## ILS1U852PB1A0

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





#### 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 24 V, integrated
Length	170.6 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	100 rpm at 24 V 200 rpm at 36 V
Nominal torque	4 N.m
Holding torque	4 N.m

#### Complementary

Complementary		
Mounting support	Flange	
Motor flange size	85 mm	
Number of motor stacks	2	
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	Short circuit of the output voltage Overload of output voltage Safe torque off	
Peak stall torque	4 N.m	
Continuous stall torque	4 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	2.2 kg.cm²	
Maximum mechanical speed	1500 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	3.6 kg	

#### Environment

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Standards	IEC 60072-1 EN/IEC 61800-3 EN 61800-3:2001, second environment EN 50347 IEC 61800-3, Ed 2 EN/IEC 50178 EN 61800-3 : 2001-02
Product certifications	UL[RETURN]TÜV[RETURN]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 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	4.0 kg	

### Offer Sustainability

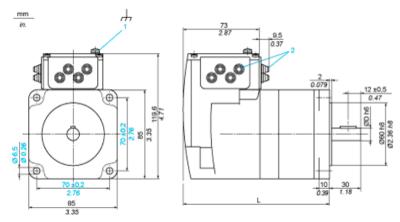
Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	<sup>™</sup> China RoHS Declaration
RoHS exemption information	₫Yes
Environmental Disclosure	Product Environmental Profile
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
PVC free	Yes
Contractual warranty	
Warranty	18 months

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#### Integrated Drive without Holding Brake

#### **Dimensions**

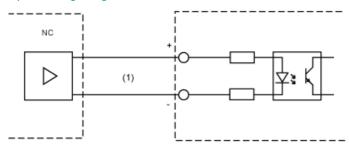


- 1
- Earth (ground) terminal Accessories: cable entries  $\emptyset = 3 \dots 9 \text{ mm/}0.12 \dots 0.35 \text{ in.}$ 2
- 170.6 mm/6.72 in.
- 12 mm/0.47 in.

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#### Multifunction Interface

#### Input Wiring Diagram



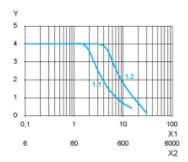
#### (1) Opto-isolated signals

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".

## Product data sheet Performance Curves

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#### **Torque Characteristics**



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