PAQUIN SENSORS
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Electronic Level Switch

- Suitable for both conductive and non-conductive media with permittivity ≥ 1.5
- Designed to ignore residue and foam, enabling accurate detection even with viscous and sticky substances like syrups, pastes, cleaning agents and more
- Offers PNP open collector output with LED indication for easy diagnostics
- Supports horizontal or diagonal mounting in both metal and plastic tanks or pipes
- Withstands process temperatures from -40 to +221 °F (-40 to +105 °C) and pressures up to 1450 psi (100 bar)

CE

About

The P37 is a compact high-frequency level sensor designed for accurate limit detection of liquids, slurries, and pastes across a range of industrial applications. It is engineered to resist buildup from sticky or viscous substances like ketchup, yogurts, spreads, syrups, creams, pastes, cleaning agents and more, making it ideal for demanding environments where traditional sensors may fail. Its universal compatibility with both conductive and non-conductive media, combined with simplified setup using a magnetic pen or programming wire, enhances usability across tank and pipe installations. With a robust stainless steel construction and IP68 protection, the P37 is optimized for durability and performance under high-pressure and variable temperature conditions.

Applications

- ✓ Food & Beverage
- ✓ Chemical Refining & Manufacturing
- ✓ Pharmaceuticals
- ✓ Water Treatment
- ✓ Biomedical
- ✓ Machine Building
- ✓ Cleaning & Sanitation
- ✓ More

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Build Your Part Number

Series P37

Example: P37SA1PE2

Series
P37

Hazard Performance - *select one*	
S	Standard atmosphere (non-explosive)

Process Connection - *select one; see diagrams on page 4*	
A	½" npt male
B	G ½" male

Electrode Type - *select one; refer to diagrams on page 4*	
1	Standard Coated electrode PEEK (polyether ether ketone)
2	Coated electrode PEEK (polyether ether ketone) with extended electrode length

Output	
P	PNP Open Collector

Electrical Connection - *select one; see diagrams on page 4*	
E1	M12x1, 4-pole (plastic polycarbonate) with LED visual indication
E2	M12x1, 4-pole (stainless steel) with LED visual indication

Accessories – *optional; will be quoted as a separate line item*		
A1	Power supply of sensors, converting their status to power contact and remote parameterization	
A6	Seals (O-rings, USIT rings, Aluminum seals)	
A7	Weld flange G½"	
A8	Fixing nut G½"	

Note: P37 is supplied with 1 magnetic pen for parameter settings

Example of a typical application deployment

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Technical Parameters

Technical Parameters		
Electrical	Supply voltage	7 ... 34 VDC
	Power consumption	Maximum 5 mA DC
	Output type	PNP open collector
	Max. switching current	300 mA
Environmental	Process temperature range at the process connection point	-40°F...221°F (-40°C...+105°C)
	Maximum overpressure (relative)	-40°F...167°F (-40°C...75°C) at -14.5...1450 PSI (-1 ... 100 bar) 167°F...221°F (75°C...105°C) at -14.5...725 PSI (-1 ... 50 bar)
	Protection Class	IP68
Materials	Weight without cable	Approx 0.15 kg
	Housing	Stainless steel W.Nr. 1.4404 (AISI 316L)
	Electrode insulation	PEEK (polyether ether ketone)
	Connector M12 (Electrical Connection E1)	Plastic Polycarbonate
	Connector M12 (Electrical Connection E2)	Stainless steel W.Nr. 1.4404 (AISI 316L)

