

DL2-60-U series

60W Constant Voltage class II DIN-Rail Power Supply



■ Features:

- Universal AC input / Full range: 85 – 264VAC and 120 – 370VDC
- High Dielectric Strength: IN/OUT up to 4000VAC
- Protections: Over current / Short circuit / Over Voltage
- Wide operating ambient temperature range: -40°C ÷ +70°C
- Over-voltage category OVC III (designed to meet EN61558-1)
- Low no load power consumption
- Isolation class II design
- Designet to install on TS35x7.5/TS35x15 Din Rail



MODEL NUMBERING

DL2	-	60	-	X	-	U
SERIES		RATED OUTPUT POWER		RATED OUTPUT VOLTAGE		INPUT VOLTAGE RANGE
DIN RAIL CLASS II POWER SUPPLY, CONSTANT VOLTAGE DESIGN		60 means 60W		X = 05	5V	U means 85~264VAC / 120~370VDC
				X = 12	12V	
				X = 15	15V	
				X = 24	24V	
				X = 48	48V	

ELECTRICAL SPECIFICATION

MODEL	DL2-60-05-U	DL2-60-12-U	DL2-60-15-U	DL2-60-24-U	DL2-60-48-U
OUTPUT					
RATED VOLTAGE	5V	12V	15V	24V	48V
RATED CURRENT	6.5A	4.5A	4.0A	2.5A	1.25A
ADJUSTABLE VOLTAGE RANGE (MIN.)	4.9V ÷ 5.5V	10.8V ÷ 13.8V	13.5V ÷ 18.0V	21.6V ÷ 29V	43.2V ÷ 55.2V
RATED POWER	32.5W	54W	60W	60W	60W
LINE REGULATION	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
LOAD REGULATION	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 1.5%
RIPPLE & NOISE (MAX.) [2]	100mV _{p-p}	120mV _{p-p}	120mV _{p-p}	150mV _{p-p}	240mV _{p-p}
HOLD UP TIME (TYP.)	80ms / 230VAC at full load; 15ms / 115VAC at full load				
CAPACITIVE LOAD (MAX.)	20000μF	10000μF	8000μF	4000μF	680μF
INPUT					
VOLTAGE RANGE	85 ÷ 264VAC				
	120 ÷ 370VDC				
FREQUENCY RANGE	47 ÷ 63Hz				
EFFICIENCY (TYP.)	84%	88%	89%	90%	91%
AC CURRENT (MAX.)	0.8A / 230VAC; 1.2A / 115VAC				
INRUSH CURRENT (TYP.)	60A / 230VAC; 30A / 115VAC				
NO LOAD POWER CONSUMPTION (MAX.)	0.3W	0.3W	0.3W	0.3W	0.4W

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PROTECTIONS

OVER CURRENT	Range: above 120% rated current				
	Type: hiccup mode, auto-recovery.				
SHORT CIRCUIT	Type: hiccup mode, auto-recovery.				
OVER VOLTAGE	≤ 7.5VDC	≤ 16VDC	≤ 20VDC	≤ 36VDC	≤ 60VDC

WORKING ENVIRONMENT

WORKING TEMPERATURE	-40°C ÷ 70°C (Refer to Derating Curve)
STORAGE TEMPERATURE AND HUMIDITY	-40°C ÷ 85°C, 10 ÷ 95% RH non-condensing
TEMPERATURE COEFFICIENT	± 0.02% / °C
OPERATING ALTITUDE	2000m

SAFETY AND EMC REGULATIONS

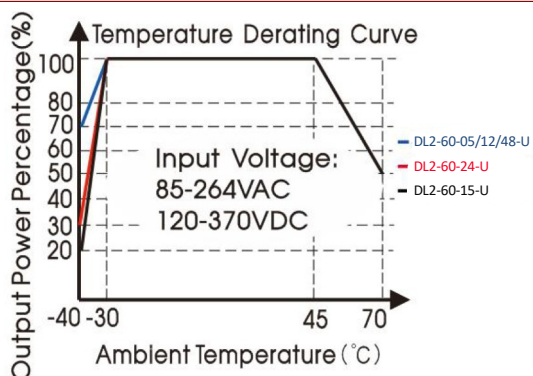
SAFETY STANDARDS	Designed to meet: EN62368-1; EN61558-1
WITHSTAND VOLTAGE	IN/OUT: 4000VAC (< 5mA / 1min)
EMC EMISSION	Designed to meet: EN55032
EMC IMMUNITY	Designed to meet: EN61000-4-2, -3, -4, -5, -6, -11

OTHERS

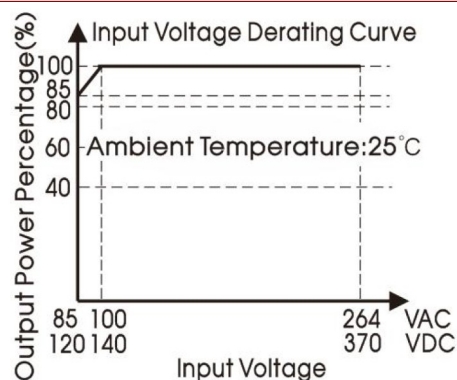
MTBF (MIN.)	300 000h / 25°C per MIL-HDBK-217F
DIMENSIONS AND NET WEIGHT	92.66 x 52.00 x 58.00mm (L x W x H) / 175g
CASE MATERIAL	Black plastic heat-resistant (UL94V-0)

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, 25°C of ambient temperature 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. AC/DC converter 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.

DERATING CURVE



STATIC CHARACTERISTIC



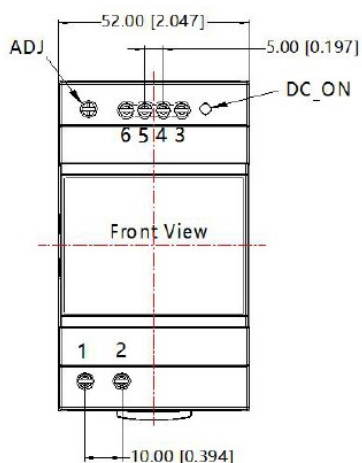
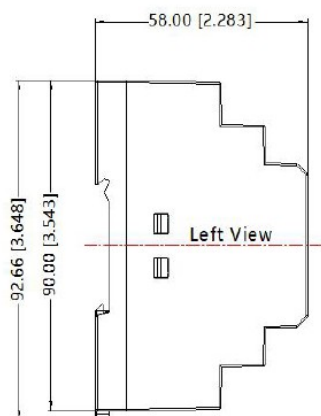
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MECHANICAL SPECIFICATION

THIRD ANGLE PROJECTION



Pin-Out	
Pin	DL2-60-U
1	AC(L)
2	AC(N)
3	+Vo
4	+Vo
5	-Vo
6	-Vo

Note:

Unit: mm[inch]

ADJ: adjustable resistance to change output voltage

Wire range: 24-12 AWG

Tightening torque: Max 0.4 N·m

Mounting rail: TS35

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