

Linear control valve series EXA

Linear control valve of series EXA are suitable for linear control of the flow of gas belonging to the first, second and third family and air.

They are particularly useful to control very low flow rates and where the process requires very accurate and precise flow regulation and low hysteresis. The actuator is piloted digitally and controlled by a voltage or current signal.

The EXA valves have the **CE** certificate according to norms EN161 and EMC according to norms EN 61000:2100.



TECHNICAL FEATURES

Body	Die-caste aluminium
Flow regulation	Linear
Max pressure	max. 500 mbar
Opening/closing time	≤ 4 sec
Ambient temperature	-15 ÷ +60 °C
Connections	Rp 3/8 ÷ 1 according to ISO7-1
Group	2
Power supply	24V ac/dc
Control signal	(0)4 ÷ 20 mA o 0(2) ÷ 10V dc
Working ED	100%
Electrical protection	IP54 according IEC 529

FEATURES

- Compact and robust construction, suitable for industrial application
- Mounting in any position
- Very high degree of accuracy and precision in flow regulation

MODELS AND FLOW RATES

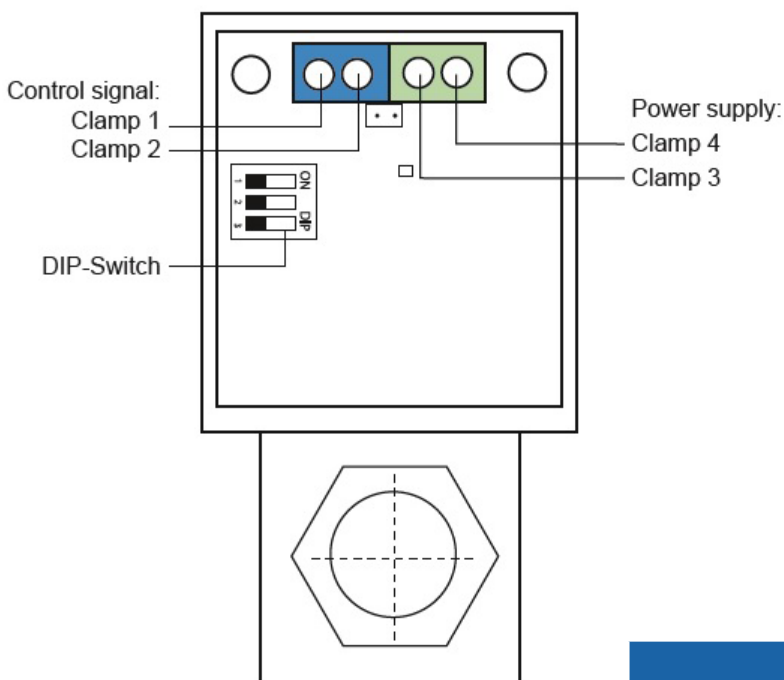
Model	Connections	Natural gas flow rate with 250 mbar of delta p
EXA 40 - 10	3/8" BSP	4 m ³ / h
EXA 40 - 15	1/2" BSP	5 m ³ / h
EXA 50 - 15	1/2" BSP	9 m ³ / h
EXA 50 - 20	3/4" BSP	10 m ³ / h
EXA 60 - 20	3/4" BSP	16 m ³ / h
EXA 60 - 25	1" BSP	18 m ³ / h

WIRING

The EXA modulating valve series has a built-in digital controller that provides a seamless interface with a process controller. The valve has two (2) buttons and a communication LED for the user interface. The buttons are used to set the valve for high and low fire settings (see Figure 4, page 4). The valve has full open and full close mechanical limits.

