



Planning and design

Notes for planing and design of water-alarm systems

General notes for planning and installation

in buildings with false floors/ceilings

Preparation

- Listing of possible sources of danger (e. g. water pipes, airconditioning systems, etc.)
- Listing of endangered items and systems (e.g. computing centers, communications cabinets, valuable items, etc.)
- Marking of all sources of danger and endangered items on the building plan

Sensor-system planning

Place the route of the sensor cable(s), the location of the point sensors and the electronic monitoring unit(s) on the building plan. An installation diagram showing lengths in meters is not absolutely necessary if the RLW electronic monitoring unit is used, provided the rooms, spaces and objects to be monitored are clearly indicated on the plan. The leak location and zone can be displayed in open text.

- Monitoring of individual items using point sensors or short lengths of sensor cable.
- Monitoring of large-area rooms and zones using sensor cables. Install the sensor cable in a meandering pattern on the floor (recommended installation distance = 1 m, or twice the tile spacing).
- Systematic room/zone monitoring using sensor cable: Install the sensor cable on the floor immediately along the sources of danger, or completely enclosing the danger source.

Between individual objects or rooms/zones which are not to be monitored, the sensor cable can be connected to a standard installation cable (e.g. LIYY 4 x 0.5 mm²). Connectors, couplings and zone dividers are provided for this purpose. T-branch junctions, which permit branching within the route of the sensor cable, are also available. Precise leak locating and breakage monitoring remain unaffected. Please request separate Notes on Planning for the T-branch junction.

Planning of electronic monitoring units

- Determine the number and/or the zones of buildings, rooms, floors, areas, to be monitored.
- Leak-locating function necessary: Yes/No
(Depending on item size and inspectability in case of leakage)

The RDW and RDA type electronic monitoring units are used for monitoring applications in which no leakage locating function is required. Both sensor cables and point sensors can be connected.

See data-sheet for performance features.

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Number of electronic monitoring units

A rational number of electronic monitoring units should in all cases be determined using the building plans.

Recommendation

- When a leakage alarm signal to the control room is supplemented by other functions (such as the enclosure of individual water supply lines, for example) the planned number of electronic monitoring units should be increased, in order to achieve selective shut-down.
- The installation of one electronic monitoring unit per building or per zone is recommended in cases in which building sections and/or zones are widely separated from one another.



Installation

Retrospective installation of sensor cables and/or point sensors behind false floors/ceilings is possible at any time. The sensor cable should be fixed directly to the painted and dust free floor.

Features

- Simple, direct local connection of sensor cables/meter-lengths of cable to the connectors
- The highly flexible cable can be easily installed
- Lengths of cable pre-fitted with connectors, etc., enable rapid installation
- Easy to fix cabling with self-adhesive fixing tapes
- No dust is produced during installation, no drilling required (important for cleanrooms, computing centres, etc.)

Necessary installation documents

- Installation diagram
- System documentation, consisting of: Description, data-sheets, installation instructions, notes for installation, operating instructions, commissioning, operating instruction sheets, test report

Time of installation

All other work, including final cleaning, should have been completed before the sensor cable is installed; this eliminates the danger of damage to the sensor cable as a result of third-party work.

