

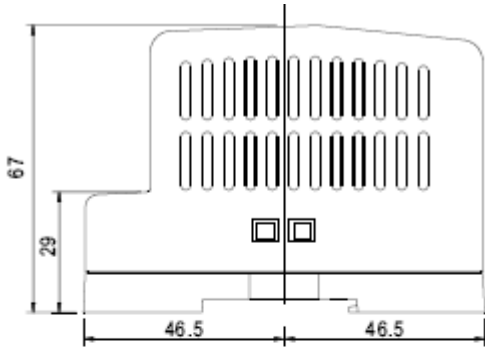
- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- Fix switching frequency at 100KHz
- 3 years warranty



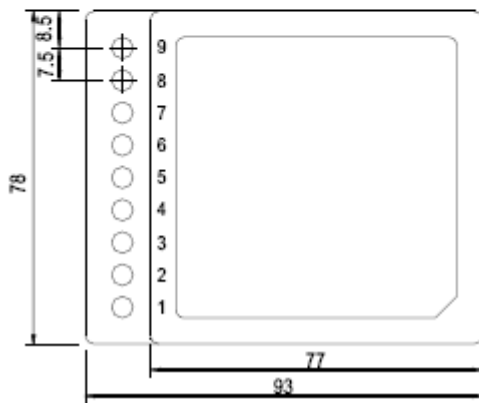
Specifications for 45 W models

Model	DR45-05	DR45-12	DR45-15	DR45-24	
Output	DC voltage	5,0 V	12 V	15 V	24 V
	Rated current	5,0 A	3,5 A	2,8 A	2,0 A
	Current range	0 – 5 A	0 – 3,5 A	0 – 2,8 A	0 – 2,0 A
	Rated power	25 W	42 W	42 W	48 W
	Ripple & noise (max.) Note.2	100 mVp-p	200 mVp-p	240 mVp-p	480 mVp-p
	Voltage adj. range	4,75 – 5,5 V	10,8 – 13,2 V	13,5 – 16,5 V	21,6 – 26,4 V
	Voltage adj. tolerance Note.3	± 2 %	± 1 %	± 1 %	± 1 %
	Line regulation	± 1 %	± 1 %	± 1 %	± 1 %
	Load regulation	± 1 %	± 1 %	± 1 %	± 1 %
	Setuo, rise time	800ms, 60ms/230VAC at full load			
Hold time (Typ.)	100ms/230VAC at full load				
Input	Voltage range	85 ~ 264VAC	120 ~ 370VDC		
	Frequency range	47 ~ 63Hz			
	Efficiency (Typ.)	72 %	77 %	77 %	80 %
	AC current (Typ.)	1.5A/115VAC	0.75A/230VAC		
	Inrush current (Typ.)	Cold start 28A/115VAC	56A/230VAC		
	Leakage current	<1mA / 240VAC			
Protection	Over load	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	Over voltage	5,75 – 6,75 V	13,8 – 16,2 V	17,25 – 20,25 V	27,6 – 32,4 V
	Over temperature	Tj 135 °C typically (U1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
Environment	Working temp.	-10 ~ +50 °C (Refer to output load derating curve)			
	Working humidity	20 ~ 90% RH non-condensing			
	Storage temp., humidity	-20 ~ +85 °C , 10 ~ 95% RH			
	Temp. coefficient	± 0,03 %/°C (0 – 50 °C)			
	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
Safety & EMC (note 4)	Safety standards	UL508, TUV EN60950-1 Approved			
	Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC			
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC			
	EMI conduction & radiation	Compliance to EN55011, EN55022 (CISPR22) Class B			
	Harmonic current	Compliance to EN61000-3-2,-3			
Others	MTBF	364.6K hrs min. MIL-HDBK-217F (25 °C)			
	Dimension	93 x 78 x 67mm (L x W x H)			
	Weight	310 g			
Notes	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & 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 a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.				

