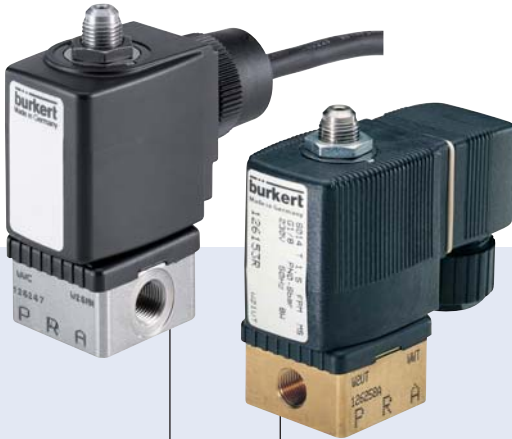




Direct-acting 3/2 way plunger valve

- Direct-acting, compact valve with diameter of up to DN 2.5
- Vibration-proof, bolted coil system
- Banjo threaded connection for direct mounting on pneumatic valves
- Service-friendly manual override
- Energy-saving impulse versions

Type 6014 can be combined with...



Type 2508

Cable Plug



Type 6014

Multiple manifold
(e.g. 6-fold)



Type 2511

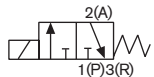
Cable plug



Type 2513

Cable plug
(ATEX Cat. 3 GD)

Valve 6014 is a direct-acting plunger 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. A Bürkert-specific flange design (SFB) enables space-saving arrangement of valves on a manifold. The coils are moulded with polyamide or with chemically resistant epoxy. Pulse coils are available for the reduction of electrical power consumption during operation. Optional manual actuation enables quick commissioning and easy maintenance. In combination with a plug in accordance with DIN EN 17301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.



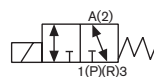
3/2 way valve NC,
outlet 2 relieved

Circuit function C



3/2 way valve NO, outlet
2 normally pressurized

Circuit function D



3/2 way,
universal valve

Circuit function T

Technical data	
Body material	Brass or stainless steel, polyamide (sub-base)
Seal material	FKM (EPDM on request)
Medium	Neutral gases and fluids (e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol). Suitable for technical vacuum
Medium temperature Polyamide coil (FKM seal)	-10° to +100 °C (PA coil) to 120 °C Epoxy coil
Ambient temperature	Max. +55 °C
Viscosity	Max. 21 mm ² /s
Port connection	G 1/8, G 1/4, sub-base (SFB)
Operating voltage	24 V DC, 24 V/50 Hz, 230 V/50 Hz (other voltages on request)
Voltage tolerance	±10%
Duty cycle / single valve Assembly	100% continuous rating Intermittent operation 60% (30 min) or with 5 W coil (on request)
Electrical connection	DIN EN 175301-803 Form A for Cable Plug, Type 2508 (see Ordering chart for accessories) ATEX/IECEx version with 3 m moulded cable
Installation	As required, preferably with actuator upright
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)
Coil insulation class	Polyamide class B (Epoxy class H on request)
Coil material	Polyamide (Epoxy on request)
Orifice	DN 1.5 - 2.5

Technical data

Power consumption

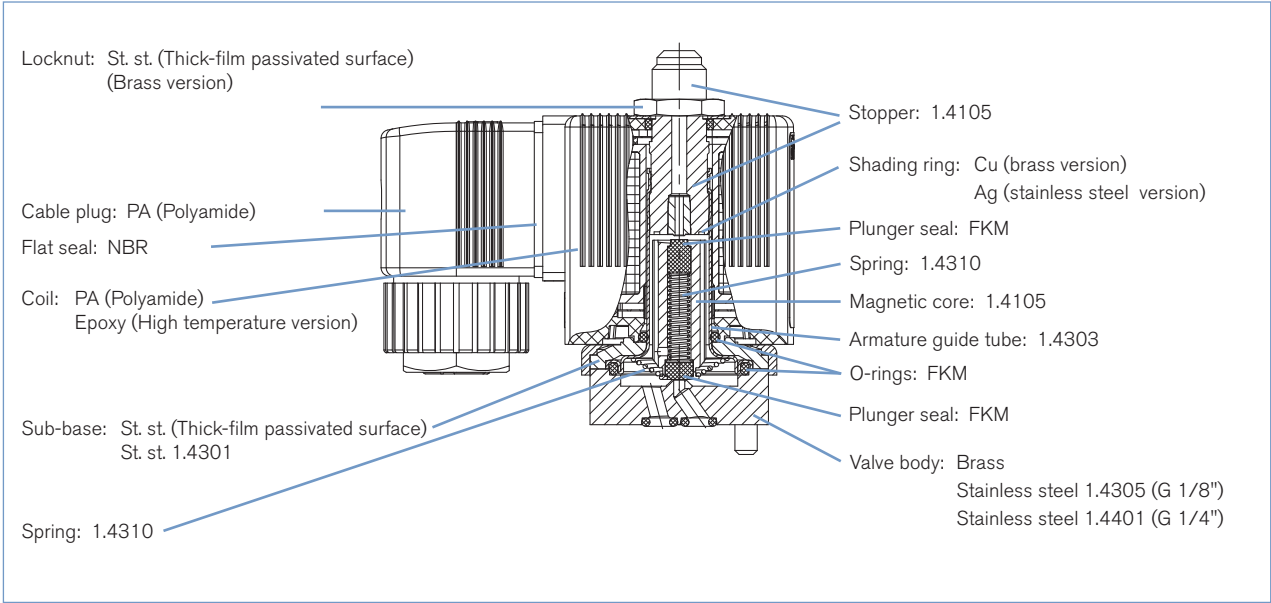
Orifice [mm]	Power consumption		
	Inrush AC [VA]	Hold AC (hot coil) [VA] [W]	DC hot / cold coil [W]
1.5-2.5	24	17 8	8 / 9

