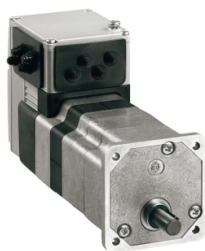


# Product datasheet

Specifications



## brushless dc motor 24..48 V - DeviceNet interface - L = 174 mm - 54:1

ILE2D661PB1A3

! Discontinued - Service only

! Discontinued on: 15 Jun 2023

! To be end-of-service on: 31 Dec 2026

### 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<br>48 V                               |
| Network type              | DC                                         |
| Communication interface   | DeviceNet, 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, 4 stages              |
| Reduction ratio           | 54:1 (490:9)                               |
| Nominal speed             | 73 rpm at 24 V<br>92 rpm at 48 V           |
| Nominal torque            | 10 N.m at 24 V<br>10 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<br>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<br>3 mA at 24 V on/STO_B for safety input<br>2 mA at 24 V for 24 V signal interface |
| Discrete output voltage    | 23...25 V                                                                                                                   |
| Maximum switching current  | 100 mA per output<br>200 mA total                                                                                           |
| Protection type            | Overload of output voltage<br>Safe torque off<br>Short circuit of the output voltage                                        |
| Maximum supply current     | 0.1 A (power stage disabled)<br>6.8 A at 24 V<br>3.8 A at 48 V                                                              |
| Nominal output power       | 112 W at 48 V<br>90 W at 24 V                                                                                               |
| Peak stall torque          | 20.9 N.m at 24 V<br>20.9 N.m at 48 V                                                                                        |
| Continuous stall torque    | 11.6 N.m                                                                                                                    |
| Detent torque              | 4.36 N.m                                                                                                                    |
| Speed feedback resolution  | 12 points/turn motor<br>0.55° gearbox output                                                                                |
| Accuracy error             | +/- 0.5 point                                                                                                               |
| Maximum torsional backlash | 1 °                                                                                                                         |
| Rotor inertia              | 441 kg.cm²                                                                                                                  |
| Maximum mechanical speed   | 92 rpm                                                                                                                      |
| Maximum radial force Fr    | 200 N (long-term operation)<br>200 N (short-term operation)                                                                 |
| Maximum axial force Fa     | 10 N (long-term operation)<br>80 N (short-term operation)                                                                   |
| Service life in hours      | 2500 h bearing short-term operation<br>15000 h bearing long-term operation                                                  |
| Marking                    | CE                                                                                                                          |
| Type of cooling            | Natural convection                                                                                                          |
| Net weight                 | 1.85 kg                                                                                                                     |

# Environment

|                                                       |                                                                                                                                               |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | EN 61800-3 : 2001-02<br>IEC 60072-1<br>EN 50347<br>EN/IEC 61800-3<br>EN 61800-3:2001, second environment<br>IEC 61800-3, Ed 2<br>EN/IEC 50178 |
| Product certifications                                | UL<br>TÜV<br>cUL                                                                                                                              |
| Ambient air temperature for operation                 | 40...55 °C (with power derating of 2 % per °C)<br>0...40 °C (without derating)                                                                |
| Permissible ambient air temperature around the device | 105 °C power amplifier<br>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 EN/IEC 60068-2-6                                                                             |
| Shock resistance                                      | 150 m/s² 1000 shocks conforming to EN/IEC 60068-2-29                                                                                          |
| IP degree of protection                               | IP41 shaft bushing: conforming to EN/IEC 60034-5<br>IP54 total except shaft bushing: conforming to EN/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 cm     |
| Package 1 Weight             | 2.318 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             | 10.524 kg |
| Package 3 Height             | 30.0 cm   |

# Contractual warranty

|                      |    |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)



### Environmental footprint

Environmental Disclosure

[Product Environmental Profile](#)

## Use Better



### Materials and Substances

|                   |                                                                                        |
|-------------------|----------------------------------------------------------------------------------------|
| SCIP Number       | C2ce416c-ac1e-4e66-863f-bde9b6d94d11                                                   |
| EU RoHS Directive | <a href="#">Compliant By Exemption</a>                                                 |
| REACH Regulation  | <a href="#">Reference contains Substances of Very High Concern above the threshold</a> |
| PVC free          | Yes                                                                                    |

