

SPOOL VALVES ECO22

Series 888

General

Competitively priced, good performance and versatility combined with a compact design are the main characteristics of this new series of valves. The aluminium valve body and spool/seal arrangement optimize both the flow rate and the valve switching time.

This new series of valves are available with G1/8" and G1/4" ports in 3/2, 5/2 and 5/3 versions. Monostable or bistable versions are available and include an integrated technopolymer solenoid operator with 9mm stem and built in manual override

The valves can be supplied with or without the solenoid coil, however, if the solenoid coil is required please refer to the following table:

Voltages		Coil Code	
Direct current DC	12V (3,5W)	MF4	STD
	24V (3,5W)	MF5	STD
Alternating current AC 50 Hz	24V (3,7W)	MF56	STD
	110V (3,7W)	MF57	STD
	230V (3,7W)	MF58	STD

Coil type U1



Construction characteristics

Body	Aluminium
Operators	Technopolymer
	Aluminium for spring bottom plates
Spools	Aluminium
Seals	NBR
Pistons	Technopolymer
Springs	Spring steel



Use and maintenance

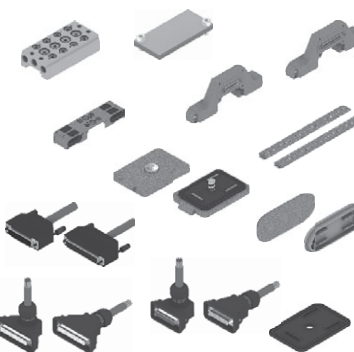
These valves have an average life of 15 million cycles depending on the application and air quality, filtered and lubricated air using specified lubricants will dramatically reduce the wear of the seals and ensures long and trouble free operation.

Please ensure that the valve is being used according with the manufacturers specification, such as air pressure and temperature and that exhaust ports 3 & 5 are protected against the possible ingress of dirt or debris.

Repair kits including the spool complete with seals are available for overhauling the valves; however, although this is a simple operation it should be carried out by a competent person.





		Symbol	Description		Code	Max. pressure	Flow at 6 bar, Δp=1	Orifice size
G 1/8"	3/2		Solenoid - Spring (self-feeding)	STD	8880.32.A.39*	8 bar	790 NI/min	5,8 mm
			Solenoid - Spring (self-feeding)	STD	8880.32.C.39*			
			Solenoid - Solenoid	STD	8880.32.00.35*			
			Solenoid - Spring (self-feeding)	STD	8880.52.00.39*			
	5/2		Solenoid - Solenoid	STD	8880.52.00.35*			
			Solenoid - Solenoid - C.C.	STD	8880.53.31.35*			
			Solenoid - Solenoid - O.C.	STD	8880.53.32.35*			
	5/3		Solenoid - Solenoid - P.C.	STD	8880.53.33.35*			
			Solenoid - Spring (self-feeding)		888E.32.A.39*			
			Solenoid - Spring (self-feeding)		888E.32.C.39*			
	5/2		Solenoid - Solenoid (external-feeding)		888E.32.00.35*			
			Solenoid - Spring (self feeding)		888E.52.00.39*			
			Solenoid - Solenoid (external-feeding)		888E.52.00.35*			
	G 1/4"	5/3		Solenoid - Solenoid - C.C. (external-feeding)			888E.53.31.35*	
			Solenoid - Solenoid - O.C. (external-feeding)		888E.53.32.35*			
			Solenoid - Solenoid - P.C. (external-feeding)		888E.53.33.35*			
3/2			Solenoid - Spring (self feeding)	STD	8884.32.A.39*			
			Solenoid - Spring (self feeding)	STD	8884.32.C.39*			
			Solenoid - Solenoid	STD	8884.32.00.35*			
			Solenoid - Spring (self feeding)	STD	8884.52.00.39*			
			Solenoid - Solenoid	STD	8884.52.00.35*			
			Solenoid - Solenoid - C.C.	STD	8884.53.31.35*			
			Solenoid - Solenoid - O.C.	STD	8884.53.32.35*			
			Solenoid - Solenoid - P.C.	STD	8884.53.33.35*			
			Manifold (Valves 5/2 - 5/3)	STD	888.**			
			Closing plate	STD	8880.00			
			Manifold (Valves 3/2)	STD	8883.**			
			Closing plate	STD	8883.00			
			Endplate, 25 poles IP65		888M.25.10			
			Endplate, 37 poles IP65		888M.37.10			
			Modular base, 2 positions IP65		888M.02.BM			
			Left and Right Power board PNP 24 VDC		888M.***			
			Closing plate		888M.22.PC			
			Multipolar base plug		888M.T			
			Seals		888M.22.G			
			In line cable complete with connector IP40		2400.**.**.00			
			Cable complete with connector, 25 Poles IP65		2300.25.**.**			
			Cable complete with connector, 37 Poles IP65		2400.37.**.**			

* Voltage : F05 = 24 VDC - F56 = 24 V (50-60 Hz) - F57 = 110 V (50-60 Hz) - F58 = 230 V (50-60 Hz) - F00 = Without coil ** Number of seat : from 02 to 10, 12 and

*** Number positions : 04 = 4 positions - 08 = 8 positions - 12 = 12 positions - 16 = 16 positions - Type : 00 = left side - 01 = right side

*** Connector : 25 = 25 poles - 37 = 37 poles - Cable lenght : 03 = 3 meters - 05 = 5 meters - 10 = 10 meters

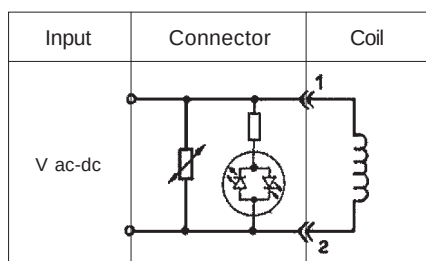
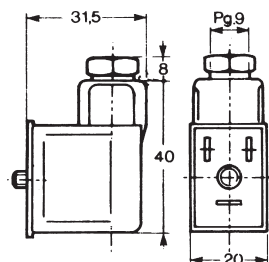
** Cable lenght : 03 = 3 meters - 05 = 5 meters - 10 = 10 meters - Connector : 10 = In line - 90 = 90° Angle

Exhaust = 1/8"

Connector for coil (DIN 43650)

	Ordering code	Supply voltage until	Coil type	Protection class	Remarks
	MP1	0-250V~/300V=	U1	IP 65	CONNECTOR
	MP1-LED-24V	24V	U1	IP 65	+LED
	MP1-LED-24V-5M	24V	U1	IP 65	+LED+CABLE
	MP1-LED-230V	230V	U1	IP 65	+LED

Electronic circuit for MP-LED



Bipolar LED and VDR to protect supply and switch.
(The energy in the coil is limited by the VDR).
Voltage: 24 or 230V.



