

Large Packaged AC Drive Solutions

Pre-engineered total package solutions to reduce design time



NEMA 12 Positive Pressure Blown and Filtered AC drive system

Control Techniques is known worldwide for packaged drive system solutions that offer a wide variety of enclosure, power, and control option configurations to meet even the most demanding application requirements. Built with the quality and reliability you would expect from an industry-leading global supplier, these engineered solutions are fully tested and backed by complete engineering documentation and drawings as well as robust after-sale support programs. The result is a single source, turn-key solution with a single source for support.

Key Features

- Cost competitive, pre-engineered provides complete “AC in – AC out” solutions
- Industry standard filtered and ventilated enclosure ensures a robust design
- Simple ordering, installation, and configuration saves valuable time
- Contact factory for additional, custom solutions

Choice of AC drive optimizes value

Unidrive M700 AC Drives

- Class leading induction and permanent magnet motor performance for applications requiring advanced control for open and closed loop applications
- The MCi option module adds a second processor for industry standard IEC 61131-3 PLC programs and multi-axis control

Unidrive M600 AC Drives

- Enhanced throughput with high-performance open and closed loop control of induction and open loop control of permanent magnet motors

Unidrive M400 AC Drives

- Improve throughput with advanced open loop motor control of induction motors

Voltage ratings	
380 / 480 VAC ± 10%	✓
500 / 575 VAC ± 10%	✓

Control Modes	M400	M600	M70x
Open loop vector or V/Hz induction motor control	✓	✓	✓
Open loop Rotor Flux Control for induction motors (RFC-A)	✓	✓	✓
Open loop permanent magnet motor control (RFC-S)		✓	✓
Closed loop Rotor Flux Control for induction motors (RFC-A)		Opt	✓
Closed loop permanent magnet motor control (RFC-S)			✓
Active Front End (AFE) power quality converter		✓	✓

Experience you can trust

Control Techniques' packaged systems group combines state of the art technology with over 30 years experience in providing complete solutions for thousands of applications

Key Data

Heavy Duty Ratings: 50 HP to 1,000 HP (30 kW to 560 kW)
 Normal Duty Ratings: 50 HP to 1,000 HP (30 kW to 600 kW)
 Supply: 460 and 575 V drives 3Ø
 Control Connections: Drive dependent: see individual drive brochure
 Option slots: M600 - M700: 3; M400: 1
 Keypad: Door mounted LCD keypad
 Parameter cloning via: PC tools, SD card, Smartcard

Large Packaged AC Drive Solutions

Normal Duty 460 V ⁽³⁾				
Unidrive M Order Code	Max. Cont. Current (A)	Motor Power (HP)	Typical Output (kW @ 400 V)	Dimensions H x W x D (in)
LPxxx-140050N-x-xxxxxx	63	50	30	60.0 x 38.0 x 16.0
LPxxx-140060N-x-xxxxxx	79	60	37	60.0 x 38.0 x 16.0
LPxxx-140075N-x-xxxxxx	94	75	45	60.0 x 38.0 x 16.0
LPxxx-140090N-x-xxxxxx	112	90	55	60.0 x 38.0 x 16.0
LPxxx-140125N-x-xxxxxx	155	125	75	78.8 x 31.5 x 27.5
LPxxx-140150N-x-xxxxxx	184	150	90	78.8 x 31.5 x 27.6
LPxxx-140175N-x-xxxxxx	221	175	110	78.8 x 31.5 x 27.6
LPxxx-140200N-x-xxxxxx	266	200	132	78.8 x 31.5 x 27.6
LPxxx-140250N-x-xxxxxx	320	250	160	78.8 x 31.5 x 27.6
LPxxx-140300N-x-xxxxxx	361	300	185	78.8 x 31.5 x 27.6
LPxxx-140350N-x-xxxxxx	437	350	225	86.6 x 31.5 x 27.5
LPxxx-140400N-x-xxxxxx	507	400	280	86.6 x 31.5 x 27.5
LPxxx-140500N-x-xxxxxx	608	500	315	78.8 x 55.1 x 27.5
LPxxx-140550N-x-xxxxxx	686	550	355	78.8 x 55.1 x 27.5
LPxxx-140700N-x-xxxxxx	830	700	400	86.6 x 63.0 x 27.5
LPxxx-140800N-x-xxxxxx	963	800	500	86.6 x 63.0 x 27.5
LPxxx-141000N-x-xxxxxx	1245	1000	600	86.6 x 94.5 x 27.5

