

# Gammapilot M FMG60



More information and current pricing:

[www.ca.endress.com/FMG60](http://www.ca.endress.com/FMG60)

## Benefits:

- Multifunctional compact transmitter: One instrument for all measuring tasks which results in cost savings in spare parts and maintenance
- SIL2/3 approval in accordance with IEC 61508 for point level detection
- Highest availability, reliability and safety, even for extreme process and ambient conditions
- Highest sensitivity and accuracy at lowest dose rates (ALARA principle)
- Aluminium or stainless steel housing 316L for heavy-duty applications
- 4 to 20mA output for simple plant integration

## Specs at a glance

- **Process temperature** Any
- **Process pressure / max. overpressure limit** Any
- **Min. density of medium** Any
- **Max. measurement distance** Unlimited measuring range Cascade
- **Min. conductivity of medium** Any

**Field of application:** The Gammapilot FMG60 compact transmitter is made for non-contact point level detection, continuous level, interface and density measurement in liquids, solids, suspensions or sludges. The variable transmitter concept with NaJ crystal or plastic scintillators in different lengths guarantees optimum adaptation to individual applications. The transmitter contains a scintillator, photomultiplier and evaluation unit.

## Features and specifications

Continuous / Liquids

**Measuring principle**

Radiometric

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**Continuous / Liquids****Characteristic / Application**

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

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**Interface measurement**

Interfaces liquid / liquid also with emulsion layers and interfaces liquid / solid

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**Specialities**

Interface, density and mass flow measurement

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**Supply / Communication**

AC: 90-253V  
DC: 18-36V

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**Accuracy**

+/-1%

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**Ambient temperature**

-40...60°C  
(-40...140°F),  
With cooling jacket:  
0...120°C  
(32...248°F)

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**Process temperature**

Any

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**Process pressure / 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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**Continuous / Liquids****Process connection hygienic**

Non-contact

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**Sensor length**

PVT scintillator

400mm...2000mm

&gt;2000mm cascade mode

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**Max. measurement distance**

Unlimited measuring range

Cascade

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**Communication**

4...20 mA HART

FOUNDATION Fieldbus

PROFIBUS PA

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**Certificates / Approvals**

ATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

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**Safety approvals**

SIL1

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**Components**

Isotope: FSG60, FSG61

Source container: FQG60, FQG61, FQG62, FQG63, FQG66

Display: FHX40

Mounting accessories: FHG60

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

Radiometric

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**Characteristic / Application**

Compact transmitter

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**Specialities**

Cascading for high silos

## Continuous / Solids

**Supply / Communication**

AC: 90-253V

DC: 18-36V

**Accuracy**

+/-1%

**Ambient temperature**

-40...60°C

(-40...140°F),

With cooling jacket:

0...120°C

(32...248°F)

**Process temperature**

Any

**Process pressure / max. overpressure limit**

Any

**Main wetted parts**

Non-contact

**Process connection**

Non-contact

**Process connection hygienic**

Non-contact

**Sensor length**

PVT scintillator

400mm...2000mm

&gt;2000mm cascade mode

**Max. measurement distance**

Unlimited measuring range

Cascade

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**Continuous / Solids****Communication**

4...20 mA HART  
FOUNDATION Fieldbus  
PROFIBUS PA

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**Certificates / Approvals**

ATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

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**Safety approvals**

SIL1

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**Components**

Isotope: FSG60, FSG61  
Source container: FQG60, FQG61, FQG62, FQG63,  
FQG66  
Display: FHX40  
Mounting accessories: FHG60

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

Radiometric Limit

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**Characteristic / Application**

Compact transmitter

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**Specialities**

Interface measurement

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**Supply / Communication**

DC: 90-253V  
AC: 18-36V

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**Ambient temperature**

-40...60°C,  
(-40...140°F),  
With cooling jacket:  
0...120°C  
(32...248°F)

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**Point Level / Liquids**

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**Process temperature**Any

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

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**Min. density of medium**Any

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**Min. conductivity of medium**Any

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**Main wetted parts**Non-contact

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**Process connection**Non-contact

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**Process connection hygienic**Non-contact

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**Sensor length**

PVT scintillator 200 mm

PVT scintillator 400 mm

NaI scintillator 50x50mm

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**Communication**

4-20mA HART

FOUNDATION Fieldbus

PROFIBUS PA

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**Certificates / Approvals**ATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

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**Safety approvals**SIL1/ SIL2

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**Point Level / Liquids****Components**

Isotope: FSG60, FSG61

Source container: FQG60, FQG61, FQG62, FQG63,  
FQG66

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**Point Level / Solids****Measuring principle**Radiometric Limit

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**Characteristic / Application**Compact transmitter

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**Specialities**Optional separate housing

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**Supply / Communication**

AC: 90-253V

DC: 18-36V

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**Ambient temperature**

-40...60°C

(-40...140°F),

With cooling jacket:

0...120°C

(32...248°F)

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**Process temperature**Any

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

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**Min. density of medium**Any

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**Main wetted parts**Non-contact

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**Point Level / Solids****Process connection**Non-contact

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**Process connection hygienic**Non-contact

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**Sensor length**

PVT scintillator 200 mm (8")

PVT scintillator 400 mm (16")

Naj scintillator 50x50mm (2")

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**Communication**

4...20 mA HART

FOUNDATION Fieldbus

PROFIBUS PA

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**Certificates / Approvals**ATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

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**Safety approvals**SIL1/ SIL2

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**Components**

Isotope: FSG60, FSG61

Source container: FQG60, FQG61, FQG62, FQG63,  
FQG66

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**Density****Measuring principle**Radiometric Density

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**Characteristic / Application**Compact transmitter  
with PT100 input for  
temperature compensation

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## Density

**Supply / Communication**

AC: 90-253V

DC: 18-36V

**Ambient temperature**

-40°C...50°C / 60°C

With cooling jacket: 0°C...120°C

**Process temperature**

Any

**Process pressure**

Any

**Wetted parts**

Non-contact

**Hygienic**

Non-contact

**Sensor length**

NaJ scintillator 50x50mm

PVT scintillator 200...400mm

**Output**

4-20mA HART

FOUNDATION Fieldbus

PROFIBUS PA

**Certificates / Approvals**

ATEX, FM, CSA, IECEx, TIIS, NEPSI, GOST

**Components**

Isotope: FSG60

Source container: FQG60, FQG61, FQG62, FQG63,

QG2000

**Other approvals and certificates**

SIL1

More information [www.ca.endress.com/FMG60](http://www.ca.endress.com/FMG60)