



DOW1171 / DCW1151

AlgoRex

Radio fire detection system



Interactive

-
- **Complete integration in the interactive fire detection system CS1140**
 - **Simultaneous operation of wired and wireless fire detectors**
 - New possibilities for systems engineering
 - Adaptation to change of building utilization
 - Rapid implementation of customers` requirements
 - **Transmission reliability practically the same as wired systems**
 - System integration test every 30 seconds
 - Automatic specification of the optimum basic and backup radio channels
 - Automatic change of channel in the event of radio interference
 - 2 integrated antennae (antenna diversity)
 - Bi-directional data traffic in SRD band
 - **Radio smoke detector with optimum signal evaluation through special computing procedures**
 - Individual detector addressing for easy identification of location
 - Transmission of 4 danger levels
 - **Up to 30 detectors can be connected to each radio gateway**
 - **Long battery service life (more than 5 years)**

Application

The chief application for the DS11 interactive wireless fire detection system is where for structural or aesthetic reasons, or for reasons of architectural conservation, only restricted use of cable or conduit is permitted.

Typical fields of application

Rooms of great historical value, e.g.:

- Museums
- Churches
- Libraries

Rooms which permit only the shortest interruption to operations for wiring, e.g.:

- Hotel rooms
- Management secretariat
- Congress halls

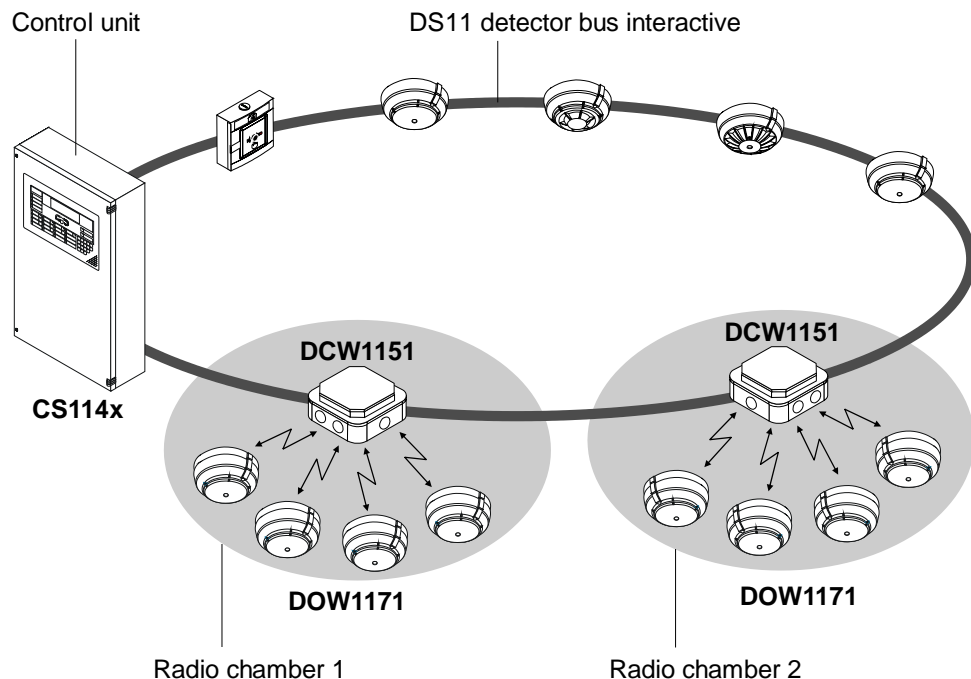
Aim and purpose

In purpose-built premises, fire detection systems are optimized, planned and installed according to the requirements of the initial user. Experience shows that even the initial user's requirements are outpaced in the shortest possible time. The company expands the utilization and structures change and constructional changes are the result. These conditions can be dealt with by simply and quickly extending the DS11 system with the radio fire detection system.

