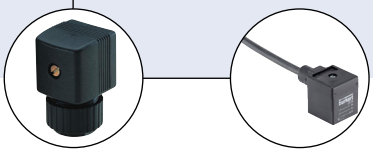
Servo-assisted 2/2 way piston valve

- Servo-assisted and compact piston valve with diameter of up to DN13
- Vibration-resistant , screwed coil system
- Increased leak-tightness with welded plunger guiding tube
- Safe opening with hard-coupled piston system
- Explosion proof versions

Type 6240 can be combined with...



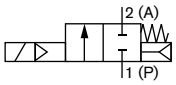
Type 2508
Cable Plug

Type 2513
Cable Plug
(ATEX cat. 3 GD)

The 6240 valve is a servo-assisted piston valve. The stopper and plunger guiding tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The housing design and surface quality enable maximum flow rates. The coils are moulded with chemically resistant epoxy. An optional sliding ring bearings increases the life cycle with dry gases. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

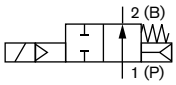
Technical data	
Port connections	G ¼, G ⅜, G ½ (NPT and Rc on request), Steam version DN13 also in G ⅜
Orifice	DN6, DN12, Steam version DN13
Body material	Brass, Stainless steel
Coil material	Epoxy
Coil insulation class	Class H
Mediums High temp. version	Neutral gases and liquids, such as e.g. compressed air, water, hydraulic oil, steam and hot mediums
Viscosity	max. 21 mm²/sec
Ambient temp.	max. 55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Elec. connection	Tag connector acc. DIN EN 175 301-803 Form A for cable plug Type 2508 (see ordering chart for accessories)
Protection class	IP65 with cable plug, ATEX/IECEx junction box version and cable connection version NEMA 4x with cable plug 2508 or 2509 only for stainless steel versions (other versions on request)
Installation	As required, preferably with actuator upright

Circuit function A



2/2 way servo-controlled solenoid valve, normally closed

Circuit function B
(only for high pressure variant DN12 MX32 see p. 11)



2/2 way servo-controlled solenoid valve, normally open

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Response times		
Version	**Opening [ms]**	**Closing [ms]**
Standard DN6	10-20	40-50
Standard DN12	20-40	80-100
Steam version DN13	80-100	200-300
High pressure MX3*	100-200	300-500

Response times [ms]:
Measured at the outlet with 6 bar inlet pressure at 20 °C
Opening: Pressure build-up 0 to 90 %
Closing: Pressure decrease 100 to 10 %

Seal material combination and medium temperature Seat seal/external seal			
Standard		**Special version**	
FKM/FKM	-10 °C to +140 °C	**Steam version DN13**	
EPDM/EPDM	-30 °C to +120 °C	FKM/FKM	0 °C to +140 °C
PTFE/FKM	-10 °C to +140 °C	**Approval DIN EN 161 (PO17)**	
		NBR/NBR (PO17)	-10 °C to +80 °C
Standard high temperature		**High pressure version MX31 & MX32**	
PTFE/PEEK DN6	-40 °C to +180 °C	PCTFE/FKM	-10 °C to +80 °C
PTFE/PEEK DN12	-40 °C to +140 °C	PCTFE/EPDM	-30 °C to +80 °C

Power consumption									
Coil size [mm]	**AC**			**DC**		**ATEX/IECEx AC/DC**	**KD-Coil AC/DC**		
							Cold		**Warm**
	Inrush [VA]	**Hold [VA]**	**[W]**	**Cold [W]**	**Warm [W]**	**Nominal power [W]**	**Inrush [W] 500 ms**	**Hold [W]**	**Hold [W]**
32 (5)	32	18	8	12	10	-	-	-	-
40 (6)	40	23	10	14	12	9	-	-	-
42 (K)	150	37	16	21	16	12	85	8.5	7
65 (L)	-	-	-	28	21	20	-	-	-

KD coil AC/DC
“Kick and Drop” coil (KD coil): Integrated electronics for short-term power increase and reduction in dual coil technology

