

KLS IP 68

Actuator Mounted On/Off Position Indicator Limit Switch for KFCM

A1

Application:

The KLS position indicator is designed to fit DSH linear actuator, type KFCM for use within the temperature range from -20°C to 80°C.

Basic Design:

All materials incorporated in the KLS are corrosion-proof. The linear movement from the KFCM actuator is transferred to a magnet arm by means of a stainless steel clamp. When the KFCM actuator reaches its outer positions, reed switches are activated by the permanent magnet placed in the magnet arm.

Each reed switch is placed eccentrically in an epoxy resin filled cartridge that is sealed off towards the environment by means of an O-ring.

Internal wires from the reed switch cartridges are led to a 4-pole terminal strip. The terminal is protected by a connection house which also holds the cable gland.

All wiring is protected against penetrating media by O-ring seals.

Switch timing is adjusted by turning the reed cartridges. Each cartridge has a screwdriver notch and can be turned 25° in both directions from centre position.

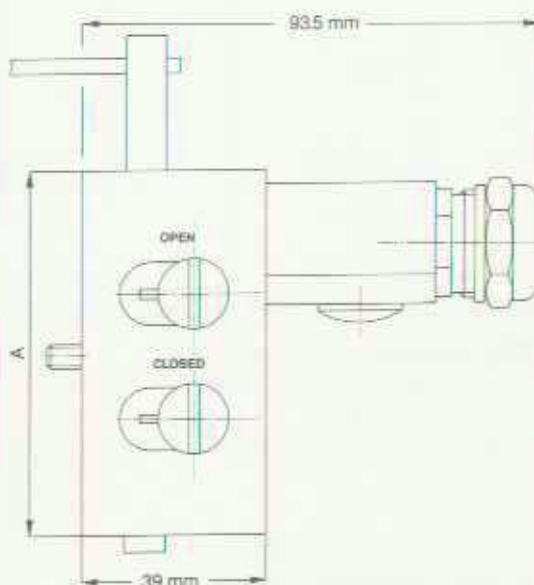
Max. preload of actuator 5 mm.



Indicator Key:

Type	A mm	Weight Appr. kg	Part no.
KLS 12/68	64	1.5	160B 4022
KLS 22/68	64	1.5	160B 4023
KLS 32/68	98	2.0	160B 4024
KLS 42/68	98	2.0	160B 4025
KLS 52/68	98	2.0	160B 4026

Dimensions:



Type Designation Code:

KLS - XX/XX
 ——— Insulation class IP
 ——— KFCM actuator size

Enclosure Rating

Cavity seals are designed to fulfil demands of enclosure rating IP 68.

Note: The main factors determining the enclosure rating of the installed KLS IP 68 are the quality of workmanship exercised when connecting the cable and the quality of the cable itself.

See mounting instruction for KLS.

When the KLS is mounted with cable from DSH the cable is casted into the connection housing.

The company policy aims at continuous improvement of the products and therefore all rights to change the specifications without notice are reserved.

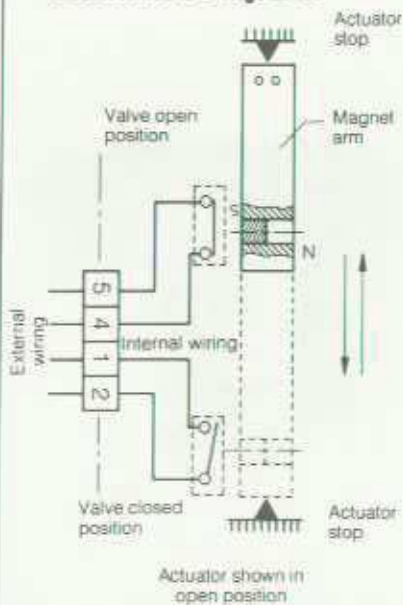


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Terminal Layout



How to hook-up the KLS

The reed switches incorporated in the KLS indicator are high quality switches that are extremely reliable as long as the following ratings are observed:

Max. continuous load: 2.5 W (VA)

Max. peak load: 12 W (VA)

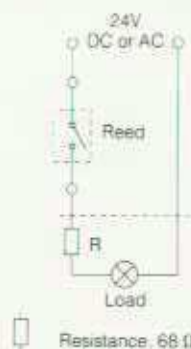
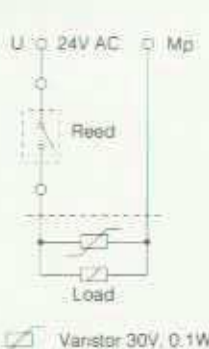
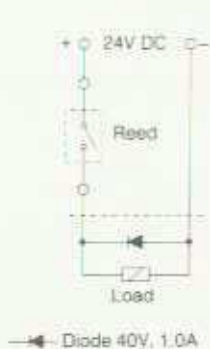
In order to obtain optimum reliability from the KLS position indicator DSH recommends a switch hook-up according to one of the four wiring diagrams shown below:

Manufacturers Data for Reed Switches

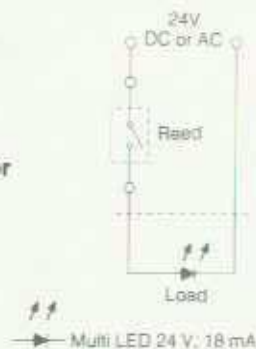
Contact material	Rhodium
Dielectric strength	400 Voc
Contact resistance max.	100 mΩ
Insulation resistance	10 ¹¹ Ω
Operate sensitivity	30...40 AT
Release sensitivity - standard	≥ 15 AT
Capacitance of Open Contacts	0.2 to 0.5 pF
Vibration Resistance	50...1000 Hz
Shock Resistance	50 g, 11 ms
Life Expectancy max.	5 x 10 ⁸ cycles
Operate time typical	3 ms
Bounce time typical	0.2 ms
Release time typical	0.07 ms
Resonant frequency typical	4000 Hz
Operating frequency max.	3200 Hz

Inductive Loads (Relays)

Resistive Loads (Lamps)



or



Materials (excl. cable gland)

- Housings and magnet arm : Brass, MS58 (CuZn39Pb3)
- Activating magnets : Plastic bonded rare earth
- Screws, sign plate and rivets : AISI 304
- Seals : NBR - Acrylonitrile Butadiene
- Imbedding material : Epoxy resin

Cable Gland Data:

- Cable outer diam. : 8 - 15 mm
- Insulation class : IP 68
- Thread : PG 13.5
- Material : Nickel plated brass
- Seal material : Perbunan

Wiring

- to the terminal:
- cross sections
- 0.5 - 1.5 mm²
- (AWG 22 - 16)

Cable Quality/Connection

Observe that water intrusion into the terminal housing can take place through the cable - even through each individual wire.