Product datasheet

Specification





integrated drive ILS with stepper motor - 24..36 V - pulse/direction 24 V - 5 A

ILS1U851PB1A0

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	Pulse/direction 24 V, 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

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	
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	
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	
Peak stall torque	2 N.m	
Continuous stall torque	2 N.m	
Speed feedback resolution	1.8°, 0.9°, 0.72°, 0.36°, 0.18°, 0.09°, 0.072°, 0.036° 200, 400, 500, 1000, 2000, 4000, 5000, 10000 steps	
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 IEC 60072-1 EN/IEC 61800-3 EN 50347 EN/IEC 50178 EN 61800-3 : 2001-02 IEC 61800-3, Ed 2
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	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	10.5 cm
Package 1 Width	19.0 cm
Package 1 Length	39.0 cm
Package 1 Weight	3.0 kg

Contractual warranty

Warranty 18 months



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Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

Well-being performance

	Mercury Free	
②	Rohs Exemption Information	Yes
	Pvc Free	

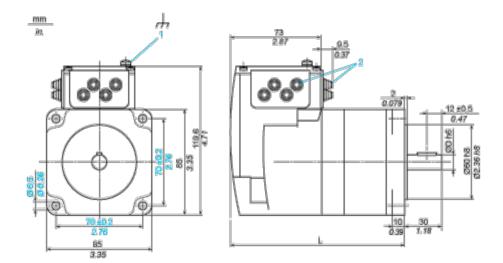
Certifications & Standards

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 without Holding Brake

Dimensions



- 1 Earth (ground) terminal
- 2 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.

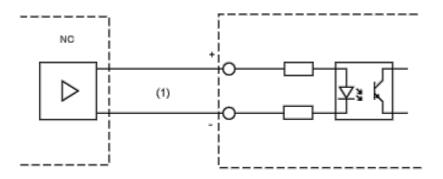
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Connections and Schema

Multifunction Interface

Input Wiring Diagram



(1) Opto-isolated signals

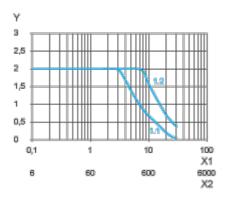
The reference pulses are supplied via two of the signal inputs, either as pulse/ direction signals or as A/B signals. The other signal inputs have the functions "power amplifier enable/pulse blocking" and "step size switching/PWM motor current control".

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Performance Curves

Torque Characteristics



- X1 Frequency in kHz
- X2 Speed of rotation in rpm
- Y Torque in Nm
- 1.1 Max. torque at 24 V
- 1.2 Max. torque at 36 V