



NTR Ex small immersion probes

**Controlling devices with
magnetically operated reed contact,
for signalling or regulation
of liquid levels**



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**Option:
mounting brackets,
see pages 16-2-0 and following**

**The units described in this documentation
may only be installed, connected and
started up by suitably qualified personnel!**

**Subject to deviations from the diagrams
and technical data.**

**The details in this brochure are product
specification descriptions and do not
constitute assured properties in the legal
sense.**

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Construction and operating principle of the NTR Ex small immersion probes

The NTR Ex small immersion probes have a probe tube with a built-in reed contact. The float is fitted with a permanent magnet and moves freely up and down the probe tube, activating the reed contact as it rises and falls.

It should be noted that the reed contact does **not** lock but that it switches only for as long as it is influenced by the magnetic field. Once the float passes beyond the contact upwards or downwards, the latter returns to its original position.

Types overview

Following types are available:	Screw-in nipple	Protection class	Connecting cable	Page
NTR/FED/E8/B/PVC/ Variant 0/Ex-1G ⊕ II 2 G Ex ia IIC T6 Gb	G ¹ / ₂ upwards	IP54	PVC cable	3-4-3
NTR/FED/E8/C/PVC/ Variant 0/Ex-1G ⊕ II 2 G Ex ia IIC T6 Gb	G ¹ / ₂ downwards	IP65		3-4-3
NTR/FED/E8/C/PVC/ Variant 0/Ex-0G ⊕ II 2/1 G Ex ia IIC T6 Ga/Gb			3-4-5	
NTR/FED/E8/C/PURLF/ Variant 0/Ex-0G ⊕ II 1 G Ex ia IIC T6 Ga			antistatic PURLF cable (with external conductive PUR sheath)	3-4-5



NTR/FED/E8/./PVC/Variant 0/Ex-1G

II 2 G Ex ia IIC T6 Gb

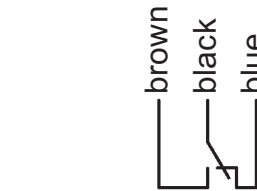
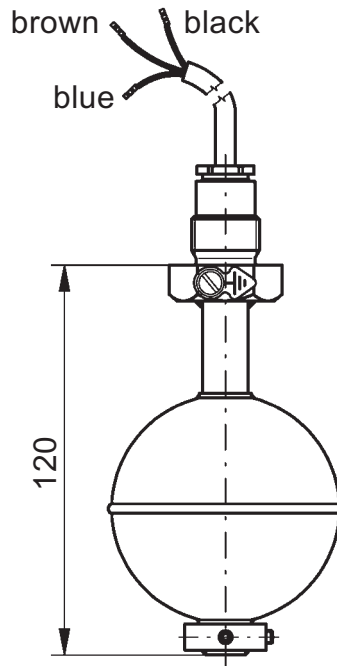
small immersion probes

Technical data	NTR/FED/E8/B/PVC/ Variant 0/Ex-1G II 2 G Ex ia IIC T6 Gb with G½ nipple – upwards	NTR/FED/E8/C/PVC/ Variant 0/Ex-1G II 2 G Ex ia IIC T6 Gb with G½ nipple – downwards
Application	for use in intrinsically safe circuits in potentially explosive atmospheres zone 1 or 2; EC type examination certificate INERIS 03ATEX0163X	
Probe tube: • material • diameter • length	stainless steel 316 Ti 14 mm 120 mm, measured from the nipple sealing surface; other length on request	
Screw-in nipple	G½ upwards G½ downwards (see opposite page)	
Float	stainless steel 316 Ti, 72 mm Ø	
Float suitable for use in media with a specific gravity	≥ 0.70 g/cm³	
Cable entry	nickel-plated brass, protection class IP54	nickel-plated brass, on request: stainless steel, protection class IP65
Connecting cable	PVC cable, other cable type on request	
Connecting cable length	3 m, other cable length on request	
Mounting orientation	vertical	
Temperature range	– 20°C to + 60°C	
Pressure resistance	for pressureless applications only, use only under atmospheric conditions; pressure resistance up to max. 10 bar on request	
Contact Min. distances to be observed (based on liquids with a specific gravity of 1 g/cm³): • from the nipple sealing surface to the contact • from the contact to the end of the probe tube (when float is falling)	reed contact: potential-free changeover contact approx. 60 mm approx. 60 mm	
Option	G½ counter nut made of stainless steel 316 Ti	

