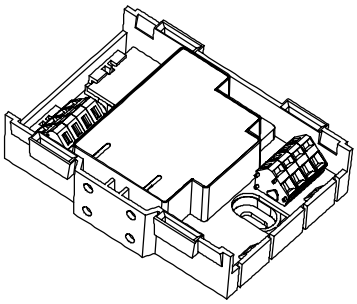
SIEMENS



Output module (230 V)

FCA1209-Z1

Technical Manual

Building Technologies

A6V10425246_a_en_--
2014-01-27

Control Products and Systems

Legal notice

Issued by:

Siemens Switzerland Ltd.
Infrastructure & Cities Sector
Building Technologies Division
International Headquarters
Gubelstrasse 22
CH-6301 Zug
Tel. +41 41 724-2424
www.siemens.com/buildingtechnologies

Edition: 2014-01-27
Document ID: A6V10425246_a_en_--

Table of contents

1 About this document

Purpose

This document contains all information on the output module.
The consistent observance of the instructions ensures a trouble-free and safe application.

Target groups

The information in this document is intended for the following target groups:

Target group	Activity	Qualification
Installation personnel	Assembles and installs the product components at the place of installation. Carries out a performance check following installation.	Has received specialist training in the area of building installation technology or electrical installations.
Maintenance personnel	Carries out all maintenance work. Checks that the products are in perfect working order.	Has obtained suitable specialist training for the function and for the products.

Document identification

Position	Information
Title page	Product picture, Product type, Product designation, Document type
Footers	Pages, Document ID, Edition date
Last page	Document ID, Edition date, Manual

Applicable documents

Document ID	Title
A6V10381907	Data sheet Output module FCA1209-Z1
A6V10393185	Installation Output module FCA1209-Z1

Modification history

Version	Edition date	Brief description
a	2014-01-27	First version

2 Safety regulations

Signal words

The signal word classifies the danger as defined in the following table:

Signal word	Danger level
DANGER	DANGER identifies a dangerous situation, which **will result directly in death or serious injury** if you do not avoid this situation.
WARNING	WARNING identifies a dangerous situation, which **may result in death or serious injury** if you do not avoid this situation.
CAUTION	CAUTION identifies a dangerous situation, which **could result in slight to moderately serious injury** if you do not avoid this situation.
NOTICE	NOTICE identifies possible damage to property that may result from non-observance.

Symbols

The symbols listed below indicate the nature and origin of the danger.

General danger

Electrical voltage

How risk of injury is presented

Information about the risk of injury is shown as follows:

	⚠ **WARNING**
	Nature and origin of the danger Consequences if the danger occurs ● Measures / prohibitions for danger avoidance

How possible damage to property is presented

Information about possible damage to property is shown as follows:

!	***NOTICE***
	Nature and origin of the danger Consequences if the danger occurs ● Measures / prohibitions for danger avoidance

Safety–relevant instructions

National standards, regulations and legislation

Siemens products are developed and produced in compliance with the relevant European and international safety standards. Should additional national or local safety standards or legislation concerning the planning, assembly, installation, operation or disposal of the product apply at the place of operation, then these must also be taken into account together with the safety regulations in the product documentation.

Electrical installations

⚠ WARNING

Electrical voltage
Electric shock
Work on electrical installations may only be carried out by qualified electricians or by instructed persons working under the guidance and supervision of a qualified electrician, in accordance with the electro technical regulations.

- Wherever possible disconnect products from the power supply when carrying out commissioning, maintenance or repair work on them.
- Lock volt-free areas to prevent them being switched back on again by mistake.
- Label the connection terminals with external voltage using a 'DANGER External voltage' sign.
- Route mains connections to products separately and fuse them with their own, clearly marked fuse.
- Fit an easily accessible disconnecting device in accordance with IEC 60950-1 outside the installation.
- Produce earthing as stated in local safety regulations.

Assembly, installation, commissioning and maintenance

- If you require tools such as a ladder, these must be safe and must be intended for the work in hand.
- When starting the power supply ensure that unstable conditions cannot arise.

Modifications to the system layout and products

Modifications to the system and to individual products may lead to faults, malfunctioning and safety risks. Written confirmation must be obtained from Siemens and the corresponding safety bodies for modifications or additions.

