

2

General :

Using the 2240.03.25P 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.

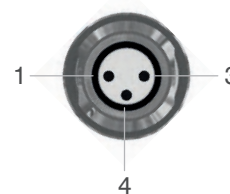
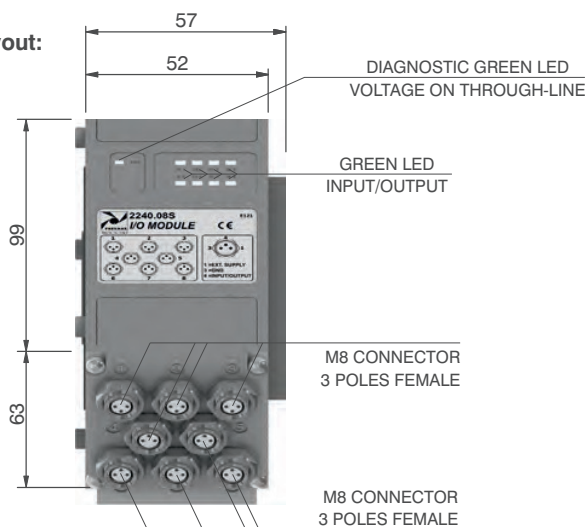
Please note: For an LED to function, a signal of at least +15VDC must be present on pin 4 of the connector. If this signal is lower, the LED will not light, this does not compromise the normal Input / Output function of the unit.

Ordering code

2240.08S



Overall dimensions and I/O layout:



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 (photo-cells, 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 2240.02.25P or 2240.12.25P)

Pin 36-37 of the 37 pin multi-pole connector (code 2240.02.37P or 2240.12.37P)

Output features:

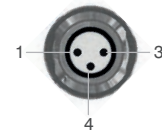
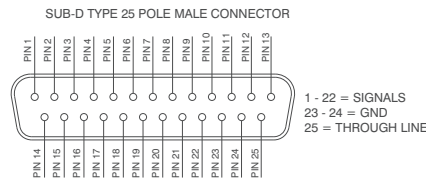
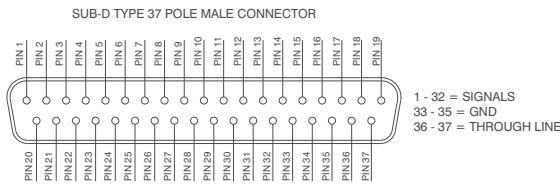


Attention: The output connections are not protected against short-circuit. Please pay attention when wiring (avoid Pin 4 being connected to Pin 3 or Pin 1).

General characteristics	Model	2240.08S
	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:

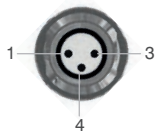
- A) Control via multi-pole connection
- B) Control via fieldbus

A) Control via multi-pole :

M8 connector used as Input:



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



PIN	DESCRIPTION
1	THROUGH LINE
4	SIGNAL
3	GND

In order to use the I/O module, the correct right hand endplate with 25 pole female outlet connector must be used. (Code 2240.03.25P).

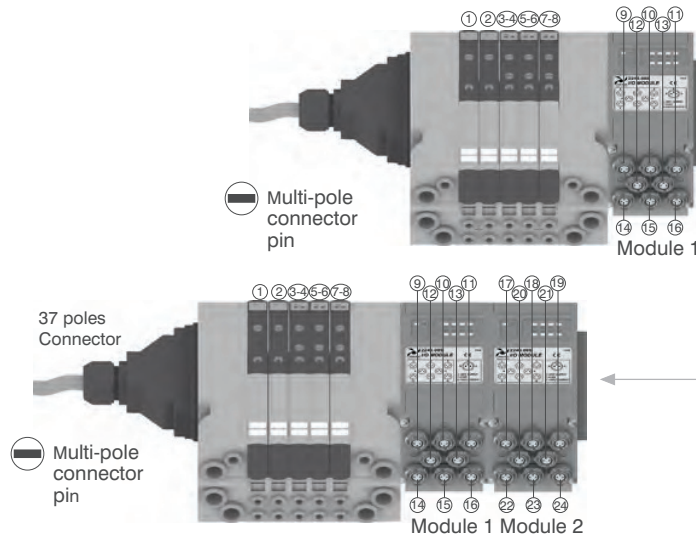


M8 connector used as Output:

Output voltage will be the same as is applied at the multi-pole connector pin. The maximum output current depends upon the power unit used, but we recommend no more than 250mA.



