

EB 80 BOXI

Being extremely modular, the EB 80 electro-pneumatic system is ideal for the construction of all types of valve island and size. This great versatility is not always being utilized, especially in the case of applications where only a few valves are needed and where there is no need to handle input or output signals.

BOXI was designed to best meet this requirement for simplicity.

Each version includes pneumatic and electrical connections, control electronics and the possibility of installing 4, 6, 8 or 12 valves.

BOXI retains most of the features that have made the EB 80 so popular, namely:

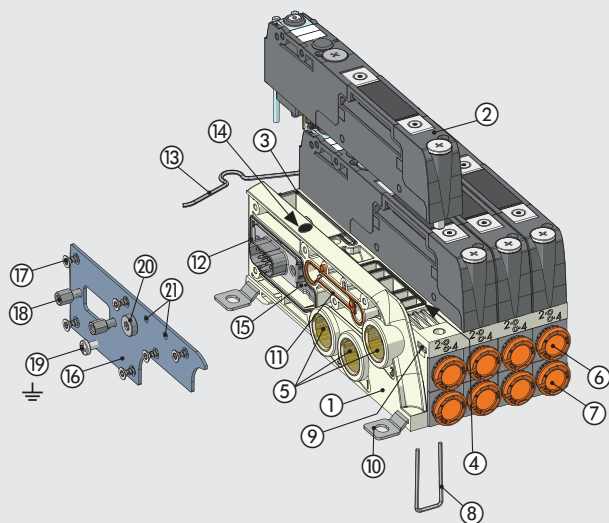
- All the EB 80 valves, from the twin 2/2 to the high-flow models, can be installed.
- Can be powered at 12VDC or 24VDC.
- Bases with single or double electric control, featuring interchangeable cartridge fittings.
- Only 0.3 W to keep each valve controlled.
- Diagnostics (open circuit, overload, voltage short-circuit) with LED signal lights.
- Possibility of connecting multifunction modules to the outputs.

In addition, an extra supply and drain module to be fitted onto the 6, 8 or 12-position islands downstream the solenoid valves can be requested when ordering.



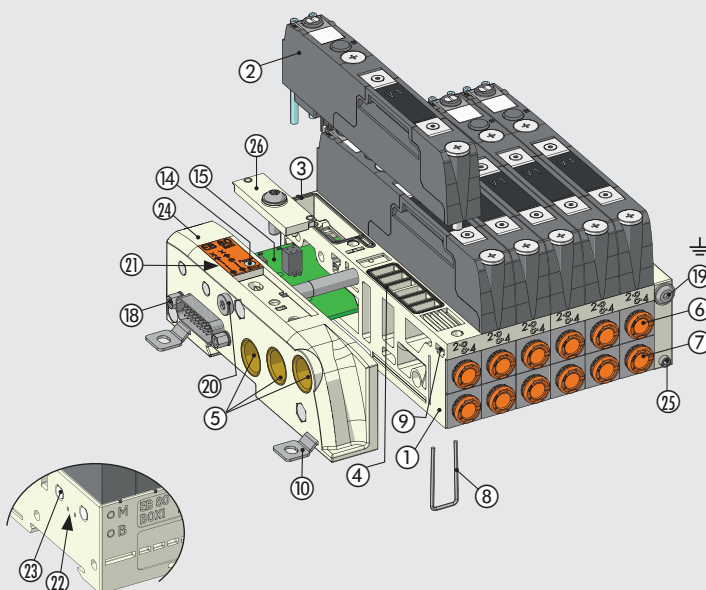
COMPONENTS

4-position valve island



- ① BASE: technopolymer
- ② EB 80 VALVE (see page B2.5 and page B2.56)
- ③ GASKET: NBR
- ④ VALVE GASKET: NBR
- ⑤ PORTS 1-3-5: brass threaded element
- ⑥ PORT 2 CARTRIDGE: push-in fitting
- ⑦ PORT 4 CARTRIDGE: push-in fitting
- ⑧ CLIP for securing the cartridge: stainless steel
- ⑨ THREADED PLATE for securing the valves: zinc-plated steel
- ⑩ FIXING FOOT: zinc-plated steel
- ⑪ GASKET FOR SERVO-ASSISTING: NBR
- ⑫ GASKET FOR IP65: NBR
- ⑬ SPRING CLIP for omega bar: stainless steel
- ⑭ Alarm LED light display: technopolymer
- ⑮ ELECTRONIC BOARD

6-8-12-position valve island



- ⑮ ELECTRONIC BOARD
- ⑯ END PLATE: stainless steel
- ⑰ SCREW FOR FIXING THE CLOSING PLATE TO THE BASE: zinc-plated steel
- ⑱ ELECTRIC CONNECTOR FIXING COLUMNS: nickel-plated brass
- ⑲ GROUNDING SCREW: zinc-plated steel
- ⑳ A7/M5 PLUG (in the non-servo-assisted version only): nickel-plated brass
- ㉑ INDICATOR: indicates whether pilot power supply is separate or not
- ㉒ RELIEF VALVE: safety in case of internal pressure increase due to temperature or losses
- ㉓ PILOT RELIEF: HDPE silencer
- ㉔ INPUT TERMINAL: technopolymer
- ㉕ GRUB SCREW securing the DIN bar or bracket: zinc-plated steel
- ㉖ INTERLOCKING SELECTOR SWITCH: zinc alloy

TECHNICAL DATA							
Supply voltage range	VDC	12 -10%		24 +30%			
Minimum operating voltage	VDC	10.8 *					
Maximum operating voltage	VDC	31.2					
Maximum admissible voltage	VDC	32 ***					
Power for each controlled pilot	W	3 for 15 ms, then holding 0.3					
Drive		PNP					
Solenoid rating		100% ED					
Protection		Overload protection					
Grounding		With screw on a metal closing plate					
Diagnostics		LED light signal on the base					
Faults signalled		Solenoid pilot broken or missing; solenoid pilot overload. power supply out of range					
Type of electric solenoid pilot control		Version with one electric control at each valve position (only multipole) Version with two electric controls at each valve position (multipole and IO-Link)					
Electrical connection		D-Sub 9-pin multipole (BOXI 4-position); D-Sub 26-pin multipole (BOXI 6, 8, 12-position) IO-Link with M12x1 connector					
Ambient temperature	°C	-10 to + 50 (at 8 bar)					
	°F	14 to 122 (at 8 bar)					
Operating pressure		5/2 and 5/3		2/2 and 3/2			
Non-assisted valves	bar	3 to 8		3.5 to 8			
	MPa	0.3 to 0.8		0.35 to 0.8			
	psi	43 to 116		51 to 116			
Assisted valves	bar	Vacuum to 10					
	MPa	Vacuum to 1					
	psi	Vacuum to 145					
Servo pressure	bar	3 to 8		min (see graph on page B2.57) / max. 8			
	MPa	0.3 to 0.8		min (see graph on page B2.57) / max. 0.8			
	psi	43 to 116		min (see graph on page B2.57) / max. 116			
Pneumatic fittings		Supply (port 1) and exhaust (ports 3 and 5): 1/4" G (BSP) or 1/4" NPT. Piloting (X): M5 or 10/32" UNF (with adapter) Pipe fittings Ø 4 (5/32"), 6, 8 (5/16"), 1/4"					
Pneumatic outputs		4500					
Flow rate at 6.3 bar ΔP 1 bar Feeding (port 1)	Nl/min	5500 + 5500					
6.3 bar flow rate with free exhaust from ports 3 and 5	Nl/min						
Valve flow rate, at 6.3 bar ΔP 1 bar		Ø 4 (5/32")	Ø 6	Ø 8 (5/16")	Ø 1/4"	Ø 10 **	Ø 3/8" **
	valve 2/2 Nl/min	350	430	500	430	-	-
	valve 3/2 Nl/min	350	600	700	600	1250	1250
	valve 5/2 Nl/min	350	650	800	650	1250 - 1400	1250 - 1400
	valve 5/3 Nl/min	350	460	500	460	1000 - 1250	1000 - 1250
	valve V3V (R) Nl/min	-	-	-	-	1000	1000
Actuation response time (TRA) / reset response time (TRR) at 6 bar							
	TRA/TRR valve 2/2 and 3/2	ms		14 / 28			
	TRA/TRR valves 5/2 monostable and shut-off valve	ms		12 / 45			
	TRA/TRR valve 5/2 bistable	ms		12 / 14			
	TRA/TRR valve 5/3	ms		15 / 45			
	TRA/TRR valve 3/2 high flow	ms		13 / 36			
Fluid		Unlubricated air					
Air quality required		ISO 8573-1 class 4-7-3					
Degree of protection		IP65					
Category ATEX		Ⓔ II 3G Ex ec IIC T5 Gc X -10°C<Ta<50°C Ⓔ II 3D Ex tc IIIC T100°C Dc X					
Certifications		CE - EAC - cULus - Ex					
Weight (without valves)	g	330 (4-position); 640 (6-position); 780 (8-position); 1060 (12-position)					

