INTERRA

Developer of Uniqueness

Water Flood Detector

Product Manual

PM2402290227BEN

Contents

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TS EN ISO 9001:2008

1. Content of The Document

This document contains the specifications of Interra's ITR401-0XX2 KNX Water Flood Detector product and the project context. This document applies to all products involved as a common information base and is binding on KNX system equipment involved in the project. Changes are permitted only in coordination with the product management.

2. Product Description

Leaks can cause serious damage to your home. ITR401-0XX2 is a water flood detector equipped with KNX system. ITR401-0XX2 is an early warning system that notifies you through KNX bus. By catching it early, you may be able to avoid expensive repairs and loss of treasured items. Due to the existence of the KNX system, users have a chance to arrange any kind of additional alert system.

The detector can be placed near trouble spots like the sump pump, water heater, washer and under sinks. Each can be individually named and registered in the main control panel. The detector works based on the theory of liquid conductivity. The performance is reliable and the installation is easy. The detector can be placed near trouble spots like the sump pump, water heater, washer, under sinks or any desired location such as computer rooms, warehouses, water tanks mainly any hidden areas where water can leak without notice. When the water-based liquids reach to probes of detector, it will send telegrams to the KNX bus.

2.1. Technical Information

The following table shows the technical information of the Interra Water Flood Detector.

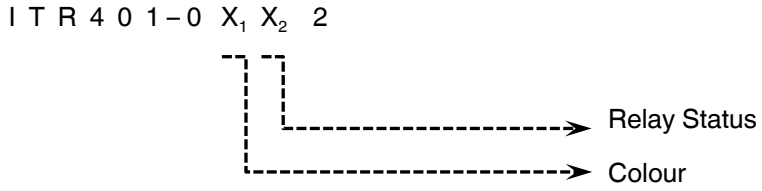
Product Code	ITR401-0XX2
Power supply	KNX power supply
Current consumption	10 mA (Alarm condition)
LED indicators	1 x Alarm (Red) / Operating (Green) LED 1 x Programming LED
Buttons	1 x Programming button
Switching Output current	1 A @24 V DC
Connection cable	0,25 mm^2 – 1,5 mm^2
Type of protection	IP 20
Temperature range	Operation (0°C…40°C) Storage (-10°C…75°C)
Maximum air humidity	< 90 RH
Colour	White, Anthracite
Dimensions	55 x 88 x 22 mm (W x H x D)
Certification	KNX Certificate
Configuration	Via ETS Software

2.2. Functional Descriptions

The most outstanding features of ITR401-0XX2 are:

- In Operation notification.
- Device is eligible to alert the users via buzzer, LED or relay output. Users can activate the LED or buzzer via ETS parameters
- The LED is available for two colour statuses which operated inversely as green and red.
- Alarm detection delay selections are available. Users can determine the delay via ETS parameters.
- Device has a sensing probe that extends downward up to 25cm. The sensing probe operates determined alarm conditions when water presence is detected.
- Lock and Alarm reset features are available.

2.3. Model and Variations



X_1 : Colours	
0	White
1	Anthracite

Table 1: Water Flood Detector Colours

X_4 : Relay Status	
0	No Relay
1	Relay

Table 2: Water Flood Detector Relay Status

3. ETS Parameters

3.1. General

When the Water Flood Detector is attached to the project from the ETS program, a configuration setting must be made primarily before loading, depending on the model to be programmed. When entering the “GENERAL” in the parameter page, the configuration screen will appear shown above. As previously mentioned, all models can be configured via an ETS file thus the programmers can work flexibly.

