Smoke Detector
Type G8920 5517 709

- **Smoke detector using Tyndall effect**
- **Detection of smouldering fires and flaming fires with smoke development**
- **Without radioactive sources**
- **Detection of up to 60 m²**
- **Transmission of alarms and Alive signal via Dupline®**
- **Operating voltage supplied by Dupline® bus**
- **Optional use of the smoke detector as alarm device for other detectors such as gas, water and burglary via Dupline®**
- **Battery backup if the Dupline® connection is interrupted**
- **Acoustic alarm > 85 dB**
- **Constant monitoring of sensor sensitivity via Dupline®**

Product Description

The G89205517709 smoke detector allows early detection of smouldering fires as well as flaming fires that develop smoke. It operates on the proven light scatter principle. Inside the sensing chamber, a light source and a light sensor are arranged so that light normally does not fall on the sensor. It is only when airborne particles enter the chamber that light is scattered onto the sensor (Tyndall effect) to produce the electrical signal. This design means that no radioactive source is required.
Smoke alarms and Alive signal are transmitted via the Dupline® bus.
Besides alarms, the built-in LED also shows the operational status of the device. A test button allows a manual check of the alarm function, while simultaneously an alarm is given via the Dupline® bus. Optional use of the smoke detector as alarm device for other detectors such as gas, water and burglary via Dupline®.

Ordering Key

G8920 5517 709

Type: Dupline®
Type

Type Selection

Ordering no.	G8920 5517 709

Supply Specifications

Supply	Supplied by Dupline®
Current consumption typ.	0.3 mA
Battery current consumption	20 µA
Supply voltage	9 VDC
Current consumption when alarm is active	7.5 mA

Input Specifications

Detector	Optical (Tyndall effect)
Response level	According to EN 12239 (95)

General Specifications

Channel programming	Via GAP 1605 and special cable GAP-TPH-CAB
Channel assignment	
I/O number 1	Alarm signal. Choose between active high or active low sensor. See datasheet for GAP 1605 about how to use this option.
I/O number 2	Monitoring of sensor (tamper/presence). The signal is always active if OK, otherwise inactive.
I/O number 3	Monitoring of battery voltage. The signal is active if the voltage is low.

General Specifications (cont.)

I/O number 4	Monitoring of sensor sensitivity. The signal is active if the sensor becomes dirty.
I/O number 5	Forced alarm. The smoke sensor can be used as an alarm device for e.g. water, gas and burglar alarms.
Fail-Safe mode	If the Dupline® connection is interrupted, the smoke sensor will still work, but as a normal individual smoke detector.
Indication	Red LED (short flash once every 42 sec. (alive signal): The smoke detector is OK. Short flash every 0.5 sec.: Alarm. Red flash (42 sec.) and simultaneous beep = Low battery voltage. Red flash (42 sec.) and asynchronous beep = Dirty

General Specifications (cont.)

Environment	
Degree of protection	IP 43
Operating temperature	0 to 50°C (+32° to +122°F)
Storage temperature	-5 to +85°C (+23 to +185°F)
Meets the requirements of	ISO 12239
Connection	Screw terminals Wire diameter: 0.4-1.5 mm See wiring diagrams

Housing	For installation on ceilings.
Dimensions	Ø 100 x 51 mm
Material	ABS
Colour	White
Sound level	> 85 dB(A) / 3 m (10 ft)
Battery	IEC 6LR 61
Average life, battery	2 years
Alarm signalling	Acoustic and optical
Vds approval	G202055

Notes on application

To achieve minimum protection, one G8920 5517 709 should be installed in front of each sleeping area or each floor. Higher protection will be achieved if one smoke detector is present in every room (except for the kitchen and the bath - here, false alarms may occur due to steam development).

When using the G8920 5517 709, the following issues must be observed:

- Rooms may have a floor area of up to 60 m² and a height of up to 6 m
- Hallways and narrow corridors may have a width of up to 3 m (10 ft) and a length of up to 15 m (50 ft)
- The mounting location must be as close as possible to the centre of the room
- A minimum distance of 0.5 m (1,5 ft) must be maintained from walls and furniture

The G8920 5517 709 must **NOT** be mounted in the following locations:

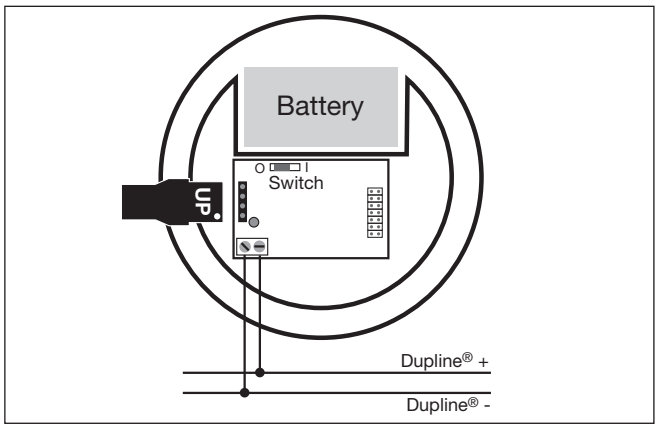
- Near ventilation ducts or strong draughts
- Directly in the apex of pitched roofs (a minimum distance of 30 cm (1 ft) from the apex must be maintained)
- In rooms which are usually very steam-, dust- or smoke-filled (for example in workshops, bathrooms and laundry rooms)

Connection of multiple smoke alarms

It is possible to interconnect several smoke alarms so that the alarm signal from one alarm is transmitted to all other connected alarms. The smoke alarms are connected in parallel using a 2-wire cable.

Note: **Make sure that the total power consumption does not exceed the channel generator's output when interconnecting the smoke alarms. Use a back-up battery to avoid voltage drop in the Dupline Bus when using interconnection.**

Wiring Layout and Description



Switch = 0

Normal position.

If the battery is removed, the smoke alarm indicates – Low bat.

Switch = 1

Bypass of "Low bat" indication.

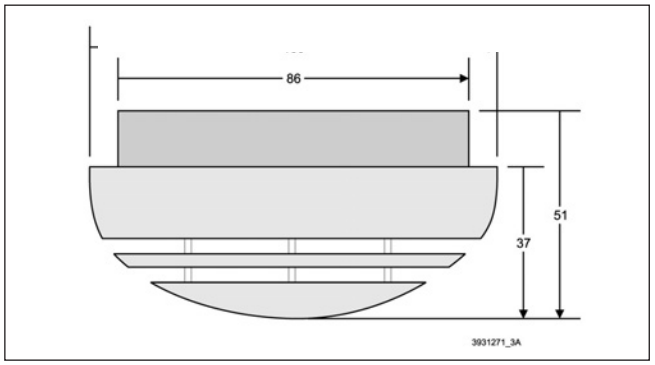
The smoke signal device does not indicate "Low bat" alarm if the battery is removed.

Programming

The I/O addresses and the passive/active alarm may be programmed by means of GAP 1605, using the GAP-THP-CAB cable.

If the Dupline® signal fails, the output will go to the predefined fault polarity.

Dimensions



Accessories

Programming cable for GAP 1605	GAP-TPH-CAB