



# LSA-PLUS® Series Modules

## Print modules

### System survey of the LSA-PLUS® Series 2

The Series 2 PCB modules are used for efficient and reliable termination of cables on printed circuit boards. The connection is gas-tight and provides a reliable contact thanks to the secure application of the LSA-PLUS technique: an oblique insulation displacement contact that meets the most stringent requirements. These modules are available with three different contact versions:

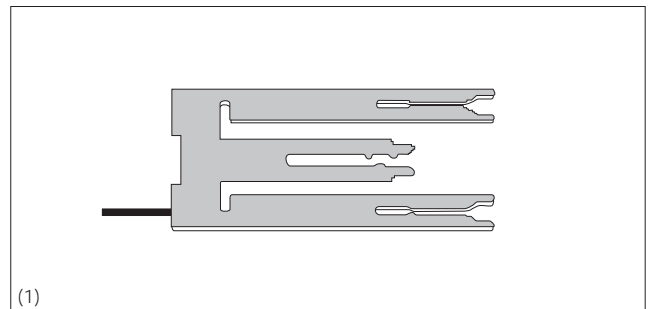
- as a connection module
- as a disconnection module
- as a switching module



#### Connection modules

The connection module (1) with its grey upper housing section offers a direct, galvanic connection between the printed circuit board connection (pin) and two LSA-PLUS contacts.

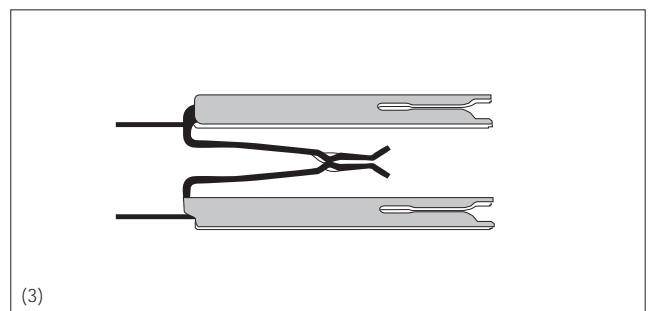
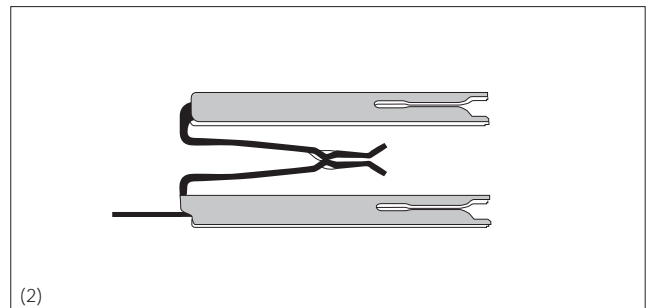
A contact, located between the LSA-PLUS contacts, is available for testing purposes or over-voltage protection (high-voltage protection).

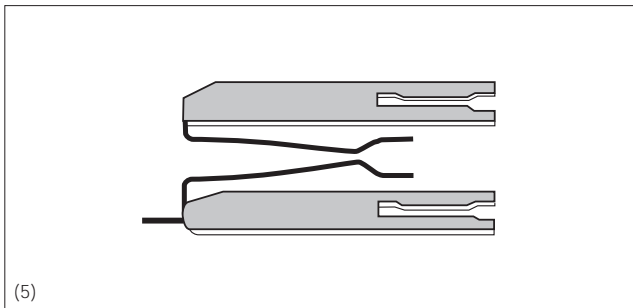
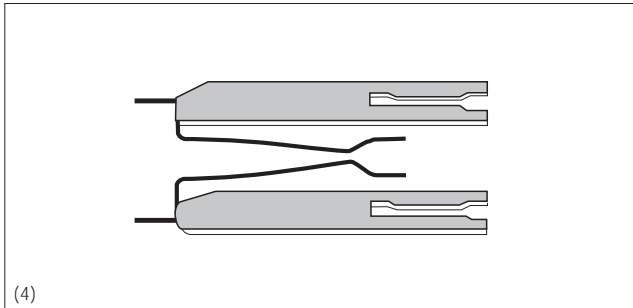


#### Disconnection modules

The PCB modules are available with one or two rows of pins. The single-row version (2) is designed for universal use. It permits the separating of specific circuits and connection of circuits which should not be separated, as well as measuring and testing work.

The disconnection module is also suitable for installing over-voltage protection components with graded protection (high-voltage and low-voltage protection). The double-row version (3) is suitable for wiring concentrators. When idle, the circuit is closed via the disconnection point; if a plug is inserted, the circuit is opened and routed via the plugged-in cord.





