

The Positioning Experts
in the Economy Class
CDE/CDB3000



 c-line _ positioning system



CDE/CDB3000 _ Your search is over!

The control performance of an advanced PLC, complex state regulating structures, numerous simultaneous position measurement systems at very high resolution, clock synchronism for up to 256 axes accurate to the microsecond – fantastic features of today's high-performance drive controllers.

But – do you really need all that? If you do, then our new CDE/CDB3000 positioning system probably won't be able to help you.

But if progress for you primarily means improving cost-effectiveness while retaining current levels of performance and functionality, then LTI has just the right solution for you. Our CDE and CDB position controllers offer you identical functionality in two design variants for your positioning applications. The CDE is optimized for interaction with synchronous servomotors. The CDB is best suited to the control of asynchronous gear motors. And we have fitted both units with exactly the features you need for your applications. CDE and CDB – two positioning experts to aid cost-cutting on your machine or line.





CDE/CDB3000 _ A wealth of top-class functionality

If you're worried that cost consciousness in system design leads to penny-pinching functionality, we can assure you it doesn't. This document demonstrates the surprising breadth of functionality we are able to offer based on state-of-the-art component and manufacturing technology, without stretching those tight cost limits.

It would not have been enough simply to concentrate on the componentry in our efforts to optimize costs. You can of course also expect to receive our usual standards of sound, targeted advice, expert support in commissioning, an advanced, needs-oriented order and delivery logistics system, outstanding service and diagnostic capability and, not least, top product quality. But that is doubtless no surprise to you. After all, CDE and CDB are members of the successful c-line DRIVES series from LTI.



Safe stopping to category 3 EN 954-1
to save on external safety components



CANopen inside
with DSP402 Position, Interpolated Position, Velocity and Homing modes and scaling of units by Factor Group



Evaluation of two encoders
for precision positioning operations with backlash mechanism



Evaluation of multi-turn encoders
for positioning operations without referencing



Sequenced driving set positioning
with sequential job logic, graphically operated



PLCmotion
for process-oriented additional tasks and coordination of movement sequences



Cam-contactor group
for generation of position-dependent control signals to control connected machine peripherals



Online position profile generator
for real-time position profile generation with 250 μ s fine interpolation



Cam profile function
for flying knife/flying saw

The CDE/CDB drive controllers are available in power classes from 375 W/2 A up to 110 kW/210 A. You can also select from a wide range of innovative synchronous and asynchronous gear motors. So cut your costs further by employing a complete system solution from LTI.



The new LSH servomotor _ the compact power pack

We have become accustomed to regular innovations in drive controllers in recent years. But what about servomotors? The answer is surprising!

