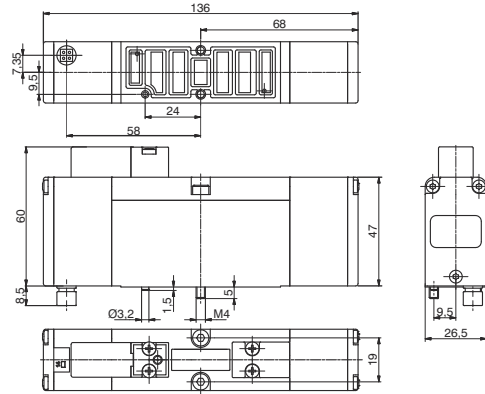
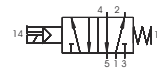


Solenoid-Spring

Ordering code
2741.52.00.P.V
PILOTING
P 39=Self feeding
29=External feeding
VOLTAGE
V 01=12V DC
02=24V DC
08=24V DC 1W



SHORT FUNCTION CODE (Self feeding) "AA"
SHORT FUNCTION CODE (External feeding) "AE"



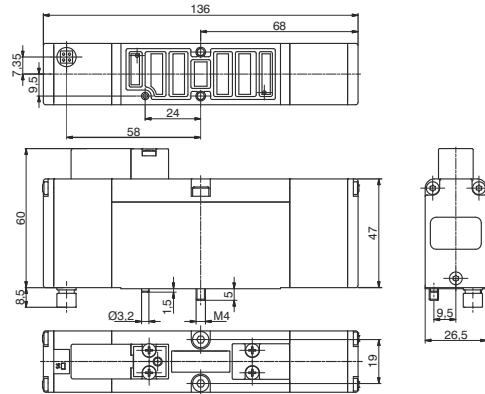
Note:
The "Activations time" values, are valid only for the 2,3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

Operating Characteristics

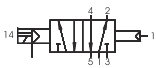
Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	1000	20	38	From vacuum to 10	2	-5 ÷ +50	280

Solenoid-Differential

Ordering code
2741.52.00.P.V
PILOTING
P 36=Self feeding
26=External feeding
VOLTAGE
V 01=12V DC
02=24V DC
08=24V DC 1W



SHORT FUNCTION CODE (Self feeding) "BA"
SHORT FUNCTION CODE (External feeding) "BE"



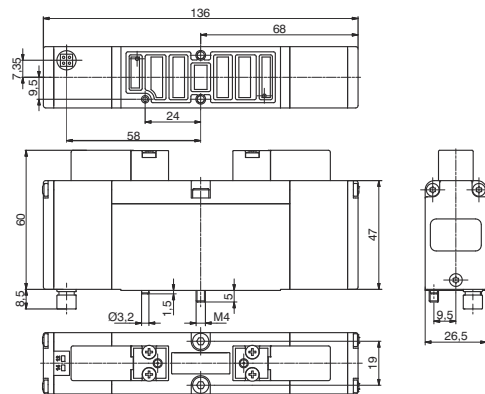
Note:
The "Activations time" values, are valid only for the 2,3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

Operating Characteristics

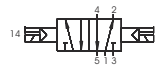
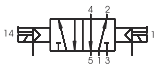
Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	1000	20	38	From vacuum to 10	2	-5 ÷ +50	280

Solenoid-Solenoid

Ordering code
2741.52.00.P.V
PILOTING
P 35=Self feeding
24=External feeding
VOLTAGE
V 01=12V DC
02=24V DC
08=24V DC 1W



SHORT FUNCTION CODE (Self feeding) "CA"
SHORT FUNCTION CODE (External feeding) "CE"



Note:
The "Activations time" values, are valid only for the 2,3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

Operating Characteristics

Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	1000	12	14	From vacuum to 10	2	-5 ÷ +50	310

Solenoid-Solenoid

Ordering code

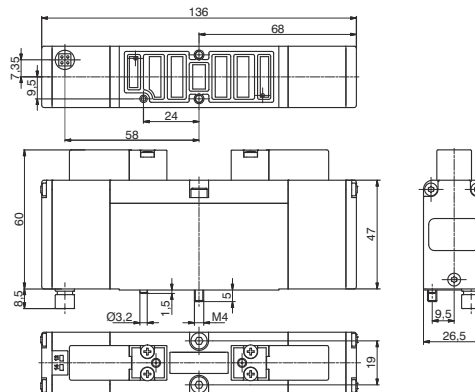
2741.53.31.P.V

PILOTING

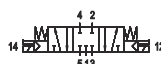
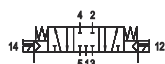
- P** 35=Self feeding
- 24=External feeding

VOLTAGE

- V** 01=12V DC
- 02=24V DC
- 08=24V DC 1W



SHORT FUNCTION CODE (Self feeding) "EA"
SHORT FUNCTION CODE (External feeding) "EE"



Note:
The "Activations time" values, are valid only for the 2.3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

Operating Characteristics

Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	660	12	60	From vacuum to 10	3	-5 ÷ +50	310

Solenoid-Solenoid (Self feeding)

Ordering code

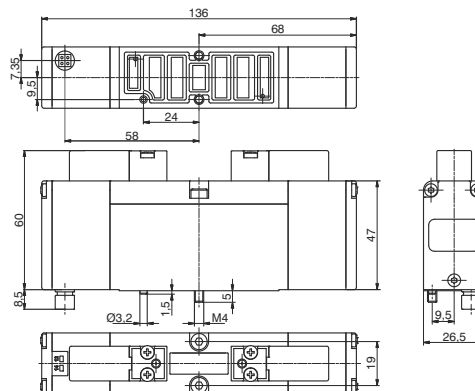
2741.62.F.35.V

FUNCTION

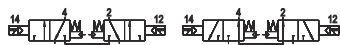
- F** 44=2 Coils 3/2 NC
- 45=1 Coil 3/2 NC (14) + 1 Coil 3/2 NO (12)
- 55=2 Coils 3/2 NO
- 54=1 Coil 3/2 NO (14) + 1 Coil 3/2 NC (12)