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Content

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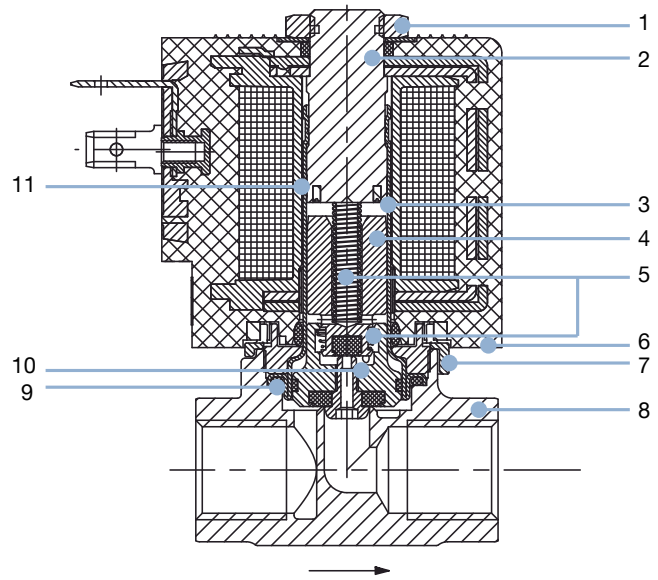
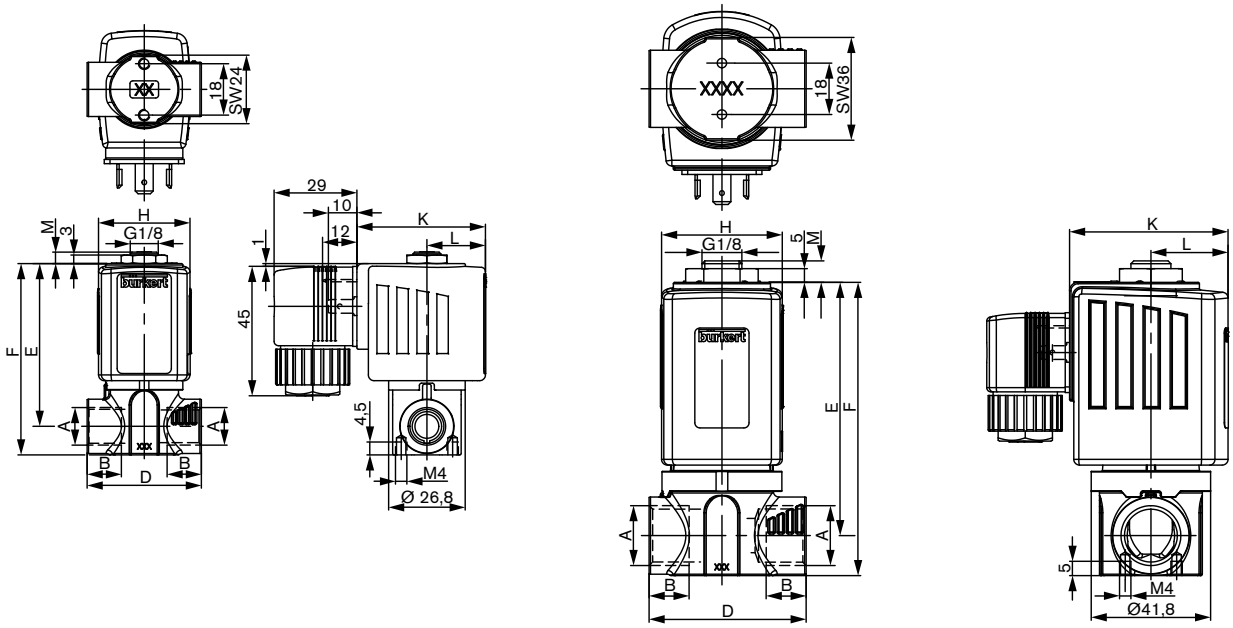
Standard version

Materials Standard version



Nr.	Element	Material
1	Nut	Steel (surface finish thick film passivated) (Brass version) Stainless steel 1.4305 PTFE (Stainless steel version)
2	Stopper	1.4113
3	Armature guide tube	1.4303
4	Guide ring	PTFE carbon filled
5	Springs	1.4310
6	Coil	Epoxy
7	Safety lock	PPS
8	Body	Brass/stainless steel 1.4404 (316L)
9	Seal facing outwards	FKM/EPDM/PEEK (high temperature version)
10	Piston consists of	Brass/stainless steel 1.4305 Stainless steel PEEK PTFE carbon filled FKM/EPDM/PTFE (PTFE for high temperature and PTFE/FKM for high pressure versions)
11	Shading ring	copper/silver

Dimensions Standard version [mm]



A Body connection	DN [mm]	B [mm]	D [mm]	E [mm]	F [mm]	M [mm]	H [mm]	K [mm]	L [mm]	Weight [g]
Threaded port										
G ¼	6	12	40	57.3	67.3	3.7	32	45.0	20.5	304
G ¼	6	12	40	57.3	67.3	3.7	40	51.0	23.5	382
G ⅜	6	12	50	58.3	70.3	3.7	32	45.0	20.5	346
G ⅜	6	12	50	58.3	70.3	3.7	40	51.0	23.5	424
G ½	12	12	55	89.0	103.0	7.5	42	55.5	27.0	800

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Ordering chart Standard version

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Pressure range [bar]	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	24/50	230/50
G internal thread, seal material FKM/FKM								
A 2/2 way valve NC	**Brass body**							
	G ¼	6.0	0.6	0-16	32	177800	177801	177802
	G ⅜	6.0	0.6	0-16	32	177803	177804	177805
	Stainless steel body							
	G ¼	6.0	0.6	0-16	32	177806	177807	177808
	G ½	12.0	2.2	0-16	42	238632	238633	238634

Other versions with alternative voltages, NPT or RC internal thread, seal material EPDM/EPDM available on request.

Ordering chart High temperature version

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Pressure range [bar]	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	24/50	230/50
G internal thread, stainless steel body, seal material PTFE/PEEK								
A 2/2 way valve NC	**Medium temperature -40 to +180 °C**							
	G ¼	6.0	0.6	0-16	32	184739	184740	184741
	Medium temperature -40 to +140 °C							
	G ½	12.0	2.2	0-25	42	238638	238639	238640

Other versions with alternative voltages, NPT or RC internal thread on request.

Ordering chart Increased pressure range MW06

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Pressure range [bar] liquids	gases	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	24/50	230/50
G internal thread, brass body, seal material PTFE/FKM									
A 2/2 way valve NC	G ¼	6.0	0.6	0-25	0-40	40	184742	184743	184744
	G ⅜	6.0	0.6	0-25	0-40	40	184745	184746	184747

Other versions with alternative voltages, NPT or RC internal threads are available on request.