The components illustrated and described in the present catalogue are sold under the trademark **PNEUMAX**. Sales in Italy and abroad are handled through the organization indicated in the "**Sales network pages**". The overall dimensions and technical information are provided solely for information reasons and may be subject to change without notice.

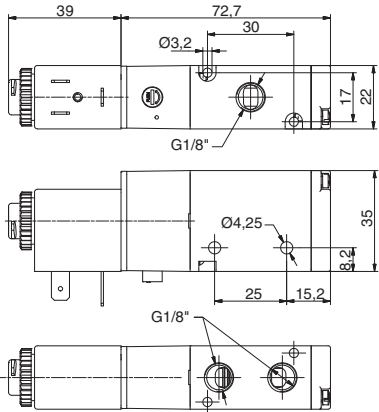


Solenoid - Spring - 3/2 (Self-feeding)

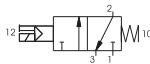
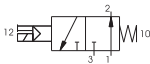
Ordering code

8880.32.F.39.V

- FUNCTION
- F A=Normally Open
C=Normally Closed
- VOLTAGE
- F05=24 V DC
- V F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 210
Minimum working pressure 2 bar



Operational characteristics

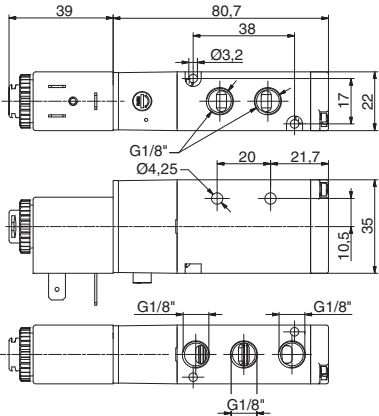
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Spring - 5/2 (Self-feeding)

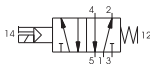
Ordering code

8880.52.00.39.V

- VOLTAGE
- F05=24 V DC
- V F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 220
Minimum working pressure 2 bar



Operational characteristics

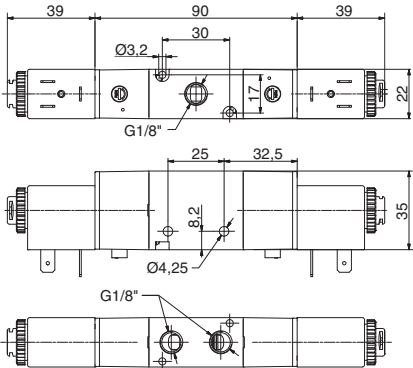
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 3/2

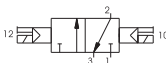
Ordering code

8880.32.00.35.V

- VOLTAGE
- F05=24 V DC
- V F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 310
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 5/2

Ordering code

8880,52.00,35.Ⓟ

VOLTAGE	
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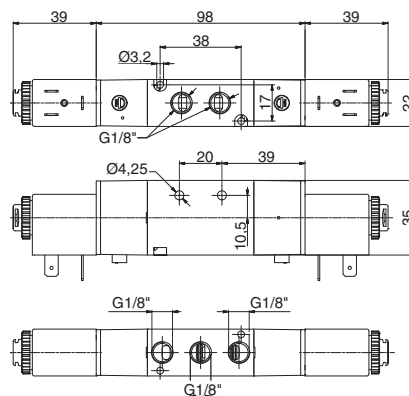
F05=24 V DC

F56=24 V (50-60 Hz)

F57=110 V (50-60 Hz)

F58=230V (50-60 Hz)

F00=Without coil



Weight gr. 320

Minimum working pressure 2 bar



Operational characteristics

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p = 1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 5/3

Ordering code

8880.53.ⓕ.35.Ⓥ

FUNCTION	
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31 = Closed centres

32=Open centres

33=Pressured centres

VOLTAGE	
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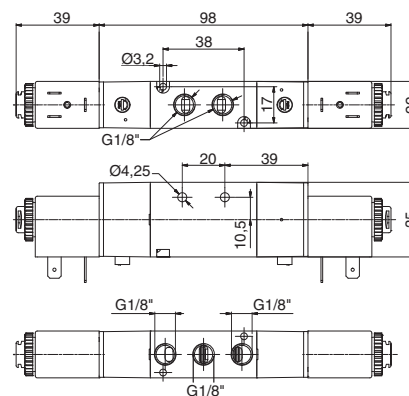
F05=24 V DC

F56=24 V (50-60 Hz)

F57=110 V (50-60 Hz)

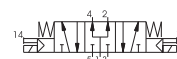
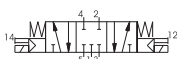
F58=230V (50-60 Hz)

F00=Without coil



Weight gr. 330

Minimum working pressure 2,5 bar



Operational characteristics

Operational characteristics					
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p = 1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	440	5,8	G 1/8"

Solenoid - Spring - 3/2 (Self-feeding)

Ordering code

888E.32.F.39.V

F FUNZIONE
A=3/2 Normalmente Aperta
C=3/2 Normalmente Chiusa

VOLTAGE

F04=12 V DC

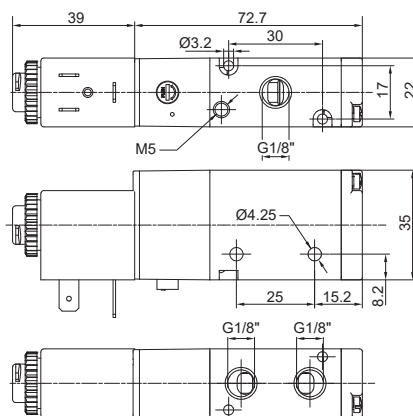
F05=24 V DC

V F56=24 V (50-60 Hz)