VOLTAGE

- V** 01=12V DC
- 02=24V DC
- 08=24V DC 1 Watt



SHORT FUNCTION CODE:
2 3/2 NC="FA"
1 3/2 NC (14) + 1 3/2 NO (12)="HA"
2 3/2 NO="GA"
1 3/2 NO (14) + 1 3/2 NC (12)="IA"



Note: The "Activations time" values, are valid only for the 2.3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

Operating Characteristics

Example: if inlet pressure is set at 5bar then pilot pressure must be at least $P_p=2+(0.3*5)=3.5\text{bar}$

Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	550	15	15	From vacuum to 10	$\geq 2+(0,3P.\text{alim.})$	-5 ÷ +50	310

Solenoid-Solenoid (External feeding)

Ordering code

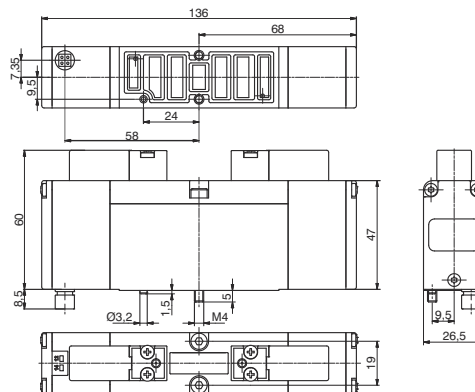
2741.62.F.24.V

FUNCTION

- F** 44=2 Coils 3/2 NC
- 45=1 Coil 3/2 NC (14) + 1 Coil 3/2 NO (12)
- 55=2 Coils 3/2 NO
- 54=1 Coil 3/2 NO (14) + 1 Coil 3/2 NC (12)

VOLTAGE

- V** 01=12V DC
- 02=24V DC
- 08=24V DC 1 Watt



SHORT FUNCTION CODE:
2 3/2 NC="FE"
1 3/2 NC (14) + 1 3/2 NO (12)="HE"
2 3/2 NO="GE"
1 3/2 NO (14) + 1 3/2 NC (12)="IE"



Note: The "Activations time" values, are valid only for the 2.3W versions
"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001, Pneumatic fluid power - Directional control valves - Measurement of shifting time."

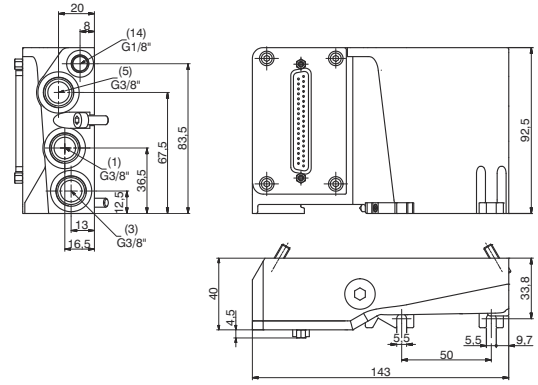
Operating Characteristics

Example: if inlet pressure is set at 5bar then pilot pressure must be at least $P_p=2+(0.3*5)=3.5\text{bar}$

Fluid	Flow rate at 6 bar with $\Delta p=1$ (Nl/min)	Response time (ISO12238), activation time (ms)	Response time (ISO12238), deactivation time (ms)	Working pressure (bar)	Minimum piloting pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	550	12	60	From vacuum to 10	$\geq 2+(0,3P.\text{alim.})$	-5 ÷ +50	310

Left Endplates

Ordering code
2740.02.Ⓢ
CONNECTIONS
Ⓢ 37P=Connectors 37 poles PNP
Ⓢ 25P=Connectors 25 poles PNP
Ⓢ 37N=Connectors 37 poles NPN
Ⓢ 25N=Connectors 25 poles NPN

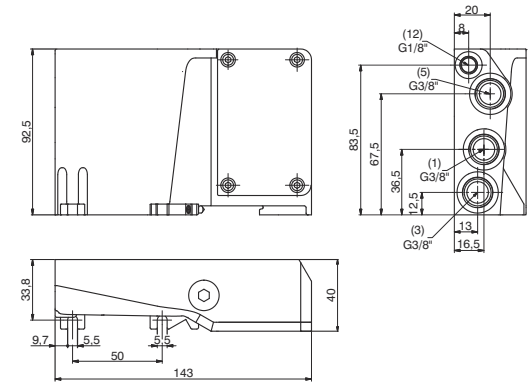


Operating Characteristics

Fluid	Working pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	From vacuum to 10	-5 ÷ +50	600

Right Endplates

Ordering code
2740.03.Ⓢ
CONNECTIONS
Ⓢ 00=Exhaust electrical connection closed
Ⓢ 25P=Connectors 25 poles

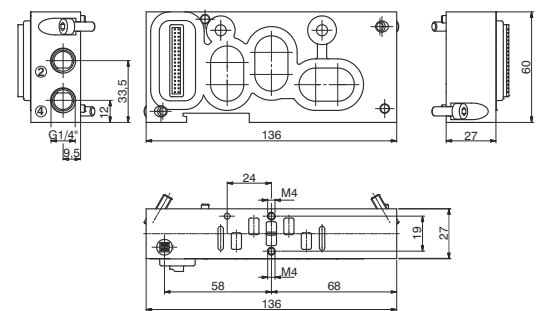


Operating Characteristics

Fluid	Working pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	From vacuum to 10	-5 ÷ +50	600

Modular base

Ordering code
2740.01.Ⓢ
VERSION
Ⓢ M=Monostable
Ⓢ B=Bistable



Operating Characteristics

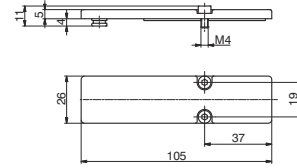
Fluid	Working pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	From vacuum to 10	-5 ÷ +50	330



