



PS-220 ANALOG CONTROLLER

PS-220 Analog Leakwise Controller is a power supply and signal processor that interfaces with a single Leakwise ID-220 Series Sensor to report hydrocarbons spill/leak alerts, including layer buildup and thickness, to users via outputs for local or remote reporting. PS-220 has well-proven reliability and is cost-effective for a basic monitoring system. It can be AC or DC line powered.

APPLICABILITY

Typical PS-220 and Leakwise ID-220 Series Sensor applications include oil spill/leak monitoring in storage tank sumps, discharge from wastewater treatment, hydrocarbon pipeline pumping stations, hydroelectric and fossil fuel power plants, transformer substations, groundwater monitoring wells, remediation sites, etc.

FEATURES

- Low-power consumption
- Built-in self-diagnostics of the controller and the sensor
- Simple calibration procedure
- Adjustable sensitivity of oil detection with two alarm points

PS-220 OPERATION

The PS-220 supplies stabilized 12 VDC for powering the sensor. The returned current signal from the sensor is filtered and amplified. Then the signal is compared to two adjustable alarm set-points to determine the status that the sensor reports: Water, Oil, High-Oil or Air, depending on the application. There are two relay outputs with dry contacts for reporting the status. An additional fail-safe operated relay reports sensor or power failure. Turning on a low-pass filter eliminates false alarms in applications with turbulent water. An optional 4-20 mA output reports oil layer thickness. An optional Bar-Graph visualizes the oil layer thickness.



PS-220 in NEMA 4 Enclosure



PS-220 in NEMA 7 Enclosure

TECHNICAL SPECIFICATIONS

PS-220 Controller Specifications and Options	
Specifications	
PS-220 Description	PS-220 Controller is an analog signal processor and power supply in a NEMA 4 enclosure, and supports a single ID-220 Series Leakwise sensor.
Temperature	Ambient temperature range: -40 - 85 °C (-40 - 185 °F)
Cable length to Sensor	Up to 1,200 m (3,937 ft.) subject to hazardous area restrictions.
PS-220/RL/LI	Two alarm relays with dry contacts and one fail relay contact: SPDT rated 4A (3A for fail contact) at 250 VAC or 30 VDC, normally open and normally closed, and four status indication lights: Water, Oil, Air / High Oil and Fail. Includes built-in diagnostics.
Wiring Connections	Terminal blocks: 14 AWG maximum for sensor and 4-20 mA output wires; 12 AWG maximum for power and relays wires.
Options	
Enclosure Options	/N4 for NEMA 4X (IP65): 305 x 195 x 120 mm (12.0 x 7.7 x 4.7 in) 2 Kg (4.4 lb.); /N7 for NEMA 7: 278 x 259 x 166 mm (11.0 x 10.2 x 6.5 in) 8.5 Kg (18.7 lb.); /Exd for Ex d: 355 x 276 x 200 mm (14.0 x 10.9 x 7.9 in), 14 Kg (30.9 lb.); /BP: without an enclosure, to be mounted in a local cabinet. 190 x 180 x 130 mm, 1 Kg.
Input Power Options	220 or 110 VAC (50 - 60 Hz) or 9 - 36 VDC (@ 5 Watts); may also be solar powered.
/420	4-20 mA analog output proportional to hydrocarbon layer thickness, current source.
/420/BG	Bar-Graph display (20 bars) of hydrocarbon thickness in addition to 4-20 mA analog output.
/CEN	Zener Safety Barriers to allow installation of the sensor in hazardous areas.
/AUD	Audio alarm option (available in weather-proof or explosion-proof enclosure).

Other Controllers – Refer to separate data sheets	
SLC-220	Digital Signal Processor for Multiple (up to 4) ID-220 Series sensors support, with various output options, including relays, lights, 4-20 mA, LCD, Modbus in RS-232 and RS-485 communication, and remote cellular connectivity.

PS-220 Controller Certifications	
PS-220 Enclosure	For hazardous areas: North America - NEMA 7, Class I, Div 1, Groups B, C & D; NEMA 4 Europe ATEX & IECEx - II2(1)GD, Ex db [Ia Ga] IIC T6 Gb IP66
Combined System	Approved for operation in hazardous locations when Zener Safety Barriers are added
Manufacturing	ISO 9001:2015 Certified

