



■ Features

- AC100-240V input for worldwide used with rechargeable AC cord C13 inlet
- Perfect for charging all Li-ion/LiFePO4 battery
- Fully automatic 4 stages charging process by MCU controlled
- Green 4Leds indicator for battery charging and Red Led indicator for Power on
- Output constant current for faster charging
- Protections: Short circuit/OVP/OCP/Overload/Polarity reversed
- 100% full load and burn-in test
- High efficiency, long life and high reliability
- 2 years warranty

■ Applications

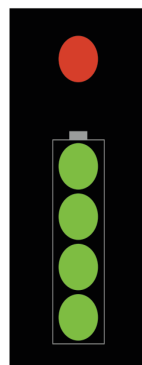
Suit battery:

- Li-ion battery 3~7cells 4~30AH
 - LiFePO4 battery 3~8cells 4~30AH
- e-bike, motorcycle, electric vehicle, electric tools, emergency light, R/C toys, portable electronics devices, field detection instrument

■ Description

EP60XXL/FX series is a 60W 4 stages smart battery charger by MCU controlled with 4Leds indicator for battery charging. EP60XXL/FX programmed 4 stages Ip-Im-Um-Cut off charging process. Stage "Ip" is a pre-charge function for deep discharged battery, it is helpful for battery's cycle life. When battery recovered by Ip small current, stage "Ip" will output bulk current (3,3A). Then, "Um" stage is followed, the output voltage is limited at 4.2V/cells (3.6V/cell for Fe) until the charging current declined to 0.4A under. At this stage, the battery is charged completely and the charger will cut off output automatic.

■ Display Panel



Power on LED

Charging process indicator

- Indicate battery capacity from 25% to 100% when charging
- All LEDs flashing means battery polarity reversed or output shorted
- All Leds are "off" means no battery

■ Model Encoding

EP60XXL/FX

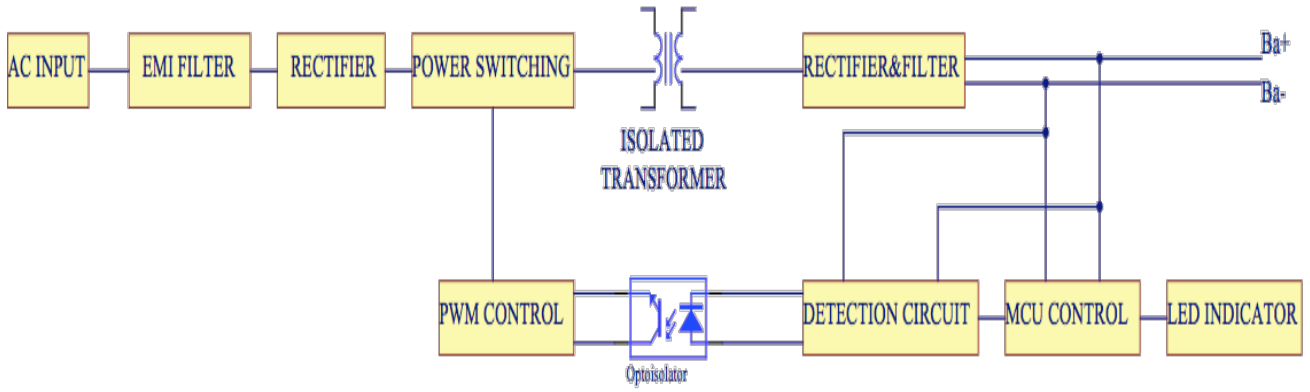


Battery type L:LI-ION F:LiFePO4 X:battery cells
Output voltage:(12or 24)
Output power