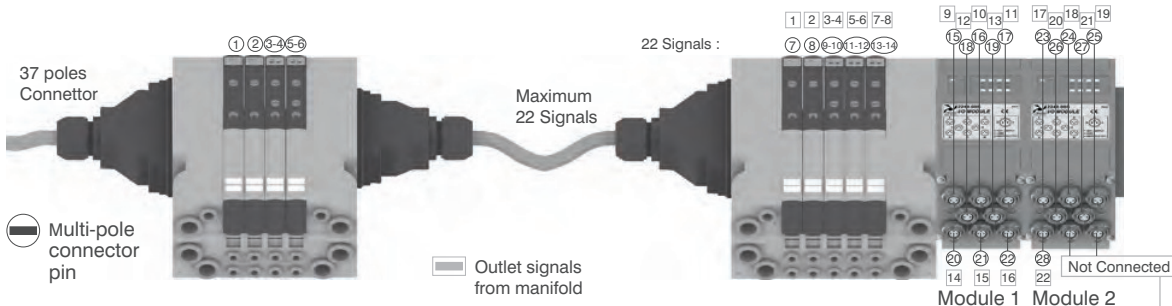
Attention: Since every cable has a degree of resistance, there will always be a voltage drop depending on the cable's length, sectional area and the current.



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

Attention: No more additions are possible

Attention : Optyma 32-S 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.

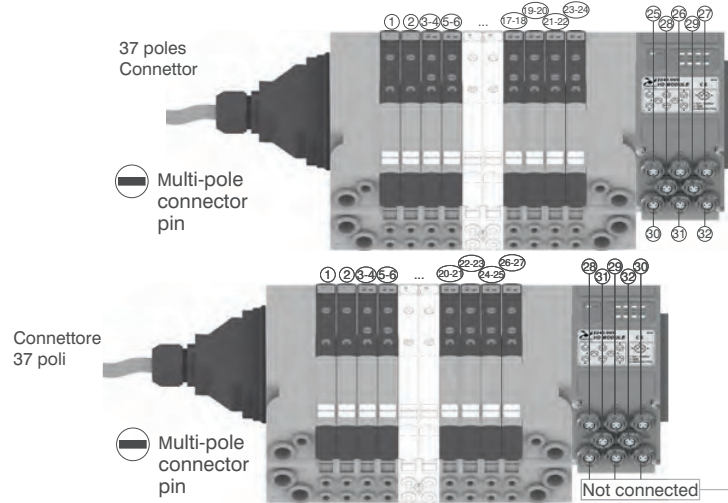


Attention: Signal Not connected
GND Connected
Through line Connected

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. 22 16



Please note: Optyma 32-S 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.

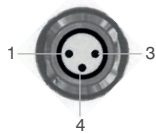


Attention:
Signal Not connected
GND Connected
Through line Connected

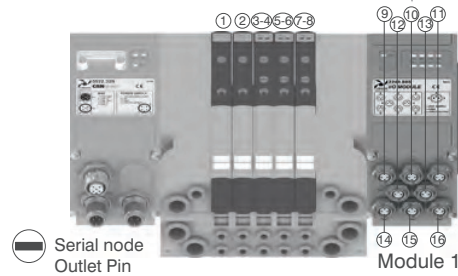
B) Control via fieldbus:

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.

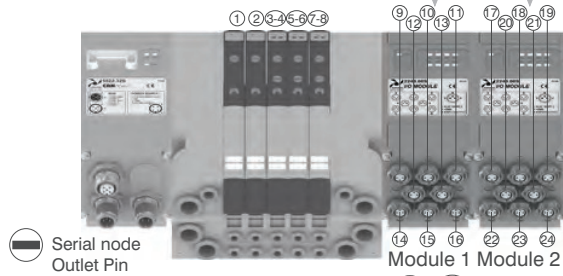


PIN	DESCRIPTION
1	NOT CONNECTED
4	SIGNAL
3	GND



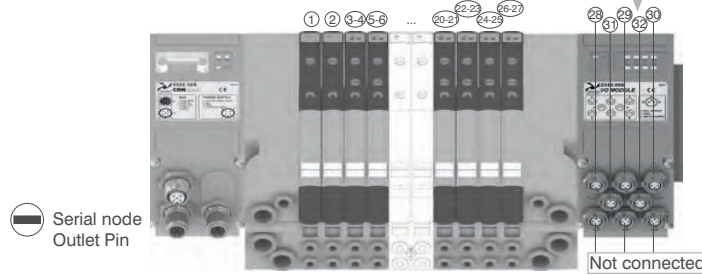
Attention:
Output only

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



Attention:
Output only

Attention:
No more additions are possible

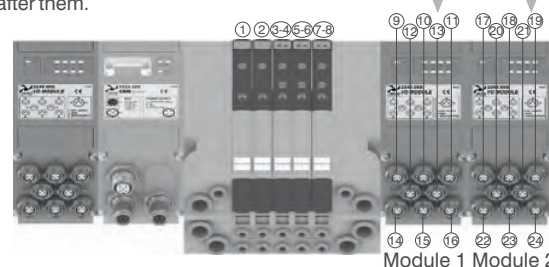


Attention:
Output only

Attention:
Signal Not connected
GND Connected

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

Serial node Outlet Pin
Input Module



Attention:
Output only

Attention:
No more additions are possible



Electrical connection

The electrical connection is made using a 37 pin connector and can manage up to 32 electrical signals. Alternatively a 25 pin connector can be used which is suitable for up to 22 electrical signals. The distributions of the electrical signals between sub-bases achieved thanks to a dedicated electrical connector positioned in each sub-base which diverts the signals needed to operate the solenoid pilots of the valve mounted on the sub-base and passing unused signals forward to the next base.