Closing plate

Ordering code

2740.00



SHORT FUNCTION CODE: "T"

Operating Characteristics

Fluid	Working pressure (bar)	Temperature °C	Weight (gr.)
Filtered air, with or without lubrication	From vacuum to 10	-5 ÷ +50	100

Cable complete with connector, 25 Poles IP65

Ordering code

2300.25.L.C

CABLE LENGTH

03=3 meters

05=5 meters

10=10 meters

CONNECTOR

10=In line

90=90° Angle



Cable complete with connector, 37 Poles IP65

Ordering code

2400.37.L.C

CABLE LENGTH

03=3 meters

05=5 meters

10=10 meters

CONNECTOR

10=In line

90=90° Angle



Cable complete with connector, 25 Poles IP65

Ordering code

2400.25.L.25

CABLE LENGTH

03=3 meters

05=5 meters

10=10 meters



Diaphragm plug

Ordering code

2740.17



Constructions characteristics

Weight (gr.)

65

The electrical connection is achieved by a 37 pin connector and can manage up to 32 solenoid pilots. It is also possible use a 25 sub-D pin connector and, in this case, it is possible to manage a maximum of 22 outputs. The management and distribution of the electrical signals between each valve is obtained thanks to an electrical connector which receives the signals from the previous module, uses one, two or none depending on the type, and carries forward to the next module the remaining.

Bistable valves, 5/3 and 2x3/2 valves which have two solenoid pilots built in, use two signals; the first is directed to the pilot side 14 the second to the pilot side 12. Modular bases can be fitted with two type of electrical connector: the monostable version uses only one signal (connected to the pilot side 14) and carries forward the remaining, the bistable version which always uses two signals.

This solution allows the modification of the manifold (replacement of monostable valves without bistable for example) without having to reset the PLC output layout.

On other hand this solution limits the maximum number of valves to 16 when it is used a 37 pin connector or 11 when it is used a 25 pin connector.

Intermediate supply/exhaust module uses an electrical connector directly forwarding signals to the next one without any kind of modification.

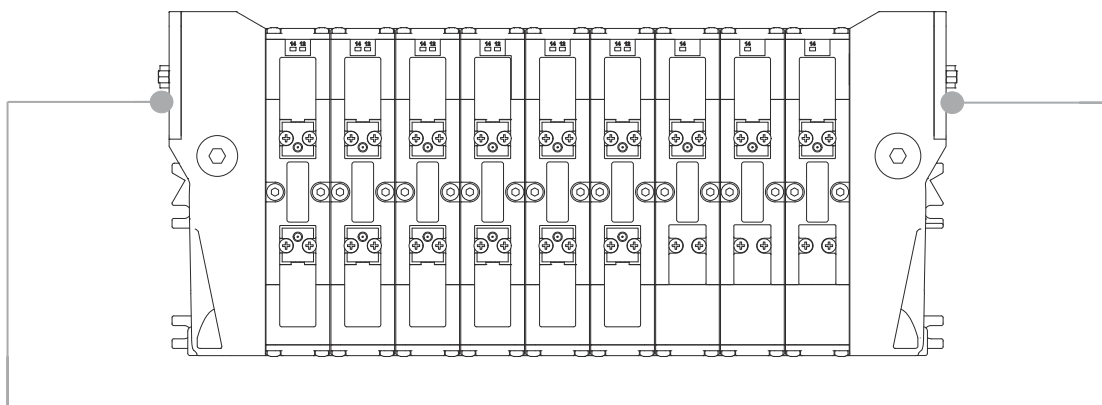
This allows the use of intermediate modules in any position of the manifold.

All the electrical signals that have not been used on the manifold can be used placing at the end of the manifold the end plate complete with the 25 sub-D female connector.

The number of available signals depends of the connector used to the type of the left end plate and by the total signals used along the manifold:

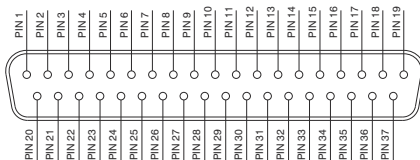
37 pin connector	nr of output = 32 – (total of used signals)
25 pin connector	nr of output = 22 – (total of used signals)

Following we show some examples of possible combination and the relative pin assignment.



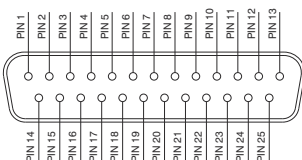
IN-LET ELECTRIC CONNECTIONS

SUB-D 37 POLE
MALE CONNECTOR



1 - 32 = SOLENOID VALVES SIGNAL
33 - 35 = GND
36 - 37 = THROUGH LINE

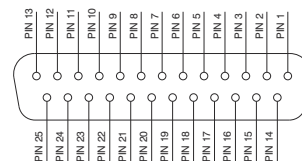
SUB-D 25 POLE
MALE CONNECTOR



1 - 22 = SOLENOID VALVES SIGNAL
23 - 24 = GND
25 = THROUGH LINE

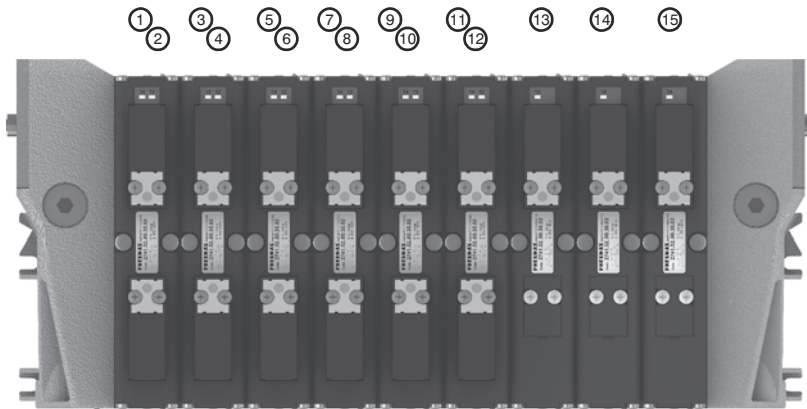
**OUTLET ELECTRIC CONNECTIONS
(IF PRESENT)**

