



brushless dc motor 24..36 V - RS485 interface - L = 174 mm - 54:1

ILE1R661PB1A3

! Discontinued on: Nov 9, 2020

! End-of-service on: Jan 22, 2021

① Discontinued

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	RS485, integrated	
Length	6.9 in (174 mm)	
Winding type	Medium speed of rotation and medium torque	
Electrical connection	Printed circuit board connector	
Holding brake	Without	
Gear box type	Straight teeth gear, 4 stages	
Reduction ratio	54:1 (490:9)	
Nominal speed	73 rpm 24 V 88 rpm 36 V	
Nominal torque	88.5 lbf.in (10 N.m) 36 V 84.08 lbf.in (9.5 N.m) 24 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	0.6 in (16 mm)	
Centring collar depth	0.2 in (4 mm)	
Number of mounting holes	4	
Mounting holes diameter	0.2 in (4.4 mm)	
Circle diameter of the mounting holes	2.90 in (73.54 mm)	

Feedback type	BLDC encoder	
Shaft end	Keyed	
Second shaft	Without second shaft end	
Shaft diameter	0.4 in (10 mm)	
Shaft length	1.0 in (25 mm)	
Key width	0.6 in (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 safety input 3 mA at 24 V on/STO_B safety input 2 mA at 24 V 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 36 V power stage disabled) 0.1 A 24 V power stage disabled) 3.5 A 36 V 4.3 A 24 V	
Nominal output power	73 W 24 V 88 W 36 V	
Peak stall torque	111.87 lbf.in (12.64 N.m) 24 V 154.9 lbf.in (17.5 N.m) 36 V	
Continuous stall torque	101.8 lbf.in (11.5 N.m)	
Detent torque	29.2 lbf.in (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	4.08 lb(US) (1.85 kg)	

Environment

Standards	EN 61800-3: 2001-02 IEC 61800-3, Ed 2 IEC 60072-1 EN/IEC 61800-3 EN/IEC 50178 EN 50347 EN 61800-3:2001, second environment	
Product certifications	cUL TÜV UL	
Ambient air temperature for operation	122149 °F (5065 °C) with power derating of 2 % per °C) 32122 °F (050 °C) without derating)	
Permissible ambient air temperature around the device	221 °F (105 °C) power amplifier 230 °F (110 °C) motor	
Ambient air temperature for storage	-13158 °F (-2570 °C)	
Operating altitude	<= 1000 m without derating	
Relative humidity	1585 % without condensation	
Vibration resistance	20 m/s² 10500 Hz) 10 cycles EN/IEC 60068-2-6	
Shock resistance	150 m/s² 1000 shocks EN/IEC 60068-2-29	
P 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	3.1 in (8 cm)	
Package 1 Width	7.3 in (18.5 cm)	
Package 1 Length	14.0 in (35.5 cm)	
Package 1 Weight	4.96 lb(US) (2.25 kg)	

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

	Mercury Free	
⊘	Rohs Exemption Information	Yes
	Pvc Free	

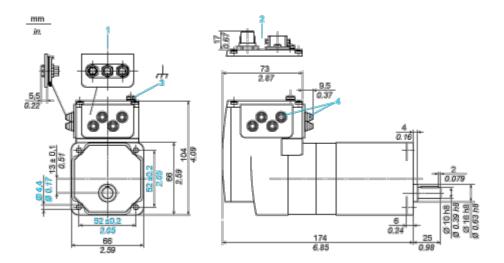
Certifications & Standards

Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
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

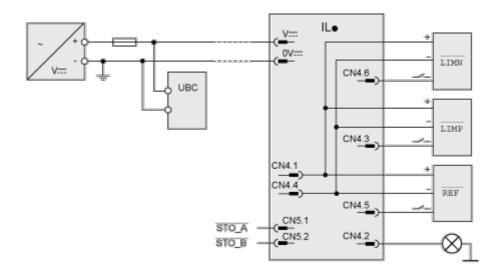
Dimensions



- 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

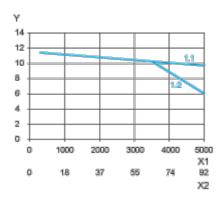
Connection Example with 4 I/O Signals



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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