

Easy movement detector with twilight sensor



GW 10 756
GW 12 756
GW 14 756

Technical Manual

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1 Introduction

This manual describes the functions of the device named GW1x756 "**Easy movement detector with twilight sensor**" and how to use the ETS configuration software to change the settings and configurations.

2 Application

The **Easy movement detector with twilight sensor** allows you to send timed activation commands to actuator devices using the KNX/EIB bus through which it connects to the Home Automation system, according to the movements detected and the light in the environment where the device is installed, measured by the two built-in sensors.

The IR movement detector function and the twilight sensor function work together and it is not possible to separate them; however, if you turn the potentiometer for local regulation of brightness threshold on the front of the device completely on the right, you can almost exclude the twilight sensor function (set the brightness threshold to the maximum value, about 500 lux), letting the IR movement detector function ON.

It is also possible to enable/disable the function that sends commands following movement detection, through an appropriate communication object.

The device is fitted with two trimmers, one to set the brightness threshold and the other to modify the cycle time (that will be analysed in detail further on) and a pilot light backlit by a green led which indicates when a start movement telegram is sent.

The device manages a safety intermission which excludes the IR sensor for 5 seconds when the commanded actuator switches OFF (it requires the commanded actuator to send its status information). This intends to prevent undesired activation, for instance caused by the switching off of an electrical load with high heat emission.

It is possible to set the functions on the device so that they activate only movement detection when the actuator to be commanded is ON (conditioned detection). This function mode allows you, for instance, to switch on lights in the traditional manner (using a button or similar fitting) whilst guaranteeing the automatic switch-off function once the area covered by the movement sensors is liberated.

This manual refers solely to the configuration using the ETS software. Please refer to the **INSTALLATION AND USER MANUAL** supplied with the product for instructions on how to adjust and use the trimmers fitted on the device.

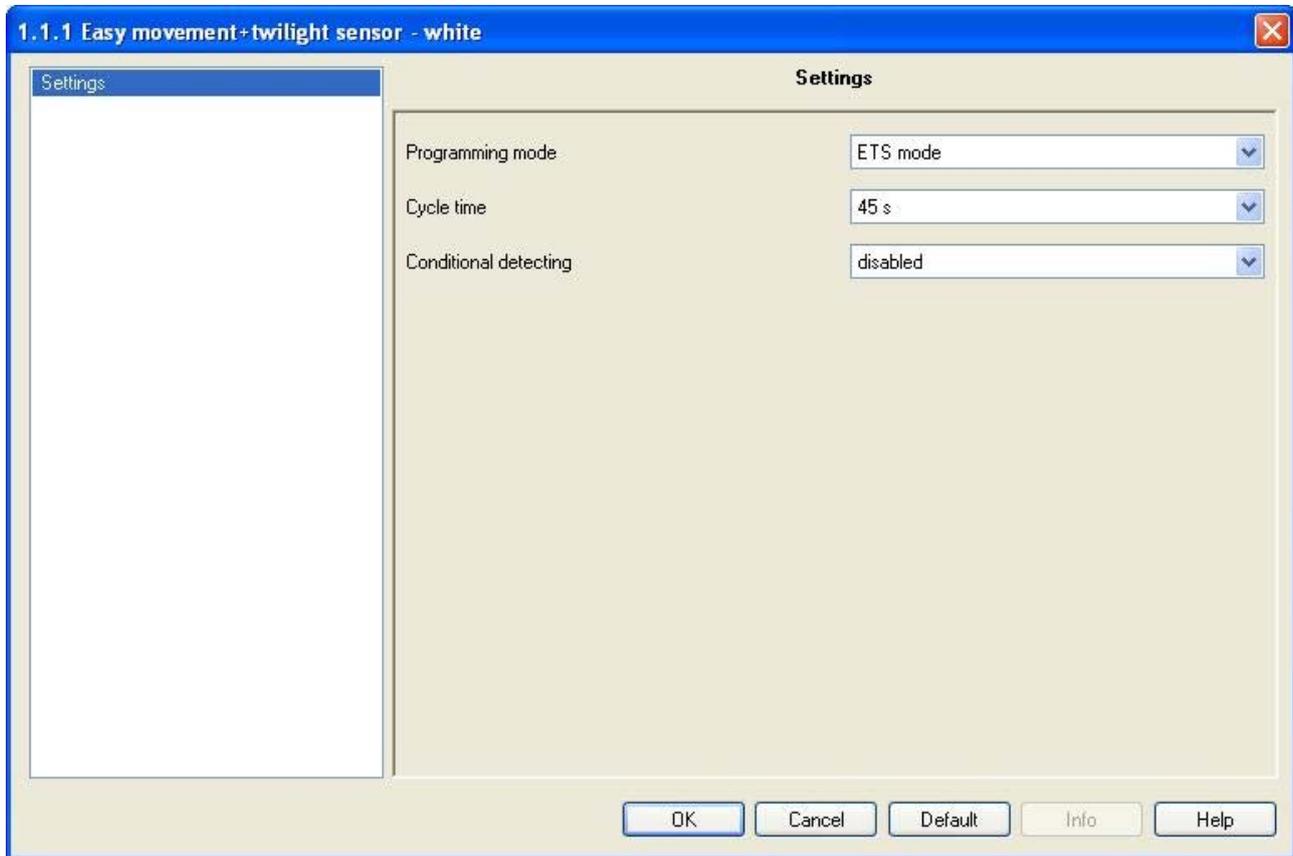
2.1 Limits to the associations

Maximum number of group addresses:	40
Maximum number of logical associations:	40

This means that it could be possible to define maximum 40 group addresses and realize maximum 40 associations between group addresses and communication objects.