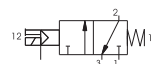
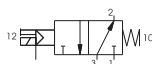
F57=110 V (50-60 Hz)

F58=230 V (50-60 Hz)

F00=Senza bobina



Weight gr. 210
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Spring - 5/2 (Self-feeding)

Ordering code

888E.52.00.39.V

VOLTAGE

F04=12 V DC

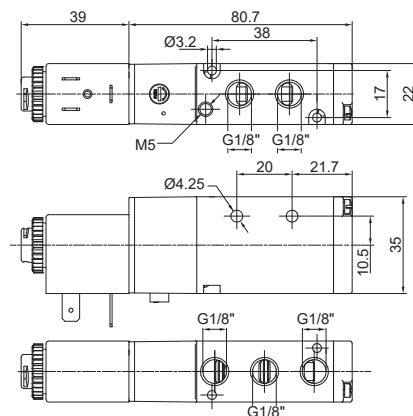
F05=24 V DC

V F56=24 V (50-60 Hz)

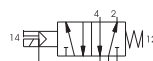
F57=110 V (50-60 Hz)

F58=230 V (50-60 Hz)

F00=Senza bobina



Weight gr. 220
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 3/2 (External-feeding)

Ordering code

888E.32.00.35.V

VOLTAGE

F04=12 V DC

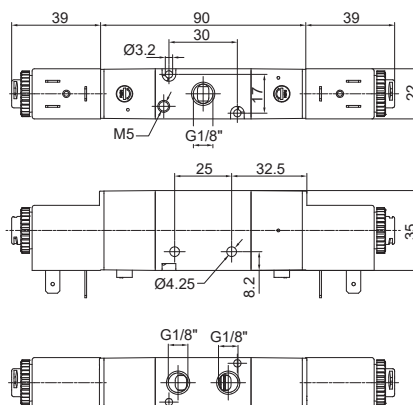
F05=24 V DC

V F56=24 V (50-60 Hz)

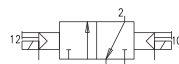
F57=110 V (50-60 Hz)

F58=230 V (50-60 Hz)

F00=Senza bobina



Weight gr. 310
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 5/2 (External-feeding)

Ordering code

888E.52.00.35.V

VOLTAGE

F04=12 V DC

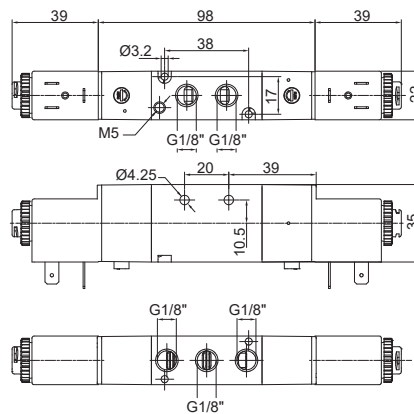
F05=24 V DC

V F56=24 V (50-60 Hz)

F57=110 V (50-60 Hz)

F58=230 V (50-60 Hz)

F00=Senza bobina



Weight gr. 320
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	790	5,8	G 1/8"

Solenoid - Solenoid - 5/3 (External-feeding)

Ordering code

888E.53.F.35.V

FUNZIONE

F 31=Closed centres

32=Open centres

33=Pressured centres

VOLTAGEpos.

F04=12 V DC

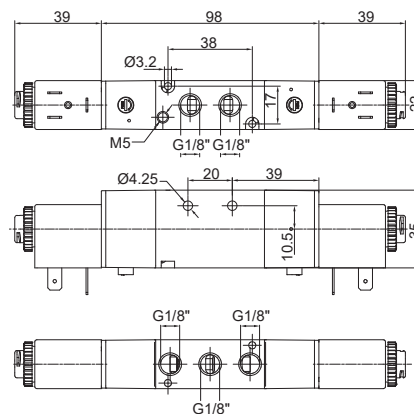
F05=24 V DC

V F56=24 V (50-60 Hz)

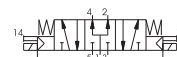
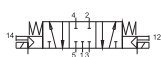
F57=110 V (50-60 Hz)

F58=230 V (50-60 Hz)

F00=Senza bobina



Weight gr. 330
Minimum working pressure 2,5 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	440	5,8	G 1/8"

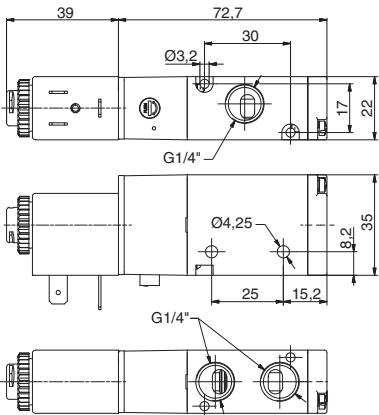


Solenoid - Spring - 3/2 (Self-feeding)

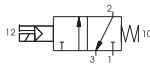
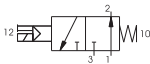
Ordering code

8884.32.F.39.V

- FUNCTION
- A=Normally Open
C=Normally Closed
- VOLTAGE
- F05=24 V DC
F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 210
Minimum working pressure 2 bar



Operational characteristics

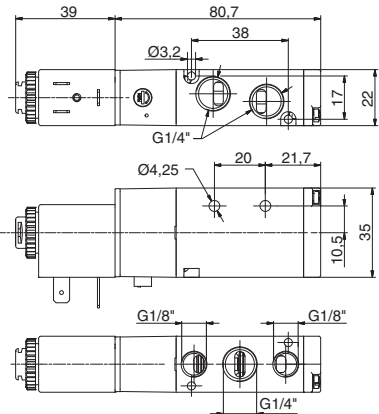
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	890	6,5	G 1/4"

