

MiniCal® III

For reliable leakage monitoring in cooling circuits



The MiniCal III system was designed especially for detection of ammonia leakages in cooling circuits. Many years of experience lead to the development of this robust and practical system which can be used in water as well as in brine circuits.

By using ion selective resp. gas sensitive electrodes a reliable and early detection of leakages in cooling circuits is provided. Even at lowest Ammonium, resp. Ammonia concentrations safety precautions can be taken in time. The integrated controller provides a linear 4-20 mA output signal which can be connected to an evaluation unit or directly to a PLC.

The MiniCal III bypass fitting can be quickly and easily installed. A partial flow passes the fitting and is pumped back into the circuit. Because of the partial flow positioning of the fitting is more flexible. Depending the conditions at site the fitting is mounted under pipeline or at the wall. The shut-off valves allow service and maintenance during operation without down times of the cooling system.

The integrated HP-pump returns the measuring medium into the circuit and therefore avoids cooling media losses. The pump alarm not only warns of pump failure but also in case of insufficient adjustable sample flow caused by e.g. dirt. A permanent coolant exchange within the fitting is necessary for reliable detection of ammonia leakages.

- **Quick and reliable detection of leakages**
- **Simple operation and installation**
- **Increased safety by flow survey**

Technical Data

Elektrodes

Measuring Values / Detection ranges

NH₃ / 0...100 ppm
NH₄⁺ / 0...100 ppm

Measuring Amplifier

Power Supply

Controller: 24V DC
Pump: 230 V AC

Current Consumption

Controller: max. 55 mA
Pump: max 0.3A

Adjustments

2 keypads for all functions

Inputs / Outputs

4-20 mA – Output
indirect coupled
max. load 100 Ω

Housing

Stainless Steel

Fitting

Medium

Water or
Water / Brine mixtures e.g.
Ethylene, Tyfoxit, Hycool etc.

Pressure range

1.. 6 bar
optional 1.. 10 bar (special. Pump)

Temperature range

Cooling circuit:
-10...+50°C
optional: -40...+80°C (heating/
cooling spiral)

Measuring chamber:
> 0°C

Parts in contact with medium POM

Mounting

On horizontal tubing
DIN-flange DN50, PN16