MEAN WELL APC-16 Series 16W Single Output Switching Power Supply Owner's Manual

Contents

MEAN WELL APC-16 Series 16W Single Output Switching Power Supply

OWNNER'S MANUAL

GTIN CODE

https://www.meanwell.com/serviceGTIN.aspx

User's Manual

FEATURES:

- Constant current mode design
- Universal AC input/ Full range
- Protections :Short circuit/ Over voltage
- Fully isolated plastic case
- Small and compact size
- Cooling by free air convection
- Class II power unit, no FG
- Class 2 power unit
- Pass LPS
- IP42 design
- Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)(Note.6)
- 100% full load burn-in test
- Low cost/ High reliability
- 2 years warranty

SPECIFICATION

MODEL		APC-16-350	APC-16-700
OUTPUT	RATED CURRENT	350mA	700mA
	DC VOLTAGE RANGE	12-48V	9-24V
	RATED POWER	16.8W	16.8W
	RIPPLE & NOISE (max.) Note.2	300mVp-p	250mVp-p
	VOLTAGE TOLERANCE Note.3	±5.0%	
	CURRENT ACCURACY	±8.0%	
	LINE REGULATION	±1.0%	
	LOAD REGULATION	±3.0%	
	SETUP, RISE TIME	3000ms, 200ms I 230VAC 3000ms, 200ms I 115VAC atfull load	
	HOLD UP TIME (Typ.)	20ms/230VAC 12ms/115VAC atfull load	
INPUT	VOLTAGE RANGE Note.4	90 – 264VAC 127- 370VDC	
	FREQUENCY RANGE	47 – 63Hz	
	EFFICIENCY(Typ.)	84%	83%
	AC CURRENT	0.3A/230VAC;0.5A/115VAC	
	INRUSH CURRENT(Typ.)	COLD START 45A(twidth=210μs measured at 50% Ipeak) at 230VAC	
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	13 units (circuit breaker of type B) / 23 units (circuit breaker of type C) at 230VAC	
	LEAKAGE CURRENT	0.25mA I 240VAC	
PROTECTION	OVER VOLTAGE	50.4- 60V	27.6- 33.5V
		Protection type: Shut off o/p voltage, clamping by zener diode	
ENVI	WORKING TEMP.	-30 – 70°C (Refer to “Derating Curve”)	
	WORKING HUMIDITY	20 – 90% RH non-condensing	

RON MENT	STORAGE TEMP., HUMIDITY	-40 – +80°C, 10 – 95% RH
	TEMP. COEFFICI ENT	±0.2%/°C (0 – 50°C)
	VIBRATION	10 – 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFE TY & EMC (Note 5)	SAFETY STANDA RDS Note.7	UL8750,CSA C22.2 No.250.0-08, BIS IS15885, EAC TP TC 004,BS EN/EN 62368-1 approved
	WITHSTAND VOL TAGE	I/P-O/P:3.75KVAC
	ISOLATION RESI STANCE	I/P-O/P:>100M Ohms/ 500VDC / 25°C/ 70% RH
	EMC EMISSION	Compliance to BS EN/EN55032,BS EN/EN61000-3-2,BS EN/EN61000-3-3, EAC TP TC 020
	EMC IMMUNITY	Compliance to BS EN/EN55035,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry l evel(surge 2KV), EAC TP TC 020
OTHE RS	MTBF	6411.4K hrs min. Telcordia SR-332 (Bellcore); 1092.9K hrs min. MIL-HDB K-217F (25°C)
	DIMENSION	77’40’29(L ‘W’H)
	PACKING	0.1Kg; 120pcs/14Kg/1.06CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of am bient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12″ twisted pair-wire terminated wit h a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristic for more det ails.Please connect L line to the positive pole and N line to the negative pole under DC input. 5. The power supply is considered as a component that will be operated in combination w[h final equip ment. Since EMC performance will be affected by the complete installation, the final equipment manufa cturers must re-qualify EMC Directive on the complete installation again. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 6. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF /XLG series are recommended.) 7. The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional mo del. Please contact MEAN WELL for details. 8. The ambient temperature derating of 3.5°C/1000m with fanless models and of S°C/1000m w[h fan models for operating altitude higher than 2000m(6500ft). 9. For any application note and IP water proof function installation caution, please refer our user manua l before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf Product Liabil[y Disclaimer : For detailed information, please refer to https://www.meanwell.com/servic eDisclaimer.aspx	