Notes for sensor-cable installation

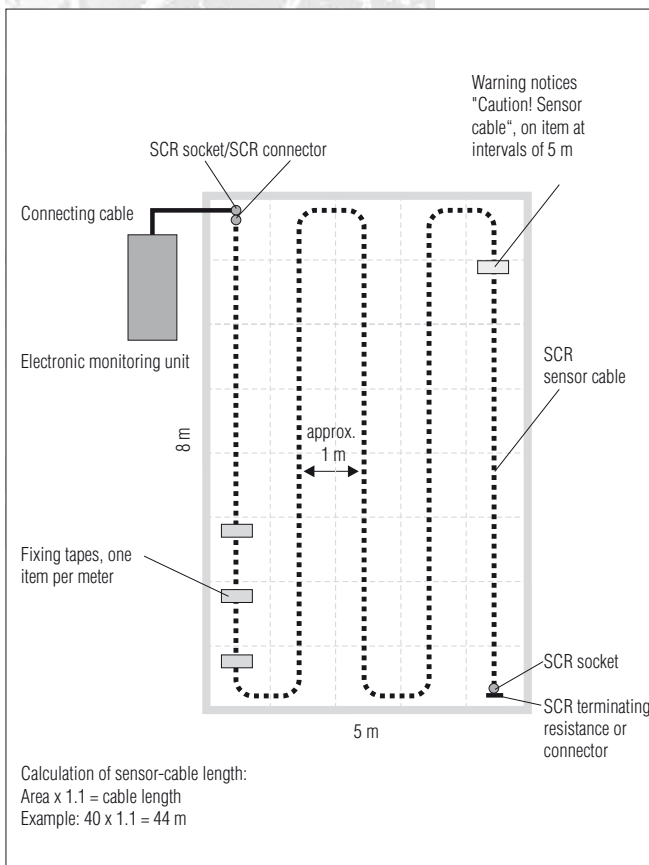
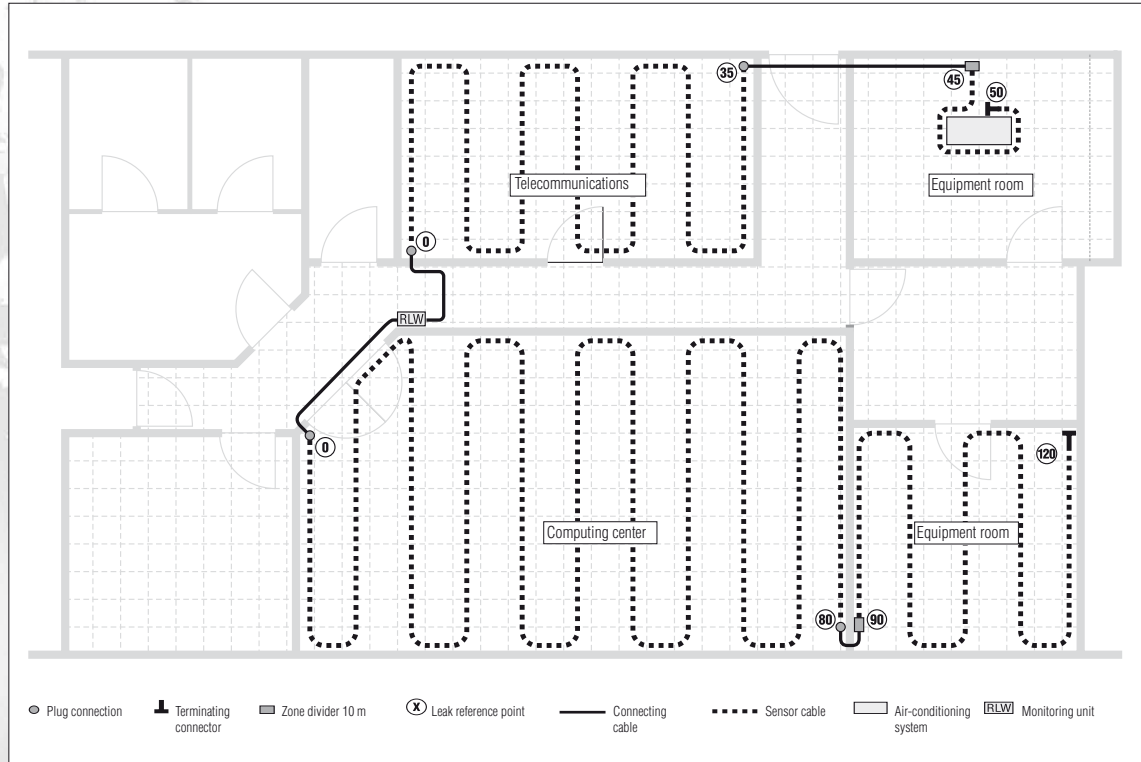
- The substrate must be dry and clean, and completely free of dust.
- The sensor cable should be fixed to the floor using self-adhesive fixing tapes at intervals of 1 m.
- The sensor cable must not be crushed by metal components, since the electronic evaluation system checks the cable for electrical resistance.
- Ensure that dripping condensed water from pipes or cooling/refrigeration systems is not able to affect the sensor cable.
- A non-detecting connecting cable or a protecting tube or hose must be used in wall penetration and other points of the building.
- Warning notices ("Caution! Sensitive sensor cable") should be affixed at points at which the sensor cable could be subjected to damage.
- The sensor cable must be in contact with the surface to be monitored (installation over obstructions, such as flush-mounted cable routings, for example, is permissible provided leak-detection can be continued immediately after the obstruction).
- Enter the length of sensor cable installed on the installation diagram (particularly important in the case of part-lengths with T-branches).
- The sensor cable's insulation resistance must be checked during and after completion of the installation work before the system is activated (see Test Record).
- Commissioning and technical data: see System Documentation.

Tender specifications and further information can be found at www.wasserwarnsystem.de

Leakage Detection Systems

Installation and connection examples

1. Installation under a false floor



List of materials

Description	Quantity	Order no.
Electronic monitoring unit RDA 01, rack-mounted type, 230 V AC or RDA 01, rack-mounted type, 24 V DC or RDW 03, wall-mounted type, 230 V AC or RLW single-channel, with locating function	1 item	17-85F4-2322 17-85F4-2422 17-85F3-8322 17-85G1-2121
Sensor cable SCR, running meters	44 m	17-85M1-1761
Accessories Connecting cable (state required length)	1 m	02-4042-0011
SCR terminating resistance, 220 Ohm, for RDA, RDW or SCR terminating connector for RLW	1 item	05-0080-0164 05-0080-0161
Fixing tape (pack 50 items)	1 item	05-0091-0045
Warning notice "Sensitive sensors"	9 item	05-2144-0777
SCR connector, installation set	1 item	05-0091-0054
SCR socket, installation set	2 item	05-0091-0055

2. Installation instructions for wall penetrations

"Bare - unprotected" installation of the sensor cable through masonry is not permitted. The zone divider permits optimum separation of leakage detection between two rooms. The offset of the zone divider (10 m) must be taken into account in the installation diagram (see drawing).

