



## DPX15W Series

Single and Dual Output 15W Din Rail Mount  
DC-DC Converters

- Single and dual output
- Meet EN55022 Class B
- Input fuse protection
- Input reverse polarity protection
- Input in-rush current protection
- Overload and short circuit protection
- Over voltage protection
- Reliable snap-on for DIN rail TS-35/7.5 or TS-35/15
- I/O-isolation 1600 VDC
- Output DC-OK indicator

### Key Market Segments & Applications

Communication Systems, Industry Control Systems  
Factory Automation, Semiconductor Equipment

### DPX15W Features and Benefits

#### Features

- CE Approvals
- Wide Range Input

#### Benefits

- Easier System Approvals
- Less Parts to Inventory

### Specifications

| ITEMS                                                   | DPX15W                                                                                                         |                            |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------|
| Rated Input voltage range                               | 24V nominal input 9.5-36VDC                                                                                    | 48V nominal input 18-75VDC |
| Switching Frequency                                     | 400kHz, typ                                                                                                    |                            |
| Maximum Input Current                                   | See Table                                                                                                      |                            |
| Input Fuse                                              | 24V input, 6A Fuse                                                                                             | 48V input, 4A fuse         |
| Max Output Power (W)                                    | See Table                                                                                                      |                            |
| Voltage Accuracy                                        | Single/Dual $\pm 1.2\%$ / Single (3.3V) $\pm 2.0\%$                                                            |                            |
| Line Regulation (LL to HL at full load)                 | Single $\pm 0.2\%$ / Dual 0.5%                                                                                 |                            |
| Ripple and Noise                                        | 20MHz bandwidth                                                                                                | See table                  |
| Start up time (Nominal Vin and constant resistive load) | Power up 100mS, typ                                                                                            |                            |
| Remote on/off (option) (Note 2)                         | POSITIVE logic: ON: Open or 3-12V, OFF Short or <1.2V<br>NEGATIVE logic: ON: Short or <1.2V, OFF Open or 3-12V |                            |
| Efficiency                                              | See Table                                                                                                      |                            |
| Over Current Protection, Factory Set                    | Maximum, 150% of full load                                                                                     |                            |
| Short Circuit Protection (Note 3)                       | Hiccup, auto recovery                                                                                          |                            |
| Overvoltage Protection                                  | 3.3V output                                                                                                    | 3.9V                       |
|                                                         | 5V output                                                                                                      | 6.2V                       |
|                                                         | 12V output                                                                                                     | 15V                        |
|                                                         | 15 output                                                                                                      | 18V                        |
| Operating Temperature                                   | -40°C ~ 85°C (without derating) 85°C ~ 95°C (with derating - see curve)                                        |                            |
| Storage Temperature                                     | -40°C ~ 105°C                                                                                                  |                            |
| Thermal Shock                                           | MIL-STD-810F                                                                                                   |                            |
| Relative Humidity (non condensing)                      | 5% to 95% RH                                                                                                   |                            |
| Transient Response (25% step load change)               | 250µS                                                                                                          |                            |
| Isolation Voltage (Min)                                 | 1600Vdc                                                                                                        |                            |
| Isolation Resistance                                    | $10^9 \Omega$                                                                                                  |                            |
| Isolation Capacitance (Max)                             | 4000 pF                                                                                                        |                            |
| MTBF BELLCORE TR-NWT-000332 (Note 1)                    | 147,200 hrs                                                                                                    |                            |
| Vibration                                               | MIL-STD-810F                                                                                                   |                            |
| Conducted and Radiated Emissions                        | EN55022, Class B                                                                                               |                            |
| Immunity                                                | EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6 Perf. Criteria A                               |                            |
| Safety                                                  | CE                                                                                                             |                            |
| Size (H x W x D)                                        | 57.6 x 24.5 x 125.0 mm                                                                                         |                            |
| Weight                                                  | 147.5g                                                                                                         |                            |
| Connector                                               | Screw Terminal                                                                                                 |                            |
| Cooling                                                 | Convection                                                                                                     |                            |
| Front Panel LED                                         | Output DC good                                                                                                 |                            |
| Warranty yrs                                            | 2                                                                                                              |                            |

