

- Universal 85-264VAC or 120-370VDC input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -40°C to +70°C
- High I/O isolation test voltage up to 4000VAC
- Industrial-grade design
- OVC III (EN61558-1 standards)
- Low standby power consumption, high efficiency
- Low ripple & noise
- Output short circuit, over-current, over-voltage protection
- Withstand 300VAC surge input for 5s
- DIN rail TS35X7.5/ TS35X15 mountable

ASDT60-20XXP



RoHS

3-Year Warranty

Description

ASDT60-20XXP products offer a high level of stability and immunity to noise, compliant with international IEC62368 standards for EMC and safety sepeciftions meet IEC/EN61000-4, CISPR32, EN55032, UL62368, IEC62368 and EN62368. These light weight AC-DC converters also have an extremely compact design for space saving and are ideal for applications such as industrial control equipment machinery and all kinds of applications in a harsh environment.

Selection Guide

Certification	Part No.	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range ADJ(V)*	Efficiency at 230VAC (%) Typ.	Capacitive Load (μF) Max.
/	ASDT60-2005P	32.5	5V/6.5A	4.9-5.5	84	20000
	ASDT60-2012P	54	12V/4.5A	10.8-13.8	88	10000
	ASDT60-2015P	60	15V/4.0A	13.5-18.0	89	8000
	ASDT60-2024P	60	24V/2.5A	21.6-29.0	90	4000
	ASDT60-2048P	60	48V/1.25A	43.2-55.2	91	680

Note: ASDT60-2024P-Q with conformal coating.
**The actual adjustment range may extend outside the values stated, care should be exercised to ensure that the output voltage and power levels remain within the published maximum values.

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Voltage Range	AC input	85	--	264	VAC
	DC input	120	--	370	VDC
Input Frequency		47	--	63	Hz
Input Current	115VAC	--	--	1.2	A
	230VAC	--	--	0.8	
Inrush Current	115VAC	--	30	--	
	230VAC	--	60	--	
Leakage Current	264VAC	0.25mA RMS max.			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	0% - 100% load		--	±2	--	%
Line Regulation	Rated load		--	±0.5	--	
Load Regulation	230VAC		--	±1.5	--	
Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	5V output	--	--	100	mV
		12V output	--	--	120	
		15V output	--	--	120	
		24V output	--	--	150	
		48V output	--	--	240	
Temperature Coefficient			--	±0.02	--	%/°C
Stand-by Power Consumption	230VAC input	5V/12V/15V/24V output	--	--	0.3	W
		48V output	--	--	0.4	
Short Circuit Protection			Hiccup, continuous, self-recovery			
Over-current Protection			≥120%Io, self-recovery			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Over-voltage Protection	5V output	≤7.5V	Output voltage clamp or hiccup		
	12V output	≤16V			
	15V output	≤20V			
	24V output	≤36V			
	48V output	≤60V			
Minimum Load		0	--	--	%
Start-up Delay Time		--	--	3	s
Hold-up Time	115VAC	--	15	--	ms
	230VAC	--	80	--	

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

General Specifications

Item		Operating Conditions		Min.	Typ.	Max.	Unit
Isolation	Input - output	Electric Strength Test for 1min., (leakage current<5mA)		4000	--	--	VAC
Operating Temperature				-40	--	+70	℃
Storage Temperature				-40	--	+85	
Storage Humidity				--	--	95	%RH
Operating Altitude				--	--	2000	m
Switching Frequency				--	65	--	kHz
Power Derating		-40℃ to -30℃	5V/12V/48V output	3.0	--	--	% /℃
			24V output	7.0	--	--	
			15V output	8.0	--	--	
		+45℃ to +70℃		2.0	--	--	% /℃
		85VAC - 100VAC		1.0	--	--	
Safety Standard		ASDT60-xyyyyP		UL/IEC62368-1, IS13252 (Part1) safety approved & EN62368-1, BS EN 62368-1 (Report); Design refer to EN61558-1			
		ASDT60-xyyyyP-Q		Design refer to UL/IEC62368-1, IS13252 (Part1) & EN61558-1, EN62368-1, BS EN 62368-1			
Safety Class				CLASS II			
MTBF		MIL-HDBK-217F@25℃		>300,000 h			

