



# J DSD30 Series

AC-DC POWER SUPPLIES up to 30 watts

**3**  
YEARS  
WARRANTY

ROHS  
COMPLIANT

REACH  
COMPLIANT

+85°C  
-40°C  
AMBIENT TEMP.



Automation



Datacom



IPC



Industry



Measurement



Telecom



Automobile



Boat



Charger



Medical



PV



Railway



**3000 VAC**  
Reinforced  
Insulation

**ADJ.**  
Output  
Voltage

Internal  
EN55022  
Class **B**  
Filter

**LOW**  
Standby  
Power

**LOW**  
Leakage  
Current

Operating  
Altitude  
**5000**  
meter

Protection  
Class **II**

**OCP**

**OVP**

**SCP**

## PART NUMBER STRUCTURE

VP	S	D	30	U	S	12	B	-	T
Application	Package Code	Dimension Code	Output Power (W)	Input Voltage (VAC)	Output Quantity	Output Voltage (VDC)	Protection Type		Connector Option
Industry Application	S: Encapsulated D: Din rail type			U: Universal 85 ~ 264	S: Single	3P3: 3.3 05: 5 7P5: 7.5 09: 9 12: 12 121: 12 15: 15 151: 15 18: 18  24: 24 28: 28 36: 36 48: 48 53: 53	B: CLASS II		T: Terminal Block M: Molex D: Pin Type Blank: JST

**J DSD30** Series**AC-DC POWER SUPPLIES up to 30 watts****TECHNICAL SPECIFICATION** All specifications are typical at 230VAC input, full load and 25°C unless otherwise noted

Model Number	Input Range	Output Voltage	Output Current Natural convection	Max. Output Power	Input Power @ No Load	Efficiency
	VAC	VDC	A	W	mW	%
VPD30US3P3B-T VPD30US3P3B-D	85 ~ 264	3.3	6	20	40	84
VPD30US05B-T VPD30US05B-D	85 ~ 264	5	6	30	40	87
VPD30US7P5B-T VPD30US7P5B-D	85 ~ 264	7.5	4	30	40	87
VPD30US09B-T VPD30US09B-D	85 ~ 264	9	3.34	30	40	88
VPD30US12B-T VPD30US12B-D	85 ~ 264	12	2.5	30	40	90.5
VPD30US121B-T VPD30US121B-D	85 ~ 264	12	2.5	30	40	88
VPD30US15B-T VPD30US15B-D	85 ~ 264	15	2	30	40	90.5
VPD30US151B-T VPD30US151B-D	85 ~ 264	15	2	30	40	88
VPD30US18B-T VPD30US18B-D	85 ~ 264	18	1.67	30	40	88
VPD30US24B-T VPD30US24B-D	85 ~ 264	24	1.25	30	40	89.5
VPD30US28B-T VPD30US28B-D	85 ~ 264	28	1.08	30	40	89.5
VPD30US36B-T VPD30US36B-D	85 ~ 264	36	0.84	30	40	90
VPD30US48B-T VPD30US48B-D	85 ~ 264	48	0.63	30	40	91.5
VPD30US53B-T VPD30US53B-D	85 ~ 264	53	0.58	30	40	91

**INPUT SPECIFICATIONS**

Parameter	Conditions	Min.	Typ.	Max.	Unit
Operating input voltage range	AC input	85		264	VAC
	DC input	120		370	VDC
Input frequency	AC input	47		63	Hz
Input current	100VAC and Full Load			0.8	A
	240VAC and Full Load			0.4	
No load input power	230VAC		40		mW
Leakage current	264VAC			100	µA
Start up time				1500	ms
Rise time	Others 24Vout,28Vout,36Vout 48Vout,53Vout		20		ms
			40		
			50		
Hold up time	115VAC and Full Load		16		ms
Input inrush current	230VAC			40	A
Input protection	Internal fuse			T1.6A/250VAC	



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Your Power House  
VP ELECTRONIQUE

