Product datasheet

Specification





integrated drive ILS with stepper motor - 24..36 V - CANopen DS301 - 5 A

ILS1F851PB1A0

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	CANopen DS301, 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	50, 100, 125, 250, 500, 800 and 1000 kbauds	
mounting support	Flange 85 mm	
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	

-		
econd shaft Without second shaft end		
Shaft diameter	12 mm	
Shaft length	30 mm	
Supply voltage limits	1840 V	
Current consumption	5000 mA maximum	
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	Safe torque off Short circuit of the output voltage Overload of 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 IEC 50178 IEC 61800-3 EN 61800-3: 2001-02 IEC 60072-1 IEC 50347 IEC 61800-3, Ed 2
Product certifications	UL TÜV cUL
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 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	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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Transparency RoHS/REACh

Well-being performance

	Mercury Free	
②	Rohs Exemption Information	Yes
	Pvc Free	

Certifications & Standards

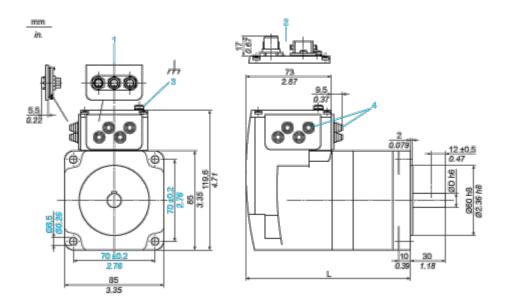
Circularity Profile	End of Life Information
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Environmental Disclosure	Product Environmental Profile
China Rohs Regulation	China RoHS declaration
Eu Rohs Directive	Pro-active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

19 Aug 2024

Dimensions Drawings

Integrated Drive without Holding Brake

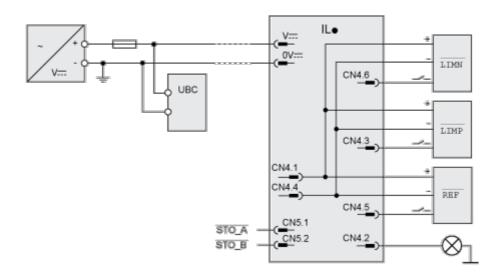
Dimensions



- 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

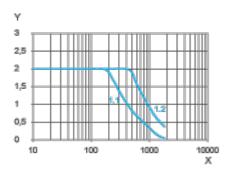


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Performance Curves

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