LINE **150** | MULTIPOLE VALVES

Valve Line SIM 150 features a flexible and easy assembling, that is typical of valves on manifold, along with the advantages of the electric and pneumatic cabling system belonging to more cutting-edge solutions. A special double solenoid pilot, which is positioned on one side only of the valve, is able to supply even bistable valves, thus remarkably reducing the valve island overall dimensions.
Easy and intuitive assembling system enables a quick mounting of any configuration type, guaranteeing prompt and reliable service.
The comprehensive range of valves and modules available allows realizing true integrated systems up to 20 bistable solenoid valves, so as to meet effectively several application requirements.

SINGLE PILOT POWER

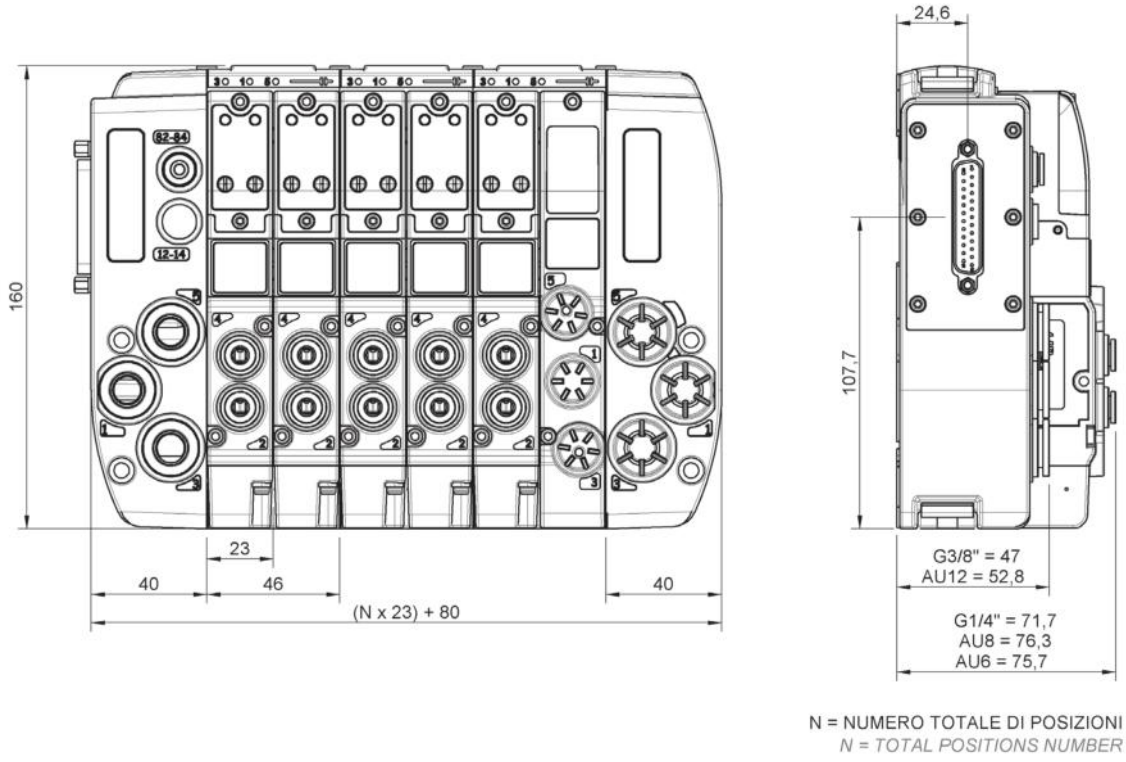
Fluid	filtered air with or without lubrication (in case lubrication is needed, it must be constant)
Working Temp.	-5÷50°C (23÷122°F) Please note: Below 3°C the air of the circuit must be free from humidity
Max Valves Q.ty	20
Max. Pilot Q.ty	40
Voltage	24 V DC 310%
Potenza Singolo Pilota	1,3 W * see note
Configurazione Elettrica	PNP
Connessione Elettrica	multipole connector 25 pin (up to 10 valve positions) multipole connector 44 pin (from 2 to 20 valve positions)
Grado Di Protezione	IP40: standard multipole connection 25 pin IP65: multipole connection 25 and 44 pin

WORKING PRESSURE

Function	Pilot supply	Working pressure	Pilot pressure	flow rate Ø8mm (6=bar; dp=1bar)
5/2 monostable	internal - internal (1)	2 - 7 bar	(*)	900 Nl/min
	esterno - external (12-14)	vuoto / vacuum - 10 bar	2 - 7 bar	
5/2 bistable	internal - internal (1)	1,5 - 7 bar	(*)	900 Nl/min
	esterno - external (12-14)	vuoto / vacuum - 10 bar	1,5 - 7 bar	
5/3	internal - internal (1)	2,5 - 7 bar	(*)	800 Nl/min
	esterno - external (12-14)	vuoto / vacuum - 10 bar	2,5 - 7 bar	
3/2 + 3/2	internal - internal (1)	3,5 - 7 bar	(*)	700-800 Nl/min
	esterno - external (12-14)	vuoto / vacuum - 10 bar	3,5 - 7 bar	

