

# Product data sheet

Specifications



integrated drive ILS with stepper motor - 24..36 V - CANopen DS301 - 6 A

ILS1F853TB1A0

## 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	CANopen DS301, 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

Transmission rate	50, 100, 125, 250, 500, 800 and 1000 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	18...40 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	-3...4.5 V
Voltage state 1 guaranteed	15...30 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	23...25 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	3.3 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	EN 61800-3 : 2001-02 EN 50347 EN 61800-3:2001, second environment EN/IEC 50178 IEC 60072-1 IEC 61800-3, Ed 2 EN/IEC 61800-3
Product certifications	UL cUL TÜV
Ambient air temperature for operation	50...65 °C (with power derating of 2 % per °C) 0...50 °C (without derating)
Permissible ambient air temperature around the device	105 °C power amplifier 110 °C motor
Ambient air temperature for storage	-25...70 °C
Operating altitude	<= 1000 m without derating

Relative humidity	15...85 % without condensation
Vibration resistance	20 m/s² (f= 10...500 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 Weight	5.736 kg
Package 1 Height	19 cm
Package 1 width	22 cm
Package 1 Length	40 cm

### Offer Sustainability

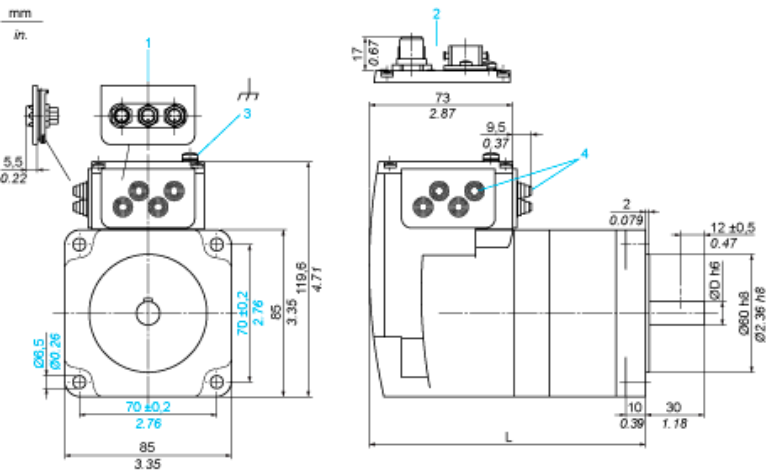
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

### Contractual warranty

Warranty	18 months
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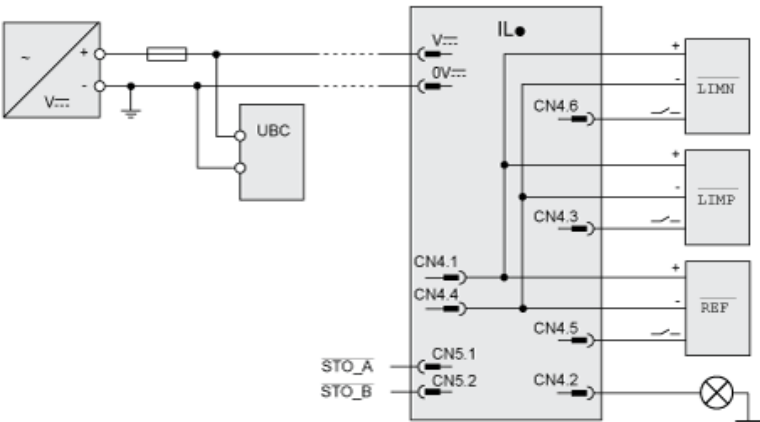
Integrated Drive without Holding Brake

Dimensions

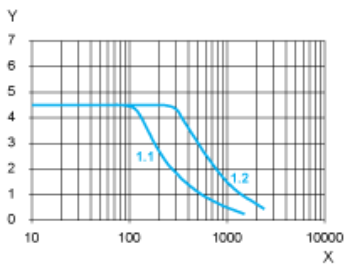


- 1 Accessories: I/O signal insert with industrial connectors
- 2 Option: industrial connectors
- 3 Earth (ground) terminal
- 4 Accessories: cable entries  $\varnothing = 3 \dots 9 \text{ mm}/0.12 \dots 0.35 \text{ in.}$
- L 200.6 mm/7.90 in.
- D 14 mm/0.55 in.

Connection Example with 4 I/O Signals



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