Solenoid - Spring - 5/2 (Self-feeding)

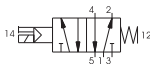
Ordering code

8884.52.00.39.V

- VOLTAGE
- F05=24 V DC
F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 220
Minimum working pressure 2 bar



Operational characteristics

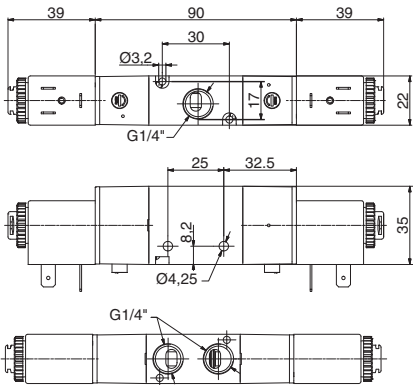
Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	890	6,5	G 1/4"

Solenoid - Solenoid - 3/2

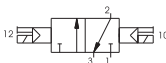
Ordering code

8884.32.00.35.V

- VOLTAGE
- F05=24 V DC
F56=24 V (50-60 Hz)
F57=110 V (50-60 Hz)
F58=230V (50-60 Hz)
F00=Without coil



Weight gr. 310
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (l/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	890	6,5	G 1/4"

Solenoid - Solenoid - 5/2

Ordering code

8884.52.00.35.V

VOLTAGE

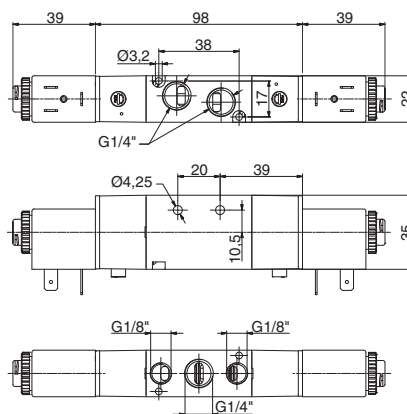
F05=24 V DC

F56=24 V (50-60 Hz)

F57=110 V (50-60 Hz)

F58=230V (50-60 Hz)

F00=Without coil



Weight gr. 320
Minimum working pressure 2 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	890	6,5	G 1/4"

Solenoid - Solenoid - 5/3

Ordering code

8884.53.F.35.V

FUNCTION

31=Closed centres

32=Open centres

33=Pressured centres

VOLTAGE

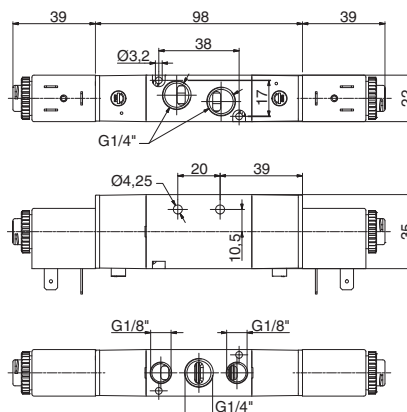
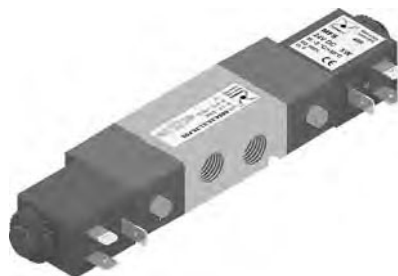
F05=24 V DC

F56=24 V (50-60 Hz)

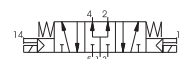
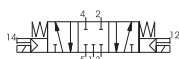
F57=110 V (50-60 Hz)

F58=230V (50-60 Hz)

F00=Without coil



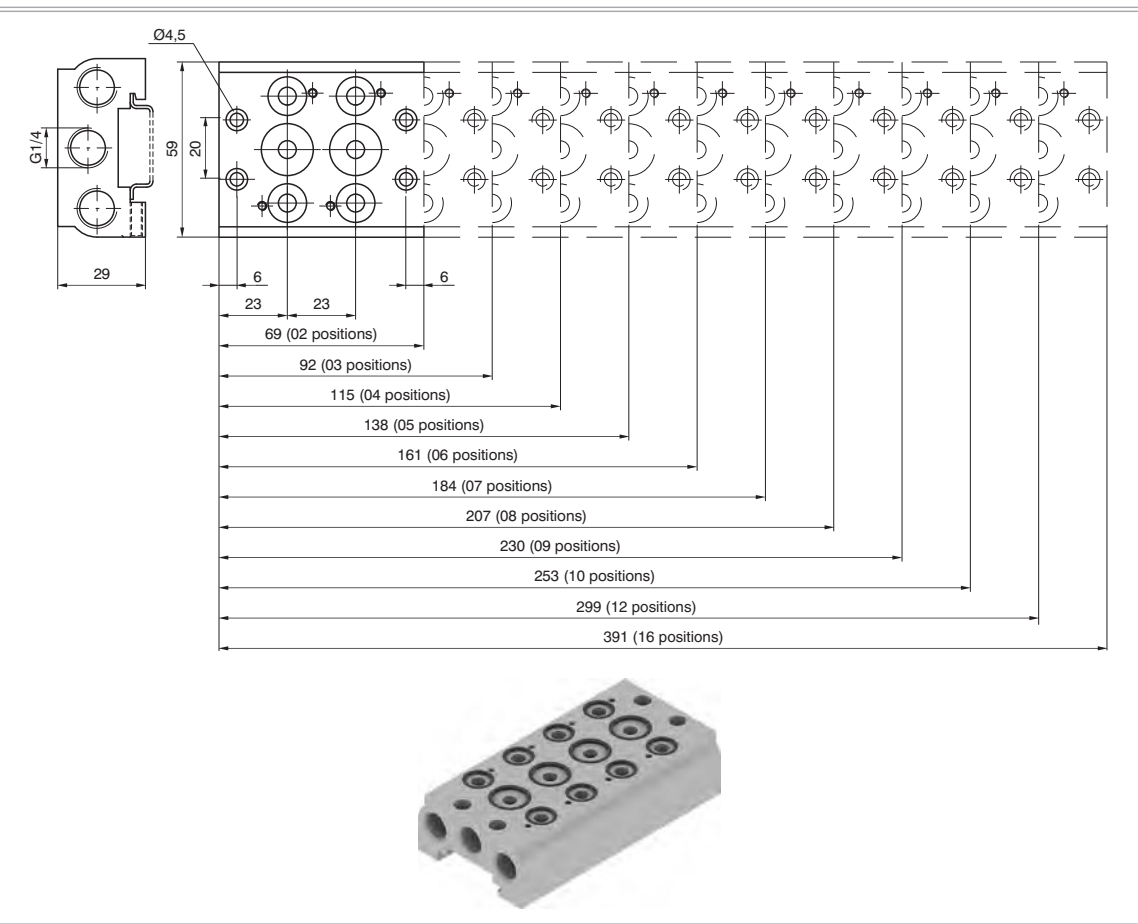
Weight gr. 330
Minimum working pressure 2,5 bar



