

DPX40W Series

Single and Dual Output 40W 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

DPX40W Features and Benefits

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

Specifications

ITEMS		DPX40W	
Rated Input voltage range		24V nominal input 9.5-36VDC	48V nominal input 18-75VDC
Switching Frequency		300kHz, typ	
Maximum Input Current		See Table	
Max Output Power (W)		See Table	
Voltage Accuracy		Single/Dual ± 1.0% / Single (3.3V) ± 1.5%	
Voltage Adjustment	*(Note 7)*	Single output ± 10%	
Minimum Load		N/A	
Line Regulation (LL to HL at full load)		Single at ± 0.5%	
Ripple and Noise		20MHz bandwidth See table	
Start up time (Nominal Vin and constant resistive load)		Power up 100mS, typ (remote 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 5V output 12V output 15 output	3.9V 6.2V 15V 18V
Operating Temperature		-40˚C ~ 66˚C (without derating)	66˚C ~ 87˚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)*	968,800 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		182g	
Connector		Screw Terminal	
Cooling		Convection	
Front Panel LED		Output DC good	
Warranty yrs		3	

Notes: See page 2

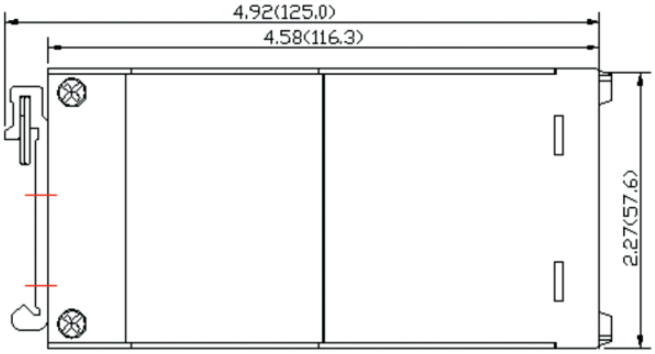
Notes

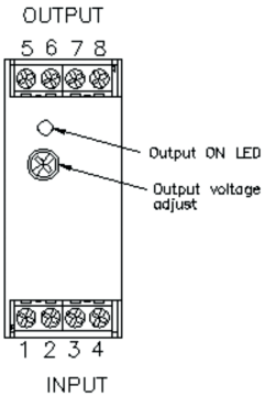
1. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40°C. MIL-HDBK-217F Notice2 @Ta=25°C, Full load(Ground, Benign, controlled environment).
2. The ON/OFF control pin voltage is referenced to -Vin. To order Negative logic ON/OFF control add the suffix -N (Ex:DPX40-48WS05-N), for Positive logic add suffix -P (Ex:DPX40-48NS05-P)
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.

