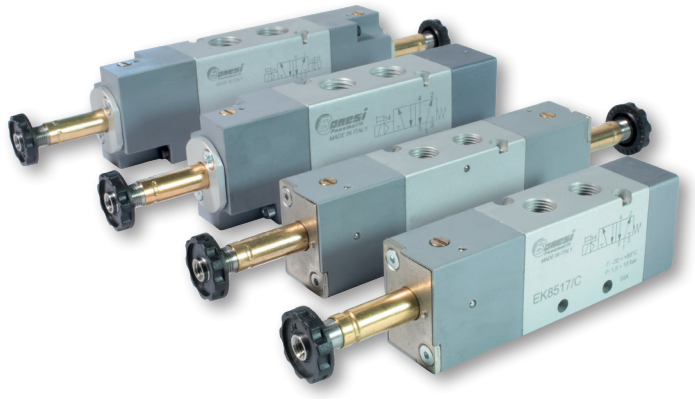
Balanced spool electropneumatic valves - K83 Series

Connections: 1/8" - 1/4"

K SERIES



- Balanced spool valves with static sealing
- Fast switching times
- Small footprint
- Anodised aluminium body and bases
- Electro-pneumatically operated
  Internal servo-pilot
- Possibility of series assembly
- ATEX 2014/34/EU certificates available

TECHNICAL FEATURES			
Function		5/2 - 5/3	
Operation		Electropneumatic: Internal servo-pilot - Monostable mechanical and pneumatic, bistable spring return, three positions	
Materials		Body, base and cover in anodised aluminium alloy - Internal components in steel - aluminium - brass NBR gaskets	
Note on materials		Compliant with REACH (1907/2006/EC and subsequent amendments)	
Connections		1/8" - 1/4" Gas	
Threads		Cylindrical gases (BSPP)	
Operating temperature		0°C ÷ 80°C (-20°C with dry air, to avoid ice formation)	
Operating pressure		2 ÷ 10 bar	
Pilot actuation pressure		2 bar	
Air flow rate		1/8"	1/4"
Nominal diameter		5mm	7.5mm
Supply pressure	5 bar	500 Nl/min	1000 Nl/min
(with ΔP 1 bar)	6 bar	550 Nl/min	1100 Nl/min
	7 bar	600 Nl/min	1200 Nl/min
		See flow diagram page 3.1.05.21	
Fluid		Filtered air, lubrication-free, compliant with ISO 8573-1:2010 [7:4:4]	
Lubrication		Not required (if required in the pneumatic circuit, it must be continuous)	

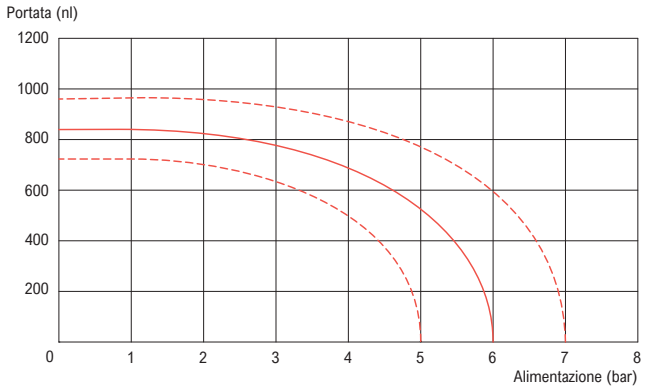
COILS ELECTRICAL CHARACTERISTICS		
Coil type	Type "C" (22mm)	
Operating voltage	24 VDC	24, 110, 220 VAC
Power (max.)	4.8 W	5.5 VA
Tolerance	± 10%	
Protection class	IP54 / IP65	
Other features	See from p. 3.3.05.10	

ATEX CERTIFICATION	
Valve marking	CE Ⓔx II 2G Ex h IIC T6 Gb (Zone 1 and Zone 2) CE Ⓔx II 2D Ex h IIIC 85°C Db (Zone 21 and Zone 22)
Operating pressure in ATEX environment	0.5 ÷ 10 bar
ATEX ambient temperature	-20°C ≤ Ta ≤ +60°C
CE marking	In compliance with Directive 2014/34/EU (see declaration of conformity)

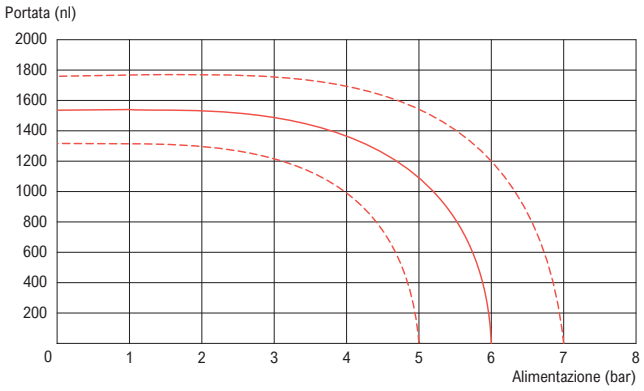
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FLOW DIAGRAMS - ELECTROPNEUMATICALLY OPERATED VALVES

FLOW RATE DIAGRAM - SIZE 1/8"