* Minimum voltage 10.8VDC required at solenoid pilots. Check the minimum voltage at the power supply output using the calculations shown on page B2.28

** Using high-flow valves or connected valves - see pages B2.58

*** IMPORTANT! Voltage greater than 32VDC will damage the system irreparably.

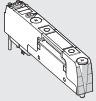
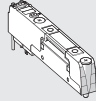
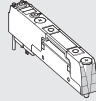
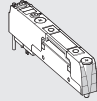
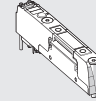
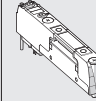
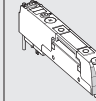
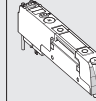
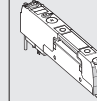
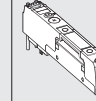
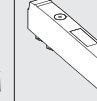
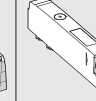
CERTIFICATIONS

The  certification for the part concerning only CSA (Canada) is bound to the following conditions of use:

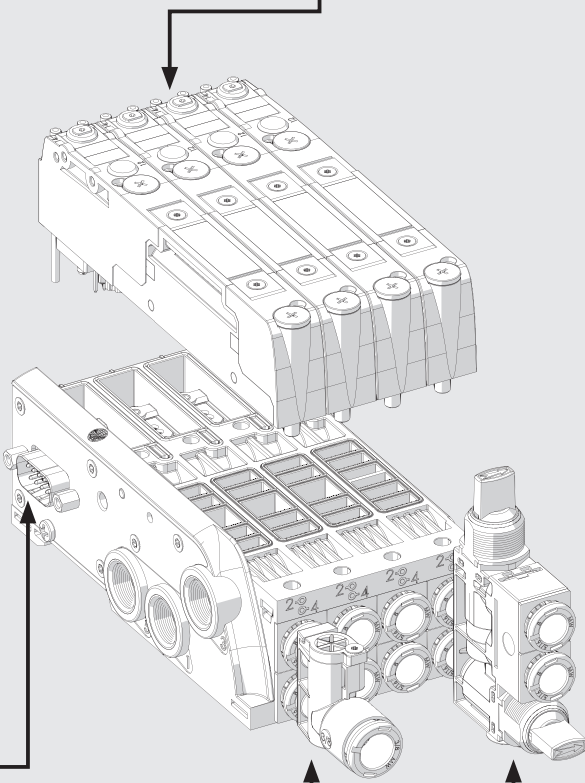
- environment temperature: max 45°C
- ED max 70%

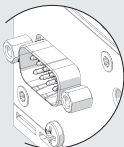
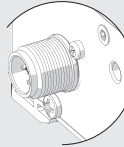
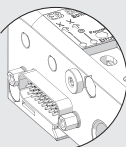
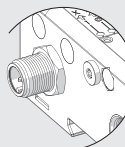
If non-adjoining valves are used, ED max can reach 100% (environment temperature max 45°C)

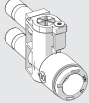
THE EB 80 BOXI WORLD

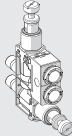
VALVES											
Z_ ▲	I_ ▲	W_ ▲	L_ ▲	V_	K_ ▲	O_ ▲	G_	J_	R_ +	NO	Y8
											
2 valves 2/2 NC	2 valves 3/2 NC (valid as 5/3 OC)	2 valves 3/2 NO (valid as 5/3 PC)	3/2 NC + 3/2 NO	Monostable 5/2	Bistable 5/2	5/3 CC	3/2 NC high flow	3/2 NO high flow	Shut-off valve	Dummy valve	Bypass
See page B2.57	See page B2.57	See page B2.57	See page B2.57	See page B2.57	See page B2.57	See page B2.57	See page B2.58	See page B2.58	See page B2.59	See page B2.60	See page B2.60

▲ Can only be used with 8 control bases.
 + Requires inlet port X slave synchronisation.



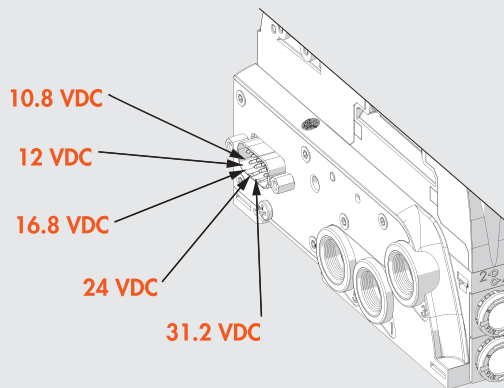
ELECTRICAL CONNECTION			
4-position		6-8-12-position	
			
D-Sub 9-pin multipole	IO-Link M12x1 5 pin coding A	D-Sub 26-pin multipole	IO-Link M12x1 5 pin coding A
See page B2.82	See page B2.82	See page B2.92	See page B2.92

Y-FITTING
R2

Y-fitting
See page B2.61

MULTI-FUNCTION MODULE

Fittings with pneumatic functions
See page B2.94

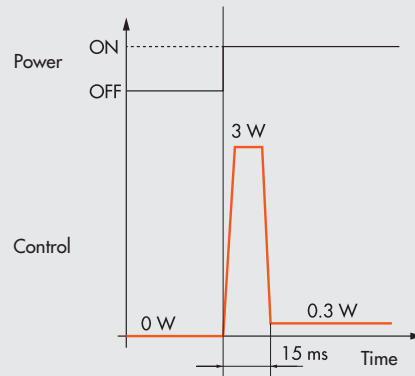
SOME CHARACTERISTICS OF EB 80 BOXI SYSTEMS

THE SAME ISLAND CAN BE SUPPLIED 10.8 - 31.2 VDC



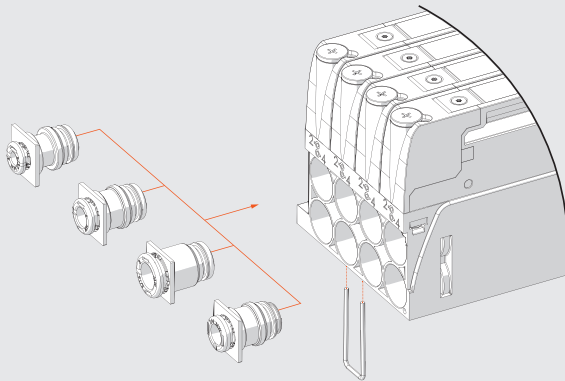
ONLY 0.3 W FOR EACH SOLENOID VALVE

- Speed-up solenoid valve control:
 - high power for a few milliseconds ensures high performance and rapid and safe switching;
 - reduced holding power resulting in reduced temperatures and energy saving.



INTERCHANGEABLE CARTRIDGE FITTINGS

- For pipes $\varnothing$ 4 (5/32"), 6, 8 (5/16"), 1/4"

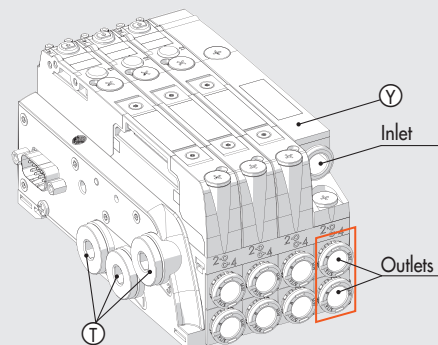


FRONT SUPPLY AND EXHAUSTS

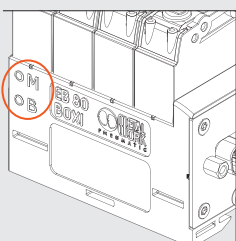
On the BOXI islands, a Bypass module (Y) can be mounted in any position instead of a solenoid valve so as to obtain all front pneumatic connections.

In the case of 6-8-12-position islands, the additional power supply can be used (see page B2.91), so that no electrical control is lost and the number of useful valves remains unchanged.

The side inlets must be closed with A7 1/4 plugs (T).



TYPE OF DATA IN THE BASES



● M = only one electrical control for each position. Can only be used with valves with one solenoid pilot, types V, J, G and R. If you use a N dummy or Y bypass valve, it is occupied an electric position.

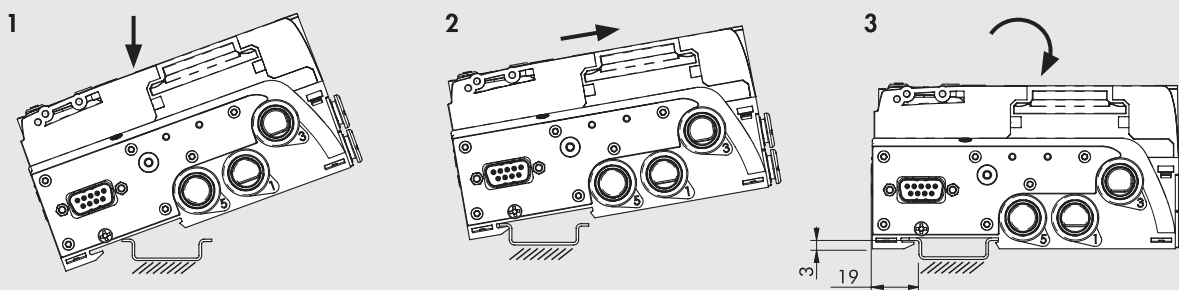
○ M = 2 electrical controls for each position. It can be used for all types of valves. If you use a V, G, J or R type valves (with only one solenoid pilot), N dummy or Y bypass valve, both electrical positions get occupied.