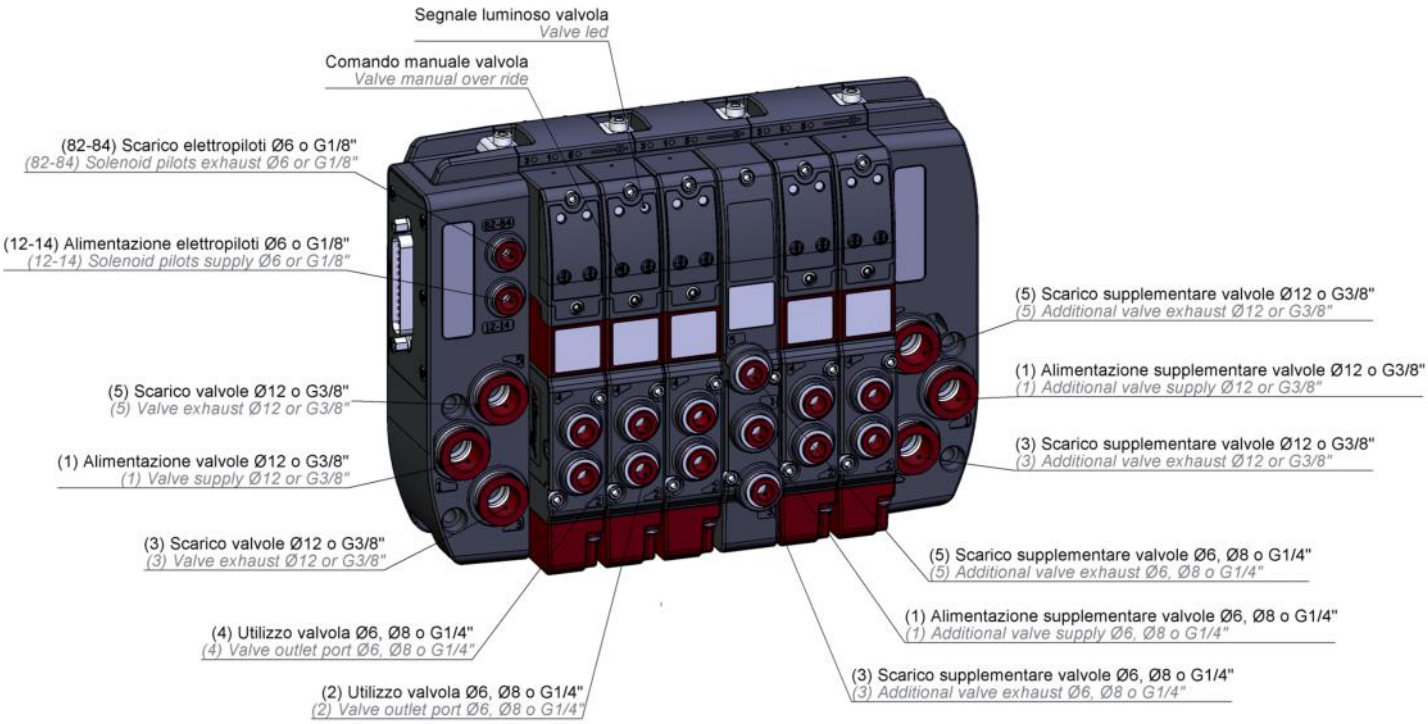
(*) pilot supply pressure max: 7bar. An higher pressure may cause malfunctioning of the valve

