

ILE2E661PB1A2

brushless DC motor, Lexium ILA ILE ILS, 24 to 48V, EtherCAT interface, 174mm, straight teeth gear, 38:1



Main

| | |
|---------------------------|--|
| Range of product | Lexium integrated drive |
| Product or component type | Motion integrated drive |
| Device short name | ILE |
| Motor type | Brushless DC motor |
| Number of motor poles | 6 |
| Network number of phases | Single phase |
| [Us] rated supply voltage | 48 V 24 V |
| Network type | DC |
| Communication interface | EtherCAT, integrated |
| Length | 174 mm |
| Winding type | Medium speed of rotation and medium torque |
| Electrical connection | Printed circuit board connector |
| Holding brake | Without |
| Gear box type | Straight teeth gear, 3 stages |
| Reduction ratio | 38:1 (75:2) |
| Nominal speed | 107 rpm at 24 V 133 rpm at 48 V |
| Nominal torque | 7.3 N.M at 24 V 7.3 N.m at 48 V |

Complementary

| | |
|---------------------------------------|--|
| Transmission rate | 100 Mbits |
| Mounting support | Flange |
| Motor flange size | 66 mm |
| Number of motor stacks | 1 |
| Centring collar diameter | 16 mm |
| Centring collar depth | 4 mm |
| Number of mounting holes | 4 |
| Mounting holes diameter | 4.4 mm |
| Circle diameter of the mounting holes | 73.54 mm |
| Feedback type | BLDC encoder |
| Shaft end | Keyed |
| Second shaft | Without second shaft end |
| Shaft diameter | 10 mm |
| Shaft length | 25 mm |
| Key width | 16 mm |
| Supply voltage limits | 18...55.2 V |
| Current consumption | 7000 mA peak 5500 mA maximum continuous |
| Associated fuse rating | 16 A |
| Commissioning interface | RS485 Modbus TCP (9.6, 19.2 and 38.4 kbauds) |
| Input/output type | 4 signals (each be used as input or output) |

| | |
|----------------------------|---|
| Voltage state 0 guaranteed | -3...4.5 V |
| Voltage state 1 guaranteed | 15...30 V |
| Discrete input current | 10 mA at 24 V on/STO_A for safety input 3 mA at 24 V on/STO_B for safety input 2 mA at 24 V for 24 V signal interface |
| Discrete output voltage | 23...25 V |
| Maximum switching current | 100 mA per output 200 mA total |
| Protection type | Safe torque off Short circuit of the output voltage Overload of output voltage |
| Maximum supply current | 0.1 A (power stage disabled) 6.8 A at 24 V 3.8 A at 48 V |
| Nominal output power | 119 W at 48 V 95 W at 24 V |
| Peak stall torque | 13.07 N.M at 24 V 13.07 N.m at 48 V |
| Continuous stall torque | 8.3 N.m |
| Detent torque | 3 N.m |
| Speed feedback resolution | 12 points/turn motor 0.8° gearbox output |
| Accuracy error | +/- 0.5 point |
| Maximum torsional backlash | 1 ° |
| Rotor inertia | 211 kg.cm ² |
| Maximum mechanical speed | 133 rpm |
| Maximum radial force Fr | 200 N (long-term operation) 200 N (short-term operation) |
| Maximum axial force Fa | 10 N (long-term operation) 80 N (short-term operation) |
| Service life in hours | 2500 H bearing short-term operation 15000 h bearing long-term operation |
| Marking | CE |
| Type of cooling | Natural convection |
| Net weight | 1.85 kg |

Environment

| | |
|---|--|
| Standards | IEC 61800-3, Ed 2 IEC 50347 EN 61800-3 : 2001-02 EN 61800-3:2001, second environment IEC 60072-1 IEC 50178 IEC 61800-3 |
| Product certifications | cUL[RETURN]TÜV[RETURN]UL |
| Ambient air temperature for operation | 40...55 °C (with power derating of 2 % per °C) 0...40 °C (without derating) |
| Permissible ambient air temperature around the device | 105 °C power amplifier 110 °C motor |
| Ambient air temperature for storage | -25...70 °C |
| Operating altitude | <= 1000 m without derating |
| Relative humidity | 15...85 % without condensation |
| Vibration resistance | 20 m/s ² (f= 10...500 Hz) 10 cycles conforming to IEC 60068-2-6 |
| Shock resistance | 150 m/s ² 1000 shocks conforming to IEC 60068-2-29 |
| IP degree of protection | IP41 shaft bushing: conforming to IEC 60034-5 IP54 total except shaft bushing: conforming to IEC 60034-5 |

