

DN 40 up to DN 80

Fast and high resolution motorvalve for control and switching of neutral through to highly aggressive media in process engineering, chemical industries and for plant equipment.

- Low operation noise level (quiet operation)
- Control of high differential pressures with small actuators
- Fast stroking speed
- Small dead band
- Smooth start and slow down
- Stainless steel body
- For temperatures from -50°C up to +220°C



Technical Information of the Valve

Body material	Stainless steel 1.4408	
Nominal size	DN 40 up to DN 50 1 1/2" up to 3"	
Connections:		
Pipe threads acc. ISO 228-1	DN 40 - 80 / 1 1/2" - 3"	
NPT thread	DN 40 - 80 / 1 1/2" - 3"	
Welding ends	DN 40 - 65 / 1 1/2" - 2 1/2"	
Clamp connections	DN 40 - 65 / 1 1/2" - 2 1/2"	
Nominal pressure	PN 40	
Media temperature	-30°C up to 200°C, opt. -50°C up to 220°C	
Ambient temperature	Standard:	-10°C up to +60°C
	Low temperature version:	-40°C up to +60°C
Viscosity	max. 600 mm ² /s (600 cSt)	
Vacuum	max. 0,001 bar,abs.	
Operating pressure packing underneath	max. 12 bar	
Operating pressure for Tri-Clamp connection	max. 16 bar	
Packing leakage	tested according to TA-Luft as defined in DIN EN ISO 15848-1 and VDI 2440	

Technical Information of the Actuator

Driving force	2,0 kN / 5,0 kN			
Power connections	24 V AC/DC			
	100 - 240 V 50/60Hz			
Ambient temperature	Standard:	-10°C up to +60°C		
	Low temperature version:	-40°C up to +60°C		
Storage Temperature	Standard:	-30°C up to +80°C (+60°C with Fail-Safe protection)		
	Low temperature version:	-40°C up to +80°C (+60°C with Fail-Safe protection)		
Mounting position	choice horizontal or vertical actuator only			
Protection class (EN 60529)	IP 67			
Max. power consumption at 24V AC/DC-operation:	40 Watt			
Nominal power consumption during mains operation	Mains voltage 230V:	P=40W	S=67,8VA	I=295mA
	Mains voltage 115V:	P=40W	S=58,8VA	I=511mA
				cosφ=0.59 cosφ=0.68
Dead band	±0,2% at min. 6mm stroke			
Repeat accuracy	±0,1% at min. 6mm stroke			
Stroking speed	2,0 kN-version:	0,75 s/mm up to 250 s/mm (standard 1,5 s/mm)		
	5,0 kN-version:	2 s/mm up to 250 s/mm (standard 4 s/mm)		
Stroking speed of the Fail-Safe protection	2,0 kN-version:	0,75 s/mm up to 4 s/mm		
	5,0 kN-version:	2 s/mm up to 4 s/mm		
Set point range	adjustable 0(4) - 20 mA, 0(2) - 10 V			
	optional binary input signal (24V DC)			
Feed back	adjustable 0(4) - 20 mA, 0(2) - 10 V			
cycles (Fail-Safe)	500000			
life-time (Fail-Safe)	10 years			
duty cycle	100%			
Self Monitoring	monitoring of the driving power, set point, actuator temperature, temperature of the electronic etc.			
Diagnostic function	storage of motor and total service life, temperature- and way classes			
Valve adaptation	automatic stroke adjustment to suit valve limits			
additional inputs	binary input			
additional outputs	2 alarm outputs			
Electrical connection	Power supply M20x1.5 (optional NPT 1/2")			
	Signal/position feedback 2x M16x1.5			

