

# ILS1F853PC1A0

integrated drive ILS with stepper motor - 24..36 V - CANopen DS301 - 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<br>36 V                               |
| Network type              | DC                                         |
| Communication interface   | Integrated CANopen DS301                   |
| Length                    | 200.6 mm                                   |
| Winding type              | Medium speed of rotation and medium torque |
| Electrical connection     | Industrial connector                       |
| Holding brake             | Without                                    |
| Gear box type             | Without                                    |
| Nominal speed             | 60 rpm at 24 V<br>120 rpm at 36 V          |
| Nominal torque            | 6 N.m                                      |
| Holding torque            | 6 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                   | 5000 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                | 2 mA at 24 V for 24 V signal interface<br>≤ 3 mA at 24 V on/STO_B for safety input<br>≤ 10 mA at 24 V on/STO_A for safety input |
| Discrete output voltage               | 23...25 V                                                                                                                       |
| Maximum switching current             | 200 mA total<br>100 mA per output                                                                                               |

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| Protection type           | Overload of output voltage<br>Safe torque off<br>Short circuit of the output voltage |
| Peak stall torque         | 6 N.m                                                                                |
| Continuous stall torque   | 6 N.m                                                                                |
| Speed feedback resolution | 20000 points/turn                                                                    |
| Accuracy error            | +/- 6 arc min                                                                        |
| Rotor inertia             | 3.3 kg.cm <sup>2</sup>                                                               |
| Maximum mechanical speed  | 1000 rpm                                                                             |
| Maximum radial force Fr   | 110 N                                                                                |
| Maximum axial force Fa    | 30 N (force pressure)<br>170 N (tensile force)                                       |
| Service life in hours     | 20000 h of bearing :                                                                 |
| Marking                   | CE                                                                                   |
| Type of cooling           | Natural convection                                                                   |
| Product weight            | 4.7 kg                                                                               |

## Environment

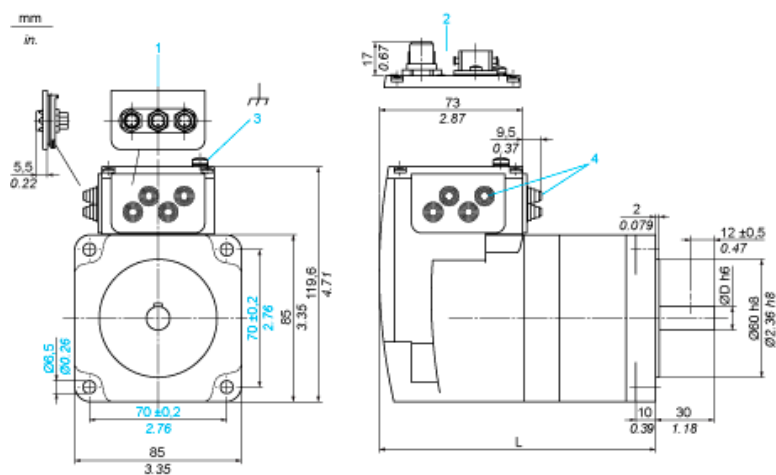
|                                                       |                                                                                                                                               |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | EN 50347<br>EN 61800-3:2001, second environment<br>EN 61800-3 : 2001-02<br>EN/IEC 50178<br>EN/IEC 61800-3<br>IEC 60072-1<br>IEC 61800-3, Ed 2 |
| Product certifications                                | CUL<br>TÜV<br>UL                                                                                                                              |
| Ambient air temperature for operation                 | 0...50 °C without derating<br>> 50...65 °C with power derating of 2 % per °C                                                                  |
| Permissible ambient air temperature around the device | 110 °C (motor)<br>105 °C (power amplifier)                                                                                                    |
| Ambient air temperature for storage                   | -25...70 °C                                                                                                                                   |
| Operating altitude                                    | <= 1000 m without derating                                                                                                                    |
| Relative humidity                                     | 15...85 % without condensation                                                                                                                |
| Vibration resistance                                  | 20 m/s <sup>2</sup> (f = 10...500 Hz) for 10 cycles conforming to EN/IEC 60068-2-6                                                            |
| Shock resistance                                      | 150 m/s <sup>2</sup> for 1000 shocks conforming to EN/IEC 60068-2-29                                                                          |
| IP degree of protection                               | IP54 total except shaft bushing conforming to EN/IEC 60034-5<br>IP41 shaft bushing conforming to EN/IEC 60034-5                               |

## Offer Sustainability

|                               |                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status      | Not Green Premium product                                                             |
| RoHS (date code: YYWW)        | Compliant - since 0922 - <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                         | Reference not containing SVHC above the threshold                                     |
| Product environmental profile | Available <a href="#">Download Product Environmental</a>                              |

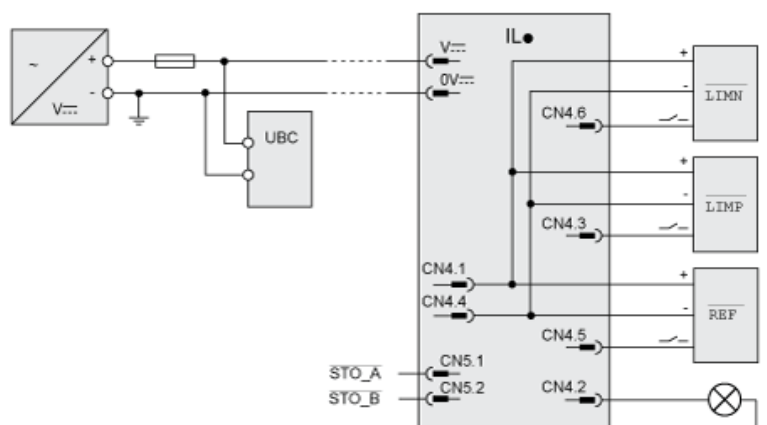
## Integrated Drive without Holding Brake

### 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.

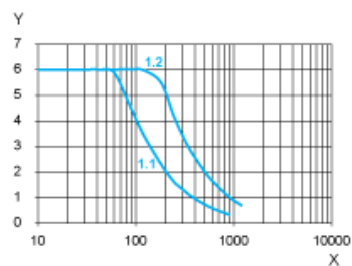
Connection Example with 4 I/O Signals



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## Torque Characteristics

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X Speed of rotation in rpm

Y Torque in Nm

1.1 Max. torque at 24 V

1.2 Max. torque at 36 V