Operational characteristics

Fluid	Max working pressure (bar)	Temperature °C	Flow rate at 6 bar with $\Delta p=1$ (NI/min)	Orifice size (mm)	Working port size
Filtered and lubricated air	8	-5 ÷ +50	540	6,5	G 1/4"

Manifold (Valves 5/2 - 5/3)



Ordering code

888.P

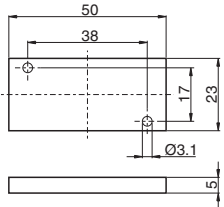
N. POSITIONS	
02=nr.	2 pos. (270 gr)
03=nr.	3 pos. (335 gr)
04=nr.	4 pos. (400 gr)
05=nr.	5 pos. (465 gr)
06=nr.	6 pos. (530 gr)
07=nr.	7 pos. (595 gr)
08=nr.	8 pos. (660 gr)
09=nr.	9 pos. (725 gr)
10=nr.	10 pos. (790 gr)
12=nr.	12 pos. (920 gr)
16=nr.	16 pos. (1180 gr)

Manifold supplied complete with Seals, Valve fixing screws and DIN rail fixing pin

2

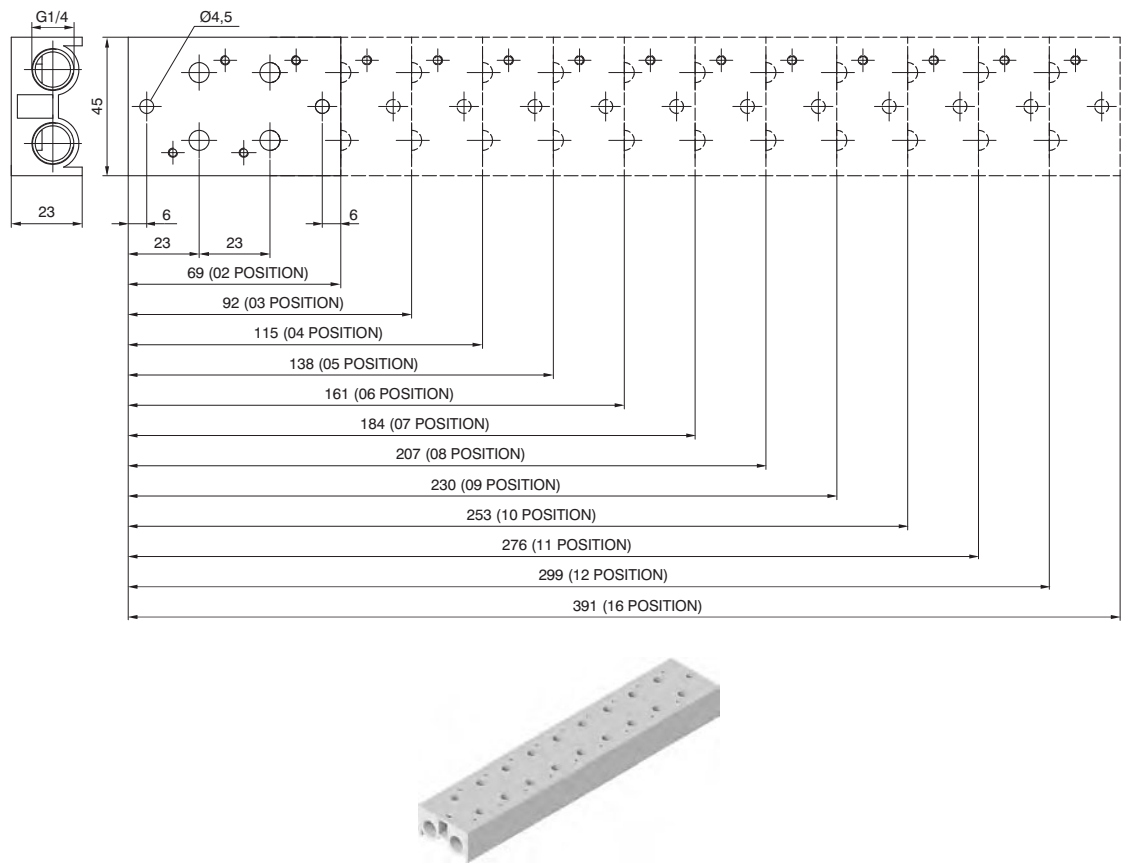
Closing plate

Ordering code
888.00



Weight gr. 18
Closing plate supplied complete with 2 fixing screws to the manifold and 2 fixing screws to the multi-polar base

Manifold (Valves 3/2)



Ordering code

8883.P

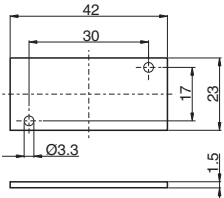
POSIZIONE
02=nr. 2 pos. (112 gr)
03=nr. 3 pos. (149 gr)
04=nr. 4 pos. (186 gr)
05=nr. 5 pos. (223 gr)
06=nr. 6 pos. (260 gr)
07=nr. 7 pos. (297 gr)
08=nr. 8 pos. (334 gr)
09=nr. 9 pos. (371 gr)
10=nr. 10 pos. (408 gr)
12=nr. 12 pos. (482 gr)
16=nr. 16 pos. (630 gr)

Manifold supplied complete with Seals and Valve fixing screws.