Admissible Differential Pressures

driving force	seating seal Nominal size	pmax [bar]					
		PTFE		PEEK-7 (T<160°C)		PEEK-8 (T>160°C)	
		Control	On/Off	Control	On/Off	Control	On/Off
2kN	DN40	16	16	8	8	14	14
	DN50*	10	10	3,5	3,5	8,5	8,5
	DN65*	5	5	-	-	4,5	4,5
	DN80*	3,5	3,5	-	-	2,5	2,5
5kN	DN40	17	23	17	23	17	23
	DN50*	15	15	15	15	17	25
	DN65*	12	12	10	10	14	14
	DN80*	11	11	6,5	6,5	10	10
2kN pressure balanced version	DN40	17	40	17	40	17	40
	DN50	17	40	17	40	17	40
	DN65	17	25	17	25	17	25
	DN80*	17	25	17	25	17	25

*reinforced design

Kvs-values (stroke)

Characteristic DN	linear				equal percentage			
	40	50	65	80	40	50	65	80
100 %	27 (21,2)	39 (21,2)	42 (20)	54 (20)	25 (21,2)	31 (21,2)	33 (20)	43 (20,7)
63 %	-	24 (21,2)	26 (21,2)	-	-	17 (21,2)	19 (20)	-
40 %	11 (11,2)	-	-	-	10 (14,2)	-	-	-
25 %	-	-	-	-	-	-	-	-
15 %	-	-	-	-	-	-	-	-
10 %	-	-	-	-	-	-	-	-
7,5 %	-	-	-	-	-	-	-	-
On-Off	-	3,8 (9,2)	9 (15,2)	17 (18,2)	35 (21,2)	51 (21,2)	62 (20)	74 (20)

* Kvs-values not possible with bronze housing.

Options

2 additional stroke limit switches	free adjustable volt free contacts (open/close)
Fail safe protection	Mounted in own body at actuator Safety position freely selectable
Communication software	with communication link, for parametrization and diagnosis of the actuator
Bluetoothmodul BT-1	Wireless connection to DeviceConfig configuration software (upgrade option)

Actuator with Fail-Safe protection (Option)

- Safety function at power failure
- Power supply via high performance capacitors
- Safety position open, closed or in every other position selectable
- Automatic monitoring of the charge condition of the capacitors



