SIEMENS

FDCL181 Line Separator
Product Manual

Overview

FDCL181 Line Separator is used to detect and isolate the short-circuit part of the FD18-BUS. It's also connected to prevent different branches from breaking down at the same time due to a short circuit.
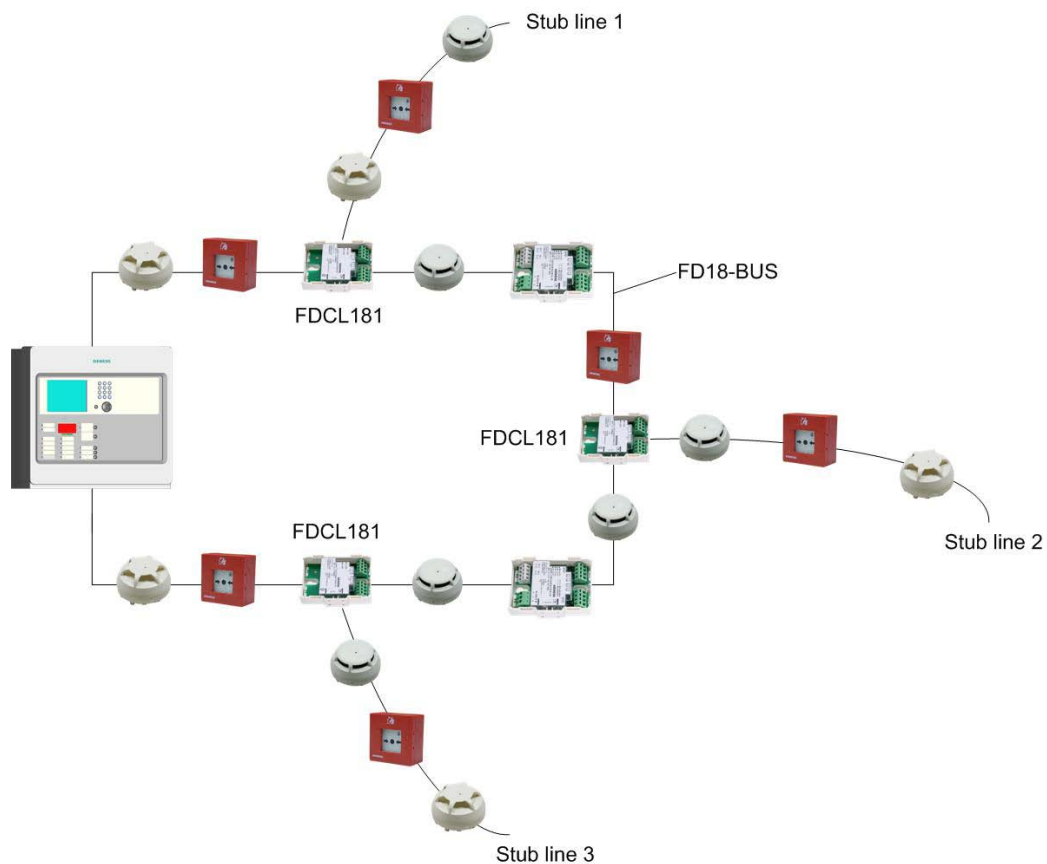
Characteristic

- Protection of FD18-BUS from short-circuit
- For T branches of FD18-BUS
- Indicates conditions by LED indicator
- Automatic address setting without encoder settings or Dip-switch
- Communication via FD18-BUS（separate address）
- Directly applicable in dry areas. Applicable in humid and dusty areas with FDCH221 housing
- "Sticker Method" easy for commissioning

Function

- Embedded in a FD18-BUS same function as a electronic switch to isolate the short circuit part of the line and ensure the normal operation of other parts.
- Connected to the detection bus by two four-entry terminals.
- Indication of short circuit isolation by a yellow LED.

Application

- Protection of different branches from breaking down at the same time due to a short circuit.
- In a loop line connection, up to 32 devices can be connected between two separators.
- In a stub line connection, up to 32 devices can be connected to one separator.

Structure

The module consists of the module carrier, the printed circuit board and the cover. The printed circuit board includes two LEDs to indicate isolating/localization status.

