



FEATURES

- ECO SMART Technology : No load drop is zero. Increases life of battery
- Protections : Reverse battery/ Short circuit/ Over load/ Over voltage.
- Natural air cooled
- Fully Isolated M.S. Box.
- Small in size : Gives more space in panel
- Precise current limit at 10A
- Efficiency is 87%- 100% Full load burn in test
- High operating temperature upto 85°C
- Withstand 300VAC surge input for 5 Sec
- Dinrail mounting can be provided.
- Warranty : 1 year

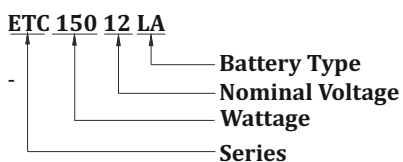
APPLICATIONS

- Diesel Generator
- Car battery charging
- UPS & Invertor

DESCRIPTION -

ETC-150 is a single output 150W AC/DC SMPS type charger with 3 stage charging curve. The battery charger is compatible with GEL/AGM type sealed lead acid batteries. The charger has various protections for short-circuit, over-load, over-voltage, over-current and over-temp. It operates over a wide temperature range under free air convection.

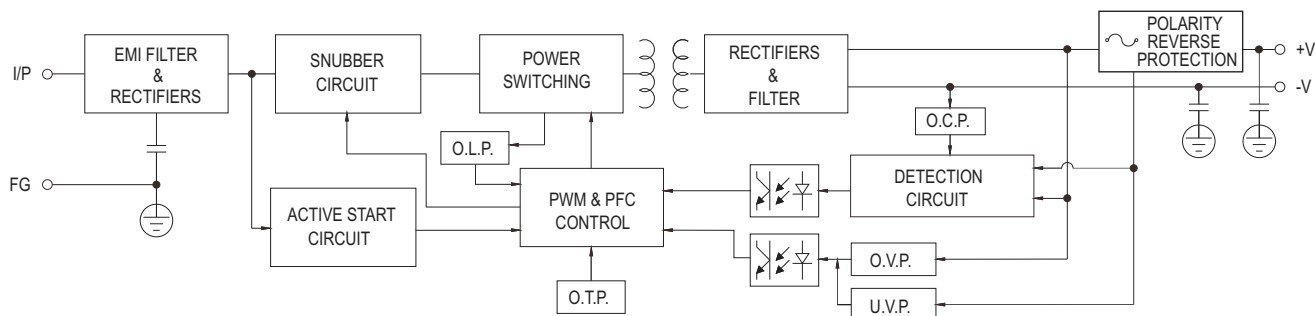
MODEL ENCODING



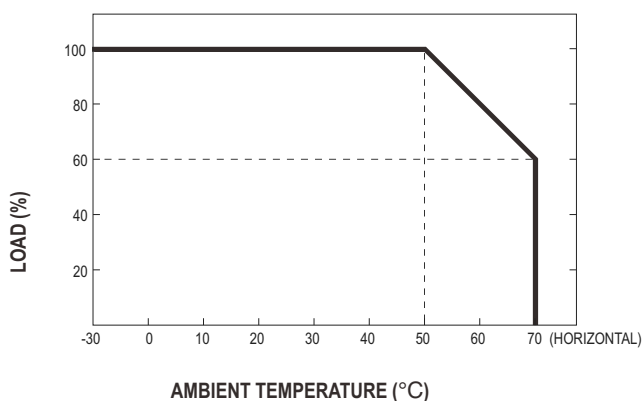
Specifications

	MODEL	ETC-150-12-10	ETC-150-24-5	ETC-150-48-2
OUTPUT	BOOST CHARGE VOLTAGE(Vboost)(default)	13.8V - 14.2V	27.6V ~ 28.4	53.2V ~ 53.8V
	FLOAT CHARGE VOLTAGE(Vfloat)(default)	13.4V - 13.7V	26.8V ~ 27.4V	54.3V ~ 54.8V
	CHARGE VOLTAGE RANGE	8.5 ~ 14.5V	18 ~ 30V	36 ~ 60V
	OUTPUT CURRENT (FLOAT)	0-3A	0-2A	0-1A
	OUTPUT CURRENT (BOOST)	3-10A	2-5A	1-2A
	RATED POWER	145W	145W	145W
	RECOMMENDED BATTERY CAPACITY (AMP HOURS) Note.4	30 ~ 100AH	25 ~ 60AH	5 ~ 15AH
	LEAKAGE CURRENT FROM BATTERY (Typ.)	<1mA		
INPUT	INPUT VOLTAGE RANGE Note.5	150 ~ 270 VAC		
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	87%		
	AC CURRENT (Typ.)	0.967A/150VAC ~ 0.63/230VAC		
	INRUSH CURRENT (Typ.)	COLD START 65A at 230VAC		
	LEAKAGE CURRENT	<3.5mA / 240VAC		
PROTECTION	SHORT CIRCUIT Note.6	Protection type : Shut down O/P voltage		
	OVER VOLTAGE Note.7	Protection type : Shut down and Automatic Power On after recovery		
	REVERSE POLARITY	By relay		
	OVER TEMPERATURE	Shut down O/P voltage, auto recovery after temperature reduction		
ENVIRONMENT	WORKING TEMP.	0 ~ +55°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH		
	SURGE AS PER IEC61 000-4-5 LEVEL 5 DIFF MODE (SOURCE IMPEDANCE 2 OHM, WAVE FORM 8/20, 1.2/50 MICROSEC	7.5K V BOTH + AND - PASS CATEGORY B		
	SURGE AS PER IEC61 000-4-5 LEVEL 5 COMMON MODE (SOURCE IMPEDANCE 2 OHM, WAVE FORM 8/20, 1.2/50	15K V BOTH + AND - PASS CATEGORY B		
ISOLATION	INPUT TO OUTPUT	3KV AC		
	INPUT TO EARTH	1.5KVAC		
	OUTPUT TO EARTH	1KVAC		
OTHERS	MTBF	1726.4K hrs min.; 206.1K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	180*100*55mm (L*W*H)		
	PACKING	0.98Kg; 10pcs/10.8Kg /1.38CUFT		