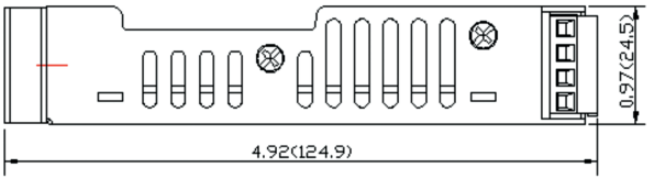
Model Selector

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)
DPX40-24WS3P3	9.5 - 36 VDC	3.3 VDC	0mA	10000mA	50mVp-p	83mA	1741mA	83	25750µF
DPX40-24WS05	9.5 - 36 VDC	5 VDC	0mA	8000mA	50mVp-p	103mA	2083mA	84	13600µF
DPX40-24WS12	9.5 - 36 VDC	12 VDC	50mA	3333mA	75mVp-p	55mA	2083mA	84	2360µF
DPX40-24WS15	9.5 - 36 VDC	15 VDC	50mA	2666mA	75mVp-p	56mA	2083mA	84	1510µF
DPX40-24WD12	9.5 - 36 VDC	± 12 VDC	±65mA	±1667 Ma	120mVp-p	65mA	2110mA	83	±1200µF
DPX40-24WD15	9.5 - 36 VDC	± 15 VDC	±50mA	±1333mA	150mVp-p	76mA	2110mA	83	±750µF
DPX40-48WS3P3	18 - 75 VDC	3.3 VDC	0mA	10000mA	50mVp-p	63mA	859mA	84	25750µF
DPX40-48WS05	18 - 75 VDC	5 VDC	0mA	8000mA	50mVp-p	68mA	1029mA	86	13600µF
DPX40-48WS12	18 - 75 VDC	12 VDC	50mA	3333mA	75mVp-p	34mA	1029mA	85	2360µF
DPX40-48WS15	18 - 75 VDC	15 VDC	50mA	2666mA	75mVp-p	34mA	1029mA	85	1510µF
DPX40-48WD12	18 - 75 VDC	± 12 VDC	±65mA	±1667mA	120mVp-p	34mA	1042mA	84	±1200µF
DPX40-48WD15	18 - 75 VDC	± 15 VDC	±60mA	±1333mA	150mVp-p	34mA	1042mA	84	±750µF

Outline Drawing DPX40W Series

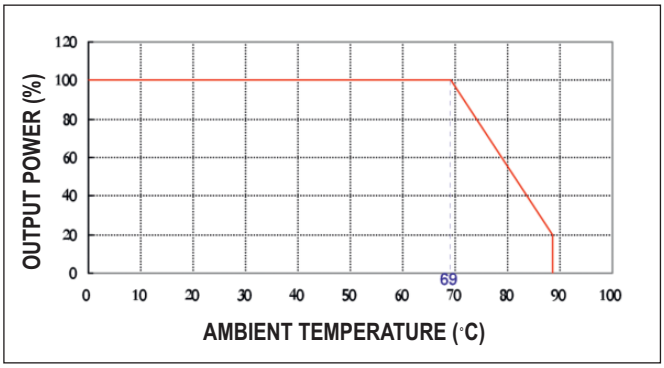




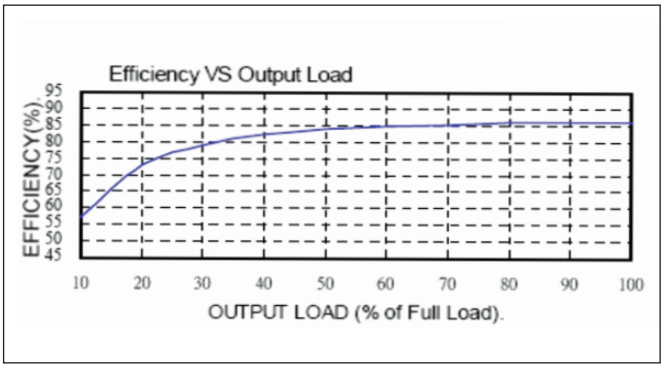


All dimensions in inches (mm)
Tolerance: X. XX ± 0.04 (X.X±1.0)
X. XXX± 0.02 (X.XX±0.5)

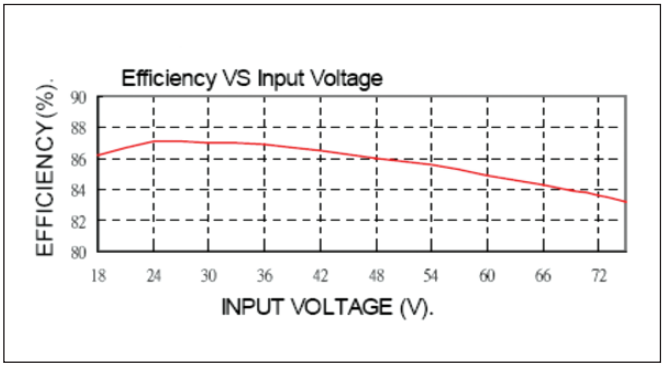
Derating Curve DPX40-48WS05



Efficiency / Load Curve DPX40-48WS05



Efficiency / Input Curve DPX40-48WS05



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
Positive Logic Remote ON/OFF	– P



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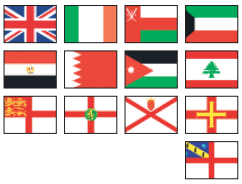

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