# 240W Single Output Industrial DIN RAIL DV-240 series

### Features :

- Built-in active PFC function, PF>0.95
- High efficiency 92% and low power dissipation
- Protections: SCP / OLP / OVP / OTP
- Cooling by free air convection
- Two peak load mode select by user.
- Can be installed on DIN rail TS-35 / 7.5 or 15
- Built-in DC OK Relay contact
- Built-in Remote ON / OFF function
- 100% full load burn-in test
- 150% peak load capability
- 3 years warranty



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	MODEL	DV-240-24	DV-240-48		
	DC Voltage Range	24V	48V		
	Rated Current	10A	5A		
	Current Range	0 ~ 10A 0 ~ 5A			
	Rated Power	240W	240W		
	Peak Current	15A	7.5A		
	Peak Power Note.6	360W (3sec.) Two peak load mode select by user.			
OUTPUT	Ripple & Noise (max.) Note.2	150 mVp-p	300 mVp-p		
	Voltage Adjustment Range	-2% ~ +8%	-2% ~ +8%		
	Voltage Tolerance Note.3	±1.0%	±1.0%		
	Line Regulation	±0.5%	±0.5%		
	Load Regulation	±1.0%	±1.0%		
	Setup, Rise Time	700ms_30ms/230VAC_/115VAC at full load			
	Hold Time (Typ.)	20ms / 230VAC 20ms / 115VAC at full load	b		
	Voltage Range	88V ~ 264VAC 124 ~ 373VDC	-		
	Frequency Range	47 ~ 63Hz			
	Power Factor(Typ.)	0.96 / 230VAC / 115VAC at full load			
INPUT	Efficiency (Typ.)	91%	92%		
	AC Current (Typ.)	2 6A / 115VAC 1 3A / 230VAC			
	Inrush Current (Typ.)	33A/115VAC 65A/230VAC			
	Leakage Current	< 1mA / 240VAC			
	Over Load	>150% rated power or short circuit is constant current limiting, if o/p drop to 40% rating output voltage then shutdown and auto-recover 5 time, if fault condition not remove in this 5 time, the system well be shutdown and re-power on to recover.			
Protection	Owen Welterne	28 ~ 33V	56 ~ 65V		
	Over voltage	Protection type : Shut down o/p voltage with auto-recovery			
	Owen Terrere en terre	95±5° C (TSW : detect on heatsink of power diode)			
	Over temperature	Protection type : Shut down o/p voltage, recovers automatically after temperature goes dow			
Protection	DC OK REALY CONTACT RATINGS (max.)	60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load			
	Working Temp. Note.5	-25 ~ +70°C (Refer to output load de-rating curve)			
	Working Humidity	20 ~ 95% RH non-condensing			
Environment	Storage Temp., Humidity	-40 ~ +85°C 10 ~95% R.H			
Environment	Temp.Coefficient	±0.03%/°C (0~50°C)			
	Vibration	Component : 10 ~ 500Hz, 2G 10min/1cycle, 60 min each along X,Y,Z axes; Mounting: Compliance to IEC60068-2-6			
	Safety Standards	UL508 / TUV EN60950-1			
	Withstand Voltage	I/P - O/P: 4242VDC I/P - FG: 2121VDC O/P-FG: 707VDC O/P-DC OK: 707VDC			
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VE	DC / 25°C / 70% RH		
Safety & ENIC	<b>EMI</b> Conduction & Radiation	EN55022: 2006 Class B			
Note.4	Harmonic Current	EN61000-3-2: 2006 Class A, EN61000-3-3: 1995+A1: 2001+A2: 2005			
	EMS Immunity	EN61204-3: 2000, EN55024: 1998+A1: 2001+A2: 2003 light industry level, criteria A			
	MTBF	xxxK HRS Compliance: MIL-HDBK-217F(25°C)			
Others	Dimension (LxWxH)(mm)	65.8x125x117.7			
	Packing	0.9kg;12Pcs/12.8kg			
Note	<ol> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uf &amp; 47 uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</li> <li>3 seconds or 20% duty cycle max. and the average output power should not exceed the rate power.</li> </ol>				
	7. Derating may be needed under low input voltage. Please check the derating curve for more details.				



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# Mechanical Specification

Terminal Pin No. Assignment (TB1)

Pin NO.	Assignment	
1	FG 🕀	
2	AC/L	
3 AC/N		

Terminal Pin No. Assignment (TB2)

Pin NO.	Assignment	
1	DC+	
2	DC-	
3	INH+	
4	INH-	
5,6	Relay Contact	

Switch No. Assignment

SW NO.	Assignment
SW1	PEAK LOAD SETTING
SW2	REMOTE ON/OFF SETTING







Unit : mm





TB1 COLOR

# **Block Diagram**



## DC OK Relay Contact

Contact Close	When the output voltage reaches the adjusted output voltage.
Contact Open	When the output voltage drop below 45% output voltage.
Contact Ratings(max.)	30V/1A resistive load



DV-240 series

# Peak Loading SW1 ON (Mode1) Default setting



T-peak presents while the unit is working within 110%~150% Rating output power. See curve "B" for the variation in T-peak btw output current and holdup time.

If T-peak is more than the time setting in curve "B", the output current will drop to the constant current limited (I-normal) that is 105% rating power, meanwhile, I- normal and T-normal will be presenting. See curve "A" for the timing back to I-Peak of T-normal and this Mode can use for easy 2-stage battery charger.

# Peak Loading SW1 OFF (Mode2)



T-peak presents while the unit is working within 110%~150% Rating output power. See curve " B " for the variation in T-peak btw output current and holdup time. If T-peak is more than the time setting in curve "B", the output voltage will be shut down for 3~4 sec, then auto-recovery.





# **Remote ON / OFF**

De-rating Curve

The PSU can be turned ON/OFF by using the "Remote Control" function.

	Output Status	INH+(3 PIN)/ INH-(4 PIN)	SW2
	ENABLE	SW ON (>2.5V)	OFF
	0.8V) DISABLE		OFF
	DISABLE	SW ON (>2.5V)	ON
(Default Setting)	ENABLE	SW OFF (<0.8V)	ON



# Output derating VS input voltage