System overview

The radio gateway DCW1151, which is connected to the interactive detector bus, communicates by radio with up to 30 DOW1171 radio smoke detectors. Each detector has its own location address. The radio gateway transmits the signals received from the radio smoke detectors via the detector bus to the fire detection control unit and passes on commands from the control unit to the radio smoke detectors.

The radio fire detection system operates in the SRD band from 868 - 870MHz, a frequency range with the highest transmission and functional reliability, with clear instructions for all users.



Radio smoke detector DOW1171



- Uniform response to the most varied types of fire
- Dynamic analysis of the sensor signal Smoke in the detector itself
- Built-in diagnostic algorithms with automatic self-test
- High immunity to false alarms and ambient influences
- High-quality optoelectronic sensor system
- Automatic compensation for soiling
- Simple exchange of detector and battery

Functions

- *Four danger levels* allow the actuation of different counter-measures as well as an early warning in the event of an incorrect application.
- *Self-test*. Periodically or upon command the detector carries out a comprehensive self-test.
- *Algorithms*. Special computing procedures in the detector processor allow optimum signal evaluation as assigned to the detector. This ensures high immunity to interference and operational reliability.
- *Measured value compensation*. This gives the detector practically constant sensitivity throughout its entire service life.
- A built-in response indicator signals an alarm on the spot.

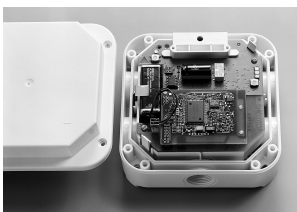
Supply

The DOW1171 radio smoke detector is supplied by two 9 V lithium batteries. In normal operating condition they have a service life of more than 5 years. Separate monitoring of each battery guarantees up to 30 days' operation of the detector even if one battery malfunctions.

Installation

- Mounting with detector base DBW1171. The detector must only be inserted in the base during commissioning (address allocation).
- The detector can be inserted and removed using a detector exchanger up to a height of 7 meters.

Radio gateway DCW1151



- Signal transmission from and to the control unit
- Signal conditioning and monitoring of up to 30 detectors
- As programmable opener or closer relay contact to actuate fire control systems on the spot

Supply

The radio gateway DCW1151 is supplied via the detector bus. The additional 9 V battery guarantees the operation during commissioning or when the detector bus is dead. In normal operating condition the battery is switched off which leads to a service life of well over 5 years.

Installation

- The housing with cover DCA1191 and the terminal plate DWB1151 are required for installation. Six M20x1.5 threaded cable entries are provided on the housing to feed in the cable.
- The DWA1151 electronics unit is only inserted after the wiring check during commissioning.

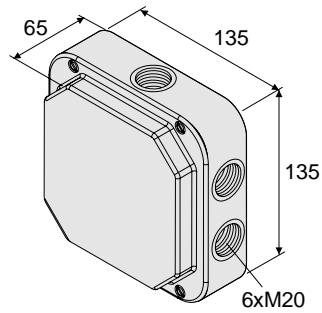
Radio test set DZW1171



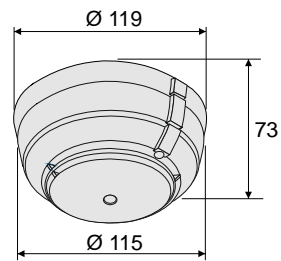
- The mobile radio test set DZW1171 enables the project manager to easily determine the exact propagation of the radio waves through the building.
- To ensure a safe project planning, i.e. the determination of radio gateway and radio smoke detector locations, we would recommend to carry out field strength measurements.

