



**It's so easy  
with ISI**

**Made possible by swarm intelligence:  
Protection against leakage  
for large-scale buildings**



**Efficient building services**





## The clever solution

Water goes wireless. Our SYR Connect program connects fittings, control electronics and the internet. A clever combination, which opens the way to completely different and new solutions. For instance our ISI. ISI is our first leakage protection solution for apartment buildings, public buildings and industrial sites. ISI stands for "internet-based swarm intelligence". In fact, this revolutionary concept can only be put into practice thanks to the invisible link between the different leakage protection modules in a building and their inter-connection and communication via a server. Like fish in a swarm changing direction out of the blue, as a response to an invisible signal ...

# Water management for every building.

Protection against leakage is a major technological challenge for apartment buildings. Imagine a building consisting of eight apartments, equipped with only one leakage protection solution in the basement. If in each of the eight apartments somebody takes a shower at the same time, some 800 to 1,000 liters are easily drawn at once. Should the leakage protection isolate the installation at that moment, the people in the shower would be left without water. However, if nobody took a shower at that moment, the same quantity of water could mean a burst pipe in the basement. Such kinds of communication problems can be solved by ISI with its internet-based swarm intelligence. There is a leakage protection module for every residential unit (Slave module) controlled by a Master module.

Every individual module is web-enabled and transmits status reports to the central server according to a predetermined interval. All the set parameters for each module and for each residential unit are stored and matched on the server. In case of leakage, the module will be shut-off and an automatic failure notice will be generated. The Master module will always be informed of the current situation of the Slave modules and, if necessary, the leakage protection level will be increased.

ISI is thus the perfect solution, not only for buildings with several apartments or residential units, but also for public buildings, administrations and industrial sites. Moreover, ISI is designed such as to be easy to retrofit it!

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## Four steps towards reliable safety

Here are four steps for reliable leakage protection with SYR and ISI, which many insurance companies will require in future:

First, the **analysis phase**. We will check where the risks lie in the building and which parts of the building or, respectively, water lines need protection. Then our specialist engineers will

draw a detailed **hydraulic plan**, indicating the exact position and kind of the individual ISI modules. This is to guarantee that damage is limited as much as possible in case of leakage. Of course, an **invitation to tender** is part of the planning process. And obviously, SYR will offer **briefings and training schemes**.

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## Intelligent water management with a multitude of possibilities

The ISI modules provide reliable, needs-based leakage protection solutions for every conceivable building. A Slave module will be fitted in the individual apartments or, respectively, in parts of the building, and in a central position you will find the Master module.

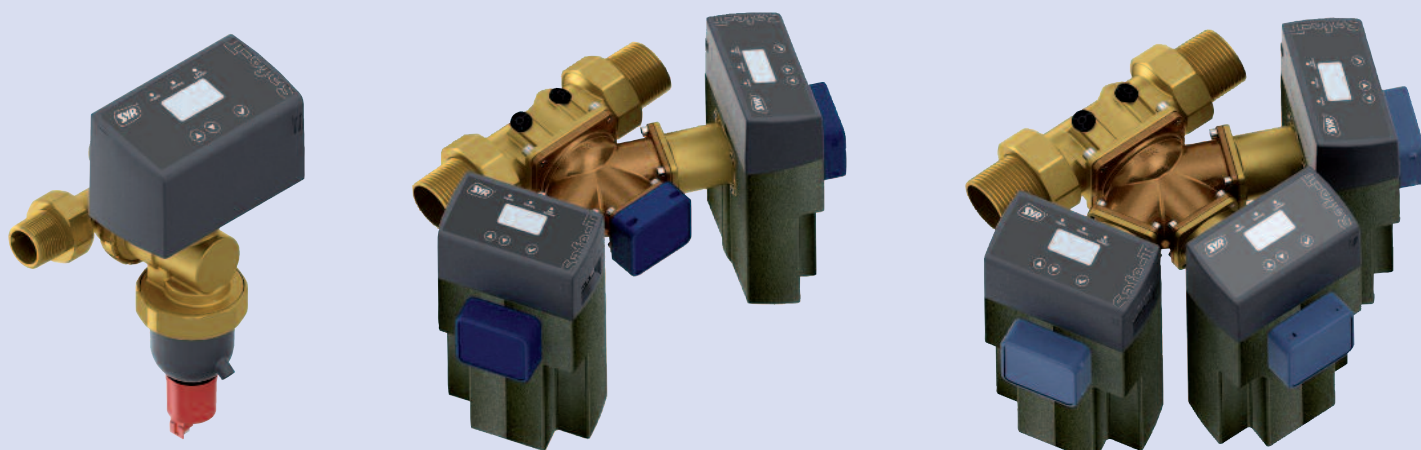
In case of buildings with a supply pipe size of more than DN 32, multiple modules shall be used. Apart from leakage protection, the ISI hygiene modules will also meet the requirements of building hygiene in respect of water temperature and stagnation.



# Information in full, always and everywhere



ISI is equipped with web-based software, which means that, for example, the janitor of a school knows about the status of leakage protection straightaway. He can check the status of the modules used, modify parameters or the leakage protection level etc. And any homeowner or tenant may check and control the leakage protection module via an app (without charge for iPhones, in preparation for Android). In the event of an incident, i.e. in case of leakage, there is an information mode that sees to the notification of the incident to a mobile phone number or e-mail address previously indicated.



ISI MODULE SERIES



# Billions lost due to water damage

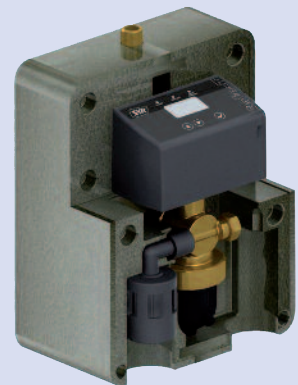
Every year, insurance companies in Germany have to deal with one million claims for water damage. Over the past 20 years, the amount of the average claim rose from approx. EUR 900 to more than EUR 1,700 per year. The insurance sector makes losses and is worried that claims for water damage might continue to increase dramatically.

There are many reasons for it: on the one hand, the increasing demand for comfort when it comes to dealing with water also means a considerably higher standard in building services and installations. The systems thus become more and more complex. In addition, more and more building installations are concealed, and water damage does not surface until very late. Given the increased use of lightweight design, water damage often means total loss of the part concerned.

All the more reason to think about installing ISI leakage protection when constructing a building. Or to analyze existing buildings in order to prevent expensive damage in good time.



SYR has designed and realized the leakage protection system in an old school that had already suffered water damage in the past.



# Proven its worth in practice: Internet-based swarm intelligence ISI

Whether in schools, apartment buildings, administrations, hospitals or industrial sites: ISI has already proven its worth as a reliable leakage protection system. The decisive factor is primarily the correct identification of the individual units to be protected, securing them individually via an ISI module; on the other hand, it depends upon the correct definition of the corresponding leakage protection level for each unit.

The connection to the internet is as easy as pie: every ISI module has its IP interface. Once the corresponding cable is plugged in, the module will search for its connection to the internet and send the signal to the ISI server. It's easy to learn, including the handling of the ISI software, which serves to enable the on-site control of all the relevant ISI parameters.

**Leakage protection of apartment buildings and public buildings:  
it's so easy with ISI, the revolutionary SYR innovation.**



Examples for buildings that may be fitted with ISI