The Optyma-S sub-bases are designed to carry two valves and are available in the following configurations:

Sub-base configurations	Signals used for the single position	Total number of used signal
Sub-base for 2 bistable valves	2 signals used for the first position	4
	2 signals used for the second position	
Sub-base for 2 monostable valves	1 signal used for the first position	2
	1 signal used for the second position	

Sub-base for 2 bistable valves

On the sub base for 2 bistable valves the first electrical signal is used to actuate the solenoid pilot on side 14 of the first position, the second signal is used to actuate the solenoid pilot on side 12 of the first position. Each sub base uses 4 electric signals. The same layout applies to the following position therefore the third signal is used to actuate the solenoid pilot on side 14 of the second position and the fourth signal is used to actuate the solenoid pilot on side 12 of the second position.

The remaining signals are transferred downstream.

On a bistable sub base it is possible to mount both bistable or monostable valves (in the second case 1 electrical signal for each valve is wasted). This solution enables the user to change the manifold layout without the need to re-configure the output correspondence on the PLC. The use of bistable sub-bases reduces the maximum number of valves that can be mounted on the manifold: If the 37 pole connector is used the maximum number of valves is 16 If the 25 pole connector is used the maximum number of valves is 10.

Sub-base for 2 monostable valves

On the sub base for 2 monostable valves the first electrical signal is used to actuate the solenoid pilot on side 14 of the first position, the second signal is used to actuate the solenoid pilot on side 12 of the second position. Each sub base uses 2 electric signals.

The remaining signals are transferred downstream. On a monostable sub base it is possible to mount only monostable valves (should a bistable valve be mounted on a monostable sub base it will not be possible to actuate the solenoid pilot on side 12). This solution enables the user to maximise the manifold layout using all the electrical signals available.

If the 37 pole connector is used the maximum number of valves is 32

If the 25 pole connector is used the maximum number of valves is 22



Note:

Monostable valves, which are fitted with only one solenoid pilot can be mounted on both monostable or bistable sub bases.

Bistable valves ,5/3; 2x3/2;2x2/2, which are fitted with 2 solenoid pilots and therefore always use two electrical signals must always be mounted on bistable subbases.

Additional exhaust and air supply modules:

The Additional exhaust and air supply module is fitted with a dedicated electrical connector which does not use any electric signal but simply carries forward all signals which have not been used by the valves mounted before it.

This enables its use in any position of the manifold.

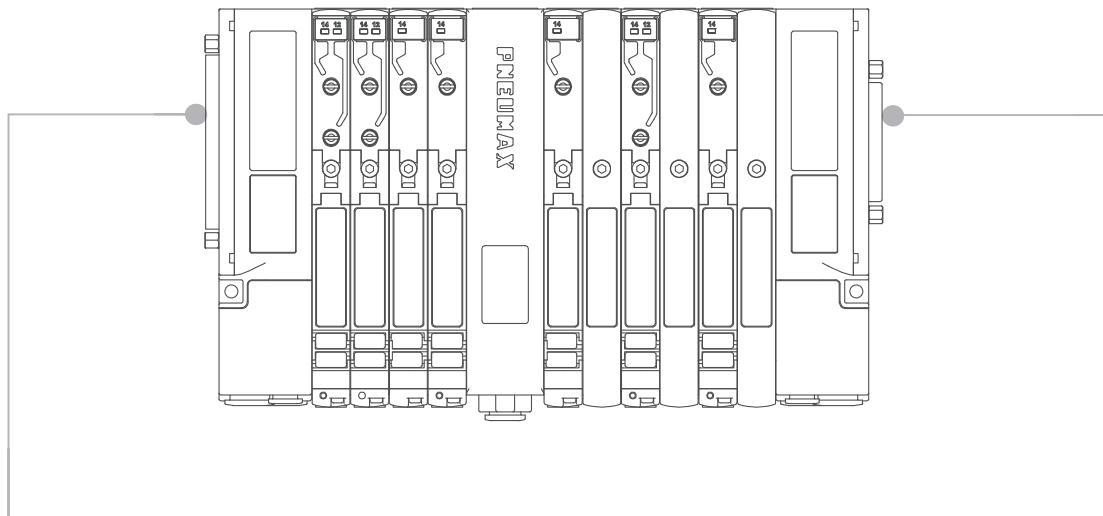
Unused electrical signals

The electrical signals which have not been used in the manifold can be made available by using the end plate fitted with the 25 pole connector.