Closing plate

Ordering code

8883.00



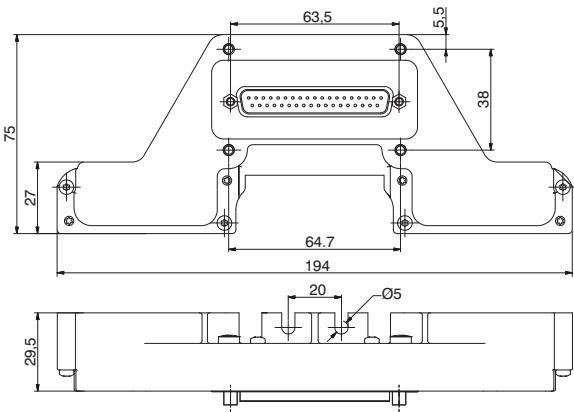
Weight gr. 10 - Closing plate supplied complete with 2 fixing screws to the manifold



Endplate, 37 Poles IP65

Ordering code

888M.37.10

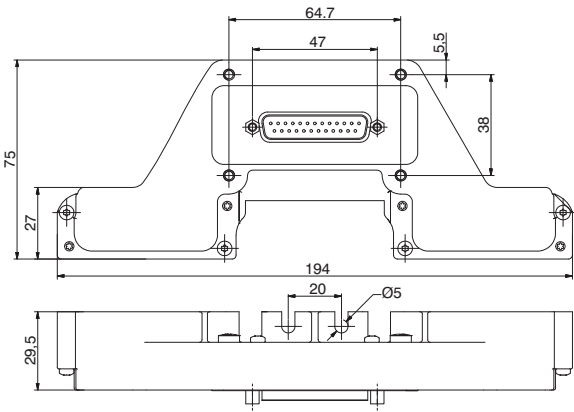


Weight gr. 186
The IP65 protection is obtained by IP65 Pneumax cable
Code complete with assembled endplate and 4 manifold fixing screws, previously mounted on the Manifold.

Endplate, 25 Poles IP65

Ordering code

888M.25.10

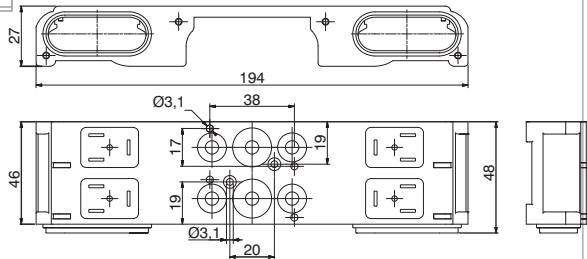


Weight gr. 181
The IP65 protection is obtained by IP65 Pneumax cable
Code complete with assembled endplate and 4 manifold fixing screws, previously mounted on the Manifold.

Modular base, 2 positions IP65

Ordering code

888M.02.BM



Weight gr. 220
Complete with seals and fixing screws
Usable only for 5/2 and 5/3 Distributors

Left and Right Power board PNP 24 VDC

Ordering code

888M.P.T

N. POSITIONS

04=nr. 4 pos. (11,2 gr.)

08=nr. 8 pos. (22,4 gr.)

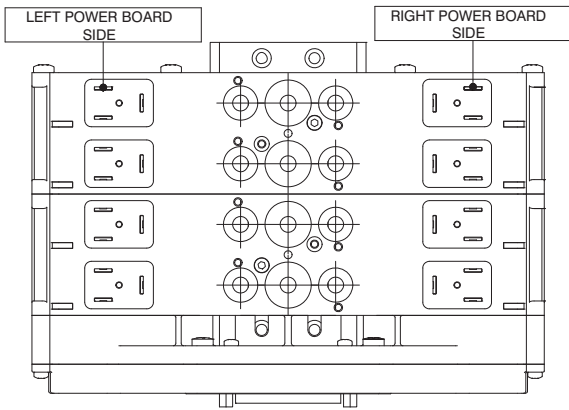
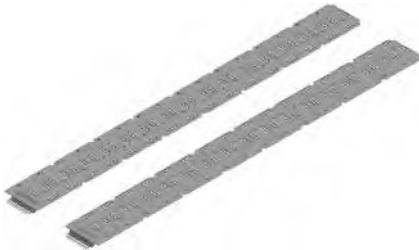
12=nr. 12 pos. (33,6 gr.)

16=nr. 16 pos. (44,8 gr.)

TYPE

00=Left side

01=Right side

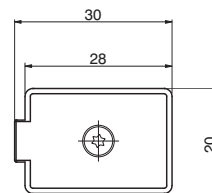
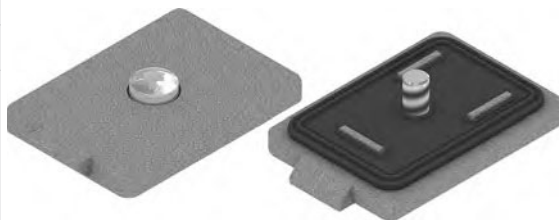