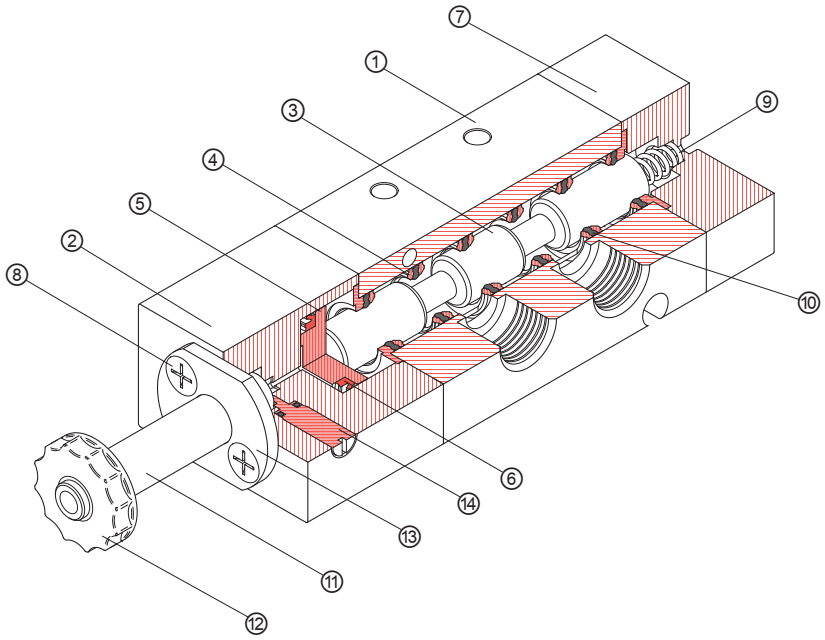


FLOW RATE DIAGRAM - SIZE 1/4"



MATERIALS - ELECTROPNEUMATICALLY OPERATED VALVES

POS	DESCRIPTION	MATERIALS	POS	DESCRIPTION	MATERIALS
①	Body	Anodised drawn aluminium	⑧	Screw	Galvanised steel
②	Cover	Reinforced polyarylamide	⑨	Spring	Harmonic steel
③	Spool	Anodised aluminium	⑩	Sealing gasket	Nitrile rubber (NBR)
④	Spacers	OT58 brass	⑪	Electropilot	Brass - Magnetic stainless steel
⑤	Piston	Anodised aluminium	⑫	Ring nut	Acrilonitrile butadiene stirene ABS
⑥	Piston gasket	PUR 85 ShA	⑬	Mounting plate	Anodised aluminium
⑦	Base	Anodised drawn aluminium	⑭	Manual intervention	Brass OT58 - NBR



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CODING KEY - VALVES ELECTRO-PNEUMATICALLY OPERATED VALVES

Operation — **EK**

- **EK** = Electropneumatic internal servo-pilot Standard connections
- **EKN** = Electropneumatic internal servo-pilot NAMUR Connections

Size — **4**

- **8** = 1/8" Gas
- **4** = 1/4" Gas

Function — **5**

- **3** = 3/2 Normally closed
- **5** = 5/2
- **6** = 5/3 Open centres
- **7** = 5/3 Closed centres

Version — **12**

- **11** = Monostable Pneumatic spring return
- **17** = Monostable Mechanical spring return
- **21** = Electropneumatic bistable
- **22** = Differential bistable electropneumatic

Electropilot — **/C**

- **/C** = Electropilot Ø9 For type C coils

Certification — □

- **NULL** = None
- **EX** = For compressed air in atmosphere potentially explosive (ATEX)

