



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

ILE1B661PB1A3

! Discontinued on: 23 May 2023

! Discontinued

EAN Code: 3389119222150

Main

Lexium integrated drive	
Motion integrated drive	
ILE	
Brushless DC motor	
6	
Single phase	
24 V 36 V	
DC	
Profibus DP, integrated	
174 mm	
Medium speed of rotation and medium torque	
Printed circuit board connector	
Without	
Straight teeth gear, 4 stages	
54:1 (490:9)	
73 rpm at 24 V 88 rpm at 36 V	
10 N.m at 36 V 9.5 N.m at 24 V	

Complementary

Transmission rate	9.6, 19.2, 45.45, 93.75, 187.5, 500, 1500, 3000, 6000 and 12000 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	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	Overload of output voltage Short circuit of the output voltage Safe torque off
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	EN/IEC 50178 EN 61800-3: 2001-02 EN/IEC 61800-3 EN 61800-3:2001, second environment IEC 60072-1 EN 50347 IEC 61800-3, Ed 2	
Product certifications	TÜV 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 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	
IP 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	11 cm
Package 1 Width	19 cm
Package 1 Length	39.5 cm
Package 1 Weight	2.281 kg
Unit Type of Package 2	S04
Number of Units in Package 2	5
Package 2 Height	30 cm
Package 2 Width	40 cm
Package 2 Length	60 cm
Package 2 Weight	12.502 kg
Package 3 Height	30.0 cm

Contractual warranty

Warranty 18 months



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Transparency RoHS/REACh

Well-being performance

	Mercury Free	
②	Rohs Exemption Information	Yes
	Pvc Free	

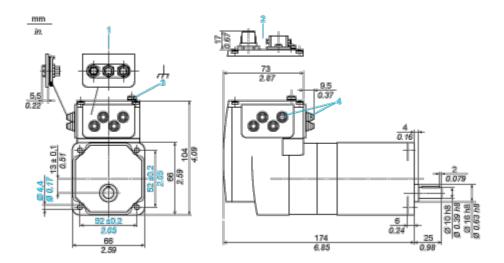
Certifications & Standards

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

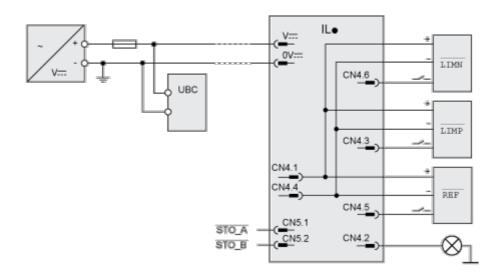
Dimensions



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

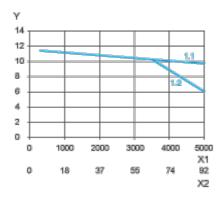
Connections and Schema

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