

SG-100/SG-200

Overvoltage protection modules

Advanced Information

English



Table of Contents

Wiring Diagrammes	3
ISDN/ADSL with Splitter	4
ADSL/VDSL without Splitter (Router < 10 m away)	5
ADSL/VDSL without Splitter (Router > 10 m away)	6
External Analogue Door Terminal	7
External Extension	8
Block Diagrammes	9
SG-100	9
SG-200	9
Simple Function Check	10
Important Information	11
Function Check	12
Visual Check as First Step.....	12
Requirements for the Function Check	12
SG-100	13
SG-200	14

Wiring Diagrammes

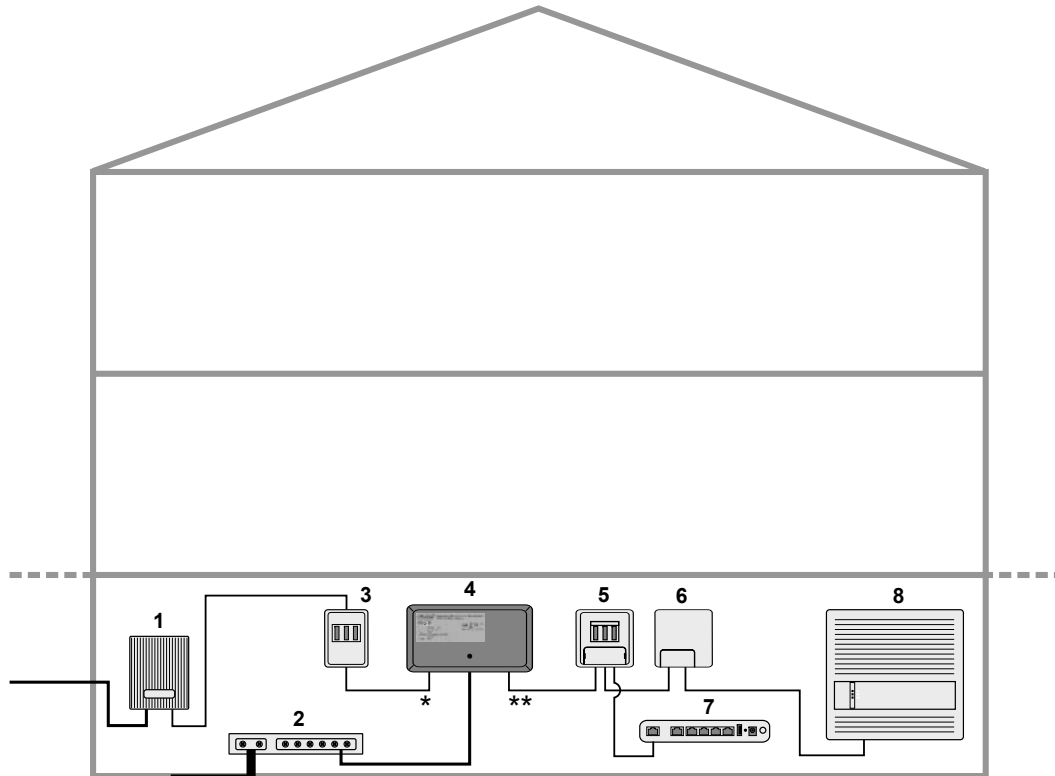
The following is a selection of possible uses of the **SG-100** and **SG-200** overvoltage protection modules for **medium** and **fine protection**.

Note: You find further information about the position and grounding of the devices in the Instructions.

Topics

- [ISDN/ADSL with Splitter \(page 4\)](#)
- [ADSL/VDSL without Splitter \(Router < 10 m away\) \(page 5\)](#)
- [ADSL/VDSL without Splitter \(Router > 10 m away\) \(page 6\)](#)
- [External Analogue Door Terminal \(page 7\)](#)
- [External Extension \(page 8\)](#)

ISDN/ADSL with Splitter



Medium protection for ADSL connections with splitter and ISDN NTBA in short distance between the DSL router and the house connection.

