

Motor Valve compact 8231

GS 1 series, DN 15 up to DN 50



Motor valve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Space saving wafer type construction
- Lowest possible weight
- Low operation noise level (quiet operation)
- Self adaption
- Operating pressures up to 580 psi
- Control of high differential pressures with small actuators
- Available also with „spring return“



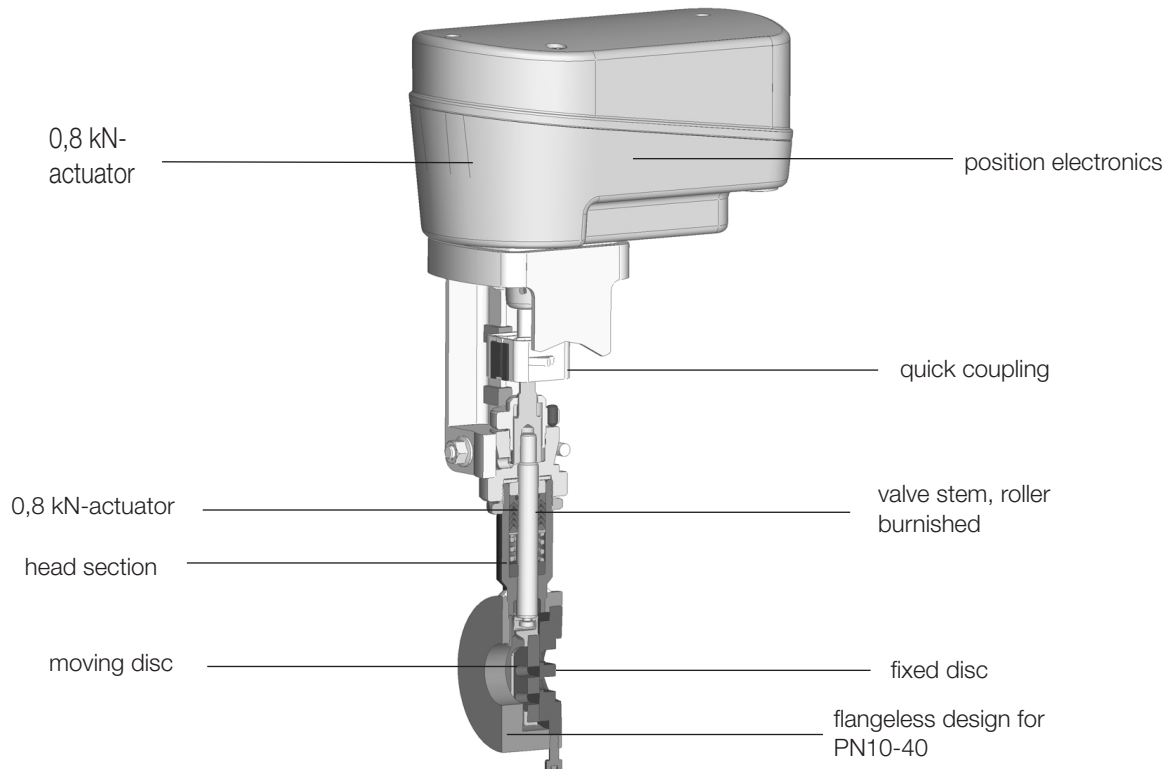
Technical Information Valve

Design	Flangeless design Dimensions acc. DIN EN 558-1 series 20 for flanges acc. DIN EN 1092-1 form B		
Nominal size	DN 15 up to DN 50		
Nominal pressure	PN 40 acc. DIN 2401 also for flanges PN 10 up to PN 25		
Fluid temperature	Body 1.0570: -10 up to +230°C Body 1.4571: -60 up to +230°C		
Rangeability	30 : 1		
Leakage rate (% of Kvs)	Unit carbon-stainless steel < 0,0001	SFC-unit < 0,0005	STN2-unit < 0,001

Kvs-values see data sheet 8001.