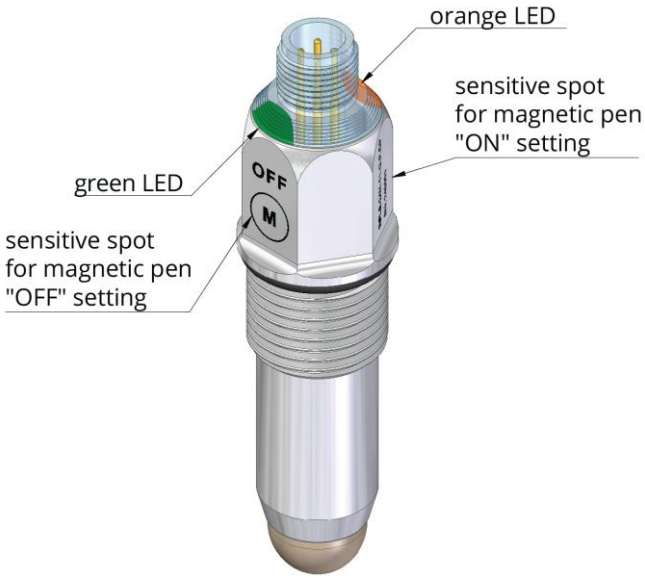
Material Variant Media Applications	
Variant	**Description**
Electrode Type 1 with Electrical Connection E1	For sensing various liquids, slurries and pastes, also suitable for oils. Plastic connector with LED indication allows adjustment even with a magnetic pen and visual check of sensor functionality
Electrode Type 2 with Electrical Connection E1	For sensing various liquids, slurries and pastes, also suitable for oils. Plastic connector with LED indication allows adjustment even with a magnetic pen and visual check of sensor functionality
Electrode Type 1 with Electrical Connection E2	For sensing various liquids, slurries and pastes, also suitable for acids or bases. Hardened stainless steel version of the connector (without LED indication) is designed for more demanding conditions, setting with a programming cable is recommended
Electrode Type 2 with Electrical Connection E2	For sensing various liquids, slurries and pastes, also suitable for acids or bases. Hardened stainless steel version of the connector (without LED indication) is designed for more demanding conditions, setting with programming wire is recommended

Setting and Display Elements

Setting elements
Used to adjust the sensitivity and behavior of the sensor.

1) Locally using a magnetic pen (Electrical Connection E1)
which is attached to the magnetically sensitive ON or OFF spots on the sensor.

2) Remotely by programming wire (Electrical Connection E1 and E2)
via the DSU-1222-AP power supply unit. Remote parameterization Allows the same setting options as the magnetic pen setting.



Display elements (Electrical Connection E1)
Used to display the sensor status.

1) Green LED
Flashing - (approx. 0.4 sec.) - correct level detection function
Not illuminated - incorrect installation or malfunction

2) Orange LED illuminated
- the sensor is closed not illuminated
- the sensor is open 3 short flashes
- confirmation of setting

Alternating flashing of green and orange LEDs - setting error
Simultaneous illumination of green and orange LEDs - during the application of the mag. pen when the setting is confirmed

