Product datasheet





integrated drive ILS with stepper motor - 24..36 V - Profibus DP - 5

ILS1B853PB1A0

! Discontinued on: 19 May 2023

! To be end-of-service on: 31 Dec 2026

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 36 V	
Network type	DC	
Communication interface	Profibus DP, integrated	
Length	200.6 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	120 rpm at 36 V 60 rpm at 24 V	
Nominal torque	6 N.m	
Holding torque	6 N.m	

Complementary

<u> </u>	
Transmission rate	9.6, 19.2, 45.45, 93.75, 187.5, 500, 1500, 3000, 6000 and 12000 kbauds
mounting support	Flange 85 mm
Motor flange size	85 mm
Number of motor stacks	3
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	14 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 Overload of output voltage Short circuit of the output voltage	
Peak stall torque	6 N.m	
Continuous stall torque	6 N.m	
Speed feedback resolution	20000 points/turn	
Accuracy error	+/- 6 arc min	
Rotor inertia	3.3 kg.cm ²	
Maximum mechanical speed	1000 rpm	
Maximum radial force Fr	110 N	
Maximum axial force Fa	xial 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	4.7 kg	

Environment

Standards	EN 61800-3 : 2001-02	
	EN/IEC 61800-3	
	EN 50347	
	IEC 61800-3, Ed 2	
	IEC 60072-1	
	EN/IEC 50178	
	EN 61800-3:2001, second environment	
Product certifications	cUL	
	UL	
	TÜV	
Ambient air temperature for	5065 °C (with power derating of 2 % per °C)	
operation	050 °C (without derating)	
Permissible ambient air	105 °C power amplifier	
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	19.5 cm
Package 1 Length	40 cm
Package 1 Weight	5.84 kg
Unit Type of Package 2	S06
Number of Units in Package 2	12
Package 2 Height	73.5 cm
Package 2 Width	60 cm
Package 2 Length	80 cm
Package 2 Weight	76.3 kg
Unit Type of Package 3	P06
Number of Units in Package 3	12
Package 3 Height	77 cm
Package 3 Width	80 cm
Package 3 Length	60 cm
Package 3 Weight	78.58 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	

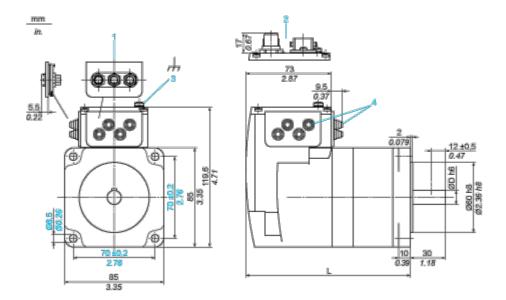
Certifications & Standards

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

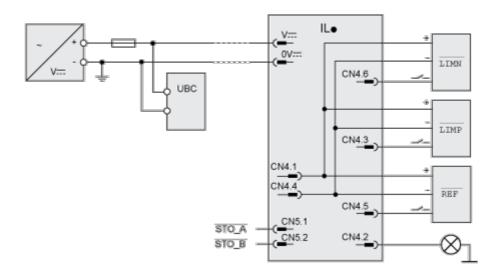
Dimensions



- 1 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 200.6 mm/7.90 in.
- D 14 mm/0.55 in.

Connections and Schema

Connection Example with 4 I/O Signals

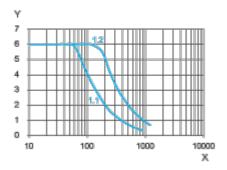


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Performance Curves

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