



XMTCpro

新一代热导二元气体分析仪

Panametrics的XMTCpro是一款紧凑、坚固的分析仪, 设计为SIL 2认证, 用于连续测量二元气态混合物中的气体浓度, 包括氢气、二氧化碳、甲烷、氦气等其它气体。

关键特点

XMTCPpro具有集成显示器和直观的用户界面。XMTCPpro还结合了计算机强大的信号测量,以实现最快的响应、实时错误检测和MODBUS数字通信。

XMTCPpro为用户带来:

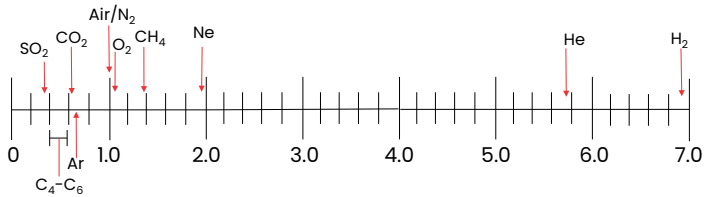
- 超稳定导热传感器
- 系统集成的紧凑设计
- 直观的操作界面,学习曲线短,使用方便灵活
- 高对比度、易于阅读的多参数显示器
- MODBUS数字通信提供测量和配置数据
- 设计具有SIL 2的高可靠性

最低限度的校准和服务需求

XMTCPpro是当今市场上最稳定的热导分析仪。坚固耐用的XMTCPpro测量单元可抵抗污染,对流量变化不敏感。

由于该设计没有使用移动部件,变送器可以轻松承受许多工业应用中的冲击、振动和恶劣环境。

如果变送器需要维护,其模块化结构允许快速轻松地进行维修。用户可以快速进行现场校准,并在几分钟内用预先校准好的备件更换插入式测量单元。



气体	热导系数	化学式	气体	热导系数	化学式
乙炔	0.90	C_2H_2	氮	5.53	He
空气	1.00	N_2/O_2	正庚烷	0.58	C_7H_{16}
氩	0.67	Ar	正己烷	0.66	C_6H_{14}
正丁烷	0.74	C_4H_{10}	氢	6.80	H_2
二氧化碳	0.70	CO_2	甲烷	1.45	CH_4
氯	0.34	Cl_2	氯甲烷	0.53	CH_3Cl
乙二醇	0.64	$C_2H_5OH_4$	氖	1.84	Ne
乙烯	0.98	C_2H_4	正戊烷	0.70	C_5H_{12}
环氧乙烷	0.62	C_2H_4O	二氧化硫	0.38	SO_2
氟利昂-11	0.37	CCl_3F	水蒸气	0.77	H_2O

取样系统

取样系统在最佳温度、压力和流速下向XMTCPpro输送干净、有代表性的样品。

Panametrics为各种应用提供取样系统。如需协助设计您的自己的取样系统,请咨询我们的应用工程团队。



应用

稳定准确的热导率传感器经过全球认证,可用于危险区域环境,使XMTCPpro成为以下领域的首选工具:

氢经济

- H_2 在氢价值链上的各种应用

金属工业

- 金属热处理炉中 N_2 气氛中的 H_2

电力工业

- H_2 在氢冷发电机组上的应用

石油

- H_2 在碳氢组分上的应用

化工

- NH_3 和 CH_3OH 合成气中的 H_2
- 氯气厂中的 H_2

甲烷工业

- 甲烷中二氧化碳

垃圾填埋场/沼气行业

- 沼气中的二氧化碳
- 沼气中的 CH_4

气体生产工业

- Ar、 H_2 、N和He纯度监测

食品工业

- 发酵过程中二氧化碳

技术规格



性能

精度	±2% of span*
线性	±1% of span
重复性	±0.5% of span
零点稳定性	±0.5% of span per week (±1% for 0-1% range)
量程稳定性	±0.5% of span per week (±1% for 0-1% range)
响应时间T90	<20 seconds
量程	0% to 1% 0% to 2% 0% to 5% 0% to 10% 0% to 25% 0% to 50% 0% to 100% 50% to 100% 80% to 100% 90% to 100% 95% to 100% 98% to 100%
测量气体 (典型)	H ₂ in N ₂ , air, O ₂ or CO ₂ He in N ₂ or air CO ₂ in N ₂ or air SO ₂ in air Ar in N ₂ or air H ₂ /CO ₂ /air 氢冷发电机组应用
所需流量	50 to 2,000 cc/min (0.1 to 4.0 SCFH); 250 cc/min (0.5 SCFH) nominal