Note:
Please note that the cable plug must be ordered separately, see ordering chart for accessories and separate data sheet for Type 2508.

Approval DIN EN 161 (PO17) version

Materials and dimensions - see Standard version

Ordering chart DIN EN 161 Automatic shut-off valves for gas burners version

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Max. medium pressure [bar] gas	Body material	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	24/50	230/50
Seal material NBR/NBR									
A 2/2 way valve NC	G ¼	6.0	0.6	0-16	Brass	32	253501	on request	287855
	G ½	12.0	2.2	0-16	Stainless steel	42	253502	on request	287438

Other versions with alternative voltages, housing material and connection combinations are possible.

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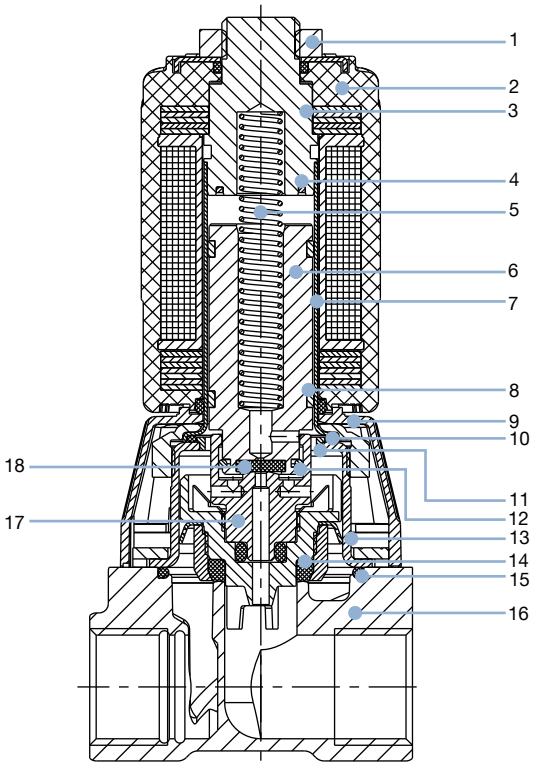
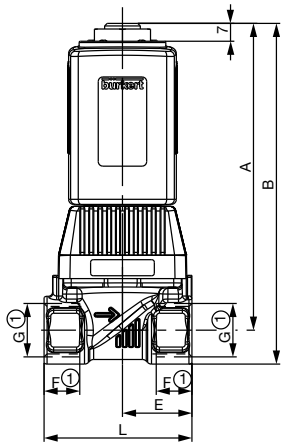
Steam NA67 version

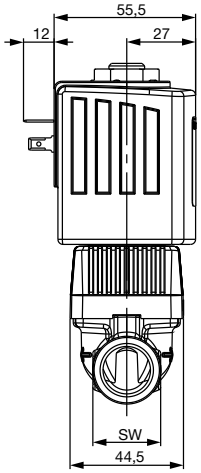
Materials DN13 version



No.	Element	Material
1	Nut	1.4305
2	Coil	Epoxy
3	Stopper	1.4105
4	Shading ring	Silver
5	Spring	1.4310
6	Core	1.4113
7	Guide tube	1.4303
8	Glide ring	PTFE coal filled
9	Cover	PA6
10	Seal	FKM
11	Support ring	PPS Fortron
12	Coupling ring	PEEK
13	Holding cap	1.4301
14	Seat gasket	FKM
15	Outer seal	FKM
16	Body	Brass, Stainless steel 1.4408
17	Piston coupling	1.4401, PPS Fortron, PTFE, PEEK, FKM
18	Core seal	FKM

Dimensions DN13 version [mm]

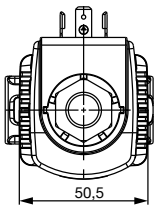




① For G-thread sizes F1 and G1 apply.
For NPT threads sizes F2 and G2 apply.
For Rc threads sizes F3 and G3 apply

② MS/MZ version only

③ only VA-version



DN	A	B	E	F1	G 1	F2	G 2	F3	G 3	L	SW
13	120.35	133.85	27.25	14	G ½	13.7	NPT ½	13.2	Rc ½	58	27
13	120.35	133.85	32.5	14	G ½	13.7	NPT ½	13.2	Rc ½	65	27
13	122.35	138.35	32.5	16	G ¾	14	NPT ¾	14.5	Rc ¾	65	32

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Ordering chart Steam version NA67

Other versions on request

Circuit function	Port connection	Orifice [mm]	K_V value water (m^3/h)	Max. medium pressure [bar] steam	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/50	230/50
Brass body, seal material FKM/FKM							
NC	G ½	13.0	4	0-4	42	315069	244912
	G ¾	13.0	4	0-4	42	315072	244915

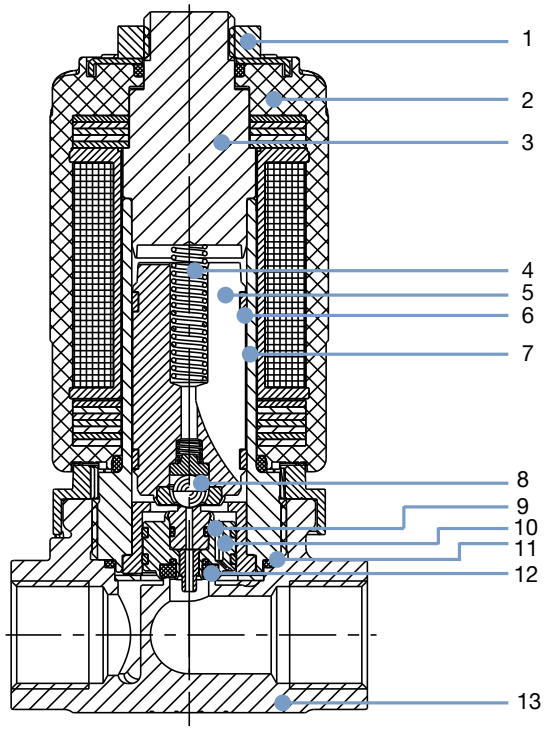
Other versions with alternative voltages, NPT or RC connections are available on request.

