

# Product data sheet

Specifications



## integrated drive ILS with stepper motor - 24..48 V - Modbus TCP - 5 A

ILS2T852PC1A0

### 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 | 48 V<br>24 V                               |
| Network type              | DC                                         |
| Communication interface   | Modbus TCP, integrated                     |
| Length                    | 170.6 mm                                   |
| Winding type              | Medium speed of rotation and medium torque |
| Electrical connection     | Industrial connector                       |
| Holding brake             | Without                                    |
| Gear box type             | Without                                    |
| Nominal speed             | 180 rpm at 24 V<br>360 rpm at 48 V         |
| Nominal torque            | 4 N.m                                      |
| Holding torque            | 4 N.m                                      |

### Complementary

|                                       |               |
|---------------------------------------|---------------|
| Transmission rate                     | 10, 100 Mbits |
| Mounting support                      | Flange        |
| Motor flange size                     | 85 mm         |
| Number of motor stacks                | 2             |
| 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      |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|                            |                                                                                      |
|----------------------------|--------------------------------------------------------------------------------------|
| Second shaft               | Without second shaft end                                                             |
| Shaft diameter             | 12 mm                                                                                |
| Shaft length               | 30 mm                                                                                |
| Supply voltage limits      | 18...55 V                                                                            |
| Current consumption        | 5000 mA maximum continuous                                                           |
| Associated fuse rating     | 16 A                                                                                 |
| Commissioning interface    | RS485 Modbus TCP (9.6, 19.2 and 38.4 kbauds)                                         |
| 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 for safety input<br>2 mA at 24 V for 24 V signal interface             |
| Discrete output voltage    | 23...25 V                                                                            |
| Maximum switching current  | 100 mA per output<br>200 mA total                                                    |
| Protection type            | Overload of output voltage<br>Safe torque off<br>Short circuit of the output voltage |
| Peak stall torque          | 4 N.m                                                                                |
| Continuous stall torque    | 4 N.m                                                                                |
| Speed feedback resolution  | 20000 points/turn                                                                    |
| Accuracy error             | +/- 6 arc min                                                                        |
| Rotor inertia              | 2.2 kg.cm <sup>2</sup>                                                               |
| Maximum mechanical speed   | 3000 rpm                                                                             |
| Maximum radial force Fr    | 100 N                                                                                |
| Maximum axial force Fa     | 170 N (tensile force)<br>30 N (force pressure)                                       |
| Service life in hours      | 20000 h bearing                                                                      |
| Marking                    | CE                                                                                   |
| Type of cooling            | Natural convection                                                                   |
| Net weight                 | 3.6 kg                                                                               |

## Environment

|                                                       |                                                                                                                                          |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                             | IEC 61800-3<br>IEC 50347<br>IEC 50178<br>IEC 60072-1<br>EN 61800-3:2001, second environment<br>EN 61800-3 : 2001-02<br>IEC 61800-3, Ed 2 |
| Product certifications                                | TÜV<br>cUL<br>UL                                                                                                                         |
| Ambient air temperature for operation                 | 40...55 °C (with power derating of 2 % per °C)<br>0...40 °C (without derating)                                                           |
| Permissible ambient air temperature around the device | 105 °C power amplifier<br>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 IEC 60068-2-6                                              |
| Shock resistance        | 150 m/s² 1000 shocks conforming to IEC 60068-2-29                                                           |
| IP degree of protection | IP41 shaft bushing: conforming to IEC 60034-5<br>IP54 total except shaft bushing: conforming to IEC 60034-5 |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 10.4 cm |
| Package 1 Width              | 18.0 cm |
| Package 1 Length             | 36.5 cm |
| Package 1 Weight             | 4.1 kg  |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

| Environmental footprint          |                                               |
|----------------------------------|-----------------------------------------------|
| Total lifecycle Carbon footprint | 627                                           |
| Environmental Disclosure         | <a href="#">Product Environmental Profile</a> |

Use Better

| Materials and Substances               |                                                                                                                                                                                                                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging made with recycled cardboard | Yes                                                                                                                                                                                                                                                                                         |
| Packaging without single use plastic   | No                                                                                                                                                                                                                                                                                          |
| <a href="#">EU RoHS Directive</a>      | Pro-active compliance (Product out of EU RoHS legal scope)                                                                                                                                                                                                                                  |
| SCIP Number                            | F800009a-26ea-46d4-b613-164e8055f98f                                                                                                                                                                                                                                                        |
| REACH Regulation                       | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                           |
| 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> |
| PVC free                               | Yes                                                                                                                                                                                                                                                                                         |

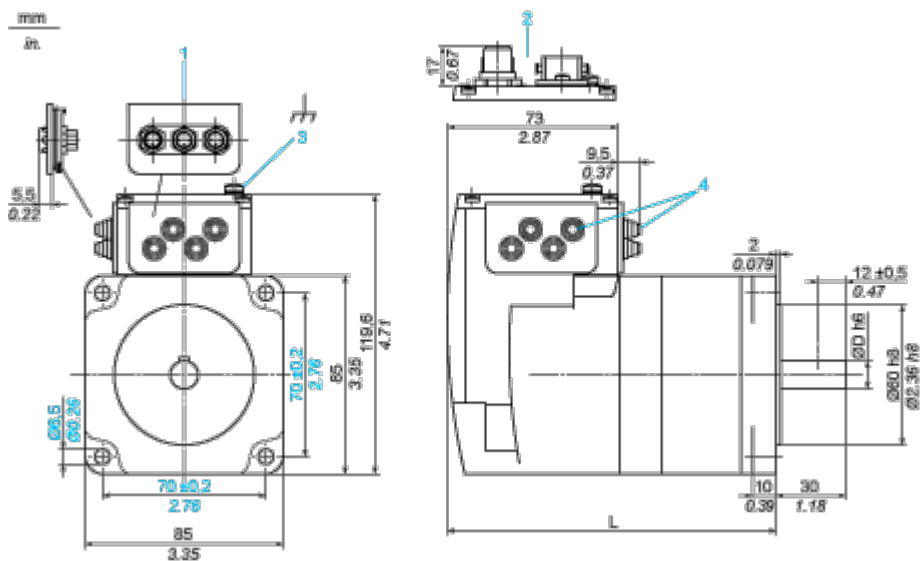
Use Again

| Repack and remanufacture        |                                                                                                                                                                                                                 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| End of life manual availability | <a href="#">End of Life Information</a>                                                                                                                                                                         |
| Take-back                       | No                                                                                                                                                                                                              |
| WEEE Label                      |  The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

## Dimensions Drawings

### 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 170.6 mm/6.72 in.
- D 12 mm/0.47 in.

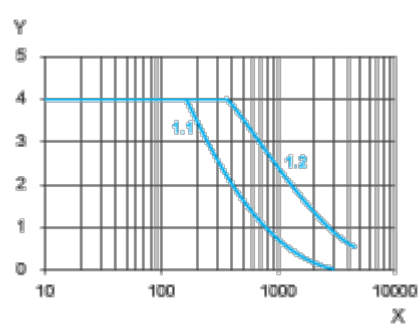
Connections and Schema

Connection Example with 4 I/O Signals



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 48 V