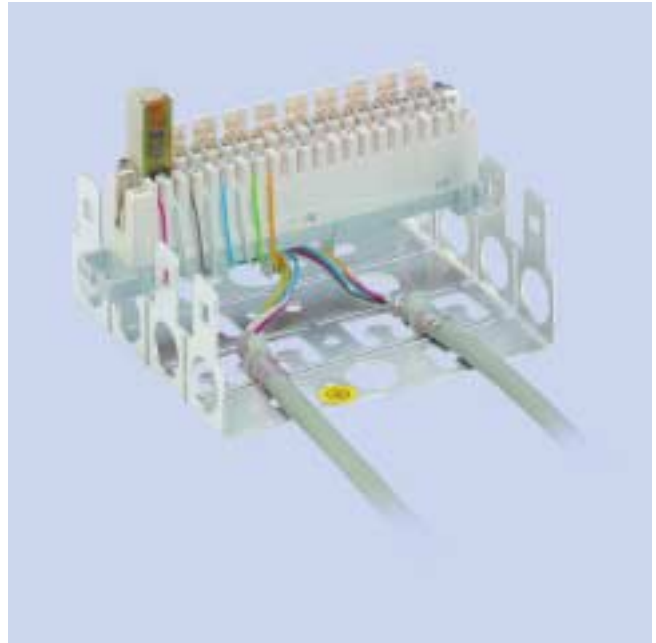
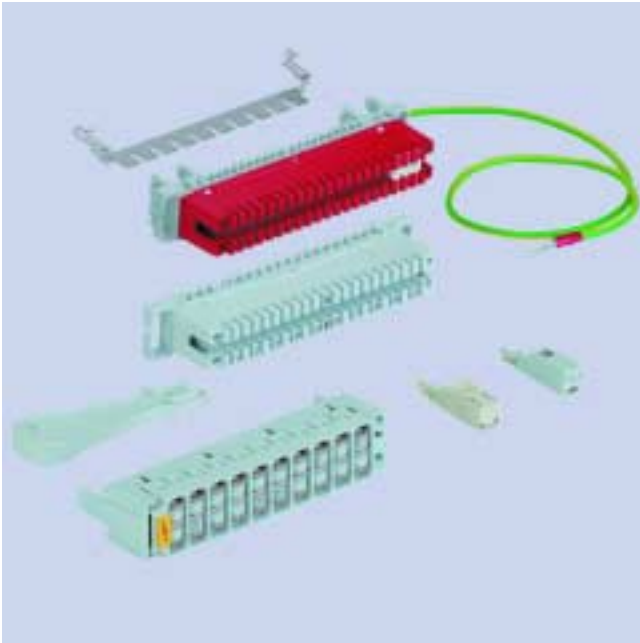


## LSA-Plus technology



### Operation and fields of application

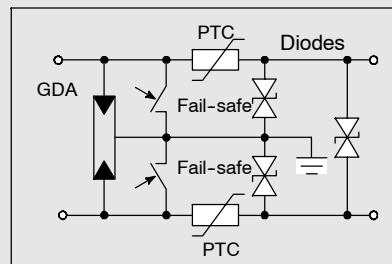
LSA-Plus surge protection from OBO is used especially with multi-wire systems such as those to be found, for example, in measurement and control engineering and in telephone exchanges. For example, ten two-wire (TC) systems can be protected with only one surge protection (basic protection) magazine LSA-B-MAG. Modules LSA-BF provide one twin-core protection of two lines.

The basic and precision protection devices of type LSA-BF 180 (180 V version) are intended for use in telephone exchanges in analog and ISDN networks. OBO basic and precision protection devices LSA-BF-24 (24 V version) are used especially in computer systems and measurement and control engineering.

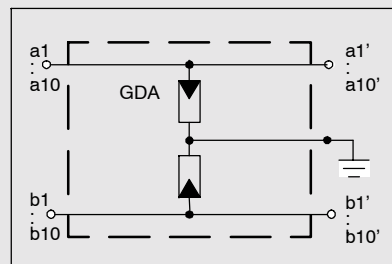
The protection circuit of the LSA-Plus devices consists of powerful triple-pole gas discharge arresters. Basic and precision protection are based on fail-safe technology, ensuring that, in the event of a thermal overload, the arrester is bridged and therefore protected.