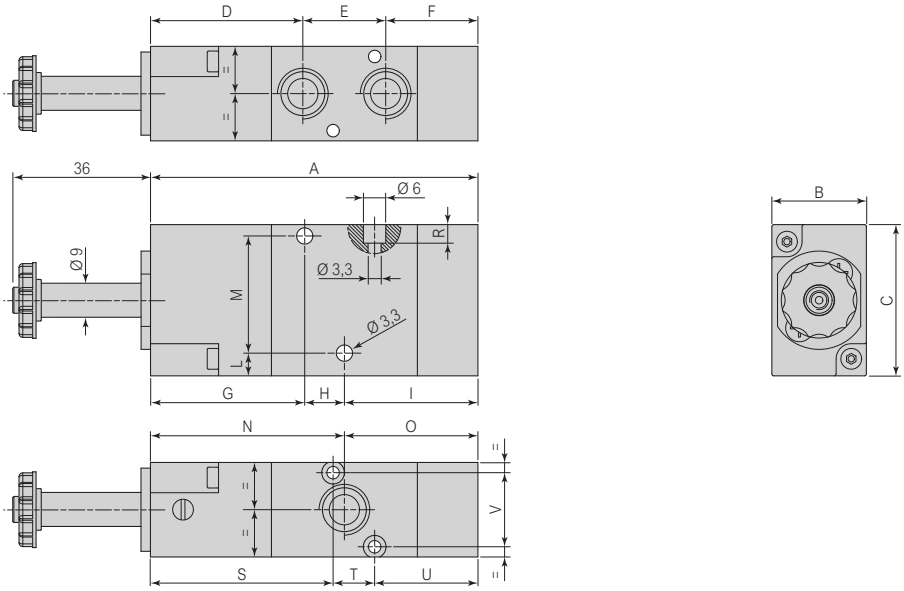
POSSIBLE CONFIGURATIONS

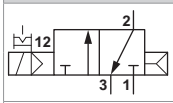
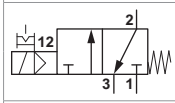
Operation	Size	Function	Version	Electropilot	Certification
EK Electropneumatic external servo pilot Standard connections	**8** 1/8" Gas **4** 1/4" Gas	**3** 3/2 normally closed **5** 5/2	**11** Monostable Pneumatic return **17** Monostable Mechanical return **21** Electropneumatic bistable **22** Differential bistable electropneumatic	**/C** Electropilot Ø9 For type C coils	□ None **EX** ATEX
		6 5/3 Open centres **7** 5/3 Closed centres	**21** Electropneumatic bistable	**/C** Electropilot Ø9 For type C coils	□ None **EX** ATEX
EKN Electropneumatic external servo pilot NAMUR Connections	**4** 1/4" Gas	**5** 5/2	**11** Monostable Pneumatic return **17** Monostable Mechanical return **21** Electropneumatic bistable **22** Differential bistable electropneumatic	**/C** Electropilot Ø9 For type C coils	□ None **EX** ATEX

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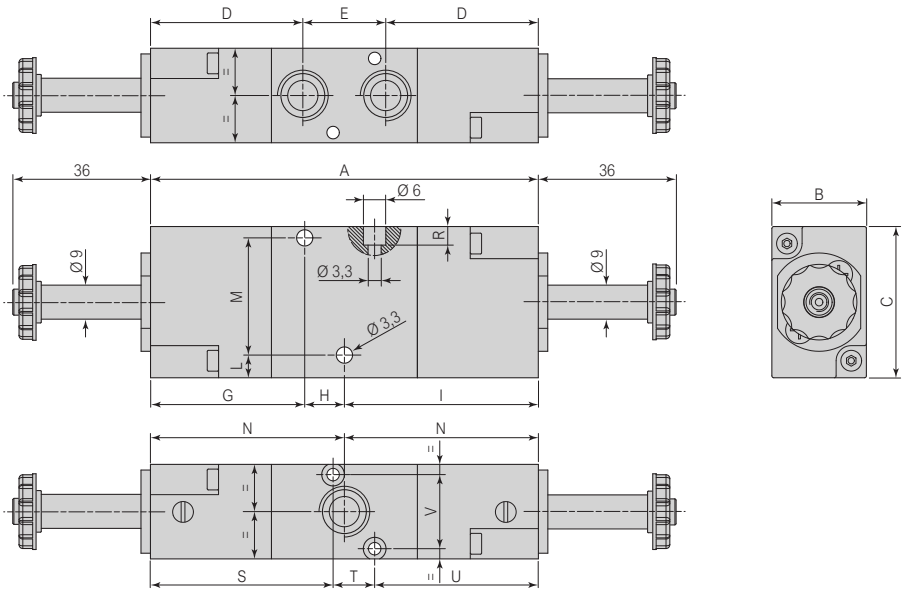
DIMENSIONS - 3/2 VALVES ELECTRO-PNEUMATICALLY OPERATED

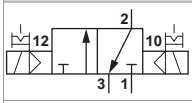
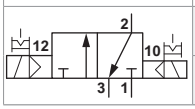
ELECTROPNEUMATIC OPERATION - NORMALLY CLOSED - MONOSTABLE WITH PNEUMATIC / MECHANICAL SPRING RETURN



Symbol	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	R	S	T	U	V
	Gas 1/8"	EK8311/C	83.5	22	32	37.75	18	27.75	38.5	8.25	36.75	4.5	20.1	46.75	36.75	3	44.5	7.75	31.25	17.4
	Gas 1/4"	EK4311/C	92.6	25	40	40.3	22	30.3	40.8	10.5	41.3	6	31	51.3	41.3	4	48.3	11	33.3	11
	Gas 1/8"	EK8317/C	78.5	22	32	37.75	18	22.75	38.5	8.25	31.75	4.5	20.1	46.75	31.75	3	44.5	7.75	26.25	17.4
	Gas 1/4"	EK4317/C	86.6	25	40	40.3	22	24.3	40.8	10.5	35.3	6	31	51.3	35.3	4	48.3	11	28.3	11

