

BXL: 3-way unit valve

How energy efficiency is improved

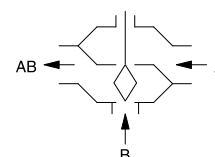
Linear mixture for energy-efficient regulation

Features

- Valve with male thread as per DIN/EN ISO 228-1, class A
- Control passage A–AB open when the spindle is moved in
- Used as a control valve
- Valve body made of gun metal
- Plug with EPDM soft seal
- Stainless-steel spindle
- Stuffing box with double O-ring seal
- Version with cap nut and flat seal



BXL025F200



Technical data

Parameters

Nominal pressure	PN 16
Valve characteristic, control passage	Linear
Valve characteristic, mixing passage	Complementary, reduced
Valve stroke	2.9 mm
Leakage rate of control passage	Approx. 0.05% of k_{VS} value
Leakage rate, mixing passage	Approx. 0.2% of k_{VS} value

Ambient conditions

Admissible operating temperature for valve	2...130 °C
Admissible operating temperature for valve in combination with AXT 211, AXS 215 and AXM 217 (S)	100 °C
Operating pressure	Max. 16 bar at 130 °C

Construction

Nickel-plated body	No
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Overview of types

i The BXL 3-way valve must not be used as a 2-way valve

Type	Nominal diameter	k_{VS} value	Weight
BXL025F200	DN 25	6.5 m ³ /h	1.2 kg
BXL040F200	DN 40	9.5 m ³ /h	2.35 kg

Accessories

Type	Description
0361824025	3 threaded sleeves, R 1", flat-sealing
0361824040	3 threaded sleeves, R 5/4", flat-sealing
0361825028	3 solder nipple, Ø 28; flat-sealing, DN 25
0361825035	3 solder nipple, Ø 35; flat-sealing, DN 40
0361825042	3 solder nipple, Ø 42; flat-sealing, DN 40



Combination of BXL with electric actuators

i *Warranty: The technical data and pressure differences indicated here are applicable only in combination with SAUTER valve actuators. The warranty does not apply if used with valve actuators from other manufacturers.*

i **Definition of Δp_s :** Maximum admissible pressure drop in the event of a malfunction (pipe break after the valve) at which the actuator reliably closes the valve.

i **Definition of Δp_{max} :** Maximum admissible pressure drop in control mode at which the actuator reliably opens and closes the valve.

Pressure differences with motorised actuators

Actuator	AXM217F200	AXM217F202	AXM217SF402
Voltage	230 V~	24 V~/=	24 V~/=
Control signal	3-point	3-point	0/2...10 V, 0...5 V, 5...10 V, 0/4...20 mA
Running time	38 s	38 s	38 s

 Δp [bar]

As control valve	Δp_{max}	Δp_{max}	Δp_{max}
BXL025F200	0.5	0.5	0.5
BXL040F200	0.2	0.2	0.2

Cannot be used as distribution valve

Pressure differences with thermal actuators

Actuator	AXT211F210 AXT211HF210 AXT211F110 AXT211F110B AXT211F110M AXT211F190 AXT211HF110	AXT211F212 AXT211HF212 AXT211F112 AXT211F112B AXT211F112M AXT211F192 AXT211HF112	AXS215SF222 AXS215SF222B AXS215SF122 AXS215SF122B
Voltage	230 V~	24 V~/=	24 V~
Control signal	2-point	2-point	0...10 V
Running time	96 s	116 s	87 s

 Δp [bar]

As control valve	Δp_{max}	Δp_{max}	Δp_{max}
BXL025F200	0.5	0.5	0.5
BXL040F200	0.2	0.2	0.2

Cannot be used as distribution valve

Description of operation

The spindle is pressed in to open the control passage (passage A-AB) and close the mixing passage B-AB. It is reset by spring force. The valve can be controlled to the OPEN or CLOSED positions with the thermal actuator for unit valves AXT 211. Used in combination with the "normally closed" version of the actuator, the control passage of the valve opens in the event of a power failure.

