

HXE-450 SERIES



FEATURES

- AC Input range selectable by switch
- High operating temperature up to 70 °C
- Protection: Short Circuit/Overload/ Over Voltage/ Over Temperature
- Air cooling by build-in DC fan
- Higher efficiency
- 4 years warranty

IS 13252 (Part 1) 2010/
IEC 60950-1:2005
R-62006220
www.bis.gov.in



HXE-450 series are designed with lower profile housing, adopting the input of 90VAC or 132VAC. In addition to the high efficiency, Delivering an extremely low no load power consumption. The design of metallic mesh case enhances the heat dissipation. The good performance can be used for industrial automation & control systems, varied equipments etc.

SELECTION GUIDE

Product model	DC Voltage	Rated Current	Rated Power	Max. Capacitive Load (µF)
HXE-450-12	12V	37.5A	450W	20000uF
HXE-450-13.5	13.5V	33.3A	449.55W	10000uF
HXE-450-15	15V	30A	450W	10000uF
HXE-450-24	24V	18.8A	451.24W	8000uF
HXE-450-36	36V	12.5A	450W	6000uF
HXE-450-48	48V	9.4A	451.2W	4000uF
HXE-450-60	60V	7.5A	450W	1000uF

INPUT CHARACTERISTICS

Parameter	Units	Model
VOLTAGE RANGE	90~132VAC/180 ~264VAC by switch	
	240~370VDC (Switch on 230VAC)	
FREQUENCY RANGE	47/63Hz	
AVERAGE EFFICIENCY(115/230VAC)	85%	HXE-450-12
	85%	HXE-450-13.5
	86%	HXE-450-15
	88.0%	HXE-450-24
	88.5%	HXE-450-36
	89%	HXE-450-48
	88.5%	HXE-450-60
AC CURRENT(Typ.)	10A/115VAC	
	6A/230VAC	
INRUSH CURRENT(Typ.)	60A/230VAC	
LEAKAGE CURRENT	<2mA/240VAC	

OUTPUT CHARACTERISTICS

Parameter	Units	Model
RIPPLE & NOISE(max.)	200mVp-p	HXE-450-12
	200mVp-p	HXE-450-13.5
	200mVp-p	HXE-450-15
	240mVp-p	HXE-450-24
	360mVp-p	HXE-450-36
	360mVp-p	HXE-450-48
	480mVp-p	HXE-450-60

Parameter	Units	Model
VOLTAGE TOLERANCE	±1.0%	HXE-450-12
	±1.0%	HXE-450-13.5
	±1.0%	HXE-450-15
	±1.0%	HXE-450-24
	±1.0%	HXE-450-36
	±1.0%	HXE-450-48
	±1.0%	HXE-450-60
LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%	HXE-450-13.5
	±1.0%	HXE-450-12
	±0.5%	HXE-450-15
	±0.5%	HXE-450-24
	±0.5%	HXE-450-36
	±0.5%	HXE-450-48
	±0.5%	HXE-450-60
SETUP TIME	1500ms/230VAC at full load	
	1500ms/115VAC at full load	
RISE TIME	50ms/230VAC at full load	
	50ms/115VAC at full load	
HOLD UP TIME (Typ.)	16ms/230VAC at full load	
	12ms/115VAC at full load	

PROTECTION

Parameter	Units
SHORT CIRCUIT	Protection type: Hiccup mode, recovers automatically after fault condition is removed
OVER LOAD	105%~150% Rated Output Power
	Protection type: Hiccup mode, recovers automatically after fault condition is removed
OVER VOLTAGE	12V:10.2~13.8V
	13.5V:12.8~14.2V
	15V:13.5~18V
	24V:21.6~28.8V
	36V:32.4~39.6V
	48V:43.2~52.8V
	60V:54.0~66.0V
	Protection type: Hiccup mode, recovers automatically after fault condition is removed
OVER TEMPERATURE	Protection type: Hiccup mode, recovers automatically after fault condition is removed

ENVIRONMENT

Parameter	Units
WORKING TEMP	-25°C to +50°C (Refer to "Derating Curve")
WORKING HUMIDITY	20~90% RH Non-Condensing
STORAGE TEMP, HUMIDITY	-40°C~+70°C,10~95% RH non-condensing
TEMP COEFFICIENT	±0.03%/°C(0~50°C)
SAFETY PROTECTION	CLASS I
VIBRATION	10~500Hz, 5G 10min./1 cycle,60 min. each along X,Y,Z axes
OVER VOLTAGE CATEGORY	Class III; According to BS EN/EN61558, BS EN/EN50178,
	altitude up to 2000 meters
MTBF	300K hrs min. MIL-HDBK-217F(25°C)

