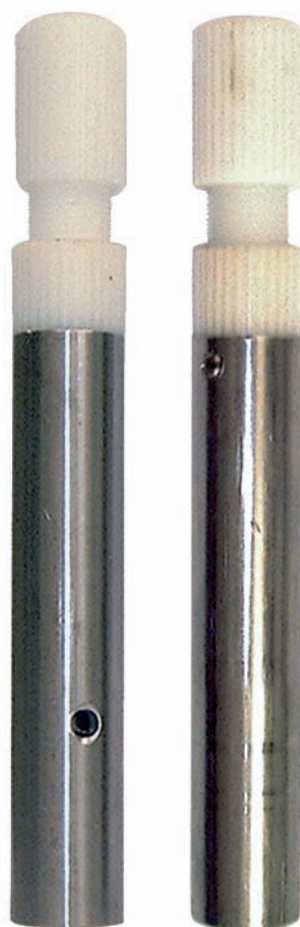


**Conductive level electrode for well and bore-hole
EF & EFC**



INSTRUCTIONS MANUAL

BAMO MESURES

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**Conductive level electrodes
for well & bore-hole**

EF & EFC

21-01-2014

542 M1 02 B

NIV

542-02/1

SAFETY PRECAUTIONS

- Installation, initial start-up and maintenance may only be performed by trained personnel.
- All applicable European and national regulations regarding installation of electrical equipment must be adhered to.
- The device may only be operated under the conditions specified in the operating instructions.

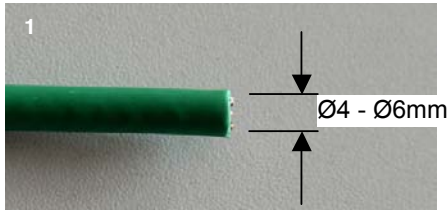
FUNCTIONS DESCRIPTION

With EF-probes the level of conductive liquids can be detected. Its function is based on the conductive measurement, i. e. the electrical resistance between the reference electrode and the probe electrode is measured. A high resistance is measured, if the conductive liquid is not wetting the electrode. A low resistance is measured, if the conductive liquid is wetting the electrode and "connecting" the electrodes. The connected resistive amplifier relay ES2001 detects this change of resistance and switches the attached relay contacts. EF 16 electrodes are equipped with one electrode. EFC 16 is equipped with a probe electrode and reference electrode (housing).

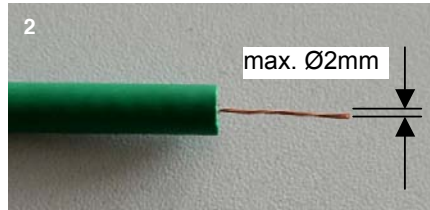
TECHNICAL FEATURES

Housing:	Stainless steel (316L)
Electrode:	Stainless steel (316L)
Insulation:	Delrin (Polyacetal)
Max. temperature:	100°C
Attachment:	Hanging on cable
Cable length:	On request - The coaxial cable of EFC 16 electrodes is coated in PVC.
CE Mark:	In accordance with low-voltage directive RL 2006/95/EC and EMC directive 2004/108/EC

MOUNTING OF EF PROBE



1
Cable with outer diameter $\varnothing 4 - \varnothing 6\text{mm}$, conductor $\varnothing 2\text{mm}$
alternative: coaxial cable



2
Skinning ca. 15mm
alternative: remove coat, shield and dielectrikum



3
Putting on the upper part (with thread)



4
Placing neoprene sealing ($\varnothing 10.5 \times 2 - 14.5\text{mm}$)



5
Placing brass washer ($\varnothing 10 \times 2 - 0.6\text{mm}$)



6
placing brass turning piece (ca. $\varnothing 8 \times 8.5\text{mm}$, tip with cone)



7
Placing brass turning piece up till cable coating



8
folding the conductor



9
Putting on stainless turning piece



10
Putting on the coaxial cable and screwing it with the upper part



11

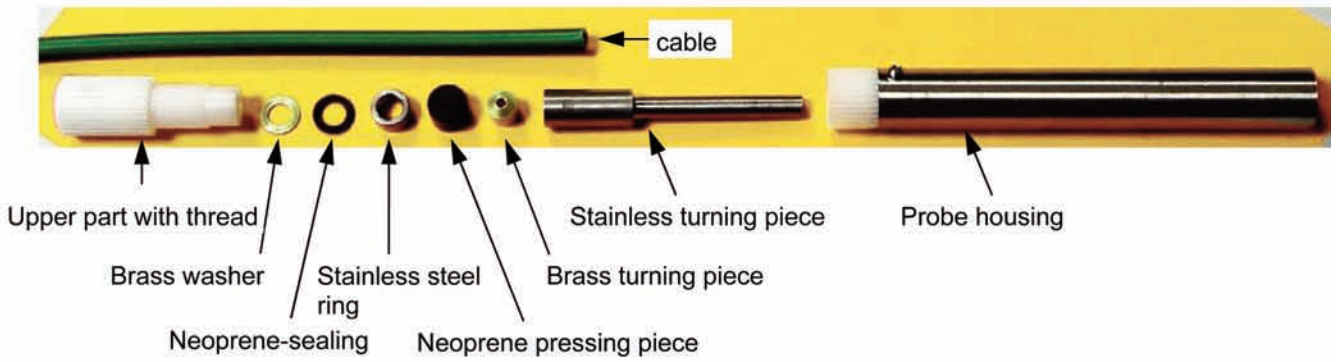


Don't forget to check the electric continuity to validate the good mounting of all parts.

