

S9000 - MOD

FIRST ELECTRIC ACTUATORS EMV 110 WITH MODULATING CONTROL SIGNAL

with Clip system for 2-way and 3-way valves



FIRST actuators EMV 110, series S9000 MOD, are modulating control actuators designed for operating 2-way and 3-way valves with clip system (DN15 - DN32).

- The FIRST S9000 MOD actuators have control signal range (0..10V, 4..20mA) and output signal 0..10V DC .
- Actuators are available with cable or Molex connection with or without manual control handle.
- Actuators have DIP switches for setting different functions of the actuator.
- Recommended for mixing, diverting and modulating water control .

OPERATION

S9000-MOD is an electric actuator designed for operating 2-way and 3-way valves. Actuators are controlled by modulating signal 0-10V. Actuators have output signal. FIRST S9000-MOD electric actuators allow for high regulating accuracy and easy installation with one-click CLIP system.

Actuators are available in 24 V AC 50 Hz and are supplied with 1m attached connection cable or Molex connector. Actuator can be manually operated with handle and button on the cover.

Actuators S9000-MOD are recommended for modulating water control with FBV 200C-M valves. Actuators can also be used for mixing or diverting applications with FBV 230C valves and FBV 330C valves or for on/off applications with FBV 200C valves.

MAINTENANCE

Actuator requires no maintenance. The installation of suitable stainer is recommended.

TECHNICAL DATA: ACTUATOR

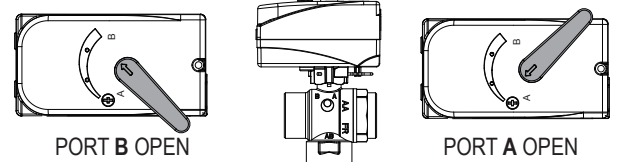
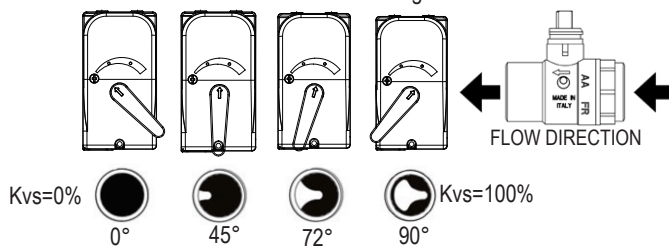
Control:	0...10 VDC, 4...20 mA
Output signal:	0... 10 VDC, max < 0,5 mA/ 10V
Supply voltage:	24 VAC , 50Hz
Rotation time:	20s/90°, 40s/90°, 55s/90°, 80s/90°, 110s/90°
Power consumption:	3,5 VA (operation), 1,5 VA (in stand by)
Max. Torque:	5 Nm
Protection class:	II
Enclosure rating:	IP40 (Molex), IP44 (Cable connection), IP44 (specially sealed Molex cable)
Connection:	cable 4 x 0,5 mm ² l=1m / Molex connection
Direction of rotation:	defined CW/CCW (90°)
Manual control:	with or without manual control handle
Position indicator:	handle with position indicator
Media temperature:	+2°C..+110°C (With optional SCA adaptor -15°C to +125°C, briefly up to +150°C)
Ambient temperature:	+0°C..+55°C
Storage temperature:	-10°C..+70°C
Humidity:	0%..80% R.H. (non condensed)

INSTALLATION POSITION

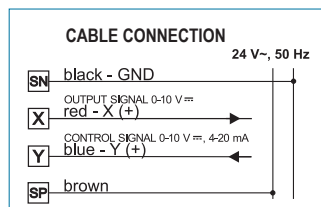
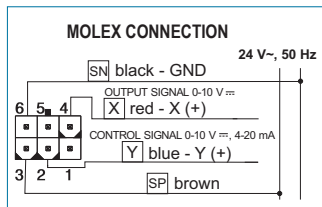
Actuator can be installed only in one position.

S9FR7 with FBV 200C-M valves for modulating water control.

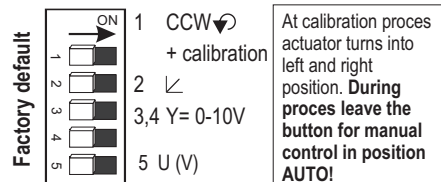
S9FR7 with FBV 230C valves for mixing or diverting applications.