### Switching modules

The switching module is used to connect up to 40 circuits. The plug configuration can be used for measuring and testing purposes and even for connection purposes. The switching module is generally equipped with two rows of soldering pins (4). A module with only one row of soldering pins is suitable for over-voltage protection applications (5).

### Technical specifications

#### Advantages of the LSA-PLUS PCB modules

- Mechanical insulation of the soldered points from switching forces and/or movements thanks to float mounting of the LSA-PLUS contact in the fork of the soldered contact,
- uniform, printed circuit board layout for various types of modules,
- comprehensive range of accessories,
- over-voltage protection can be integrated,
- high switching frequency.

The connection modules are attached to the printed circuit boards using plastic studs which, prior to soldering, are riveted at a temperature of 175 - 180°C with a half-round rivet head or secured by ultrasonic welding.

The side holes shown in the layout diagram (diameter 1.8mm) are only needed if over-voltage protection equipment is to be used. The PCB modules must then be mounted together with PCB earth contacts. Retrofitting of earth contacts is not possible.

The release wedges (accessories) are used for the easy dismantling of the modules when they are clipped on to back-mount frames in larger units and are to be disassembled. The assembly requires adequate mechanical support in the area of the connection module.

The switching forces total 50 to 120N depending on the wire diameter; the wire extraction forces total 25 to 75N.



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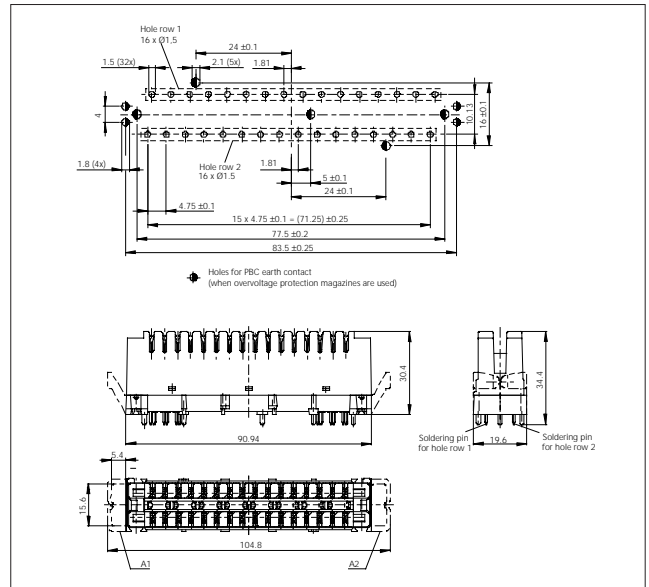
LSA-PLUS-PCB modules from Series 2 are ideally suited for subscriber-end termination of exchanges, for printed circuit boards on machine control equipment, telecommunication equipment and the implementation of adapter circuits / printed circuit boards. A wide range of different versions are available for connection purposes, measuring and testing purposes and over-voltage protection.

The modules are mounted directly on the printed circuit board. They can, however, also be clicked onto the back-mount frame when the printed circuit board does not exceed the width of the back-mount frame (102mm).

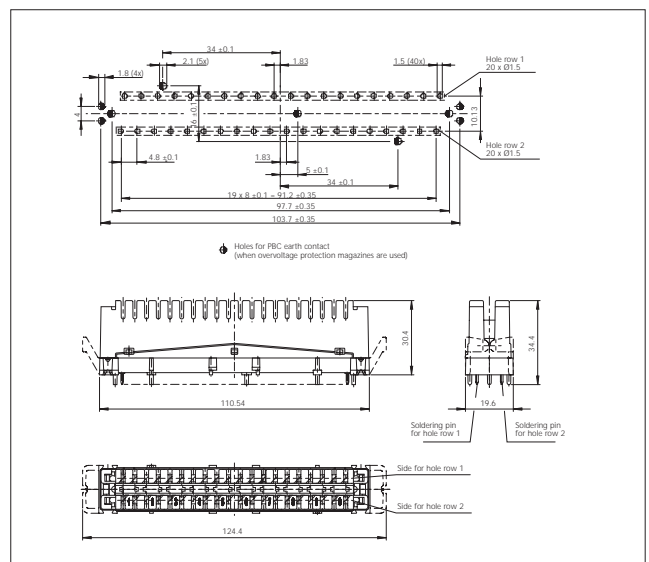
**Other accessories:**

Accessories from the LSA-PLUS series 2/8 and 2/10 are also compatible with these Series 2 print modules.

The PCB earth contact for printed circuit board mounting is used when over-voltage protection is used.



Footprint for 8-pair modules



Footprint for 10-pair module