DRT-960 Series

960W Three Phase Industrial DIN Rail Power Supply

Case No: 8015FT
276 x 125.2 x 100mm

Features

- Three Phase AC 340 ~ 550V wide range input
- High Efficiency 91% and low dissipation
- Protections: Short Circuit / Overload / Over voltage / Over Temperature
- Optional parallel function (1+1)
- Cooling by Free Air Convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (Industrial Control Equipment) approved
- EN61000-6-2 (EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty

Specification

INPUT	**Voltage**	Three-phase 340~550VAC (Dual phase operation possible in connecting L1. L3, FG)	
	Frequency	47 ~ 63 Hz	
	AC Current (Typ.)	2A/400VAC 1.6A/500VAC at full load	
	Inrush Current (Typ.)	Cold start 50A	
	Leakage Current	<3.5mA/530VAC	
	Efficiency	91%	92%
OUTPUT	**MODEL No.**	**DRT-960-24**	**DRT-960-48**
	Voltage	24V	48V
	Rated Current	40A	20A
	Current Range	0~40A	0~20A
	Rated Power	960W	960W
	Ripple Noise MAX.	80mVp-p	80mVp-p
	Voltage Adjustment Range	24 ~ 28V	48 ~ 55V
	Voltage Tolerance	± 1.0%	± 1.0%
	Line Regulation	± 0.5%	± 0.5%
	Load Regulation	± 0.5%	± 0.5%
	Setup Rise Time	200ms, 60ms/400VAC 200ms, 60ms/500VAC at full load	
	Hold Up Time (Typ.)	14ms/400VAC 30ms/500VAC at full load	
PROTECTION	**Over Load**	105 ~ 125% rated output power	
		Protection Type: Constant current limiting, unit will shut down o/p voltage after 3 sec., re-power on to recover	
	Over Voltage	30 ~ 36V	59 ~ 66V
		Protection Type: Shut down o/p voltage, re-power onto recover	
	Over Temperature	110°C±5°C (TSW1) detect on heatsink of power transistor	85°C ±5°C (TSW2) detect on heat sink of power diode
		Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	**Working Temperature**	-20 ~ +60°C (Refer to "Derating Curve")	
	Working Humidity	20 ~ 90% RH non-condensing	
	Storage Temp., Humidity	-40 ~ +85°C, 10-95%RH	
	Temp. Co-efficient	±0.03% / °C (0~50°C)	
	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60 min. each along X, Y, Z axes; Mounting: compliance to IEC60068-2-6	
SAFETY & EMC	**Safety Standards**	UL508, UL60950-1, TUV EN60950-1 EAC TP TC 004 approved	
	Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	Isolation Resistance	I/P-OP I/P-FG, O/P-FG: 100M Ohms/500Vdc/25°C/70% RH	
	EMC Emission	Compliance to EN55011 (CISPR11), EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3, EAC TP TC 020	
	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61204-3, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020	
OTHERS	**M.T.B.F.**	122.5K hrs min. MIL-HDBK-217F (25°C)	
	Packaging	3.3Kg; 4pcs/14.2Kg/1.14CUFT	

1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.
2. Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. The power supply is considered as a component which will be installed with final equipment. The final equipment must re-confirmed that it still meets EMC Directives.
5. Dual phase operation: (Connecting L1, L3, FG) is allowed under certain derating to output load. Please refer to derating curves for details.
6. The ambient temperature of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude of higher than 2000m (6500ft)

