

CINCON ELECTRONICS



GETRONIC

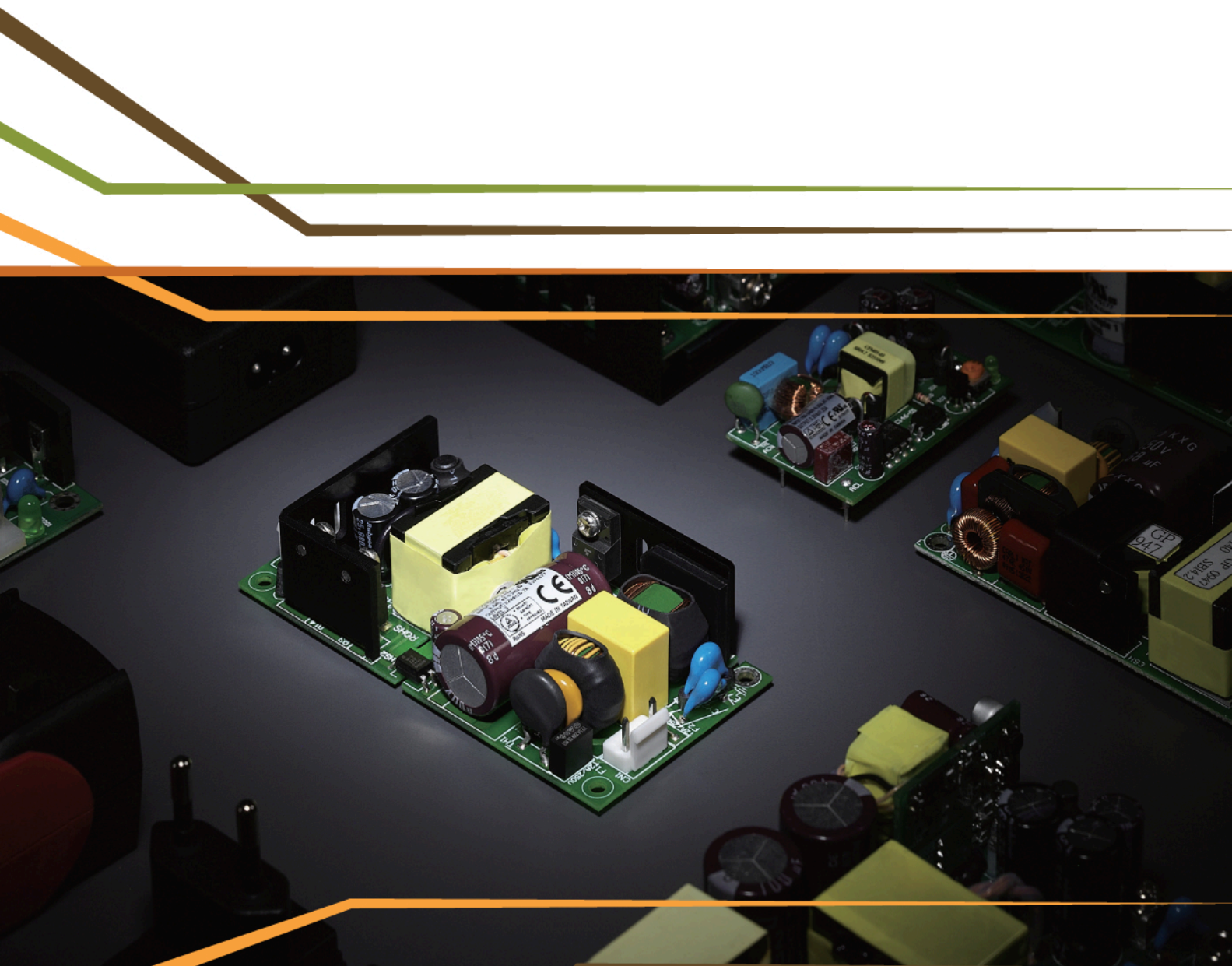
Elektronische Bauelemente und Systeme

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AC-DC SWITCHING POWER SUPPLY CATALOG 2016



Every day, 365 days a year Cincon makes a difference in people's lives throughout the world.

Design engineers and other power supply specifiers select our AC-DC and DC-DC convertors to power a wide range of products. Cincon power supplies are found in a myriad of applications, from medical equipment used to keep us healthy, to security systems working to keep us safe. Name an electronic device in any equipment category and it's likely you'll find a Cincon power supply inside. The communications, test instrumentation, entertainment, lighting, medical, computer, networking, industrial and transportation industries all use Cincon power supplies.

Cincon gives power supply specifiers what they need, speed and specification. Need a power supply fast? Designers can select from one of our 25,000 plus standard model numbers, many available off the shelf from distributors located around the globe. Give us a little more time and we can modify one of our standard products to your requirement. Need a full custom power supply? We do that also.

Using state of the art design tools, our power supplies are engineered with proven technology in one of our two Taiwan design laboratories. We focus heavily on reliability

in the early stages of development to ensure a robust final product. Combined with extensive verification testing at the prototype and pilot production stages, Cincon is able to offer power supplies with long operational lives.

Cincon AC-DC and DC-DC power supplies are manufactured in one of our wholly owned, ISO 9001 and ISO 14001 certified, manufacturing facilities in Taiwan and China. Products are built using the latest manufacturing and quality assurance techniques on state of the art equipment; giving our customers not only high quality but also short lead times.

As a global designer and manufacturer of AC-DC and DC-DC power supplies, our products are certified to international safety, efficiency, hazardous substance and EMI standards where required. We also have capability to design and certify to application and country specific standards.

When you require an AC-DC or DC-DC power supply, standard or custom, and have little time, look to us for a solution. Let Cincon power your idea.

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CFM05 SERIES

5 WATT

Features

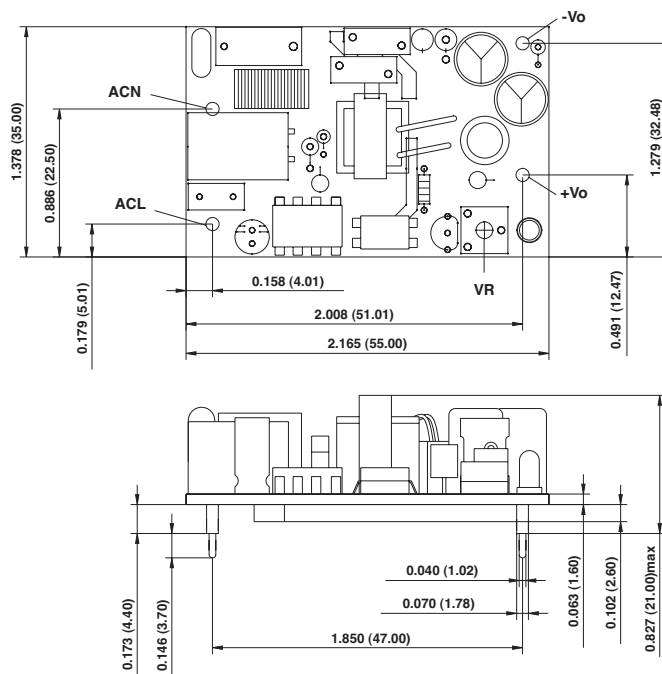
- ◆ Universal Input Range 85-264VAC
- ◆ Efficiency to 80%
- ◆ EN55022 Class B
- ◆ Continuous Short Circuit Protection
- ◆ Low Leakage Current 0.25mA Max.



Mechanical Dimensions

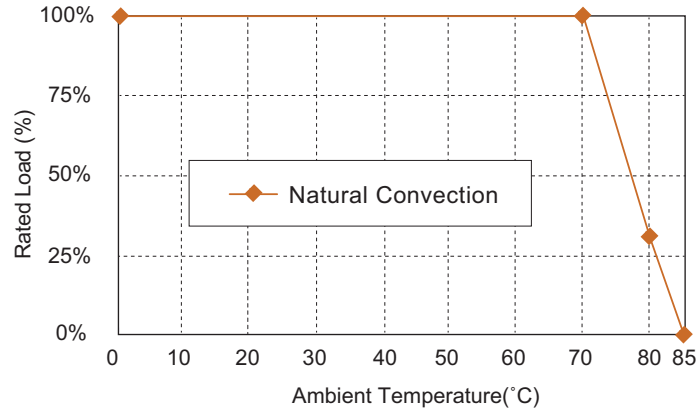
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.X \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT		RIPPLE & (mVp-p) (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF (Typ.) (NOTE 5)
		MIN.	MAX.					
CFM05S033	3.3 V	0 A	1.25 A	50 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	69%
CFM05S050	5 V	0 A	1.0 A	50 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	73%
CFM05S090	9 V	0 A	0.55 A	90 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	77%
CFM05S120	12 V	0 A	0.42 A	120 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	77%
CFM05S150	15 V	0 A	0.33 A	150 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	78%
CFM05S180	18 V	0 A	0.28 A	180 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	79%
CFM05S240	24 V	0 A	0.23 A	240 mV	$\pm 1\%$	$\pm 0.5\%$	$\pm 1\%$	76%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	85-264Vac
Frequency	47 to 63Hz
Inrush Current	40A max. @240Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Continuous (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMC

Emission and Immunity	EN55022 Class B, EN61000-6-3 EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	0°C-85°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	60KHz Typical
MTBF MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	2000m
Dimensions	2.165 x 1.378 x 0.827 inches (55.00 x 35.00 x 21.00 mm)
Weight	35 g (0.08 Pounds)

NOTE

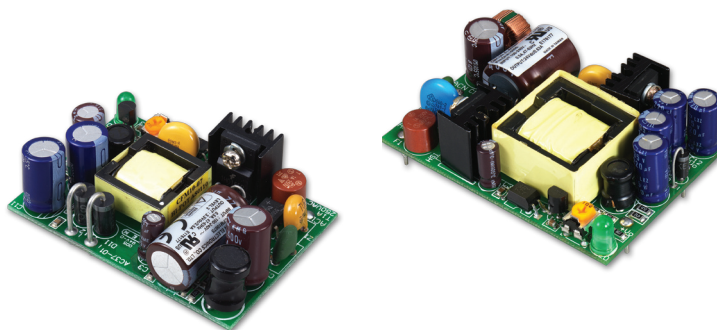
1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 100% rated load and 25°C.Ta.
3. Line regulation is measured from 100Vac to 240Vac with full load.
4. Load regulation is measured from 10% to 100% full load.
5. Typical efficiency at 230VAC and full load at 25°C.

CFM10, CFM15 SERIES

10 WATT, 15 WATT

Features

- ◆ Universal Input Range 85-264VAC
- ◆ Efficiency to 82%
- ◆ EN55022 Class B, CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Leakage Current 0.25mA Max.
- ◆ PCB Mountable



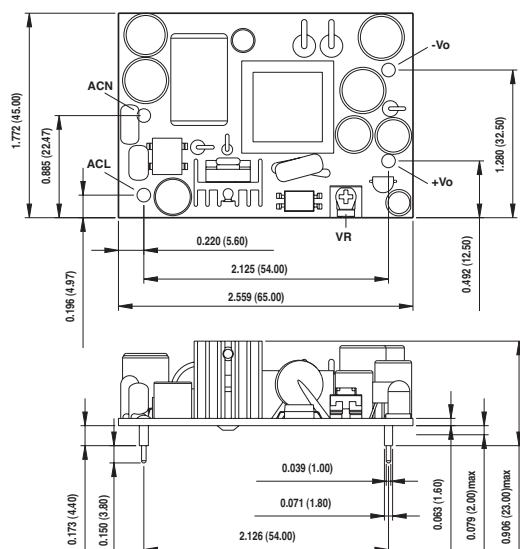
Mechanical Dimensions

All Dimensions In Inches(mm)

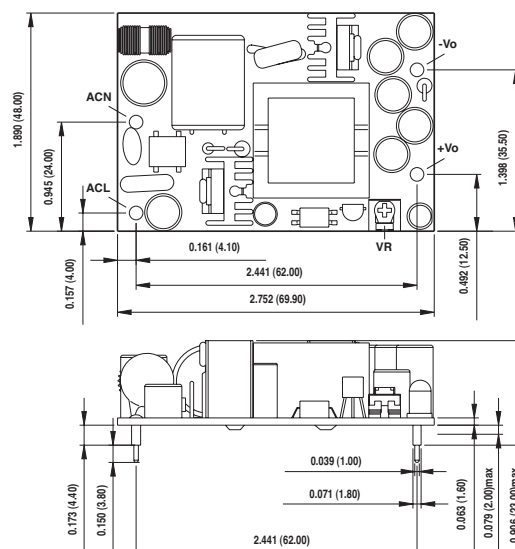
Tolerance Inches: x.xxx= ±0.02

Millimeters: x.xx= ±0.5

CFM10 Series



CFM15 Series



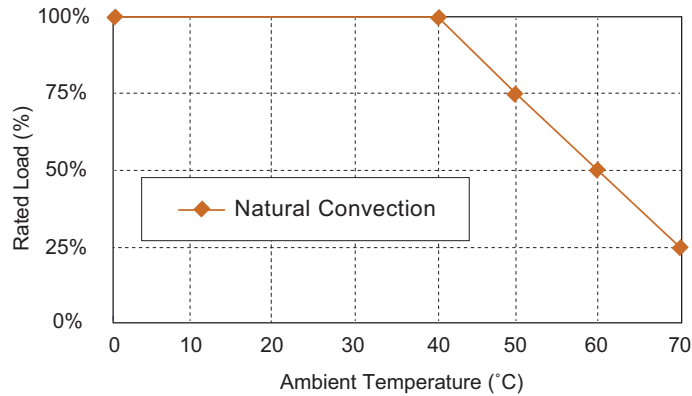
CFM10 Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY	LINE REGULATION (NOTE 2)	LOAD REGULATION (NOTE 3)	% EFF. (TYP.) (NOTE 4)
CFM1001S	5 V	2000 mA	1%	± 1%	± 0.5%	± 1%	73%
CFM1002S	12 V	840 mA	1%	± 1%	± 0.5%	± 1%	76%
CFM1003S	15 V	670 mA	1%	± 1%	± 0.5%	± 1%	76%
CFM1005S	24 V	420 mA	1%	± 1%	± 0.5%	± 1%	77%
CFM1007S	3.3 V	2500 mA	50 mV	± 1%	± 0.5%	± 1%	67%
CFM1009S	9 V	1120 mA	1%	± 1%	± 0.5%	± 1%	72%

CFM15 Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY	LINE REGULATION (NOTE 2)	LOAD REGULATION (NOTE 3)	% EFF. (TYP.) (NOTE 4)
CFM1501S	5 V	3000 mA	1%	± 1%	± 0.5%	± 1%	74%
CFM1502S	12 V	1250 mA	1%	± 1%	± 0.5%	± 1%	80%
CFM1503S	15 V	1000 mA	1%	± 1%	± 0.5%	± 1%	81%
CFM1505S	24 V	630 mA	1%	± 1%	± 0.5%	± 1%	83%
CFM1507S	3.3 V	3000 mA	50 mV	± 1%	± 0.5%	± 1%	69%
CFM1509S	9 V	1670 mA	1%	± 1%	± 0.5%	± 1%	76%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	85-264Vac
Frequency	47 to 63Hz
Input Current	100Vac/0.5A max., 240Vac/0.25A max.
Inrush Current	Cold Start@25°C 20A max. @115Vac 40A max. @230Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	0.05%/°C

SAFETY AND EMC

Emission and Immunity	EN55022 Class B, EN61000-6-3 EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	0°C-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	CFM10: 100KHz Typical CFM15: 67KHz Typical
MTBF	MIL-HDBK-217F, GB, at 25°C/115VAC 200K hrs min.
Altitude	2000m
Dimensions	CFM10: 2.599 x 1.772 x 0.906 inches (65.00 x 45.00 x 23.00 mm) CFM15: 2.752 x 1.890 x 0.906 inches (69.90 x 48.00 x 23.00 mm)
Weight	CFM10: 60 g (0.13 Pounds) CFM15: 80 g (0.18 Pounds)

NOTE

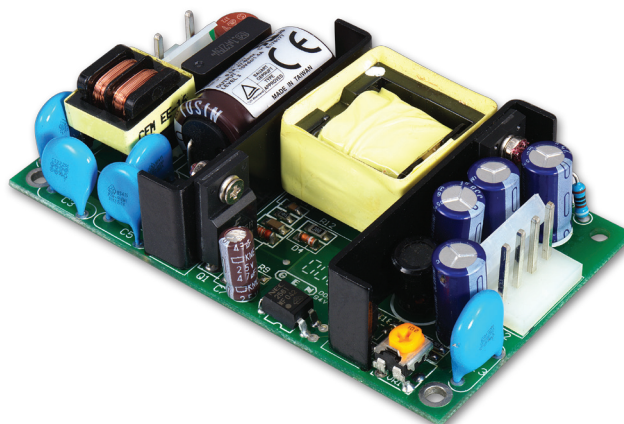
1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Line regulation is measured from high line to low line with full load.
3. Load regulation is measured from full to 10% load.
4. Typical efficiency with 230VAC and max. load at 25°C.

CFM20 SERIES

20 WATT

Features

- ◆ Universal Input Range 85-264Vac
- ◆ Efficiency to 81%
- ◆ Industry Standard Pin Out
- ◆ EN55022 Class B
- ◆ Continuous Short Circuit Protection
- ◆ PCB Mountable Type is available

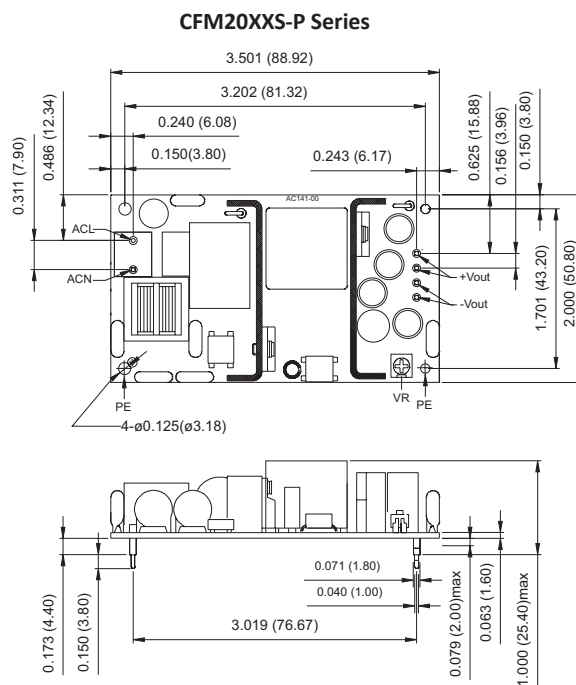
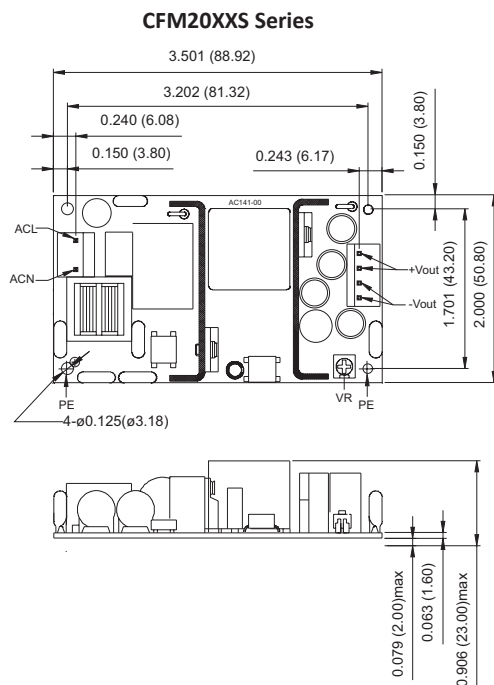


Mechanical Dimensions

All Dimensions in Inches (mm)

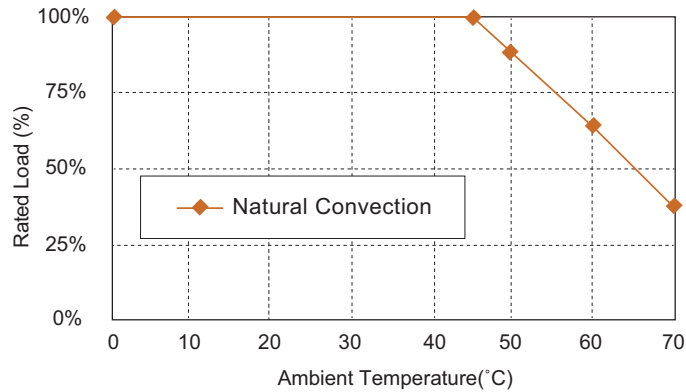
Tolerance Inches: X.XXX=±0.02

Millimeters: X.X=±0.5



MODEL NUMBER	OUTPUT VOLTAGE	MIN. LOAD	MAX. LOAD	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE 2	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	% EFF (Typ.) NOTE 5
CFM2001S	5 V	0 A	4400 mA	1%	±1%	±0.5%	±1%	72%
CFM2002S	12 V	0 A	1800 mA	1%	±1%	±0.5%	±1%	79%
CFM2003S	15 V	0 A	1400 mA	1%	±1%	±0.5%	±1%	80%
CFM2005S	24 V	0 A	920 mA	1%	±1%	±0.5%	±1%	81%
CFM2007S	3.3 V	0 A	4400 mA	50mV	±1%	±0.5%	±1%	66%
CFM2009S	9 V	0 A	2450 mA	1%	±1%	±0.5%	±1%	76%.

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	85-264Vac
Frequency	47 to 63Hz
Inrush Current	40A max. @230Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMC

Emission and Immunity	EN55022 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	0-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	67KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	3000Khrs min.
Altitude	2000m
Dimensions	3.501 x 2.000 x 0.906 inches (88.92 x 50.80 x 23.00 mm)
	3.501 x 2.000 x 1.000 inches (88.92 x 50.80 x 25.40 mm)
	100 g (0.22 Pounds)
Weight	

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 100% rated load and 25°C Ta.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from full to 10% load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series or equivalent.
7. Model "CFM200XS-P": Connectors with pcb mountable type.

CFM21 SERIES

20 WATT, LOW PROFILE 0.8"

Features

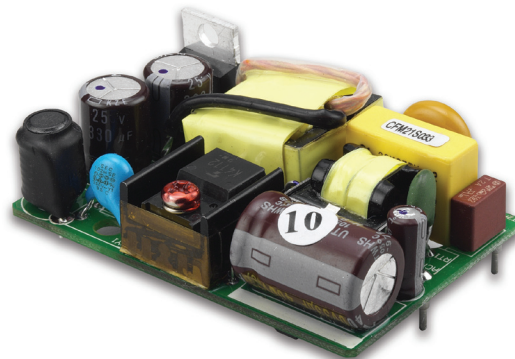
- ◆ Universal Input Range 90-264VAC
- ◆ Medical and ITE Safety Approvals
- ◆ Industry-Standard Pin Out
- ◆ Efficiency to 85%
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ No Load Input Power < 0.3W
- ◆ Leakage Current < 0.1mA
- ◆ Safety Standard: UL60601-1/IEC60601-1/
EN60601-1/UL60950-1/IEC60950-1/EN60950-1
- ◆ Option for On-Board, Connector, Screw Terminal and Encapsulated type



UL 60950-1
And CSA C22
No.60950-1-07
APPROVED



IEC
60601-1
EN
60601-1
E252331

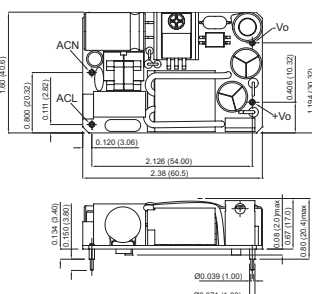


Mechanical Dimensions

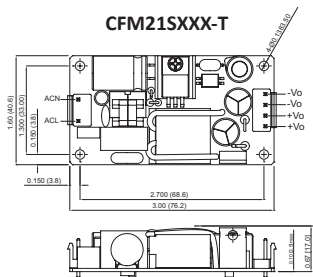
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02, X.XXX=±0.01
Millimeters: X.XX=±0.5, X.XX=±0.25

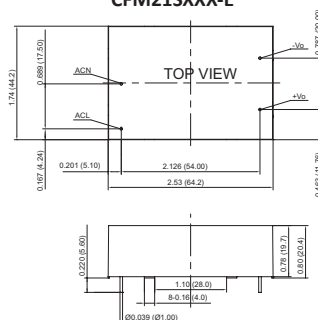
CFM21SXXX



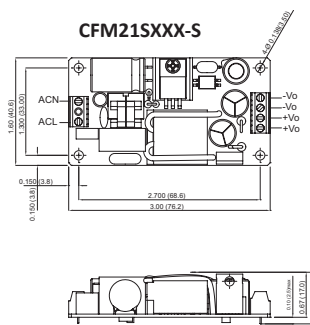
CFM21SXXX-T



CFM21SXXX-E

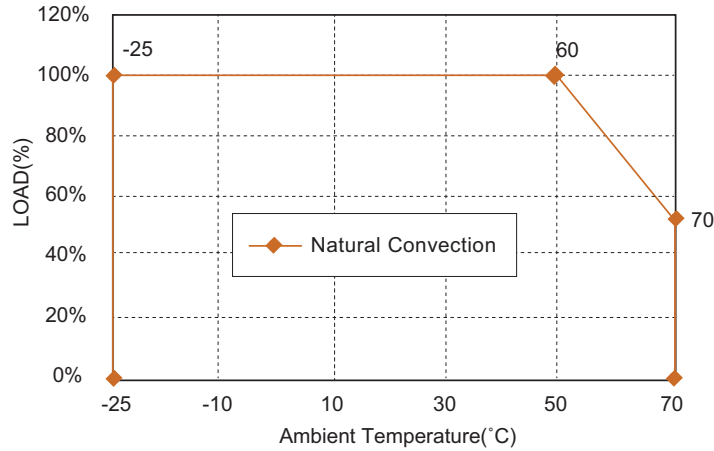


CFM21SXXX-S



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	MIN. LOAD	MAX. LOAD	OUTPUT RATED POWER	RIPPLE & NOISE	VOLTAGE ACCURACY	% EFF.
CFM21S033	90-264 VAC	3.3 V	0 A	4.0 A	13.2 W	50 mV	±1%	75%
CFM21S050	90-264 VAC	5 V	0 A	4.0 A	20.0 W	50 mV	±1%	80%
CFM21S090	90-264 VAC	9 V	0 A	2.3 A	20.7 W	90 mV	±1%	81%
CFM21S120	90-264 VAC	12 V	0 A	1.7 A	20.4 W	100 mV	±1%	83%
CFM21S150	90-264 VAC	15 V	0 A	1.4 A	21.0 W	100 mV	±1%	84%
CFM21S240	90-264 VAC	24 V	0 A	0.9 A	21.6 W	100 mV	±1%	85%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.3 to 0.5A
Inrush Current	Cold Start @25°C 40A max. @230Vac
Leakage Current	0.1mA max.

