

DARFON DBL-170Series 170W single output power supply

Features

- DC wide range input (12 to 48Vdc)
- Protections: Short circuit/Over current auto recovery
- Over voltage/Over temperature power reset
- Constant current design (C.C.mode)
- Multiple dimming functions
- IP65/IP67 Design for indoor and outdoor use
- Suitable for LED and street lighting applications
- Comply with UL, TUV, CE, FCC, CQC safety regulation
- 5 years Warranty



DBL-170--XXXX □ Type A: IP65 grade · Adjust current by variable resistor internal or by 1~10V/PWM signal/Resistor external
 Type B: IP67grade · Dimming by 1~10V/PWM signal/Resistor

Model	Rated Current	Current adjust range(1)	Output Voltage (Max Vo * Iout)	OVP level	Input DC Voltage			Output Power	Efficiency (2)
					24V	36V	48V		
DBL-170-0700	700mA	280~700mA	115~165V(600mA)	181~198V	V	V	V	100W	88%
DBL-170-1400	1400mA	560~1400mA	70~120V(1000mA)	132~144V	V	V	V	120W	89%
DBL-170-3150	3150mA	1260~3150mA	42~75V(1860mA)	90~97.5V	V	V	V ⁽³⁾	140W	90%
DBL-170-4200	4200mA	1680~4200mA	30~45V(3750mA)	57.6~62.4V	V	V ⁽³⁾	-	170W	91%

1. Only Type A Adjust current by variable resistor internal
2. Efficiency test condition please reference "Efficiency Vs Load "
3. Output voltage must be 3 volts higher than the input voltage

◆ Input Specification

Input voltage range	22.8 ~50.4Vdc
Inrush current (Typ.)	150A peak @48Vdc, Cold Start

◆ Output Specification

Output Current Tolerance	± 5%
Ripple & Noise (1)	1V p-p
Output Ripple Current	± 5%
Line Regulation	± 1%
Turn-on Delay Time	<0.5s @24Vdc/48Vdc, @ full load

1. Ripple current is measured at 20MHz of bandwidth. The measured terminal is paralleled with a 22uF E-cap and a 0.1uF Ceramic cap.

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◆ General Specification

MTBF	350Khrs min. MIL-HDBK-217F(25°C)
Life Time	>50,000hrs, 48VDC, 100% Load, @ T-Case 70°C
Dimension	170 * 63 * 40mm (L*W*H)
Weight	730g

◆ Protections

Short Circuit	Auto recovery or Power reset
Over Voltage	Power reset
Over Temperature De-rated (1)	Over 50°C, automatic de-rate to 75% of rated load current
Over Temperature (1)	85°C±10°C, Power reset

1. Please reference "Temperature-De-rating curve "

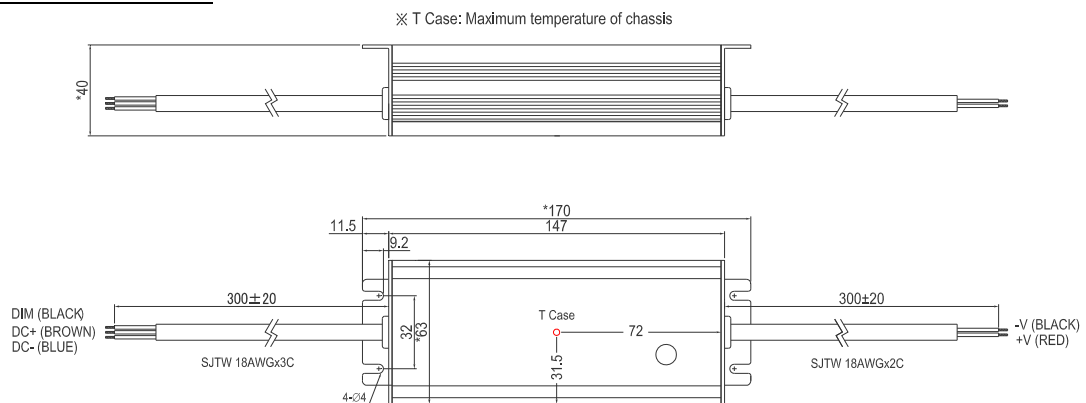
◆ Environment, Safety and EMC

Operating Temperature & Humidity (1)	-40°C~70°C ; 10%~95% RH, Non-condensing
Storage Temperature & Humidity	-40°C~85°C ; 10%~95% RH
Vibration	IEC 68-2-2-1995/CNS-3629-C6016/GB/T 2423.10-2008 ; 5-500Hz, 1.0G, 1 Oct/min, 2cycle X, Y, Z, 75 minutes
Safety standards	Meet UL 8750, EN 61347-1, EN 61347-2-13, GB 19510.1, GB 19510.14
EMI	Meet EN 55015, EN 61000-3-2, EN 61000-3-3, FCC Part18, CNS 14115, GB 17743
EMS	Meet EN 61547, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11, GB 17625.1