ELECTROPNEUMATIC OPERATION - BISTABLE - DIFFERENTIAL BISTABLE

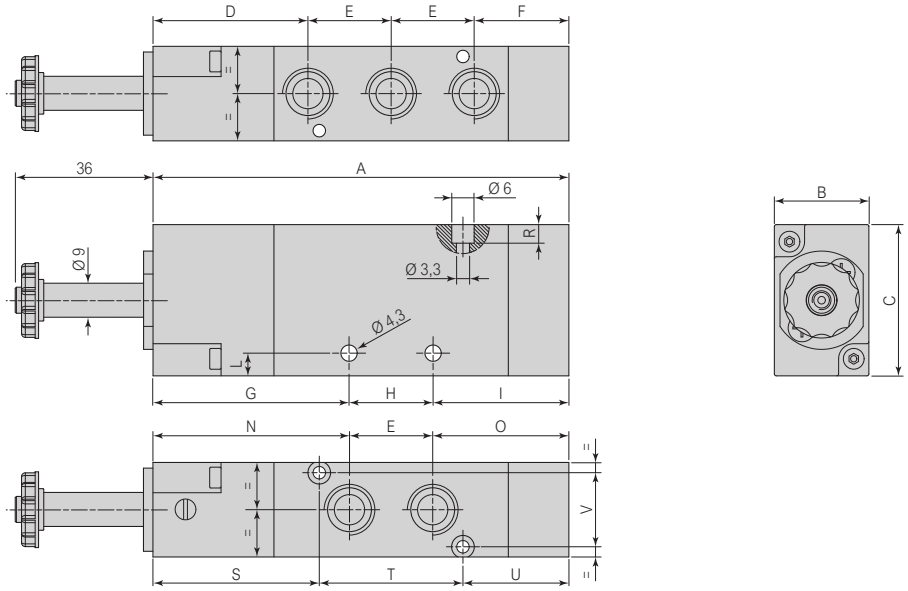


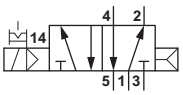
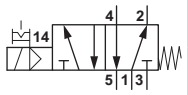
Symbol	Connections	Code	A	B	C	D	E	G	H	I	L	M	N	R	S	T	U	V
	Gas 1/8"	EK8321/C	93.5	22	32	37.75	18	38.5	8.25	46.75	4.5	20.1	46.75	3	44.5	7.75	41.25	17.4
	Gas 1/4"	EK4321/C	102.6	25	40	30.3	22	40.8	10.5	51.3	6	31	51.3	4	48.3	11	43.3	11
	Gas 1/8"	EK8322/C	93.5	22	32	37.75	18	38.5	8.25	46.75	4.5	20.1	46.75	3	44.5	7.75	41.25	17.4
	Gas 1/4"	EK4322/C	102.6	25	40	30.3	22	40.8	10.5	51.3	6	31	51.3	4	48.3	11	43.3	11

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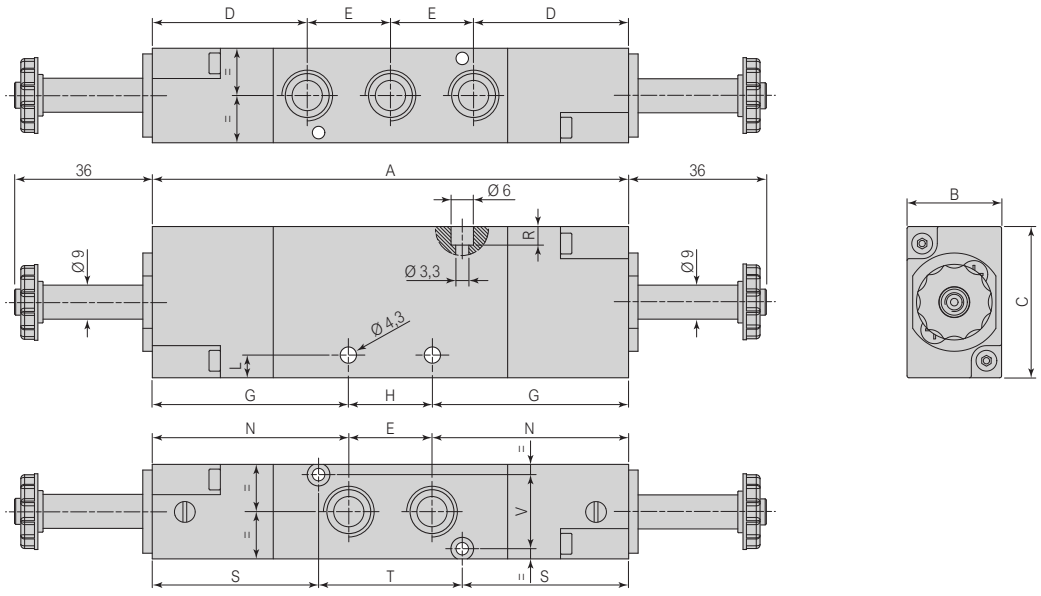
DIMENSIONS - 5/2 VALVES ELECTRO-PNEUMATICALLY OPERATED

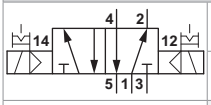
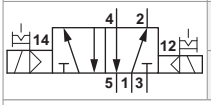
ELECTROPNEUMATIC OPERATION - MONOSTABLE WITH PNEUMATIC / MECHANICAL SPRING RETURN



Symbol	Connections	Code	A	B	C	D	E	F	G	H	I	L	N	O	R	S	T	U	V
	Gas 1/8"	EK8511/C	101.5	22	32	37.75	18	27.75	46.75	18	36.75	4.5	46.75	36.75	3	40.75	30	30.75	17.4
	Gas 1/4"	EK4511/C	116	25	40	41	22	31	52	22	42	6	52	42	4.5	44	38	34	19.6
	Gas 1/8"	EK8517/C	96.5	22	32	37.75	18	22.75	46.75	18	31.75	4.5	46.75	31.75	3	40.75	30	25.75	17.4
	Gas 1/4"	EK4517/C	110	25	40	41	22	25	52	22	36	6	52	36	4.5	44	38	28	19.6

