Large Packaged AC Drive Solutions
Pre-engineered total package solutions to reduce design time

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

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

Voltage ratings

<table>
<thead>
<tr>
<th>Voltage ratings</th>
<th>M400</th>
<th>M600</th>
<th>M70x</th>
</tr>
</thead>
<tbody>
<tr>
<td>380 / 480 VAC ± 10%</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>500 / 575 VAC ± 10%</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

Control Modes

<table>
<thead>
<tr>
<th>Control Modes</th>
<th>M400</th>
<th>M600</th>
<th>M70x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open loop vector or V/Hz induction motor control</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Open loop Rotor Flux Control for induction motors (RFC-A)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Open loop permanent magnet motor control (RFC-S)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Closed loop Rotor Flux Control for induction motors (RFC-A)</td>
<td>Opt</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Closed loop permanent magnet motor control (RFC-S)</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Active Front End (AFE) power quality converter</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

www.controltechniques.com

APPROVAL
ISO9001
CE
SIL3

NEMA 12 Positive Pressure Blown and Filtered AC drive system

Call us at: +1 800 893-2321

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

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

<table>
<thead>
<tr>
<th>Unidrive M Order Code</th>
<th>Max. Cont. Current (A)</th>
<th>Motor Power (HP)</th>
<th>Typical Output (kW @ 400 V)</th>
<th>Dimensions H x W x D (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.Pxxx-140500N-xxxxxx</td>
<td>66</td>
<td>50</td>
<td>30</td>
<td>60.0 x 38.0 x 16.0</td>
</tr>
<tr>
<td>L.Pxxx-140600N-xxxxxx</td>
<td>77</td>
<td>60</td>
<td>37</td>
<td>60.0 x 38.0 x 16.0</td>
</tr>
<tr>
<td>L.Pxxx-140700N-xxxxxx</td>
<td>90</td>
<td>75</td>
<td>45</td>
<td>60.0 x 38.0 x 16.0</td>
</tr>
<tr>
<td>L.Pxxx-140900N-xxxxxx</td>
<td>112</td>
<td>90</td>
<td>55</td>
<td>60.0 x 38.0 x 16.0</td>
</tr>
<tr>
<td>L.Pxxx-14125SN-xxxxxx</td>
<td>155</td>
<td>125</td>
<td>75</td>
<td>78.8 x 31.5 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-14150SN-xxxxxx</td>
<td>184</td>
<td>150</td>
<td>90</td>
<td>78.8 x 31.5 x 27.6</td>
</tr>
<tr>
<td>L.Pxxx-14175SN-xxxxxx</td>
<td>221</td>
<td>175</td>
<td>110</td>
<td>78.8 x 31.5 x 27.6</td>
</tr>
<tr>
<td>L.Pxxx-14200UN-xxxxxx</td>
<td>266</td>
<td>200</td>
<td>132</td>
<td>78.8 x 31.5 x 27.6</td>
</tr>
<tr>
<td>L.Pxxx-1425SN-xxxxxx</td>
<td>320</td>
<td>250</td>
<td>160</td>
<td>78.8 x 31.5 x 27.6</td>
</tr>
<tr>
<td>L.Pxxx-1430SN-xxxxxx</td>
<td>361</td>
<td>300</td>
<td>185</td>
<td>78.8 x 31.5 x 27.6</td>
</tr>
<tr>
<td>L.Pxxx-1435SN-xxxxxx</td>
<td>437</td>
<td>350</td>
<td>225</td>
<td>86.6 x 31.5 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1440SN-xxxxxx</td>
<td>507</td>
<td>400</td>
<td>280</td>
<td>86.6 x 31.5 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1450SN-xxxxxx</td>
<td>608</td>
<td>500</td>
<td>315</td>
<td>78.8 x 55.1 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1455SN-xxxxxx</td>
<td>686</td>
<td>550</td>
<td>355</td>
<td>78.8 x 55.1 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1460SN-xxxxxx</td>
<td>830</td>
<td>700</td>
<td>400</td>
<td>86.6 x 63.0 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1470SN-xxxxxx</td>
<td>963</td>
<td>800</td>
<td>500</td>
<td>86.6 x 63.0 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-1480SN-xxxxxx</td>
<td>1245</td>
<td>1000</td>
<td>600</td>
<td>86.6 x 94.5 x 27.5</td>
</tr>
<tr>
<td>L.Pxxx-14100SN-xxxxxx</td>
<td>1401</td>
<td>1200</td>
<td>900</td>
<td>86.6 x 94.5 x 27.5</td>
</tr>
</tbody>
</table>

