

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 ($< C_{11}$) 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 mADC 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, EEx 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

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