

# AD-HF2DSL02

SCon

MOTOR FEEDBACK SYSTEMS

**SICK**  
Sensor Intelligence.

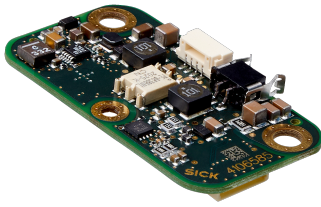


Illustration may differ

## Ordering information

| Type        | part no. |
|-------------|----------|
| AD-HF2DSL02 | 2123676  |

Other models and accessories → [www.sick.com/SCon](http://www.sick.com/SCon)

## Detailed technical data

### Safety-related parameters

|  |  |
|--|--|
| <b>MTTF<sub>D</sub> (mean time to dangerous failure)</b> | ≤ 190 years (EN ISO 13849) <sup>1)</sup> |
|--|--|

<sup>1)</sup> This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 60 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

### Performance

|  |                         |
|--|-------------------------|
| <b>Speed when switching on/resetting the motor feedback system</b> | ≤ 0.5 min <sup>-1</sup> |
| <b>Interpolation factor</b>  | 13 bit                  |

### Interfaces

|  |  |
|--|--|
| <b>Communication interface</b>                     | HIPERFACE DSL <sup>®</sup>                                       |
| <b>Initialization time</b>                         | ≤ 1.3 ms <sup>1)</sup>   |
| <b>Measurement external temperature resistance</b> | 32-bit value, without prefix (1 Ω) 0 ... 209,600 Ω <sup>2)</sup> |
| <b>Input signal</b>                                |  |
| Signal type  | HIPERFACE <sup>®</sup>   |
| Maximum cable length                               | ≤ 0.2 m  |

<sup>1)</sup> From reaching a permitted operating voltage.

<sup>2)</sup> Without sensor tolerance; at -40 °C ... +160 °C: NTC +2K; PTC+3K (KTY84-130/PT1000). For additional conversion function of PT1000 to KTY84/130, see technical description.

### Electronics

|                                  |   |
|----------------------------------|---|
| <b>Connection type</b>           | Male connector, 4-pin, output<br>Male connector, 8-pin, Input |
| <b>Supply voltage</b>            | 7 V ... 12 V  |
| <b>Warm-up time voltage ramp</b> | Max. 180 ms <sup>1)</sup>                                     |
| <b>Current consumption</b>       | 80 mA (without load) <sup>2)</sup>                            |

<sup>1)</sup> Duration of voltage ramp between 0 and 7.0 V.

<sup>2)</sup> Current rating applies when using interface circuit suggestions as shown in HIPERFACE DSL<sup>®</sup> manual (8017595).

### Mechanics

|               |        |
|---------------|--------|
| <b>Weight</b> | ≤ 10 g |
|---------------|--------|

### Ambient data

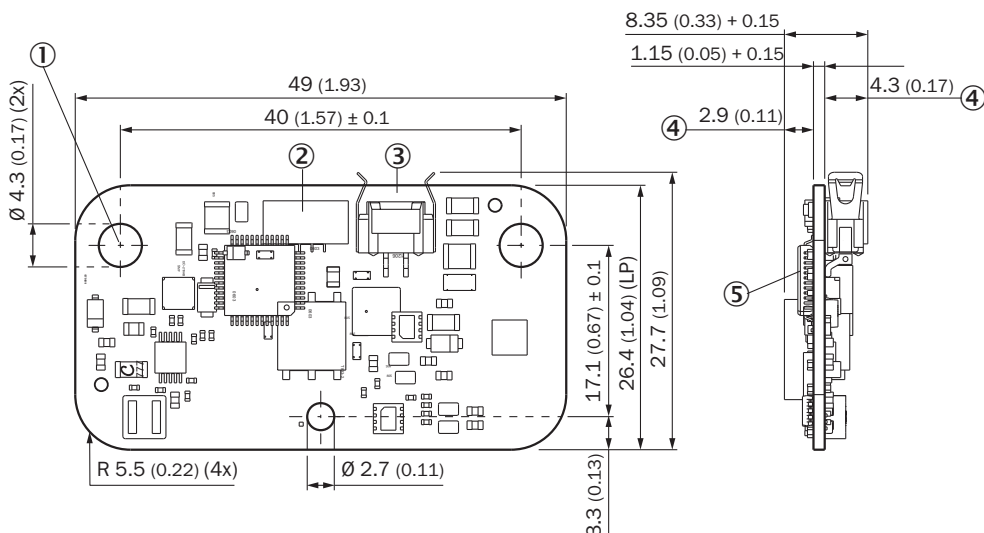
|                                    |                    |
|------------------------------------|--------------------|
| <b>Operating temperature range</b> | -30 °C ... +115 °C |
|------------------------------------|--------------------|