The IP65 protection degree is guaranteed if assembled by Pneumax



Closing plate

Ordering code

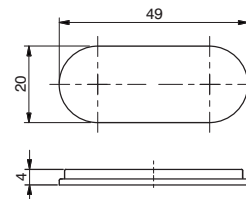
888M.22.PC

Weight gr. 3

Closing plate supplied complete with 1 Seal and fixing screw with O ring

Multipolar base plug

Ordering code

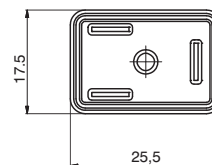
888M.T

Weight gr. 2,6

Complete with: Nr. 1 Plug, Nr. 2 Fixing screws

Seals

Ordering code

888M.22.G

Weight gr. 0,52

In line cable complete with connector IP40

Ordering code

2400.T.L.00

CONNECTORS

T 25=25 poles

37=37 poles

CABLE LENGHT

L 03=3 meters

05=5 meters

10=10 meters



Cable complete with connector, 25 Poles IP65

Ordering code

2300.25.L.C

CABLE LENGHT

L 03=3 meters

05=5 meters

10=10 meters

CONNECTORS

C 10=In line

90=90° Angle



Cable complete with connector, 37 Poles IP65

Ordering code

2400.37.L.C

CABLE LENGHT

L 03=3 meters

05=5 meters

10=10 meters

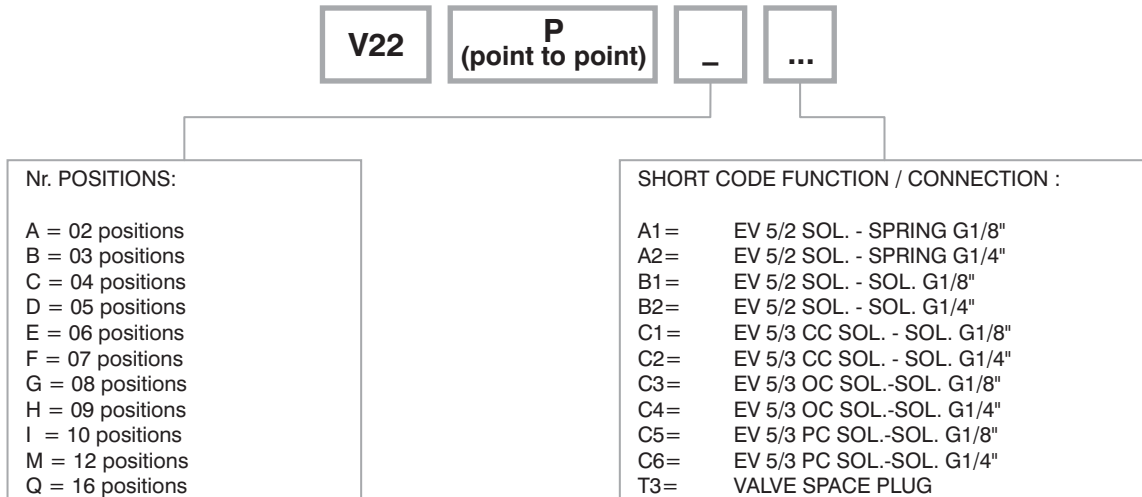
CONNECTORS

C 10=In line

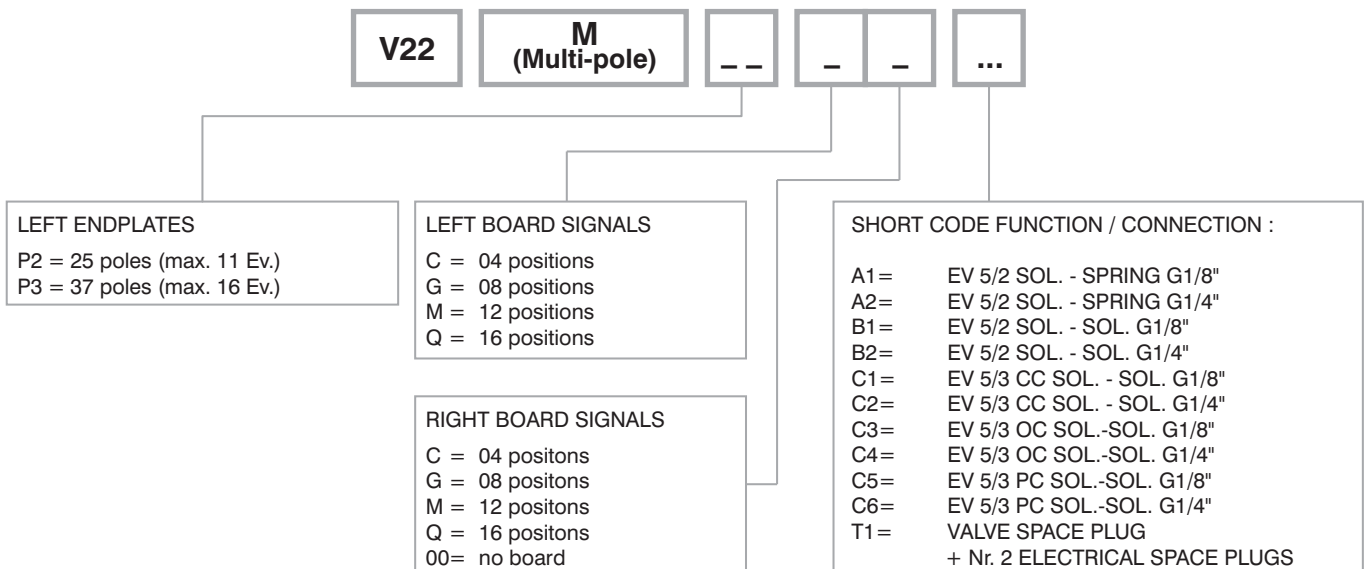
90=90° Angle



