## IN-PLACE INCLINOMETER

## Description

The In-place Inclinometer consists of a tilt sensor (or two tilt sensors mounted at $90^{\circ}$ in the biaxial version) mounted inside a stainless steel tube through two coasters each equipped with a pair of wheels, inserted inside the tube inclinometer to continuously measure the deformation.

Generally connected to one another through a stainless steel cable in order to form a column of instruments, the In-place Inclinometers are used in continuous monitoring of landslides and soil movements in general, but also in structural control of dams, walls, bulkheads, poles, masts, etc. The probe allows you to attach a stainless steel cable for the placement into the hole and for possible recovery. All mechanical parts, including the pair of coasters with wheels, are made completely in stainless steel AISI 316. The compartment that contains sensors and conditioning electronics is completely covered in resin to ensure maximum durability against water infiltration.

Next also provides all the accessories for the correct installation of tools within the inclinometric tube columns (stainless steel suspension cable, suspension, stainless screws and nuts, etc.).

## Applications

- Unstable landslides and slopes
- Tunnels and dams
- Deep excavations
- Bridges and viaducts



## Features

- Reliability also for long time monitoring
- High resolution and accuracy
- Degree of protection IP68
- Hursh stainless steel construction
- Analog and digital outputs signals


## Technical specifications

|  | Analog output model | Digital output model |
| :--- | :--- | :--- |
| Sensor type | biaxial MEMS | biaxial MEMS |
| Range | $+/-10^{\circ},+/-30^{\circ}$ | from $+/-5^{\circ}$ to $+/-30^{\circ}$ |
| Power | $12-15 \mathrm{Vdc}$ | $12-15 \mathrm{Vdc}$ |
| Output signal | $0-5 \vee 3$ wires | RS 485 (Modbus RTU) |
| Resolution | $0.001^{\circ}$ | $0.0003^{\circ}$ |
| Total accuracy | $<0.05 \% \mathrm{~F} . \mathrm{S}$. | $<0.02 \% \mathrm{F.S}$. |
| Long term stability | $<0.02^{\circ}$ | $<0.01^{\circ}$ |
| Operating temperature | $-20 \ldots . .+60^{\circ} \mathrm{C}$ | $-20 \ldots . .+60^{\circ} \mathrm{C}$ |
| Dimensions | 30 mm diameter, 1200 mm lenght | 30 mm diameter, 1200 mm lenght |
| Distance between wheels | 1000 mm | 1000 mm |
| Material | stainless steel | stainless steel |
| Suspension cable | 2 mm stainless steel cable | diam. 10 mm stainless steel rods |

## Accessories and spare parts

- Support head
- Stainless steel suspension cable
- 1 m stainless steel rod
- Cut to size signal cable


## Please specify

| CODE | PRODUCT DESCRIPTION |
| :--- | :--- |
| IFF-110 | Analogic vertical in-place inclinometer |
| IFF-300 | Support head for analogic inclinometer |
| IFF-350 | Stainless steel suspension cable |
| IFF-510 | Digital vertical in-place inclinometer |
| IFF-700 | Support head for digital inclinometer |
| IFF-601 | 1 m stainless steel rod |
| IFF-400 | Signal cable for in-place inclinometer |



## For further information:

