

KEP Magnetic Switches

Features

- CE Approved
- Non Contact Switching
- N.O., N.C. & SPDT Industrial Reed Switches

- Momentary & Bistable Versions Available
- No Switching Power Needed
(Drives KAL Series without external power)
- Long Life (Estimated 3 Billion Operations)

Switch Operations:

N.O. (third letter "S") (Closing Switch)

If a permanent magnet (a north pole or a south pole is placed near the actuating zone of the magnetic switch, the contact tongues inside the glass sealed gas protected area spring quickly to close position. When field is removed switch opens again.

N.C. (third letter "O") (Opening Switch)

A contact tongue of a switch is magnetized by an internal magnet with the south pole field. If a south pole actuating magnet is placed near the magnetic switch, both contact tongues are magnetized with the same polarity. Like poles repel each other and the magnetic switch contact opens. When field is removed switch closes again.

SPDT (third letter "U") (Change over Switch)

A change over contact has one moveable (COMM.) and two static contact tongues (N.C. and N.O.) When there is no magnetic field, contact tongue rests on the N.C. contact by means of its elastic force. When an actuating magnet is placed near it (north pole or south pole) the moveable contact tongue switches. The NC contact opens and the NO contact springs to close position. When field is removed, moveable contact returns to rest position.

Bistable (fourth letter "M"*)

By means of an internal polarizing magnet, a contact tongue is magnetized with a south pole field in such a way that when north pole magnet is placed in its proximity the magnetic switch contact changes state. The switch remains in this state until a south pole magnet is placed in its proximity.

Operating Temperature: 14° to 176°F (-10° to 80°C)

Cable

Length: 39.4" (1 M)

Color:

Jacket: Gray or Beige 0.22" (5.6mm) diameter

Inside: 19 ga.

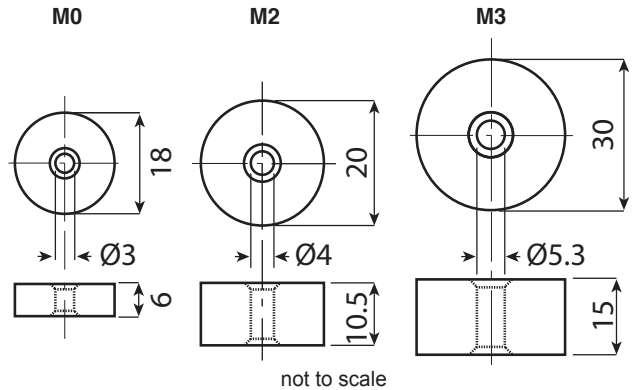
N.O.: Brown & Blue

N.C.: Black & Blue

SPDT: Brn (comm), Blue (N.C.), Blk (N.O.)

NOTE: Some cables may have extra green/yellow wire connected to metal case.

Actuating Magnets:

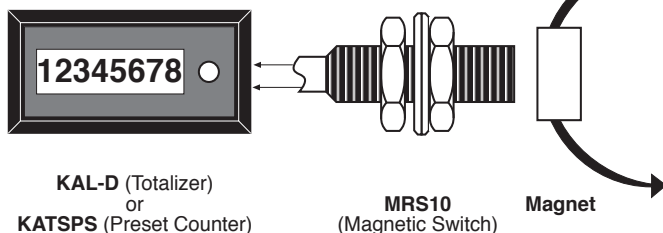


Switch & Magnet Spacing:

