



SELV
(for FDHC-100H only)



IP67



IS 15885 (Part 2/Sec13)
R-41027766

■ Features

- Constant Power mode output
- Metal housing design
- Built-in Input OVP (Over Voltage Protection)
- Built-in active PFC function, PF>0.9, THD<10%
- Full Power at 70~100% max. current
- No load power consumption <0.6W
- IP67 rating for indoor or outdoor installations
- Output current adjustable via potentiometer
- 3 years warranty

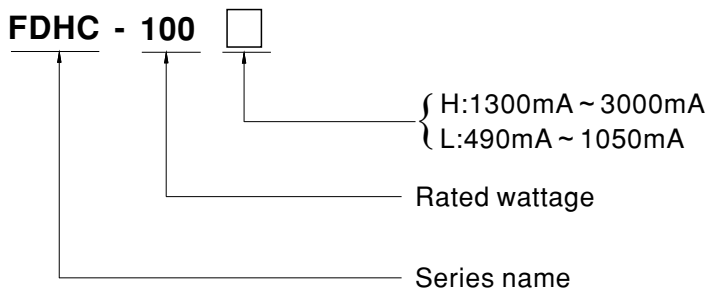
■ Applications

- LED flood lighting
- LED decorative lighting
- LED architectural lighting
- LED street lighting

■ Description

FDHC-100 series is a 100W AC/DC LED power supply featuring the constant power output mode, FDHC-100 operates from 180 ~ 295VAC and output current can be adjust between 490mA to 1050mA & 1300mA ~ 3000mA. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -30°C ~ +90°C case temperature under free air convection. The design of metal housing and IP67 ingress protection level allows this series to fit both indoor and outdoor applications. FDHC-100 is equipped with output current adjustable function so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding

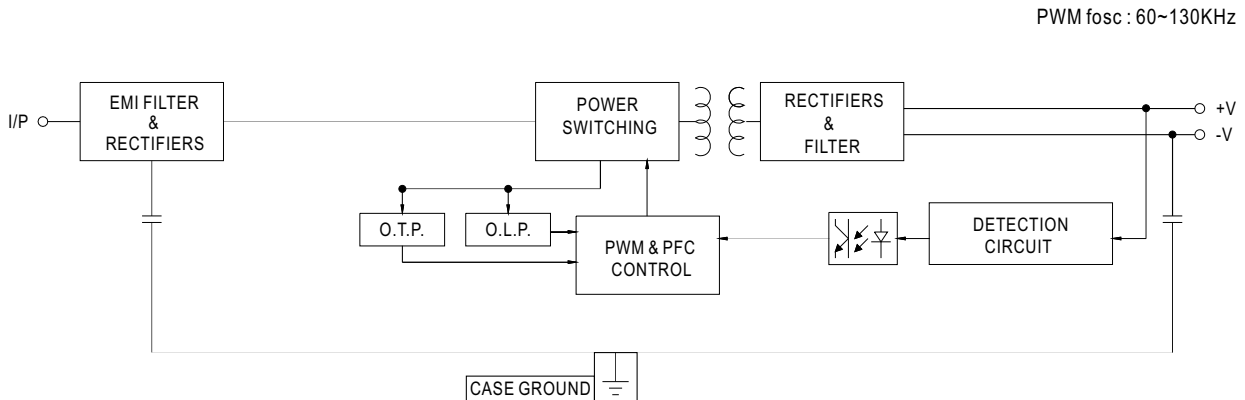




SPECIFICATION

MODEL		FDHC-100L	FDHC-100H
OUTPUT	OUTPUT CURRENT REGION	490~ 1050mA(700mA default)	1300~ 3000mA(1850mA default)
	CONSTANT POWER <small>Note.2</small>	100W	
	CONSTANT CURRENT REGION <small>Note.2</small>	96 ~ 142V	30 ~ 54V
	FULL POWER CURRENT RANGE	700~ 1050mA	1850~ 3000mA
	OPEN CIRCUIT VOLTAGE _(max.)	154V max.	59V max.
	CURRENT TOLERANCE	±5.0%	
	SET UP TIME <small>Note.3</small>	1000ms/230VAC	
INPUT	VOLTAGE RANGE <small>Note.5</small>	180 ~ 295VAC 254 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF ≥ 0.9(@load≥70%/230VAC; @load≥75%/277VAC) (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)	
	TOTAL HARMONIC DISTORTION	THD < 10%(@full load/220VAC 50Hz) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)	
	EFFICIENCY (Typ.)	90%	
	AC CURRENT (Typ.)	0.7A / 230VAC 0.5A/277VAC	
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=270μs measured at 50% Ipeak)/230VAC; Per NEMA 410	
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	9 units (circuit breaker of type B) / 16 units (circuit breaker of type C) at 230VAC	
	LEAKAGE CURRENT	<0.75mA / 277VAC	
	NO LOAD POWER CONSUMPTION	<0.6W	
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed	
	OVER TEMPERATURE	Shut down output voltage, recovers automatically after fault condition is removed	
	INPUT OVP	305 ~ 315VAC (Shut down output voltage when the input voltage exceeds protection voltage)	
		295 ~ 305VAC (Auto recovery) can survive input voltage stress of 440V for 48 hours	
ENVIRONMENT	WORKING TEMP.	Tcase=-30 ~ +90°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)	
	MAX. CASE TEMP.	Tcase=+90°C	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-30 ~ +80°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	± 0.03%/°C (0 ~ 50°C)	
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS	EN61347-1, EN61347-2-13 Independent, EN62384, IS15885(part 2/ sec.13), IP67 approved	
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH	
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (load ≥ 70%) ; EN61000-3-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Earth:6KV,Line-Line:3KV)	
OTHERS	MTBF	1225.4K hrs min. Telcordia SR-332 (Bellcore)	430.9Khrs min. MIL-HDBK-217F (25°C)
	DIMENSION	180*53*33mm (L*W*H)	
	PACKING	0.625Kg;24pcs /16Kg / 0.8CUFT	
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. Please refer to " OUTPUT CURRENT SETTING ". Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf 		

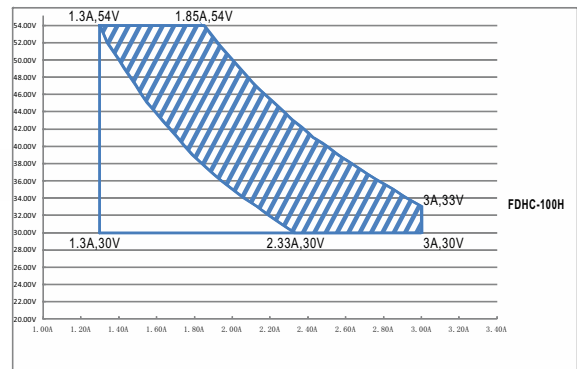
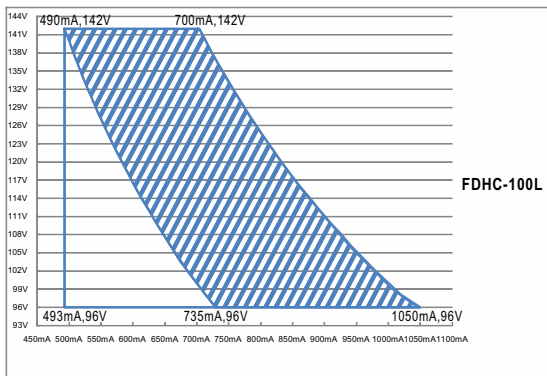
■ BLOCK DIAGRAM



