Continuous Hydrocarbons in Water Monitoring

Instrument

8280

Description

The 8280 Hydrocarbons-In-Water monitor is a continuous sampling monitor designed for use where rapid response to light hydrocarbon (< C₁₁) leaks or spills, along with high sensitivity and low maintenance, is required. It provides advance warning against contaminated plant effluent, contaminated condensate return or cooling water, as well as monitoring of light volatile organics or hydrocarbons in various other water streams.

The 8280 has a wide range of leak detection with the capability to detect from the very low ppm (part-per-million) range up to the two percent range. It is well suited for monitoring most volatile organics and hydrocarbons. It is effective for detection of benzene, 1,2-dichloroethane, propane, butanes, phenol, hexanes, and other organic compounds in water. When equipped with the optional membrane stripper, the 8280 effectively detects organic compounds with high vapor pressures such as i-butane and n-butane. The 8280 is not suitable for detection of heavy, non-volatile oils or greases.

Applications

- Boiler feed water in low ppm range to protect boiler
- Condensate return to detect heat exchanger leaks
- Process or cooling tower water returns
- Effluent water monitoring to detect volatile organic and hydrocarbon leaks for pollution alerts
- Detection of low ppm up to the 2% range of volatile organics or hydrocarbon compounds in process streams with specific compound calibration such as acetone
- Detection of hydrocarbons in sea water for drilling operations

Features

- Detects volatile organics and hydrocarbons
- Rapid detection
- Low ppm to 2% detection level
- Continuous 4-20 mA DC isolated output signal
- Two levels of alarm
- No moving parts
- Low maintenance
- Proven online reliability
## Specifications

**Range**
0-10 ppm up to 0 - 2% for most detectable compounds

**Detector**
Hydrogen Flame Ionization Detector (FID)

**Sensitivity**
Better than 100 ppb for most volatile organics or hydrocarbons

**Repeatability**
±2% R.S.D. of full scale range

**Response**
30-45 seconds for 90% change at sample inlet

**Output Signal**
4-20 mADC, isolated, linear

**Alarm Contacts**
High and High/High concentration alarms
FID flame out alarm
Sample flow alarm (optional)

**Sample Flow Rate**
1 to 2 gallons per minute
(3.7 to 7.5 liters per minute)

**Sample Pressure**
Greater than 5 psig (0.35 BARG)

**Sample Temperature**
Less than 38° C (100° F)

**AC Power**
110 VAC ±10%, 50/60 Hz @ 300 Watts
220 VAC ±10%, 50/60 Hz (optional)

**Utility Gases**
Chromatographic grade and hydrocarbon free
Hydrogen fuel @ 40-80 cc/min
Nitrogen stripper gas @ 30-60 cc/min
FID combustion air @ 200-300 cc/min

**Enclosure Purge**
Air or nitrogen @ 120 SCFH (57 liters per minute)

**Electrical Area Classification**
NEMA-4 metal enclosure, with ISA type “Z” purge
NEC Class I, Division 2, Group B, C, D (optional “X” purge, Class I, Division 1, Group B, C, D)

**European Classification**
CE Certified, CENELEC Zone 1, EE x d P e IIC T6

**Mounting**
Flush mount on wall or rack. Rear access not required

**Weight**
125 Pounds (57 kilograms)

**Dimensions**
33.5"H x 19.7"W x 11.8"D
(85cm H x 50cm W x 30cm D)

**Ambient Temperature**
0 to 50° C (32 to 120° F), freeze protection required

---

**Thermo Electron Corp.**

Thermo designs, develops, markets, and services sophisticated laboratory and process analyzers to improve production efficiency and quality assurance, meet regulatory requirements, and enhance safety in the process industries. Company products incorporate advanced technologies to provide real-time analysis, data collection, and control functions.

Thermo products are used in a number of bulk processing industries, including oil and gas, chemical, petrochemical, refining, industrial and specialty gases, iron and steel, pharmaceutical, electric utilities, food and beverage, and semiconductors.

Our worldwide presence and experienced staff enable Thermo to provide rapid, expert preventive maintenance and after-sales support services to our customers.