

Embedded Switch Mode Power Supplies (SMPS)

FEATURES

- Universal 85 - 264V AC or 120-370 VDC
- Efficiency up to 91.5%
- Low standby power consumption
- Output voltage adjustment
- DIN rail TS35X7.5/ TS35X15 mountable
- Operating temperature range - 30°C to +70°C
- DC ON output indicator LED
- Output short circuit, over-current, over-voltage protection.
- EMI performance meets. CISPR32 / EN55032 CLASS B
- Safety according to IEC/EN/UL62368, EN/IEC60335, IEC61558, UL61010

RS PRO Embedded Switch Mode Power Supplies

RS Stock No: 2358687,2358688



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

Embedded Switch Mode Power Supplies (SMPS)

AC-DC DIN rail power supply suitable for a wide range of Industrial, Machinery and Instrumentation applications. Featuring a universal AC input this cost-effective, compact design is available in a range of standard outputs. Complying with International and European EMC and safety standards meets IEC/EN61000-4, CISPR32, EN55032, UL/EN/IEC62368, IEC/EN60335, IEC61558, UL61010.

General Specifications

Model	AC-DC 150W power supply
Mounting Type	DIN Rail mount
MTBF	MIL-HDBK-217F@25°C > 300,000 h
Applications	Industrial control systems, instrumentation and machinery equipment

RS Stock#	Input Voltage	Output Voltage	Output Current	Adj' range (V)	Wattage	Efficiency (Typ)
2358687	85 to 264V ac 120 to 370V dc	12V	11.3A	10.8-13.8V	135W	89%
2358688	85 to 264V ac 120 to 370V dc	24V	6.25A	21.6-29V	150W	91.5%

Input Specifications

Input Specification	
Voltage Range	85 to 264V ac, 120 to 370V dc
Frequency	47 to 63Hz
Input current	3A/115V ac, 1.8A/230V ac
Inrush Current	35A/ 115V ac, 70A / 230V ac
Leakage	<0.5mA
Stand-by Power Consumption	0.3W

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Output Specifications

Output Specification			
Output voltage	12V	15V	24V
Trim range	10.8-13.8V	13.5-18V	21.6-29V
Rated Current	11.3	15.9A	6.25A
Ripple & Noise (max.) *	100mV	120mV	150mV
Rated Power	135.6W	142.5W	150W
Line Regulation typ.	±1%	±1%	±1%
Load Regulation typ.	±1%	±1%	±1%
Max Capacitive load μ F	10000 μ F	8000 μ F	5000 μ F
Minimum Load	0%	0%	0%

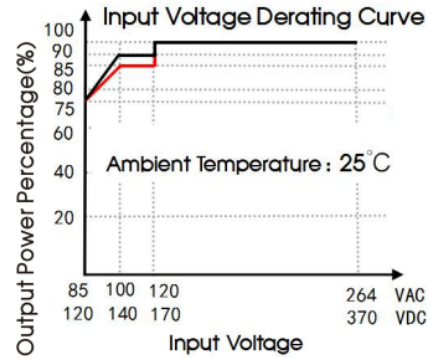
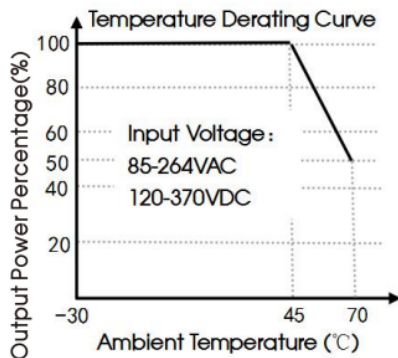
Hold Up Time 115/230Vac	12/30ms	
Over Voltage Protection	12V Output	$\leq 16V$ (Output voltage hiccup)
	15V Output	$\leq 23 V$ (Output voltage hiccup)
	24V Output	$\leq 35 V$ (Output voltage hiccup)
Short Circuit Protection	Hiccup, continuous, self-recovery	
Note: * The "twisted pair-wire method" is used for ripple and noise test, please refer to AC-DC Converter Application Notes for specific information		