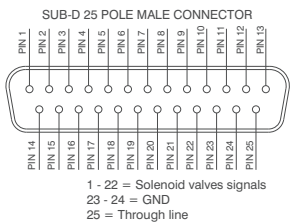
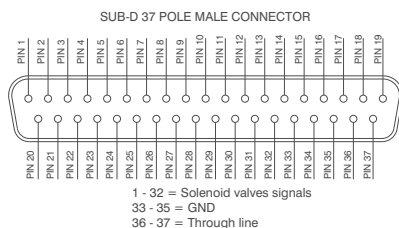
The number of electric signals available depends on the type of connector mounted on the inlet plate and on the number of signals used in the manifold:

- 37 pole Inlet connector : N. of outputs= 32 – used signals (max 22)
- 25 pole Inlet connector : N. of outputs= 22 – used signals

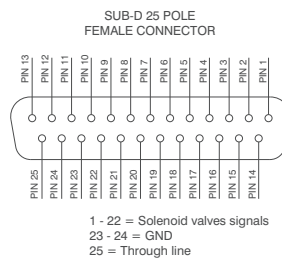
Here are some examples of possible configurations and the corresponding pin layout both on the inlet and end plate :



INLET ELECTRIC CONNECTIONS

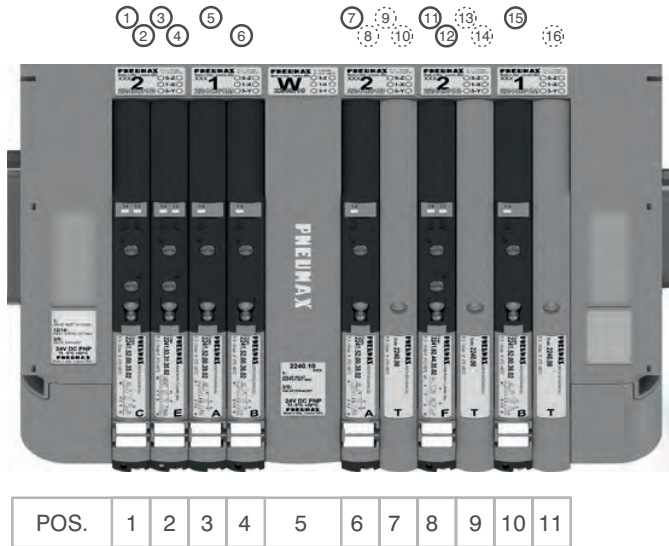


OUTLET ELECTRIC CONNECTIONS (IF PRESENT)



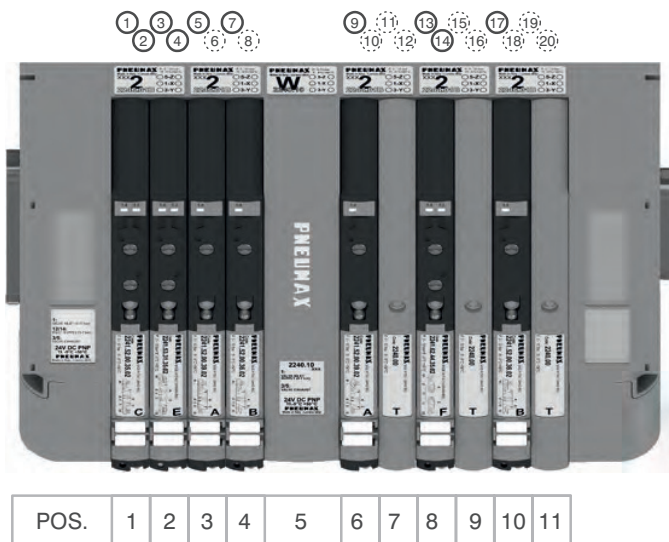


37 PIN Connector correspondence for valves assembled on mixed bases



- 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 14 EV POS.4
- PIN 7 = PILOT 14 EV POS.6
- PIN 8 = NOT CONNECTED
- PIN 9 = NOT CONNECTED
- PIN 10 = NOT CONNECTED
- PIN 11 = PILOT 14 EV POS.8
- PIN 12 = PILOT 12 EV POS.8
- PIN 13 = NOT CONNECTED
- PIN 14 = NOT CONNECTED
- PIN 15 = PILOT 14 EV POS.10
- PIN 16 = NOT CONNECTED