OUTPUT SPECIFICATIONS

Voltage Accuracy:	±1.0% max.
Line Regulation (note 3)	±0.5% max.
Load Regulation (note 4)	±1.0% max.
Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection (TVS)	115%-140% of nominal output voltage

SAFETY AND EMISSION

CE Directive	2004/108/EC, 93/42/EEC
Emissions	EN60601-1/EN61204-3/ EN55022/ CISPR Class B EN55024
Safety Approvals	Class II, UL60601-1, IEC60601-1, EN60601-1, UL60950-1, IEC60950-1, EN60950-1

GENERAL SPECIFICATIONS

Efficiency	see Table
Switching Frequency	100KHz typ.
Isolation	Input to output = 5,656VDC
Operating Temperature	-25-70°C (with de-rating)
Storage Temperature	-40-85°C
Cooling	Natural Convection
Humidity	93% RH max. Non condensing
MTBF MIL-STD-217F, GB	650Khrs min.
Dimensions	2.38 x 1.60 x 0.80 inches (60.5 x 40.6 x 20.4 mm) -T: 3.00 x 1.60 x 0.77 inches (76.2 x 40.6 x 19.5 mm) -E: 2.53 x 1.74 x 0.80 inches (64.2 x 44.2 x 20.4 mm) -S: 3.00 x 1.60 x 0.77 inches (76.2 x 40.6 x 19.5 mm)
Weight	50 g, 55 g (-T, -S), 105 g (-E)

NOTE

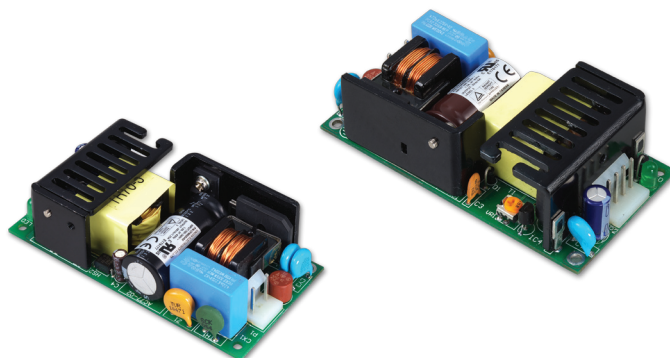
1. Voltage accuracy is set of 100% rated load.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from 10% to 100% full load.
5. "T" Version Connection: JST B3P-VH / B4P-VH or equivalent.
6. "S" Version Connection: DECA MB332-381A or equivalent.

CFM40, CFM60 SERIES

40 WATT, 60 WATT, 2" X 4" OPEN FRAME

Features

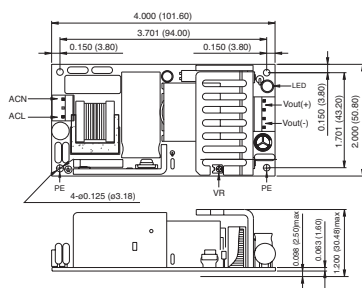
- ◆ Universal Input Range 90-264VAC
- ◆ Industry Standard Pin Out
- ◆ Efficiency to 87%
- ◆ EN55022 Class B and CISPR/FCC Class B, Conducted
- ◆ Continuous Short Circuit Protection



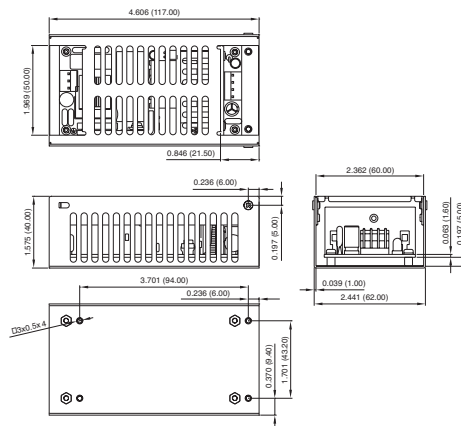
Mechanical Dimensions

All Dimensions In Inches(mm)
Tolerance Inches: x.xxx= ±0.02
Millimeters: x.xx= ±0.5

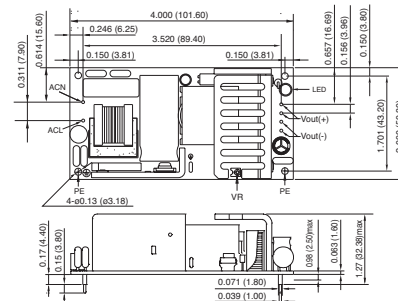
CFM40SXXX / CFM60SXXX
(Open Frame)



CFM40SXXX-CA / CFM60SXXX-CA
(With Cover)



CFM40SXXX-P / CFM60SXXX-P
(Input/Output Connector With Pin)



CFM40 Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)
CFM40S033	3.3 V	6 A	50 mV	± 1%	± 0.5%	± 1%	70%
CFM40S050	5 V	6 A	1%	± 1%	± 0.5%	± 1%	76%
CFM40S090	9 V	4.45 A	1%	± 1%	± 0.5%	± 1%	84%
CFM40S120	12 V	3.34 A	1%	± 1%	± 0.5%	± 1%	85%
CFM40S150	15 V	2.67 A	1%	± 1%	± 0.5%	± 1%	85%
CFM40S240	24 V	1.67 A	1%	± 1%	± 0.5%	± 1%	85%
CFM40S300	30 V	1.33 A	1%	± 1%	± 0.5%	± 1%	86%
CFM40S360	36 V	1.11 A	1%	± 1%	± 0.5%	± 1%	87%
CFM40S480	48 V	0.834 A	1%	± 1%	± 0.5%	± 1%	87%

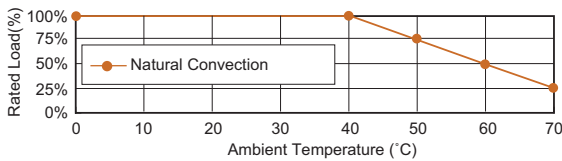
CFM60 Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	%EFF. (Typ.)
CFM60S033	3.3 V	8 A	50 mV	± 1%	± 0.5%	± 1%	72%
CFM60S050	5 V	8 A	1%	± 1%	± 0.5%	± 1%	77%
CFM60S090	9 V	6.67 A	1%	± 1%	± 0.5%	± 1%	84%
CFM60S120	12 V	5 A	1%	± 1%	± 0.5%	± 1%	85%
CFM60S150	15 V	4 A	1%	± 1%	± 0.5%	± 1%	86%
CFM60S240	24 V	2.5 A	1%	± 1%	± 0.5%	± 1%	86%
CFM60S300	30 V	2 A	1%	± 1%	± 0.5%	± 1%	86%
CFM60S360	36 V	1.67 A	1%	± 1%	± 0.5%	± 1%	88%
CFM60S480	48 V	1.25 A	1%	± 1%	± 0.5%	± 1%	88%

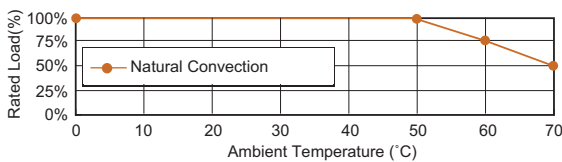
Derating Curve

CFM40SXXX / CFM60SXXX (Open Frame)

CFM40S050, 40S090, 60S033, 60S050, 60S090

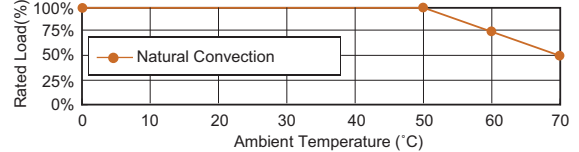


CFM40S120, 40S150, 40S240, 40S300, 40S360, 40S480
CFM60S120, 60S150, 60S240, 60S300, 60S360, 60S480

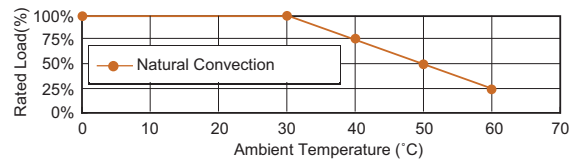


CFM40SXXX-CA / CFM60SXXX-CA (With Cover)

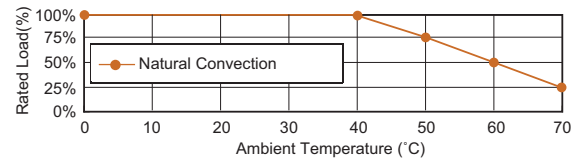
CFM40S120, 40S150, 40S240, 40S300, 40S360, 40S480



CFM40S033, CFM40S050, CFM60S033, CFM60S050



CFM40S090, 60S090, 60S120, 60S150, 60S240, 60S300
CFM60S360, 60S480



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold start @25°C 50A max. @240Vac
Leakage Current	1mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMC

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to Output = 4,242VDC
Operating Temperature	0°C-70°C (see derating curve)
Storage Temperature	-20°C-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	66KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200K hrs min.
Altitude	2000m
Dimensions:	
CFM40/60 Open Frame	4.000 x 2.000 x 1.200 inches (101.60 x 50.80 x 30.48 mm)
CFM40/60 Covered	4.606 x 2.441 x 1.575 inches (117.00 x 62.00 x 40.00 mm)
Weight	
CFM40/60:	170g/175g (0.38/0.39 Pounds)
CFM40/60 Covered:	210g/215g (0.46/0.47 Pounds)

NOTE

1. Add a 0.1µF ceramic capacitor and a 10µF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Line regulation is measured from High Line to low Line with full load.
3. Load regulation is measured from Full to 10% load.
4. Input connector mates with molex housing 09-50-3031 and molex 2878 series crimp terminal.
5. Output connector mates with molex housing 09-50-3041 and molex 2878 series crimp terminal.
6. Safety approvals do not apply to the Covered versions, only to the Open-Frame versions.

CFM40M SERIES

40 WATT, 2" X 3" OPEN FRAME

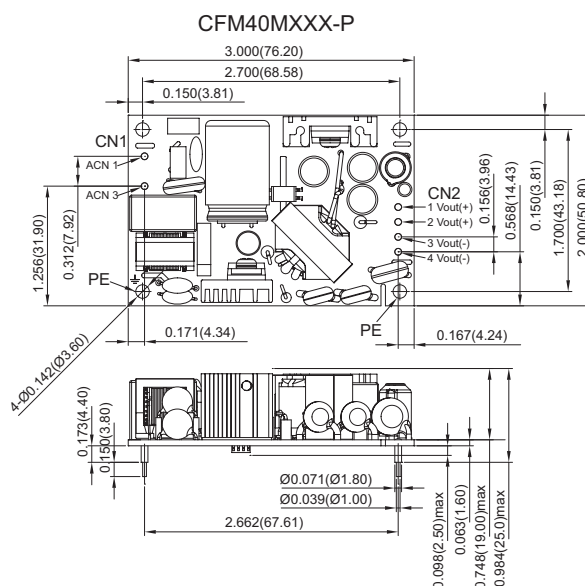
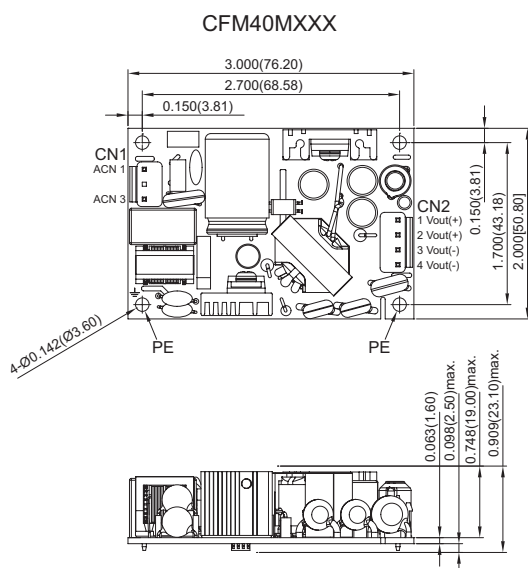
Features

- ◆ Universal Input Range 90-264VAC
- ◆ Medical and ITE Safety Approvals
- ◆ Efficiency to 88% Typical
- ◆ Continuous Short Circuit Protection
- ◆ EN55011 and EN55022 Class B
- ◆ No Load Power Consumption < 0.3W
- ◆ 2" x 3" Package
- ◆ 2 MOPP



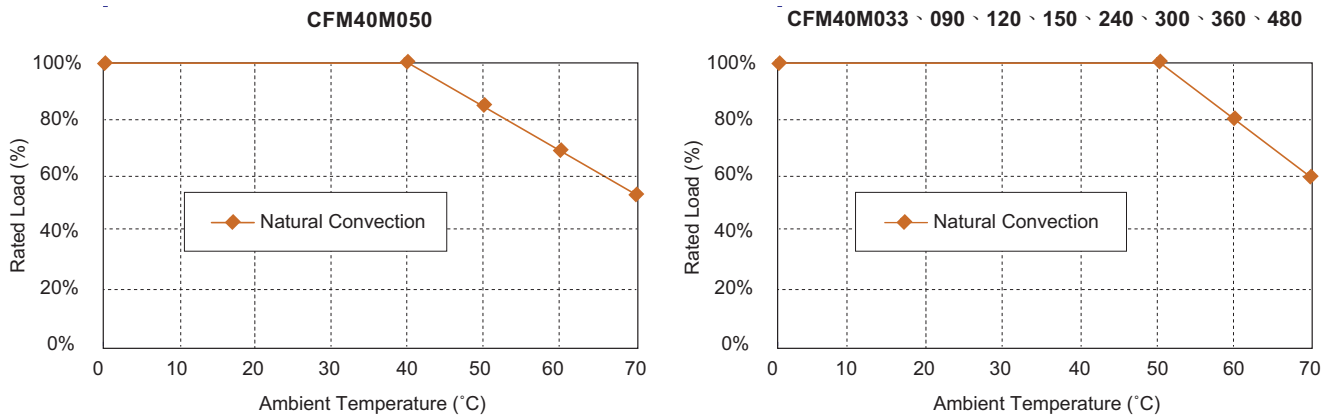
Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXX±0.02
Millimeters: X.XX±0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 2)	VOLTAGE ACCURACY (NOTE 1)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
CFM40M033	3.3 V	6 A	50 mV	±1%	±0.5%	±1%	76%
CFM40M050	5 V	6 A	1%	±1%	±0.5%	±1%	80%
CFM40M090	9 V	4.45 A	1%	±1%	±0.5%	±1%	84%
CFM40M120	12 V	3.34 A	1%	±1%	±0.5%	±1%	86%
CFM40M150	15 V	2.67 A	1%	±1%	±0.5%	±1%	87%
CFM40M240	24 V	1.67 A	1%	±1%	±0.5%	±1%	88%
CFM40M300	30 V	1.33 A	1%	±1%	±0.5%	±1%	88%
CFM40M360	36 V	1.11 A	1%	±1%	±0.5%	±1%	88%
CFM40M480	48 V	0.834 A	1%	±1%	±0.5%	±1%	88%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold start @25°C 60A max. @240Vac
Input Current	100Vac/1A max 240Vac/0.55A max.
Leakage Current	100uA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

Isolation	Input to output = 5,656VDC
Operating Temperature	0°C-70°C (see derating curve)
Storage Temperature	-20°C-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	3000m
Dimensions	3.00 x 2.00 x 0.91 inches (76.2 x 50.8 x 23.1 mm) CFM40XXX-P: 3.00 x 2.00 x 0.91 inches (76.2 x 50.8 x 23.1 mm)
Weight	90 g

SAFETY AND EMISSION

Emission and Immunity	EN55011, EN55022 Class B, EN55022, FCC CFR 47 Part 15,18 EN61204-3, EN61000-6-1, EN610006-3 EN60601-1-2, EN61000-3-2, EN61000-3-3 Class I, IEC60601-1:2005, EN60601-1:2006, UL ANSI/AAMI ES60601-1:2005, IEC60950-1, EN60950-1, UL60950-1
Safety	

NOTE

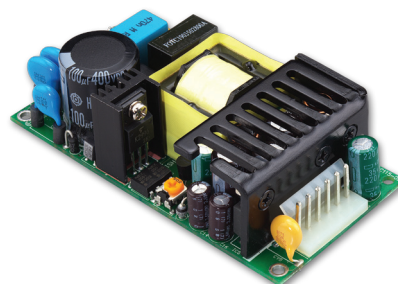
1. Voltage accuracy is set at full load.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measurement @20MHz BW.
3. Line regulation is measured from 100VAC to 240VAC with full load.
4. Load regulation is measured from 10% to 100% full load.
5. Typical efficiency at 230VAC and full load 25°C.
6. Standard input and output connectors (CN1 and CN2) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series or equivalent.

CFM40D, CFM40T SERIES

40 WATT, DUAL / TRIPLE OUTPUTS

Features

- ◆ Universal Input Range 90-264VAC
- ◆ 2" x 4" Size
- ◆ Industry Standard Pin Out
- ◆ Efficiency to 81%
- ◆ EN61204-3 Class B and CISPR/FCC Class B
- ◆ Short Circuit Protection



Mechanical Dimensions

All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02
Millimeters: X.XX=±0.5

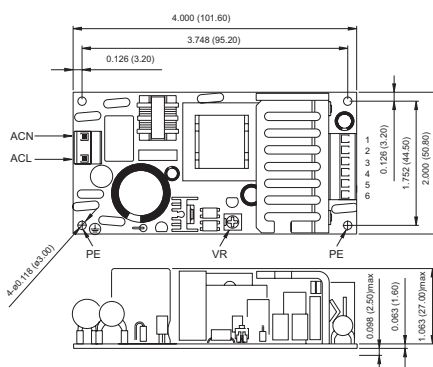
CN1

PIN CONNECTION	
Pin	Function
1	ACN
2	-
3	ACL

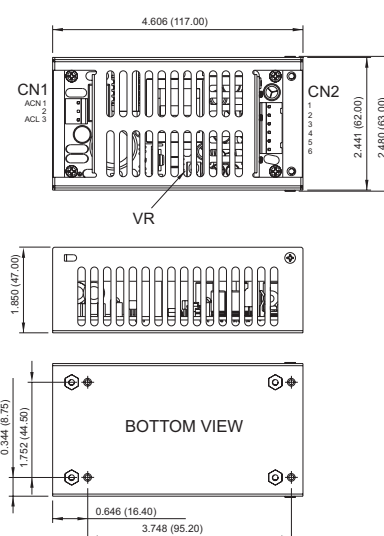
CN2

PIN CONNECTION	
Pin	Function
1	V2
2	V1
3	V1
4	GND
5	GND
6	V3

CFM40D / CFM40T Open Frame



CFM40D / CFM40T With Cover

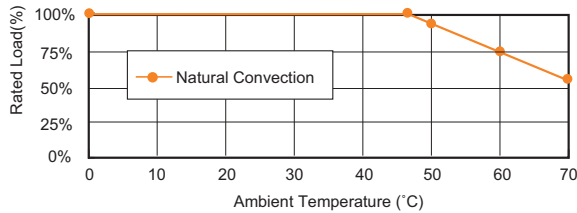


MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT			RIPPLE (mVp-p)	VOLTAGE ACCURACY	LINE REG	LOAD REG	O/P POWER MAX.	% EFF. (Typ.)
		MIN.	RATED	MAX.						
CFM40D-01	5V(V1)	0.4	3.2	5.0	50	±3%	±1%	±3%	40.0W	80%
	12V(V2)	0.2	2.0	2.5	120	±4%	±2%	±5%		
CFM40D-02	5V(V1)	0.4	3.2	5.0	50	±3%	±1%	±3%	40.0W	81%
	24V(V2)	0.2	1.0	1.5	240	±4%	±2%	±5%		
CFM40T-01	5V(V1)	0.4	3.0	5.0	50	±3%	±1%	±3%	40.5W	78%
	12V(V2)	0.2	2.0	2.5	120	±4%	±2%	±5%		
CFM40T-02	-5V(V3)	0	0.3	0.5	50	±3%	±1%	±1%	42.6W	78%
	5V(V1)	0.4	3.0	5.0	50	±3%	±1%	±3%		
CFM40T-03	12V(V2)	0.2	2.0	2.5	120	±4%	±2%	±5%	42.0W	78%
	-12V(V3)	0	0.3	0.5	120	±3%	±1%	±1%		
CFM40T-04	5V(V1)	0.4	3.0	5.0	50	±3%	±1%	±3%	42.6W	78%
	24V(V2)	0.2	1.0	1.5	240	±4%	±2%	±5%		
CFM40T-05	-12V(V3)	0	0.3	0.5	120	±3%	±1%	±1%	40.5W	78%
	5V(V1)	0.4	3.0	5.0	50	±3%	±1%	±3%		
CFM40T-06	24V(V2)	0.2	1.0	1.5	240	±4%	±2%	±5%	42.6W	78%
	12V(V3)	0	0.3	0.5	120	±3%	±1%	±1%		
CFM40T-07	3.3V(V1)	0.4	5.0	7.0	100	±3%	±1%	±3%	30.0W	71%
	5V(V2)	0.2	2.0	3.5	100	±4%	±3%	±5%		
	-12V(V3)	0	0.3	0.5	120	±3%	±1%	±1%		

Derating Curve

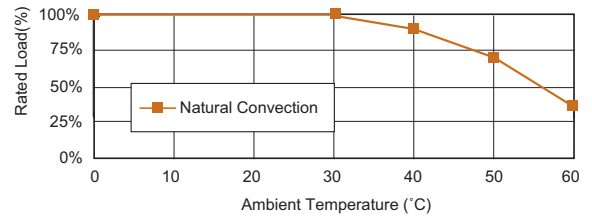
CFM40D-XX / CFM40T-XX (Open Frame)

CFM40D-01, 40D-02, 40T-01, 40T-02, 40T-03, 40T-04, 40T-05,
40T-06, 40T-07

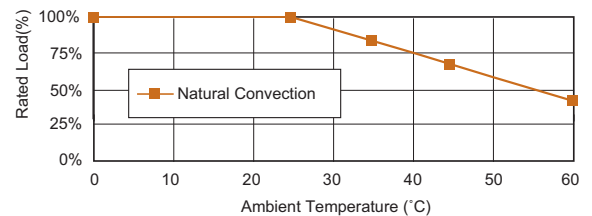


CFM40D-XX-CA / CFM40T-XX-CA (With Cover)

CFM40D-01, 40D-02, 40T-01, 40T-02, 40T-03, 40T-04, 40T-05, 40T-06



CFM40T-07



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold Start@25°C 60A max. @240Vac
Input Current	1A max. (RMS) @115Vac
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Rated Power for Convection Cooling	40W (CFM40T-07, 30W)
Maximum Power with 30 CFM Forced Air	50W (CFM40T-07, 40W)
Hold-up Time	20ms typ. @115Vac
Short Circuit	Hiccup Mode (Auto Recover)
Over Voltage Protection CFM40D/T	6V on V1(5V) 16V/20V/30V on V2 (12V/15V/24V)
Over Voltage Protection CFM40T-07	6V on V1 (3.3V), 9V on V2 (5V)
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	0-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	62.5KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	2000m
Dimensions	

	Open Frame	4.000 x 2.000 x 1.063 inches (101.60 x 50.80 x 27.00 mm)
	With Cover	4.606 x 2.480 x 1.850 inches (117.00 x 63.00 x 47.00 mm)
Weight	Open Frame	180 g (0.40 Pounds)
	With Cover	220 g (0.49 Pounds)

NOTE

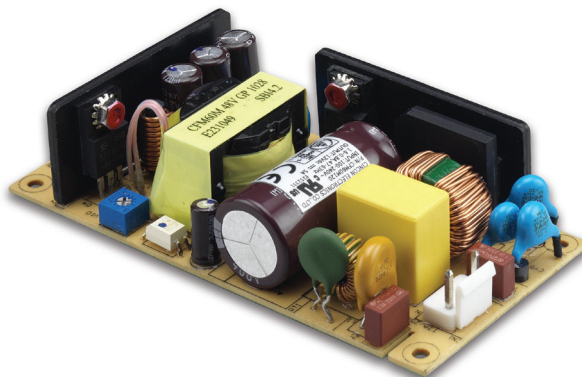
- Voltage accuracy is set at full load and 25°C Ta.
- Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
- Line regulation is measured from 100Vac to 240Vac with full load.
- Load regulation is measured from 60% to 100% full load and from 60% to 20% full load (60% ±40% full load)
- Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.
- Output connector mates with Molex housing 09-50-3061 and Molex 2878 series crimp terminal.
- Safety approvals do not apply to the covered versions, only to the open-frame versions.

