OPTICAL SENSOR
BLOOD LEAK DETECTOR
NON-INVASIVE BLOOD LEAK DETECTION
SONOTEC
The blood leak detector BLD is a non-invasive optical sensor, developed to detect smallest amounts of blood in clear fluids on transparent plastic tubing. It was designed for medical devices such as dialysis machines.

As blood should not cross the blood/dialysate membrane, each dialysis machine needs a detector to monitor blood leaks. The optical sensor uses a light source with an optimum wavelength in order to provide the best sensitivity regarding the detection of the red blood cells. A threshold triggers an alarm if the amount of blood in the fluid exceeds the limits. The required sensitivity is defined by the international standard IEC 60602-2-16. Accordingly, the sensor detects 0.35 ml/min of blood at a hematocrit level of 0.32 at the maximum specified flow rate. Sophisticated algorithms in the sensor guarantee an excellent protection against ambient light. The sensor can be easily adjusted to similar applications by selecting a light source with a different wavelength. Modifications of the design or interfaces are available as customer-specific solutions.

**UNIQUE FEATURES**

- Highly resistant to ambient light
- IEC 60601-2-16 compliant
- Customized designs available
- Wavelength and sensitivity adjustable to different applications
- Easy parameterization and testing
- Made in Germany

**MEASURING PRINCIPLE**

Optical, in transmission

**TUBING**

Transparent plastic tubing

**OUTER DIAMETER**

5.5 to 7.0 mm

**POWER SUPPLY**

+3.3 to +5.5 VDC, ≤ 50 mA

**OPERATING TEMPERATURE**

5 to 50 °C

**RESPONSE TIME**

100 ms

**INTERFERENCE**

BLD01: UART
BLD02: Digital

**STANDARDS**


**SOFTWARE**

Development according to IEC 62304:2006, Safety class C

SONOTECH preserves the right to change technical specifications without further notice. (Rev. 3.1 / 2018-11-02)