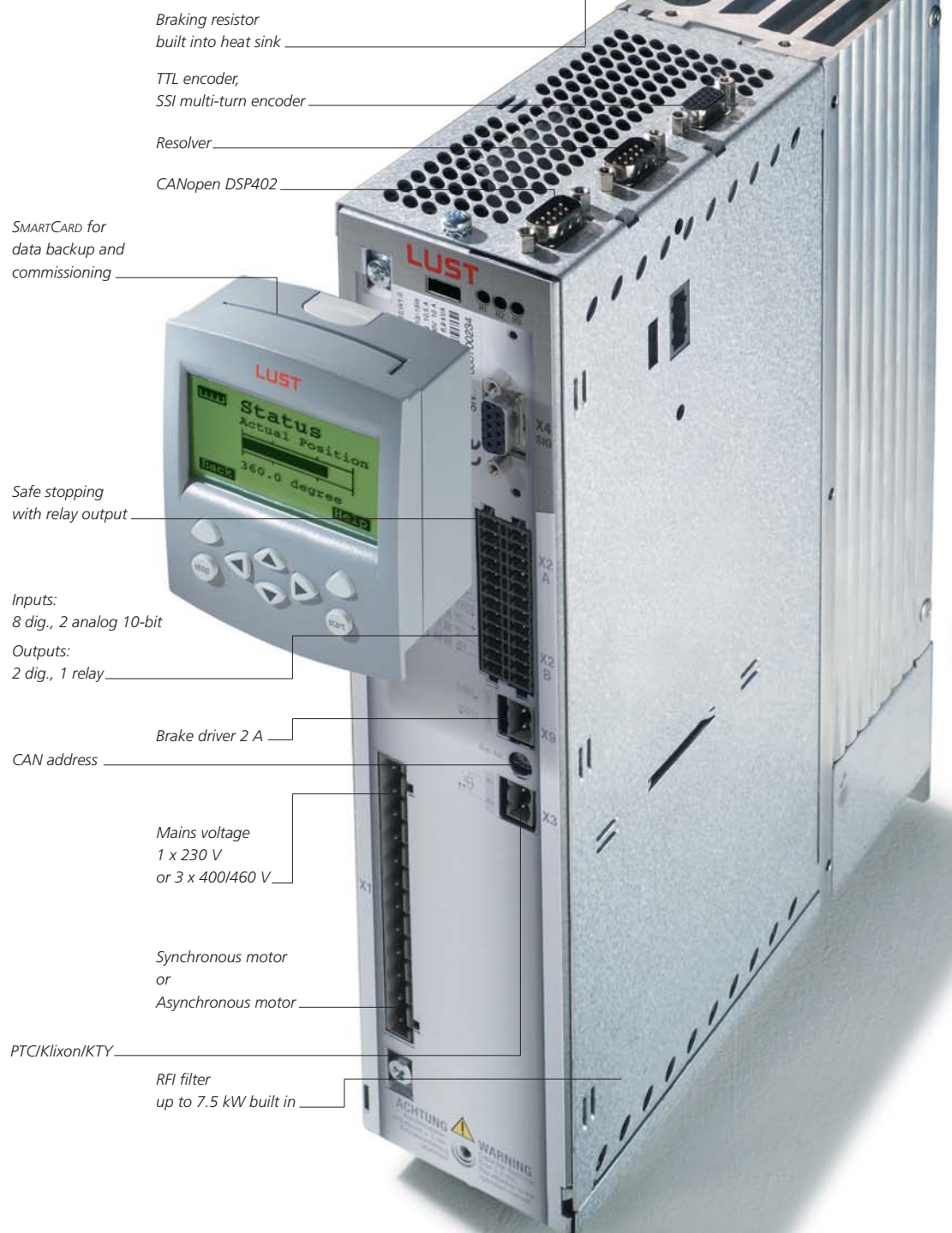
Would you have thought that the power density of good servomotors with NdFeB magnets could have been substantially enhanced any more? The latest winding technologies have made it possible: 30 to 70 % more power density, at a much lower price, and with an up to 100 % improvement in dynamics.

Moreover, the soundly-based design and manufacturing technology underlying the new LSH generation of servomotors ensures maximum operational reliability.