SUB-D 25 POLE
FEMALE CONNECTOR



1 - 22 = SOLENOID VALVES SIGNAL
23 - 24 = GND
25 = THROUGH

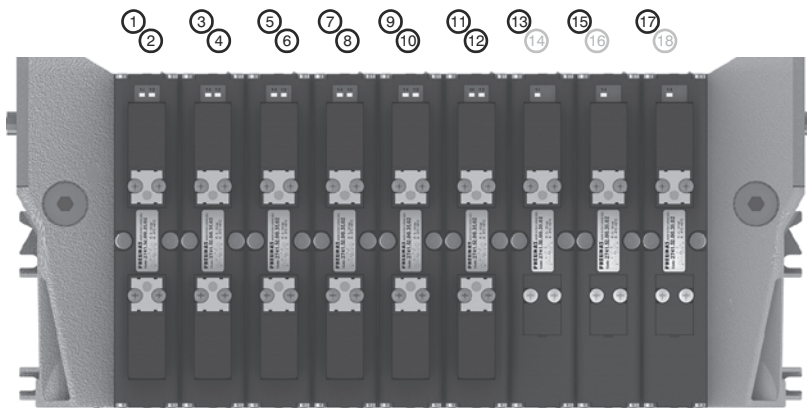
37 PIN Connector correspondence for valves assembled on mixed bases



- PIN 1 = PILOT 14 EV POS.1
- PIN 2 = PILOT 12 EV POS.1
- PIN 3 = PILOT 14 EV POS.2
- PIN 4 = PILOT 12 EV POS.2
- PIN 5 = PILOT 14 EV POS.3
- PIN 6 = PILOT 12 EV POS.3
- PIN 7 = PILOT 14 EV POS.4
- PIN 8 = PILOT 12 EV POS.4
- PIN 9 = PILOT 14 EV POS.5
- PIN 10 = PILOT 12 EV POS.5
- PIN 11 = PILOT 14 EV POS.6
- PIN 12 = PILOT 12 EV POS.6
- PIN 13 = PILOT 14 EV POS.7
- PIN 14 = PILOT 14 EV POS.8
- PIN 15 = PILOT 14 EV POS.9

POS.	1	2	3	4	5	6	7	8	9
------	---	---	---	---	---	---	---	---	---

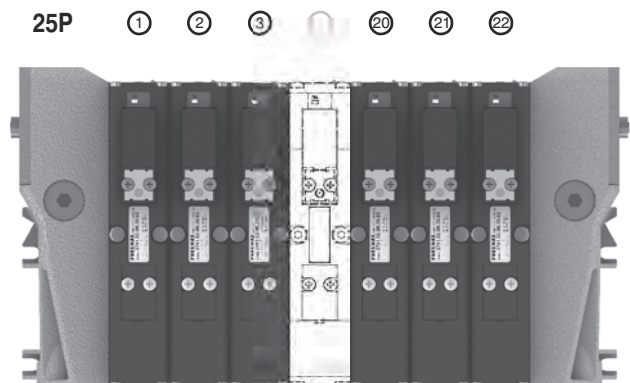
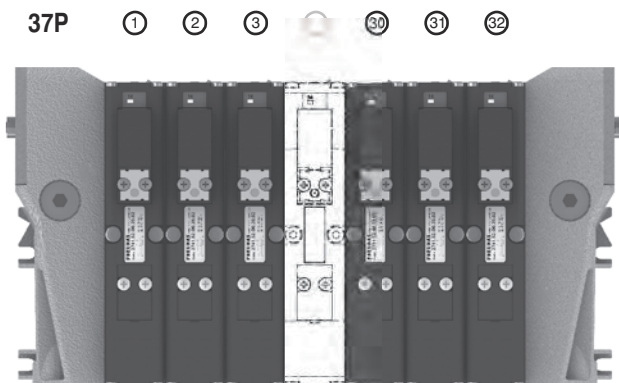
37 PIN Connector correspondence for manifold mounted on bases for bistable valves



- PIN 1 = PILOT 14 EV POS.1
- PIN 2 = PILOT 12 EV POS.1
- PIN 3 = PILOT 14 EV POS.2
- PIN 4 = PILOT 12 EV POS.2
- PIN 5 = PILOT 14 EV POS.3
- PIN 6 = PILOT 12 EV POS.3
- PIN 7 = PILOT 14 EV POS.4
- PIN 8 = PILOT 12 EV POS.4
- PIN 9 = PILOT 14 EV POS.5
- PIN 10 = PILOT 12 EV POS.5
- PIN 11 = PILOT 14 EV POS.6
- PIN 12 = PILOT 12 EV POS.6
- PIN 13 = PILOT 14 EV POS.7
- PIN 14 = NOT CONNECTED
- PIN 15 = PILOT 14 EV POS.8
- PIN 16 = NOT CONNECTED
- PIN 17 = PILOT 14 EV POS.9
- PIN 18 = NOT CONNECTED

POS.	1	2	3	4	5	6	7	8	9
------	---	---	---	---	---	---	---	---	---

37 PIN Connector correspondence for manifold for 32 position manifold with monostable valves on base



POS.	1	2	3	...	30	31	32
------	---	---	---	-----	----	----	----

POS.	1	2	3	...	20	21	22
------	---	---	---	-----	----	----	----

General :

Using the 2740.03.25P output terminal it is possible to make any electrical signals not used by valves available on a 25 sub-D female connector at the right end of the manifold.
It is possible to then join a multi-core cable to link to the next manifold, or connect directly to one or two I/O modules.
The I/O modules can accept input or output signals, depending upon what is connected.

