Features

- 60W rated power
- 85–305V AC / 100–430V DC input
- 4200V AC isolation
- Efficiency up to 92%
- Standby power 0.1W typ.
- -40°C to +85°C operating temperature
- EN 55032 Class B with no external components
- Optional chassis (CT) or DIN rail (CR) mounting
- OVP, OCP, SCP
- 3 years warranty

36PMR60H-xy(CT)(CR)

60W Encapsulated PCB Mount AC/DC Power Supply



Image for illustration purposes only.

Description

The 36PMR60H-xy is a 60W encapsulated PCB mount AC/DC power supply with a single regulated output. The potted construction protects the converter from dust and moisture, and it meets EN 55032 Class B emissions with no external components. The same module is also offered in a screw-terminal chassis for panel mounting (CT) or DIN rail mounting (CR).

Certified to UKCA, CE, cURus, FCC and CB, and built to UL/EN/IEC 62368-1, CSA C22.2 No. 62368-1, EN 60335-1, EN 61558-1 and EN 61558-2-16, with EMC to CISPR 32 and EN 55032. The unit meets RoHS and REACH requirements. These are primarily used in industrial and commercial applications, and customised solutions are available upon request.

Part Number Breakdown

36PMR60H	-xy	CT / CR
Series Name	Output Voltage	Chassis Option Blank: PCB Mount CT: Chassis Mount CR: DIN Rail Mount

Models

Part Number	Input Voltage (V AC / V DC)	Output Voltage (V DC)	Output Current (mA max.)	Efficiency (% typ.)	Capacitive Load (µF max.)
36PMR60H-050(CT)(CR)	85–305V AC 100–430V DC	5.0	10000	89.0	20000
36PMR60H-120(CT)(CR)		12.0	5000	92.0	5000
36PMR60H-150(CT)(CR)		15.0	4000	92.0	3000
36PMR60H-240(CT)(CR)		24.0	2500	91.0	1800
36PMR60H-480(CT)(CR)		48.0	1250	91.0	470
36PMR60H-555(CT)(CR)		55.5	1090	91.0	470

Note: Only typical models are listed. Other models may be available upon request.

Input Specifications

Parameter	Specification
Nominal Input Voltage	100–277V AC
Input Frequency	47–63Hz
Input Current	115V AC: 1.8A max. 230V AC: 1.0A max.
Inrush Current	115V AC: 40A typ. cold start 230V AC: 60A typ. cold start
Leakage Current	0.1mA RMS max. @ 277V AC, 50Hz
No-load Power Consumption	0.1W typ.
Built-In Fuse	3.15A, 300V, slow blow

Output Specifications

Parameter	Specification
Output Voltage Accuracy	±2%
Line Regulation	±1% typ. @ full load
Load Regulation	±1.5% typ. @ 0–100% of rated
Ripple & Noise	80mVp-p typ., 150mVp-p max. Measured at 20MHz bandwidth using a 12" twisted pair wire terminated with a 0.1µF and 47µF parallel capacitor
Temperature Coefficient	±0.02%/°C typ.
Hold-Up Time	115V AC: 8mS typ. 230V AC: 60mS typ. @ full load
Minimum Load	No minimum load is required
Efficiency Conditions	Efficiency in the Models table is tested at 230V AC. The CT and CR chassis options reduce efficiency by 2%.

Protection

Parameter	Specification					
Overvoltage Protection (V DC max., Hiccup or Clamping by Zener Diode)	**5V:** 9	**12V:** 16	**15V:** 25	**24V:** 35	**48V:** 60	**55.5V:** 70
Overcurrent Protection	≥140% IOUT, automatic recovery					
Short Circuit Protection	Hiccup mode, automatic recovery					

Environmental Characteristics

Parameter	Specification
Operating Temperature	-40°C to +85°C (see derating curves)
Storage Temperature	-40°C to +105°C
Storage Humidity	10–95%RH
Maximum Case Temperature	+95°C max.
Operating Altitude	5000m max. (see derating curves)
Cooling Method	Natural convection
Vibration	10–55Hz, 5G, 30 minutes along X, Y and Z axes
Soldering Temperature (5S)	260°C typ.

Safety Standards

Parameter	Specification	
Certifications	UKCA, CE, cURus, FCC, CB, RoHS, REACH	
Safety Standards	UL 62368-1, CSA C22.2 No. 62368-1, EN 62368-1, IEC 62368-1, EN 60335-1, EN 61558-1, EN 61558-2-16	
Overvoltage Category	OVC III	
Safety Class	Class II	
Isolation Voltage	Input to output: 4200V AC min.	Tested for 1 minute
Insulation Resistance	Input to output: 100MΩ min.	500V DC, 25°C, 70% RH

Electromagnetic Compatibility (EMC)

