

Explosion protection

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| Marking | ATEX: II 2 G Ex h IIC T3 resp. T4 Gb IECEX: Ex IIC T4 Gb NEC 500: Class I, Div. 2, Groups B, C, D T3 resp. T4 NEC 505: Class I, Zone 1, AEx db eb ib mb pxb * IIC T3 resp. T4 CEC Sec. 18: Ex db eb ib * pxb * IIC T3 resp. T4 TR CU: II Gb T4 X |
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Technical data

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| Technology | batch distillation |
| Method | SAM compliant with: ASTM D86, DIN EN ISO 3405, IP 123 Correlates with: ASTM D4814 (calculation of TV/L) ASTM D4737 (Calculated Cetane Index) RAM correlates with: ASTM D86, DIN EN ISO 3405, IP 123 |
| Measuring range | 20 to 420 °C (68 to 788 °F) output of any temperature/distillate amount via Modbus |
| Repeatability | ≤ DIN EN/ASTM e.g. gasoline typ. T@ 50% rec. 1 °C |
| Reproducibility | ≤ DIN EN/ASTM |
| Measuring cycle | typical time for gasoline/diesel in SAM (in min) IBP: approx. 24/29 50 % recovered: approx. 36/41 FBP: approx. 45/50 cycle time will be reduced by approx. 40 % in RAM |
| Product streams | up to 3 x sample, 1 validation sample each (additional hardware required) |
| – Electrical data | |
| Nominal voltage | 230 V AC ± 10 %, 1 phase; 50 Hz; other ratings on request |
| Maximum power consumption | approx. 600 W |
| – Protection class | IP 54 (comparable with NEMA 13) |
| – Ambient conditions | |
| 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 |
| Sample | |
| Quality | filtered 50 µm, bubble-free (≤ 37 cSt at inlet temperature) |
| Consumption | approx. 10 to 40 l/h (≥ 10 cSt: max. 15 l/h) |
| Pressure at inlet | 1.5 to 2 bar (21.8 to 29 psi) |
| Temperature at inlet | depends on application, max. 55 °C (131 °F) |
| Utilities | |
| – Instrument air Consumption | During operation: approx. 1 Nm³/h while purging: 8 Nm³/h (~12 min) |
| Pressure at inlet | 2 to 7 bar (29 to 101.5 psi) |
| Quality | humidity class 2 or better acc. to ISO 8573.1 |

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| – Nitroge Consumption | During operation: max. 0.001 Nm³/h |
| Pressure at inlet | 3.5 to 10 bar (51 to 145 psi) |
| Quality | Purity >= 98%, class 2 or better acc. to ISO 8573-1 |
| – Coolant | max. 60 l/h |
| Temperature | -10 to 55 °C (14 to 131 °F) |
| Pressure at inlet | 2 to 7 bar (29 to 101.5 psi) |
| Quality | filtered 50 µm, pH 6 to 8 |
| Signal outputs and inputs | |
| Analog outputs | temperature at specific distillation batch |
| Digital outputs | Alarm, Ready/Valid |
| Digital inputs | Stream Selection, Validation Request, Reset |
| Electrical data of signal outputs and inputs | |
| 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 |
| Control unit | |
| Central control unit | Industrial PC |
| Operating system | Windows 10 Enterprise LTSC |
| Control software | PACS |
| User interfaces | |
| Display | TFT display with touch function 1366 x 768 pixel |
| Keyboard | virtual keyboard, controlled via TFT display with touch function |
| Connections | |
| Tube fittings | Swagelok® 6 mm/12 mm/18 mm other fittings on request |
| Vent/Drain | open to atmosphere backpressure on request |
| Weight and dimensions | |
| Weight | approx. 250 kg |
| Dimensions (W x H x D) | approx. 1140 x 1900 x 710 mm |
| Space requirements | right: 150 mm/left: 100 mm |
| Optional interfaces | |
| Analog outputs | on request |
| Analog inputs | density |
| MODBUS interface | MODBUS/RTU via RS485 or RS422 or FOC is, MODBUS/TCP via FOC is |
| Remote access | via Ethernet (VDSL or FOC is) |