



**RCEL**  
**Electric Motorized**  
**Actuator**  
**Model: 005/005L**



# RCEL 005 / 005L

## Electric Actuators



**RCEL005**



**RCEL005L**

- Enclosure: IP68, Nema 4 and 6.
- Dome type position indicator for high visualization. Illuminated at fully open or fully closed position.
- For small quarter-turn applications.
- 2-watt space heater is included as standard which protects the components and extends the actuator's life.
- In case of a power loss, a manual override provides for positioning the valve.
- Worm gear drive eliminates the possibility of back drive and the need for motor brakes.
- Two limit switches and two auxiliary switches for e.g. end position signaling to PLC or PC-port.
- Lightweight and compact design for greater versatility.
- Thermal protection prevents the motor from overheating.

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## RCEL 005 / 005L

Actuator type	Torque Nm	24 VDC	1-phase	1-phase	Accessories					Mounting, mount kits, act/valve <sup>1)</sup>
			110V 60Hz	230V 50Hz	TAC	PIU	CPT	PCU	LCU	
RCEL 005	50	•	•	•	•					•
RCEL 005L	50	•	•	•	•	•	•	•	•	•

1) Valve type, brand and size to be advised

ACCESSORIES	
PIU	Potentiometer kit, 1 kOhm
CPT	Current Position Transmitter, 4-20 mA feed back signal
PCU	Positioner with feed back signal 4-20 mA
LCU	Local Control Unit



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## Electric Actuators

PERFORMANCE									
Type	Max torque Nm	Op. Time sek 90° 50Hz/60Hz	Square drive	Weight Kgs	No. of handle turns	Current draw max. (A) 1-ph 24VAC	Current draw max. (A) 24VDC	Current draw max. (A) 1-ph 110V	Current draw max. (A) 1-ph 230V
005	50	17;14	14	2,8	6	1,8	1,8	0,35	0,23
005L	50	17;14	14	3,2	6	1,8	1,8	0,35	0,23

STANDARD SPECIFICATION	
Enclosure	IP66 Nema 4 and 6
Ambient Temp	-20 °C to +70 °C
Power Supply	110/230VAC, 1Phase ±10 % 24VDC (24VAC), 50Hz/60Hz
Limit Switches	Open/Close, 2+2 pcs
Stall Protection	Built-in Thermal Protection Cut-off at 120 °C
Travel Angle	90°
Indicator	Continuous Position Indicator Illuminated at fully open or fully closed position
Manual Override	Allen key (6mm)
Worm Gear	Permanently lubricated and Selflocking
Space Heater	2W (110/230VAC) 24VDC Anti-condensation
Conduit Entries	M20 x 1,5
Lubrication	Grease Moly (EP-type)
Materials	Steel, Aluminium Alloy, Al Bronze
External coating	Anodized and Dry Powder Polyester

OPTIONAL ITEMS	
LCU	Local Control Unit Local/Off/Remote Selector S/W Open/Stop/Close Selector S/W
PIU	Potentiometer Unit 1 kOhm
CPT	Current Position Transmitter Output signal: 4-20mA DC
PCU	Proportional Control Unit Inout signal: 4-20mA, 2-10V DC Output signal: 4-20mA DC

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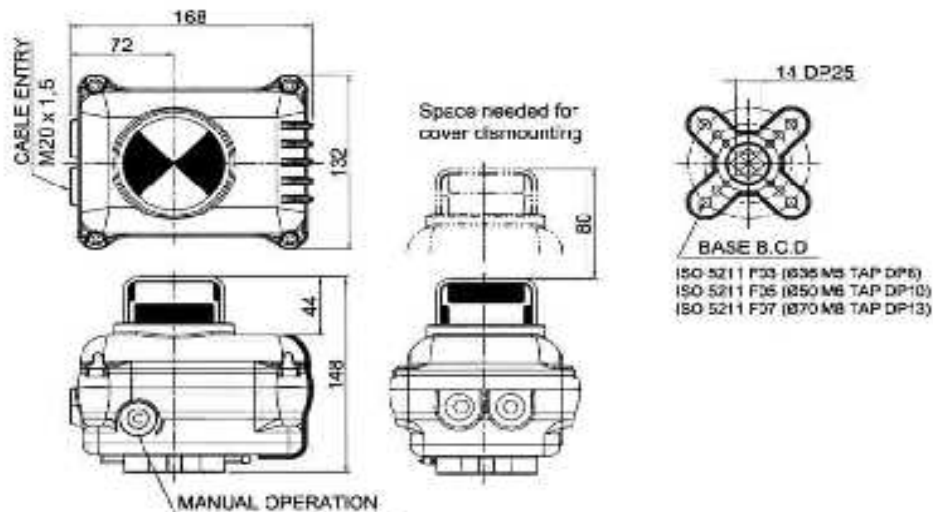
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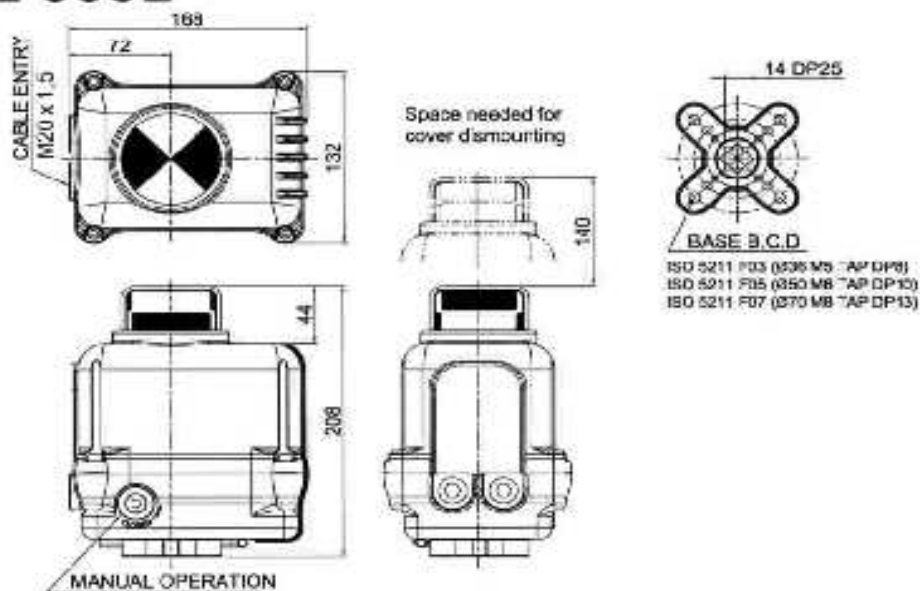