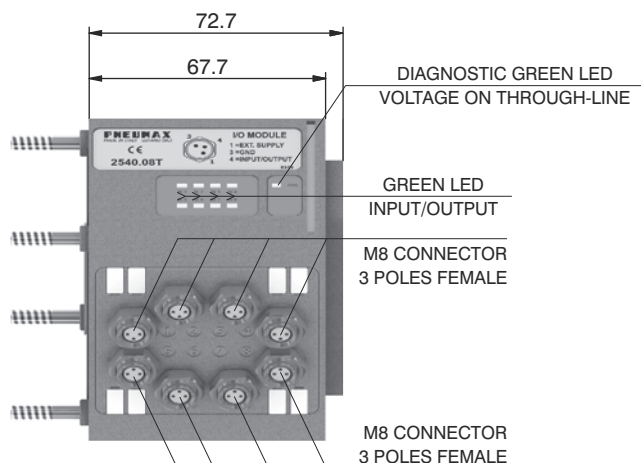
Please note: If the manifold is connected by a multi-core connection, each connection can be used as either an input or an output, while if the manifold is connected to a serial node the connections can only be used as an output.

It is possible to connect the manifold to up to two I/O modules.

Each I/O module includes 8 diagnostic LEDs which indicate the presence of an Input / Output signal for each connector.

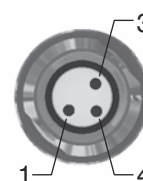
Please note: For an LED to function, a signal of at least +15VDC must be present on pin 4 of the connector. If this signal is lower, the LED will not light, this does not compromise the normal Input / Output function of the unit.

Overall dimensions and I/O layout :



Ordering code

2540.08T



PIN	DESCRIPTION
1	+24 VDC
4	INPUT/OUTPUT
3	GND

Input features:

Each connection can accept either two wire (switches, magnetic switches, pressure switches, etc.) or three wire connections (photocells, electronic end of stroke sensors, etc.) If +24VDC is required on at Pin 1 of each connector, it is possible to provide this via the through-line pin of the multi-pole connector.

I.E :

Pin 25 of the 25 pin multi-pole connector (code 2740.02.25P or 2740.12.25P)

Pin 36-37 of the 37 pin multi-pole connector (code 2740.02.37P or 2740.12.37P)

Output features:

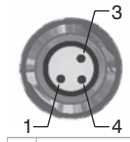
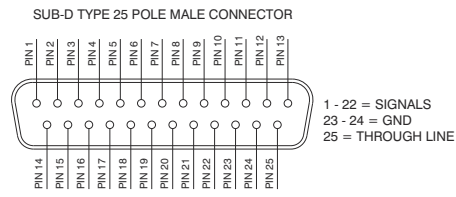
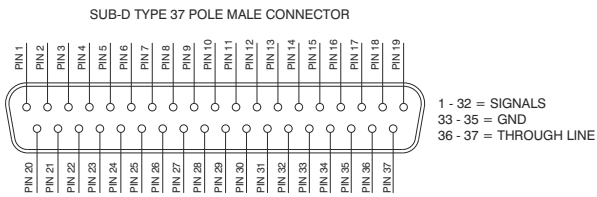


Attention: The output connections are not protected against short-circuit. Please pay attention when wiring (avoid Pin 4 being connected to Pin 3 or Pin 1).

General characteristics

Model	2540.08T
Case	Reinforced technopolymer
I/O Connector	M8 connector 3 poles female (IEC 60947-5-2)
PIN 1 voltage (connector used as Input)	By the user
PIN 4 voltage diagnosis	Green Led
Node consumption (Outlets excluded)	7mA per each LED with 24 VDC signal
Outlets voltage	+23,3 VDC (serial) /by the user (multipolar)
Input voltage	Depend by the using
Maximum outlet current	100 mA (serial) / 400 mA (multipolar)
Maximum Input/Output	8 per module
Multiconnector max. Current	100 mA
Connections to manifold	Direct connection to 25 poles connector
Maximum n. of moduls	2
Protection degree	IP65 when assembled
Ambient temperature	from -0° to +50° C

CORRESPONDENCE BETWEEN MULTI-POLE SIGNAL AND CONNECTOR



PIN	DESCRIPTION
1	THROUGH LINE
4	SIGNAL
3	GND

Connection modes:

The I/O module changes its operation depending on the way the manifold is controlled. There are two possible modes:

- A) Control via multi-pole connection
- B) Control via fieldbus

In order to use the I/O module, the correct right hand endplate with 25 pole female outlet connector must be used. (Code 2740.03.25P).



A) Control via multi-pole :

M8 connector used as Input:

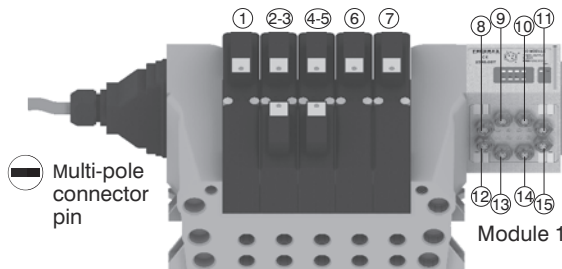
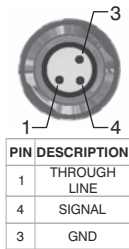
M8 connector used as Output:



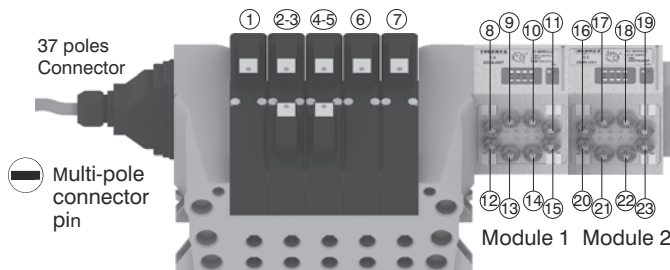
Attention: Voltage applied to each connector is passed to multi-pole connector pin.