VALVE ISLAND DIMENSIONS



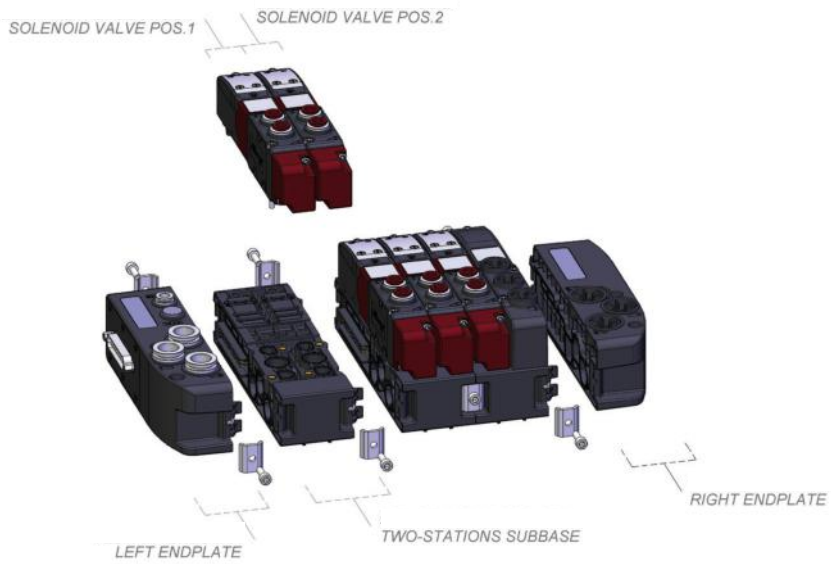
N = NUMERO TOTALE DI POSIZIONI
N = TOTAL POSITIONS NUMBER

LAYOUT

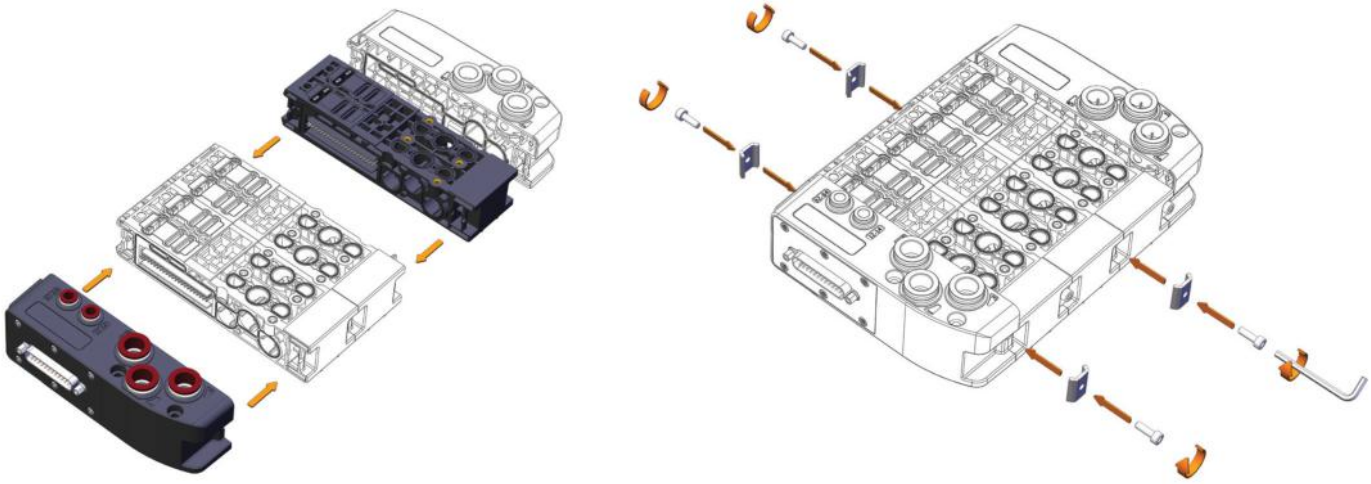


LINE **150** | MULTIPOLE VALVES

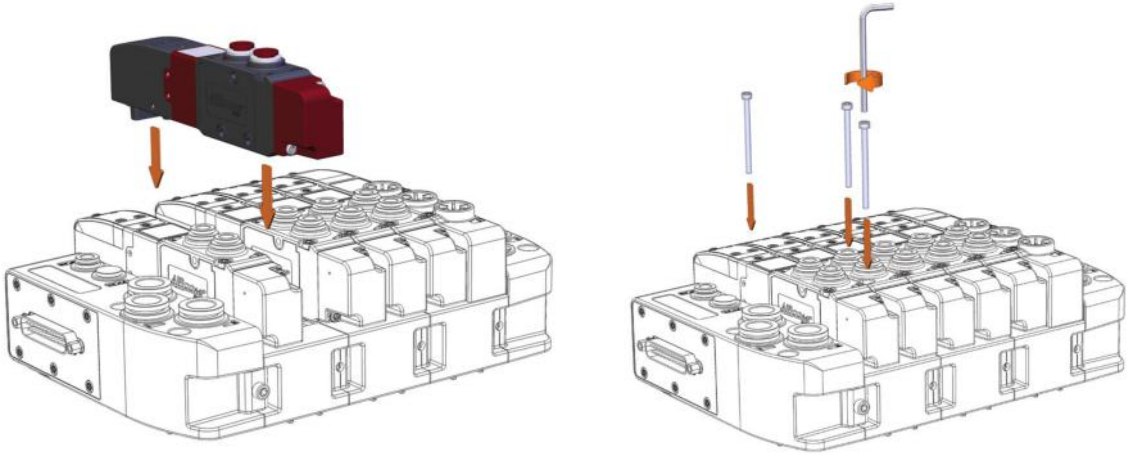
VALVE ISLAND CONFIGURATION



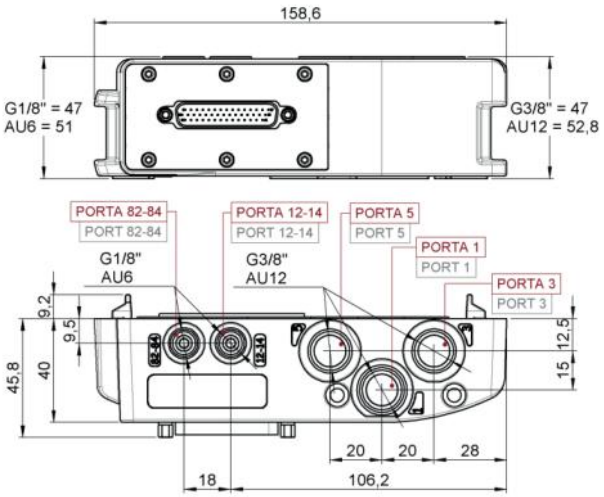
SUBBASES AND END PLATES ASSEMBLY



SOLENOID VALVES ASSEMBLY



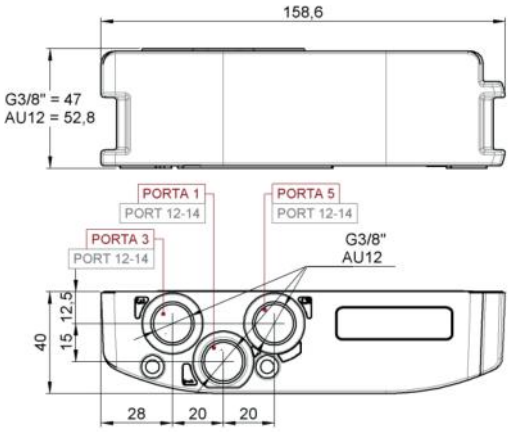
LEFT END PLATE



CODE	REFERENCE	CONNECTION PORT 1,3 AND 5	CONNECTION PORT 12-14/82-84	PILOT AIR SUPPLY	OPERATING PRESSURE	PILOT PRESSURE
1501C00123	Sub-D 25 pins	G3/8"	G1/8"	Internal/External (for information see page 2.73)	Vacuum ÷ 10[bar]	See Valves
1501C00124	Sub-D 44 pins	G3/8"	G1/8"			
1501C00125	Sub-D 25 pins	Push-in Ø12	Push-in Ø6			
1501C00126	Sub-D 44 pins	Push-in Ø12	Push-in Ø6			