## Use Longer



### Lifetime extension

|        |    |
|--------|----|
| Repair | No |
|--------|----|

## Use Again



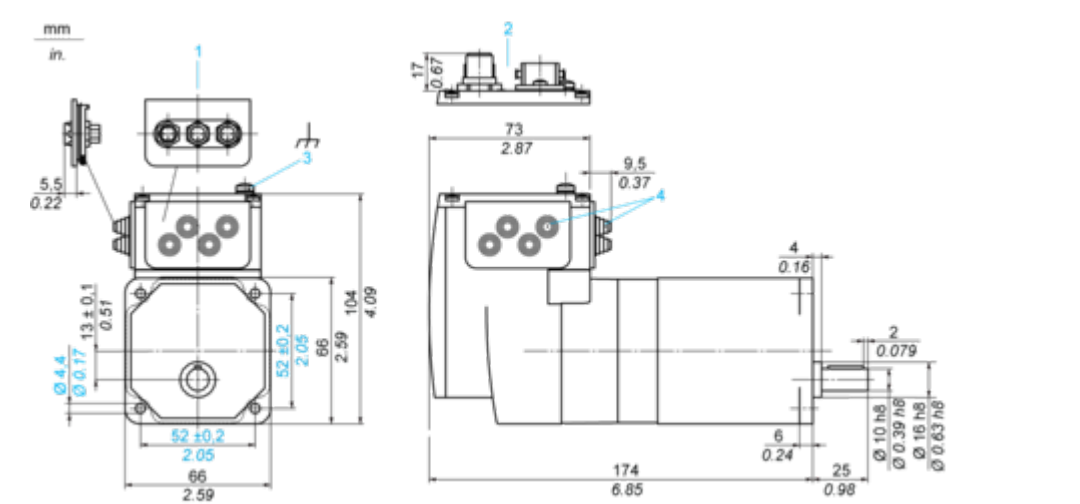
### Repack and remanufacture

|                                 |                                         |
|---------------------------------|-----------------------------------------|
| End of life manual availability | <a href="#">End of Life Information</a> |
|---------------------------------|-----------------------------------------|

Dimensions

Integrated Drive with Straight Teeth Gear

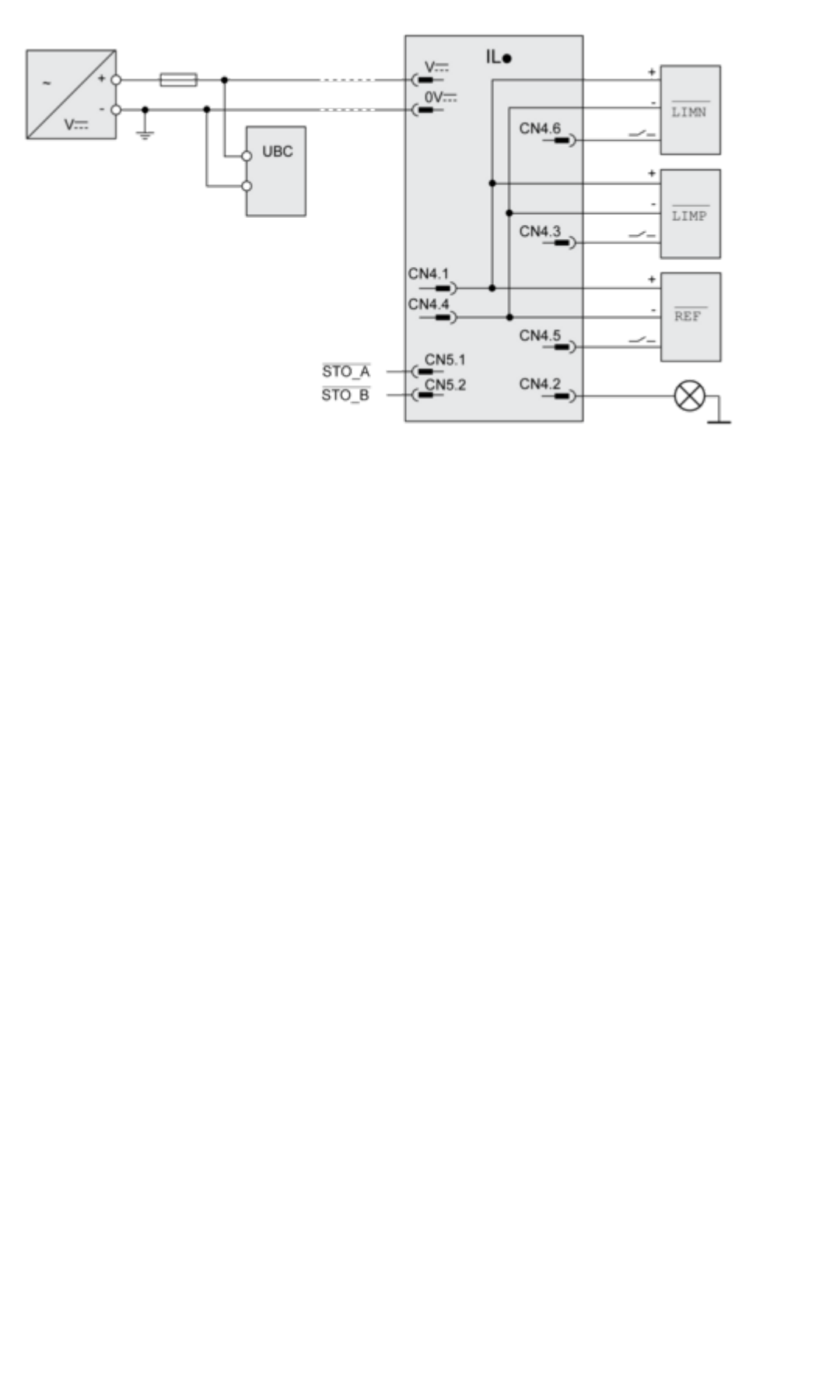
Dimensions



- 1 Accessories: I/O signal insert with industrial connectors
- 2 Option: industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries Ø 3 ... 9 mm/0.12 ... 0.35 in.

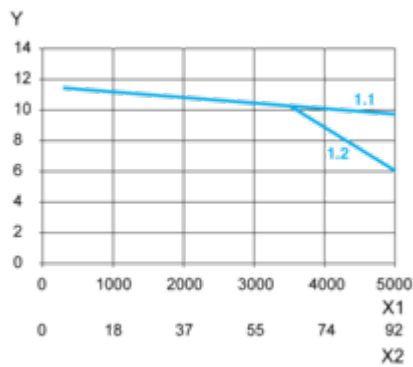
Wiring

Connection Example with 4 I/O Signals



PerformanceCurves

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