The valve can be controlled to any desired position with the continuous actuator for unit valves AXS 215S. Depending on the position of the DIP switches, the valve is adjusted continuously with a control voltage of 0...10 V / 10...0 V or 2...10 V / 10...2 V. The control signal is then assigned linearly to the valve stroke and produces the equal-percentage characteristic in the valve. The positioner integrated into the actuator controls the actuator according to the setting of the DIP switches and positioning signal y. The continuous actuator positions the valve and, as soon as the position is reached, it stops. The valve can be controlled to any desired position with the motorised actuator for unit valves AXM 217. With type AXM217S (with positioner) the valve is constantly adjusted using a 0...10 V or 4-20mA control signal, according to the position of the DIP switches.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

All related product documents must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

The control unit can be fitted in any desired position, but not in a suspended fitting position. Condensate, dripping water, etc. must be prevented from entering the actuator.

To prevent damage resulting from non-usage, the valves should be activated for a short time at regular intervals. We recommend performing a stroke movement of at least 10% every month.

To increase the functional reliability of the valves, the system should conform to DIN/EN 14336 (heating systems in buildings). DIN EN 14336 states, amongst other things, that the system has to be flushed through before being put into service.

To prevent any flow noise from being audible in very quiet rooms, the pressure difference over the valve must not exceed the following values:

BXL025F200 = 0.3 bar

BXL040F200 = 0.2 bar

Further information

Fitting instructions	MV 505261
Assembly of AXT 211/AXS 215S	MV P100002547
With auxiliary contact:	
Assembly of AXM 217/217S	MV P100011418
Assembly of AXM217F200	MV P100000986

Additional version information

Valve body made of nickel-plated gunmetal (CuSn3Zn8Pb-C as per EN 1982), plug made of brass (CuZn39Pb3 as per EN 12164) with EPDM sealing ring and spindle made of stainless steel (X46Cr13 as per DIN 17440), protective cap (or manual adjustment knob) made of plastic.

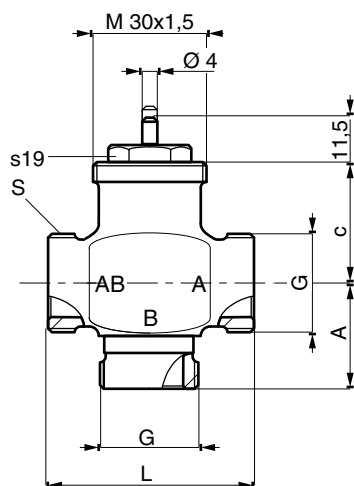
Disposal

When disposing of the product, observe the currently applicable local laws.

More information on materials can be found in the Declaration on materials and the environment for this product.

Dimension drawing

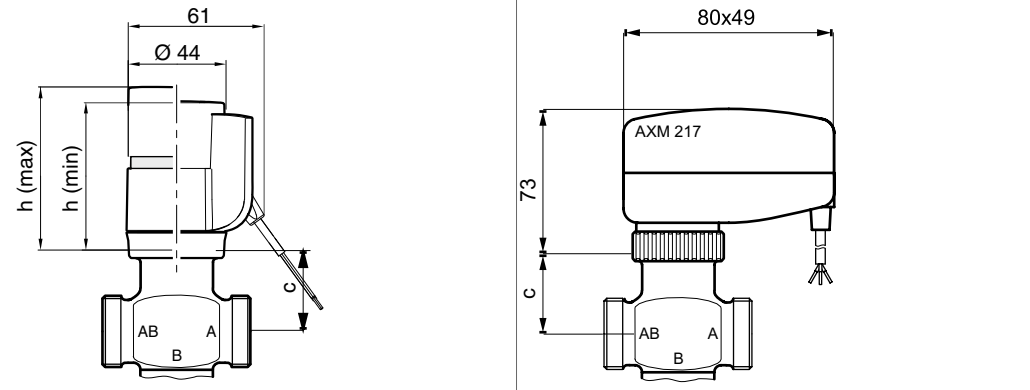
5M112



Type	A	c	G	L	S
BXL025F200	50	41	G1 1/4A	90	46
BXL040F200	64	42	G2A	115	66

Combinations

Combinations with thermal actuator AXT, AXS and motorised actuator AXM



	h (min)	h (max)
NC	59	66
NO	59	64
Manual	66.5	73.5

Accessories

Threaded sleeve	Soldered socket																												
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