

## HXDT-960W SERIES



## FEATURES

- 3-Phase 340~550VAC Wide Range Input (2-phase operation possible)
- Protection: Short Circuit/Overload /Over Voltage/Over Temperature
- Built-in Constant Current Limiting Circuit
- Current Sharing up to 3840W (3+1)
- Built-in Active PFC Function
- DC OK Relay Contact
- High Efficiency and Low Power Dissipation
- 4 Years Warranty
- Works on DC Input (480~780VDC) also

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IEC 60950-1:2005  
R-62006220  
www.bis.gov.in



HXDT-960 series are designed with metal housing and for three phase system with wide range from 340VAC To 550VAC. The series offer built-in constant current limiting circuit, active PFC function, current sharing up to 3840W(3+1), and operating in wide temperature range. They are suitable for industrial-related applications such as industrial control, semiconductor fabrication equipment, and factory automation and Electro-mechanical apparatus etc.

## SELECTION GUIDE

Product Model	DC Voltage	Rated Current	Rated Power
HXDT-960-24	24V	40A	960W
HXDT-960-48	48V	20A	960W

## INPUT CHARACTERISTICS

Parameter	Units		Model
RATED INPUT (Certified Voltage)	Three-Phase 380 ~ 480VAC (Dual phase operation possible)		
	480 ~ 780VDC		
INPUT VOLTAGE RANGE	340 ~ 550VAC		
FREQUENCY RANGE	47~63Hz		
POWER FACTOR (Typ.)	PF≥0.88/400VAC at full load		
	PF≥0.86/500VAC at full load		
EFFICIENCY (Typ.)	94%		HXDT-960-24
	94.5%		HXDT-960-48
AC CURRENT(Typ.)	2.0A/400VAC		
	1.4A/500VAC		
INRUSH CURRENT(Typ.)	COLD START 60A		
LEAKAGE CURRENT	<3.5mA / 530VAC		

## OUTPUT CHARACTERISTICS

Parameter	Units	
RIPPLE & NOSE(MAX.)	180mVp-p	HXDT-960-24
	250mVp-p	HXDT-960-48
VOLTAGE TOLERANCE	±2.0%	
LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%	
SETUP,RISE TIME	1000ms, 100ms/400VAC at full load	
	800ms, 100ms/500VAC at full load	
HOLD UP TIME (Typ.)	12ms / 400VAC at full load	
	14ms / 500VAC at full load	

## PROTECTION

Parameter	Units	Model
OVER LOAD	105 ~ 130% rated output power	
	protection type : Constant current limiting, unit will hiccup after 3 sec re-power on to recover	
OVER VOLTAGE	29~33V	HXDT-960-24
	56~65V	HXDT-960-48
	Protection type: Shut down o/p voltage, re-power on to recover.	
OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down.	

## ENVIRONMENT

Parameter	Units
WORKING TEMP	-30 ~ +70 °C (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 95% RH non-condensing
STORAGE TEMP, HUMIDITY	-40 ~ +85 °C, 10 ~ 95% RH non-condensing
COLD START	-40°C-40°C
TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X,
	Y, Z axes; Mounting: Compliance to IEC60068-2-6
MTBF	550.04K hrs min. Telcordia SR-332(Bellcore)

## SAFETY & EMC

Parameter	Units
SAFETY STANDARDS	BS EN/EN62368-1
WITHSTAND VOLTAGE	I/P-O/P: 3KVAC I/P-FG: 2KVAC O/P-FG: 0.5KVAC O/P-DC OK: 0.5KVAC
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH
EMC EMISSION	BS EN/EN55032(CISPR32)
EMC IMMUNITY	BS EN/EN61000-4-2, 3, 4, 5, 6, 8,11

