

## FDCI181-2 Input Module Product Manual

### Characteristic

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- 2 monitored digital input
- Input lines are monitored for open line and short/open circuit (terminal resistors is mandatory)
- Microprocessor-controlled signal evaluation
- Prevention of noise interference through intelligent analysis of input signals
- LED display of input status
- Automatic address setting, without encoder settings or Dip-switch
- Power supply via FD18-BUS
- Communication with controller via FD18-BUS(detection line)
- Directly used in dry areas, Applicable in dusty and humid areas when installed in FDCH221 housing
- “Sticker Method” easy for commissioning

### Application

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With the input a status can be monitored, the input can be configured by controller or configuration tools as follows:

- “Status“ input or “Alarm“ input
- Lead monitoring for open line or open line and short circuit
- When inputting status, according to different status of contact, can be set as follows:
  - Normal mode: normally open input
  - Inverted mode: normally closed input

## “Status” inputs and “Alarm” inputs

“Alarm” inputs trigger an alarm as soon as the input is activated. “Status” inputs trigger a monitoring status change as soon as they are activated.

## Line monitoring and circuitry

The input lines are monitored for open line or open/short line. To make these possible, resistors must be properly connected to the end of lines of the input (Fig.6). When an open line or a short line occurs on one of the input lines, a trouble message is transmitted to the control panel.

The input must be potential-free.

## Structure

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The module consists of the module carrier, the printed circuit board, the cover and the protection cover. The printed circuit board includes the LEDs. The LEDs indicate the status of the inputs. The cover of the printed circuit board is transparent, so that the state of the LEDs is visible even when the housing is closed.

To protect the modules from environmental influences, there are additional options for the housing.

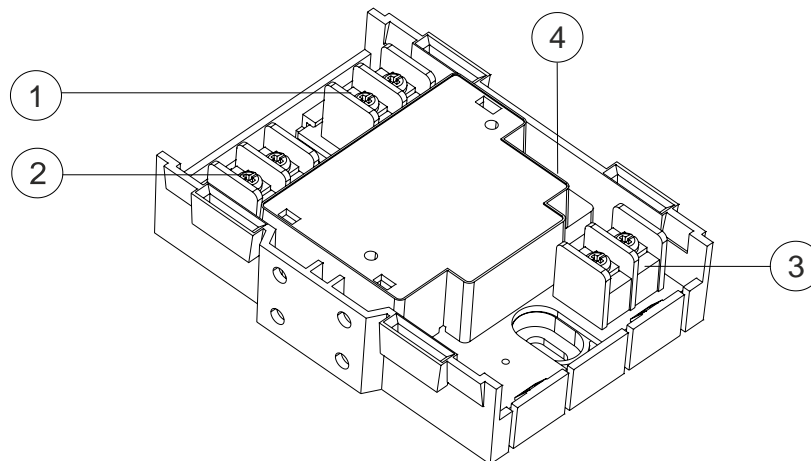


Fig. 1 Overview

### Legend

- |                   |                  |
|-------------------|------------------|
| 1. Input 1        | 3. Input 2       |
| 2. Detection line | 4. LED indicator |

## LED indicator

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LED indicator is used for displaying status of input. Each input has an indicator.

Status LED	Meaning
Off	Normal operation
LED flashing every 1 s (250 ms ON)	Input activated
Input 1, LED flashing every 1 s (short flashes)	Localization mode

