



Level



Pressure



Flow



Temperature

Liquid
Analysis

Registration

Systems
Components

Services



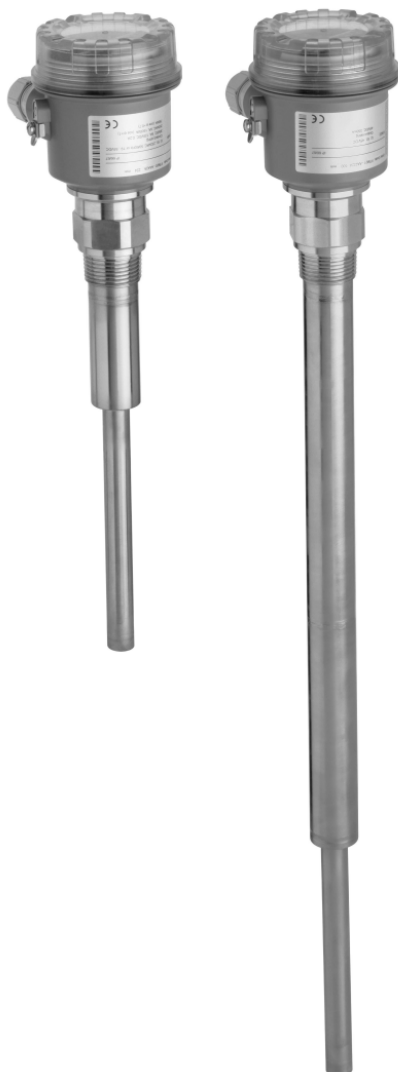
Solutions

Technical Information

Soliphant T FTM20, FTM21

Level limit switch

Robust vibration limit switch for bulk solids,
also for dust incensive hazard areas



Application

Soliphant T is a robust level limit switch for silos with fine-grained or coarse-grained, non-fluidised bulk solids. The various designs means the device has a wide range of applications. Certificates are also available for use in dust incensive hazard areas.

FTM20: compact design (250 mm) as vibrating rod for installation in any direction

FTM21: vibrating rod with extension pipe (500 mm/1000 mm/1500 mm/20 in/40 in/60 in) for installation in any direction

Typical applications: cereals, coffee beans, sugar, animal feed, rice, detergents, dye powder, chalk, gypsum, cement, sand, plastic granules

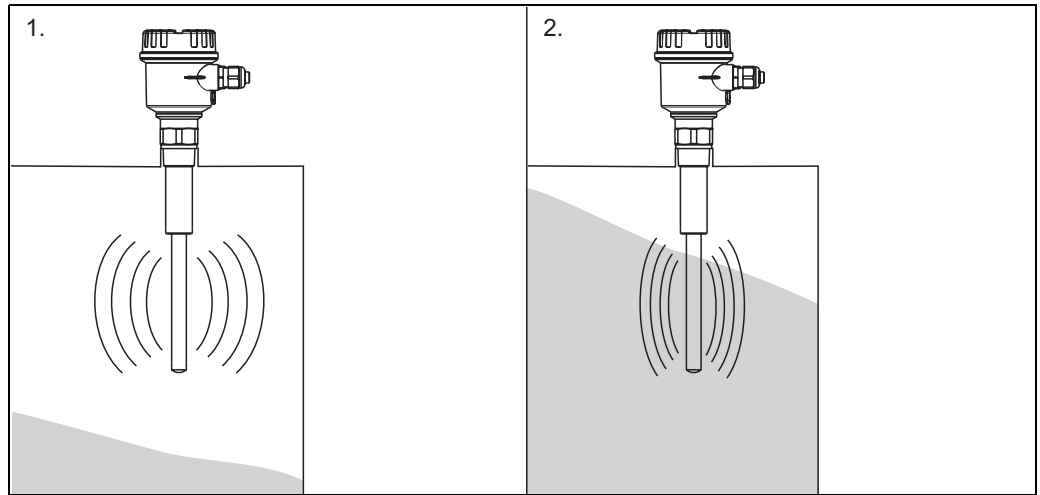
Your benefits

- No calibration: easy commissioning
- Insensitive to build-up: maintenance-free operation
- No mechanically moving parts: no wear, long operating life
- Sensor material 316L: hardly any abrasion even with building materials
- F16 plastic housing with cover with sight glass: switch status visible from outside
- F18 aluminium housing also available
- Insensitive to external vibration and flow noises
- Also available with explosion protection ATEX II 1/3 D, FM or CSA approval

Function and system design

Measuring principle

A piezoelectric drive excites the vibrating rod of Soliphant T FTM20, FTM21 to its resonance frequency. If medium covers the vibrating rod, the rod's vibrating amplitude changes (the vibration is damped). Soliphant's electronics compare the actual amplitude with a target value and indicates whether the vibrating rod is vibrating freely or whether it is covered by medium.