Attention: Since every cable has a degree of resistance, there will always be a voltage drop depending on the cable's length, sectional area and the current.

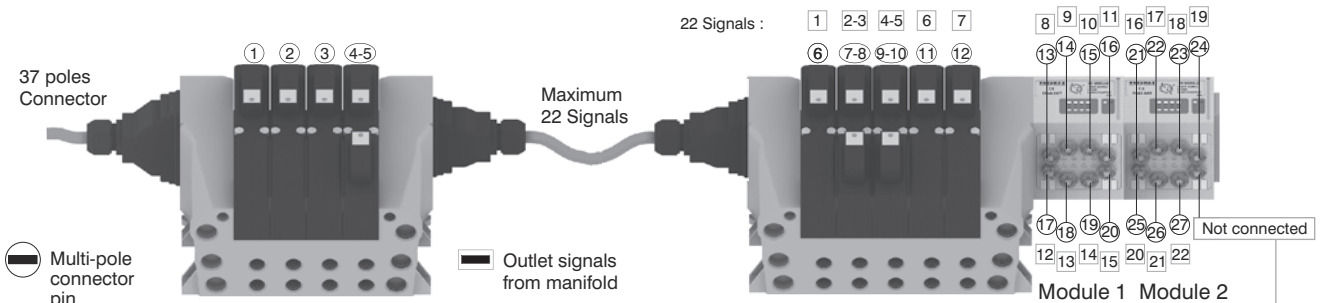


Attention: Only one more I/O module can be added.



Attention: No more additions are possible

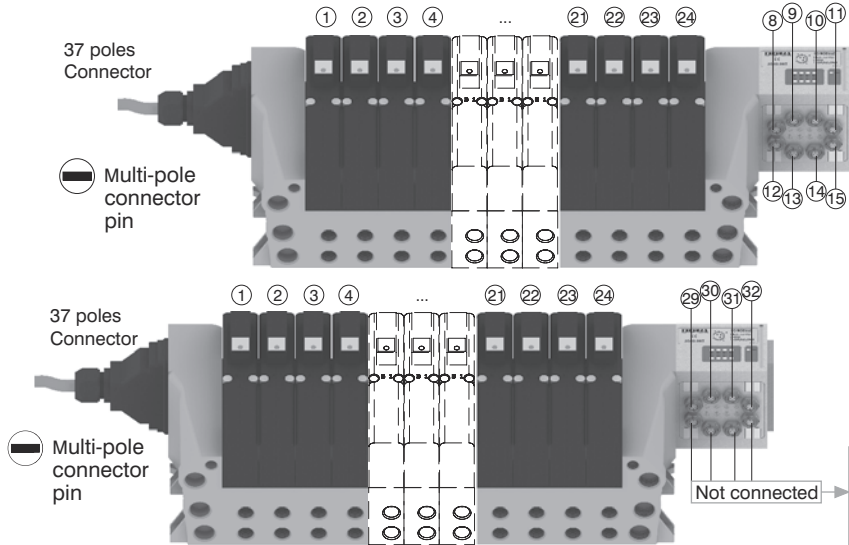
Attention : 2700 solenoid valve manifolds permit up to 22 electrical signals that are not used by manifolds to be made available: these signals can be managed by another manifold and / or by I/O modules. The I/O module will manage these unused signals. Connections that are not managing useful signals will remain unconnected.



Attention: Signal Not connected
GND Connected
Through line Connected

Please note: this example considers a 37 pin multi-pole connector. The same configuration managed by a 25 pin multi-pole connector will stop at number 22 of multi-pole connector and at number 17 of the manifold.

Please note: 2700 solenoid valve manifolds manage up to 32 signals. If the manifold uses more than 24 signals the I/O module will manage only the remainder. Connections that are not managing useful signals will remain unconnected.

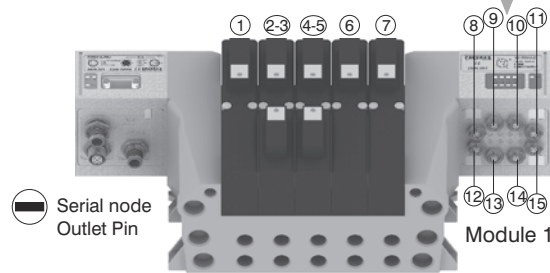
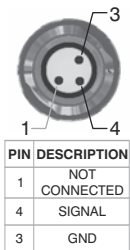


Attention:
Signal Not connected
GND Connected
Through line Connected

B) Control via fieldbus:

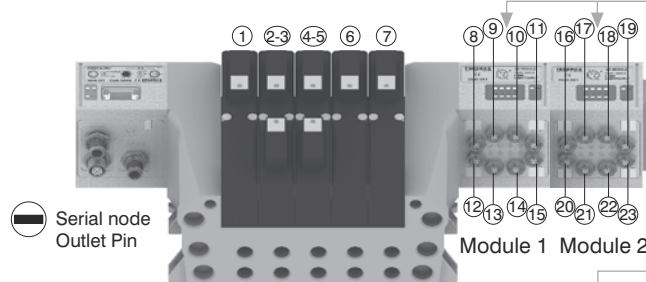
With this kind of control the I/O module can only be used as an output. Pin 1 of each connector is not connected. The output voltage will be 0.7V lower than that applied to Pin 4 of the connector.

The maximum output current for each output is 100mA. The correspondence between control byte and each single output depends on how many electrical signals are used by the manifold and by the relative position of the I/O module.



