# **Product datasheet**

Specifications





# integrated drive ILS with stepper motor - 24..36 V - Profibus DP - 6 A

ILS1B853TC1F0

! Discontinued on: 15 Jun 2023

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

EAN Code: 3389119227032

#### 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	Profibus DP, integrated	
Length	247.3 mm	
Winding type	High speed of rotation and medium torque	
Electrical connection	Industrial connector	
Holding brake	With	
Gear box type	Without	
Nominal speed	100 rpm at 24 V 300 rpm at 36 V	
Nominal torque	4.5 N.m	
Holding torque	6 N.m holding brake 4.5 N.m	

## Complementary

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	6000 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	4.5 N.m
Continuous stall torque	4.5 N.m
Speed feedback resolution	20000 points/turn
Accuracy error	+/- 6 arc min
Rotor inertia	3.5 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
Brake pull-in power	22 W
Brake release time	40 ms
Brake application time	20 ms
marking	CE
Type of cooling	Natural convection
Net weight	6.5 kg

### **Environment**

Standards EN/IEC 61800-3

IEC 61800-3, Ed 2 EN 50347 EN/IEC 50178 EN 61800-3 : 2001-02

EN 61800-3 : 2001-02 EN 61800-3:2001, second environment

IEC 60072-1

Product certifications	TÜV cUL UL	
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	22.0 cm
Package 1 Width	19.0 cm
Package 1 Length	39.0 cm
Package 1 Weight	7.538 kg
Unit Type of Package 2	P06
Number of Units in Package 2	12
Package 2 Height	77.0 cm
Package 2 Width	80.0 cm
Package 2 Length	60.0 cm
Package 2 Weight	98.956 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**

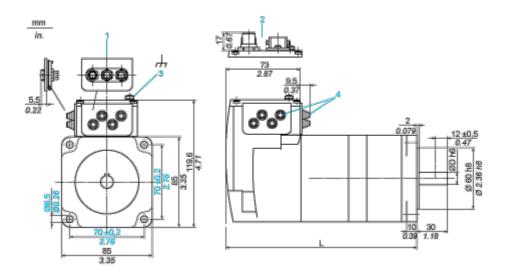
Circularity Profile	End of Life Information
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>Environmental Disclosure</b>	Product Environmental Profile
China Rohs Regulation	China RoHS declaration
Eu Rohs Directive	Pro-active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

19 Aug 2024

#### **Dimensions Drawings**

#### **Integrated Drive with Holding Brake**

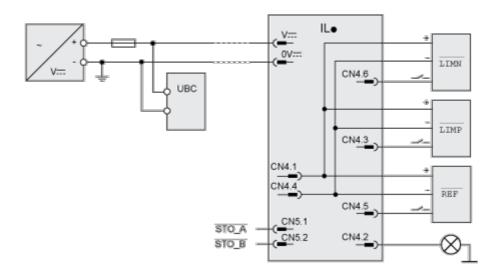
#### **Dimensions**



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

Connections and Schema

#### Connection Example with 4 I/O Signals

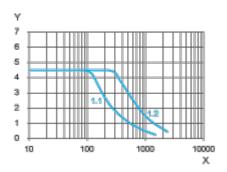


## **Product datasheet**

#### ILS1B853TC1F0

#### 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