

CONTAMINATION MONITORS

HY Series

HY-TRAX® – Manually Controlled Fluid Sampling System



Features and Benefits

- Provides local visibility to the fluid condition of critical systems.
- Integrated micro VSD, (Variable Speed Drive), pump/motor provides optimal flow for accurate sensor readings in variable conditions.
- The HY-TRAX® Manually Controlled Fluid Sampling System allows a user to retrieve ISO cleanliness levels from a reservoir tank or a low-pressure line (<50 psi max).
- The compact design allows for installations with tight space constraints.
- The manual rheostat VSD pump controller is housed in a compact IP 40 enclosure and allows the user to adjust the pump flow for optimal sensor readings.
- Optional AC adapter available for converting 115V AC / 60 Hz to 24V DC.
- Rugged design for field use.
- Fluorocarbon elastomer (FKM) seals.
- Fluid viscosities up to 1622 SUS (350 cSt).
- Flow control valve providing optimal pressure for accurate sensor readings.

Applications

- Mobile Equipment Technology
- Surface Mining
- Construction
- Monitoring of Oil Cleanliness in Storage Tanks
- Fleet Services
- Rail

Technical Specifications

Measuring Range	Display ISO ranges between 9/8/7 and 25/24/23 Calibration within the range ISO 13/11/10 to 23/21/18	
Contamination Output Code	Standard: ISO 4406:1999 or SAE AS 4059(D) Optional: ISO 4406:1987; NAS 1638 and ISO 4406:1999	
Self-Diagnosis	Continuously with error indication via status LED	
Pressure Rating	50 psi (3.4 bar) max	
Fluid Inlet/Outlet	SAE ORB, Size 4	
Seal Material	Fluorocarbon elastomer (FKM)	
Pump Speed	500-5000 RPM (<i>adjustable</i>)	
Optimal Sampling Pump Flow Rate	0.008-0.079 GPM (30-300 mL/min)	
Fluid Temp. Range	32°F to 185°F (0°C to +85°C)	
Ambient Temp. Range	-22°F to 176°F (-30°C to 80°)	
Max Viscosity	1622 SUS (350 cSt)	
Pump Type	Gear Pump	
Power Supply Voltage	24 VDC +/- 10%, Residual Ripple <10%	
Max. Power/Current Consumption	100 Watt/ 4 amp	
Electric Output	4-20 mA analog output; 2-10 V analog (<i>option for contamination monitor (CS1000) RS485 for communication w/FluMoS Software</i>)	
Electrical Specifications	4 - 20 mA analog output (<i>max burden 330 Ω</i>) 2 to 10v output (<i>min load resistor 820 Ω</i>) Limit switching output (<i>Power MOSFET</i>): max current 1.5A	
CS1000 Contamination Monitor Signal Output Connections located on Control Enclosure	USB-B Female Port for use with Windows-based computer and FluMoS Software M12 8 pole, Male Port, Analog or Digital, for use with PLC or RS485 Communication, (4 - 20 mA is standard). 2 - 10 V is optional, must specify when ordering CS1000 Contamination Monitor	
Water Sensor (AS1008) Signal Output Connection	Water sensor (AS1008) M12-5 pole Signal Output 5 pole Male Port, located on Control Enclosure	
Electrical Safety Class	III (<i>low voltage protection</i>)	
Enclosure Ratings	IP 40 enclosure	
Weight and Dimensions		
Communications Module Control with CS1000 Sensor	Fluid Sampling Sys. Manifold w/ CS1000 & VSD Pump/Motor	HY-TRAX® Manual Control Module
	10 lbs. (4.5 kg) 10.3" x 6.8" x 4.3" (262 x 173 x 109 mm)	5 lbs. (2.5 kg) 9.3" x 5.7" X 2.6" (236 X 145 x 65 mm)

Model Code

HY - 12 2 0 - - - P -

Model	_____	_____	_____	_____	_____	_____	_____	_____	_____
HY	=	HY-TRAX® System - Oils to 350cSt <i>(includes 100 micron mesh strainer and pressure gauge in manifold block)</i>							
ISO Code Preference	_____	_____	_____	_____	_____	_____	_____	_____	_____
NT	=	Manifold supplied w/o CS1xx0 <i>(customer will supply own manifold mount CS1xx0 with or without display)</i>							
12	=	ISO Code >4/>6/>14							
13	=	ISO Code >2/>5/>15							
Display Options	_____	_____	_____	_____	_____	_____	_____	_____	_____
2	=	with display							
Fluids	_____	_____	_____	_____	_____	_____	_____	_____	_____
0	=	Hydraulic/Mineral Oil							
Analog Interfaces	_____	_____	_____	_____	_____	_____	_____	_____	_____
(omit)	=	4 - 20 mA (Standard)							
S	=	2 - 10V Analog Output							
Water Sensor Option	_____	_____	_____	_____	_____	_____	_____	_____	_____
(omit)	=	No Water Sensor (None Standard)							
AS-D	=	with AS3008 Water Sensor							
Control Options	_____	_____	_____	_____	_____	_____	_____	_____	_____
(omit)	=	Manually Controlled - Panel with Rheostat flow control and signal output (Standard)							
Power Options	_____	_____	_____	_____	_____	_____	_____	_____	_____
(omit)	=	24V DC (Standard)							
P	=	115V AC							
Air Suppression Loop	_____	_____	_____	_____	_____	_____	_____	_____	_____
(omit)	=	none							
L	=	Looped hose and fittings							

What's Included

- CS1000 Series Contamination Sensor
- Machined, 6061-T651 aluminum alloy manifold block with anodized surface treatment.
- Specially designed fitting for mating to pump/motor.
- Fluorocarbon elastomer (FKM) seals.
- Plugged water sensor port (G3/8 BSPP)
- VSD (Variable Speed Drive) Motor Power Supply and Control Cable
- Water Sensor (AS3008) Power Supply and Signal Cable (only supplied with optional water sensor (AS3008))
- Contamination Monitor (CS1000) output signal, USB-B Female Port for use with Windows-Based Computer and FluMoS Software, located on Control Enclosure
- Contamination Monitor (CS1000), output signal, M12 8 pole, Male Port, located on Control Enclosure, for use with PLC or RS485 Communication, analog or digital, 4 - 20 mA is standard, 2 -10 V is optional
- Flow control valve
- VSD (Variable Speed Drive) pump/motor
- Manual rheostat pump controller
- IP 40 enclosure
- Side or Front Inlet/Outlet Porting (SAE Size 04 ORB)
- 24 VDC Power Supply (NC3MP Female Connector)
- Optional 115 VAC Power Supply with Cord
- Contamination Monitor (CS1000) Power and Signal Cable
- Water Sensor (AS3008) M12 5 pole Signal Output Connection, Male Port, located on Control Enclosure
- Contamination monitor (CS1000) power connection, female M12 8 pole located on control enclosure
- Water sensor (AS3008) power connection, M12 5 pole Female located on control enclosure