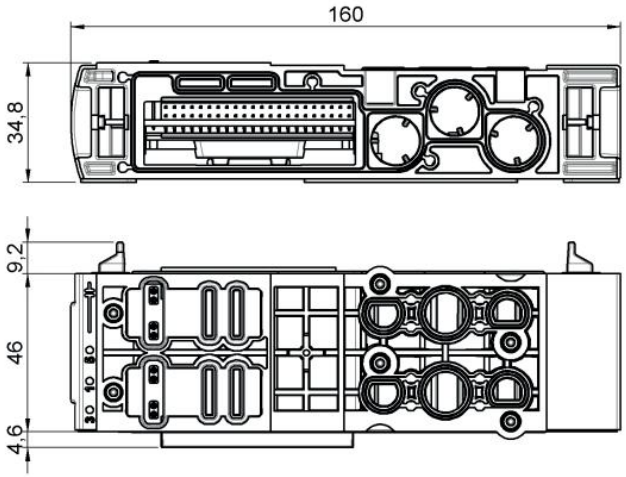
LINE 150 | MULTIPOLE VALVES

RIGHT END PLATE



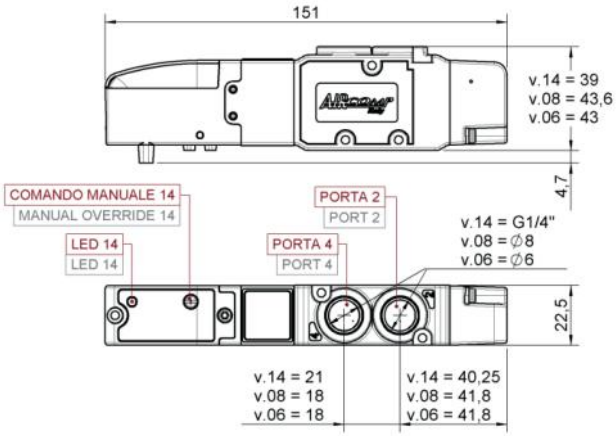
CODE	CONNECTION PORT 1,3 AND 5	PILOT AIR SUPPLY	OPERATING PRESSURE
1501C00127	Closed	Internal/External (for information see page 2.73)	Vacuum ÷ 10[bar]
1501C00128	G3/8"		
1501C00129	Push-in Ø12		

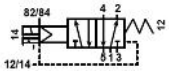
MODULAR SUBBASE



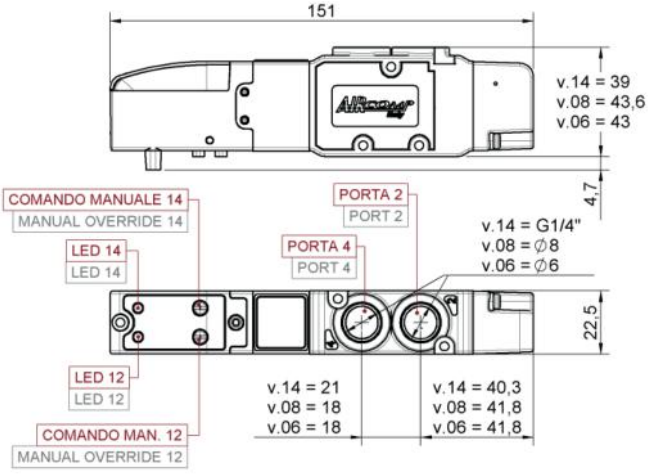
CODE	VALVE POSITION NUMBER	ELECTRIC SIGNAL FOR VALVE POSITION	OPERATING PRESSURE
1501C00130	2	2	Vacuum ÷ 10[bar]

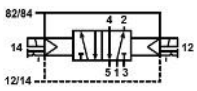
VA 5/2 MONOSTABLE VALVES



CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	OPERATING PRESSURE	FLOW RATE AT 6[BAR] P=1
1501C00001	VA14	G1/4"		Vacuum ÷ 10[bar]	2÷7[bar]	900 Nl/min (1/4")
1501C00002	VA08	Push-in Ø8				
1501C00003	VA06	Push-in Ø6				

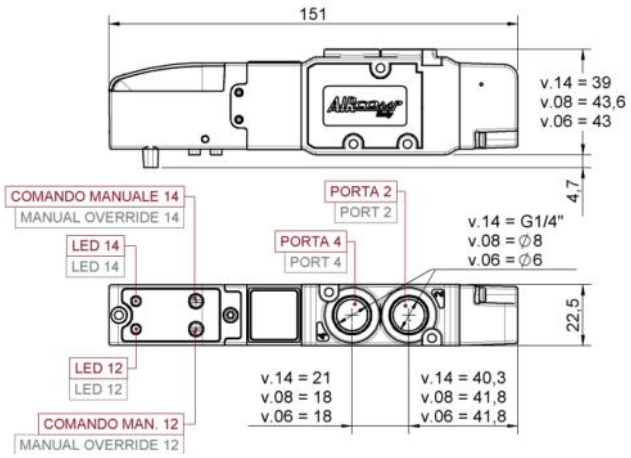
VB 5/2 BISTABLE VALVES

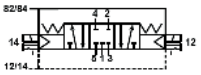


CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	OPERATING PRESSURE	FLOW RATE AT 6[BAR] P=1
1501C00004	VB14	G1/4"		Vacuum ÷ 10[bar]	2÷7[bar]	900 Nl/min (1/4")
1501C00005	VB08	Push-in Ø8				
1501C00006	VB06	Push-in Ø6				