CFM60M SERIES

60 WATT, 2" X 4" OPEN FRAME

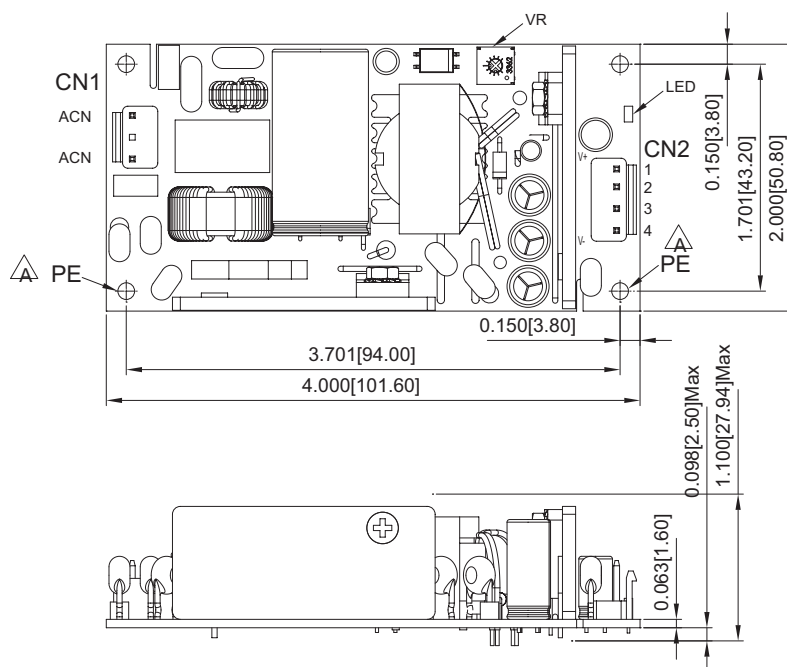
Features

- ◆ Universal Input Range 90-264VAC
- ◆ Medical and ITE Safety Approvals
- ◆ Efficiency to 90%
- ◆ Continuous Short Circuit Protection
- ◆ EN55011 and EN55022 Class B
- ◆ 2 MOPP
- ◆ No Load Power Consumption < 0.5W
- ◆ 2" x 4" Package



Mechanical Dimensions

All Dimensions are in Inches (mm)
Tolerance Inches: X.XXX±0.02
Millimeters: X.XX±0.5

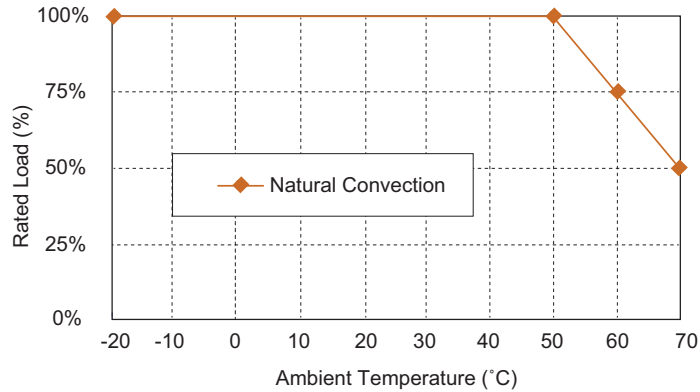


Input Connector CN1	
Pin 1	Line
Pin 2	Not Fitted
Pin 3	Neutral

Output Connector CN2	
Pin 1	+ Vout
Pin 2	+ Vout
Pin 3	- Vout
Pin 4	- Vout

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 2)	VOLTAGE ACCURACY (NOTE 1)	VOLTAGE ADJ. RANGE	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
CFM60M050	5 V	8 A	1%	±1%	4.75-5.25	±0.5%	±1%	82%
CFM60M120	12 V	5 A	1%	±1%	11.4-12.6	±0.5%	±1%	87%
CFM60M150	15 V	4 A	1%	±1%	14.25-15.75	±0.5%	±1%	88%
CFM60M240	24 V	2.5 A	1%	±1%	22.8-25.2	±0.5%	±1%	89%
CFM60M480	48 V	1.25 A	1%	±1%	45.6-50.4	±0.5%	±1%	90%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold Start @25°C 75A max. @240Vac
Input Current	100Vac/1.6A max., 240Vac/0.8Amax.
Leakage Current	100uA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

Isolation	Input to output = 4000VAC (5,656VDC)
Operating Temperature	-20-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	3000m
Dimensions	4.000 x 2.000 x 1.100 inches (101.6 x 50.8 x 27.94 mm)
Weight	125 g

SAFETY AND EMISSION

Emission and Immunity

EN55011, EN55022 Class B,
EN55024, FCC CFR 47 Part 15, 18
EN61204-3, EN61000-6-1,
EN61000-6-3
EN60601-1-2, EN61000-3-2,
EN61000-3-3
Class I, IEC60601-1:2005,
EN60601-1:2006,
UL ANSI/AAMI ES60601-1:2005,
IEC60950-1, EN60950-1,
UL60950-1

Safety (Medical 3rd)

NOTE

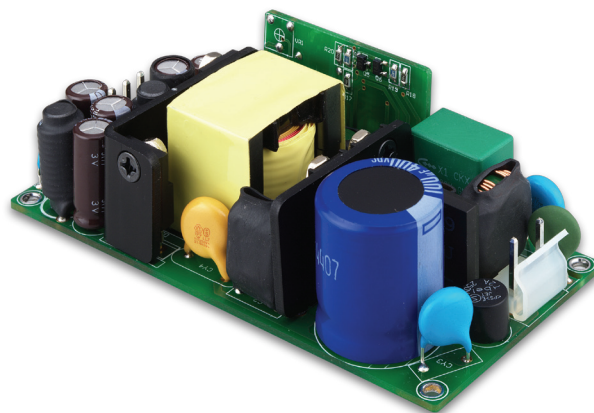
1. Voltage accuracy is set at full load and 25°C Ta.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from 100VAC to 240VAC with full load.
4. Load regulation is measured from 10% to 100% full load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors (CN1 and CN2) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series and JST SVH-21/41T-P1.1 series crimp terminal or equivalent.
7. Optional input and output connectors (CN1 and CN2) wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series and MOLEX 5194 series crimp terminal or equivalent.

CFM60T SERIES

60 WATT, TRIPLE OUTPUTS

Features

- ◆ Universal Input: 90-264VAC
- ◆ 2" x 4" Size
- ◆ Industry-Standard Pin Out
- ◆ Efficiency to 83%
- ◆ EN61204-3 Class B and CISPR/FCC Class B
- ◆ Short Circuit Protection

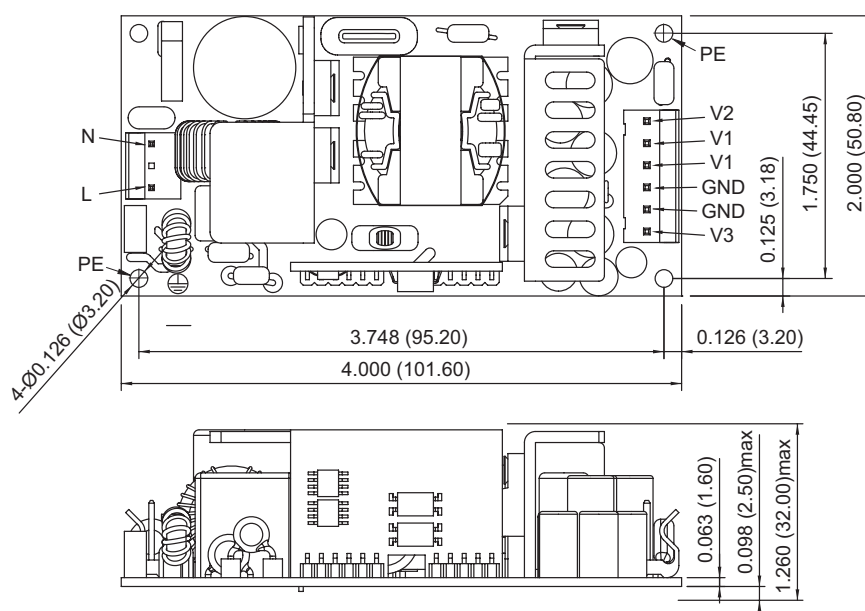


Mechanical Dimensions

All Dimensions in Inches (mm)

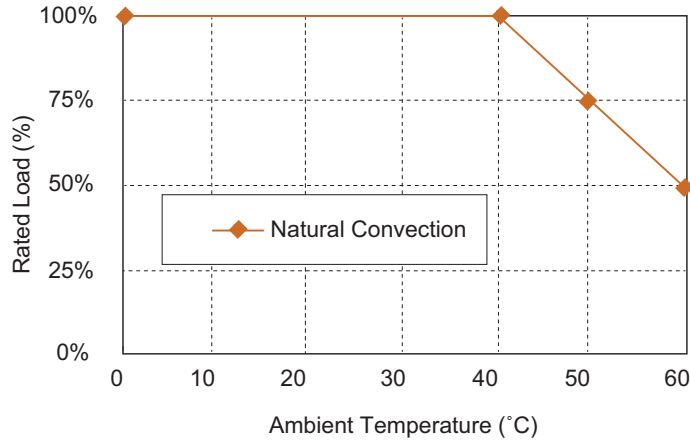
Tolerance Inches: X.XXX \pm 0.02

Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT			RIPPLE (mVp-p)	VOLTAGE ACCURACY	LINE REG.	LOAD REG.	O/P POWER MAX.	% EFF. (Typ.)
		MIN.	RATED	MAX.						
CFM60T-01	V1=5 V	0 A	4.0 A	5.0 A	50 mV	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	62W	83%
	V2=12 V	0 A	3.0 A	3.7 A	120 mV	$\pm 5\%$	$\pm 1\%$	$\pm 3\%$		
	V3=-12 V	0 A	0.5 A	0.65 A	120 mV	$\pm 5\%$	$\pm 1\%$	$\pm 5\%$		
CFM60T-02	V1=5 V	0 A	4.0 A	5.0 A	50 mV	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	62W	83%
	V2=15 V	0 A	2.5 A	3.1 A	150 mV	$\pm 4\%$	$\pm 1\%$	$\pm 3\%$		
	V3=-15 V	0 A	0.3 A	0.5 A	150 mV	$\pm 5\%$	$\pm 1\%$	$\pm 5\%$		
CFM60T-03	V1=5 V	0 A	4.0 A	5.0 A	50 mV	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	62W	83%
	V2=24 V	0 A	1.5 A	1.8 A	240 mV	$\pm 3\%$	$\pm 1\%$	$\pm 3\%$		
	V3=-12 V	0 A	0.5 A	0.6 A	120 mV	$\pm 5\%$	$\pm 1\%$	$\pm 5\%$		
CFM60T-04	V1=3.3 V	0 A	6.0 A	7.5 A	50 mV	$\pm 4\%$	$\pm 1\%$	$\pm 5\%$	40.8W	78%
	V2=5 V	0 A	3.0 A	3.7 A	50 mV	$\pm 5\%$	$\pm 1\%$	$\pm 4\%$		
	V3=-12 V	0 A	0.5 A	0.65 A	120 mV	$\pm 5\%$	$\pm 2\%$	$\pm 5\%$		

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	50A max. @240Vac
Leakage Current	3.5mA max.
Cold Start@25°C	

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit	Hiccup Mode (Auto Recover)
Over Voltage Protection	6V/7V on V1(3.3V/5V) 15V/18V/28V on V2 (12V/15V/24V)
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-3-2, EN61000-3-3, EN55024
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	0-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
Altitude	2000m
Dimensions	4.000 x 2.000 x 1.260 inches (101.60 x 50.80 x 32.00 mm)
Weight	170 g (0.37 Pounds)

NOTE

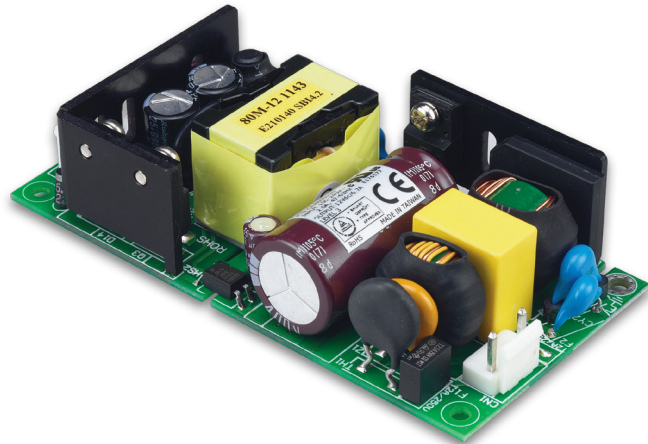
1. Voltage accuracy is set of 60% rated load.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from 103VAC-127VAC & 207VAC-253VAC with rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at other outputs set to 60% rated load.
5. Input connector mates with molex housing 09-50-3031 and molex 2878 series crimp terminal.
6. Output connector mates with molex housing 09-50-3061 and molex 2878 series crimp terminal.

CFM80S SERIES

80 WATT, 2" X 4" OPEN FRAME

Features

- ◆ Universal Input Range 90-264VAC
- ◆ Continuous Short Circuit Protection
- ◆ Efficiency to 90% Typical
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ EN61000-3-2 Class A
- ◆ No Load Power Consumption < 0.5W

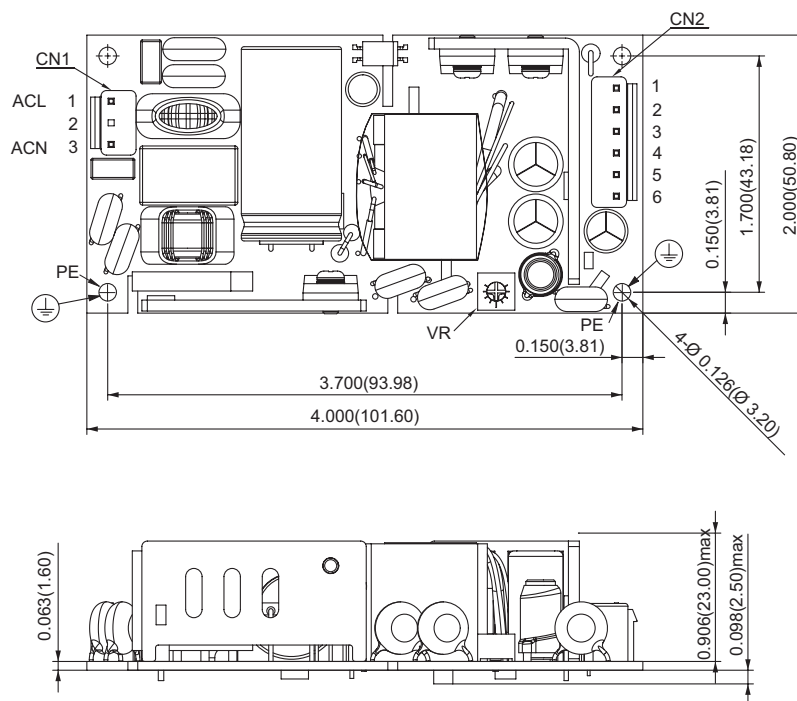


Mechanical Dimensions

All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02

Millimeters: X.XX=±0.5



CN1:

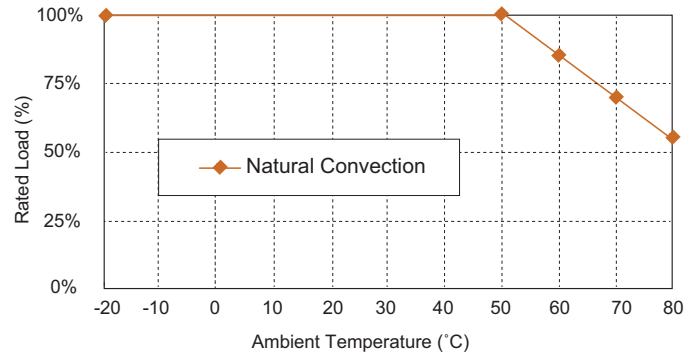
PIN CONNECTION	
Pin	Function
1	Line
2	Not Fitted
3	Neutral

CN2:

PIN CONNECTION	
Pin	Function
1	Vout(+)
2	Vout(+)
3	Vout(+)
4	Vout(-)
5	Vout(-)
6	Vout(-)

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 2	VOLTAGE ACCURACY	VOLTAGE ADJ. RANGE NOTE 1	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	% EFF (Typ.) NOTE 5
CFM80S050	5 V	12 A	1%	±1%	4.75-5.25 V	±0.5%	±1%	86%
CFM80S120	12 V	6.7 A	1%	±1%	11.4-12.6 V	±0.5%	±1%	89%
CFM80S150	15 V	5.36 A	1%	±1%	14.25-15.75 V	±0.5%	±1%	90%
CFM80S240	24 V	3.35 A	1%	±1%	22.8-25.2 V	±0.5%	±1%	90%
CFM80S480	48 V	1.67 A	1%	±1%	45.6-50.4 V	±0.5%	±1%	90%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold start @25°C 100A max. @240Vac
Input Current	100Vac/1.5A max., 240Vac/0.8A max.
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	12mS typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 CLASS B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	-20-80°C (see derating curve)
Storage Temperature	-20°C-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	100KHz Typical
Dimensions	4.000 x 2.000 x 1.07 inches (101.6 x 50.8 x 27.1 mm)
Weight	155 g

NOTE

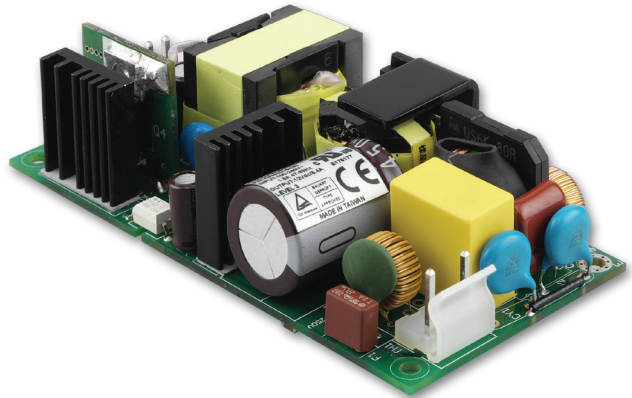
1. Voltage accuracy is set at full load.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measurement @20MHz BW.
3. Line regulation is measured from 110VAC to 230VAC with full load.
4. Load regulation is measured from 10% to 100% full load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors (CN1 and CN2) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series and JST SVH-21/41T-P1.1 series crimp terminal or equivalent.

CFM101S SERIES

100 WATT, 2" X 4" OPEN FRAME

Features

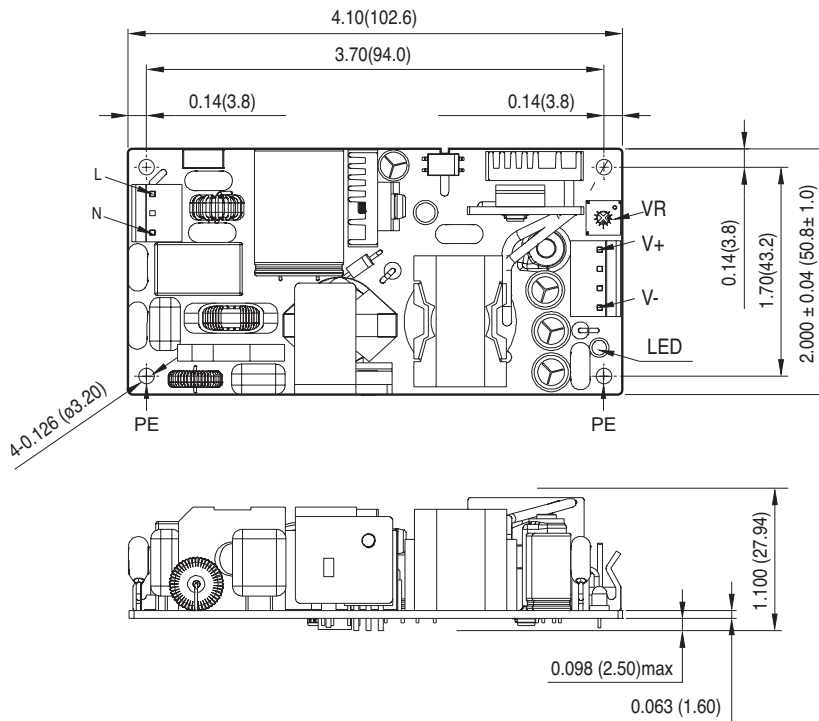
- ◆ Universal Input Range 90-264VAC
- ◆ Active PFC Function
- ◆ Efficiency at 89% Typical
- ◆ Continuous Short Circuit Protection
- ◆ EN55022 Class B and CISPR/FCC Class B



Mechanical Dimensions

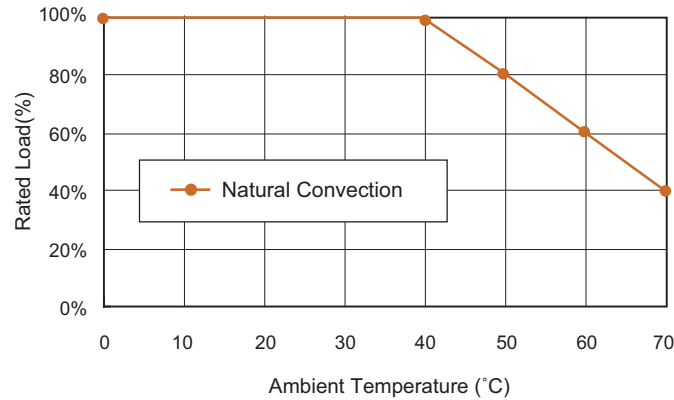
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02
Millimeters: X.XX=±0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	VOLTAGE ADJ. RANGE	LOAD REGULATION (NOTE 4)	% EFF (Typ.) (NOTE 5)
CFM101S120	12 V	8.4 A	1%	±1%	±0.5%	11.4-12.6 V	±1%	87%
CFM101S150	15 V	6.7 A	1%	±1%	±0.5%	14.25-15.75 V	±1%	87%
CFM101S200	20 V	5.0 A	1%	±1%	±0.5%	19-21 V	±1%	88%
CFM101S240	24 V	4.2 A	1%	±1%	±0.5%	22.8-25.2 V	±1%	88%
CFM101S480	48 V	2.1 A	1%	±1%	±0.5%	45.6-50.4 V	±1%	89%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold Start @25°C 90A max. @240Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10mS typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B FCC Part 15 Subpart B Class B, EN55024, EN61204-3, EN61000-6-3, EN61000-6-1, EN61000-3-2, EN61000-3-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	0-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	100KHz Typical
MTBF MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	2000m
Dimensions	102.6 x 50.8 x 27.94 mm (4.100 x 2.000 x 1.100 inches)
Weight	150 g

NOTE

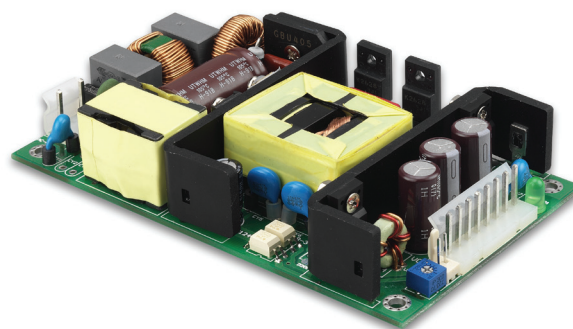
1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measurement @20MHz BW.
2. Voltage accuracy is set at 100% full load.
3. Line regulation is measured from 110VAC to 230VAC with full load.
4. Load regulation is measured from 10% to 100% full load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Input connector mates with molex housing 09-50-3031 and molex 2878 series crimp terminal.
7. Output connector mates with molex housing 09-50-3041 and molex 2878 series crimp terminal.

CFM100M SERIES

100 WATT, LOW PROFILE 1.05"

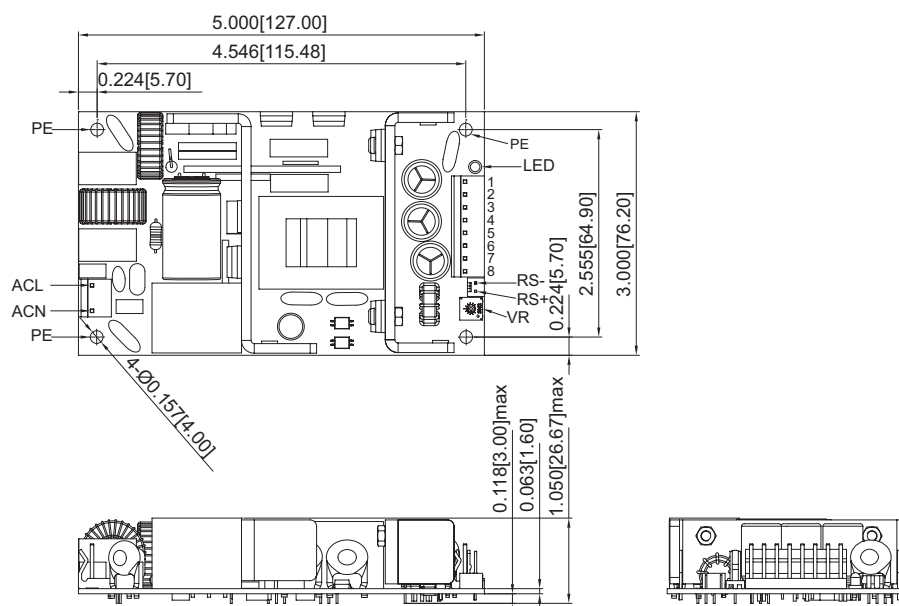
Features

- ◆ Universal Input Range 90-264VAC
- ◆ Medical and ITE Safety Approvals
- ◆ 3" x 5" Package
- ◆ Low Profile 1.05"
- ◆ Industry Standard Pin Out
- ◆ Active PFC Meets EN61000-3-2
- ◆ High Efficiency up to 92%
- ◆ CISPR/FCC Class B
- ◆ Remote Voltage Sense
- ◆ Over Voltage Protection
- ◆ Continuous Short Circuit Protection
- ◆ No Load Power Consumption < 0.5W
- ◆ 2 MOPP



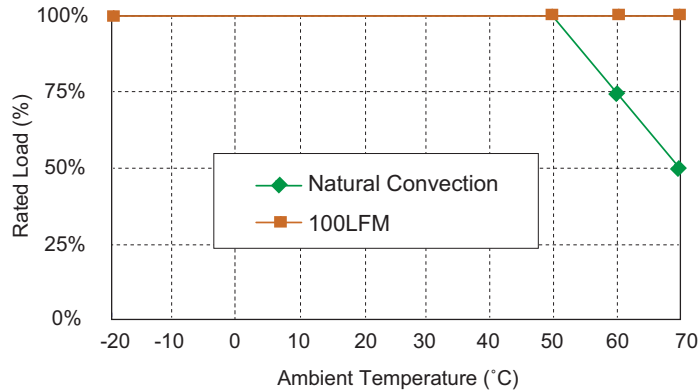
Mechanical Dimensions

All Dimensions are in Inches (mm)
Tolerance Inches: X.XXX±0.02
Millimeters: X.XX±0.5



MODEL NUMBER	OUTPUT VOLTAGE	MAX. LOAD	MIN. LOAD	RIPPLE & NOISE (NOTE 1)	VOLTAGE ADJ. RANGE	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
CFM100M050	5 V	20 A	0 A	2%	4.75-5.25	±1%	±0.5%	±1%	83%
CFM100M075	7.5 V	13.4 A	0 A	2%	7.13-7.88	±1%	±0.5%	±1%	87%
CFM100M090	9 V	11.2 A	0 A	1%	8.55-9.45	±1%	±0.5%	±1%	89%
CFM100M120	12 V	8.4 A	0 A	1%	11.4-12.6	±1%	±0.5%	±1%	89%
CFM100M150	15 V	6.7 A	0 A	1%	14.25-15.75	±1%	±0.5%	±1%	90%
CFM100M180	18 V	5.6 A	0 A	1%	17.1-18.9	±1%	±0.5%	±1%	90%
CFM100M240	24 V	4.2 A	0 A	1%	22.8-25.2	±1%	±0.5%	±1%	91%
CFM100M280	28 V	3.6 A	0 A	1%	26.6-29.4	±1%	±0.5%	±1%	90%
CFM100M360	36 V	2.8 A	0 A	1%	34.2-37.8	±1%	±0.5%	±1%	91%
CFM100M480	48 V	2.1 A	0 A	1%	45.6-50.4	±1%	±0.5%	±1%	92%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	80A max. @240Vac
Leakage Current	300uA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ.
Short Circuit Protection	Hiccup mode (Auto Recovery)
Adjustment Range on Vout	±5%
Over Voltage Protection	Recycle AC input to restart
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

Isolation	Input to output = 5,656VDC
Operating Temperature	-20°C-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	90KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	140Khrs min.
Altitude	3000m
Dimensions	5.000 x 3.000 x 1.050 inches (127.00 x 76.20 x 26.67 mm)
Weight	270 g (0.6 Pounds)

SAFETY AND EMISSION

Emission and Immunity

EN55024, EN61000-6-1, EN61204-3
EN60601-1-2, EN61000-3-2
Class A, B, C, D, EN61000-3-3
EN55011 Class B, EN55022 Class B,
FCC Part15 Class B
Class I, IEC60601-1:2005,
EN60601-1:2006,
ANSI/AAMI ES60601-1:2005
IEC60950-1, EN60950-1, UL60950-1

Safety

NOTE

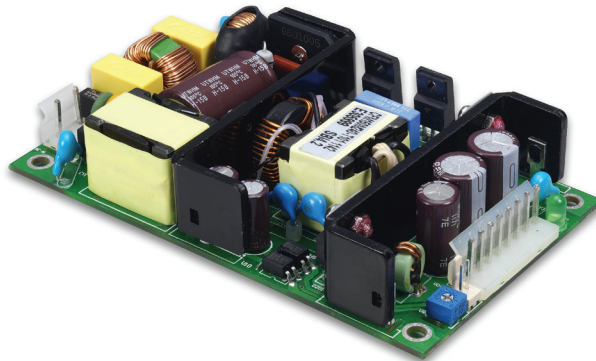
- CFM100M050: Add a 0.1μF ceramic capacitor and 220μF E.L. capacitor to output for ripple & noise measuring @20MHz BW. other model: add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
- Voltage accuracy is set at 100% rated load and 25°C Ta.
- Line regulation is measured from high line to low line with full load.
- Load regulation is measured from full to 10% load.
- Typical efficiency at 230VAC and full load at 25°C.
- Standard input and output connectors wafer with LONG CHU P3060 series and mate with molex housing 09-50-1031 and 09-50-1081 or equivalent.
- DC output pin 1, 2, 3, 4: Vout (-), DC output pin 5, 6, 7, 8: Vout (+).

