

# VARIABLE FREQUENCY DRIVE Low HARMONIC

PHASE CONVERTING | VOLTAGE DOUBLING, 230/460V OPTIONS  
OPEN & NEMA 1 (INDOOR) ENCLOSURE OPTIONS



Active  
Front End



Regenerative  
Power



Voltage Doubling  
Options



Flexible I/O  
(Input/Output)



Intuitive User  
Interface



FANS



COMPRESSORS



HVAC



IRRIGATION



PUMPS



CLEAN WATER &  
WASTEWATER



## Enclosure

- Rugged All-Steel-Enclosure
- Open, NEMA 1 (Indoor)
- Remote Keypad Ready

## Intuitive User Interface

- Large Backlit Graphic Display
- Eight Button Keypad
- Internal SDHC Port

## Quick Setup

- Six Preset Wizards

## Flexible I/O

- Three Analog Inputs
- Four Digital Inputs
- Four Programmable Relays
- Modbus
- Ethernet
- BACnet



# LHX

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## SERIES

## Industrial Three-Phase VFD's

Designed with the Contractor in mind, our new **LHX Series** Variable Frequency Drives offer **significant value** in a **clean and compact design**.



# LHX SERIES

5-500 HP | Low HARMONIC | VFD



## Full Feature VFD

- ▶ Advanced Motor Protection & PID Control
- ▶ V/f Control and Direct Torque Control
- ▶ Download and Load Parameters Seamlessly
- ▶ Simple User Interface
- ▶ Large Backlit Graphic Display
- ▶ Intuitive Menus in Simple English
- ▶ Rugged All-Steel-Enclosure
- ▶ Rated Temperature:  $-40^{\circ}\text{C} - 40^{\circ}\text{C}$  ( $-40^{\circ}\text{F} - 104^{\circ}\text{F}$ )
- ▶ Nominal Voltage: 230 V | 460 V
- ▶ Certified to UL 61800-5-1

## Active Front End Low Harmonic Technology

- ▶ Guaranteed IEEE 519-2014 standard without additional harmonic filters as long as a minimum load of 50% is maintained as related to the max current rating of the system.

## Regenerative

- ▶ Maximize efficiency with balanced, stable voltage to the load and full regeneration on shutdown

## Voltage Doubling Output

- ▶ Eliminates the need for a transformer while minimizing motor lead wire size on 460V systems running on a 230V source

## Power Factor Correcting

- ▶ Lowers Electricity Bills: Lowering the demand for reactive power will reduce utility charges.



TECHNICAL  
SUPPORT



INDUSTRY BEST  
LEAD TIMES



MADE IN  
THE USA

## Easy Setup Wizards

- ▶ Constant Pressure
- ▶ Flow Control
- ▶ Tank Level
- ▶ Pump Down
- ▶ Suction Pump
- ▶ HVAC

