

Excellent Integrated System Limited

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[TDK-Lambda Americas, Inc.](#)
[DPX2024WD15](#)

For any questions, you can email us directly:

sales@integrated-circuit.com



DPX20W Series

Single and Dual Output 20W 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

DPX20W Features and Benefits

Features

- CE Approval
- Wide Range Input

Benefits

- Easier System Approvals
- Less Parts to Inventory

Specifications

ITEMS		DPX20W	
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 $\pm 1.0\%$ / Single (3.3V) $\pm 1.5\%$	
Voltage Adjustment	(Note 7)	Single output $\pm 10\%$	
Line Regulation (LL to HL at full load Single)		Single $\pm 0.2\%$ / Dual $\pm 0.5\%$	
Ripple and Noise		20MHz bandwidth See table	
Start up time (Nominal Vin and constant resistive load)		Power up 100mS, typ (remote On/Off 20mS, 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 ~ 78°C (without derating) 78°C ~ 91°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 Ω	
Isolation Capacitance (Max)		4000 pF	
MTBF BELLCORE TR-NWT-000332	(Note 1)	139,300 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

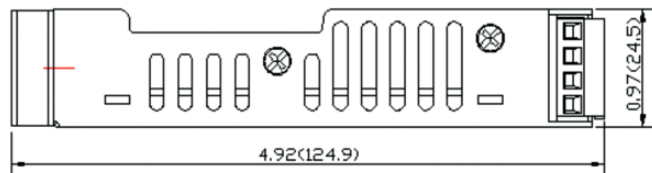
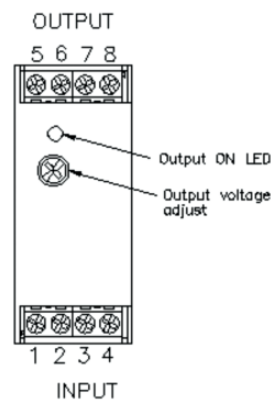
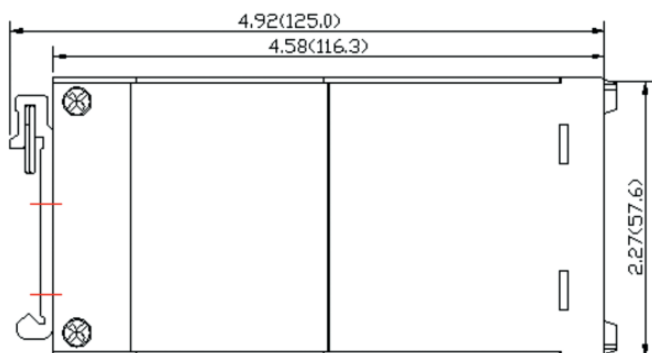
Notes

1. 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).
2. The ON/OFF control pin voltage is referenced to -Vin. Positive logic standard. To order Negative logic ON/OFF control add the suffix-N (Ex:DPX20-48WS05-N)
3. Typical value at nominal input voltage and full load.
4. Typical value at nominal input voltage and no load.
5. Maximum value at nominal input voltage and full load.
6. Test by minimum Vin and constant resistive load.
7. Single outputs have a potentiometer to adjust the output voltage.