CFM150M SERIES

150 WATT, LOW PROFILE 1.05"

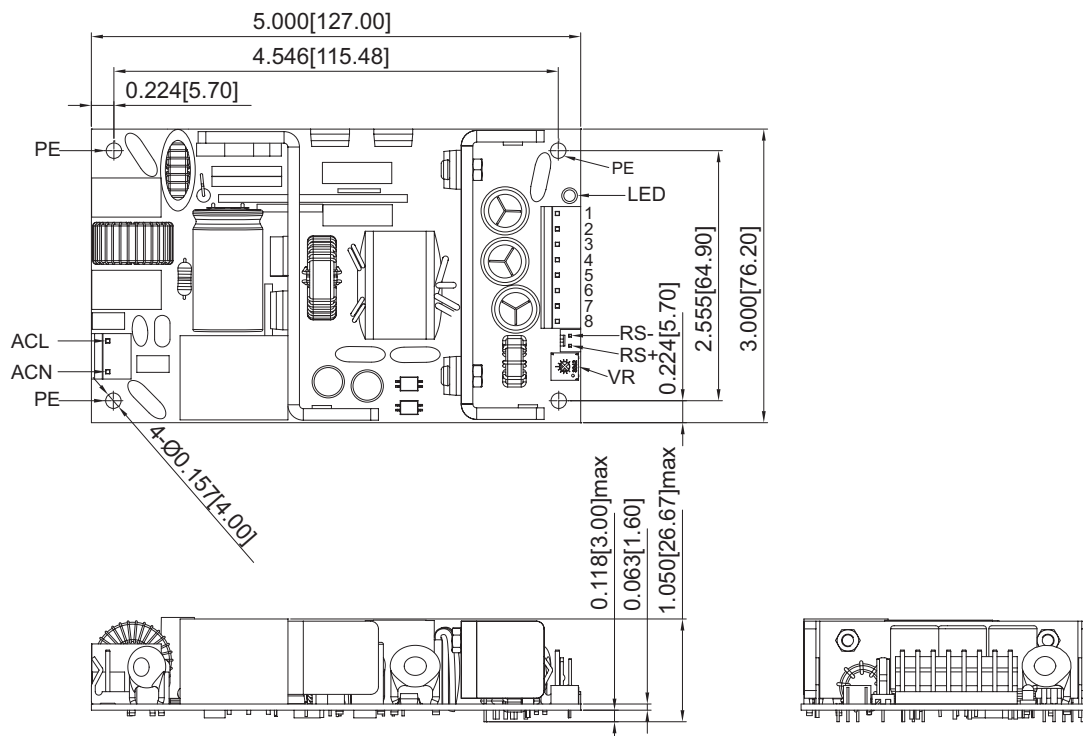
Features

- ◆ Universal Input Range 90-264VAC
- ◆ Medical and ITE Safety Approvals
- ◆ 3" x 5" Package
- ◆ Low Profile 1.05"
- ◆ Industry Standard Pin Out
- ◆ Active PFC Meets EN61000-3-2
- ◆ High Efficiency up to 93%
- ◆ CISPR/FCC Class B
- ◆ Remote Voltage Sense
- ◆ Over Voltage Protection
- ◆ Continuous Short Circuit Protection
- ◆ No Load Power Consumption < 0.5W
- ◆ 2 MOPP



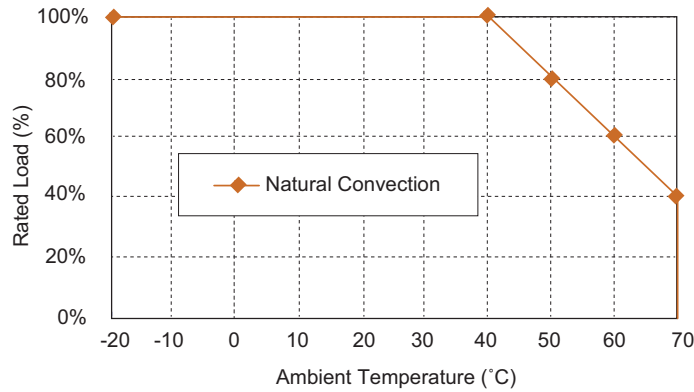
Mechanical Dimensions

All Dimensions are in Inches (mm)
 Tolerance Inches: X.XXX±0.02
 Millimeters: X.XX±0.5



MODEL NUMBER	OUTPUT VOLTAGE	MAX. LOAD	MIN. LOAD	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
CFM150M120	12 V	12.5 A	0 A	1%	±1%	±0.5%	±1%	90%
CFM150M240	24 V	6.25 A	0 A	1%	±1%	±0.5%	±1%	92%
CFM150M360	36 V	4.17 A	0 A	1%	±1%	±0.5%	±1%	92%
CFM150M480	48 V	3.13 A	0 A	1%	±1%	±0.5%	±1%	93%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	110A max. @240Vac
Leakage Current	300uA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ.
Short Circuit Protection	Hiccup mode (Auto Recovery)
Adjustment Range on Vout	±5%
Over Voltage Protection	Recycle AC input to restart
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

Isolation	Input to output = 5,656VDC
Operating Temperature	-20°C-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	90KHz Typical.
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	150Khrs min.
Altitude	3000m
Dimensions	5.000 x 3.000 x 1.050 inches (127.00 x 76.20 x 26.67 mm)
Weight	270 g (0.6 Pounds)

SAFETY AND EMISSION

Emission and Immunity

EN55011 Class B, FCC Part 15 Class B
EN60601-1-2, EN61000-3-2
Class A, B, C, D, EN61000-3-3
Class I, IEC60601-1:2005,
EN60601-1:2006,
ANSI/AAMI ES60601-1:2005
IEC60950-1, EN60950-1, UL60950-1

Safety

NOTE

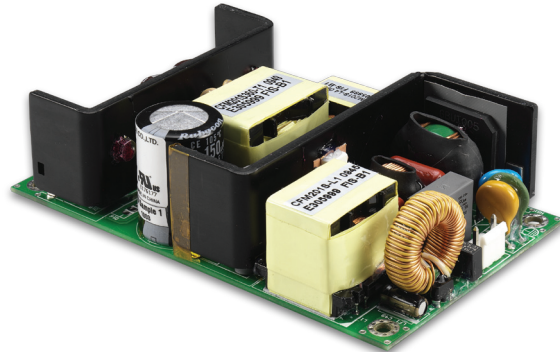
1. Add a 0.1μF ceramic capacitor and 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 100% rated load and 25°C Ta.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from full to 10% load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors wafer with LONG CHU P3060 series and mate with molex housing 09-50-1031 and 09-50-1081 or equivalent.
7. DC output pin 1, 2, 3, 4: Vout (-), DC output pin 5, 6, 7, 8: Vout (+).

CFM201S SERIES

200 WATT, 3" X 5" OPEN FRAME

Features

- ◆ Universal Input Range 90-264VAC
- ◆ Active PFC Meets EN61000-3-2
- ◆ Conductive EMI Meets CISPR/FCC Class B
- ◆ High Efficiency up to 92%
- ◆ Remote Voltage Sense
- ◆ Over Temperature Protection

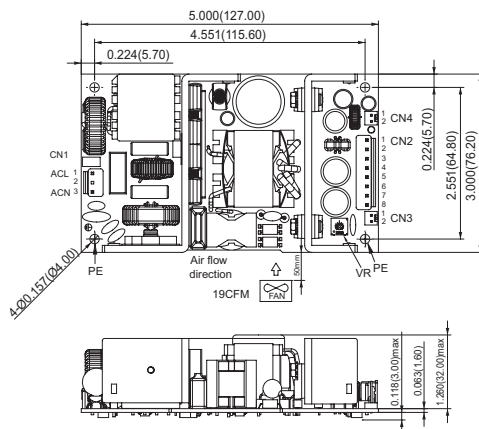


Mechanical Dimensions

All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5

Open Frame



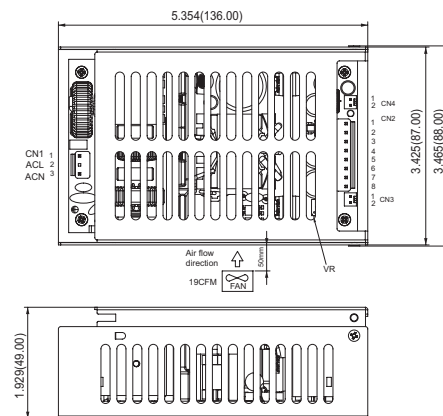
CN1:

PIN CONNECTION	
Pin	Function
1	ACL
2	-
3	ACN

CN2:

PIN CONNECTION			
Pin	Function	Pin	Function
1	Vout(+)	5	Vout(-)
2	Vout(+)	6	Vout(-)
3	Vout(+)	7	Vout(-)
4	Vout(+)	8	Vout(-)

With Cover



CN3:

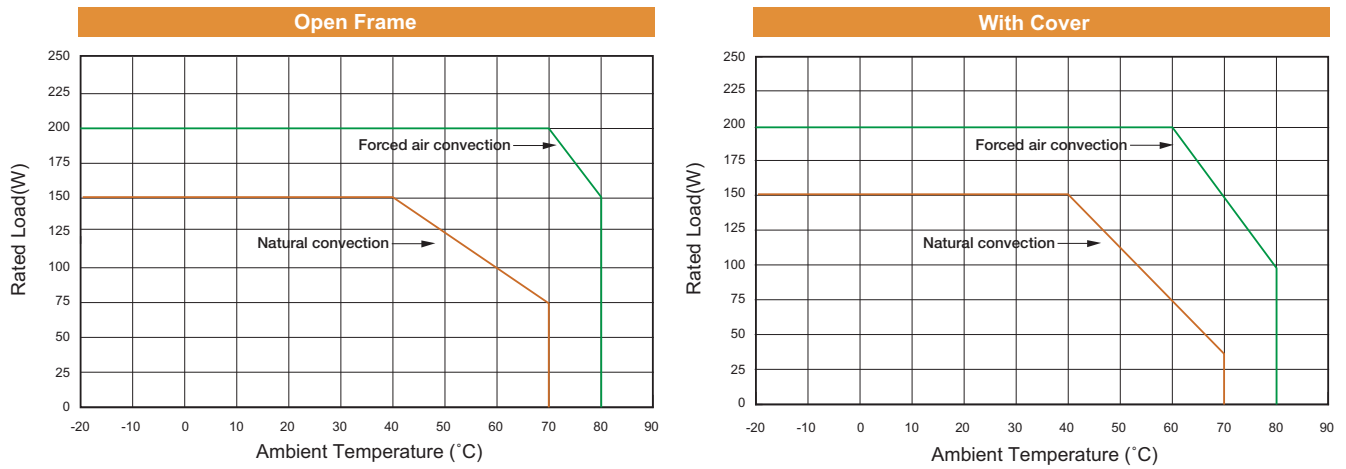
PIN CONNECTION	
Pin	Function
1	Rs+
2	Rs-

CN4:

PIN CONNECTION	
Pin	Function
1	FAN V+
2	FAN V-

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT RATED 1	OUTPUT CURRENT RATED 2	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	VOLTAGE ADJ. (RANGE)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
Main Output Voltage									
CFM201S120	+12 V	16.67 A	12.5 A	120 mV	$\pm 1\%$	$\pm 0.5\%$	11.4-12.6	$\pm 1\%$	89%
CFM201S240	+24 V	8.34 A	6.25 A	150 mV	$\pm 1\%$	$\pm 0.5\%$	22.8-25.2	$\pm 1\%$	90%
CFM201S360	+36 V	5.56 A	4.17 A	150 mV	$\pm 1\%$	$\pm 0.5\%$	34.2-37.8	$\pm 1\%$	91%
CFM201S480	+48 V	4.17 A	3.13 A	150 mV	$\pm 1\%$	$\pm 0.5\%$	45.6-50.4	$\pm 1\%$	92%
Fan Output Voltage									
All	+12 V	0.5 A		120 mV	$\pm 3\%$	$\pm 1\%$	--	$\pm 5\%$	--

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Input current	100Vac/3A max., 240Vac/1.5A max.
Frequency	47 to 63Hz
Inrush Current	Cold Start@25°C 100A max. @240Vac
EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Isolation	Input to Output = 3000VAC (4,242VDC)
Hold-up Time	10ms typ@115Vac
Over Voltage Protection	Hiccup mode (Auto Recovery)
Short Circuit Protection	Hiccup mode (Auto Recovery)
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61000-6-1, EN61204-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1 2 nd edition

GENERAL SPECIFICATIONS

Operating Temperature	-20-80°C (see derating curve)
Storage Temperature	-20-85°C
Over Temperature Protection	Auto Recovery
Humidity	93% RH max. non-condensing
Altitude	2000m
Cooling	Natural convection for 150W and forced air convection (19CFM FAN) for 200W
Switching Frequency	80-100KHz typ
Dimensions	
Open frame	5.000 x 3.000 x 1.441 inches (127.00 x 76.20 x 36.60mm)
With Cover	5.354 x 3.465 x 1.929 inches (136.00 x 88.00 x 49.00 mm)
Weight	Open frame 400 g With Cover 500 g

NOTE

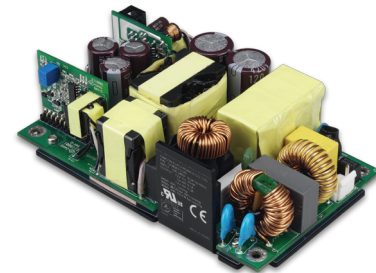
1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW
2. Voltage accuracy is set at 60% rated load and 25°C.Ta.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured from full to 10% load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors (CN1 and CN2) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series or equivalent.
7. Optional input and output connectors (CN1 and CN2) wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series or equivalent.
8. Output connector CN3 (Remote voltage sense) mates with molex housing 5051 or equivalent.
9. Output connector CN4 (Fan output) mates with MOLEX housing 5051 or equivalent.
10. For covered versions add "C" to model number or order part no.
For example CFM201S120-C, safety approvals do not the covered assembly, only to the open-frame power supply.

CFM361S SERIES

360 WATT, 3" X 5" WITH PFC

Features

- ◆ Universal Input Range 90-264VAC
- ◆ 300W with Natural Convection @ 220Vac/CFM361S
- ◆ 360W with Natural Convection @ 220Vac/CFM361SXXXC
- ◆ 360W with Baseplate Cooled -40-85°C/CFM361SXXXC
- ◆ EN60950 and EN55022 Class B
- ◆ Active PFC Meets EN61000-3-2
- ◆ High Efficiency up to 93.5% Typical
- ◆ High Power Density up to 15W/inch³ /CFM361S
- ◆ Remote Voltage Sense
- ◆ PS On/Off Remote Control
- ◆ +5V Stand-by Output Power
- ◆ 12V Fan Output
- ◆ Structure Patented



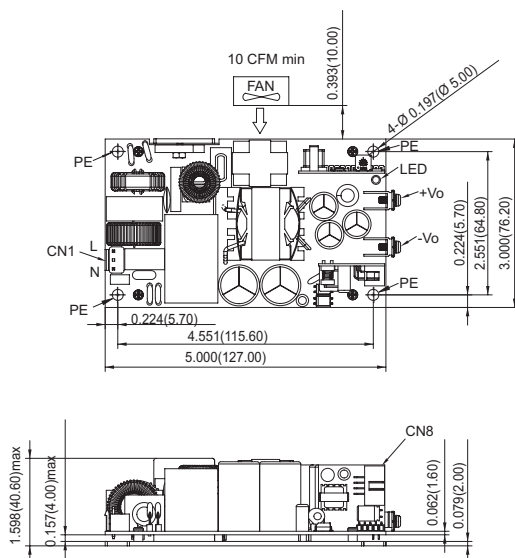
Mechanical Dimensions

All Dimensions in Inches (mm)

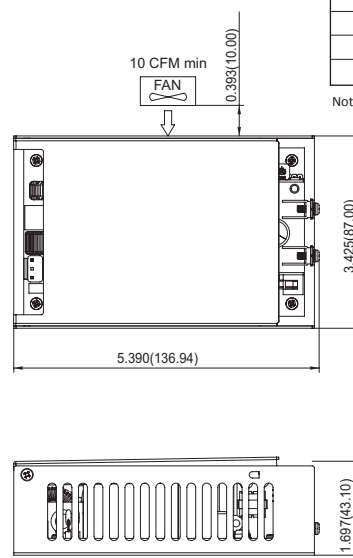
Tolerance Inches: X.XXX±0.02

Millimeters: X.XX±0.5

CFM361SXXX (Open Frame)



CFM361SXXXC (With Cover)



CN8:

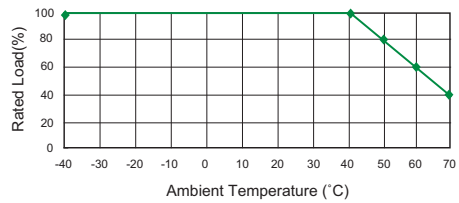
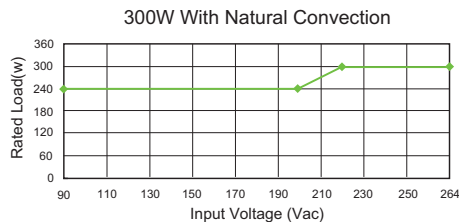
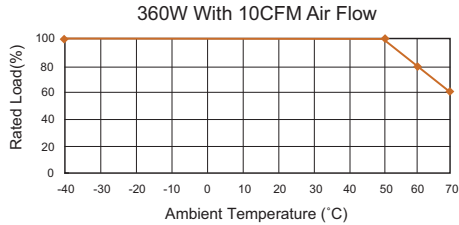
PIN CONNECTION			
Pin	Function	Pin	Function
1	+SENSE	8	-SENSE
2	GND	7	ENABLE
3	GND	6	+5VBS
4	FAN Output-	5	FAN Output+

Note: Pull down Enable to activate the PSU

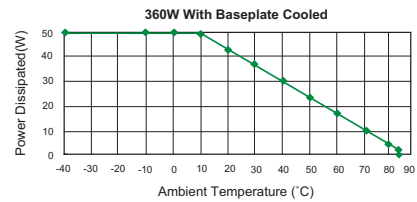
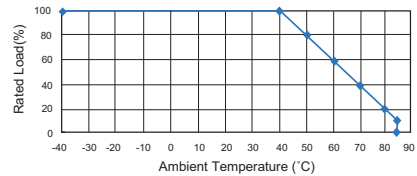
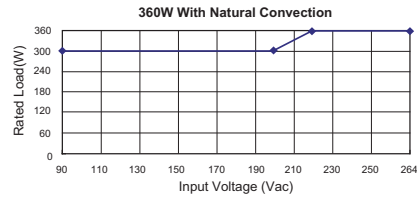
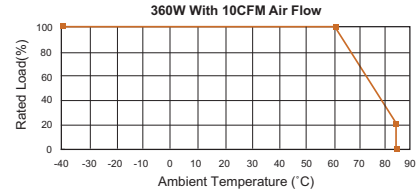
MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ADJ. RANGE (NOTE 2)	VOLTAGE ACCURACY (NOTE 3)	LINE REGULATION (RANGE)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
Main Output Voltage								
CFM361S120	+12 V	29.6 A	120 mVp-p	11.4-12.6V	±1.0%	±0.5%	±1%	92.5%
CFM361S240	+24 V	14.8 A	150 mVp-p	22.8-25.2V	±1.0%	±0.5%	±1%	93.5%
CFM361S480	+48 V	7.4 A	150 mVp-p	45.6-50.4V	±1.0%	±0.5%	±1%	93.5%
Stand-by Output Voltage								
All	+5.0 V	0.5	----		----	----	----	
Fan Output Voltage								
All	+12.0 V	0.3	----		----	----	----	

Derating Curve

CFM361SXXX (Open Frame)



CFM361SXXXC (With Cover)



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	50A max. @240Vac
Leakage Current @ 264Vac	3.5mA max.

OUTPUT SPECIFICATIONS

Total Rated Output Power	360W
Remote Voltage Sense	Compensates for wire Voltage drop
Adjustment Range on Vout	±5%
Hold-up Time	12ms typ.
Over Voltage Protection	Recycle AC input to restart
Short Circuit Protection	Hiccup mode(Auto Recovery)
Over Temperature Protection	Auto Recovery
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61000-6-1, EN61204-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	see derating curve
Storage Temperature	-40-85°C
Humidity	93% RH max. Non condensing
Switching Frequency	55KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	100Khrs min.
Altitude	2000m
Dimensions:	
Open frame versions	5.000 x 3.000 x 1.598 inches (127.00 x 76.20 x 40.60 mm)
Covered versions	5.391 x 3.425 x 1.697 inches (136.94 x 87.00 x 43.10 mm)
Weight:	
Open frame versions	470g (1.04 Pounds)
Covered versions	550g (1.21 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 47μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 60% rated load and 25°C Ta.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured at 60%±40% rated.
5. Typical efficiency at 230VAC and full Load at 25°C.
6. Power dissipation (Pd): $P_d = P_i - P_o = P_o(1-\eta)/\eta$
7. Input connectors (CN1) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series or equivalent.
Output connectors (CN8) wafer with TAIWAN KING PIN TERMINAL PIDC254M1L series and mate with Molex housing 70450 series or equivalent.

CFM750E SERIES

750 WATT

Features

- ◆ 1U Low Profile, High Power Density
- ◆ Universal Input Range 90-264VAC
- ◆ Active PFC Meets EN61000-3-2
- ◆ CISPR/FCC Class B
- ◆ High Efficiency at 91% Typical
- ◆ Remote Voltage Sense
- ◆ PS On/Off Remote Control
- ◆ +5V Stand-by Output Power
- ◆ Fan Speed Control with Temperature
- ◆ Active Current Sharing
- ◆ I²C Bus Interface

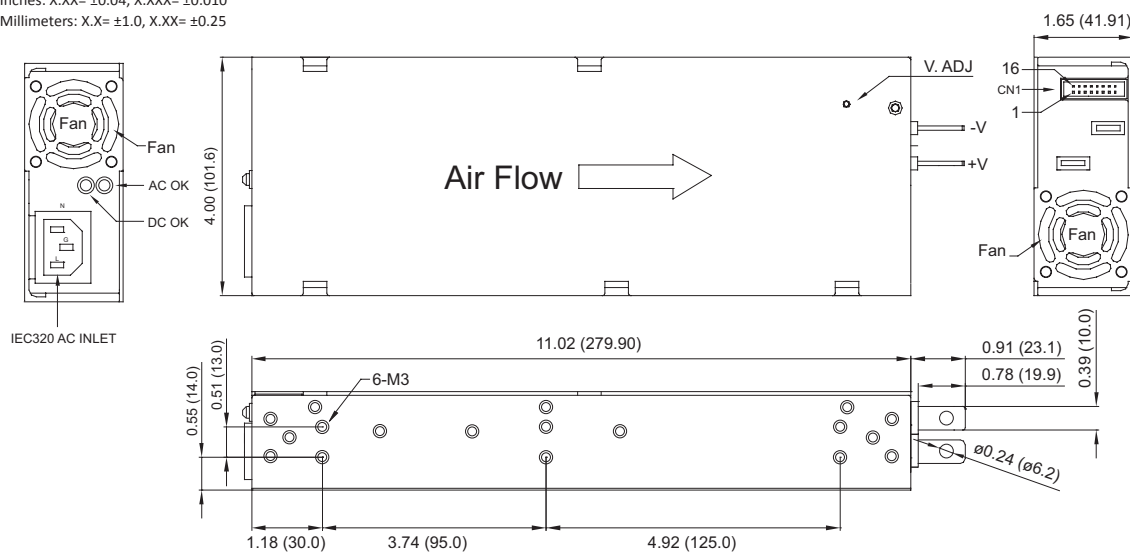


Mechanical Dimensions

All Dimensions In Inches(mm)

Tolerance Inches: X.XX= ±0.04, X.XXX= ±0.010

Millimeters: X.X= ±1.0, X.XX= ±0.25

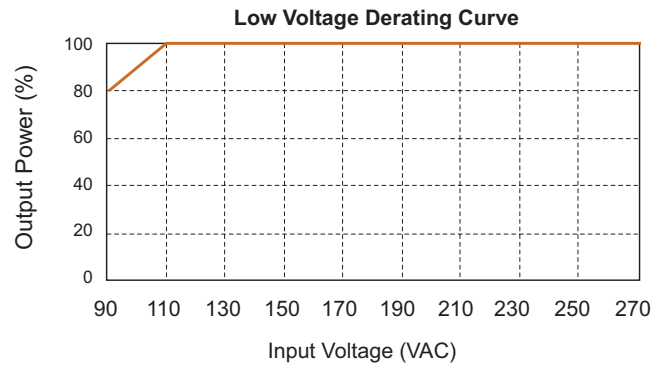
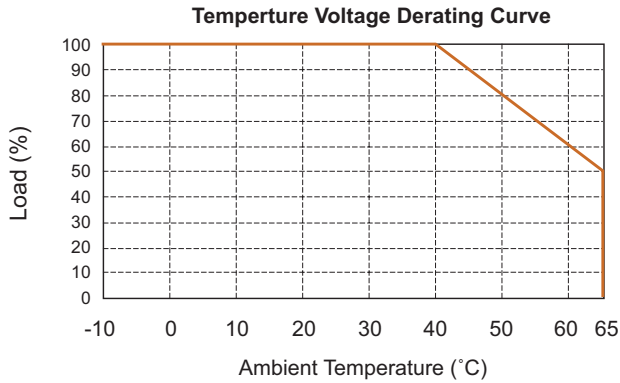


CN1: Molex70247-16 or Equivalent
PIN: CONNECTION

16	+SENSE	15	I SHARE	14	+5VSB	13	DC OK	12	V TRIM	11	GND	10	I ² C-SDA	9	ON/OFF
1	-SENSE	2	AC OK	3	+5VSB	4	I ² C-A0	5	OTPW	6	GND	7	I ² C-SCL	8	I ² C-A1

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT		RIPPLE & NOISE	VOLTAGE ADJ. RANGE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REG. (NOTE 3)	LOAD REG. (NOTE 4)	% EFF. (Typ.) (NOTE 5)
		RATED	MIN.						
Main Output Voltage									
CFM750E-240	+24 V	31.2	0	200 mVp-p	22.8-26.4V	±2.0%	±0.5%	±1%	89%
CFM750E-360	+36 V	20.8	0	240 mVp-p	34.2-39.6V	±2.0%	±0.5%	±1%	91%
CFM750E-480	+48 V	15.6	0	240 mVp-p	45.6-52.8V	±2.0%	±0.5%	±1%	92%
Standby Output Voltage									
All	+5.0 V	1.0	0	100 mVp-p		±2.0%	----	----	

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	40A max. @230Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current/240Vac	3.5mA max.