Notes: See page 2

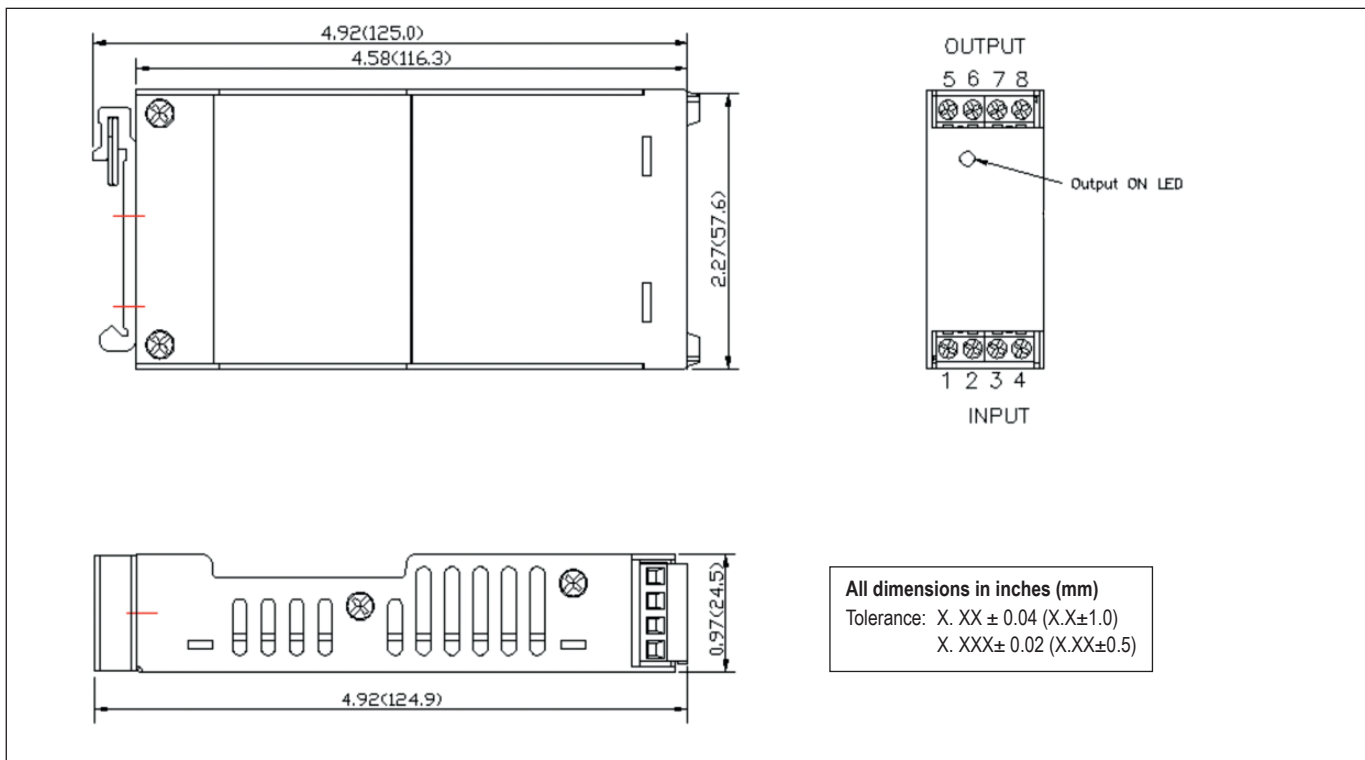
## Model Selector

| Model         | Input Range  | Output Voltage | Output Current Min Load | Output Current Full Load | Output (3) Ripple & Noise | Input Current No Load (4) | Input Current Full Load (5) | Eff % (3) | Capacitor Load Max (6) |
|---------------|--------------|----------------|-------------------------|--------------------------|---------------------------|---------------------------|-----------------------------|-----------|------------------------|
| DPX15-24WS3P3 | 9.5 - 36 VDC | 3.3 VDC        | 0mA                     | 4500mA                   | 50mVp-p                   | 52mA                      | 773mA                       | 84        | 147000μF               |
| DPX15-24WS05  | 9.5 - 36 VDC | 5 VDC          | 0mA                     | 3000mA                   | 50mVp-p                   | 67mA                      | 772mA                       | 85        | 7200μF                 |
| DPX15-24WS5P1 | 9.5 - 36 VDC | 5.1 VDC        | 0mA                     | 3000mA                   | 50mVp-p                   | 67mA                      | 787mA                       | 85        | 7200μF                 |
| DPX15-24WS12  | 9.5 - 36 VDC | 12 VDC         | 0mA                     | 1250mA                   | 75mVp-p                   | 26mA                      | 772mA                       | 85        | 1250μF                 |
| DPX15-24WS15  | 9.5 - 36 VDC | 15 VDC         | 0mA                     | 1000mA                   | 75mVp-p                   | 26mA                      | 772mA                       | 85        | 800μF                  |
| DPX15-24WD05  | 9.5 - 36 VDC | ±5 VDC         | 0mA                     | ±1500mA                  | 75mVp-p                   | 57mA                      | 772mA                       | 85        | ±3600μF                |
| DPX15-24WD12  | 9.5 - 36 VDC | ±12 VDC        | 0mA                     | ±625mA                   | 75mVp-p                   | 35mA                      | 762mA                       | 86        | ±625μF                 |
| DPX15-24WD15  | 9.5 - 36 VDC | ±15 VDC        | 0mA                     | ±500mA                   | 75mVp-p                   | 35mA                      | 762mA                       | 86        | ±400μF                 |