■ OUTPUT CURRENT SETTING

※ I-V Operating Area

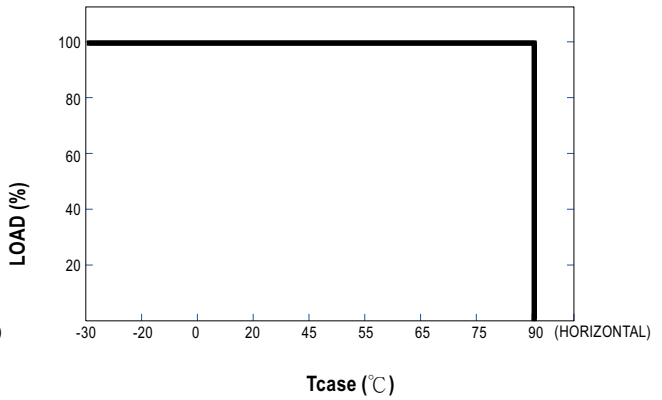
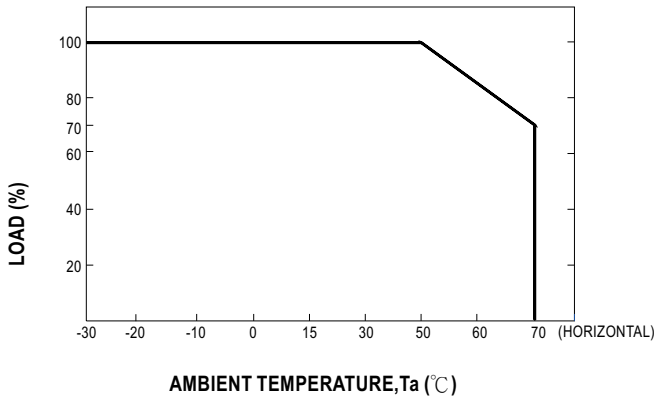
Output rated current level can be adjusted through built-in potentiometer



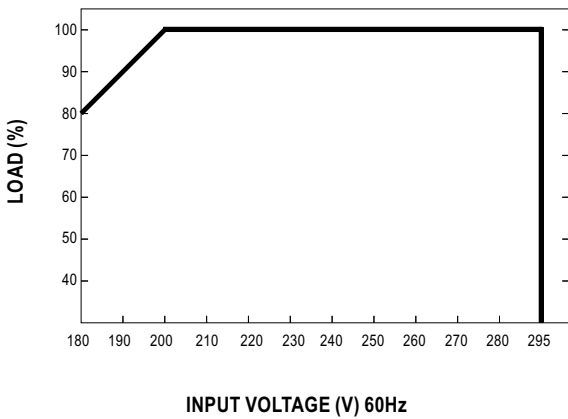
▨ High Performance Region □ Operational Region

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OUTPUT LOAD vs TEMPERATURE

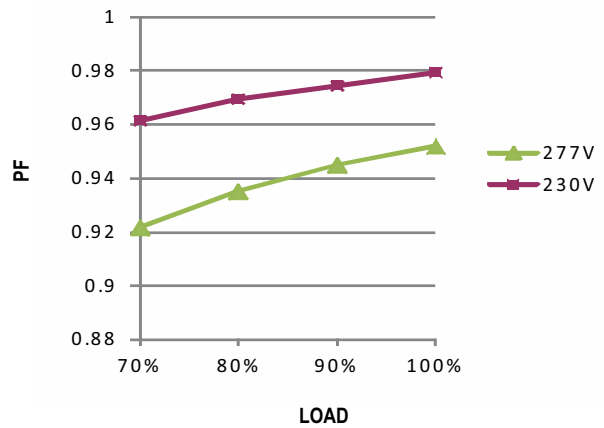


STATIC CHARACTERISTIC



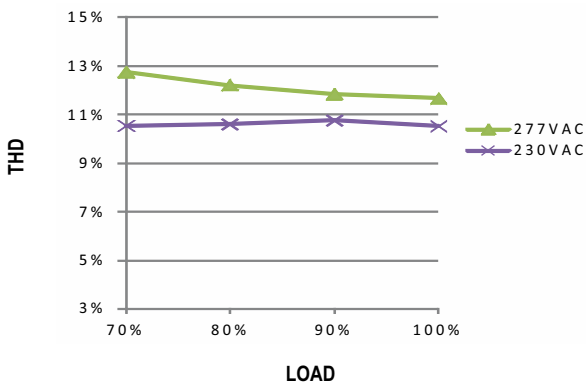
POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 80°C



TOTAL HARMONIC DISTORTION (THD)