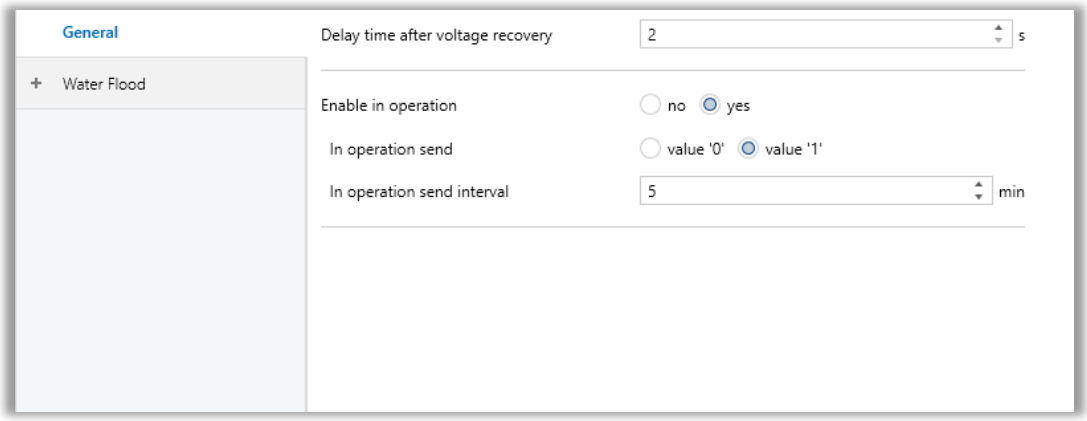


Fig. 1: General Parameter Configuration Page

3.1.A. Enable in Operation

This function has an important role to detect whether the device is working or not. By enabling the “Enable in operation” parameter, it is possible to know if the device is working properly. The value set in “in operation send” parameter is sent with a preset time via the “In Operation” object. If this telegram is received periodically, it shows that the device is working properly. Since the period time is in minutes, it is better to keep the period time higher in order not to increase the bus line traffic.

3.1.1. Parameters List

PARAMETER	DESCRIPTION	VALUES
Delay time after voltage recovery (sec)	This parameter is used to determine the delay time after voltage recovery in seconds. When in a delayed state, the Water Flood Detector does not send any KNX telegrams. Incoming telegrams are received and updated in the background. The updated values are only executed when the wait state ends and then sent according to the parametrization.	**2**…60
Enable in operation	This parameter is used to determine the existence of the Water Flood Detector on the KNX bus line. The cyclic telegram can be monitored by an external KNX device. If a telegram is not received, the device may be defective or the KNX cable to the transmitting device may be interrupted. **No:** The group object is not enabled. **Yes:** The group object is enabled.	**No** Yes
In operation send[1]	This parameter is used to determine the send value of the “General - In operation” group object on the KNX bus line.	Value ‘0’ **Value ‘1’**
In operation send interval (min)[1]	This parameter is used to set the cyclically sending time interval value of the “General - In operation” group object.	1…**5**… 255

[*1] This parameter is only visible when the parameter “Enable in operation” is set to “Yes”.

3.2. Water Flood

The users can make many settings related to the Water Flood via ETS software. Many features such as water alarm delay, status LED, alarm LED, to reset alarm with an object and buzzer etc. can be controlled with this tab.