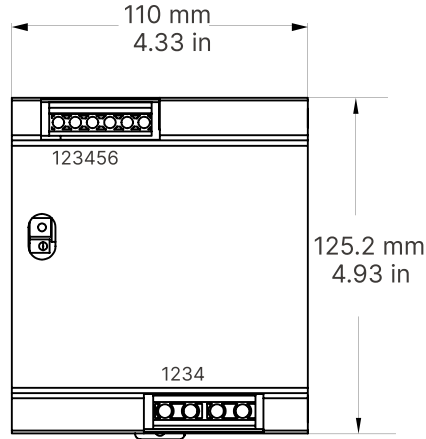
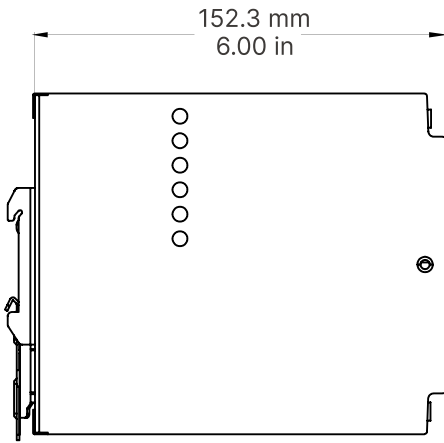
## NOTE

1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature
2. Ripple&noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is heat source.
4. The ambient temperature derating of 3.5 °C/1000m for operating altitude higher than 2000m(6500ft).
5. Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.

## DIMENSION, WEIGHT & PACKING

Parameter	Units
SIZE:	110*125.2*152.3mm (LxHxW)
WEIGHT:	2.47kg
CARTON SIZE:	49 × 34.5 × 16.5 CM
	19.3 × 13.6 × 6.5 in
MASTER CARTON QUANTITIES:	6pcs / Carton