Mechanical Specifications – 45 W model



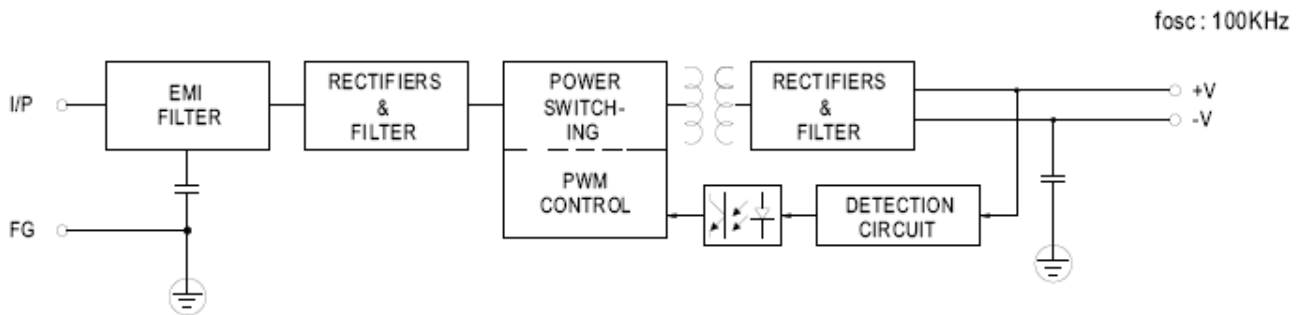
Install DIN rail TS35/7.5 or TS35/15



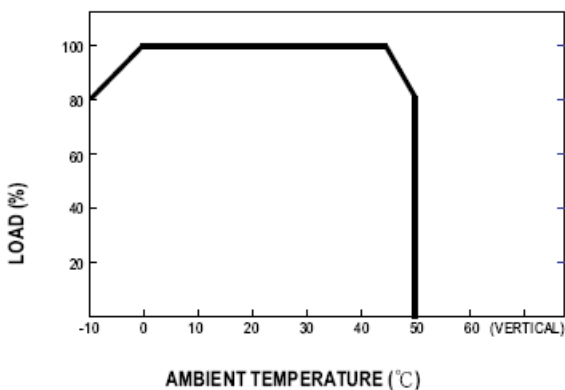
Terminal pin no. assignment			
Pin no.	Assignment	Pin no.	Assignment
1	AC/L	6, 7	DC output +V
2	AC/N	8	LED
3	FG (Ground)	9	+V adjust
4, 5	DC output -V		



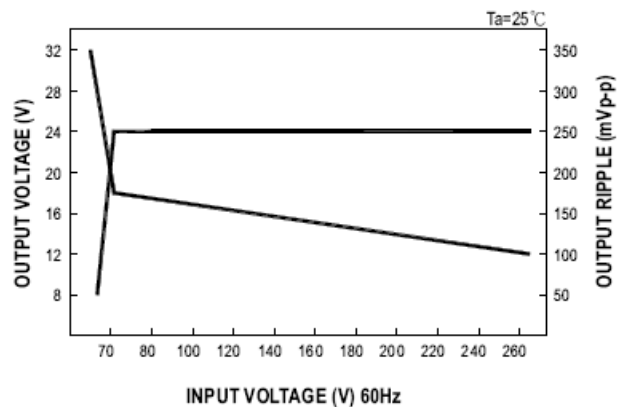
Block diagram



Output derating



Static characteristics (24V)



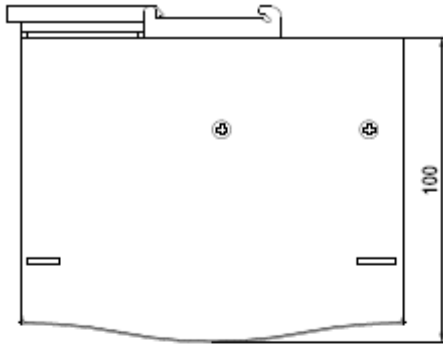
- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- Fix switching frequency at 50KHz
- 3 years warranty



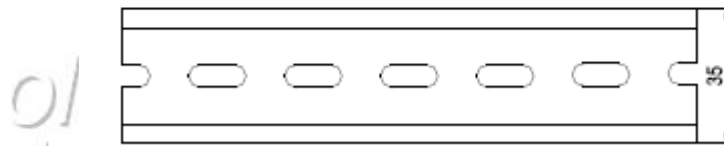
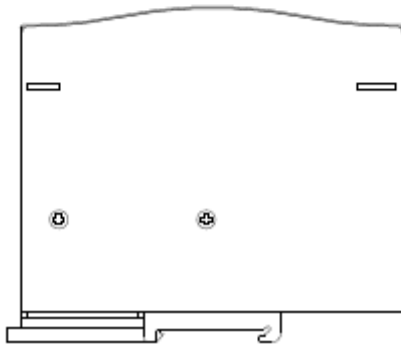
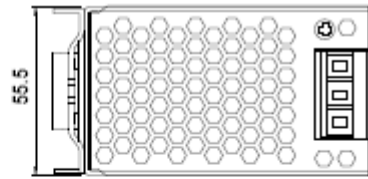
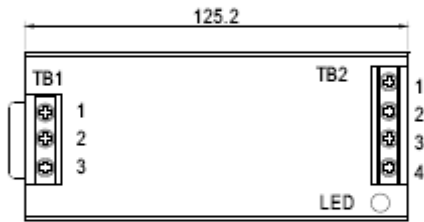
Specifications for 75 W models

