

# Level detection of bulk solids

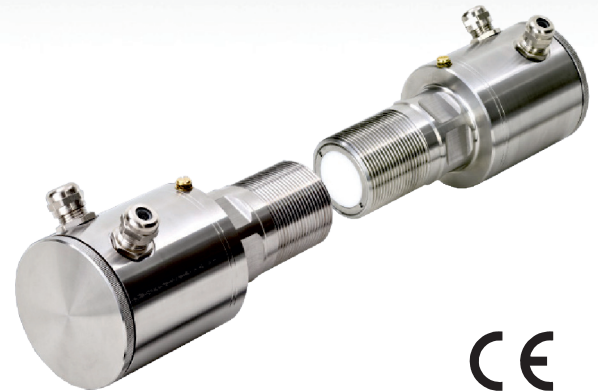
## Microwave barrier

### System description

The measurement system DYNAguard L is a microwave barrier and consist of a transmitter and a receiver unit. It is used for level monitoring or level detection of bulk material e.g. in silos, pipelines, chutes, containers, feeding- / receiving vessels and hoppers.

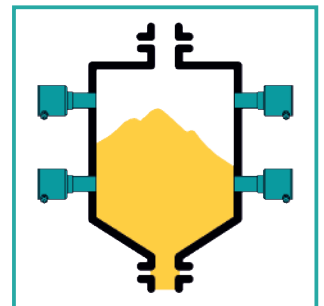
Based on the latest microwave technology, the transmitter unit sends out microwaves which are evaluated by the receiver unit. Bulk material that is conveyed e.g. into a hopper is piling up slowly between transmitter and receiver and attenuates the signal. This initiates an individually adjustable switching operation which indicates that a certain level in the hopper is reached. Conversely the system can be used for minimum level detection also when silos are emptied.

The DYNAguard L can also measure through electrical insulators. In case of special process conditions (temperature, pressure, specific products) this allows also to disconnect the system from the vessel to be monitored.



### Technical Data:

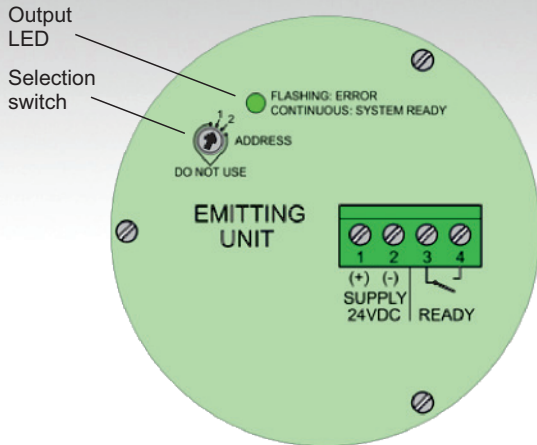
Material of housing:	Stainless steel
Sensor surface:	Plastic [optionally ceramic for abrasive substances]
International Protection Rating:	IP65
Weight Measuring System:	2.6 kg
Storage temperature:	-20 °C bis 60 °C [non-condensing]
Operating temperature:	-20 °C bis 60 °C [non-condensing]
Process temperature:	-20 °C bis 85 °C
Process pressure:	Max. 2 bar [optionally 25 bar with ceramic sensor surface]
Operating voltage:	24 VDC [18 VDC ... 30 VDC]
Current drain Transmitter/Receiver:	Max. 80 mA
Power:	< 2 W
Transmit frequency:	24.000 Ghz ... 24.250 GHz
Transmit power:	10 dBm
Measuring range	15 cm bis 25 m
Hysteresis:	Adjustable
Switching delay:	Adjustable [50 ms to 50 s]
Relay output:	SPST or SPDT, floating
Switching voltage:	35 VAC resp. 45 VDC
Switching current:	Min. 10 µA & max. 1 A
Switching power:	35 VA resp. 30 W
Cable gland:	M16
Connection:	Pluggable screw connectors