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

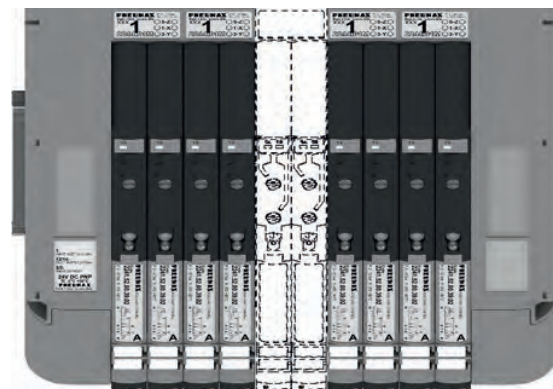
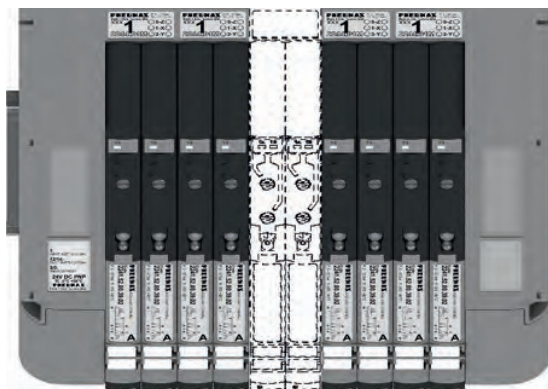


- PIN 1 = PILOT 14 EV POS.1
- PIN 2 = PILOT 12 EV POS.1
- PIN 3 = PILOT 14 EV POS.2
- PIN 4 = PILOT 12 EV POS.2
- PIN 5 = PILOT 14 EV POS.3
- PIN 6 = NOT CONNECTED
- PIN 7 = PILOT 14 EV POS.4
- PIN 8 = NOT CONNECTED
- PIN 9 = PILOT 14 EV POS.6
- PIN 10 = NOT CONNECTED
- PIN 11 = NOT CONNECTED
- PIN 12 = NOT CONNECTED
- PIN 13 = PILOT 14 EV POS.8
- PIN 14 = PILOT 12 EV POS.8
- PIN 15 = NOT CONNECTED
- PIN 16 = NOT CONNECTED
- PIN 17 = PILOT 14 EV POS.10
- PIN 18 = NOT CONNECTED
- PIN 19 = NOT CONNECTED
- PIN 20 = NOT CONNECTED

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

37P ① ② ③ ④ ... ②⑨ ③① ③②

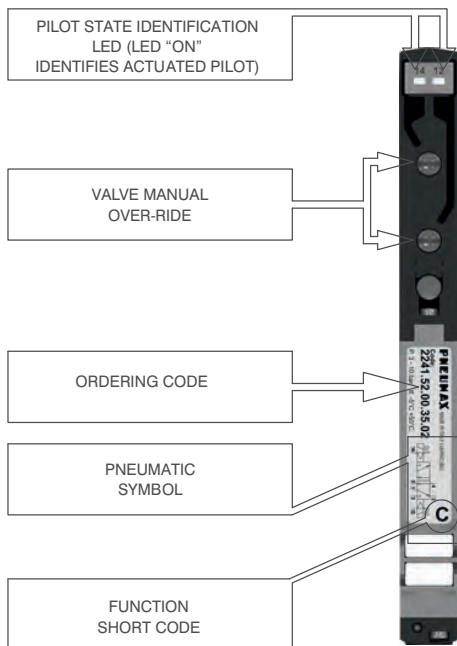
25P ① ② ③ ④ ... ①⑨ ②① ②②



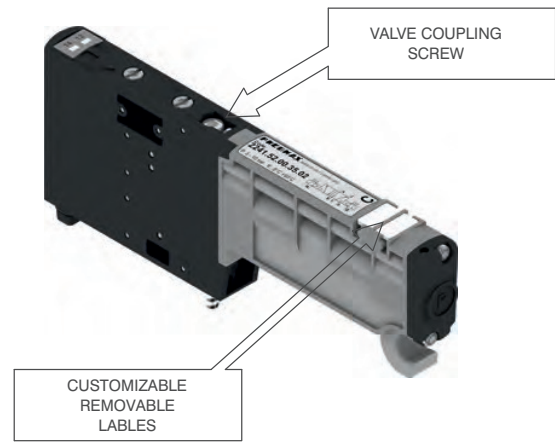
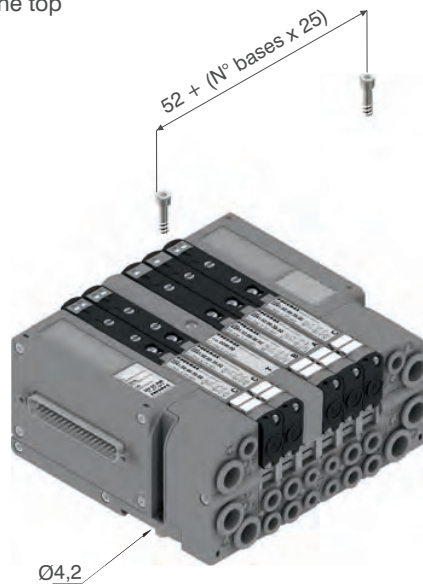
POS.	1	2	3	4	...	29	30	31	32
------	---	---	---	---	-----	----	----	----	----