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| <b>Storage temperature range</b>      | -40 °C ... +125 °C, without package |
| <b>Relative humidity/condensation</b> | 90 %, Condensation not permitted    |
| <b>Enclosure rating</b>               | IP00                                |

### Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270590 |
| <b>ECLASS 5.1.4</b>   | 27270590 |
| <b>ECLASS 6.0</b>     | 27270590 |
| <b>ECLASS 6.2</b>     | 27270590 |
| <b>ECLASS 7.0</b>     | 27270590 |
| <b>ECLASS 8.0</b>     | 27270590 |
| <b>ECLASS 8.1</b>     | 27270590 |
| <b>ECLASS 9.0</b>     | 27270590 |
| <b>ECLASS 10.0</b>    | 27273805 |
| <b>ECLASS 11.0</b>    | 27273901 |
| <b>ECLASS 12.0</b>    | 27273901 |
| <b>ETIM 5.0</b>       | EC001486 |
| <b>ETIM 6.0</b>       | EC001486 |
| <b>ETIM 7.0</b>       | EC001486 |
| <b>ETIM 8.0</b>       | EC001486 |
| <b>UNSPSC 16.0901</b> | 41112113 |

### Dimensional drawing



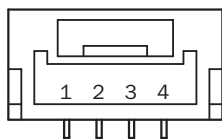
Dimensions in mm (inch)

When installing/attaching the sCon® interface converter, designing the support surface as a dome is recommended. In order to guarantee the recommended distance of 1.0 mm to all electronic components from an EMC standpoint, the diameter of the domes must not exceed 8 mm. Since the sCon® interface converter can be mounted on either side, the minimum height of the domes must be 3.9 mm or 5.3 mm.

- ① Bore holes for fixing screws
- ② HIPERFACE DSL® male connector-female connector

- ③ Temperature sensor female connector
- ④ Max. component height
- ⑤ HIPERFACE® male connector-female connector

### PIN assignment HIPERFACE DSL® pin assignment

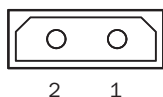


| PIN | Signal                | Explanation                 |
|-----|-----------------------|-----------------------------|
| 1   | -                     | Not connected - no function |
| 2   | +U <sub>S</sub> /DSL+ | Supply 7 V ... 12 V         |
| 3   | GND/DSL-              | Ground connection           |
| 4   | -                     | Not connected - no function |

Recommended outer diameter of set of stranded wires: 2.8 mm ±0.3 mm

Recommended mating connector: JST (GHR-04V-S)

### PIN assignment Temperature sensor pin assignment

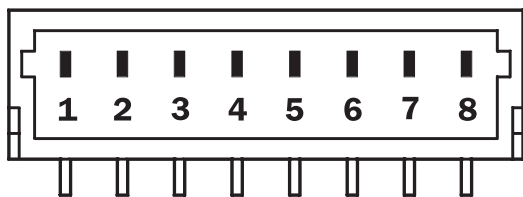


| PIN | Signal | Explanation                       |
|-----|--------|-----------------------------------|
| 1   | T+     | Thermistor connection             |
| 2   | T-     | Thermistor connection (to ground) |

Recommended outer diameter of set of stranded wires: 2.2 mm ± 0.1 mm

Recommended mating connector: Harwin M80-8990205

### PIN assignment HIPERFACE® pin assignment



| PIN | Signal         | Wire colors (cable connection) | Explanation          |
|-----|----------------|--------------------------------|----------------------|
| 1   | U <sub>S</sub> | Red                            | Supply voltage       |
| 2   | + SIN          | White                          | Process data channel |
| 3   | REFSIN         | Brown                          | Process data channel |
| 4   | + COS          | Pink                           | Process data channel |
| 5   | REFCOS         | Black                          | Process data channel |

| PIN  | Signal | Wire colors (cable connection) | Explanation              |
|--|--------|--------------------------------|--------------------------|
| 6  | GND    | Blue                           | Ground connection        |
| 7  | Data + | Gray or yellow                 | Parameter channel RS 485 |
| 8  | Data - | Green or purple                | Parameter channel RS 485 |
| The GND connection (0 V) of the supply voltage is not connected to the housing |        |                                |                          |

### Recommended accessories

Other models and accessories → [www.sick.com/SCon](http://www.sick.com/SCon)

|                       | Brief description   | Type             | part no. |
|-----------------------|---|------------------|----------|
| connectors and cables |   |                  |          |
|                       | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, JST, 8-pin, straight</li> <li>• <b>Connection type head B:</b> Female connector, JST, 8-pin, straight</li> <li>• <b>Signal type:</b> HIPERFACE®</li> <li>• <b>Cable:</b> 0.1 m, 8-wire</li> <li>• <b>Description:</b> HIPERFACE®, unshielded</li> </ul> | DDL-OJ08-G0M1XB6 | 2117842  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)