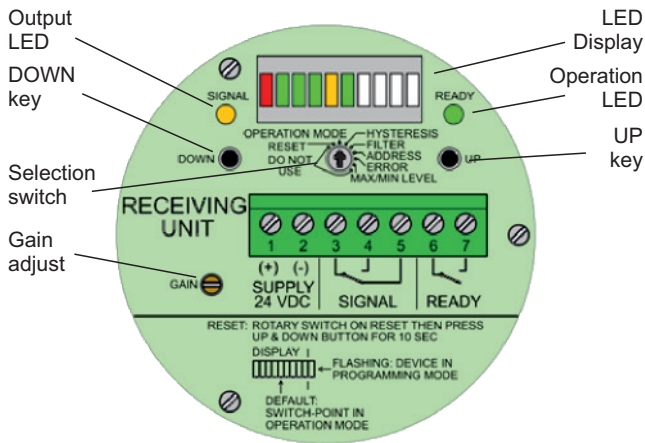
- Reliable level detection
- Contactless measurement
- Wide detection area
- Adjustable individually with LED display
- Easy installation also at GRP containers



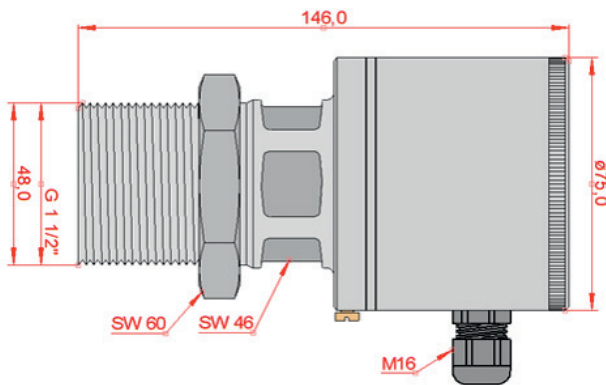
### Display and control elements transmitter



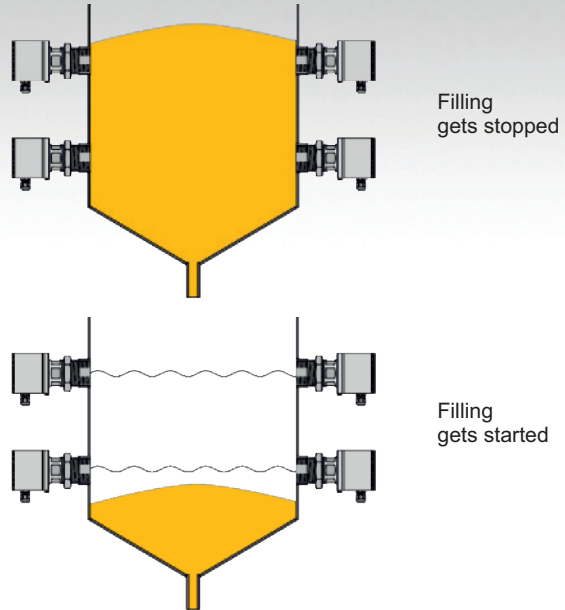
### Display and control elements receiver



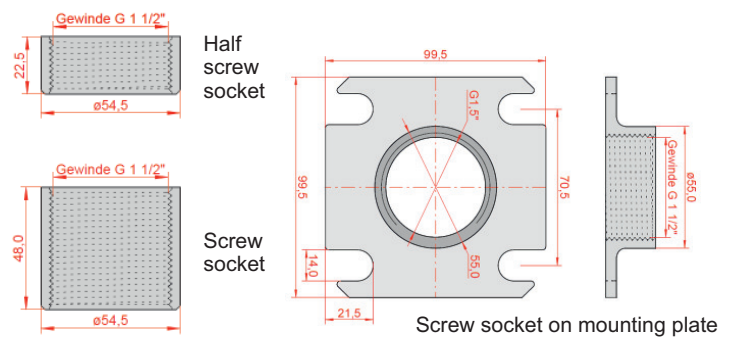
### Dimensions in mm



### Application



### Mounting



### Ordering key

#### DYNAguard A/B/C/D/E

- A: Outputs**  
L01: Relay output
- B: Size**  
G1,5: G 1 1/2" thread
- C: Housing material**  
10: Stainless steel 1.4305 (AISI 303)
- D: Sensor surface material**  
20: PTFE  
40: Ceramic
- E: Pressure**  
02: 2 bar  
25: 25 bar

Technical data subject to change without notice.

Contact your national or area sales and service office