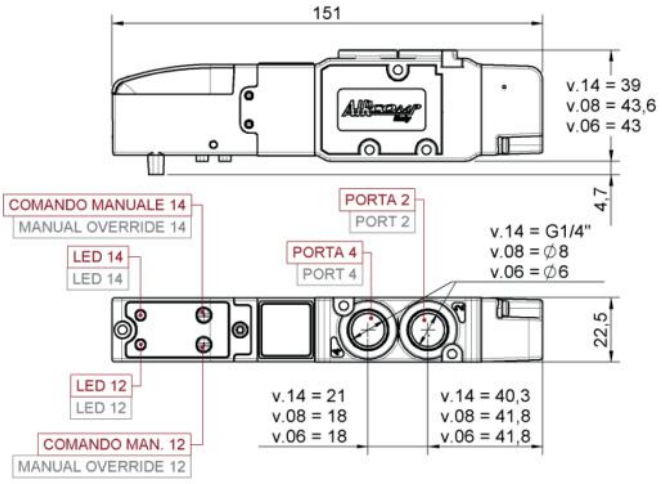
LINE **150** | MULTIPOLE VALVES

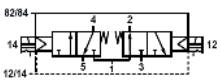
VC 5/3 CENTRE CLOSED VALVES



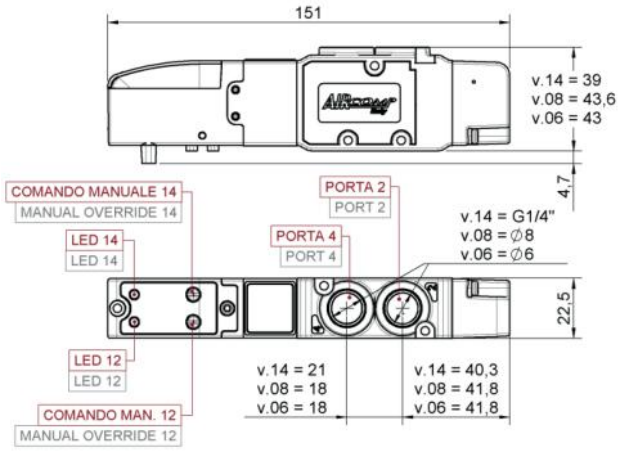
CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	PILOT PRESSURE	FLOW RATE AT 6[BAR] △P=1
1501C00007	VC14	G1/4"		Vacuum ÷ 10[bar]	2,5÷7[bar]	800 Nl/min (1/4")
1501C00008	VC08	Push-in Ø8				
1501C00009	VC06	Push-in Ø6				

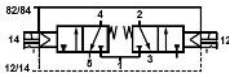
VD 3/2 NC + 3/2 NO VALVES



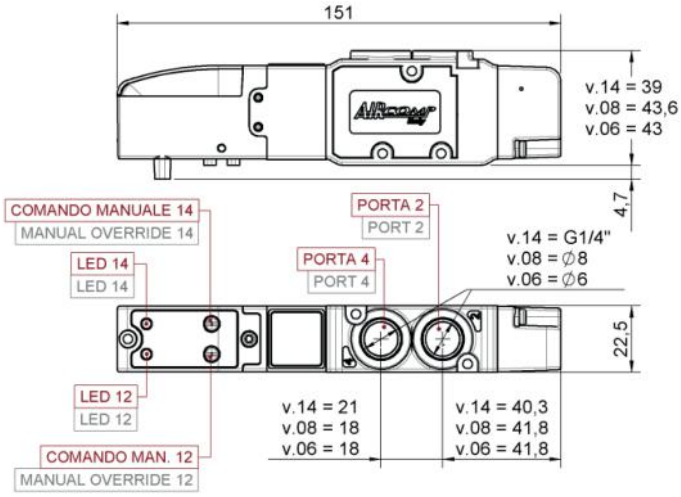
CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	PILOT PRESSURE	FLOW RATE AT 6[BAR] △P=1
1501C00010	VD14	G1/4"		Vacuum ÷ 10[bar]	3,5÷7[bar]	750 Nl/min (1/4")
1501C00011	VD08	Push-in Ø8				
1501C00012	VD06	Push-in Ø6				

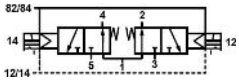
VE 3/2 NC + 3/2 NC (5/3 CA) VALVES



CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	PILOT PRESSURE	FLOW RATE AT 6[BAR] △P=1
1501C00013	VE14	G1/4"		Vacuum ÷ 10[bar]	3,5÷7[bar]	800 Nl/min (1/4")
1501C00014	VE08	Push-in Ø8				
1501C00015	VE06	Push-in Ø6				

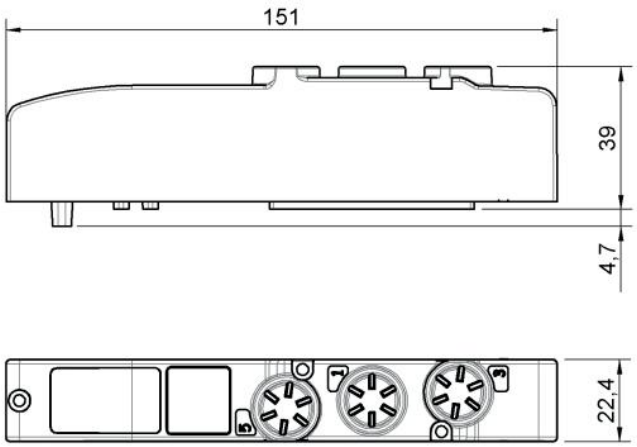
VF 3/2 NO + 3/2 NO (5/3 CP) VALVES

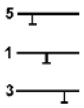


CODE	REFERENCE	CONNECTION PORT 2 - 4	SYMBOL	OPERATING PRESSURE	PILOT PRESSURE	FLOW RATE AT 6[BAR] △P=1
1501C00016	VF14	G1/4"		Vacuum ÷ 10[bar]	3,5÷7[bar]	700 Nl/min (1/4")
1501C00017	VF08	Push-in Ø8				
1501C00018	VF06	Push-in Ø6				