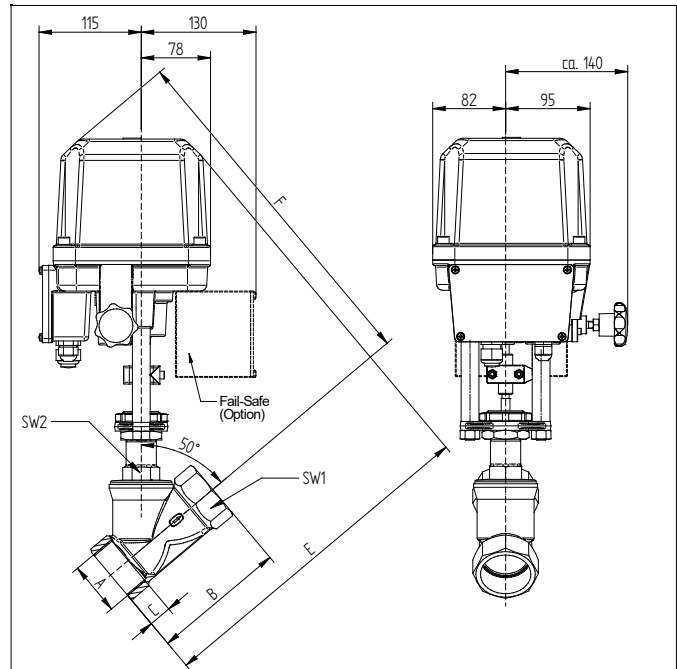
Ordering Number System

		Article number									
		7310/									
Nominal size:											
DN 40		040									
DN 50		050									
DN 65		065									
DN 80		080									
Item:											
Valve		V									
Upper part		U									
Actuator		A									
Body design:											
Angle bodied			1								
Connection:											
BSP thread				0							
NPT thread				5							
With welded ends acc. DIN 11850-series 2				D							
With welding ends acc. ISO				H							
Body material:											
Stainless steel					2						
Seating seal:											
PTFE					0						
FKM (Viton)					1						
EPDM					2						
NBR					3						
Actuator:											
without actuator					0						
2kN, position electronic, IP67 , activation: 4-20mA or 2-10V, feedback 4-20mA or 2-10V					A						
5kN, position electronic, IP67 , activation: 4-20mA or 2-10V, feedback 4-20mA or 2-10V					B						
Motor Voltage:											
100 - 240V, 50/60Hz									-		
24V AC/DC									1		
Control plug:											
none										-	
linear 100%										1	
equal percentage 100%										2	
linear 40%										3	
equal percentage 40%										4	
Special versions:											
See following positions											S
Pressure balanced version											P
Safety position:											
without safety position											-
Fail Safe Function: Safety position closed in the case of power failure											1
Fail Safe Function: Safety position opened in the case of power failure											2
Fail Safe Function: position in case of power failure according to customer specification											3
Stroking times:											
Standard (1,5s/mm=0,67mm/s)											-
0,75s/mm = 1,33mm/s											1
1s/mm = 1mm/s											2
2s/mm = 0,5mm/s											3
4s/mm = 0,25mm/s											4
20s/mm = 0,05mm/s											9

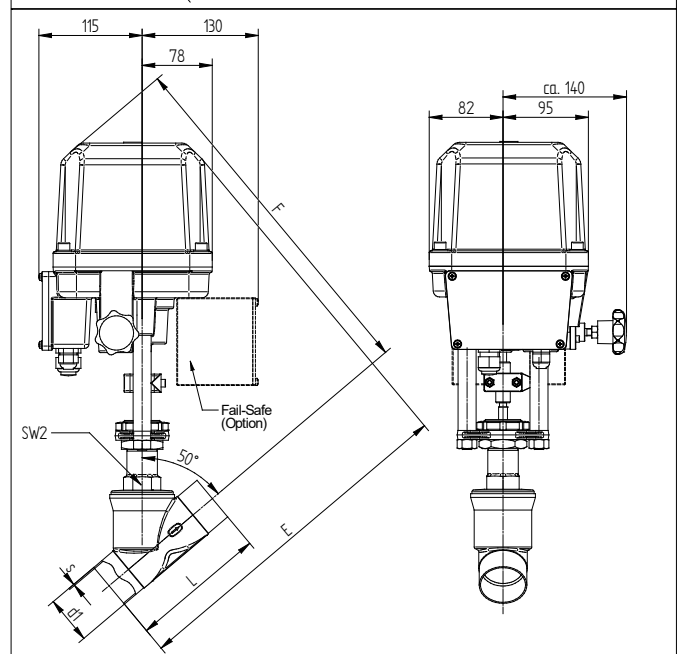
ordering example: 7310/040V1020A-1
 Angle seat valve with motor actuator DN 25, PN 10/40, BSP thread, Stainless Steel,
 linear actuator 2 kN, 100-240V 50/60 Hz, control cone 100% linear

Dimensions and Weights

**Body with threaded connection
G/NPT**



**Body with welded ends
DIN/ISO**



DN	A		B		C		L		ISO		DIN		SW1	SW2
	G / NPT	G / NPT	G	NPT	DIN/ISO	d1	s	d1	s					
40	1 1/2"	120	21,4	18,5	120	48,3	2,6	41	1,5	55	30			
50*	2"	150	25,7	19	150	60,3	2,9	53	1,5	68	36			
65*	2 1/2"	180	30,2	25,5	180	76,1	2,9	70	2	85	41			
80*	3"	214	33,5	27,4	220	88,9	3,2	-	-	100	41			

DN	E		F		weight with 2 kN-actuator		weight with 5 kN-actuator	
	2kN	5kN	2kN	5kN	without Fail-Safe	with Fail-Safe	without Fail-Safe	with Fail-Safe
40	362	382	381	404	9,8	11,5	10,7	12,4
50*	375	395	383	408	10,8	12,5	11,7	13,4
65*	395	414	396	420	12,6	14,3	13,5	15,2
80*	445	464	394	417	14,7	16,4	15,6	17,3

*: reinforced version

dimensions in mm