Product datasheet

Specification





brushless DC motor, Lexium ILA ILE ILS, 24 to 36V, CANopen DS301 interface, industrial connector, 174mm, straight teeth gear, 54:1

ILE1F661PC1A3

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 36 V	
network type	DC	
Communication interface	CANopen DS301, integrated	
Length	174 mm	
Winding type	Medium speed of rotation and medium torque	
Electrical connection	Industrial 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 88 rpm at 36 V	
Nominal torque	10 N.m at 36 V 9.5 N.m at 24 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	16 mm	
Centring collar depth	4 mm	
Number of mounting holes 4		
Mounting holes diameter	iameter 4.4 mm	
Circle diameter of the mounting holes	73.54 mm	
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	1840 V	
Current consumption	7000 mA peak 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	-34.5 V	
Voltage state 1 guaranteed	1530 V	
Discrete input current	10 mA at 24 V on/STO_A for safety input 3 mA at 24 V on/STO_B for safety input 2 mA at 24 V for 24 V signal interface	
Discrete output voltage	2325 V	
Maximum switching current	100 mA per output 200 mA total	
Protection type	Safe torque off Short circuit of the output voltage Overload of output voltage	
Maximum supply current	0.06 A at 36 V (power stage disabled) 0.1 A at 24 V (power stage disabled) 3.5 A at 36 V 4.3 A at 24 V	
Nominal output power	73 W at 24 V 88 W at 36 V	
Peak stall torque	12.64 N.m at 24 V 17.5 N.m at 36 V	
Continuous stall torque	11.5 N.m	
Detent torque	3.3 N.m	
Speed feedback resolution	12 points/turn motor 0.55° gearbox output	
Accuracy error	+/- 1 point	
Maximum torsional backlash	1°	
Rotor inertia	441 kg.cm²	
Maximum mechanical speed	92 rpm	
Maximum radial force Fr	200 N (long-term operation) 200 N (short-term operation)	
Maximum axial force Fa	10 N (long-term operation) 80 N (short-term operation)	
Service life in hours	2500 h bearing short-term operation 15000 h bearing long-term operation	
marking	CE	
Type of cooling	Natural convection	
Net weight	1.85 kg	

Environment

Standards	IEC 50178 IEC 50347 IEC 61800-3, Ed 2 IEC 61800-3 IEC 60072-1 EN 61800-3:2001, second environment EN 61800-3: 2001-02	
Product certifications	cUL TÜV 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 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 IEC 60068-2-6	
Shock resistance	150 m/s ² 1000 shocks conforming to IEC 60068-2-29	
IP degree of protection	IP41 shaft bushing: conforming to IEC 60034-5 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	8.0 cm
Package 1 Width	18.5 cm
Package 1 Length	35.5 cm
Package 1 Weight	2.25 kg

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

	Mercury Free	
②	Rohs Exemption Information	Yes
	Pvc Free	

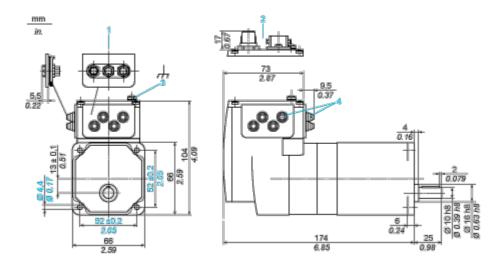
Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	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 Straight Teeth Gear

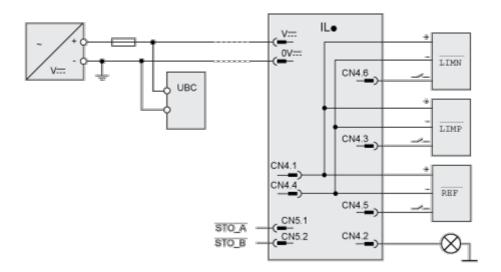
Dimensions



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

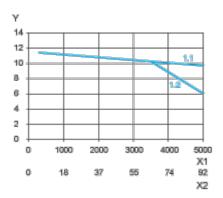
Connections and Schema

Connection Example with 4 I/O Signals



Performance Curves

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