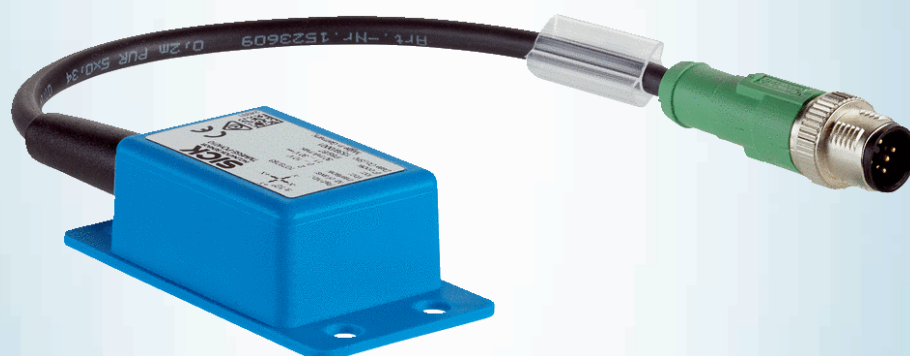




# TMM55E-PMH060

TMM55

INCLINATION SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

| Type          | part no. |
|---------------|----------|
| TMM55E-PMH060 | 1073782  |

Other models and accessories → [www.sick.com/TMM55](http://www.sick.com/TMM55)



### Detailed technical data

#### Safety-related parameters

|                                                          |                                          |
|----------------------------------------------------------|------------------------------------------|
| <b>MTTF<sub>D</sub> (mean time to dangerous failure)</b> | 378 years (EN ISO 13849-1) <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 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

#### Performance

|                                                      |                          |
|------------------------------------------------------|--------------------------|
| <b>Number of axis</b>                                | 2                        |
| <b>Measuring range</b>                               | ± 60°                    |
| <b>Resolution</b>                                    | 0.06°                    |
| <b>Static measurement accuracy</b>                   | ± 0.5°                   |
| <b>Compensated cross-sensitivity (2-dimensional)</b> | Typ. ± 1.2°, max. ± 2.4° |
| <b>Temperature coefficient (zero point)</b>          | Max. ± 0.009°/K          |
| <b>Limit frequency</b>                               | 18 Hz                    |
| <b>Sampling rate</b>                                 | 1.95 kHz                 |

#### Interfaces

|                                |                  |
|--------------------------------|------------------|
| <b>Communication interface</b> | Analog / Current |
| <b>Current output</b>          | 4 mA ... 20 mA   |
| <b>Load resistance</b>         | ≤ 930 Ω          |
| <b>Initialization time</b>     | 75 ms            |

#### Electronics

|                                                |                                                       |
|------------------------------------------------|-------------------------------------------------------|
| <b>Connection type</b>                         | Cable, 5-wire, with male connector, M12, 5-pin, 0.2 m |
| <b>Supply voltage</b>                          | 11 V DC ... 30 V DC                                   |
| <b>Current consumption</b>                     | 15 ... 45 mA                                          |
| <b>Reverse polarity protection</b>             | ✓                                                     |
| <b>Short-circuit protection of the outputs</b> | ✓                                                     |

#### Mechanics

|                         |                       |
|-------------------------|-----------------------|
| <b>Dimensions</b>       | 65 mm x 35 mm x 20 mm |
| <b>Weight</b>           | 55 g (with cable)     |
| <b>Housing material</b> | Plastic (ABS)         |
| <b>Material, cable</b>  | PUR                   |

## Ambient data

|                                    |                                         |
|------------------------------------|-----------------------------------------|
| <b>EMC</b>                         | EN 61326-1, EN ISO 14982, EN ISO 13309  |
| <b>Enclosure rating</b>            | IP65 (IEC 60529)<br>IP67 (IEC 60529)    |
| <b>Operating temperature range</b> | -40 °C ... +80 °C                       |
| <b>Storage temperature range</b>   | -40 °C ... +85 °C                       |
| <b>Resistance to shocks</b>        | 100 g, 6 ms (EN 60068-2-27)             |
| <b>Resistance to vibration</b>     | 10 g, 10 Hz ... 2,000 Hz (EN 60068-2-6) |

