

Sensor

Take M/HS05.1 as example

The background of the top half of the page is a purple-tinted aerial view of a city with a river and bridges. The title "目录" and "CONTENTS" is centered over this background.

目录

CONTENTS

01

Introduction

02

Commission

03

请添加内容三
Please add content 3

04

请添加内容四
Please add content 4



Part 01

Introduction



HDL-KNX/EIB M/HS05.1-D PIR and Lux Sensor is a multifunctional movement sensor. It includes 4 independent logic blocks and 1 combined logic block. The logic relations “AND”, “OR” can be set. The logic input conditions contain the conditions of movement sensor, LUX, temperature, dry contact and external conditions. According to different application requirements, the sensor can be configured as the master-slave mode or single mode.

Five Logic functions

1.1.30 PIR Sensor M/HS05.1 > General

General	System delay(2..255s) after bus voltage recovery	10
Light control	Heartbeat telegram	Disable
Function status	Status LED indicator	ON when movement detected
Logic function A	Sensor setting: (1)Movement sensor sensitivity (1%-100%)	95%
Logic function B	-> Movement sensor sensitivity via object	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Logic function C	(2)Brightness quiver (5..30%)	5%
Logic function D	->Lux compensation	0
Logic function E	(3)Temperature hysteresis (0.1'C)	10
	->Temperature compensation (0.1'C)	0
	(4)Dry contact 1 for logic	Disable
	(5)Dry contact 2 for logic	Disable
	Extend dry contact function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Constant brightness:	=====
	Constant brightness function A	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Function Status:

On this page, the real-time status captured by the sensor can be obtained through enabling different sensing functions.

1.1.30 PIR Sensor M/HS05.1 > Function status

General	(1)Slave Movement sensor status report <input checked="" type="radio"/> No <input type="radio"/> Yes
Light control	(2)Brightness report <input checked="" type="radio"/> No <input type="radio"/> Yes
Function status	(3)Temperature report <input checked="" type="radio"/> No <input type="radio"/> Yes
Logic function A	(4)Dry contact 1 report <input checked="" type="radio"/> No <input type="radio"/> Yes
Logic function B	(5)Dry contact 2 report <input checked="" type="radio"/> No <input type="radio"/> Yes
Logic function C	
Logic function D	
Logic function E	

For Example, we enabled brightness report.

1.1.30 PIR Sensor M/HS05.1 > Function status

General	(1)Slave Movement sensor status report <input checked="" type="radio"/> No <input type="radio"/> Yes
Light control	(2)Brightness report <input type="radio"/> No <input checked="" type="radio"/> Yes
Function status	->Lux report mode <input checked="" type="radio"/> Report when changed <input type="radio"/> Report cyclic
Logic function A	->Differential value for report (1..200lux) <input style="width: 80px;" type="text" value="20"/>
Logic function B	->Minimum time interval(1..255s) <input style="width: 80px;" type="text" value="1"/>
Logic function C	(3)Temperature report <input checked="" type="radio"/> No <input type="radio"/> Yes
Logic function D	(4)Dry contact 1 report <input checked="" type="radio"/> No <input type="radio"/> Yes
Logic function E	(5)Dry contact 2 report <input checked="" type="radio"/> No <input type="radio"/> Yes

应用下载后，选着诊断—选择开始（我们可以获得传感器实际收集到的亮度值

The screenshot shows the '诊断' (Diagnosis) window of the HDL software. The interface includes a sidebar with navigation options like '监视器' (Monitor), '总线监视器' (Bus Monitor), '诊断' (Diagnosis), '设备信息' (Device Information), '个人地址' (Personal Address), and '编程模式' (Programming Mode). The main area contains a toolbar with buttons for '开始' (Start), '停止' (Stop), '清除' (Clear), '打开' (Open), '保存' (Save), '打印' (Print), '回放电报' (Replay Telegram), and '选项' (Options). Below the toolbar, there are input fields for '组地址' (Group Address), '数据点类型' (Data Point Type) set to '9.004 lux (Lux)', and '延迟时间[秒]' (Delay Time [s]) set to 0. A table displays the following data:

指定地点地址	指定地点名称	路由器	类型	DPT	信息
1/6/0	亮度值	6	GroupValueWrite	9.004 lux (...1D 78 112 Lux	
5/0/1	新建群组地址	6	GroupValueWrite	9.001 tem... 0C B5 24.1 °C	
1/6/0	亮度值	6	GroupValueWrite	9.004 lux (...1D 78 112 Lux	
5/0/1	新建群组地址	6	GroupValueWrite	9.001 tem... 0C B5 24.1 °C	
1/6/0	亮度值	6	GroupValueWrite	9.004 lux (...1D 78 112 Lux	

If we want the Entrance Downlight to turn on automatically when the sensor detects motion. How can we do that ?

1.Enable logical block A

1.1.30 PIR Sensor M/HS05.1 > Logic function A

General	Use logical block A	<input type="radio"/> No <input checked="" type="radio"/> Yes
Light control		
Function status	(1)Enable Movement sensor	Single mode(independent sensor) ▾
	->Movement sensor status	<input type="radio"/> Movement sensor detected is False,else is...
		<input checked="" type="radio"/> Movement sensor detected is True,else is F...
Logic function A		
Block A	(2)Enable brightness(Lux) sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	(3)Enable temperature sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A1: Switching	(4)Enable external telegram 1	Disable ▾
Logic function B	(5)Enable external telegram 2	Disable ▾

2.Enable Movement Sensor

1.1.30 PIR Sensor M/HS05.1 > Logic function A

General	Use logical block A	<input type="radio"/> No <input checked="" type="radio"/> Yes
Light control		
Function status	(1)Enable Movement sensor	Single mode(independent sensor) <input type="text"/>
Logic function A	->Movement sensor status	<input type="radio"/> Movement sensor detected is False,else is... <input checked="" type="radio"/> Movement sensor detected is True,else is F...
Block A	(2)Enable brightness(Lux) sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A1: Switching	(3)Enable temperature sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	(4)Enable external telegram 1	Disable <input type="text"/> <small>Default Value: Disable</small>

3. Select Switch controller as output type

1.1.30 PIR Sensor M/HS05.1 > Block A

General	Object output 1 (to bus)	Switch controller
Light control	Object output 2 (to bus)	Invalid
Function status	Object output 3 (to bus)	Invalid
Logic function A	Object output 4 (to bus)	Invalid
Block A	Object output 5 (to bus)	Invalid
	Object output 6 (to bus)	Invalid

4. Link Entrance Downlight's group address(1/0/1) with Object output A1.

	Number	Name	Object Function	Description	Group Address	Length
➡	1	General	Heartbeat telegram			1 bit
➡	18	Function status	Brightness(Lux) value	Lux Value	1/5/3	2 bytes
➡	26	Light channel 1 slave input	Movement status from bus			1 bit
➡	27	Light channel 1 external input	External telegram			1 bit
➡	31	Light channel 1 output	Switching			1 bit
➡	61	Object output A1	Switching	Entrance Downlight	1/0/1	1 bit

If we want Staircase light to turn on when sensor detects lux below 100 and motion? How can we do that ?



Let's use logic B to do that.

1.Enable logical block B

1.1.30 PIR Sensor M/HS05.1 > Logic function B

General	Use logical block B	<input type="radio"/> No <input checked="" type="radio"/> Yes
Light control	(1)Enable Movement sensor	Single mode(independent sensor) ▼
Function status	-> Movement sensor status	<input type="radio"/> Movement sensor detected is False,else is... <input checked="" type="radio"/> Movement sensor detected is True,else is F...
Logic function A	(2)Enable brightness(Lux) sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Block A	(3)Enable temperature sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A1: Switching	(4)Enable external telegram 1	Disable ▼
Logic function B	(5)Enable external telegram 2	Disable ▼

2.Enable Motion Sensor and Brightness sensor , and set conditions.

