

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

Specifications

ITEMS	DPX20W	
Rated Input voltage range	24V nominal input 9.5-36VDC	48V nominal input 18-75VDC
Frequency	400Hz, 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 (3.3vo) ± 1.5%	
Voltage Adjustment *(Note 7)*	Single output ± 10%	
Line Regulation (LL to HL at full load Single)	Single ± 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 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 ~ 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	
MTBF BELLCORE TR-NWT-000332 *(Note 1)*	1,393,000 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	2 Years	

Notes: See page 2

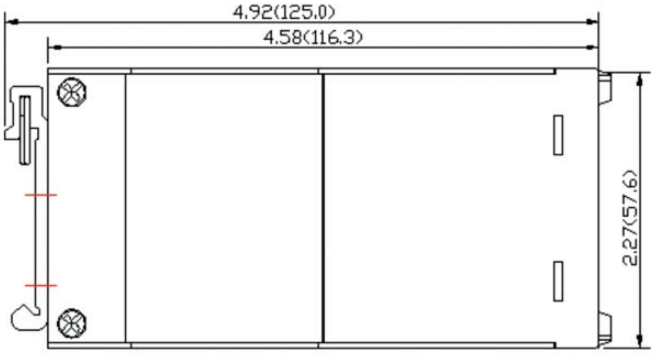
Notes

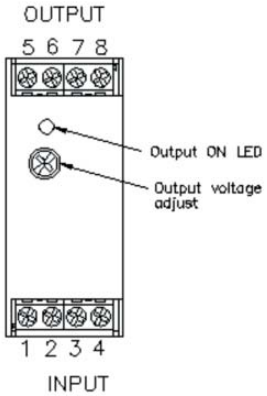
1. BELLCORE TR-NWT-000332. Case I: 50% Stress, Temperature at 40ºC. MIL-HDBK-217F Notice2 @Ta=25 ºC, Full load(Ground, Benign, controlled environment).
2. The ON/OFF control pin voltage is referenced to -Vin. Positive logic standard. To order Negative logic ON/OFF control add the suffix-N (Ex:DPX20-48WS05-N)
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.

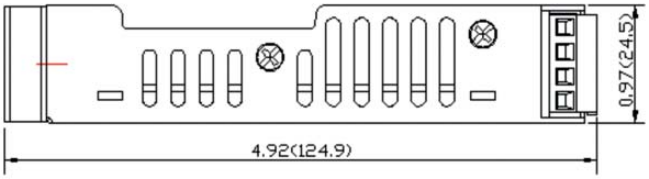
Model Selector

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	±200mA	100mVp-p	59mA	1016mA	86	±4800µF
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

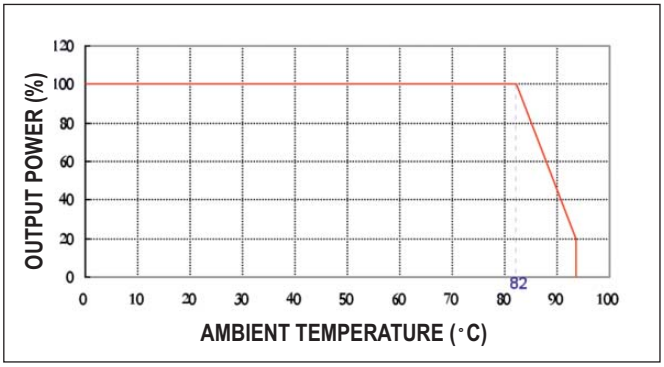




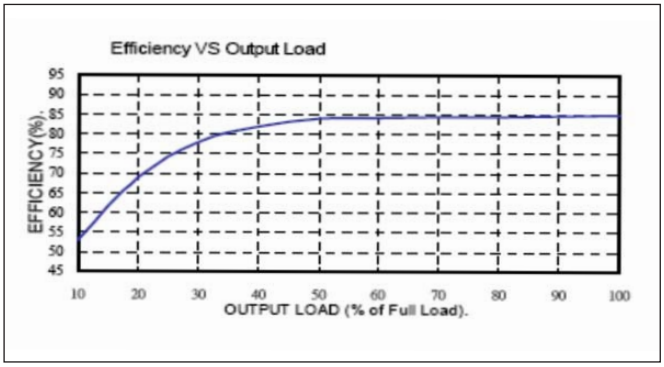


All dimensions in inches (mm)
Tolerance: X. XX ± 0.04 (X.X±1.0)
X. XXX± 0.02 (X.XX±0.5)

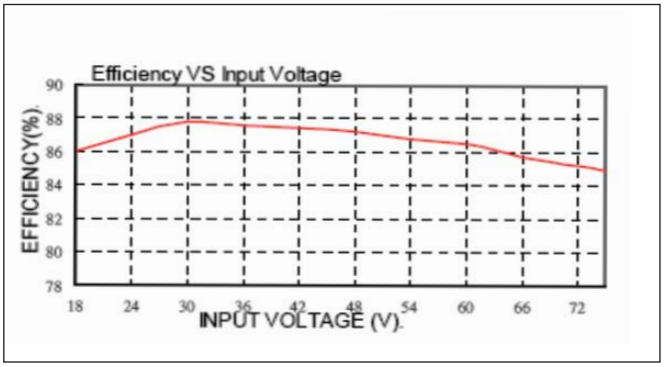
Derating Curve DPX20-48WS05



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Derating 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

For full data and drawings please visit
www.emea.tdk-lambda.com/www/dpx