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Innovating Reliable Power



DPX30W Series

Single and Dual Output 30W 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

DPX30W Features and Benefits

Features	Benefits
• CE Approval	• Easier System Approvals
• Wide Range Input	• Less Parts to Inventory

Specifications

ITEMS		DPX30W	
Rated Input voltage range		24V nominal input 10-40VDC	48V nominal input 18-75VDC
Switching Frequency		300kHz, 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 ± 1.0% / Single (3.3V) ± 1.5%	
Voltage Adjustment	*(Note 7)*	Single output ± 10%	
Minimun Load		N/A	
Line Regulation (LL to HL at full load)		Single ± 0.5% / 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 5V output 12V output 15 output	3.9V 6.2V 15V 18V
Operating Temperature		-40˚C ~ 67˚C (without derating)	67˚C ~ 90˚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)*	112,400 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		170g	
Connector		Screw Terminal	
Cooling		Convection	
Front Panel LED		Output DC good	
Warranty yrs		3	

Notes: See page 2

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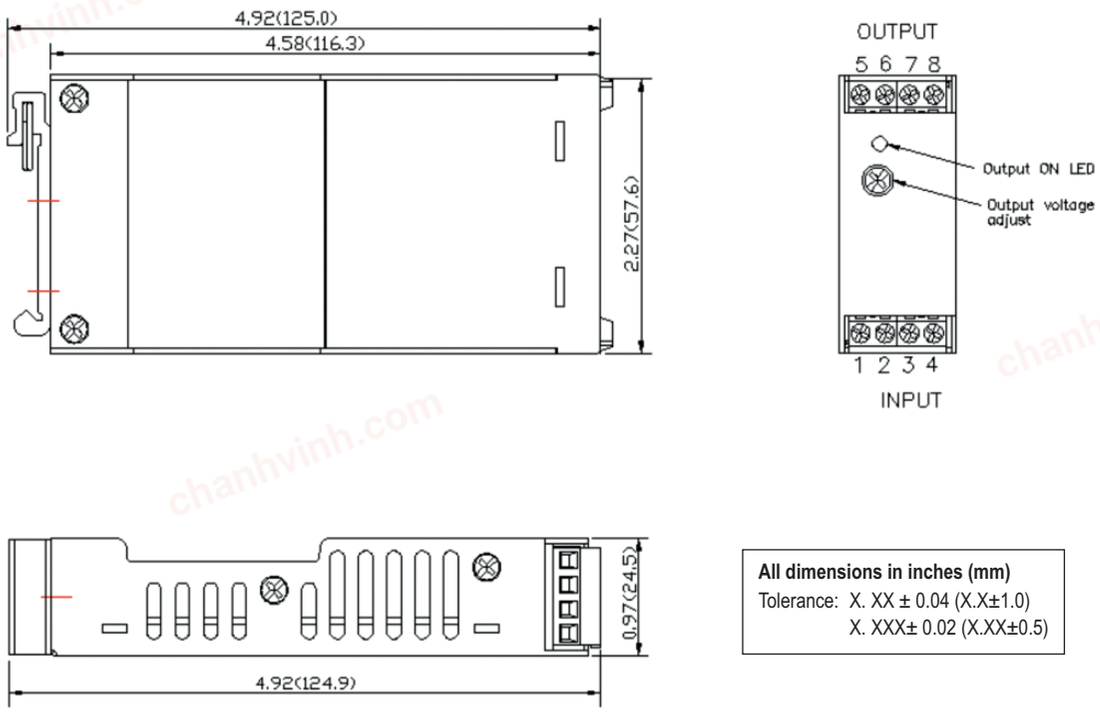
Notes