SAFETY & EMC

Parameter	Units
SAFETY STANDARDS	BSEN/EN62368-1, BSEN/EN61558-1
WITH STAND VOLTAGE	I/P-O/P:3.75KVACI/P-PE:2KVAC,O/P-FG:5KVAC
ISOLATION RESISTANCE	I/P-O/P,I/P-FG,O/P-FG:100M Ohms/500VDC/25°C/70%RH
EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class A
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,perf. CriteriaA
	BSEN/EN61000-4-11,perf.CriteriaB

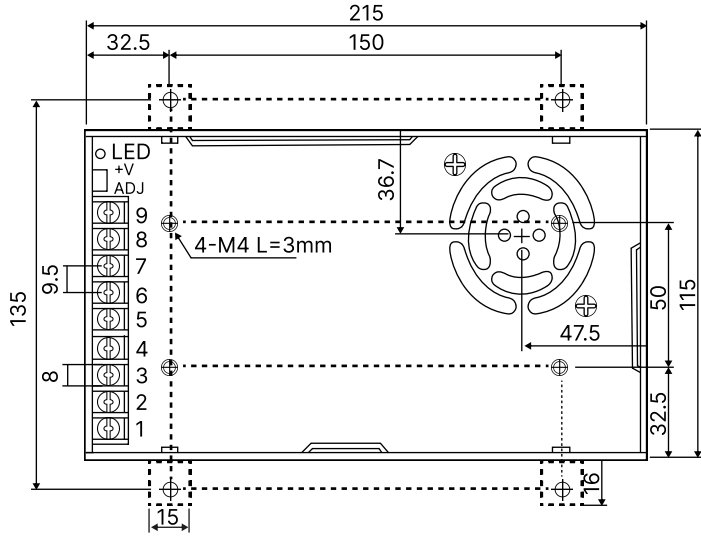
Note

- All parameters NOT specially mentioned are measured at 115/230VAC input, rated load and 25°C of ambient temperature.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- Tolerance : includes set up tolerance, line regulation and load regulation.
- Line regulation is measured from low line to highline at rated load.
- Load regulation6.Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. n is measured from 0% to 100% rated load.
- Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
- The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).
- The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC. directives.
- The out case needs to be connected to the earth, of system when the terminal equipment in operating

DIMENSION, WEIGHT & PACKING

Parameter	Units
Length:	215*115*30mm (LxWxH)
Weight:	850g
Carton Size:	54×30×24CM
	21.26×11.81×9.45in
Master Carton Quantities:	15pcs/Carton