## Nomenclature

### Input Type

- 1 = Single Phase
- 3 = Three Phase

Low Harmonic VFD's Only

### HP

**3LHX225R**

### Enclosure Type

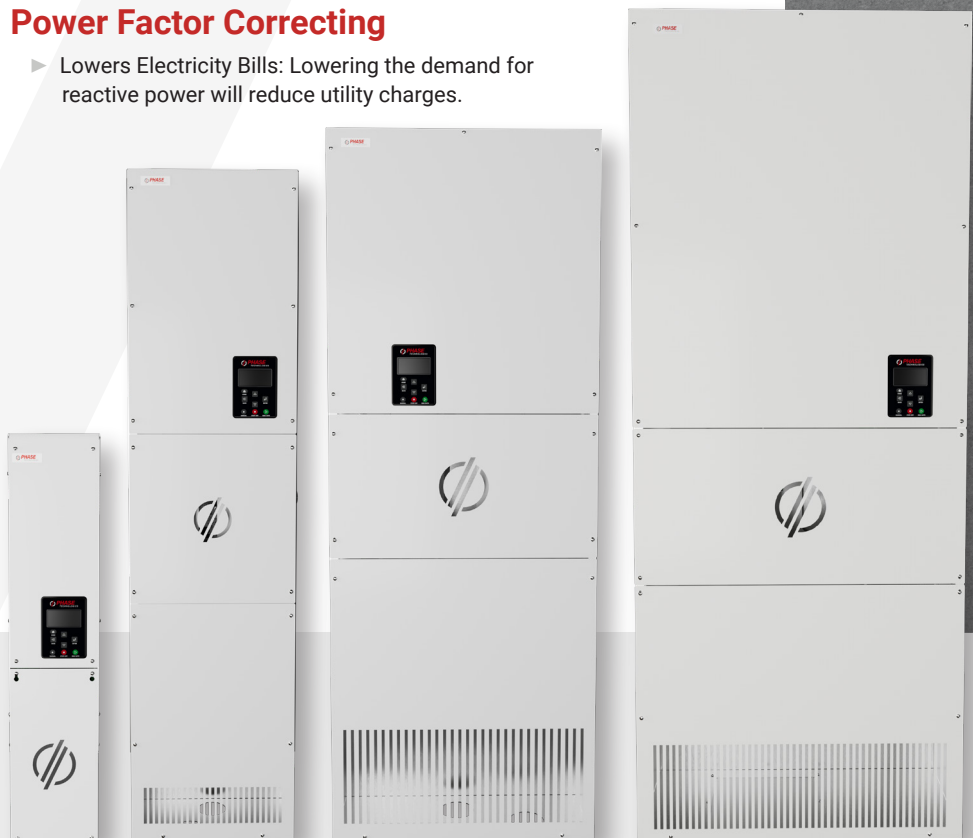
- Blank = NEMA Type 1
- R = NEMA Type 3R

### Voltage

- 0 = 208V - 230V
- 2 = Voltage Doubling
- 4 = 460V

### VFD Series

- DXLL, DXL, DX, SD = Standard
- LHX, 1LH, 3LH = Low Harmonic
- ES, SD, 2XD = Aqua Phase



**L1**

**L2**

**L3**

**L4**

# Product Specifications

## 1LHX SERIES

	Model / Part Number	HP	Rated Current (Input)	Rated Current (Output)	Input Voltage	Output Voltage	CFM	BTU/hr	Panel Size
230V	1LHX005	5	26 A	18 A	230	230	125 - 250	459	L1
	1LHX007	7.5	37 A	25 A	230	230	125 - 250	638	L1
	1LHX010	10	48 A	31 A	230	230	125 - 250	791	L1
	1LHX015	15	72 A	46 A	230	230	125 - 250	1174	L1
	1LHX020	20	97 A	62 A	230	230	125 - 250	1582	L1
Voltage Doubling	1LHX205	5	26 A	9 A	230	460	125 - 250	459	L1
	1LHX207	7	37 A	13 A	230	460	125 - 250	663	L1
	1LHX210	10	50 A	18 A	230	460	125 - 250	919	L1
	1LHX215	15	67 A	24 A	230	460	125 - 250	1225	L1
	1LHX220	20	97 A	31 A	230	460	125 - 250	1582	L1
	1LHX225	25	115 A	38 A	230	460	125 - 250	2041	L1
	1LHX230	30	139 A	46 A	230	460	450	2347	L2
	1LHX240	40	196 A	61 A	230	460	450	3113	L2
	1LHX250	50	226 A	77 A	230	460	720	3929	L3
	1LHX260	60	282 A	91 A	230	460	720	4945	L3
460V	1LHX405	5	13 A	9 A	460	460	125 - 250	459	L1
	1LHX407	7.5	19 A	13 A	460	460	125 - 250	663	L1
	1LHX410	10	26 A	18 A	460	460	125 - 250	919	L1
	1LHX415	15	36 A	25 A	460	460	125 - 250	1276	L1
	1LHX420	20	48 A	31 A	460	460	125 - 250	1582	L1
	1LHX425	25	60 A	38 A	460	460	125 - 250	2041	L1
	1LHX430	30	72 A	46 A	460	460	125 - 250	2347	L1
	1LHX440	40	98 A	61 A	460	460	450	3113	L2
	1LHX450	50	121 A	77 A	460	460	450	3929	L2
	1LHX460	60	143 A	91 A	460	460	450	4643	L2
	1LHX475	75	170 A	107 A	460	460	450	5460	L2
	1LHX4100	100	226 A	142 A	460	460	720	7246	L3
	1LHX4125	125	273 A	172 A	460	460	720	9346	L3
	1LHX4150	150	315 A	198 A	460	460	900	16519	L3

