Capacitive Level Limit Switches for Bulk Goods

- Switching accuracy: ±3 mm (6 mm)
- Pressure: max. 25 bar
- Temperature: max. 120 °C
- Connection: R 1 option: adapter R 1½ or G 1½
- Material: PPS
- Maintenance-free
- Deposit compensation

KOBOLD companies worldwide:
ARGENTINA, AUSTRIA, BELGIUM, CANADA, CHILE, CHINA, CZECH REPUBLIK, FRANCE, GERMANY, GREAT BRITAIN, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, SWITZERLAND, SINGAPORE, SLOVAKIA, THAILAND, USA, VENEZUELA, VIETNAM

KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
☎ +49(0)6192 299-0
Fax +49(0)6192 23398
E-Mail: info.de@kobold.com
Internet: www.kobold.com

Model:
NTS

01 / 1205 / Ko / 10

Description

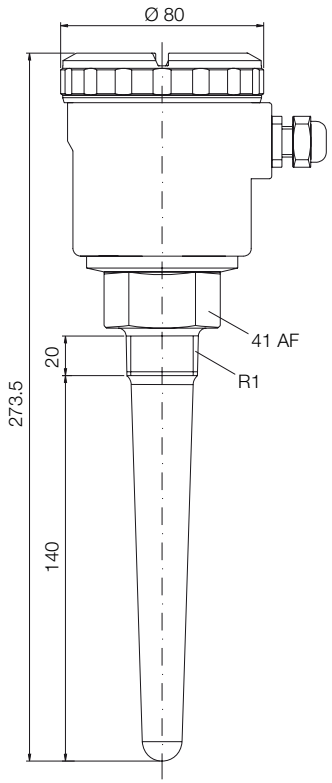
The KOBOLD NTS level limit switch for bulk goods operates on the capacitive measuring technique. The measuring probe, tank or vessel wall form a capacitor. The capacitance de-pends on the medium between probe and wall.
If air is present (tank empty), the capacitance is low. As soon as product touches the probe, the capacitance increases. This change in capacitance is detected electronically and converted to a switching signal when the capacitance rises above or drops below the limit. The instrument has a changeover feature for minimum/maximum safety. The switch point is always accurately maintained by the "deposit compensation" even with deposit formation. The effect of deposit compensation depends on the density of the coating on the probe, the conductance of the coating as well as the adjustable sensitivity. The NTS is adjusted at the factory; the sensitivity can be re-adjusted however. For non-conductive vessels the earth connection must be attached to nearby conductive and earthed objects.

Applications

NTS are suitable for level monitoring in powdery and fine-grained bulk materials, for example:

- Chalk, gypsum
- Cement
- Grain
- Flour, milk powder
- Mixed animal feed

Dimensions



Technical Details

Housing:	Plastic
Probe:	PPS (polyphenylene sulphide)
Medium:	DK value $\varepsilon_r \geq 1.6$ bulk materials upto grain size 30 mm
Connection:	R 1 male thread 2999/ISO 7 option: installation coupling R 1½ or G 1½
Auxiliary power:	**DC version** 10.8 to 45 V_{DC}/max. 30 mA **AC/DC version** 20 to 253 V_{AC} or 20 to 55 V_{DC} max. 130 mA
Output:	**DC version** PNP/I_{max} 200 mA overload and short-circuit proof **AC/DC version** relay: I_{max} 4 A ; I_{min} 1 mA; U_{max} 253 V U_{min} 6 V; P_{max} 1000 VA
Failure signal:	DC-PNP < 100 µA AC/DC relay dropped out
Switch delay:	0.5 s becoming uncovered / becoming covered
Error of measurement:	horizontal ± 3 mm vertical ± 6 mm
Hysteresis:	horizontal 4 mm vertical 7 mm
Switch point:	horizontal middle of probe -5 mm vertical 40 mm
Electrical connection:	terminal connection
Protection:	IP 66
Medium temperature:	-40 to 120 °C
Ambient temperature:	-40 to +70 °C
Operating pressure:	-1 to 25 bar

Order Details (Example: **NTS-1000 R25**)

Connection male thread	Order number	
	20-55 V_{DC} 20-253 V_{AC}	10.8-45 V_{DC}
Standard R 1 male thread	**NTS-1000 R25**	**NTS-1001 R25**
Option: with installation coupling R 1½	**NTS-1000 R40**	**NTS-1001 R40**
Option: with installation coupling G 1½	**NTS-1000 G40**	**NTS-1001 G40**

01 / 1205 / Ko / 10