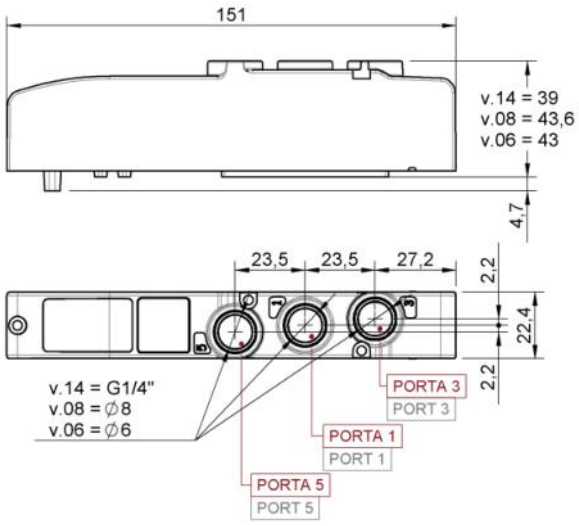
LINE **150** | MULTIPOLE VALVES

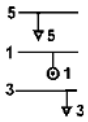
BLANKING PLATE



CODE	REFERENCE	SYMBOL	OPERATING PRESSURE
1501C00025	MS		Vacuum ÷ 10[bar]

ADDITIONAL SUPPLY AND EXHAUST MODULE

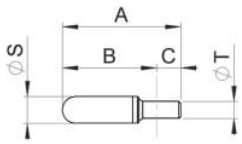


CODE	REFERENCE	CONNECTION PORT 1, 3 E 5	SYMBOL	OPERATING PRESSURE
1501C00026	MR14	G1/4" G1/4"		Vacuum ÷ 10[bar]
1501C00027	MR08	Push-in Ø8		
1501C00028	MR06	Push-in Ø6		

LINE **150** | MULTIPOLE VALVES

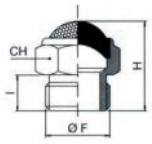
ACCESSORIES

PE SILENCERS



CODE	ØT	A	B	C	ØS
1601A00064	6	45	28,5	16,5	12,5
1601A00065	8	43	23.5	19,5	13,5
1601A00066	12	80	58	22	18,5

BRASS SILENCERS



CODE	ØT	H	CH
391.01.18	G1/8"	15	13
391.01.14	G1/4"	18	16
391.01.38	G3/8"	20	19

DIN RAIL EN 60715 FIXING KIT

CODE	DESCRIPTION
1601C00018	DIN rail fixing kit

DIAPHRAGM PLUG

CODE	DESCRIPTION
1531C00010	Diaphragm plug

FIXING KIT - FEET

CODE	DESCRIPTION
1601C00017	Feet fixing kit

CABLE WITH STANDARD CONNECTOR 25 PIN IP40

CODE	PIN	IP	LENGTH
1601C00002	25	40	3mt
1601C00003	25	40	5mt
1601C00004	25	40	10mt

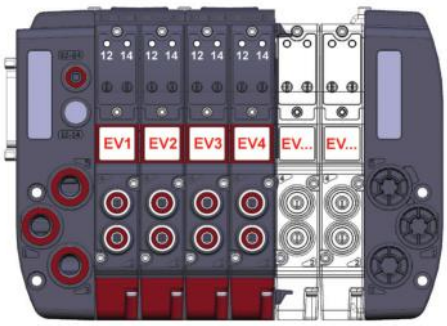
CABLE WITH STANDARD CONNECTOR 25 PIN IP65

CODE	PIN	IP	LENGTH
1601C00006	25	65	3mt
1601C00007	25	65	5mt
1601C00008	25	65	10mt

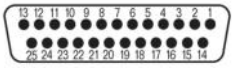
CABLE WITH STANDARD CONNECTOR 44 PIN IP65

CODE	PIN	IP	LENGTH
1601C00014	44	65	3mt
1601C00015	44	65	5mt
1601C00016	44	65	10mt

LINE 150 | MULTIPOLE VALVES

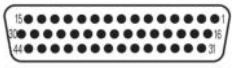


SUB-D 25 PIN CONNECTOR WIRING SCHEME



N° PIN	WIRE COLOUR	VALVE	PILOT
1	White	EV1	14
2	Brown	EV1	12
3	Green	EV2	14
4	Yellow	EV2	12
5	Grey	EV3	14
6	Pink	EV3	12
7	Blue	EV4	14
8	Red	EV4	12
9	Black	EV5	14
10	Purple	EV5	12
11	Grey	EV6	14
12	Red/Blue	EV6	12
13	White/Green	EV7	14
14	Brown/Green	EV7	12
15	White/Yellow	EV8	14
16	Yellow/Brown	EV8	12
17	White/Grey	EV9	14
18	Grey/Brown	EV9	12
19	White/Pink	EV10	14
20	Pink/Brown	EV10	12
21	White/Blue	common	14
22	Brown/Blue	common	12
23	White/Red	common	14
24	Brown/Red	common	12
25	White/Black	common	14