Circuit function	Port connection	Orifice [mm]	K_V value water (m^3/h)	Max. medium pressure [bar] steam	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/50	230/50
Stainless steel body, seal material FKM/FKM							
NC	G ½	13.0	4	0-4	42	323434	323436
	G ¾	13.0	4	0-4	42	323437	323438

Other versions with alternative voltages, NPT or RC connections are available on request.

High pressure version MX31 & MX32

Materials DN6



No.	Element	Material
1	Nut	1.4305
2	Coil	Epoxy
3	Stopper	1.4523
4	Spring	1.4310
5	Core coupling	1.4113, 1.4305
6	Glide ring	PTFE coal-filled
7	Guide tube	1.4571
8	Core seal	Ceramic ball
9	Piston coupling	1.4305, PEEK, PTFE coal-filled
10	Piston guide	1.4305
11	Seal	FKM, EPDM
12	Seat seal	PCTFE
13	Body	Stainless steel 1.4404

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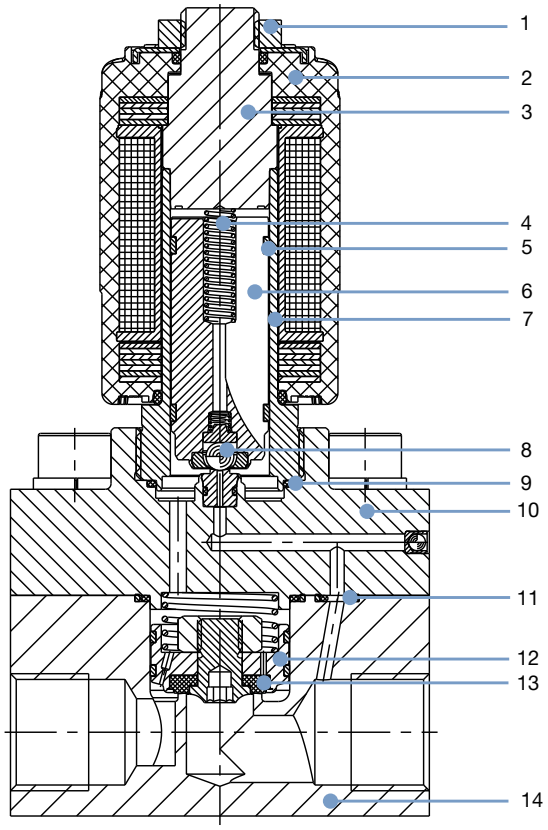
Materials DN12



No.	Element	Material
1	Nut	1.4305 PTFE coated
2	Coil	Epoxy
3	Stopper	1.4523
4	Spring	1.4310
5	Glide ring	PTFE coal-filled
6	Core coupling	1.4113, 1.4305
7	Guide tube	1.4571
8	Core seal	Ceramic ball
9	Outer seal	FKM, EPDM
10	Flange coupling	Stainless steel 1.4404, PEEK, FKM/EPDM
11	Outer seal	FKM, EPDM
12	Piston coupling	1.4305, PTFE coal-filled
13	Seat seal	PCTFE
14	Body	Stainless steel 1.4404

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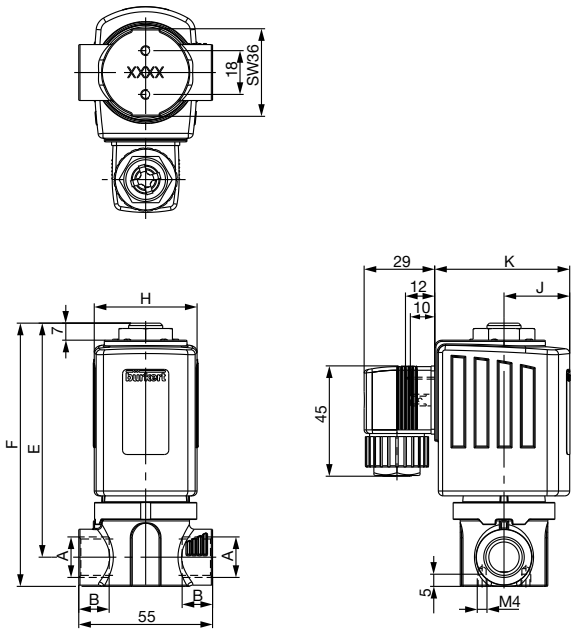
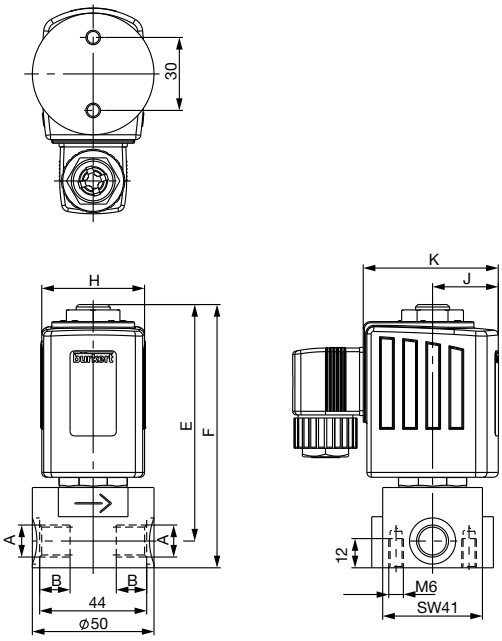
Dimensions DN6 [mm]