ELECTRICAL CONNECTION



DIP SWITCHES; for setting different functions of the actuator.



SUITABLE VALVES

FBV 230C

FBV 330C

FBV 200C-M

FBV 200C



Available as one unit: S9000 200C-M

CLIP SYSTEM

Compact design of the valve allows easy assembling and disassembling. Clip system allows easy installation of the actuator on the valve body with single click, without any tools.



CE In accordance with PED, LVD, RoHS2, EMC



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Let First be your first choice.



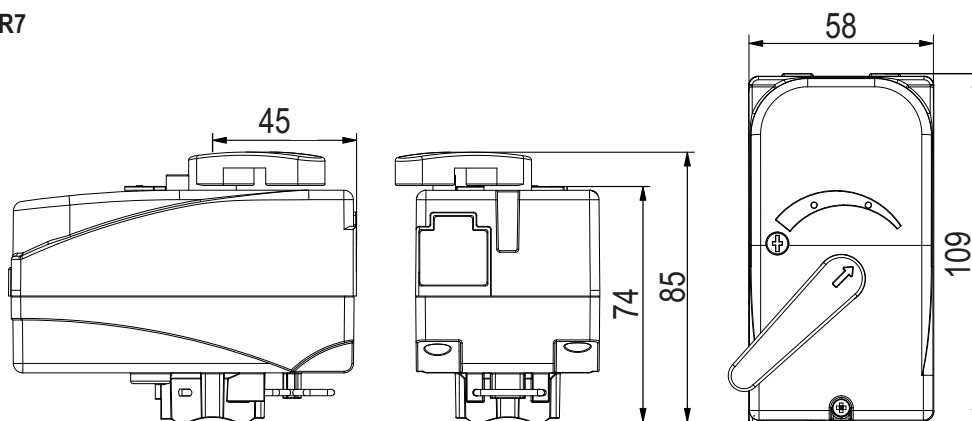
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FIRST ELECTRIC ACTUATORS EMV 110 WITH MODULATING CONTROL SIGNAL

with Clip system for 2-way and 3 way valves

S9000 MOD

electric actuator - 9FR7

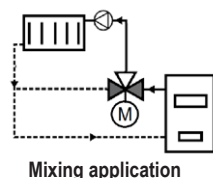
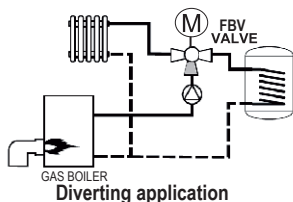


S9000-MOD, electric actuator

Code	Type	Voltage	Rotation time	Control signal	Max. torque [Nm]	Weight [kg]	Price (€)
14097	9FR7-M MOD	24 V~ 50 Hz	110s/90°	Modulating 0-10 V	5	0,33	
14098	9FR7-K MOD	24 V~ 50 Hz	110s/90°	Modulating 0-10 V	5	0,48	
14091	9FT7-M MOD	24 V~ 50 Hz	40s/90°	Modulating 0-10 V	5	0,33	
14092	9FT7-K MOD	24 V~ 50 Hz	40s/90°	Modulating 0-10 V	5	0,48	

Installation examples

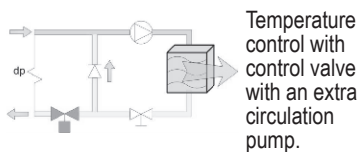
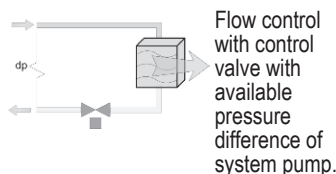
FBV 230C installation example:



Features and options

- **Connection:** Molex connector (IP40) and optional specially sealed Molex cable (IP44) or cable (4x0,5mm²·l=1m)-(IP44).
- **Different running times:** 20s/90°, 40s/90°, 55s/90°, 80s/90°, 110s/90°.
- **Manual control handle:** with or without manual control handle.
- **Solar/cooling adapter:** Heat barrier for protection of the actuator in solar or cooling systems.

FBV 200C-M installation example:



DIFFERENT OPTIONS

- Solar/ cooling adapter.



- Special Molex IP44 connector



- Without manual control handle



- With cable connection



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