SUB-D 44 PIN CONNECTOR WIRING SCHEME

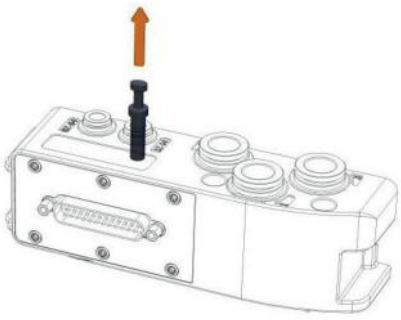


N° PIN	WIRE COLOUR	VALVE	PILOT
1	White	EV1	14
2	Brown	EV1	12
3	Green	EV2	14
4	Yellow	EV2	12
5	Grey	EV3	14
6	Pink	EV3	12
7	Blue	EV4	14
8	Red	EV4	12
9	Black	EV5	14
10	Purple	EV5	12
11	Grey/Pink	EV6	14
12	Red/Blue	EV6	12
13	White/Green	EV7	14
14	Brown/Green	EV7	12
15	White/Yellow	EV8	14
16	Yellow/Brown	EV8	12
17	White/Grey	EV9	14
18	Grey/Brown	EV9	12
19	White/Pink	EV10	14
20	Pink/Brown	EV10	12
21	White/Blue	EV11	14
22	Brown/Blue	EV11	12
23	White/Red	EV12	14
24	Brown/Red	EV12	12
25	White/Black	EV13	14
26	Brown/Black	EV13	12
27	Grey/Green	EV14	14
28	Yellow/Grey	EV14	12
29	Pink/Green	EV15	14
30	Yellow/Pink	EV15	12
31	Green/Blue	EV16	14
32	Yellow/Blue	EV16	12
33	Green/Red	EV17	14
34	Yellow/Red	EV17	12
35	Green/Black	EV18	14
36	Yellow/Black	EV18	12
37	Grey/Blue	EV19	14
38	Pink/Blue	EV19	12
39	Grey/Red	EV20	14
40	Pink/Red	EV20	12
41	Grey/Black	common	
42	Pink/Black	common	
43	Blue/Black	common	
44	Red/Black	common	

CONVERTING LEFT END PLATE FROM INTERNAL PILOT AIR SUPPLY TO EXTERNAL PILOT AIR SUPPLY

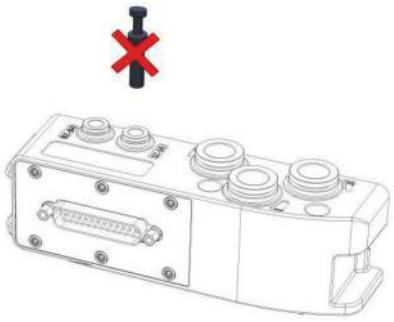
LEFT end plate, that is supplied separately, is always preset for INTERNAL pilot air supply. In this case, the end plate is equipped with a plug on supply connection 12-14. This plug must be maintained if the valve island you need to assemble requires internal air supply, whereas exhaust of pilot 12-14 must remain open.
If you need the end plate to be with EXTERNAL air supply, do the following operations:

PHASE 1 - END PLATE AU12



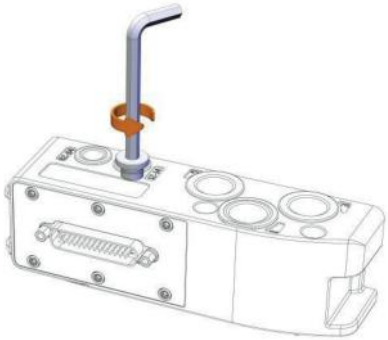
Phase 1. Remove plug from push-in fitting on connection 12-14

PHASE 2 - END PLATE AU12



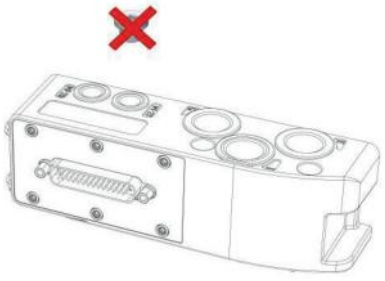
Phase 2. Scrap plug and connect supply pipe on connections 12-14

PHASE 1 - END PLATE CONNECTION 3/8



Phase 1. Unscrew the plug from connection 12-14

PHASE 1 - END PLATE CONNECTION 3/8LINE



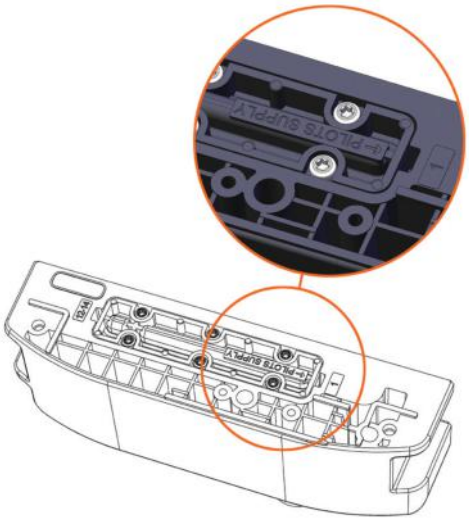
Phase 1. Scrap plug, mount fitting and connect supply pipe on connections 12-14.

ATTENTION: realizing a valve island with EXTERNAL pilot air supply requires converting both LEFT end plate and RIGHT end plate, as shown in following page.

CONVERTING RIGHT END PLATE FROM INTERNAL PILOT AIR SUPPLY TO EXTERNAL PILOT AIR SUPPLY

RIGHT end plate, that is supplied separately, is always preset for INTERNAL pilot air supply. In this case, the plate positioned on the back of end plate will bear the wording “pilots supply” turned towards 1.
If you need the end plate to be with EXTERNAL air supply, do the following operations:

PHASE 1

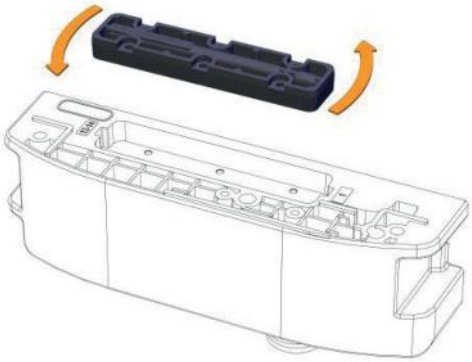


Phase 1. Position of plate for internal air supply

PHASE 2

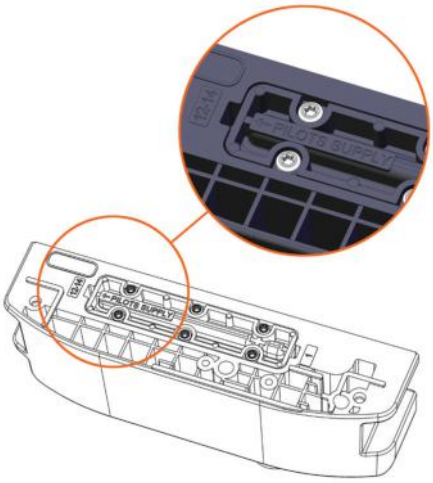
Phase 2. Unscrew the 6 fixing screws and lift the plate