EB 80 BOXI - 4-POSITION VALVE ISLAND

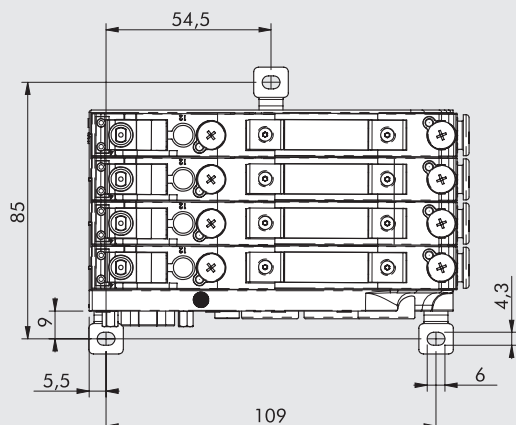
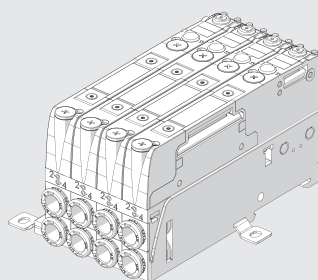
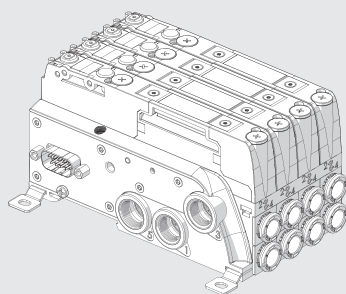


FIXING OPTIONS

Fixing on a DIN bar: fixing on a DIN bar in the sequence indicated.



Fixing by means of brackets: 3 brackets are already included in each EB 80 BOXI pack. Push them firmly into the appropriate seats on the base up to the "click".



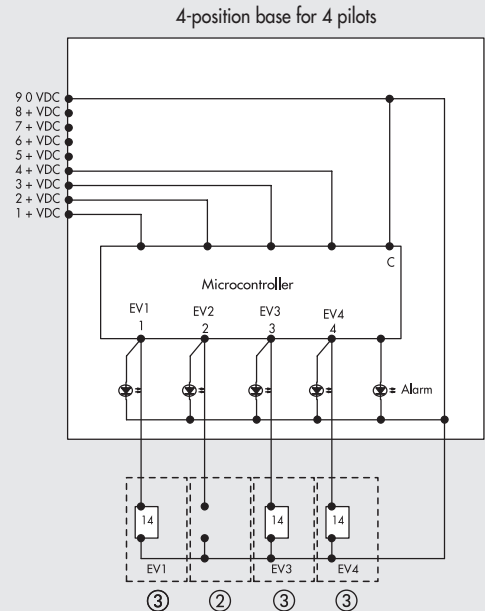
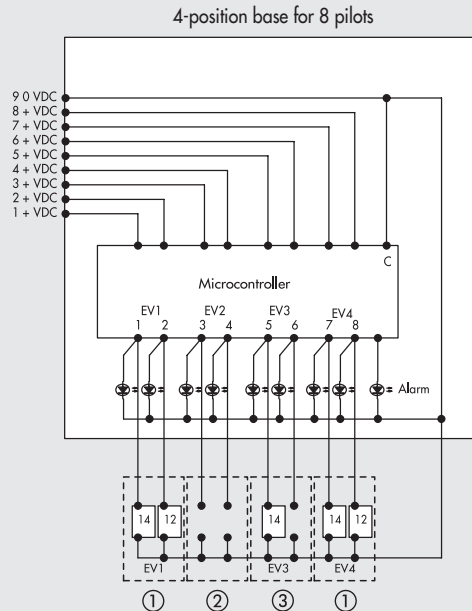
EB 80 BOXI WIRING DIAGRAM

D-Sub 9-PIN CONNECTOR

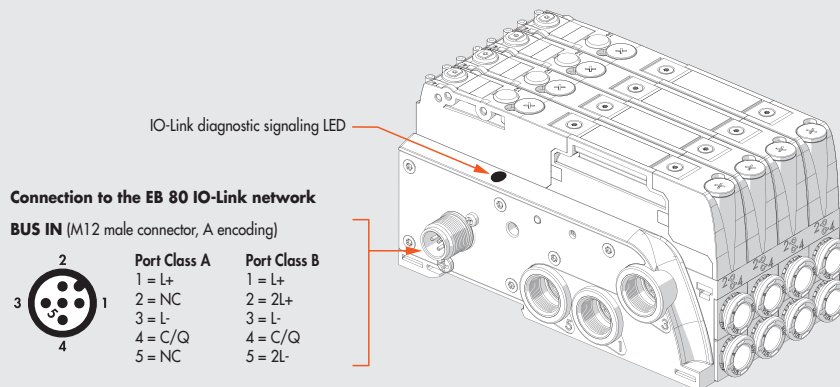


Examples of types of valves:

- ① Valve with 2 solenoid pilots
- ② Dummy valve or bypass
- ③ Valve with 1 solenoid pilot



EB 80 BOXI IO-Link WIRING DIAGRAM



TECHNICAL DATA		
Fieldbus		IO-Link version 1.1
Communication speed	Kbps	230.4 (COM3)
Vendor ID / Device ID		1046 (hex 0x0416) / 8 (hex 0x000008)
Minimum cycle time	ms	2.8
Process data length		1 byte of Input / 1 byte of Output
Supply voltage range (M8 connector)	VDC	12 -10% 24 +30%
Minimum operating voltage	VDC	10.8 *
Maximum operating voltage	VDC	31.2
Maximum admissible voltage	VDC	32 ***
IO-Link power supply (L+L - Bus IN connector)	VDC	min 20, max 30
Protection		Module protected from overload and polarity inversion. Outputs protected from overloads.
Connections		M12 male, A-coded - Port Class A - Port Class B.
Diagnostics**		IO-Link: via local LED lights and software messages. Outputs: via local LED
Power supply current absorption		See EB 80 Boxi IO-Link instruction manual
Maximum number of pilots		8
Data bit value		0 = non-active; 1 = active
State of outputs in the absence of communication		Configurable for each output: non-active, holding of the state, setting of a preset state

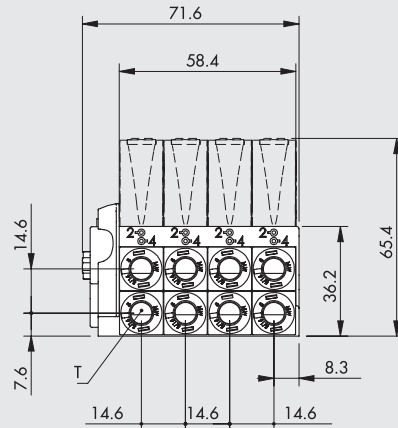
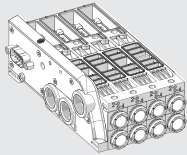
* Minimum voltage 10.8VDC required at solenoid pilots. Check the minimum voltage at the power supply output using the calculations shown on page B2.28

** Refer to the user manual for a detailed description.

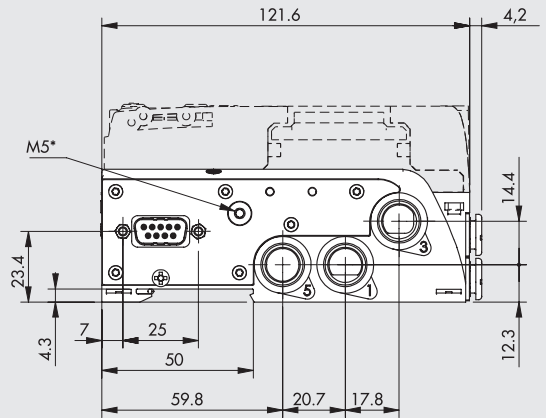
*** IMPORTANT! Voltage greater than 32VDC will damage the system irreparably.

