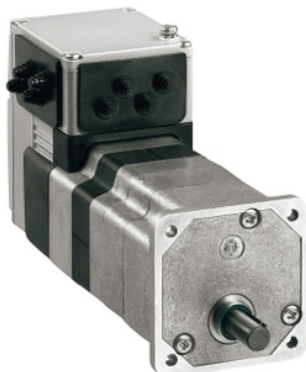


# ILE1F661PB1A7

brushless DC motor, Lexium ILA ILE ILS, 24 to 36V, CANopen DS301 interface, 174mm, 92:1



## 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>36 V                               |
| Network type              | DC                                         |
| Communication interface   | CANopen DS301, integrated                  |
| 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, 3 stages                        |
| Reduction ratio           | 92:1 (735:5)                               |
| Nominal speed             | 44 rpm at 24 V<br>44 rpm at 36 V           |
| Nominal torque            | 9 N.M at 24 V<br>9.2 N.m at 36 V           |

## Complementary

|                            |                                                                                                                             |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Transmission rate          | 50, 100, 125, 250, 500, 800 and 1000 kbauds                                                                                 |
| 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...40 V                                                                                                                   |
| Current consumption        | 7000 mA peak<br>5500 mA maximum continuous                                                                                  |
| Associated fuse rating     | 10 A                                                                                                                        |
| 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>Short circuit of the output voltage<br>Safe torque off |
| Maximum supply current     | 0.1 A (power stage disabled)<br>6.8 A at 24 V<br>3.8 A at 36 V                       |
| Nominal output power       | 41 W at 24 V<br>42 W at 36 V                                                         |
| Peak stall torque          | 11.96 N.M at 24 V<br>16.56 N.m at 36 V                                               |
| Continuous stall torque    | 11.7 N.m                                                                             |
| Detent torque              | 12.3 N.m                                                                             |
| Speed feedback resolution  | 12 points/turn motor<br>0.33° gearbox output                                         |
| Accuracy error             | +/- 1 point                                                                          |
| Maximum torsional backlash | 1 °                                                                                  |
| Rotor inertia              | 1270 kg.cm²                                                                          |
| Maximum mechanical speed   | 54 rpm                                                                               |
| Maximum radial force Fr    | 200 N                                                                                |
| Maximum axial force Fa     | 80 N                                                                                 |
| Service life in hours      | 9000 h bearing                                                                       |
| Marking                    | CE                                                                                   |
| Type of cooling            | Natural convection                                                                   |
| Net weight                 | 2.3 kg                                                                               |

## Environment

|                                                       |                                                                                                                                          |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | IEC 50347<br>EN 61800-3 : 2001-02<br>IEC 61800-3<br>EN 61800-3:2001, second environment<br>IEC 50178<br>IEC 60072-1<br>IEC 61800-3, Ed 2 |
| Product certifications                                | TÜV[RETURN]UL[RETURN]cUL                                                                                                                 |
| Ambient air temperature for operation                 | 50...65 °C (with power derating of 2 % per °C)<br>0...50 °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 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<br>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             | 9.0 cm  |
| Package 1 Width              | 19.0 cm |
| Package 1 Length             | 38.5 cm |
| Package 1 Weight             | 2.25 kg |
| Unit Type of Package 2       | S04     |
| Number of Units in Package 2 | 3       |
| Package 2 Height             | 30 cm   |
| Package 2 Width              | 40 cm   |
| Package 2 Length             | 60 cm   |
| Package 2 Weight             | 8.0 kg  |

## Offer Sustainability

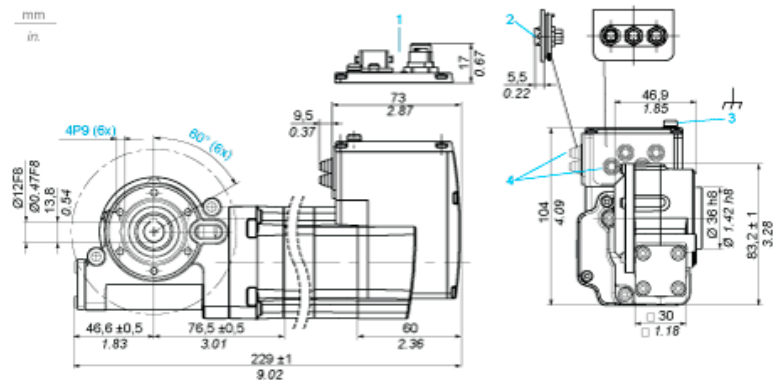
|                            |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                           |
| REACH Regulation           | <a href="#"> REACH Declaration</a>             |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)                                                                      |
| Mercury free               | Yes                                                                                                                             |
| China RoHS Regulation      | <a href="#"> China RoHS Declaration</a>        |
| RoHS exemption information | <a href="#"> Yes</a>                           |
| Environmental Disclosure   | <a href="#"> Product Environmental Profile</a> |
| Circularity Profile        | <a href="#"> End Of Life Information</a>       |
| 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 |
|----------|-----------|

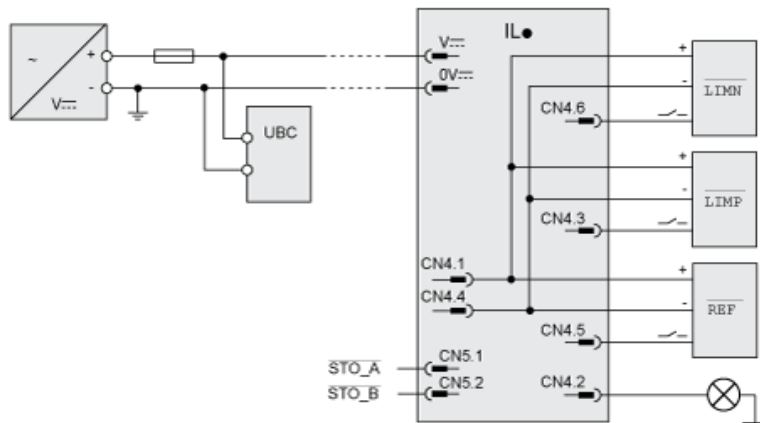
## Integrated Drive with Worm Gear

### Dimensions

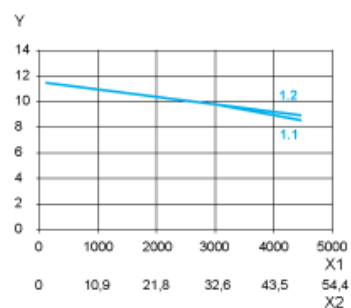


- 1 Option: industrial connectors
- 2 Accessories: I/O signal insert with industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries  $\varnothing = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$

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