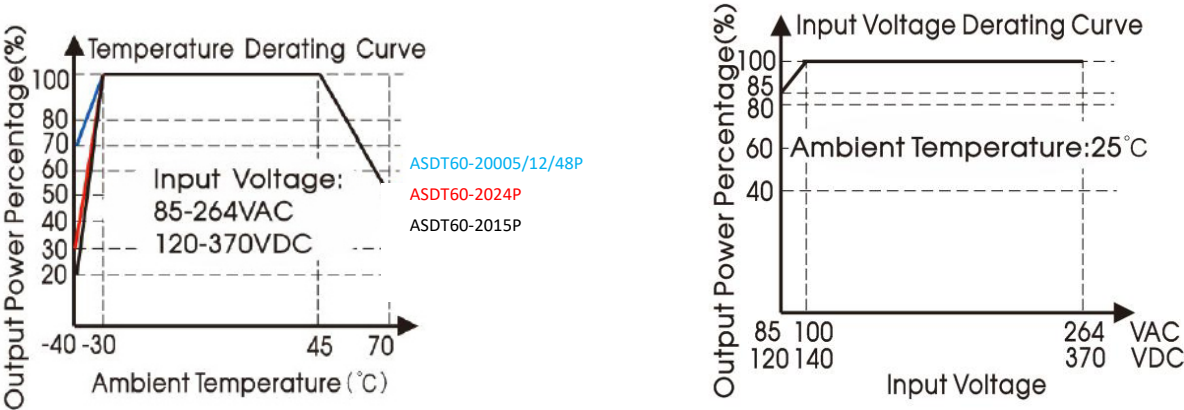
Mechanical Specifications

Case Material	Plastic, heat-resistant (UL94V-0)
Package Dimensions	92.66 x 52.00 x 58.00mm
Weight	175g (Typ.)
Cooling Method	Free air convection

EMC Specifications

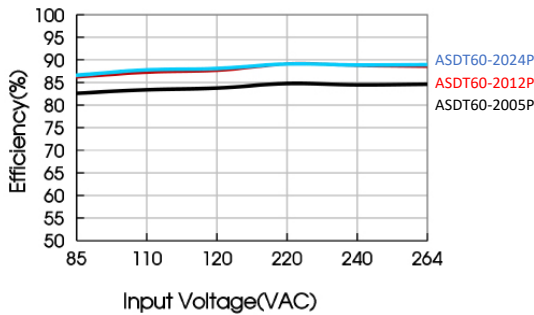
Emissions	CE	CISPR32/EN55032 CLASS B
	RE	CISPR32/EN55032 CLASS B
Immunity	ESD	IEC/EN61000-4-2 Contact ±6KV/Air ±8KV Perf. Criteria A
	RS	IEC/EN61000-4-3 10V/m Perf. Criteria A
	EFT	IEC/EN61000-4-4 ±2KV Perf. Criteria A
	Surge	IEC/EN61000-4-5 Line to line ±2KV Perf. Criteria A
	CS	IEC/EN61000-4-6 10Vr.m.s Perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11 100% dip 1 periods, 30% dip 25 periods,Perf. Criteria A 100% interruptions 250 periods

Product Characteristic Curves

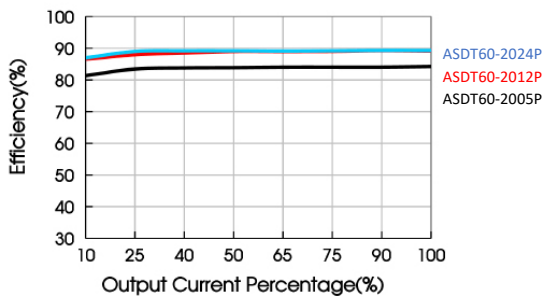


Product Characteristic Curves

Efficiency Vs Input Voltage (Full Load)



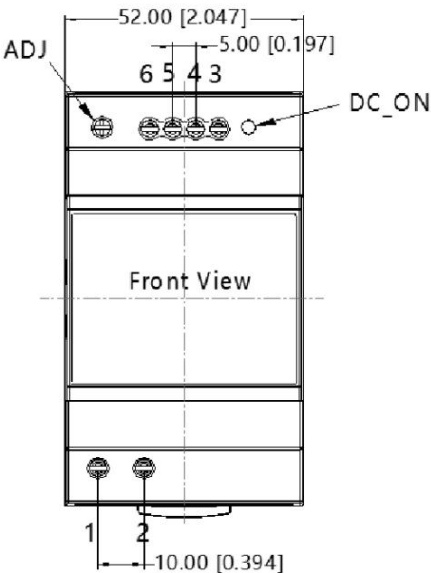
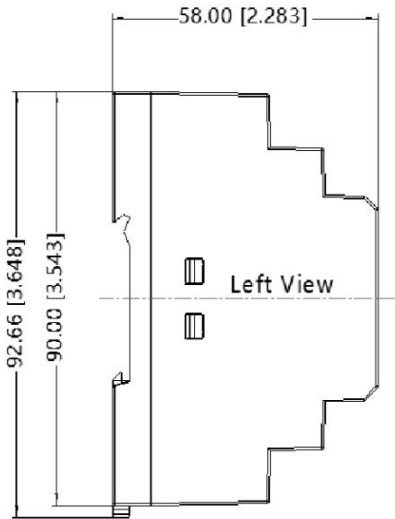
Efficiency Vs Output Load (Vin=230VAC)



Dimensions and Recommended Layout

units: mm [inch]
ADJ: built-in trimpot
wire range: 24-12 AWG
tightening torque: Max 0.4 N·m
mounting rail: TS35
general tolerances: ±1.0 [±0.039]

TERMINAL CONNECTIONS	
TERMINAL	Function
1	AC (L)
2	AC (N)
3	+Vo
4	+Vo
5	-Vo
6	-Vo



- Note:
- 1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25°C, humidity<75% with nominal input voltage and rated output load;
 - 2. All index testing methods in this datasheet are based on our company corporate standards;
 - 3. We can provide product customization service, please contact our technicians directly for specific information;
 - 4. Specifications are subject to change without prior notice.
 - 5. Products are related to laws and regulations: see "Features" and "EMC";