



75ACPDC_3 series

75W - Single Output AC-DC Converter

AC-DC Converter

75 Watt

- ⊕ **Input voltage:**
100-240VAC or 140-340VDC
- ⊕ **Standard ultra-thin product**
- ⊕ **Height only 30mm**
- ⊕ **Natural cooling**
- ⊕ **Operating temperature:**
-30°C to +70°C
- ⊕ **Short circuit protection**
- ⊕ **Overload and over voltage protection function**

Introducing our new ultra-thin power module, our new 75ACPDC_3 series, designed for compact and efficient performance! With a versatile input voltage range of 100-240VAC or 140-340VDC, this power module ensures seamless adaptability for a wide range of applications. Its ultra-thin design, with a height of only 30mm, makes it ideal for space-constrained installations without compromising functionality. Operating reliably across a temperature range of -30°C to +70°C, this module is naturally cooled, eliminating the need for additional cooling components. Enhanced safety features include short circuit protection, as well as overload and over voltage protection, providing robust performance and peace of mind. Compact, efficient, and dependable—this power module is the perfect fit for modern design challenges.



Common specifications

Short circuit protection	Power protection after short circuit at the output end, which can automatically restore output after eliminating the short circuit
Over current protection	110%Io (min.) 165%Io (max.) hiccup mode, recovers automatically after fault condition is removed
Over voltage protection	110% (min.) 130% (max.) Dual voltage loop voltage limiting. When the main voltage loop fails and causes an increase in output voltage, the secondary voltage loop (over voltage protection loop) operates in real time, limiting the output voltage to a safe range of values
Dielectric test	Input-output, 3000 VAC, 7mA @60S Input-case, 1500 VAC, 7mA @60S Output-case, 500 VAC, 7mA @60S
Operating temperature	-30°C - +70°C (with derating)
Storage temperature	-30°C - +80°C
Altitude	5000m (the ambient temperature derating of 0.5°C/100m for operating altitude higher than 2000m)
Working humidity	20~95% RH (non-condensing)
Storage humidity	10~95% RH (non-condensing)
Safety standard	UL 62368-1; EN62368-1; IEC 62368-1; GB 4943.1
MTBF	600,000 hours 230VAC, 25°C, 80% Load (MIL-HDBK-217F)
Weight	250g (typ.)
Dimension	99.0 × 97.0 × 30.0 mm

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance	5VDC	-2.0		+2.0	%
	others	-1.0		+1.0	
Ripple & noise (pk-pk)*	5VDC			100	mV
	12/15VDC			120	
	24VDC			150	
	36/48VDC			200	
Line regulation		-0.5		+0.5	%
Load regulation	5VDC	-2.0		+2.0	%
	others	-1.0		+1.0	
Turn on delay time	230VAC			2500	ms
Rise time	230VAC			50	ms
Hold up time	230VAC	20			ms

Note: *Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.

Isolation specifications

Item	Operating conditions	Min	Typ	Max	Units
Ground resistances				0.1	Ω
Insulation resistance	500VDC, 60S	100			MΩ

Example:

75ACPDC_05S3

75 = 75Watt; AC = AC-DC; PDC = Series; 05 = 5Vout; S = Single output; 3 = 3kVAC isolation

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Input voltage range (AC)		90		264	VAC
Rated input voltage (AC)		100		240	VAC
Frequency range		47		63	Hz
Input voltage range (AC)		140		340	VDC
Input current	100% load, 230VAC			0.85	A
Leakage current	240VAC/60Hz			1	mA
Input voltage		120	230	277	VAC
Ipeak (typ.)			70		A

- Please follow the installation instructions when use the power supply.
- Before power on test run after installation, please check and proofread the wiring on each terminal, make sure that the input and output, AC and DC, positive and negative, voltage and current values are correct, prevent the occurrence of wrong connection, and avoid damaging the power supply and user equipment.
- Before power on, please use a multimeter to measure whether the live wire, zero wire and ground wire are short circuited, and whether the output terminal is short circuited; it is better to start without load when power on.
- Do not exceed the nominal value of the power supply when using, so as not to affect the reliability of the product. If you need to change the output parameters of the power supply, please consult our technical department before using.
- In order to ensure the safety of use and reduce interference, please ensure that the grounding terminal is reliably grounded.
- If the power supply fails, please do not repair it without permission.

