

Introduction / Function

Introduction

Fields of application

The unit is used for level monitoring of electrical conductive liquids, muds etc. in all kinds of containers.

Type KN 2700: 1 point level limit switch
 Type KN 2800: 2 point level limit switch

Due to the robust design of the measuring bar, the unit may resist strong mechanical loads.

Use in oily and greasy liquids is not recommended, for this may cause an isolating coat on the measuring bar.

Due to the use of alternate current in the electrical measuring circuit, corrosion and electrochemical reaction is avoided.

Applications

Building materials industry
 mortar, mud, concret etc.

Chemical industry
 acidic, alkaline solution etc.
 (as far as 1.4301, PE, PUR is resistant)

Environmental technologie
 water level, sewage etc.

Approvals

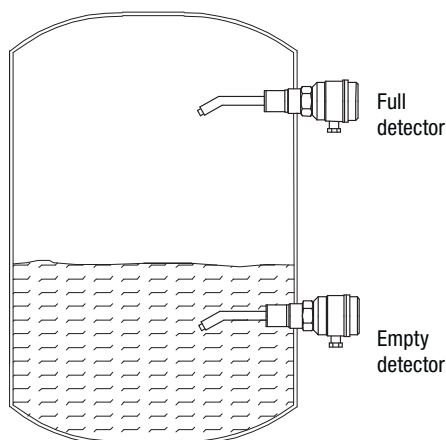
CE	EMC	EN 61326 / A1
	Electrical Safety	EN 61010-1

Function KN 2700

The conductive probe is screwed into the lateral container wall, so that it is level with the filling height to be registered and monitored. Due to the incline measuring bar, the sliding of material from the bar will be increased.

The probe is detecting a liquid by measuring its conductivity. The conductivity between the front of the measuring bar and the container wall will be measured.

Standard in every unit is a signal output delay, which can be adjusted. This causes a secure measurement in moving liquid surfaces.



Function KN 2800

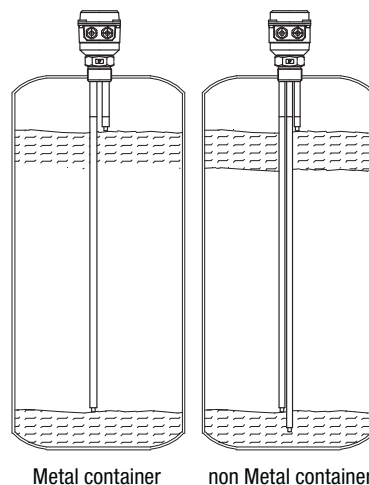
The conductive probe is screwed into the upper container wall. The ends of the measuring bars are level with the filling heights to be registered and monitored.

The probe is detecting a liquid by measuring its conductivity.

The conductivity between the end of the measuring bars and the container wall (2 bar unit) or the ground-bar (3 bar unit) will be measured.

If the liquid level is higher than the maximum-bar, the output signal signs „full“, if it is lower than the minimum-bar, it signs „empty“.

If the level is between the bars, the output signal remains on the last state.



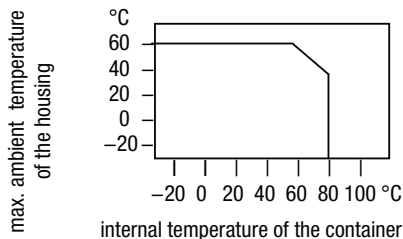
Technical data

Mechanical data

Housing:	Aluminium diecast housing RAL 5010 gentian blue
Enclosure:	IP 66 to EN 60529
Screwed piece:	
Material:	Stainless steel 1.4301/304; 1.4305/303 Isolation PE / PUR
Width across:	50mm
Thread:	G 1 1/2" ISO 228 NPT 1 1/2" conical ANSI B1.20.1
Overall weight:	approx. 1.2 kg
Options:	Weather protection cover

Operating conditions

Operating temperatures:	see drawing below
Features of material:	Conductive material, which has no strong propensity to cake or deposit and leave no coat of oil or grease on the measuring bar
max. Probe load:	KN 2700: max. 500N laterally (at the front of the bar) KN 2800: max. 100Nm laterally
max. Container pressure:	0.8 bar
in case of high mech. loading:	Mounting of a protective angle above the probe



Electrical data

Mains voltage:	alternative 220-240V / 110-120V / 42V / 24V +10% -15% 50/60 Hz
	20V - 30V DC max. ripple: 7 VSS
Installed load:	max. 2 VA AC max. 2W DC
Connection terminal:	max. 2.5mm ²
Screwed cable gland:	M20x1.5 cable gland NPT 1/2" conduit
Signal output:	potential-free relay point: AC max. 250V, 2A, 500VA at cosφ= 1 DC max 300V, 2A, 60W
Switch status display:	by built-in LED
Signal delay:	probe free -> covered approx. 0.5 sec. probe covered -> free adjustable approx. 0.5..6 sec. (only KN 2700) (other times on request)
Safety operation: (FSL, FSH)	to be switched over for minimum / maximum security
Sensitivity:	continuously variable setting range I (5k) approx. 500 - 4500Ω range II (50k) approx. 0.5 - 50kΩ range I and II switchable
Measuring voltage:	approx. 6V / 60 Hz potential-free to mains voltage isolating 3kV DC
Isolating:	Mains voltage to signal output: 3kV~
Protection class:	I