Product datasheet

Specification





integrated drive ILS with stepper motor - 24..36V- pulse/direction w/ o RS422- 6A

ILS1V853TB1A0

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	Pulse/direction 5 V without RS422, integrated	
Length	200.6 mm	
Winding type	High speed of rotation and medium torque	
Electrical connection	Printed circuit board connector	
Holding brake	Without	
Gear box type	Without	
Nominal speed	100 rpm at 24 V 300 rpm at 36 V	
Nominal torque	4.5 N.m	
Holding torque	4.5 N.m	

Complementary

mounting support	Flange
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	6000 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	Short circuit of the output voltage Safe torque off Overload of output voltage
Peak stall torque	4.5 N.m
Continuous stall torque	4.5 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	3.3 kg.cm²
Maximum mechanical speed	2000 rpm
Maximum radial force Fr	110 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	4.7 kg

Environment

Standards	IEC 61800-3, Ed 2 EN 61800-3: 2001-02 IEC 50178 IEC 60072-1 IEC 61800-3 IEC 50347 EN 61800-3:2001, second environment
Product certifications	TÜV UL 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	19.5 cm
Package 1 Width	22 cm
Package 1 Length	40 cm
Package 1 Weight	5.702 kg
Unit Type of Package 2	S06
Number of Units in Package 2	9
Package 2 Height	73.5 cm
Package 2 Width	60 cm
Package 2 Length	80 cm
Package 2 Weight	58.9 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

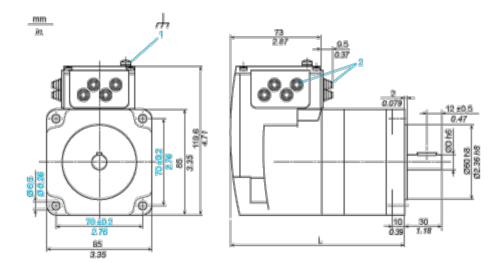
Circularity Profile	End of Life Information
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Environmental Disclosure	Product Environmental Profile
China Rohs Regulation	China RoHS declaration
Eu Rohs Directive	Pro-active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

19 Aug 2024

Dimensions Drawings

Integrated Drive without Holding Brake

Dimensions



- 1 Earth (ground) terminal
- 2 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.

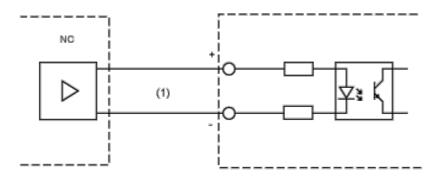
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Connections and Schema

Multifunction Interface

Input Wiring Diagram

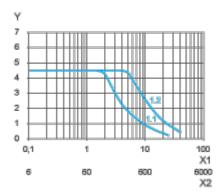


(1) Opto-isolated signals

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".

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