PROBE

TYPE R4 & KR

CONTENTS:

Retain these instructions for future use.

STANDARD PROBE FOR TANKS CONTAINING PETROL AND DIESEL.

- Temperature range -25°C to +50°C
- Probe for electronic level alarm
- Probe for overfill prevention

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Mounting instructions

Version with R 1”-thread for mounting in underground- or overground tanks.

Placement

In R 1”-connector on top of tank or on tank lid minimum 350 mm from inlet in tank or tank wall. When mounted in connected tanks always mount the probe in the tank that is filled first. In a cone shaped tank or in a tank with big tilt the probe have to be mounted in the lowest position or be adjusted downwards accordingly. The marking for the shut off level for the probe is not to be fixed higher than 25 mm below the ventilation pipe in the tank.

Length

The length of the probe should give 95% filling. The table shows the probel length from the thermistormarking to the flange including flange height of 30 mm and steel thickness of 5 mm.

Ajust length

1. If flange is higher of lower than 30 mm
2. If probe is placed on top of tank lid, increase the value with height of tank lid and the height of the tank neck.

Cutting

The pipe is cutted with a tube cutter. This work should be done outside the EX-Zone.

Assembly

Seal, ring, cone and screw is placed in the probe head.

1. Insert the cutted sensor pipe until it reaches the inner bottom surface level in the probe head.
2. Tighten the adjustment screw well.

Mounting (mechanical)

1. Use teflon tape. However make sure that the grounding of the probe is ok.
2. Tighten the probe well.

If the probe head is to be moulded compound from 3M type Scotchcast 1471N should be used.

Cable

Use 2 x 1,5 mm 2 screened cable f ex Ölflex SY. Cable in ground our when passing house grounds etc cable should be mechanicly protected with a non corrosive material (f ex PVC- or PVDF-pipe).
Connection cable is not to be placed in filling- or ventilation pipes.

Mounting (electrical)

At tank:

1. Put down the cable gland in the sensor pipe
2. Connect the cable in the cable socket (blue to blue - black to black)
3. Tighten the cablegland around the cable
4. Fill moulding compound in the probe head
5. Put on the lid. Tighten well so that the O-ring is pressed down firmly

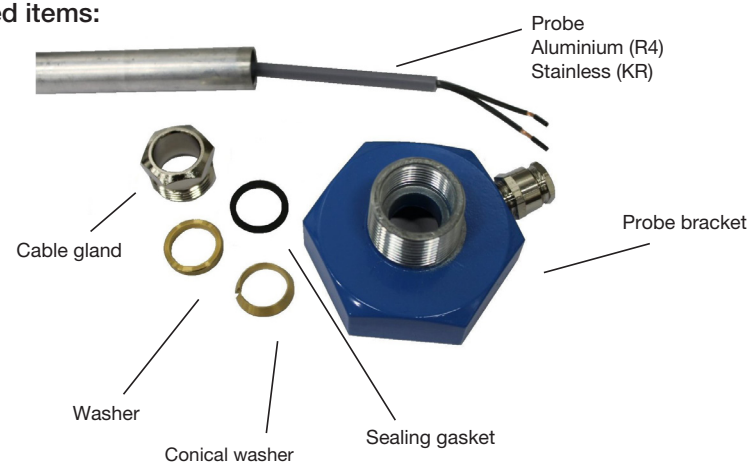
At connector:
The connector is to be mounted close to the filling point at a suitable height. Cable should be properly protected when put above ground. Cable is to be mounted from below into the connector. - Black wire to plus-pin - blue wire to minus-pin. Make sure that the connector is properly marked in order to prevent mix-up with other equipment.

Testing
Test the sensor using a thermistor tester. When testing in EX-zone tester must be EX-certified.

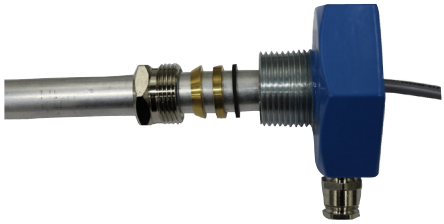
Repair
Repair and rebuilding of probe is not allowed since the approval for the probe will not be valid. Replace the probe with a new.

General provisions for installation and maintenance of explosion protected electrical equipment must be taken into account (EN 60079-14 and EN 60079-17 in European countries affiliated to CENELEC). The probe should be grounded through its mounting in the tank.

Included items:



Correct placement of seal and cable gland when assembled below:



Correct placement of seal and cable gland when assembled below:

The following formulas can be used to calculate the correct probe length

Horizontal cylindrical cistern

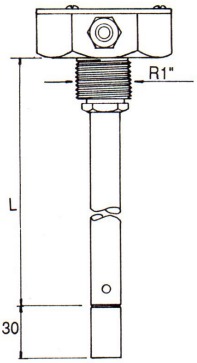
L = (Diam x 0,10) + M +T, M=height manhole etc, T=Thickness of the sheet metal

Rectangular or standing cylindrical tank

L = (Heigth x 0,05) + M +T, M=height manhole etc, T=Thickness of the sheet metal

MOUNTING TABLES

VERTICAL CYL. TANKS		BOX SHAPED OR STANDING CYL. TANKS			
1000	135	1000	105	3600	215
1100	145	1100	105	3700	220
1200	155	1200	105	3800	225
1300	165	1300	105	3900	230
1400	175	1400	105	4000	235
1500	185	1500	110	4100	240
1600	195	1600	115	4200	245
1700	205	1700	120	4300	250
1800	215	1800	125	4400	255
1900	225	1900	130	4500	260
2000	235	2000	135	4600	265
2100	245	2100	140	4700	270
2200	255	2200	145	4800	275
2300	265	2300	150	4900	280
2400	275	2400	155	5000	285
2500	285	2500	160	5100	290
2600	295	2600	165	5200	295
2700	305	2700	170	5300	300
2800	315	2800	175	5400	305
2900	325	2900	180	5500	310
3000	335	3000	185	5600	315
3100	345	3100	190	5700	320
3200	355	3200	195	5800	325
3300	365	3300	200		
3400	375	3400	205		
3500	385	3500	210		



AFRISO

CE

Declaration thermistor probe R4/KR

Declaration of conformity

Thermistor probe type R4/KR

The above name product is considered to be "simple apparatus" according to the ATEX directive (2014/34/EU). The ATEX directive is not applicable to simple components that consists of well defined and simple semiconductor devices.

The probes design is verified according to the requirements of the ATEX-directive

EN 60079-0 (2018)	Equipments - General requirements
EN 60079-11 (2012)	Explosive atmospheres - Equipments protected by intrinsic safety "i"

Intrinsically Safe Design :	II 1 G Ex ia IIB T3
Electrical Parameters :	Ci: 1 nF, Li: 10 uH, Ii: 200 mA Ui: 30,0 V, Pi: 1,25 W
Operating temperature :	-25 to +50° C
Conditions for use :	Must be connected to a barrier isolated from earth. With electrical parameters not exceeding the maximum value of the intrinsically safe output parameters of the connected barrier.

Afriso Ema AB declares under our sole responsibility, that the equipment specified above conforms to the above mentioned Directives and Standards.

Date: 2021-05-24

Signed:

Jonas Ericson Nihlstorp
CEO

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Notes

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