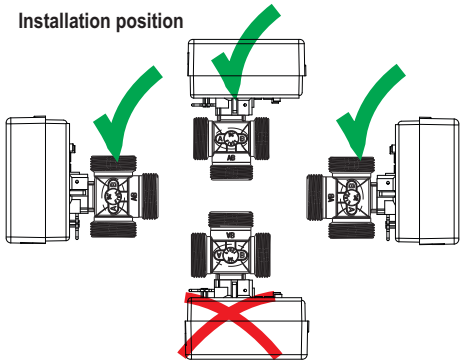
Installation position

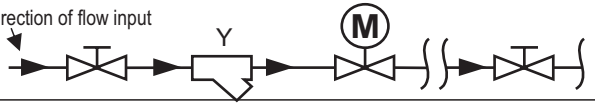


FOR INDOOR USE ONLY!

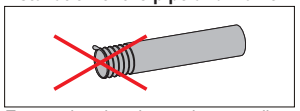
Do not mount actuator under pipes fittings and other valves due to possible leakage of water. The installation site has to be frost-proof and the protection of the device from chemicals, paints, detergents, solvents and their vapours and environmental influences must be guaranteed.

Installation recommendation for valves

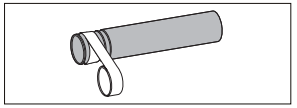
Direction of flow input



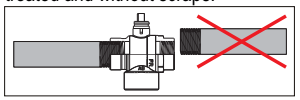
Installation of the pipe and valve



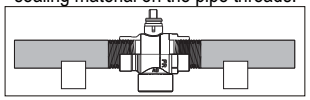
Ensure that the pipe ends are well treated and without scraps.



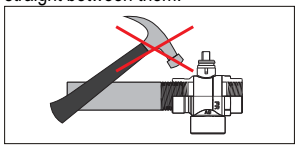
Do not put more than necessary sealing material on the pipe threads.



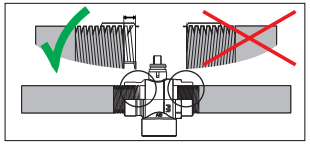
The connection pipes must be placed on the same axis and should be straight between them.



To avoid bending, the pipes must be substeined.



Avoid any damage to the valve because problems with sealing can occur.

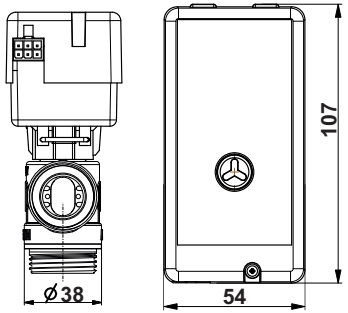


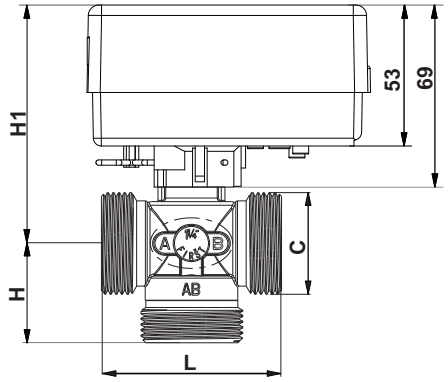
Ensure that the pipe is not screwed to the end of the thread.

Maximum screwing torque of the connecting pipes into valves

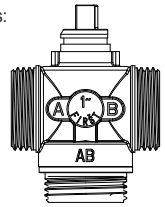
	DN 20	DN 25
External threads	40 Nm	55 Nm
Compression fittings	40/60 Nm	60/80 Nm
	Number of turns to tight with tool after tightening by hand	
	1/2-3/4	1/2-3/4

Dimensions:

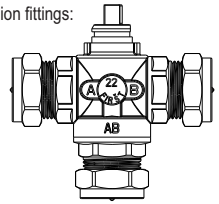




FDV 532C
External threads:
G1"
G 5/4"



