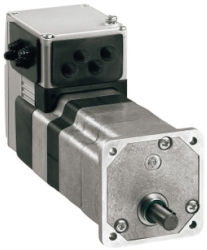
Product datasheet

Specifications



brushless dc motor 24..48 V - EtherCAT interface - L = 174 mm - 115:1

ILE2E661PB1A4

Discontinued on: 9 Feb 2023

Discontinued

EAN Code: 3606485188836

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 48 V
network type	DC
Communication interface	EtherCAT, integrated
Length	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	115:1 (3675:32)
Nominal speed	35 rpm at 24 V 44 rpm at 48 V
Nominal torque	12 N.m at 24 V 12 N.m at 48 V

Complementary

Transmission rate	100 Mbits
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	18…55.2 V
Current consumption	7000 mA peak 5500 mA maximum continuous
Associated fuse rating	16 A
Commissioning interface	RS485 Modbus TCP (9.6, 19.2 and 38.4 kbauds)
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 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	23...25 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	0.1 A (power stage disabled) 6.8 A at 24 V 3.8 A at 48 V
Nominal output power	54 W at 24 V 68 W at 48 V
Peak stall torque	24.72 N.m at 24 V 24.72 N.m at 48 V
Continuous stall torque	14 N.m
Detent torque	9.19 N.m
Speed feedback resolution	12 points/turn motor 0.26° gearbox output
Accuracy error	+/- 0.5 point
Maximum torsional backlash	1 °
Rotor inertia	1962 kg.cm²
Maximum mechanical speed	44 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 61800-3 : 2001-02 EN 61800-3:2001, second environment IEC 61800-3, Ed 2 IEC 60072-1 IEC 61800-3 IEC 50347 IEC 50178
Product certifications	UL TÜV cUL
Ambient air temperature for operation	40…55 °C (with power derating of 2 % per °C) 0…40 °C (without derating)
Permissible ambient air temperature around the device	105 °C power amplifier 110 °C motor
Ambient air temperature for storage	-25…70 °C
Operating altitude	<= 1000 m without derating
Relative humidity	15…85 % without condensation
Vibration resistance	20 m/s² (f= 10…500 Hz) 10 cycles conforming to IEC 60068-2-6
Shock resistance	150 m/s² 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	2.3 kg

Contractual warranty

Warranty	18 months

Sustainability

Green Premium^{TM} label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Transparency

RoHS/REACh

Well-being performance

Mercury Free	
Rohs Exemption Information	Yes
Pvc Free	

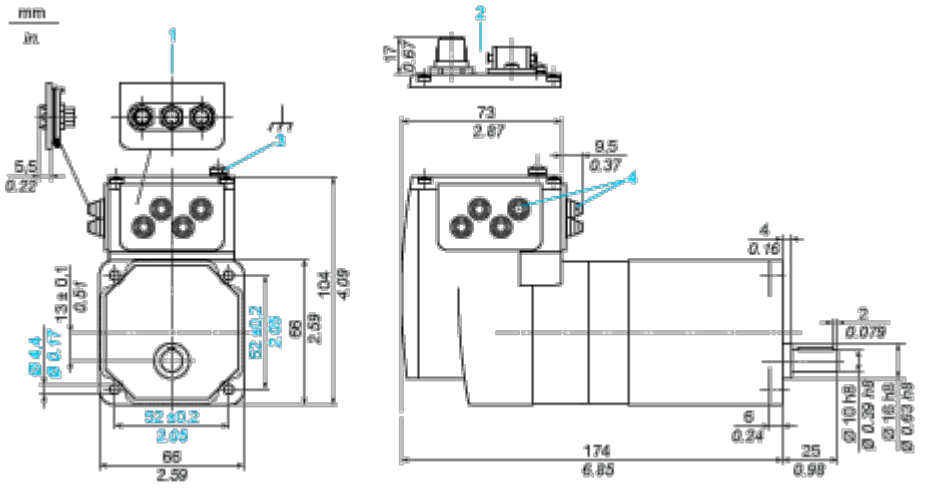
Certifications & Standards

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

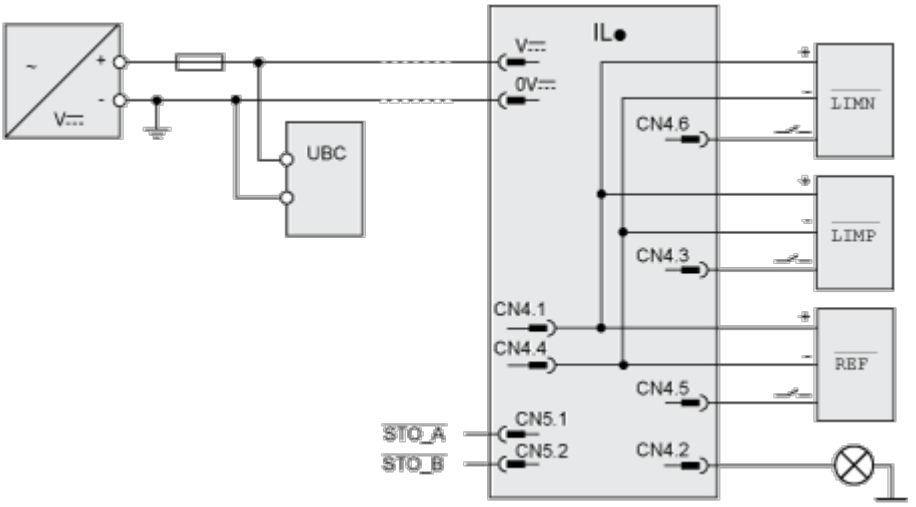
2 Option: industrial connectors

3 Earth (ground) terminal

4 Accessories: cable entries Ø = 3 ... 9 mm/0.12 ... 0.35 in.

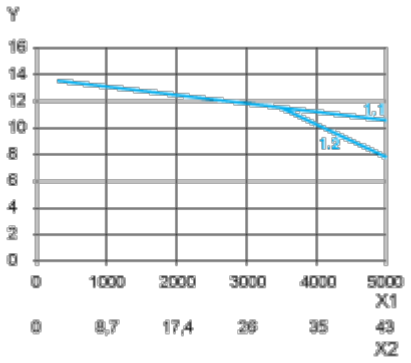
Connections and Schema

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