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. To order Negative logic ON/OFF control add the suffix /N (Ex:DPX30-48WS05/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)
DPX30-24WS3P3	10 - 40 VDC	3.3 VDC	0mA	6000mA	60mVp-p	52mA	1031mA	84	19500µF
DPX30-24WS05	9.5 - 36 VDC	5 VDC	0mA	6000mA	75mVp-p	67mA	1563mA	84	10200µF
DPX30-24WS12	10 - 40 VDC	12 VDC	0mA	2500mA	100mVp-p	69mA	1563mA	84	3300µF
DPX30-24WS15	10 - 40 VDC	15 VDC	0mA	2000mA	100mVp-p	75mA	1543mA	85	1100µF
DPX30-24WD12	10 - 40 VDC	± 12 VDC	0mA	± 1250mA	100mVp-p	34mA	1623mA	81	±1000µF
DPX30-24WD15	10 - 40 VDC	± 15 VDC	0mA	±1000mA	100mVp-p	40mA	1603mA	82	±680µF
DPX30-48WS3P3	18 - 75 VDC	3.3 VDC	0mA	6000mA	60mVp-p	32mA	509mA	85	19500µF
DPX30-48WS05	18 - 75 VDC	5 VDC	0mA	6000mA	75mVp-p	32mA	762mA	86	10200µF
DPX30-48WS12	18 - 75 VDC	12 VDC	0mA	2500mA	100mVp-p	38mA	772mA	85	3300µF
DPX30-48WS15	18 - 75 VDC	15 VDC	0mA	2000mA	100mVp-p	48mA	762mA	86	1100µF
DPX30-48WD12	18 - 75 VDC	± 12 VDC	0mA	±1250mA	100mVp-p	28mA	791mA	83	±1000µF
DPX30-48WD15	18 - 75 VDC	± 15 VDC	0mA	±1000mA	100mVp-p	28mA	781mA	84	±680µF

Outline Drawing DPX30W Series



All dimensions in inches (mm)
Tolerance: X. XX ± 0.04 (X.X±1.0)
X. XXX± 0.02 (X.XX±0.5)

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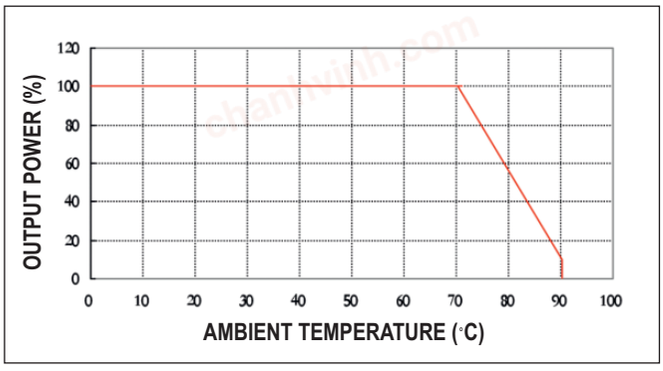
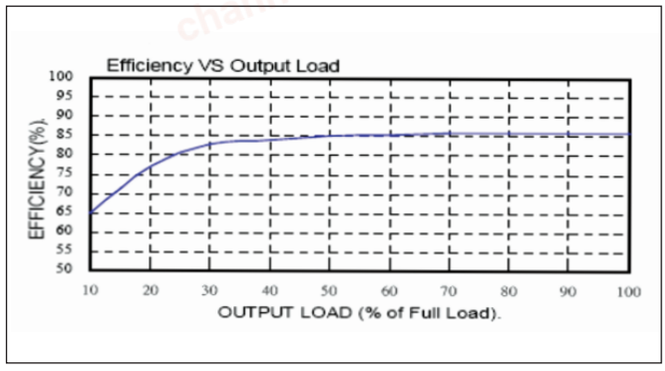
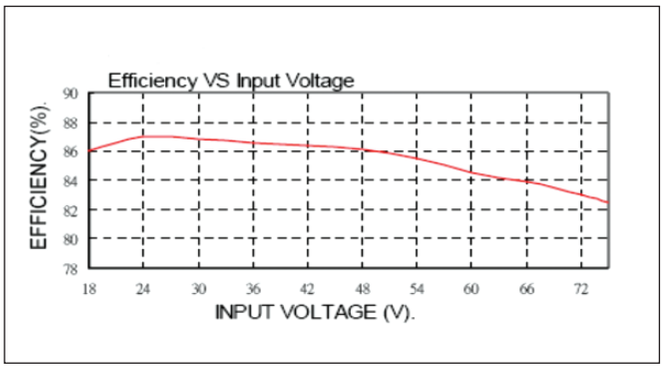
Derating Curve DPX30-48WS05



Efficiency / Load Curve DPX30-48WS05



Efficiency / Input Curve DPX30-48WS05



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

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