| Magnetic Switch | Magnets | | |
|-----------------|---------|-------|-------|
| | M0 | M2 | M3 |
| KRS9 | ≈3mm | ≈10mm | ≈27mm |
| KRU9 | ≈5mm | ≈14mm | ≈30mm |
| KWU9 | ≈4mm | ≈11mm | ≈26mm |
| GMS9 | ≈3mm | ≈10mm | ≈22mm |
| GMU9 | ≈3mm | ≈8mm | ≈19mm |
| MRS10 | ≈4mm | ≈11mm | ≈28mm |
| MRS12 | ≈4mm | ≈11mm | ≈27mm |
| MRU12 | ≈3mm | ≈10mm | ≈28mm |
| DRS | ≈5mm | ≈11mm | ≈27mm |
| DRU | ≈3mm | ≈9mm | ≈17mm |
| DRSM | ≈14mm | ≈28mm | ≈58mm |
| DRUM | ≈8mm | ≈20mm | ≈45mm |
| FLS-AL | ≈5mm | ≈11mm | ≈27mm |
| FLU-AL | ≈3mm | ≈9mm | ≈17mm |
| FLSM-AL | ≈14mm | ≈28mm | ≈55mm |
| FLUM-AL | ≈8mm | ≈20mm | ≈45mm |
| FWU-AL | ≈5mm | ≈13mm | ≈30mm |
| FGMS-AL | ≈3mm | ≈9mm | ≈21mm |

NOTE: To convert from mm to inches use the following:
mm ÷ 25.4 = inches

Electronic Counting With No Outside Power:



**Type: KRS9
KRU9
KWU9**

Technical Data:

Switching Action: Monostable

Contact Material: KRS9 & KRU9: rhodium
KWU9 - tungsten

Protection: NEMA 4X / IP65

Make/Break Capacity: KRS9 & KWU9: 60 VA max.
KRU9: 40 VA max.

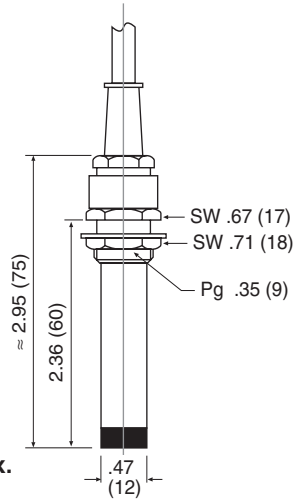
Switching Voltage: 250V max.

Switching Current: KRS9: 2A max.
KRU9 & KWU9: 1A max.

Switching Frequency: KRS9 & KRU9: 300 Hz
KWU9: 100 Hz

Switching Hysteresis: KRS9 & KRU9: ≈ 5mm
KWU9: ≈ 2-3mm

Housing: Glass fiber reinforced nylon



**Type: GMS9
GMU9**

Technical Data:

Switching Action: Monostable

Contact Material: rhodium

Protection: NEMA 4X / IP65

Make/Break Capacity: GMS9: 100 VA max.
GMU9: 40 VA max.

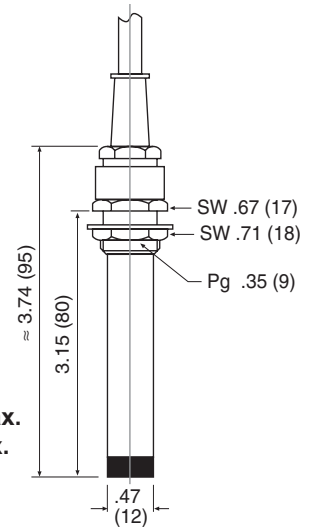
Switching Voltage: 250V max.

Switching Current: GMS9: 2A max.
GMU9: 1A max.

Switching Frequency: 300 Hz

Switching Hysteresis: GMS9: ≈ 3-4mm
GMU9: ≈ 5mm

Housing: Glass fiber reinforced nylon



Type: MRS10

Technical Data:

Switching Action: Monostable

Contact Material: rhodium

Protection: NEMA 12 / IP54

Make/Break Capacity: 10 VA max.

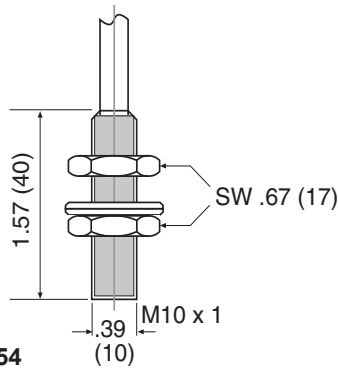
Switching Voltage: 250V max.

Switching Current: 0.5A max.