Model		DR75-12	DR75-24	DR75-48
Output	DC voltage	12 V	24 V	48 V
	Rated current	6,3 A	3,2 A	1,6 A
	Current range	0 – 6,3 A	0 – 3,2 A	0 – 1,6 A
	Rated power	76,0 W	76,8 W	76,8 W
	Ripple & noise (max.) Note.2	100 mVp-p	150 mVp-p	240 mVp-p
	Voltage adj. range	12 – 14 V	24 – 28 V	48 – 53 V
	Voltage adj. tolerance Note.3	± 2 %	± 1 %	± 1 %
	Line regulation	± 0,5 %	± 0,5 %	± 0,5 %
	Load regulation	± 1 %	± 1 %	± 1 %
	Setuo, rise time	1000 ms, 60 ms / 230 VAC at full load, 1800 ms, 60 ms / 115VAC at full load		
Hold time (Typ.)	60 ms / 230 VAC at full load, 12 ms / 115 VAC at full load			
Input	Voltage range	85 ~ 264 VAC	120 ~ 370 VDC	
	Frequency range	47 ~ 63 Hz		
	Efficiency (Typ.)	76 %	80 %	81 %
	AC current (Typ.)	1.6 A / 115 VAC	0.96 A / 230 VAC	
	Inrush current (Typ.)	Cold start 20 A / 115 VAC	40 A / 230 VAC	
	Leakage current	<1mA / 240 VAC		
Protection	Over load	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	Over voltage	15,0 – 16,5 V	29 – 34 V	58 – 65 V
	Over temperature	85 °C ± 5 °C (TSW1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
Environment	Working temp.	-10 ~ +60 °C (Refer to output load derating curve)		
	Working humidity	20 ~ 90% RH non-condensing		
	Storage temp., humidity	-20 ~ +85 °C , 10 ~ 95% RH		
	Temp. coefficient	± 0,03 %/°C (0 – 50 °C)		
	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
Safety & EMC (note 4)	Safety standards	UL508, TUV EN60950-1 Approved		
	Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC		
	EMI conduction & radiation	Compliance to EN55011, EN55022 (CISPR22) Class B		
	Harmonic current	Compliance to EN61000-3-2, -3		
Others	MTBF	123.1 K hrs min. MIL-HDBK-217F (25 °C)		
	Dimension	55,5 x 125,2 x 100 mm (W x H x D)		
	Weight	600 g		
Notes	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & 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 a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			

Mechanical Specifications – 75 W model

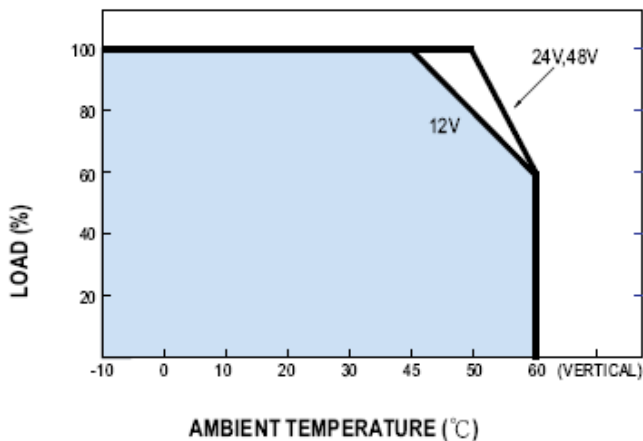


Terminal pin no. assign. TB1		Terminal pin no. assign. TB2	
Pin no.	Assignment	Pin no.	Assignment
1	FG (Ground)	1, 2	DC output +V
2	AC/N (DC+)	3, 4	DC output -V
3	AC/L (DC-)		

