

## Type RS

In the type RS contact is made by a mechanical **reed switch** encapsulated in glass.

Direct connection with 2-pole cable, 5m long, open ended (Type RS-K). With 3-pole connector M8, cable length ca. 100 mm (Type RS-S).

## Type ES

In the type ES contact is made by an **electronic switch** – without bounce or wear and protected from pole reversal. The output is short circuit proof and insensitive to shocks and vibrations. Connection is by 3-pole connector for easy disconnection.

Fitted with connection cable 100 mm long with connector.

**A 5 m cable with connector and open end can be ordered separately, or use the Order No. for the complete Type ES with 5 m cable.**

## Proximity Sensors RS and ES

### Electrical Service Life Protective Measures

Magnetic switches are sensitive to excessive currents and inductions. With high switching frequencies and inductive loads such as relays, solenoid valves or lifting magnets, service life will be greatly reduced.

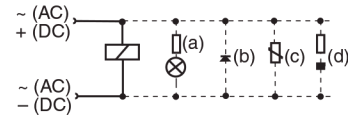
With **resistive and capacitive loads** with high switch-on current, such as light bulbs, a protective resistor should be fitted. This also applies to long cable lengths and voltages over 100 V.

In the switching of inductive loads such as relays, solenoid valves and lifting magnets, voltage peaks

(transients) are generated which must be suppressed by protective diodes, RC loops or varistors.

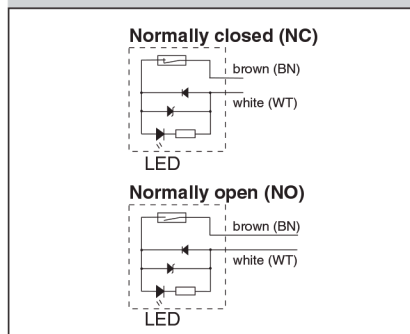
### Connection Examples

- Load with protective circuits
- (a) Protective resistor for light bulb
  - (b) Freewheel diode on inductivity
  - (c) Varistor on inductivity
  - (d) RC element on inductivity

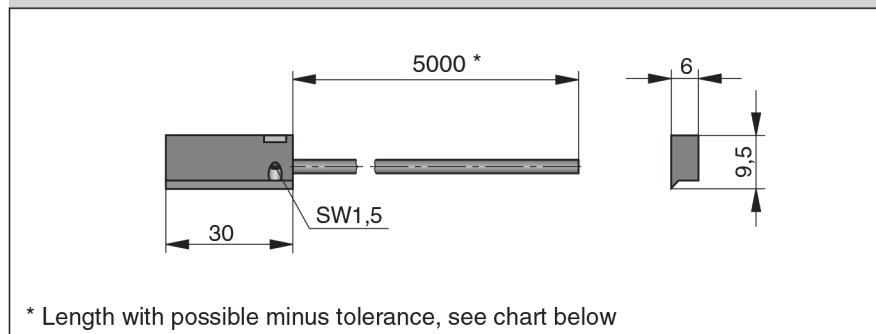


For the type ES, external protective circuits are not normally needed.

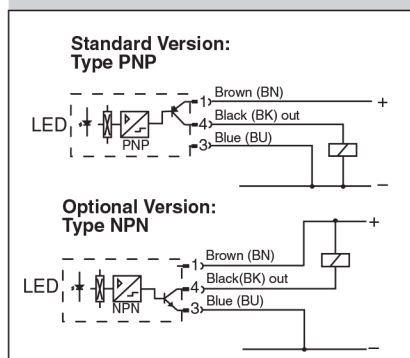
### Electrical Connection, Type RS



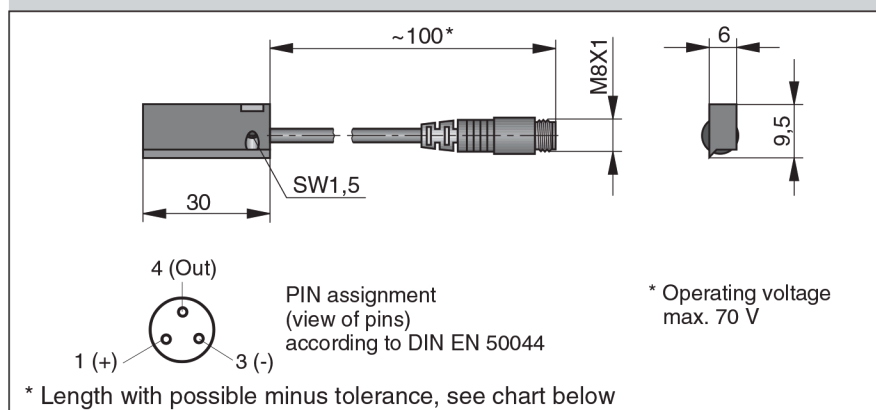
### Dimensions (mm) – Type RS-K



### Electrical Connection, Type ES



### Dimensions (mm) – Type ES-S / RS-S\*



### Length of connection cable with length tolerance

Sensor-Order-No.	Nominal cable length	Length tolerance
KL3045	5000 mm	-50 mm
KL3048	5000 mm	-50 mm
KL3054	100 mm	-20 mm
KL3060	100 mm	-20 mm