## RCEL 005



Ref No 400 Art No 960408

## RCEL 005L



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## RCEL 005 / 005L

### Electric Actuators - Instruction

#### INSTALLATION

1. Mounting on valve (A).
2. Electric wiring (B).
3. Adjustment (C).
4. Manual operation (D).

**NOTE:** Only electric wiring, according to instruction B, is required when the actuator is delivered from Remote Control mounted on a valve. It is adjusted and ready for operation.

#### WARNING!



**Remove power before the cover is dismantled! The actuator must be handled with the utmost care when the cover is removed and the power is connected.**

#### A. MOUNTING ON VALVE

1. Operate the valve manually to fully open or fully closed position before the actuator is mounted.
2. Operate the actuator manually (see D) to fully open or fully closed position.
3. Check that the actuator and valve stem are in correct position. Please note, valve and actuator must be in the same mode (fully open / fully closed) prior to the assembly.
4. Mount the actuator on the valve and check that the actuator and valve stems are centered and aligned. If a mounting bracket is used, the fit must be checked so that no distortion or play exists.
5. Operate the valve manually with the aid of allen key (see D) and check that the valve moves with normal resistance.
6. Check that all screws are correctly tightened.

#### B. ELECTRIC WIRING

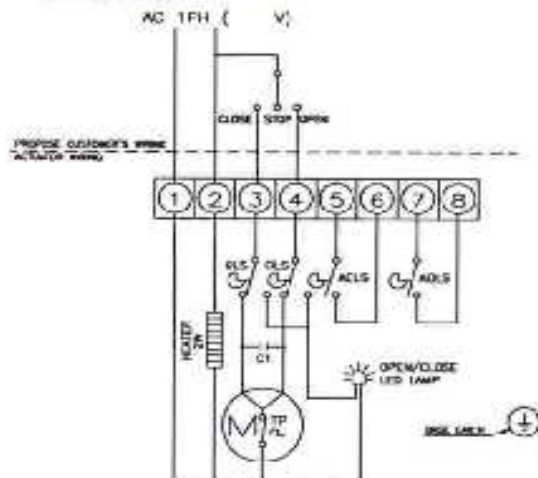
**NOTE:** Electric wiring must be carried out by qualified personnel only!

1. Loosen the screws on the cover and lift it off.
2. Check the voltage marked on the actuator label.
3. Connect according to the enclosed wiring diagram or, if the actuator is of standard design, according to the wiring diagram below. The wiring diagram is drawn in unaffected position (the valve in intermediate position).
4. Test run the actuator from the intermediate position checking that the actuator turns in the correct direction.
5. Test run the actuator and check that the limit switches work correctly.
6. Check that the cable entries and possible blind plug are sealed.
7. Mount the cover.

#### Wiring diagram No. ST 12000 A

CLS : CLOSE LIMIT SWITCH (250VAC 3A)  
 OLS : OPEN LIMIT SWITCH (250VAC 3A)  
 ACS : ALG. CLOSE LIMIT SWITCH (250VAC 3A)  
 ADS : ALG. OPEN LIMIT SWITCH (250VAC 3A)  
 TP : THERMAL PROTECTOR  
 C1 : CAPACITOR  
 \*EACH ACTUATOR SHOULD BE PROVIDED SEPARATELY WITH OWN INDIVIDUAL SWITCH OR RELAY CONTACTS TO PREVENT CROSS FEED BETWEEN TWO OR MORE ACTUATORS

SWITCH	CLOSE	OPEN
CLS		
OLS		
ACS		
ADS		



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## C. ADJUSTING

1. Make the final cam adjustments for the limit switches (if necessary) according to instruction (a) below.
2. Run the actuator from one end position to the other a number of times.
3. Adjust the indicator disc for visual indication so that it relates to the valve position.
4. Test run the actuator and check that the limit indicators are working correctly.
5. Mount the cover.

### (a) Adjustment of cams for limit switches:

1. Operate the actuator manually to closed position.
2. Adjust the cam for closed position (lower cam) marked CLS on the electronic card.
3. Operate the actuator manually to open position.
4. Adjust the cam for open position (upper cam) marked OLS on the electronic card.
5. Test run the actuator.

## D. MANUAL OPERATION

1. Take the attached 6mm Allen key mounted underside the actuator.
2. Insert the 6mm Allen key and turn the valve to the required position.
3. Turn clockwise to close and anti-clockwise to open.



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