Response times

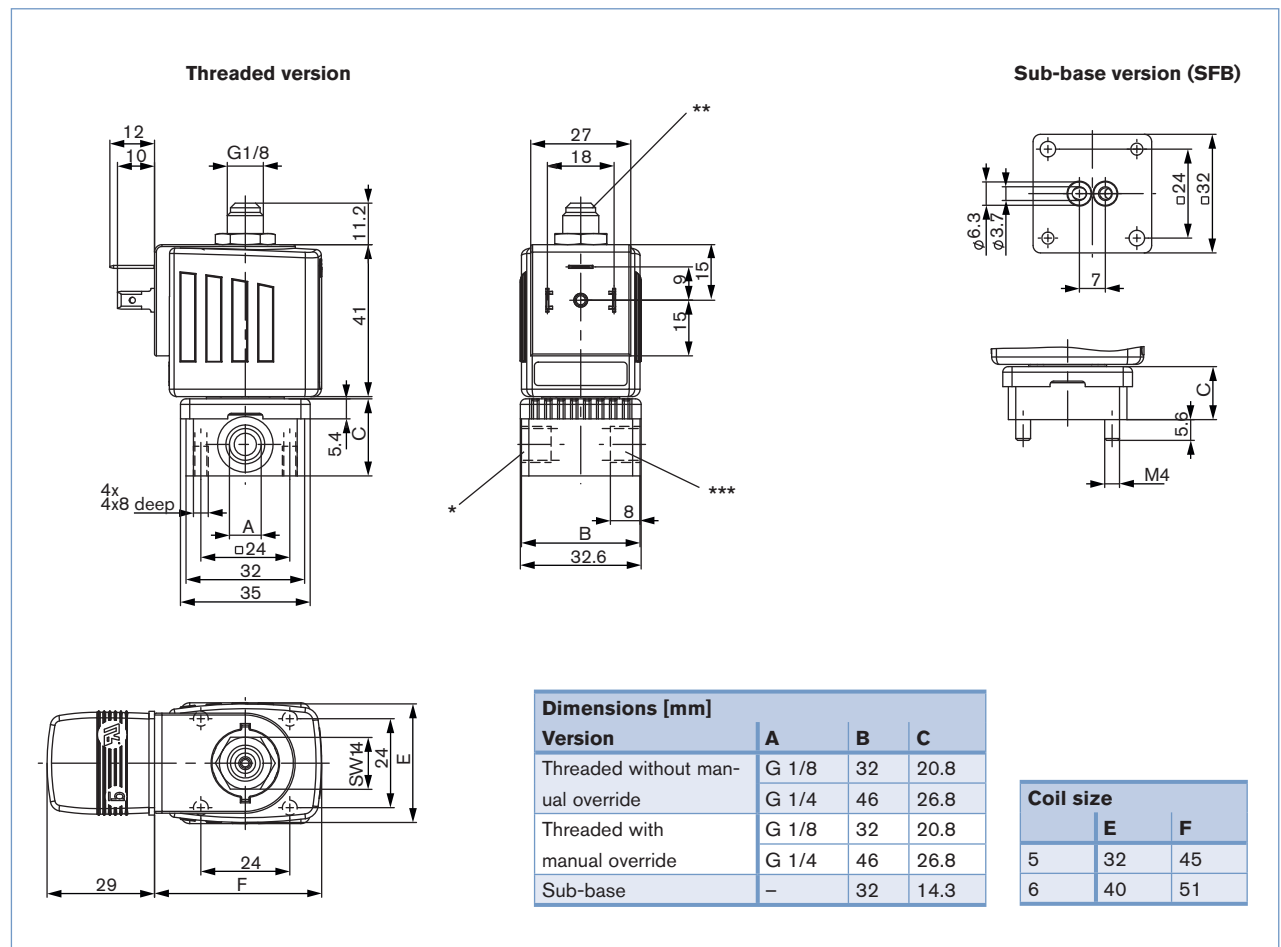
Orifice [mm]	Response times AC and DC	
	Opening [ms]	Closing [ms]
1.5	10-15	15-20
2.0	10-15	15-20
2.5	15-20	10-22

Response times [ms]:
Measured at valve outlet at 6 bar and +20 °C.
Opening: Pressure build-up 0 - 90%, to
Closing: Pressure relief 100 to 10%

Materials



Dimensions [mm]



Utilisation in another circuit function

Valves with circuit functions (WW) C, D and T are fitted with different springs. If used in some other circuit function, the permissible operating pressure may change (see table below).

Valve Version Basic version		Max. operating pressure [bar] for valve application in circuit function				
DN	Circuit function	A	B	C	D	T
1.5	C	16	22	16	2	2
	D	2	2.5	2	16	2
	T	10	16	10	6	6
2.0	C	10	14	10	1	1
	D	1	1.5	1	10	1
	T	6	10	6	4	4
2.5	C	6	9	6	0.7	0.7
	D	0.7	1	0.7	6	0.7
	T	3.5	6	3.5	2.5	2.5

Connections

For the positions marked with *, ** or *** in the drawing, the connections are marked with the letters shown in the table above, depending on the circuit function. Unused connections in circuit functions A or B will be closed off with a blanking plug or cap nut.

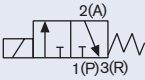
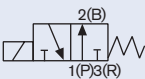
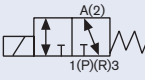
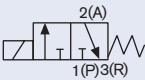
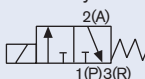
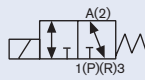
Circuit function	Connection Type		
	*	**	***
A	P	blank off	A
B	blank off	B	P
C	P	R	A
D	R	P	B
T	P	R	A

• see drawing on page 7

Ordering chart for valves (other versions on request)

6014 Threaded valves with FKM seal, (class B)

Delivered without cable plug (see accessories)

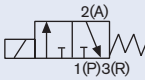
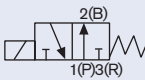
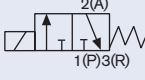
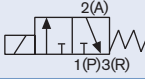
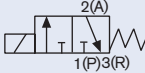
Circuit function	Orifice [mm]	Port connection	Kv value water [m³/h] ¹⁾	Pressure range [bar] ²⁾	Effective coil power [W]	Item no. per voltage / frequency		
						024/DC	024/50	230/50
Brass body								
C 3/2 way valve NC 	1.5	G 1/8	0.07	0 - 16	8	125 329	125 331	125 332
	2.0	G 1/8	0.11	0 - 10	8	125 333	125 334	125 336
		G 1/4	0.11	0 - 10	8	125 348	126 138	126 140
	2.5	G 1/8	0.16	0 - 6	8	125 341	125 340	125 342
		G 1/4	0.16	0 - 6	8	126 142	126 143	126 145
D 3/2 way valve, NO 	1.5	G 1/8	0.07	0 - 16	8	126 195	126 196	125 355
	2.0	G 1/8	0.11	0 - 10	8	125 357	125 358	125 360
		G 1/4	0.11	0 - 10	8	126 198	126 199	126 201
	2.5	G 1/8	0.16	0 - 6	8	125 363	126 202	126 204
		G 1/4	0.16	0 - 6	8	126 205	126 206	126 208
T 3/2 way Universal valve 	1.5	G 1/8	0.07	0 - 7	8	126 150	126 151	126 153
with manual override								
C 3/2 way valve NC 	2.0	G 1/8	0.11	0 - 10	8	125 337	125 338	125 339
		G 1/4	0.11	0 - 10	8	125 349	126 147	126 149
D 3/2 way valve, NO 	2.0	G 1/8	0.11	0 - 10	8	126 209	125 361	126 211
		G 1/4	0.11	0 - 10	8	126 212	126 213	126 215
Stainless steel body								
C 3/2 way valve NC 	1.5	G 1/8	0.07	0 - 16	8	126 216	126 217	126 219
	2.0	G 1/8	0.11	0 - 10	8	126 220	126 221	126 223
	2.0	G 1/4	0.11	0 - 10	8	126 224	126 225	126 227
T 3/2 way, universal valve 	1.5	G 1/8	0.07	0 - 7	8	126 228	126 229	126 231

¹⁾ Measured at +20 °C, 1 bar²⁾ pressure difference²⁾ Measured as overpressure to the atmospheric pressure

Ordering chart for valves (other versions on request)

6014 Valves with FKM seal and sub-base body (SFB), (class B)

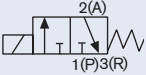
Delivered without cable plug (see accessories)

Circuit function	Orifice [mm]	Kv value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Effective coil power [W]	Item no. per voltage / frequency		
					024/DC	024/50	230/50
Brass body							
C 3/2 way valve NC 	1.5	0.07	0 - 16	8	126 154	126 155	125 366
	2.0	0.11	0 - 10	8	125 367	125 368	125 370
D 3/2 way valve, NO 	2.0	0.11	0 - 10	8	126 161	126 162	125 383
with manual override							
C 3/2 way valve NC 	1.5	0.07	0 - 10	5	126 403	126 404	126 406
	1.5	0.07	0 - 16	8	126 157	126 158	126 160
	2.0	0.11	0 - 6	5	126 407	126 408	126 410
	2.0	0.11	0 - 10	8	125 371	125 372	125 374
Polyamide body material							
C 3/2 way valve NC 	1.5	0.07	0 - 10	5	126 390	126 391	126 393
with manual override							
C 3/2 way valve NC 	1.5	0.07	0 - 10	5	126 396	126 397	126 399

