

DS2-120-U series

120W Constant Voltage metal case DIN-Rail Power Supply



■ Features:

- Universal AC input / Full range: 90 – 264VAC and 127 – 370VDC
- High Dielectric Strength: IN/OUT up to 4000VAC
- Protections: Over current / Short circuit / Over Voltage / Over temperature
- Wide operating ambient temperature range: -20°C ÷ +60°C
- Low ripple and noise
- Designed to install on TS35x7.5/TS35x15 Din Rail
- Ultra slim design: suitable for small chassis and narrow space installation
- Accepts AC or DC input (dual-use of same terminal)



MODEL NUMBERING

DS2	-	120	-	X	-	U
SERIES		RATED OUTPUT POWER		RATED OUTPUT VOLTAGE		INPUT VOLTAGE RANGE
DIN RAIL. METAL CASE, POWER SUPPLY, CONSTANT VOLTAGE DESIGN		120 MEANS 120W (NOT FOR ALL VOLTAGE VERSIONS, PLEASE CHECK DETAILS IN BELOW SPECIFICATION — OUTPUT SECTION)		X = 12 12V		U means 90~264VAC / 127~370VDC
				X = 24 24V		
				X = 48 48V		

ELECTRICAL SPECIFICATION

MODEL	DS2-120-12-U	DL2-120-24-U	DL2-120-48-U
OUTPUT			
RATED VOLTAGE	12V	24V	48V
RATED CURRENT	10A	5A	2.5A
ADJUSTABLE VOLTAGE RANGE (MIN.)	12V ÷ 14V	24V ÷ 28V	48V ÷ 53V
RATED POWER FOR	120W	120W	120W
LINE REGULATION	± 0.5%	± 0.5%	± 0.5%
LOAD REGULATION	± 1.0%	± 1.0%	± 1.0%
RIPPLE & NOISE (MAX.) [2]	100mV _{p-p}	120mV _{p-p}	150mV _{p-p}
HOLD UP TIME (MIN.)	16ms / 230VAC; 8ms / 115VAC		
CAPACITIVE LOAD (MAX.)	3000μF	1200μF	800μF

INPUT

VOLTAGE RANGE	AC INPUT	90 ÷ 264VAC
	DC INPUT	127 ÷ 370VDC

DS2-120-U series

120W Constant Voltage metal case DIN-Rail Power Supply



FREQUENCY RANGE	47 ÷ 63Hz		
EFFICIENCY (TYP.)	85%	88%	89%
AC CURRENT (MAX.)	1.6A / 230VAC; 3A / 115VAC		
INRUSH CURRENT (TYP.)	55A / 230VAC; 30A / 115VAC		

PROTECTIONS

OVER CURRENT	NORMAL TEMPERATURE	-150% Io, constant current mode, automatic recover after fault condition is removed
	LOW TEMPERATURE, HIGH TEMPERATURE	≥105%Io, constant current mode, automatic recover after fault condition is removed
SHORT CIRCUIT	RECOVERY TIME <3s AFTER SHORT CIRCUIT DISAPPEAR.	Constant current, continuous, self-recovery
OVER VOLTAGE	12V	≤16V (Output voltage turn off, re-power on for recover)
	24V	≤33V (Output voltage turn off, re-power on for recover)
	48V	≤60V (Output voltage turn off, re-power on for recover)
OVER TEMPERATURE		Output voltage turn off, re-power on for recver after the temperature drops.

WORKING ENVIRONMENT

WORKING TEMPERATURE	-20°C ÷ 60°C (Refer to Derating Curve)
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 85°C, 20 ÷ 90% RH non-condensing

SAFETY AND EMC REGULATIONS

SAFETY STANDARDS	Compliance to EN62368-1
WITHSTAND VOLTAGE	IN/OUT: 4000VAC (< 10mA / 1min)
EMC EMISSION	Compliance to EN55032 Class B, EN61000-3-2 Class A
EMC IMMUNITY	Compliance to: EN55035; EN61000-4-2, -3, -4, -5, -6, -11

OTHERS

MTBF (MIN.)	300 000h / 25°C per MIL-HDBK-217F
DIMENSIONS AND NET WEIGHT	36.00 x 125.00 x 100.00mm (L x W x H)
CASE MATERIAL	Metal (AL1100, SGCC)
NET WEIGHT	0.41kg