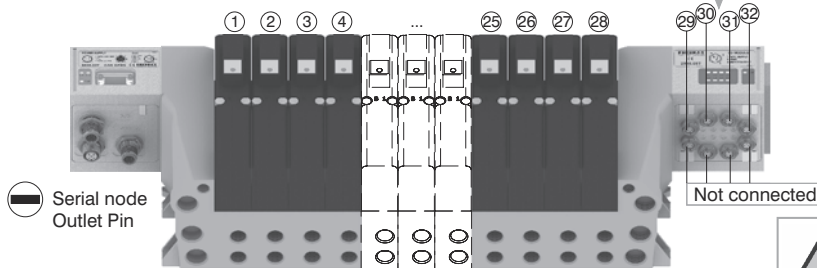
Attention:
Output only

Attention:
Only one more I/O module can be added.



Attention:
Output only

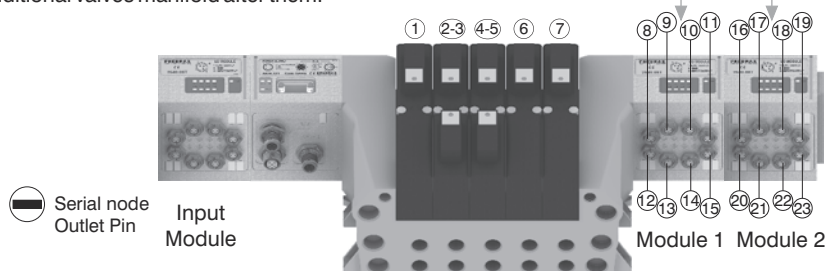
Attention:
No more additions are possible



Attention:
Output only

Attention:
Signal Not connected
GND Connected

Please note: I/O modules don't allow to connect any additional valves manifold after them.

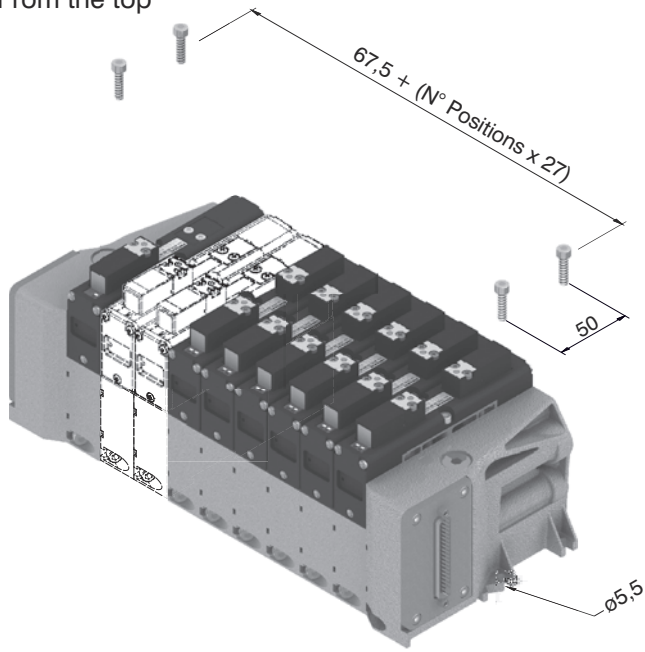


Attention:
Output only

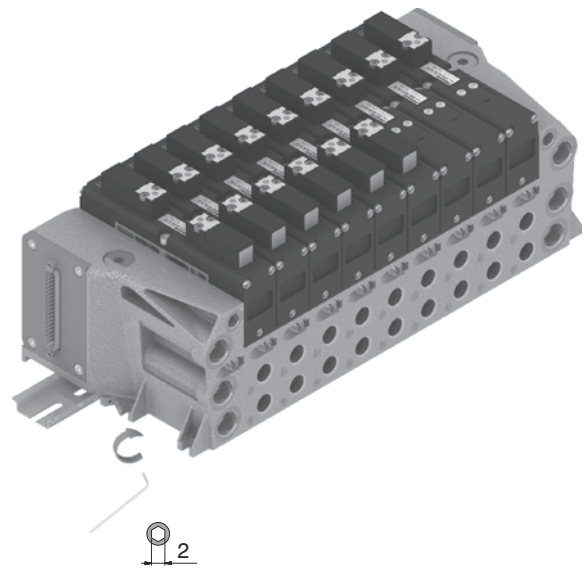
Attention:
No more additions are possible

2

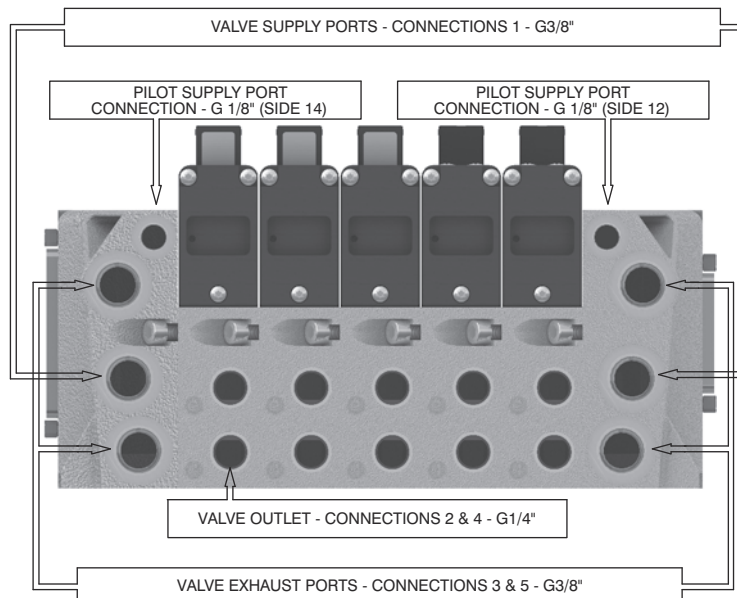
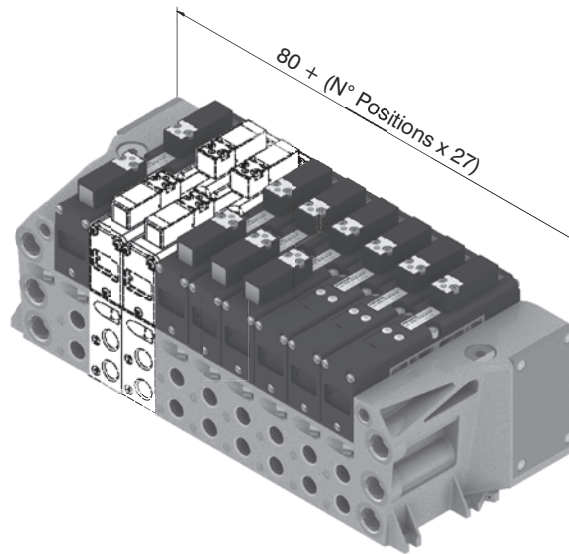
From the top



