

## Explosion protection

Marking	<p>NEC 505: Class I, Zone 1, AEx d e ib px IIB resp. IIB+H2 T3 resp. T4</p> <p>Canada: CEC Sec. 18 Class I, Zone 1, Ex d e ib pxb IIB resp. IIB+H2 T4</p> <p>ATEX: II 2G Ex IIC T4 Gb</p> <p>IECEX: Ex IIC T4 Gb</p> <p>EAC TR CU: II Gb T4 X</p>
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## Technical data

Technology	continuous measurement using catalytic combustion
Method	correlates with: ASTM D56, ASTM D93, DIN EN ISO 2719, DIN EN ISO 13736, IP 34, IP 170, DIN 51755
Measuring range	25 to 180 °C (77 to 356 °F)
Repeatability	≤ DIN EN/ASTM e.g. kerosene typ. 0.1 °C (approx. 0.2 °F)
Reproducibility	≤ DIN EN/ASTM
Measuring cycle	continuous
Product streams	2 x sample, 1 x validation (additional hardware required)
<b>– Electrical data</b>	
Nominal voltage	230 V AC ± 10 %, 1 phase; 50 Hz; other ratings on request
Maximum power consumption	approx. 500 W
<b>– Protection class</b>	
IP 54 (comparable with NEMA 13)	
<b>– Ambient conditions</b>	
Ambient temperature	operation 5 to 40 °C (41 to 104 °F) storage 0 to 60 °C (32 to 140 °F)
Ambient humidity	operation 5 to 80 % relative humidity, non-corrosive storage 5 to 85 % relative humidity, non-corrosive
<b>Sample</b>	
Quality	filtered 50 µm, free of suspended water, bubble-free, sulfur < 2000 ppm, free of heavy metals, free of phosphate (≤ 37 cSt at inlet temperature)
Consumption	approx. 2 to 3 l/h (at sample inlet)
Pressure at inlet	2 to 5 bar (29 to 72.5 psi)
Temperature at inlet	min. 15 K below expected FP temperature max. 80 °C, temperature change maximum 1K/min, For cooling with product: max +40 °C For using an inductive ring-type initiator ("min. contact") on the flow meter: max. +60 °C
<b>Utilities</b>	
<b>– Instrument air Consumption</b>	
Purge	8 Nm <sup>3</sup> /h while purging (~12 min)
Operation	approx. 1 Nm <sup>3</sup> /h
Pressure at inlet	2 to 7 bar (29 to 101.5 psi)
Quality	humidity class 2 or better acc. to ISO 8573.

<b>– Coolant</b>	depends on flash point temperature
Consumption	sample as coolant: 30 to 60 l/h or plant cooling water: 10 to 40 l/h
Temperature	5 to 40 °C (41 to 104 °F)
Pressure at inlet	2 to 5 bar (14.5 to 72.5 psi)
Quality	filtered 50 µm
<b>Signal outputs and inputs</b>	
Analog outputs	flash point temperature (others on request)
Digital outputs	Alarm, Ready/Valid
Digital inputs	Stream Selection, Validation Request, Reset
<b>Electrical data of signal outputs and inputs</b>	
Analog outputs	max. 8 (4 to 20 mA; 1000 Ω) active isolated on request
Analog inputs	4 to 20 mA; 160 Ω
Digital outputs	24 V DC; max. 0.5 A
Digital inputs	high: 15 to 28 V DC/low: 0 to 4 V DC
Auxiliary power supply output	24 V DC; max. 0.8 A
<b>Control unit</b>	
Central control unit	Industrial PC
Operating system	Windows Embedded Standard 7®
Control software	PACS
<b>User interfaces</b>	
Display	TFT display with touch function 1024 x 768 pixel
Keyboard	virtual keyboard, controlled via TFT display with touch function
<b>Connections</b>	
Tube fittings	Swagelok® 6 mm/12 mm/18 mm other fittings on request
Vent/Drain	open to atmosphere
<b>Weight and dimensions</b>	
Weight	approx. 200 kg
Dimensions (W x H x D)	approx. 1140 x 2000 x 710 mm
Space requirements	right: 200 mm/left: 200 mm
<b>Optional interfaces</b>	
Analog outputs	on request
MODBUS interface	MODBUS/RTU via RS485 or RS422 or FOC is, MODBUS/TCP via FOC is
Remote access	via Ethernet (VDSL or FOC is)