DIMENSIONS - ORDERING CODES

EB 80 BASE BOXI WITH D-Sub 9-PIN MULTIPOLE ELECTRICAL CONNECTION



* Pilot (only for servo-assisted version)



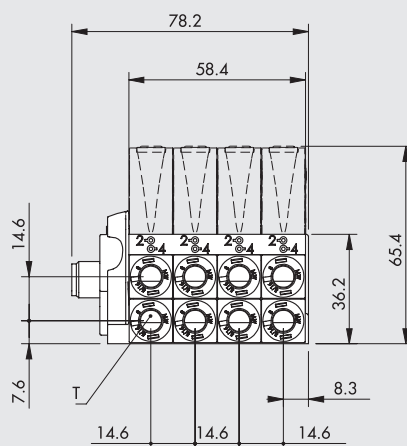
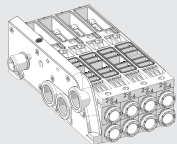
Port threads 1, 3, 5 in G (BSP)

		Code	
	T - Pipe fitting	4 CONTROLS	8 CONTROLS
Servo-assisted	without cartridges	0228BGX4M1111	0228BGX8M1111
	Ø 4 (5/32")	0228BGX4M4444	0228BGX8M4444
	Ø 6	0228BGX4M6666	0228BGX8M6666
	Ø 8 (5/16")	0228BGX4M8888	0228BGX8M8888
	Ø 1/4"	0228BGX4M2222	0228BGX8M2222
Non-servo-assisted	without cartridges	0228BG14M1111	0228BG18M1111
	Ø 4 (5/32")	0228BG14M4444	0228BG18M4444
	Ø 6	0228BG14M6666	0228BG18M6666
	Ø 8 (5/16")	0228BG14M8888	0228BG18M8888
	Ø 1/4"	0228BG14M2222	0228BG18M2222

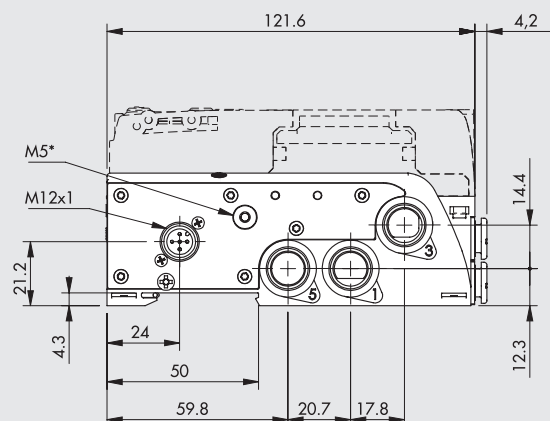
Port threads 1, 3, 5 in NPT

		Code	
	T - Pipe fitting	4 CONTROLS	8 CONTROLS
Servo-assisted	without cartridges	0228BUX4M1111	0228BUX8M1111
	Ø 4 (5/32")	0228BUX4M4444	0228BUX8M4444
	Ø 6	0228BUX4M6666	0228BUX8M6666
	Ø 8 (5/16")	0228BUX4M8888	0228BUX8M8888
	Ø 1/4"	0228BUX4M2222	0228BUX8M2222
Non-servo-assisted	without cartridges	0228BU14M1111	0228BU18M1111
	Ø 4 (5/32")	0228BU14M4444	0228BU18M4444
	Ø 6	0228BU14M6666	0228BU18M6666
	Ø 8 (5/16")	0228BU14M8888	0228BU18M8888
	Ø 1/4"	0228BU14M2222	0228BU18M2222

EB 80 BASE BOXI WITH ELECTRICAL CONNECTION IO-Link (M12x1)



* Pilot (only for servo-assisted version)



Port threads 1, 3, 5 in G (BSP)

		Code	
	T - Pipe fitting	4 CONTROLS	8 CONTROLS
Servo-assisted	without cartridges	0228BGX8L1111	0228BGX8L1111
	Ø 4 (5/32")	0228BGX8L4444	0228BGX8L4444
	Ø 6	0228BGX8L6666	0228BGX8L6666
	Ø 8 (5/16")	0228BGX8L8888	0228BGX8L8888
	Ø 1/4"	0228BGX8L2222	0228BGX8L2222
Non-servo-assisted	without cartridges	0228BG18L1111	0228BG18L1111
	Ø 4 (5/32")	0228BG18L4444	0228BG18L4444
	Ø 6	0228BG18L6666	0228BG18L6666
	Ø 8 (5/16")	0228BG18L8888	0228BG18L8888
	Ø 1/4"	0228BG18L2222	0228BG18L2222

Port threads 1, 3, 5 in NPT

		Code	
	T - Pipe fitting	4 CONTROLS	8 CONTROLS
Servo-assisted	without cartridges	0228BUX8L1111	0228BUX8L1111
	Ø 4 (5/32")	0228BUX8L4444	0228BUX8L4444
	Ø 6	0228BUX8L6666	0228BUX8L6666
	Ø 8 (5/16")	0228BUX8L8888	0228BUX8L8888
	Ø 1/4"	0228BUX8L2222	0228BUX8L2222
Non-servo-assisted	without cartridges	0228BU18L1111	0228BU18L1111
	Ø 4 (5/32")	0228BU18L4444	0228BU18L4444
	Ø 6	0228BU18L6666	0228BU18L6666
	Ø 8 (5/16")	0228BU18L8888	0228BU18L8888
	Ø 1/4"	0228BU18L2222	0228BU18L2222

KEY TO CODING OF THE EB 80 BOXI WITHOUT VALVES

0228B FAMILY	G PORT THREADS 1, 3, 5	1 PILOTING	8 NUMBER OF SOLENOID PILOT CONTROLS	M ELECTRICAL CONNECTION	4 1° position (from left)	4 2° position	4 3° position	4 4° position
0228B EB 80 BOXI	G 1/4" G (BSP) U 1/4" NPT	1 Non-servo-assisted X Servo-assisted	4 4 controls	M D-Sub 9-pin multipole connection	1 The whole base without cartridges	2 Pipe fitting Ø 1/4"	4 Pipe fitting Ø 4 (5/32")	6 Pipe fitting Ø 6
			8 8 controls	M D-Sub 9-pin multipole connection L IO-Link, M12x1	8 Pipe fitting Ø 8 (5/16")			

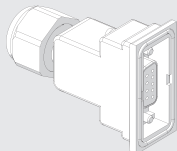
KEY TO CODING OF THE EB 80 BOXI COMPLETE WITH VALVES

0228B FAMILY	G PORT THREADS 1, 3, 5	1 PILOTING	8 NUMBER OF SOLENOID PILOT CONTROLS	M ELECTRICAL CONNECTION	4 1° position (from left)	4 2° position	4 3° position	4 4° position	0 MANUAL CONTROL	V V K I VALVES
0228B EB 80 BOXI	G 1/4" (BSP) U 1/4" NPT	1 Non-servo-assisted X Servo-assisted	4 4 controls	M D-Sub 9-pin multipole connection	1 The whole base without cartridges	2 Pipe fitting Ø 1/4"	4 Pipe fitting Ø 4 (5/32")	6 Pipe fitting Ø 6	8 Pipe fitting Ø 8 (5/16")	0 Monostable 1 Bistable
			8 8 controls	M D-Sub 9-pin multipole connection L IO-Link, M12x1						V 5/2 monostable G 3/2 NC high flow J 3/2 NO high flow + R Shut-off valve Y Bypass N Dummy valve (plug) Z 2 valves 2/2 NC I 2 valves 3/2 NC W 2 valves 3/2 NO L 3/2 NC + 3/2 NO V 5/2 monostable K 5/2 bistable O 5/3 CC G 3/2 NC high flow J 3/2 NO high flow + R Shut-off valve N Dummy valve (plug)

+ Requires inlet port X slave synchronisation.

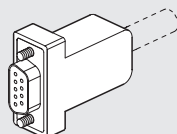
ACCESSORIES

STRAIGHT IP65 9-PIN PLUG CONNECTOR KIT



Code	Description	Weight [g]
02269G0000	Straight D-Sub 9-PIN IP65 connector kit	20

STRAIGHT IP40 9-PIN PLUG CONNECTOR KIT



Code	Description	Weight [g]
0226180102	Straight D-Sub 9-PIN connector kit	20

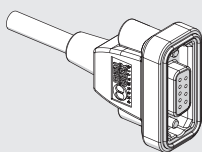
CABLE



Code	Description	Weight [g/m]
0226107201	10-PIN cable	60

Specify the number of metres desired.