1. Please reference "Temperature-De-rating curve "

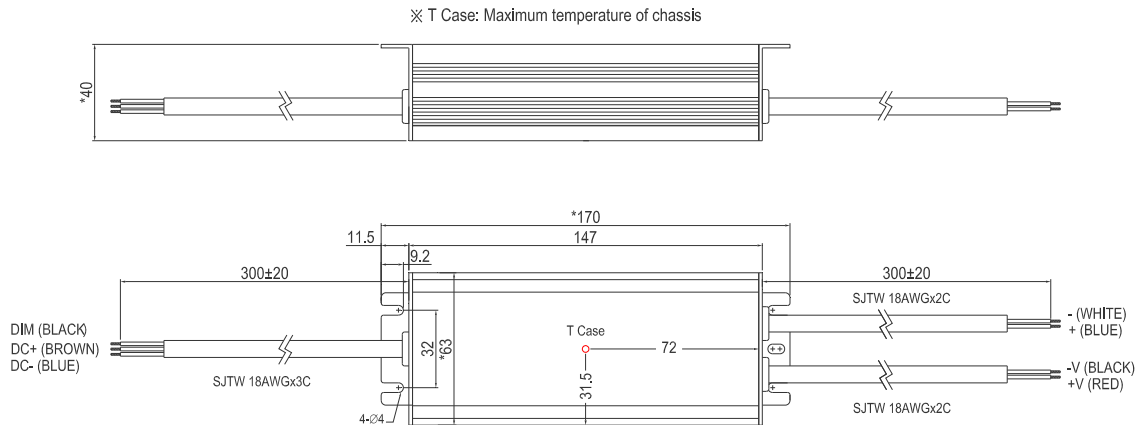
◆ Mechanical Drawing

Type A:IP65 DBL170



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Type B:IP67 DBL170



Dimming Control

* 10K~100KΩ adjust output current

Resistor value	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

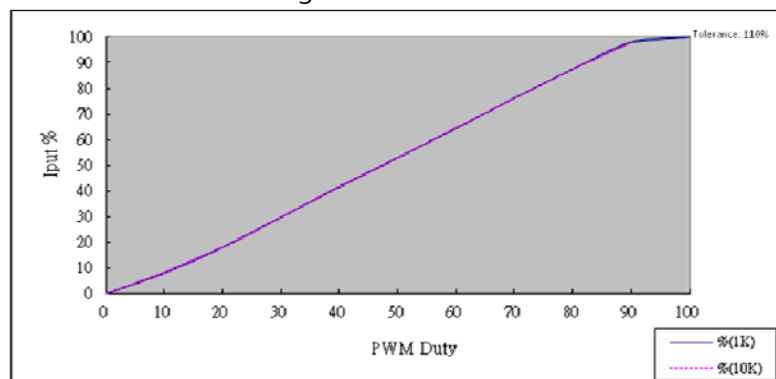
* 1~10Vdc adjust output current

Vdc	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

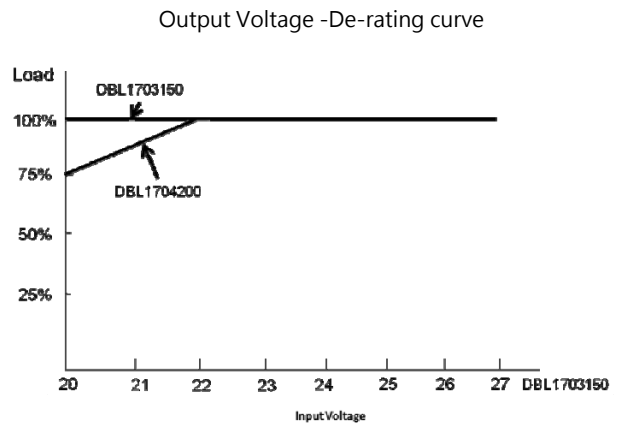
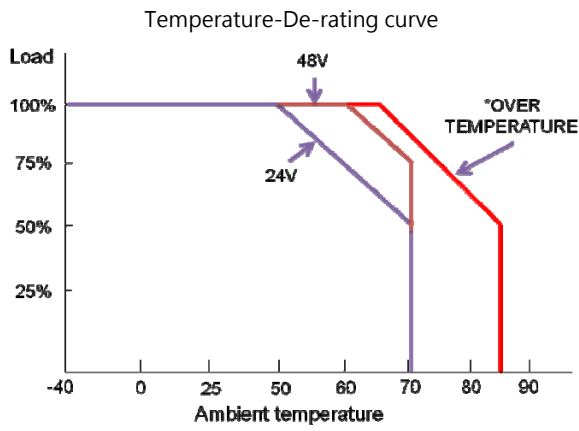
* 10V PWM adjust output current ; Frequency range 1KHz~10KHz

Duty	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Rated Current rate	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95~105%

PWM out current change of the PWM control



◆ Output Load De-rating Curve



Efficiency Vs Load (24V Input VF3.3V)

