



FC1 - Remote Signal Module for NC3 Automatic Controller



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1 General

The *FC1* Remote Signal Module is the output module for the *NC3*-series. The module outputs fault signals from the *NC3*-automatic Controller via potential-free contacts. Information can be transferred to remotely located control centres.

1.1 Transmission of fault signals

The *FC1* extension module should be installed close to the *NC3*-Automatic Controller. It is equipped with 8 potential free contacts to output for individual signals for transmission of incoming fault signals. The system is design in such a way that each of the *FC1*-modules can transmit 8 fault signals. If the *FC1*-module is assigned to the *NC3*-Automatic Controller, the incoming fault signals can be transmitted when in open circuit mode. When in closed circuit mode fault signals cannot be processed by the *FC1* module.

If *NC3* Automatic Controller fault signals (closed circuit) as well as operating signals need to be transferred, they have to be taken directly from the *NC3* output relays. In this case it is necessary to encode the *NC3* output relays accordingly (see *NC3* description).

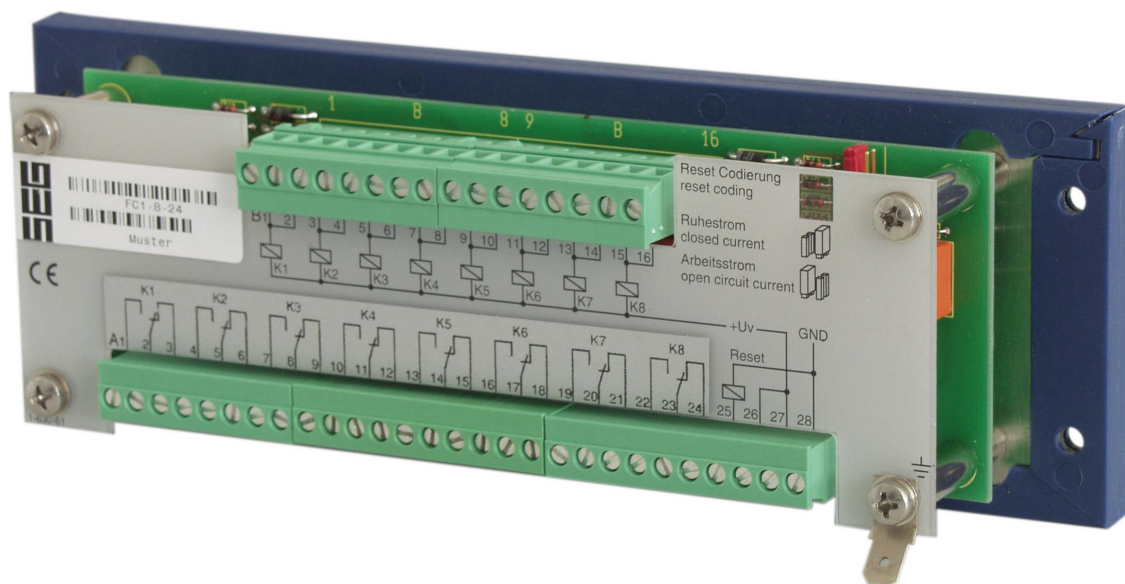


Figure 1.1: Mechanical design of remote signal module

2 Mechanical Design and Startup

2.1 Mechanical Design

The *FC1* Remote Signal Module comprises front and one printed circuit board (Figure. 1.1). On the rear cover are explanations of the code strips on the PCB.

2.2 Coding

The reset input function can be encoded by using the code plug in open circuit or closed circuit mode. As standard the reset function of the *FC1*-module is encoded in open circuit mode.

- Remote Signal Module allocated to NC3 Automatic Controller.

Contact of the relays

The *FC1* module is equipped with potential-free change-over contacts. For contact rating please see chapter "Technical Data".

