

SINTEF Technical Approval

TG 20822

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 Revised:
 Amended:
 Valid until 01.03.2022
 Provided listed on
www.sintefcertification.no

SINTEF confirms that

Uponor Phyn Plus active leakage detector

has been found to be fit for use in Norway and to meet the provisions regarding product documentation given in the regulation relating to the marketing of products for construction works (DOK) and regulations on technical requirements for building works (TEK), with the properties, fields of application and conditions for use as stated in this document



1. Holder of the approval

Uponor GmbH
 Industriestrasse 56
 97437 Hassfurt
 Germany
www.uponor.no

2. Product description

Uponor Phyn Plus is installed in or around water installations to stop an unwanted water outflow by detecting the leak and automatically shutting off the water supply. The active leakage detector consists of a control unit with an integral pressure sensor and flow meter. Wireless third-party leakage detectors can be connected using a separate mobile app, see Fig. 1. The leakage is registered by the control unit or the wireless detector.

Table 1 lists the components included in the system.
 Table 2 lists the main functions.

Uponor Phyn Plus will not prevent water leakages from occurring but can efficiently reduce the water flow and the consequential damage.

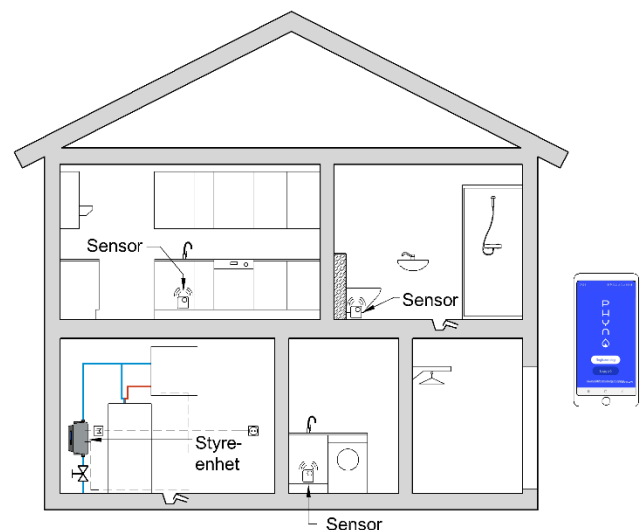
Due to delays caused by wireless communication the response time from the wireless sensor can be as much as 20 seconds.

3. Fields of application

Uponor Phyn Plus is normally used in detached houses and apartments but can also be used in commercial buildings. Regulations on technical requirements for construction works (Byggt teknisk forskrift, TEK) sets requirements for the use of active leakage detectors with regards to water damage protection of installations in rooms without drains.

Uponor Phyn Plus can monitor and stop leaks from technical installations such as:

- Dishwasher
- Washing machine
- Refrigerator with water connection
- Ice cube maker
- Water dispenser
- Water heater
- Water filter
- Pipe-in-tube systems



Uponor Phyn Plus – system layout

4. Properties

Leak tightness

The motor valve has passed a function test according to DIN 3553: "Fittings for drinking water systems in buildings - Leakage protection systems with sensors and automated shut-off devices - Detectors for installation in drinking water installations - Requirements and tests".

Table 3 Properties for motorized valve

Dimension		Operating temp. range. [°C]
1"	3-6	2 - 50

Electrical safety - degree of enclosure

The control unit has specified IP class 55.

Frequency band

The control unit uses the 802.11 b/g/n frequency band (2.4 GHz WLAN)

Radio control unit

The control unit shall satisfy the requirements for electrical safety in the Low Voltage Directive, the EMC Directive (Electromagnetic Compatibility Directive) and the Directive for Radio and Telecommunications Terminal Equipment (R & TTE Directive).

SINTEF is the Norwegian member of European Organisation for Technical Assessment, EOTA, and European Union of Agrément, UEAtc

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SINTEF AS
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 Enterprise register: NO 919 303 808 MVA

Table 1
Main components

Product	Component				
Uponor Phyn Plus	Uponor Phyn Plus (control unit)	D-Link (wireless sensor)*	Phyn (mobile App)	mydlink (mobile App)*	IFTTT (mobile App)*

* Third party accessory – necessary for full-fledged functionality

Table 2
Main functions

Product	Function						
Uponor Phyn Plus	Detection of large water volume	Detection of long water flow	Detection of pipe breakage (large water volume)	Detection of abnormal pressure loss	Detection of leakage at tapping point	Manual shut-off of water supply	Registration of abnormal humidity

5. Environmental aspects

Substances hazardous to health and environment

Uponor Phyn Plus contains no hazardous substances with priority in quantities that pose any increased risk for human health and environment. Chemicals with priority include CMR, PBT or vPvB substances.

The health and environmental evaluation does not include the electric and electronic components

Effect to potable/drinking water

Uponor Phyn Plus is evaluated to emit no substances to drinking water in amounts that can cause taste, smell or is dangerous to the health.

Waste treatment/recycling

Uponor Phyn Plus shall be sorted as EE-waste. Electrical and electronic components shall be delivered to a facility authorized to handle EE-waste.

Environmental declaration

No environmental declaration (EPD) has been worked out for Uponor Phyn Plus.

6. Special conditions for use and installation

Engineering

The water supply to each tap must be sufficient. Dimensioning of water supply shall be carried out in accordance with NS 3055, and the shut-off valve of the active leakage detector shall not be a limiting capacity factor.

The building's fire extinguishing system must be unaffected by the active leakage detector in the event of a fire. The closing valve must be fitted after fire water withdrawal.

The closing valve of the system must be mounted after the main stop tap of the housing unit, preferably before the first branch. Service and maintenance must be able to be performed at a pressureless system. Filters are mounted in front of the shut-off valve in cases where there is a risk of dirt and particles in the water supply.

Assembly

When mounting, only components that are part of the approved system must be used. After installation, the components must be easily accessible for replacement without any technical intervention.

The product must be mounted according to supplier's instructions. The system must be control tested after installation.

The shut-off valve must be mounted and positioned so that it is not exposed to freezing temperatures.

Maintenance

The manufacturer's user manual must be used. The system must be checked every six months by a function test.

Operating voltage

Uponor Phyn Plus depends on electricity to function as intended. The control unit with motor valve is based on 230 V mains voltage. In the event of a power failure, the valve can also be manually operated. Wireless sensors from D-link use 2x 1.5V AA batteries.

7. Factory production control

Uponor Phyn Plus is produced by in Mexico for Uponor GmbH.

The holder of the approval is responsible for the factory production control in order to ensure that Uponor Phyn Plus is produced in accordance with the preconditions applying to this approval.

The manufacturing of Uponor Phyn Plus is subject to continuous surveillance of the factory production control in accordance with the contract regarding SINTEF Technical Approval.

The manufacturer has a quality assurance system that is certified according to EN ISO 9001.

8. Basis for the approval

The evaluation of Uponor Phyn Plus is based on reports owned by the holder of the approval.

9. Marking

Uponor Phyn Plus must be marked with the manufacturer, product name and production date

The approval mark for SINTEF Technical Approval TG 20822 may also be used.

10. Liability

The holder/manufacturer has sole product responsibility according to existing law. Claims resulting from the use of the product cannot be brought against SINTEF beyond the provisions of Norwegian Standard NS 8402.

for SINTEF

A handwritten signature in blue ink, reading "Hans Boye Skogstad". The signature is written in a cursive style with a large initial 'H' and a long, sweeping underline.

Hans Boye Skogstad
Approval Manager