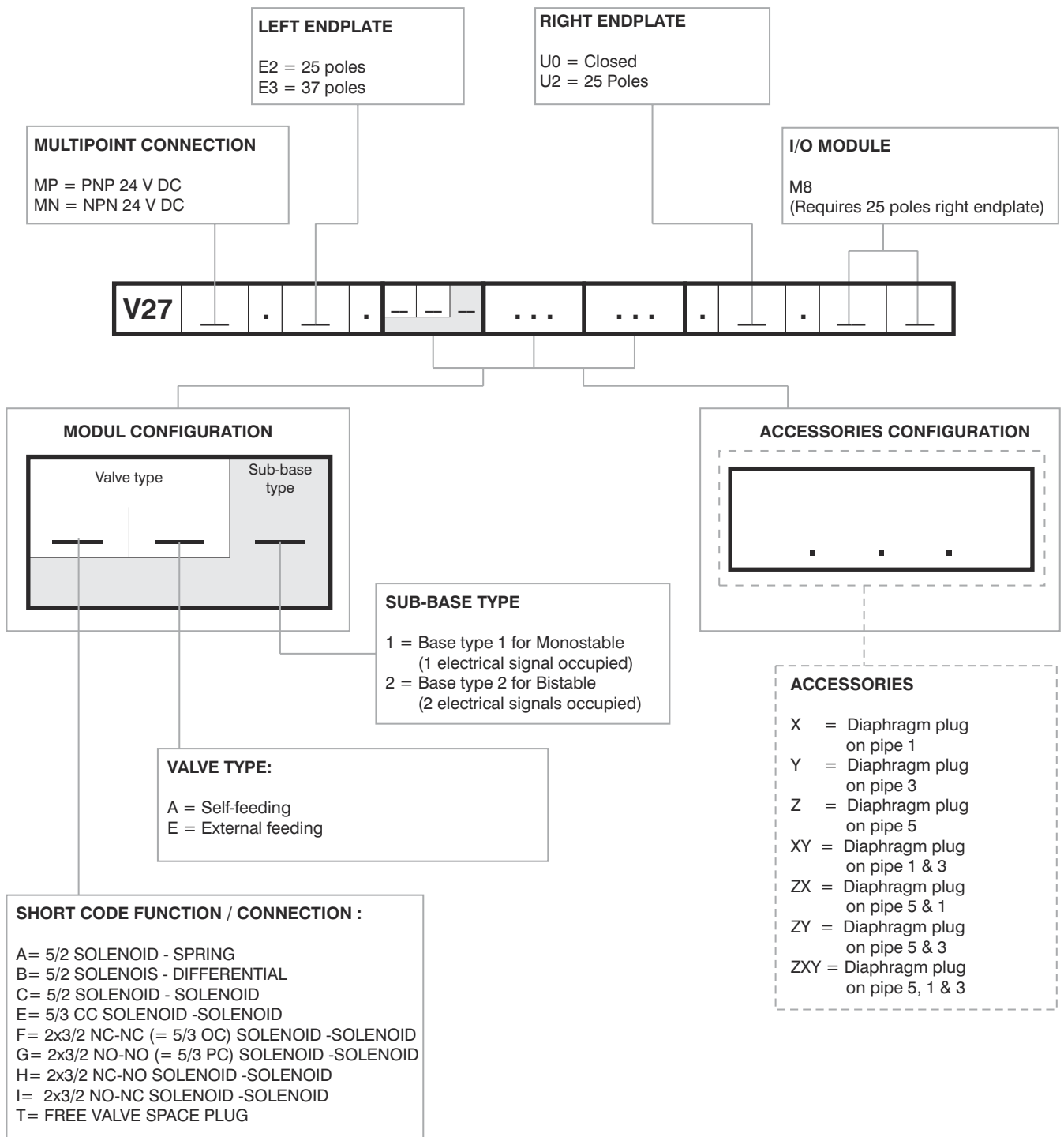
DIN rail fixing



Maximum possible size according to valves seats



Manifold Layout configuration



NOTE:

While configuring the manifold always be careful that the maximum number of electrical signals available is:
32 when an input 37 poles endplate is used.
22 when an input 25 poles endplate is used.

The use of monostable valve mounted on a base type 2 (2 electrical signals occupied) causes the loss of one electric signal. In this case the monostable valve can be replaced by a bistable valve. The diaphragms plugs are used to intercept the conduits 1,3 & 5 of the base. If it is necessary to interrupt more than one conduit in the same time then put in line the letters which identifies the position (for example : regarding the 3 & 5 conduits, put the Y & Z letters).

Should one or more conduits be cut more than one time it is necessary to add the relevant intermediate Supply/Exhaust module.