



RLS IP 68

Actuator Mounted On/Off Position Indicator Reed Limit Switch

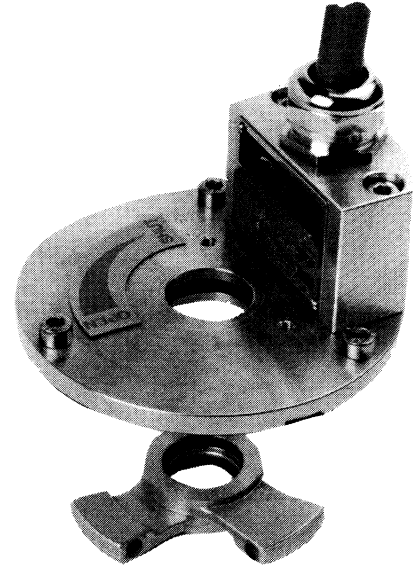
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Application:

The RLS position indicator is designed to fit DSH quarterturn valve actuators BRC and BRCF for use within the temperature range from -20° to 80°C.

Basic Design:

Switch function is accomplished by two normally open reed switches, resin imbedded in the indicator basis cover that forms a cover for the indicator cavity on the actuator. Each reed switch is activated by a separate magnet arm, friction mounted on the actuator indicator shaft. As a result of the friction mounting and the twin arm design the RLS indicators are self-adjusting and can be used to indicate end positions of any interval from 15 to 180 degrees. Electric connection is established through a 4-pole terminal-strip mounted in the cover. The permanent connections from the terminal to the reed switches are resin imbedded. The terminal is protected by a connection housing that holds the cable gland.



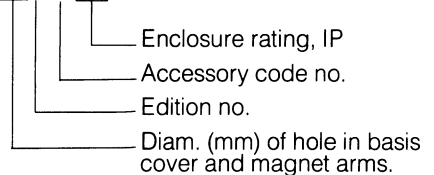
RLS 182/0-68

Indicator/Actuator Key:

Type	For actuator type/(version)	Part no.
RLS 182/0 - 68	BRC 022 - 092 (A1)	056 - 3461
	BRCF 002 - 042 (B1)	
	BRCF 052 - 072 (A1)	
RLS 182/4 - 68	BRC 002M (A1)	056 - 3471
RLS 222/0 - 68	BRC 002 (A1)	056 - 3221
RLS 302/0 - 68	BRC 012 (A1)	056 - 3551

Type Designation Code:

RLS XXX/X-XX



Accessory Code No.:

- 0: No accessories
- 2: Adapter, Ø12/Ø22
- 3: Adapter, Ø12/Ø22 + indicator housing
- 4: Indicator housing.

Enclosure Rating:

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

Note: In case of installation where a larger enclosure rating than IP 67 is required, the connection house should be encapsulated after wiremounting and test of function. See mounting instruction for RLS.

Cable Gland Data:

Cable outer diam. : 8 - 15 mm
 Enclosure rating : 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.

Additional equipment:

If The RLS is placed on open deck or similar we will recommend that the RLS is being mounted with shaft cover. Please contact DSH for further information.

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



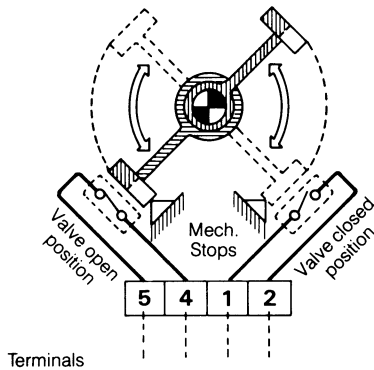
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Terminal Layout

Valve/Actuator shown in open position



How to hook-up the RLS

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

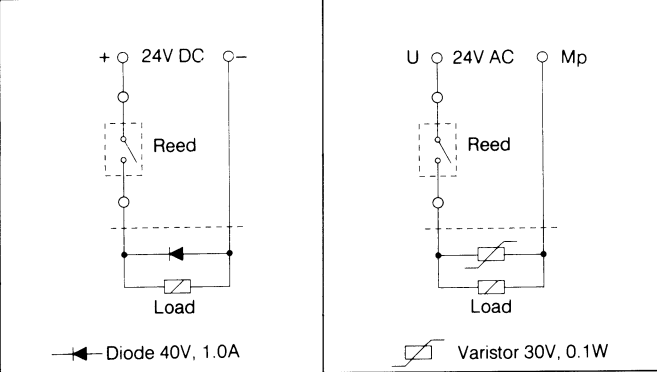
Max. continuous load: 2.5 W (VA)
Max. peak load: 12 W (VA)

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

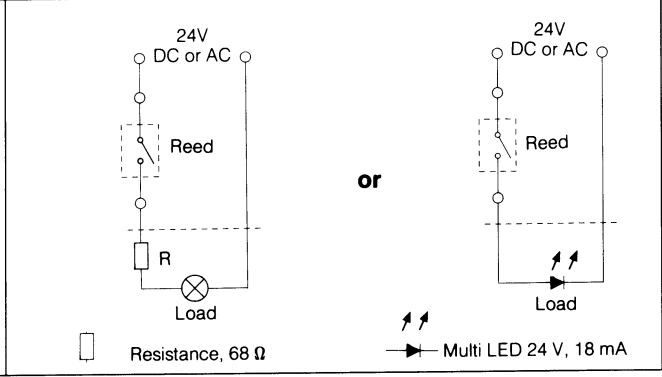
Manufacturers Data for Reed Switches

Contact material	Rhodium
Dielectric strength	400 V _{DC}
Contact resistance max.	100 mΩ
Insulation resistance	10 ¹¹ Ω
Operate sensitivity - standard	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 × 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

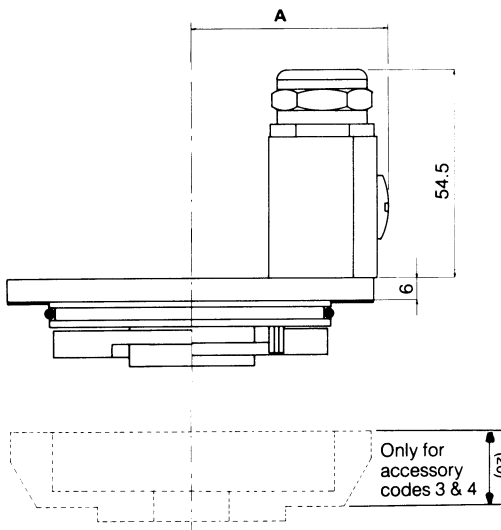
Inductive Loads (Relays)



Resistive Loads (Lamps)



Dimensions:



Materials (excl. cable gland)

- Housings and magnet arms : Brass, MS58 (CuZn39Pb3)
- Activating magnets : Plastic bonded rare earth
- Screws, sign plates and rivets : AISI 304
- Gaskets : CR ~ Chloroprene
- Seals and friction elements : NBR ~ Acrylonitrile Butadiene
- Imbedding material : Epoxy resin

Basic type	A mm	Weight appr. kg
RLS 182 & 222	53	1.0
RLS 302	68	1.5
RLS 382	63	1.3
Housing (code 3 & 4)		0.6

Test:

The switch has been vibration tested according to IEC 68-2-6, Fc. Neither the switch function nor the positioning of the magnet arms was affected.