- 1 house connection
- 2 potential compensation bar
- 3 TAE socket
- 4 **overvoltage protection SG-100**
- 5 splitter
- 6 ISDN NTBA
- 7 router
- 8 PBX

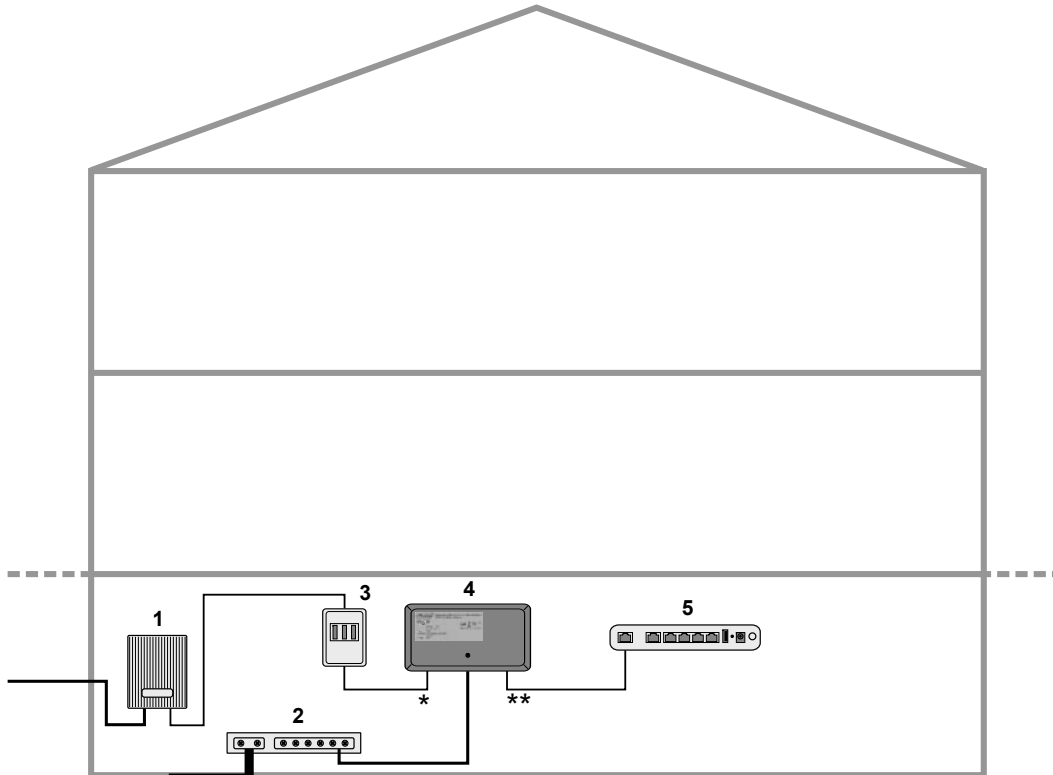
- * unprotected line
- ** protected line

ADSL/VDSL without Splitter (Router < 10 m away)

