Digital correlator for locating leaks in water networks

Correlux C-3

- Easy to use with colour touch display
- Online and offline correlation
- Long operating time and inductive sensor charging
- Pinpointing with multi-sensors or ground microphone
- Perfect for plastic pipes and trunk mains
- Multi-correlation without pipe parameter input

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Correlux C-3 – Identifying leaks with precision

How it works

The Correlux C-3 correlator locates leaks in drinking water pipes. Pressurized water at the leak location creates a noise which travels out in all directions of the pipe.

This noise is recorded, amplified and sent wirelessly to the correlator by two sensors (piezo microphone, hydrophone) which are attached to the pipe (e.g. valve, hydrants).

The Correlux C-3 compares both signals (correlation) and calculates the exact distance to the leakage on the basis of the delay time of the signals, the sensor spacing and the sound velocity in the pipe.

Power transmitters are deployed and transmit the live signal to the correlator.

Perfectly designed for customer requirements

Online and offline correlation

The Correlux C-3 is suitable for both immediate measurement (online) as well as night measurement (offline). If the measuring point is easily accessible and is not in a danger area, then online measurement comes into effect. Power transmitters are deployed in this case (transmitter and microphone). These transmit the live signal directly to the correlator and you receive the result immediately.

However, if the measuring point is in an area which is difficult to access or if there is lots of interference, then you have the option to conduct an offline measurement using the power transmitters or up to 8 multi-sensors. The multi-sensors are programmed accordingly with the correlator and then deployed. Following the measurement the power transmitters and multi-sensors are collected and the data can be read and evaluated by the correlator.

Power transmitters (transmitter and microphone)

Offline measurement with up to 8 multi-sensors

Further potential applications

With the aid of the pinpointing function you can now determine the exact position of the leak, either with the multi-sensors or with a PAM W-2 ground microphone. Both options can be carried out using the Correlux C-3; no other devices are needed.

Special features

The correlator housing is light and easy to handle. The colour touch display also makes it easier to use and improves the readability.

The system is charged in the transport case supplied using wireless inductive charging. This means that only one charging cable is needed for the complete charging of all devices.

In order to maximise the operating time of the power transmitter, wireless transmission is only activated once the sensor is taken from the power transmitter.

A trolley attachment is available for easy transport of the Correlux C-3. This can be retrofitted at any time without tools.

Transport case with induction loading and with optional trolley attachment

ⓘ Correlux C-3

Technical data

Correlux C-3	
Display	5.7" VGA colour display, 640 x 480 pixels
Data entry	Touch display, rotary encoder with enter function
Power supply	Internal lithium-ion rechargeable battery, ext. power supply 12 V DC
Operating time	min. 16 hours
PC-interface	USB
Connection options	Sensor, hydrophone, two ext. antennas, headphones, GPS, ground microphone
Protection class	IP65
Dimensions / weight	250 x 190 x 100 mm / 1.9 kg
Correlation offline	digital wireless
Correlation online	analogue long range wireless
PT A / PT B power transmitters	
Display	Battery status, noise level
Buttons	On / off
Operating time	min. 12 hours
Power supply	Internal rechargeable battery, inductively chargeable
Connection options	Sensor, antenna
Protection class	IP 65
Dimensions / weight	Ø 125 x 111 mm / 0.9 kg
Correlation offline	digital wireless
Correlation online	analogue long-range wireless
PAM CORR sensor	
Sensor	Piezo sensor with active amplifier
Adapter	Magnetic adapter
Protection class	IP 68
Dimension / weight	38 x 78 mm / 0.4 kg
Multi-sensors	
Sensor	Integrated piezo sensor with active amplifier
Adapter	Magnetic adapter
Operating time	min. 16 hours
Power supply	Internal rechargeable battery, inductively chargeable
Protection class	IP 68
Dimension / weight	Ø 45 x 115 mm / 0.4 kg
Correlation offline	digital wireless

Advantages

- Easy to use with colour touch display
- Robust and very compact construction
- Simultaneous display correlation curve and coherence spectrum
- Quick and simple leak detection without pipe parameter input
- Mixed pipes with up to 12 sections measurable
- System charged using induction in the case
- Automatic and free filter adjustment

Scope of delivery

Correlux C-3	Standard	Pro	ProPlus
DK C3 Correlator	✔	✔	✔
PT A + Sensor PAM CORR	✔	✔	✔
PT B + Sensor PAM CORR	✔	✔	✔
Multi-sensors (MS)	🚫	3 sensors	8 sensors
Headphones	✔	✔	✔
Carrying case	✔	✔	✔
Case for MS *	🚫	🚫	✔
Charger	✔	✔	✔
Motor vehicle charger	✔	✔	✔
PC software	✔	✔	✔
Trolley for carrying case	optional	optional	optional

* Extra case with charging function for up to 8 multi-sensors

Further options

- Hydrophone for use on plastic pipe
- PAM W-2 ground microphone for pinpointing
- High temperature sensors PAM HT