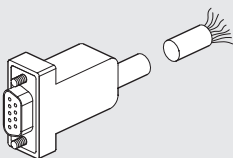
① PRE-WIRED STRAIGHT IP65 9-PIN PLUG CONNECTOR KIT



Code	Description	Weight [g/m]
02269G0100	Straight D-Sub 9-PIN IP65 connector + cable L = 1 m	80
02269G0250	Straight D-Sub 9-PIN IP65 connector + cable L = 2.5 m	170
02269G0500	Straight D-Sub 9-PIN IP65 connector + cable L = 5 m	320
02269G1000	Straight D-Sub 9-PIN IP65 connector + cable L = 10 m	620
02269G2000	Straight D-Sub 9-PIN IP65 connector + cable L = 20 m	1220
02269H0100*	Straight D-Sub 9-PIN IP65 connector, UL H-FLEX CL6, cable L = 1 m	80
02269H0250*	Straight D-Sub 9-PIN IP65 connector, UL H-FLEX CL6, cable L = 2.5 m	170
02269H0500*	Straight D-Sub 9-PIN IP65 connector, UL H-FLEX CL6, cable L = 5 m	320
02269H1000*	Straight D-Sub 9-PIN IP65 connector, UL H-FLEX CL6, cable L = 10 m	620

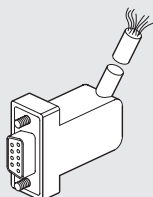
* Very flexible cables, class 6 according to IEC 60228

② PRE-WIRED STRAIGHT IP40 9-PIN PLUG CONNECTOR KIT



Code	Description	Weight [g/m]
0226900100	Straight D-Sub 9-PIN connector + cable L = 1 m	80
0226900250	Straight D-Sub 9-PIN connector + cable L = 2.5 m	170
0226900500	Straight D-Sub 9-PIN connector + cable L = 5 m	320
0226900750	Straight D-Sub 9-PIN connector + cable L = 7.5 m	470
0226901000	Straight D-Sub 9-PIN connector + cable L = 10 m	620
0226901500	Straight D-Sub 9-PIN connector + cable L = 15 m	920
0226902000	Straight D-Sub 9-PIN connector + cable L = 20 m	1220
0226905000	Straight D-Sub 9-PIN connector + cable L = 50 m	3020

② PRE-WIRED 90° IP40 9-PIN PLUG CONNECTOR



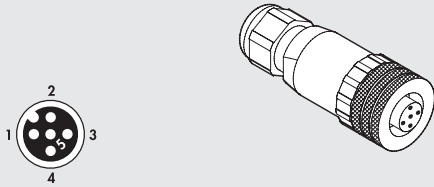
Code	Description	Weight [g/m]
0226910100	90° D-Sub 9-PIN connector + cable L = 1 m	80
0226910250	90° D-Sub 9-PIN connector + cable L = 2.5 m	170
0226910500	90° D-Sub 9-PIN connector + cable L = 5 m	320
0226910750	90° D-Sub 9-PIN connector + cable L = 7.5 m	470
0226911000	90° D-Sub 9-PIN connector + cable L = 10 m	620
0226911500	90° D-Sub 9-PIN connector + cable L = 15 m	920

WIRING DIAGRAM FOR PRE-WIRED 9-PIN PLUG CONNECTORS



Position of electrical contact	Colour of the corresponding wire Metal Work cable IP40 connector ②	Colour of the corresponding wire (DIN 47100) IP65 connector ①	Function	4-position base	8-position base
1	green/black	white	Out 1 + VDC	solenoid pilot 14 valve 1	solenoid pilot 14 valve 1
2	white	brown	Out 2 + VDC	solenoid pilot 14 valve 2	solenoid pilot 12 valve 1
3	blue/black	green	Out 3 + VDC	solenoid pilot 14 valve 3	solenoid pilot 14 valve 2
4	blue	yellow	Out 4 + VDC	solenoid pilot 14 valve 4	solenoid pilot 12 valve 2
5	yellow/black	grey	Out 5 + VDC	/	solenoid pilot 14 valve 3
6	yellow	pink	Out 6 + VDC	/	solenoid pilot 12 valve 3
7	red/black	blue	Out 7 + VDC	/	solenoid pilot 14 valve 4
8	green	red	Out 8 + VDC	/	solenoid pilot 12 valve 4
9	white/black	black	COM 0VDC	common	common

STRAIGHT CONNECTOR FOR M12, A-CODED



Code	Description
W0970513001	5-PIN M12x1 straight connector

Note: Can be used for IO-Link

STRAIGHT CONNECTOR WITH WIRE FOR M12, A-CODED

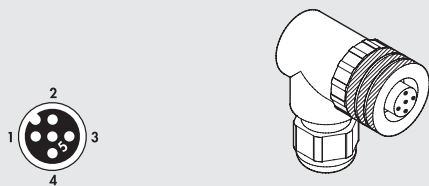
Pin	Cable color
1	Brown
2	White
3	Blue
4	Black
5	Gray



Code	Description
W0970513002	5-PIN M12x1 straight connector with wire L = 5 m

Note: Can be used for IO-Link

90° CONNECTOR FOR M12, A-CODED

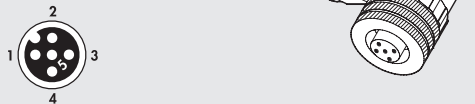


Code	Description
W0970513003	M12x1 5-PIN 90° connector

Note: Can be used for IO-Link

90° CONNECTOR WITH WIRE FOR M12, A-CODED

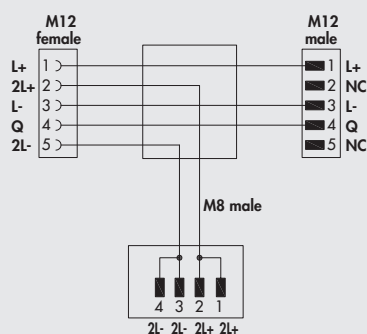
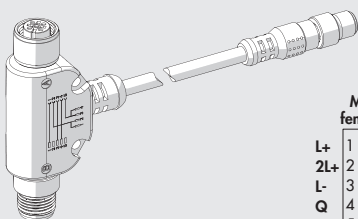
Pin	Cable color
1	Brown
2	White
3	Blue
4	Black
5	Gray



Code	Description
W0970513004	M12x1 5-PIN 90° connector with wire L = 5 m

Note: Can be used for IO-Link

T-CONNECTOR M12 A-CODED / M8 MALE FOR AUXILIARY POWER

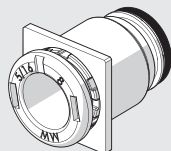


Code	Description
0240009070	T - connector for auxiliary power

Note: Can be used for IO-Link

SPARE PARTS

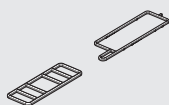
CARTRIDGE



Code	Description	Ø
02282R2001	EB 80 Ø 4 base square cartridge kit	4 (5/32")
02282R2002	EB 80 Ø 6 base square cartridge kit	6
02282R2003	EB 80 Ø 8 base square cartridge kit	8 (5/16")
02282R2006	EB 80 Ø 1/4 base square cartridge kit	1/4"

Comes in 10-pc. packs

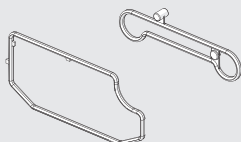
BASE-VALVE GASKET



Code	Description
02282R1002	EB 80 base-valve gasket kit

Comes in 10-pc. packs

GASKETS BETWEEN BASE AND COVER SHEET METAL



Code	Description
02282R1006	EB 80 BOXI kit of gaskets between base and cover sheet metal

Comes in 10-pc. packs

FIXING FOOT



Code	Description
02282R4002	EB 80 BOXI fixing foot

Comes in 3-pc. packs

KIT PNEUMATIC MOTION® EB 80 BOXI

The EB 80 BOXI complete with electrical connector, cable, fittings and silencers can be supplied under one ordering code only.

REQUEST THE KIT CODE BY SPECIFYING:

- The EB 80 BOXI code
- The code of the single connector or pre-wired connector
- The fitting and the quantity desired. We suggest choosing one among those listed below ▲
- The silencer and the quantity desired. We suggest choosing one among those listed below ◆

Example

0228BG18M66660KKKK

02269G0250

n° 1 2L01010

n° 2 W0970530053

▲ 1/4" FITTINGS FOR BOXI PNEUMATIC SUPPLIES *

Ø Pipe	Straight male cylindrical code (R1)	L rotary elbow, male, code (R34)
4	2L01003	2L34003
6	2L01008	2L34008
8	2L01010	2L34010
10	2L01012	2L34013
12	2001019	-