## 3LHX SERIES

	Model / Part Number	HP	Rated Current (Input)	Rated Current (Output)	Input Voltage	Output Voltage	CFM	BTU/hr	Panel Size
230V	3LHX005	5	18 A	18 A	230	230	125 - 250	459	L1
	3LHX007	7.5	25 A	25 A	230	230	125 - 250	638	L1

## 3LHX SERIES

	Model / Part Number	HP	Rated Current (Input)	Rated Current (Output)	Input Voltage	Output Voltage	CFM	BTU/hr	Panel Size
230V	3LHX010	10	31 A	31 A	230	230	125 - 250	791	L1
	3LHX015	15	46 A	46 A	230	230	125 - 250	1,174	L1
	3LHX020	20	61 A	61 A	230	230	125 - 250	1,556	L1
	3LHX025	25	75 A	75 A	230	230	125 - 250	1,914	L1
	3LHX030	30	91 A	91 A	230	230	125 - 250	2,322	L1
Voltage Doubling	3LHX205	5	18 A	9 A	230	460	125 - 250	459	L1
	3LHX207	7	25 A	13 A	230	460	125 - 250	663	L1
	3LHX210	10	30 A	18 A	230	460	125 - 250	919	L1
	3LHX215	15	46 A	25 A	230	460	125 - 250	1,276	L1
	3LHX220	20	60 A	31 A	230	460	125 - 250	1,582	L1
	3LHX225	25	77 A	38 A	230	460	125 - 250	1,939	L1
	3LHX230	30	91 A	46 A	230	460	450	2,347	L2
	3LHX240	40	121 A	61 A	230	460	450	3,113	L2
	3LHX250	50	152 A	77 A	230	460	450	4,644	L2
	3LHX260	60	182 A	91 A	230	460	720	5,460	L3
460V	3LHX275	75	214 A	107 A	230	460	720	7,246	L3
	3LHX2100	100	284 A	142 A	230	460	720	8,777	L3
	3LHX405	5	9 A	9 A	460	460	125 - 250	459	L1
	3LHX407	7.5	13 A	13 A	460	460	125 - 250	663	L1
	3LHX410	10	18 A	18 A	460	460	125 - 250	919	L1
	3LHX415	15	24 A	24 A	460	460	125 - 250	1,276	L1
	3LHX420	20	31 A	31 A	460	460	125 - 250	1,582	L1
	3LHX425	25	38 A	38 A	460	460	125 - 250	2,041	L1
	3LHX430	30	46 A	46 A	460	460	125 - 250	2,347	L1
	3LHX440	40	61 A	61 A	460	460	125 - 250	3,113	L1
	3LHX450	50	77 A	77 A	460	460	125 - 250	3,929	L1
	3LHX460	60	91 A	91 A	460	460	450	4,644	L2
	3LHX475	75	107 A	107 A	460	460	450	5,460	L2
	3LHX4100	100	142 A	142 A	460	460	450	7,246	L2
	3LHX4125	125	172 A	172 A	460	460	450	8,777	L2
	3LHX4150	150	198 A	198 A	460	460	450	10,104	L2
	3LHX4200	200	250 A	250 A	460	460	720	12,758	L3
	3LHX4250	250	304 A	304 A	460	460	720	15,513	L3
	3LHX4300	300	365 A	365 A	460	460	720	18,473	L3
	3LHX4350	350	415 A	415 A	460	460	900	21,178	-
	3LHX4400	400	478 A	478 A	460	460	900	24,393	-
	3LHX4500	500	590 A	590 A	460	460	900	30,108	-



## Panel Sizes

Enclosure	NEMA 1 Panel Dimensions (Height" x Width" x Depth")	Open Panel Dimensions (Height" x Width" x Depth")
L1	33-1/4" x 6-15/16" x 12-7/8"	27-5/16" x 6-15/16" x 12-7/8"
L2	53-9/16" x 13-5/16" x 17-3/8"	49-7/8" x 13-5/16" x 17-3/8"
L3	59-15/16" x 21-1/2" x 18-1/16"	52-7/16" x 21-1/2" x 18-1/16"