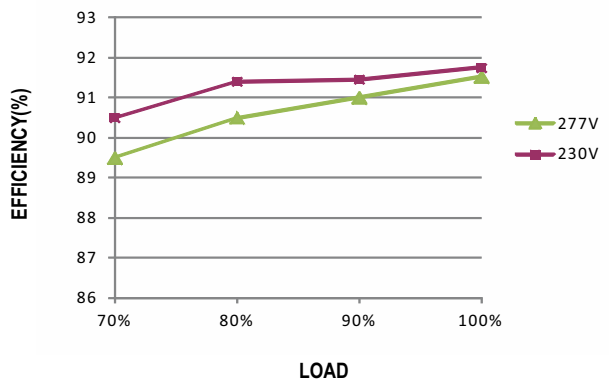
※ Tcase at 80°C



EFFICIENCY vs LOAD

FDHC-100 series possess superior working efficiency that up to 90% can be reached in field applications.

Tcase at 80°C



■ AC input voltage drop vs. output current characteristics

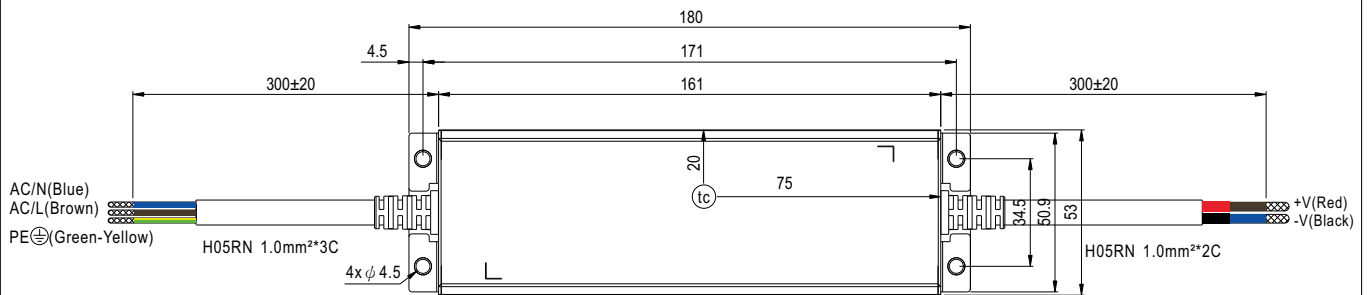
AC input voltage drop	10%	8%	5%	3%
Io drop	<13%	<11%	<6%	<3%

NOTE: Output current will return to the rated value within 90ms

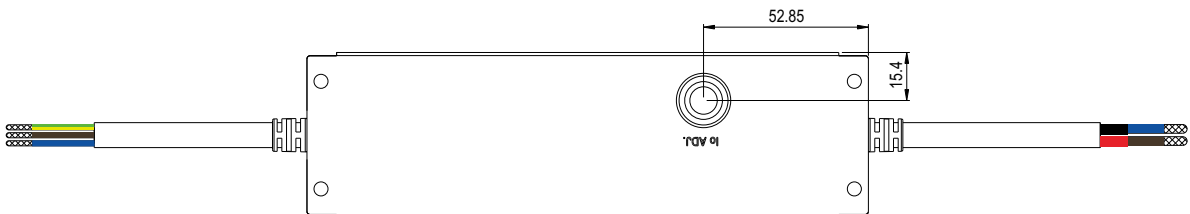
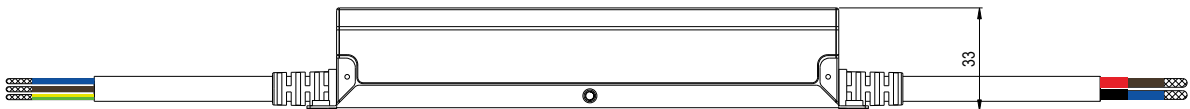
■ MECHANICAL SPECIFICATION

CASE NO.: 261A

Unit:mm



• (tc) : Max. Case Temperature



© Note: Please connect the case to FG for the complete EMC deliverance.

■ INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>