3 “Settings” menu

Here it is possible to configure the programming mode between ETS mode (S-Mode) and Easy mode by the Easy controller software (Kit GW90837, Kit GW90838, GW90840) and the other functional parameters (see Diag 3.1).



Diag. 3.1

3.1 Parameters

➤ 3.1.1 Programming mode

This parameter determines the programming mode of the device:

- **ETS mode**

Select this value if you want to configure the device with ETS (S-Mode); all the configuration parameters are now visible.

- **Easy mode**

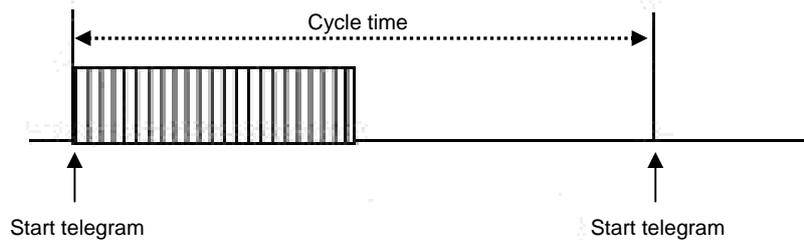
Select this value if you want to configure the device with the Easy controller software.

Remember to download the application program with this value selected before using the device by the Easy controller software if you have already used the device in an ETS project.

➤ 3.1.2 Cycle time

When the device detects movement and after assessing the brightness level detected by the twilight sensor, it sends a movement start telegram; from this moment in time, the value on the cycle time counter decrease.

During the cycle time, any movement detected will not trigger the sending of a bus telegram as this would create an overflow on the bus line, so the device repeat the start telegram at the end of each cycle time; therefore, if the cycle time lapses and there is constant movement, the device will send another start telegram (see Diag. 3.2).



Diag. 3.2

At this parameter, you can set the following values: 10s, 30s, 45s, 1min, 2min, 5min.

The cycle time period set through the ETS can be regulated manually by $\pm 50\%$ rotating the right local potentiometer on the detector. For instance, setting a time of 30 seconds on the **Cycle time** ETS parameter, it will be possible to continuously regulate the transmission period from 15 to 45 seconds (see INSTALLATION AND USER MANUAL).

➤ 3.1.3 Conditional detecting

Here it is possible to enable the conditional detecting movement, so the movement detection is active only if the actuator to be commanded is ON. This function mode allows you, for instance, to switch on lights in the traditional manner (using a button for example) whilst guaranteeing the automatic switch-off function once the area covered by the movement sensors is liberated. The settings are:

- **enabled**

The conditional detecting movement is enabled, so the movement detection is active only if the actuator to be commanded is ON.

- **disabled**

The conditional detecting movement is disabled, so the movement detection is always active.

Pay attention: the device sends only start timed activation commands so it is the controlled actuator that automatically switched off when its time of activations elapsed; for this reason, it is most important to configure the time of activation on the actuator greater than the cycle time set on the Easy movement detector with twilight sensor.

3.2 Communication objects

The **Settings** menu makes the following communication object visible (See Diag. 3.3.):

Number	Name	Object Function	Length	C	R	W	T	U	Data Type	Priority
1.000	Status feedback	On/Off	1 bit	C	-	W	-	-	1 bit DPT_Switch	Low
1.001	Sensor enabling	Enable/Disable	1 bit	C	-	W	-	-	1 bit DPT_Enable	Low
1.002	Timed switch	Start/Stop	1 bit	C	R	-	T	-	1 bit DPT_Start	Low

Diag. 3.3

➤ 3.2.1 Timed switch

The device sends START temporization commands to the bus through this communication object following a movement detection.

The enabled flags are C (communication), R (read by bus) and T (transmission).

The standard format of the object is *1.010 DPT_Start*, the size of the object is *1 bit* and the information it contains is *START temporization*.

➤ 3.2.2 Status feedback

Through this communication object, the device receives status feedbacks for the devices it controls, generally actuators, so that it is always updated about their status and therefore able to manage them correctly. Please note that the use of this object is essential in order for the proper functioning of the device.

The enabled flags are C (communication), W (written by bus).

The standard format of the object is *1.001 DPT_Switch*, the size of the object is *1 bit* and the information it contains is *ON/OFF status* or more generally *1/0 status*.

➤ 3.2.3 Sensor enabling

Through this communication object, the device receives enable/disable movement detection function commands by other KNX/EIB devices.

The enabled flags are C (communication), W (written by bus).

The standard format of the object is *1.003 DPT_Enable*, the size of the object is *1 bit* and the information it receives is *enable/disable movement detection function*.

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