CDE3000

So similar and yet so different



Braking resistor
built into heat sink

TTL encoder,
SSI multi-turn encoder

Resolver

CANopen DSP402

SMARTCARD for
data backup and
commissioning

Safe stopping
with relay output

Inputs:
8 dig., 2 analog 10-bit

Outputs:
2 dig., 1 relay

Brake driver 2 A

CAN address

Mains voltage
1 x 230 V
or 3 x 400/460 V

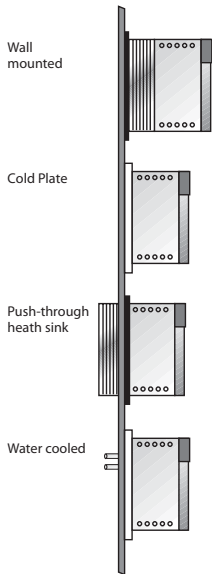
Synchronous motor
or
Asynchronous motor

PTC/Klixon/KTY

RFI filter
up to 7.5 kW built in



Position controllers _ CDE/CDB3000



| | BG1 | BG2 | BG3 | BG4 | BG5 | BG6 |
|--|----------------------------------|--------------------|----------------|-----------------|-----------------|------------------------|
| Rated current [A] (1 x 230 V mains) (3 x 400/460 V mains) | 2.4/4 | 7.1 2.2/4.1/5.7 | – 7.8/10 | – 14/17 | – 24/32 | – 32/40 |
| Motor power [kW] _{1,)} | 0.375/0.75 | 0.75/1.5/2.2 | 3/4 | 5.5/7.5 | 11/15 | 15/20 |
| Peak current [A] | 1.8 times rated current for 30 s | | | | | 2.0 times 1.5 times |
| Wall mounted | x | x | x | x | x | x |
| Cold Plate | x | x | x | x | x | x |
| Push-through heat sink | – | – | x | x | x | x |
| Liquid cooled heat sink | – | – | – | – | – | – |
| Certification | CE, cUL | | | | | |
| Dimensions (W x H x D) in mm | 70 x 193 x 120 | 70 x 218 x 145 | 70 x 300 x 218 | 120 x 300 x 218 | 170 x 300 x 218 | 220 x 300 x 218 |

The braking chopper electronics are built into all controllers. A mains filter to comply with EN 61800-3 is built into all controllers of sizes 1, 2, 3, 4 and 6. 1.) referred to 4-pole asym



Synchronous servomotors _ LSH/LST

| | LSH-050 | LSH-074 | LSH-097 | LSH-127 | LST-037 | LST-050 | LST-074 |
|--|-----------|----------|---------|-----------|-----------|-----------|----------|
| Standstill torque [Nm] | 0.26-0.95 | 0.95-4.2 | 4.1-8.6 | 11.6-27.0 | 0.1-0.3 | 0.20-0.95 | 0.65-3.0 |
| Rated torque [Nm] | 0.24-0.84 | 0.86-3.1 | 3.2-6.1 | 8.4-21 | 0.09-0.27 | 0.19-0.85 | 0.6-2.5 |
| Rated speed [min ⁻¹] | 4500 | 3000 | 3000 | 3000 | 6000 | 4500 | 3000 |
| Installation window [mm] | 55 | 86 | 98 | 142 | 37 | 55 | 86 |
| Design length [mm] | 67-112 | 96-186 | 129-189 | 172-290 | 81-111 | 98-158 | 109-181 |
| Moment of inertia [kgcm ²] ¹⁾ | 0.06-0.12 | 0.5-1.5 | 1.7-3.5 | 6.8-15.3 | 0.06-0.08 | 0.6-0.18 | 0.5-1.5 |

¹⁾ with resolver, without brake



BG7



Accessories

| BG6 | BG7 / (BG7a) |
|-----------------------------|--|
| - | - |
| 45/60/72 | 90/110 / (143/170/210) |
| 22/30/37 | 45/55 / (75/90/110) |
| times I_N (30 s/10 s CDE) | 2.0 times I_N (30 s/10 s) |
| times I_N (30 s CDB) | |
| x | x |
| x | |
| x | |
| x | x |
| 190 x 348 x 230 | 280 x 540 x 240 / (280 x 540 x 320) |
| asynchronous motors | |

| | |
|---|--|
| DRIVEMANAGER PC operator control software | For user-friendly commissioning, diagnosis and operation |
| Control unit, memory card | KEYPAD KP300, SMARTCARD SC-XL |
| Operator Panel via RS232, CANopen | Text display or LCD touch-panel |
| Communication module, user module | PROFIBUS-DP, I/O expansion |
| Line chokes, mains filters | 4 A – 210 A |
| Braking resistors | 35 W – 8 kW |
| Cables | Motor and encoder cables for all preferred motors |