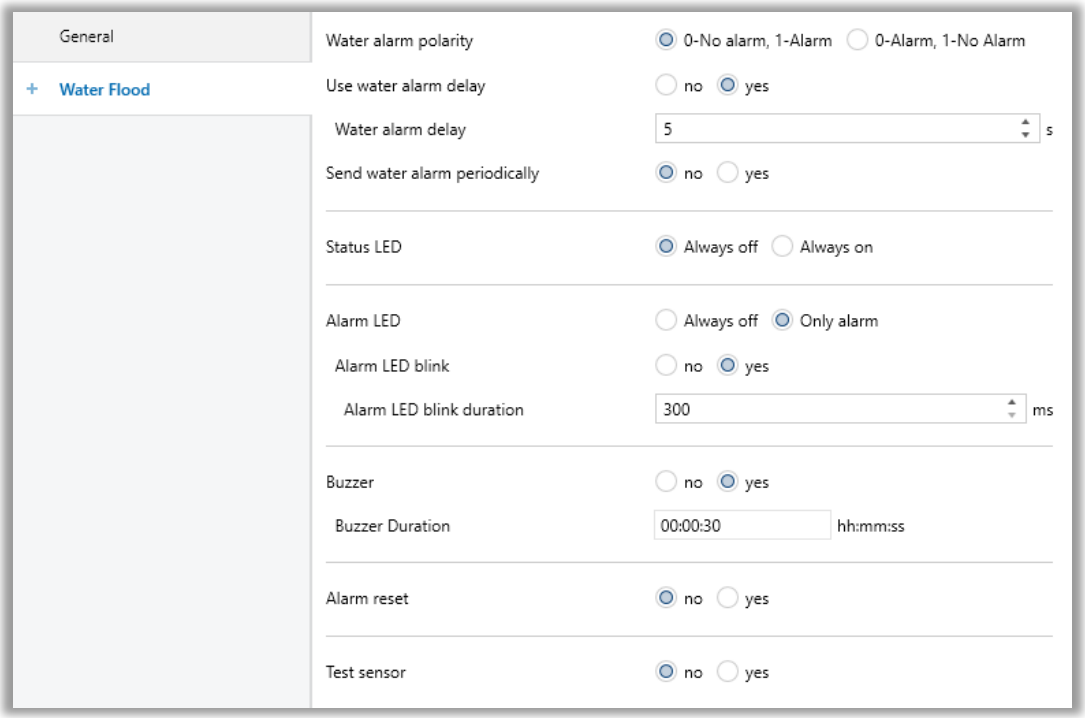


Fig. 2: Water Flood Parameter Configuration Page

3.2.1. Parameters List

PARAMETER	DESCRIPTION	VALUES
Water Alarm Polarity	This parameter allows determining telegram polarity of the water alarm.	**1:Alarm; 0: No alarm /** 1: No Alarm; 0: Alarm
Use water alarm delay	This parameter determines alarm object, LED, buzzer and relay is set immediately or after a delay time.	No **Yes**
-> Water alarm delay[1]	A delay time for the water alarm can be assigned via this object.	1…**5**…255
Send water alarm periodically	It determines alarm object is sent periodically.	**No** Yes
-> Water alarm period[2]	Alarms can be sent periodically at the intervals specified in this parameter.	**00:01:00**…18:12:15
Status LED	Status LED indicates device is energized or not. The led can be arranged as always on or always off via this parameter.	**Always off** Always on
Alarm LED	This parameter is used for the behaviour of water alarm led. **Always off:** Alarm LED is never turned on. **Only alarm:** It is turned on when alarm is happed.	Always off **Only alarm**
-> Alarm LED blink[3]	If the alarm LED is arranged as Only alarm, this parameter allows the alarm LED to make blink.	No **Yes**
-> Alarm LED blink duration (ms)[3,4]	Alarm LED blink duration can be determined via this object.	**300**…3000
Buzzer	This parameter determines whether buzzer will be used on alarm condition or not.	No **Yes**
-> Buzzer Duration hh:mm:ss[5]	If buzzer is arranged to be used on alarm condition, duration of buzzer can be determined via this parameter.	00:00:01…**00:00:30**…18:12:15
Alarm reset	The alarm reset parameter is used to end the alarm condition of the device. **No:** Determined alarm conditions start when the device detects water flood. As soon as probes get	**No** Yes

	dry alarm conditions to end. Water alarm reset object is not used. **Yes:** When the device detects water flood, alarm conditions start. Even if probes get dry, alarm conditions do not end. Water alarm reset object is used to stop alarm condition.	
-> Alarm reset polarity[6]	This parameter determines which value is used to clear water alarm with object.	**1-Reset; 0-Nothing** 1-Nothing; 0-Reset
Test sensor	This parameter is used to test LEDs, relay and buzzer.	**No** Yes

[*1] This parameter is only visible when the parameter “Use water alarm delay” is set to “Yes”.

[*2] This parameter is only visible when the parameter “Send water alarm periodically” is set to “Yes”.

[*3] This parameter is only visible when the parameter “Alarm LED” is set to “Only alarm”.

[*4] This parameter is only visible when the parameter “Alarm LED blink” is set to “Yes”.

[*5] This parameter is only visible when the parameter “Buzzer” is set to “Yes”.

[*6] This parameter is only visible when the parameter “Alarm reset” is set to “Yes”.

3.3. Lock

In this section, the locking feature of the water flood detector is mentioned. Locking feature suspend to send group objects.

