



# PET-1RB250G1NMRMR

PET

PRESSURE SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type              | Part no. |
|-------------------|----------|
| PET-1RB250G1NMRMR | 6083960  |

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

### Detailed technical data

#### Features

|                            |   |
|----------------------------|---|
| <b>Pressure type</b>       | Gauge pressure                            |
| <b>Measuring range</b>     | 0 bar ... 250 bar                         |
| <b>Process temperature</b> | -30 °C ... +100 °C                        |
| <b>Output signal</b>       | 0.5 V ... 4.5 V, ratiometric, 3-conductor |
| <b>Pieces per package</b>  | 50 pieces                                 |

#### Mechanics/electronics

|   |  |
|---|--|
| <b>Process connection</b>               | G ¼ A according to DIN 3852-E  |
| <b>Seal</b>                             | NBR  |
| <b>Wetted parts</b>                     | Stainless steel, stainless steel 13-8 PH   |
| <b>Pressure port</b>                    | 0.6 mm pressure port (available on request)  |
| <b>Housing material</b>                 | Stainless steel 316L, PBT GF30   |
| <b>Connection type</b>                  | M12 round connector x 1, 4-pin   |
| <b>Enclosure rating</b>                 | IP67, for round connector (IEC 60529) <sup>1)</sup>  |
| <b>Supply voltage</b>                   | 5 V DC, ± 10 % <sup>2)</sup>   |
| <b>Maximum ohmic load R<sub>A</sub></b> | > 4.5 kΩ with ratiometric output signal  |
| <b>Maximum power consumption</b>        | 5 mA   |
| <b>Initialization time</b>              | 15 ms  |
| <b>Protection class</b>                 | III  |
| <b>Isolation voltage</b>                | 750 V DC   |
| <b>Overvoltage protection</b>           | 36 V DC  |
| <b>Short-circuit protection</b>         | Output Q <sub>A</sub> towards M  |
| <b>Reverse polarity protection</b>      | L <sup>+</sup> towards M   |
| <b>CE-conformity</b>                    | 2004/108/EC, EN 61326-1 emission (group 1, class B) and interference immunity (industrial application) and pressure equipment directive 97/23/EC |

<sup>1)</sup> The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

<sup>2)</sup> The pressure transmitter must be supplied with power by a limited energy circuit compliant with 9.3 of UL/EN/IEC 601010-1 or LPS to UL/EN/IEC 60950-1 or Class 2 to UL 1310/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m if the pressure transmitter is used above this altitude.

|                         |                             |
|-------------------------|-----------------------------|
| <b>RoHS certificate</b> | ✓                           |
| <b>Service life</b>     | Minimum 10 Mio. load cycles |
| <b>MTTF</b>             | > 100 years                 |

<sup>1)</sup> The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

<sup>2)</sup> The pressure transmitter must be supplied with power by a limited energy circuit compliant with 9.3 of UL/EN/IEC 601010-1 or LPS to UL/EN/IEC 60950-1 or Class 2 to UL 1310/UL1585 (NEC or CEC). The power supply must be suitable for operation above 2,000 m if the pressure transmitter is used above this altitude.

## Performance

|   |  |
|---|--|
| <b>Non-linearity</b>                        | ≤ ± 0.5 % of span (best fit straight line, BFSL) |
| <b>Accuracy</b>                             | ≤ ± 1.2 % of span (at room temperature)          |
| <b>Response time</b>                        | < 2 ms   |
| <b>Measurement deviation of zero signal</b> | ≤ ± 0.5 % of the span                            |
| <b>Temperature error</b>                    | ≤ ± 1.5 % of the span                            |
| <b>Long-term drift/one-year stability</b>   | ≤ ± 0.3 % of span (per year)                     |
| <b>Rated temperature range</b>              | 0 °C ... +80 °C                                  |
| <b>Reference conditions</b>                 | According to IEC 61298-1                         |