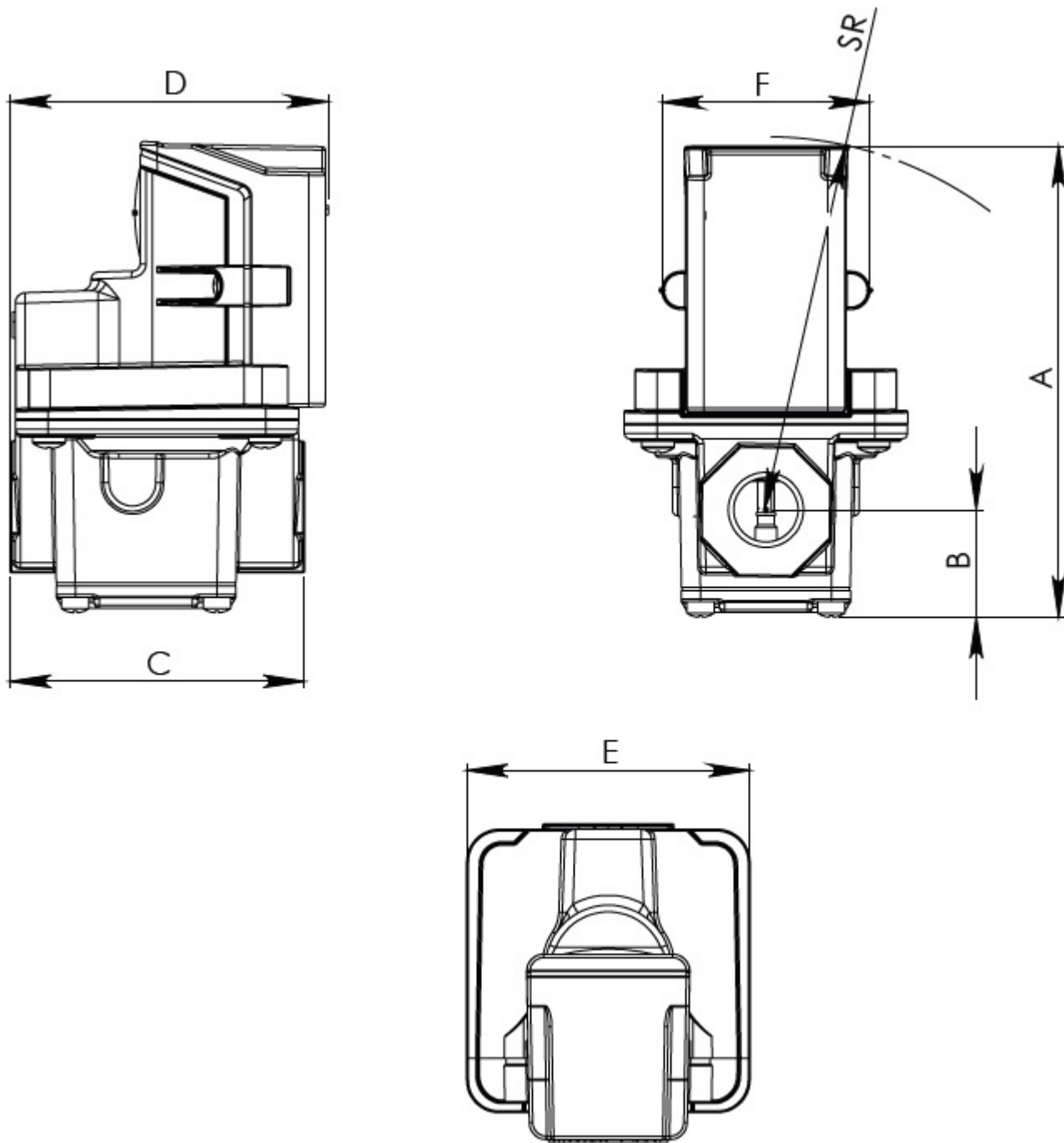
The user can program settings that are within the valve's mechanical limits. This added dimension for sizing and applying the valve is an important feature. It allows the valve to be set up for an entirely different net output characteristic (dependent upon supply pressure) (see Table 1, page 1). There are six (6) electrical connections on the EXA valve. Two (2) are for power, two (2) are for the control signal, and two (2) are for position feedback (see Figure 2). Control Signal The control signal indicates a position within the valve's programmed range of modulation.

NOTE: Control signal is polarity sensitive. Connect control signal positive (+) to terminal 1 and control signal return (-) to terminal 2 (see Table 2). The control signal is "scaled" between the high and low fire setting of the valve. The minimum control signal will correspond to the programmed low fire setting, and the maximum control signal will correspond to the programmed high fire setting



	DIP - Switch position		
	SW1 - Signal	SW2 - Adjustment	SW3 - Characteristic
0 - 10V	OFF	OFF	OFF
2 - 10V	OFF	ON	OFF
0 - 20mA	ON	OFF	OFF
4 - 20mA	ON	ON	OFF

DIMENSIONS



Model	Swing radius	Dimensions in mm					
		A	B	C	D	E	F
EXA 40	102	122	26	54	94	61	61
EXA 50	110	140	34	87	94	84	61
EXA 60	117	153	39	102	105	100	61

OPERATION

Step 1: Remove 2 screws holding cover.