MX31



MX32



Coil size	H	J	K
K	42	27	55.5
L	65	37.5	72

A	B	E	F
G ¼	13	95.2	105.2
NPT ¼	10	95.2	105.2
G ⅜	12	96.2	108.2
NPT ⅜	10.3	96.2	108.2

A	B	E	F
G ¼	13	97.2	108.2
NPT ¼	10	97.2	108.2
G ⅜	12	98.7	111.2
NPT ⅜	10.3	98.7	111.2

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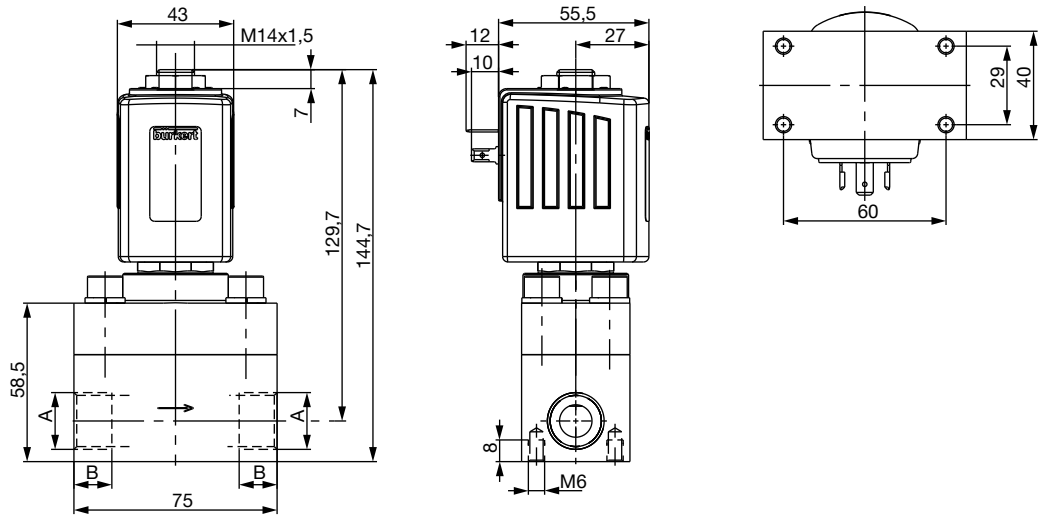
Dimensions DN12 [mm]



A	B
G ½	14
NPT ½	13.7

Ordering chart High pressure version DN6 - pressure rating up to 160 bar (MX31)

Other versions on request

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Max. differential pressure [bar] water DC	water AC	oil DC	oil AC	air DC	air AC	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	24/AC	230/AC
Stainless steel body, G internal thread, cable head with integrated rectifier for AC included in delivery													
NC	G ¼	6.0	0.75	1-100	1-100	1-80	1-80	1-100	1-100	42	300602	-	300603
				-	1-90	-	1-60	-	1-90	42	-	318327	-
	G ⅜	6.0	0.75	1-120	1-120	1-80	1-80	1-120	1-120	42	323476	-	323477
				-	1-90	-	1-60	-	1-90	42	-	323478	-

Other versions with alternative voltages, NPT or RC internal thread, seal material PCTFE/EPDM available on request.

Ordering chart High pressure version DN6 - pressure rating up to 250 bar (MX32)

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Max. differential pressure [bar] water DC	water KD-Coil AC/DC	oil DC	oil KD-Coil AC/DC	air DC	air KD-Coil AC/DC	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz] 24/DC	KD-Coil 24 AC/DC	KD-Coil 230 AC/DC
Stainless steel body, G internal thread													
NC	G ¼	6.0	0.75	1-230	-	1-200	-	1-250	-	65	319700	-	-
				-	1-230	-	1-200	-	1-250	42	-	323479	323480
	G ⅜	6.0	0.75	1-230	-	1-200	-	1-250	-	65	323481	-	-
				-	1-230	-	1-200	-	1-250	42	-	323482	323483

Other versions with alternative voltages, NPT or RC internal thread, seal material PCTFE/EPDM available on request.

Note:
KD-coil (Kick and Drop) contains integrated electronics for short-term power increase and decrease in double-coil technology.

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Ordering chart High pressure version DN12 - pressure rating up to 250 bar (MX32)

Circuit function	Port connection	Orifice [mm]	K_V value water (m^3/h)	Max. differential pressure [bar]						Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]		
				water		oil		air					
				DC	AC	DC	AC	DC	AC		24/DC	24/AC	230/AC
Stainless steel body, G internal thread, cable head with integrated rectifier for AC included in delivery													
NC	G ½	12.0	2.2	1-250	1-250	1-250	1-250	1-250	1-250	42	312895	-	314877
				1-250	1-250	1-200	1-200	1-250	1-250	42	-	323484	-
NO	G ½	12.0	2.2	1-200	1-200	1-150	1-150	1-250	1-250	42	314875	323485	323486

Other versions with alternative voltages, NPT or RC internal thread, seal material PCTFE/EPDM available on request.