1. Vibrating amplitude with probe vibrating freely
2. Vibrating amplitude with probe covered

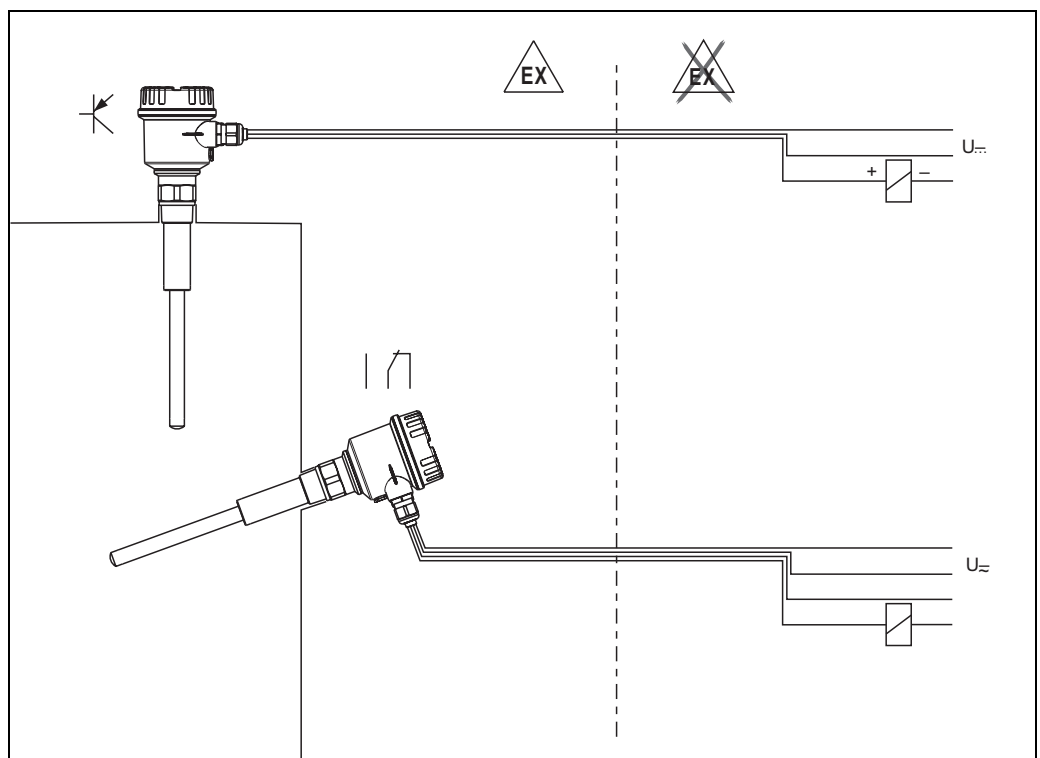
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Measuring system

Soliphant T is a compact electronic switch.

Thus, the entire measuring system only consists of:

- Soliphant T FTM20 or FTM21 with FEM22 or FEM24 electronic insert
- a supply point and
- the connected control systems, switching units, signalling systems (e.g. lamps, horns, PCS, PLC, etc.)



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Ordering information

Soliphant T FTM20

10	Approval				
	A	Non-hazardous area			
	C	CSA General Purpose, CSA C US			
	D	CSA DIP+FM DIP			
	Y	Special version			
	4	ATEX II 1/3 D			
20	Process connection				
	A	Thread, DIN2999	R1,	316L	
	G	Thread, DIN2999	R1½,	316L	
	M	Thread, ANSI	NPT1¼,	316L	
	N	Thread, ANSI	NPT1½,	316L	
	Y	Special version			
30	Electronics; output				
	2	FEM22:	3-wire PNP,	10... 45 V DC	
	4	FEM24:	Relay DPDT,	19...253 V AC / 55 V DC	
	9	Special version			
40	Housing; cable entry				
	2	F16	Polyester	IP66/IP67	M20 gland
	3	F16	Polyester	IP66/IP67	Thread, NPT½
	4	F16	Polyester	IP66/IP67	Thread, G½
	5	F18	Aluminium	IP66/IP67	M20 gland
	6	F18	Aluminium	IP66/IP67	Thread, NPT¾
	7	F18	Aluminium	IP66/IP67	Thread, G½
	9	Special version			
50	Additional fittings				
	A	Basic version			
	Y	Special version			
FTM20					Complete product designation

Soliphant T FTM21

10		Approval			
	A	Non-hazardous area			
	C	CSA General Purpose, CSA C US			
	D	CSA DIP+FM DIP			
	Y	Special version			
	4	ATEX II 1/3 D			
20		Process connection			
	A	Thread, DIN2999	R1,	316L	
	G	Thread, DIN2999	R1½,	316L	
	M	Thread, ANSI	NPT1¼,	316L	
	N	Thread, ANSI	NPT1½,	316L	
	Y	Special version			
25		Sensor length			
	2	500 mm			
	3	1000 mm			
	4	1500 mm			
	6	20 inch			
	7	40 inch			
	8	60 inch			
	9	Special version			
30		Electronics; output			
	2	FEM22:	3-wire PNP,	10...45 V DC	
	4	FEM24:	Relay DPDT,	19...253 V AC / 55 V DC	
	9	Special version			
40		Housing; cable entry			
	2	F16	Polyester	IP66/IP67	M20 gland
	3	F16	Polyester	IP66/IP67	Thread, NPT½
	4	F16	Polyester	IP66/IP67	Thread, G½
	5	F18	Aluminium	IP66/IP67	M20 gland
	6	F18	Aluminium	IP66/IP67	Thread, NPT¾
	7	F18	Aluminium	IP66/IP67	Thread, G½
	9	Special version			
50		Additional fittings			
	A	Basic version			
	Y	Special version			
FTM21		Complete product designation			

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