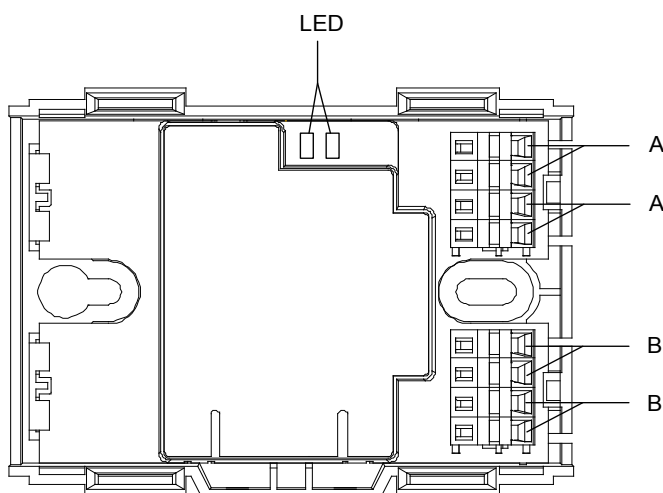To protect the modules from environmental influences, housing FDCH221 is optional.

Fig.1 Overview

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LED indicator

The separator has two indicators to indicate status of the two sides of the separator.

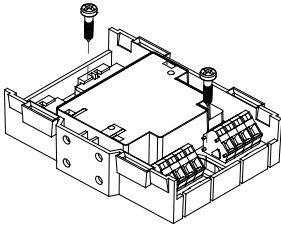| Indicator	Meaning
Both off	Normal
Yellow LED at entry A flashing	Entry A isolating
Yellow LED at entry B flashing	Entry B isolating
Both flashing	Localization mode

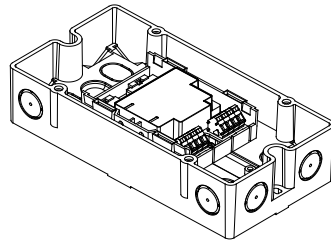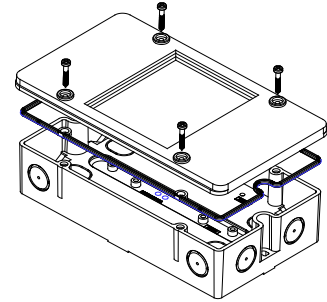# Installation
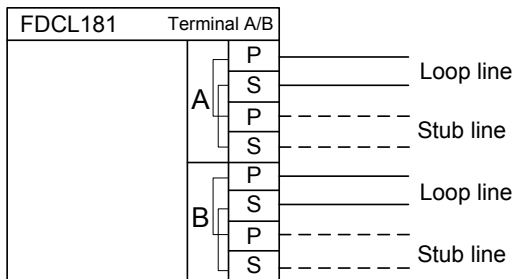

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Preparation

1. Determine the type of installation: there are 2 types of installation for FDCL181 separator:
   - 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 ± 1.0mm.
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 IP 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 FDCL81separator.

1. Open the housing.
2. Fix module with two screws in the housing (Fig. 3).
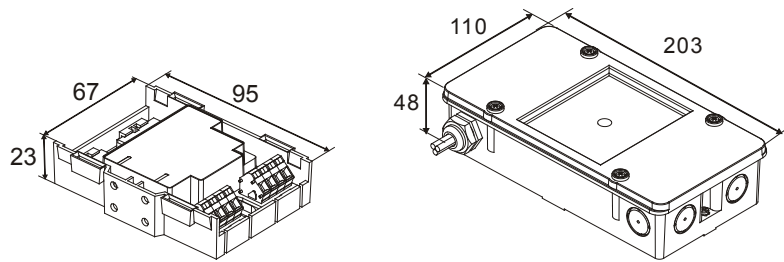3. Press the module until it fits the housing.

Installation on an even surface

1. Position module on an even surface.
2. Fix module with two screws M4X15 (Fig. 2). Distance between holes: 63.5 ± 1.0mm.

Electric connection

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

Dimension

In：mm

Specification

Operating voltage	12 … 32 VDC
Operating current(Quiescent)	0.25 mA
Activation current	0.45 mA
Operating temperature	0 ... +42 °C
Storage temperature	–20 ... +75 °C
Humidity	≤95 %
Communication protocol	FD18-BUS
Load factor	1
Connection terminals	1.0 ... 1.5 mm^2
Color – Housing – Cover	 white，RAL 9010 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
FDCL181	S54322-F3-A1	100856217	Line separator	0.054 Kg
FDCH221	S54312-F3-A1	100686595	Housing (IP65)	0.250 Kg

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