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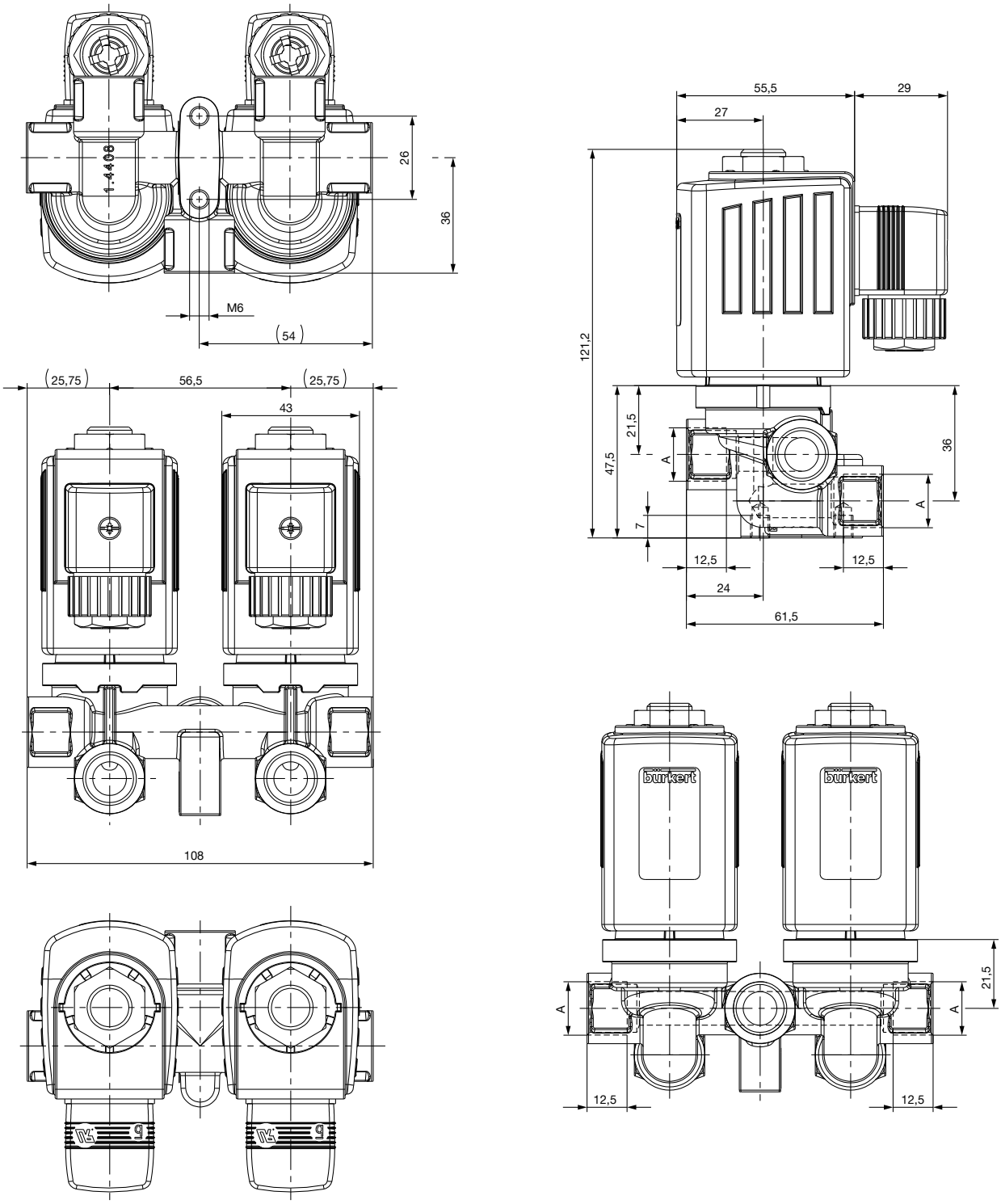
Block solution for car wash applications 8820-6240

Dimensions solution for self-service car wash 160 bar (MX31)



Version	A
AH40	G ¼
AH37	G ⅜

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Ordering chart solution for self-service car wash 160 bar (MX31)

Other versions on request

Circuit function	Port connection	Orifice single valve [mm]	K_v value water single valve (m^3/h)	max. differential pressure [bar]		Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]	
				DC	AC		24/DC	230/AC
Stainless steel body, G internal thread, cable head with integrated rectifier for AC included in delivery								
NC	G ¼	6.0	0.75	1-120	1-120	42	333330	333331
	G ⅜	6.0	0.75	1-120	1-120	42	312702	320736

Other versions with alternative voltages, NPT or RC internal thread on request.