* Normally, one is used for port 1

◆ SILENCERS FOR EB 80 BOXI OUTLET PORTS **

SFE silencer with stainless steel mesh
SPLF silencer made of resin with felt

** Normally, two are used for ports 3 and 5

Code
W0970530053
W0970530073

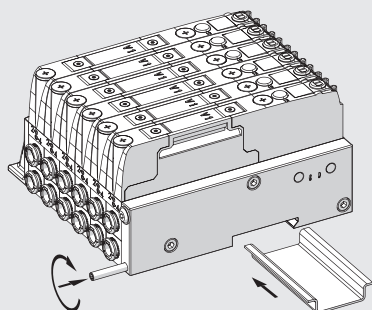


EB 80 BOXI - 6-8-12-POSITION VALVE ISLAND

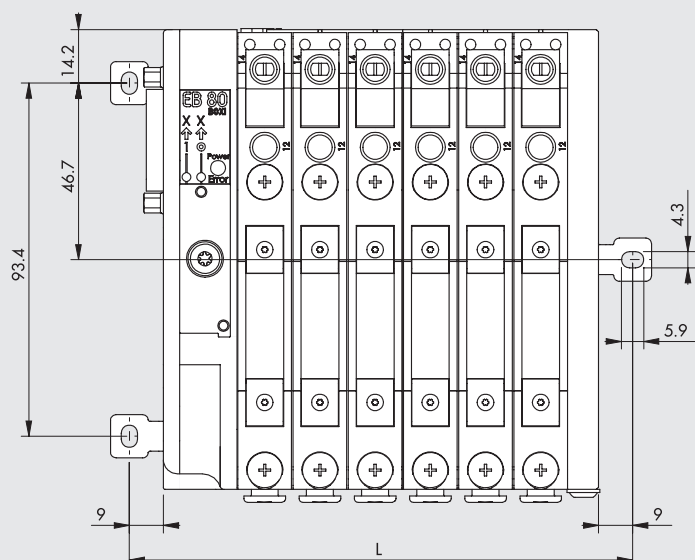
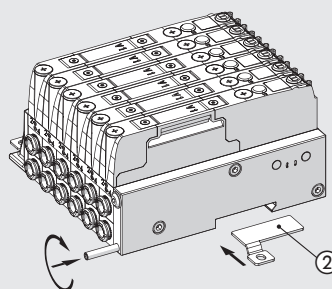
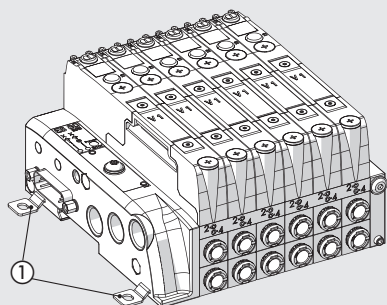


FIXING OPTIONS

Fixing on a DIN bar: tighten the screw on the end plate.



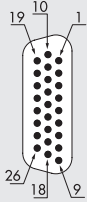
Fixing by means of brackets: the 3 brackets are already included in each EB 80 BOXI island. On the pressure inlet side, push the two brackets ① firmly into the appropriate seats on the base up to the "click". Tighten the screw on the end plate to secure the third bracket ②.



Boxi island	L (mm)
6 position	133
6 position with additional pneumatic supply	153
8 position	162
8 position with additional pneumatic supply	182.5
12 position	221
12 position with additional pneumatic supply	241

WIRING DIAGRAM MULTIPOLE VERSION

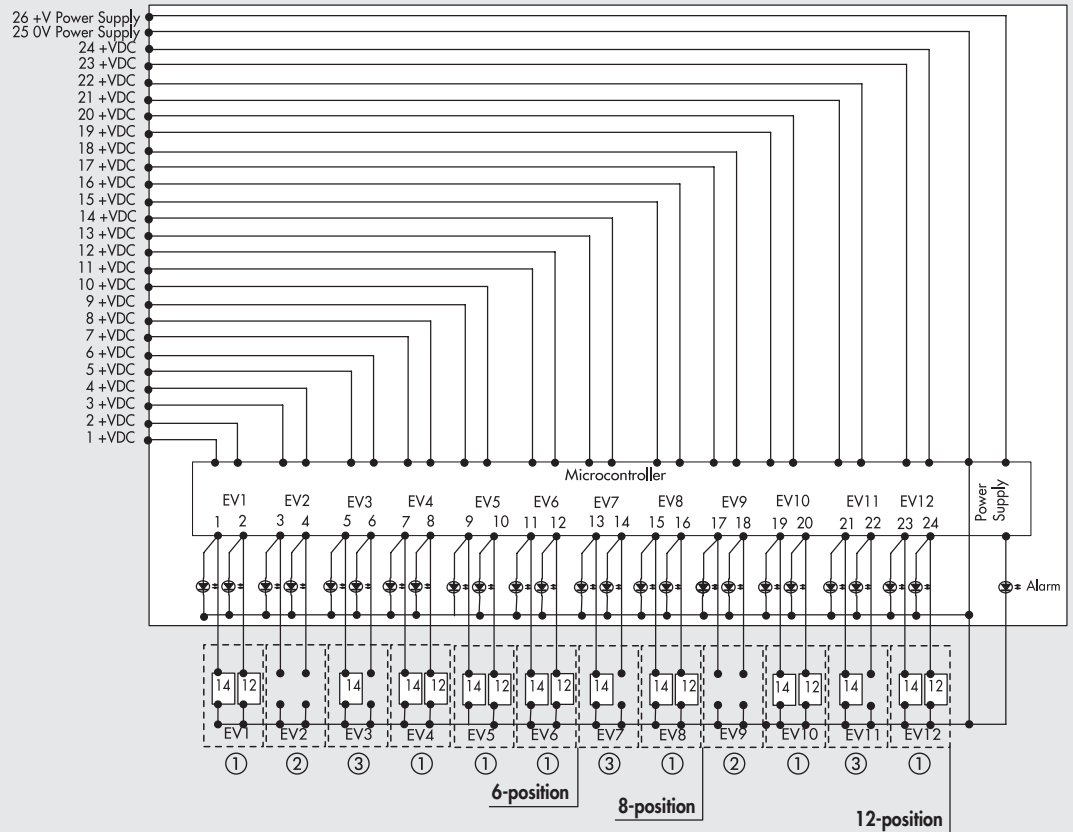
D-Sub 26-PIN CONNECTOR



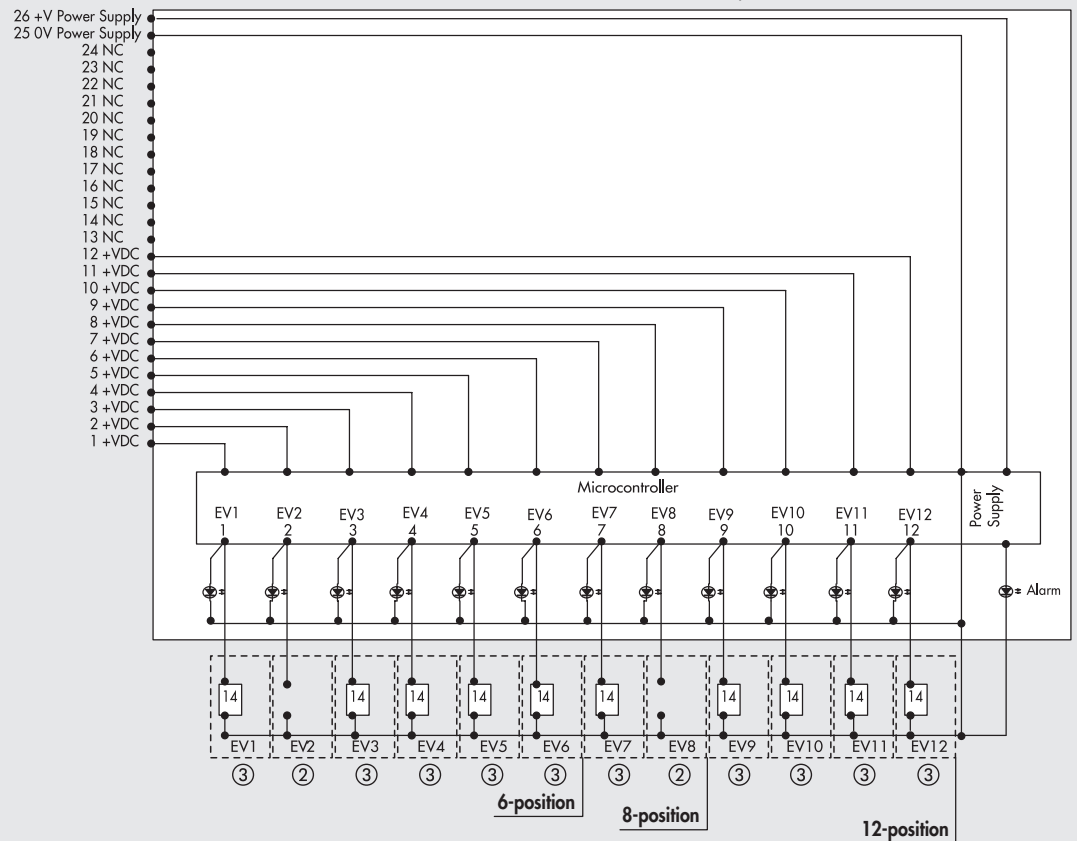
Examples of types of valves:

- ① Valve with 2 solenoid pilots
- ② Dummy valve or bypass
- ③ Valve with 1 solenoid pilot