LST-190



LST-220



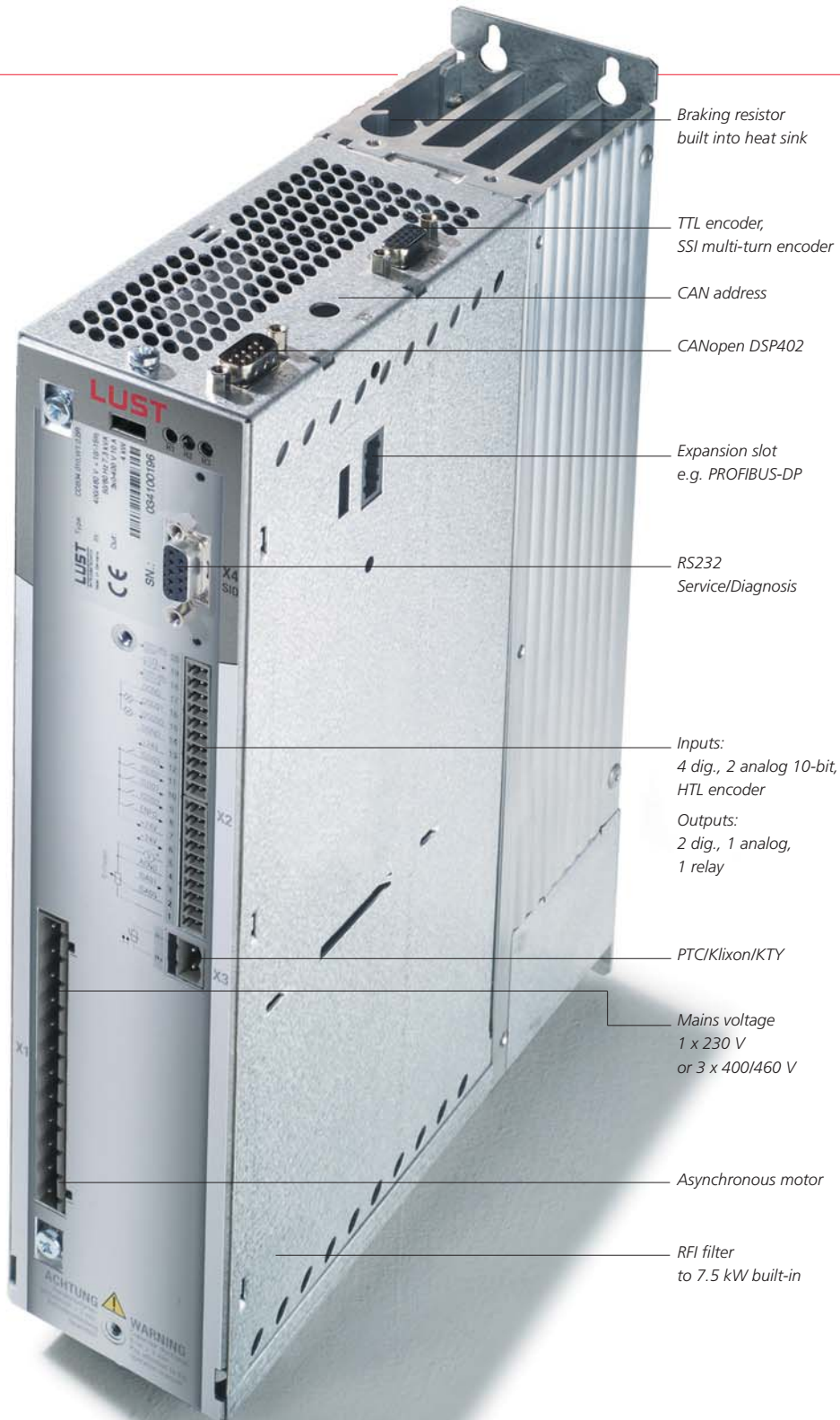
PC _ user software „DRIVEMANAGER“

| | LST-097 | LST-127 | LST-158 | LST-190 | LST-220 |
|------|---------|----------|-----------|-----------|------------|
| 0.74 | | | | | |
| 3.0 | 2.6-9.5 | 6.6-22.0 | 13.5-35.0 | 27.0-40.0 | 40.0-115.0 |
| 2.5 | 2.3-8.5 | 5.7-17.0 | 13.0-26.0 | 21.0-26.0 | 30.0-50.0 |
| 0 | 3000 | 3000 | 3000 | 3000 | 3000 |
| | 98 | 142 | 190 | 190 | 240 |
| 181 | 146-236 | 185-304 | 201-395 | 242-287 | 310-514 |
| 1.5 | 1.9-6.1 | 5.9-11.7 | 13.1-46.0 | 36.0-46.0 | 76.0-190.0 |

| | |
|----------------------|---|
| Software performance | Comfortable windows for commissioning |
| | 4-channel digital scope |
| | Status display for actual value and reference |
| | Direct controlling of drive controller via PC |
| Software condition | Microsoft Windows [®] , 95/98/ME |
| | Windows [®] , NT, 2000, XP |

Information and specifications are subject to change at any time. For more information please visit us at www.lt-i.com.

CDB3000



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