FDV 533C
Compression fittings:
CPF 22
CPF 28



Title	C	L (mm)	H (mm)	H1 (mm)	KVS (m^3/h)	Weight (kg)
S89ix-M/*K 532C G1"	G1"	60	38	86	8	0,61
S89ix-M/*K 532C G 5/4"	G5/4"	74	43	86	8	0,76
S89ix-M/*K 533C CPF=22	22	80	45	86	8	0,46
S89ix-M/*K 533C CPF=28	28	80	49	86	8	0,87

Legend:
M - Molex connection
K - cabel
* - available on special request

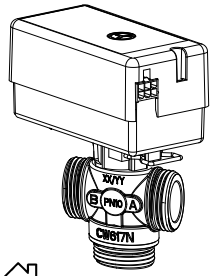
FIRST®

EMV 110..89ix-M/K

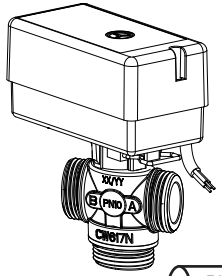
Actuators S8000 2P ND with FDV 530C valves

2-point control **1 / 0**

EMV 110..89ix-M
Without handle, Molex connection



EMV 110..89ix-K
Without handle, cable connection



+55°C.. 0°C

PN10, ΔP<1 bar +5..80°C

Product designation: **EMV 110 ..** 8 9 i X - X

Series	9000
Actuator type	9=with relay module, without manual control
Rotation time	i=8s/60°
Voltage	0=230 VAC 3=24 VAC
Connection type	M=Molex connection K=cable

English | Information

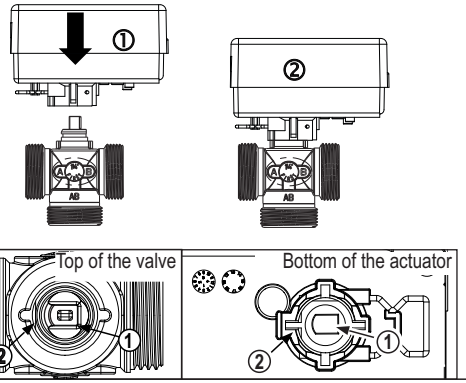
FIRŠT d.o.o
Koroška cesta 56, 3320 Velenje,
Slovenia

tel: ++386 (0)3 898 35 00
fax: ++386 (0)3 898 35 35
info@first.si, http://www.first.si

English

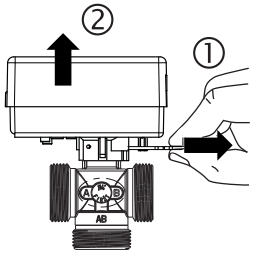
Assembly of the actuator on the valve

Actuator can be installed only in one position.Easy and fast installation of actuator on the valve with single push - CLIP system.



Disassembly of the actuator from the valve

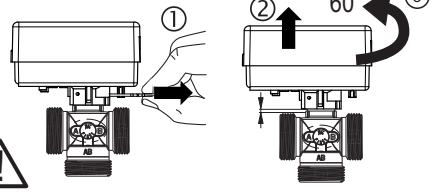
First pull out the spring, then lift the actuator from the valve.



Manual operation:EMV110.. 89ix

The actuator has no manual operation function.But in some cases the valve can be temporarily manually operated by the actuator.

1. Pull out the spring.
2. Partially remove the actuator from the valve (till the valve's edge-approx.3mm)
3. Turn the actuator for 60°.

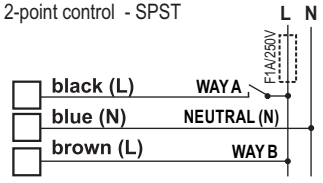


After manual operation the valve must be set in position which allows the reattachment of the actuator on it.

Electrical connection

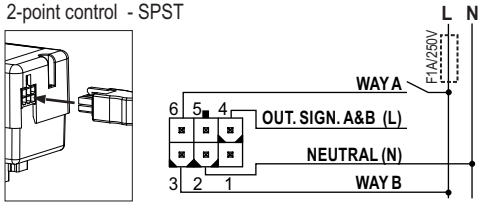
***EMV 110..89ix-K, Cable connection**

2-point control - SPST



EMV 110..89ix-M, Molex connection

2-point control - SPST



Switch off power supply before making electrical connections or servicing to prevent electrical shock and equipment damage!