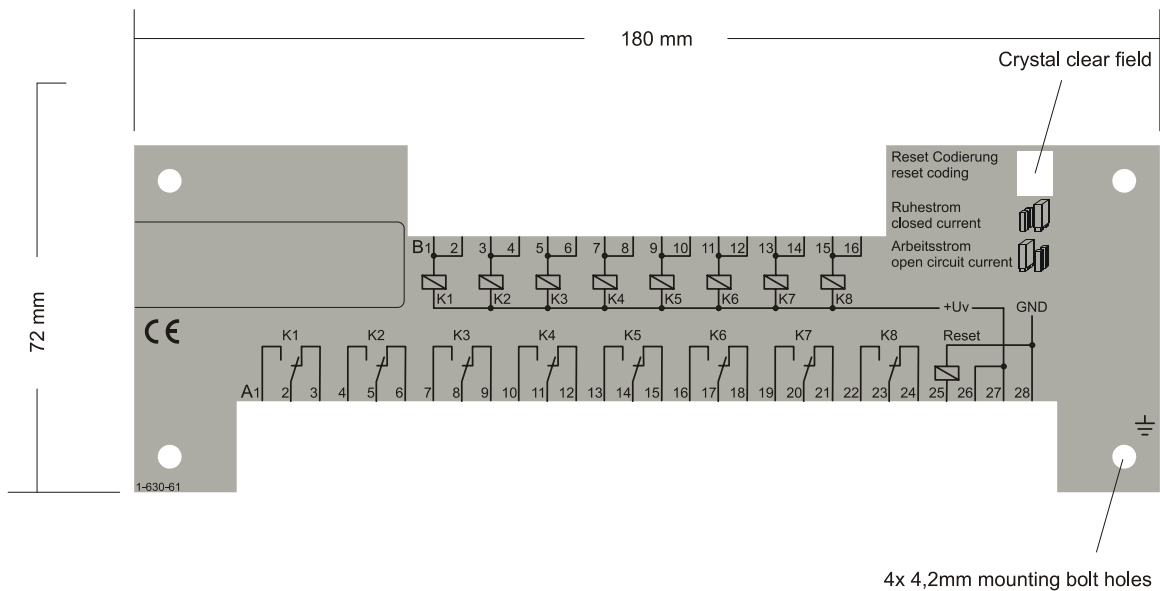


Figure 2.1: Connection diagram: *FC1*-remote signal module

2.3 Earthing

The *FC1* module needs to be earthed and is provided with a socket to connect an AMP plug. The modules can then be interconnected as well as connected to earth.

2.4 Terminal Assignment

Terminals A1 to A24 (Figure 2.1) are potential-free outputs relays K1 to K8. The 8 fault or operating signals are passed on by these relays. The first signal is assigned to relay K1, the second signal to relay K2 etc.

The output relays are only provided for passing on information. They are not suitable for large or inductive loads. For such applications use protective circuits or interposing relays.

Connect the supply voltage 24 V DC to terminals A27 (+) and A28 (-) (Figure 2.1).

For resetting the fault signals a potential-free contact of the **NC3** can be connected to terminals A25 and A26.

When a **NC3** normally open (NO) contact is used, the reset input of the *FC1* module has to be encoded to the open circuit mode by means of the code plug.

When a **NC3** normally closed (NC) contact is used, the reset input of the *FC1* has to be encoded to the closed circuit mode.

3 Mounting the Remote signal module

FC1 Remote Signal Modules are designed for mounting in switchboards. They can be fixed by using the enclosed screws. In order to keep the cables between the extension modules and the NC3 as short as possible, the modules should be mounted close to the NC3-Automatic Controller (for examples of mounting layouts, see chapter 6). The dimensions of the FC1 module are contained in the dimensional drawing.

