



Level



Pressure



Flow



Temperature

Liquid
Analysis

Registration

Systems
Components

Services



Solutions

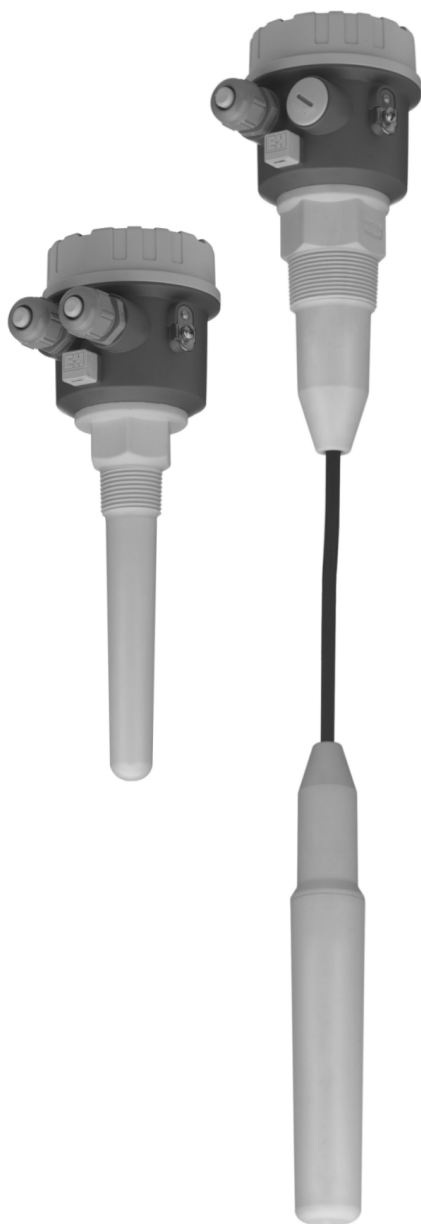
Technical Information

Minicap FTC260, FTC262

Capacitive Limit Detection

Compact switch for limit detection with active build-up compensation; No calibration necessary

Version available for dust explosion areas



Applications

Minicap is designed for limit detection of light bulk solids, with a grain size up to max. 30 mm and a dielectric constant $\epsilon_r \geq 1.6$, e.g. grain products, flour, milk powder, animal feed, cement, chalk or gypsum.

Versions:

- Minicap FTC260 (left): with 140 mm rod probe, with FDA listed material; for bulk solids and liquids
- Minicap FTC262 (right): with max. 6 m rope probe; for bulk solids
- Relay output (potential-free change-over contact / SPDT) with AC or DC power
- PNP output with three-wire DC power

Your Benefits

- Complete unit consisting of the probe and electronic insert:
 - simple mounting
 - no calibration on start-up
- Active build-up compensation
 - accurate switch point even with heavy build-up on the probe
 - high operational safety
- Mechanically rugged
 - no wearing parts
 - long operating life
 - no maintenance
- The rope probe of the Minicap FTC262 can be shortened
 - optimum matching to the measuring point in the silo
 - less stocks required

Function and system design

General Information

Technical specifications to DIN 19259

Measuring principle

Limit Detection

A metal plate at the end of the probe, within the insulation, and the integrated counter-electrode together with the surroundings combine to form the two electrodes of a capacitor.

If the probe is covered or free of material, then the capacitance changes and the Minicap switches.