OUTPUT SPECIFICATIONS

Total Rated Output Power	750W
Remote Voltage Sense	Compensates for wire
	Voltage drop
Adjustment Range on Vout	+10%, -5%
Hold-up Time	20ms typ.
Over Voltage Protection	Recycle AC input to Restart
Short Circuit Protection	Auto Recovery
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-10-65°C (see derating curve)
CFM750E will be in thermal protection for exceeding the rated power output or the operating temperature	
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Switching Frequency	100KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	80Khrs min.
Altitude	2000m
Dimensions	11.02 x 4.00 x 1.65 inches (280.0 x 101.6 x 41.9 mm)
Weight	1610 g (3.55 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 47μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 60% rated load and 25°C.Ta.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured at 60%±40% rated.
5. Typical efficiency at 230VAC and Full Load at 25°C.

CFM1600H SERIES

1600 WATT

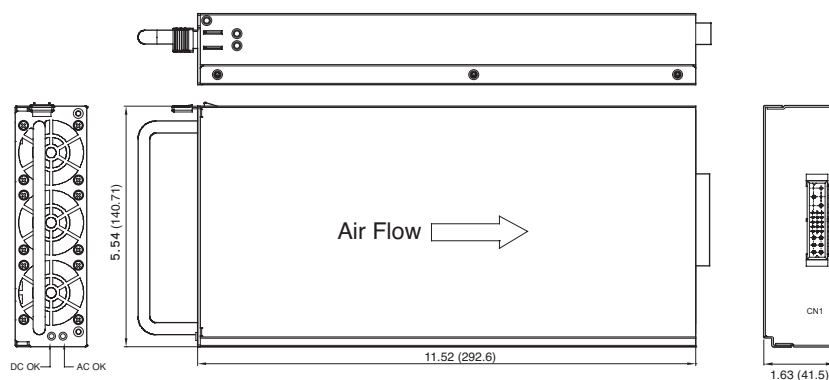
Features

- ◆ 1U Low Profile, High Power Density
- ◆ Universal Input Range 90-264VAC
- ◆ Active PFC Meets EN61000-3-2
- ◆ CISPR/FCC Class B
- ◆ High Efficiency at 90% Typical
- ◆ PS On/Off Remote Control
- ◆ +5V Stand-by Output Power
- ◆ Fan Speed Control Function (Option)
- ◆ Active Current Sharing
- ◆ Hot Swap Redundancy
- ◆ Build-in ORing FETs
- ◆ I²C Bus Interface
- ◆ Optional 1U x 19" Power-Rack

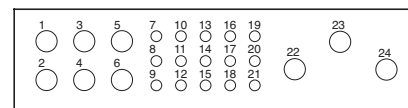


Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXXX=±0.04, X.XXX=±0.010
Millimeters: X.XXX=±1.0, X.XX=±0.25



CN1



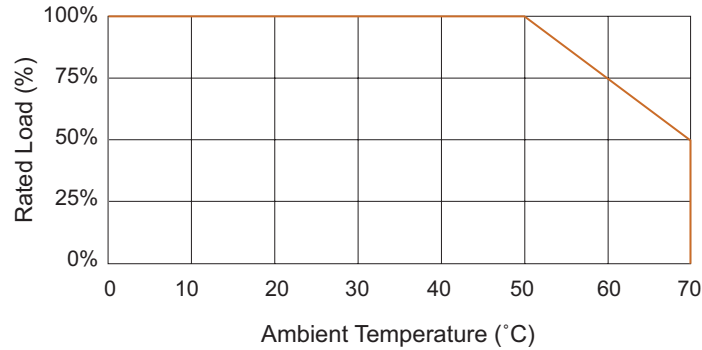
CN1: Positronic PCB24W9M400A1 or
Equivalent PIN CONNECTION

1	-Vout	7	ON/OFF	13	I ² C-A2	19	SB GND
2	-Vout	8	I ² C-A1	14	+SENSE	20	DC OK
3	+Vout	9	I SHARE	15	I ² C-SCL	21	V TRIM
4	-Vout	10	I ² C-A0	16	+5VSB	22	PE
5	+Vout	11	-SENSE	17	AC OK	23	N
6	+Vout	12	I ² C-SDA	18	OTPW	24	L

MATING CONNECTOR: Positronic PCB24W9F400A1 or Equivalent
Note: 1. Pin7 is Short Pin 2. Pull Down Pin7 to Activate the PSU

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT (A) RATED @ 180-264VAC RATED @ 90-132VAC	RIPPLE & NOISE NOTE 1	VOLTAGE ADJ. RANGE	VOLTAGE ACCURACY NOTE 2	LINE REG. NOTE 3	LOAD REG. NOTE 4	%EFF (Typ.) NOTE 5
CFM1600H-480-24P	Main Output							
	+48 V	33.4 25.0	1%	45.6-52.8 V	± 1%	± 1%	± 1%	90%
	Standby Output Voltage							
	+5 V	1	100mVp-p	----	----	± 1%	± 1%	----
CFM1600H-240-24P	Main Output							
	+24 V	60 50	1%	22.8-26.4 V	± 1%	± 1%	± 1%	88%
	Standby Output Voltage							
	+5 V	1	100mVp-p	----	----	± 1%	± 1%	----

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	40A max. @230Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Total Rated output	1200W (@90-132Vac) 1600W (@180-264Vac)
Current Share	Single wire Current Sharing
Adjustment Range on Vout	+10%, -5%
Remote Voltage Sense	Compensates for Wire
Hold-up Time	Voltage Drop 20ms typ.
Over Voltage Protection	Recycle AC input to Restart
Short Circuit Protection	Auto Recovery
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	0-70°C (see derating curve)
PSU will be in thermal protection for exceeding the rated power output or the operating temperature	
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Switching Frequency	125KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	70Khrs min.
Altitude	2000m
Dimensions	11.52 x 5.54 x 1.63 inches (292.6 x 140.7 x 41.5 mm)
Weight	2470 g (5.45 Pounds)

NOTE

1. Add a 0.1uF ceramic capacitor and a 47uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 60% rated load and 25°C Ta.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured at 60%±40% rated load.
5. Suffix "-F" to model number with fan speed control function

CFM40C, CFM60C, CFM101C SERIES

40 WATT, 60 WATT, 100 WATT

Features

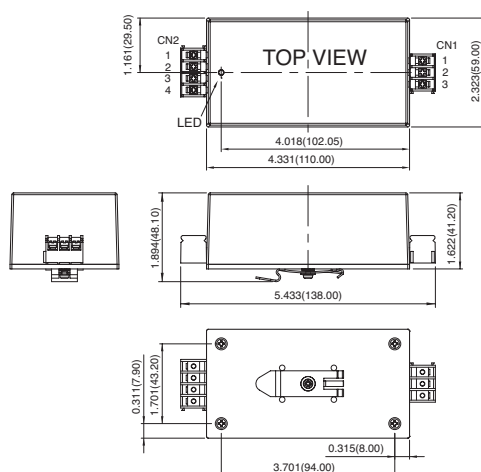
- ◆ Universal Input Range 90-264VAC
- ◆ Efficiency up to 90%
- ◆ EN55022 and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ LED Indicator for Power ON
- ◆ Can be Installed on DIN rail TS-35/7.5 or 15



Mechanical Dimensions

All Dimensions in Inches (mm)

Tolerance Inches: X.XX=±0.02, X.XXX=±0.010
Millimeters: X.X=±0.5, X.XX=±0.25



CN1 PIN CONNECTION

Pin	Function
Pin 1	ACN
Pin 2	ACL
Pin 3	⏏

CN2 PIN CONNECTION

Pin	Function
Pin 1	+ Vout
Pin 2	+ Vout
Pin 3	- Vout
Pin 4	- Vout

CFM40CXXX-DR Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)
CFM40C033-DR	3.3 V	6 A	50mV	±1%	±0.5%	±1%	70%
CFM40C050-DR	5 V	6 A	1%	±1%	±0.5%	±1%	76%
CFM40C090-DR	9 V	4.45 A	1%	±1%	±0.5%	±1%	84%
CFM40C120-DR	12 V	3.34 A	1%	±1%	±0.5%	±1%	85%
CFM40C150-DR	15 V	2.67 A	1%	±1%	±0.5%	±1%	85%
CFM40C240-DR	24 V	1.67 A	1%	±1%	±0.5%	±1%	85%
CFM40C300-DR	30 V	1.33 A	1%	±1%	±0.5%	±1%	86%
CFM40C360-DR	36 V	1.11 A	1%	±1%	±0.5%	±1%	87%
CFM40C480-DR	48 V	0.834 A	1%	±1%	±0.5%	±1%	87%

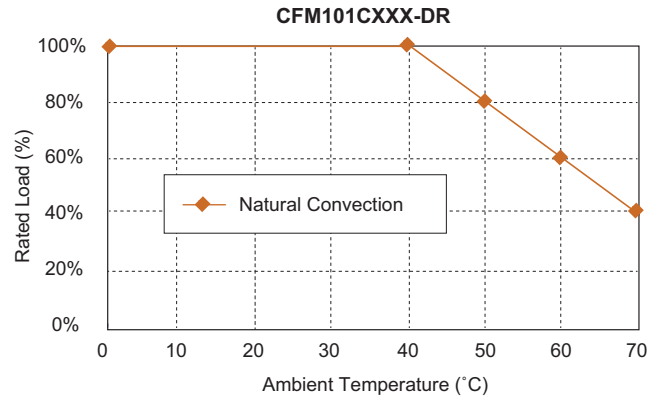
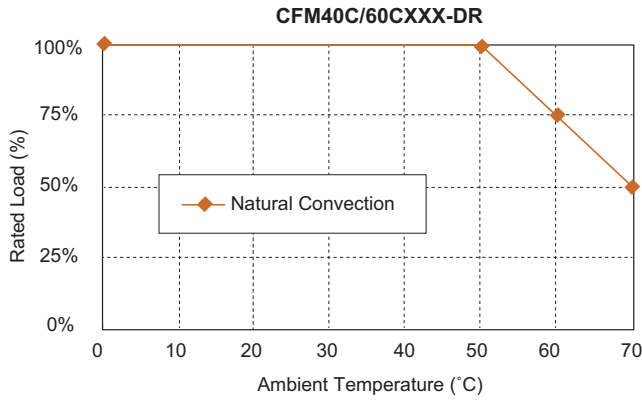
CFM60CXXX-DR Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)
CFM60C033-DR	3.3 V	8 A	50mV	±1%	±0.5%	±1%	72%
CFM60C050-DR	5 V	8 A	1%	±1%	±0.5%	±1%	77%
CFM60C090-DR	9 V	6.67 A	1%	±1%	±0.5%	±1%	84%
CFM60C120-DR	12 V	5 A	1%	±1%	±0.5%	±1%	85%
CFM60C150-DR	15 V	4 A	1%	±1%	±0.5%	±1%	86%
CFM60C240-DR	24 V	2.5 A	1%	±1%	±0.5%	±1%	86%
CFM60C300-DR	30 V	2 A	1%	±1%	±0.5%	±1%	86%
CFM60C360-DR	36 V	1.67 A	1%	±1%	±0.5%	±1%	88%
CFM60C480-DR	48 V	1.25 A	1%	±1%	±0.5%	±1%	88%

CFM101CXXX-DR Series

MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)	PF (Typ.)
CFM101C120-DR	12 V	8.4 A	1%	±1%	±0.5%	±1%	87%	0.9
CFM101C150-DR	15 V	6.7 A	1%	±1%	±0.5%	±1%	87%	0.9
CFM101C200-DR	20 V	5 A	1%	±1%	±0.5%	±1%	88%	0.9
CFM101C240-DR	24 V	4.2 A	1%	±1%	±0.5%	±1%	88%	0.9
CFM101C480-DR	48 V	2.1 A	1%	±1%	±0.5%	±1%	90%	0.9

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	CFM40C/60CXXX-DR 50A max. @240Vac CFM101CXXX-DR 90A max. @240Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	CFM40C/60CXXX-DR 8ms typ. @115Vac CFM101CXXX-DR 10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	CFM40C/60CXXX-DR 0-70°C CFM101CXXX-DR 0-70°C
Storage Temperature	-20-85°C
Humidity	93% RH max. Non-Condensing
Cooling	Natural Convection
Switching Frequency	CFM40C/60CXXX-DR 66KHz Typical CFM101CXXX-DR 100KHz Typical
Altitude	2000m
Dimensions	5.433 x 2.323 x 1.894 inches (138.00 x 59.00 x 48.10 mm)
Weight	475 g

NOTE

1. Voltage accuracy is set at full load and 25°C Ta.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from full to 10% load.
5. CFM40C/60C/101C input connector mates with DECA T40MBB27-03 (Pitch 6.35mm) 3pin positions terminal blocks.
6. CFM40C/60C/101C Output connector mates with DECA T40MBB27-04 (Pitch 6.35mm) 4pin positions terminal blocks

CBM100S Series

100 WATT, AC-DC FULL BRICK POWER MODULE

Features

- ◆ Universal Input Range 90-264VAC
- ◆ Full Load with Baseplate Cooled and No Fan Required
- ◆ Wide Operating Temperature Range
- ◆ 17mm Ultra Low Profile
- ◆ Built-in EN55022 Class B Filter
- ◆ Active PFC Meets EN61000-3-2
- ◆ High Efficiency up to 90% Typical
- ◆ No Load Input Power Consumption < 0.5W
- ◆ Over Temperature Protection
- ◆ Over Voltage Protection
- ◆ Over Current Protection

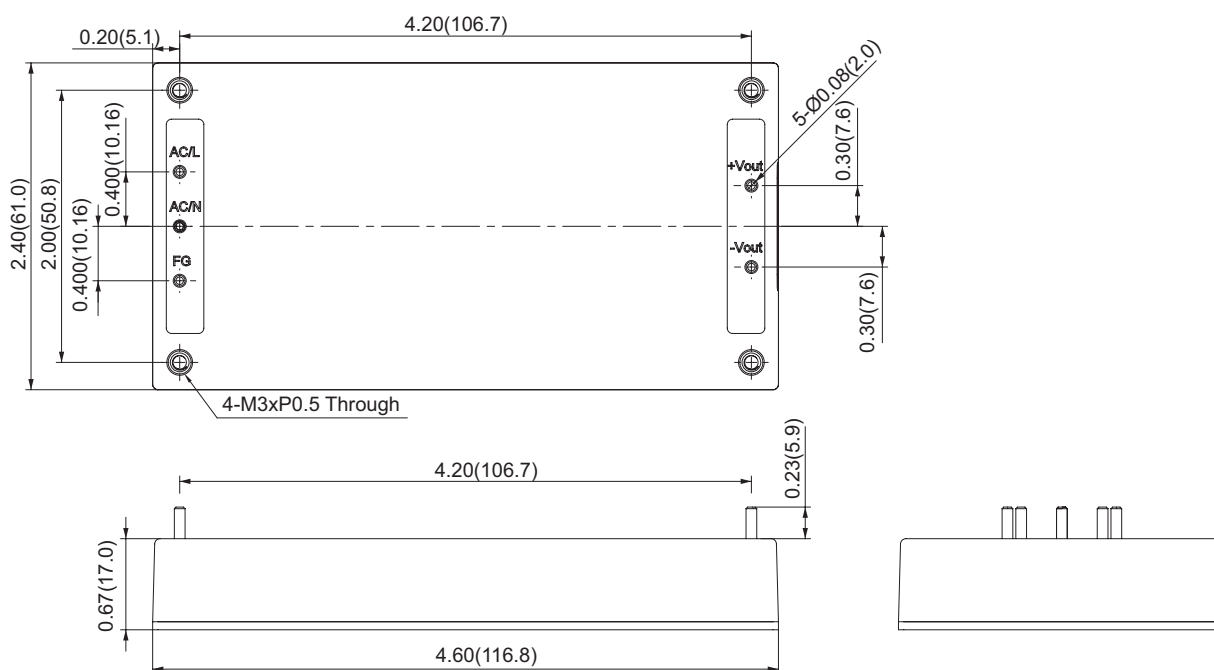


Mechanical Dimensions

All Dimensions In Inches(mm)

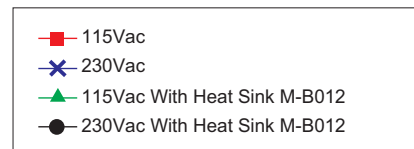
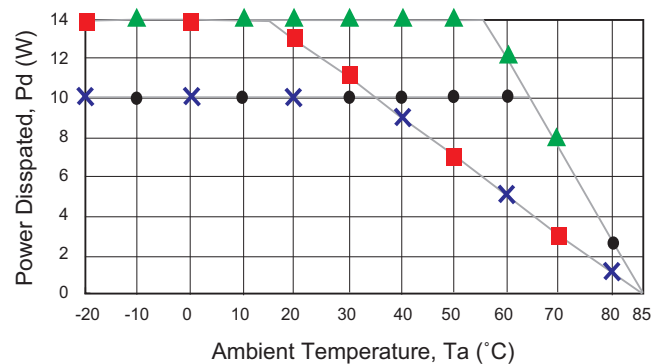
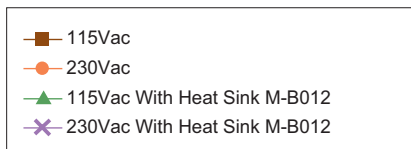
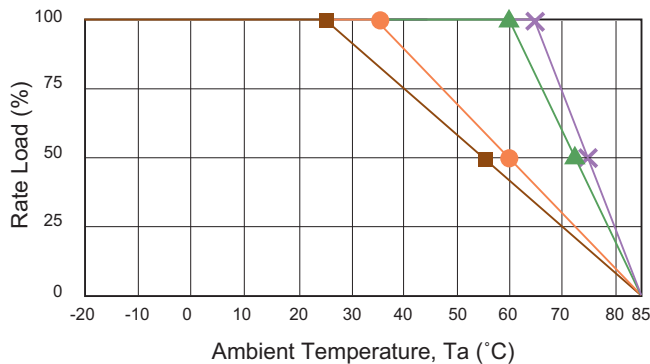
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010

Millimeters: x.x= ±0.5, x.xx= ±0.25



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
CBM100S120	+12 V	8.4 A	1.0%	±1.0%	±0.5%	±1%	90%
CBM100S240	+24 V	4.2 A	1.0%	±1.0%	±0.5%	±1%	91%
CBM100S280	+28 V	3.6 A	1.0%	±1.0%	±0.5%	±1%	91%
CBM100S360	+36 V	2.8 A	1.0%	±1.0%	±0.5%	±1%	91%
CBM100S480	+48 V	2.1 A	1.0%	±1.0%	±0.5%	±1%	90.5%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

AC Input Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	100A max. @240Vac
Leakage Current @ 264Vac	3.5mA max.

OUTPUT SPECIFICATIONS

Isolation	Input to output= 4242VDC
Total Rated Output Power	100W
Hold-up Time	12ms typ.
Over Voltage Protection	Recycle AC input to restart
Short Circuit Protection	Hiccup mode (Auto Recovery)
Over Current Protection	Auto Recovery
Over Temperature Protection	Auto Recovery
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61000-6-1, EN61204-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Operating Ambient Temperature	see derating curve
Storage Temperature	-40-100°C
Humidity	93% RH max. Non condensing
Switching Frequency	130KHz Typical
MTBF ... MIL-HDBK-217F, GB, 25°C/115VAC	100Khrs min.
No Load Input Power Consumption	< 0.5W
Altitude	2000m
Dimensions	4.60 x 2.40 x 0.67 inches (116.8 x 61.0 x 17.0 mm)
Weight	236 g (0.52 Pounds)

NOTE

1. CBM100S series: Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage accuracy is set at 60% rated load.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured at 60%±40% rated.
5. Typical efficiency with 230VAC and full load at 25°C.
6. Power dissipation (Pd): $Pd = Pi - Po = Po(1-\eta)/\eta$.

TRG10R SERIES

10 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input: 90-264VAC
- ◆ Interchangeable AC Plugs
- ◆ EN55022 Class "B" and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output cable length \leq 1800mm)
- ◆ No Load Power Consumption < 75mW



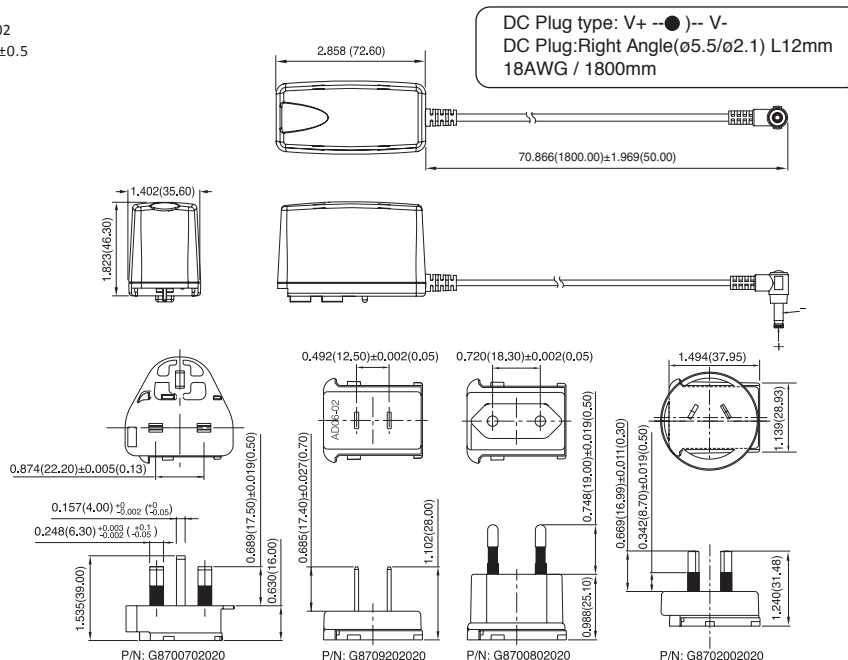
Ordering information

TRG10RXXX - Model No.	XX DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185
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Mechanical Dimensions

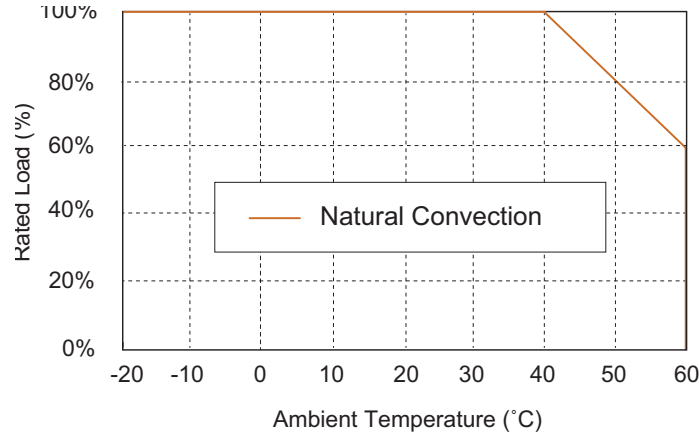
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02
Millimeters: X.XX=±0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRG10R050	5 V	1.6 A	50mVp-p	±2%	±1%	±4%	77.37%
TRG10R059	5.9 V	1.5 A	1%	±2%	±1%	±3%	78.12%
TRG10R060	6 V	1.5 A	1%	±2%	±1%	±3%	81.57%
TRG10R075	7.5 V	1.2 A	1%	±2%	±1%	±3%	81.57%
TRG10R090	9 V	1.1 A	1%	±2%	±1%	±2%	82.14%
TRG10R120	12 V	0.85 A	1%	±2%	±1%	±2%	82.32%
TRG10R136	13.6 V	0.75 A	1%	±2%	±1%	±2%	82.32%
TRG10R150	15 V	0.7 A	1%	±2%	±1%	±2%	82.49%
TRG10R180	18 V	0.55 A	1%	±2%	±1%	±2%	82.14%
TRG10R240	24 V	0.4 A	1%	±2%	±1%	±2%	81.96%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.4A max.
Inrush Current	Cold Start @25°C 40A max. @ 240Vac
Leakage Current	0.25mA max

OUTPUT SPECIFICATIONS

Hold-up Time	10mS typ. @115Vac
Short Circuit Protection	Continuous (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	67KHz typ.
MTBF (MIL-HDBK-217F, GB, 25°C/115VAC)	200K hrs min.
Altitude	2000m
Dimensions	2.858 x 1.823 x 1.402 inches (72.6 x 46.3 x 35.6 mm)
Weight	130 g (0.29 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for Ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100Vac to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%,50%,75%,100% load and input voltage is 115VAC / 230VAC.