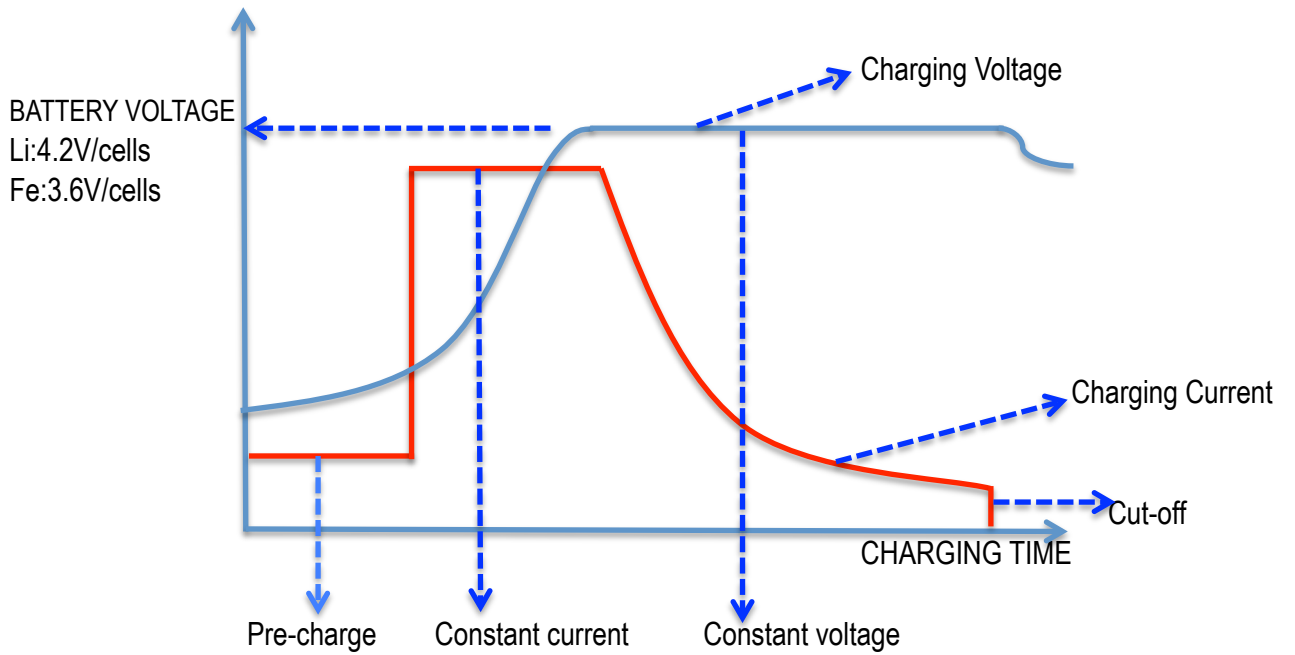
■ Specification

Model		EP6012L3	EP6012L4	EP6012F3	EP6012F4	EP6024L	EP6024F
OUTPUT	DC Voltage	12.6V	16.8V	10.8V	14.4V	29.4V	28.8V
	RATED CURRENT	3.3A	2.8A	3.5A	3.3A	1.5A	1.5A
	RATED POWER	41.6W	47W	37.8W	47.5W	44.1W	43.2W
	VOLTAGE RANGE	7.5V~12.75V	10V~17V	7.5V~10.95V	10V~14.6V	17.5V~29.75V	20V~29.2V
	CURRENT RANGE	±0.3A	±0.3A	±0.3A	±0.3A	±0.3A	±0.3A
	VOLTAGE TOLERANCE	±1%	±1%	±1%	±1%	±1%	±1%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
INPUT	VOLTAGE RANGE	100~240VAC					
	FREQUENCY RANGE	47~63Hz					
	EFFICIENCY	80%	80%	80%	80%	80%	80%
	AC CURRENT	0.6A/115 VAC 0.3A/230VAC					
FUNCTION	CHARGING PROCESS	Ip-Im-Um-Cut off					
	CHARGING MODE	Fully automatically 4 stages by MCU controlled					
	CHARGE END CONDITION	>0.4A	>0.3A	>0.4A	>0.4A	>0.2A	>0.2A
	CHARGING INDICATOR	Red LED:Power on 4Green LED:25%~100% battery capacity Green LED Flash:Fault					
	SUIT BATTERY	3cell li 3~25Ah	4cells li 3~25Ah	3cells Fe 3- 25Ah	4cells Fe 3- 25Ah	7cells li-2~12Ah	8cells Fe 2~12Ah
	CHARGING TIME	1~8H					
PROTECTION	OVER VOLTAGE	12.75V	17V	10.95V	14.6V	29.75V	29.2V
	OVER LOAD	110~140% rated output power					
	OUTPUT SHORTED	Green LED Flash/Hiccup mode,recovers automatically after fault condition is removed					
	POLARITY REVERSED	Green LED Flash/Hiccup mode,recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	-10 ~ +50°C					
	WORKING HUMIDITY	20~90% RH NON-CONDENSING					
	STORAGE TEMP.,HUMIDITY	-10 ~ +50°C 20~90%					
	Cooling	Natural convection					
	water proof	IP64 Dust protected,water splashing resistance					
	IMPACT	1 Meter drop test>=3times					
SAFETY	SAFETY STANDARDS	EN60335 UL1310					
	EMC STANDARD	T.B.D					
	MTBF	30000 Hrs MIL-HDBK-217F					
	ESD	8KV					
	ISOLATION RESISTNCE	i/p to o/p: 3000V (1 min.)					
	MAX.TEMP.RISE	< 40°C on casing					
MECHANICAL	WEIGHT	300g (only body)					
	SIZE	120*67*41MM					
	CASE	PLASTIC PC 945					

