

# Radiometric level and density measurement Gammapilot FMG50

Compact transmitter for point level detection, continuous level, interface and density measurement



More information and current pricing:

[www.th.endress.com/FMG50](http://www.th.endress.com/FMG50)

## Benefits:

- First real 2-wire loop-powered compact transmitter minimizes engineering and installation efforts
- Reduced installation and engineering costs thanks to the first 2-wire loop powered compact transmitter
- Increased plant safety, efficiency and availability even under extreme process and ambient conditions
- Designed according to IEC 61508 with SIL2/3 approval for all measuring tasks
- Reduced verification effort and minimized plant shut-downs due to state-of-art Heartbeat Technology
- Usage in up to +80°C (+176°F) ambient temperature without additional cooling thanks to innovative sensor technology
- **Bluetooth®** wireless technology for remote operation out of the radiation beam

## Specs at a glance

- **Process temperature** Any
- **Process pressure absolute / max. overpressure limit** Any
- **Max. measurement distance** Unlimited measuring range, Cascade
- **Accuracy** +/-1%
- **Main wetted parts** Non-contact

**Field of application:** The Gammapilot FMG50 compact transmitter is designed for non-contact point level detection, continuous level, interface and density measurement in liquids, solids, suspensions or

sludges. As the first true 2-wire loop powered compact transmitter it minimizes engineering and installation efforts.

## Features and specifications

### Point Level / Solids

**Measuring principle**

Radiometric Limit

**Characteristic / Application**

Compact transmitter for extreme process conditions (temperature, pressure);

Non-contact measuring technique

**Specialities**

Heartbeat Technology,

SIL 2/3 according to IEC 61508,

Bluetooth® commissioning, operation and maintenance with the SmartBlue App

**Supply / Communication**

2-wire loop powered

**Ambient temperature**

-40 °C...+80 °C,

(-40 °F...+176 °F)

**Process temperature**

Any

**Process pressure absolute / max. overpressure limit**

Any

**Main wetted parts**

Non-contact

**Process connection**

Non-contact

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**Point Level / Solids****Sensor length**

PVT scintillator:  
200 mm...400 mm,  
NAI scintillator:  
50 x 50 mm,  
50 x 100 mm

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**Communication**

4...20 mA HART

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**Certificates / Approvals**

ATEX, IEC Ex, CSA C/US, NEPSI, INMETRO, EAC Ex, JPN Ex, KC Ex

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**Safety approvals**

Overfill protection WHG  
SIL 2/3

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**Design approvals**

EN 10204-3.1

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**Options**

Display

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**Components**

Isotope: FSG60, FSG61,  
Source container: FQG60, FQG61, FQG62, FQG63, FQG66,  
Mounting accessories: FHG61

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**Point Level / Liquids****Measuring principle**

Radiometric Limit

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**Characteristic / Application**

Compact transmitter for extreme process conditions (temperature, pressure);  
Non-contact measuring technique

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**Point Level / Liquids****Specialities**

Heartbeat Technology,  
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**Supply / Communication**

2-wire loop powered

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**Ambient temperature**

-40 °C...+80 °C,  
(-40 °F...+176 °F)

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**Process temperature**

Any

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**Process pressure absolute / max. overpressure limit**

Any

---

**Main wetted parts**

Non-contact

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**Process connection**

Non-contact

---

**Sensor length**

PVT scintillator:  
200 mm...400 mm,  
NAI scintillator:  
50 x 50 mm,  
50 x 100 mm

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**Communication**

4...20 mA HART

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**Certificates / Approvals**

ATEX, IEC Ex, CSA C/US, NEPSI, INMETRO, EAC Ex, JPN Ex, KC Ex

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**Point Level / Liquids****Safety approvals**

Overfill protection WHG  
SIL 2/3

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**Design approvals**

EN 10204-3.1

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**Options**

Display

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**Components**

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Mounting accessories: FHG61

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**Density****Measuring principle**

Radiometric Density

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**Characteristic / Application**

Compact transmitter for extreme process conditions (temperature, pressure);  
Non-contact measuring technique

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**Supply / Communication**

2-wire loop powered

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**Ambient temperature**

-40 °C...+80 °C,  
(-40 °F...+176 °F)

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**Process temperature**

Any

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**Process pressure absolute**

Any

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**Density****Wetted parts**

Non-contact

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**Sensor length**

PVT scintillator:  
200 mm...400 mm,  
NAI scintillator:  
50 x 50 mm,  
50 x 100 mm

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**Output**

4...20 mA HART

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**Certificates / Approvals**

ATEX, IEC Ex, CSA C/US, NEPSI, INMETRO, EAC Ex, JPN Ex, KC Ex

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**Options**

Display

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**Specialities**

Heartbeat Technology,  
SIL 2/3 according to IEC 61508,  
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SmartBlue App

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**Components**

Isotope: FSG60, FSG61,  
Source container: FQG60, FQG61, FQG62, FQG63, FQG66,  
Mounting accessories: FHG61

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**Continuous / Solids****Measuring principle**

Radiometric

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**Characteristic / Application**

Compact transmitter for extreme process conditions (temperature,  
pressure);  
Non-contact measuring technique

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**Continuous / Solids****Specialities**

Heartbeat Technology,  
SIL 2/3 according to IEC 61508,  
Bluetooth® commissioning, operation and maintenance with the  
SmartBlue App

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**Supply / Communication**

2-wire loop powered

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**Accuracy**

+/-1%

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**Ambient temperature**

-40 °C...+80 °C,  
(-40 °F...+176 °F)

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**Process temperature**

Any

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**Process pressure absolute / max. overpressure limit**

Any

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**Main wetted parts**

Non-contact

---

**Process connection**

Non-contact

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**Sensor length**

PVT scintillator  
400 mm...3000 mm,  
>3000 mm cascade mode

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**Max. measurement distance**

Unlimited measuring range,  
Cascade

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**Communication**

4...20 mA HART

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## Continuous / Solids

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### Certificates / Approvals

ATEX, IEC Ex, CSA C/US, NEPSI, INMETRO, EAC Ex, JPN Ex, KC Ex

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### Safety approvals

Overfill protection WHG

SIL 2/3

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### Design approvals

EN 10204-3.1

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### Options

Display

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### Components

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## Continuous / Liquids

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### Measuring principle

Radiometric

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### Characteristic / Application

Compact transmitter for extreme process conditions (temperature, pressure);

Non-contact measuring technique

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### Interface measurement

Interfaces liquid / liquid also with emulsion layers

Interfaces liquid / solid

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### Specialities

Heartbeat Technology,

SIL 2/3 according to IEC 61508,

Bluetooth® commissioning, operation and maintenance with the SmartBlue App

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**Continuous / Liquids****Supply / Communication**2-wire loop powered

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**Accuracy**+/-1%

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**Ambient temperature**-40 °C...+80 °C,  
(-40 °F...+176 °F)

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**Process temperature**Any

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**Process pressure absolute / max. overpressure limit**Any

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**Main wetted parts**Non-contact

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**Process connection**Non-contact

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**Sensor length**PVT scintillator  
400 mm...3000 mm,  
>3000 mm cascade mode

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**Max. measurement distance**Unlimited measuring range,  
Cascade

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**Communication**4...20 mA HART

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**Certificates / Approvals**ATEX, IEC Ex, CSA C/US, NEPSI, INMETRO, EAC Ex, JPN Ex, KC Ex

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## Continuous / Liquids

### Safety approvals

Overfill protection WHG  
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### Design approvals

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### Options

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