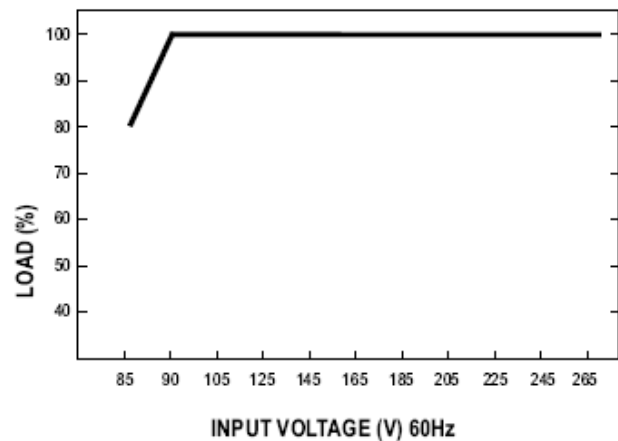


ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

Output derating



Output derating Vs input voltage



- Universal AC input / Full range
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- Fix switching frequency at 50KHz
- 3 years warranty

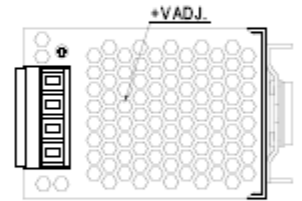
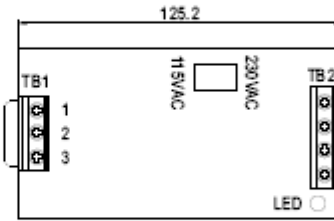
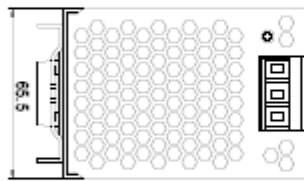
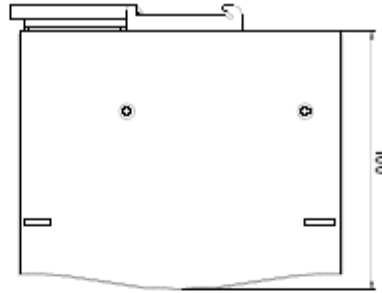


Specifications for 120 W models

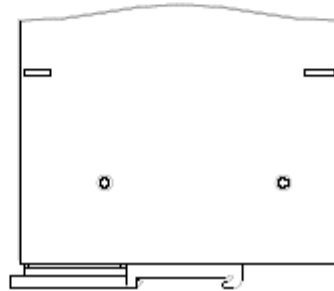
Model	DR120-12	DR120-24	DR120-48	
Output	DC voltage	12 V	24 V	48 V
	Rated current	10 A	5 A	2,5 A
	Current range	0 – 10 A	0 – 5 A	0 – 2,5 A
	Rated power	120 W	120 W	120 W
	Ripple & noise (max.) Note.2	80 mVp-p	80 mVp-p	100 mVp-p
	Voltage adj. range	12 – 14 V	24 – 28 V	48 – 53 V
	Voltage adj. tolerance Note.3	± 2 %	± 1 %	± 1 %
	Line regulation	± 0,5 %	± 0,5 %	± 0,5 %
	Load regulation	± 1 %	± 1 %	± 1 %
	Setuo, rise time	500 ms, 70 ms / 230 VAC at full load, 500 ms, 70 ms / 115VAC at full load		
Hold time (Typ.)	36 ms / 230 VAC at full load, 32 ms / 115 VAC at full load			
Input	Voltage range	88 ~ 132 VAC / 176 – 264 VAC		248 ~ 370 VDC
	Frequency range	47 ~ 63 Hz		
	Efficiency (Typ.)	80 %	84 %	85 %
	AC current (Typ.)	2.6 A / 115 VAC	1.6 A / 230 VAC	
	Inrush current (Typ.)	Cold start 20 A / 115 VAC	40 A / 230 VAC	
Leakage current	<3,5 mA / 240 VAC			
Protection	Over load	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	Over voltage	15,0 – 16,5 V	29 – 33 V	58 – 65 V
	Over temperature	85 °C ± 5 °C (TSW1)	90 °C ± 5 °C (TSW1)	90 °C ± 5 °C (TSW1)
Environment	Working temp.	-10 ~ +60 °C (Refer to output load derating curve)		
	Working humidity	20 ~ 90% RH non-condensing		
	Storage temp., humidity	-20 ~ +85 °C , 10 ~ 95% RH		
	Temp. coefficient	± 0,03 %/°C (0 – 50 °C)		
	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes		
Safety & EMC (note 4)	Safety standards	UL508, UL60950-1, TUV EN60950-1 Approved		
	Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC		
	EMI conduction & radiation	Compliance to EN55011, EN55022 (CISPR22) Class B		
	Harmonic current	Compliance to EN61000-3-2, -3		
Others	MTBF	136.8 K hrs min. MIL-HDBK-217F (25 °C)		
	Dimension	65,5 x 125,2 x 100 mm (W x H x D)		
	Weight	790 g		
Notes	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & 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 a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			

