

# ILE1R661PC1A6

brushless DC motor, Lexium ILA ILE ILS, 24 to 36V, RS485 interface, industrial connector, 174mm, 54:1



## 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  |
| Phase                     | Single phase   |
| [Us] rated supply voltage | 24 V<br>36 V   |
| Network type              | DC   |
| Communication interface   | RS485, Integrated                                      |
| Length                    | 9.02 in (229 mm)                                       |
| Winding type              | Medium speed of rotation and medium torque             |
| Electrical Connection     | Industrial connector                                   |
| Holding brake             | Without  |
| Gear box type             | Worm gear, 3 stages                                    |
| Reduction ratio           | 54:1 (1715:32)   |
| Nominal speed             | 75 rpm 24 V<br>75 rpm 36 V                             |
| Nominal torque            | 51.3 Lbf.in (5.8 N.m) 24 V<br>53.1 lbf.in (6 N.m) 36 V |

## Complementary

|                            |   |
|----------------------------|---|
| Transmission Rate          | 9.6, 19.2 and 38.4 kbauds   |
| Mounting Support           | Flange  |
| Motor flange size          | 2.6 in (66 mm)  |
| Number of motor stacks     | 1   |
| Centring collar diameter   | 1.4 in (36 mm)  |
| Number of mounting holes   | 2   |
| Mounting holes diameter    | 0.2 in (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 safety input<br>3 MA at 24 V on/STO_B safety input<br>2 mA at 24 V 24 V signal interface |
| Discrete output voltage    | 23...25 V   |
| Maximum switching current  | 100 MA per output<br>200 mA total   |

|                            |  |
|----------------------------|--|
| Protection Type            | Safe torque off<br>Overload of output voltage<br>Short circuit of the output voltage |
| Maximum supply current     | 0.1 A power stage disabled)<br>6.8 A 24 V<br>3.8 A 36 V                              |
| Nominal output power       | 45 W 24 V<br>47 W 36 V   |
| Peak stall torque          | 103.20 lbf.in (11.66 N.m) 36 V<br>74.52 lbf.in (8.42 N.m) 24 V                       |
| Continuous stall torque    | 69.9 lbf.in (7.9 N.m)  |
| Detent torque              | 57.5 lbf.in (6.5 N.m)  |
| Speed feedback resolution  | 12 points/turn motor<br>0.56° gearbox output   |
| Accuracy error             | +/- 1 point  |
| Maximum torsional backlash | 1 °  |
| Rotor inertia              | 430 kg.cm <sup>2</sup>   |
| Maximum mechanical speed   | 93 rpm   |
| Maximum radial force Fr    | 200 N  |
| Maximum axial force Fa     | 80 N   |
| Service life in hours      | 6000 h bearing   |
| Marking                    | CE   |
| Type of cooling            | Natural convection   |
| Net Weight                 | 5.07 lb(US) (2.3 kg)   |

## Environment

|   |  |
|---|--|
| Standards   | IEC 50347<br>EN 61800-3:2001, second environment<br>IEC 61800-3, Ed 2<br>IEC 61800-3<br>IEC 60072-1<br>EN 61800-3 : 2001-02<br>IEC 50178 |
| Product Certifications                                | TÜV[RETURN]cUL[RETURN]UL   |
| Ambient air temperature for operation                 | 122...149 °F (50...65 °C) with power derating of 2 % per °C)<br>32...122 °F (0...50 °C) without derating)                                |
| Permissible ambient air temperature around the device | 221 °F (105 °C) power amplifier<br>230 °F (110 °C) motor   |
| Ambient Air Temperature for Storage                   | -13...158 °F (-25...70 °C)   |
| Operating altitude                                    | <= 3280.84 ft (1000 m) without derating  |
| Relative humidity                                     | 15...85 % without condensation   |
| Vibration resistance                                  | 20 m/s <sup>2</sup> 10...500 Hz) 10 cycles IEC 60068-2-6   |
| Shock resistance                                      | 150 m/s <sup>2</sup> 1000 shocks 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                              |

## Ordering and shipping details

|                   |               |
|-------------------|---------------|
| Category          | US1PC5618288  |
| Discount Schedule | PC56          |
| GTIN              | 3389119222631 |
| Returnability     | No            |
| Country of origin | DE            |

## Packing Units

|                              |                       |
|------------------------------|-----------------------|
| Unit Type of Package 1       | PCE                   |
| Number of Units in Package 1 | 1                     |
| Package 1 Height             | 3.5 in (9.0 cm)       |
| Package 1 Width              | 7.5 in (19.0 cm)      |
| Package 1 Length             | 15.2 in (38.5 cm)     |
| Package 1 Weight             | 4.96 lb(US) (2.25 kg) |

## Offer Sustainability

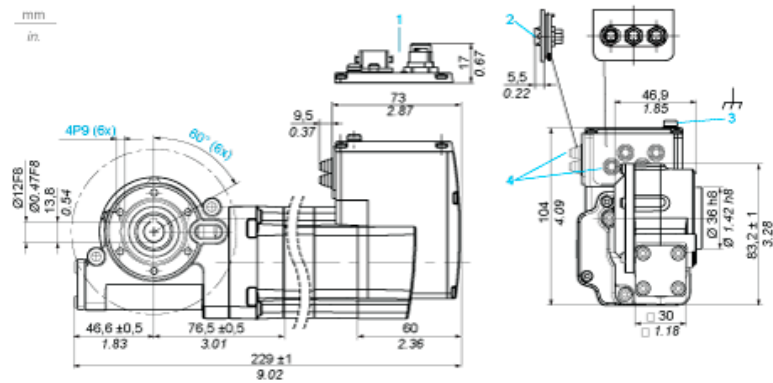
|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</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

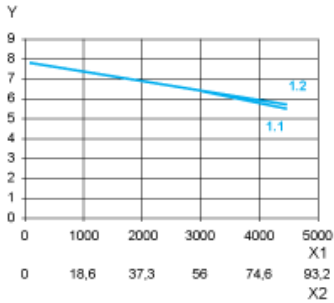


- 1 Option: industrial connectors
- 2 Accessories: I/O signal insert with industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries  $\varnothing = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$

## 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