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.

Input reactors (3% impedance) are included on drives 150 HP Frame 9 (Normal Duty) and above as standard.

| L.Pxxx-140500H-xxxxxx  | 66                    | 50              | 30                          | 60.0 x 38.0 x 16.0        |
| L.Pxxx-140600H-xxxxxx  | 77                    | 60              | 37                          | 60.0 x 38.0 x 16.0        |
| L.Pxxx-140700H-xxxxxx  | 90                    | 75              | 45                          | 60.0 x 38.0 x 16.0        |
| L.Pxxx-140900H-xxxxxx  | 112                   | 90              | 55                          | 60.0 x 38.0 x 16.0        |
| L.Pxxx-14125SH-xxxxxx  | 157                   | 125             | 75                          | 78.8 x 31.5 x 27.5        |
| L.Pxxx-14150SH-xxxxxx  | 180                   | 150             | 90                          | 78.8 x 31.5 x 27.5        |
| L.Pxxx-14175SH-xxxxxx  | 211                   | 175             | 110                         | 78.8 x 31.5 x 27.5        |
| L.Pxxx-14200HM-xxxxxx  | 270                   | 200             | 132                         | 78.8 x 31.5 x 27.5        |
| L.Pxxx-1425SH-xxxxxx   | 307                   | 250             | 160                         | 78.8 x 31.5 x 27.5        |
| L.Pxxx-1430SH-xxxxxx   | 377                   | 300             | 200                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1435SH-xxxxxx   | 415                   | 350             | 250                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1440SH-xxxxxx   | 513                   | 400             | 300                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1450SH-xxxxxx   | 583                   | 500             | 380                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1460SH-xxxxxx   | 716                   | 600             | 450                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1470SH-xxxxxx   | 788                   | 650             | 500                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-1480SH-xxxxxx   | 884                   | 750             | 575                         | 86.6 x 31.5 x 27.5        |
| L.Pxxx-14100SH-xxxxxx  | 1182                  | 1000            | 900                         | 86.6 x 94.5 x 27.5        |

Order Code

Product - LP

Large Packaged Drive

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

Motor

Typical Output (kW @ 400 V)

HP = 2 kHz
HD = 3 kHz

Blower Motor Starter Option - g

0 = None
1 = Blower Motor Starter*

Air Conditioning - i

1 = Air Conditioning
0 = None

Duty Rating - d

H = Heavy Duty
N = Normal Duty

Voltage Rating - b

4 = 460 VAC
5 = 575 VAC

Current (A)

0.4 - 1.6
0.63 - 2.5
0.4 - 6.0
6 - 13
11 - 17

Notes:
- **Motor Blower Starter**
- Options
- Data Port Option - h
- Data Port
- Air Conditioning
- NEMA Rating - j
- cULus Label - k
- cULus

Options

- Air conditioner AC
- Line / load reactors
- Blower motor starter
- Data port
- Consult factory options

Motor Blower Current (A)

0.4 - 0.63
0.63 - 1
1.6 - 2.5
2.5 - 4
4 - 6
6 - 10
9 - 13
11 - 17

Consult factory options

1 = cULus

(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) Optional 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.

www.controltechniques.com