

Inline Concentration Control μ -ICC 2.45 compact

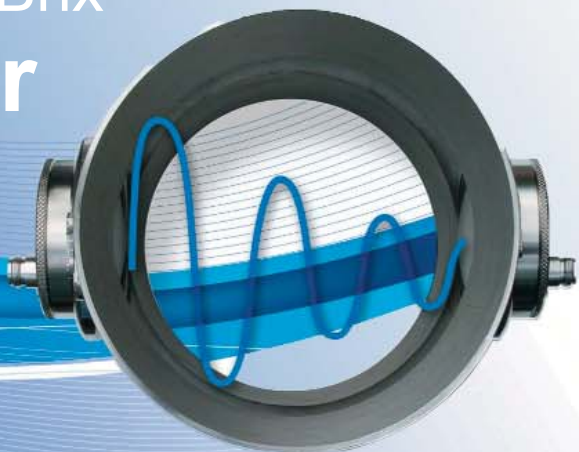
proMtec
highly concentrated know how



Microwave

Concentration Density
Dry Substance Content Brix

Transmitter





See the new possibilities. Gaze into the heart of your processes!

Microwaves allow you to look right through the entire cross-section of a pipe and obtain representative measurements.



Inline Concentration Control μ-ICC 2.45 compact



The μ-ICC 2.45 compact is currently the only compact device of its kind for determining density and is supplied by proMtec.

Inline concentration control calculates the concentration, the density, proportion of dry matter or the water content of aqueous products directly in the process itself.

The product can be present as a liquid, paste or suspension.

The instrument is attached directly where the measurement is taken so it is a perfect complete solution for individual measurement locations.

Despite its compact design, all the electronic hardware components are contained within the casing. This allows proMtec to provide you with an individually customised and extremely low cost solution.

Moreover, proMtec offers a wide range of sensor specifications and can therefore find the best solution for your specific needs.



Microwave transmission measurement has many advantages:



- measurements are contact-free and the instrument requires no maintenance
- it is suitable both for use with pipes and directly in containers
- the readings are representative because it evaluates the cross-section of the product flow
- precision is comparable with laboratory analysis
- independently of dirt or deposits

Know How from an enormous range of applications ...

- Sugar industry:
beet sugar, cane sugar, refined sugar, syrup, thin to thick juice, milk of lime
- Food processing industry:
dairy products, fruit juices, tomatoes, olive oil, wine, coffee, vinasse, breweries
- paper industry
- aerated concrete
- chemical and pharmaceutical industries
- biogas and sewage treatment plants

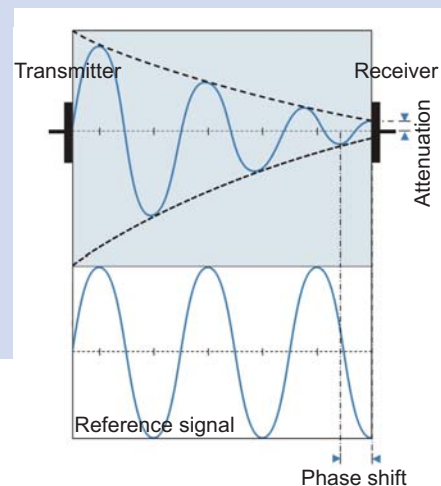


The measurement principle

Microwave concentration measurement is based on the principle that microwaves are absorbed by free water molecules.

The measurement signal therefore experiences a phase shift in comparison to a reference signal and a damping of the amplitude, i.e. the measurement correlates with the water content of the medium.

From this information it is calculated a value for the water content, density or total dry matter.



Data sheet

Housing	Aluminium wall housing, protection IP65, Dimension 160 x 160 x 120 mm, 3,1 kg
Mounting	4 holding flaps H x B = 120 x 180 mm for ø 6 mm
Power supply	24V DC, max. 1000 mA
Display	3.9"-Monochrome QVGA-LC, 320 x 240 pixel, illuminated. Large display of the measurement result and drag pointer with analogue bar graph displays of deviation of the measurement in its defined scale
Microwave	Extremely stabile phase, attenuation and level measurement with PLL-synthesizer, 2.45GHz, transmission performance 10 mW, 10 dBm
Microwave cable	2 x N-plugs for coaxial cable 50 ohms, typical 1 to 2 m (max. 3 m)
Handling	Foil keyboard with 4 soft keys, well-structured multilingual
Status display	LEDs for status of the measurement and access-PIN for parameter
Output	4 – 20 mA isolated output for concentration, load max. 500 ohms
Data interface	USB 2.0 interface for software update, data output and calibration via pc [PROFIBUS PA / ETHERNET/ IP / RS-232/-485 / CANopen - on request]
Data memory	SD-/ SD-HC-Card Slot for writing/ reading measuring datas & storage set of parameters
Environment temperature	0 to 50°C
Temperature compensation	Pt 100 with four-wire-system, M12 plug-in
Sample push-button	for memorizing measured data, M12 plug-in



The **µ-ICC 2.45 standard** is also available as an alternative to this concept and this consists of 3 components. It permits a high degree of flexibility and allows the user to take up to four measurements with one controller (detailed information on request).