TRG15 SERIES

15 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ EN55022 Class "B" and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output cable length \leq 1800mm)
(TRG1506: Output Cable Length \leq 1220mm)
- ◆ No Load Power Consumption < 75mW



Ordering information

TRG15XX - Model No.	x AC Plug Type A: USA 2 Pin E: Europe 2 Pin U: British 3 Pin S: Australia 2 Pin	-XX DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185 FOR 5V,7.5V,9V * 16AWG / UL1185 FOR 6V * 20AWG/UL1185FOR12V,13.6V,15V,18V,24V
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Mechanical Dimensions

All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02

Millimeters: X.XX=±0.5

FIG.A

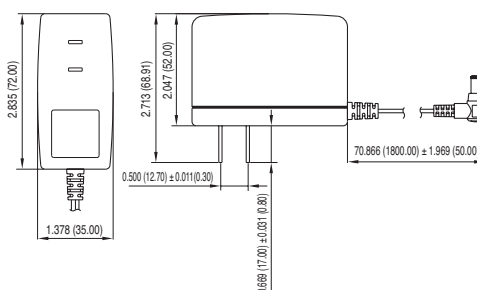


FIG.E

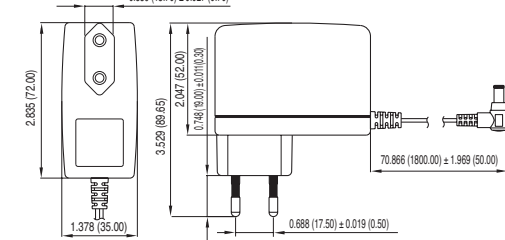


FIG.S

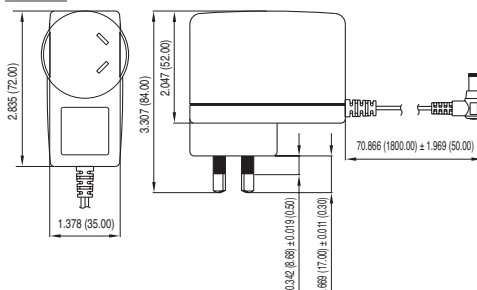
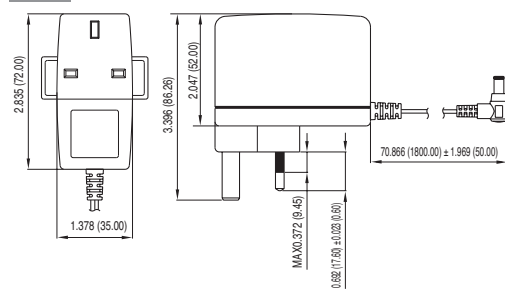
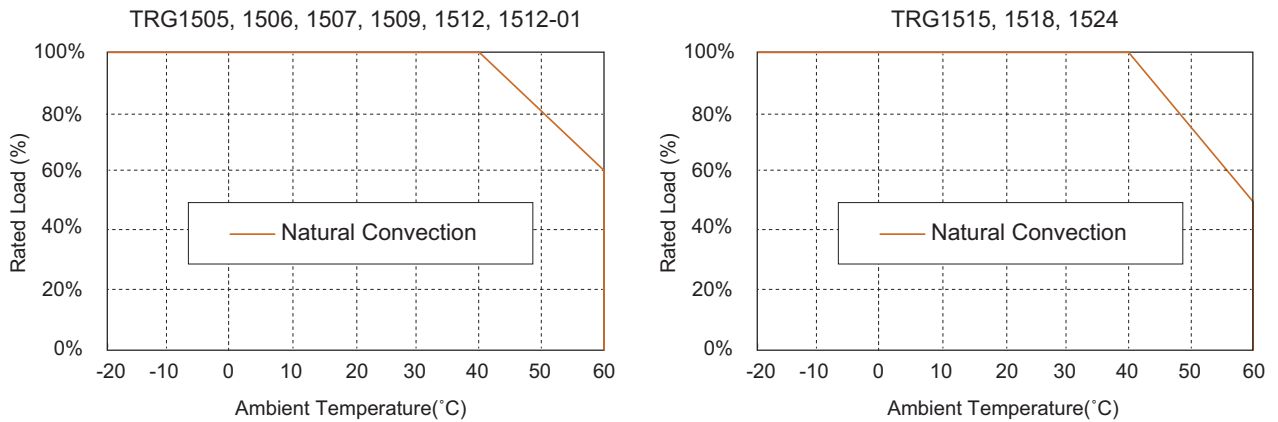


FIG.U



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRG1505	5 V	2.0 A	50mVp-p	±2%	±1%	±4%	79%
TRG1506	6 V	1.5 A	60mVp-p	±2%	±1%	±3%	81.57%
TRG1507	7.5 V	1.6 A	75mVp-p	±2%	±1%	±3%	83.26%
TRG1509	9 V	1.4 A	90mVp-p	±2%	±1%	±2%	83.54%
TRG1512	12 V	1.0 A	100mVp-p	±2%	±1%	±2%	83.26%
TRG1512-01	13.6 V	1.0 A	100mVp-p	±2%	±1%	±2%	83.97%
TRG1515	15 V	1.0 A	100mVp-p	±2%	±1%	±2%	84.5%
TRG1518	18 V	0.83 A	100mVp-p	±2%	±1%	±2%	84.48%
TRG1524	24 V	0.63 A	100mVp-p	±2%	±1%	±2%	84.54%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.5A max.
Inrush Current	Cold Start @25°C 50A max. @ 240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	Hiccup Mode (Auto Recovery)
Temperature Coefficient	±0.05% / °C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	Full Load, 115V / 85KHz Typical 230V / 65KHz Typical
MTBF ... MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	5000m
Dimensions	2.835 x 2.047 x 1.378 inches (72.00 x 52.00 x 35.00 mm))
Weight	140 g (0.33 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100Vac to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115VAC / 230VAC.

TR15RA SERIES

15 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ Interchangeable AC Plugs
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
- ◆ No Load Power Consumption < 75mW



Ordering information

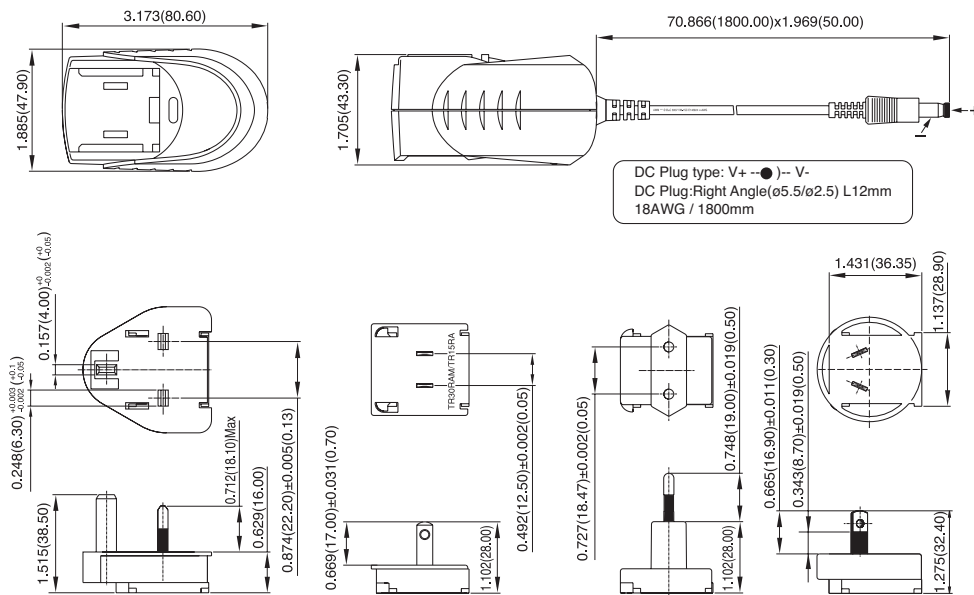
TR15RAXXX - Model No.	XX DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185	-XX Color of Overmold Case BE: Blue GY: Gray RD: Red PE: Purple OE: Orange	-BK
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Mechanical Dimensions

All Dimensions in Inches (mm)

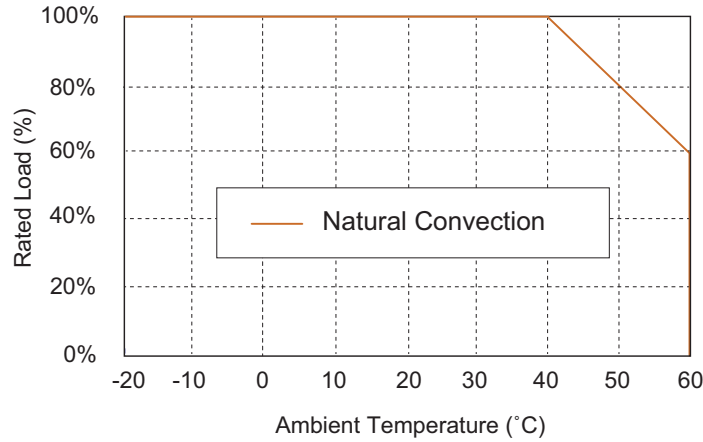
Tolerance Inches: X.XXX \pm 0.02

Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TR15RA050	5 V	2.0 A	50mVp-p	\pm 3%	\pm 1%	\pm 4%	79.01%
TR15RA059	5.9 V	1.7 A	1%	\pm 2%	\pm 1%	\pm 3%	79.03%
TR15RA090	9 V	1.4 A	1%	\pm 2%	\pm 1%	\pm 2%	83.55%
TR15RA120	12 V	1.1 A	1%	\pm 2%	\pm 1%	\pm 2%	83.81%
TR15RA150	15 V	1.0 A	1%	\pm 2%	\pm 1%	\pm 2%	84.51%
TR15RA180	18 V	0.83 A	1%	\pm 2%	\pm 1%	\pm 2%	84.49%
TR15RA240	24 V	0.625 A	1%	\pm 2%	\pm 1%	\pm 2%	84.51%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.4A max
Inrush Current	Cold Start @25°C 90A max. @ 240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Continuous (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05% / °C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF (MIL-HDBK-217F, GB, at 25°C /115VAC)	200Khrs min.
Altitude	2000m
Dimensions	3.173 x 1.885 x 1.705 inches (80.60 x 47.90 x 43.30 mm)
Weight	150 g (0.33 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRH25 SERIES

25 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input: 90-264VAC
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
(TRH25033: Output Cable Length \leq 720mm)
(TRH25050: Output Cable Length \leq 1220mm)
- ◆ No Load Power Consumption < 75mW

Ordering information

TRH25 XXX - Model No.	X AC Plug Type A: USA 2 Pin E: Europe 2 Pin U: British 3 Pin S: Australia 2 Pin	-X DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185 * 16AWG / UL1185 for Vo:5V,3.3V
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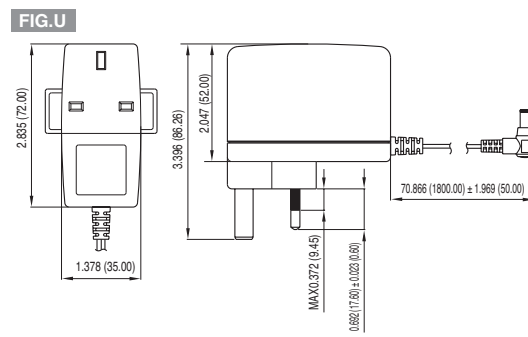
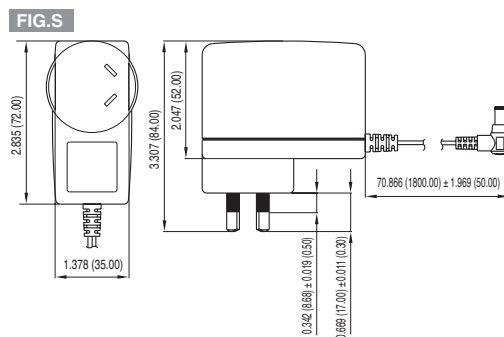
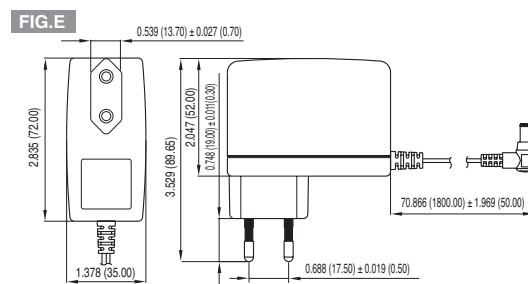
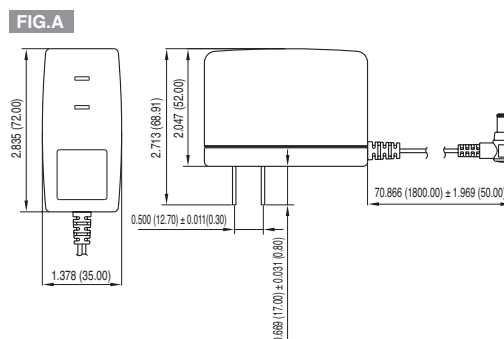


Mechanical Dimensions

All Dimensions in Inches (mm)

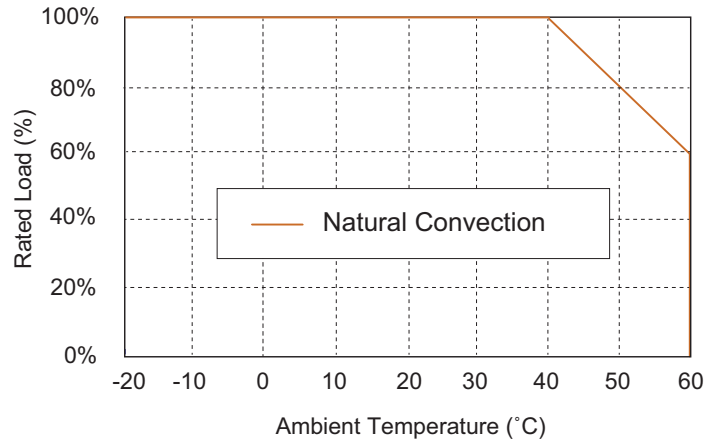
Tolerance Inches: X.XXX \pm 0.02

Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRH25033	3.3 V	4.0 A	50mVp-p	±2%	±1%	±6%	80.97%
TRH25050	5 V	4.0 A	50mVp-p	±2%	±1%	±6%	83.69%
TRH25120	12 V	2.1 A	1%	±2%	±1%	±5%	87.02%
TRH25150	15 V	1.67 A	1%	±2%	±1%	±3%	86.99%
TRH25180	18 V	1.4 A	1%	±2%	±1%	±2%	87.02%
TRH25240	24 V	1.05 A	1%	±2%	±1%	±2%	87.02%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.7A max
Inrush Current	Cold Start @25°C 90A max. @ 240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Continuous (Auto Recovery)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05% / °C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B EN61000-6-3, EN61000-3-2, EN61000-3-3, EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	67KHz Typical
Altitude	2000m
Dimensions	2.835 x 2.047 x 1.378 inches (72.00 x 52.00 x 35.00 mm)
Weight	140 g (0.31 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%,50%,75%,100% load and input voltage is 115Vac / 230Vac.

TRG30R V SERIES

30 WATT, LEVEL VI EFFICIENCY

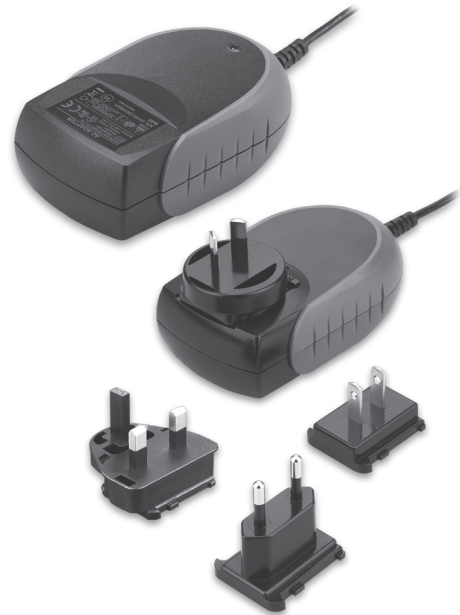
Features

- ◆ Universal Input Range 90-264VAC
- ◆ Interchangeable AC Plugs
- ◆ EN61204-3 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
- ◆ No Load Power Consumption < 75mW



Ordering information

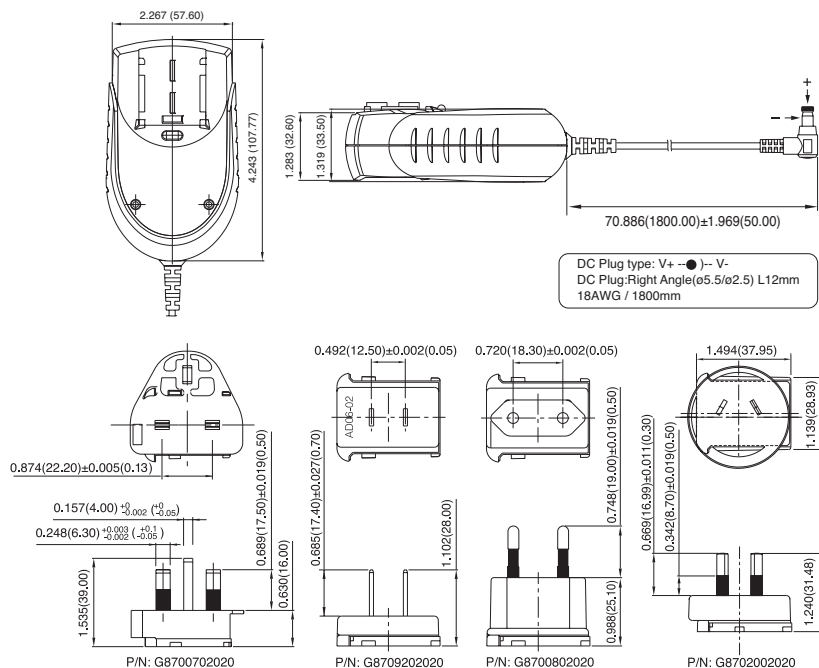
TRG30RXXXV Model No.	-XX DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185 * 16AWG / UL1185 for 5V · 9V	-XX Color of Overmold Case BE: Blue GY: Gray RD: Red PE: Purple OR: Orange	-BK
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Mechanical Dimensions

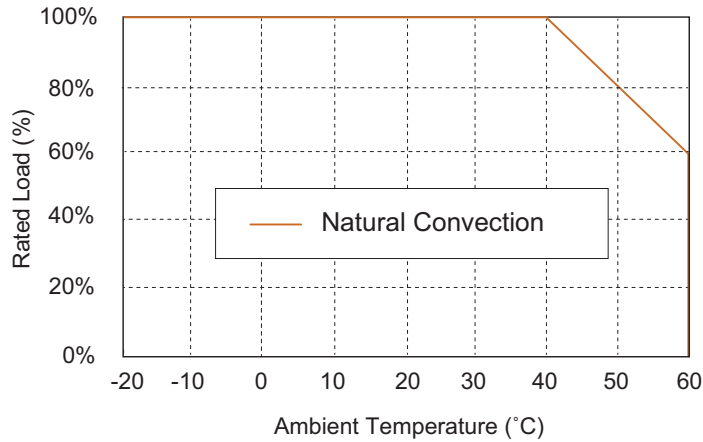
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRG30R050V	5 V	4.0 A	50mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	83.69%
TRG30R090V	9 V	3.0 A	90mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	87.30%
TRG30R120V	12 V	2.5 A	100mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	87.70%
TRG30R150V	15 V	2.0 A	100mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	87.70%
TRG30R180V	18 V	1.67 A	100mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	87.70%
TRG30R240V	24 V	1.25 A	100mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	87.70%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.8A max
Inrush Current	Cold Start @25°C 100A max. @ 240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	Latch

SAFETY AND EMISSION

Emission and Immunity	EN61204-3, EN61000-3-2, EN61000-3-3, FCC CFR Title 47 Part 15 Subpart B
Safety	Class II, IEC60950-1, UL60950-1, EN60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	5000m
Dimensions	4.243 x 2.267 x 1.319 inches (107.77 x 57.60 x 33.50 mm)
Weight	300 g (0.66 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRG30RA V SERIES

30 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ Interchangeable AC Plugs
- ◆ EN61204-3 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
- ◆ No Load Power Consumption < 75mW



Ordering information

TRG30RAXXXV Model No.	-XX DC Plug Type	E OVP	XX DC Cable Length and Type 01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core * 18AWG / UL1185 * 16AWG / UL1185 for 5V - 9V	-XX Color of Overmold Case BE: Blue GY: Gray RD: Red PE: Purple OR: Orange	-BK
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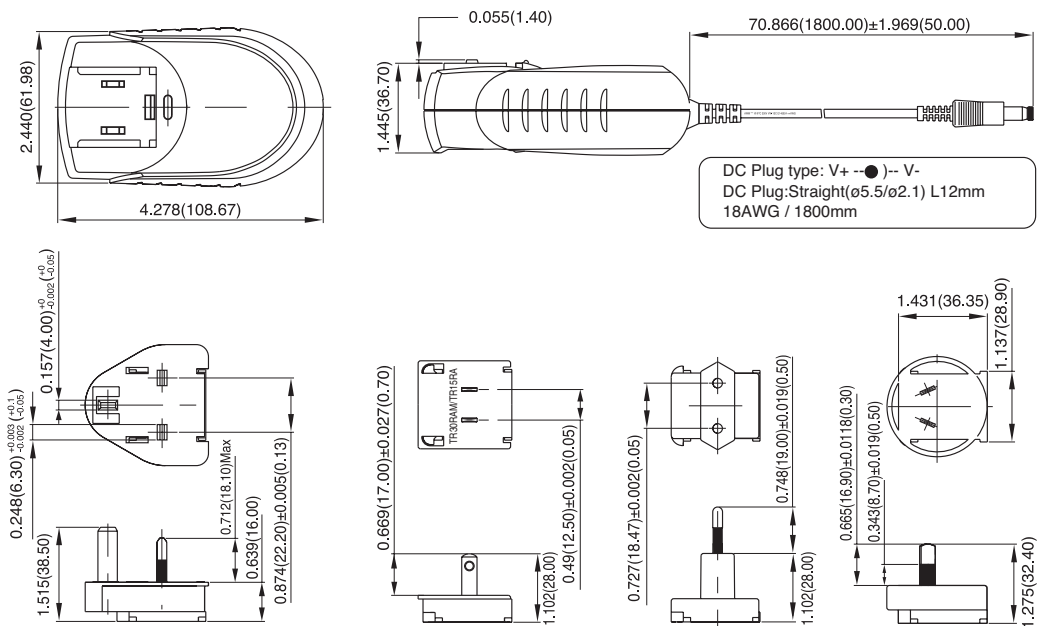


Mechanical Dimensions

All Dimensions in Inches (mm)

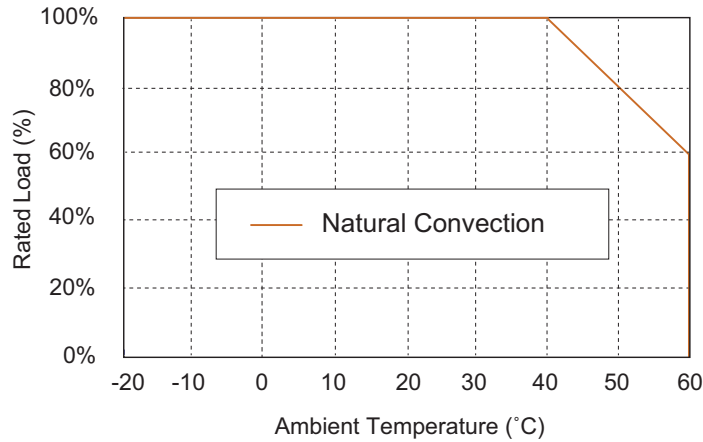
Tolerance Inches: X.XXX \pm 0.02

Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	CURRENT REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRG30RA050V	5 V	4.0 A	50mVp-p	\pm 2%	\pm 1%	\pm 6%	83.69%
TRG30RA090V	9 V	3.0 A	90mVp-p	\pm 2%	\pm 1%	\pm 3%	87.30%
TRG30RA120V	12 V	2.5 A	100mVp-p	\pm 2%	\pm 1%	\pm 2%	87.70%
TRG30RA150V	15 V	2.0 A	100mVp-p	\pm 2%	\pm 1%	\pm 2%	87.70%
TRG30RA180V	18 V	1.67 A	100mVp-p	\pm 2%	\pm 1%	\pm 2%	87.70%
TRG30RA240V	24 V	1.25 A	100mVp-p	\pm 2%	\pm 1%	\pm 2%	87.70%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.8A max
Inrush Current	Cold Start @25°C 100A max. @ 240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Hiccup Mode (Auto Recovery)
Over Voltage Protection	Latch

SAFETY AND EMISSION

Emission and Immunity	EN61204-3, EN61000-3-2, EN61000-3-3 FCC CFR Title 47 Part 15 Subpart B
Safety	Class II, IEC60950-1, UL60950-1, EN60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	5000m
Dimensions	4.243 x 2.267 x 1.319 inches (107.77 x 57.60 x 33.50 mm)
Weight	300 g (0.66 Pounds)

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRH21A SERIES

20 WATT, LEVEL VI EFFICIENCY

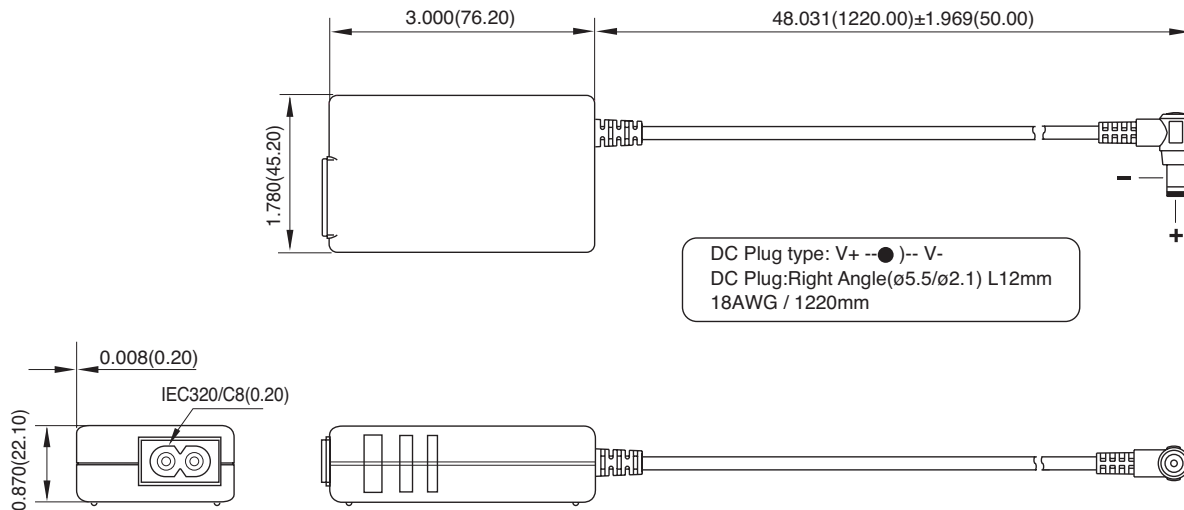
Features

- ◆ Universal Input Range 90-264VAC
 - ◆ Efficiency to 87%
 - ◆ Continuous Short Circuit Protection
 - ◆ Over Voltage Protection
 - ◆ No Load Input Power < 0.1W
 - ◆ Leakage Current < 0.1mA
 - ◆ IEC60950-1/EN60950-1/UL60950-1 ITE Approved
 - ◆ AC Inlet IEC320/C8
 - ◆ 2 MOOP
 - ◆ DOE Level VI
- (Output Cable Length \leq 1800mm 18AWG)
(TRH21A050: Length \leq 1200mm 18AWG)



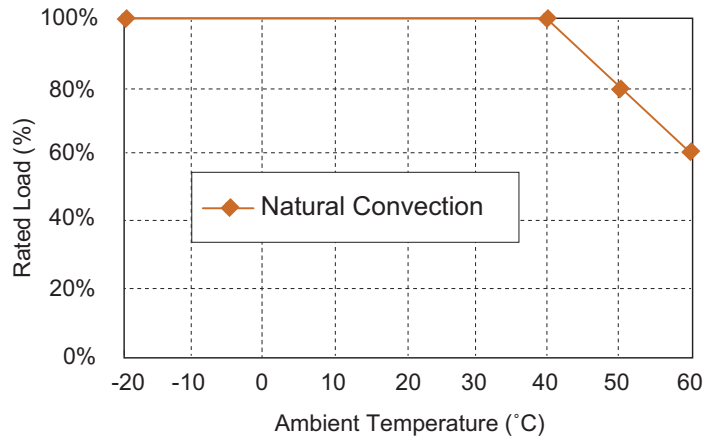
Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	OUTPUT RATED POWER	RIPPLE & NOISE	VOLTAGE ACCURACY	LOAD REG.	% EFF.
TRH21A050	90-264 VAC	5 V	3.0 A	15.0 W	50 mV	$\pm 2\%$	$\pm 5\%$	80%
TRH21A090	90-264 VAC	9 V	2.3 A	20.7 W	50 mV	$\pm 2\%$	$\pm 4\%$	85%
TRH21A120	90-264 VAC	12 V	1.8 A	21.6 W	90 mV	$\pm 2\%$	$\pm 3\%$	86%
TRH21A150	90-264 VAC	15 V	1.4 A	21.0 W	100 mV	$\pm 2\%$	$\pm 3\%$	86%
TRH21A180	90-264 VAC	18 V	1.2 A	21.6 W	100 mV	$\pm 2\%$	$\pm 2\%$	87%
TRH21A240	90-264 VAC	24 V	0.9 A	21.6 W	100 mV	$\pm 2\%$	$\pm 2\%$	87%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.3 to 0.5A
Inrush Current	Cold Start@25°C 50A max.@240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Voltage Accuracy	±2.0% max.
Line Regulation (note 3)	±1.0% max.
Load Regulation (note 4)	see table
Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection(TVS)	115%-140% of nominal output voltage