OUTPUT SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Output power					30	Watts
Initial set voltage accuracy	230VAC and Full Load		-1.0		+1.0	%
Line regulation	Low Line to High Line at Full Load		-0.2		+0.2	%
Load regulation	No Load to Full Load	3.3Vout, 5Vout	-0.7		+0.7	%
		Others	-0.5		+0.5	
	10% Load to 90% Load	3P3Vout, 5Vout	-0.6		+0.6	%
		Others	-0.4		+0.4	
Voltage adjustability			-10		+10	%
Minimum load				0		%
Ripple and noise	Measured by 20MHz bandwidth					mVp-p
	With a 10µF/25V 1206 X7R MLCC	3.3Vout, 5Vout, 7.5Vout, 9Vout t		50		
	With a 1µF/50V 1206 X7R MLCC	12Vout, 15Vout, 18Vout, 24Vout, 28Vout, 36Vout		50		
	With a 0.1µF/100V 1206 X7R MLCC	48Vout, 53Vout		50		
Temperature coefficient			-0.02		+0.02	%/°C
Transient response	Load step form 50 ~ 75% change at 2.5A/µs	Peak deviation			3	%Vout
		Recovery time		500		µs
Over voltage protection	% of Vout(nom); Automatics recovery		125		140	%
Over load protection	% of Iout rated; Hiccup mode			140		%
Short circuit protection			Continuous, automatics recovery			

GENERAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Isolation voltage	1 minute (Reinforced insulation)	Input to Output	3000			VAC
Isolation resistance	500VDC		0.1			GΩ
Switching frequency	230VAC and Full Load		30	45	60	kHz
Design meet safety standard			UL /EN /IEC60950-1			
Weight		Connector type			119g (4.20oz)	
		Pin type			106g (3.74oz)	
MTBF	MIL-HDBK-217F, Full load					3.341 x 10 <sup>6</sup> hrs

ENVIRONMENTAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating ambient temperature	Natural convection	With derating	-40		+85	°C
Storage temperature range			-40		+85	°C
Operating altitude					5000	m
Shock			IEC60068-2-27			
Vibration			IEC60068-2-6			
Relative humidity	Non-condensing					5% to 95% RH

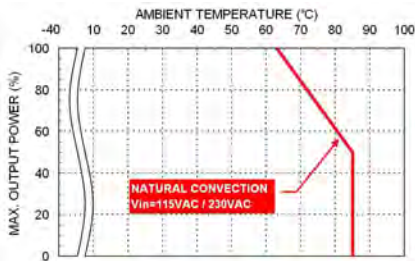
EMC SPECIFICATIONS					
Parameter	Conditions		Level		
EMI	EN55011, EN55022 and FCC Part 15		Conducted		Class B
			Radiated		Class B
Harmonic currents	EN61000-3-2	Full Load			Class A
Voltage flicker	EN61000-3-3				
ESD	EN61000-4-2	Air ± 15kV and Contact ± 8kV			Perf. Criteria A
Radiated immunity	EN61000-4-3	20 V/m			Perf. Criteria A
Fast transient	EN61000-4-4	± 2kV			Perf. Criteria A
Surge	EN61000-4-5	DM ± 1kV			Perf. Criteria A
Conducted immunity	EN61000-4-6	20 Vr.m.s			Perf. Criteria A
Power frequency magnetic field	EN61000-4-8	30 A/m			Perf. Criteria A
Dip and interruptions	EN61000-4-11	230VAC 50Hz	30% 20mS		Perf. Criteria A
			30% 500mS		Perf. Criteria A
			60% 1000mS		Perf. Criteria A
			>95% 10mS		Perf. Criteria A
			>95% 5000mS		Perf. Criteria B
Damped Oscillatory Wave	EN 61000-4-18	DM ± 1kV and CM ± 2.5kV			Perf. Criteria A



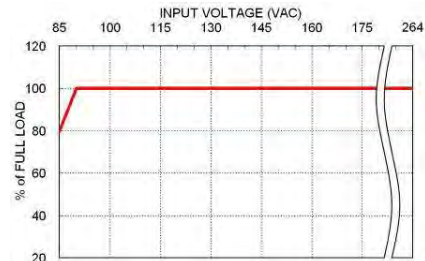
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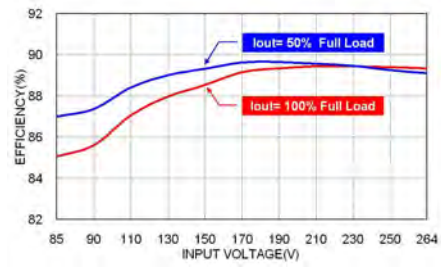
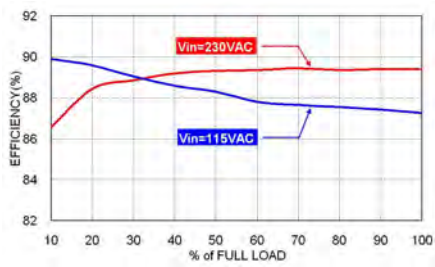
## CHARACTERISTIC CURVE