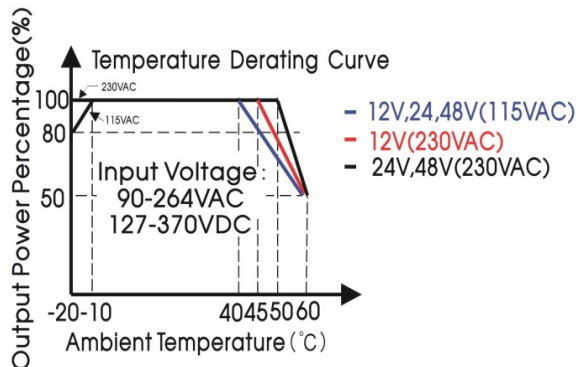
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, 25°C of ambient temperatur and humidity <75% RH.
2. Ripple & noise is measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μF i 47μF parallel capacitor.
3. Power supply is considered as component not indented to apply by end-user. Power supply meets safety and EMC standards however the final equipment with power supply must be re-quality to comply with EMC Directives.
4. Specifications are subject to change without prior notice.

DS2-120-U series

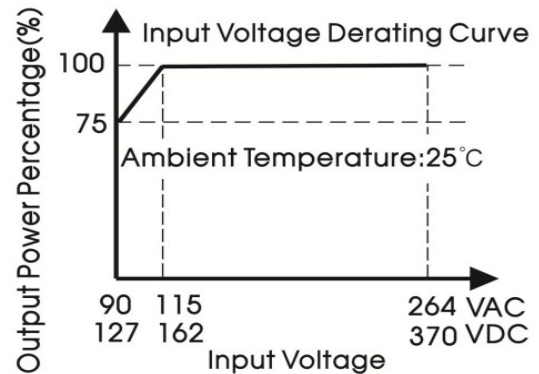
120W Constant Voltage metal case DIN-Rail Power Supply



DERATING CURVE

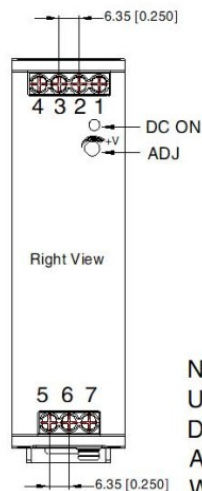
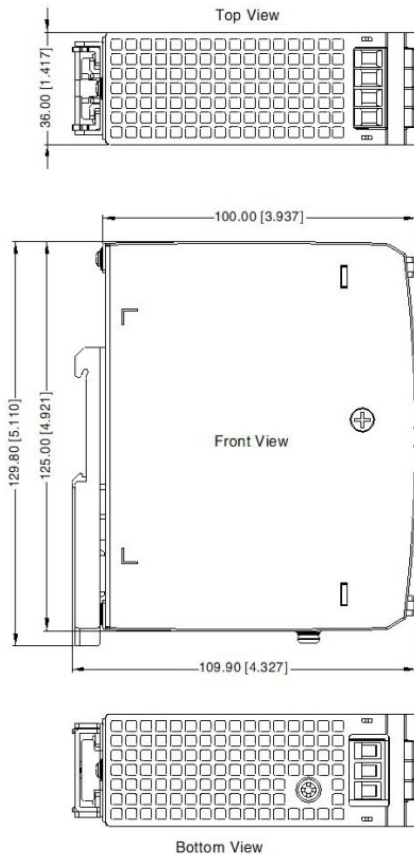
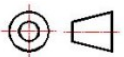


STATIC CHARACTERISTIC



MECHANICAL SPECIFICATION

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Mark
1	-Vo
2	-Vo
3	+Vo
4	+Vo
5	AC(N)
6	AC(L)
7	⏏

Note:

Unit: mm[inch]

DC ON: Output status indicator LED

ADJ: Output adjustable resistor

Wire range: Input: 26-10AWG(12-10AWG for pin7)

Output: 12V: 12-10AWG

24V: 16-10AWG

48V: 18-10AWG

Tightening torque: Max 0.79N · m

Mounting rail: TS35, rail needs to connect safety ground

General tolerances: $\pm 1.00[\pm 0.039]$