Mechanical Specifications – 120 W model

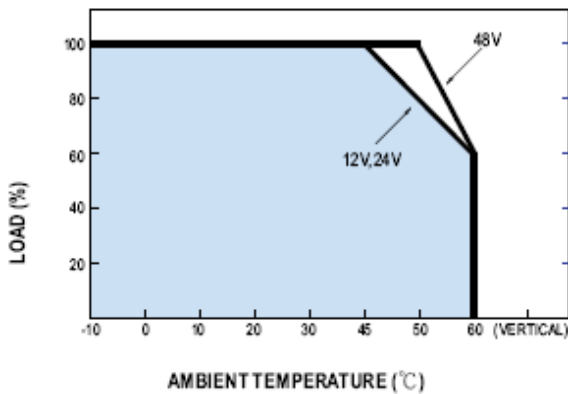
Terminal pin no. assign. TB1		Terminal pin no. assign. TB2	
Pin no.	Assignment	Pin no.	Assignment
1	FG (Ground)	1, 2	DC output +V
2	AC/N	3, 4	DC output -V
3	AC/L		



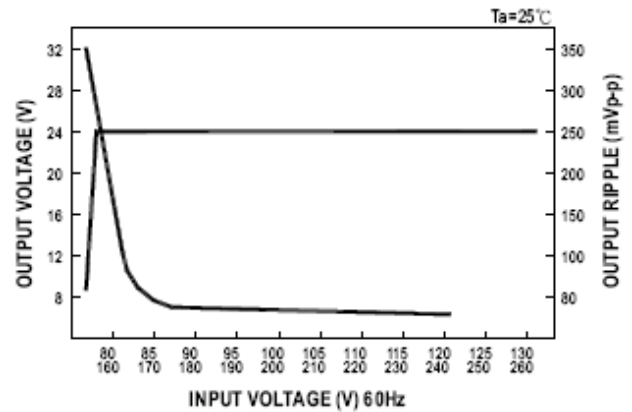
ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15



Output derating



Static characteristics (24V)



- Universal AC input / Full range
- Built in active PFC function
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- 100% full load burn-in test
- Fix switching frequency at 100KHz
- 3 years warranty

