## **Product datasheet**

Specifications





# integrated drive ILS with stepper motor - 24..48 V - EtherCAT - 5 A

ILS2E851PB1A0

() Discontinued on: 30 Jun 2023

(!) Discontinued

#### Main

Range of product	Lexium integrated drive
Product or component type	Motion integrated drive
Device short name	ILS
Motor type	3-phase stepper 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	140.6 mm
Winding type	Medium speed of rotation and medium torque
Electrical connection	Printed circuit board connector
Holding brake	Without
Gear box type	Without
Nominal speed	300 rpm at 24 V 600 rpm at 48 V
Nominal torque	2 N.m
Holding torque	2 N.m

## Complementary

Transmission rate	100 Mbits
mounting support	Flange
Motor flange size	85 mm
Number of motor stacks	1
Centring collar diameter	60 mm
Centring collar depth	2 mm
Number of mounting holes	4
Mounting holes diameter	6.5 mm
Circle diameter of the mounting holes	99 mm
Feedback type	Index pulse

Shaft end	Untapped
Second shaft	Without second shaft end
Shaft diameter	12 mm
Shaft length	30 mm
Supply voltage limits	1855 V
Current consumption	5000 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	-34.5 V
Voltage state 1 guaranteed	1530 V
Discrete input current	10 mA at 24 V 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 Overload of output voltage Short circuit of the output voltage
Peak stall torque	2 N.m
Continuous stall torque	2 N.m
Speed feedback resolution	20000 points/turn
Accuracy error	+/- 6 arc min
Rotor inertia	1.1 kg.cm <sup>2</sup>
Maximum mechanical speed	3000 rpm
Maximum radial force Fr	100 N
Maximum axial force Fa	170 N (tensile force) 30 N (force pressure)
Service life in hours	20000 h bearing
marking	CE
Type of cooling	Natural convection
Net weight	2.6 kg

## Environment

Standards	EN/IEC 50178 EN 61800-3 : 2001-02 EN 61800-3:2001, second environment IEC 60072-1 EN 50347 EN/IEC 61800-3 IEC 61800-3, Ed 2
Product certifications	cUL T��V UL
Ambient air temperature for operation	4055 °C (with power derating of 2 % per °C) 040 °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/s <sup>2</sup> (f= 10500 Hz) 10 cycles conforming to EN/IEC 60068-2-6
Shock resistance	150 m/s <sup>2</sup> 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	10.4 cm
Package 1 Width	18.0 cm
Package 1 Length	36.5 cm
Package 1 Weight	3.1 kg

## **Contractual warranty**

Warranty

18 months

## Sustainability Screen Premium

**Green Premium<sup>TM</sup> label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

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

Yes

Learn more about Green Premium >

Guide to assess a product's sustainability >



Transparency RoHS/REACh

#### Well-being performance

Mercury Free

Rohs Exemption Information

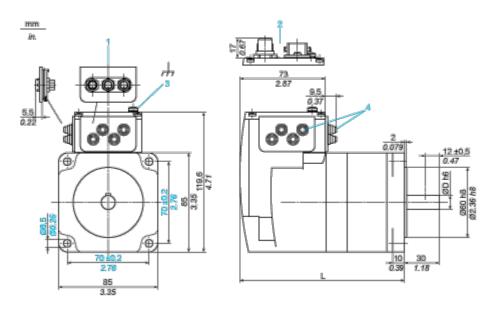
#### **Certifications & Standards**

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 without Holding Brake

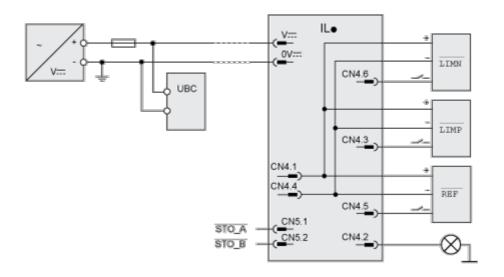
#### Dimensions



- 1 Accessories: I/O signal insert with industrial connectors
- 2 Option: industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries  $\emptyset = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$
- L 140.6 mm/5.53 in.
- D 12 mm/0.47 in.

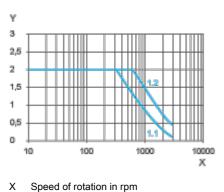
Connections and Schema

#### Connection Example with 4 I/O Signals



#### **Performance Curves**

#### **Torque Characteristics**



- Speed of rotation in rpm
- Torque in Nm Υ
- Max. torque at 24 V 1.1 1.2 Max. torque at 48 V