Heavy Duty 460 V ⁽³⁾				
Unidrive M Order Code	Max. Cont. Current (A)	Motor Power (HP)	Typical Output (kW @ 400 V)	Dimensions H x W x D (in)
LPxxx-140050H-x-xxxxxx	66	50	30	60.0 x 38.0 x 16.0
LPxxx-140060H-x-xxxxxx	77	60	37	60.0 x 38.0 x 16.0
LPxxx-140075H-x-xxxxxx	100	75	45	60.0 x 38.0 x 16.0
LPxxx-140100H-x-xxxxxx	134	100	55	60.0 x 38.0 x 16.0
LPxxx-140125H-x-xxxxxx	157	125	75	78.8 x 31.5 x 27.5
LPxxx-140150H-x-xxxxxx	180	150	90	78.8 x 31.5 x 27.5
LPxxx-140175H-x-xxxxxx	211	175	110	78.8 x 31.5 x 27.5
LPxxx-140200H-x-xxxxxx	270	200	132	78.8 x 31.5 x 27.5
LPxxx-140250H-x-xxxxxx	307	250	160	78.8 x 31.5 x 27.5
LPxxx-140300H-x-xxxxxx	377	300	200	86.6 x 31.5 x 27.5
LPxxx-140350H-x-xxxxxx	415	350	200	86.6 x 31.5 x 27.5
LPxxx-140400H-x-xxxxxx	513	400	250	78.8 x 55.1 x 27.5
LPxxx-140500H-x-xxxxxx	583	500	280	78.8 x 55.1 x 27.5
LPxxx-140600H-x-xxxxxx	716	600	355	86.6 x 63.0 x 27.5
LPxxx-140650H-x-xxxxxx	788	650	400	86.6 x 63.0 x 27.5
LPxxx-140900H-x-xxxxxx	1074	900	550	86.6 x 94.5 x 27.5
LPxxx-141000H-x-xxxxxx	1182	1000	560	86.6 x 94.5 x 27.5

Normal Duty ratings are at 2 kHz switching frequency. For ratings other than 2 kHz refer to appropriate Power Installation Guide. Heavy Duty ratings are at 3 kHz switching frequency. For ratings other than 3 kHz refer to appropriate Power Installation Guide. Circuit Breakers used in packages 550 HP ND / 450 HP HD and above contain Arc Energy Reduction and Ground Fault Protection compliant with NEC guidelines. Unidrive M400, M600, and M70x up to 150 HP ND, 125 HP HD include internal line reactors. Ambient temperature -4 °F to 104 °F (-20 °C to 40 °C) as standard. Up to 131 °F (55 °C) with derating.

Order Code

Sample Code: LP aaa - 1 b cccc d - e - f g h i j k

Product - LP
Large Packaged Drive

Drive Model - aaa
400 = Unidrive M400 ⁽¹⁾
600 = Unidrive M600
700 = Unidrive M700
701 = Unidrive M701
702 = Unidrive M702

Input Power - 1
1 = Circuit Breaker Disconnect ⁽²⁾

Voltage Rating - b
4 = 460 VAC
5 = 575 VAC ⁽³⁾

Note: Door mounted keypad and E-Stop push-button are offered as standard.

The keypad provides the features of power on, run, fault indication and the ability to start, stop, and provide speed control.

Horsepower - cccc
0050 = 50 HP
0060 = 60 HP
0075 = 75 HP
0100 = 100 HP
0125 = 125 HP
0150 = 150 HP
0200 = 200 HP
0250 = 250 HP
0300 = 300 HP
0350 = 350 HP
0400 = 400 HP
0450 = 450 HP
0500 = 500 HP
0600 = 600 HP
0650 = 650 HP
0700 = 700 HP
0800 = 800 HP
0900 = 900 HP
1000 = 1000 HP

Duty Rating - d
H = Heavy Duty
N = Normal Duty

Keypads - e
0 = Door Mounted LCD Keypad
1 = Drive Mounted Keypad

Filtering Options - f
0 = None
1 = AC Input Reactor ⁽⁴⁾
2 = AC Output Reactor ⁽⁵⁾
3 = AC Input and Output Reactor

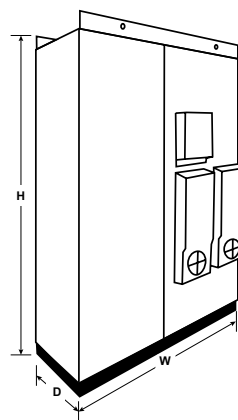
Blower Motor Starter Option - g
0 = None
1 = Blower motor starter*

Data Port Option - h
0 = None
1 = Data Port

Air Conditioning - i
0 = None
1 = Air Conditioning

NEMA Rating - j
0 = NEMA 12
1 = NEMA 3R

cULus Label - k
1 = cULus



Note: Depth dimensions for the cabinets in the table include through-panel heat sinks and fans on the back of the cabinet. Through-panel mounting available for 150 HP and above.

Options	
Air conditioner AC	✓
Line / load reactors	✓
Blower motor starter	✓
Data port	✓
Consult factory options	
NEMA 3R	✓

*Motor Blower Starter Order Code	Motor Blower Current (A)
8410-100-00.63	0.4 - 0.63
8410-100-0001	0.63 - 1
8410-100-001.6	1 - 1.6
8410-100-002.5	1.6 - 2.5
8410-100-0004	2.5-4
8410-100-0006	4 - 6
8410-100-0010	6 - 10
8410-100-0013	9 - 13
8410-100-0017	11 - 17

- (1) Unidrive M400 drive model is only available up to 200 HP normal duty / 150 HP heavy duty.
- (2) Drive line fuses and flanged handle circuit breaker are included as standard. Packages with Frame 11 drives (sizes 350 HP ND / 300 HP HD, 400 HP ND / 350 HP HD, 700 HP ND / 500 HP HD and above) offer through door circuit breaker as standard.
- (3) Consult factory for 575 Vac pricing.
- (4) Built-in inductors (3% impedance) are standard up to Frame 8 150 HP ND / 125 HP HD. Optional input reactors (3% impedance) are available. Input reactors (3% impedance) are included on drives 150 HP Frame 9 (Normal Duty) and above as standard.
- (5) Output reactors (1% impedance) are included on drives 500 HP (normal duty) and above as standard. Optional output reactors (1.5% impedance) are available on all other drives.

