

Fast Thermal Conductivity Analyzer FTC300



- Accurate and long term stable thermal conductivity measurement
- High sensitivity e.g. 0-0.5Vol.% H₂ in N₂ range; Low noise <10ppm H₂ in N₂
- Precise linearization for the gas mixtures as H₂, He, CO₂, CH₄ in N₂ or Ar and N₂ in Ar on board
- Customized linearization with polynomial up to sixth order
- Multi Gas Mode allows sequential indication of up to 15 binary mixtures
- Isolated 4-20mA output, expandable; free set of start and end within 100 Vol.% range
- Classic 2-point calibration or simple one-gas calibration
- Free set of display indication (ppm or Vol.%) at a resolution up to 1ppm
- Cross sensitivity compensation by feed in of external signal and internal calculation
- Fast response with a T90-time of less than 1 sec (depending on flow rate)
- Pressure proof (20bar) and vacuum leak tight stainless steel (LF316i) gas duct
- Three isolated relays for indication of alarms and instrument status
- RS 232 excess to all values and parameters
- Digital output with 1ppm resolution over the whole 100Vol.% range

- PC-based service program simplifies all settings, linearization and calibration
- Small and robust transmitter in Al-housing for field use (protection class: IP65)
- Dimensions: Width 145mm, Height 80mm (without connectors), Depth 85mm
- Power supply 18V to 36V DC / 700mA

Measuring Ranges:

Measuring Gas	Carrier Gas	Basic range	Smallest range	Smallest suppressed zero range	Multi Gas Mode
H ₂	N ₂ or air	0% - 100%	0% - 0.5%	98% - 100%	Yes
H ₂	Ar	0% - 100%	0% - 0.4%	99% - 100%	Yes
H ₂	He	20% - 100%	20% - 40%	85% - 100%	On request
H ₂	CH ₄	0% - 100%	0% - 0.5%	98% - 100%	On request
H ₂	CO ₂	0% - 100%	0% - 0.5%	98% - 100%	On request
He	N ₂ or air	0% - 100%	0% - 0.8%	97% - 100%	Yes
He	Ar	0% - 100%	0% - 0.5%	98% - 100%	Yes
CO ₂	N ₂ or air	0% - 100%	0% - 3%	96% - 100%	Yes
CO ₂	Ar	0% - 60%	0% - 10%	-	Yes
Ar	N ₂ or air	0% - 100%	0% - 3%	96% - 100%	Yes
Ar	O ₂	0% - 100%	0% - 3%	96% - 100%	Yes
Ar	CO ₂	40% - 100%	-	80% - 100%	Yes
CH ₄	N ₂ or air	0% - 100%	0% - 2%	96% - 100%	Yes
CH ₄	Ar	0% - 100%	0% - 1.5%	97% - 100%	Yes
O ₂	N ₂	0% - 100%	0% - 15%	85% - 100%	Yes
O ₂	Ar	0% - 100%	0% - 2%	97% - 100%	Yes
N ₂	H ₂	0% - 100%	0% - 2%	99,5% - 100%	Yes
N ₂	Ar	0% - 100%	0% - 3%	97% - 100%	Yes
N ₂	CO ₂	0% - 100%	0% - 4%	96% - 100%	On request
NH ₃	H ₂	0% - 100%	0% - 5%	95% - 100%	On request
NH ₃	N ₂	0% - 100%	0% - 10%	60% - 100%	On request
CO	H ₂	0% - 100%	0% - 2%	99% - 100%	On request
SF ₆	N ₂ or air	0% - 100%	0% - 2%	96% - 100%	On request

Other gases and ranges on request; Multi Gas Mode "Yes" means that these binary mixtures and in addition one customized gas mixture may be measured sequentially with one instrument

Specification:

Dimensions without connectors; weight	145mm x 80mm x 85mm; max. 1800g
Power supply	24V DC (18V to 36V), 700mA
Ambient temperature range	-5°C to 50°C, other on request
Linearity	< 1% of range
Warm up time	About 30min; 1h for small ranges
Flow rate	40l/h to 150l/h; 60l/h -80l/h recommended
T90-time	< 1sec at flow rate higher 60l/h
Noise	< 1% of smallest range
Drift at zero point	< 2% of smallest range per week
Repeatability	< 1% of range
Error due to change of ambient temperature	< 1% of smallest range per 10°C
Error due to change of flow at 80l/h	< 1% of smallest range per 10l/h
Gas pressure	Max. 2MPa (20bar)
Error due to change of pressure (above 800hPa abs.)	< 1% of smallest range per 10hPa

Important Notice: The specifications are given for guidance; they might differ for some gas mixture.