Technical Information Motor Actuator

Type of motor	BM24C	BM24C/I	BM24C/IOS2	BM250C/IO2	BM24	BM115	BM230
Function	Control	Control	Control	Control	On/Off	On/Off	On/Off
Nominal voltage	24 V AC/DC	24 V AC/DC	20-30V AC 20-45V DC	85-250V AC 120-250V DC	24 V AC/DC	115V AC	230 V AC
Set point	2 - 10 V	4 - 20 mA	4 - 20 mA	4 - 20 mA	3-step	3-step	3-step
Load	100 kOhm	500 Ohm	500 Ohm	500 Ohm	-	-	-
Position feedback	2 - 10 V	2 - 10 V	4 - 20 mA	4 - 20 mA	-	-	-
external load	-	-	< 700 Ohm	< 700 Ohm	-	-	-
limit switches	-	-	2 x	2 x	-	-	-
max. switching load	-	-	24V AC/DC 70mA	24V AC/DC 70mA	-	-	-
Power consumption	3 W	3 W	3 W	4 W	3 W	6 W	6 W
Stroking time (standard)	3,50 s/mm	3,50 s/mm	3,50 s/mm	3,50 s/mm	7,5 s/mm	7,5 s/mm	7,5 s/mm
Thrust	800 N						
Class of protection	IP 65						
Ambient temperature	-10°C up to +60°C						



Admissible Differential Pressure

Nominal Size	maximum differential pressure [bar]					
	DN15	DN20	DN25	DN32	DN40	DN50
Unit carbon/SFC-stainless steel	40	40	40	40	30	20
STN 2-unit	40	37	28	20	14	8,5

Materials

Body	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581	
Head section	Carbon steel 1.0570 /1.0619	Stainless steel 1.4571 /1.4581	
Packing	PTFE (carbon filled), spring 1.4310		
Actuating stem	Stainless steel, roller burnished		
Fixed plate	Stainless steel 1.4571, plated	STN2-disc	
Sliding disc	Standard: special carbon material	SFC-disc	STN2-disc
Coupling ring for discs	Stainless steel 1.4581		

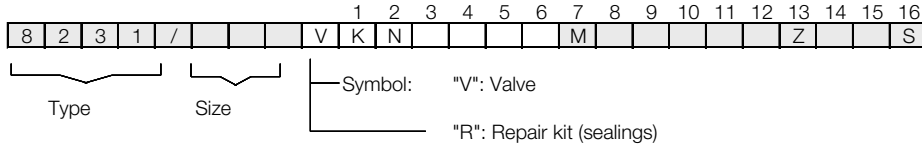
Stroking times

Stroking times for control actuators in sec.		
Setting	DN 15 - DN 40	DN 50
1,75 s/mm	11	14
3,5 s/mm	22*	29*
7,0 s/mm	44	58
14,0 s/mm	88	116

Stroking times for on/off-actuators in sec.		
Setting	DN 15 - DN 40	DN 50
7,5 s/ mm	47*	62*
4,5 s/ mm	28	37

*Standard

Ordering Number System



1 - 6 : Please quote all 6 sections.
7 - 16: Quote only if required.