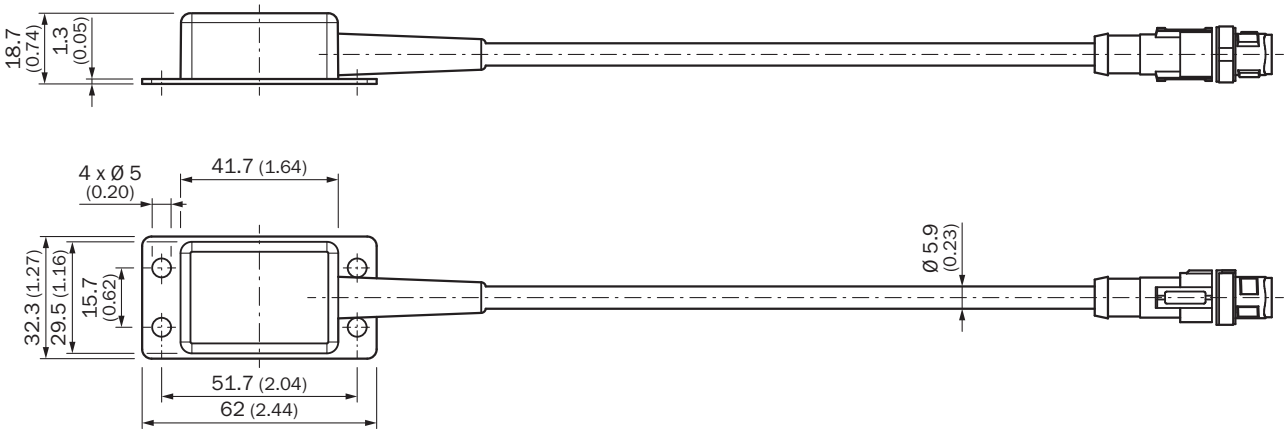
## Certificates

|                                                                              |   |
|------------------------------------------------------------------------------|---|
| <b>EU declaration of conformity</b>                                          | ✓ |
| <b>UK declaration of conformity</b>                                          | ✓ |
| <b>ACMA declaration of conformity</b>                                        | ✓ |
| <b>China RoHS</b>                                                            | ✓ |
| <b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b> | ✓ |

## Classifications

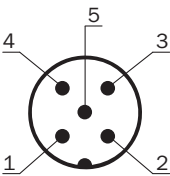
|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270790 |
| <b>ECLASS 5.1.4</b>   | 27270790 |
| <b>ECLASS 6.0</b>     | 27270790 |
| <b>ECLASS 6.2</b>     | 27270790 |
| <b>ECLASS 7.0</b>     | 27270790 |
| <b>ECLASS 8.0</b>     | 27270790 |
| <b>ECLASS 8.1</b>     | 27270790 |
| <b>ECLASS 9.0</b>     | 27270790 |
| <b>ECLASS 10.0</b>    | 27271101 |
| <b>ECLASS 11.0</b>    | 27271101 |
| <b>ECLASS 12.0</b>    | 27271101 |
| <b>ETIM 5.0</b>       | EC001852 |
| <b>ETIM 6.0</b>       | EC001852 |
| <b>ETIM 7.0</b>       | EC001852 |
| <b>ETIM 8.0</b>       | EC001852 |
| <b>UNSPSC 16.0901</b> | 41111613 |

Dimensional drawing



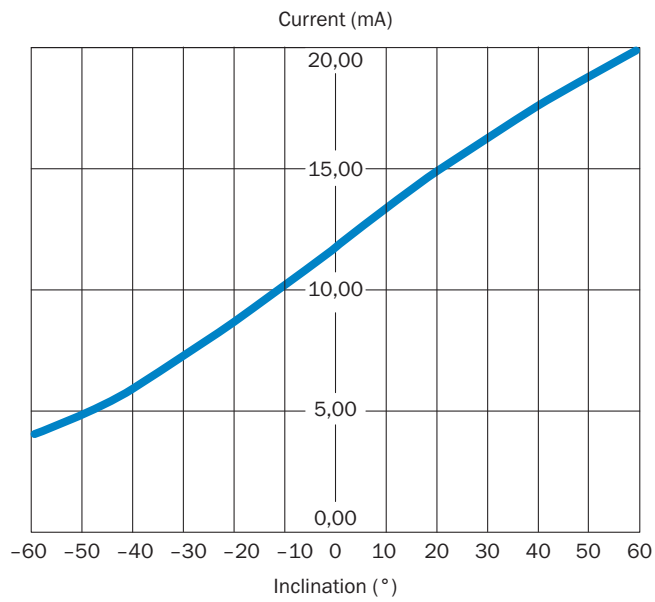
Dimensions in mm (inch)

PIN assignment



| PINPlug, M12, 5-pin | Wire colors (cable connection) | Signal      | Description                                 |
|---------------------|--------------------------------|-------------|---------------------------------------------|
| 1                   | Brown                          | VDC         | Supply voltage                              |
| 2                   | White                          | Y-OUT       | Sensorsignal y-axis                         |
| 3                   | Blue                           | GND         | 0V (GND)                                    |
| 4                   | Black                          | X-OUT       | Sensorsignal x-axis                         |
| 5                   | Green/yellow                   | Signal- GND | Signal GND<br>(internally connected to GND) |

## Diagrams



### Recommended accessories

Other models and accessories → [www.sick.com/TMM55](http://www.sick.com/TMM55)

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Type               | part no. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> </ul>                                                                                                                                                                                     | DOS-1205-G         | 6009719  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li><b>Note:</b> For field bus technology</li> </ul>                                                                                                                                        | STE-1205-G         | 6022083  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable, Power</li> <li><b>Cable:</b> 1.5 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded, Power</li> </ul>                                                                                                 | DOL-1205-W1M5ACSCO | 6049455  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1.5 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF2A25-015UB6XLEAX | 2095833  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 3 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YF2A25-030UB6XLEAX | 2095834  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 3 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>     | YG2A25-030UB6XLEAX | 2095791  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>     | YG2A25-050UB6XLEAX | 2095792  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 10 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>    | YG2A25-100UB6XLEAX | 2095793  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 0.6 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>   | YG2A25-C60UB6XLEAX | 2145612  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 1 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>     | YG2A25-010UB6XLEAX | 2145613  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 2 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, shielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>     | YG2A25-020UB6XLEAX | 2145614  |

## 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.”**

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