¹⁾ Measured at +20 °C, 1 bar ²⁾ pressure difference²⁾ Measured as overpressure to the atmospheric pressure

Ordering chart for valves, impulse version (other versions on request)

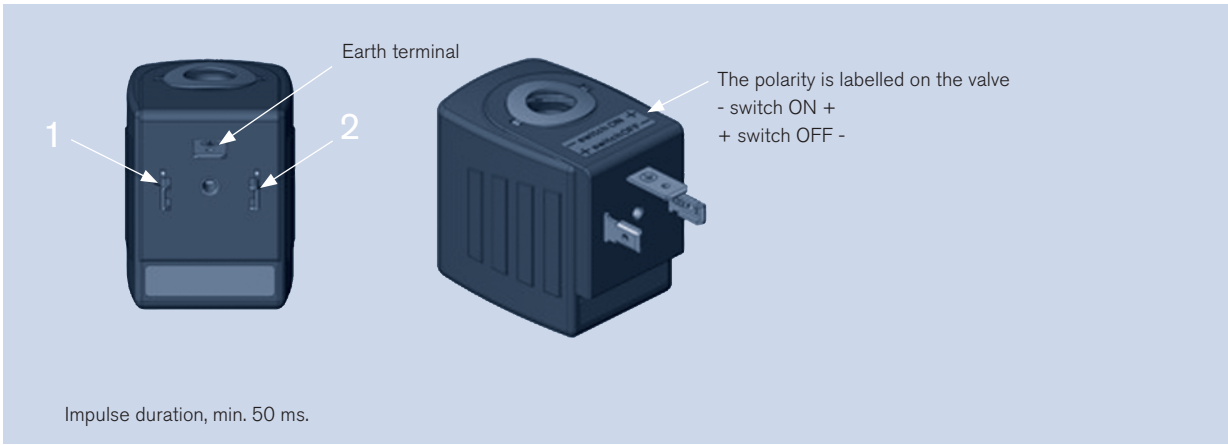
6014 impulse valve with FKM seal material and brass body (class H)

Circuit function	Port connection		Orifice [mm]	Kv value water [m ³ /h] ¹⁾	Pressure range [bar] ²⁾	Power consumption DC (hot/cold coil) [W]	Item no. per voltage [V/]	
							012/DC	024/DC
C 3/2 way valve, output 2 exhausted 	Brass body							
	Threaded port	G 1/8	1.5	0.07	0-16	7	209 280	209 284
			2.0	0.11	0-10	7	209 281	209 285
	Sub-base {SFB}		1.5	0.07	0-16	7	209 278	209 282
			2.0	0.11	0-10	7	209 279	209 283

¹⁾ Measured at +20 °C, 1 bar²⁾ pressure difference
²⁾ Measured as overpressure to the atmospheric pressure

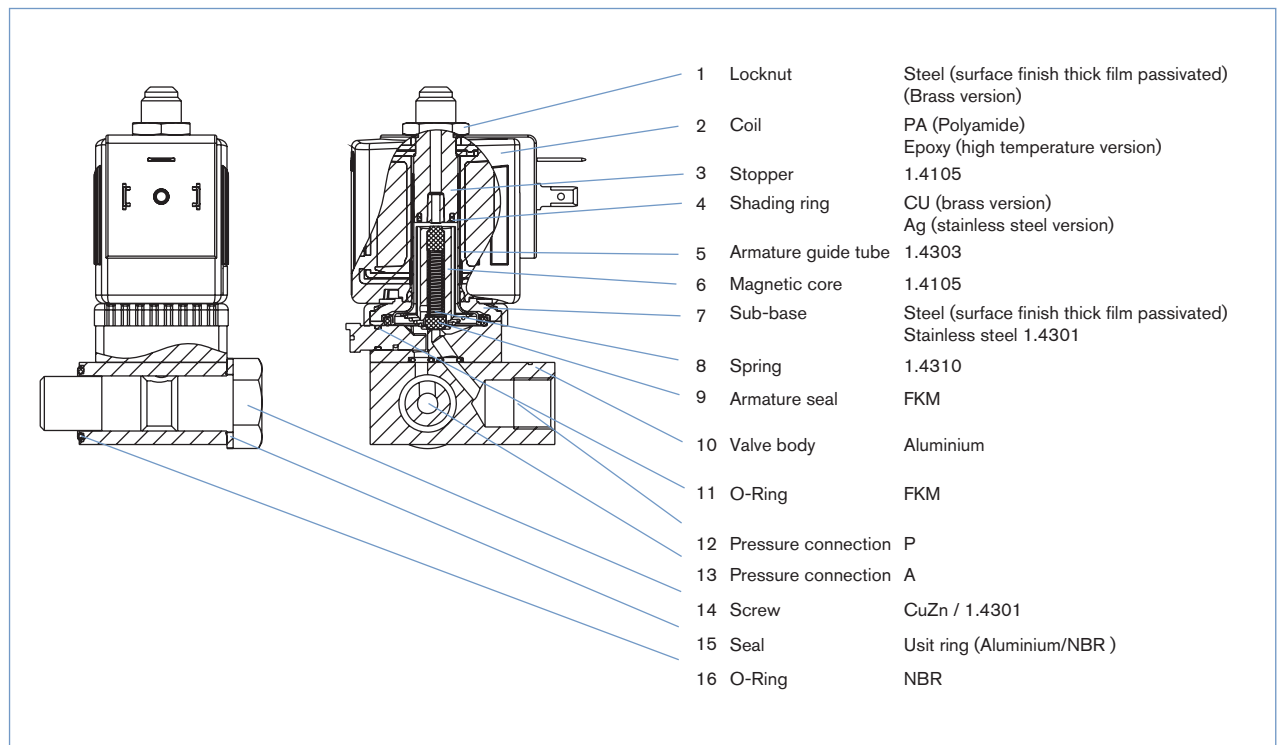
Activation of the impulse version with inverse polarity operation

The polarity is labelled on the valve	Specifications	Terminal connections
- switch ON +	valve will be opened	(+) on terminal 2 and (-) on terminal 1 (see below)
+ switch OFF -	valve will be closed	(+) on terminal 1 and (-) on terminal 2 (see below)

