

## 8x10mm

### No. A440/A441/A442

This product is not recommended for new designs. Please refer to Littelfuse series SL1024A.



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

### Standard 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

- A440: 00=Bulk (2.000 pcs.)
- A440/F: 00=Bulk (500 pcs.)
- A441: 04=Tray (250 pcs.)
- A442: 04=Tray (500 pcs.)
- A442/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. 2.2g

### Characteristics

| Type/<br>Order Code  | DC<br>sparkover<br>voltage | Tolerance | Impulse<br>sparkover<br>voltage<br>(1kV/µs)<br>typ. | Glow<br>Voltage | Insulation<br>Resistance<br>(@100 Vdc or<br>@50Vdc for 90V)<br>E1/M;E2/M | Capacitance<br>(@1MHZ)<br>E1/M;E2/M | 8/20µs<br>Nominal<br>Impulse<br>Discharge<br>Current<br>(10 times)<br>E1+E2/M | 8/20µs<br>Single<br>Impulse<br>Discharge<br>Current<br>(1 time)<br>E1+E2/M | AC<br>Nominal<br>Discharge<br>Current<br>(50Hz; 1s;<br>10 times)<br>E1+E2/M | AC<br>Alternating<br>Discharge<br>Current<br>(50Hz;<br>9 cycles)<br>E1+E2/M | Approval |
|--|----------------------------|-----------|---|-----------------|--|-------------------------------------|---|--|---|---|----------|
| A440 SO 0090 01 00<br>A441 SO 0090 01 04<br>A442 SO 0090 01 04<br>A442 FO 0090 01 04*                        | 90V                        | +/- 20%   | < 450V  | ~ 60V           | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |
| A440 SO 0230 01 00<br>A440 FO 0230 01 00*<br>A441 SO 0230 01 04<br>A442 SO 0230 01 04<br>A442 FO 0230 01 04* | 230V                       | +/- 20%   | < 550V  | ~ 200V          | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |
| A440 FO 0250 01 00*  | 250V                       | +/- 20%   | < 550V  | ~ 200V          | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |
| A440 SO 0350 01 00<br>A440 FO 0350 01 00*<br>A441 SO 0350 01 04<br>A442 FO 0350 01 04*                       | 350V                       | +/- 20%   | < 800V  | ~ 200V          | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |
| A440 FO 0420 01 00*  | 420V                       | +/- 20%   | < 850V  | ~ 200V          | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |
| A440 SO 0600 01 00<br>A441 SO 0600 01 04   | 600V                       | +/- 20%   | < 1000V   | ~ 200V          | > 10GΩ   | < 1.5 pF                            | 10kA  | 15kA   | 10A   | 40A   | •        |

other values on request

\* with failsafe

Specifications are subject to change without notice.

Order  
Example

| Qty. | Order-<br>Number | Type | Failsafe Option | Sparkover Volt. | Tolerance | Packaging |
|------|------------------|------|-----------------|-----------------|-----------|-----------|
|      |                  | A420 | SO              | 0090            | 01        | 00        |

WebSite

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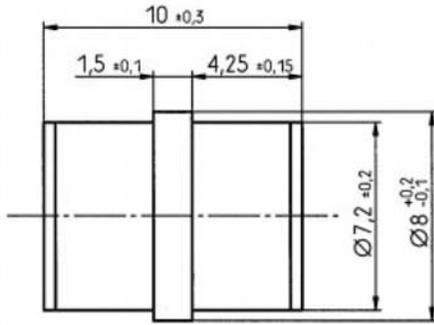
E-mail: [sales@wickmann.com.hk](mailto:sales@wickmann.com.hk)

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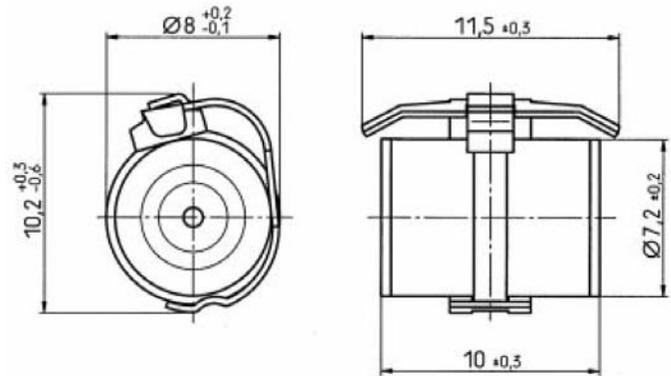
E-mail: [sales@wickmann.cn](mailto:sales@wickmann.cn)

## Dimensions (mm) A440/A441/A442

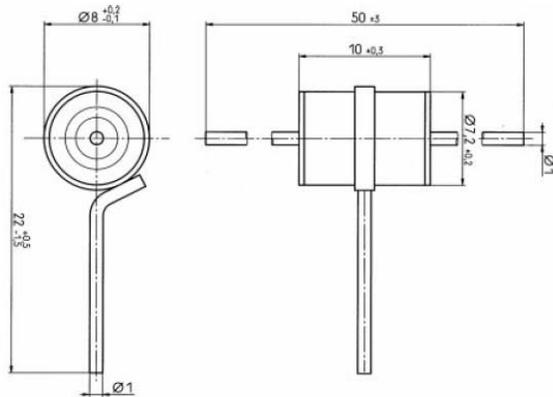
### A440



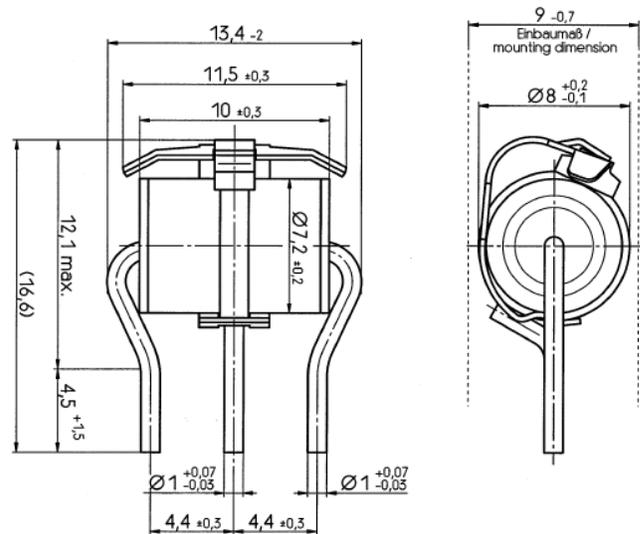
### A440 with Failsafe



### A441



### A442 with Failsafe



### A442