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	LEAKAGE CURRENT	0.25mA / 240VAC	
PROTECTION	OVER VOLTAGE	50.4~ 60V	27.6~ 33.5V
		Protection type : Shut off o/p voltage, clamping by zener diode	
ENVIRONMENT	WORKING TEMP.	-30 ~ 70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.2%/℃ (0 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 5)	SAFETY STANDARDS Note.7	UL8750,CSA C22.2 No.250.0-08, BIS IS15885, EAC TP TC 004,BS EN/EN 62368-1 approved	
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	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25℃ / 70% RH	
	EMC EMISSION	Compliance to BS EN/EN55032,BS EN/EN61000-3-2,BS EN/EN61000-3-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN55035,BS EN/EN61000-4-2,3,4,5,6,8,11; light industry level(surge 2KV), EAC TP TC 020	
OTHERS	MTBF	6411.4K hrs min. Telcordia SR-332 (Bellcore) ; 1092.9K hrs min. MIL-HDBK-217F (25℃)	
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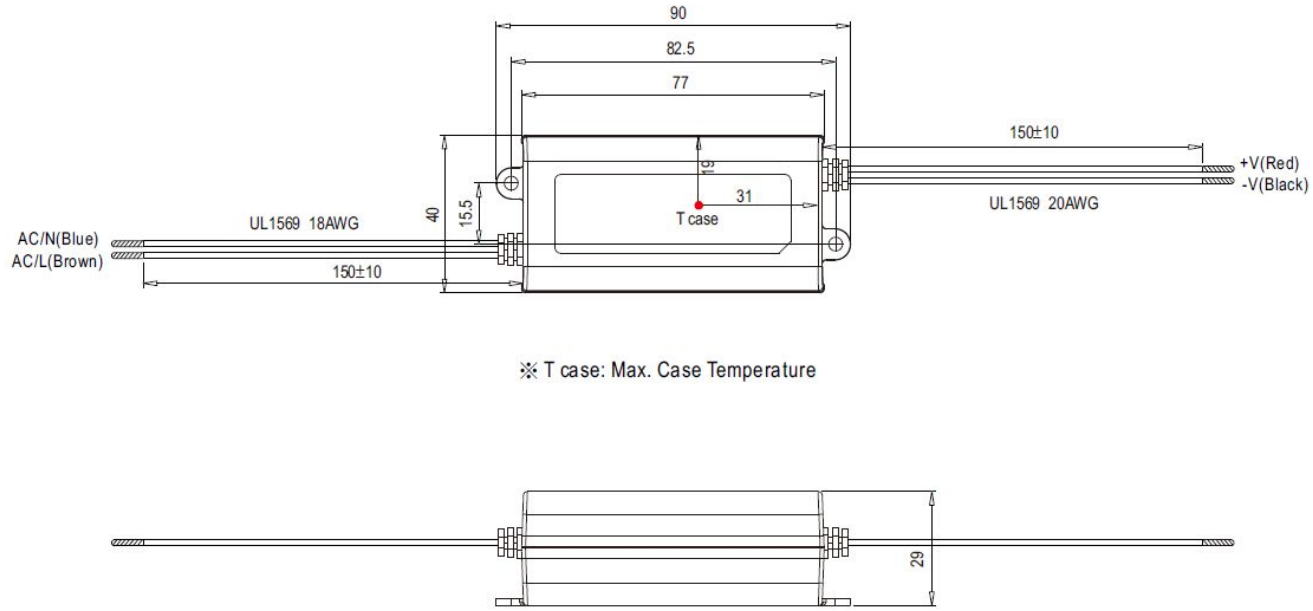
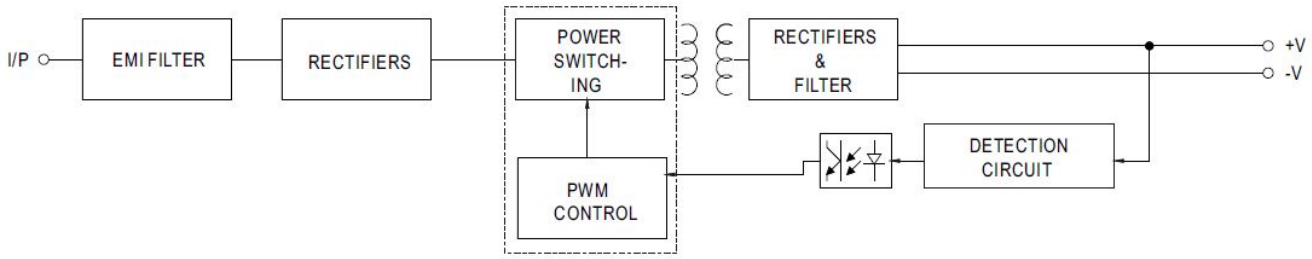
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Derating may be needed under low input voltage. Please check the static characteristic for more details.Please connect L line to the positive pole and N line to the negative pole under DC input. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf) 6. This product is not intended for LED lighting luminaire applications in the EU.(In the EU the LPF/NPF/XLG series are recommended.) 7. The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional model . Please contact MEAN WELL for details. 8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 9. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx		

