Product data sheet





integrated drive ILS with stepper motor - 24..36V - pulse/direction 5V RS422-5A

ILS1W853PB1F0

Discontinued on: Jun 30, 2023



Product availability: Non-Stock - Not normally stocked in distribution facility

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
Phase	Single phase
[Us] Rated Supply Voltage	36 V 24 V
Network Type	DC
Communication Interface	Pulse/direction 5 V RS422, Integrated
Length	9.74 in (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 36 V 60 rpm 24 V
Nominal Torque	53.10 lbf.in (6 N.m)
Holding Torque	53.10 lbf.in (6 N.m) holding brake 53.10 lbf.in (6 N.m)

Complementary

Mounting Support	Flange
Motor Flange Size	3.35 in (85 mm)
Number Of Motor Stacks	3
Centring Collar Diameter	2.36 in (60 mm)
Centring Collar Depth	0.08 in (2 mm)
Number Of Mounting Holes	4
Mounting Holes Diameter	0.26 in (6.5 mm)
Circle Diameter Of The Mounting Holes	3.90 in (99 mm)
Feedback Type	Index pulse

Price is "List Price" and may be subject to a trade discount - check with your local distributor or retailer for actual price.

Shaft End	Untapped
Second Shaft	Without second shaft end
Shaft Diameter	0.55 in (14 mm)
Shaft Length	1.18 in (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 safety input
Discrete Output Voltage	2325 V
Maximum Switching Current	100 mA per output 200 mA total
Protection Type	Overload of output voltage Short circuit of the output voltage Safe torque off
Peak Stall Torque	53.10 lbf.in (6 N.m)
Continuous Stall Torque	53.10 lbf.in (6 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	3.5 kg.cm ²
Maximum Mechanical Speed	1000 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	14.33 lb(US) (6.5 kg)

Environment

Standards	IEC 60072-1 EN 61800-3:2001, second environment EN/IEC 61800-3 EN 61800-3 : 2001-02 EN 50347 IEC 61800-3, Ed 2 EN/IEC 50178	
Product Certifications	cUL TÜV UL	
Ambient Air Temperature For Operation	122149 °F (5065 °C) with power derating of 2 % per °C)	

Permissible Ambient Air Temperature Around The Device	221 °F (105 °C) power amplifier 230 °F (110 °C) motor
Ambient Air Temperature For Storage	-13158 °F (-2570 °C)
Operating Altitude	<= 3280.84 ft (1000 m) without derating
Relative Humidity	1585 % without condensation
Vibration Resistance	20 m/s² 10500 Hz) 10 cycles EN/IEC 60068-2-6
Shock Resistance	150 m/s ² 1000 shocks 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

Ordering and shipping details

Category	US1PC5618288
Discount Schedule	PC56
Gtin	3389119227896
Returnability	No
Country Of Origin	DE

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	4.13 in (10.5 cm)
Package 1 Width	7.48 in (19.0 cm)
Package 1 Length	15.35 in (39.0 cm)
Package 1 Weight	12.13 lb(US) (5.5 kg)

Contractual warranty

Warranty 18 months

Sustainability Green Premium

Green PremiumTM **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-CO₂ 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



Rohs Exemption Information

Yes

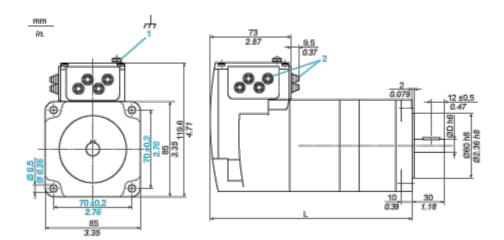
Certifications & Standards

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.
Weee Circularity Profile	, , , , , , , , , , , , , , , , , , , ,

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.

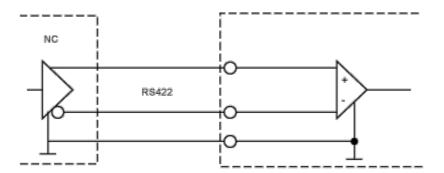
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Connections and Schema

Multifunction Interface

Input Wiring Diagram



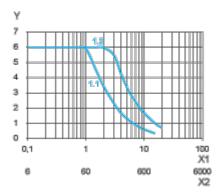
The reference pulses are supplied via two of the signal inputs, either as pulse/ direction signals or as A/B signals. The other signal inputs have the functions "power amplifier enable/pulse blocking" and "step size switching/PWM motor current control".

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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