



Füllstand



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analyse



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Technical Information

Silopilot M FMM50

Electromechanical Level Measuring System



Applications

The Silopilot M FMM50 is an electromechanical level measurement system. Depending on the sensing weight, the level in bunkers or silos can be measured - whether for dusty, fine or coarse - grained bulk products, or in tanks containing liquids. According to the mechanical design of the Silopilot and the fittings, measurement in silos or tanks can be performed at operating temperatures up to 230°C and at operating pressures up to 3 bar absolute, or in aggressive atmospheres, e.g. acidic or caustic vapours.

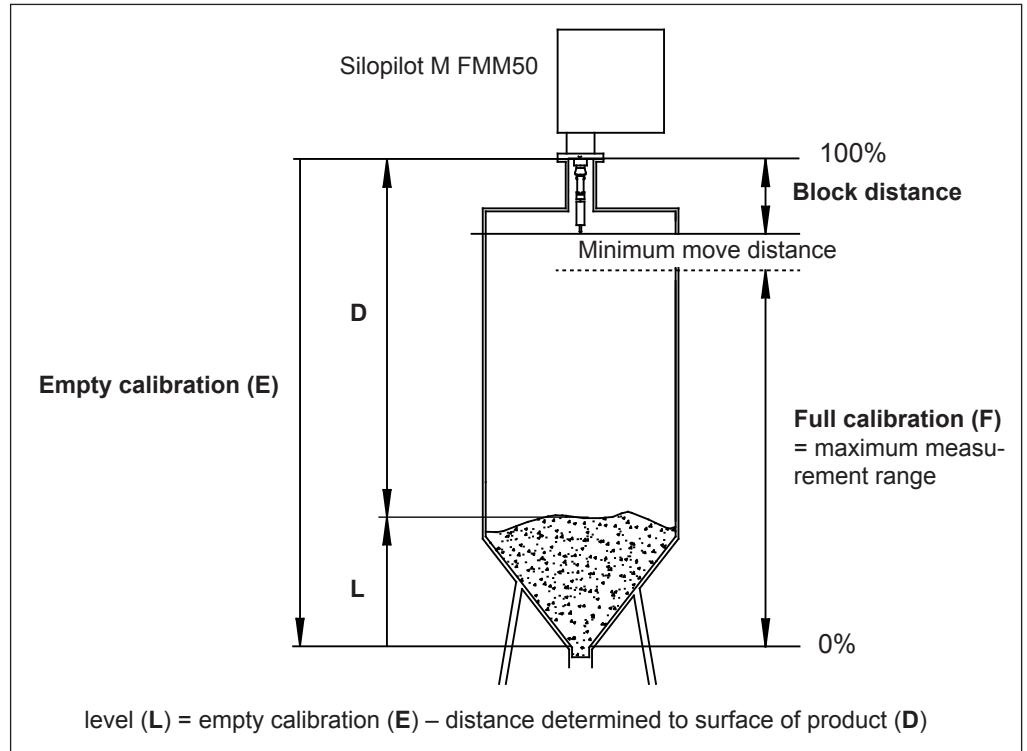
The advantages at a glance

- Measurement of levels up to 70 m irrespective of the product characteristics.
- Accuracy of ± 5 cm or ± 1 pulse, therefore precise detection of the level
- Compact transmitter with 0/4 - 20 mA current output as well as further free programmable signal outputs, e.g. counter pulse
- Quick menu-guided local operation using a 4-line text display
- Fully electronic digital minimum fail-safe control, therefore no running down of the sensor weight into the silo outlet and no risk to the conveying systems
- High performance three-phase engine (traction power up to 500N) using a single-phase supply voltage by employment of a converter, therefore simple electric supply
- Optional design with certification for application in areas subject to dust explosion hazard zones 20, 21 and 22 (measuring zone) or zones 21 and 22 (device zone), category 1/2D.

Function and system design

Measuring principle

A measuring tape, loaded with a sensing weight, is lowered into the bunker or silo. When the weight meets the surface of the product the tension on the measuring tape is relaxed and this is detected by the Silopilot electronics.



Determination of the measured value

The measured value is transmitted to the 0/4 - 20 mA current output. The sensing weight now runs back up to the start position and the measured value is retained until the next measurement is performed.

The current output signal represents the level (L). The unit is delivered with default values for the maximum measuring range according to the unit configuration (see ordering information). The menu-guided programming using the 4-line text display assures easy and fast adjustment to the bunker or silo geometry.

During the entire measuring process (lowering and hoisting of the sensing weight) the Silopilot can also transmit pulses (relay output) corresponding to the length of the measuring tape, which can be recorded by a control unit or by an electromechanical counter.

Both individual measurements and periodic measurement sequences can be performed. The measurement can then be initiated manually (e.g. external start button) or periodically (e.g. programmed function of the Silopilot).

Ordering information

Ordering information for Silopilot M FMM50

10	Approval:			
	A	Non-hazardous area		
	B	ATEX II 1/2D IP67 T99°C		
	Y	Special version, to be specified		
20	Housing:			
	1	Aluminium		
	2	Aluminium, coated		
	9	Special version, to be specified		
30	Motor traction power:			
	A	max. 250 N, bulk density low		
	B	max. 500 N, bulk density high		
	Y	Special version, to be specified		
40	Measuring range:			
	1	25 m		
	2	35 m		
	3	50 m		
	4	70 m		
	9	Special version, to be specified		
50	Max. nozzle height; tape wiper			
	A	230 mm, alu/steel		
	B	230 mm, stainless steel		
	C	500 mm, alu/steel		
	D	500 mm, stainless steel		
	E	1000 mm, alu/steel		
	F	1000 mm, stainless steel		
	Y	Special version, to be specified		
60	Power supply:			
	1	180 - 253 VAC, 50/60 Hz		
	2	90 - 127 VAC, 50/60 Hz		
	9	Special version, to be specified		
70	Output:			
	A	0/4 - 20 mA + 2x relay, adjustable: counting / reverse / upwards / max. position / alarm / limit / measuring active		
	B	0/4 - 20 mA + 6x relay, adjustable: counting / reverse / upwards / max. position / alarm / limit / measuring active		
	Y	Special version, to be specified		

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