Switching Frequency: 1000 Hz

Switching Hysteresis: ≈ 5mm

Housing: Brass



**Type: MRS12
MRU12**

Technical Data:

Switching Action: Monostable

Contact Material: rhodium

Protection: NEMA 12 / IP54

Make/Break Capacity: MRS12: 60 VA max.
MRU12: 40 VA max.

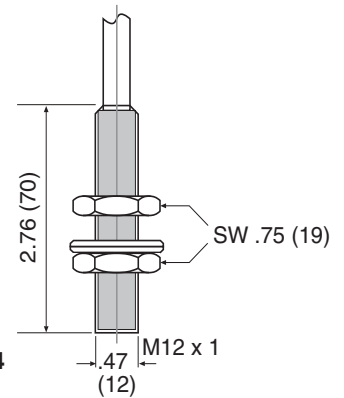
Switching Voltage: 250V max.

Switching Current: MRS12: 2A max.
MRU12: 1A max.

Switching Frequency: 300 Hz

Switching Hysteresis: ≈ 5mm

Housing: Brass



Type: DRS, DRU, DRSM, DRUM, FGMS-AL

Technical Data:

Switching Action: DRS, DRU & FGMS-AL: monostable
DRSM & DRUM: bistable

Contact Material: rhodium

Switching Frequency: 300 Hz

Switching Hysteresis: DRS & DRU: ≈ 5mm
FGMS-AL: ≈ 3-4mm

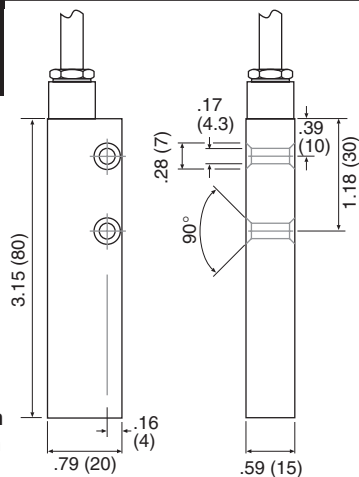
Protection: DRS, DRU, DRSM & DRUM: NEMA 12 / IP54
FGMS-AL: NEMA 4X / IP65

Make/Break Capacity: DRS: 60 VA max.
DRU & DRUM: 40 VA max.
DRSM & FGMS-AL: 100 VA max.

Switching Voltage: 250V max.

Switching Current: DRS, DRSM, & FGMS-AL: 2A max.
DRU & DRUM: 1A max.

Housing: DRS, DRU, DRSM & DRUM: Glass fiber reinforced nylon
FGMS-AL: Aluminum



How To Order:

Actuating Magnets:

- MO (Ø 18 mm)
- M2 (Ø 20 mm)
- M3 (Ø 30 mm)

NOTE: Magnets have countersink on both sides. One side is South, the other is North

Magnetic Switches:

- KRS9
- KRU9
- KWU9
- GMS9
- GMU9
- MRS10
- MRS12
- MRU12
- DRS
- DRU
- DRSM
- DRUM
- FLS - AL
- FLU - AL
- FLSM - AL
- FLUM-AL
- FWU-AL
- FGMS-AL

Type: FLS-AL, FLU-AL, FWU-AL, FLSM-AL, FLUM-AL

Technical Data:

Switching Action: FLS-AL, FLU-AL & FWU-AL: monostable
FLSM-AL, FLUM-AL: bistable

Contact Material: FLS-AL, FLU-AL, FLSM-AL & FLUM-AL: rhodium
FWU-AL: tungsten

Switching Frequency: FLS-AL, FLU-AL, FLSM-AL & FLU-AL: 300 Hz
FWU-AL: 100 Hz

Switching Hysteresis: FLS-AL & FLU-AL: ≈ 5mm
FWU-AL: ≈ 2-3mm

Protection: NEMA 4X / IP65

Make/Break Capacity: FLU-AL & FLUM-AL: 40 VA max.
FLS-AL, FWU-AL: 60 VA max.
FLSM: 100 VA max.

Switching Voltage: 250V max.

Switching Current: FLS-AL & FLSM-AL: 2A max.
FLU-AL, FLUM-AL & FWU-AL: 1A max.

Housing: Aluminum

