

ACCESSORIES

THERMOMETER (BG) • DATA-SHEET



Suitable for: RITTER Bellows-type Gas Meters

Measuring Range: 0 °C to + 60 °C

Scale graduation: 1 °C

Application

The Thermometer can be used for measurement of the gas temperature while measuring the gas flow. **Among other reasons, this is necessary if the measured and indicated actual volume of gas must be recalculated into the norm volume.** The actual volume is the volume at the actual temperature and the actual pressure. The norm volume of a gas is the volume at norm conditions which are (in Germany).



The norm volume of a gas is the volume at norm conditions which are (in Germany):

Norm Temperatur	= 273,15 Kelvin (= 0 °C)
Norm Druck	= 1.013,25 mbar

The formula for converting the actual volume into norm volume is:

$$V_N = V_i \times \frac{P_a}{P_N} \times \frac{T_N}{T_i}$$

V_N	=	Norm Volume in	[ltr]
V_i	=	Indicated Volume in	[ltr]
p_N	=	Norm Pressure in	[mbar-absolut]
p_a	=	Actual Pressure in	[mbar-absolut]
T_N	=	Norm Temperatur in	[Kelvin]
T_i	=	Indicated Temperatur in	[Kelvin]

Installation

Unpack the Thermometer which is mounted into a T-piece. According to the rules for calibration and measurement with gas meters, the Thermometer must be positioned at the gas outlet of the meter. The gas outlet nozzle is labelled accordingly.

Mount the Thermometer onto the gas outlet nozzle by tightly screwing the union nut which is attached to the Thermometer. The Thermometer is now ready for use.

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The most recent version of this data-sheet can be found at <https://www.ritter.de/en/data-sheets/thermometer-bg/>

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