

## 12 S1 Water detector 211701

### Use of the application program

Product family: Monitor, Report  
 Product type: Sensors  
 Manufacturer: Siemens

Name: Water detector UP 272 Delta profil  
 Order no.: 5WG1 272-2AB01/... /51

### Functional description

The water detector can be used with this application program to detect ground water in residential buildings. The signals are transmitted via three communication objects: "Water", "Water alarm" and "Device/cable defective". The fourth communication object is used to acknowledge the object "Water alarm" in the event of a water alarm being triggered.

The objects "Water" and "Water alarm" are set to object value 1 at the water contact of the sensor and the status LED lights up (not available in every design variant). If the sensor contacts are dry again, the value of the "Water" object is reset. The "Water alarm" object that can also be parameterised for cyclical sending, remains set until an acknowledgement is received via the "Alarm acknowledgement" object and the sensor is dry again (otherwise a new acknowledgement is required).

The "Device/cable defective" object contains information as to whether the water detector is defective or not, whether the sensor is disconnected or the sensor cable is broken. If the object value changes from 0 to 1 in the event of an error, this status is only sent once by the water detector and the status LED (not available in every design variant) flashes. If the defect is resolved, the object value is reset and also only sent once.

The value of the "Water alarm" object is not stored on bus voltage failure. The device requires a delay of approx. 10 seconds after bus voltage recovery for the so-called transient condition. The application disables the evaluation of the sensor for this period. Any reading out of the objects during this initialisation phase can lead to false values being obtained.

### Note regarding the initial commissioning stage:

The water detector is calibrated by downloading the application program. The water sensor must be connected with its final connection cable and it must be dry.

<b>Bit 0:</b>	<b>Water</b>
logic "1":	Overrange in the response threshold
logic "0":	Underflow in the response threshold

<b>Bit 1:</b>	<b>Water alarm</b>
logic "1":	Overrange in the triggering threshold
logic "0":	Underflow in the triggering threshold

<b>Bit 2:</b>	<b>Device/cable defective</b>
logic "1":	Device or cable is defective
logic "0":	Sensor is OK

<b>Bit 3:</b>	<b>Alarm acknowledgement</b>
logic "1":	Alarm is not acknowledged
logic "0":	Alarm signal is acknowledged

### Communication objects

Phys. Addr.   Program			
no.	Function	Object name	Type
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0	Yes / No	Water	1 Bit
1	Yes / No	Water alarm	1 Bit
2	Yes / No	Device / cable defective	1 Bit
3	Reset alarm	Alarm acknowledgement	1 Bit

### Note

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flag
0	Yes / No	Water	1 Bit	CTU
This object contains information as to whether the sensor contacts are wet or dry. A "1" telegram is sent at the water contact of the sensor via the group address in this object. If the sensor contacts are dry, this corresponds to the object value "0". Each change in the object value is sent automatically.				
1	Yes / No	Water alarm	1 Bit	CTU
This object is set to the same conditions as the "Water" object (object value = 1). Provided that the object value is set, it is possible to send the value cyclically via the group address in this object. When the sensor is dry, the object value can be reset via the "Alarm acknowledgement" object.				

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Obj	Function	Object name	Type	Flag
2	Yes / No	Device/cable defective	1 Bit	CTU
<p>A "1" telegram for "Device/cable defective" is sent via the group address in this object in the event of a faulty, disconnected or broken sensor cable.</p> <p>If the object value changes from "0" to "1" (water detector's defect is detected), the water detector automatically sends this status (once). If the fault is rectified, the object value is reset and resents.</p>				
3	Reset alarm	Alarm acknowledgement	1 Byte	CRWT
<p>The switching telegrams for alarm acknowledgement are received via the group address in this object. The water detector only resets the value "1" of the "Water alarm" object in the event of an "Alarm acknowledgement", if the sensor is dry. If the sensor is wet, the object value of the "Water alarm" is maintained.</p>				

Maximum number of group addresses: 8  
Maximum number of associations: 8

## Parameters

## Water detector

Water detector	
Send alarm and fault indications cyclically	Yes
Interval for cyclical sending	5 minutes
Before programming mount the sensor and keep it dry	

Parameters	Settings
<b>Send alarm and fault indications cyclically</b>	Yes No
<p>This parameter specifies whether the "Water alarm" or "Device/cable defective" signals should be sent time and again on the bus according to the cyclic time.</p> <p>"Yes": When an alarm is sounded, the alarm telegrams appear cyclically on the bus. The cyclical sending is stopped by acknowledging the alarm signals via the "Alarm acknowledgement" object.</p> <p>"No": The alarm telegrams are only sent once after the alarm signals have been triggered.</p>	
<b>Interval for cyclical sending</b>	30 seconds 1 minute 3 minutes <b>5 minutes</b> 10 minutes 15 minutes 30 minutes 90 minutes 120 minutes
<p>This parameter specifies the cyclic time for sending the alarm telegrams time and again on the bus. If the parameter "Send alarm and fault indications cyclically" is set to "no", this parameter is not available.</p>	

Parameters	Settings
<b>Before programming, mount the sensor and keep it dry</b>	
<p><b>Note:</b> During the initial commissioning phase or after the assignment of software parameters, it is necessary to start a matching procedure. The software carries out this matching procedure automatically. The water detector must however be complete (with its sensor connected) in order to do this. The sensor contacts must also be dry. The software is then matched to the corresponding detector.</p>	

## Example of a timing diagram