Active Build-up Compensation

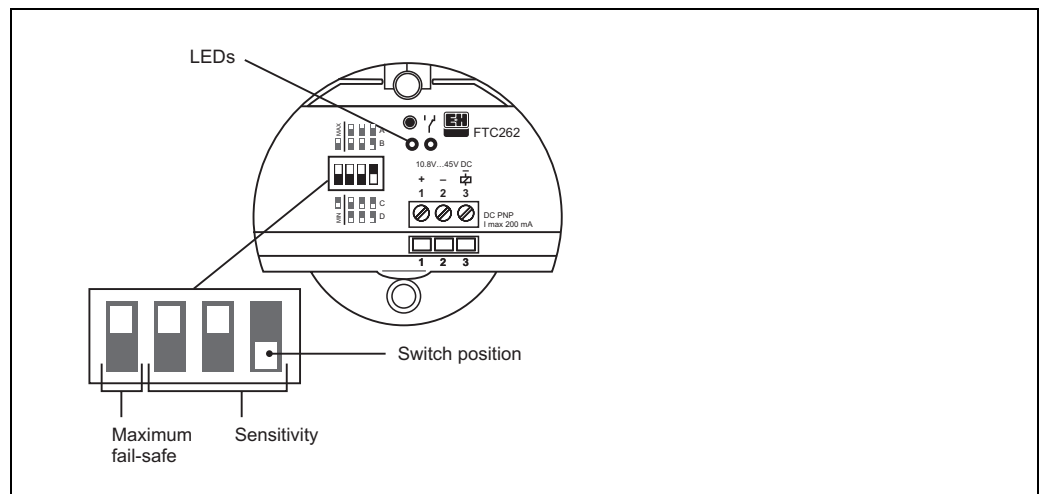
The Minicap detects build-up on the probe and compensates for its effects so that the switch point is always accurate. The effects of build-up compensation depend on:

- the thickness of the build-up on the probe,
- conductivity of the material,
- the sensitivity setting on the electronic insert.

Setting the Sensitivity

The Minicap is so calibrated at the factory that it correctly switches in most cases.

Greater sensitivity can be set using a multi-pole switch on the electronic insert. This is only necessary, however, if there is very strong build-up on the probe, or if the dielectric constant of the material ϵ_r is very small.



Factory setting on switches

L00-FTC20xxx-15-06-xx-en-001

Ordering information

Product structure FTC260

10	Approval			
	A	Non-hazardous area		
	D	Non-hazardous area, WHG		
	B	ATEX II 1/3 D		
	U	CSA, General purpose		
	S	CSA, DIP	Cl. II	Gr. E-G, Cl. III
J	FM, DIP	Cl. II, III	Gr. E-G, T5	
Y	Special version			
20	Process connection			
	A	Thread	DIN2999	R 1, PPS
	B	Thread	ANSI	NPT 1, PPS
	Y	Special version		
30	Switch output			
	2	3-wire	PNP	10.8...45 V DC
	4	Relay	20...253 V AC / 20...55 V DC	
	9	Special version		
40	Housing, Cable entry			
	B	F14 Polyester	IP66	Gland M20
	C	F14 Polyester	IP66	Thread NPT ½
	D	F14 Polyester	IP66	Thread G ½
	Y	Special version		
50	Additional option			
	1	Basic version		
	2	Transparent cover		
	9	Special version		
FTC260	Product designation			

Product structure FTC262

10	Approval				
	A	Non-hazardous area			
	B	ATEX II 1/3 D			
	U	CSA, General purpose			
	S	CSA, DIP	Cl. II, III	Gr. G+coal dust	Cl. III
	J	FM, DIP	Cl. II, III	Gr. E-G, T5	
	Y	Special version			
20	Process connection				
	A	Thread	DIN2999	R 1 ½,	PPS
	B	Thread	ANSI	NPT 1 ½,	PPS
	Y	Special version			
30	Probe length, L=500...6000 mm (20...236 inch)				
	1	... mm L (500...6000 mm)	steel	HD-PE insulated	
	2	... inch L (20... 236 inch)	steel	HD-PE insulated	
	3	1500 mm (59 inch)	steel	HD-PE insulated	
	4	2500 mm (98 inch)	steel	HD-PE insulated	
	5	4000 mm (157 inch)	steel	HD-PE insulated	
	6	6000 mm (236 inch)	steel	HD-PE insulated	
	9	Special version			
40	Switch output				
	2	3-wire	PNP	10.8...45 V DC	
	4	Relay 20...253 V AC / 20...55 V DC			
	9	Special version			
50	Housing, Cable entry				
	B	F14 Polyester	IP66	Gland M20	
	C	F14 Polyester	IP66	Thread NPT ½	
	D	F14 Polyester	IP66	Thread G ½	
	Y	Special version			
60	Additional option				
	1	Basic version			
	2	Transparent cover			
	9	Special version			
FTC262					Product designation

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