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)
DPX20-24WS3P3	9.5 - 36 VDC	3.3 VDC	0mA	5500mA	60mVp-p	52mA	957mA	83	18000μF
DPX20-24WS05	9.5 - 36 VDC	5 VDC	0mA	4000mA	75mVp-p	67mA	1016mA	86	9600μF
DPX20-24WS12	9.5 - 36 VDC	12 VDC	0mA	1670mA	75mVp-p	26mA	1043mA	84	1650μF
DPX20-24WS15	9.5 - 36 VDC	15 VDC	0mA	1330mA	75mVp-p	27mA	1039mA	84	1050μF
DPX20-24WD05	9.5 - 36 VDC	± 5 VDC	0mA	±2000mA	100mVp-p	59mA	1016mA	86	±2000μF
DPX20-24WD12	9.5 - 36 VDC	±12 VDC	0mA	±833mA	100mVp-p	34mA	1028mA	85	±825μF
DPX20-24WD15	9.5 - 36 VDC	±15 VDC	0mA	±667mA	100mVp-p	35mA	1029mA	85	±525μF
DPX20-48WS3P3	18 - 75 VDC	3.3 VDC	0mA	5500mA	60mVp-p	37mA	473mA	83	18000μF
DPX20-48WS05	18 - 75 VDC	5 VDC	0mA	4000mA	75mVp-p	37mA	508mA	86	9600μF
DPX20-48WS12	18 - 75 VDC	12 VDC	0mA	1670mA	75mVp-p	18mA	515mA	85	1650μF
DPX20-48WS15	18 - 75 VDC	15 VDC	0mA	1330mA	75mVp-p	18mA	513mA	85	1050μF
DPX20-48WD05	18 - 75 VDC	± 5 VDC	0mA	±2000mA	100mVp-p	37mA	502mA	87	±4800μF
DPX20-48WD12	18 - 75 VDC	± 12 VDC	0mA	±833mA	100mVp-p	20mA	508mA	86	±825μF
DPX20-48WD15	18 - 75 VDC	± 15 VDC	0mA	±667mA	100mVp-p	20mA	508mA	86	±525μF

Outline Drawing DPX20W Series

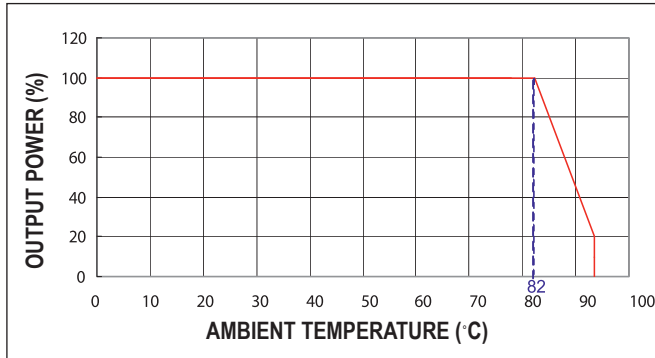


All dimensions in inches (mm)

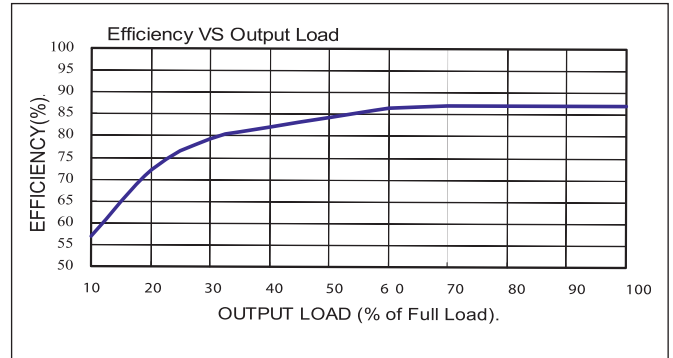
Tolerance: X. XX ± 0.04 (X.XX±1.0)

X. XXX± 0.02 (X.XX±0.5)

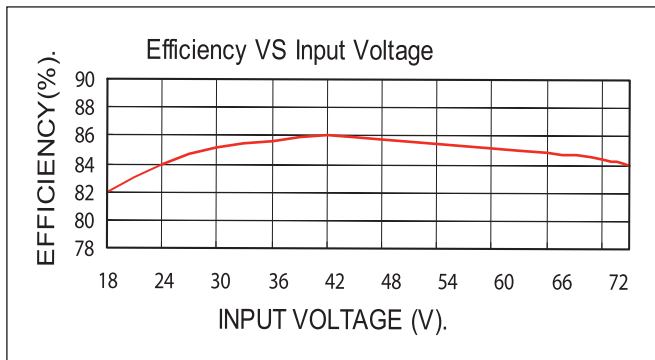
Derating Curve DPX20-48WS05



Efficiency / Load Curve DPX20-48WS05



Efficiency / Input Voltage Curve DPX20-48WS05



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

Innovating Reliable Power

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