POS.	1	2	3	4	...	19	20	21	22
------	---	---	---	---	-----	----	----	----	----

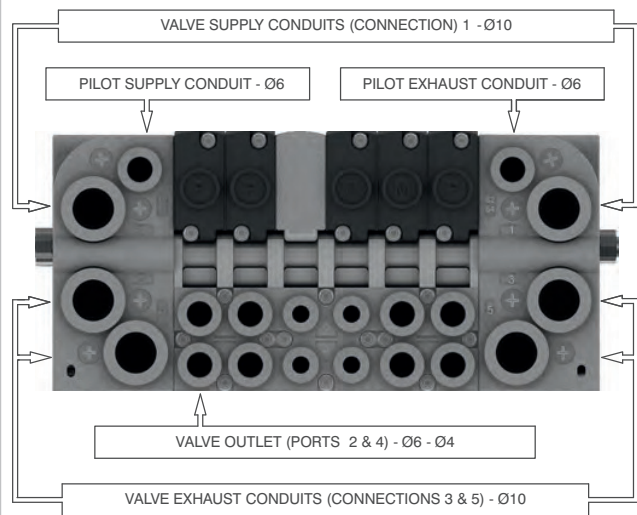
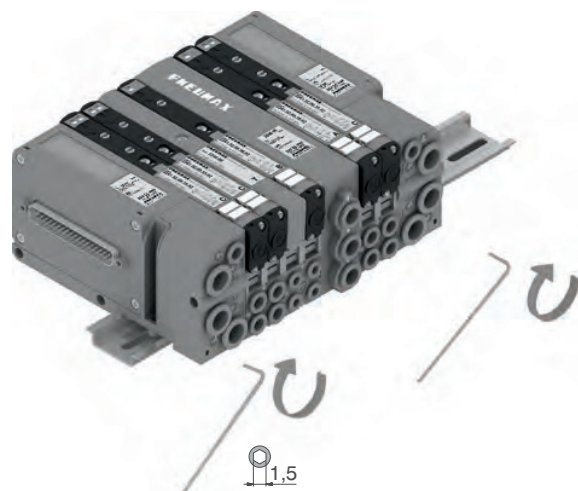




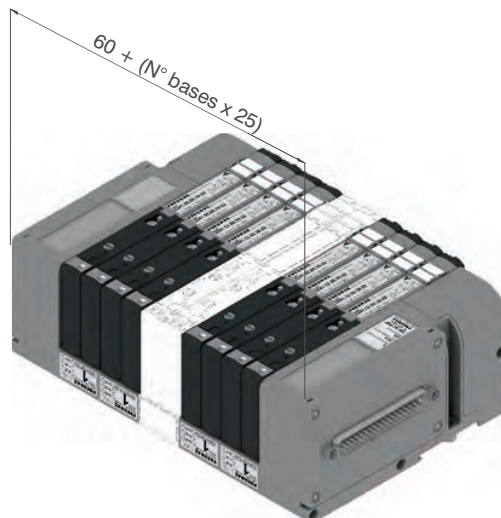
From the top



DIN rail fixing

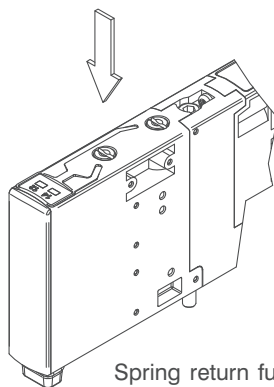
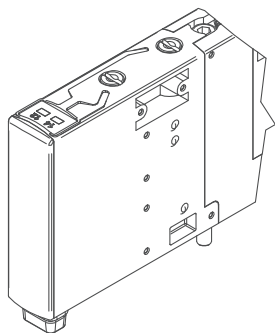


Maximum possible size
According to valves used

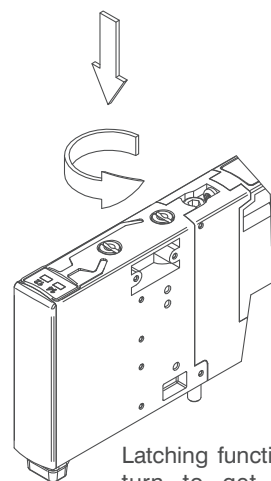




Manual override actuation



Spring return function: push to actuate (when released it moves back to the original position).