SAFETY AND EMISSION

CE Directive	2014/108/EC
Emissions	EN55022/CISPR Class B, EN55024
Safety Approvals	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,000VAC
Efficiency	see table
Switching Frequency	65KHz typ.
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-25-85°C
Cooling	Natural Convection
Humidity	93% RH max. Non condensing
MTBF MIL-STD-217F, GB, at 25°C/115VAC	400Khrs min.
Dimensions	3.000 x 1.780 x 0.870 inches (76.20 x 45.20 x 22.10 mm)
Weight	140 g (0.31Pounds)

NOTE

1. Voltage accuracy is set of 60% rated load.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).

TRG36A SERIES

36 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
- ◆ (Output cable length \leq 1800mm)
(TRG36A09: Output Cable Length \leq 1220mm)
(TRG36A05: Output Cable Length \leq 720mm
18AWG/UL2464)
- ◆ No Load Power Consumption < 75mW



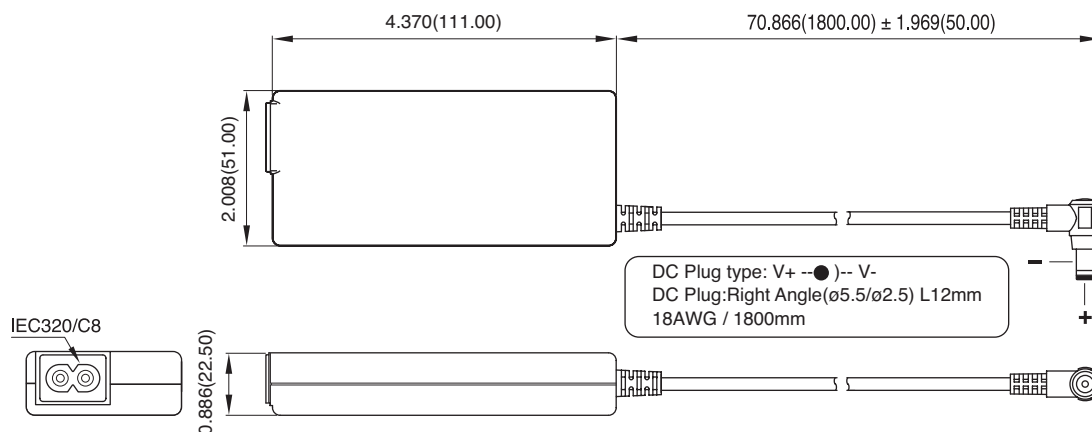
Ordering information

TRG36AXX- Model No.	XX DC Plug Type	E OVP	XX DC Cable Length and Type
			01: 720mm
			02: 1220mm
			03: 1800mm
			11: 720mm with Ferrite Core
			12: 1220mm with Ferrite Core
			13: 1800mm with Ferrite Core
			*18AWG/UL1185



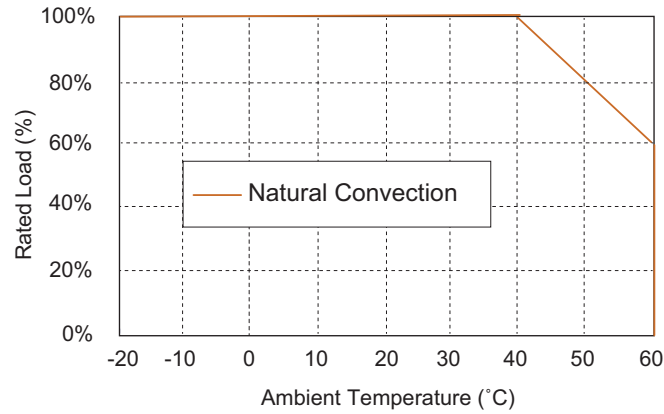
Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRG36A05	5 V	4.0 A	50mVp-p	$\pm 2\%$	$\pm 1\%$	$\pm 6\%$	83.69%
TRG36A09	9 V	3.0 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 5\%$	87.30%
TRG36A12	12 V	2.5 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 5\%$	87.70%
TRG36A13	13.5 V	2.4 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 5\%$	87.97%
TRG36A15	15 V	2.4 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 3\%$	88.31%
TRG36A18	18 V	2.0 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	88.31%
TRG36A24	24 V	1.5 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	88.31%
TRG36A48	48 V	0.75 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	88.31%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	50 to 60Hz
Input Current	1A max
Inrush Current	Cold Start@25°C 60A max.@240Vac
Leakage Current	0.25mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Continuous(Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class II, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	67KHz typ.
MTBF ... MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	2000m
Dimensions	4.331 x 1.969 x 0.787 inches (110.00 x 50.00 x 20.00 mm)
Weight	190 g (0.42 Pounds)
AC Inlet	IEC320/C8

NOTE

1. Add a 0.1μF ceramic capacitor and a 10uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%,50%,75%,100% load and input voltage is 115Vac / 230Vac.

TRH50A SERIES

50 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
(TRH50A120, TRH50A150: Output Cable Length \leq 1220mm)
- ◆ No Load Power Consumption < 150mW



Ordering information

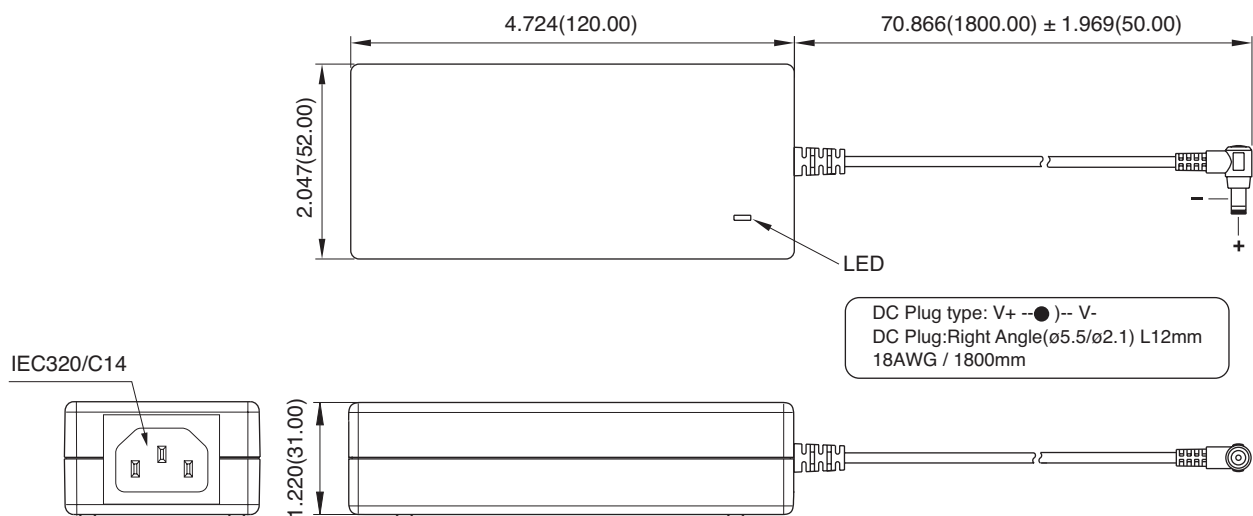
TRH50Axxx	-XX	E	XX
Model No.	DC Plug Type	OVP	DC Cable Length and Type
			01: 720mm
			02: 1220mm
			03: 1800mm
			11: 720mm with Ferrite Core
			12: 1220mm with Ferrite Core
			13: 1800mm with Ferrite Core
			* 16AWG / UL1185 FOR 12V,15V,18V,19V
			* 18AWG / UL1185 FOR 24V,28V,36V,48V



Mechanical Dimensions

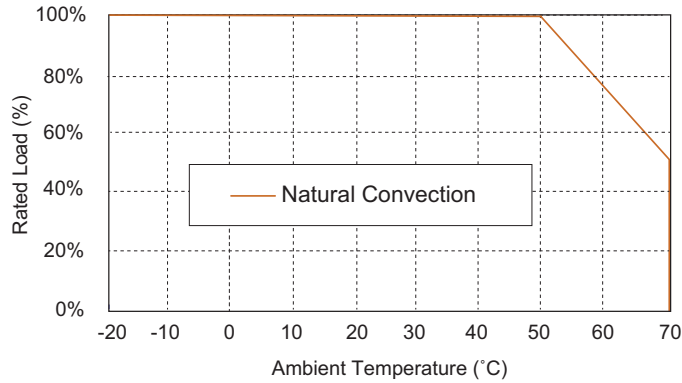
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRH50A120	12 V	4.2 A	1%	\pm 2%	\pm 1%	\pm 3%	89%
TRH50A150	15 V	3.36 A	1%	\pm 2%	\pm 1%	\pm 3%	89%
TRH50A180	18 V	2.8 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH50A190	19 V	2.65 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH50A240	24 V	2.1 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH50A280	28 V	1.8 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH50A360	36 V	1.4 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH50A480	48 V	1.05 A	1%	\pm 2%	\pm 1%	\pm 2%	89%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	1.5A max.
Inrush Current	Cold Start@25°C 100A max.@240Vac
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Continuous (Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	-20-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz typ.
MTBF ... MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	5000m
Dimensions	4.724 x 2.047 x 1.220 inches (120.00 x 52.00 x 31.00 mm)
Weight	300 g
AC Inlet	IEC320/C14

NOTE

1. Add a 0.1μF ceramic capacitor and a 10uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRH70A SERIES

70 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range 90-264VAC
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
(TRH70A120: Output Cable Length \leq 720mm)
(TRH70A150: Output Cable Length \leq 1220mm)
- ◆ No Load Power Consumption < 150mW



Ordering information

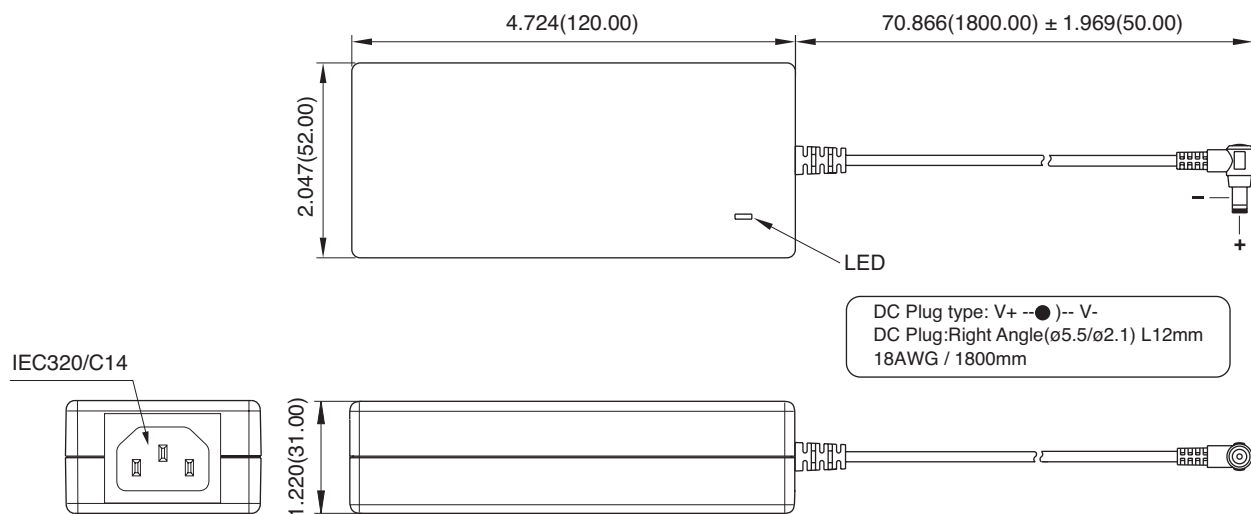
TRH70AXXX Model No.	-XX DC Plug Type	E OVP	XX DC Cable Length and Type
			01: 720mm
			02: 1220mm
			03: 1800mm
			11: 720mm with Ferrite Core
			12: 1220mm with Ferrite Core
			13: 1800mm with Ferrite Core
			* 16AWG / UL1185 FOR 12V,15V,18V,19V
			* 18AWG / UL1185 FOR 24V,28V,36V,48V



Mechanical Dimensions

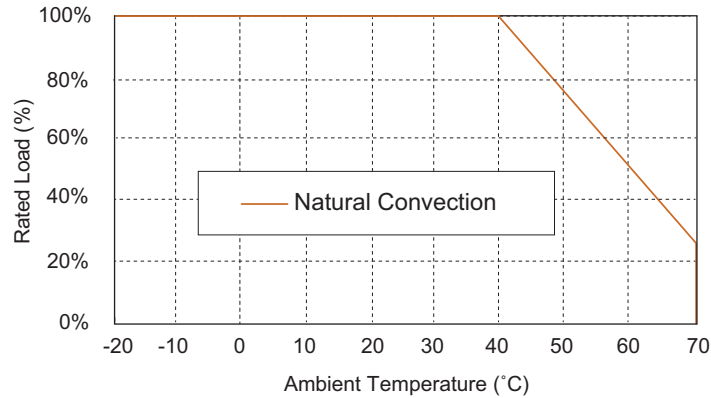
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 1)	VOLTAGE ACCURACY (NOTE 2)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	AVERAGE EFFICIENCY MIN. (NOTE 5)
TRH70A120	12 V	5.80 A	1%	\pm 2%	\pm 1%	\pm 4%	89%
TRH70A150	15 V	4.65 A	1%	\pm 2%	\pm 1%	\pm 3%	89%
TRH70A180	18 V	3.90 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH70A190	19 V	3.70 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH70A240	24 V	3.00 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH70A280	28 V	2.50 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH70A360	36 V	2.00 A	1%	\pm 2%	\pm 1%	\pm 2%	89%
TRH70A480	48 V	1.50 A	1%	\pm 2%	\pm 1%	\pm 2%	89%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	1.5A max.
Inrush Current	Cold Start@25°C 50A max.@240Vac
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	Continuous(Auto Recover)
Over Voltage Protection	TVS Component to Clamp
Temperature Coefficient	±0.05%/°C

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-6-3, EN61000-3-2,EN61000-3-3 EN55024, EN61204-3, EN61000-6-1
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Operating Temperature	-20-70°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
Switching Frequency	65KHz Typical
MTBF ... MIL-HDBK-217F, GB, at 25°C/115VAC	200Khrs min.
Altitude	5000m
Dimensions	4.724 x 2.047 x 1.220 inches (120.00 x 52.00 x 31.00 mm)
Weight	300 g
AC Inlet	IEC320/C14

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRH100A SERIES

100 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range: 90-264VAC
- ◆ Active PFC Meets EN61000-3-2
- ◆ Conductive EMI Meets CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
(Output Cable Length \leq 1800mm)
(TRH100A120-150: Output Cable Length \leq 1220mm)
(TRH100A180-480: Output Cable Length \leq 1800mm)



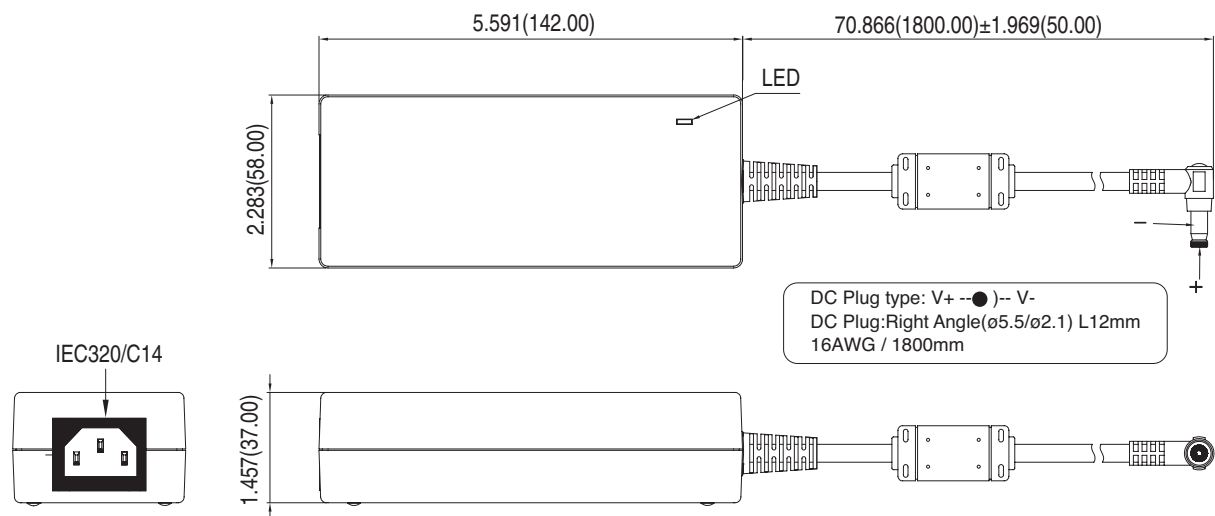
Ordering information

TRH100AXXX- Model No.	XX DC Plug Type	X OVP E: WITH OVP	XX DC Cable Length and Type 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core* 13: 1800mm with Ferrite Core 14: 1000mm with Ferrite Core 21: 720mm with two Ferrite Core 22: 1220mm with two Ferrite Core 23: 1800mm with two Ferrite Core *UL2464 For all models
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Mechanical Dimensions

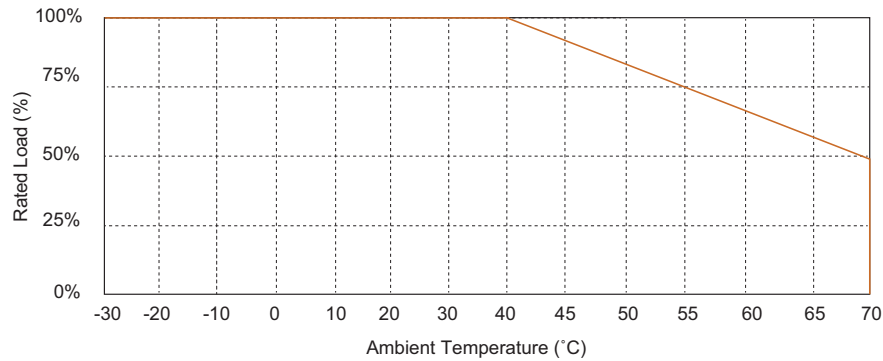
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	MIN. LOAD	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE SETPOINT	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)
TRH100A120	12 V	0 A	8.34 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	89%
TRH100A135	13.5 V	0 A	7.33 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	89%
TRH100A150	15 V	0 A	6.67 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 4\%$	89%
TRH100A180	18 V	0 A	5.56 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH100A190	19 V	0 A	5.26 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH100A240	24 V	0 A	4.17 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH100A280	28 V	0 A	3.54 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH100A360	36 V	0 A	2.78 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%
TRH100A480	48 V	0 A	2.1 A	1%	$\pm 2\%$	$\pm 1\%$	$\pm 2\%$	89%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	120A max. @240Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection	Yes

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-3-2 EN61000-3-3, EN55024 EN61204-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	-30°C-70°C, 40°C-70°C with 1.67%/°C Derating
Storage Temperature	-40-85°C
Cooling	Natural Convection
Switching Frequency	65KHz Typical
Operating Altitude	Sea Level to 5000m
AC Inlet	IEC320/C14
Dimensions	5.591 x 2.283 x 1.457 inches (142.00 x 58.00 x 37.00 mm)
Weight	485 g

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC with full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% full load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TRH150A SERIES

150 WATT, LEVEL VI EFFICIENCY

Features

- ◆ Universal Input Range: 90-264VAC
- ◆ Active PFC Meets EN61000-3-2
- ◆ Conductive EMI Meets CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Over Voltage Protection
- ◆ CoC Tier 2 & DoE Level VI
- (Output Cable Length \leq 1200mm)
- (TRH150A120: Output Cable Length \leq 950mm)
- (TRH150A150~480: Output Cable Length \leq 1220mm)



Ordering information

TRH150AXXX-
Model No. XX
DC Plug Type X
OVP
E: WITH OVP XX
DC Cable Length and Type
471: 950mm with Ferrite Core
12: 1200mm with Ferrite Core
*UL2464 For all models

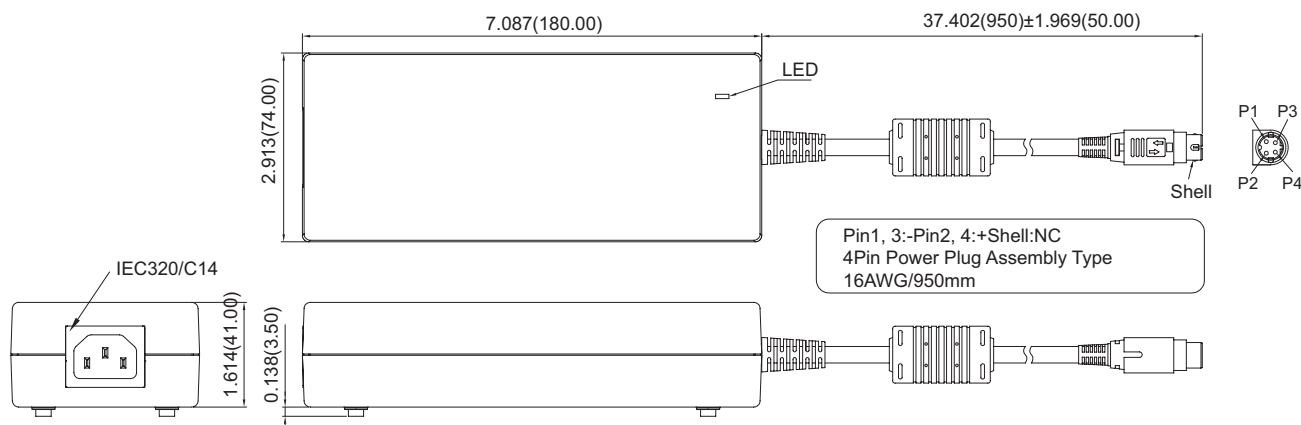


Approval
Pending

Mechanical Dimensions

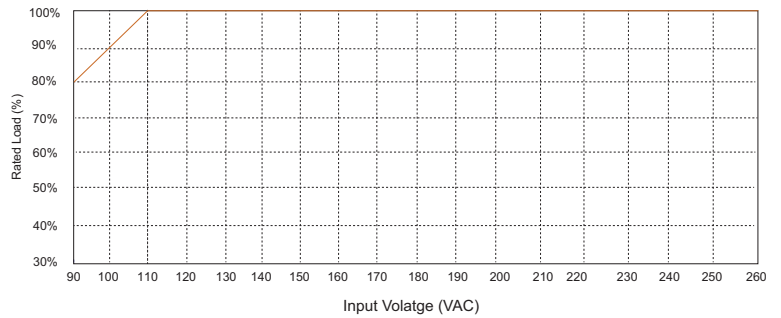
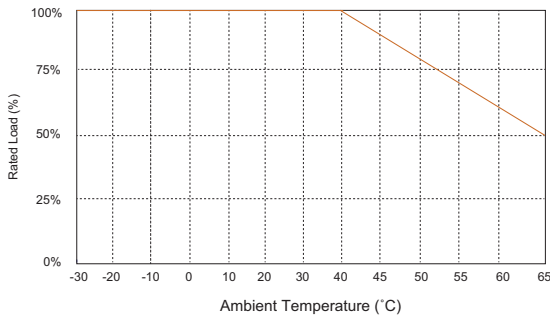
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX \pm 0.02
Millimeters: X.XX \pm 0.5



MODEL NUMBER	OUTPUT VOLTAGE	MIN. LOAD	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE SETPOINT	LINE REGULATION	LOAD REGULATION	% EFF. (Typ.)
TRH150A120	12 V	0 A	12.50 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A150	15 V	0 A	10.00 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A180	18 V	0 A	8.34 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A190	19 V	0 A	7.90 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A240	24 V	0 A	6.25 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A280	28 V	0 A	5.36 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A360	36 V	0 A	4.17 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%
TRH150A480	48 V	0 A	3.13 A	2%	\pm 2.5%	\pm 1%	\pm 5%	89%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	120A max. @240Vac
Conducted EMI	CISPR/FCC Class B
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	16ms typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection	Yes

SAFETY AND EMISSION

Emission and Immunity	EN55022 Class B, FCC Part 15 Class B, EN61000-3-2 EN61000-3-3, EN55024 EN61204-3
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1

GENERAL SPECIFICATIONS

Isolation	Input to output = 4,242VDC
Operating Temperature	-30°C-65°C, 40°C-65°C with 2%/°C Derating
Storage Temperature	-40-85°C
Cooling	Natural Convection
Switching Frequency	67KHz Typical
AC Inlet	IEC320/C14
Dimensions	7.087 x 2.913 x 1.614 inches (180.00 x 74.00 x 41.00 mm)
Weight	950 g

NOTE

1. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
2. Voltage setpoint at 60% full load.
3. Line regulation measured from 100VAC to 240VAC with full load.
4. Load regulation measured from 60% to full load and from 60% to 20% load (60% +/- 40% full load).
5. Average Efficiency measured at 25%, 50%, 75%, 100% load and input voltage is 115Vac / 230Vac.