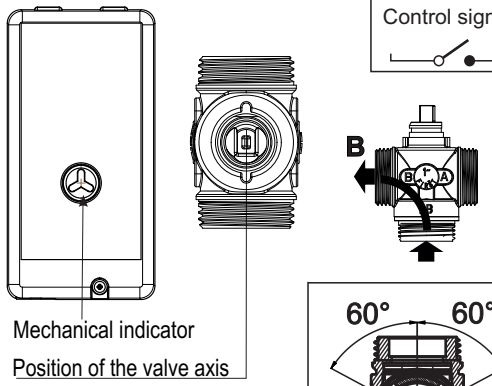
WARNING

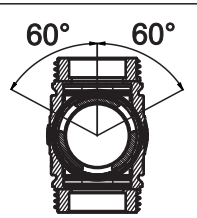
- The actuator must be protected by a fuse 1A.
- It is not allowed to open the actuator housing!
- The actuator must be electrically connected in accordance with technical norms.
- Observe the correct connection voltage!
- Installers, and users are responsible for the safe and proper installation / operation of the actuator.

Position indication and flow direction

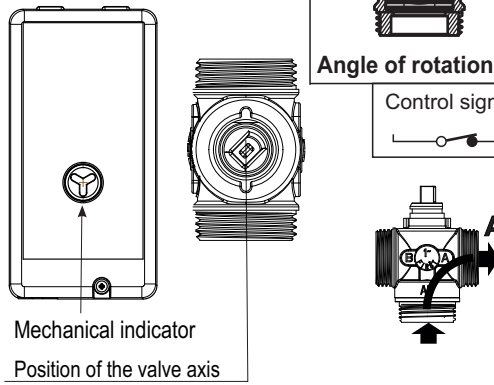
FACTORY DEFAULT: B - OPEN

Valve: OPEN B





Valve: OPEN A



Tehnical data

Supply voltage	EMV 110 89i**0** 230 VAC, 50Hz	EMV 110 89i**3** 24 VAC, 50Hz
Running time	EMV 110 89**i**x = 8s/60°	
Power consumption	9VA at 230 VAC	
Torque	Max 5 Nm	
Protection class	II ⧈	
Degree of protection	Molex connection: IP40 *Cable connection: IP44	
Connection	EMV 110 89ix-M: Molex connection *EMV 110 89ix-K: Cable l=1 m (3 x 0,75 mm^2)	
Rotation direction	undefined CW/CCW 60°/360°	
Position indicator	on the actuator cover	
Ambient temperature	0°C…+55°C	
Relative Humidity	0..80% r.H Non-condensing	
Storage temperature	-10°...+70°	
Maintaining	maintenance free	

* EMV 110 89ix-K available on special request

We reserve us the right to modify the technical instructions and product data without prior notice.

Diverting valve	**FDV 532C**	**FDV 533C**
Pipe connection thread	M/M external threads (G 1") (G 5/4")	C/C compression fittings (CPF - 22mm) (CPF - 28mm)
Fluid	water, glycol <50%, **The use is not allowed for flammable liquids, combustible gases or explosive liquids!** **Water quality as per VDI 2035.**	
Fluid temperature	+5°C...+80°C *with optional SCA adapter from -15°C ...+80°C	
Nominal pressure	PN10	
Max. differential pressure	1 bar	
Materials		
Valve body	Brass, CW617N	
Seals	PTFE, NBR	
Rotor	PPS	

* SCA adapter available on special request

Safety information:

- Before installation wash pipes, sealing material must not go inside the valve
- During installation, avoid soldering or welding near the valve
- Any deterioration or destruction of any part of the valves shall result in the need to replace the complete valve: alterations to any part of the complete valve shall result in the valve no longer being in compliance with the performance requirements of this document.
- Place of assembly must be protected against frost, the device must be protected from chemicals, paints, detergents, solvents and their vapors and other environmental influences (vibration).
- All installations should be performed in accordace with existing local installation regulations end codes of practice where they exist.
- It's imperative to follow the installation instructions of the valve manufacturer.
- If the valve is installed in the heating installation the water quality in the system has to comply with the VDI 2035 requirements.