Optical Clamp-on Sensor for Contactless Detection of Smallest Traces of Blood

PRODUCT BENEFITS

- Optical sensor with adapted wavelength
- Non-invasive measurement
- No wear and tear
- Highly resistant to ambient light
- Programming and test kit
- Software development according to IEC 62304:2006, class C

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BLOOD LEAK DETECTOR BLD | CONTACTLESS DETECTION OF SMALLEST TRACES OF BLOOD

The optical sensor BLD detects non-invasively smallest amounts of blood in dialysates on transparent tubes. As the wavelength is adapted to the transmittance of blood, the international standard IEC 60601-2-16:2008 for medical electrical devices is fulfilled reliably. Hence, the sensor is able to detect even 0.04 percent of blood in an isotonic saline solution.

TWO CONFIGURATIONS FOR MANIFOLD SPECIFICATIONS

The BLD01 meets high safety standards and features a serial interface. With simple commands, the sensor can be tested and the sensitivity adjusted.

Hence, the BLD02 has been developed strictly according to the software requirements of the international standard IEC 62304:2006, class C and meets highest demands on patient safety and reliability.

INTELLIGENT OPTICAL CLAMP-ON SENSOR

As a clamp-on component the non-invasive sensor with remote electronics is suitable for all tasks that require the optical detection of transmission differences of liquids in transparent tubes. Due to the high sensitivity of the sensor it is even possible to recognize if a tube filled with a clear fluid runs empty. Certified according to ISO 13485 we support you with the documentation necessary for the approval of medical devices on request.

Technical Data

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<tr>
<th>MEASUREMENT PRINCIPLE</th>
<th>Optical, in transmission</th>
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<tr>
<td>TUBING</td>
<td>Transparent plastic tubing</td>
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<tr>
<td>OUTER DIAMETER</td>
<td>5.5 to 7.0 mm</td>
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<td>POWER SUPPLY</td>
<td>+3.3 to +5.5 VDC ≤ 50 mA</td>
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<tr>
<td>OPERATING TEMPERATURE</td>
<td>5 to 50 °C</td>
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<tr>
<td>RESPONSE TIME</td>
<td>100 ms</td>
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<td>INTERFACES</td>
<td>BLD01: UART</td>
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<td>BLD02: Digital</td>
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<td>STANDARDS</td>
<td>Safety requirements: IEC 60601-2-16:2008</td>
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<td></td>
<td>EMC: IEC 60601-1-2:2007</td>
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<tr>
<td>SOFTWARE</td>
<td>BLD02: Development according to IEC 62304:2006, Safety class C</td>
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APPLICATIONS

Hemodialysis
Transmission measurement at tubes

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Do you have any questions?
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