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EMC specifications					
EMI	CE	Conducted emission Test & Radiated emission Test	EN55032	Class B	
EMI	CE	Harmonic current emissions	EN 61000-3-2		
EMI	CE	Voltage fluctuations & flicker	EN 61000-3-3		
EMS	CE	Electrostatic Discharge (ESD)	EN 61000-4-2	Air 8kV / contact 6kV	Criteria B
EMS	CE	Radio-Frequency Electromagnetic Field Susceptibility Test-RS	EN 61000-4-3	80MHz-1GHz 10V/m	Criteria B
EMS	CE	Electrical Fast Transient / Burst-EFT	EN 61000-4-4	±2kV, (5 or 100) kHz	Criteria B
EMS	CE	Surge Immunity Test	EN 61000-4-5	CM±2kV/DM ±1kV	Criteria B
EMS	CE	Conducted Radio Frequency Disturbances Test-CS	EN 61000-4-6	10Vr.m.s;	Criteria A
EMS	CE	Power Frequency Magnetic Field Test	EN 61000-4-8	30A/m	Criteria A
EMS	CE	Voltage Dips	EN 61000-4-11	0%/100%/0.5 Period 70%/30%/25 Period 0%/100%/250 Period	Criteria C Criteria B Criteria B

Note: The power supply is considered a component which will be installed into a terminal equipment. All EMC test should be confirmed with the final equipment.

Product Selection Guide

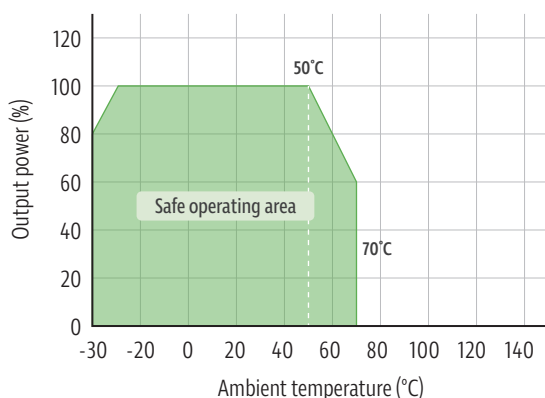
Approval	Part number	Output Power (W)	Input voltage (VAC)	Output voltage (VDC)	Default voltage (Min./Max)	Voltage ADJ. Range (Min./Max)	Output Current (A)	Efficiency* (%)	Efficiency** @110 VAC (%) typ.	Efficiency** @230 VAC (%) typ.	Max. Capacitive Load (µF)
	75ACPDC_05S3	60.0	100-240	5	5/5.1	4.5/5.5	0-12.0	83.0	83.0	83.0	6000
	75ACPDC_12S3	72.0	100-240	12	12/12.2	10.8/13.2	0-6.00	85.0	85.0	85.0	3600
	75ACPDC_15S3	75.0	100-240	15	15/15.2	13.5/16.5	0-5.00	85.0	85.0	85.0	3000
	75ACPDC_24S3	74.4	100-240	24	24/24.3	21.6/26.4	0-3.10	85.0	85.0	85.0	1200
	75ACPDC_36S3	75.6	100-240	36	36/36.4	33.0/39.0	0-2.10	86.0	86.0	86.0	150
	75ACPDC_48S3	76.6	100-240	48	48/48.4	44.0/52.0	0-1.60	86.0	86.0	86.0	100

Note: * All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.