Modules and spare parts

- Components and spare parts must comply with the technical specifications defined by Siemens. Only use products specified or recommended by Siemens.
- Only use fuses with the specified fuse characteristics.
- Wrong battery types and improper battery changing lead to a risk of explosion. Only use the same battery type or an equivalent battery type recommended by Siemens.
- Batteries must be disposed of in an environmentally friendly manner. Observe national guidelines and regulations.

Disregard of the safety regulations

Before they are delivered, Siemens products are tested to ensure they function correctly when used properly. Siemens disclaims all liability for damage or injuries caused by the incorrect application of the instructions or the disregard of danger warnings contained in the documentation. This applies in particular to the following damage:

- Personal injuries or damage to property caused by improper use and incorrect application.
- Personal injuries or damage to property caused by disregarding safety instructions in the documentation or on the product.
- Personal injury or damage to property caused by poor maintenance or lack of maintenance.

Disclaimer

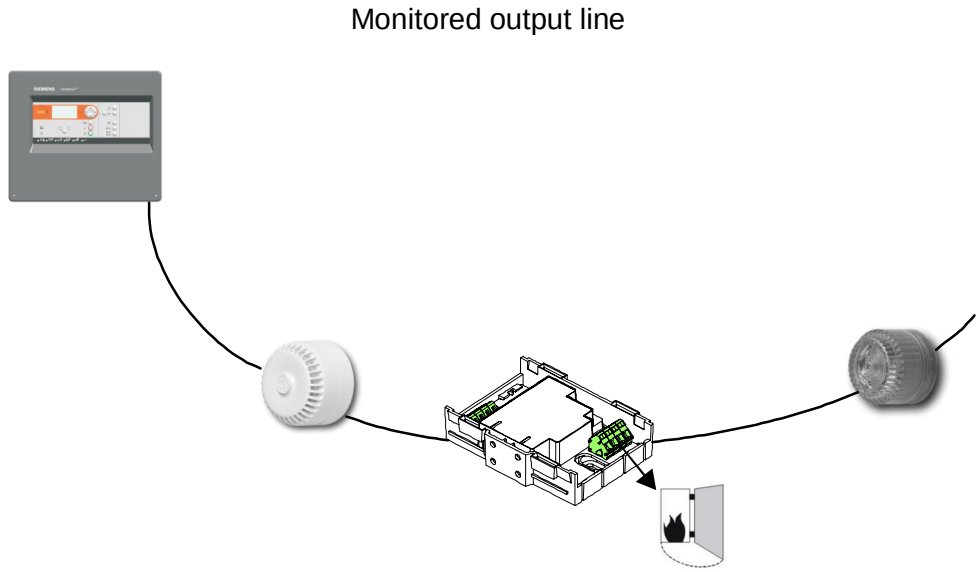
We have checked that the content of this document matches the hardware and software described. Despite this, we cannot rule out deviations and cannot therefore assume liability for them matching completely. The details in this document are checked regularly and any corrections needed included in subsequent editions.

We are grateful for any suggestions for improvement.

3 Description

3.1 Description

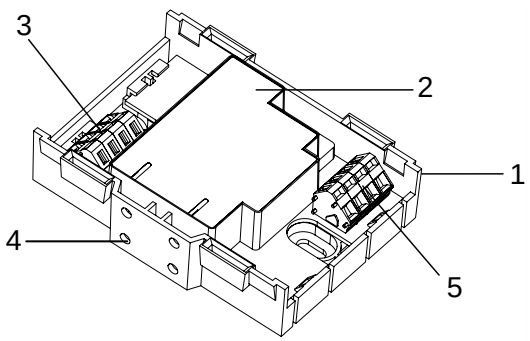
- 1 output with potential-free relay contacts for the control of fire ventilation, air conditioning, elevator control installations
- Direct connection into the monitored output line
- Indication of the output status
- Two-wire installation for all types of cable
- No external power supply
- Applicable in dry, dusty and humid areas
- Different mounting possibilities



3.2 Structure

The modules consist of the housing, the printed circuit board and the cover. The printed circuit board includes the LED. The LED indicates the states of output. The cover of the printed circuit board is transparent, so that the state of the LED is visible even when the housing is closed.