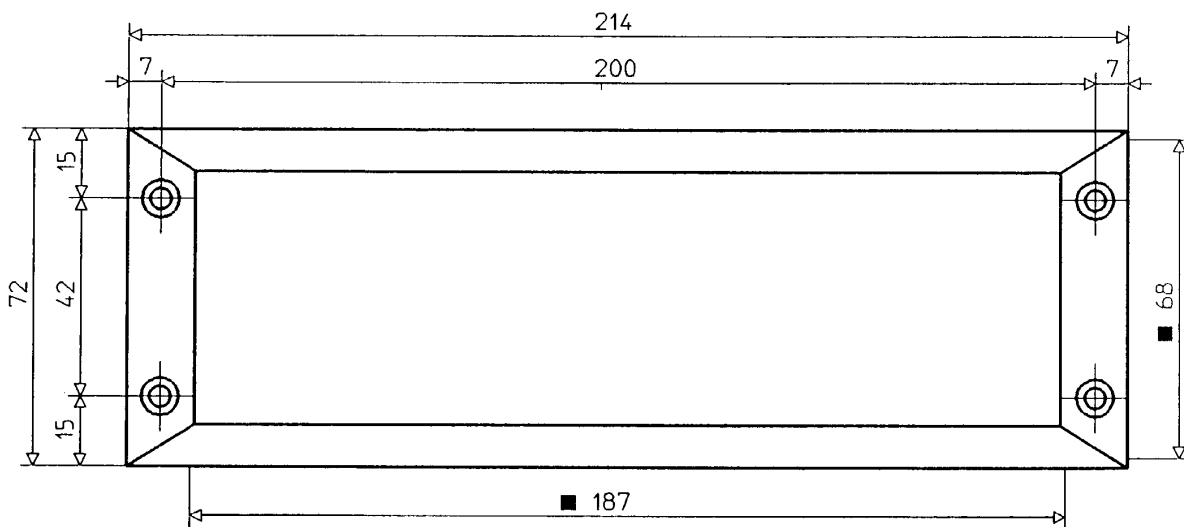


Figure 3.1: Dimensional diagram FC1

(Dimensions in mm)