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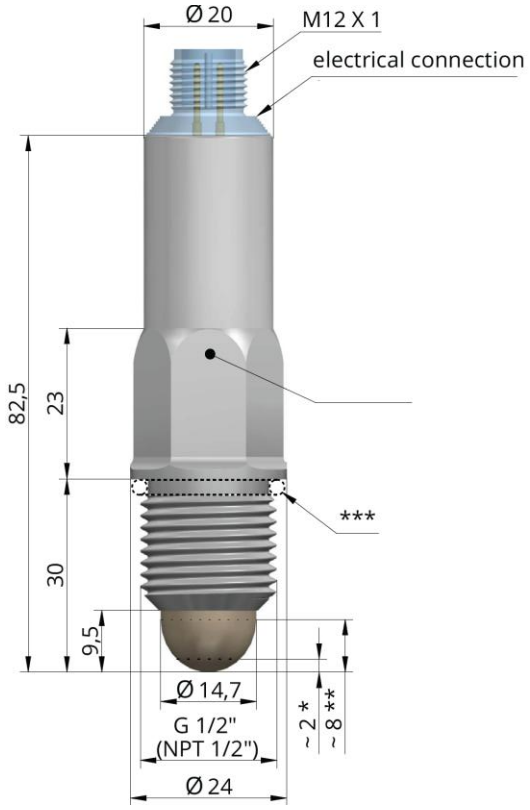
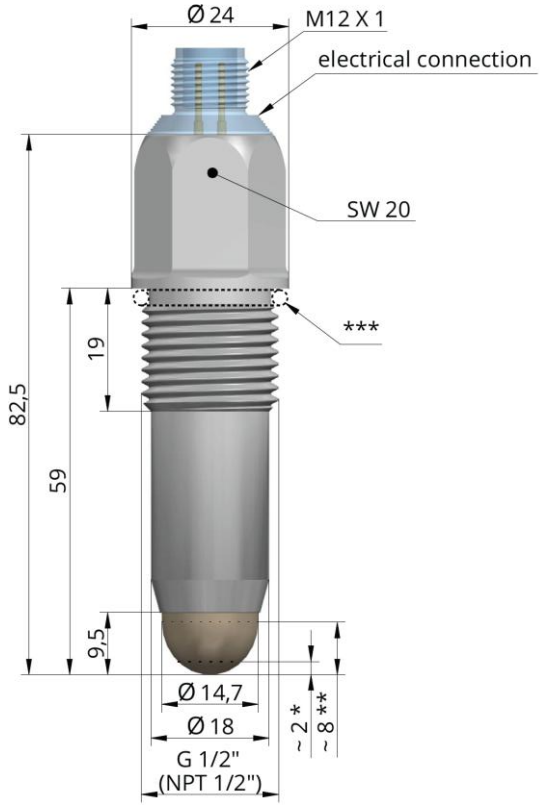
Dimensions



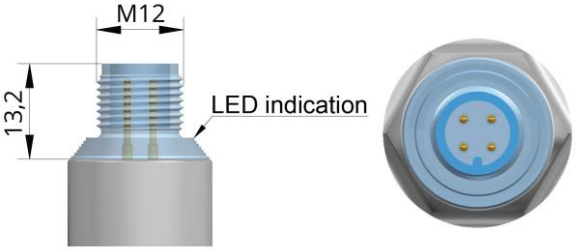
Ordering Code 1
Coated Electrode



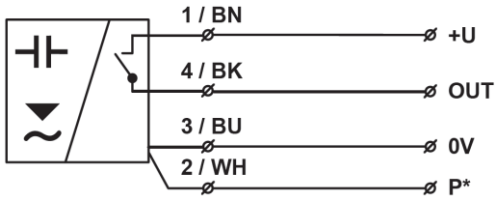
Ordering Code 2
Extended Coated Electrode

* Typical switching point position for water (factory setting)
** Typical switching point position for oil (factory setting)
*** Supplied without gasket as standard

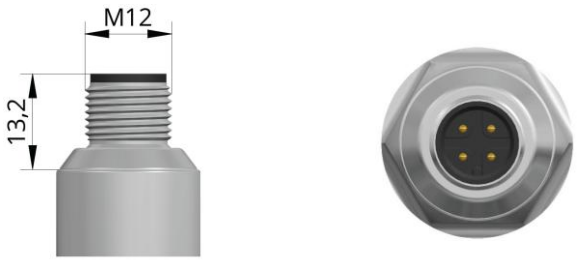
Electrical Connections



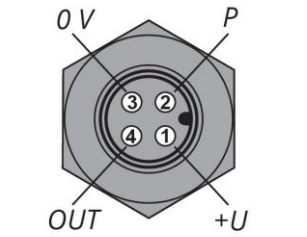
Electrical Connection E1



Wiring with PNP Output
* P = Programming wire



Electrical Connection E2



Connection of the connector on the sensor

Legend:
BK - black (OUT)
BN - brown (+U)
BU - blue (0V)
WH - white (P)

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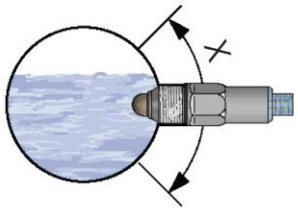
Installation Instructions Application Descriptions

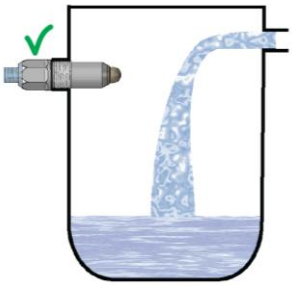
Level Sensors

The P37 level sensor can be mounted horizontally or diagonally in a vessel, tank or pipe shell by screwing into a sleeve or by attaching with a nut. Basic application recommendations are listed below.