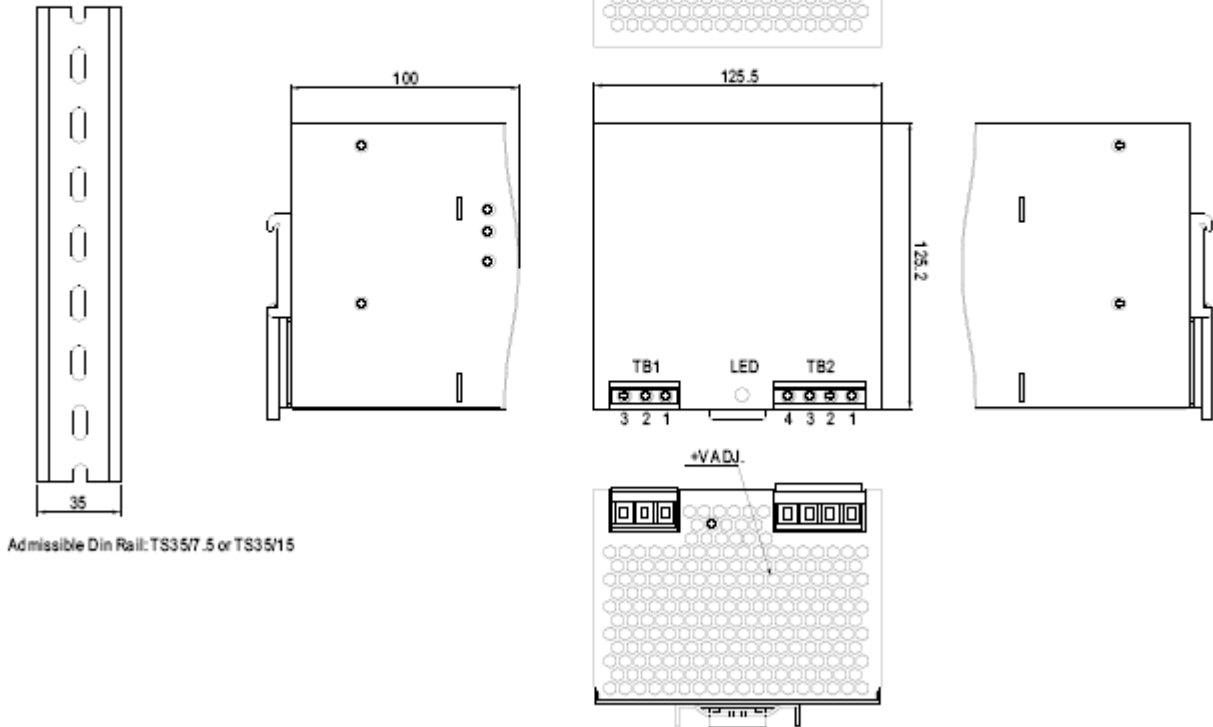


Specifications for 240 W models

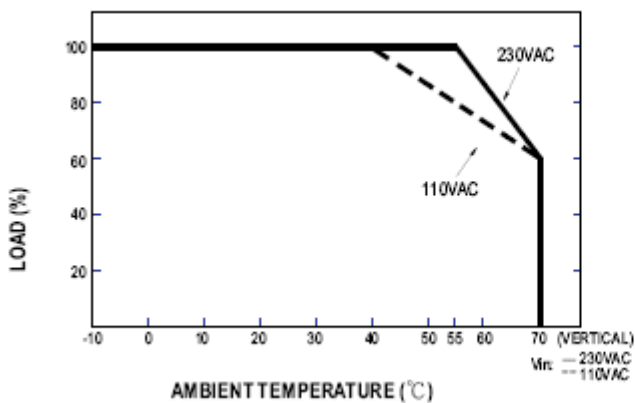
Model	DRP240-24	DRP240-48	
Output	DC voltage	24 V	48 V
	Rated current	10 A	5 A
	Current range	0 – 10 A	0 – 5 A
	Rated power	240 W	240 W
	Ripple & noise (max.) Note.2	80 mVp-p	150 mVp-p
	Voltage adj. range	24 – 28 V	48 – 53 V
	Voltage adj. tolerance Note.3	± 1 %	± 1 %
	Line regulation	± 0,5 %	± 0,5 %
	Load regulation	± 1 %	± 1 %
	Setuo, rise time	800 ms, 40 ms / 230 VAC at full load, 800 ms, 40 ms / 115VAC at full load	
Hold time (Typ.)	24 ms / 230 VAC at full load, 24 ms / 115 VAC at full load		
Input	Voltage range	85 ~ 264 VAC	120 ~ 370 VDC
	Frequency range	47 ~ 63 Hz	
	Efficiency (Typ.)	84 %	85 %
	AC current (Typ.)	2.8 A / 115 VAC	1.4 A / 230 VAC
	Inrush current (Typ.)	Cold start 27 A / 115 VAC	45 A / 230 VAC
	Leakage current	<3,5 mA / 240 VAC	
Protection	Over load	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	Over voltage	30 – 36 V	54 – 60 V
	Over temperature	100 °C ± 5 °C (TSW1) Detect on heat sink of power transistor Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
Environment	Working temp.	-10 ~ +70 °C (Refer to output load derating curve)	
	Working humidity	20 ~ 90% RH non-condensing	
	Storage temp., humidity	-20 ~ +85 °C , 10 ~ 95% RH	
	Temp. coefficient	± 0,03 %/°C (0 – 50 °C)	
Safety & EMC (note 4)	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
	Safety standards	UL508, UL60950-1, TUV EN60950-1 Approved	
	Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC	
	EMI conduction & radiation	Compliance to EN55011, EN55022 (CISPR22) Class B	
	Harmonic current	Compliance to EN61000-3-2, -3	
Others	EMS immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN55024, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A	
	MTBF	105.5 K hrs min. MIL-HDBK-217F (25 °C)	
	Dimension	125,5 x 125,2 x 100 mm (W x H x D)	
Notes	Weight	1,2 kg	
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & 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 a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	

