Light Sensor
Type G8210 2220

Dupline®
Fieldbus | *Installationbus*

- For daylight regulation applications
- Supplied by Dupline
- For ceiling mounting
- Channel coding by GAP 1605
- OPUS housing

Product Description

The G8210 2220 Light Sensor is a component of the Dupline Installation System. It measures the light intensity in a room/office. The sensor is part of the Daylight system and is used together with the G3448 5239 Daylight Controller.

The sensor is designed for ceiling mounting and measuring of indirect light. The module is powered by Dupline.

Ordering Key

G 8210 2220

Type: Dupline®
OPUS housing
Transmitter
2 Channels
1 Input
Light level measuring

Type Selection

Supply	Color	Ordering no.
By Dupline®	White	**G 8210 2220**

Input Specifications

Signal input	Visible light
Spectral range	330 – 720 nm
	Infrared rejection filter
Spectral peak	580 nm
Viewing angle	26°
Optical range	0 – 100 Lux
	400 – 500 Lux at table height is approximately 25 Lux measured by the sensor, depending on the reflection factor and the distance
Response time	9 cycles
	≤ 1224 ms @ 128 channels

Supply Specifications

Power supply	Supplied by Dupline®
Current consumption	≤ 4 mA

General Specifications

Power-on delay	≤ 1 s
Environment	
Degree of protection	IP 20
Pollution degree	3 (IEC 60664)
Operating temperature	0 to 50 °C (32 to 122°F)
Storage temperature	-20 to 85°C (-4 to 185°F)
Humidity (non condensing)	≤ 85%
Material	OPUS 66 housing
	66 x 66 x 35 mm
Weight	60 g
Standards	IEC 60669, EN 55022/ EN 50081-1 and EN 55024/ EN 50082-1

Mode of Operation

Coding

With the GAP1605 programming unit, each channel can be assigned any address between A1 and P8 via the programming connection on the PCB. For connection of GAP 1605 to a module, the cable GAP-TPH-CAB must be used. The allocation of the channels is as follows:

Channel	Default address	Description
1	A7	Sync. input for light level data
2	A2	Light level output

The coding of the sensor can be carried out without Dupline signal. It is retained permanently, but may be overwritten at any time.

Functions and programming

For transmission of light levels from the light sensors, channel 2 (A2) is used as output for serial data. Channel 1 (A7) is also used for transmitting data. The channel is used as an input for synchronizing the serial data. In the configuration software for the Master Generator, the channel must be selected as a "Daylight sync." channel. The Master Generator will then automatically generate the sync. signal used for the controller and the light sensor. Only one channel in the Dupline system needs to be configured as sync. channel, independently of the number of light controllers and light sensors. All sync. channels of the modules just have to be configured to the same channel selected in the Master Generator.

Mounting

The sensor must be mounted in the ceiling and directed towards the floor. It is important to place the sensor where it will not be hit by any direct sunlight during the day. It is also important that the sensor is placed correctly in the room. Since it can be difficult to find the ideal place the first time, it may be necessary to change the placement of the sensor if the regulation during the day is not optimum.

As a starting point, the sensor should be placed in the area, where the sunlight contributes least to the total light in the room. This means that in most cases it will be recommended to place the sensor at the back of the room in relation to the windows.

It is advantageous to split up a room in several light groups: one area (light group) close to the windows is regulated by a sensor placed within this area, while an area away from the windows is regulated by its own sensor. In this area, a larger amount of lighting will usually be needed to maintain a homogeneous light level in the room.

The sensors must be placed so that they have a free view. This means that no large objects, like big flowers, shelves etc. must be placed under the sensors. In addition, it is important that no kind of up-light is placed near the sensors, or that the area around the sensor is not lit up with for example table lamps, which are not connected to the Daylight controller.