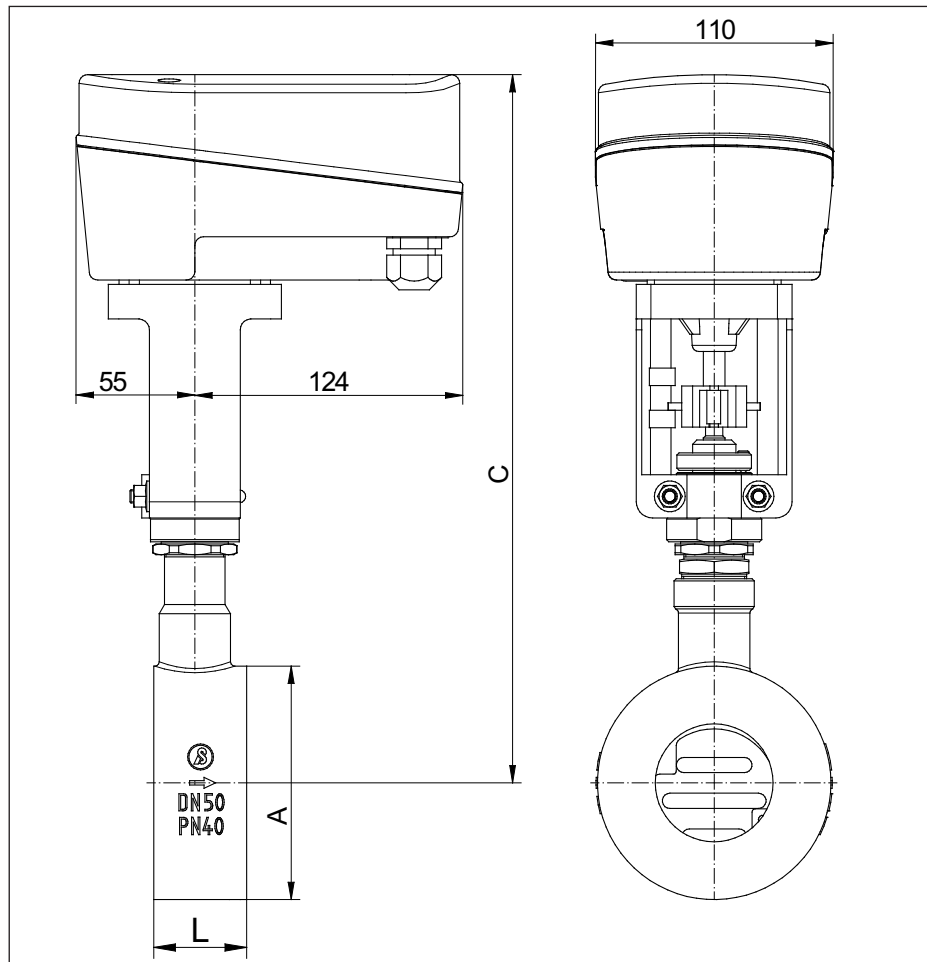
1. Motor design	2. Function	3. Connection	4. Body material	5. Safety position	6. Motor actuator	7. Special versions	8. Stem sealing
K compact actuator	N control valve with Motor actuator (type 8231, short design)	0 flangeless design for flanges acc. DIN 2632-2635 (PN10-PN40)	0 C-Steel 1.0570/1.0619 1 stainless steel 1.4571/1.4581	- without safety position 0 spring closes	0 control actuator BM250C/IOS2 85-250V AC/120-250V DC control electronics 4-20 mA, feedback 4-20 mA, 2 limit switches 1 control actuator BM24C - 24V AC/DC, control electronics 2-10 V, feedback 2-10 V 2 control actuator BM24C/1 - 24V AC/DC, control electronics 4-20 mA, feedback 2-10 V 6 on-off actuator BM24; 24 V AC/DC 7 on-off actuator BM230; 230V AC 8 on-off actuator BM115; 115V AC 9 control actuator BM24C/IOS2 20-30V AC/20-45V DC control electronics 4-20 mA, feedback 4-20 mA, 2 limit switches	M to state if some of sections 8 - 15 are quoted	- PTFE-packing self-adjusting (standard)
9. Moving disc	10. Fixed disc	11. Kvs-Values	12. Flow characteristic	13. Accessories	14. Set point signal	15. Stroking times	16. Special versions
- carbon 9 STN2/STN3-disc S SFC-disc	- stainless steel 1 STN2-disc (only in combination with pos."9") 3 STN3-disc (only in combination with pos."9")	- 100% (stand.) A red. to 63% 1 red. to 40% B red. to 25% 2 red. to 16% C red. to 10% 3 red. to 6,3% 4 red. to 2,5% 5 red. to 1% 6 red. to 20% 7 red. to 12% 8 red. to 2% 9 red. to 0,4%	- linear equal percentage 1	Z accessories (pos.14 ff.)	- standard 2-10V or 4-20 mA signal opens	- standard: control actuators: 3,5 s/mm On-off actuators: 7,5 s/mm L 4,5 s/mm on/off-actuators only 1 1,75 s/mm contr. actuators only 2 7,0 s/mm contr. actuators only 3 14,0 s/mm contr. actuators only	

