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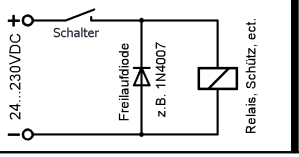
# Schutzbeschaltung für Füllstandsgeräte wie z.B. Reedkontakte, Mikroschalter etc.

## Kontaktschutz

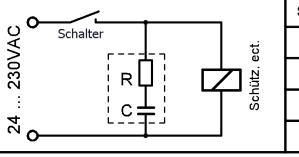
Mit einer der folgenden Schutzbeschaltung ist eine sichere Funktion und eine lange Lebensdauer gewährleistet:

**Schutzbeschaltung**

**Für induktive Last an DC**




**Für induktive Last an AC**

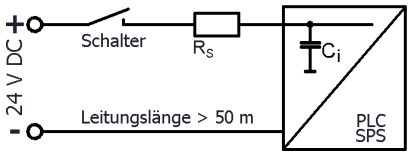



**Werte AC**

**Zulässige Werte für RC-Glieder**

| Spannung | Kapazität | Widerstand | Art.Nr.: |
|---|---|---|---|
| 24 VAC | 0,1 µF | 100 Ohm | ebe00450 |
| 48 VAC | 0,1 µF | 220 Ohm | ebe00451 |
| 115 VAC | 0,1 µF | 330 Ohm | ebe00452 |
| 230 VAC | 0,1 µF | 470 Ohm | ebe00453 |

**Für kapazitive Last an DC (SPS Eingänge)**

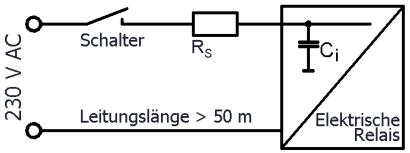



**Erklärung**

$C_i$ = innere Kapazität einer SPS, ect.

$R_s$ = Schutzwiderstand = 47 Ohm

**Für kapazitive Last an AC (Elektronische Relais)**




**Erklärung**

$C_i$ = innere Kapazität eines elektronischen Relais, ect.

$R_s$ = Schutzwiderstand: 220 Ohm für 230 V AC Relais

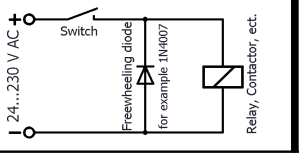
# Protective circuitry for level measurement devices such as reed contacts and microswitches etc.

## Contact protection

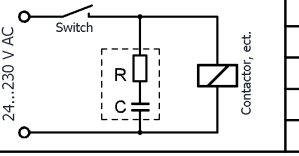
To ensure secure operation and to achieve a long life, one of the following protective circuit examples should be applied:

**Protection circuit**

**For inductive load on DC**




**For inductive load on AC**

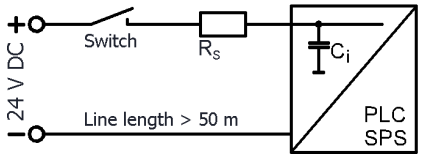


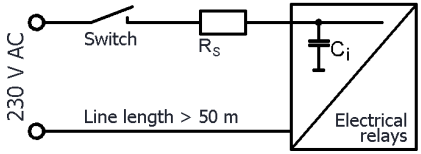

**Values AC**

**Permissible values for RC elements**

| Voltage | Capacity | Resistor | Art..No.: |
|---|---|---|---|
| 24 VAC | 0,1 µF | 100 Ohm | ebe00450 |
| 48 VAC | 0,1 µF | 220 Ohm | ebe00451 |
| 115 VAC | 0,1 µF | 330 Ohm | ebe00452 |
| 230 VAC | 0,1 µF | 470 Ohm | ebe00453 |


**Irrtümer und Änderungen vorbehalten / Errors and changes reserved / Sous réserve ,d'erreurs ou de modifications**

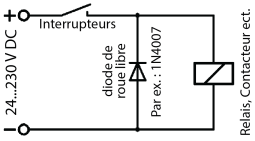
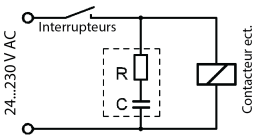
| For capacitive load on DC (PLC Input) | Declaration |
|---|---|
|  | $C_i$ = internal capacitance of a PLC, ect.<br>$R_s$ = protective resistor = 47 Ohm |

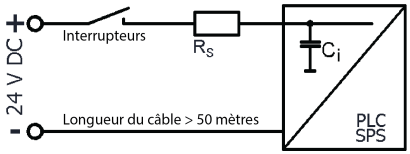
| For capacitive load on AC (for electronic relays) | Declaration |
|---|---|
|  | $C_i$ = internal capacitance of an electronic relay, ect.<br>$R_s$ = protective resistor: 220 Ohm for 230 V AC Relais |

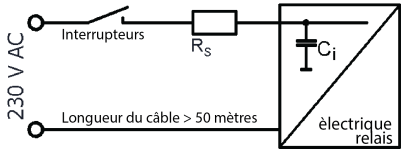
# Circuit de protection pour l'équipement Fluid.iO. tel que contacteur Reed et microrupteur etc.

## Protection des contacts

Avec l'un des circuits de protection suivants, un fonctionnement sûr et une longue durée de vie sont garantis:

| Circuit de protection | | Valeurs AC | | | |
|---|---|---|---|---|---|
| Pour charge inductive sur DC | Pour charge inductive sur AC | Valeurs autorisées pour circuits RC | | | |
|  |  | Tension | Capacité | Résistance | Réf. art.: |
| | | 24 VAC | 0,1 µF | 100 Ohm | ebe00450 |
| | | 48 VAC | 0,1 µF | 220 Ohm | ebe00451 |
| | | 115 VAC | 0,1 µF | 330 Ohm | ebe00452 |
| | | 230 VAC | 0,1 µF | 470 Ohm | ebe00453 |

| Pour charge capacitive sur DC (SPS entrées) | Explication |
|---|---|
|  | $C_i$ = iCapacité interne d'une commande à mémoire programmable etc.<br>$R_s$ = Résistance de protection = 47 Ohms |

| Pour charge capacitive sur AC (relais électroniques) | Explication |
|---|---|
|  | $C_i$ = Capacité interne d'un relais électronique etc.<br>$R_s$ = Résistance de protection : 220 Ohms pour relais 230 V AC |