



Instructions Manual



1. INTRODUCTION

When an installation requires that the electromagnetic sensor is separated from the control unit, the union between these two elements must be made by means of an interconnection cable.

Normally, these cables are supplied by Tecfluid S.A., already prepared for its direct connection to the sensor and the converter.



Important: The interconnection cable between the sensor and the converter must always be a single piece, **without any type of joint**.

In the event of having to repair a broken cable at either end, it should be cut at the break and at this point prepared for the connexion.

2. PREPARING THE CABLE

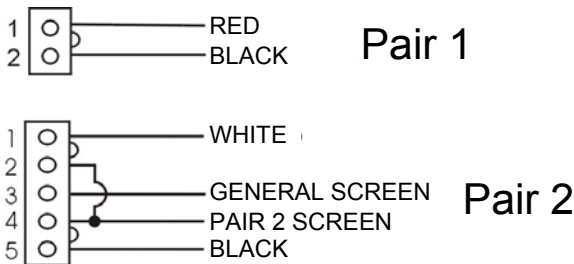
The ends of the cable should be prepared as shown in the drawing on page 3. Special care should be taken to avoid possible short circuits between the shields. The point at which the shields are cut refers to the aluminium shields.

Electronics side

At the electronic unit's end, the ends of the cables should be striped at about 5 mm and then tined. Pair 1 (Red & Black) is for the excitation coils and Pair 2 (White & Black) is for the electrodes.

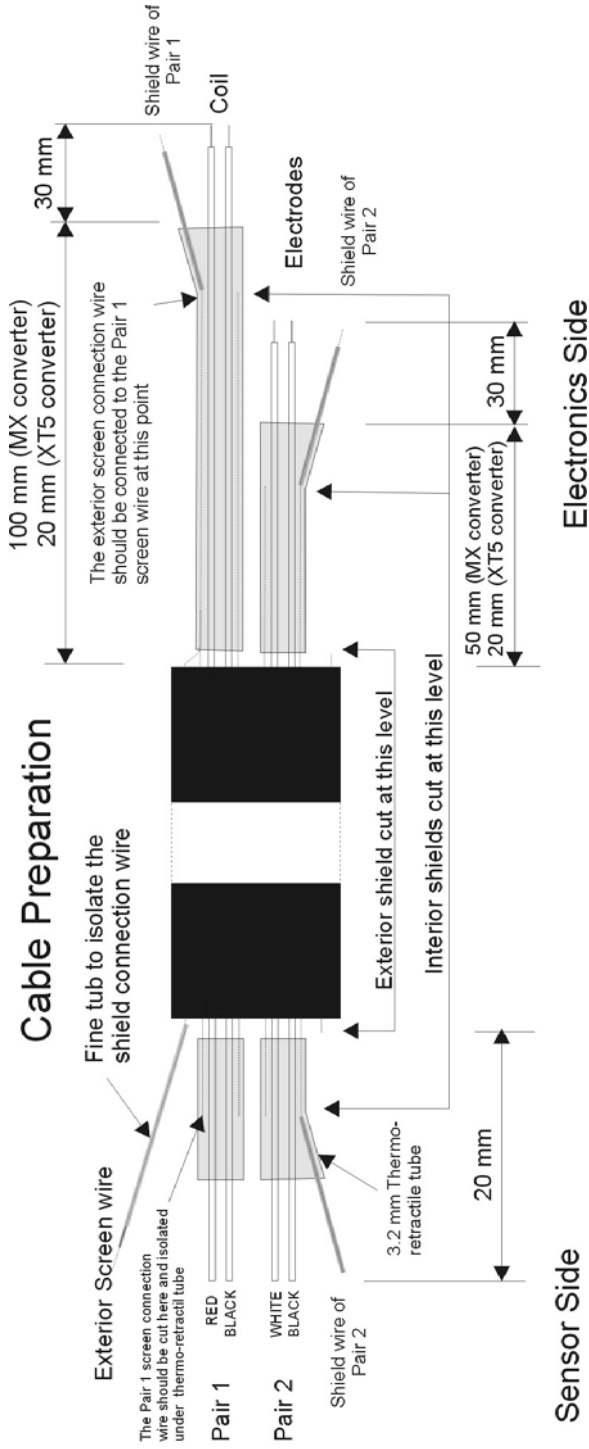
Sensor side

Pass the sensor side end through the cable gland of the sensor connectors cover and then connect the cables of this end to the IDC connectors as shown in the following drawing.