## MECHANICAL SPECIFICATION

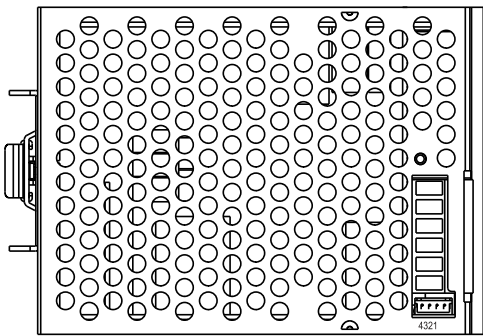


### Input

No	Description
1	FG $\downarrow$
2	AC/L3
3	AC/L2
4	AC/L1

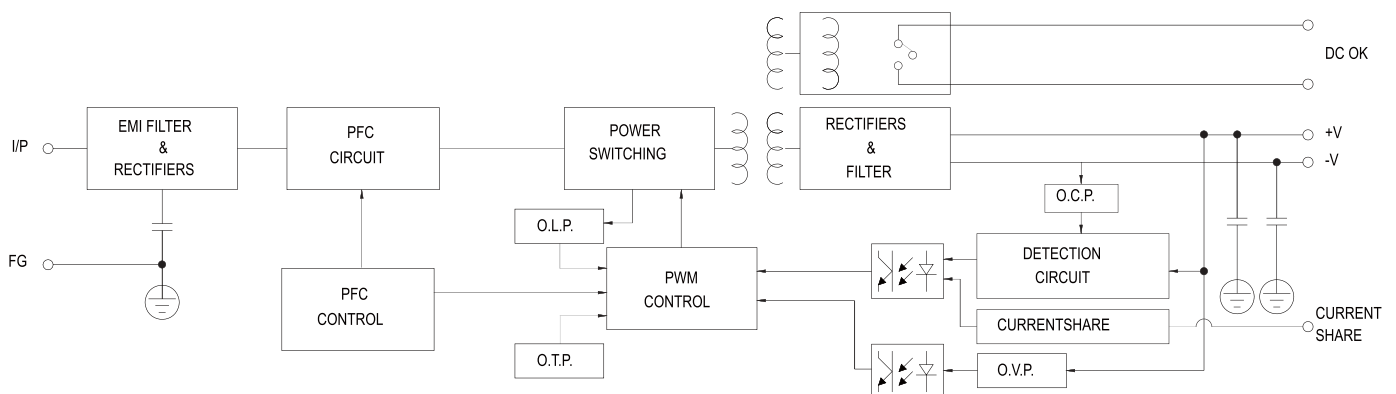
### Output

No	Description
1,2,3	DC OUTPUT +V
4,5,6	DC OUTPUT -V

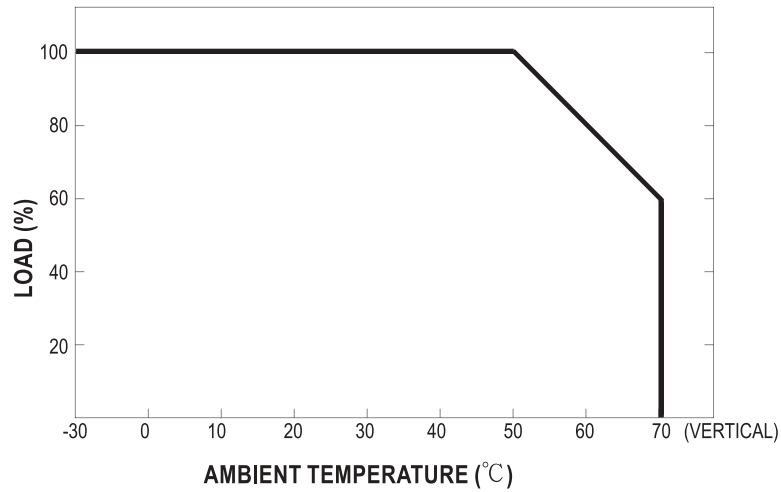


No	Description
1	P- (Current Share)
2	P+ (Current Share)
3,4	DC OK Relay Contact

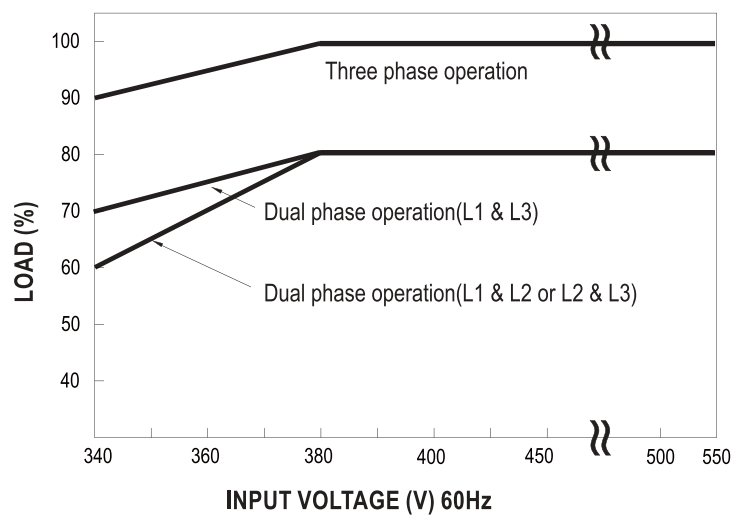
## BLOCK DIAGRAM



## DERATING CURVE



## OUTPUT DERATING VS INPUT VOLTAGE



## DC OK RELAY CONTACT

Parameter	Units
CONTACT CLOSE	PSU turns ON /DC OK
CONTACT OPEN	PSU turns OFF /DC FAIL
CONTACT RATINGS (max)	30V/1Aresistive load.

## NOTE

1. Connection Type Of Parallel Operation Is As Follows (P+,P- Parallel Connection)
2. The Output Voltage Difference Between The Parallel Units Should Be Less Than 0.2V
3. The Total Output Current Must Not Exceed The Value Calculated Of The Following Equation (Output Current At Parallel Operation)=(The Rated Current Per Unit)\* (Number Of Unit) X 0.9
4. The Maximum Quantity Of Parallel Operation Is Four Units, If Need More Quantity Of Parallel Operation, Please Contact The Manufacture.
5. In Parallel Connection, The Minimum Output Load Should Be More Than 3% Of Total Output Load (Min. Load > 5% Rated Current Per Unit X Number Of Unit).
6. The Power Supplies Should Be Paralleled Using Short And Large Diameter Wiring And Then Connected To The Load.
7. In Parallel Connection, Maybe Only One Unit(Master) Operate If Total Output LEDs & Relays Will Not Turn On.