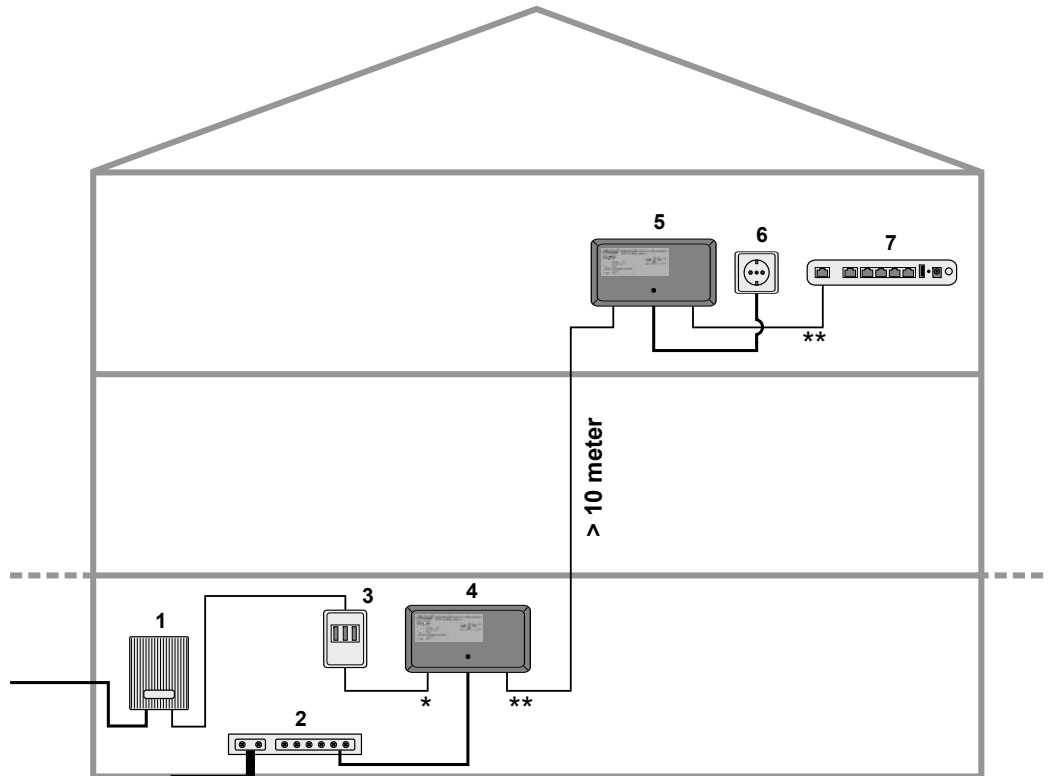
Medium protection for ADSL/VDSL connections without splitter in short distance between DSL router and the house connection.

- 1 house connection
- 2 potential compensation bar
- 3 TAE socket
- 4 **overvoltage protection SG-100 (or SG-100 with existing data reduction)**
- 5 router

- * unprotected line
- ** protected line



ADSL/VDSL without Splitter (Router > 10 m away)



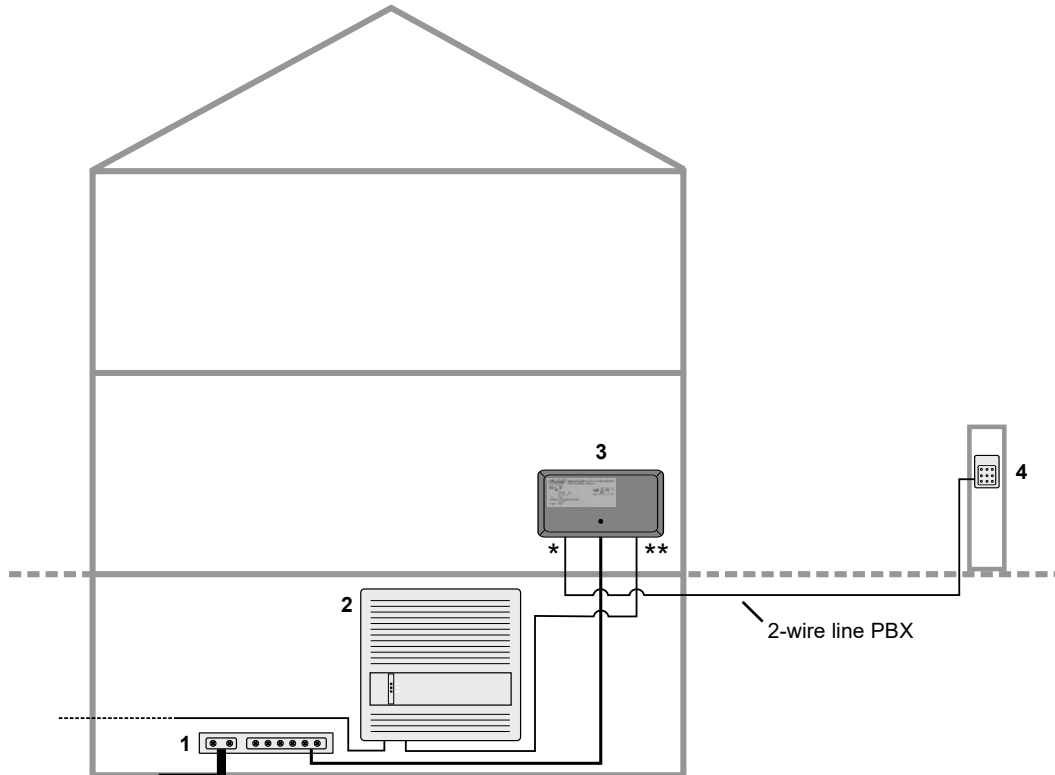
Medium and fine protection for ADSL/VDSL connections at more than 10 meters distance between DSL router and the house connection.

