# **Product datasheet**

Specification





# integrated drive ILS with stepper motor - 24..36V - I/O for motion sequence - 5A

ILS1M851PB1A0

### 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	36 V 24 V	
network type	DC	
Communication interface	I/O for motion sequence, 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	200 rpm at 24 V 400 rpm at 36 V	
Nominal torque	2 N.m	
Holding torque	2 N.m	

## Complementary

Transmission rate	9.6, 19.2 and 38.4 kbauds
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	1840 V	
Current consumption	5000 mA maximum continuous	
Associated fuse rating	10 A	
Commissioning interface	RS485 (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 on/STO_A for safety input 3 mA at 24 V on/STO_B for safety input 10 mA at 24 V for 24 V signal interface	
Discrete output voltage	1030 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.cm²	
Maximum mechanical speed	2000 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 61800-3:2001, second environment EN/IEC 61800-3 EN 61800-3 : 2001-02 IEC 61800-3, Ed 2 EN/IEC 50178 EN 50347 IEC 60072-1
Product certifications	cUL UL TÜV
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	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	22 cm
Package 1 Width	20 cm
Package 1 Length	40 cm
Package 1 Weight	3 kg
Unit Type of Package 2	CAR
Number of Units in Package 2	1
Package 2 Height	22 cm
Package 2 Width	20 cm
Package 2 Length	49 cm
Package 2 Weight	3 kg
Unit Type of Package 3	S06
Number of Units in Package 3	9
Package 3 Height	73.5 cm
Package 3 Width	60 cm
Package 3 Length	80 cm
Package 3 Weight	40 kg

## **Contractual warranty**

Warranty 18 months



**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.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

### Well-being performance

	Mercury Free	
<b>②</b>	Rohs Exemption Information	Yes
	Pvc Free	

#### **Certifications & Standards**

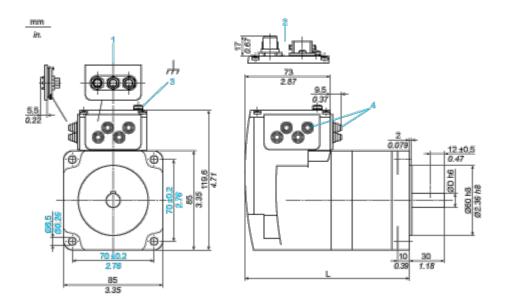
Circularity Profile	End of Life Information
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>Environmental Disclosure</b>	Product Environmental Profile
China Rohs Regulation	China RoHS declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Reach Regulation	REACh Declaration

19 Aug 2024

#### **Dimensions Drawings**

#### **Integrated Drive without Holding Brake**

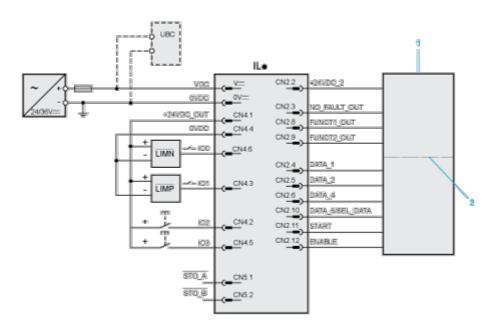
#### **Dimensions**



- 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



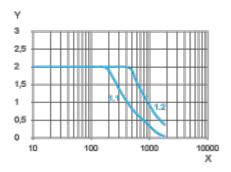
- 1 PLC
- 2 Galvanic isolation

# **Product datasheet**

### **ILS1M851PB1A0**

#### Performance Curves

### **Torque Characteristics**



- X Speed of rotation in rpm
- Y Torque in Nm
- 1.1 Max. torque at 24 V
- 1.2 Max. torque at 36 V