



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

DPX15W	
ITEMS	
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 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	3

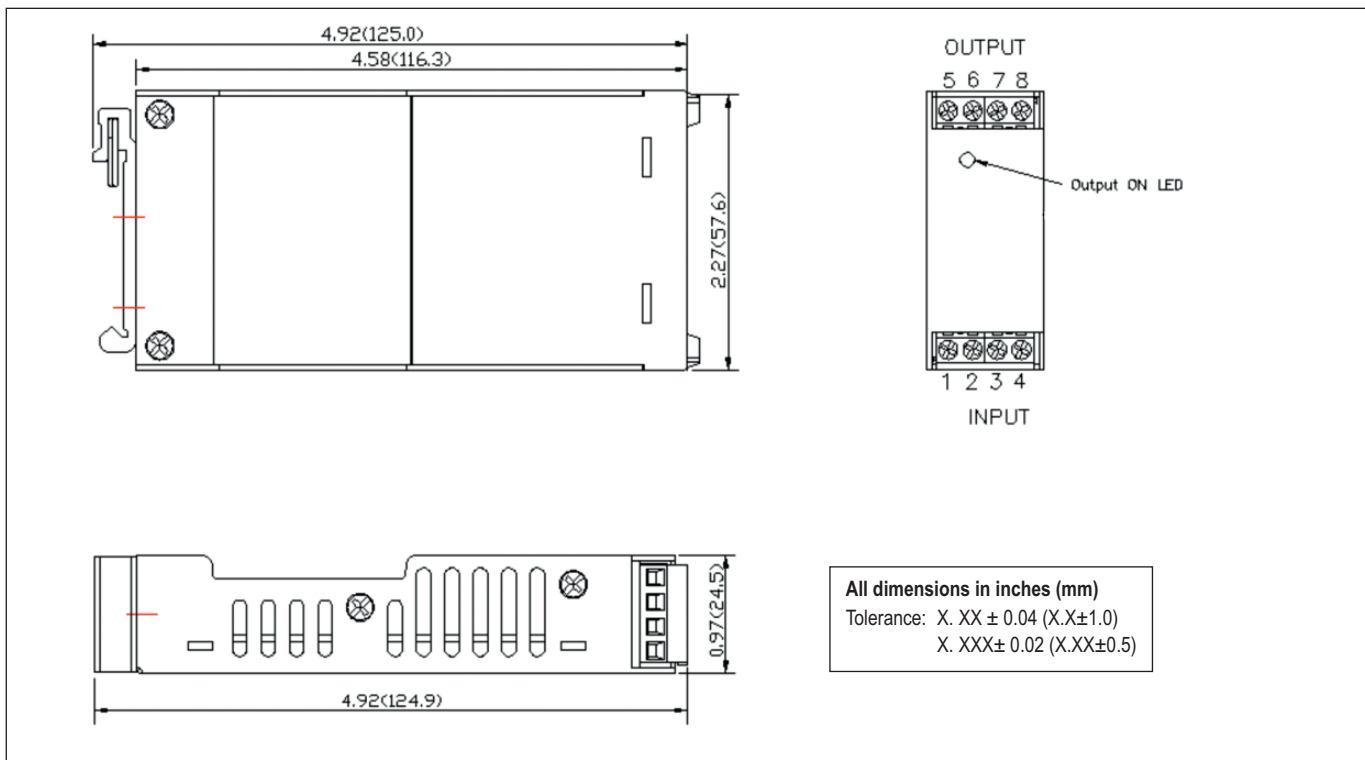
Model Selector

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

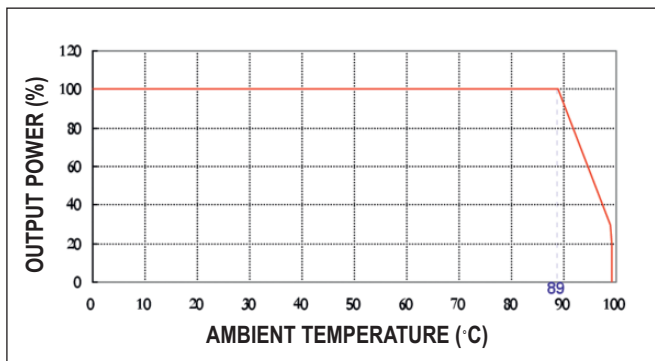
Notes see above

- 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. To order Negative 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.