TR30P SERIES

30 WATT, POE ADAPTER

Features

- ◆ 30W Single Output
- ◆ Universal Input Range 90-264VAC
- ◆ High Efficiency to 88%
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ CEC & ErP Level V
- ◆ Class I

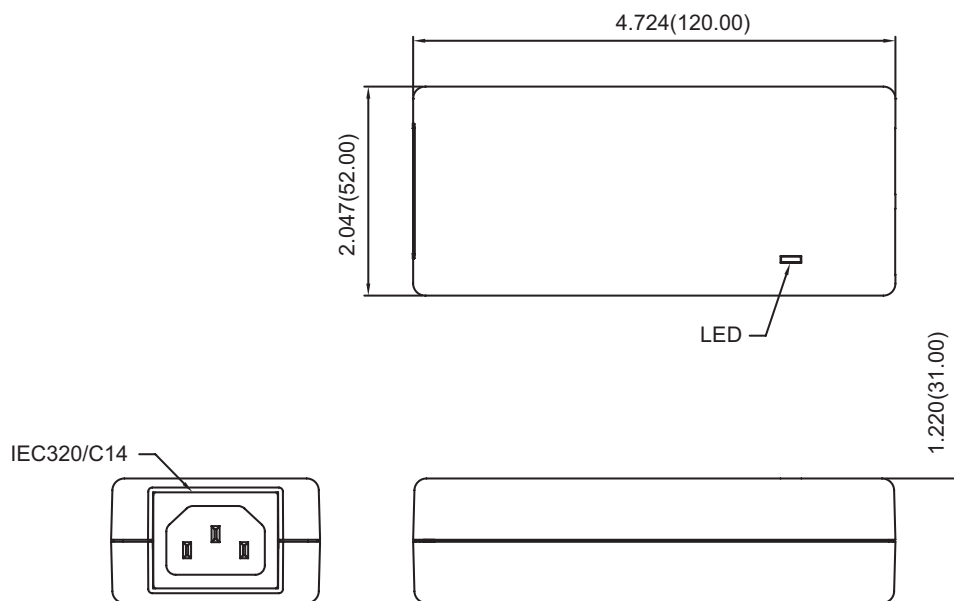


Ordering information

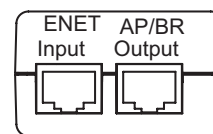
TR30P-480-XX- XX
Model No. 01: 30W Power Adapter with Output Lightning Protection
 02: 30W Power Adapter

Mechanical Dimensions

All Dimensions in Inches (mm)
Tolerance Inches: X.XXX=±0.02
 Millimeters: X.XX=±0.5

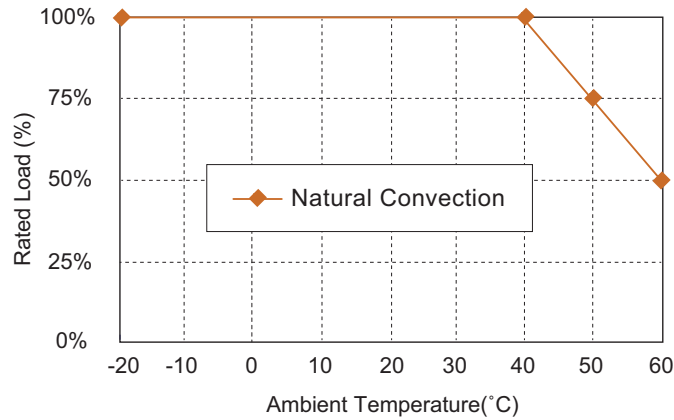


PIN	Input	PIN	Output
1	TX(+)	1	TX(+)
2	TX(-)	2	TX(-)
3	RX(+)	3	RX(+)
4	NC	4	DC+
5	NC	5	DC+
6	RX(-)	6	RX(-)
7	NC	7	GND
8	NC	8	GND



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 2)	VOLTAGE ACCURACY (NOTE 1)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
TR30P-480 -01	48 V	0.63 A	150 mV	±2%	±0.5%	±1%	88%
TR30P-480 -02	48 V	0.63 A	150 mV	±2%	±0.5%	±1%	88%
TR30P-560 -01	56 V	0.54 A	150 mV	±2%	±0.5%	±1%	88%
TR30P-560 -02	56 V	0.54 A	150 mV	±2%	±0.5%	±1%	88%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Input Current	0.8A max.
Inrush Current	Cold Start@25°C 70A max. @240Vac
Leakage Current	3.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	(Auto Recovery)
Over Current Protection	Yes
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

Isolation	Input to output= 4,242VDC
Switching Frequency	65KHz Typical
Operating Temperature	-20-60°C (see derating curve)
Storage Temperature	-20-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200Khrs min.
Altitude	2000m
Dimensions	4.724 x 2.047 x 1.22 inches (120.00 x 52.00 x 31.00 mm)
Weight	158 g (0.35 Pounds)

NOTE

1. Voltage accuracy is set at 60% full load and 25°C Ta.
2. Add a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from 100Vac to 240VAC with full load.
4. Load regulation is measured from 60% to 100% full load and from 60% to 20% full load (60% +/- 40% load).
5. Typical efficiency with 230VAC and max. load at 25°C.

TRG60A-POE-L SERIES

60 WATT, POE ADAPTER

Features

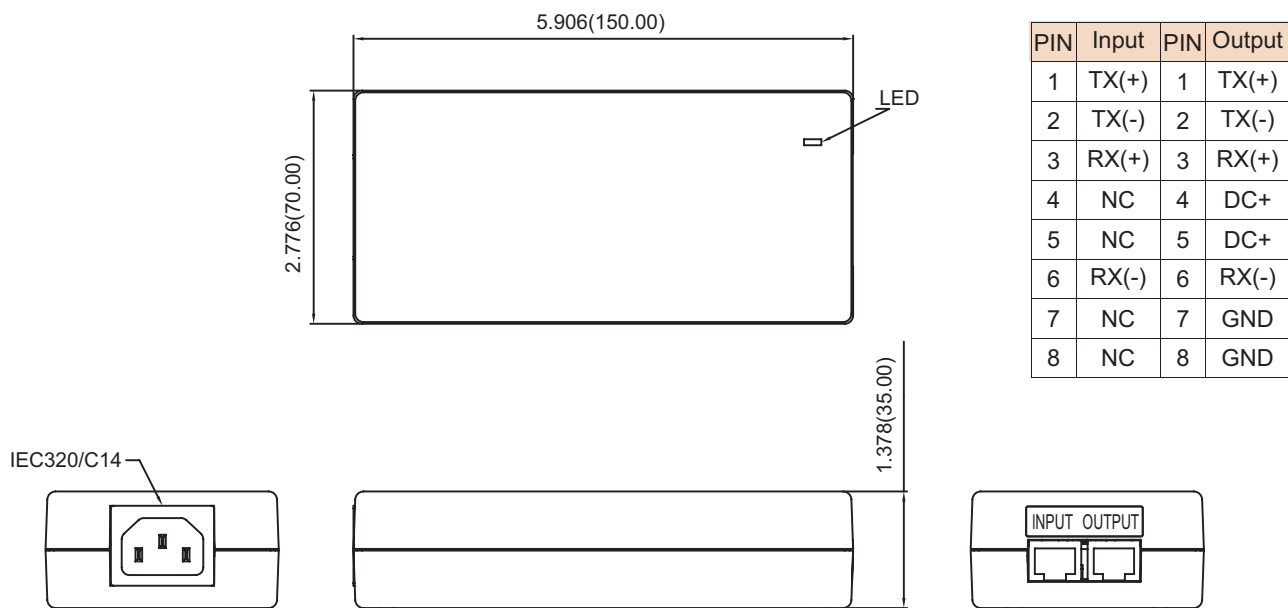
- ◆ 60W Single Output
- ◆ Universal Input Range 90-264VAC
- ◆ CEC & ErP Level V
- ◆ EN55022 Class B and CISPR/FCC Class B
- ◆ Continuous Short Circuit Protection
- ◆ Output Lightning Protection
- ◆ Class I



Mechanical Dimensions

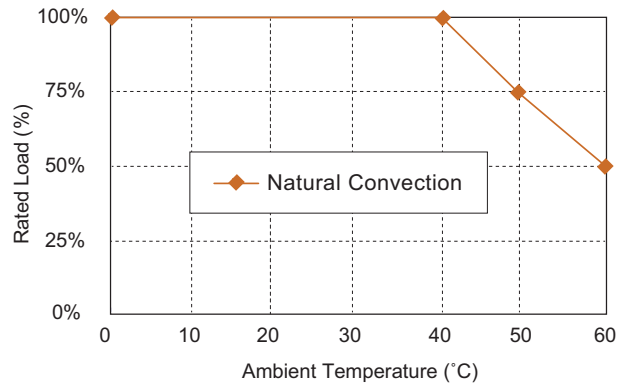
All Dimensions in Inches (mm)

Tolerance Inches: X.XXX=±0.02
Millimeters: X.XX=±0.5



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE (NOTE 2)	VOLTAGE ACCURACY (NOTE 1)	LINE REGULATION (NOTE 3)	LOAD REGULATION (NOTE 4)	% EFF. (Typ.) (NOTE 5)
TRG60A-POE-L	48 V	1.2 A	150 mV	±2%	±1%	±2%	88%

Derating Curve



Specifications

All Specifications Typical At Nominal Line, 75% Load and 25°C Unless Otherwise Noted

INPUT SPECIFICATIONS

Voltage	90-264Vac
Frequency	47 to 63Hz
Inrush Current	Cold Start@25°C 80A max. @240Vac
Leakage Current	1.5mA max.

OUTPUT SPECIFICATIONS

Hold-up Time	8ms typ. @115Vac
Short Circuit Protection	(Auto Recovery)
Over Current Protection	Auto-Recovery
Temperature Coefficient	±0.05%/°C

GENERAL SPECIFICATIONS

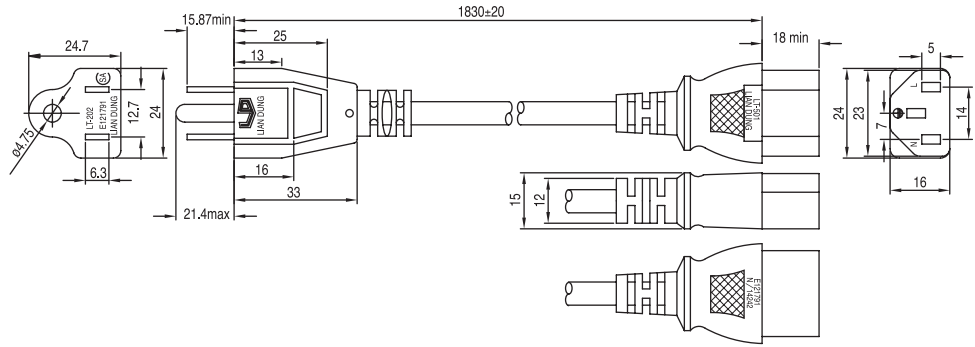
Isolation	Input to output= 4,242VDC
Switching Frequency	65KHz Typical
Operating Temperature	0-60°C (see derating curve)
Storage Temperature	-25-85°C
Humidity	93% RH max. Non condensing
Cooling	Natural Convection
MTBF MIL-HDBK-217F, GB, 25°C/115VAC	200K hrs min.
Altitude	2000m
Dimensions	5.906 x2.776 x 1.378 inches (150.00 x 70.00 x 35.00 mm)
Weight	348 g (0.77 Pounds)

NOTE

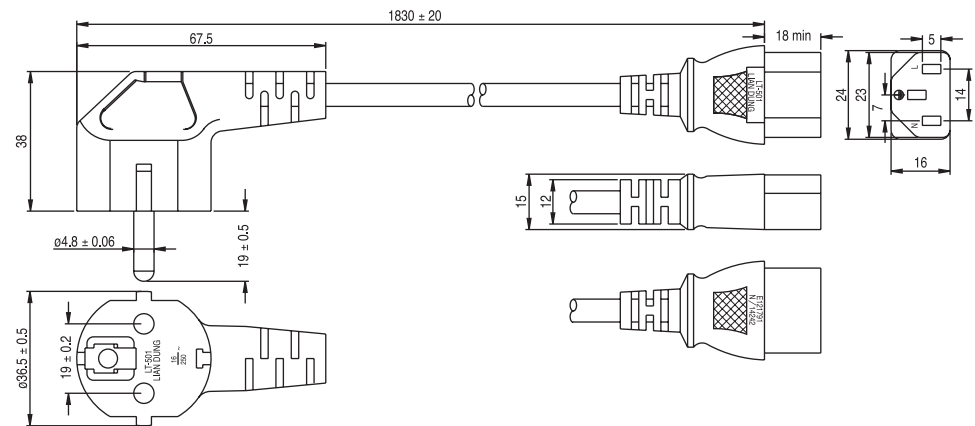
1. Voltage accuracy is set at 60% full load and 25°C Ta.
2. Add a 0.1µF ceramic capacitor and a 10µF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
3. Line regulation is measured from 100VAC to 240VAC with full load.
4. Load regulation is measured from 60% to 100% full load and from 60% to 20% full load (60% +/- 40% load).
5. Typical efficiency with 230 VAC and max. load at 25°C.

AC POWER CORD

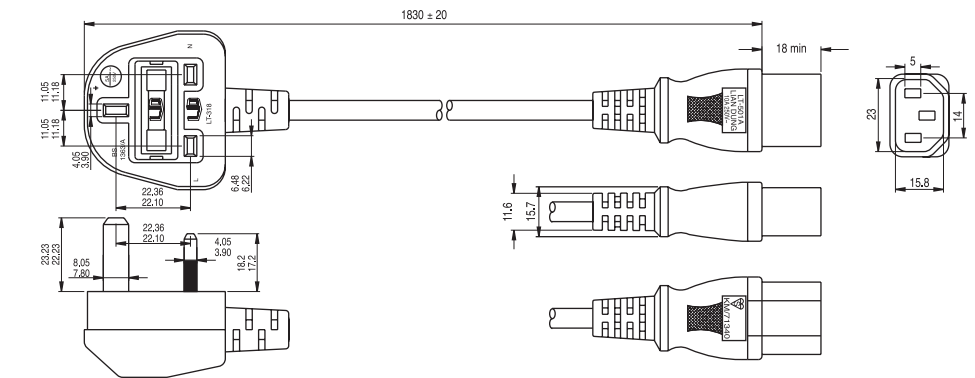
C13+US Plug
P/N: G7472205014
LT-202+501



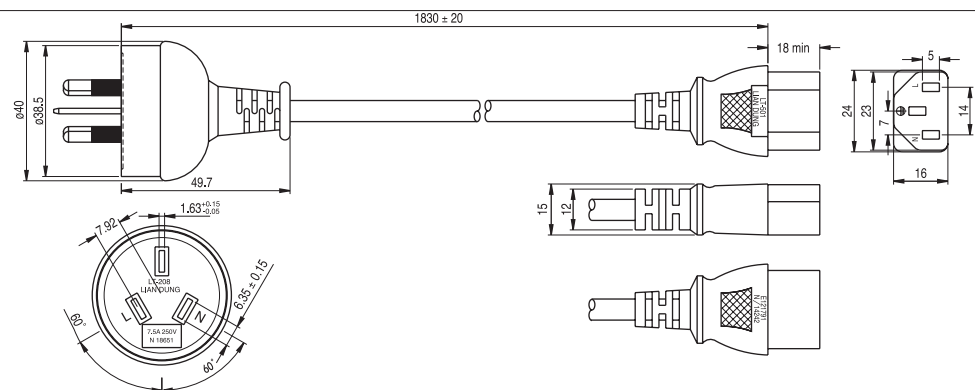
C13+European Plug
P/N: G7472205414
LT-322+501



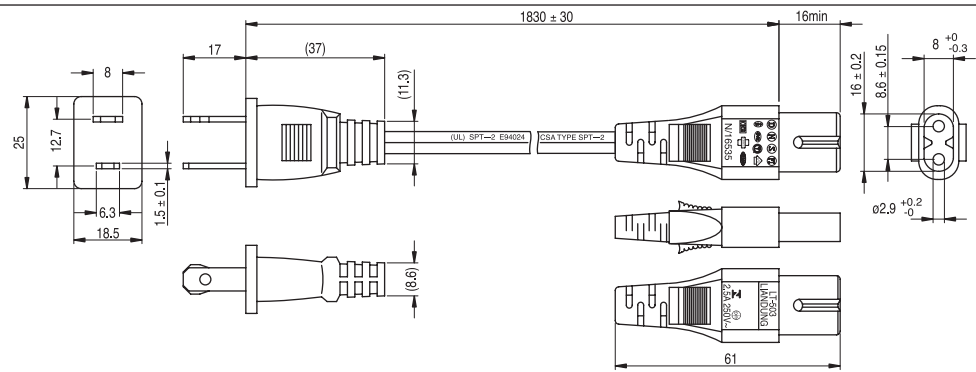
C13+UK Plug
P/N: G7472206214
LT-318+501A



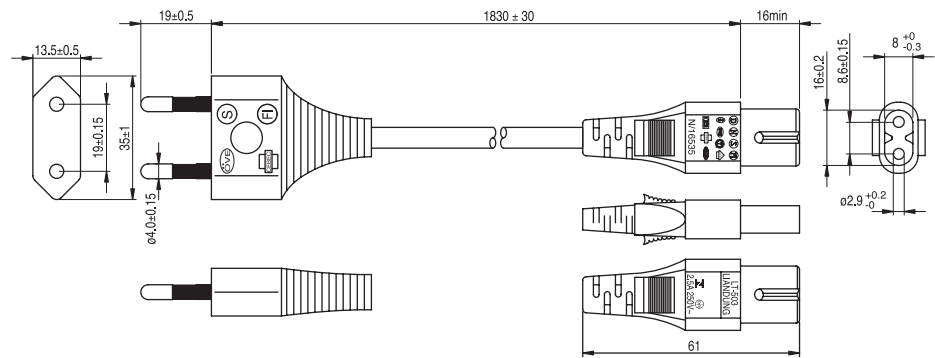
C13+Australian Plug
P/N: G7472205514
LT-208+501



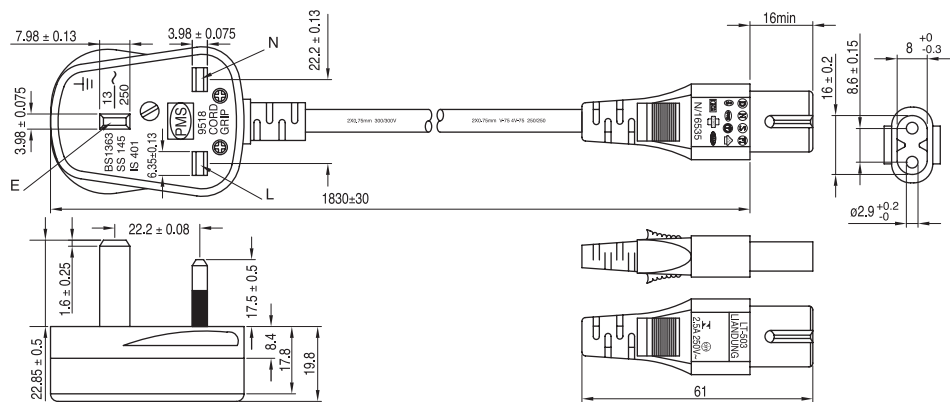
C7+US Plug
P/N: G7476205014
LT-301+503



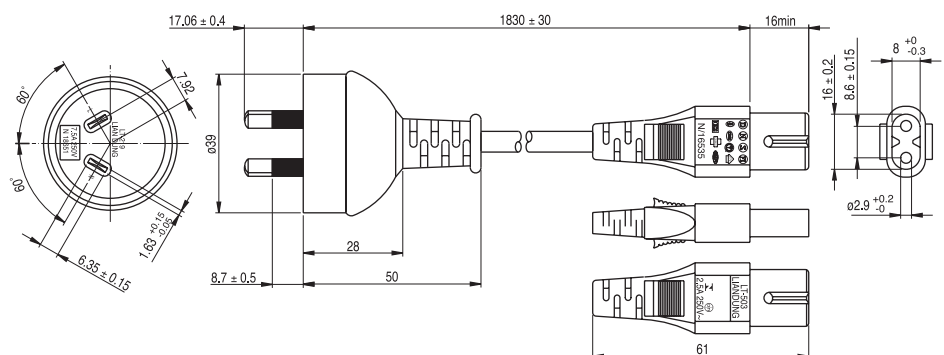
C7+European Plug
P/N: G7472205314
LT-207+503



C7+UK Plug
P/N: G7472205214
LT-317+503





C7+Australian Plug
P/N: G7472207014
LT-219+503



SWITCHING ADAPTER PART NUMBER CONFIGURATION

WALL-MOUNT AC-DC SWITCHING ADAPTER

TRXXXX -		XX		X	XX
Model No.	AC Plug Type	DC Plug Type		OVP Option	DC Cable Length and Type
A : USA 2 Pin	A : USA 2 Pin E : Europe 2 Pin U : British 3 Pin S : Australia 2 Pin	Straight/Inner+Outer-	Right Angle/Inner+Outer-	A: Without OVP Option	01: 720mm
E : Europe 2 Pin				E : With OVP Option	02: 1220mm
U : British 3 Pin		11 : 5.5 x 2.1 x 12mm	01 : 5.5 x 2.1 x 12mm		03: 1800mm
S : Australia 2 Pin		12 : 5.5 x 2.5 x 12mm	02 : 5.5 x 2.5 x 12mm		11: 720mm with Ferrite Core
		18 : 5.5 x 2.5 x 11mm	17 : 5.5 x 2.1 x 11mm		12: 1220mm with Ferrite Core
		23 : 5.5 x 2.1 x 9.5mm	19 : 5.5 x 2.5 x 10.5mm		13: 1800mm with Ferrite Core
		26 : 5.5 x 2.5 x 9.5mm	20 : 5.5 x 2.5 x 9mm		
		32 : 5.5 x 2.1 x 7.5mm	21 : 5.5 x 2.5 x 9.5mm		
		33 : 5.5 x 2.1 x 11.5mm	24 : 5.5 x 2.1 x 9.5mm		
		35 : 4.0 x 1.7 x 9.5mm	31 : 3.5 x 1.35 x 7.5mm		
		37 : 5.5 x 2.5 x 7.5mm	34 : 5.5 x 2.1 x 11.5mm		
		39 : 3.5 x 1.35 x 9mm	36 : 3.5 x 1.35 x 9mm		
		41 : 3.5 x 1.35 x 7.5mm	40 : 4.0 x 1.7 x 9.5mm		
		45 : 4.75 x 1.7 x 9.5mm	42 : 3.5 x 1.35 x 9.5mm		
		50 : 4.0 x 1.7 x 11mm	46 : 4.0 x 1.7 x 12mm		
			48 : 5 x 1.5 x 9.5mm		
		49 : 2.35 x 0.7 x 9.5mm			





DESK-TOP AC-DC SWITCHING ADAPTER

TRXXXXX -

XX

X

XX

Model No.	DC Plug Type		OVP Option	DC Cable Length and Type
	Straight/Inner+Outer-	Right Angle/Inner+Outer-	A: Without OVP Option E : With OVP Option	01: 720mm 02: 1220mm 03: 1800mm 11: 720mm with Ferrite Core 12: 1220mm with Ferrite Core 13: 1800mm with Ferrite Core
				
11	: 5.5 x 2.1 x 12mm	01 : 5.5 x 2.1 x 12mm		
12	: 5.5 x 2.5 x 12mm	02 : 5.5 x 2.5 x 12mm		
18	: 5.5 x 2.5 x 11mm	17 : 5.5 x 2.1 x 11mm		
23	: 5.5 x 2.1 x 9.5mm	19 : 5.5 x 2.5 x 10.5mm		
26	: 5.5 x 2.5 x 9.5mm	20 : 5.5 x 2.5 x 9mm		
32	: 5.5 x 2.1 x 7.5mm	21 : 5.5 x 2.5 x 9.5mm		
33	: 5.5 x 2.1 x 11.5mm	24 : 5.5 x 2.1 x 9.5mm		
35	: 4.0 x 1.7 x 9.5mm	31 : 3.5 x 1.35 x 7.5mm		
37	: 5.5 x 2.5 x 7.5mm	34 : 5.5 x 2.1 x 11.5mm		
39	: 3.5 x 1.35 x 9mm	36 : 3.5 x 1.35 x 9mm		
41	: 3.5 x 1.35 x 7.5mm	40 : 4.0 x 1.7 x 9.5mm		
45	: 4.75 x 1.7 x 9.5mm	42 : 3.5 x 1.35 x 9.5mm		
50	: 4.0 x 1.7 x 11mm	46 : 4.0 x 1.7 x 12mm		
		48 : 5 x 1.5 x 9.5mm		
		49 : 2.35 x 0.7 x 9.5mm		
	Straight/Inner-Outer+	Right Angle/Inner-Outer+		
				
05	: 5.5 x 2.1 x 12mm	03 : 5.5 x 2.1 x 12mm		
13	: 5.5 x 2.1 x 12mm	04 : 5.5 x 2.5 x 12mm		
14	: 5.5 x 2.5 x 12mm	16 : 5.5 x 2.1 x 11mm		
27	: 5.5 x 2.5 x 9.5mm	22 : 5.5 x 2.5 x 9.5mm		
		43 : 5.5 x 2.1 x 9.5mm		
		44 : 3.5 x 1.35 x 7.5mm		

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Cincon USA

1655 Mesa Verde Ave, Ste 180
Ventura, CA 93003 USA
Tel: (805) 639-3350
E-mail: info@cincon.com

POWER SUPPLY - REQUEST FOR QUOTE - by fax +886 2 2702 9852

Company _____ Date _____

First Name _____ Last Name _____

Country _____ City _____

Address _____

Telephone _____ Fax _____

E-mail _____

Product Type

Application

Output Voltages

Output Currents

Input Voltages

Efficiency

Isolation

Protection

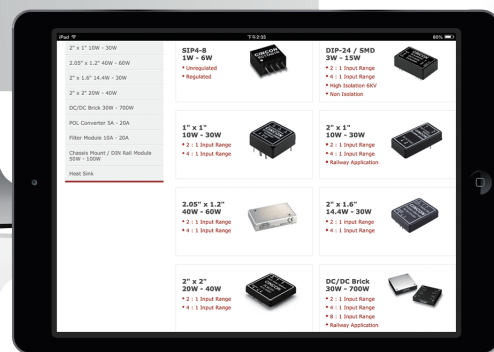
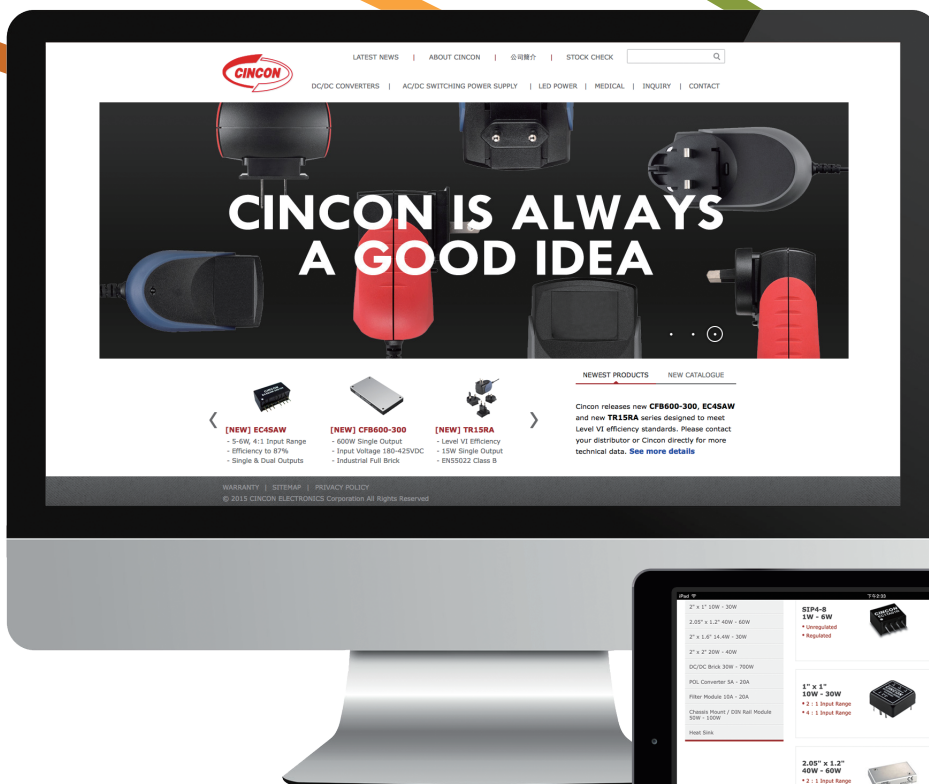
Storage / Operating Temperature Range

Safety Standard

EMC Standard

Mechanical Description

Remarks



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