



# PET-1RB160G1NMRMR

PET

PRESSURE SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
PET-1RB160G1NMRMR	6083959

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

### Detailed technical data

#### Features

<b>Medium</b>	Fluids
<b>Pressure type</b>	Gauge pressure
<b>Pressure unit</b>	bar
<b>Measuring range</b>	0 bar ... 160 bar
<b>Overpressure safety</b>	2-fold (3-fold upon request)
<b>Process temperature</b>	-30 °C ... +100 °C
<b>Maximum ohmic load R<sub>A</sub></b>	> 4.5 kΩ, with ratiometric output signal
<b>Output signal</b>	0.5 V ... 4.5 V, ratiometric, 3-conductor
<b>Initialization time</b>	15 ms
<b>Pieces per package</b>	50 pieces

#### Mechanics/electronics

<b>Communication interface</b>	-
<b>Process connection</b>	G ¼ A (ISO 1179-2)
<b>Wetted parts</b>	Process connection: 316L stainless steel Measuring chamber: stainless steel 13-8 PH
<b>Pressure port</b>	0.6 mm pressure port
<b>Housing material</b>	Stainless steel 316L, PBT GF30
<b>Connection type</b>	M12 round connector x 1, 4-pin
<b>Supply voltage</b>	4.5 V DC ... 5.5 V DC <sup>1) 2)</sup>
<b>Power consumption</b>	5 mA
<b>Ex-approvals</b>	2004/108/EC, EN 61326-1 emission (group 1, class B) and interference immunity (industrial application) and pressure equipment directive 97/23/EC
<b>Seal</b>	NBR <sup>3)</sup>

<sup>1)</sup> 5 V DC ± 10 %.

<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.

<sup>3)</sup> Only for process connection G ¼ A according to DIN 3852-E.

<sup>4)</sup> The enclosure rating classes specified only apply while the thermometer is connected with female connectors that provide the corresponding enclosure rating.

<sup>5)</sup> Available upon request for process connections G ¼ A according to DIN 3852-E, ¼ " NPT, R ¼ according to ISO 7, and 7/16"-20 UNF.

<b>Enclosure rating</b>	IP67 (IEC 60529) <sup>4)</sup>
<b>MTTF</b>	> 100 years
<b>Pressure peak dampening</b>	Through integrated pressure port 0.6 mm or 0.3 mm <sup>5)</sup>
<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

<sup>1)</sup> 5 V DC ± 10 %.

<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.

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<sup>5)</sup> Available upon request for process connections G ¼ A according to DIN 3852-E, ¼ " NPT, R ¼ according to ISO 7, and 7/16"-20 UNF.

## 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>Adjustment accuracy of zero signal</b>	≤ ± 0.5 % of the span
<b>Response time</b>	< 2 ms
<b>Long-term drift/one-year stability</b>	≤ ± 0.3 % of span (per year)
<b>Rated temperature range</b>	0 °C ... +80 °C
<b>Service life</b>	Minimum 10 Mio. load cycles
<b>Temperature error</b>	≤ ± 1.5 % of the span
<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

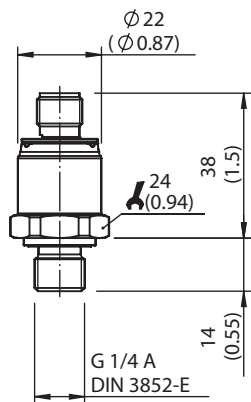
<b>ECLASS 5.0</b>	27200614
<b>ECLASS 5.1.4</b>	27200614
<b>ECLASS 6.0</b>	27200614
<b>ECLASS 6.2</b>	27200614
<b>ECLASS 7.0</b>	27200614
<b>ECLASS 8.0</b>	27200614
<b>ECLASS 8.1</b>	27200614
<b>ECLASS 9.0</b>	27200614
<b>ECLASS 10.0</b>	27200614
<b>ECLASS 11.0</b>	27200614
<b>ECLASS 12.0</b>	27200614
<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

### Certificates

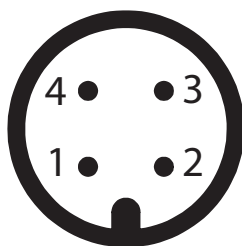
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>China RoHS</b>	✓

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



Dimensions in mm (inch)

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.
connectors and cables			
	<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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-100UB3XLEAX	2095768
	<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> </ul>	YG2A14-150UB3XLEAX	2095769

	Brief description	Type	part no.
	<ul style="list-style-type: none"> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> <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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</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, Untaminated zones</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, Untaminated zones</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, Untaminated zones</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, Untaminated zones</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, Untaminated zones</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, Untaminated zones</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, Untaminated zones</li> </ul>	YG2A14-050VB3XLEAX	2095897
	<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, Untaminated zones</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> </ul>	YG2A14-150VB3XLEAX	2096213

	Brief description	Type	part no.
	<ul style="list-style-type: none"> <li><b>Application:</b> Zones with chemicals, Untaminated zones</li> <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, Untaminated zones</li> </ul>	YG2A14-200VB3XLEAX	2096214
	<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> 0.6 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-C60UB3XLEAX	2145654
	<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> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-010UB3XLEAX	2145655
	<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> 3 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-030UB3XLEAX	2145656
	<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> 0.6 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-C60UB3XLEAX	2145657
	<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> 1 m, 4-wire, PUR, halogen-free</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-010UB3XLEAX	2145658
	<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> 0.6 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untaminated zones</li> </ul>	YG2A14-C60VB3XLEAX	2145709
	<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> 1 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untaminated zones</li> </ul>	YG2A14-010VB3XLEAX	2145710
	<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> 0.6 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untaminated zones</li> </ul>	YF2A14-C60VB3XLEAX	2145707
	<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> 1 m, 4-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Untaminated zones</li> </ul>	YF2A14-010VB3XLEAX	2145708

## 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)