Ordering example

8231/050VKN0103

GS-Motor valve compact type 8231, DN 50, flangeless design PN10-PN40, stainless steel body, spring closes, control actuator BM24C/IOS, 24V AC/DC, control electronics 4-20 mA, stroke feedback 4-20 mA, 2 limit switches, linear flow characteristic, Kvs-value 100 %

Dimensions and Weights



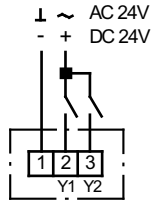
DN	A	C	L	Stroke	Weight kg
15	64	385	56	6	3,8
20	72	390	56	6	4
25	82	395	56	6	4,3
32	86	400	56	6	4,5
40	99	405	56	6	4,8
50	116	415	64	8	6,3

Dimensions in mm

On/Off-Actuators

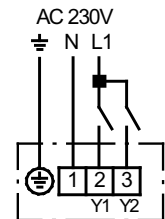
Actuator: BM24

24V AC/DC
3-step drive



Actuator: BM230, BM115

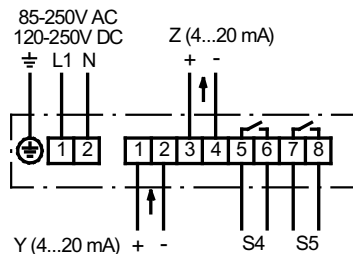
230V 50/60 Hz
115V 50/60 Hz
3-step drive



Control Actuators

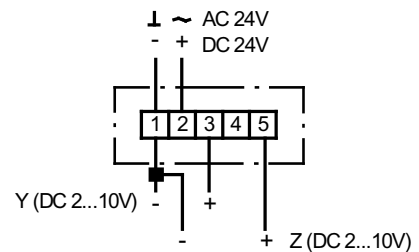
Actuator: BM250C/IOS2, BM230C/IOS2-R

85-250V AC 120-250V DC
input signal 4-20mA
feedback signal 4-20mA
2 limit switches



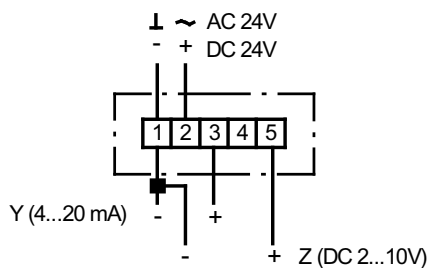
Actuator: BM24C, BM24C-R

24V AC/DC
input signal 2-10V
feedback signal 2-10V



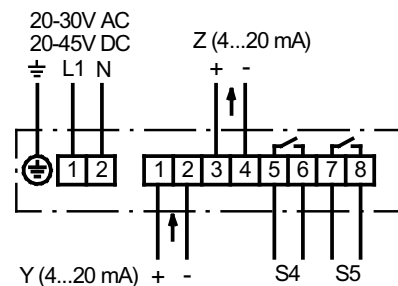
Actuator: BM24C/I, BM24C/I-R

24V AC/DC
input signal 4-20mA
feedback signal 2-10V



Actuator: BM24C/IOS2

20-30V AC 20-45V DC
input signal 4-20mA
feedback signal 4-20mA
2 limit switches



BM.....-R: version with safety position
Y: signal, Z: feedback signal