



■ Features

AC input range selectable by switch
 Withstand 300VAC surge input for 5 second
 No load power consumption<0.75W
 Miniature size and 1U low profile
 High operating temperature up to 70 °C
 Protections: Short circuit / Overload / Over voltage /
 Over temperature protection etc
 Cooling by free air convection
 Compliance to IEC/EN 60335-1(PD3) and
 IEC/EN61558-1, 2-16 for household appliances
 Operating altitude up to 5000 meters
 Withstand 5G vibration test
 High efficiency, long life and high reliability
 LED indicator for power on
 100% full load burn-in test
 2 years warranty

■ Applications

Industrial automation machinery
 Industrial control system
 Mechanical and electrical equipment
 Electronic instruments, equipments or
 Apparatus Household appliances

■ Description

DRS-400 series is a 400W single-output enclosed type power supply with 30mm of low profile design.

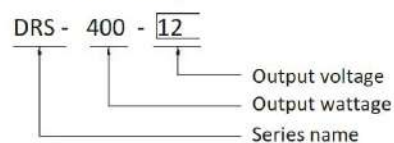
Adopting the input of 115VAC or 230VAC(selectable by switch), the entire series provides an output voltage line of 12V, 15V, 24V, 36V and 48V.

In addition to the high efficiency up to 90%, the design of metallic mesh case enhances the heat dissipation of DRS-400 that the whole series operates from -30°C through 70°C under air convection with a fan.

Delivering an extremely low no load power consumption (less than 0.75W), it allows the end system to easily meet the worldwide energy requirement. DRS-400 has the complete protection functions and 5G anti-vibration capability;

It is complied with the international safety regulations such as TUV EN60950-1,EN60335-1,EN61558-1/-2-16, UL60950-1 and GB4943. DRS-400 series serves as a high price-to-performance power supply solution for various industrial applications.