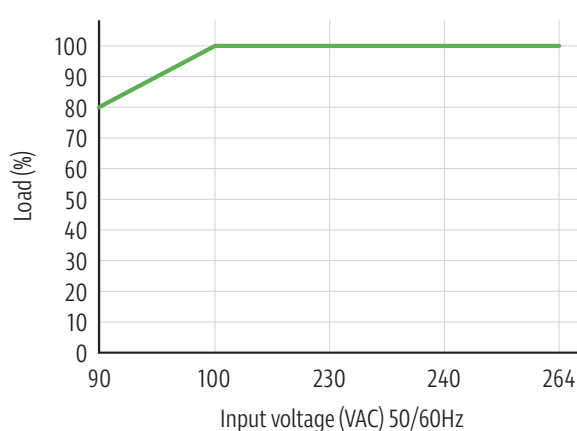
** 100% load, Ta = 25°C

Typical characteristics

Temperature derating graph



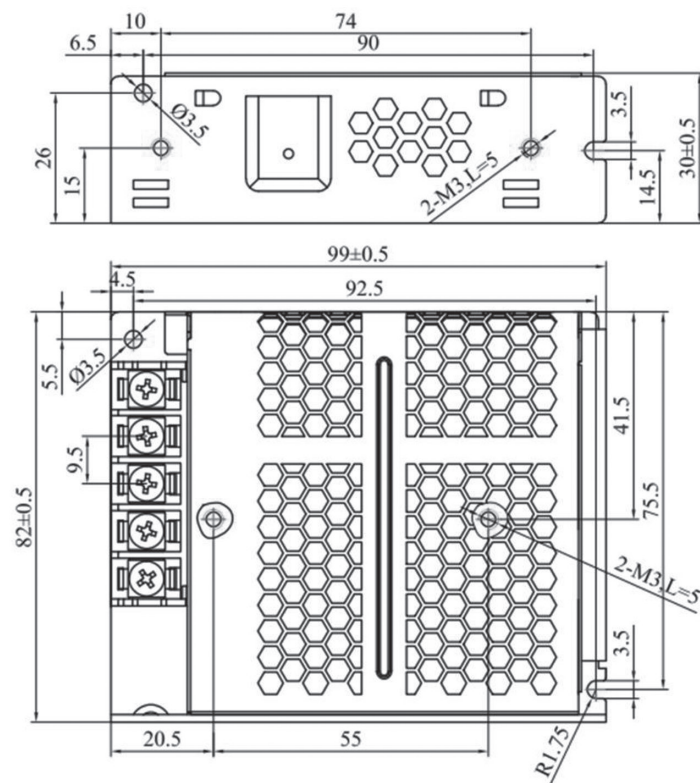
Load vs input voltage



Note:

In order to extend the service life, it is recommended to leave 30% more allowance when loading. For example, if the equipment needs 100W power, please choose the power supply over 130W.

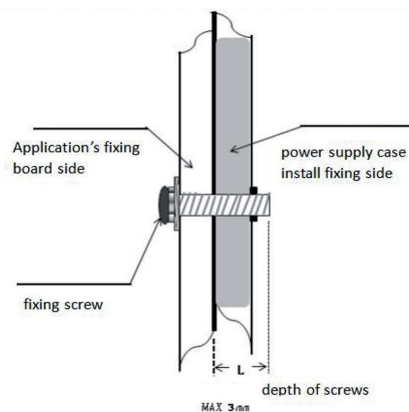
Mechanical dimensions



Input and Output Terminals Description

PIN Number	PIN Function	PIN Number	PIN Function
L	AC LINE	V+	DC output +
N	AC NEUTRAL	V-	DC output -
FG	EARTH		

Installation



Warning

- Use mounting screws by M4 * 6mm, 0.8N·m
- Max depth of screws into housing is 3mm
- Right picture with more details.
- Connector tightening torque: Input Terminal: 1.0N·m
Output Terminal: 1.0N·m