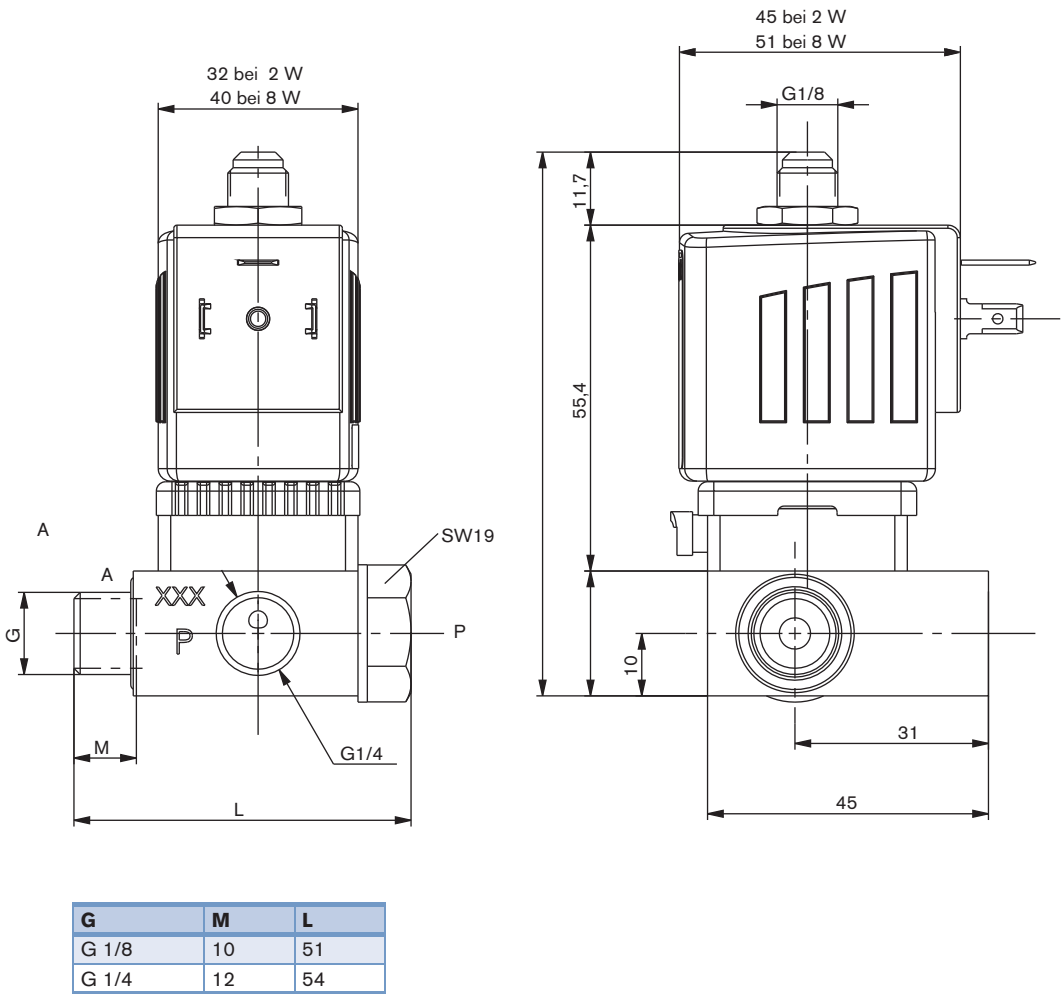


Note: Only cable plug without circuitry should be used together with impulse version!

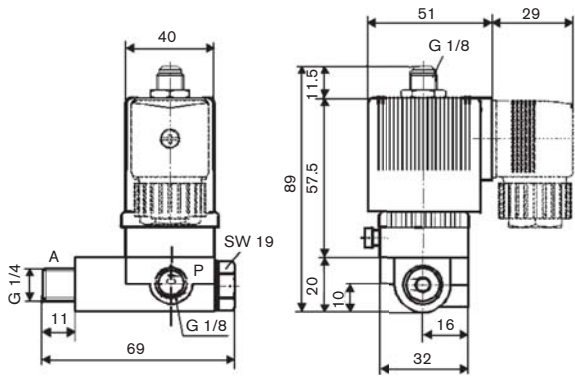
Materials for banjo version



Dimensions for banjo version

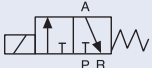


IXEF® Banjo coupler, anodised aluminium banjo bolt



Ordering chart for banjo version (other versions on requests)

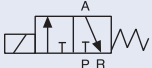
All valves with FKM seal and manual override, delivered without cable plug
Anodised aluminium banjo coupler, nickel-plated brass banjo bolt

Circuit function	Pressure inlet P (banjo coupler)	Service port A (banjo bolt)	Orifice [mm]	Q _{Nn} value air [l/min]	Material flange body	Pressure range [bar]	Power consumption [W]	Item no. per voltage/frequency [V/Hz]		
								024/DC	024/50	230/50
C 3/2 way valve NC 	G 1/4	G 1/8	1.5	75	PA	0-6	2	424 123	424 124	424 127
		G 1/4	1.5	75	PA	0-6	2	424 118	424 119	424 122
		G 1/8	2.0	120	Brass	0-10	8	424 113	424 114	424 117
		G 1/4	2.0	120	Brass	0-10	8	424 103	424 104	424 107

Please note that the cable plug has to be ordered separately, see separate datasheet for Type 2508.

Ordering chart for banjo version IXEF (other versions on requests)

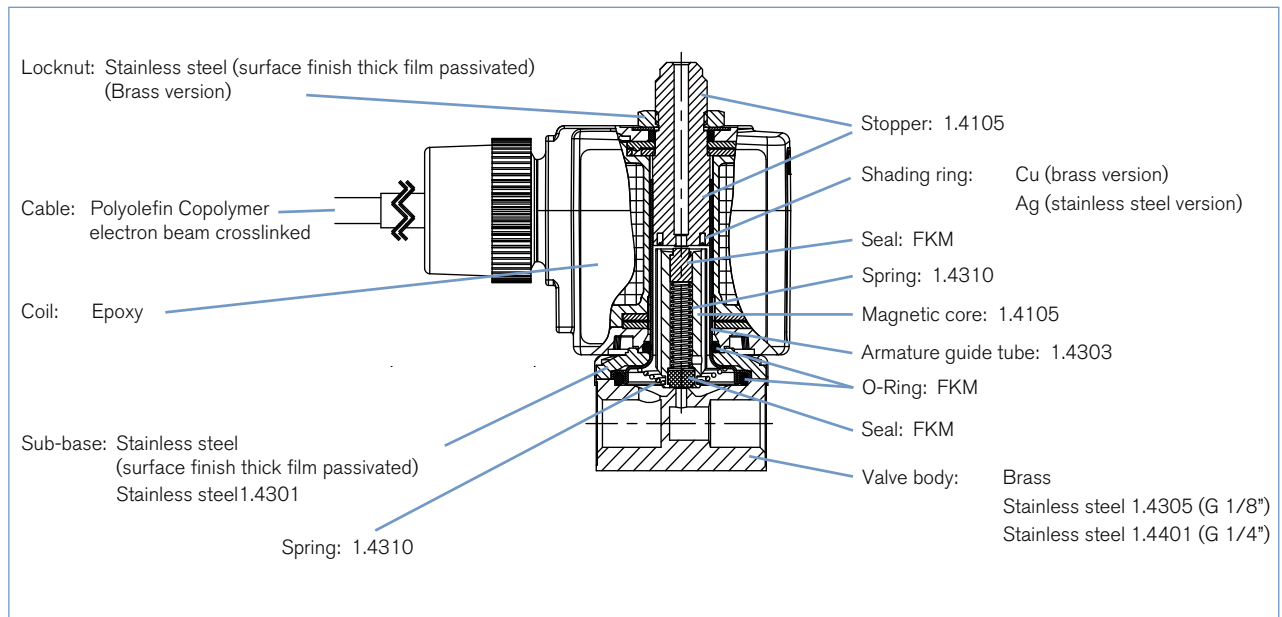
All valves with PA body, FKM seal and manual override, delivered without cable plug
IXEF® banjo coupler, anodised aluminium banjo bolt

Circuit function	Pressure inlet P (banjo coupler)	Service port A (banjo bolt)	Orifice [mm]	Q _{Nn} value air [l/min]	Material flange body	Pressure range [bar]	Power consumption [W]	Item no. per voltage/frequency [V/Hz]		
								024/DC	024/50	230/50
C 3/2 way valve NC 	G 1/8	G 1/4	1.5	75	PA	0-10	5	784 710	x	x
	G 1/8	G 1/4	2.0	120	PA	0-10	8	784 706	784 707	784 709
	G 1/8	G 1/4	2.5	174	PA	0-6	8	786 014	x	786 015

