

# MiniCal III

## Ammonia detection in brine



### KEY FEATURES

- *Designed for monitoring of Ammonia in secondary cooling circuits*
- *Detection in Water, Brine mixtures, e.g. Ethylene, Tyfoxit, Hycool, etc*
- *Fast and reliable detection of Ammonia (NH<sub>3</sub>) and Ammonium (NH<sub>4</sub>)*
- *Easy installation and easy handling*
- *Two buttons for all operations*
- *Shut of valve for easy maintenance without influence the cooling system.*
- *Alarm for pump fault and low flow.*
- *Measures low concentration < 0,2ppm).*

### - Detection of Ammonia in water and brine.

#### General:

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.

#### Technical Data:

|                      |  |
|----------------------|--|
| Detection principle: | Ion selective  |
| Measuring range:     | 0,2-100ppm Ammonia<br>0,2-100ppm Ammonium            |
| Power supply:        | Pump 230V AC<br>Controller 24V DC                    |
| Power consumption:   | Max 55mA   |
| System pressure:     | Standard up to 6 bar (up to 10 bar as option).       |
| Temperatures:        | In circuit -30 - +80°C<br>In measuring chamber >-5°C |
| Output:              | 2 x 4..20mA linear                                   |
| Material:            | Stainless steel                                      |
| Dimensions:          | 360 x 410 x 340 mm                                   |
| Weight:              | ~ 10 kg  |

# Product summary

| Order code | Model          | Description  |             |  |
|------------|----------------|--|-------------|--|
|            | <b>MiniCal</b> | Output, 2 x 4..20mA.<br>Measuring range NH <sub>3</sub> 0,2 - 100ppm, (NH <sub>4</sub> 0,2 - 100ppm)<br>Power supply: Controller 24V DC, Pump 230V AC.<br>Pressure range 1.. 6 bars. (option up to 10 bar)<br>Temperature range (in circuit) -30 - +80°C.<br>Stainless steel<br>IP65 |             |  |
|            |                | MiniCal II   | Open system |  |
| 35-180     | MiniCal III    | Pressurised system   |             |  |
|            |                |  |             |  |
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