1.1.30 PIR Sensor M/HS05.1 > Logic function B

General	Use logical block B	<input type="radio"/> No <input checked="" type="radio"/> Yes
Light control	(1)Enable Movement sensor	Single mode(independent sensor) ▼
Function status	-> Movement sensor status	<input type="radio"/> Movement sensor detected is False,else is... <input checked="" type="radio"/> Movement sensor detected is True,else is F...
Logic function A	(2)Enable brightness(Lux) sensor	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Block A	Enable brightness(Lux) threshold A	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
A1: Switching	->Lux >= Threshold lower(0 ~ 1200 lux)	0 ▲▼
Logic function B	->Lux <= Threshold upper(0 ~ 1200 lux)	100 ▲▼
Block B	->Changed Lux threshold value via bus	<input checked="" type="radio"/> No <input type="radio"/> Yes

3.As want Staircase light to turn on when sensor detects lux below 100 and motion, so the relation of condition of motion sensor and brightness has to be “And”.

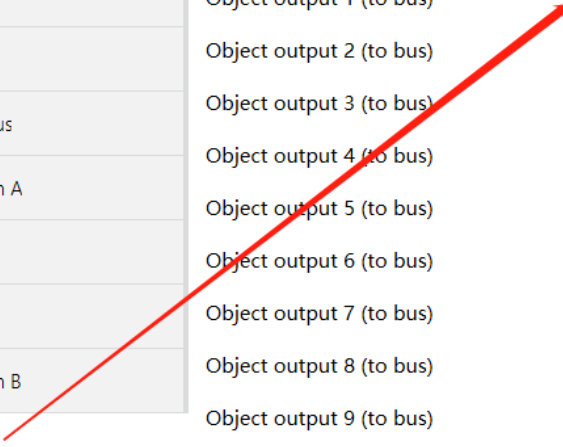
1.1.30 PIR Sensor M/HS05.1 > Logic function B

General	-> Changed Lux threshold value via bus	<input checked="" type="radio"/> NO <input type="radio"/> YES
Light control	-> Brightness(Lux) status	In range is True,else False
Function status	-> Independent control <object output 8>	<input checked="" type="radio"/> No <input type="radio"/> Yes(Separated from logic and output)
Logic function A	Enable brightness(Lux) threshold B	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Block A	(3)Enable temperature sensor	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
A1: Switching	(4)Enable external telegram 1	Disable
	(5)Enable external telegram 2	Disable
Logic function B	(6)Enable dry contact 1 input	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	(7)Enable dry contact 2 input	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Logical relation of block B	<input checked="" type="radio"/> AND <input type="radio"/> OR
Block B	Result of logic B inverted	<input checked="" type="radio"/> No <input type="radio"/> Yes
B1: Switching	Status(True/False) of logic B to bus	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Logic function C		
Logic function D		
Logic function E	<1>Use logical B function lock?	<input checked="" type="radio"/> No <input type="radio"/> Yes

4. Select Switch controller as output type

1.1.30 PIR Sensor M/HS05.1 > Block B

General	Object output 1 (to bus)	Switch controller
Light control	Object output 2 (to bus)	Invalid
Function status	Object output 3 (to bus)	Invalid
Logic function A	Object output 4 (to bus)	Invalid
Block A	Object output 5 (to bus)	Invalid
A1: Switching	Object output 6 (to bus)	Invalid
Logic function B	Object output 7 (to bus)	Invalid
Block B	Object output 8 (to bus)	Invalid
	Object output 9 (to bus)	Invalid
	Object output 10 (to bus)	Invalid



Link Staircase light's group address(1/3/1) with Object output B1.

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U
1	General	Heartbeat telegram			1 bit	C	-	-	T	U
18	Function status	Brightness(Lux) value	Lux Value	1/5/3	2 bytes	C	R	-	T	U
26	Light channel 1 slave input	Movement status from bus			1 bit	C	-	W	-	U
27	Light channel 1 external input	External telegram			1 bit	C	-	W	-	U
31	Light channel 1 output	Switching			1 bit	C	R	-	T	U
61	Object output A1	Switching	Entrance Downlight	1/0/1	1 bit	C	R	-	T	U
101	Object output B1	Switching	Staircase light	1/3/1	1 bit	C	R	-	T	U

THANKS