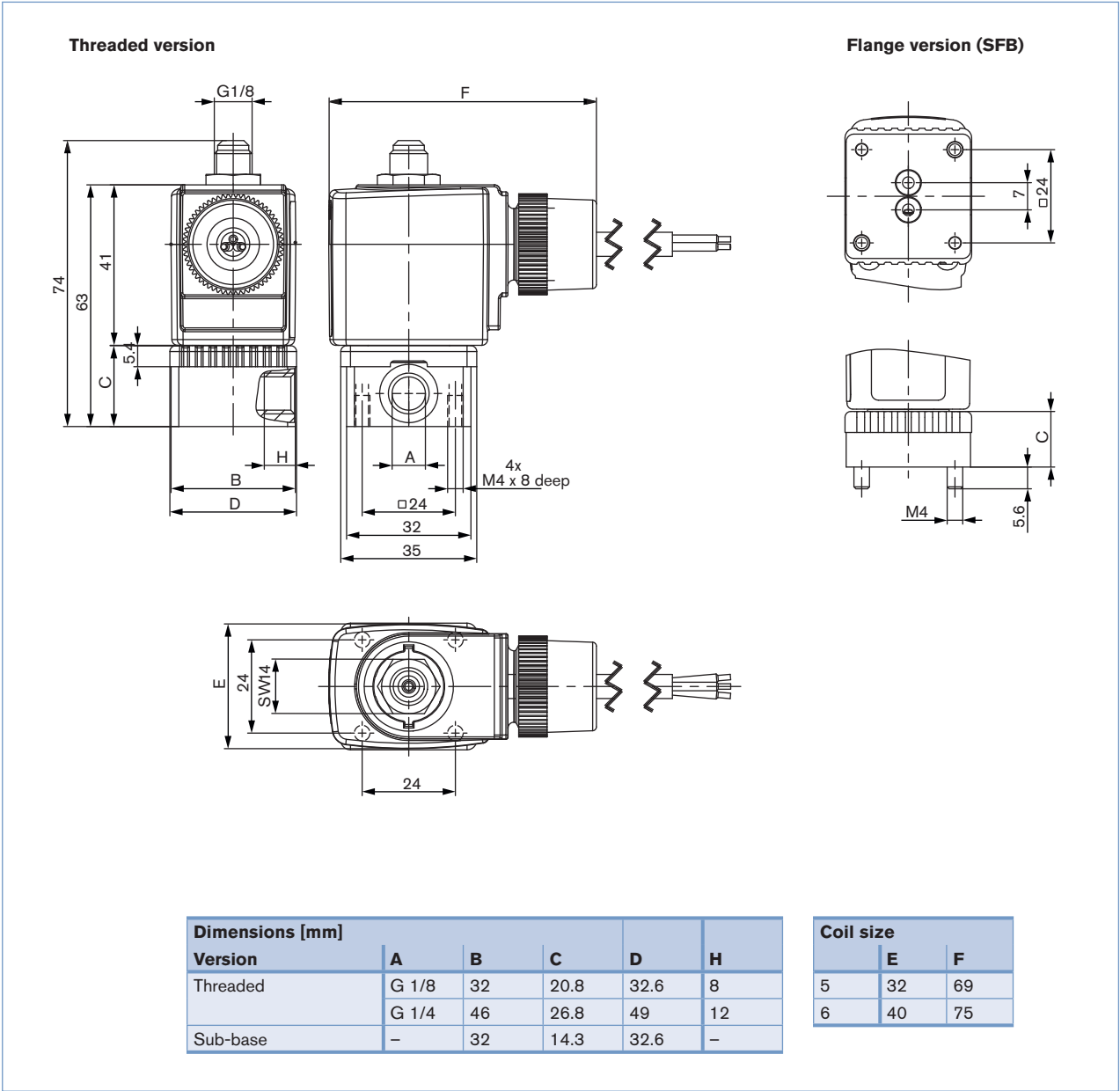
Please note that the cable plug has to be ordered separately, see separate datasheet for Type 2508.

x on request

Materials for ATEX/IECEX m cable version

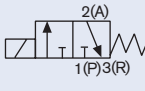


Dimensions for ATEX/IECEx m cable version

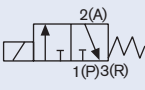
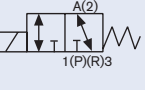


Ordering chart for Ex m valves cable version

6014 valve, Ex m II T4, with FKM seal material and sub-base (SFB) connection with 3 m moulded cable approved for block mounting, ambient temperature from -10 °C to +40 °C

Circuit function	Orifice [mm]	Port connection	Kv-value water [m³/h]	Pressure range [bar]	Body material	Effective coil power [W]	Voltage/frequency [V/Hz]	Item no. with manual override
C 	1.5	sub-base (SFB)	0.07	0-10	PA	7	024/UC	278 651
							230/UC	278 653
	2.0	sub-base (SFB)	0.11	0-6	Brass	7	024/UC	278 655
							230/UC	278 656
					Brass	7	024/UC	278 658
							230/UC	278 659

6014 valve, Ex m II T4, with FKM seal material and threaded connection with 3 m moulded cable approved for single mounting, ambient temperature from -10 °C to +55 °C

Circuit function	Orifice [mm]	Port connection	Kv-value water [m³/h]	Pressure range [bar]	Body material	Effective coil power [W]	Voltage/frequency [V/Hz]	Item no. without manual override	Item no. with manual override
C 	2.0	G 1/8	0.11	0-10	Brass	9	024/UC	278 637	278 645
							230/UC	278 638	278 646
		G 1/4	0.11	0-10	Stainless steel	9	024/UC	278 660	x
							230/UC	278 661	x
		G 1/4	0.11	0-10	Brass	9	024/UC	278 639	278 647
							230/UC	278 641	278 649
	2.5	G 1/8	0.16	0-6	Stainless steel	9	024/UC	278 662	x
							230/UC	278 663	x
		G 1/4	0.16	0-6	Brass	9	024/UC	x	x
							230/UC	x	x
		G 1/4	0.16	0-6	Brass	9	024/UC	278 643	278 673
							230/UC	278 644	x
T 	1.5	G 1/8	0.07	0-7	Brass	9	024/UC	278 650	x
							230/UC	x	x
					Stainless steel	9	024/UC	278 664	x
							230/UC	278 665	x
		G 1/4	0.07	0-7	Brass	9	024/UC	x	x
							230/UC	x	x
					Stainless steel	9	024/UC	278 666	x
							230/UC	x	x