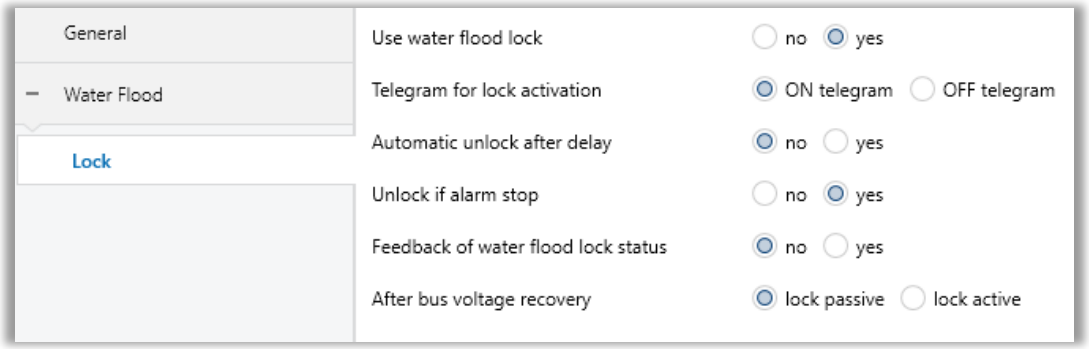


Fig. 3: Lock Parameter Configuration Page

3.3.1. Parameters List

PARAMETER	DESCRIPTION	VALUES
Use water flood lock	This parameter is used to activate or deactivate the water flood detector lock feature. When this parameter is selected as "yes", parameters related to the locking feature will be visible on the page.	**No** Yes
Telegram for lock activation[1]	This parameter specifies the telegram value that should be used to lock the water flood detector. For example, if this parameter is selected as "ON telegram", the detector will be locked when an ON telegram is sent from the KNX bus line to the relevant Lock object. In this state, when the OFF telegram is sent, the detector lock will be removed. The opposite of this configuration is also valid.	**ON telegram** OFF telegram
Automatic unlock after delay[1]	This parameter is used to activate or deactivate the feature of automatically unlocking the detector after a certain period.	No **Yes**
-> Automatic unlock time[1,2]	This parameter is used to determine the time required to unlock the detector from the moment the detector is locked. The time information to be entered is in hours, minutes and seconds.	00:00:01…**00:00:30**…18:12:15
Unlock if alarm stop[1]	This parameter is used to unlock device, when lock is activated and alarm is stop.	No **Yes**
Feedback of water flood lock status[1]	This parameter is used to enable or disable the feedback of the water flood lock status object.	**No** Yes
After bus voltage recovery[1]	This parameter is used to determine the water flood lock status after the bus voltage recovery.	**Lock passive** Lock active

[*1] This parameter is only visible when the parameter “Use water flood lock” is set to “Yes”.

[*2] This parameter is only visible when the parameter “Automatic unlock after delay” is set to “Yes”.

4. ETS Objects List & Descriptions

The KNX Water Flood Detector can communicate via the KNX bus line. In this section, the group objects of the KNX Water Flood Detector is described. Which of these group objects are visible and capable of being linked with group addresses are explained in sub-sections.

No	Name	Function	DTP Type	Length	Flags				
					C	R	W	T	U
1	General	In operation	1.002	1 bit	X			X	
2	Water Flood	Water Alarm	1.005	1 bit	X	X		X	X
3	Water Flood	Water Alarm Reset	1.002	1 bit	X	X	X	X	X
4	Water Flood	Test Sensor	1.003	1 bit	X	X	X	X	X
5	Water Flood	Lock	1.003	1 bit	X		X		
6	Water Flood	Feedback of lock	1.003	1 bit	X	X		X	

4.1. General Objects

This section describes the "general" group objects and their properties. General group objects, as the name suggests, indicate the general characteristics of the KNX Water Flood Detector

Object Number	Object Name	Function	Type	Flags
1	**General**	**In Operation**	**1 bit**	**CWU**
This object is used to monitor the presence of the device on the KNX bus line regularly. However, monitoring telegrams can be sent cyclically on the KNX bus line. DPT: 1.002 (boolean)				
2	**Water Flood**	**Water Alarm**	**1 bit**	**CRTU**
This object indicates status of water alarm. DPT: 1.005 (alarm)				
3	**Water Flood**	**Water Alarm Reset**	**1 bit**	**CRWTU**
If alarm reset parameter is set this object is used to reset the water alarm object. DPT: 1.002 (boolean)				
4	**Water Flood**	**Test Sensor**	**1 bit**	**CRWTU**
This object start to test LEDs, relay and buzzer. When this object is set, device suspend to detect water alarm and sending objects. DPT: 1.003 (enable)				
5	**Water Flood**	**Lock**	**1 bit**	**CW**
This object is used to lock the water alarm. It becomes visible when the "use water flood lock" parameter is set to yes. Depending on the parameter setting, when an ON or OFF telegram is sent to this object, detector is locked. For example, when "ON telegram" is selected in the parameter page for locking, it will be locked when an ON telegram is received from the KNX bus line, and when an OFF telegram is received, the detector channel will be unlocked. Depending on the parameter configuration, an output value can also be sent when the locking operation is performed. DPT: 1.003 (enable)				
6	**Water Flood**	**Feedback of lock**	**1 bit**	**CRT**
This object is used to send feedback on the lock status for the detector. It becomes visible when the "use water flood detector lock" parameter is set to yes. If a status change occurs on the lock function, the changed statue value will be sent from this object. DPT: 1.003 (enable)				

CONTACT INFORMATION

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