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PRODUCT SPECIFICATIONS

LevelPRO series of gauges

Non-contacting, minimal source, high precision continuous level gauges for challenging applications

The Thermo Scientific™ LevelPRO Series are non-contacting, easy to use continuous level gauges, that offer repeatable and reliable level measurements using a smaller source for a variety of challenging applications.

Features

- Proven stability at the widest temperature range
- Small source size for increased safety and lower capital costs
- Designed to meet shock and vibration standards for all major industries
- Flexible configuration of integrated and remote transmitter options
- Leverages EZ CAL II Software

The Thermo Scientific™ LevelPRO Series of non-contacting continuous level gauges offers flexibility, durability and precision in order to enhance the efficiency of industrial processes.

Industrial design

The non-contacting LevelPRO gauges are mounted on to the outside of the vessel. Using the principal of gamma transmission,

energy is emitted by one of two types of radioactive sources, Cesium 137 or Cobalt 60. These sources are contained in a lead filled, steel- encapsulated housing mounted. The housings use 30°, 45° and 60° beam angles that allow optimization of level coverage for any sized vessel. The scintillation detector is mounted on the opposite side of the vessel. Tested and certified to meet numerous specifications for humidity, extreme temperature ranges, shock and vibration the LevelPRO series is designed to withstand extreme conditions.

Operating principles

The gamma energy emitted by the source is transmitted through the vessel walls, process material and any insulation. The electronics within the LevelPRO gauge converts the energy reading to a level measurement.

Flexible configuration

The LevelPRO series can be function as an integrated detector or with a remote transmitter. Multiplex capable, the LevelPRO series also offers independent control of up to four gauges with one microprocessor which allows for reduction in the cost of ownership of multiple units. The user friendly EZ CAL II software includes multiple self diagnostic capabilities and alarms.

Thermo Scientific™ LevelPRO Series

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Thermo Scientific™ LevelPRO Series of Gauges

Specifications	
System performance	± 0.05% of span, typical
Stability	less than ± 0.05% or radiation change over six months
Ambient temperature (field)	± 0.009% of radiation change per degree °C
Response time	Maximum 2 seconds
Source type	Cs-137: 5 mCi to 10,000 mCi Co-60: 1,000 mCi to 3,000 mCi
Source housing	Carbon steel, lead filled, polyurethane painted. Two-position shutter, locks in OFF (closed) position, beam angle offerings of 30° 45° and 60° are offered
System architecture	32-bit, 60 MHz micro computer unit; Real-time clock (RTC) Lithium backup battery; voltage monitor for the RTC and SRAM circuits allows for configuration retentions in the event of power failure Local I/O consisting of: four analog inputs; one 100-ohm Pt RTD input; two digital outputs (DO); two digital inputs (DI); one local serial communication port connection; one RS232/RS485 host serial communication port; connection for optional Intrinsically safety Input/output boards (ISIO); one +15 V power supply output; one Isolated 24 V output; one 10/100 Ethernet communication port with ESD protection; and one USB port.
Detection type	Poly Vinyl Toluene (PVT) scintillation detector in active lengths of one foot (30.48 cm) to 12 foot (365.76 cm). Detectors can be cascaded to optimize large level spans. Multiplexing and vapor density compensation is offered
Detector stabilization	Electronic control without heater stabilization for optimum performance over operating temperature range
Integrated/Remote detector enclosure	316 stainless steel or carbon steel polyurethane painted; optional water-cooled detector for higher temperature applications
Transmitter	Stainless Steel; Nema 4X and IP66; 20 push button keypad; 8 line monochrome LCD
Power requirements	115/230 Vac, ± 10%, 50/60 Hz or 24 Vdc
Operating temperature	-40°C to +75°C (-40°F to +167°F) ambient
Inputs	Two 4 – 20 mA inputs; two 0 – 10 Vdc inputs; two Digital inputs (DI): provides contact input with internal +5 Vdc wetting volatage; temperature compensation circuitry with 100-ohm Platinum RTD, 3 or 4 wire
Outputs	4 – 20 mA output; Optional Intrinsically Safe

Ordering Information

The Thermo Scientific series of LevelPRO gauges may require custom configuration based on your application. Please contact your local Thermo Fisher Scientific sales representative and we will work with you to accurately determine the best configuration for your process.

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

USA
27 Forge Parkway
Franklin, MA 02038
Ph: (713) 272-0404
Fax: (713) 272-2273
orders.process.us@thermofisher.com

India
C/327, TTC Industrial Area
MIDC Pawane
New Mumbai 400 705, India
Ph: +91 22 4157 8800
india@thermofisher.com

China
+Units 702-715, 7th Floor
Tower West, Yonghe
Beijing, China 100007
Ph: +86 10 84193588
info.eid.china@thermofisher.com

Europe
Ion Path, Road Three,
Winsford, Cheshire CW73GA UK
Ph: +44 1606 548700
Fax: +44 1606 548711
sales.epm.uk@thermofisher.com

Find out more at **thermofisher.com**

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