

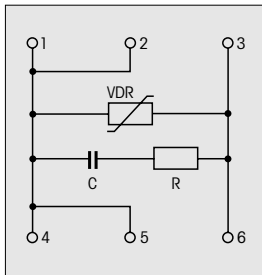
## Protection elements / Suppressors

- Universal overvoltage dischargers and contact protection circuits (spark absorbers)
- Optimized noise suppression with RC-combination
- Voltage ranges up to 240V
- Compact DIN case

### Spark absorbers

#### CRC02

##### Circuit



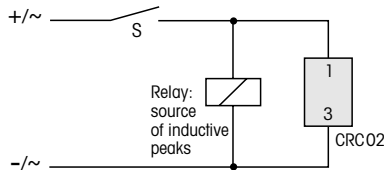
RC-element parallel to voltage absorber (Varistor)

##### Application

###### Contact protection

e.g. for inductive loads.  
Voltage limitation by varistor, minimum noise radiation by RC-element.

##### Circuit example



##### Voltages

UC ≈ : 24V, 48V, 240V

##### Technical data

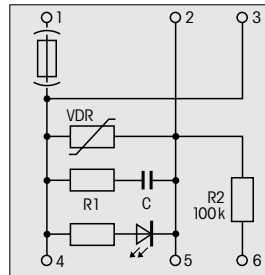
Mechanical			
Type of protection	Case IP40, terminals IP20		
Operating temperature	-25...+60°C		
Relative humidity	10...95% non-condensing		
Electrical			
Rated voltage	UC24V	UC48V	UC240V
DC operation	...38V	...85V	---
AC operation	...30V	...60V	...265V
Terminal current	max. 10A		
Capacitor	0,25µF/250V // X2		
Resistance (24V, 48V)	47Ω/0,5W		
(240V)	470Ω/0,5W		

Example of order:  
1 spark absorber CRC02/UC24V

### Mains protection

#### CVG01

##### Circuit



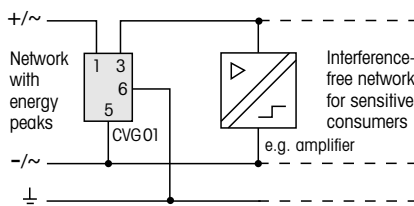
Combination with fuse, LED and shunt resistor

##### Application

###### Fine protection

e.g. on connection of sensitive consumers to a network with a high noise level.  
Voltage limitation by varistor, minimum noise radiation by RC-element.  
Dissipation of electrostatic charges.

##### Circuit example



##### Voltages

UC ≈ : 24V, 48V, 240V

##### Technical data

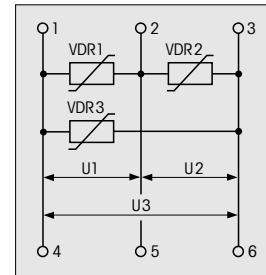
Mechanical			
Type of protection	Case IP40, terminals IP20		
Operating temperature	-25...+60°C		
Relative humidity	10...95% non-condensing		
Electrical			
Rated voltage	UC24V	UC48V	UC240V
DC operation	...38V	...85V	---
AC operation	...30V	...60V	...265V
Terminal current	max. 10A		
Capacitor	0,25µF/250V // X2		
Resistance	47Ω/0,5W		
Fuse	5x20mm (max. 6,3A)		
Internal consumption	approx. 3mA		
(LED not visible at approx. 40% of rated voltages)			

Example of order:  
1 mains protection CVG01/UC24V

### Overvoltage dischargers

#### CUB03

##### Circuit



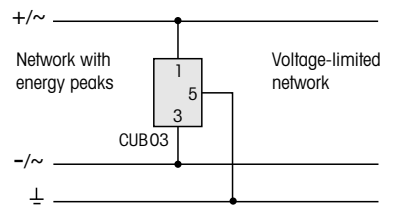
3 voltage dischargers (Varistors)

##### Application

###### General protection

e.g. for inductive energy peaks on the supply voltage.  
Voltage limitation between two conductors and against a common conductor ( $\frac{1}{2}$ ).

##### Circuit example



##### Voltages

UC ≈ : 24V, 48V, 240V

##### Technical data

Mechanical			
Type of protection	Case IP40, terminals IP20		
Operating temperature	-25...+60°C		
Relative humidity	10...95% non-condensing		
Electrical			
Rated voltage	UC24V	UC48V	UC240V
DC operation	...38V	...85V	---
AC operation	...30V	...60V	...265V
Terminal current	max. 10A		
Limiting voltage	U1-2 = U2-3 = U1-3		
Type	UC24V	UC48V	UC240V
@ I = 1A	75V	130V	550V
@ I = 100A	130V	165V	680V
I max. (1ms)	8A	5A	5A

Example of order:  
1 overvoltage discharger CUB03/UC24V