| DPX15-48WS3P3 | 18 - 75 VDC  | 3.3 VDC        | 0mA                     | 4500mA                   | 50mVp-p                   | 37mA                      | 387mA                       | 84        | 14700μF                |
| DPX15-48WS05  | 18 - 75 VDC  | 5 VDC          | 0mA                     | 3000mA                   | 50mVp-p                   | 38mA                      | 381mA                       | 86        | 7200μF                 |
| DPX15-48WS5P1 | 18 - 75 VDC  | 5.1 VDC        | 0mA                     | 3000mA                   | 50mVp-p                   | 38mA                      | 389mA                       | 86        | 7200μF                 |
| DPX15-48WS12  | 18 - 75 VDC  | 12 VDC         | 0mA                     | 1250mA                   | 75mVp-p                   | 18mA                      | 386mA                       | 85        | 1250μF                 |
| DPX15-48WS15  | 18 - 75 VDC  | 15 VDC         | 0mA                     | 1000mA                   | 75mVp-p                   | 18mA                      | 386mA                       | 85        | 800μF                  |
| DPX15-48WD05  | 18 - 75 VDC  | ± 5 VDC        | 0mA                     | ± 1500mA                 | 75mVp-p                   | 37mA                      | 381mA                       | 86        | ±3600μF                |
| DPX15-48WD12  | 18 - 75 VDC  | ± 12VDC        | 0mA                     | ± 625mA                  | 75mVp-p                   | 20mA                      | 381mA                       | 86        | ±625μF                 |
| DPX15-48WD15  | 18 - 75 VDC  | ± 15 VDC       | 0mA                     | ± 500mA                  | 75mVp-p                   | 20mA                      | 381mA                       | 86        | ±400μF                 |

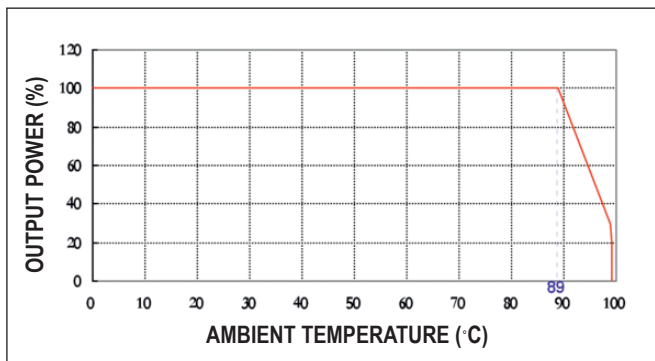
### Notes see above

- BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. MIL-HDBK-217F Notice2 @Ta=25°C, Full load(Ground, Benign, controlled environment).
- The ON/OFF control pin voltage is referenced to -Vin. Positive logic standard To orderNegative logic ON/OFF control add the suffix-N (Ex:DPX15-48WS05-N)
- Typical value at nominal input voltage and full load.
- Typical value at nominal input voltage and no load.
- Maximum value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.