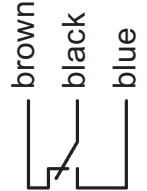
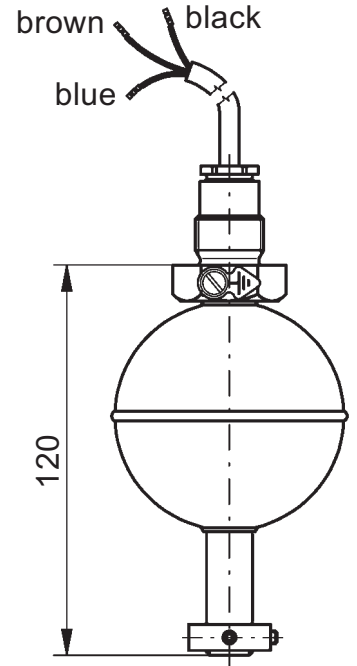
Versions for use in mines susceptible to firedamp with a II M2 Ex ia I Mb protection level on request.



**NTR/FED/E8/B/PVC/
Variant 0/Ex-1G**
 Ex II 2 G Ex ia IIC T6 Gb



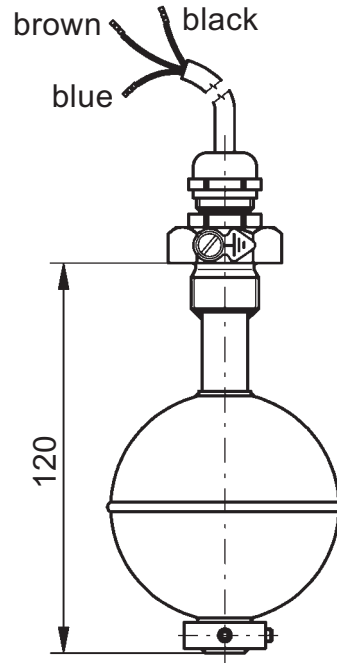
Contact position with
empty container



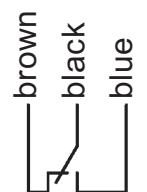
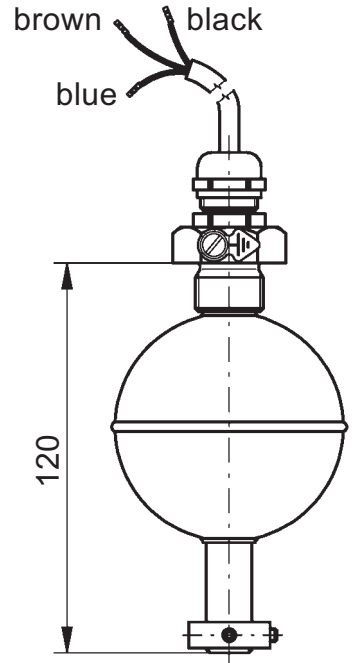
Contact position with
full container



**NTR/FED/E8/C/PVC/
Variant 0/Ex-1G**
 Ex II 2 G Ex ia IIC T6 Gb



Contact position with
empty container



Contact position with
full container



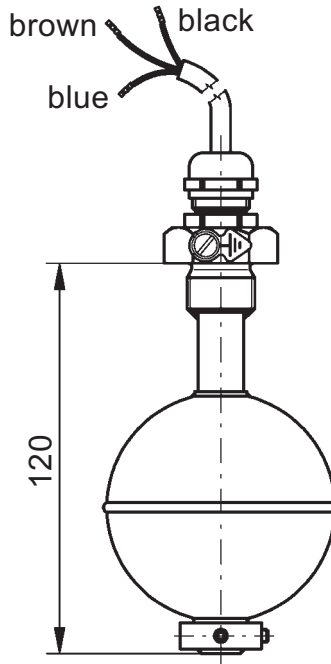
NTR/FED/E8/C/PVC/Variant 0/Ex-0G Ⓢ II 2/1 G Ex ia IIC T6 Ga/Gb and NTR/FED/E8/C/PURLF/Variant 0/Ex-0G Ⓢ II 1 G Ex ia IIC T6 Ga small immersion probes