Derating Curve vs. Ambient Temperature  
VPSD30US24B



Derating Curve vs. Input Voltage



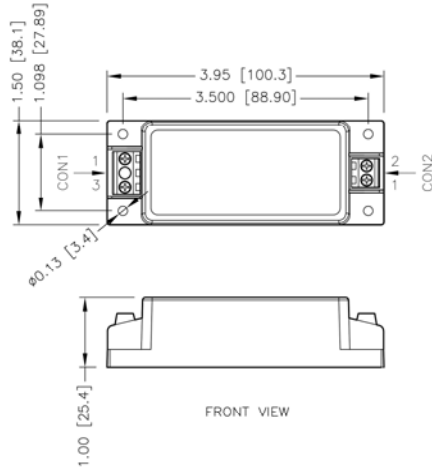


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## MECHANICAL DRAWING

XÚS D- T Connector type

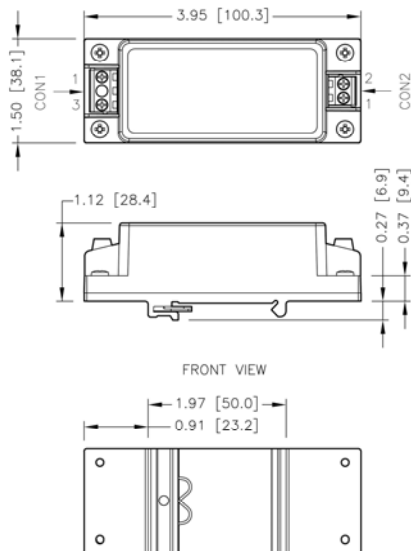


### CONNECTORS CONNECTION

CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral




CON2 – Output Connector	
Pin 1	+Vout
Pin 2	-Vout

XÚD D- T Din rail type



- All dimensions in inch (mm)  
Tolerance : x.xx±0.02 (x.x±0.5)  
              x.xxx±0.01 (x.xx±0.25)
- The screw locked torque: MAX 5Kgf.cm/0.49N.m

## CONNECTOR OPTIONS

Blank:	JST Type	-M	Molex Type	-T	Terminal Block
	Housing CON1: VHR-3N CON2: VHR-2N  Crimp terminals CON1: SVH-21T-P1.1 CON2: SVH-21T-P1.1		Housing CON1: 09-50-8031 CON2: 09-50-8021  Crimp terminals CON1: SD-2478 CON2: SD-2478		Mates with <b>Screw locked torque</b> <b>MAX 2.5Kgf.cm/0.25N.m</b>  <b>Wire dimension range</b>

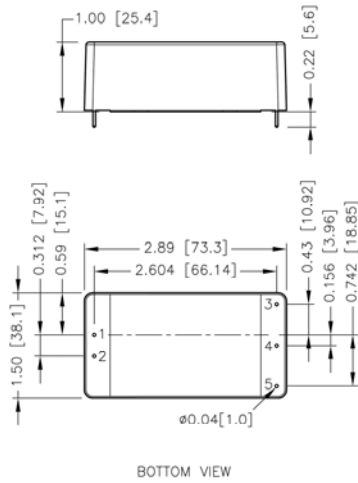


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## MECHANICAL DRAWING

VPSD -D Pin Type

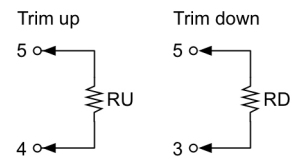


### PIN CONNECTION

PIN	SINGLE
1	Neutral
2	Line
3	+Vout
4	-Vout
5	Trim

### EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown below.



1. All dimensions in inch (mm)
2. Tolerance :x.xx±0.02 (x.x±0.5)  
x.xxx±0.01 (x.xx±0.25)
3. Pin pitch tolerance ±0.01 (0.25)
4. Pin dimension tolerance ±0.004(0.10)