General Specifications

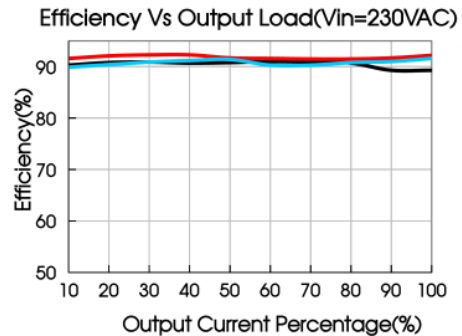
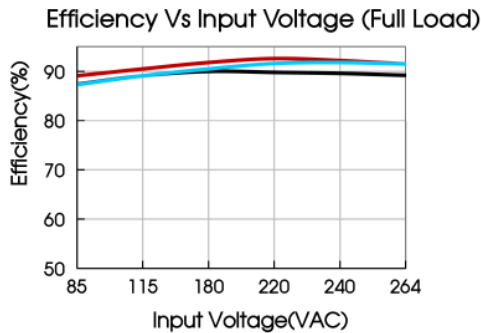
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Item	Operating Conditions		Min	Typ	Max.	Unit
Isolation	Input-Output	Electric Strength Test for 1min., (leakage current < 5mA)	4000	-	-	VAC
Operating Temperature			-30	-	+70	°C
Storage Temperature			-40	-	+85	
Storage Humidity	Non-condensing		-	-	95	%RH
Power Derating	85VAC-100VAC	12V/15V	1.1	-	-	%VAC
		24V	0.784	-	-	
	+45°C to +70°C		2.0	-	-	%/°C
	100VAC - 120VAC	12V	-	-	122.4	W
		15V	-	-	128.3	
		24V	-	-	127.4	
Safety Standard			UL/EN/IEC62368, EN/IEC60335, IEC61558, UL61010			
Safety Class			CLASS II			
MTBF	MIL-HDBK-217F@25°C		> 300,000 h			

Derating



Note: ① With an AC Input between 85-120VAC and a DC Input between 120-170VDC, the output power must be derated as per temperature derating curves;
 ② This product is suitable for applications using natural air cooling; for applications in closed environment please consult factory or one of our FAE.



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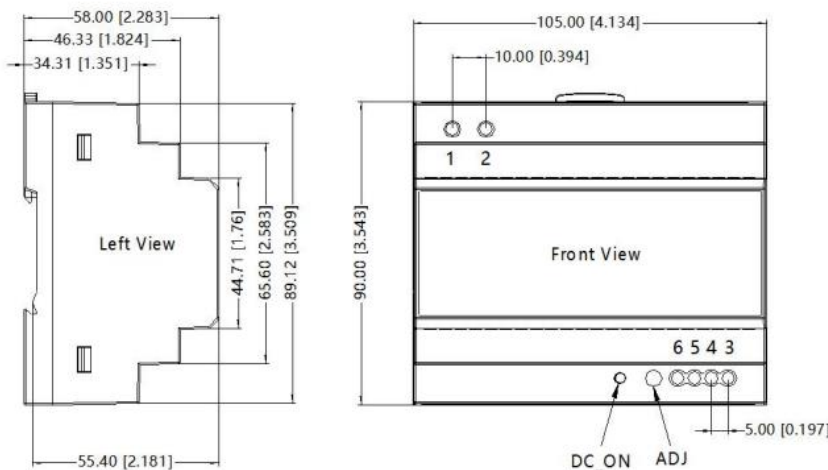
EMC Specifications

Emissions	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
	Harmonic Current	IEC/EN61000-3-2 CLASS A	
Immunity	ESD	IEC/EN61000-4-2 Contact $\pm 4\text{KV}$ / Air $\pm 8\text{KV}$	Perf. Criteria A
	RS	IEC/EN61000-4-3 10V/m	Perf. Criteria A
	EFT	IEC/EN61000-4-4 $\pm 4\text{KV}$	Perf. Criteria B
	Surge	IEC/EN61000-4-5 line to line $\pm 2\text{KV}$	Perf. Criteria A
	CS	IEC/EN61000-4-6 10Vr.m.s	Perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11 0%, 70%	

Mechanical Specifications

Case Material	Plastic, heat-resistant (UL94V-0)
Dimensions	105.00 x 90.00 x 55.40 mm
Weight	330g (Typ.)
Cooling Method	Free air convection

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	AC(L)
2	AC(N)
3	-Vo
4	-Vo
5	+Vo
6	+Vo

Note:
 Unit: mm[inch]
 ADJ: adjustable resistance to change output voltage
 Wire range: 24-12 AWG
 Tightening torque: Max 0.4 N·m
 Mounting rail: TS35
 General tolerances: $\pm 1.00[\pm 0.039]$



Approvals

Safety Standards	Meet IEC/EN/UL62368, IEC/EN61010-1, IEC/EN61558-1, IEC60335-1
	EN62368-1 (Report) Safety Approval
Safety Class	Class II

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity
2. All index testing methods in this datasheet are based on our company corporate standards
3. Specifications are subject to change without prior notice
4. Products are related to laws and regulations: see "Features" and "EMC"
5. Our products shall be classified according to ISO14001 and related environmental laws and regulations and shall be handled by qualified units.