

# Датчики уровня FDR56, FDR57

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# Microwave barrier transceiver

## Soliwave FDR56

### Transceiver for non-contact point level detection in bulk solids



#### Benefits:

- Highly reliable measurement due to flush-mounted installation and possible non-contact installation as well as indication of the signal strength on the transceiver
- Mechanical robust solution ensures cost savings over the whole life cycle of the product: No wear and tear, process-wetted ceramic sensor diaphragm (optional), long serviceable life, maintenance free
- Electronics housing can be rotated by 360°, allowing adjustment into optimum position after installation
- Direct connection of the supply voltage (emitter and receiver separately or together)
- Mechanically compatible to FQR50/FDR50 microwave barrier, existing process connections can continue to be used; likewise, accessories such as adapter flanges, installation brackets and sight glasses can continue to be used

#### Specs at a glance

- **Process temperature** Non-contact installation: any Within installation: -40°C...+70°C (-40°F...+158°F) With high temperature adapter: up to +450°C (+842°F)
- **Process pressure / max. overpressure limit** Non-contact installation: any Within installation: 0.5 bar ... 6.8 bar (7.2 psi ... 99 psi) abs. With high pressure adapter: up to +21 bar (+305 psi) abs.
- **Min. density of medium** Solid weight: > 10 g/l

**Field of application:** The Soliwave FDR56 microwave barrier uses a contact-free procedure for detection of point levels. It can be installed in containers, conduits, shafts or on free fall shafts. It is possible to take a

measurement through non-metallic container materials from the outside. Suitable as point level switch for controlling and counting all types of bulk solids. It interacts with the Soliwave FQR56 emitter.

## Features and specifications

### Point Level / Solids

#### Measuring principle

Microwave barrier

#### Characteristic / Application

Transceiver

Non-contact point level detection and flow monitoring

Detecting, counting and positioning of objects

Monitoring of material transfer points

Detection and analysis of deposits and contamination

Installation:

Non-contact installation (transmission window) or front-flush installation (contact)

#### Specialities

Measurement range: max. 100 m

#### Supply / Communication

85 ... 253 VAC

20 ... 60 VDC/ 20 ... 30 VAC

#### Ambient temperature

-40°C...+70°C

(-40°F...+158°F)

#### Process temperature

Non-contact installation: any

Within installation:

-40°C...+70°C (-40°F...+158°F)

With high temperature adapter:

up to +450°C (+842°F)

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**Point Level / Solids****Process pressure / max. overpressure limit**

Non-contact installation: any  
Within installation:  
0.5 bar ... 6.8 bar (7.2 psi ... 99 psi) abs.  
With high pressure adapter:  
up to +21 bar (+305 psi) abs.

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**Min. density of medium**

Solid weight: > 10 g/l

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**Main wetted parts**

Non-contact installation:  
no wetted parts  
Within installation:  
316Ti or Aluminium;  
PTFE or Ceramic

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**Process connection**

1-1/2" R, 1-1/2" G, 1-1/2" NPT

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**Process connection hygienic**

Non-contact installation

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**Communication**

Relays SPDT  
Solid-State-Relaiy  
4 ... 20 mA

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**Certificates / Approvals**

ATEX, CSA C/US, IEC Ex

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**Design approvals**

EN10204-3.1

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Point Level / Solids

**Options**

Sight glass

High temperature adapter

High pressure adapter

Installation bracket

FAR50, FAR51, FAR52, FAR53, FAR54, FAR55

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**Components**

Transmitter: FQR56

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**Application limits**

Solid weight: < 10 g/l

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# Microwave barrier transceiver Soliwave FDR57

## Transceiver for non-contact point level detection and bulk flow monitoring



### Benefits:

- Simple assembly with R 1½, 1½ NPT thread or G 1½ (with lock nut)
- Mechanically robust construction ensures cost savings over the whole life cycle of the product: No wear and tear, process-wetted ceramic sensor diaphragm (optional), long serviceable life, maintenance free
- Mechanically compatible to FQR50/FDR50 and FQR56/FDR56 microwave barrier, existing process connections can be used; likewise, accessories such as adapter flanges, installation brackets and sight glasses can be used again
- Increased safety of the point level monitoring by optional integrated bulk flow monitoring
- Measuring principle almost independent of the process properties
- Can also be used in difficult applications, where other measurement methods fail
- Easy operation via the Nivotester FTR525 with graphical display saves time and reduces costs

### Specs at a glance

- **Process temperature** Non-contact installation: any Within installation: -40°C ... +70°C (-40°F ... +158°F) With high temperature adapter: up to +450°C (+842°F)
- **Process pressure / max. overpressure limit** Non-contact installation: any Within installation: 0.5 bar ... 6.8 bar (7.2 psi ... 99 psi) abs. With high pressure adapter: up to +21 bar (+305 psi) abs.
- **Min. density of medium** Solid weight: > 10 g/l

**Field of application:** The Soliwave microwave barrier uses a non-contact procedure for detection of point levels and bulk flow (flow / no flow,

trend). The device is also suitable for detecting and counting objects, detection of deposits as well as monitoring of filling processes and material transfer points. It can be installed in containers, conduits, hoppers, filling stations, shafts, filters or on free fall shafts. It is possible to take a measurement through non-metallic container materials from the outside.

## Features and specifications

### Point Level / Solids

#### Measuring principle

Microwave barrier

#### Characteristic / Application

Transceiver

Non-contact point level detection and flow monitoring

Detecting, counting and positioning of objects

Monitoring of material transfer points

Detection and analysis of deposits and contamination

Installation:

Non-contact installation (transmission window) or front-flush installation (contact)

#### Specialities

With optional integrated bulk flow monitoring

Parallel mode with up to 5 channels

Detection range limit: max. 100 m

Detection range flow: max. 10 m, depending on bulk solids

#### Supply / Communication

Via process transmitter with control unit Nivotester FTR525

#### Ambient temperature

-40 °C...+70 °C

(-40 °F...+158 °F)

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**Point Level / Solids****Process temperature**

Non-contact installation: any

Within installation:

-40°C ... +70°C

(-40°F ... +158°F)

With high temperature adapter:

up to +450°C (+842°F)

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**Process pressure / max. overpressure limit**

Non-contact installation: any

Within installation:

0.5 bar ... 6.8 bar

(7.2 psi ... 99 psi) abs.

With high pressure adapter:

up to +21 bar (+305 psi) abs.

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**Min. density of medium**

Solid weight: &gt; 10 g/l

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**Main wetted parts**

Non-contact installation:

no wetted parts

Within installation:

316Ti, PTFE or Ceramic

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**Process connection**

Threads:

1-1/2" R, 1-1/2" G, 1-1/2" NPT

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**Communication**

Via process transmitter with control unit Nivotester FTR525

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**Certificates / Approvals**

ATEX, CSA C/US, IEC Ex

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**Design approvals**

EN10204-3.1



Point Level / Solids

**Options**

Sight glass

High temperature adapter

High pressure adapter

Installation bracket

FAR50, FAR51, FAR52, FAR53, FAR54, FAR55

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**Components**

Transmitter: FQR57

Process transmitter: FTR525

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**Application limits**

Solid weight: < 10 g/l

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