

PS-220 Analog Controller

The PS-220 Analog Leakwise Controller is a power supply and signal processor that interfaces with a single (1) Leakwise ID-220 Series Sensor to report hydrocarbons spill/leak alerts, including layer buildup and thickness, to users via outputs interfaces for local or remote reporting. The PS-220 has a well proven reliability and is cost effective for a basic monitoring system. It can be AC or DC line powered.

Applications

Typical PS-220 and Leakwise ID-220 Series Sensor applications include oil spill/leak monitoring in tank farm sumps, discharge from wastewater treatment plants, 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 Leakwise Sensor.
- Simple calibration procedure.

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, and then it is compared to two (2) 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. There is an option to turn on a low-pass filter for applications with turbulent water and avoid false alarms. An optional 4-20 mA output reports oil layer thickness. An optional Bar-Graph visualize the oil layer thickness.



PS-220 in NEMA 4 Enclosure



PS-220 in Exd Enclosure, with Bar-Graph

Technical Specifications¹

PS-220 Controller Specifications and Options

Specifications

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| 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 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 contact: SPDT rated 4A (3A for fail contact) at 250 VAC or 30 VDC, normally open and normally closed, and four indicating lights: Air / High Oil, Oil, Water, Fail. Includes a built-in diagnostics feature. |
| Wiring Connections | Terminal blocks: 14 AWG maximum for sensor and 4-20 mA output wires; 12 AWG maximum for power and relays wires. |

Options

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| Enclosure Options | /N4 for NEMA 4X (IP65): 300 x 190 x 120 mm (12.0 x 7.5 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), 12.5 Kg (27.5 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 thickness up to 25 mm (1.0 in), 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

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| SLC-220 | Digital Signal Processor for Multiple (2 / 4 standard, more in a network) ID-220 Series sensor support, with various output options, including relay, lights, 4-20 mA, LCD, Modbus in RS-232 and RS-485 communication, and cellular remote connectivity. |
| WSP-220 | Wireless communication – Point-to-Point data radio. |

PS-220 Controller Certifications

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| PS-220 Enclosure | For hazardous areas: North America - NEMA 7, Class I, Div 1, Groups B, C & D; NEMA 4 Europe ATEX & IECEx - II(1)GD, Ex db [ia Ga] IIC T6 IP66 |
| Combined System | Approved for operation in hazardous location |
| Manufacturing | ISO 9001:2015 Certified |

¹ Specifications may be subject to change without prior notice.
For special applications, it may be possible to offer products that deviate from the above specifications.