TDK·Lambda DPX Series

40-60W Single, Dual & Triple Output DIN Mount DC-DC Converters

Features

- DIN Rail Mount Version of TDK-Lambda's PX Series
- 1600VDC Input to Output Isolation
- Wide Operating Temperature Range
- Internally Protected
- All In One Package



Key Market Segments & Applications

Industrial

RoHS

Specifications

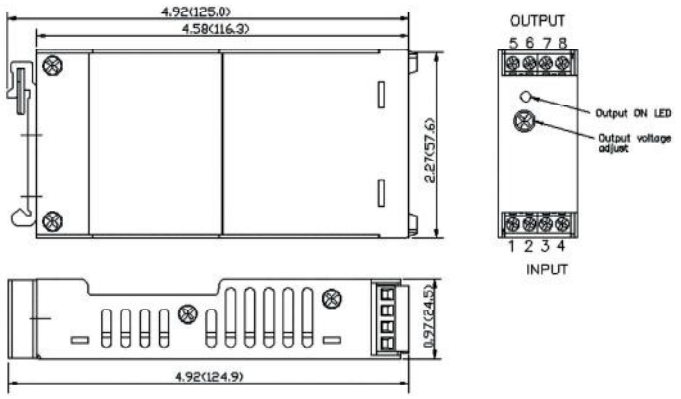
Model		DPX40	DPX60
Max Output Power	W	40W	60W
Efficiency	%	85% typical at nominal input & full load	
Voltage Accuracy	%	Single, Dual & Triple Main ±1%, Triple auxiliaries ±5%	
Volt. Adjust. (Single Output Only)	%	±10%	
Minimum Load, each output (1)	%	Single output 0%, Dual & Triple outputs 10%	
Line Regulation	%	Single / Dual ±0.5%, Triple (main) ±1%, (auxiliaries) ±5%	
Load Regulation (10% to 100%)	%	Single ±0.5%, Dual ±1%, Triple (main) ±2%, (auxiliaries) ±5%	
Cross Regulation (25% to 100%)	%	Triple (main) ±1%, Dual / Triple (auxiliaries) ±5%	
Start up time	ms	100ms typ.	
Remote on/off (ref. to neg. input)	-	/P option: Positive Logic: ON: Open or 3.5-12V, OFF: Short or <1.2V /N option: Negative Logic: ON: Short or <1.2V, OFF Open or 3-12V	
Temperature Coefficient	%/°C	<±0.02%/°C	
Operating Temperature	°C	-40 to 85°C. Derating at high ambient temperatures is model dependent. Please see the application notes on website for individual values.	
Storage Temperature	°C	-40 to 85°C	
Thermal Shock	-	MIL-STD-810F	
Relative Humidity	%RH	5 to 95%RH (non condensing)	
Trans. Resp.(25% step load chng.)	ms	250µs recovery	
Overvolt. Protection (Zener clamp)	-	5V: 6.2V, 12V: 15V, 15V: 18V	
Overcurr. & Short Circuit Protection	-	Typically at 150%, hiccup with self recovery	
Input Surge Volt. (Max. for 100ms)	-	12V input: 36V, 24V input: 50V, 48V input: 100V	
Isolation Voltage	VDC	1600VDC minimum	
Isolation Resistance	Ω	10^9 Ohms minimum	
Typical Switching Frequency (Fixed)	kHz	300kHz (typ)	
Shock & Vibration	-	MIL-STD-810F	
Conducted & Radiated Emissions	-	EN55022 Level B	
Immunity	-	EN61000-4-2, -3, -4, -5, -6 Pref Criteria A	
Safety Agency Approval	-	CE Mark	
Size (W x H x L)	in(mm)	0.96 x 2.27 x 4.92" (24.5 x 57.6 x 125mm)	
Weight	g	182g	
Warranty	yrs	Three Years	

1. No load operation will not damage the unit

Model Selector

Output Voltage (V)	Output Current (A)	Input Voltage (VDC)	Model	Ripple & Noise (Pk to Pk mV)	Max Load Cap (uF)
Single Outputs					
5V	8A	9.5 - 36VDC	DPX4024WS05	50mV	13600uF
12V	3.33A	9.5 - 36VDC	DPX4024WS12	75mV	2360uF
15V	2.67A	9.5 - 36VDC	DPX4024WS15	75mV	1510uF
5V	8A	18 - 75VDC	DPX4048WS05	50mV	13600uF
12V	3.33A	18 - 75VDC	DPX4048WS12	75mV	2360uF
15V	2.67A	18 - 75VDC	DPX4048WS15	75mV	1510uF
5V	12A	18 - 36VDC	DPX6024S05	75mV	20400uF
12V	5A	18 - 36VDC	DPX6024S12	100mV	3550uF
15V	4A	18 - 36VDC	DPX6024S15	100mV	2300uF
5V	12A	36 - 75VDC	DPX6048S05	75mV	20400uF
12V	5A	36 - 75VDC	DPX6048S12	100mV	3550uF
15V	4A	36 - 75VDC	DPX6048S15	100mV	2300uF
Dual Outputs					
±12	1.667A	9.5 - 36VDC	DPX4024WD12	120mV	±1200uF
±15	1.333A	9.5 - 36VDC	DPX4024WD15	150mV	±1510uF
±12	1.667A	18 - 75VDC	DPX4048WD12	120mV	±1200uF
±15	1.333A	18 - 75VDC	DPX4048WD15	150mV	±1510uF
Triple Outputs					
+5V, ±12V	6, ±0.4A	9.5 - 18VDC	DPX4012T0512	50 / 75mV	6800uF, ±330uF
+5V, ±15V	6, ±0.3A	9.5 - 18VDC	DPX4012T0515	50 / 75mV	6800uF, ±110uF
+5V, ±12V	6, ±0.4A	18 - 36VDC	DPX4024T0512	50 / 75mV	6800uF, ±330uF
+5V, ±15V	6, ±0.3A	18 - 36VDC	DPX4024T0515	50 / 75mV	6800uF, ±110uF
+5V, ±12V	6, ±0.4A	36 - 75VDC	DPX4048T0512	50 / 75mV	6800uF, ±330uF
+5V, ±15V	6, ±0.3A	36 - 75VDC	DPX4048T0515	50 / 75mV	6800uF, ±110uF

Outline Drawing



Pin Connection

PIN	SINGLE	DUAL	TRIPLE
1	Ctrl	Ctrl	Ctrl
2	VIN (-)	VIN (-)	VIN (-)
3	VIN (-)	VIN (-)	VIN (-)
4	VIN (+)	VIN (+)	VIN (+)
5	NC	NC	Aux (+)
6	VOUT (-)	VOUT (-)	Common
7	VOUT (+)	Common	Aux (-)
8	NC	VOUT (+)	VOUT (+)

Options

Suffix	Description
Blank	No remote on-off
/P	Positive Logic
/N	Negative Logic

For Additional Information, please visit
https://product.tdk.com/info/en/products/power/index.html