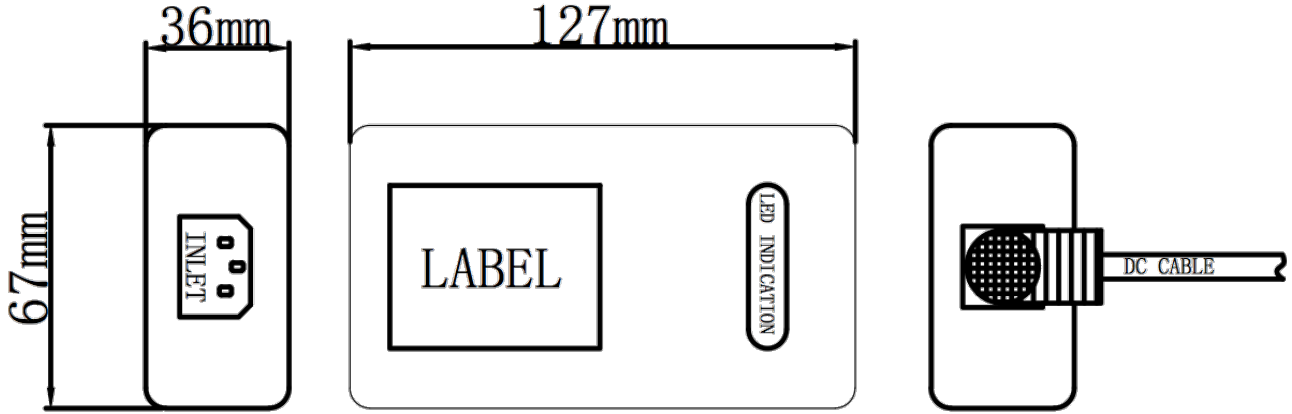
■ **Block Diagram**



■ **CHARGING CURVES**



■ **Mechanical Specification**



DC Connector

General type of DC output plug photos

NLA-1 (1.5×4.5×10mm)



NLA-6 (KET-MG-620024)



NLA-12 (Lotus)



NLA-2 (1.35×3.5×10mm)



NLA-7 (SS-Alligator clips, 3A)



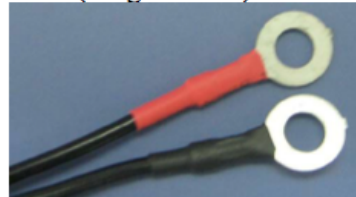
NLA-13 (Voyage terminal)



NLA-3 (2.1×5.5×12)



NLA-8 (Ring terminal)



NLA-14 (XLR Female)



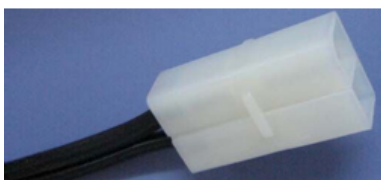
NLA-4 (2.5×5.5×12)



NLA-10 (L-Alligator clips, 15A)



NLA-5 (KET-MG-620006)



NLA-11 (XLR Male)