Depth (behind panel): ca. 50 mm

■ = Switchboard cut-out (B x H): 187 mm x 68 mm

4 Application example

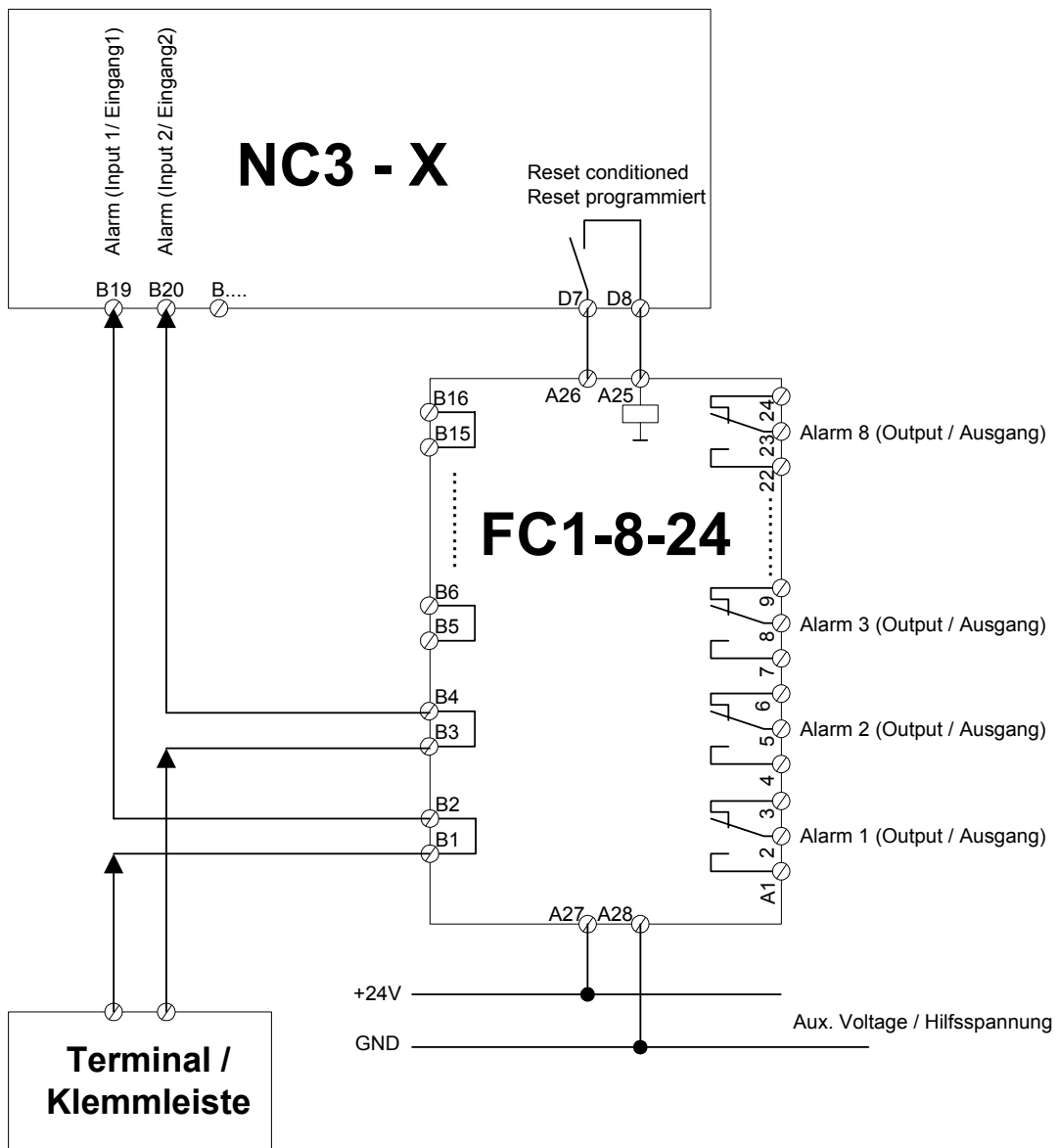


Figure 4.1: Application example

5 Technical Data

General Data

Maintenance:	no maintenance
Duty:	continuous
Mounting position:	optional (close to NC3)

Input Circuits

Auxiliary voltage:	17 - 32 V/DC
Nominal voltage:	24 V/DC
Max. input voltage:	32 V/DC
Nominal power consumption (depending on number of activated relays):	0.43 – 2.28 W
Max. power consumption:	4.48 W (at $U_V = 32$ V)

Output circuits

Signal relays:	8 relays
Contacts:	potential free; each with 1 change-over contact
Galvanic isolated:	2.5 kV to earth 2.5 kV to the internal electronics 2.5 kV to other input and output circuits
Continuous current:	1 A AC/DC
Inrush current:	10 A AC/DC
Interrupting current:	1 A AC 1 A DC to 50 V 0,2 A DC at 300 V
Switching voltage:	270 V AC/300 V DC
Switching power:	20 VA
Contact service life:	min. 50×10^6 operations

Possible codes

Possible codes:	setting of the FC1 -module function using code plug
Possible outputs:	NC3 – Fault signal inputs (only in open circuit mode)

Processing time: ca. 40 - 100 ms

Ambient conditions

Min./max. ambient conditions

- storage: - 40°C to + 75°C
- operation: - 25°C to + 70°C

Humidity resistance: Class F to DIN 40040, tested to DIN IEC 68 part 2-3 (56 days 40°C and 93 %R.H.)

Housing, Dimensions, Weight and Housing

Construction:	for through-panel mounting in switchboards
Material	front cover: Foil front panel
	Rear cover: macrolon/sheet steel
Width x height x depth:	214 mm x 72 mm x ca. 50 mm
Switchboard cut-out (W x H):	187 mm x 68 mm
Housing attachment:	by screws
Weight:	approx. 300 g
Protection	Front cover: IP 54
	Rear cover: IP 00

Technical data subject to change without notice.

6 Order form

Please use the form on this page when ordering. Use one form for each Remote Signal Module. Please cross the desired coding of the reset input.

If no details on coding are given, modules are supplied with standard coding.

Remote signal module *FC1*

Coding of the reset input

Standard

As requested



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