功能

安全功能	IEC61508 SIL 2 (可选)
模拟输出	Two 4 to 20 mA isolated, 550 Ω maximum load, 可现场设定
数字输出	Modbus RS232/RS485
Relays/Alarms	4 Measurement / Alarm Relays 2 Solenoid valve relays
电源	24 VDC ±4 VDC, 1.2 A maximum
温度	环境操作温度 (2个选项) - 选项 1: -20°C to +50°C (-4°F to +122°F) - 选项 2: -5°C to +65°C (+23°F to +149°F) - 储存温度: -20°C to +65°C (-4°F to +149°F)

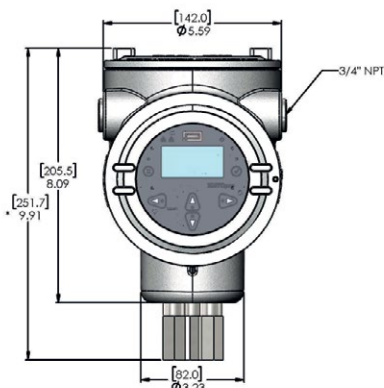
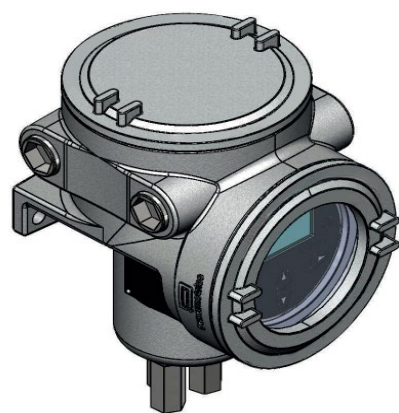
物理特性

传感器接液部件材料	- 标准: 316不锈钢, glass and Viton® O-rings - 可选: Hastelloy C276 and Chemraz® O-rings
外形尺寸	- Wp. (H x D x W): 228 x 178 x 142mm (9 x 7 x 6in) - Ex-proof (H x D x W): 252 x 178 x 142mm (10 x 7 x 6in)
重量	- 铝制外壳: 4.5kg / 9.9 lb - 不锈钢外壳: 11.0 kg / 24.2 lb
连接	3/4 in NPT (电气) 1/4 in NPTF (样气进出口)
防护等级	IP66, Type 4X
IECEx 认证	Ex db IIC T6 Gb, Ex tb IIIC T78°C Db, -20°C < Tamb < +65°C
European Union 认证	- EMC Directive 2014/30/EU - ATEX 2014/34/EU: II 2 GD Ex db IIC T6 Gb, Ex tb IIIC T78°C Db, -20°C < Tamb < +65°C
NEC/CEC 认证	- CI I, II, III Div 1. Groups ABCDEFG, T6 - CI I, Zn I AEx/Ex db IIC T6 Gb - CI II, Zn 2I AEx/Ex tb IIIC T78°C Db - CI I, II, III Div 2, Groups ABCDEFG, T6/T5** -20°C < Tamb < +65°C

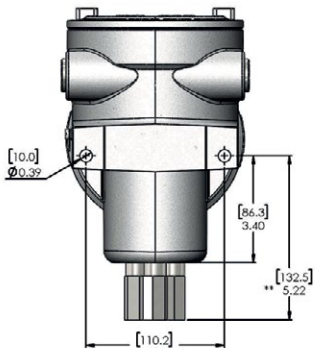
* Accuracy may vary and depends on the gases and concentration ranges measured.

** T5 applies for higher max ambient temperatures (from +55°C to +65°C) for Division 2 (US/Canada).

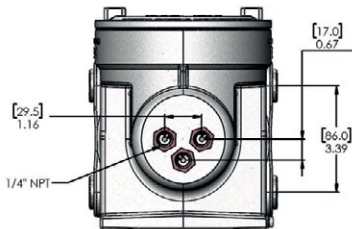
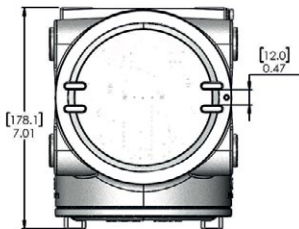
铝制外壳