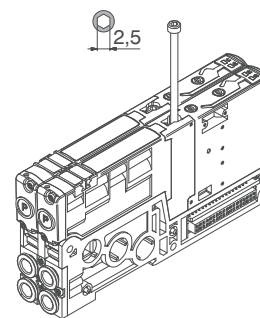
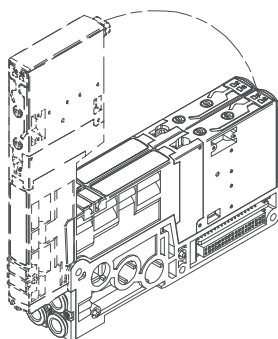
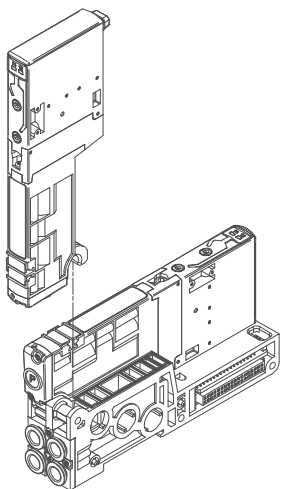


Latching function: push and turn to get the latching function

NOTE : It is strongly suggested to replace the original position after using

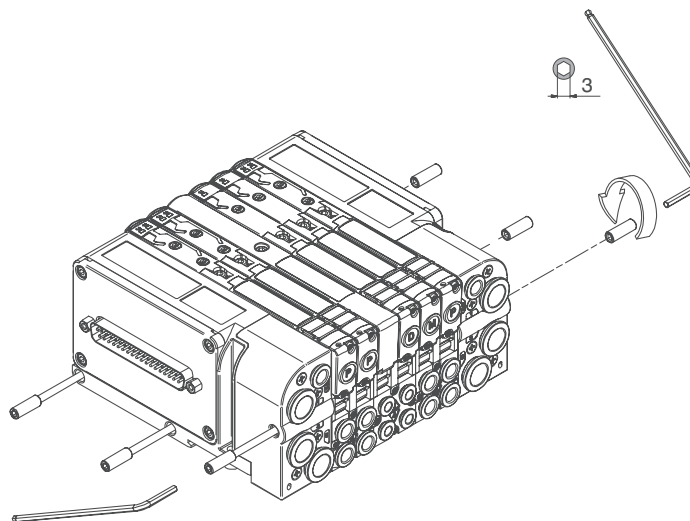


Valve Installation



Torque moment (Nm) : 0,8

Manifold assembly



Min. torque moment : 2 Nm
Max. torque moment: 2,5 Nm

Manifold Layout configuration

MULTIPOINT CONNECTION

MP = PNP 24 V DC
 MN = NPN 24 V DC
 MA = 24 V AC

LEFT ENDPLATE

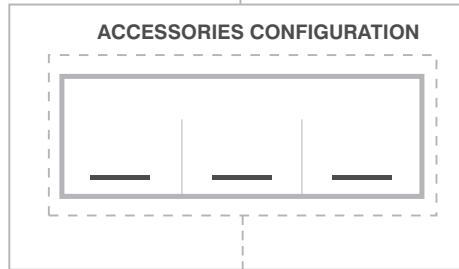
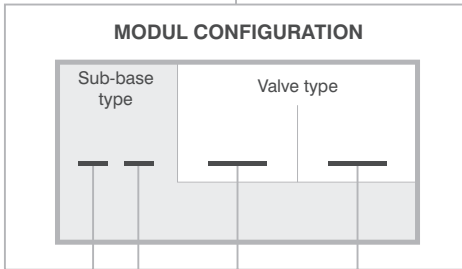
A2 = 25 poles - Self feeding
 A3 = 37 poles - Self feeding
 E2 = 25 poles - External feeding
 E3 = 37 poles - External feeding

RIGHT ENDPLATE

U0 = Closed
 U2 = 25 Poles
 U3 = 37 Poles

I/O MODULE

M8
 (Requires 25 poles right endplate)



SUB-BASE TYPE

- 3 = 2 Position Monostable sub base ø4 (2 electric signal used)
- 4 = 2 Position Bistable sub base ø4 (4 electric signals used)
- 5 = 2 Position Monostable sub base ø6 (2 electric signal used)
- 6 = 2 Position Bistable sub base ø6 (4 electric signals used)
- 7 = 2 Position Monostable sub base ø8 (2 electric signal used)
- 8 = 2 Position Bistable sub base ø8 (4 electric signals used)

