# Enclosure protection IP68 – 8 m

## 1 Description

Enclosure protection IP68 according to EN 60529, add. order code „**K51**“, means protection against continuous immersion in water.

Electric actuators of type ranges 2SA7…- and 2SG7…- in enclosure protection IP68 are protected against continuous immersion up to a water depth of maximum **8 m head of water** (from the upper edge of the actuator) for a duration of maximum **72 hours**.
During flooding up to **10 motor operations** (switching cycles) are permitted.

## 2 Manual operation[1]

During continuous immersion of the actuator, the pressure of the head of water evenly acts upon all outer actuator housing parts and therefore upon the hand crank /hand wheel.

Actuators 2SA7…- in enclosure protection IP68 are therefore delivered with a clamp fitted on the shaft of the manual drive. Accidental pressing in of the hand crank/hand wheel into the manual drive against the spring force is thereby prevented.

The clamp has to be removed when changing over to manual operation, see fig.

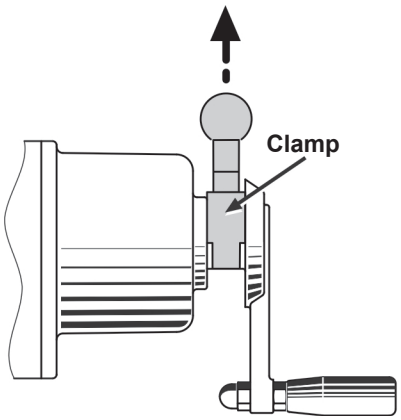


**Fig.: Clamp against accidental change-over to manual operation**

- The clamp has to be fitted on the shaft to guarantee enclosure protection IP68.
- The clamp has to be removed for manual operation.

## 3 Cable glands

Electric actuators are supplied without cable glands. On delivery, the threads are closed with plugs.

For the connection of the motor and control cables, suitable pressure-tight cable glands must be used. The sizes of the cable glands must match the outer diameter of the cables. See recommendations of the cable gland manufacturers.

Cable glands suitable for IP68 can be provided by the following companies:

**U. I. Lapp GmbH**
**Schulze-Delitzsch-Str. 25**
**D-70565 Stuttgart**
**Germany**

**Pflitsch GmbH & Co.KG**
**Ernst-Pflitsch-Straße 1**
**D-42499 Hückeswagen**
**Germany**

Pressure-tight cable glands matching the cable diameters are required to guarantee enclosure protection IP68.

[1] Not applicable for part-turn actuators 2SG7…-.

## 4 Commissioning

Use utmost care during commissioning and heed the following instructions:

- Sealing faces of the housings and covers have to be clean,
- O-rings of the covers must not be damaged,
- A thin layer of acid-free grease has to be applied to all sealing faces,
- Covers have to be tightened evenly.

- Use suitable sealing agent between actuator and valve flange!
- When using output shaft forms A and AF (locking nut), ingress of water during continuous immersion via the valve stem thread into the hollow shaft, which finally causes corrosion, cannot be avoided. Furthermore, the water also enters the axial bearings, resulting in corrosion and damage to the bearings. Output shaft forms A and AF should therefore not be used where flooding might occur.

## 5 After continuous immersion

Every electric actuator has to be checked after continuous immersion. For this, the cover of the electronics unit, the position recording unit and the electrical connection have to be removed. If there was a slight ingress of water, the interior has to be completely dried.

We recommend having the actuator maintained by the after-sales service of SIPOS Aktorik after continuous immersion.



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