ELECTROPNEUMATIC OPERATION - BISTABLE - DIFFERENTIAL BISTABLE

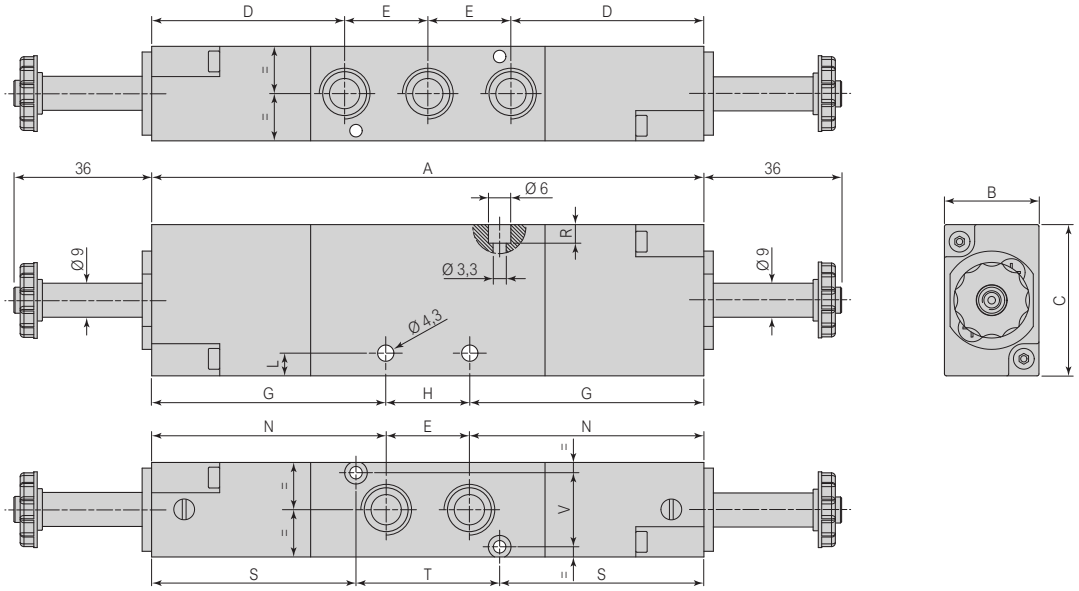


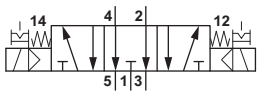
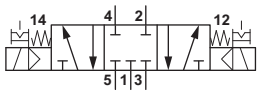
Symbol	Connections	Code	A	B	C	D	E	G	H	L	N	R	S	T	V
	Gas 1/8"	EK8521/C	111.5	22	32	37.75	18	46.75	18	4.5	46.75	3	40.75	30	17.4
	Gas 1/4"	EK4521/C	126	25	40	41	22	52	22	6	52	4.5	44	38	19.6
	Gas 1/8"	EK8522/C	111.5	22	32	37.75	18	46.75	18	4.5	46.75	3	40.75	30	17.4
	Gas 1/4"	EK4522/C	126	25	40	41	22	52	22	6	52	4.5	44	38	19.6

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DIMENSIONS - 5/3 VALVES ELECTRO-PNEUMATICALLY OPERATED

ELECTROPNEUMATIC OPERATION - THREE POSITIONS - CLOSED / OPEN CENTRES

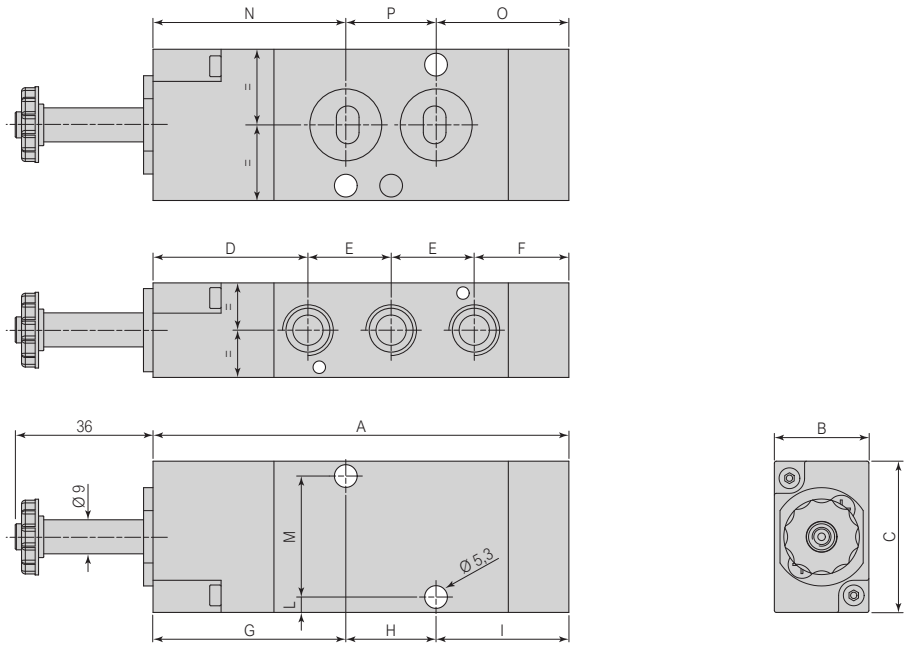


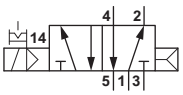
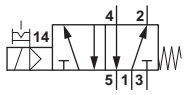
Symbol	Connections	Code	A	B	C	D	E	G	H	L	N	R	S	T	V
	Gas 1/8"	EK8621/C	111.5	22	32	37.75	18	46.75	18	4.5	46.75	3	40.75	30	17.4
	Gas 1/4"	EK4621/C	146	25	40	51	22	62	22	6	62	4.5	54	38	19.6
	Gas 1/8"	EK8721/C	111.5	22	32	37.75	18	46.75	18	4.5	46.75	3	40.75	30	17.4
	Gas 1/4"	EK4721/C	146	25	40	51	22	62	22	6	62	4.5	54	38	19.6