Terminals 2 and 4 of the 5 way connector should be connected together.

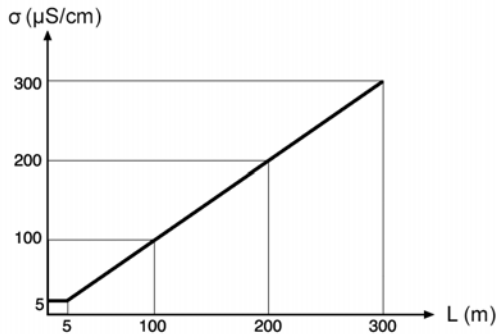
Cable Preparation



3. INSTALLATION OF THE INTERCONNECTION CABLE

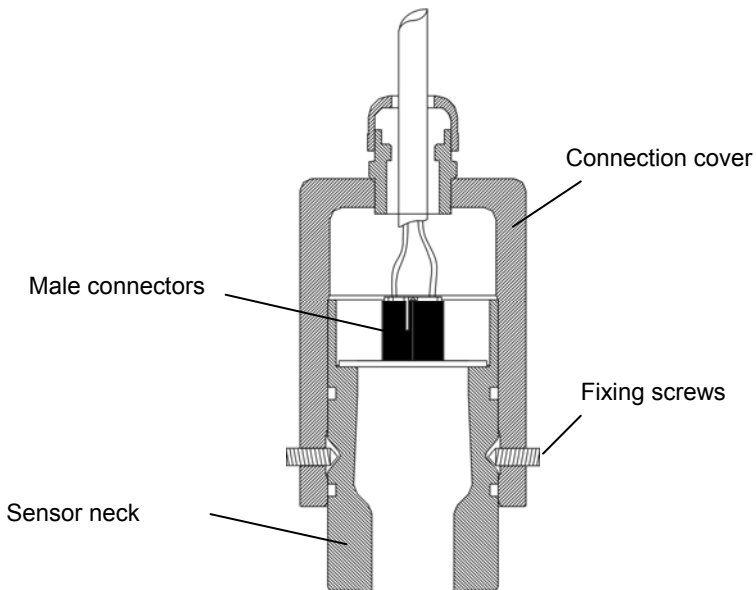
The following points must be taken into account:

- The cable should be installed in a conduit or should be securely fixed, given that movements of the cable can induce reading errors.
- The placement of the cable should be as far away as possible from sources of electrical noise switching gear and electrical machines.
- The maximum length of the cable L depends on the fluid conductivity. The minimum conductivity of $5 \mu\text{S/cm}$ is for a length of up to 5 m.



