

## **Technical data sheet**

F6125L

5-year warranty

#### **Butterfly Valve with**

- Bubble tight shut-off
- Resilient seat
- Valve face-to-face dimensions comply with API 609 & MSS-SP-67
- Completely assembled and tested, ready for installation



Picture may differ from product

### Type overview

Туре	DN
F6125L	5" [125]

#### **Technical data**

unctional data	Fluid	Chilled and hot water, water with glycol up to max. 60% vol.
	Fluid temperature	-22250°F [-30120°C]
	Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
	Close-off pressure Δps	200 psi
	Flow characteristic	equal percentage
	Leakage rate	0% leakage
	Pipe connection	Flange
		for use with ASME/ANSI class 125/150
	Servicing	maintenance-free
	Flow Pattern	2-way
	Controllable flow range	90° rotation
	Cv	1140
	Maximum Velocity	12 FPS
	Lug threads	3/4-10 UNC
Materials	Valve body	Ductile cast iron GGG40
	Valve plug	Stainless steel AISI 304 (CF-8, 1.4308)
	Stem	Stainless steel AISI 420 (1.4021)
	Stem seal	EPDM O-ring
	Stem bearing	Bronze, steel, PTFE
	Seat	EPDM

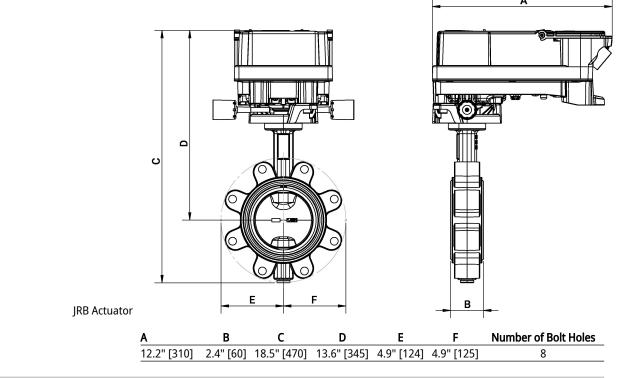
#### Dimensions

Туре	DN	Weight	
F6125L	5" [125]	21.7 lb [9.8 kg]	





F6125L



#### Further documentation

- The complete product range for water applications
- Data sheets for actuators
- Installation instructions for actuators and/or butterfly valves
- General notes for project planning



# **Technical data sheet**

Rotary actuator for butterfly valves

- Nominal voltage AC 24...240 V / DC 24...125 V
- Control On/Off, Floating point
- With two integrated auxiliary switches







Picture may differ from product

#### Technical data

Electrical data	Nominal voltage	AC 24240 V / DC 24125 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2264 V / DC 19.2137.5 V
	Power consumption in operation	20 W
	Power consumption in rest position	7 W
	Transformer sizing	with 24 V 20 VA / with 240 V 55 VA
	Auxiliary switch	2x SPDT, 1x 10° / 1x 090° (default setting 85°)
	Switching capacity auxiliary switch	1 mA3 A (0.5 A inductive), DC 5 VAC 250 V
	Connection protective earth	2014 AWG, only copper wires
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic thoughout 090° rotation
Data bus communication	Communicative control	BACnet MS/TP Modbus RTU MP-Bus
	Number of nodes	BACnet / Modbus see interface description MP-Bus max. 16
Functional data	Position accuracy	±5%
	Manual override	hand lever
	Running Time (Motor)	35 s / 90°
	Running time motor variable	20120 s
	Noise level, motor	65 dB(A)
	Position indication	Mechanical, integrated
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP66/67
	Degree of protection NEMA/UL	NEMA 4X
	Housing	UL Enclosure Type 4X
	EMC	CE according to 2014/30/EU
	Low voltage directive	CE according to 2014/35/EU
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
	UL Approval	cULus according to UL60730-1A, UL60730-2-14 and CAN/CSA E60730-1
		The UL marking on the actuator depends on the production site, the device is UL-compliant in any case



Technical data sheet

Technical data		
Safety data	Overvoltage category	III
Surcey data	Rated impulse voltage supply	4 kV
	Ambient humidity	Max. 100% RH
	Ambient temperature	-22122°F [-3050°C]
	Storage temperature	-40176°F [-4080°C]
	Software Class	A
	Servicing	maintenance-free
	<u>_</u>	
Weight	Weight	8.1 lb [3.7 kg]
Safety notes		
Ţ	<ul> <li>or in any other airborne means of t</li> <li>Caution: Line voltage!</li> <li>The device has a protective earthin hazards due to electrical shock.</li> <li>Only authorized specialists may car installation regulations must be co</li> <li>Apart from the wiring compartmen site. It does not contain any parts t</li> <li>The device contains electrical and e household refuse. All locally valid r</li> <li>The two switches integrated in the safety extra-low voltage. The comb permitted.</li> <li>For maintenance work, the correct Additionally, the actuator must be output to the safety extra-low contain the safety extra-low contain the safety extra-low contain the safety extra-low voltage. The comb permitted.</li> </ul>	g. Incorrect connection of the protective earth can lead to rry out installation. All applicable legal or institutional
Product features		
Fields of application	The actuator is particularly suitable f against the following weather condit - UV radiation - Dirt / Dust - Rain / Snow - Air humidity	or utilisation in outdoor applications and is protected cions:
Internal heating	An internal heater prevents condens	ation buildup.
	Thanks to the integrated temperatur switches on/off.	e and humidity sensor, the built-in heater automatically
Parametrizable actuators	The factory settings cover the most c	common applications.
	Belimo Assistant 2 is required for pro simplifies commissioning. Moreover, options.	ogramming via Near Field Communication (NFC) and , Belimo Assistant 2 provides a variety of diagnostic election of both diagnostic and setting options.
Simple direct mounting		rfly valve. The mounting orientation in relation to the
Manual override	The valve can be manually operated removing the hand crank.	using a hand crank. Unlocking is carried out manually by