Technical data	NTR/FED/E8/C/PVC/ Variant 0/Ex-0G Ⓢ II 2/1 G Ex ia IIC T6 Ga/Gb with G ^{1/2} nipple – downwards	NTR/FED/E8/C/PURLF/ Variant 0/Ex-0G Ⓢ II 1 G Ex ia IIC T6 Ga with G ^{1/2} nipple – downwards
Application	for use in intrinsically safe circuits in potentially explosive atmospheres • probe tube and float: zone 0, 1 or 2, • cable entry and cable: zone 1 or 2; EC type examination certificate INERIS 03ATEX0163X	
Probe tube: • material • diameter • length	stainless steel 316 Ti 14 mm 120 mm, measured from the nipple sealing surface; other length on request	
Screw-in nipple	G ^{1/2} downwards (see opposite page)	
Float Float suitable for use in media with a specific gravity	stainless steel 316 Ti, 72 mm Ø ≥ 0.70 g/cm ³	
Cable entry	nickel-plated brass, on request: stainless steel, protection class IP65	
Connecting cable	PVC cable, other cable type on request	antistatic PURLF cable (with external conductive PUR sheath)
Connecting cable length	3 m, other cable length on request	3 m, other cable length on request (max. 10 m)
Mounting orientation Temperature range Pressure resistance	vertical – 20°C to + 60°C for pressureless applications only, use only under atmospheric conditions; pressure resistance up to max. 10 bar on request	
Contact Min. distances to be observed (based on liquids with a specific gravity of 1 g/cm ³): • from the nipple sealing surface to the contact • from the contact to the end of the probe tube (when float is falling)	reed contact: potential-free changeover contact approx. 60 mm approx. 60 mm	
Option	G ^{1/2} counter nut made of stainless steel 316 Ti	

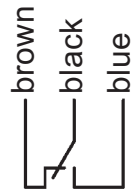
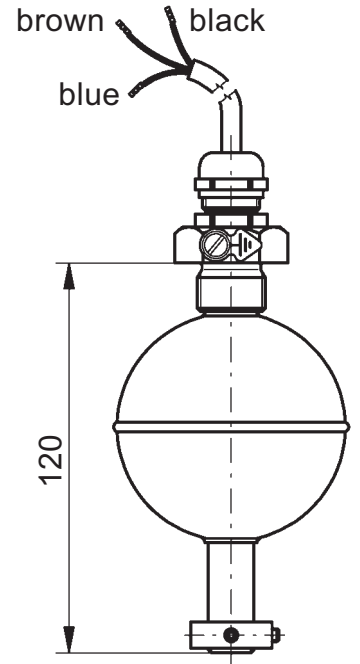
Versions for use in mines susceptible to firedamp with a Ⓢ I M2 Ex ia I Mb protection level on request.



**NTR/FED/E8/C/PVC/
Variant 0/Ex-0G**
 Ⓜ II 2/1 G Ex ia IIC T6 Ga/Gb



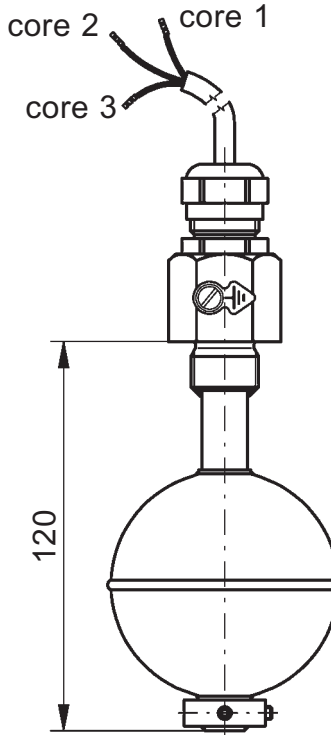
Contact position with
empty container



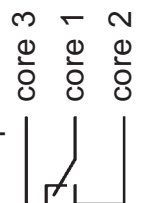
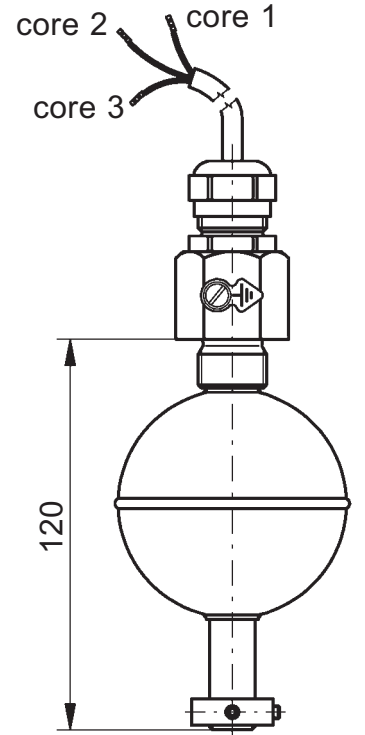
Contact position with
full container



**NTR/FED/E8/C/PURLF/
Variant 0/Ex-0G**
 Ⓜ II 1 G Ex ia IIC T6 Ga



Contact position
with empty
container



Contact position
with full
container