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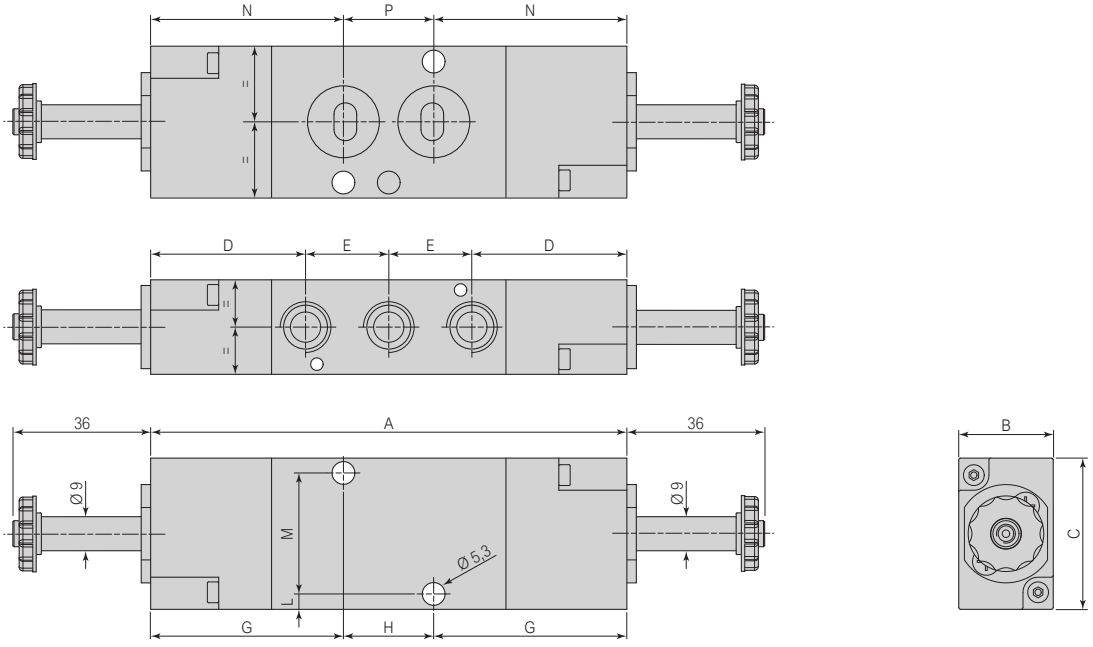
DIMENSIONS - 5/2 VALVES ELECTRO-PNEUMATICALLY OPERATED - NAMUR CONNECTIONS

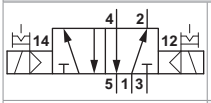
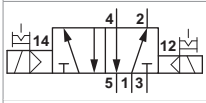
ELECTROPNEUMATIC OPERATION - MONOSTABLE WITH PNEUMATIC / MECHANICAL SPRING RETURN



Symbol	Connections	Code	A	B	C	D	E	F	G	H	I	L	M	N	O	P
	Gas 1/4"	EK4511/C	116	25	40	41	22	31	51	24	41	4	32	51	41	24
	Gas 1/4"	EK4517/C	110	25	40	41	22	25	51	24	35	4	32	51	35	24

