# **Product datasheet**





# integrated drive ILA with servo motor - 24..36 V - CANopen - PCB connector

ILA1F571PB1F0

! Discontinued on: 30 Jun 2023

! Discontinued

#### Main

| Range of product          | ge of product Lexium integrated drive      |  |
|---------------------------|--|--|
| Product or component type | Motion integrated drive                    |  |
| Device short name         | ILA  |  |
| Motor type                | AC synchronous servo motor                 |  |
| Number of motor poles     | 6  |  |
| Network number of phases  | Single phase                               |  |
| [Us] rated supply voltage | 36 V<br>24 V                               |  |
| network type              | DC   |  |
| Communication interface   | CANopen DS301, integrated                  |  |
| Length                    | 190.8 mm                                   |  |
| Winding type              | Medium speed of rotation and medium torque |  |
| Electrical connection     | Printed circuit board connector            |  |
| Holding brake             | With                                       |  |
| Gear box type             | Without                                    |  |
| Nominal speed             | 3200 rpm at 24 V<br>5500 rpm at 36 V       |  |
| Nominal torque            | 0.26 N.m                                   |  |
| Holding torque            | 1.2 N.m holding brake                      |  |

# Complementary

| Transmission rate                     | 50, 100, 125, 250, 500, 800 and 1000 kbauds |  |
|---------------------------------------|---|--|
| mounting support                      | Flange                                      |  |
| Motor flange size                     | 57 mm                                       |  |
| Number of motor stacks                | 1   |  |
| Centring collar diameter              | 50 mm                                       |  |
| Centring collar depth                 | 1.6 mm                                      |  |
| Number of mounting holes              | 4   |  |
| Mounting holes diameter               | 5.2 mm                                      |  |
| Circle diameter of the mounting holes | 66.6 mm                                     |  |
| Feedback type                         | Single turn encoder                         |  |

| Shaft end                  | Untapped  |  |
|----------------------------|---|--|
| Second shaft               | Without second shaft end  |  |
| Shaft diameter             | 9 mm  |  |
| Shaft length               | 20 mm   |  |
| Supply voltage limits      | 1840 V  |  |
| Current consumption        | 5000 mA maximum continuous<br>7000 mA peak  |  |
| Associated fuse rating     | 10 A  |  |
| Input/output type          | 4 signals (each be used as input or output)   |  |
| Voltage state 0 guaranteed | -34.5 V   |  |
| Voltage state 1 guaranteed | 1530 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    | 2325 V  |  |
| Maximum switching current  | 100 mA per output<br>200 mA total   |  |
| Protection type            | Overload of output voltage Short circuit of the output voltage Safe torque off  |  |
| Peak stall torque          | 0.6 N.m   |  |
| Continuous stall torque    | 0.26 N.m  |  |
| Speed feedback resolution  | 16384 points/turn x 4096 turns  |  |
| Accuracy error             | +/- 0.05 °  |  |
| Rotor inertia              | 0.17 kg.cm²   |  |
| Maximum radial force Fr    | 89 N  |  |
| Maximum axial force Fa     | 104 N (force pressure)<br>104 N (tensile force)   |  |
| Service life in hours      | 20000 h bearing   |  |
| Brake pull-in power        | 10 W  |  |
| Brake release time         | 14 ms   |  |
| Brake application time     | 13 ms   |  |
| marking                    | CE  |  |
| Type of cooling            | Natural convection  |  |
| Net weight                 | 1.4 kg  |  |

# **Environment**

| Standards                             | EN 61800-3 : 2001-02<br>IEC 60072-1                                   |  |  |
|---------------------------------------|---|--|--|
|                                       | EN 50347  |  |  |
|                                       | EN/IEC 50178  |  |  |
|                                       | IEC 61800-3, Ed 2   |  |  |
|                                       | EN/IEC 61800-3  |  |  |
|                                       | EN 61800-3:2001, second environment                                   |  |  |
| Product certifications                | ΤÜV   |  |  |
|                                       | cUL   |  |  |
|                                       | UL  |  |  |
| Ambient air temperature for operation | 5065 °C (with power derating of 2 % per °C) 050 °C (without derating) |  |  |

| Permissible ambient air temperature around the device   | 105 °C power amplifier<br>110 °C motor                         |  |
|---|--|--|
| Ambient air temperature for storage   | -2570 °C   |  |
| Operating altitude  | <= 1000 m without derating                                     |  |
| Relative humidity   | 1585 % without condensation                                    |  |
| Vibration resistance  | 20 m/s² (f= 10500 Hz) 10 cycles conforming to EN/IEC 60068-2-6 |  |
| Shock resistance  | 150 m/s² 1000 shocks conforming to EN/IEC 60068-2-29           |  |
| degree of protection IP41 shaft bushing: conforming to EN/IEC 60034-5 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             | 8.0 cm  |
| Package 1 Width              | 19.0 cm |
| Package 1 Length             | 39.0 cm |
| Package 1 Weight             | 2.2 kg  |

# **Contractual warranty**

Warranty 18 months



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Transparency RoHS/REACh

### Well-being performance

|          | Mercury Free               |     |
|----------|----------------------------|-----|
| <b>②</b> | Rohs Exemption Information | Yes |
|          | Pvc Free                   |     |

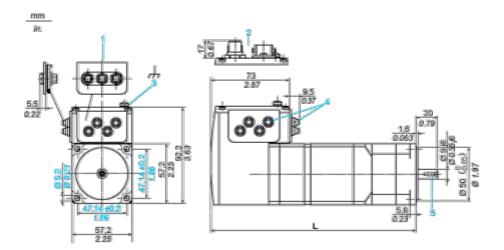
#### **Certifications & Standards**

| Eu Rohs Directive               | Pro-active compliance (Product out of EU RoHS legal scope)  |
|---------------------------------|---|
| China Rohs Regulation           | China RoHS declaration  |
| <b>Environmental Disclosure</b> | 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   |

#### **Dimensions Drawings**

#### **Integrated Drive with Holding Brake**

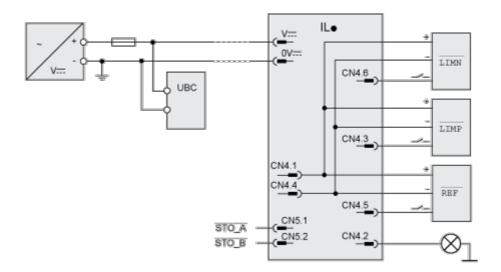
#### **Dimensions**



- 1 Accessories: I/O signal insert with industrial connectors
- 2 Option: industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries  $\emptyset = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$
- 5 Centring hole DIN 332 DS M3
- L 190.8 mm/7.51 in.

Connections and Schema

## Connection Example with 4 I/O Signals

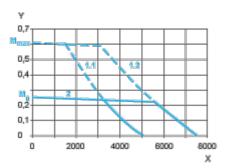


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## ILA1F571PB1F0

#### Performance Curves

### **Torque Characteristics**



- X Speed of rotation in rpm
- Y Torque in Nm
- 1.1 Max. torque at 24 V
- 1.2 Max. torque at 36 V
- 2 Continuous torque