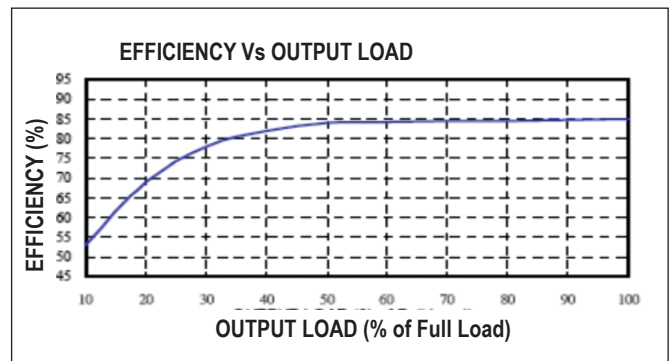
## Outline Drawing DPX15W Series



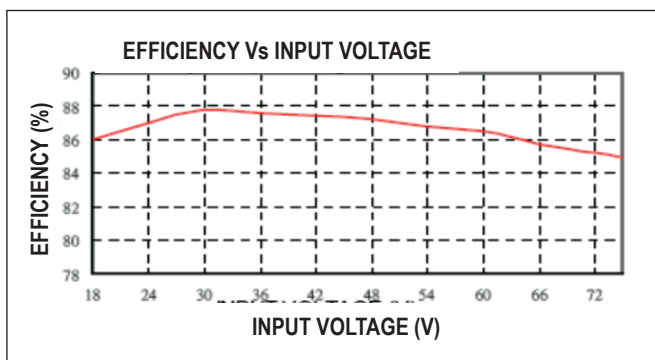
Derating Curve DPX15-48WS05



Efficiency / Load Curve DPX15-48WS05



Efficiency / Input Curve DPX15-48WS05



| Pinout |          |          |
|--------|----------|----------|
| PIN    | Single   | Dual     |
| 1      | CTRL     | CTRL     |
| 2      | - Input  | - Input  |
| 3      | - Input  | - Input  |
| 4      | + Input  | + Input  |
| 5      | NC       | NC       |
| 6      | - Output | - Output |
| 7      | + Output | Common   |
| 8      | NC       | + Output |

NC: No connection

Screw terminals - wire range from 14 to 18 AWG

## Options

| Option                       | Suffix |
|------------------------------|--------|
| Negative Logic Remote ON/OFF | - N    |

**TDK-LAMBDA EMEA**

**www.emea.tdk-lambda.com**



**TDK-Lambda France SAS**

Route de Grivery  
ZAC des Delaches  
CS 41077  
91978 Courtaboeuf Cedex  
France  
Tel: +33 1 60 12 71 65  
Fax: +33 1 60 12 71 66  
france@fr.tdk-lambda.com  
www.fr.tdk-lambda.com



**Italy Sales Office**  
Via dei Lavoratori 128/130  
20092 Cinisello Balsamo (MI)  
Italy  
Tel: +39 02 61 29 38 63  
Fax: +39 02 61 29 09 00  
info.italia@it.tdk-lambda.com  
www.it.tdk-lambda.com



**TDK-Lambda Germany GmbH**

Karl-Bold-Strasse 40  
77855 Achern  
Germany  
Tel: +49 7841 666 0  
Fax: +49 7841 5000  
info.germany@de.tdk-lambda.com  
www.de.tdk-lambda.com



**Austria Sales Office**  
Aredstrasse 22  
2544 Leobersdorf  
Austria  
Tel: +43 2256 655 84  
Fax: +43 2256 645 12  
info.germany@de.tdk-lambda.com  
www.de.tdk-lambda.com



**TDK-Lambda UK Ltd.**

Kingsley Avenue  
Ilfracombe  
Devon EX34 8ES  
United Kingdom  
Tel: +44 (0) 12 71 85 66 66  
Fax: +44 (0) 12 71 86 48 94  
powersolutions@uk.tdk-lambda.com  
www.uk.tdk-lambda.com



**Nemic Lambda Ltd.**

Kibbutz  
Givat Hashlosa 48800  
Israel  
Tel: +9 723 902 4333  
Fax: +9 723 902 4777  
info@nemic.co.il  
www.nemic.co.il



**Russia**

Technical Support:  
St Petersburg  
Tel: +7 (812) 6580463  
Sales:  
Moscow  
Tel: +7 (499) 7557732  
info@tdk-lambda.ru  
www.tdk-lambda.ru

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Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)

[www.lifeelectronics.ru](http://www.lifeelectronics.ru)