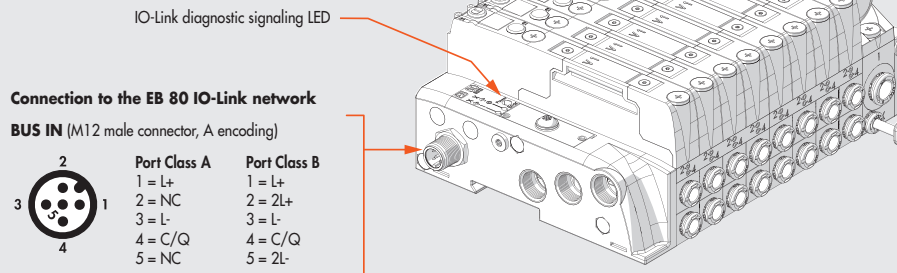
Base with 2 electric controls at each valve position



Base with 1 electric control at each valve position



EB 80 BOXI IO-Link WIRING DIAGRAM



TECHNICAL DATA	
Fieldbus	IO-Link version 1.1
Communication speed	230.4 (COM3)
Vendor ID / Device ID	1046 (hex 0x0416) / 8 (hex 0x000008)
Minimum cycle time	2.8
Process data length	1 byte of Input / 2 bytes of Output for 8- and 6-position bases 1 byte of Input / 3 bytes of output for 12-position bases
Supply voltage range (M8 connector)	12 -10% 24 +30%
Minimum operating voltage	10.8 *
Maximum operating voltage	31.2
Maximum admissible voltage	32 ***
IO-Link power supply (L+L - Bus IN connector)	min 20, max 30
Protection	Module protected from overload and polarity inversion. Outputs protected from overloads.
Connections	M12 male, A-coded - Port Class A - Port Class B.
Diagnostics**	IO-Link: via local LED lights and software messages. Outputs: via local LED
Power supply current absorption	See EB 80 Boxi IO-Link instruction manual
Maximum number of pilots	12 - 16 - 24
Data bit value	0 = non-active; 1= active
State of outputs in the absence of communication	Configurable for each output: non-active, holding of the state, setting of a preset state

* Minimum voltage 10.8VDC required at solenoid pilots. Check the minimum voltage at the power supply output using the calculations shown on page B2.28

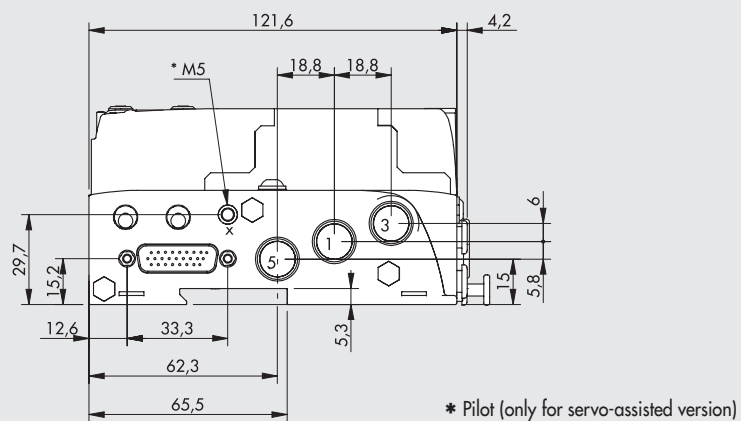
** Refer to the user manual for a detailed description.

*** IMPORTANT! Voltage greater than 32VDC will damage the system irreparably.

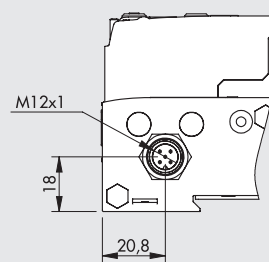
NOTES

DIMENSIONS

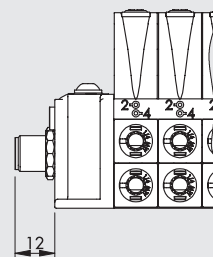
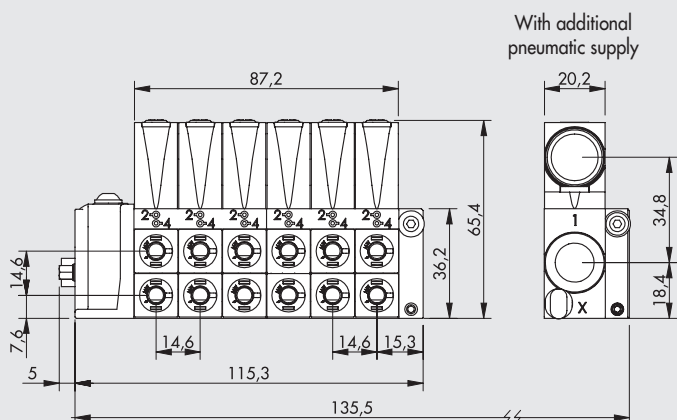
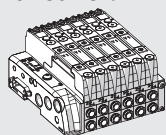
MULTI-POLE ELECTRICAL CONNECTION



ELECTRICAL CONNECTION IO-Link

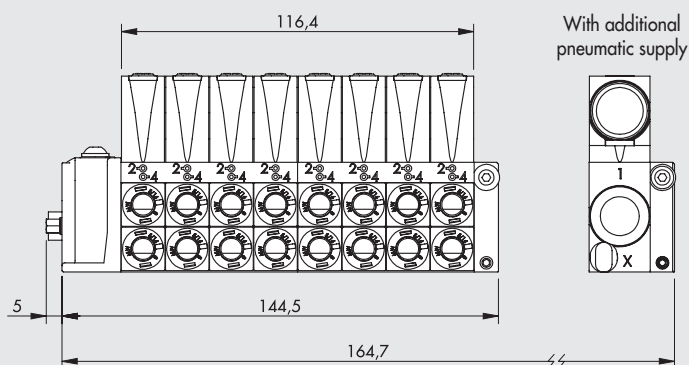
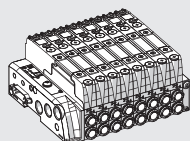


6-POSITION



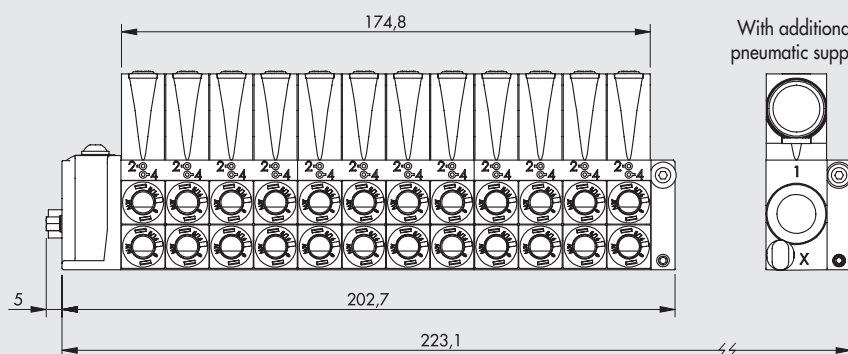
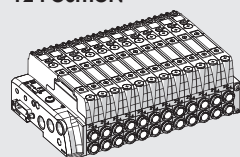
NB: For dimensions not indicated, see multi-pole electrical connection

8-POSITION



With additional pneumatic supply

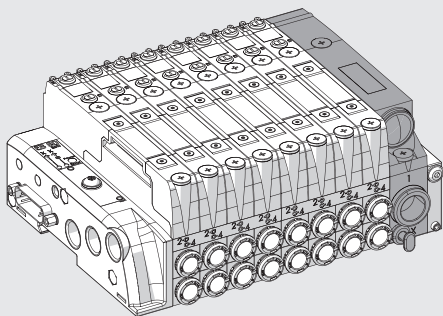
12-POSITION

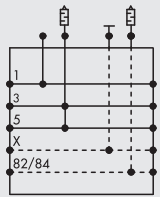
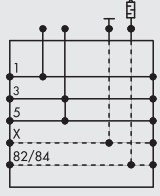


ADDITIONAL PNEUMATIC SUPPLY

During the configuration of the BOXI island, it is possible to insert, in the final position, an additional dedicated pneumatic supply and exhaust module, in order to increase the inlet and exhaust air flow rate of the island. **The module cannot be inserted into already assembled islands.** It is recommended in cases where there is simultaneous operation of several solenoid valves, with a flow rate request exceeding 3000 NI/min*, or when it becomes important to have a quick pressure relief from ports 3 and 5. It can be requested with a silenced exhaust or with a conveyed exhaust with fittings for Ø 8 - Ø 10, Ø 12 or Ø 1/2" pipes.

* Indicative value, depending on the operating pressure, the supply hoses and the specific needs of the application.



