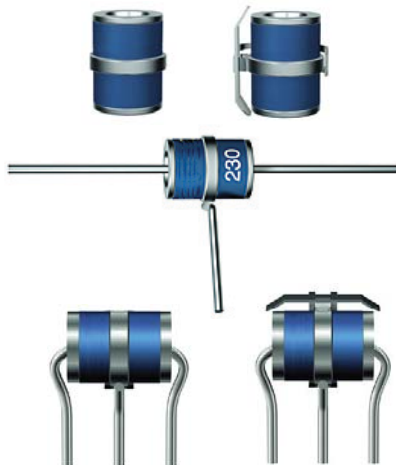


## 8x10mm No. A450/A451/A452

This product is not recommended for new designs. Please refer to Littelfuse series SL1021A.



## 3-electrode (20kA/10A)

### Enhanced Discharge Series

#### Features

- Non-radioactive
- Lead Free
- Failsafe Option

#### Applications

- Telecommunication
- Data Transmission
- Subscriber protection
- Underground cables

#### Standard

- UL-497B
- complies to ITU-T K.12 (formerly CCITT)
- complies to DIN 57845/VDE 0845

#### Approvals

- UL-rec.

#### WebLinks

- Further info see:  
[http://www.wickmanngroup.com/download/orderinfo\\_surgearr.pdf](http://www.wickmanngroup.com/download/orderinfo_surgearr.pdf)  
[http://www.wickmanngroup.com/download/crossref\\_surgearr.pdf](http://www.wickmanngroup.com/download/crossref_surgearr.pdf)

## Specifications

#### Packaging

- A450: 00=Bulk (2.000 pcs.)
- A450/F: 00\_Bulk (500 pcs.)
- A451: 04=Tray (250 pcs.)
- A452/F: 04=Tray (500 pcs.)

#### Materials

- Housing: Ceramic
- Gas: non-radioactive
- Leads: tin plated

#### Arc Voltage @ 1A

~ 35V

#### Transition Glow to Arc @

~ 1.0A

#### Operating temperature

-40°C to +90°C

#### Climatic Category

- complies to IEC 60068-1
- +40°C, 21 days, <93% humidity

#### Soldering characteristics

- complies to IEC 60068-2-20

#### Soldering Heat Resistance

- complies to IEC 60068-2-58

#### Transverse Delay Time

- complies to ITU-T K.12
- < 0.2µs

#### Marking

- Ⓜ, Type, Nom. Voltage, Date

#### Unit Weight

ca. 2.5g

### Characteristics

Type/ Order Code	DC sparkover voltage	Tolerance	Impulse sparkover voltage (1kV/µs) typ.	Glow Voltage	Insulation Resistance (@100 Vdc)	Capacitance (@1MHZ)	8/20µs Nominal Impulse Discharge Current (10 times) E1+E2/M	8/20µs Single Impulse Discharge Current (1 time) E1+E2/M	AC Nominal Discharge Current (50Hz; 1s; (10 times) E1+E2/M	AC Alternating Discharge Current (50Hz; (9 cycles) E1+E2/M	Approval
A450 S0 0230 01 00 A450 F0 0230 01 00** A451 S0 0230 01 04 A452 S0 0230 01 04 A452 F0 0230 01 04**	230V	+/- 20%	< 450V	~ 200V	> 10GΩ	< 1.5 pF	20kA	25kA	10A	50A	•
A450 S0 0250 01 00** A451 S0 0250 01 04 A452 S0 0250 01 04 A452 F0 0250 01 04**	250V	+/- 20%	< 550V	~ 200V	> 10GΩ	< 1.5 pF	20kA	25kA	10A	50A	•
A450 S0 0350 01 00 A451 S0 0350 01 04 A452 S0 0350 01 04 A452 F0 0350 01 04**	350V	+/- 20%	< 600V	~ 200V	> 10GΩ	< 1.5 pF	20kA	25kA	10A	50A	•
A450 S0 0420 11 00 A450 F0 0420 11 00** A452 S0 0420 11 04	420V	-17/+30%	< 800V	~ 200V	> 10GΩ	< 1.5 pF	20kA	25kA	10A	50A	

other values on request

\*\* with failsafe

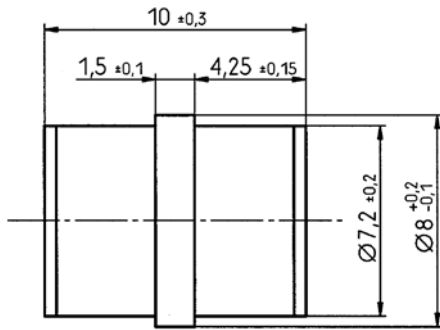
Specifications are subject to change without notice.

### Order Example

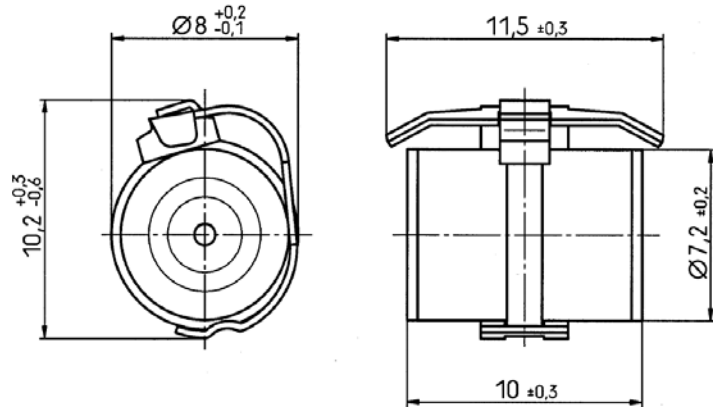
Qty.	Order- Number	Type	Failsafe Option	Sparkover Volt.	Tolerance	Packaging
		A450	S0	0230	01	00

**Dimensions (mm) A450/A451/A452**

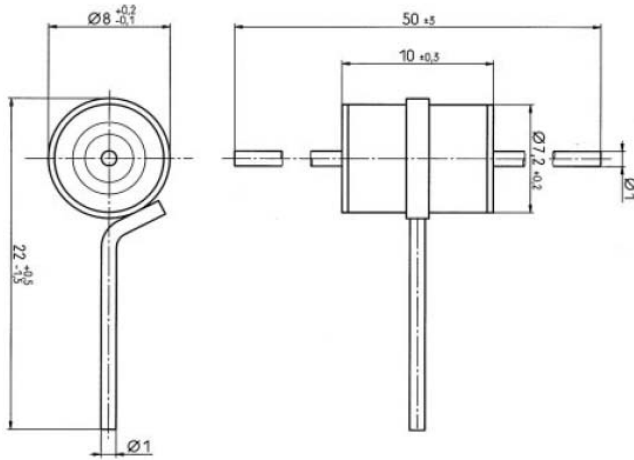
**A450**



**A450 with Failsafe**



**A451**



**A452 with Failsafe**

**A452**

