

CONTHOS 3E

THERMAL CONDUCTIVITY PROCESS GAS ANALYZER



ISATEC CONTHOS 3E thermal conductivity gas analyzer is an analytical instrument developed for on-line monitoring in process industry applications.

The special outstanding technical features of CONTHOS microprocessor-controlled gas analyzer are:

- ✓ High temperature version of thermal conductivity detector - thermostat controlled temperature from 50°C to max. 180°C
- ✓ High corrosion resistance in the entire sample gas path
- ✓ Low detection limit in the lower ppm range
- ✓ Response highly independent of the gas flow
- ✓ Extraordinarily high long-term stability
- ✓ Intuitive user-interface based on NAMUR recommendations
- ✓ Automatic self-diagnosis

KEY FEATURES:

- Extremely long-term stable analysis of H₂ and noble gases in binary and quasi-binary gas mixtures with lowest and extremely suppressed ranges: 99.5 -100%
- Ultra-fast response time T₉₀ ≤ 3 sec
- Highly corrosion resistant with Al₂O₃, glass and quartz for process gases with Cl₂, HCl, H₂O
- High temperature analyzer up to 180°C for high dew points and possible salification

www.isatec.it



Ingegneria



Service Automation



TECnologie

CONTHOS 3E THERMAL CONDUCTIVITY PROCESS ANALYZER

ENCLOSURE & ELECTRICAL DATA		MATERIALS IN CONTACT WITH SAMPLE GAS	
Dimensions (H x W x D)	19" rack (3U) 133 x 483 x 427 mm	TC-Detector	Al ₂ O ₃ -ceramic and sapphire, glass and SiO _x -coated Pt-measuring filaments high corrosion- and temperature-resistance
Protection class	IP40	Internal gas lines	standard: PTFE optional: stainless steel tubing
Weight	approx. 10 kg	Sample-gas connectors	Standard: stainless steel Optional: Swagelok® connectors for ϕ¼" tubing
Power requirements	100-240 VAC		

MEASURING CHARACTERISTICS	
Measuring principle	Thermal conductivity (TCD)
Measuring ranges	Up to 3 linearized, independently configurable, switchable ranges. Range switching is accomplished manually, automatically and/or remotely via optional digital inputs. - lowest range: 0 - 0.5% H ₂ in N ₂ or 99.5-100% H ₂ in N ₂ (or equivalent Δλ) - largest range: 0 - 100% H ₂
Response time T90	≤ 3 sec
Detection limit	≤0.5% of span
Linearity/ Accuracy	≤0.5% of span
Reproducibility	≤0.5% of span
Ambient temperature in operation	+5 to +45°C

DATA DISPLAY, INPUTS AND OUTPUTS	
User Interface	<ul style="list-style-type: none"> • LC-display (40 characters x 16 lines) + bar graph • Language: switchable between English & German
Analog signal output	0 - 20 mA, 4 - 20 mA
Digital outputs	Instrument status via floating contacts (28V max.; 350mA max.)
Interference correction	3 correction channels for static and/or dynamic interference correction
RS-485 (optional)	with Modbus communications protocol; galvanically isolated interface