	High functional reliability	The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.	
	Innovative motorization	The actuator uses the powerful Belimo M600 microchip in combination with the INFORM method. It provides the full starting torque from a standstill with high precision (sensorless INFORM-Drive by Prof. Schrödl).	
	Flexible signaling	The actuator has one auxiliary switch with a fixed setting (10°) and one adjustable auxiliary switch (090°).	
Accessories			
	Tools	Description	Туре
		Service-Tool for wired and wireless setup, on-site operation and	Belimo Assistant 2
		troubleshooting.	
		troubleshooting. Universal converter, with ZIP-USB function and Bluetooth to NFC conversion, for wired and wireless connection of the device to PC/ tablet/smartphone	Belimo One Tool
		Universal converter, with ZIP-USB function and Bluetooth to NFC conversion, for wired and wireless connection of the device to PC/	Belimo One Tool ZK1-GEN
	Mechanical accessories	Universal converter, with ZIP-USB function and Bluetooth to NFC conversion, for wired and wireless connection of the device to PC/ tablet/smartphone Connecting cable 16 ft [5 m], A: RJ11 6/4 ZTH EU, B: 6-pin for connection	

#### **Electrical installation**



#### Caution: Line voltage!

Parallel connection of other actuators possible. Observe the performance data.

Control on/off

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Power

Y1 Υ2

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C

Control on/off

<del>\*</del>

LL

Power

Y1|

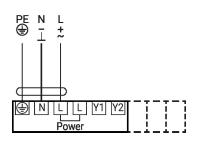
Υ2

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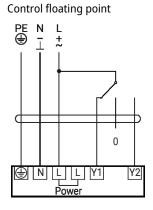
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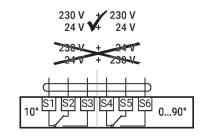
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AC 24...240 V / DC 24...125 V



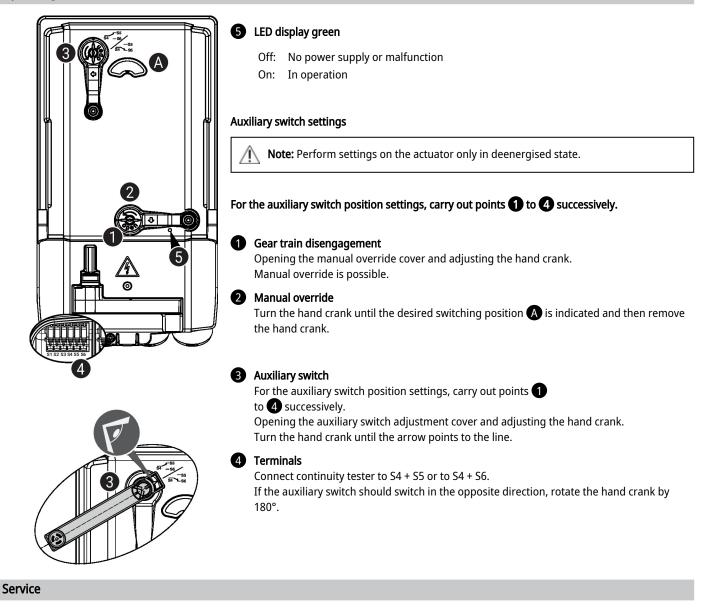
Auxiliary switch







#### **Operating controls and indicators**



Rotary Actuator, On/Off, Floating point, AC 24...240 V / DC 24...125 V, 90 Nm, Running Time (Motor) 35 s

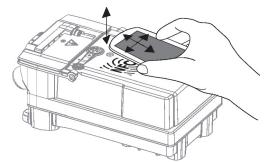


Service

**Wireless connection** Belimo devices marked with the NFC logo can be operated with the Belimo Assistant 2. Requirement:

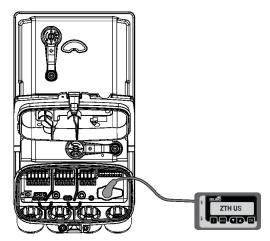
- NFC- or Bluetooth-capable smartphone
- Belimo Assistant 2 (Google Play and Apple AppStore)
- Align NFC-capable smartphone on the device so that both NFC antennas are superposed.

Connect Bluetooth-enabled smartphone via the Bluetooth-to-NFC converter ZIP-BT-NFC to the device. Technical data and operating instructions are shown in the ZIP-BT-NFC data sheet.



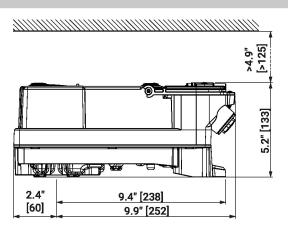
#### Wired connection

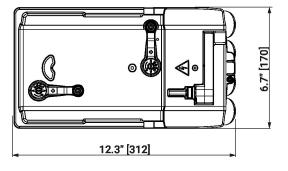
The Belimo One Tool can configure the actuator via the service socket.





#### Dimensions





#### **Further documentation**

- The complete product range for water applications
- Data sheets for butterfly valves
- Installation instructions for actuators and/or butterfly valves
- General notes for project planning
- Quick Guide Belimo Assistant 2