Mechanical Specifications – 240 W model

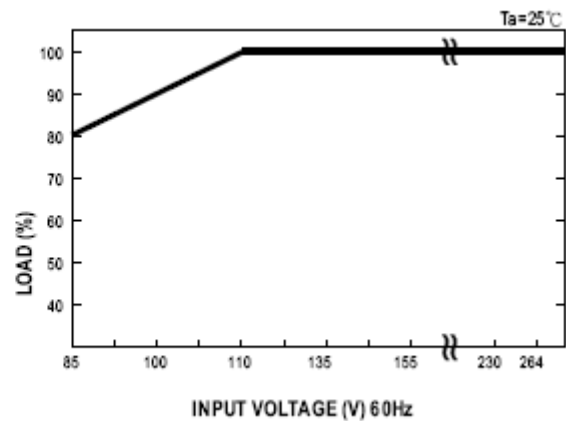
Terminal pin no. assign. TB1		Terminal pin no. assign. TB2	
Pin no.	Assignment	Pin no.	Assignment
1	FG (Ground)	1, 2	DC output +V
2	AC/N	3, 4	DC output -V
3	AC/L		



Output derating



Output derating VS Input voltage



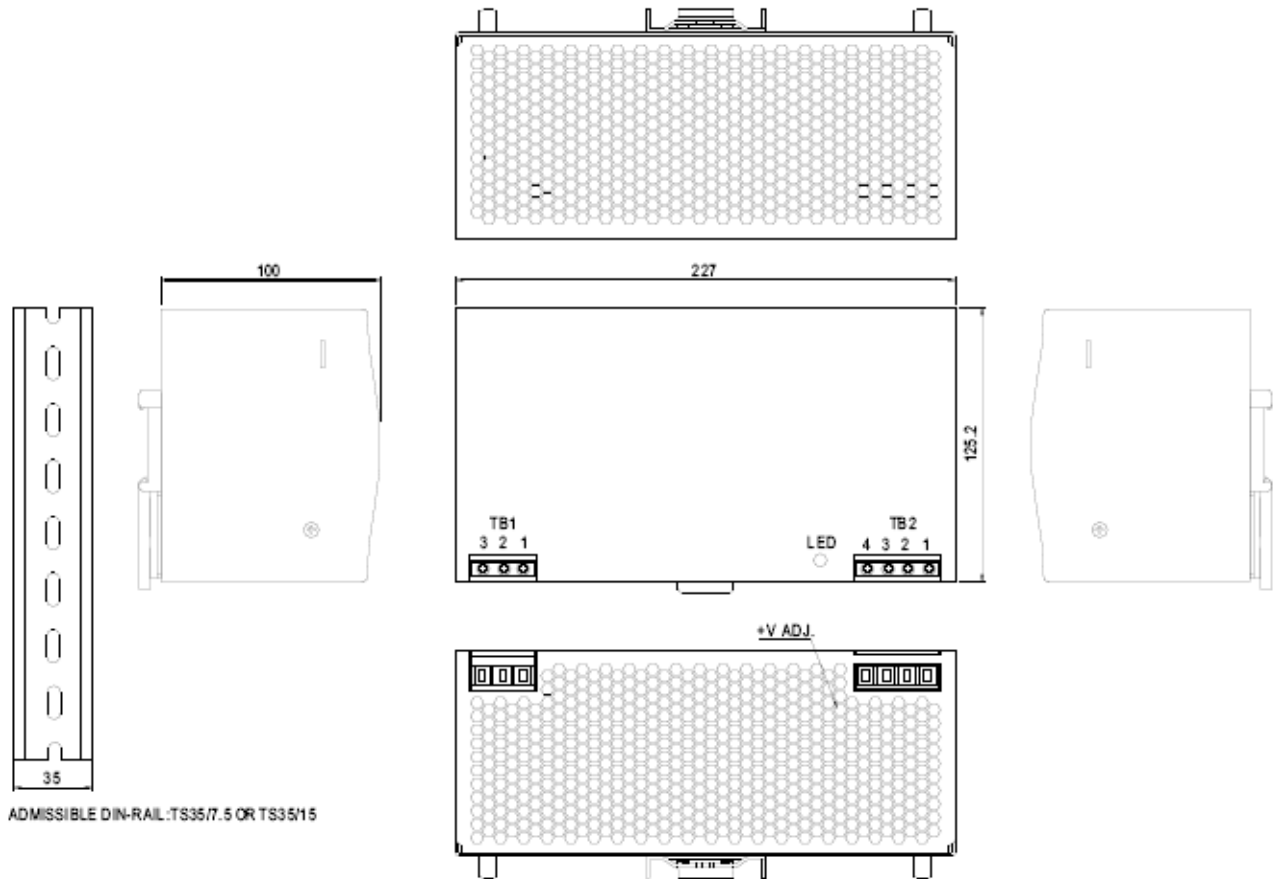
- High efficiency 89% and low dissipation
- Built in passive PFC function (EN61000-3-2)
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- Built-in constant current limiting circuit
- 3 years warranty