4. CABLE CONNECTION

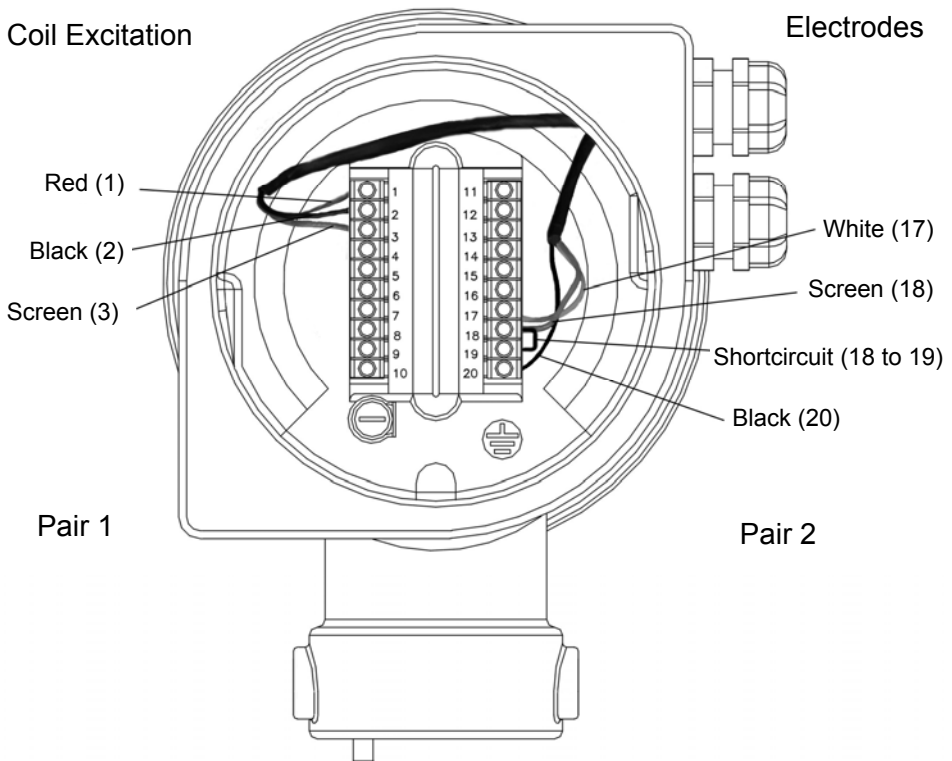
Connection to a FX Sensor



To connect to the sensor, first loosen the cable gland to allow the cable to slide in it.

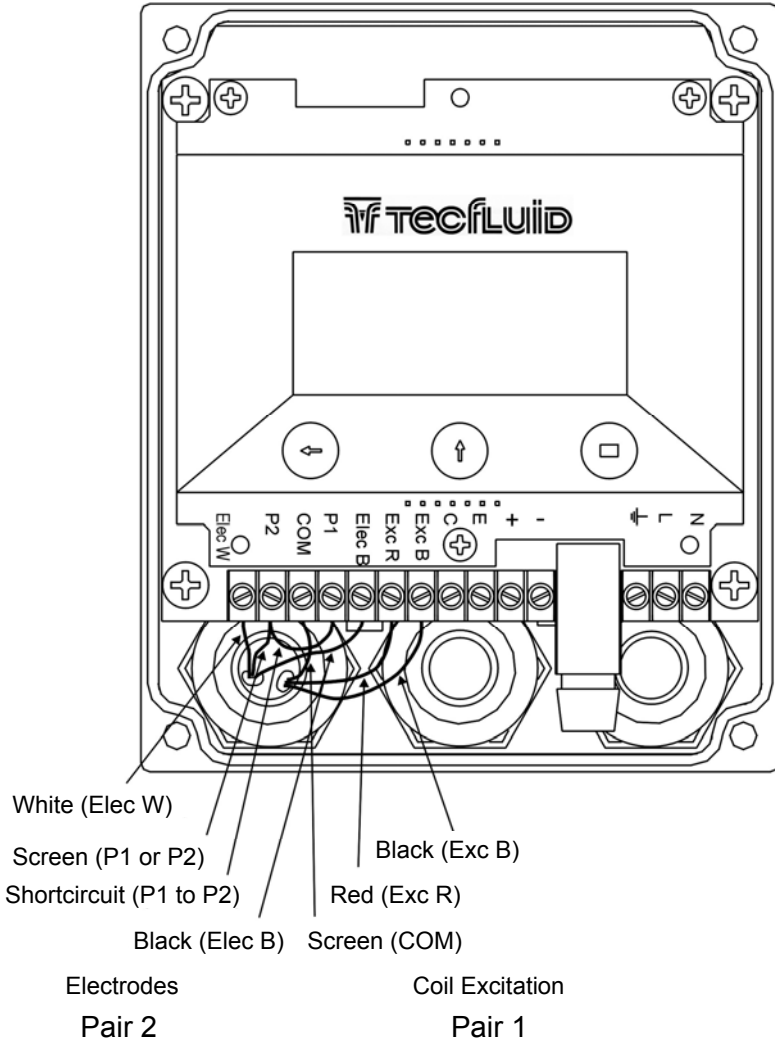
- Make sure that the two fixing screws of the cover do not protrude inside the cover (this avoids damaging the O ring of the sensor neck).
- Apply a little Vaseline on the sensor neck to aid inserting in the cover, specially on the O rings.
- Connect the two cable connectors in their corresponding male connectors on the sensor, mating the bumps in the guide of the male connectors.
- Slide the cover on the sensor neck until it meets its stop.
- Tighten the two fixing screws to anchor the cover.
- Tighten the cable gland to guarantee water tightness.