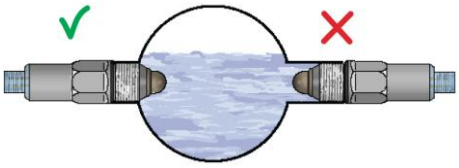
Thanks to its design, the sensor is suitable for level detection of viscous and electrically conductive media (yoghurt, marmalades, mayonnaise, spreads, liquid soaps, creams or pastes). After setting the sensitivity to the medium, the sensor reacts reliably to the presence or absence of the medium level. Conversely, the sensor does not react to residues and deposits of viscous media on the measuring electrode.



X = Recommended orientation for installation of sensors in pipes



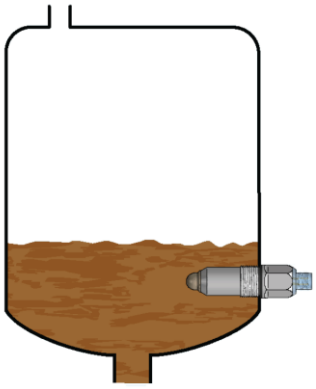
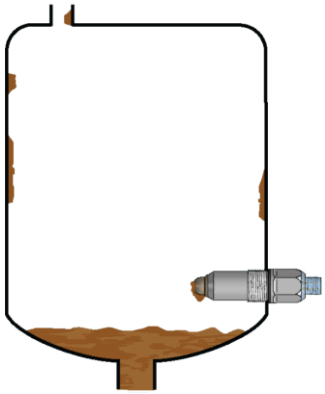
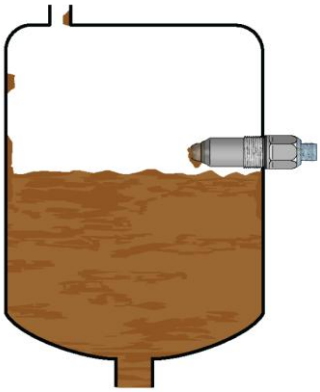
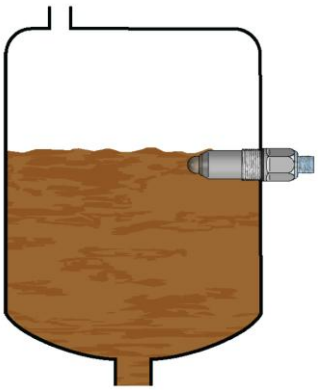
Correct orientation of sensor installation in tanks



Correct and incorrect installation of the sensor into the pipe fitting

Setting Modes

The sensor can be set to normally closed “O-mode” or to normally open “C-mode” switch types.

Minimum Level – Mode O		Maximum Level – Mode C	
			
Closed	Open	Closed	Open
Illuminated	Not illuminated	Illuminated	Not illuminated

For safety reasons, we recommend using the “O” mode setting for sensing the minimum level (the sensor switches on when flooded). A failure of the sensor or wiring will be indicated here as an emergency level condition by disconnecting the sensor. By analogy, for max. level, we recommend setting the mode “C” (the sensor switches off when flooded).

**LED indication only for Electrical Connection E1, not valid for Electrical Connection E2*

Additional Information

Paquin Sensors' product portfolio is designed to provide options to fit the most diverse range of specifications.

We collaborate with our customers to match the best product technologies with your unique application requirements.

Please contact us or call +1 (800) 831-8217 anytime to discuss your needs!