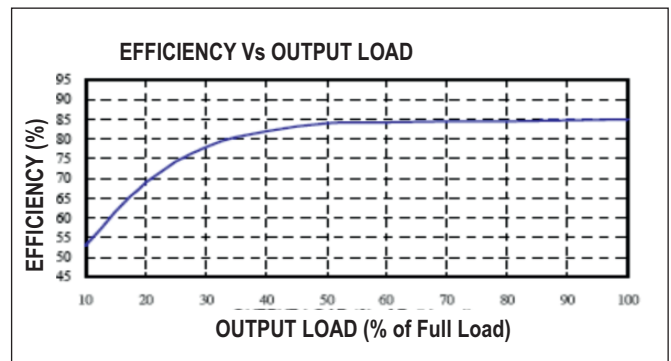
Outline Drawing DPX15W Series



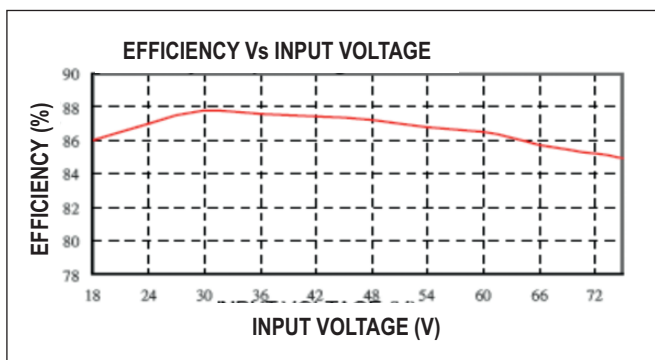
Derating Curve DPX15-48WS05



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 (Com)	- Output
7	+ Output NC	Common
8		+ Output

NC: No connection

Screw terminals - wire range from 14 to 18 AWG

Options	
Option	Suffix
Negative Logic Remote ON/OFF	/N



TDK-Lambda France SAS

Tel: +33 1 60 12 71 65
tlf.fr-powersolutions@tdk.com
www.emea.lambda.tdk.com/fr



Italy Sales Office

Tel: +39 02 61 29 38 63
tlf.it-powersolutions@tdk.com
www.emea.lambda.tdk.com/it



Netherlands

tlf.nl-powersolutions@tdk.com
www.emea.lambda.tdk.com/nl



TDK-Lambda Germany GmbH

Tel: +49 7841 666 0
tlg.powersolutions@tdk.com
www.emea.lambda.tdk.com/de



Austria Sales Office

Tel: +43 2256 655 84
tlg.at-powersolutions@tdk.com
www.emea.lambda.tdk.com/at



Switzerland Sales Office

Tel: +41 44 850 53 53
tlg.ch-powersolutions@tdk.com
www.emea.lambda.tdk.com/ch



Nordic Sales Office

Tel: +45 8853 8086
tlg.dk-powersolutions@tdk.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.

Tel: +44 (0) 12 71 85 66 66
tlu.powersolutions@tdk.com
www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.

Tel: +9 723 902 4333
tli.powersolutions@tdk.com
www.emea.lambda.tdk.com/il-en



TDK-Lambda Americas

Tel: +1 800-LAMBDA-4 or 1-800-526-2324
tla.powersolutions@tdk.com
www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda

Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation

Tel: +81-3-6778-1113
www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.

Tel: +86 21 6485-0777
tlc.powersolutions@tdk.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.

Tel: +65 6251 7211
tls.marketing@tdk.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division

Tel: +91 80 4039-0660
mathew.philip@tdk.com
www.sg.lambda.tdk.com

