

Product data sheet

Specifications



brushless DC motor, Lexium ILE ILS, 24 to 48V, EtherNet IP interface, 174mm, straight teeth gear, 18:1

ILE2K661PB1A1

! Discontinued

! Discontinued on: Jul 28, 2023

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 | 24 V 48 V |
| Network Type | DC |
| Communication Interface | Ethernet/IP, 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 | 18:1 (160:9) |
| Nominal Speed | 225 rpm at 24 V 281 rpm at 48 V |
| Nominal Torque | 3.5 N.m at 24 V 3.5 N.m at 48 V |

Complementary

| | |
|---------------------------------------|----------------------|
| Transmission Rate | 125, 250, 500 kbauds |
| 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 |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

| | |
|----------------------------|---|
| 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 Overload of output voltage Short circuit of the 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 | 6.19 N.m at 24 V 6.19 N.m at 48 V |
| Continuous Stall Torque | 4.3 N.m |
| Detent Torque | 1.42 N.m |
| Speed Feedback Resolution | 1.667° gearbox output 12 points/turn motor |
| Accuracy Error | +/- 0.5 point |
| Maximum Torsional Backlash | 1 ° |
| Rotor Inertia | 48 kg.cm² |
| Maximum Mechanical Speed | 281 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 50178 EN 61800-3 : 2001-02 IEC 61800-3, Ed 2 IEC 50347 IEC 61800-3 IEC 60072-1 EN 61800-3:2001, second environment |
| Product Certifications | cUL TÜV 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/s² (f= 10...500 Hz) 10 cycles conforming to IEC 60068-2-6 |
| Shock Resistance | 150 m/s² 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 | 8.0 cm |
| Package 1 Width | 18.5 cm |
| Package 1 Length | 35.5 cm |
| Package 1 Weight | 2.15 kg |

Contractual warranty

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

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

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[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

Well-being performance

✓ Mercury Free

✓ Rohs Exemption Information [Yes](#)

✓ Pvc Free

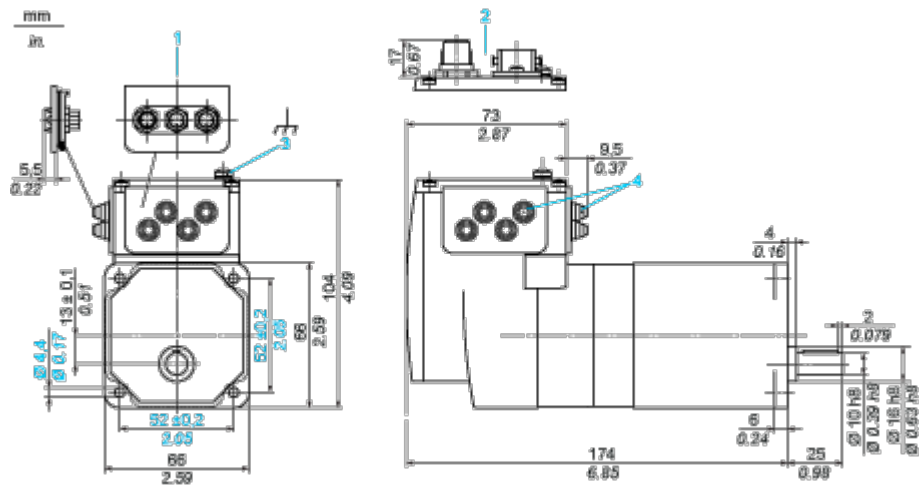
Certifications & Standards

| | |
|---------------------------|---|
| Reach Regulation | REACH Declaration |
| Eu Rohs Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| China Rohs Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |
| Weee | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile | End of Life Information |
| California Proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

Dimensions Drawings

Integrated Drive with Straight Teeth Gear

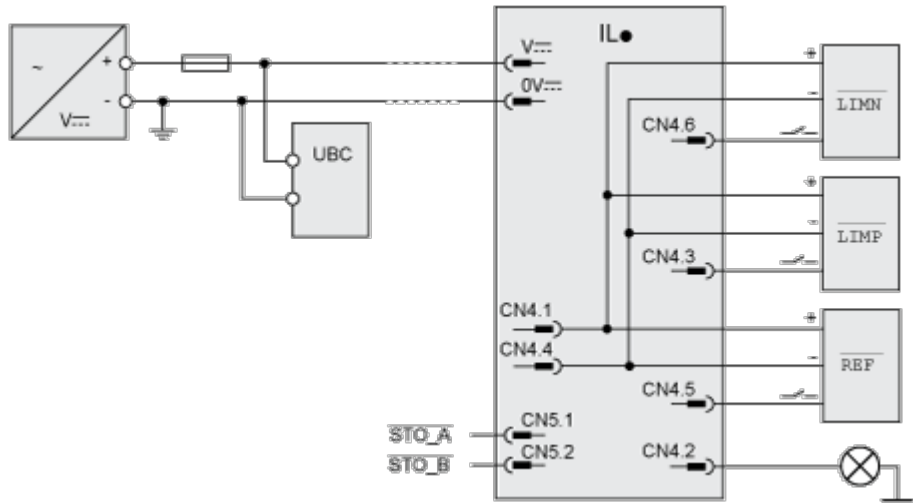
Dimensions



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

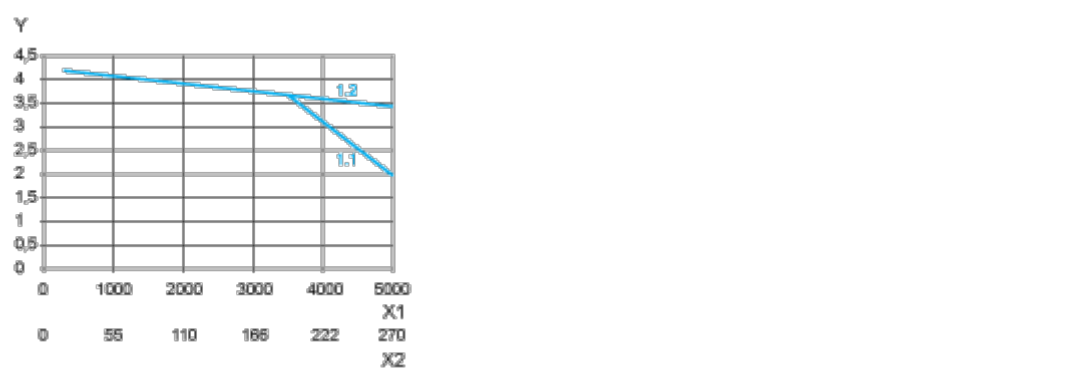
Connections and Schema

Connection Example with 4 I/O Signals



Performance Curves

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