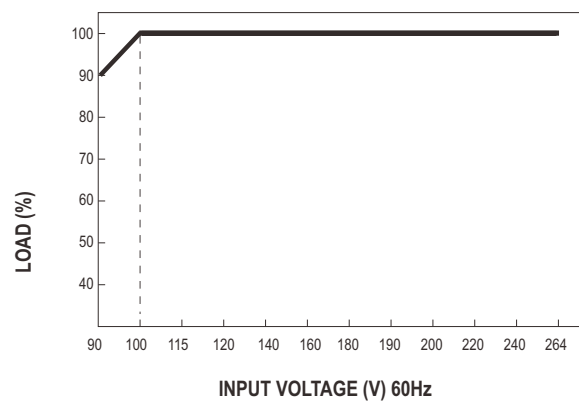
■ **Block Diagram**



■ **Derating Curve**



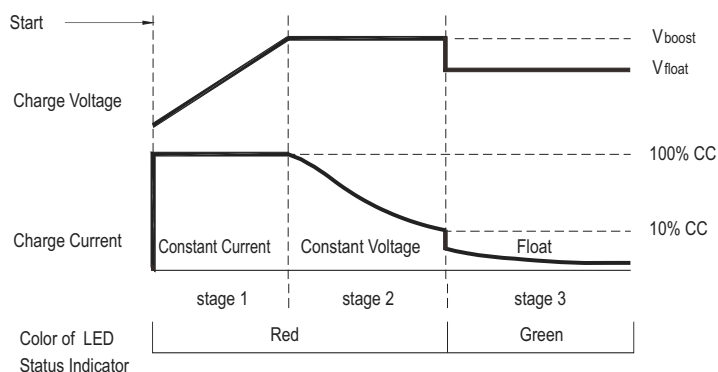
■ **Static Characteristics**



■ **Function Manual**

1.Charging Curve

※ This series provides a 3 stage charging.



Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

Embedded 3 stage charging curve

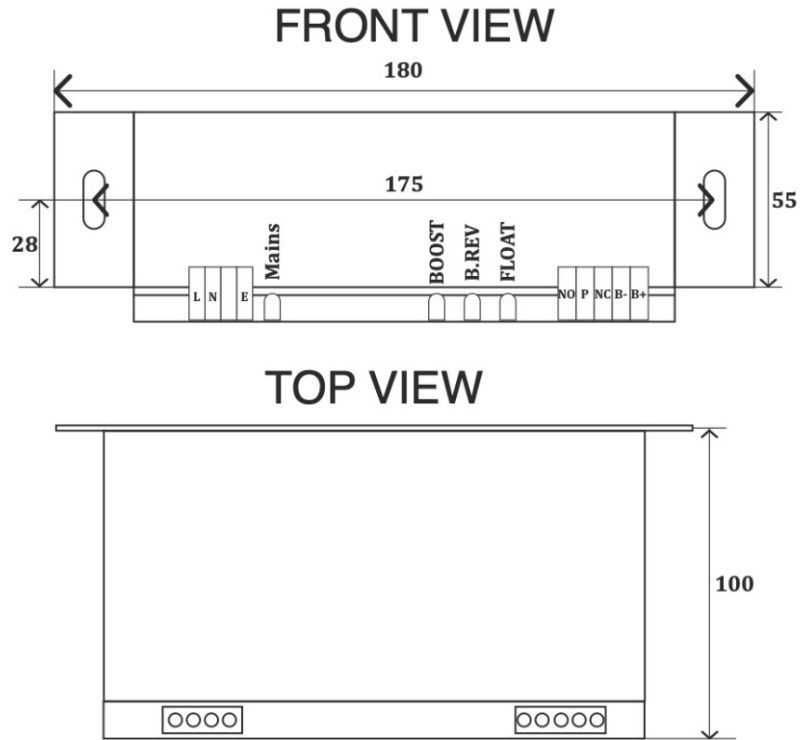
MODEL	Description	CC(default)	Vboost	Vfloat
12V	Default, programmable	8A	14.4	13.8
	Pre-defined, gel batter		14	13.6
	Pre-defined, flooded battery		14.2	13.4
	Pre-defined, AGM battery		14.5	13.5
24V	Default, programmable	4A	28.8	27.6
	Pre-defined, gel battery		28	27.2
	Pre-defined, flooded battery		28.4	26.8
	Pre-defined, AGM battery		29	27
48V	Default, programmable	2A	57.6	55.2
	Pre-defined, gel battery		56	54.4
	Pre-defined, flooded battery		56.8	53.6
	Pre-defined, AGM battery		58	54

2. Front Panel LED Indicators & Corresponding Signal at Function Pins

LED	Description
● Green	Float (stage 3)
● Red	Charging (stage 1 or stage 2)

■ Mechanical Drawing

Unit:mm



NOTE : DRAWING NOT TO SCALE
ALL DIMENSIONS IN mm