Example: 50 m sensor cable installed in Room 1 and 30 m sensor cable in Room 2.

i. e., 80 m total cable length + 10 m zone divider.

The electronic monitoring unit calibrates to 90 m.

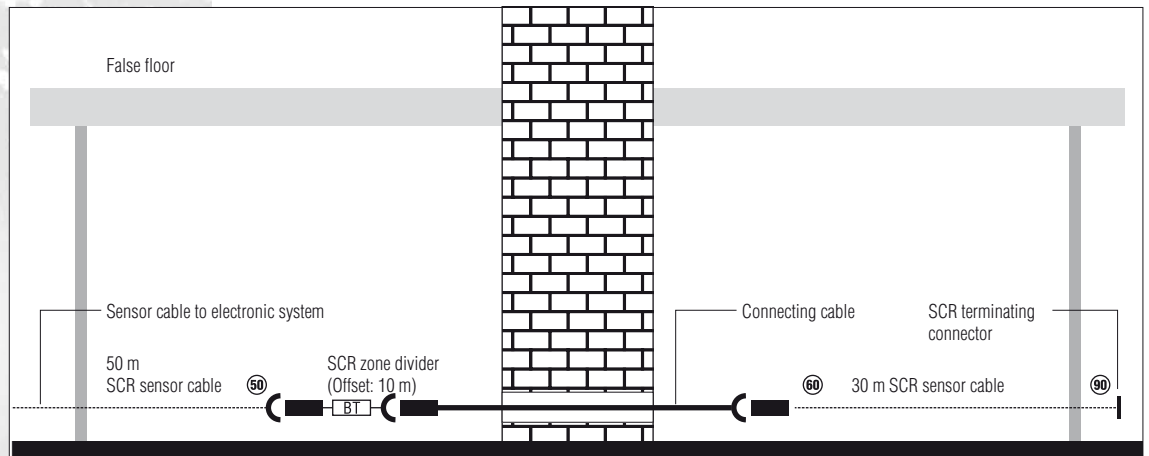
The connecting cable does not change the overall length.

In the case of open-text signals on the display, the room designation can be stored in addition to the meter indication using the "Channel Zone" menu.

Zone 1: 0 to 50 m Text: e. g. Computer Room 1

Zone 2: 60 to 90 m Text: e. g. Computer Room 2

Up to 50 zones can be implemented.



Installation on vertical pipes



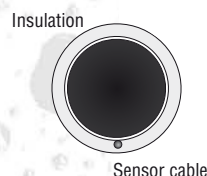
3. Installation on pipes

Time of installation

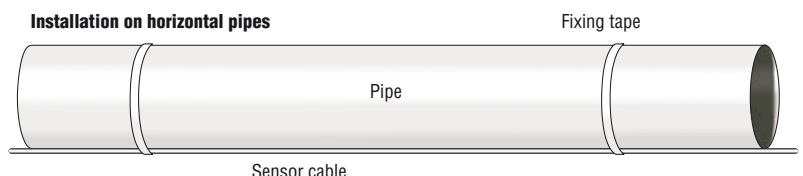
All pipe installation work must have been completed before the sensor cable is installed, in order to avoid damage to the sensor cable.

Notes for sensor-cable installation

- The pipe must be dry and clean.
- The sensor cable must be protected against condensation water or water from the exterior by means of an isolation system around the pipe.
- Installation of the sensor cable in the open is not permissible if rain, snow or a wet environment may occur.
- Note the technical data for the sensor cable and the connectors.
- The sensor cable must not be crushed against metal items.
- The sensor cable's insulation resistance must be checked during and after completion of the installation work.

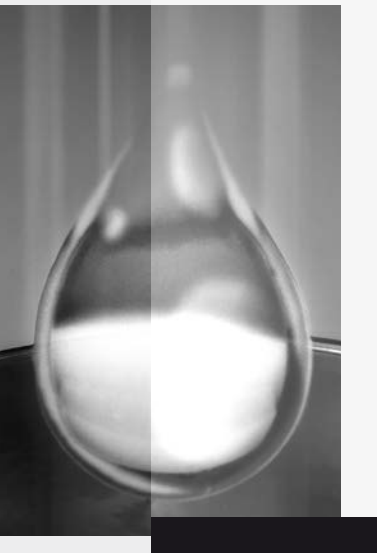


Installation on horizontal pipes



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