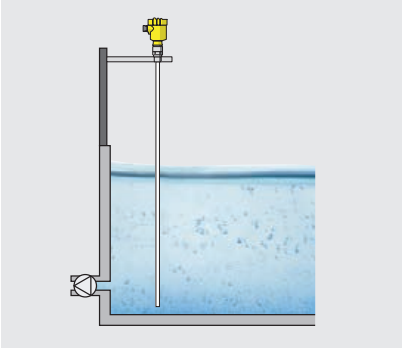
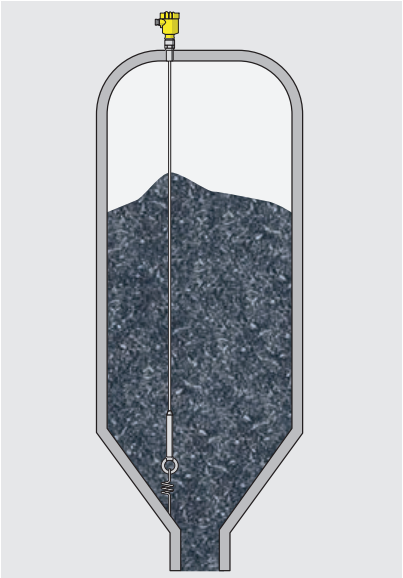
Level I Capacitive





Area of application

The robust level sensors of the VEGACAL series are used for level measurement in bulk solids and homogeneous liquids that have stable electrical properties. With the fully insulated instrument version, aggressive liquids as well as very adhesive products can be measured. The partly insulated version is preferably used for bulk solids.

Measuring principle

In capacitive level measurement, sensor and vessel form the two electrodes of a capacitor. Any change in capacitance due to a level change is converted into a level signal.

Advantages

This level measuring method is very economical and allows measurement over the entire sensor length without dead zone. Thanks to shortenable cable and rod versions, the sensors can be adapted to any application and are very easy to install. Its robust mechanical design is the basis for reliable, trouble and maintenance-free operation and a long service life.

	VEGACAL 62	VEGACAL 63	VEGACAL 64
			
Application	Bulk solids, non-conductive liquids	Liquids	Adhesive liquids
Measuring range	up to 6 m	up to 6 m	up to 4 m
Version	Partly insulated rod of steel, 316L, PTFE	Fully insulated rod of steel, 316L, PE, PTFE	Fully insulated rod of steel, 316L, FEP
Process fitting	Thread from G½, ½ NPT, flanges from DN 25, 1"	Thread from G½, ½ NPT, flanges from DN 25, 1"	Thread from G¾, ¾ NPT, flanges from DN 25, 1"
Process temperature	-50 … +200 °C	-50 … +200 °C	-50 … +150 °C
Process pressure	-1 … +64 bar (-100 … +6400 kPa)	-1 … +64 bar (-100 … +6400 kPa)	-1 … +64 bar (-100 … +6400 kPa)
Signal output	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus
Display/adjustment	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82
Approvals	ATEX, IEC, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, NEPSI, KOSHA	ATEX, IEC, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, NEPSI, KOSHA	ATEX, IEC, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, NEPSI, KOSHA
Benefit	▪ Maximum container utilization, because entire probe length is used for measuring ▪ Cost savings thanks to simple installation and setup		

Level I Capacitive

	VEGACAL 65	VEGACAL 66
		
Application	Bulk solids, non-conductive liquids	Liquids and bulk solids, not abrasive
Measuring range	up to 32 m	up to 32 m
Version	Partly insulated cable of steel, 316L, PTFE, PA	Fully insulated cable of steel, 316L, PTFE
Process fitting	Thread from G1, 1 NPT, flanges from DN 50, 2"	Thread from G1, 1 NPT, flanges from DN 50, 2"
Process temperature	-50 … +200 °C	-50 … +150 °C
Process pressure	-1 … +64 bar (-100 … +6400 kPa)	-1 … +40 bar (-100 … +4000 kPa)
Signal output	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus
Display/adjustment	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82
Approvals	ATEX, IEC, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, NEPSI, KOSHA	ATEX, IEC, FM, CSA, EAC (GOST), UKR Sepro, Overfill protection, Ship, SIL2, NEPSI, KOSHA
Benefit	▪ Maximum container utilization, because entire probe length is used for measuring ▪ Cost savings thanks to simple installation and setup	

	VEGACAL 67	VEGACAL 69
		
	Bulk solids with high process temperatures	Liquids in non-conductive vessels
	Rod up to 6 m; cable up to 40 m	up to 4 m
	Rod or cable of 316, 316L, PTFE, ceramic	Fully insulated double rod made of PTFE, PP, FEP
	Thread from G1½, 1½ NPT, flanges from DN 50, 2"	Flanges from DN 50, 2"
	-50 … +400 °C	-50 … +100 °C
	-1 … +16 bar (-100 … +1600 kPa)	-1 … +2 bar (-100 … +200 kPa)
	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus	4 ... 20 mA/HART, Profibus PA, Foundation Fieldbus
	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82	PLICSCOM, PACTware, VEGADIS 81, VEGADIS 82
	–	ATEX, IEC, EAC (GOST), UKR Sepro
	▪ Exact measuring results in almost all bulk solids and high temperature ranges	▪ Simple, fast installation thanks to compact, double rod design