PHASE 3



Phase 3. Turn the plate to 180° and re-assemble the 6 fixing screws

PHASE 4



Phase 4. Check that the wording “pilots supply” is oriented towards 12-14

LINE **150** | GUIDE TO REFERENCES

GUIDE TO REFERENCES

SM150 6 025 B VA14 - VB14 - C001 - VB14 - VA14 - VE14 - MS

Product
SM150 = Valves Battery line 150

Total Positions Number
(from 2 to 20 max. positions)
6 = 6 positions

Electric connection
025 = SUB-D 25 pin (from 2 to 10 valve positions)
044 = SUB-D 44 pin (from 2 to 20 valve positions)

Pneumatic Supply Type
B = see CHART.1

Punits Position And Sequence
(see CHART 2)
Pos.1 = VA14
Pos.2 = VB14
Pos.3 = VB14
Pos.4 = VA14
Pos.5 = VE14
Pos.6 = MS

Diaphragm Plug
C001 = Plug on port 1
C035 = Plug on port 3-5
C135 = Plug on port 1-3-5

CHART 1

PNEUMATIC SUPPLY: POSSIBLE CONFIGURATIONS

REFERENCE	LEFT END PLATE	RIGHT END PLATE	PILOTS AIR SUPPLY	LAYOUT
A	G3/8"	Closed	Internal	
B	G3/8"	G3/8"	Internal	
C	Push-in Ø12	Closed	Internal	
D	Push-in Ø12	Push-in Ø12	Internal	
E	G3/8"	Closed	External	
F	G3/8"	G3/8"	External	
G	Push-in Ø12	Closed	External	
H	Push-in Ø12	Push-in Ø12	External	

CHART 2

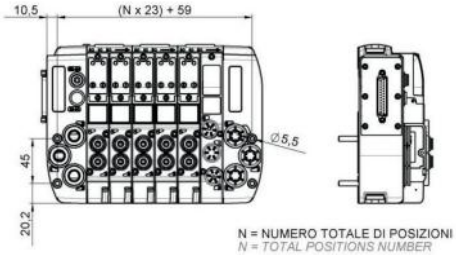
VALVES AND MODULES

REF.	FUNCTION	CONNECTION	SYMBOL
VA14	5/2 monostable	G1/4"	
VA08	5/2 monostable	Push-in Ø8	
VA06	5/2 monostable	Push-in Ø6	
VB14	5/2 bistable	G1/4"	
VB08	5/2 bistable	Push-in Ø8	
VB06	5/2 bistable	Push-in Ø6	
VC14	5/3 CC	G1/4"	
VC08	5/3 CC	Push-in Ø8	
VC06	5/3 CC	Push-in Ø6	
VD14	3/2 NC + 3/2 NO	G1/4"	
VD08	3/2 NC + 3/2 NO	Push-in Ø8	
VD06	3/2 NC + 3/2 NO	Push-in Ø6	
VE14	3/2 NC + 3/2 NC (5/3 CA)	G1/4"	
VE08	3/2 NC + 3/2 NC (5/3 CA)	Push-in Ø8	
VE06	3/2 NC + 3/2 NC (5/3 CA)	Push-in Ø6	
VF14	3/2 NO + 3/2 NO (5/3 CP)	G1/4"	
VF08	3/2 NO + 3/2 NO (5/3 CP)	Push-in Ø8	
VF06	3/2 NO + 3/2 NO (5/3 CP)	Push-in Ø6	
MS	Vacant valve po-sition		
MR	Additional supply module		

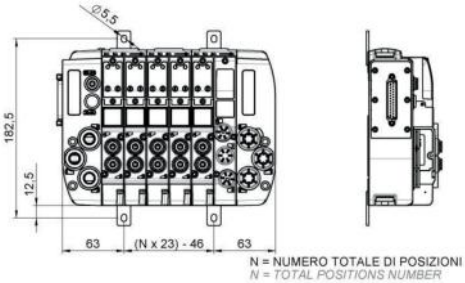
LINE **150** | MULTIPOLE VALVES

VALVE ISLAND FIXING

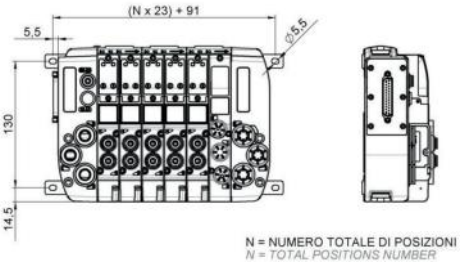
FIXING WITH SCREWS M5



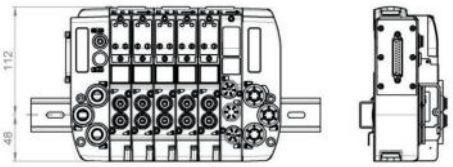
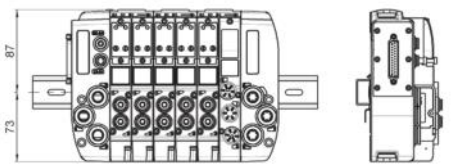
FIXING WITH FEET - POSITION 1



FIXING WITH FEET - POSITION 2



FIXING WITH DIN RAIL - POSITION 1



FIXING WITH DIN RAIL - POSITION 2