV                         | 20400uF           |
| 12V                | 5A                 | 36 - 75VDC          | DPX6048S12   | 100mV                        | 3550uF            |
| 15V                | 4A                 | 36 - 75VDC          | DPX6048S15   | 100mV                        | 2300uF            |
| Dual Outputs       |                    |                     |              |                              |                   |
| ±12                | 1.667A             | 9.5 - 36VDC         | DPX4024WD12  | 120mV                        | ±1200uF           |
| ±15                | 1.333A             | 9.5 - 36VDC         | DPX4024WD15  | 150mV                        | ±1510uF           |
| ±12                | 1.667A             | 18 - 75VDC          | DPX4048WD12  | 120mV                        | ±1200uF           |
| ±15                | 1.333A             | 18 - 75VDC          | DPX4048WD15  | 150mV                        | ±1510uF           |
| Triple Outputs     |                    |                     |              |                              |                   |
| +5V, ±12V          | 6, ±0.4A           | 9.5 - 18VDC         | DPX4012T0512 | 50 / 75mV                    | 6800uF, ±330uF    |
| +5V, ±15V          | 6, ±0.3A           | 9.5 - 18VDC         | DPX4012T0515 | 50 / 75mV                    | 6800uF, ±110uF    |
| +5V, ±12V          | 6, ±0.4A           | 18 - 36VDC          | DPX4024T0512 | 50 / 75mV                    | 6800uF, ±330uF    |
| +5V, ±15V          | 6, ±0.3A           | 18 - 36VDC          | DPX4024T0515 | 50 / 75mV                    | 6800uF, ±110uF    |
| +5V, ±12V          | 6, ±0.4A           | 36 - 75VDC          | DPX4048T0512 | 50 / 75mV                    | 6800uF, ±330uF    |
| +5V, ±15V          | 6, ±0.3A           | 36 - 75VDC          | DPX4048T0515 | 50 / 75mV                    | 6800uF, ±110uF    |

## Pin Connection

| PIN | SINGLE   | DUAL     | TRIPLE   |
|-----|----------|----------|----------|
| 1   | Ctrl     | Ctrl     | Ctrl     |
| 2   | VIN (-)  | VIN (-)  | VIN (-)  |
| 3   | VIN (-)  | VIN (-)  | VIN (-)  |
| 4   | VIN (+)  | VIN (+)  | VIN (+)  |
| 5   | NC       | NC       | Aux (+)  |
| 6   | VOUT (-) | VOUT (-) | Common   |
| 7   | VOUT (+) | Common   | Aux (-)  |
| 8   | NC       | VOUT (+) | VOUT (+) |

## Other Industrial Products

|           |                                               |
|-----------|-----------------------------------------------|
| DPP / DSP | 10W to 960W, 5V to 48V power supplies         |
| DLP       | 75W to 240W, 24V power supplies               |
| DLP-PU    | Redundancy Module (20A)                       |
| R Series  | 6A to 30A, single and three phase EMI filters |

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/dpx-series.htm](http://us.tdk-lambda.com/lp/products/dpx-series.htm)