x on request

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

ATEX and IECEx approval for coils with fixed cable outlet

ATEX: PTB 14 ATEX 2023 X

IECEx: IECEx PTB 14.0049 X

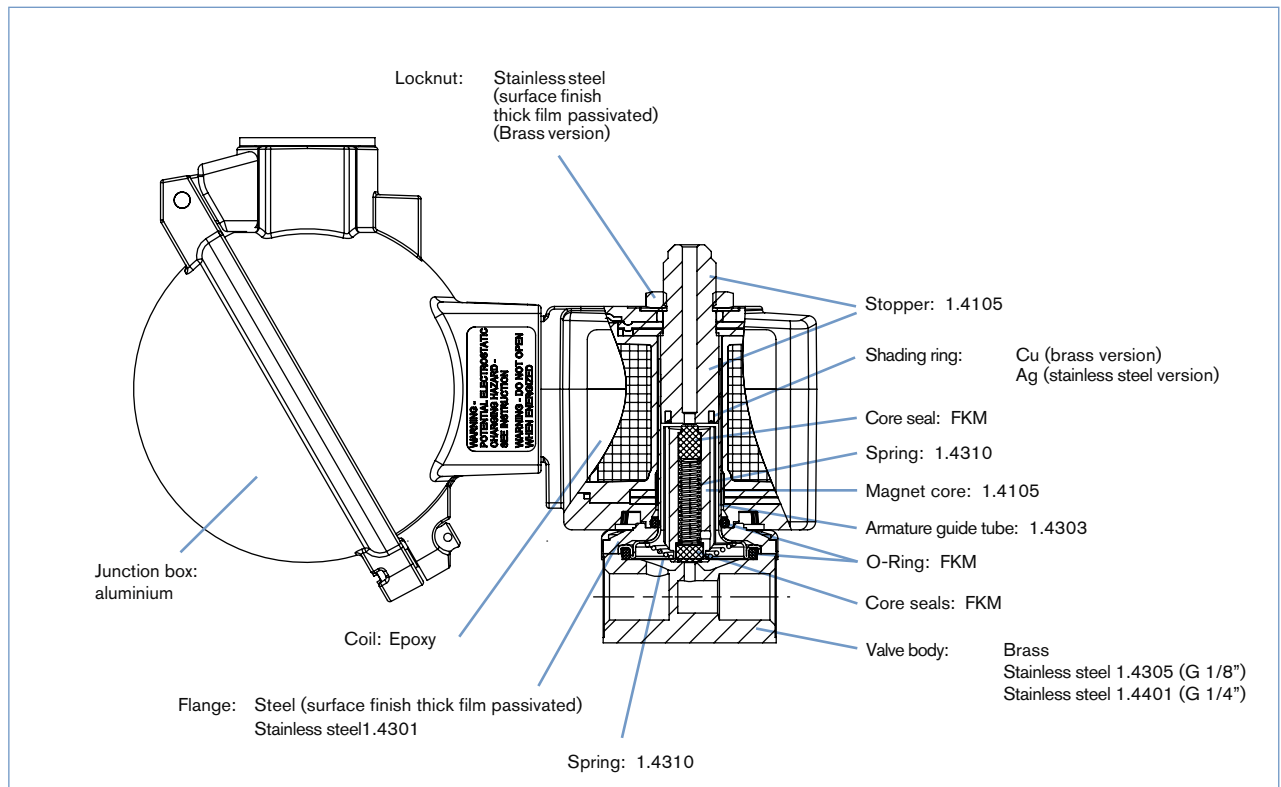
II 2G Ex mb IIC T4 Gb

Ex mb IIC T4 Gb

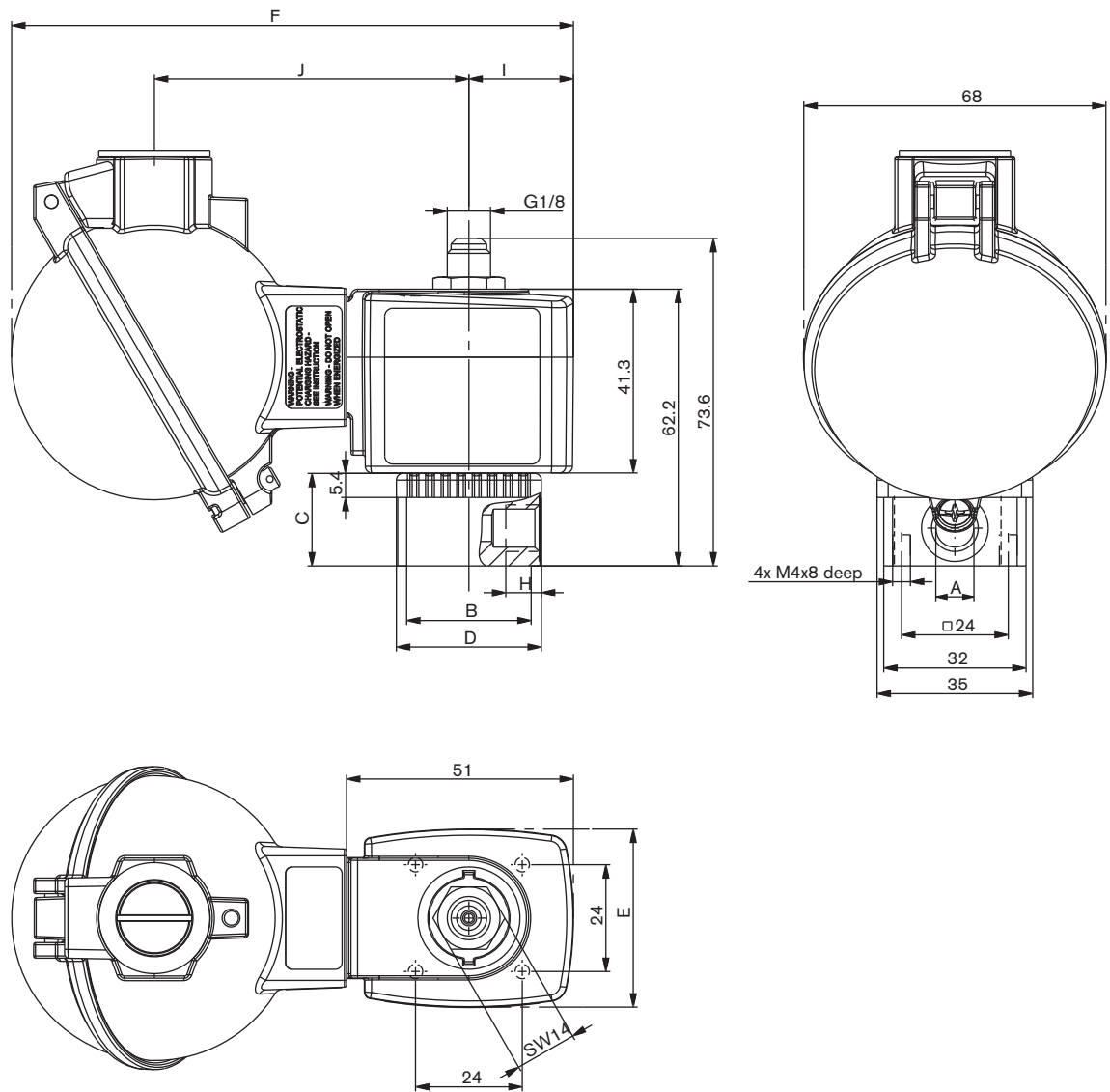
II 2D Ex mb IIIC T135 °C Db

Ex mb IIIC T135 °C Db

Materials for ATEX/IECEX m junction box version



Dimensions for ATEX/IECEx m junction box version

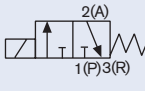


Dimensions [mm]					
Version	A	B	C	D	H
Threaded	G 1/8	32	20.8	32.6	8
	G 1/4	46	26.8	49	12
Flange	–	32	14.3	32.6	–

Coil size	E [mm]	F	I	J
5	32	120.3	20.5	69
6	40	126.3	23.5	70.7

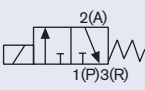
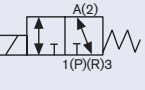
Ordering chart for Ex m valves junction box version

6014 valve, Ex m II T4, with seal material FKM and flange connection (SFB) Junction box for block mounting available, ambient temperature from -10 °C to +40 °C