## Ambient data

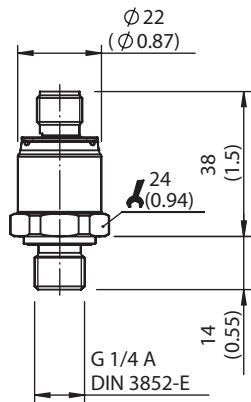
|                                       |   |
|---------------------------------------|---|
| <b>Ambient temperature, operation</b> | -30 °C ... +100 °C  |
| <b>Storage temperature</b>            | -30 °C ... +100 °C  |
| <b>Shock load</b>                     | 40 g (6 ms) according to IEC 60068-2-27 (mechanical shock)                            |
| <b>Vibration load</b>                 | 20 g (20 Hz ... 2000 Hz, 120 min) according to IEC 60068-2-6 (vibration at resonance) |

## Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27200614 |
| <b>ECLASS 5.1.4</b>   | 27200614 |
| <b>ECLASS 6.0</b>     | 27200614 |
| <b>ECLASS 6.2</b>     | 27200614 |
| <b>ECLASS 7.0</b>     | 27200614 |
| <b>ECLASS 8.0</b>     | 27200614 |
| <b>ECLASS 8.1</b>     | 27200614 |
| <b>ECLASS 9.0</b>     | 27200614 |
| <b>ECLASS 10.0</b>    | 27200614 |
| <b>ECLASS 11.0</b>    | 27200614 |
| <b>ECLASS 12.0</b>    | 27200614 |
| <b>ETIM 5.0</b>       | EC011478 |
| <b>ETIM 6.0</b>       | EC011478 |
| <b>ETIM 7.0</b>       | EC011478 |
| <b>ETIM 8.0</b>       | EC011478 |
| <b>UNSPSC 16.0901</b> | 41112410 |

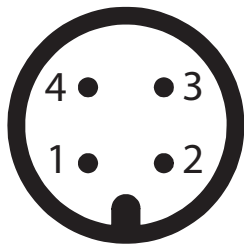
### Dimensional drawing (Dimensions in mm (inch))

Process connection G 1/4 A according to DIN 3852-E with round connector M12 x 1, 4-pin



### Connection type

M12 round connector x 1, 4-pin












| Assignment | L <sup>+</sup> | M | Q <sub>A</sub> |
|------------|----------------|---|----------------|
| 2-wire     | 1              | 3 | -              |
| 3-wire     | 1              | 3 | 4              |




- ① L<sup>+</sup>: Positive supply connection
- ② M: Negative supply connection
- ③ Q<sub>A</sub>: Analog output

## Recommended accessories

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

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
| Others  |   |                    |          |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 2 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>  | YF2A14-020UB3XLEAX | 2095607  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 5 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>  | YF2A14-050UB3XLEAX | 2095608  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 10 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YF2A14-100UB3XLEAX | 2095609  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 15 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YF2A14-150UB3XLEAX | 2095610  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 20 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YF2A14-200UB3XLEAX | 2095611  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 25 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YF2A14-250UB3XLEAX | 2095615  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>    | YG2A14-020UB3XLEAX | 2095766  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>    | YG2A14-050UB3XLEAX | 2095767  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>   | YG2A14-100UB3XLEAX | 2095768  |

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 15 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YG2A14-150UB3XLEAX | 2095769  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 20 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YG2A14-200UB3XLEAX | 2095770  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 25 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul> | YG2A14-250UB3XLEAX | 2095771  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 2 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>   | YF2A14-020VB3XLEAX | 2096234  |
|    | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 5 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>   | YF2A14-050VB3XLEAX | 2096235  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 10 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>  | YF2A14-100VB3XLEAX | 2096236  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 15 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>  | YF2A14-150VB3XLEAX | 2096237  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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> 20 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>  | YF2A14-200VB3XLEAX | 2096238  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>   | YG2A14-020VB3XLEAX | 2095895  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals</li> </ul>   | YG2A14-050VB3XLEAX | 2095897  |

|   | Brief description  | Type               | Part no. |
|---|--|--------------------|----------|
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-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, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YG2A14-100VB3XLEAX | 2095898  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-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> 15 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YG2A14-150VB3XLEAX | 2096213  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-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> 20 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YG2A14-200VB3XLEAX | 2096214  |

## 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)