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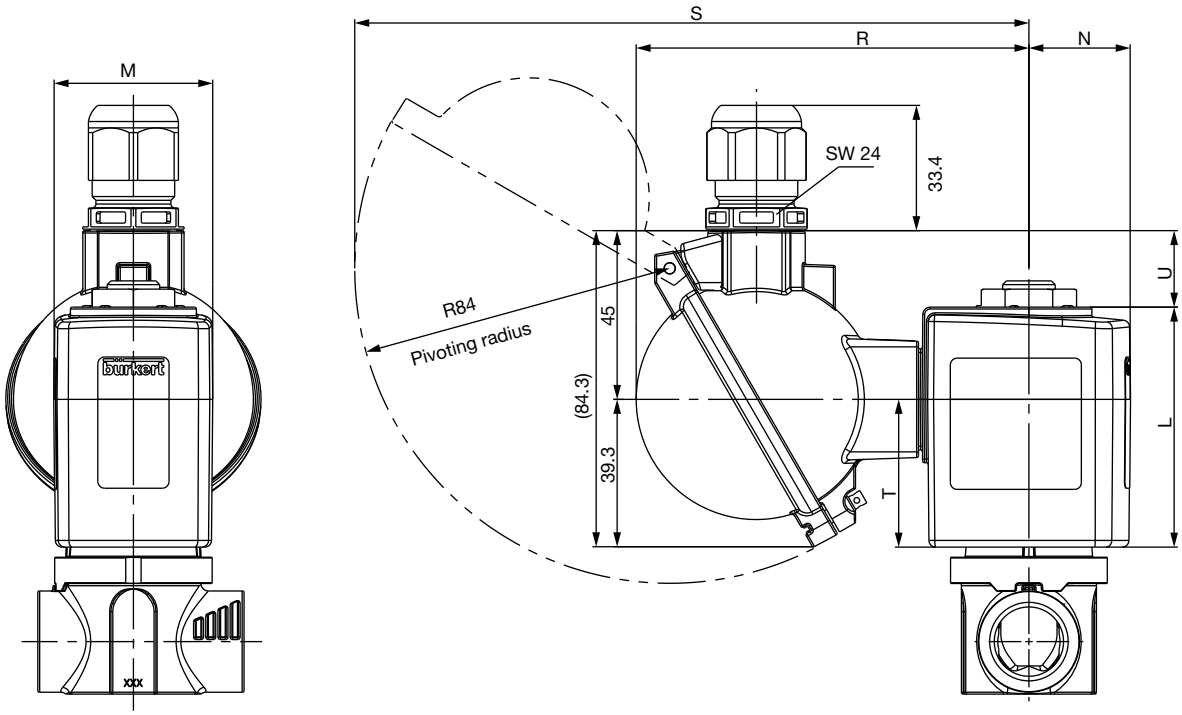
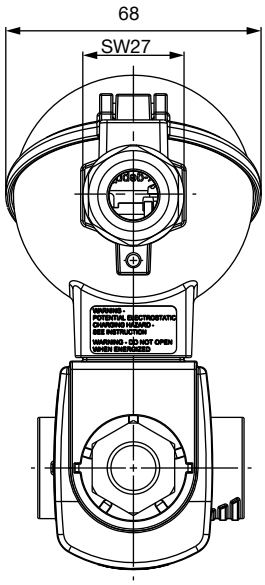
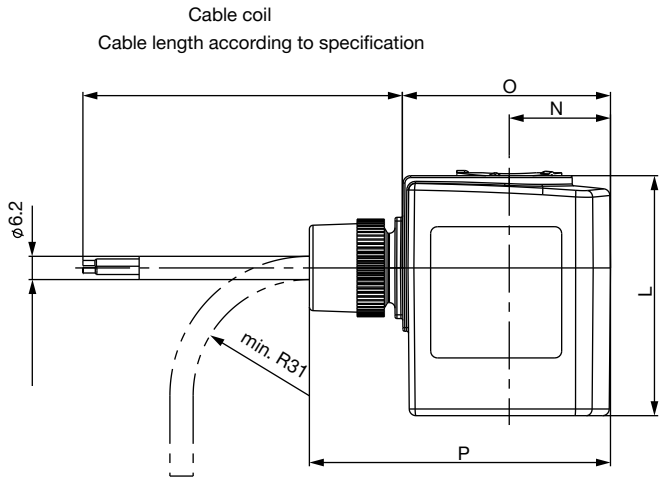
ATEX-IECEx version PX23, PX38 & PX39

Dimensions PX23, PX38 & PX39 version [mm]







Coil size	M	N	O	P	L	R	S	T	U
6	40	23.5	52	74.8	41.3	102.8	177.5	26	29.7
K	42	27	55.5	80.3	64	104.8	179.8	39.4	20.4
L	65	37.5	72	97	64	110.8	185.8	39.4	20.4

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Ordering chart Standard version – ATEX/IECEx with 3 m cable

Other versions on request

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Pressure range [bar]	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]	
						24 AC/DC	230 AC/DC
G internal thread, seal material FKM/FKM							
A	**Brass body**						
2/2 way valve NC	G ¼	6.0	0.6	0-16	40	278716	278717
	G ⅜	6.0	0.6	0-16	40	309943	278720
	Stainless steel body						
	G ¼	6.0	0.6	0-16	40	278718	278719
	G ⅜	6.0	0.6	0-16	40	278721	on request
	G ½	12.0	2.2	0-8	42	298643	298644
	G ½	12.0	2.2	0-16	65	312997	312998

Other versions with alternative voltages, NPT or RC internal thread, seal material EPDM/EPDM available on request.

Ordering chart High pressure version – ATEX/IECEx with 3 m cable

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	max. Differential pressure [bar]			Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]	
				water	oil	air		24 AC/DC	230 AC/DC
G internal thread, stainless steel body, seal material PCTFE/FKM									
A	**Pressure range up to 160 bar**								
2/2 way valve NC	G ¼	6.0	0.6	1-160	1-120	1-160	65	323487	on request
	G ⅜	6.0	0.6	1-160	1-120	1-160	65	323489	on request
	Pressure range up to 250 bar								
	G ½	12.0	2.2	1-200	1-150	1-250	42	323491	314879
	G ½	12.0	2.2	1-250	1-250	1-250	65	323492	314883
B 2/2 way valve NO	G ½	12.0	2.2	1-200	1-150	1-250	65	on request	on request

Other versions with alternative voltages, NPT or RC internal thread, seal material PCTFE/EPDM available on request.

Ordering chart Standard version – ATEX/IECEx terminal box

Other versions on request

Circuit function	Port connection	Orifice [mm]	K_v value water (m^3/h)	Pressure range [bar]	Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]	
						24 AC/DC	230 AC/DC
G internal thread, stainless steel body FKM/FKM							
A	**Brass body**						
2/2 way valve NC	G ¼	6.0	0.6	0-16	40	288608	288610
	G ⅜	6.0	0.6	0-16	40	on request	295781
	Stainless steel body						
	G ¼	6.0	0.6	0-16	40	on request	on request
	G ⅜	6.0	0.6	0-16	40	288612	288611
	G ½	12.0	2.2	0-8	42	313002	313004
	G ½	12.0	2.2	0-16	65	313005	313006

Other versions with alternative voltages, NPT or RC internal thread, seal material EPDM/EPDM available on request.

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Ordering chart High pressure version – ATEX/IECEx terminal box

Circuit function	Port connection	Orifice [mm]	K_V value water (m^3/h)	max. Differential pressure [bar]			Coil size [mm]	Article no. acc. to voltage/frequency [V/Hz]	
				water	oil	air		24 AC/DC	230 AC/DC
G internal thread, stainless steel body, seal material PCTFE/FKM									
A 2/2 way valve NC	**Pressure range up to 160 bar**								
	G ¼	6.0	0.6	1-160	1-120	1-160	65	323488	on request
	G ⅜	6.0	0.6	1-160	1-120	1-160	65	323490	on request
	Pressure range up to 250 bar								
	G ½	12.0	2.2	1-200	1-150	1-250	42	314886	on request
	G ½	12.0	2.2	1-250	1-250	1-250	65	323493	on request
B 2/2 way valve NO	G ½	12.0	2.2	1-200	1-150	1-250	65	314890	on request

Other versions with alternative voltages, NPT or RC internal thread, seal material PCTFE/EPDM available on request.

Further versions on request

Materials
Seal: EPDM

Voltage
042/50, 110/50, 240/50

Port Connection
NPT, Stainless steel version with G ⅜ connection

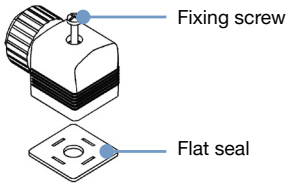
Approvals
Gas transportation DIN EN 3394-1
UL(UL-listed)
UR(UL-recognized)
FDA(Food and Drug Administration)
Versions for oxygen applications

Ordering chart for accessories

Cable plug Type 2508 according to DIN EN 175301-803 Form A

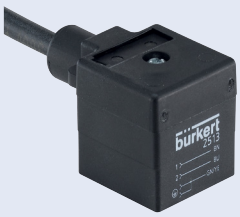
The delivery of a cable plug includes the flat seal and the fixing screw. For other versions of cable plugs see data sheet Type 2508

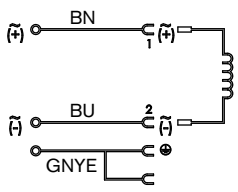
Circuitry	Voltage / frequency	Article no.
None (standard)	0-250 V AC/DC	008376
with LED	12-24 V AC/DC	008360
with LED and varistor	12-24 V AC/DC	008367
with rectifier, LED and varistor	12-24 V AC/DC	008363
with LED	200-240 V	008362
with LED and varistor	200-240 V	008369
further versions see datasheet Type 2508		



Cable plug Type 2513 acc. to DIN EN 175301-803, Form A

Meets the requirements of ATEX category 3 GD





Cable length [mm]	Article no. [in mm]
12000	260893
5000	260892
3000	260891
300	260890

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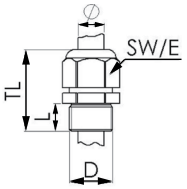
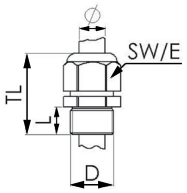
Ex-Cable glands

polyamide version included in delivery / surcharge applied for brass nickel plated version

Photo	Description	Ex-Zulassung Certification	Ex-Zulassung Identification	Article no.	Drawing
	Brass. nickelplated, 6-13 mm	IECEx PTB 13.0027X, PTB 04 ATEX 1112 X	II 2 D Ex tb IIIC Db IP68, II 2 G Ex e IIC Gb	773278	 TL 29-37 mm; L 6 mm; D 20; SW 24 mm; E 27 mm
	Polyamide, 7-13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773277	 TL 36-45 mm; L 10 mm; D 20; SW 24 mm; E 28 mm

Special tool to turn the junction box

not included in delivery

Photo	Description	Article no.
	Set SC02-AC10 Special wrench Service Manual	293488