- 1 house connection
- 2 potential compensation bar
- 3 TAE socket
- 4 **overvoltage protection SG-100**
- 5 **overvoltage protection SG-200**
- 6 power socket (potential compensation)
- 7 router

* unprotected line

** protected line

External Analogue Door Terminal

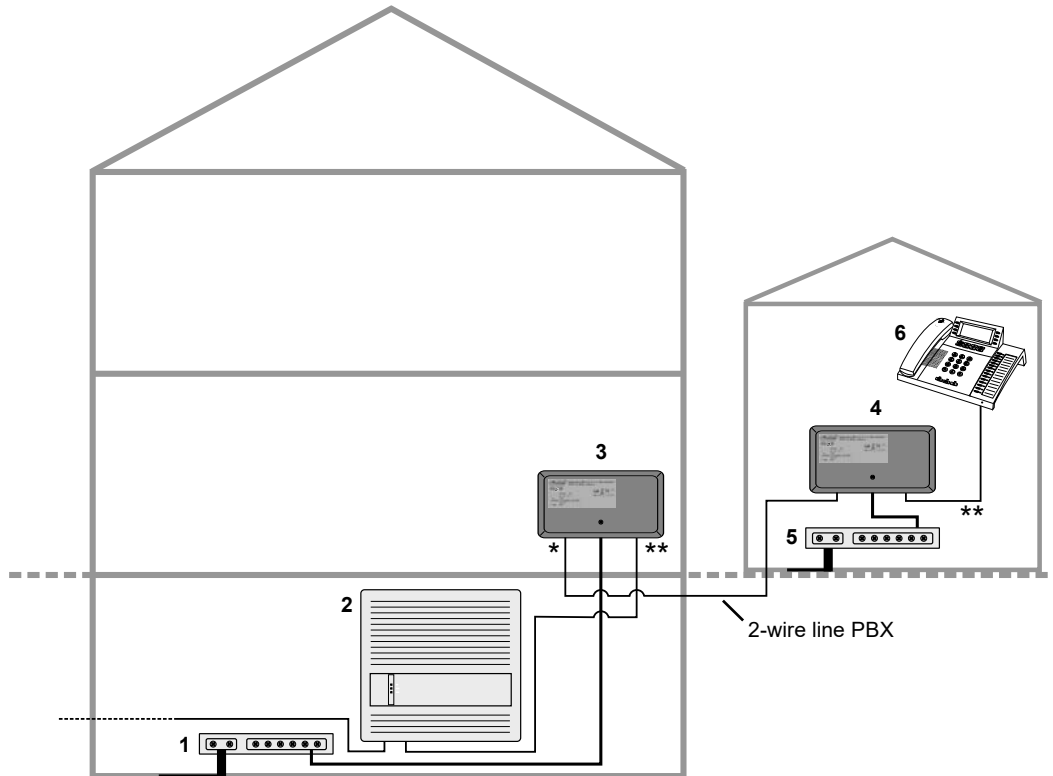


Medium protection for the PBX against power surges from a 2-wire door terminal located outside the building.

