

# ILE2P661PB1A5

brushless dc motor 24..48 V - Ethernet  
Powerlink interface - L = 174 mm - 24:1



## 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 | 24 V<br>48 V                               |
| Network type              | DC                                         |
| Communication interface   | Integrated Ethernet Powerlink              |
| Length                    | 229 mm                                     |
| Winding type              | Medium speed of rotation and medium torque |
| Electrical connection     | Printed circuit board connector            |
| Holding brake             | Without                                    |
| Gear box type             | Worm gear, 2 stages                        |
| Reduction ratio           | 24:1 (525:22)                              |
| Nominal speed             | 168 rpm at 48 V<br>168 rpm at 24 V         |
| Nominal torque            | 3.8 N.m at 48 V<br>3.8 N.m at 24 V         |

## Complementary

|                            |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Transmission rate          | 100 Mbits                                                                                                                       |
| Mounting support           | Flange                                                                                                                          |
| Motor flange size          | 66 mm                                                                                                                           |
| Number of motor stacks     | 1                                                                                                                               |
| Centring collar diameter   | 36 mm                                                                                                                           |
| Number of mounting holes   | 2                                                                                                                               |
| Mounting holes diameter    | 4.4 mm                                                                                                                          |
| Feedback type              | BLDC encoder                                                                                                                    |
| Shaft end                  | Hole                                                                                                                            |
| Second shaft               | Without second shaft end                                                                                                        |
| Supply voltage limits      | 18...55.2 V                                                                                                                     |
| Current consumption        | 5500 mA (maximum continuous)<br>7000 mA (peak)                                                                                  |
| 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     | 2 mA at 24 V for 24 V signal interface<br>≤ 3 mA at 24 V on/STO_B for safety input<br>≤ 10 mA at 24 V on/STO_A for safety input |
| Discrete output voltage    | 23...25 V                                                                                                                       |

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| Maximum switching current | 200 mA total<br>100 mA per output                                                    |
| Protection type           | Overload of output voltage<br>Safe torque off<br>Short circuit of the output voltage |
| Supply current            | Supply: 3.8 A, 48 V<br>Supply: 6.8 A, 24 V<br>Supply: 0.1 A, power stage disabled    |
| Nominal output power      | 66 W at 48 V<br>45 W at 24 V                                                         |
| Peak stall torque         | 6.19 N.m at 48 V<br>6.19 N.m at 24 V                                                 |
| Continuous stall torque   | 4.2 N.m                                                                              |
| Detent torque             | 2.9 N.m                                                                              |
| Speed feedback resolution | 1.26° (gearbox output)<br>12 points/turn (motor)                                     |
| Accuracy error            | +/- 1 point                                                                          |
| Rotor inertia             | 90 kg.cm <sup>2</sup>                                                                |
| Maximum mechanical speed  | 186 rpm                                                                              |
| Maximum radial force Fr   | 200 N                                                                                |
| Maximum axial force Fa    | 80 N                                                                                 |
| Service life in hours     | 3000 h of bearing :                                                                  |
| Marking                   | CE                                                                                   |
| Type of cooling           | Natural convection                                                                   |
| Product weight            | 2.3 kg                                                                               |

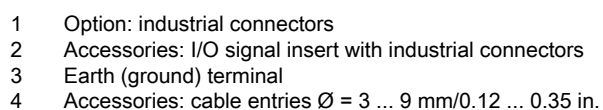
## Environment

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

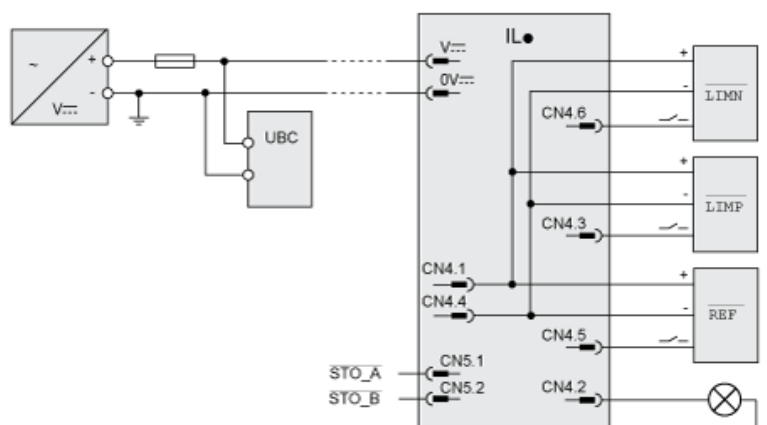
## Offer Sustainability

|                                  |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                 |
| RoHS (date code: YYWW)           | Compliant - since 0910 - <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold                                     |
| Product environmental profile    | Available <a href="#">Download Product Environmental</a>                              |
| Product end of life instructions | Available <a href="#">Download End Of Life Manual</a>                                 |

## Dimensions



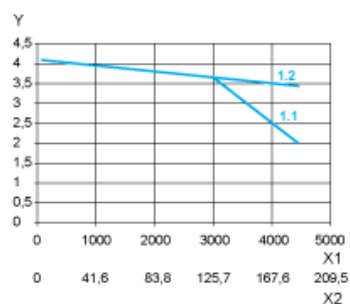
## Connection Example with 4 I/O Signals



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### Torque Characteristics

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- 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 48 V