Specifications for 480 W models

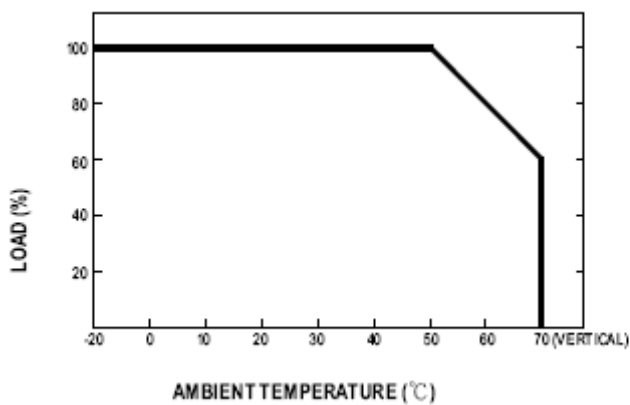
Model	DRP480-24	DRP480-48	
Output	DC voltage	24 V	48 V
	Rated current	20 A	10 A
	Current range	0 – 20 A	0 – 10 A
	Rated power	480 W	480 W
	Ripple & noise (max.) Note.2	120 mVp-p	120 mVp-p
	Voltage adj. range	24 – 28 V	48 – 53 V
	Voltage adj. tolerance Note.3	± 1 %	± 1 %
	Line regulation	± 0,5 %	± 0,5 %
	Load regulation	± 1 %	± 1 %
	Setuo, rise time	1200 ms, 40 ms / 230 VAC at full load	
Hold time (Typ.)	16 ms / 230 VAC at full load		
Input	Voltage range	180 ~ 264 VAC	250 ~ 370 VDC
	Frequency range	47 ~ 63 Hz	
	Efficiency (Typ.)	89 %	
	AC current (Typ.)	4 A / 230 VAC	
	Inrush current (Typ.)	Cold start 40 A / 230 VAC	
	Leakage current	<3,5 mA / 240 VAC	
Protection	Over load	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	Over voltage	30 – 36 V	54 – 60 V
	Over temperature	100 °C ± 5 °C (TSW1) Detect on heat sink of power switch Protection type : Shut down o/p voltage, recovers automatically after temperature goes down	
Environment	Working temp.	-20 ~ +70 °C (Refer to output load derating curve)	
	Working humidity	20 ~ 90% RH non-condensing	
	Storege temp., humidity	-20 ~ +85 °C , 10 ~ 95% RH	
	Temp. coefficient	± 0,03 %/°C (0 – 50 °C)	
Safety & EMC (note 4)	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes. Mounting compliance to IEC60068-2-6	
	Safety standards	UL508, UL60950-1, TUV EN60950-1 Approved	
	Withstand voltage	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC	
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC	
	EMI conduction & radiation	Compliance to EN55022 (CISPR22) Class B	
Others	Harmonic current	Compliance to EN61000-3-2,-3	
	EMS immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A	
	MTBF	180.9 K hrs min. MIL-HDBK-217F (25 °C)	
Notes	Dimension	227 x 125,2 x 100 mm (W x H x D)	
	Weight	2,4 kg	
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Ripple & 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 a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	

Mechanical Specifications – 480 W model



Terminal pin no. assign. TB1		Terminal pin no. assign. TB2	
Pin no.	Assignment	Pin no.	Assignment
1	AC/L (DC+)	1, 2	DC output +V
2	AC/N (DC-)	3, 4	DC output -V
3	FG (Ground)		

Output derating



Output derating VS Input voltage