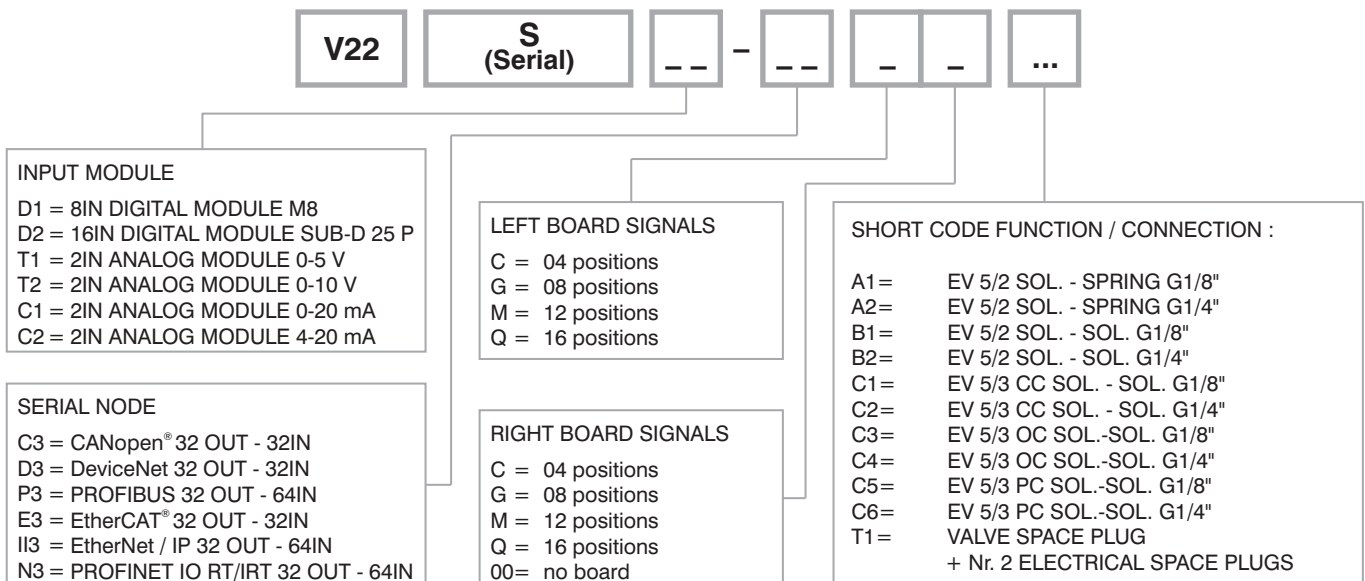
Manifold layout Configuration Point to Point



Manifold layout Configuration Multi-pole



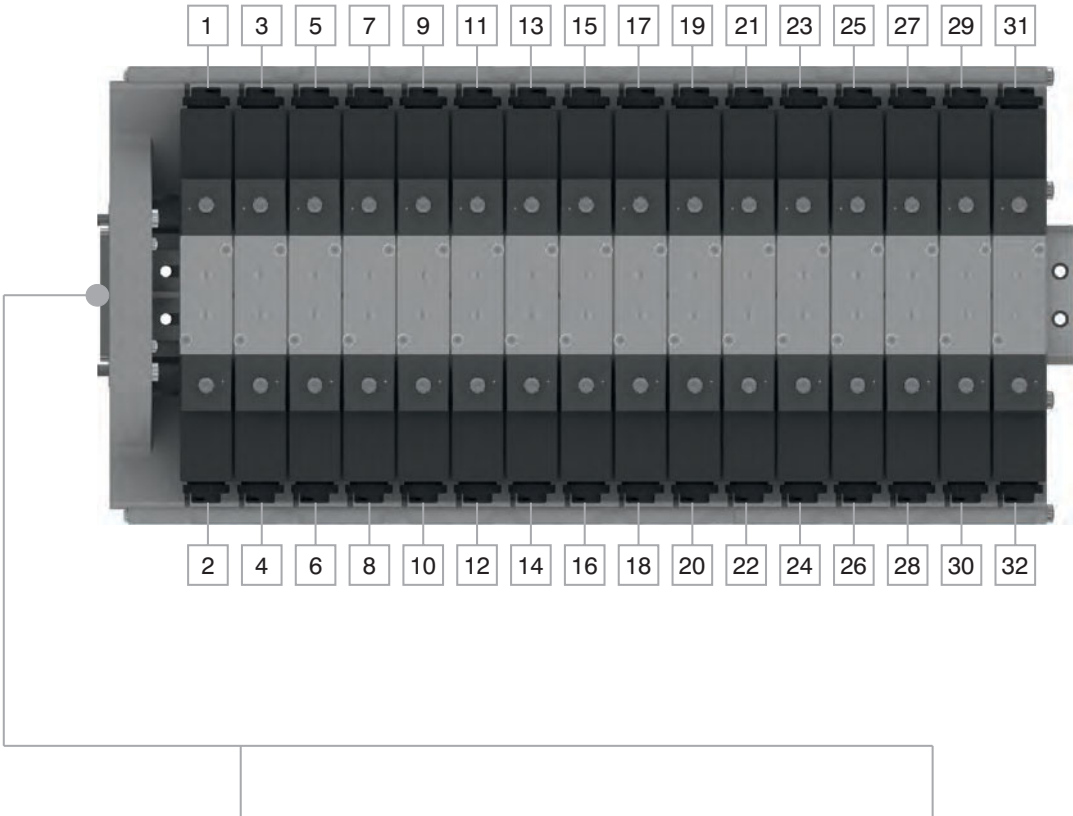
Serial manifold layout (for the serial system node, see the Optyma-F Series)



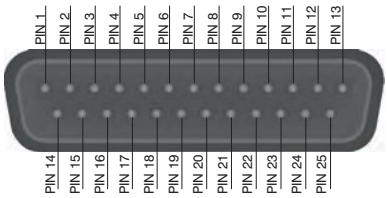
NOTE:

When constructing the configuration, please consider that the maximum number of valves that can be mounted on the manifold is 16, regardless of the valve type. Any valve position presents two electrical connections: in case of use of monostable valves (A1-A2) it will be necessary to assemble a plug to protect the unused electrical connection.

The correspondence between the electrical signal and its location on the manifold is showed in the following diagrams.

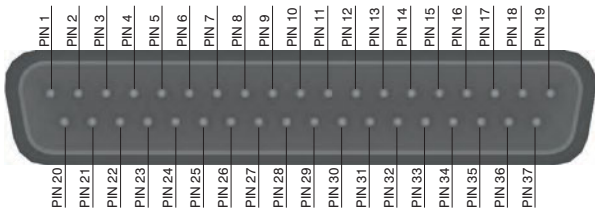


Connector 25 Poles from 1 to 11
Positions E.V. Bistable / Monostable



1 - 22 = SIGNALS
23 - 24 = GND
25 = NC

Connector 37 Poles from 1 to 16
Positions E.V. Bistable / Monostable



1 - 32 = SIGNALS
33 - 35 = GND
36 - 37 = NC

Assembly sequence