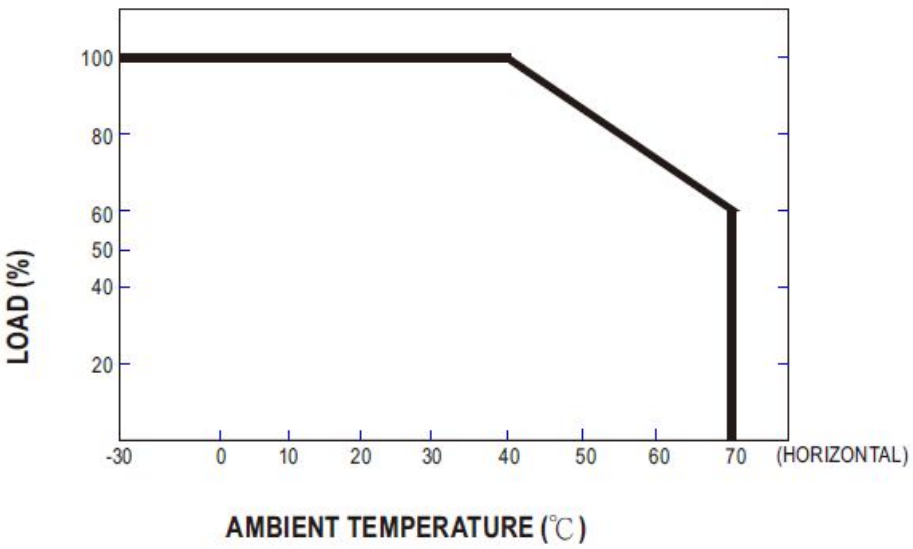
Mechanical Specification



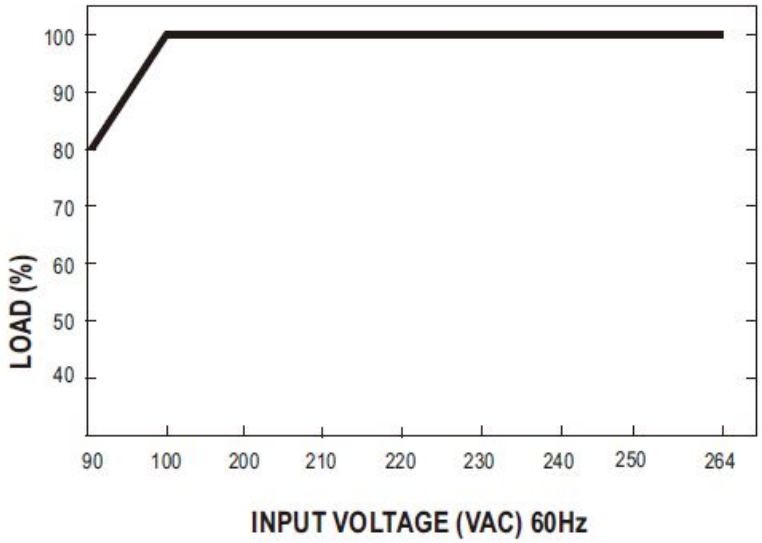
Block Diagram



Derating Curve



Static Characteristics



Product Specifications

- Model: APC-16-350, APC-16-700
- Output:
  - Rated Current: 350mA
  - DC Voltage Range: 12~48V
  - Rated Power: 16.8W
  - Ripple & Noise (max.): 300mVp-p
  - Current Accuracy: 700mA 9~24V 16.8W 250mVp-p
- Input:
  - Voltage Range: 90 ~ 264VAC, 127 ~ 370VDC
  - Frequency Range: 47 ~ 63Hz
  - Efficiency: 84%, 83%
- Protection:
  - Over Voltage Protection: 50.4~60V
  - Working Temperature: -30 ~ 70°C
- Others:
  - Safety Standards: UL8750, CSA C22.2 No.250.0-08, BIS IS15885, EAC TP TC 004, BS EN/EN 62368-1 approved
  - EMC Compliance: BS EN/EN55032, BS EN/EN61000-3-2, BS EN/EN61000-3-3, EAC TP TC 020
  - MTBF: 6411.4K hrs min.

Product Usage Instructions

Installation

1. Ensure input voltage is within the specified range.
2. Connect the L line to the positive pole and the N line to the negative pole under DC input.
3. Place the power supply in a well-ventilated area with sufficient clearance for heat dissipation.

Operation

1. Apply the appropriate load within the rated current and voltage range.
2. Monitor for any abnormal behavior such as excessive noise or voltage fluctuations.

Maintenance

1. Regularly check for any signs of damage or wear on the power supply unit.
2. Keep the unit clean and free from dust accumulation to prevent overheating.

Frequently Asked Questions (FAQ)

1. What should I do if the power supply overheats?

If the power supply overheats, immediately disconnect it from the power source and allow it to cool down before attempting to use it again.

2. Can I connect multiple devices to this power supply?

The maximum number of power supplies that can be connected on a 16A circuit breaker varies based on the type of circuit breaker and input voltage. Refer to the manual for specific details.

Documents / Resources

	**MEAN WELL APC-16 Series 16W Single Output Switching Power Supply** [pdf] Owner's Manual APC-16 Series 16W Single Output Switching Power Supply, APC-16 Series, 16W Single Output Switching Power Supply, Single Output Switching Power Supply, Output Switching Power Supply, Switching Power Supply, Power Supply, Supply

References

- **User Manual**