Parameter	Specification	
EMI Standards	CISPR 32, EN 55032 Class B with no external circuit	
ESD	IEC/EN 61000-4-2:	Contact ±6kV, air ±8kV, Criteria B
Radiated Immunity	IEC/EN 61000-4-3:	10V/m, Criteria A
EFT / Burst	IEC/EN 61000-4-4:	±2kV, Criteria B
Surge	IEC/EN 61000-4-5:	Line to line ±2kV, Criteria B
Conducted Immunity	IEC/EN 61000-4-6:	10V RMS, Criteria A
Voltage Dips & Interruptions	IEC/EN 61000-4-11:	0%, 70%, Criteria B

Reliability

Parameter	Specification
MTBF	>1,000,000 hours @ 25°C (MIL-HDBK-217F)

General Specifications

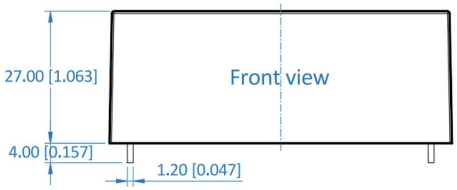
Parameter	Specification	
Switching Frequency	65kHz typ.	
Case Material	Black plastic, UL94 V-0	
Input/Output Connection	**Default** PCB pins	**CT / CR** Screw terminal block

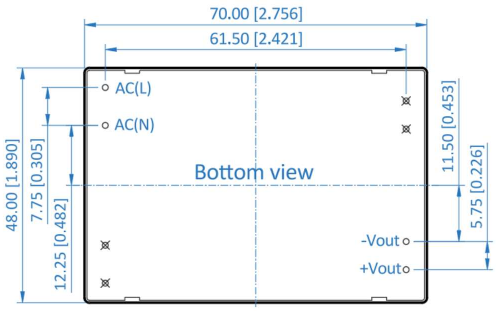
Weight & Dimensions

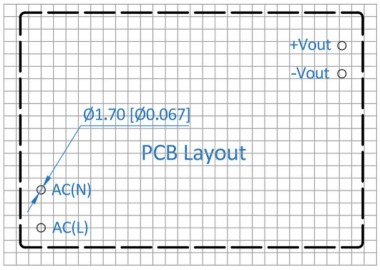
Parameter	Specification		
Dimensions (L x W x H) (excl. pins)	**Default** 70 x 48 x 27mm	**CT Suffix** 96 x 54 x 35.5mm	**CR Suffix** 96 x 54 x 40.1mm
Weight	**Default** 180g typ.	**CT Suffix** 227g typ.	**CR Suffix** 270g typ.

Mechanical Drawing

Default Package (PCB Mount)



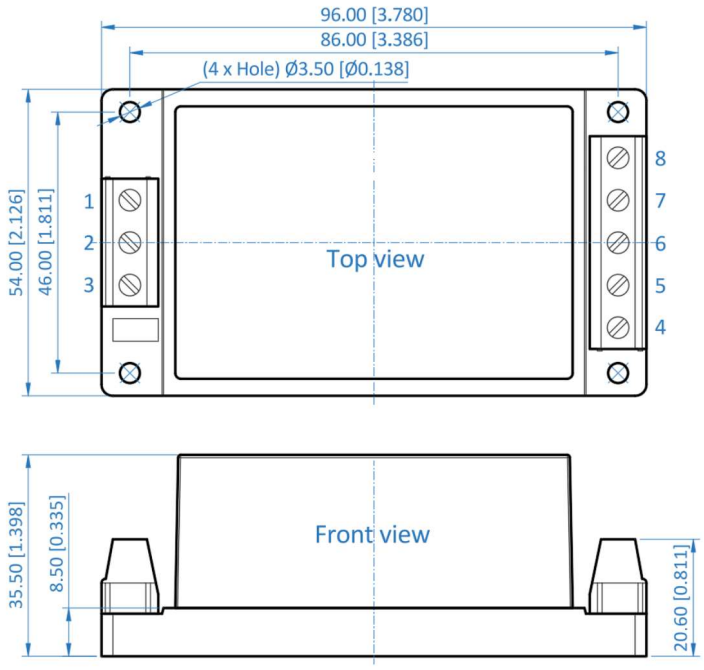




Pin	Single Output
1	AC (N)
2	AC (L)
3	-Vout
4	+Vout

Pin thickness tolerance: ±0.15mm [±0.006in].
Pin distance tolerance: ±0.50mm [±0.020in].
PCB layout footprint grid: 2.54 x 2.54mm.
Dimensions in millimetres [inches], tolerance of ±1.00mm [±0.040in].

