

# MAFA Guided microwave - material inspection

## MAFA Guided microwave ATEX-classified according to EEX 1/2 D

MAFA guided microwave enables you to simply monitor delivered material and consumption.



### Level sensor Micro TREK H-400/H-500

A unit used to measure levels in conjunction with guided microwave consisting of level transmitter, 4 mm/8 mm cable with counterweight adapted to the height of the silo, holder with 1 inch/1.5 inch connection for sensor. Output signal analogue 4-20 mA. Digital panel instrument is available as an accessory.

Guided microwave is ideal for wood pellets, powder, granulate and fodder and works according to the TDR (Time Domain Reflectometry) principle, which is well-known in connection with measuring breaks in cables. Micropulses are transmitted along a rope at the speed of light.

When the pulse reaches the surface of the material, it is reflected back to the level gauge. The distance to the material is directly proportional to the pulse period. TDR technology is independent of the material and the space above it. The measured data is converted to a 4-20 mA current + HART signal for further processing.

## Technical data and installation

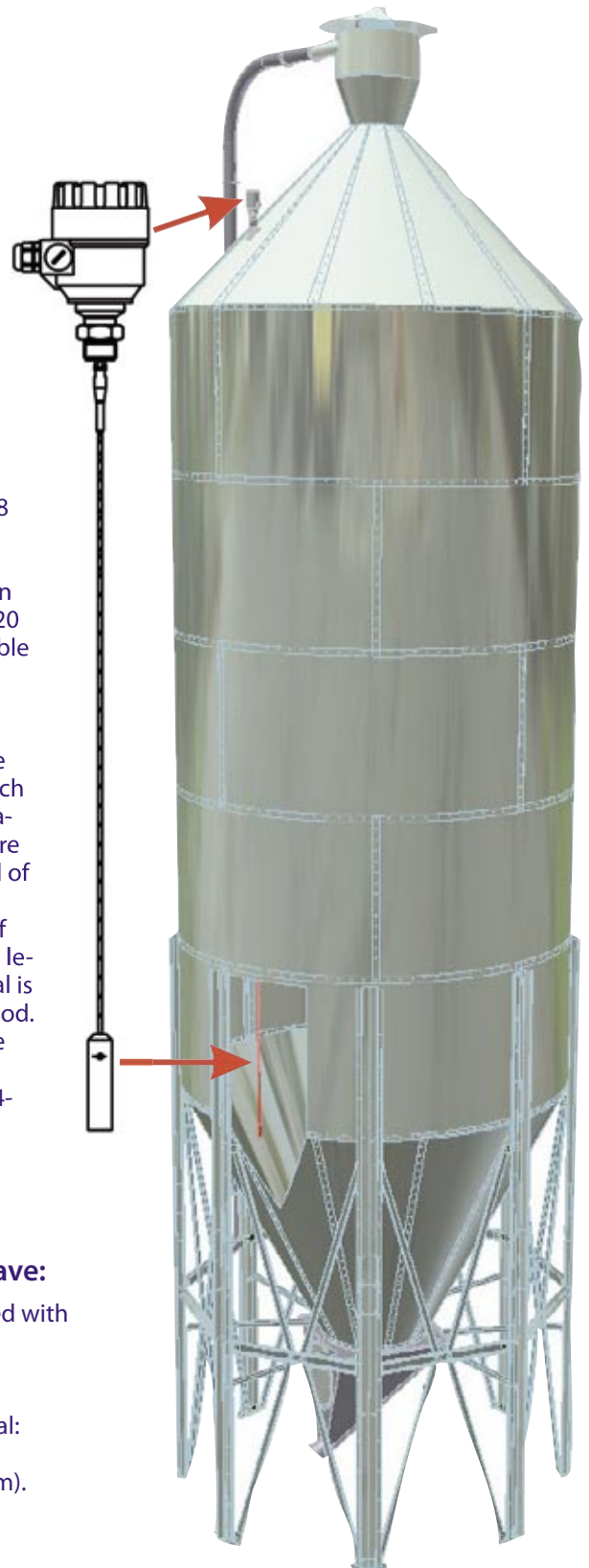


DD10-10S isolation amplifier 1-channel

### Specifications guided microwave:

2-wired TDR level transmitter. Supplied with corrosion free sonde.  
Range: max 24 m.  
Output 4-20 mA + HART.  
Accuracy for powder and bulk material:  
+/- 20 mm for length < 15m  
(+/- 20 mm +/- 0,05% for length > 15m).  
Power supply: 18-35 V DC  
Protection class: IP65  
ATEX-classified acc. to EEX 1/2 D.

At ATEX-classification always a isolation amplifier has to be used.



The illustration shows a MAFA BIB silo with guided microwave. 5 markers are used DD10-10S Isolation transmitter 1-channel.

# MAFA Guided microwave



PRW 110-5 built-in in plastic case with cable bushings. The instrument is used in those cases where there is no other overall control system.