Relief	Symbol	Pipe fitting	Configuration ID
Silenced		Ø 8 (5/16")	M100B00
		Ø 10	M200B00
		Ø 12	M300B00
		Ø 1/2"	M500B00
Conveyed		2 x Ø 8 (5/16")	M100B10
		2 x Ø 10	M200B20
		2 x Ø 12	M300B30
		2 x Ø 1/2"	M500B50

CONFIGURATION SEQUENCE

EB 80 BOXI FAMILY	0 8	1 6	E 0 2 6	G	1	8 8 8 4 4 6 6 6	0	V V K I V V K I	M 1 0 0 B 0 0
	NUMBER		ELECTRICAL CONNECTION	PORT THREADS 1, 3, 5	PILOTING	FITTINGS FOR PORTS 2-4 (Starting from the left)	MANUAL VALVE CONTROL	VALVES	ADDITIONAL PNEUMATIC SUPPLY (Optional)
BOXI		Positions	Electrical controls						
	06	06	E026 Multi-pole Connection, D-Sub 26 pin	G 1/4" G (BSP) U 1/4" NPT	1 Non-servo-assisted X Servo-assisted	1 Without cartridges 2 Pipe fitting Ø 1/4" 4 Pipe fitting Ø 4 (5/32") 6 Pipe fitting Ø 6 8 Pipe fitting Ø 8 (5/16")	0 Monostable 1 Bistable ● 9 Without valves	▲ Z 2 valves 2/2 NC ▲ I 2 valves 3/2 NC ▲ W 2 valves 3/2 NO ▲ L 3/2 NC + 3/2 NO V 5/2 monostable ▲ K 5/2 bistable ▲ O 5/3 CC G 3/2 NC high flow J 3/2 NO high flow + R Shut-off valve Y Bypass N Dummy valve (plug) ● 9 None	SILENCED EXHAUST M100B00 Pipe fitting Ø 8 (5/16") M200B00 Pipe fitting Ø 10 M300B00 Pipe fitting Ø 12 M500B00 Pipe fitting Ø 1/2"
	08	08							
	12	12							
	06	12	E010 IO-Link M12x1						CONVEYED EXHAUST M100B10 Pipe fitting Ø 8 (5/16") M200B20 Pipe fitting Ø 10 M300B30 Pipe fitting Ø 12 M500B50 Pipe fitting Ø 1/2"
	08	16							
	12	24							
	06	12							
	08	16							
	12	24							

- ▲ Only for version with 12, 16 or 24 electrical controls.
- + Requires inlet port X slave synchronisation.
- The entire island without valves.

Example of configuration sequence for an island with valves

BOXI 12 24 E026 G 1 66666888888 1 IIKKKKIIKKKK M100B00

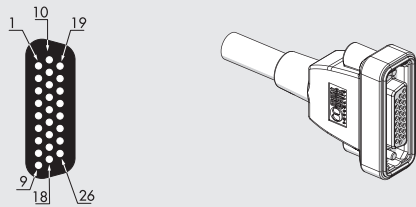
Example of configuration sequence for an island without valves

BOXI 12 24 E026 G 1 66666888888 9 99999999999 M100B00

As with the EB 80 islands, a full configuration sequence is required when ordering (see examples). The sales code for the desired configuration will be created by our sales departments.

ACCESSORIES

PRE-WIRED STRAIGHT D-Sub 26 PIN HIGH DENSITY PLUG CONNECTOR KIT

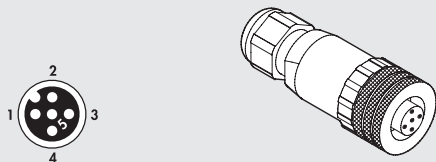


Code	Description	Weight [g]
02269K0100	Straight D-Sub HD 26 PIN IP65 connector + cable L = 1 m	160
02269K0250	Straight D-Sub HD 26 PIN IP65 connector + cable L = 2.5 m	350
02269K0500	Straight D-Sub HD 26 PIN IP65 connector + cable L = 5 m	680
02269K1000	Straight D-Sub HD 26 PIN IP65 connector + cable L = 10 m	1300
02269K2000	Straight D-Sub HD 26 PIN IP65 connector + cable L = 20 m	2540

Position of electrical contact	Colour of the corresponding wire (DIN 47100)	Function for EB 80 BOXI
1	White	Out 1
2	Brown	Out 2
3	Green	Out 3
4	Yellow	Out 4
5	Grey	Out 5
6	Pink	Out 6
7	Blue	Out 7
8	Red	Out 8
9	Black	Out 9
10	Violet	Out 10
11	Grey + Pink ring	Out 11
12	Red + Blue ring	Out 12
13	White + Green ring	Out 13

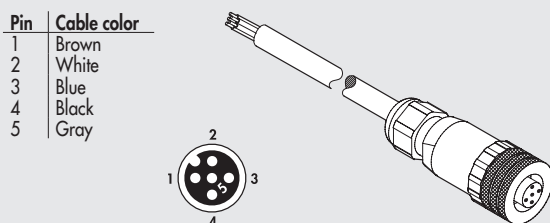
Position of electrical contact	Colour of the corresponding wire (DIN 47100)	Function for EB 80 BOXI
14	Brown + Green ring	Out 14
15	White + Yellow ring	Out 15
16	Yellow + Brown ring	Out 16
17	White + Grey ring	Out 17
18	Grey + Brown ring	Out 18
19	White + Pink ring	Out 19
20	Pink + Brown ring	Out 20
21	White + Blue ring	Out 21
22	Brown + Blue ring	Out 22
23	White + Red ring	Out 23
24	Brown + Red ring	Out 24
25	White + Black ring	0VDC
26	Brown + Black ring	+ VDC

STRAIGHT CONNECTOR FOR M12, A-CODED



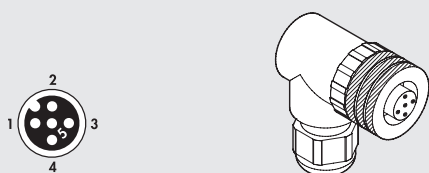
Code	Description
W0970513001	5-PIN M12x1 straight connector

STRAIGHT CONNECTOR WITH WIRE FOR M12, A-CODED



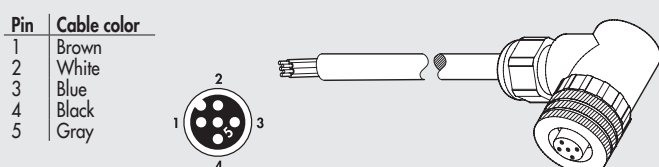
Code	Description
W0970513002	5-PIN M12x1 straight connector with wire L = 5 m

90° CONNECTOR FOR M12, A-CODED



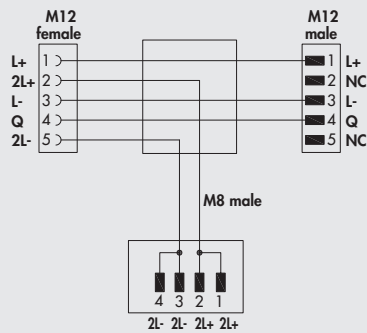
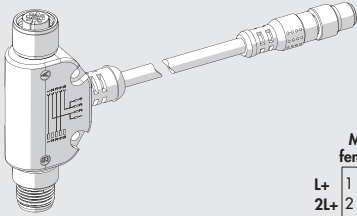
Code	Description
W0970513003	M12x1 5-PIN 90° connector

90° CONNECTOR WITH WIRE FOR M12, A-CODED



Code	Description
W0970513004	M12x1 5-PIN 90° connector with wire L = 5 m

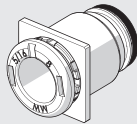
T-CONNECTOR M12 A-CODED / M8 MALE FOR AUXILIARY POWER



Code	Description
0240009070	T - connector for auxiliary power

SPARE PARTS

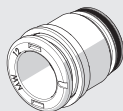
CARTRIDGE FOR BASES



Code	Description	Ø
02282R2001	EB 80 Ø 4 base square cartridge kit	4 (5/32")
02282R2002	EB 80 Ø 6 base square cartridge kit	6
02282R2003	EB 80 Ø 8 base square cartridge kit	8 (5/16")
02282R2006	EB 80 Ø 1/4 base square cartridge kit	1/4"

Comes in 10-pc. packs

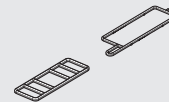
CARTRIDGE FOR ADDITIONAL PNEUMATIC SUPPLY



Code	Description	Ø
02282R2110	EB 80 silencer cartridge kit	silencer
02282R2113	EB 80 Ø 8 power supply round cartridge kit	8 (5/16")
02282R2114	EB 80 Ø 10 power supply round cartridge kit	10
02282R2115	EB 80 Ø 12 power supply round cartridge kit	12
02282R2118	EB 80 Ø 1/2 power supply round cartridge kit	1/2"

Comes in 10-pc. packs

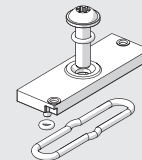
BASE-VALVE GASKET



Code	Description
02282R1002	EB 80 base-valve gasket kit

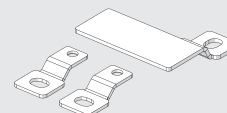
Comes in 10-pc. packs

SERVO SELECTOR



Code	Description
02282R9002	Kit servo selector with OR

FIXING FOOT



Code	Description
02282R4003	Kit fixing foots