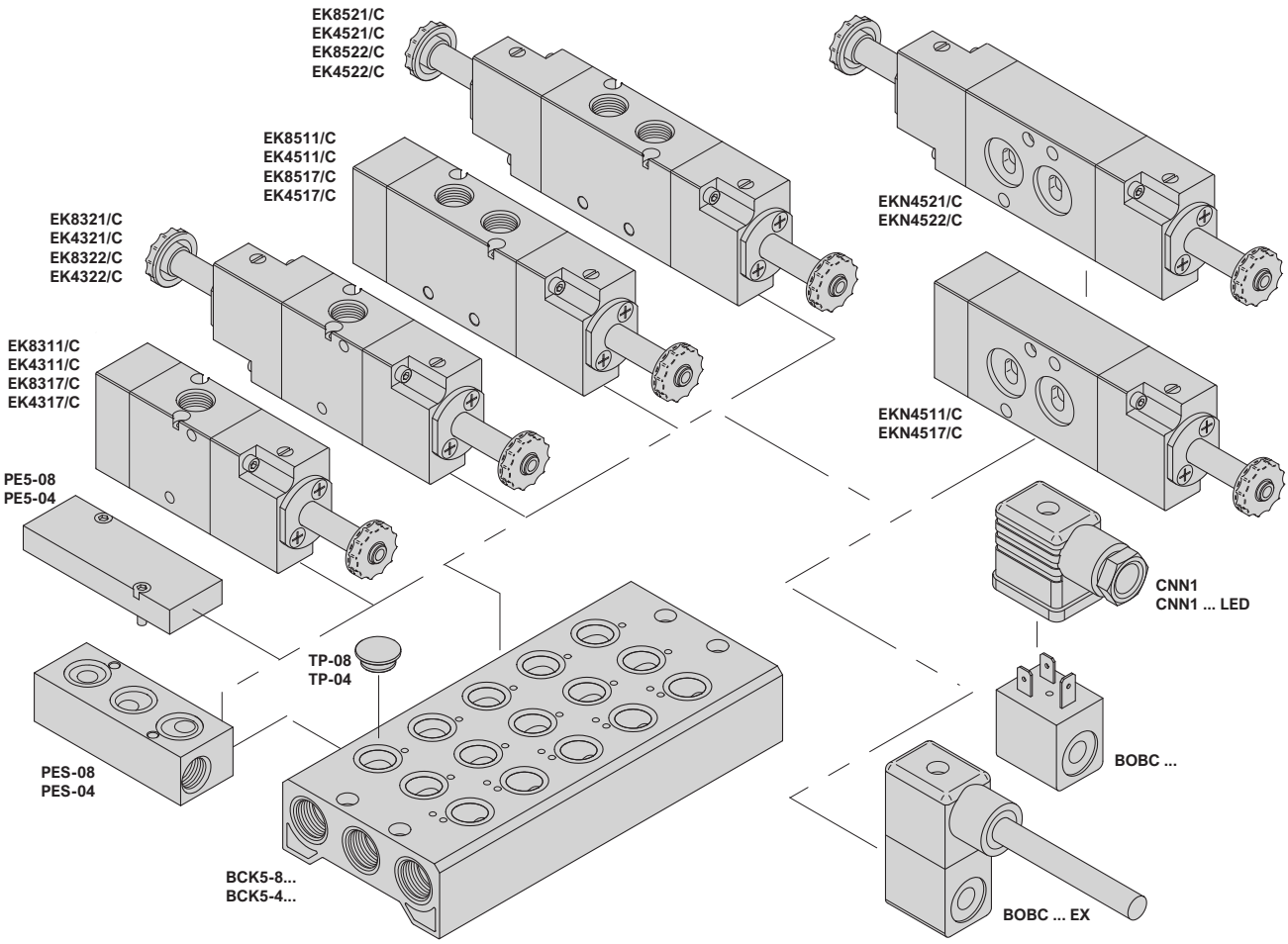
ELECTROPNEUMATIC OPERATION - BISTABLE - DIFFERENTIAL BISTABLE

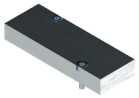


Symbol	Connections	Code	A	B	C	D	E	G	H	L	M	N	P
	Gas 1/4"	EK4521/C	126	25	40	41	22	51	24	4	32	51	24
	Gas 1/4"	EK4522/C	126	25	40	41	22	52	22	6	32	52	24

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K83 SERIES ACCESSORIES



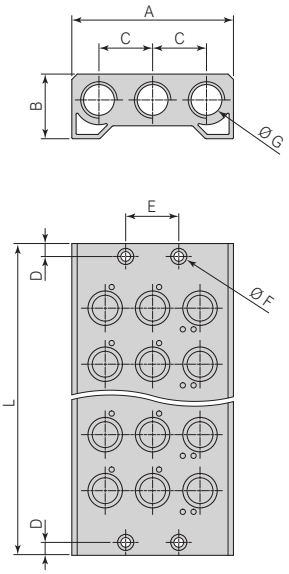
SUB-BASES BCK5...										CAP For BCK5 sub-base...	EXCLUSION PLATE For BCK5 sub-base...	SEPARATE SUPPLY For BCK5 sub-base...
												
Page 3.1.05.28										Page 3.1.05.28	Page 3.1.05.28	Page 3.1.05.28
Size	2 seats	3 seats	4 seats	5 seats	6 seats	7 seats	8 seats	9 seats	10 seats			
1/8"	BCK5-82	BCK5-83	BCK5-84	BCK5-85	BCK5-86	BCK5-87	BCK5-88	BCK5-89	BCK5-810	TP-08	PE5-08	PES-08
1/4"	BCK5-42	BCK5-43	BCK5-44	BCK5-45	BCK5-46	BCK5-47	BCK5-48	BCK5-49	BCK5-410	TP-04	PE5-04	PES-04
Anodised aluminium sub-base Zinc-plated steel fixing screws - NBR gaskets										Cap: Anodised aluminium NBR gasket	Plate: Anodised aluminium Screws: Galvanised steel	Plate: Anodised aluminium NBR gasket

BOBC ... Type "C" coils AC / DC	BOBC ... EX ATEX coils AC / DC	CNN1 ... Connectors for "C" type coils	CNN1 ... LED Connectors for "C" type coils
			
Page 3.1.05.29	Page 3.1.05.30	Page 3.1.05.29	Page 3.1.05.29
Coating in NYLON + GLASS FIBRES	Coating in Self-extinguishing PA + GLASS FIBRES	PA6 GF	PA6 GF - PA12

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ACCESSORIES

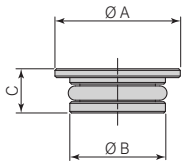
BCK5...
Sub-base



Size	Code	Seats	L	A	B	C	Ø D
Gas 1/8"	BCK5-82	2	71	60	20	20.5	Gas 1/4"
	BCK5-83	3	94				
	BCK5-84	4	117				
	BCK5-85	5	140				
	BCK5-86	6	163				
	BCK5-87	7	186				
	BCK5-88	8	209				
	BCK5-89	9	232				
	BCK5-810	10	255				
Gas 1/4"	BCK5-42	2	86	75	30	22	Gas 3/8"
	BCK5-43	3	112				
	BCK5-44	4	138				
	BCK5-45	5	164				
	BCK5-46	6	190				
	BCK5-47	7	216				
	BCK5-48	8	242				
	BCK5-49	9	268				
	BCK5-410	10	294				

Anodised aluminium sub-base - Zinc-plated steel fixing screws - NBR gaskets / 1 piece per pack

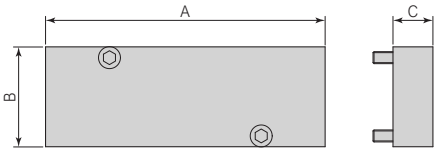
TP ..
Cap for BCK5 sub-base...