- 1 potential compensation bar
- 2 PBX
- 3 **overvoltage protection SG-100**
- 4 door terminal (located outside)

- * unprotected line
- ** protected line

External Extension



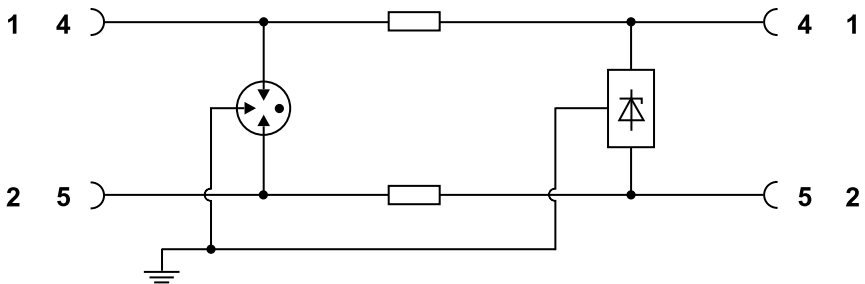
Medium protection for an extension (analogue or U_{p0}) located in a neighbouring building and the PBX by using two SG-100.

- 1 potential compensation bar
- 2 PBX
- 3 **overvoltage protection SG-100**
- 4 **overvoltage protection SG-100**
- 5 potential compensation bar
- 6 phone

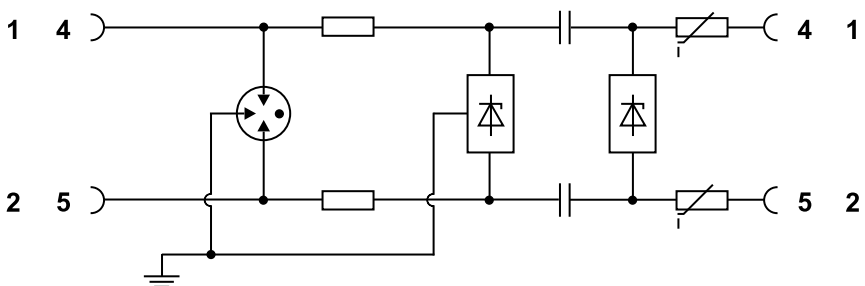
- * unprotected line
- ** protected line

Block Diagrammes

SG-100



SG-200



Simple Function Check

Topics

- [Important Information \(page 11\)](#)
- [Function Check \(page 12\)](#)

Important Information

In an installation with an overvoltage protection module SG-100 or SG-200, the DSL connection might fail for several reasons. Some are listed below:

- The router has a defect
- The DSL provider has a malfunction in his network
- The overvoltage protection module was overloaded by a very strong surge pulse and has permanently opened the connection to protect the attached devices. In this case, the device must be replaced.

To check the fault-condition of the device, a test procedure is described here. This test may only be performed by a qualified electrician.



Warning: The telecommunications lines connected to the overvoltage protection module can generate an extremely high bell voltage. Touching live conductors, components or telephone connections may cause a life-threatening electric shock.

- Disconnect the device from the DSL line and router before testing.



Warning: Power surges, which can occur during electrical storms, can cause life-threatening electric shocks, or damage or destroy the device.

- Never disconnect or test the device during a thunderstorm.

