

# MiniCal® III

For reliable detection of ammonia leakages in cooling circuits



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

# Reliable detection of ammonia 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 shutt-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



MiniCal® III bypass fitting

sample flow caused by e.g. dirt. A permanent coolant exchange within the fitting is necessary for reliable detection of ammonia leakages.

## MiniCal® III

### Elektrodes: Measuring values/ Detection ranges:

NH<sub>3</sub> 0 .. 100 ppm  
NH<sub>4</sub><sup>+</sup> 0 .. 100 ppm

### Power Supply:

Controller: 24 V DC  
Pump: 230 V AC

### Current Consumption:

Controller: max. 55 mA  
Pump: max. 0,3 A

### Adjustments:

2 keypads for all functions

### Inputs / Outputs:

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

### Housing:

Plastics

### Medium:

Water  
Water / Brine mixture e.g. Ethylene,  
Tyfoxit, Hycool etc.

### Pressure Range:

1 .. 6 bar

### Temperature Range

Cooling circuit:  
-10 .. +50°C

### Parts in contact with medium:

POM, PTFE, stainless steel

### Mounting:

On horizontal tubing  
DIN-flange DN50, PN16

# Technical Data



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