Size	Code	Ø A	Ø B	C
Gas 1/8"	TP-08	12.6	7.9	6
Gas 1/4"	TP-04	15.5	11.9	5.5

Anodised aluminium cap - NBR gasket / 1 piece per pack

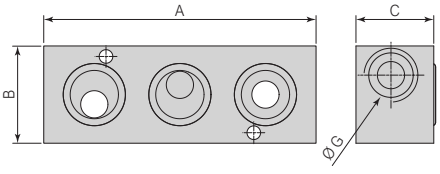
EXCLUSION PLATE
For BCK5 sub-bases...



Size	Code	A	B	C
Gas 1/8"	PE5-08	60	22	10
Gas 1/4"	PE5-04	70	25	15

Anodised aluminium plate - Zinc-plated steel fixing screws / 1 piece per pack

SEPARATE POWER PLATE
For BCK5 sub-bases...



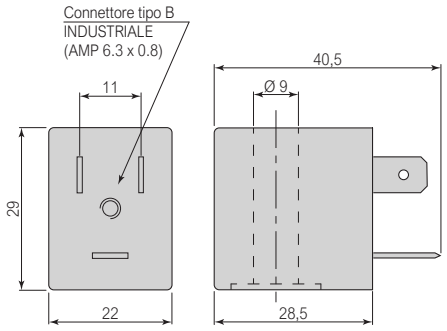
Size	Code	A	B	C	Ø G
Gas 1/8"	PES-08	60	22	10	Gas 1/8"
Gas 1/4"	PES-04	70	25	15	Gas 1/4"

Anodised aluminium plate - NBR gaskets / 1 piece per pack

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"C" type COILS (22 mm)

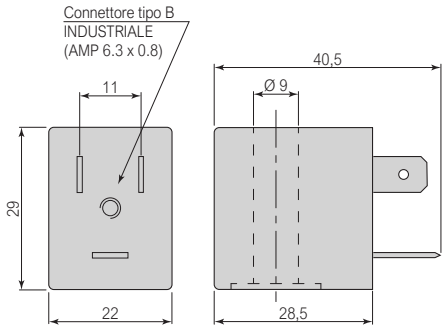
BOBC ...
Direct current coils



Technical features	
Code	BOBC024DC
Operating voltage	24 VDC
Power (max.)	4.8 W
Voltage tolerance	±10% (of nominal voltage)
Insulation class	155°C (F)
Wire insulation class	200°C (H)
Insertion duration	100% (at 20°C)
Electrical connection	INDUSTRIAL (AMP 6.3 x 0.8) form B
Protection class	IP54 (with connector) IP65 (with connector and suitable gaskets)
Material	NYLON + Fibreglass coating

BOBC... / 1 piece per pack

BOBC ...
AC coils

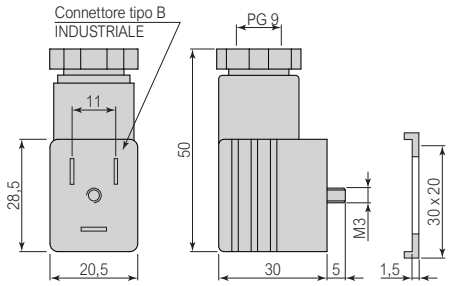


Technical features				
Code	BOBC024AC	BOBC110AC	BOBC220AC	
Operating voltage	24 VAC	110 VAC	220 VAC	
Power (max.)	5.5 VA			
Voltage tolerance	±10% (of nominal voltage)			
Insulation class	155°C (F)			
Wire insulation class	200°C (H)			
Insertion duration	100% (at 20°C)			
Electrical connection	INDUSTRIAL (AMP 6.3 x 0.8) form B			
Protection class	IP54 (with connector) IP65 (with connector and suitable gaskets)			
Material	NYLON + Fibreglass coating			

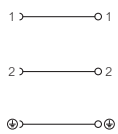
BOBC... / 1 piece per pack

CONNECTORS for "C" type coils (22 mm)

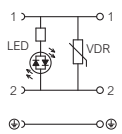
CNN1...
Connector for "C" type coils



CNN1



CNN1...LED



Technical features				
Code	CNN1	CNN1 2 LED	CNN1 4 LED	CNN1 5 LED
Voltage	0÷250 V AC/DC	12/24 V AC/DC	115 V AC/DC	230 V AC/DC
Current (max.)	10 A	5 A	5 A	5 A
Contact resistance (max.)	15 mΩ			
Overvoltage category	III			
Conductor cross-section (max.)	1.5 mm² (without terminals)			
Cable clamp thread	PG9			
Operating temperature	-40°C ÷ +100°C	-20°C ÷ +80°C	-20°C ÷ +80°C	-20°C ÷ +80°C
Electrical connection	INDUSTRIAL (AMP 6.3 x 0.8) form B			
Protection class	IP65 (properly assembled)			
Insert and case materials	PA6 GF - PA6 GF	PA6 GF - PA12	PA6 GF - PA12	PA6 GF - PA12
Visual indicator	None	Yellow LED diode	Yellow LED diode	Yellow LED diode
Colour	Black	Clear	Clear	Clear
Electrical circuit protection	None	VDR Circuit	VDR Circuit	VDR Circuit
Fixing type	Central screw M3x32,5			

CNN1... / Insert, case, gasket and fixing screw - 1 piece per pack

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