

ADLc

Cable extensometer



DESCRIPTION

Autonomous sensor with windable cables; they are linear potentiometers measuring small displacements over long distances. They allow to measure the evolution of cracks, the displacement of walls.

With the help of a steel cable, the measuring length is easily extended.

Each sensor is autonomous; it does not need another box or a sending station

APPLICATIONS

Monitoring of buildings or structures at risk, monuments, works of art, geology.

SENSOR CHARACTERISTICS

DATA RECORDING

| | |
|----------------------------|--|
| Local measurement interval | 1 second (via Bluetooth application) |
| Data reporting interval | 10 minutes (configurable) |
| Reported data | Distance (1 to 4) Case temperature Battery voltage |

MOTION PROBE

| | |
|-----------------------|--|
| Measurement principle | Potentiometric, steel cable with spring return |
| Measuring range | 0 ... 200mm |
| Resolution | < 20 μm |
| Repeatability | < 50 μm |
| Linearity | $\pm 0,1\%$ |
| Starting force | Max 1kg |

TEMPERATURE SENSOR INSIDE THE HOUSING

| | |
|---------------------|----------------------|
| Measuring principle | NTC |
| Measuring range | -55 ... +125°C |
| Resolution | 0,6°C (-5 ... +50°C) |

LONG DISTANCE RADIO

| | |
|----------------------|-------------------------------------|
| Radio technology | LoRaWAN |
| Security | AES-128 data encryption |
| Supported features | LoRa private or operated, OTAA |
| Radio range | Up to 15 km |
| Transmitted power | Up to 20 dBm (adaptive) |
| Receiver sensitivity | -142 dBm |
| Frequency band | 868 MHz (EU), 915MHz (US, AS, AU) |
| Antenna | Internal or external to the housing |

LOCAL RADIO

| | |
|----------------------|----------------------|
| Radio technology | Bluetooth Low Energy |
| Radio range | Up to 40m |
| Transmitted power | Up to 4 dBm |
| Receiver sensitivity | -96 dBm |
| Frequency band | 2.4 GHz ISM |
| Antenna | Internal to the box |

POWER SUPPLY

| | | |
|-------------------|--------------------|------------------|
| Battery type | Lithium-Ion | |
| Power consumption | < 1mW | |
| Battery life * | Measurement period | Duration (up to) |
| | 10 minutes | 5 years |
| | 20 minutes | 10 years |
| | 30 minutes | 15 years |
| | 1 hour | 15 years |

* Indicative duration, for use in the conditions of use

SENSOR

| | |
|-----------------------|--|
| Operating temperature | -30 ... +85°C |
| Dimension | 105 x 105 x 60 mm |
| Weight | 280g |
| Internal memory | 1024 measurements |
| Case | Polycarbonate (weather, UV and impact resistant) Decompressor against condensation IP65, IK07 Fixing brackets |

ORDER REFERENCES

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| | |
|------------|---|
| ADLc-01 | distance meter with 1 cable sensor (stroke 20cm, connection cable length 1m) |
| ADLc-01-xx | distance meter with 1 cable sensor (specific stroke and cable length*) |
| ADLc-02 | distance meter with 2 cable sensors (stroke 20cm, connection cable length 1m) |
| ADLc-02-xx | distance meter with 2 cable sensors (specific stroke and cable length*) |
| ADLc-03 | distance meter with 3 cable sensors (stroke 20cm, connection cable length 1m) |
| ADLc-03-xx | distance meter with 3 cable sensors (specific stroke and cable length*) |
| ADLc-04 | distance meter with 4 cable sensors (stroke 20cm, connection cable length 1m) |
| ADLc-04-xx | distance meter with 4 cable sensors (specific stroke and cable length*) |

* stroke up to 100m (steel cable), connection cable length 1m as standard

Other options : contact us

WARNINGS

Specifications and information in this document are subject to change without notice.

A3IP products are not warranted or licensed for use as a critical component for medical or other life-saving or life-sustaining applications, or other applications where failure could reasonably be expected to cause serious injury, death, or damage to any structure, work or building.

In addition, devices are indications and decision aids and cannot be used in alarm or critical applications.

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