Circuit function	Orifice [mm]	Port connection	Kv value water [m³/h]	Pressure range [bar]	Body material	Coil effective power	Voltage/Frequency [V/Hz]	Item no. with manual override
C 	1.5	sub-base (SFB)	0.07	0-10	PA	7	024/UC	288 562
					Brass	7	230/UC	288 563
	2.0	sub-base (SFB)	0.11	0-6	Brass	7	024/UC	x
							230/UC	x
							024/UC	x
							230/UC	x

x on request

6014 valve, Ex m II T4, with seal material FKM and threaded connection with junction box only for single mounting available, ambient temperature form -10 °C to +55 °C

Circuit function	Orifice [mm]	Port connection	Kv value water [m³/h]	Pressure range [bar]	Body material	Coil effective power	Voltage/Frequency [V/Hz]	Item no. without manual override	Item no. with manual override
C 	2.0	G 1/8	0.11	0-10	Brass	9	024/UC	288 470	288 491
					Stainless steel	9	024/UC	288 488	x
					Stainless steel	9	230/UC	288 497	x
		G 1/4	0.11	0-10	Brass	9	024/UC	288 471	288 475
					Stainless steel	9	230/UC	288 516	288 519
					Stainless steel	9	024/UC	288 486	x
	2.5	G 1/8	0.16	0-6	Brass	9	024/UC	288 572	x
					Brass	9	230/UC	288 505	x
		G 1/4	0.16	0-6	Brass	9	024/UC	288 498	288 476
					Brass	9	230/UC	288 575	288 479
T 	1.5	G 1/8	0.07	0-7	Brass	9	024/UC	288 511	x
					Stainless steel	9	230/UC	x	x
					Stainless steel	9	024/UC	x	x
					Stainless steel	9	230/UC	x	x
		G 1/4	0.07	0-7	Brass	9	024/UC	x	x
					Stainless steel	9	230/UC	x	x
					Stainless steel	9	024/UC	288 489	x
					Stainless steel	9	230/UC	288 506	x

x on request

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

ATEX and IECEx approval for the assembly of the coil and the junction box

ATEX: EPS 16 ATEX 1046 X

IECEX: IECEx EPS 16.0021 X

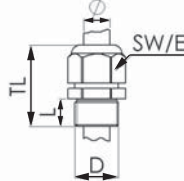
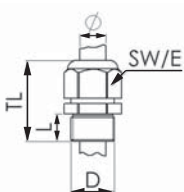
II 2G Ex eb mb IIC T4 Gb

Ex eb mb IIC T4 Gb

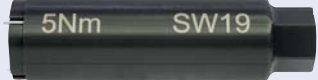
II 2D Ex mb tb IIIC T130 °C Db

Ex mb tb IIIC T130 °C Db

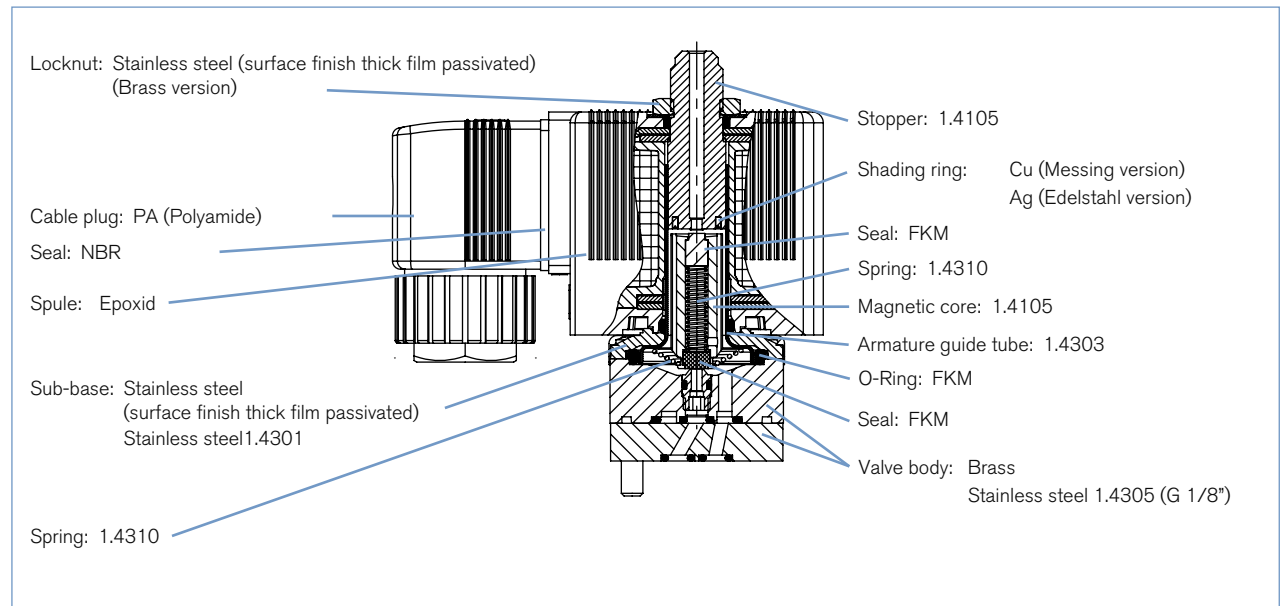
Ex-Cable glands (not included in delivery)

Ex Approvals															
Photo	Description	Certification	Identification	Item no	Drawing										
	Brass. nickel-plated, 6-13 mm	PTB 04 ATEX 1112 X, IECEx PTB 13.0027X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68,	773 278	 <table><tr><td>TL</td><td>29-37 mm</td></tr><tr><td>L</td><td>6 mm</td></tr><tr><td>D</td><td>20</td></tr><tr><td>SW</td><td>24 mm</td></tr><tr><td>E</td><td>27 mm</td></tr></table>	TL	29-37 mm	L	6 mm	D	20	SW	24 mm	E	27 mm
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	773 277	 <table><tr><td>TL</td><td>36-45 mm</td></tr><tr><td>L</td><td>10 mm</td></tr><tr><td>D</td><td>20</td></tr><tr><td>SW</td><td>24 mm</td></tr><tr><td>E</td><td>28 mm</td></tr></table>	TL	36-45 mm	L	10 mm	D	20	SW	24 mm	E	28 mm
TL	36-45 mm														
L	10 mm														
D	20														
SW	24 mm														
E	28 mm														

