



ELECTRIC ACTUATORS 400 N

SE4

APPLICATION

Electric actuator SE4 is suitable to drive VFZ valve body series in HVAC systems. Two action types are available:

- floating (3-point)
- modulating Vdc and mA.

Actuator is equipped with torque limit device, to power off when actuator reaches the end-strokes. The assembly actuator/valve body is done directly and easy by a metal ring nut, no tool is necessary.

The actuator is self-adjusting (SE4M24). When it is powered-on the stroke is automatically adapted to the valve, no calibration is required. Actuator is fitted with manual override by a hexagonal key. A LED indicates the current state of the actuator: adjustment, control, end stroke position, error condition.

TYPE	FORCE N	STROKE mm	POWER SUPPLY Vac 50/60 HZ	ACTION	POWER CONSUMPTION VA
SE4M24	400	5.5	24	modulating	7.5
SE4F24	400	5.5	24	2-, 3-point (floating)	7.0
SE4F230	400	5.5	110...240	2-, 3-point (floating)	7.0

TECHNICAL FEATURES

Power supply:

- SE4M24 24 Vac ± 10% 50/60 Hz
- SE4F24 24 Vac ± 10% 50/60 Hz
- SE4F230 110...240 Vac ± 10% 50/60 Hz

Running time:

70 sec.

Manual override:

by 3 mm hexagonal key

Action:

direct / reverse selectable by jumper

Working conditions:

0...50 °C, 10...90 r.h.% without condensing

Storage temp.:

-20...70 °C

Cable:

plug-in type in PVC, wire 3 x 0.50 mm²,
1,5 m length

Housing:

transparent

Protection class:

IP54, classe II (SE4F230),
classe III (SE4M24, SE4F24)

Self extinguishing:

V0 - V1 according to UL94

Dimensions:

see drawing

Weight:

360 g

NOTE

An indicator on the front of the unit indicates the current position.

ASSEMBLY / INSTALLATION

Actuator is factory supplied with the shaft in upper position. Otherwise, power off the unit and insert the hexagonal key into screw of manual override on the top of cover. Drive the shaft in upper position turning the key anticlockwise. Mount the actuator onto valve body and tighten the metal ring nut on the thread of bonnet valve body. Pay attention that the clearance around the unit is sufficient to mount correctly the actuator. Perform the electrical connections as per the wiring diagrams. Pay attention that power supply value corresponds to the value of actuator indicated on label stuck on unit.

SE4M24 has different input signals as per below table (selectable by jumpers):

INPUT SIGNAL	IMPEDANCE (R _{in})
0...10 V	~ 65 kOhm
0...4 V	~ 65 kOhm
6...10 V	~ 65 kOhm
2...10 V	~ 65 kOhm
4...20 mA	= 500 Ohm

STATUS INDICATION BY LEDS

- GREEN slowly blinking:** self-adjust in upper position (SE4M24).
- RED slowly blinking:** self-adjusting in bottom position (SE4M24).
- GREEN fast blinking:** modulating to upper position.
- RED fast blinking:** modulating to bottom position.
- GREEN lighted:** upper end stroke (SE4M24).
- RED lighted:** bottom end stroke (SE4M24).

- ORANGE lighted:** error, try 3 times to unlock and then 3 times to self-adjust (SE4M24).
- ORANGE blinking:** permanent error (SE4M24).

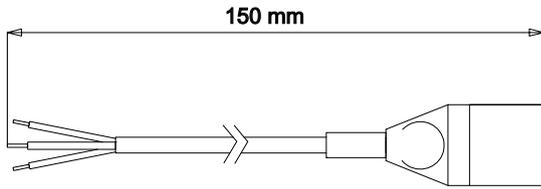
- RED and GREEN blinking:** jumpers setting not correct (SE4M24)
- All LEDS OFF:** control position reached

- Slow blinking:** 2 flashing / second
- Fast blinking:** 8 flashing / second



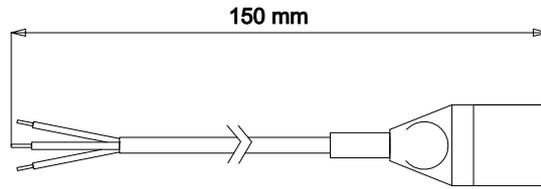
WIRING DIAGRAM

SE4F24 / SE4F230



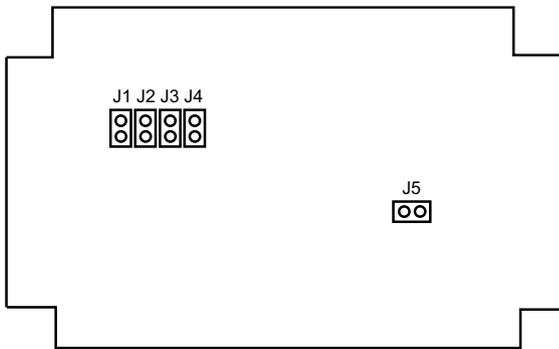
COM.	Blue
DOWN	Black
UP	Brown

SE4M24



COM	Blue
IN. (Y) 0...10 V	Black
24 Vca	Brown

JUMPERS POSITION ON PCB SE4M24



INPUT SIGNAL	J1	J2	J3	J5	J4
0...10 V					
0...4 V					
6...10 V					
2...10 V					
4...20 mA					
DIRECT ACTION					
REVERSE ACTION					

DIRECT / REVERSE ACTION SE4M24

DA: 0 Vdc shaft in upper position (A-AB valve port closed)
 10 Vdc shaft in lowest position (A-AB valve port open)
 RA: 0 Vdc shaft in lowest position (A-AB valve port open)
 10 Vdc shaft in upper position (A-AB valve port closed)
 Factory setting: DA, input signal 0...10 Vdc

Jumper unmounted
 Jumper mounted

OVERALL DIMENSIONS (mm)