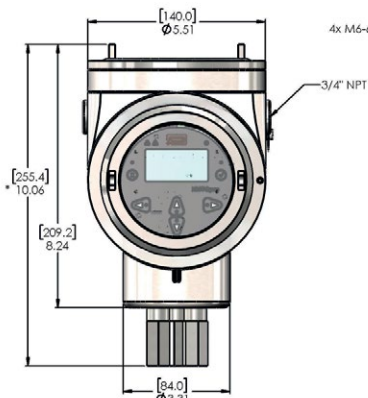
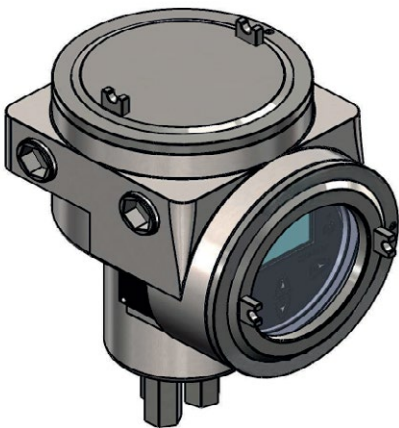
*8.96 [227.6] WEATHERPROOF VERSION



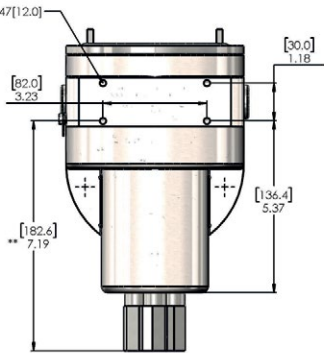
**4.27 [108.5] WEATHERPROOF VERSION



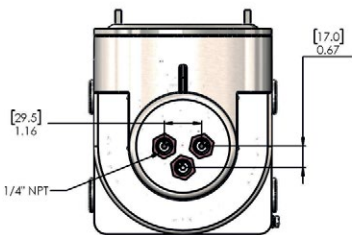
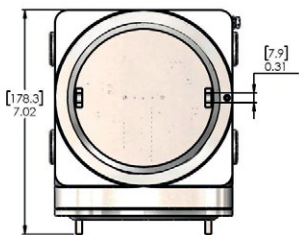
不锈钢外壳



*9.11 [231.4] WEATHERPROOF VERSION



**6.24 [158.5] WEATHERPROOF VERSION



订货和标定选型信息

Installation Site Requirements	Model	
	XMTCpro	XMTCpro, Thermal Conductivity Analyzer
		Enclosure Package
		1 Aluminium enclosure, weatherproof, with display
		2 Aluminium enclosure, explosion proof, with display
		3 Stainless steel enclosure, weatherproof, with display
		4 Stainless steel enclosure, explosion proof, with display
		5 Aluminium enclosure, weatherproof, no display
		6 Aluminium enclosure, explosion proof, no display
		7 Stainless steel enclosure, weatherproof, no display
		8 Stainless steel enclosure, explosion proof, no display
		9 Without enclosure
Analytical Performance, Software, and Specials		Wetted Material
		1 316 Stainless Steel, Viton O-Rings, PTFE
		2 Hastelloy, Chemraz O-Rings,PTFE
		3 316 Stainless Steel, Chemraz O-Rings, PTFE
		4 316 Stainless Steel, Viton O-Rings, CPVC
		5 Hastelloy, Chemraz O-Rings,CPVC
		6 316 Stainless Steel, Chemraz O-Rings, CPVC
		Certification
		1 Safe Area/General Purpose Area
		2 USA/CAN Div 1, Zone 1/21
		3 USA/CAN Div 2, Zone 2/22
		4 ATEX/IECEX
		Cell Temperature Set Point
		0 Standard Operating Temperature
		1 High Operating Temperature
		Concentration Range
		1 0 to 1%
		2 0 to 2%
		3 0 to 5%
		4 0 to 10%
		5 0 to 25%
		6 0 to 50%
		7 0 to 100%
		8 50 to 100%
		9 80 to 100%
		10 90 to 100%
		11 95 to 100%
		12 98 to 100%
		S OTHER
		Calibration Gas
		1 H ₂ /N ₂
		2 He/N ₂
		3 He/Air
		4 CO ₂ /Air
		5 CO ₂ /N ₂
		6 CH ₄ /CO ₂
		7 CO ₂ /CH ₄
		8 H ₂ /CO ₂ /Air
		9 H ₂ /O ₂
		10 O ₂ /H ₂
		S OTHER
		Software
		0 Standard
		1 Hydrogen Cooled Generator
		Safety Level
		SIL SIL2 By Design
		STN Standard Industry Model
		Special
		0 No Special
		S Special*
	XMTCpro	2 1 4 0 7 9 0 SIL 0

*Choose between RS232 and RS485 for the no display model or another option not listed above.

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