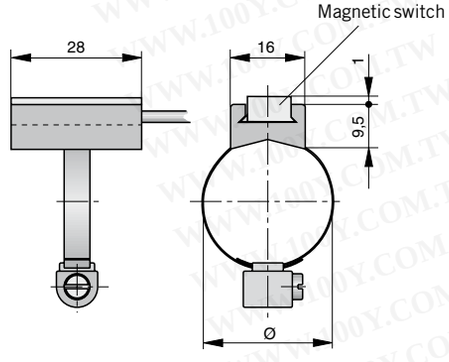
Order Instructions

Version	Imprint	Order Instructions	
		Type	Order-No.
Magnetic switch, reed contact, normally open, screw connector M8, Pin 3 neutral (ES-S compatible connector; preferred type)	1+ 4 max. 70 V/0,2 A	RS-S	KL3047
Magnetic switch, reed contact, normally closed, screw connector M8, Pin 3 neutral	1+ 4 max. 70 V/0,2 A	RS-S	KL3087
Magnetic switch, reed contact, normally closed with 5.0 m cable	bn+ max. 150 V/0,2 A	RS-K	KL3048
Magnetic switch, reed contact, normally open with 2.5 m cable	bn+ max. 240 V/0,2 A	RS-K	KL3043
Magnetic switch, reed contact, normally open with 5.0 m cable	bn+ max. 240 V/0,2 A	RS-K	KL3045
Magnetic switch, electronic, PNP-Switching with screw connector M8	PNP	ES-S	KL3054
Magnetic switch, electronic, NPN-Switching with screw connector M8	NPN	ES-S	KL3060
Magnetic switch, electronic, PNP-Switching with 2.5 m cable	PNP	ES-K	KL3055
Magnetic switch, electronic, NPN-Switching with 2.5 m cable	NPN	ES-K	KL3059
Magnetic switch, electronic, PNP-Switching with 5.0 m cable	PNP	ES-K	KL3056
Cable set 2.5 m and connector M8 with union nut		KSG25	KC3102
Cable set 5.0 m and connector M8 with union nut		KSG50	KC3104
Connector M8 without cable for custom made cables		STG8	KC3152

Strap mounting for Magnetic Switch for Series R, Ø10-63mm



Dimension Table and Order Instructions – Mounting

Cyl. Ø	Order Instructions	
	Type	Order-No.
10,12,16	HMSR 010, 012, 016	KL9196
20, 25	HMSR 020, 025	KL9197
32	HMSR 032	KL9198
40	HMSR 040	KL9199
50	HMSR 050	KL9284
63	HMSR 063	KL9285

Electrical Service Life Protective Measures

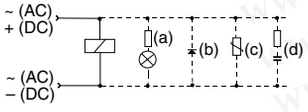
Magnetic switches are sensitive to excessive currents and inductions. With high switching frequencies and inductive loads such as relays, solenoid valves or lifting magnets, service life will be greatly reduced.

With resistive and capacitative 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.

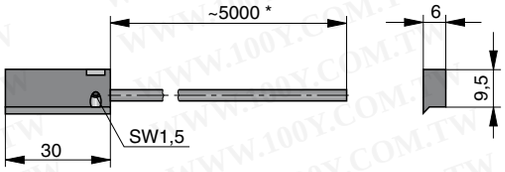
Connection Examples:

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



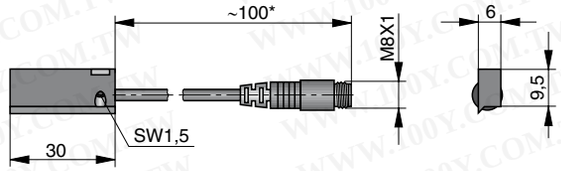
For the type ES, external protective circuits are not normally needed.

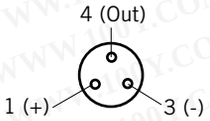
Dimensions (mm) – Type RS-K



* Length with possible minus tolerance, see chart below

Dimensions (mm) – Type ES-S / RS-S**





PIN assignment
(view of pins) according to DIN EN 50044

* Length with possible minus tolerance, see chart below
** Operating voltage max. 70 V

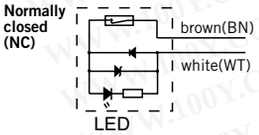
Length of connection cable with length tolerance

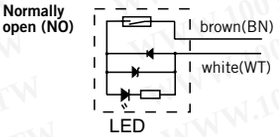
Sensor Order-No.	Nominal cable length	Length tolerance
KL3043, KL3055, KL3059	2500 mm	– 50 mm
KL3045, KL3048, KL3056	5000 mm	– 50 mm
KL3054	100 mm	– 20 mm
KL3060	145 mm	± 5 mm

Type RS

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

Electrical Connection, Type RS





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.

Electrical Connection, Type ES