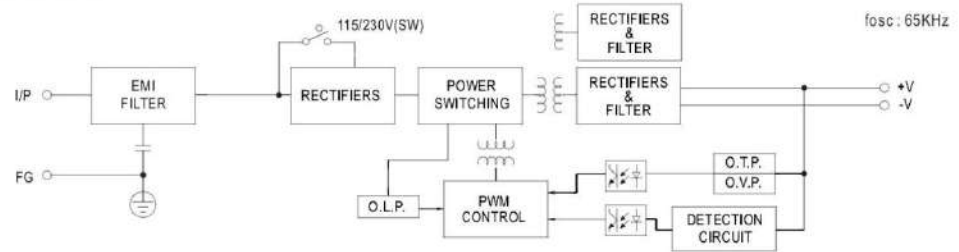
■ Model Encoding



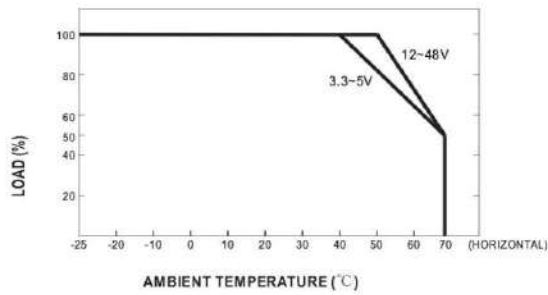
SPECIFICATION

MODEL	DRS-400-12	DRS-400-15	DRS-400-24	DRS-400-36	DRS-400-48	
OUTPUT	DC VOLTAGE	12V	15V	24V	36V	48V
	RATED CURRENT	33.3A	26.6A	16.6A	11.1A	8.3A
	CURRENT RANGE	0 ~ 33.3A	0 ~ 26.6A	0 ~ 16.6A	0 ~ 11.1A	0 ~ 8.3A
	RATED POWER	400W	400W	400W	400W	400W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	10.2 ~ 13.8V	13.5 ~ 18V	21.6 ~ 28.8V	32.4 ~ 39.6V	43.2 ~ 52.8V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION Note.5	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	500ms, 30ms/230VAC 500ms, 30ms/115VAC at full load				
HOLD UP TIME (Typ.)	16ms/230VAC 12ms/115VAC at full load					
INPUT	VOLTAGE RANGE	85 ~ 132VAC / 170 ~ 264VAC by switch 240 ~ 370VDC (switch on 230VAC)				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	85%	86.0%	88%	88%	89%
	AC CURRENT (Typ.)	6.8A/115VAC 3.4A/230VAC				
	INRUSH CURRENT (Typ.)	COLD STAR 60A/230VAC				
	LEAKAGE CURRENT	<2.0mA / 240VAC				
PROTECTION	OVER LOAD	110 ~ 140% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	13.8 ~ 16.2V	18.75 ~ 21.75V	28.8 ~ 33.6V	41.4 ~ 48.6V	55.2 ~ 64.8V
		Protection type : Shut down o/p voltage, re-power on to recover				
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	WORKING TEMP.	-30 ~ +70 °C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85 °C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50 °C)				
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 7)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, EN60335-1, EN61558-1 /-2-16, CCC GB4943 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2 KVAC O/P-FG:1.25 KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 °C / 70% RH				
	EMC EMISSION	Compliance to EN55022 (CISPR22), GB9254 Class B, EN55014, EN61000-3-2Class A (<=75% Load), EN61000-3-3				
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61000-6-2 (EN50082-2), heavy industry level				
OTHERS	MTBF	327.9K hrs min. MIL-HDBK-217F (25 °C)				
	DIMENSION	215*115*30mm (L*W*H)				
	PACKING	0.67Kg ; 30pcs/20.6Kg/38*25*39CM				
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 °C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 0% to 100% rated load.</p> <p>6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</p> <p>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to EMI testing of component power supplies.</p> <p>8. The ambient temperature derating of 5 °C/1000m is needed for operating altitude greater than 2000m (6500ft).</p>					

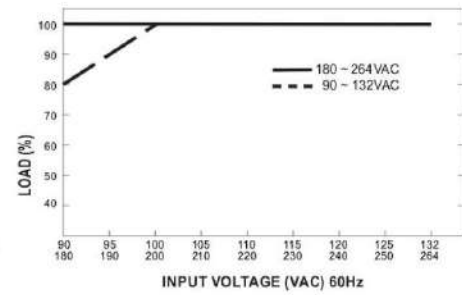
■ Block Diagram



■ Derating Curve

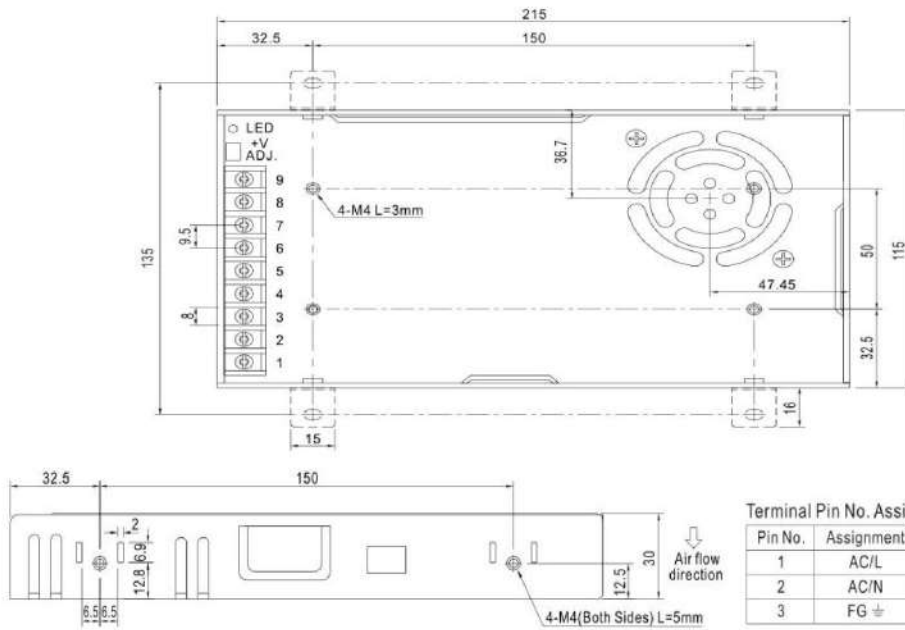


■ Static Characteristics



Unit:mm

■ Mechanical Specification



Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4-6	DC OUTPUT -V
2	AC/N	7-9	DC OUTPUT +V
3	FG ±		