ACE INSTRUMENTATION

MGMT. SYS.
RvA C 046
ISO 9001:2008
Certificate Number: 46016

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TD-4100 HYDROCARBONS IN WATER

Why Continuous On-Line Monitoring?

Continuous on-line monitoring with the TD-4100 provides the most responsive feedback for measuring hydrocarbons in water. The TD-4100 is reliable, effective, and improves process management for treating, discharging hydrocarbons in water. Compared to laboratory grab sample analysis, on-line monitoring provides cost effective, continuous, remote, operator unattended measurement of oil and other hydrocarbons in water.

NON-CONTACT, NON-FOULING FLOW CELL

The TD-4100 does not have a glass flow cell. Hydrocarbons are detected in a stream of water which falls through an open chamber; the water does not contact, dirty or foul the optical windows. A proprietary Air Curtain system keeps optical windows fog-free in humid environments or hot water applications.

LOW MAINTENANCE

There are no tubes, pumps or valves to replace. Routine maintenance involves changing a lamp twice a year. System checks are easily performed with the CheckPoint™ solid standard. Sample lines must be properly maintained for trouble free operation.

DIRECT, CONTINUOUS MONITORING

The TD-4100 monitors a flowing water stream continuously. No chemicals, no pre-treatment, no mechanical manipulation or mixing of the sample is required to monitor hydrocarbons in water.

ACCURATE

The TD-4100 directly measures fluorescing hydrocarbons in water with accuracies that consistently correlate to regulatory laboratory methods.

HIGH SENSITIVITY AND SELECTIVITY

SENSITIVE

BTEX, gasoline, diesel, jet fuel, crude oil, aromatic solvents and refined petroleum products are detected by the TD-4100 from low ppb (µg/L) to high ppm (mg/L). For example, the TD-4100 XD can detect 1 ppb of diesel fuel in water free of interfering compounds.

SELECTIVE

The TD-4100 measures only fluorescent hydrocarbons in water. Fluorescence occurs when a molecule absorbs light energy of one specific wavelength and emits light energy of a longer wavelength. This means little or no interference from suspended solids.

EFFECTIVE MONITORING IN DIRTY WATER

Fluorescence technology makes the TD-4100 resistant to interferences by turbid or dirty water that impact on-line UV absorption, IR, visible, or light scatter instruments. Most substances absorb light, but very few fluoresce; if a substance does not fluoresce at the specific wavelengths for the monitored hydrocarbon, it will not interfere.

OPERATOR FRIENDLY

The TD-4100 is designed for easy operation. Simple on-board software controls alarms, 4-20 mA output, diagnostics and calibration. Turner Designs Hydrocarbon Instruments is the recognized expert for oil in water monitoring technology.

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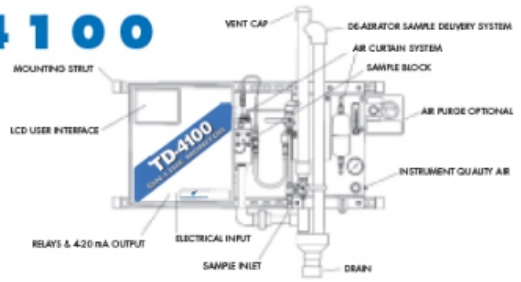

SPECIFICATIONS

Detection Range:	1ppb -> 1000 ppm* Depending on the water source and target hydrocarbon.
Dimensions:	44.0" x 43.1" x 10.8" (111.8 cm x 109.4 cm x 27.5 cm)
Weight:	64 lbs (29 Kg)
Local Display:	Yes, PPM, PPB, or Raw Signal
Controls:	Internal Touch Pad, Password Protected
Power Requirements:	110 - 240 VAC, 50/60 Hz, 2A, 24 vdc Optional
Plumbing Requirements:	Feed: 1/2" MNPT (standard) or 1/2" tube Return: 2" unrestricted drain
Sample pressure:	Inlet: 0.5 - 2 gpm (2- 8L/min), 5 - 20 psig (34-138 kpag) Sample Pump Optional Return: Atmospheric Sample Return Pump Optional
Sample Temperature:	< 140° F (60° C) w/PVC Plumbing 190° F (95° C) (max) w/ optional stainless steel plumbing
Required Air Supply general Purpose:	15 SCFH at 10 -20 psig
Ambient Operating Temperature:	32° - 120° F (0 - 49°) Heater or Vortex Cooler Optional
Flow Cell Characteristic:	Non-contact flow cell with air curtain
Operating Principle:	UV Fluorescence
Stability:	+/- 10% over 6 months
Response Time:	< 10 seconds Continuous real-time response
Calibration:	Blank / Standard Addition or Correlation to Standard Methods
Reagents:	None
Alarms:	2: Early Warning / High Alarm, Internal faults linked to high alarm
Alarm Contacts:	A/C Dry Contact Optional
Outputs:	4-20 mA
Communication Protocols:	Optional: Hart, ModBus
Diagnostics:	Self Diagnostics, Internal failure linked to relays and LCD display
Security:	Password Protects Software, Lockable Enclosure
Electronics Cabinet:	FRP
IP Rating:	IP 66, NEMA 4X
Maintenance:	Lamp (twice yearly); Routine cleaning of plumbing
Certifications:	IMO MEPC 107(49), 60(33)

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