### Mounting

The LSA connection or isolating strips are fixed simply by snap-fitting to a mounting tray. This means that they can be mounted on almost any wall.



Block diagram of LSA-BF..



Block diagram of LSA-B-MAG

Using the LSA-Plus tool, the wires can be connected without cutting, and without solder, screws and stripping.

### LSA-Plus features at a glance

### Advantages in use

LSA-Plus technology

▶ Simple solderless, screwless connections with no need to strip the insulation

Compact design

▶ Space-saving protection of multi-wire systems

Fail-safe technology

▶ Protection from thermal overloading

Individual surge protection

▶ The modules allow certain wiring branches to be protected

Modular design

▶ Allows simple, professional mounting

## Technical data

Type		LSA-B-MAG	LSA-BF-24	LSA-BF-180
Protected double lines/wires		10 TC/20	1 TC/2	
Max. continuous operating voltage	$U_c$	180 V	24 V	180 V
Voltage protection level	$U_p$	<700 V	<50 V	<300 V
LPZ		0→2	0→3	
Nominal discharge current (8/20)	$I_n$	5 kA	2.5 kA	2.5 kA
Max. discharge current (8/20)	$I_{max}$	10 kA	5 kA	5 kA
Impulse current (10/350)	$I_{imp}$	1 kA	0.5 kA	0.5 kA
Cut-off frequency (-3 dB)	MHz	30 MHz/100-600 $\Omega$	3 MHz/100 $\Omega$	3.5 MHz/600 $\Omega$
Temperature range	$\vartheta$	-20 °C to +60 °C		
Storage temperature		-40 °C to +80 °C		

Type		LSA-A-LEI
Connection strip for twin cores/wires		10 TC/20
Use with protection component		LSA-B-MAG
Colour		Grey
Dimensions	Height Width Depth	31 mm 126 mm 20 mm

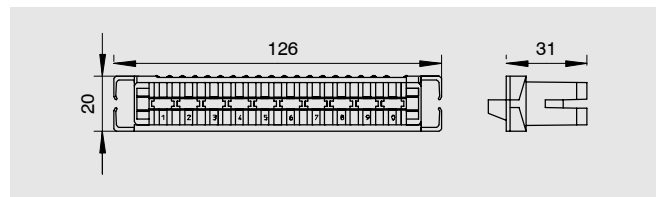
Type		LSA-T-LEI
Isolating strip for twin cores/wires		10 TC/20
Use with protection component		LSA-B-MAG; LSA-BF-24; LSA-BF-180
Colour		White
Dimensions	Height Width Depth	31 mm 126 mm 20 mm

Type		LSA-E-LEI
Earth wire strip to connect earth wires		34
Colour		Red
Dimensions	Height Width Depth	31 mm 126 mm 20 mm

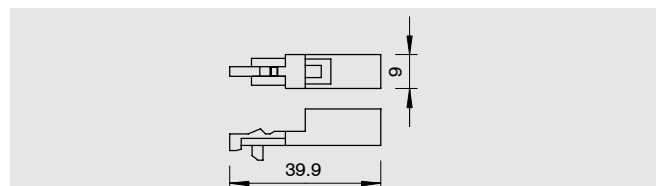
Subject to technical alterations

## Ordering data

Type	Description	Order no.
LSA-A-LEI	Connection strip for ten twin-cores	5084 00 8
LSA-T-LEI	Isolating strip for ten twin-cores	5084 01 2
LSA-E-LEI	Earth wire strip, 34-way	5084 01 6
LSA-B-MAG	Basic protection magazine, with 20 arresters	5084 02 0
LSA-BF-180	Basic and precision protection (1 TC) 180 V	5084 02 4
LSA-BF-24	Basic and precision protection (1 TC) 24 V	5084 02 8
LSA-E	Earthing bar for LSA modules	5084 03 2
LSA-M	Mounting tray for four connection/isolating strips	5084 03 6
LSA-TOOL	Wiring tool	5084 04 0



Dimension drawing of LSA-A-LEI; LSA-T-LEI



Dimension drawing of LSA-BF-180; LSA-BF-24