Packing Units

| | |
|------------------------------|-----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 11 cm |
| Package 1 Width | 19 cm |
| Package 1 Length | 39.5 cm |
| Package 1 Weight | 2.284 kg |
| Unit Type of Package 2 | S04 |
| Number of Units in Package 2 | 4 |
| Package 2 Height | 30 cm |
| Package 2 Width | 40 cm |
| Package 2 Length | 60 cm |
| Package 2 Weight | 10.448 kg |
| Unit Type of Package 3 | S06 |
| Number of Units in Package 3 | 12 |
| Package 3 Height | 73.5 cm |
| Package 3 Width | 60 cm |
| Package 3 Length | 80 cm |
| Package 3 Weight | 40.228 kg |

Offer Sustainability

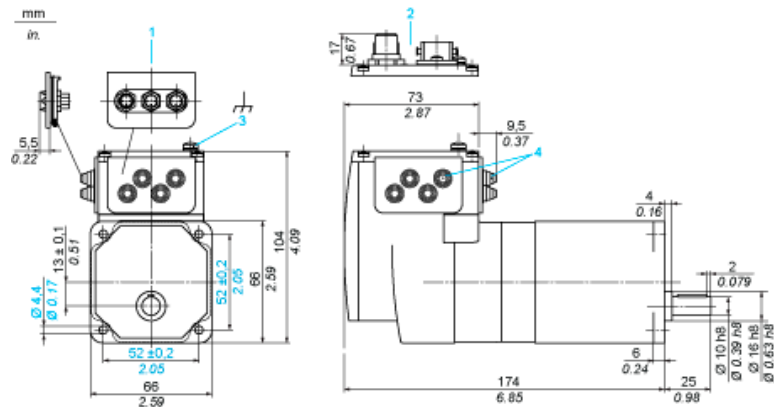
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS Declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| PVC free | Yes |

Contractual warranty

| | |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

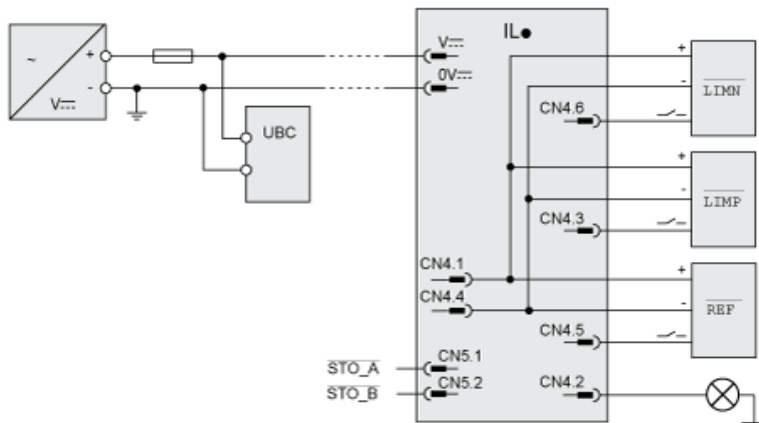
Integrated Drive with Straight Teeth Gear

Dimensions

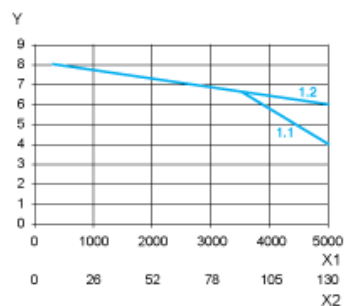


- 1 Accessories: I/O signal insert with industrial connectors
- 2 Option: industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries $\varnothing = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$

Connection Example with 4 I/O Signals



Torque Characteristics



- X1 Speed of rotation of motor in rpm
X2 Speed of rotation of gearing in rpm
Y Torque in Nm
1.1 Max. torque at 24 V
1.2 Max. torque at 36 V