Function Check

Visual Check as First Step

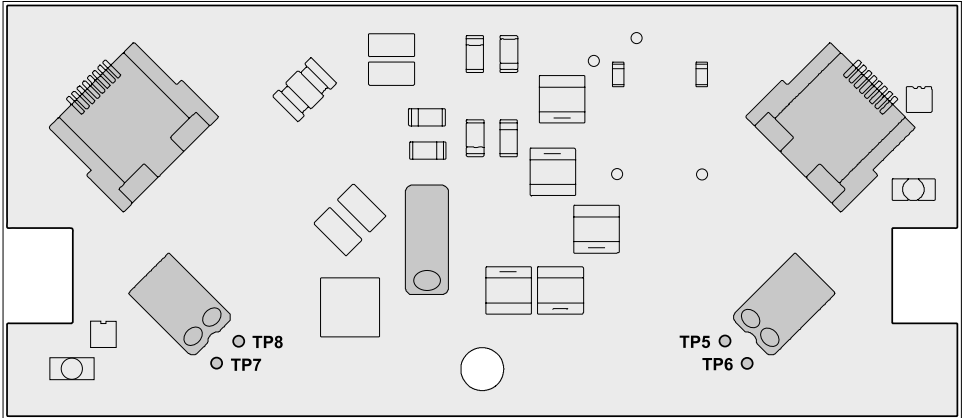
If you see traces of burns or brownish parts on the board of the device, the device has been hit by a strong impulse. It can no longer be used as overvoltage protection and must be replaced.

Requirements for the Function Check

- The device does not have any of the characteristics described under "Visual Inspection as First Step"
- The device is disconnected from the DSL line and the router
- A digital multimeter (DMM) with resistance measurement (0-20 ohm, 0-20 megohm)

SG-100

Test Contacts on the Board

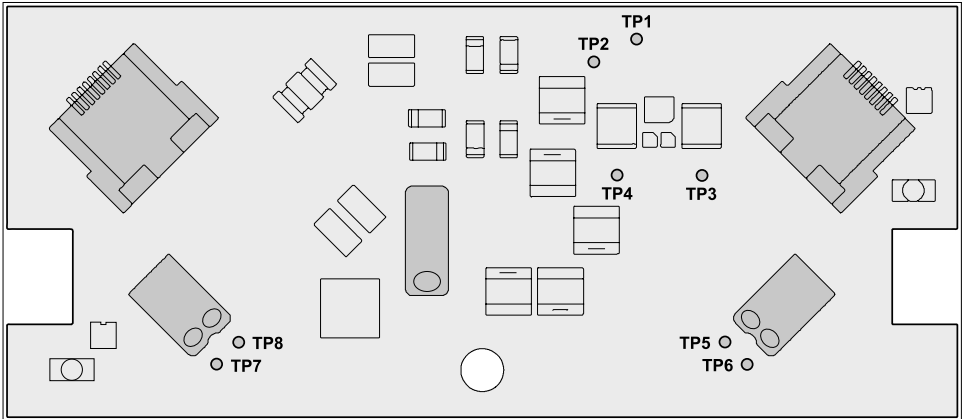


Multimeter Range	Test Contacts	Good	Insufficient *
0-20 megohm	TP7 -> TP8	> 5 megohm or out of range	< 5 megohm
0-20 ohm	TP5 -> TP7	< 3,5 ohm	> 3,5 ohm
0-20 ohm	TP6 -> TP8	< 3,5 ohm	> 3,5 ohm

* Device must be replaced

SG-200

Test Contacts on the Board



Multimeter Range	Test Contacts	Good	Insufficient *
0-20 megohm	TP1 -> TP3	> 5 megohm or out of range	< 5 megohm
0-20 megohm	TP2 -> TP4	> 5 megohm or out of range	< 5 megohm
0-20 megohm	TP3 -> TP4	> 5 megohm or out of range	< 5 megohm
0-20 megohm	TP7 -> TP8	> 5 megohm or out of range	< 5 megohm
0-20 ohm	TP1 -> TP7	< 3,5 ohm	> 3,5 ohm
0-20 ohm	TP2 -> TP8	< 3,5 ohm	> 3,5 ohm

Multimeter Range	Test Contacts	Good	Insufficient *
0-20 ohm	TP3 -> TP5	< 2,5 ohm	> 2,5 ohm
0-20 ohm	TP4 -> TP6	< 2,5 ohm	> 2,5 ohm

* Device must be replaced