# Installation

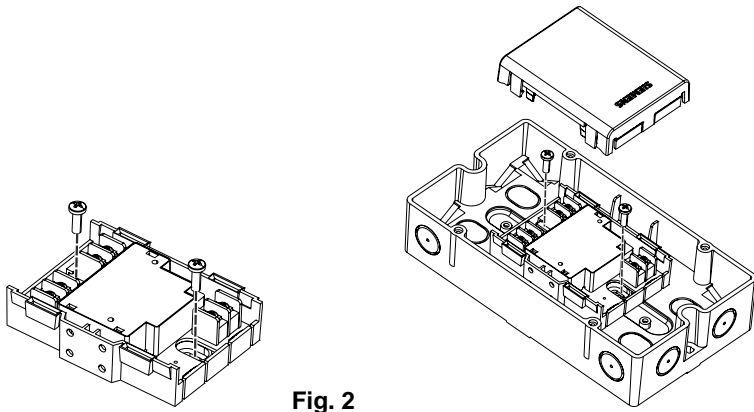


Fig. 2

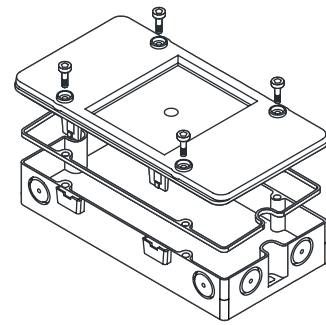


Fig. 4

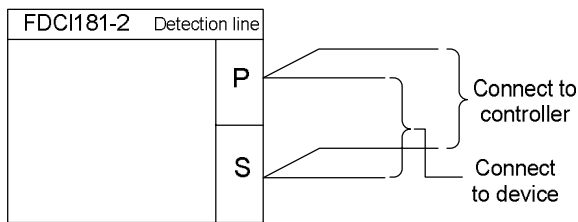


Fig. 5

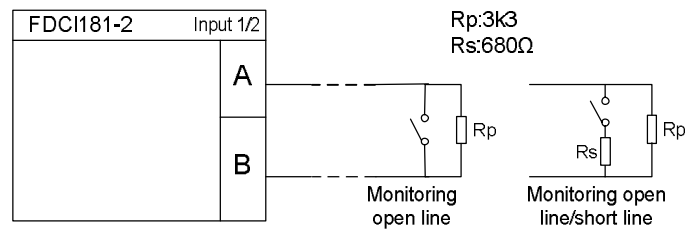


Fig. 6

## Preparation

Determine the type of installation: there are 2 types of installation for FDCI181-2 Input module:

- Installation outside a switching cabinet or a control unit: use FDCH221 housing (Fig. 3) .
- Installation directly in a switching cabinet or a control unit: mount the module on an even surface (Fig.2).



### Damage by water!

In humid or wet environments always use the housing FDCH221!

## Installation of FDCH221 Housing

1. Open the housing.
2. Determine the cable entries in the housing and break these open.
3. Use two screws (M 4) to fit the housing on a plane surface (Fig. 3). Distance between holes:  $182.0 \pm 1.0\text{mm}$ .
4. Fix and guide in the cables with waterproof joint (provided by users themselves).
5. Fix the lid additionally with four screws (Fig. 4). (Only this way is IP65 protection guaranteed.)



The housing lid is transparent. Consider a suitable installation position to make sure that the LEDs of the module are visible at any time.

## Installation of module in FDCH221 housing



### Caution!

Overheating of FDCI181-2 input module.

1. Open the housing.
2. Fix module with two screws in the housing (Fig. 3).
3. Close the housing.

## Installation on an even surface

1. Position module on an even surface (Fig. 2).
2. Fix module with two M4 screws. Distance between holes:  $63.5 \pm 1.0\text{mm}$ .

## Electric connection

1. Connect the cables to the terminals according to Fig. 5/6.

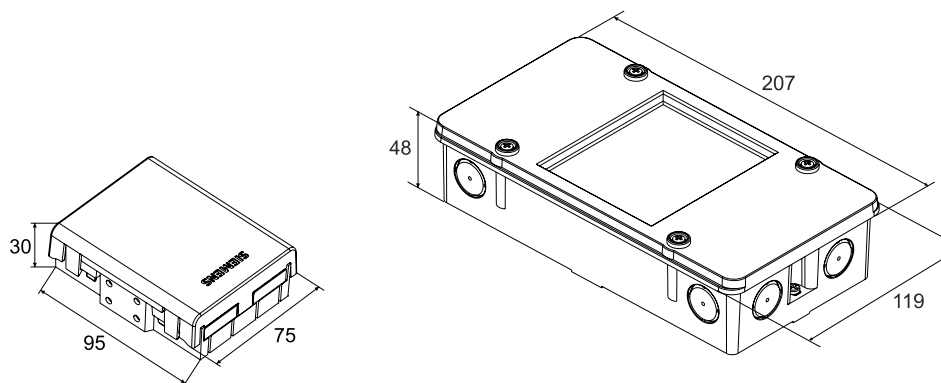


Connect only one wire per terminal!

2. Connect the resistors to the end of the monitored line. 2 resistors of  $3.3\text{k}\Omega$  and 2 of  $680\Omega$  are delivered with the product.

## Dimension

In:mm



## Specification

Operating voltage	12 ... 32 VDC
Operating current(Quiescent)	0.28 mA
Activation current	0.52 mA
Monitoring resistors	3.3K $\Omega$ (1/4w) / 680 $\Omega$ (1/4w)
Operating temperature	0 ... +42 °C
Storage temperature	-20 ... +75 °C
Humidity	≤95 %
Communication protocol	FD18-BUS
Load factors	3
Connection terminals	1.0 ... 1.5 mm <sup>2</sup>
Color	
- Housing	white, RAL 9010
- Cover	transparent
Protection category EN60529/IEC529/GB4208-93	
- With housing FDCH221	IP65
Approval (for Russian)	TR RF N123-FZ

## Details for ordering

Type	Material No.	Part No.	Designation	Weight
FDCI181-2	S54322-F1-A1	100856215	Input module	0.086 kg
FDCH221	S54312-F3-A1	100686595	Housing(IP65)	0.250 kg

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