Explosion protection

Marking	**ATEX:** II 2G Ex h IIC T4 Gb X **IECEx:** on request **NEC 500:** Class I, Division 2, Group B,C and D **NEC 505:** Class I, Zone 1, AEx db eb ib pxb IIC T3 resp. T4 **CEC Sec. 18:** Ex db eb ib pxb IIC T3 resp. T4 **TR CU:** 1Ex db e ib [ia Ga] mb pxb IIC T4 Gb X

Technical data

Technology	continuously analyzing kinematic viscosity, capillary-type
Method	compliant with: ASTM D445, DIN EN ISO 3104, IP 71
Measuring range and temperatures	0.7 to 1000 cSt 7.5 to 100 °C (temperature stability better than ± 0,02 °C)
Repeatability	≤ DIN EN/ASTM formulated oils typ. 0.03 cSt at 100 °C (212 °F)
Reproducibility	≤ DIN EN/ASTM
Measuring cycle	continuous
Product streams	2 x sample, 1 x validation (additional hardware required)
– Electrical data	
Nominal voltage	230 V AC ± 10 %, 1 phase; 50 Hz; other ratings on request
Maximum power consumption	approx. 500 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 10 µm or 50 µm (depending on the viscosity measuring range), bubble-free max. viscosity = end of measuring range (technical clarification required) (sample as coolant ≤ 10 cSt)
Consumption	3.8 to 10 l/h (depends on variant)
Pressure at inlet	3 to 14 bar (43.5 to 203 psi)
Temperature at inlet	for L + M Versions: T_M *-35 K<T_{INLET}**< T_M *+5 K for H Versions: T_M *-40 K<T_{INLET}**< T_M *-5 K depends on application
Utilities	
– Instrument air Consumption	
Purge	8 Nm³/h while purging (~12 min)
Operation	approx. 1 Nm³/h
Pressure at inlet	3 to 7 bar (43.5 to 101.5 psi)
Quality	humidity class 2 or better acc. to ISO 8573.1
– Coolant	
Consumption	sample as coolant: 20 to 40 l/h or plant cooling water: 20 to 40 l/h for re-cooling of peltier device
Temperature	5 to 50 °C (41 to 122 °F)
Pressure at inlet	2 to 7 bar (29 to 101.5 psi)
Quality	filtered 50 µm
Signal outputs and inputs	
Analog outputs	kinematic viscosity (others on request)
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 input	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 LTSB
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. 1190 x 1930 x 710 mm
Space requirements	right: 150 mm/left: 100 mm
Optional interfaces	
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)

Technical data subject to change without notice. – *T_M = Measuring Temperature / ** T_{INLET}= Sample Inlet Temperature