Connection to a Flomid MX converter.



The Pair 1 cables are connected to terminals 1, 2 & 3 for the coil excitation. The Pair 2 cables, for the electrode inputs, are connected to terminals 17, 18, 19 & 20. Terminals 18 & 19 must be short circuited together.

Connection to a XT5 converter



The Pair 1 cables are connected to terminals Exc B, Exc R & COM for the coil excitation. The Pair 2 cables for electrode connection are connected to terminals Elec W, Elec B, P1 & P2. Terminals P1 & P2 must be connected together.

4. CABLE SPECIFICATIONS

Model: CERVITRONIC PAR-POS Code 04754502

Construction

Conductor: Annealed electrolytic copper, tinned
As Norm: UNE 21064
Isolator: Poliolefina (PE - Solid)
Composition: By pars
Par shield: Tape Al/Pet + Drain CuSn.
Cover: 100 % Physical
All over shield: Tape Al/Pet + Drain Cu Sn
Cover: 100 % Physical
Exterior cover: PVC
Colour: Black

Electrical Characteristics

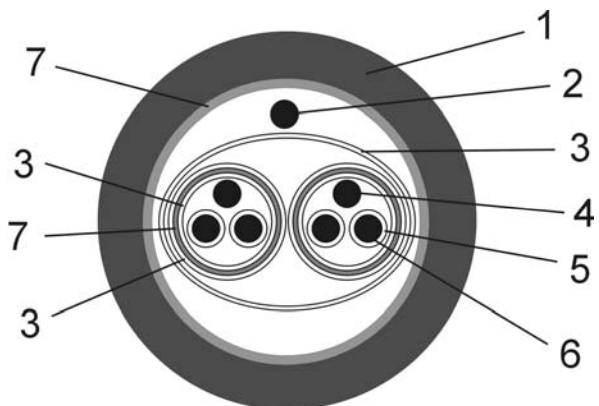
Working Voltage: 250 V.
Testing Voltage: 1.000 V. 1 minute/s.
Electrical resistance: $\leq 52,2 \Omega/\text{km}$
Capacity: C* / C** 90-170 pF/m
C* capacity between conductors
C** capacity between one conductor and the rest connected to the shields

Physical Characteristics

Exterior diameter: 6,6 mm
Bending radius: 66 mm
Working temperature: -5... +70°C
Fire risk : Does not propagate flame as per Norm : IEC 60332-1 y EN 50265
Section: 0,34 mm²
Weight: 51 kg/km

Cable section

- 1 PVC cover
- 2 Exterior shield wire
- 3 Insulating film
- 4 Pair 1/2 shield wire
- 5 PVC insulation
- 6 Pair 1/2 conductor
- 7 Aluminium shield



WARRANTY

Tecfluid S.A. GUARANTEES ALL ITS PRODUCTS FOR A PERIOD OF 24 MONTHS, after consignment, against all defects in materials and workmanship.

This warranty does not cover failures which can be imputed to misuse, use in an application different to that specified in the order, the result of service or modification by un-authorized persons, bad handling or accident.

This warranty is limited to cover the repair or replacement defective parts which have not been damaged by misuse.

This warranty is limited to the repair of the equipment and all further and eventually following damages are not covered by this warranty.

Any consignment of equipment to our factory or distributor must be previously authorised. The consignment should be done with the equipment well packed, clean of any liquids, grease or hazardous materials. Tecfluid S.A. will not accept any responsibility for damage done during transport.

Together with the equipment, a note should be enclosed indicating the failure observed, the name, address and telephone number of the sender. .

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