

# SREVERSIBLE ROTARY ACTUATOR FOR BALL & CERAMIC VALVES HGM-HMM-VDM

## CDZ Eng.



- Power supply : 230 , 24 , 12 Volt ~
- Three-wire electric control (common – opens – closes)
- Rotation angle : 90°
- Opening & closing contacts (powered)
- One auxiliary SPDT microswitch • Rapid mounting on valve
- IP 54 protection

### 1. APPLICATION

CDZ 06.. is designed to operate HGM – HMM (ball) and VDM (ceramic disk) valves. The actuator fits directly on to the valve so that no connecting device is required..

### 2. OPERATION

CDZ 06.. actuator incorporates a small, synchronised, electric motor that is reversible (in both directions) with three-wire electric control (common, opens, closes).

It can be controlled by an On-Off or modulating device (thermostat, switch, modulating controller) having an SPDT output switch.

The electric motor transmits the rotary movement to the mechanical gear which determines the spindle rotation speed and, accordingly, the actuator run time.

The actuator run is 90° and is limited by two microswitches operated by an end-of-run cam.

The actuator supplies the two powered output contacts which indicate the opening and closing positions of the actuator. Normally open, they close when the actuator reaches the respective end-of-run position.

Furthermore, it is provided with an auxiliary voltage-free SPDT microswitch (the switching takes place at about the half-run of the actuator).

### 3. MODEL

Model	Power supply V~ (VA)	Run time seconds	Nominal torque kg/cm (Nm)	Starting torque kg/cm (Nm)	Valve (up to DN) HGM-HMM-VDM
<b>CDZ 068</b>	230 (4)	60	15 (1,5)	30 (3.0)	1"
<b>CDZ 064</b>	<b>24 (1)</b>	<b>60</b>	<b>15 (1,5)</b>	<b>30 (3.0)</b>	<b>1"</b>
<b>CDZ 062</b>	12 (4)	60	15 (1,5)	30 (3.0)	1"

### 4. TECHNICAL DATA

Power supply :		Auxiliary miniature switches :	
CDZ 068	230 V~ ± 10%	maximum applicable voltage	250 V~
CDZ 064	24 V~ ± 10%	maximum current	5(1) A
CDZ 062	12 V~ ± 10%	Materials :	
Frequency	50...60 Hz	base	NYLON+F.V.
Consumption:		cover	ABS
CDZ 068	4 VA	Valve fluid temperature	5...95 °C
CDZ 064	1 VA	Ambient temperature :	
CDZ 062	4 VA	operating	0...45 °C
Rotation angle	fixed at 90°	storage	- 20...+ 60 °C
Run time	60 seconds	Protection	IP 54
Nominal torque	15 kg/cm (1.5 Nm)	Weight	0.280 kg
Starting torque	30 kg/cm (3.0 Nm)		
Powered output switches :			
output voltage for CDZ 068	230 V~		
output voltage for CDZ 064	24 V~		
output voltage for CDZ 062	12 V~		
maximum current	1(0.2) A		

**5. CONSTRUCTION**

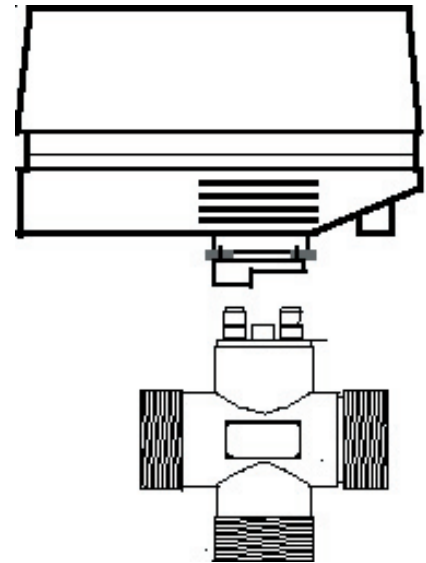
The base of the actuator is made in nylon reinforced with glass fibre, whilst the cover is in ABS. Two pre-wired electric cables, extending 1.5 meters from the base of the actuator, permit making the electrical connections without the need to open the actuator container. The coupling device in the rear of the base (8.3) permits rapid mounting of the actuator on the valve.

**6. WIRING**

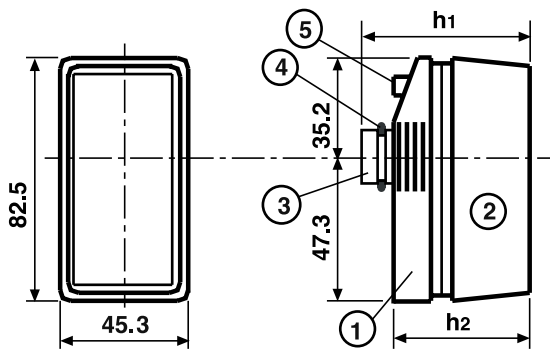
For the electrical wiring use the two pre-wired cables referred to in section 5. above. Carry out the wiring according to the wiring diagram shown in 9. below and in respect of the current safety regulations..

**7. INSTALLATION**

- Check the alignment of the groove at the top of the actuator shaft with the valve.
- If necessary, move the valve spindle by hand to align it with the groove on the actuator shaft.
- Position the actuator on the valve by aligning the two lugs on the valve with the two holes in the base of the actuator and then press firmly on the head of the actuator until it couples with the valve.
- Power the actuator and make a couple of complete runs of the valve in order to check that it operates correctly.



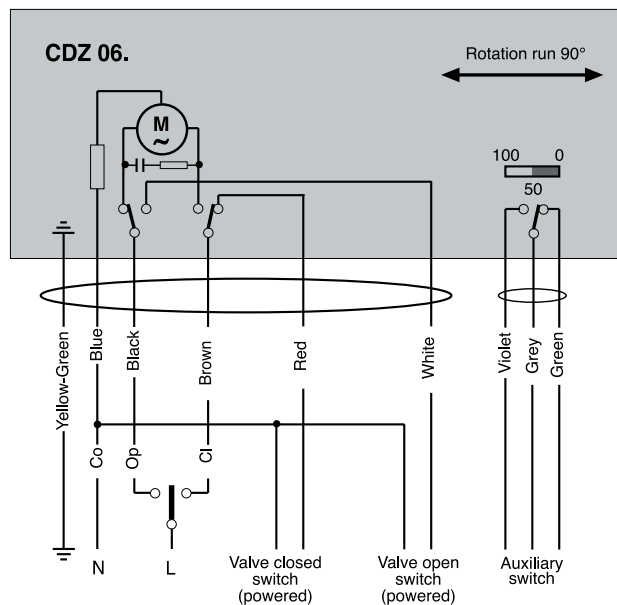
**8. OVERALL DIMENSIONS**



Model	h1	h2
CDZ 068 - 064	56.5	45.5
CDZ 062	68.5	57.5

- 1 - Base
- 2 - Protective cover
- 3 - Valve coupling
- 4 - Spring
- 5 - Cable gommet (cable length = 1.5 meters)

**9. WIRING DIAGRAM**



**Warning: factory setting: actuator closing.**

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