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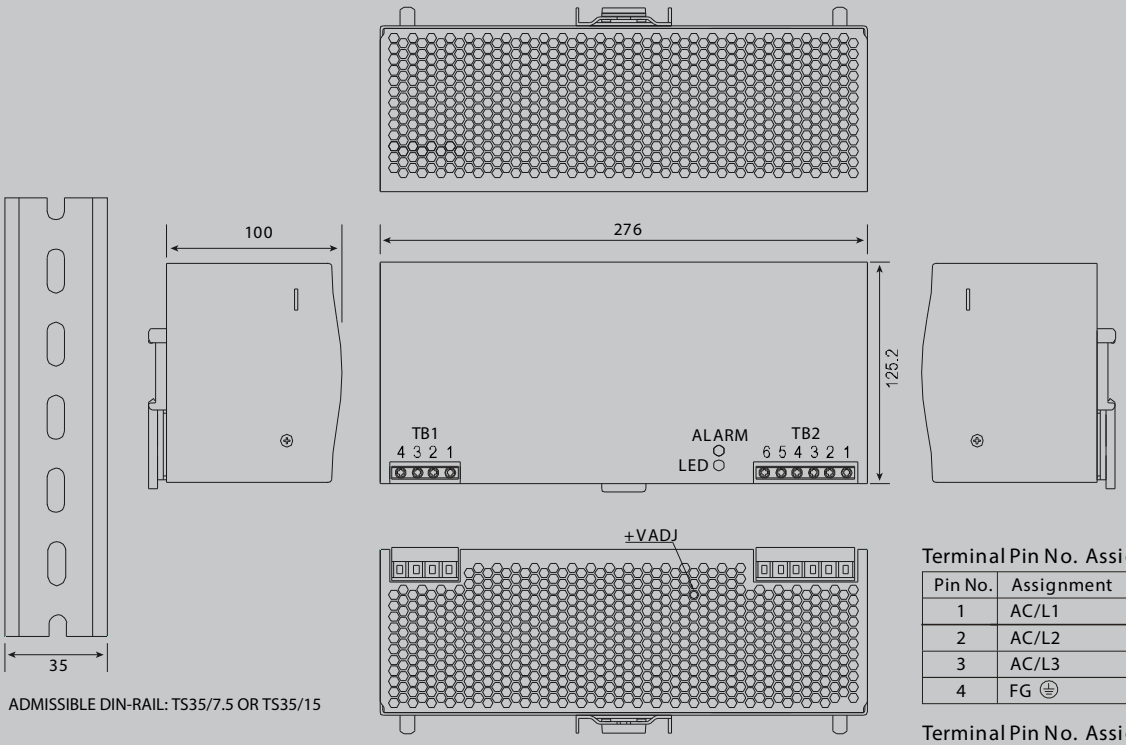
Mechanical Specification

Case No. 934 Unit: mm



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Terminal Pin No. Assignment (TB1)

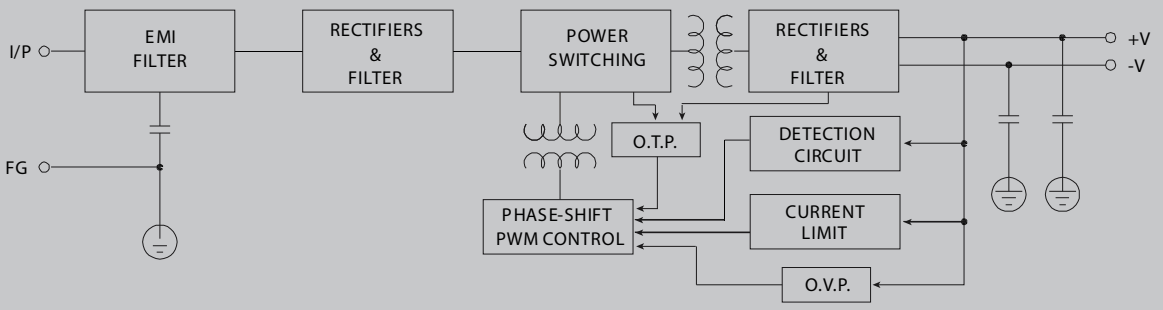
Pin No.	Assignment
1	AC/L1
2	AC/L2
3	AC/L3
4	FG ⏚

Terminal Pin No. Assignment (TB2)

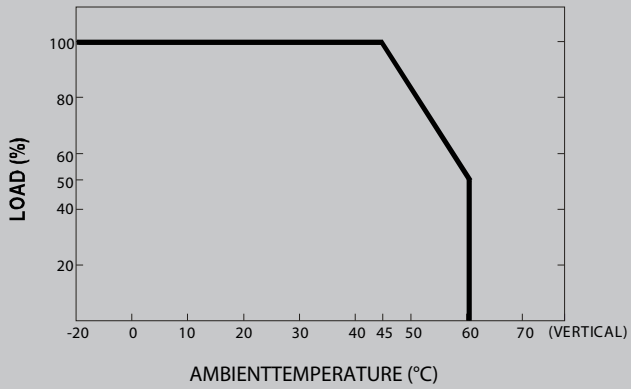
Pin No.	Assignment
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V