DIMENSIONS AND INSTALLATION



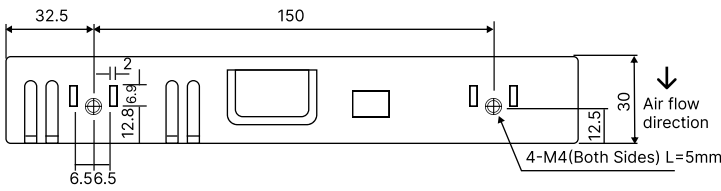
Input

No.	Description
1	AC/L
2	AC/N
3	FG \perp

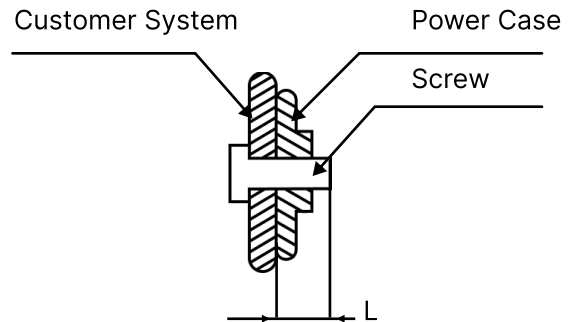
Output

No.	Description
4,6	DC OUTPUT-V
7,9	DC OUTPUT+V

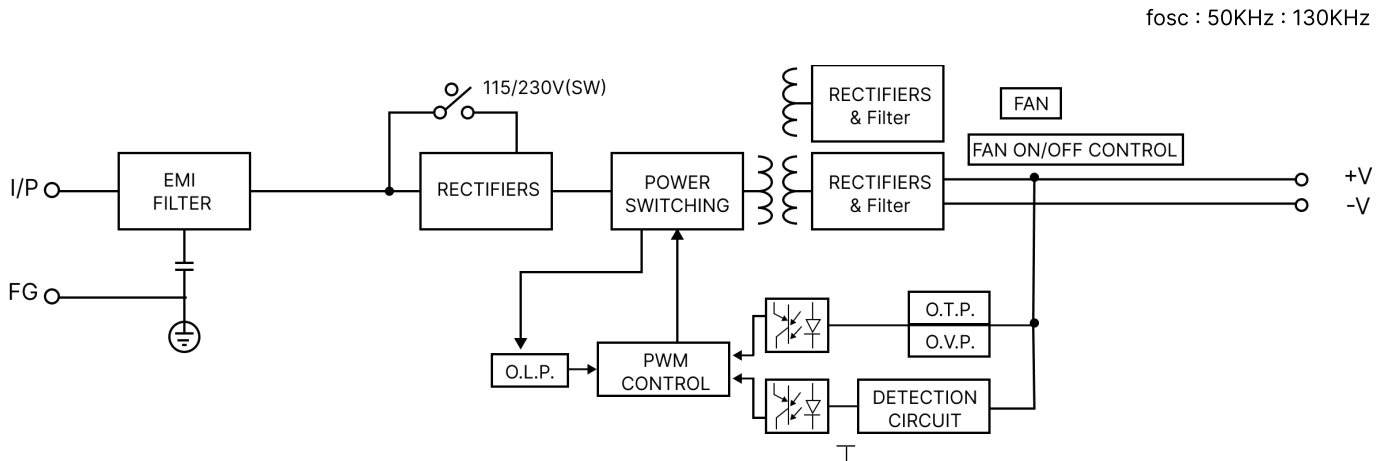
Switch	AC Input	DC Input
	90-132VAC	----
	180-264VAC	240-373VDC



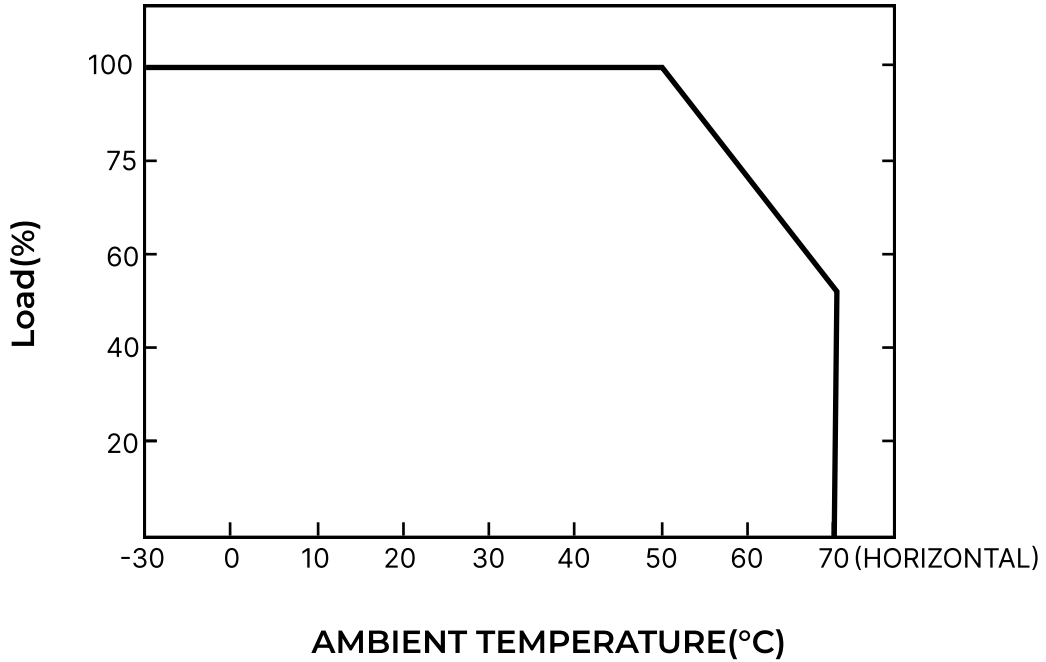
Note: Unit: mm[inch]
 Wire range: 22-12AWG
 Connector tightening torque: M3.5,0.8N-m
 General tolerances: +1.00[+0.039]



BLOCK DIAGRAM



DERATING CURVE



OUTPUT DERATING VS INPUT VOLTAGE CURVES