Step 2: Connect switched OFF 24V (AC/DC) power source to terminals 3 and 4 (see Figure 2, page 2).

Step 3: Set DIP switches to match available control signal (see Table 3, page 2).

Step 4: Connect switched OFF control signal to terminals 1 and 2. Observe polarity. Note that the return, or signal ground, must be connected to terminal 2 (see Figure 2, page 2).

Step 5: Switch power and control signal ON.

Step 6: Set valve (see "Valve Setting" in section below).

Step 7: Replace cover.

VALVE SETTING:

The EXA STAR modulating valve series has two (2) buttons and a communication LED for the user interface. The buttons are used to set the valve for high and low fire settings (see Figure 4).

1. High Fire Setting (LED will be solid red)
2. Low Fire Setting (LED will be blinking red)
3. Operating Mode (LED will be OFF)

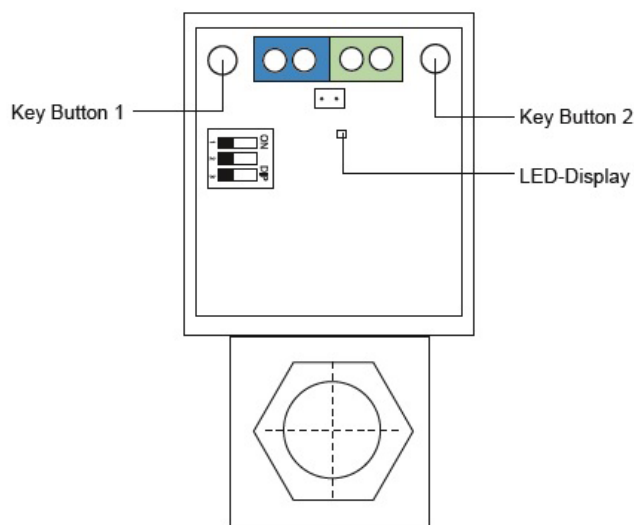
HIGH FIRE SETTING - BOTTON #1

To enter the high fire setting mode, press and hold button #1 until the LED lights solid red. Release. The valve is now in the high fire setting mode. Buttons #1 and #2 are used to set desired high fire setting. Press or hold Button #1 to increase gas flow. Each button press equates to the minimum available step size and will increase flow slowly. Holding the button down auto steps and eliminates the need to repeatedly press the button. Use this feature to rapidly increase the flow. Press or hold Button #2 to decrease gas flow. Each button press equates to the minimum available step size and will decrease flow slowly. Holding the button down auto steps and eliminates the need to repeatedly press the button. Use this feature to rapidly decrease the flow. To save the high fire setting, simultaneously hold Buttons #1 and #2 until the LED turns OFF. NOTE: Controls left in any setting mode will default to the current settings and return to normal operating mode after 5 minutes of inactivity.

HIGH FIRE SETTING - BOTTON #2

To enter into the low fire setting mode, press and hold button #2 until the LED light blinks red. Release. The valve is now in the low fire setting mode. Buttons #1 and #2 are used to set the desired low fire setting. Press or hold Button #2 to decrease gas flow. Each button press equates to the minimum available step size and will decrease flow slowly. Holding the button down auto steps and eliminates the need to repeatedly press the button. Use this feature to rapidly decrease the flow. Press or hold Button #1 to increase gas flow. Each button press equates to the minimum available step size and will increase flow slowly. Holding the button down auto steps and eliminates the need to repeatedly press the button. Use this feature to rapidly increase the flow. To save the low fire setting, simultaneously hold Buttons #1 and #2 until the blinking LED turns OFF.

ATTENTION: Controls left in any setting mode will default to the current settings and return to normal operating mode after 5 minutes of inactivity.



All the reported data are subject to be changed without notice.

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