

ADLe

Waterproof fissurometer



DESCRIPTION

Autonomous sensor with waterproof displacement probes: these robust probes, operating under water, are not sensitive to vibration or misalignment.

They measure the cracks evolution or the contraction or joints extension.
Combined, several sensors can be used to monitor cracks in 3D.
This sensor is very robust and works in harsh environments.

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

APPLICATIONS

Monitoring in buildings, bridges, pipelines, dams.

SENSOR CHARACTERISTICS

DATA RECORDING

Local measurement interval	1 second (via Bluetooth application)
Data reporting interval	10 minutes (configurable)
Reported data	Probe distance (1 to 3) Case temperature Battery voltage

MOTION PROBE

Measurement principle	Strain gauge
Measuring range	0 ... 50mm
Resolution	< ±5µm
Repeatability	< 250µm
Linearity	0,5%
Operating temperature	-40...+105°C
Protection rating	IP68

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, depending on the number of connected sensors and their characteristics

SENSOR

Operating temperature	-25 ... +85°C
Dimension	135 x 135 x 60 mm
Weight	350g
Internal memory	1024 measurements
Case	Polycarbonate (weather, UV and impact resistant)
	Decompressor against condensation
	IP65, IK07
	Fixing brackets

ORDER REFERENCES

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ADLe-01-20	IP68 distance with 1 probe (20mm stroke, 1m cable length)
ADLe-02-20	IP68 distance with 2 probes (20mm stroke, 1m cable length)
ADLe-03-20	IP68 distance with 3 probes (20mm stroke, 1m cable length)
ADLe-01-50	IP68 distance with 1 probe (50mm stroke, 1m cable length)
ADLe-02-50	IP68 distance with 2 probes (50mm stroke, 1m cable length)
ADLe-03-50	IP68 distance with 3 probes (50mm stroke, 1m cable length)
ADLe-01-5	IP68 distance with 1 probe (5mm stroke, 1m cable length)
ADLe-02-5	IP68 distance with 2 probes (5mm stroke, 1m cable length)
ADLe-03-5	IP68 distance with 3 probes (5mm stroke, 1m cable length)
ADLe-01-100	IP68 distance with 1 probe (100mm stroke, 1m cable length)
ADLe-02-100	IP68 distance with 2 probes (100mm stroke, 1m cable length)
ADLe-03-100	IP68 distance with 3 probes (100mm stroke, 1m cable length)
ADLe-01-250	IP68 distance with 1 probe (250mm stroke, 1m cable length)
ADLe-02-250	IP68 distance with 2 probes (250mm stroke, 1m cable length)
ADLe-03-250	IP68 distance with 3 probes (250mm stroke, 1m cable length)

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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