



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

ILS1U853PB1F0

EAN Code: 3389119227674

! Discontinued

# 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	247.3 mm	
Winding type	Medium speed of rotation and medium torque	
Electrical connection	Printed circuit board connector	
Holding brake	With	
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 holding brake 6 N.m	

# Complementary

3 Jul 2024

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	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 Safe torque off Short circuit of the output voltage	
Peak stall torque	6 N.m	
Peak stall torque  Continuous stall torque	6 N.m	
Continuous stall torque	6 N.m 1.8°, 0.9°, 0.72°, 0.36°, 0.18°, 0.09°, 0.072°, 0.036°	
Continuous stall torque  Speed feedback resolution	6 N.m 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	
Continuous stall torque  Speed feedback resolution  Accuracy error	6 N.m  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  +/- 6 arc min	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia	6 N.m  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  +/- 6 arc min  3.5 kg.cm²	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed	6 N.m  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  +/- 6 arc min  3.5 kg.cm²	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force)	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr  Maximum axial force Fa	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force) 30 N (force pressure)	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr  Maximum axial force Fa  Service life in hours	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force) 30 N (force pressure)	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr  Maximum axial force Fa  Service life in hours  Brake pull-in power	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force) 30 N (force pressure)  20000 h bearing	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr  Maximum axial force Fa  Service life in hours  Brake pull-in power  Brake release time	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force) 30 N (force pressure)  20000 h bearing  22 W  40 ms	
Continuous stall torque  Speed feedback resolution  Accuracy error  Rotor inertia  Maximum mechanical speed  Maximum radial force Fr  Maximum axial force Fa  Service life in hours  Brake pull-in power  Brake release time  Brake application time	6 N.m  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  +/- 6 arc min  3.5 kg.cm²  1000 rpm  110 N  170 N (tensile force) 30 N (force pressure)  20000 h bearing  22 W  40 ms	

# **Environment**

Standards	EN 50347 EN/IEC 50178 EN 61800-3:2001, second environment EN 61800-3: 2001-02 EN/IEC 61800-3 IEC 61800-3, Ed 2 IEC 60072-1	
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 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	5.5 kg

# **Contractual warranty**

Warranty 18 months



**Green Premium**<sup>TM</sup> **label** is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >





Transparency RoHS/REACh

# Well-being performance

	Mercury Free	
<b>②</b>	Rohs Exemption Information	Yes
	Pvc Free	

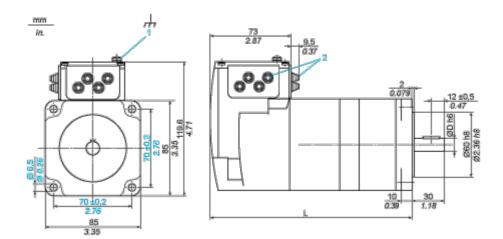
### **Certifications & Standards**

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 with 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 247.3 mm/9.74 in.
- D 14 mm/0.55 in.

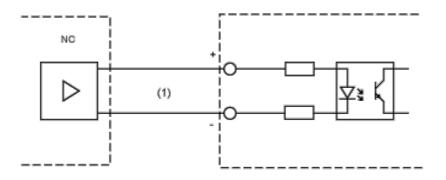
# **Product datasheet**

### ILS1U853PB1F0

#### Connections and Schema

#### **Multifunction Interface**

### **Input Wiring Diagram**

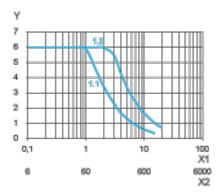


#### (1) Opto-isolated signals

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