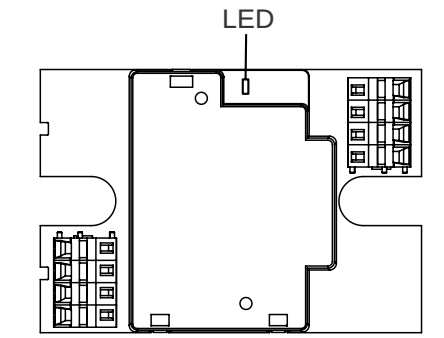
To protect the modules from environmental influences, the housing FDCH221 is available.



Legend

1 Housing
2 Cover
3 Terminals (output line)
4 Break-outs for the mounting feet
5 Terminals (relay 5 A / AC 230 V)

3.3 LED



The table below shows the meaning of the LED states.

Status LED	Signification
LED is on	Output activates

4 Installation

The proceeding during the installation depends on whether the module is installed with or without housing.
The connection diagram can be found at the end of this section.

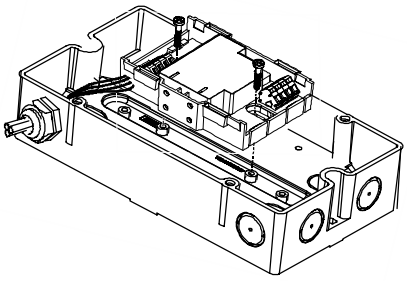
4.1 Installation with housing

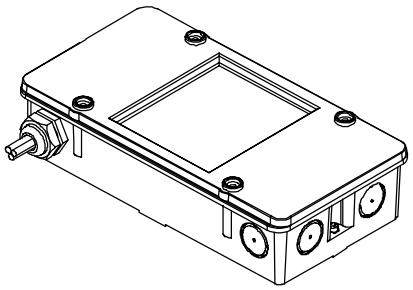
In case of an installation with housing, please proceed as follows:

1. Break out the cable entries.
2. Mount the housing on an even surface. To make sure that the LEDs are visible at any time, the housing lid is transparent.
3. Insert the cables. If necessary, fix the cables with the screwed cable glands M20 or use a different cable entry.
4. Install the module in the housing.
5. Connect the cable to the corresponding terminals (see connection diagram). Connect only one wire to each terminal.
6. Close the housing by engaging the lid. If necessary, use the screws included in the delivery with housing type FDCH221.

⚠ WARNING

Electrical voltage
Electric shock
Voltages up to AC 250 V may occur on the terminals. Always use a housing (e.g. FDCH221) with screw connection when applying the following voltages to the outputs:
- > DC 60 V (ripple <10 % of average value)
- > AC 30 V (peak value max. 42.4 V)

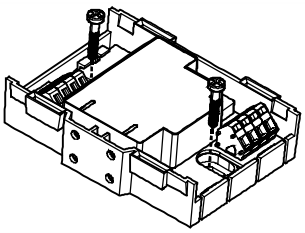


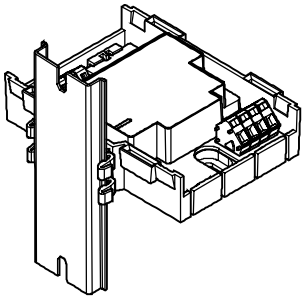


4.2 Installation in housings with a mass > 4.75 kg

In case of an installation in a bigger housing, please proceed as follows:

1. Mount the module on an even surface or on a U-rail, using two mounting feet. To make sure that the LEDs are visible at any time, the housing lid is transparent. Consider a suitable installation position to make sure that the LEDs are visible at any time when in operation.
2. Connect the cables to the terminals in account. Connect only one wire to each terminal.

