

Radiometric Level and density measurement Gammapilot FMG60

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



More information and current pricing:

www.be.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

Characteristic / Application

Compact transmitter

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

Interface measurementInterfaces liquid / liquid also with emulsion layers and interfaces liquid /
solid

SpecialitiesInterface, density and mass flow measurement

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 temperatureAny

Process pressure / max. overpressure limitAny

Main wetted partsNon-contact

Continuous / Liquids**Process connection**Non-contact

Process connection hygienicNon-contact

Sensor length

PVT scintillator

400mm...2000mm

>2000mm cascade mode

Max. measurement distance

Unlimited measuring range

Cascade

Communication

4...20 mA HART

FOUNDATION Fieldbus

PROFIBUS PA

Certificates / ApprovalsATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

Safety approvalsSIL1

Components

Isotope: FSG60, FSG61

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

Display: FHX40

Mounting accessories: FHG60

Continuous / Solids**Measuring principle**Radiometric

Characteristic / ApplicationCompact transmitter

Continuous / Solids**Specialities**Cascading for high silos

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 temperatureAny

Process pressure / max. overpressure limitAny

Main wetted partsNon-contact

Process connectionNon-contact

Process connection hygienicNon-contact

Sensor length

PVT scintillator

400mm...2000mm

>2000mm cascade mode

Continuous / Solids**Max. measurement distance**

Unlimited measuring range

Cascade

Communication

4...20 mA HART

FOUNDATION Fieldbus

PROFIBUS PA

Certificates / Approvals

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

Safety approvals

SIL1

Components

Isotope: FSG60, FSG61

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

Display: FHX40

Mounting accessories: FHG60

Point Level / Liquids**Measuring principle**

Radiometric Limit

Characteristic / Application

Compact transmitter

Specialities

Interface measurement

Supply / Communication

DC: 90-253V

AC: 18-36V

Point Level / Liquids

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

Min. density of medium

Any

Min. conductivity of medium

Any

Main wetted parts

Non-contact

Process connection

Non-contact

Process connection hygienic

Non-contact

Sensor length

PVT scintillator 200 mm
PVT scintillator 400 mm
NaI scintillator 50x50mm

Communication

4-20mA HART
FOUNDATION Fieldbus
PROFIBUS PA

Point Level / Liquids**Certificates / Approvals**

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

Safety approvals

SIL1/ SIL2

Components

Isotope: FSG60, FSG61

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

Point Level / Solids**Measuring principle**

Radiometric Limit

Characteristic / Application

Compact transmitter

Specialities

Optional separate housing

Supply / Communication

AC: 90-253V

DC: 18-36V

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

Point Level / Solids**Min. density of medium**Any

Main wetted partsNon-contact

Process connectionNon-contact

Process connection hygienicNon-contact

Sensor length

PVT scintillator 200 mm (8")

PVT scintillator 400 mm (16")

NaJ scintillator 50x50mm (2")

Communication

4...20 mA HART

FOUNDATION Fieldbus

PROFIBUS PA

Certificates / ApprovalsATEX, FM, CSA, IEC Ex, INMETRO, JPN, NEPSI, EAC

Safety approvalsSIL1/ SIL2

Components

Isotope: FSG60, FSG61

Source container: FQG60, FQG61, FQG62, FQG63,

FQG66

Density**Measuring principle**Radiometric Density

Density

Characteristic / Application

Compact transmitter
with PT100 input for
temperature compensation

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

Density

Components

Isotope: FSG60

Source container: FQG60, FQG61, FQG62, FQG63,
QG2000

Other approvals and certificates

SIL1

More information www.be.endress.com/FMG60