

LH

LOW HARMONIC

CONFIGURED PANEL



LH

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An American-manufactured panel with capabilities for applications up to 800 HP, Phase Technologies' LH (Low Harmonic) configured panels are the solution to your power distribution needs. Purchase as a standalone drive or customize your unit in an enclosed panel configuration using our 508A panel shop. Additionally, take advantage of extra add-on components to increase the efficiency and performance of your unit.

Protect your investment with our all-steel, NEMA 3R enclosures, guaranteed to keep out the elements while allowing your drive to operate at peak performance. All our enclosures are made in-house at our metal fabrication shop, ensuring the highest quality products, proudly made in America.



LOW HARMONIC CONFIGURED PANEL



**12-DAY
LEAD TIMES**



**MADE IN THE
USA**



PERFECT FOR ALL APPLICATIONS

- ▶ Available as a stand alone drive and enclosed panel configuration
- ▶ Build online with our Product Builder and receive your unit within 30 days of order confirmation
- ▶ Easy Set Up Wizards preprogrammed in your system for quick and easy startup
- ▶ IEEE-519 compliant without additional harmonic filters
- ▶ Phase Converting and Voltage Doubling capabilities for single phase or three phase input

Common Applications

AGRICULTURE	<ul style="list-style-type: none"> ▶ Irrigation ▶ Livestock
MUNICIPAL	<ul style="list-style-type: none"> ▶ Sewer Bypass ▶ Lift Stations
MINING & CONSTRUCTION	<ul style="list-style-type: none"> ▶ Dewatering ▶ Slurry & Tailings Removal ▶ Wasterwater Reuse ▶ Dust & Fire Suplestion ▶ Evaporation Equipment ▶ Process Water
INDUSTRIAL	<ul style="list-style-type: none"> ▶ Constant Torque ▶ Rotating Equipment ▶ Conveyor Belts ▶ Rock Crushers ▶ Compressors
HVAC	<ul style="list-style-type: none"> ▶ Circulating Pumps ▶ Cooling Towers ▶ Supply Fans ▶ Exhaust Fans ▶ Air Handlers
OIL & GAS	<ul style="list-style-type: none"> ▶ Water, Oil & Mud Transfer ▶ Drilling Mud Recirculation ▶ Fuel Storage Tank Booster ▶ Downhole Pumps



CRAFT YOUR CONFIGURED PANEL

The LH line is powered by our LHX variable frequency drive, combined with our configured panel options, to bring you a custom unit for your operation.

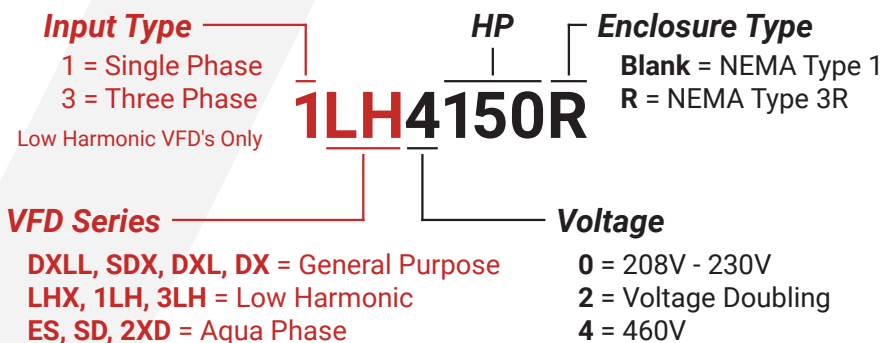
Custom Built Configured Panel

Design the right LH unit for your operation, and we will provide the perfect enclosure. Take advantage of our wide range of add-on components to enhance the efficiency and performance of your configured panel. Phase Technologies will build your unit to spec, at our manufacturing facility, and ship it directly to your home or business for easy installation.

Panel Shop Additional Options

- ▶ AuxPower
- ▶ MCCB - Service Rated
- ▶ LCL Filter
- ▶ HOA & Speed Pot
- ▶ Run & Fault Light
- ▶ Output Filters
- ▶ Surge Protection
- ▶ Leg Kit

Nomenclature



INSIDE THE PANEL

Engineered for maximum performance with minimal components, Phase Technologies configured panels are the definition of simplicity and efficiency. Gone are the days of large enclosures with small drives, heaps of wires, and bulky components. Enjoy the perfectly sized enclosure with all the necessary add-ons, intuitively crafted into a 3R enclosure.

Phase Technologies Inner Panel Design

- 1. DRIVE:** The LH is powered by a Phase Technologies LHX VFD.
- 2. ENCLOSURE:** Configured panels come standered with NEMA 3R all steel enclosures made in house.
- 3. CIRCUIT BREAKER:** Protect your drive with a Circuit Breaker which is available in our 508A panel shop options.
- 4. Integrated LCL:** LCL filter included in 3LH models 350+ HP and available as panel shop option.
- 5. Output Filter:** Built with componets to limit peak voltage, these filters are reccomended with lead lengths up to and above 1,000 feet.



Physical / Environmental

Operating Temperature Range	-40 °C – 50 °C (-40 °F – 104 °F) *Heater in enclosure may be required below –40 °C, de-rating required above 40 °C
Storage Temperature Range	-40 °C – 57 °C (-40 °F – 135 °F)
Enclosure	NEMA Type 3R: Outdoor Rainproof
Altitude	Altitude Derate by 1% every 400 ft above 3300 ft elevation

Input Power

Input Phase	Single-Phase or Three-Phase
Input Voltage	230 V 460 V
Input Voltage Range	190 V – 264 V 440 V – 520 V
Input Frequency	50/60 Hz

Output Power

Output Phase	Three-Phase
Nominal Output Voltage	230 V 460 V
Output Voltage Range	100 V – 270V 200 V – 530 V
Output Frequency	5 Hz – 120 Hz
Horsepower	5 HP - 800 HP
Output Power	1.5 - 409 kW
Switching Frequency	2 kHz – 5 kHz
Output	V/f control Torque Control (Optional)

Electrical

Short Circuit Withstand Rating	65 kA RMS symmetrical Amps
Efficiency	> 98%
Startup Ramp Time	1 – 120 s
Shutdown Ramp Time	1 – 120 s or Coast to Stop
Overload Capacity	110% for 60 s



Analog Inputs

Quantity	(3) Programmable
Current Reference	4 – 20 mA, (2) Inputs
Voltage Reference	0 – 10 VDC, (1) Input
Terminal Block Size	26 - 12 AWG

Digital Inputs

Quantity	(4) Programmable
Ratings	< 5 V, galvanically isolated
Terminal Block Size	26 - 12 AWG

Relay Outputs

Quantity	(4) Programmable
Rating	Relay 1 : 30 VDC or 277 VAC, 10 A Relay 2 : 30 VDC or 277 VAC, 10 A Relay 3 : 30 VDC, 2 A or 125 VAC, 0.5 A Relay 4 : 30 VDC, 2 A or 125 VAC, 0.5 A
Terminal Block Size	26 - 12 AWG

Features

Low Harmonic Compliance	IEEE-519 Guaranteed
Certification	ETL listed to UL 61800-5-1 and CSA C22.2 No. 274-17
User Interface	Push button membrane keypad with backlit graphic display



INTUITIVELY ENGINEERED



**DIGITAL PHASE
CONVERTERS**

**VARIABLE
FREQUENCY
DRIVES**

**MOTOR
PROTECTION**

**STARTER
PANELS**

OUR MISSION

Relentlessly seek to provide Uncommon Value, solutions, innovation, and support for the industries that we serve.