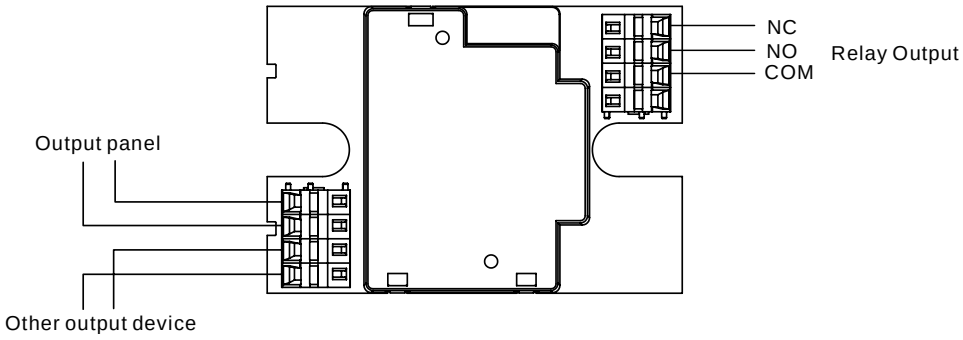




4.3 Connection

Connect only one wire to each terminal.

	⚠ **WARNING** **Electrical voltage** Electric shock In operation, up to AC 230 V may be applied to the output lines of output modules. During installation work, no voltage must be applied to the lines!



5 Specification

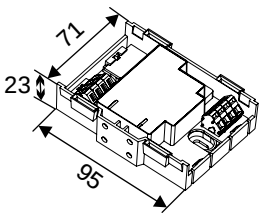
You will find information on approvals, CE marking, and the relevant EU directives for this device (these devices) in the following document(s); see 'Applicable documents' chapter:

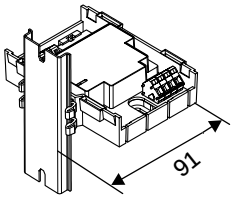
- Document A6V10381907

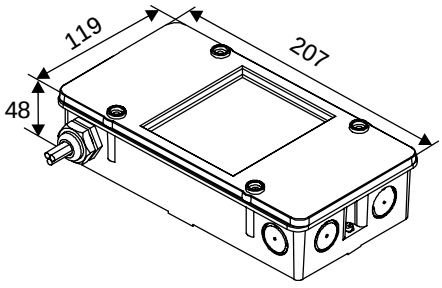
5.1 Technical data

Operating voltage	DC 14.5 ... 30 V
Operating current (quiescent)	max. 0.1 mA
Relays output (ohm)	AC 230 V, max. 5 A DC 30 V, max. 5 A
Relay coil resistance Operating current / voltage	480 Ω ± 10% 30 V / 25 mA 14.5 V / 25 mA
Internal resistance relay output	Max. 0.1 Ω
Operating temperature	-25 ... +65 °C
Storage temperature	-25 ... +65 °C
Humidity	≤95 % rel.
Communication protocol	Monitored output line
Connection terminals	0.2 ... 2.5 mm²
Color – Housing – Cover – Aux. housing FDCH221	 white, ~RAL 9010 transparent matt white, ~RAL 9010
Protection category EN60529 / IEC529 – with aux. housing FDCH221	IP30 IP65
System compatibility – Monitor Output Line	 FC120

5.2 Dimensions(mm)







6 Commissioning

The output module is commissioned via the control panel. The exact procedure is described in the control panel documentation.

7 Maintenance

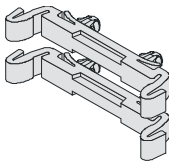
Recommendation:

- Check the devices every year.
- Replace strongly soiled or damaged devices.

No other special maintenance work is necessary.

8 Accessories

Mounting foot FDCM291



Description

- For the installation on a U-rail TS35.
- Two mounting feet must always be used together.

9 Disposal and environmental protection

This equipment is manufactured using materials and procedures which comply with current environmental protection standards as best as possible. More specifically, the following measures have been undertaken:

- Use of reusable materials
- Use of halogen-free plastics
- Electronic parts and synthetic materials can be separated

Larger plastic parts are labeled according to ISO 11469 and ISO 1043. The plastics can be separated and recycled on this basis.

Electronic parts and batteries must not be disposed of with domestic waste.

- Take electronic parts and batteries to local collection points or recycling centers.
- Contact local authorities for more information.
- Observe national requirements for disposing of electronic parts and batteries.

Siemens Switzerland Ltd.
Infrastructure & Cities Sector
Building Technologies Division
International Headquarters
Gubelstrasse 22
CH-6301 Zug
Tel. +41 41-724 24 24

www.siemens.com/buildingtechnologies

Document no. A6V10425246_a_en_--
Edition 2014-01-27

Manual FC120