Block Diagram

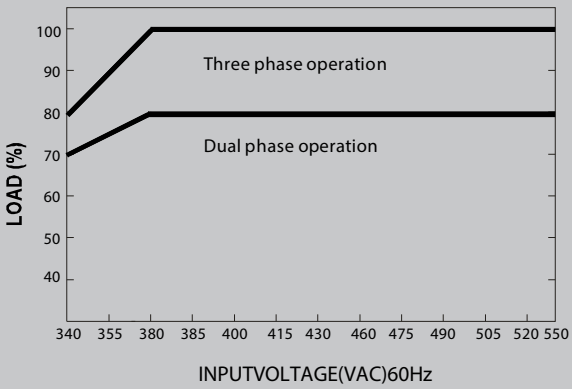
fosc : 55KHz



Derating Curve

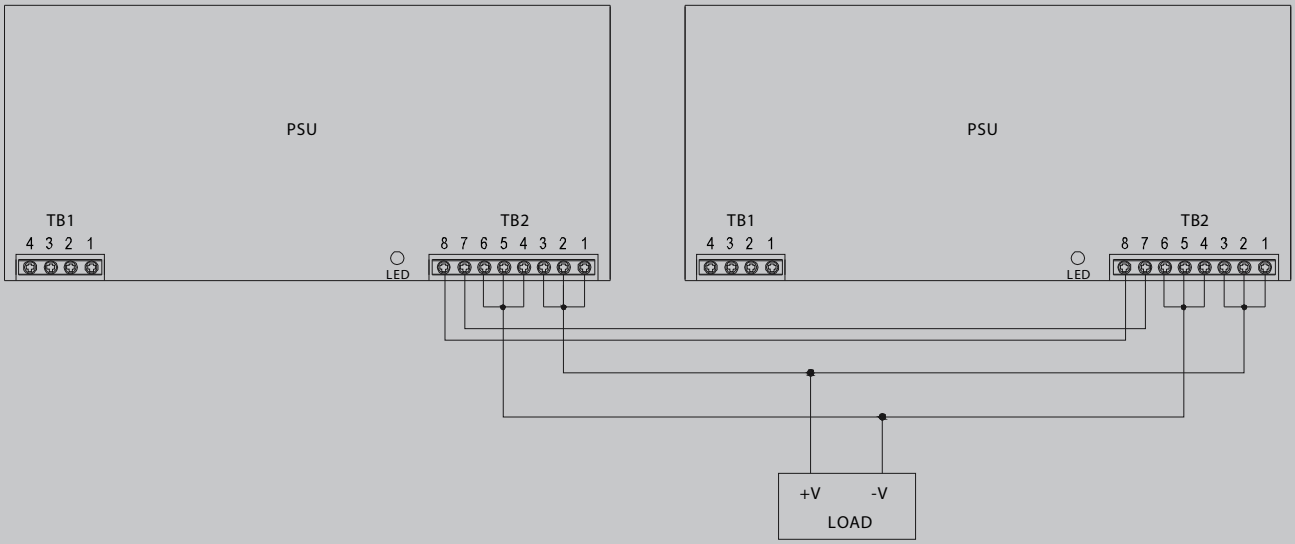


Static Characteristics



Parallel Function (1+1) - Optional (Special order required)

When in parallel operation, the minimum output load should be greater than 3% of total output load.
(Min. load >3% rated current per unit x number of unit)



TB1 Terminal Pin No. As signment

Pin No.	Assignment
1	AC/L1
2	AC/L2
3	AC/L3
4	FG ⏚

TB2 Terminal Pin No. Assignment

Pin No.	Assignment
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V
7	GND
8	P(Current Share)

Note: Under parallel operation, if the load current is too small, only one PSU (master) would provide the power and hence the LED indicator of other PSUs may not light up.