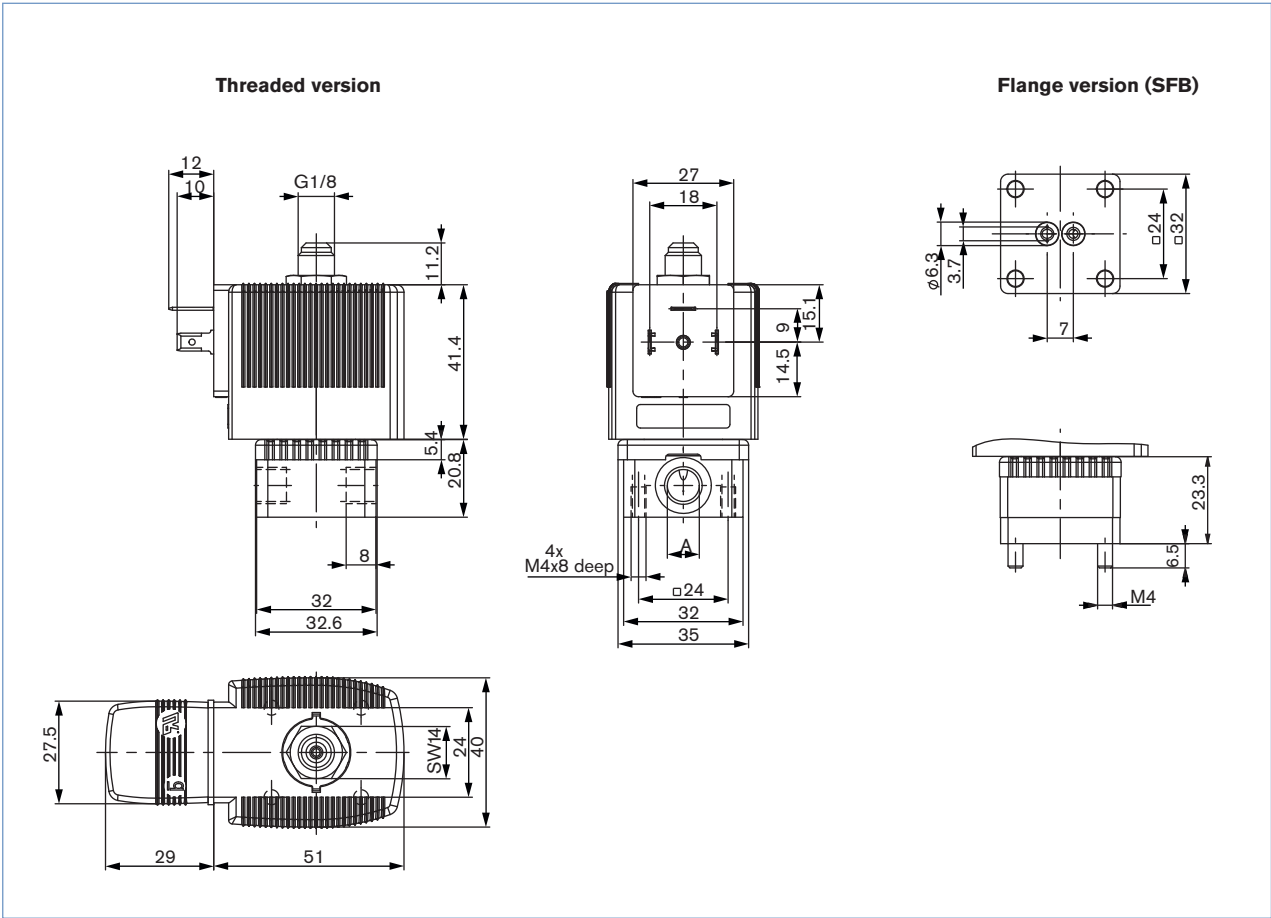
Special tool to turn the junction box (not included in delivery)

Photo	Description	Item no.
	Set SC02-AC10 Special wrench Service Manual	293 488

Materials for ATEX/IECEX ia

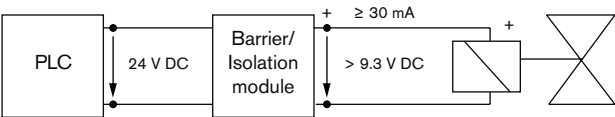


Dimensions for ATEX/IECEX ia [mm]



Electrical data

Type of protection EEx ia IIC T6 acc. to PTB-No. Ex-96.D.2010



Note: The valve is designed to operate on 24 V DC outputs through an intermediary intrinsically safe apparatus (isolating block or barrier)..

Function values for switching valve		
	at +20 °C	at +55 °C
Minimum switching current	30 mA	30 mA
Nominal resistance coil	310 Ω	360 Ω
Minimum terminal voltage	9.3 V	10.8 V

Max. allowable values acc. to the certificate of conformity	
Ui	28 V
Ii	120 mA
Pi	1,1 W
Ambient temperature	+60 °C at T6 +75 °C at T5

Technical data - ATEX/IECEEx -ia

Response times

Response times	
Opening [ms]	Closing [ms]
20	22

Response times [ms]:

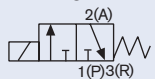
Measured at valve outlet at 6 bar and +20 °C

Opening: Pressure build-up 0 to 90%,

Closing: Pressure drop 100 to 10%

Ordering chart - ATEX/IECEEx -ia

6014 valve; Ex ia II T6 with FKM seal material only for approved single mounting, cable plug acc. to DIN EN 175301-803 Form A, ambient temperature from -10 °C to 60 °C for T6, -10 to -75 °C for T5

Circuit function	Orifice [mm]	QNn-value air [l/min]	Pressure range [bar]	Body material	Port connection	Item no. with manual override
	0.9	30	Vac. to 10	Stainless steel	Bürkert sub-base (SFB)	144 540
					G 1/8	147 226
				Brass	Bürkert sub-base (SFB)	147 227
					G 1/8	146 214

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

Explosion-proof approvals

ATEX: PTB 01 ATEX 2101 0102

II 2G Ex i IIC T6 Gb

II 2D Ex i IIC T85 °C Db

PTB IECEX12.0040

Ex ia IIC T6 Gb

Ex ia IIC T80 °C Db

Ordering chart for accessories

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

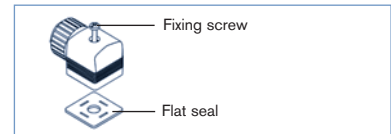
	Circuit	Voltage / frequency	Item no.
	without circuitry	0 - 250 V	438 574

Accessory parts	Features				Item no.
Single manifold	in aluminium black anodized				005 020
Multiple manifold	in aluminium	Hole spacing A [mm]	Total length B [mm]	Hole spacing C [mm]	
	2 valves	57	65	–	005 023
	3 valves	90	98	–	005 286
	4 valves	123	131	–	005 287
	5 valves	156	164	57	005 035
	6 valves	189	197	57	005 038
	8 valves	255	263	90	005 386
	10 valves	321	329	90	005 764
Covering plate	with plugs and O-ring, for closing off unused valve positions				005 630

Ordering chart for accessory

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

	Circuitry	Voltage/ Frequency	Item no.
	None (standard)	0 - 250 V AC/DC	008 376
	with LED	12 - 24 V AC/DC	008 360
	with LED and varistor	12 - 24 V AC/DC	008 367
	with LED and varistor	200- 240 V	008 369
	with inverter ¹⁾	24 V DC	on request
	further versions see datasheet Type 2508		



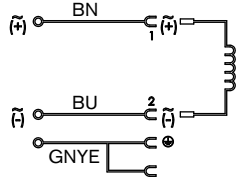
The delivery of a cable plug includes the flat seal and the fixing screw. For other cable plug versions, see separate datasheet Type 2508. Click on the box "More info." and you will come to our website for this product where you can download the datasheet.

**More
info.**

¹⁾ The inverter plug includes an electronic which is specially adapted for an electrical control with 3 wires
Input 3 wire technology, common "-" polarity, two split "+" polarity.
Output suitable for impulse model for Type 6013/6014

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

Meets the requirements of ATEX category 3 GD

		Cable length [mm]	Item no. [in mm]
		12000	260 893
		5000	260 892
		3000	260 891
		300	260 890

i Further versions on request



Materials
Epoxy coil according to Form A
Seal material EPDM



Voltage
Non-standard voltages



Port connection
With banjo nut



Approvals
ATEX, UL, CSA



Additional
Orifice: 1.2 mm, 3.0 mm

To find your nearest Bürkert facility, click on the orange box → www.burkert.com

In case of special application conditions,
please consult for advice.

Subject to alterations
© Christian Bürkert GmbH & Co. KG

1604/8_EU-en_00895091