CT Suffix: Chassis Mount



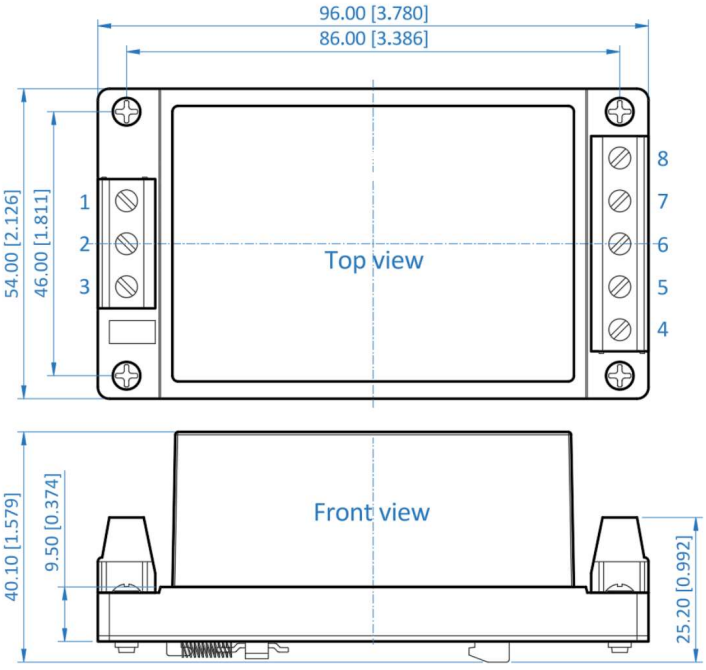
Pin	Single Output
2	AC (N)
3	AC (L)
4	+Vout
8	-Vout
1, 5, 6, 7	N/C

Tightening torque: 0.4Nm max.

Wire gauge to chassis: #12–24 AWG.

Dimensions in millimetres [inches], tolerance of ±1.00mm [±0.040in]

CR Suffix: DIN Rail Mount



Pin	Single Output
2	AC (N)
3	AC (L)
4	+Vout
8	-Vout
1, 5, 6, 7	N/C

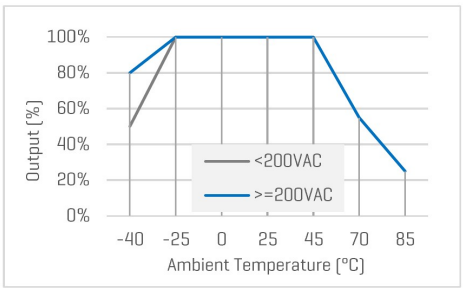
Tightening torque: 0.4Nm max.

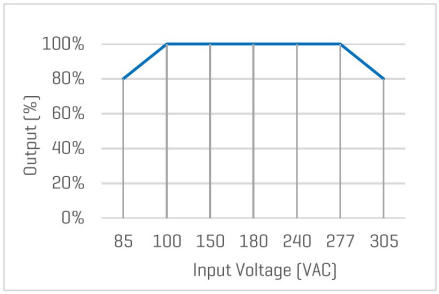
Wire gauge to chassis: #12–24 AWG.

Dimensions in millimetres [inches], tolerance of ±1.00mm [±0.040in].

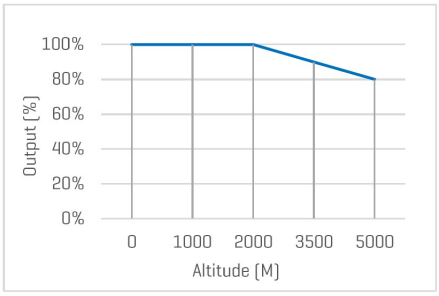
Performance Graphs

Derating: Output vs Ambient Temperature (Left) and Output vs Input Voltage (Right)

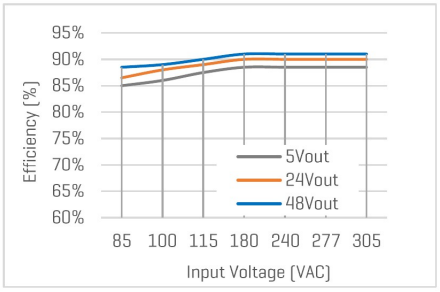


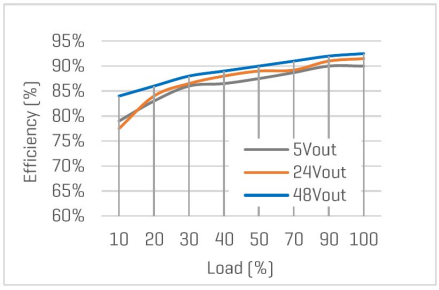


Output vs Altitude



Efficiency vs Input Voltage (Left) and Efficiency vs Load (Right)





Packaging

Parameter	Specification	
Packing Method	Blister tray, packed in cartons	
Quantity per Blister Tray	**Default** 20 pcs	**CT Suffix** 15 pcs
Quantity per Carton	**Default** 80 pcs	**CT Suffix** 60 pcs
Carton Gross Weight	**Default** 15.9kg approx.	**CT Suffix** 13.8kg approx.
Carton Size	390 x 365 x 250mm	

Notes

1. Unless otherwise stated, specifications are measured at TA = 25°C, humidity <75%, nominal input voltage and rated output load.

2. xy is the output voltage code: 050 = 5V, 120 = 12V, 150 = 15V, 240 = 24V, 480 = 48V, 555 = 55.5V. Add CT or CR after the code for the chassis options, for example 36PMR60H-240CR.