## Level control MultiCONT

### Range of applications:

- Presentation of levels from Nivelco's sensor using HART.
- Handles various types and makes of HART-based sensors.
- Control and alarm functions via 4-20 mA and relay outputs.
- Additional outputs via supplementary modules.
- RS-485 output for connection to EXAC Monitor tank-presentation program.

### Specifications:

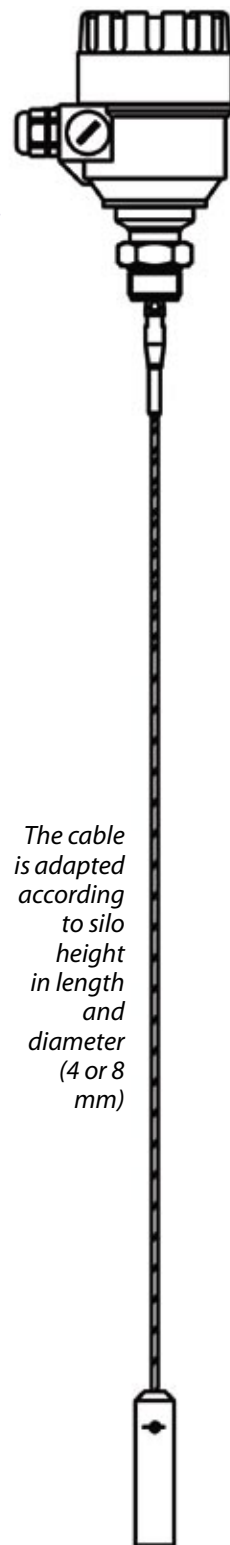
Supply voltage: 85 to 250 VAC, 10.5 to 28 VAC or 10.5 to 40 VDC

Temperature: -20 to +50 °C

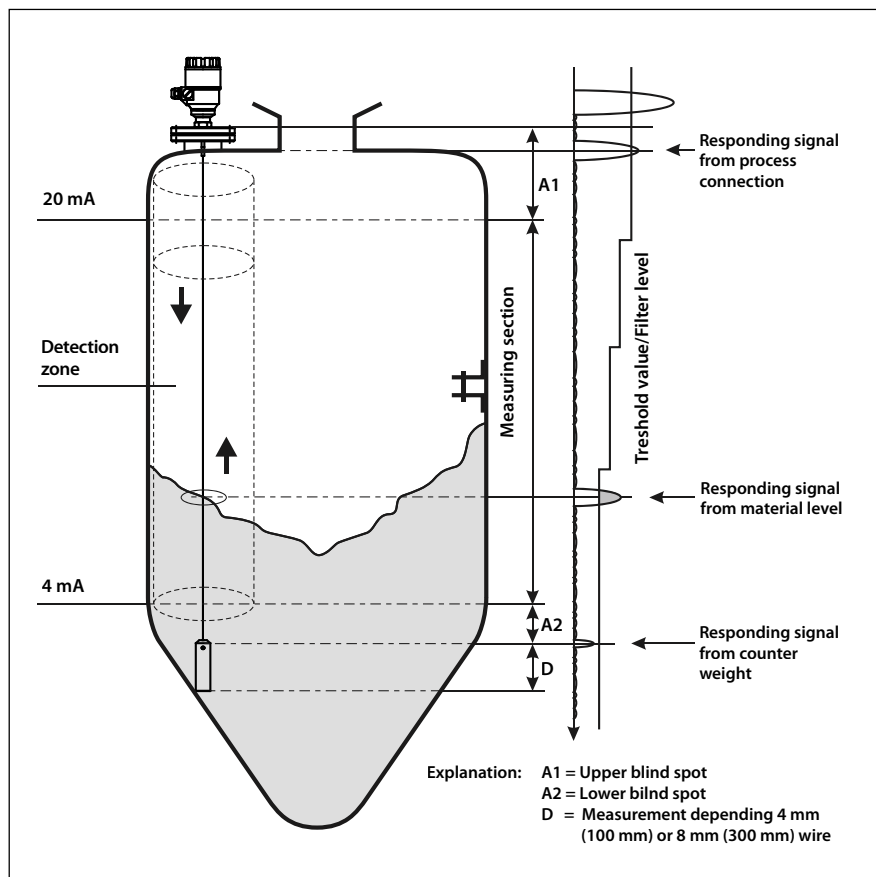
Output signal: 4 relays (SPDT), 2 x 4 to 20 mA, RS-485, more relays and outlets via supplementary modules

Enclosure class: IP 65.

Certificate: ATEX [EEx] ia



The cable is adapted according to silo height in length and diameter (4 or 8 mm)



### Installation:

For factory-assembled silos the radar on a rope can be supplied electrically mounted with electric cable connected to a junction box about 2 metres from the ground on the leg of the silo. Radar on a rope can be installed on existing silos

Further information about MAFA's Radar on a rope is available at [www.mafa.se](http://www.mafa.se)



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