Dimensions

Radio Gateway DCW1151





Radio smoke detector DOW1171
with base DBW1171



Technical data

	DOW1171	DCW1151
Transmitter/receiver antenna	2 (antenna diversity)	2 (antenna diversity)
Radio frequency	868 ... 870 MHz (SRD band)	868 ... 870 MHz (SRD band)
Channel width	25 kHz	25 kHz
Transmitting power	< 5 mW ERP	< 5 mW ERP
Transmission distance		
– in the building	max. 40 m	max. 40 m
– in the open air	max. 200 m	max. 200 m
Signal processing and monitoring	–	max. 30 detector addresses
Electromagnetic compatibility		
– ETS 300 220 / 683	3 V/m	3 V/m
– EN 50130-4	10 V/m	10 V/m
– VdS (zone with increased danger, GSM)	30 V/m	30 V/m
Supply	two 9 V lithium brownstone batteries, separately monitored	from detector bus, plus a 9 V lithium brownstone battery, monitored
Battery service life	min. 5 years	min. 5 years
Connection factor		
– 1 to 7 detectors	–	IMK = 8 / ITK = 1
– 8 to 30 detectors	–	IMK = 1 per detector + 1 / ITK = 1
Operating temperature	-10... + 55 °C	-10... + 55 °C
Humidity (no condensation)	≤ 95% rel.	≤ 95% rel.
Protection category (IEC60529)	IP44	IP56
Color	white, ~RAL 9010	white, ~RAL 9010
Standards	EN54-7	EN54-17, EN54-18

11		0786	DOW1171 compl. / DOW1171 w/o batt.	Siemens Switzerland Ltd; Gubelstrasse 22 CH-6301 Zug Technical data: see doc. 009865
DOW1171 compl., DOW1171 w/o batt. - Point type smoke detector using radio link for use in fire detection and fire alarm systems installed in buildings.				
305/2011/EU (CPR): EN 54-7 / EN 54-25 ; 2014/53/EU (RED): EN 300 220-2 / EN 301 489-3 / EN 60950-1 ; 2011/65/EU (RoHS): EN 50581				
The declared performance and conformity can be seen in the Declaration of Performance (DoP) and the EU Declaration of Conformity (DoC), which is obtainable via the Customer Support Center: Tel. +49 89 9221-8000 or http://siemens.com/bt/download				
DoP No.: 0786-CPR-21077; DoC No.: CED-DOW1171				

08			DCW1151	Siemens Switzerland Ltd; Gubelstrasse 22 CH-6301 Zug Technical data: see doc. 001787
DCW1151 - Input/output device incl. short-circuit isolator for use in fire detection and fire alarm systems installed in buildings.				
305/2011/EU (CPR): EN 54-18 / EN 54-17 ; 2014/53/EU (RED): EN 300 220-2 / EN 301 489-3 / EN 60950-1				
The declared conformity can be seen in the EU Declaration of Conformity (DoC), which is obtainable via the Customer Support Center: Tel. +49 89 9221-8000 or http://siemens.com/bt/download				
DoC No.: CED-DCW1151				

Details for ordering

	Type	Part no	Designation	Weight
Base accessories	DOW1171/ DBW1171	S24218-F62-A5	Radio smoke detector complete with base DBW1171 and two 9 V lithium brownstone batteries	0.330 kg
	DOW1171	S24218-F62-A6	Radio smoke detector	0.170 kg
	DBW1171	S24218-F316-A1	Base	0.090 kg
	DBZ1190	BPZ:4585260001	Detector locking device	0.001 kg
	DBZ1193A	BPZ:4864330001	Designation plate (10x)	0.085 kg
	DBZ1192	BPZ:4588140001	Base attachment wet	0.265 kg
	DBZ1194	BPZ:4677110001	Protective cage	0.135 kg
Gateway	DCA1191	BPZ:4588560001	Housing	0.265 kg
	DWA1151	BPZ:5472200001	Electronics unit EP5	0.100 kg
	DWA1151-B	A5Q00002905	Electronics unit EP7F	0.100 kg
	DWB1151	BPZ:5472330001	Terminal plate	0.095 kg
	DBZ1190-AA	BPZ:4677080001	Micro terminal 0.28...0.5 mm ² , 4-pole	0.001 kg
	–	A5Q00004478	Metal screwed cable gland M20 x 1.5	0.035 kg
Radio test set	DZW1171	BPZ:5762200001	Radio test set	0.550 kg
Battery	–	A5Q00004142	Lithium brownstone battery 9 V / 1 Ah (1 Block)	0.035 kg