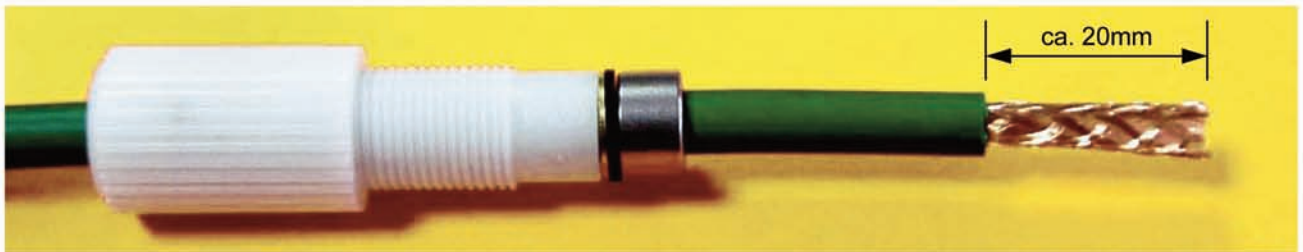
- **EF probe:** Check the electrical continuity between central part of the electrode and the main conductor at the other side of the coaxial cable.

MOUNTING OF EFC PROBE

Components of the probe:



Beading of upper part with thread, brass washer, neoprene sealing and stainless steel ring on the cable



Skinning the cable



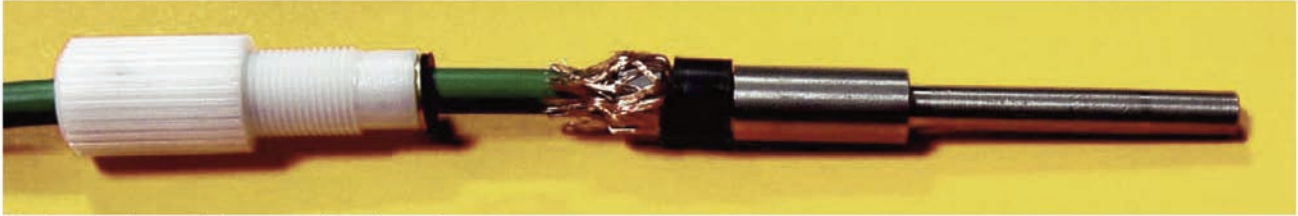
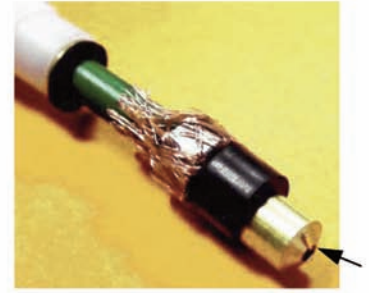
Sliding the stainless steel ring to the leading edge of the coating and putting the shield over it.



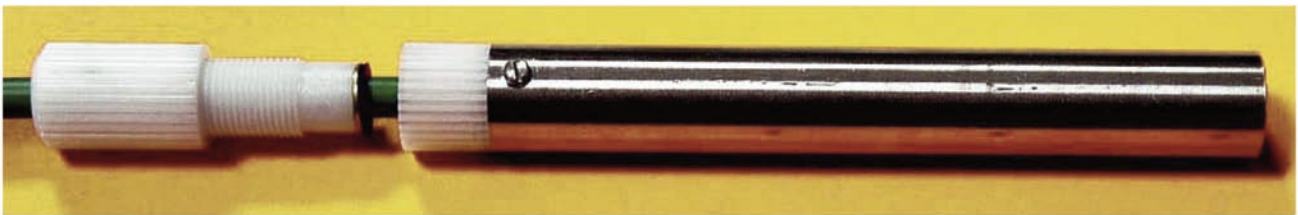
Skinning the dielectric



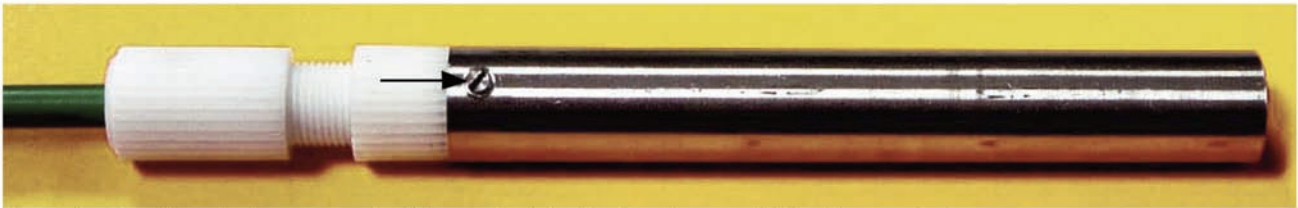
Beading on of the neoprene pressing piece and brass turning piece



Putting on the stainless steel turning piece



Inserting the cable with the components in the probe housing



Screwing the threaded upper part of the probe into the housing and fixing the contact screw



Don't forget to check the electric continuity to validate the good mounting of all parts.

- **EFC probe:** (1) Check the electrical continuity between central part of the electrode and the main conductor at the other side of the coaxial cable
- (2) Check the electrical continuity between external ring of the electrode and the shield at the other side of the coaxial cable.