VALVES TYPE

- A = 5/2 Solenoid - Spring
- B = 5/2 Solenoid - Differential
- C = 5/2 Solenoid - Solenoid
- E = 5/3 CC Solenoid - Solenoid
- F = 2x3/2 NC-NC (= 5/3 OC) Solenoid - Solenoid
- G = 2x3/2 NO-NO (= 5/3 PC) Solenoid - Solenoid
- H = 2x3/2 NC-NO Solenoid - Solenoid
- I = 2x3/2 NO-NC Solenoid - Solenoid
- T = Free valve space plug

ACCESSORIES

- W00 = Intermediate supply & exhaust module
- 0X0 = Diaphragm plug on pipe 1
- 00Y = Diaphragm plug on pipeE 3
- Z00 = Diaphragm plug on pipe 5
- 0XY = Diaphragm plug on pipe 1 & 3
- ZX0 = Diaphragm plug on pipe 5 & 1
- Z0Y = Diaphragm plug on pipe 5 & 3
- ZXY = Diaphragm plug on pipe 5,1 & 3

SUB-BASE VARIANTS

- EMPTY = No variants (SUB-BASE STANDARD)
- 6 = Diaphragm Plug on pipe 1 and 3
- 7 = Diaphragm Plug on pipe 1
- 8 = Diaphragm Plug on pipe 3 and 5

NOTE:

While configuring the manifold always be careful that the maximum number of electrical signals available is 32
 The use of monostable valve mounted on a bistable base (2 electrical signals occupied for each position) causes the loss of one electric signal.
 In this case the monostable valve can be replaced by a bistable valve without reconfiguring the PLC.
 The diaphragms plugs are used to intercept the conduits 1,3 & 5 of the base.
 Should one or more conduits be cut more than one time it is necessary to add the relevant intermediate Supply/Exhaust module.



General:

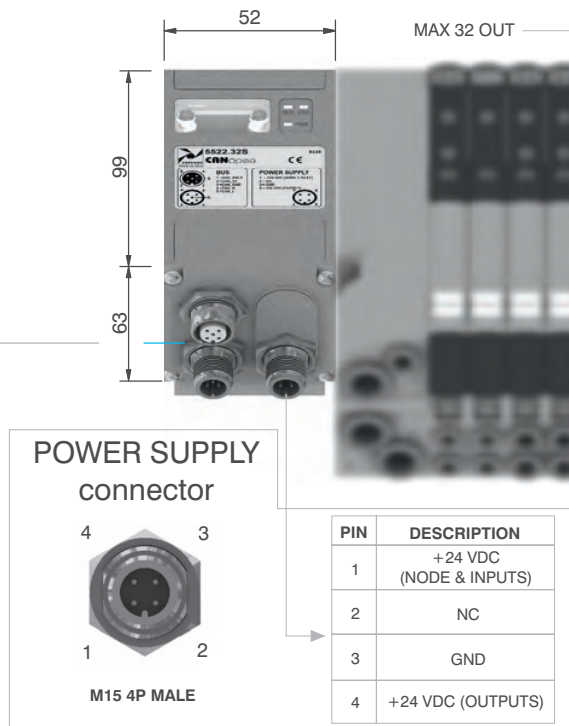
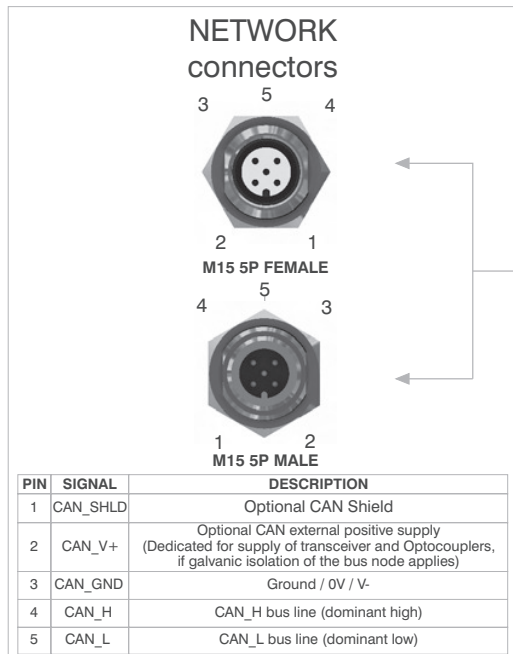
CANopen® module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-S solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5222.08S.
 CANopen® module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus CANopen® is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to CiA Draft Recommendation 303-1 (V. 1.3 : 30 December 2004).
 Transmission speed can be set by 3 dip-switches.
 The node address can be set by 6 dip-switches using BCD numeration.
 The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5522.32S



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5522.32S
	Specifications	CiA Draft Standard Proposal 301 V 4.10 (15 August 2006)
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P connectors male-female Type A (IEC 60947-5-2)
	Baud rate	10 - 20 - 50 - 125 - 250 - 500 - 800 - 1000 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m at 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

General:

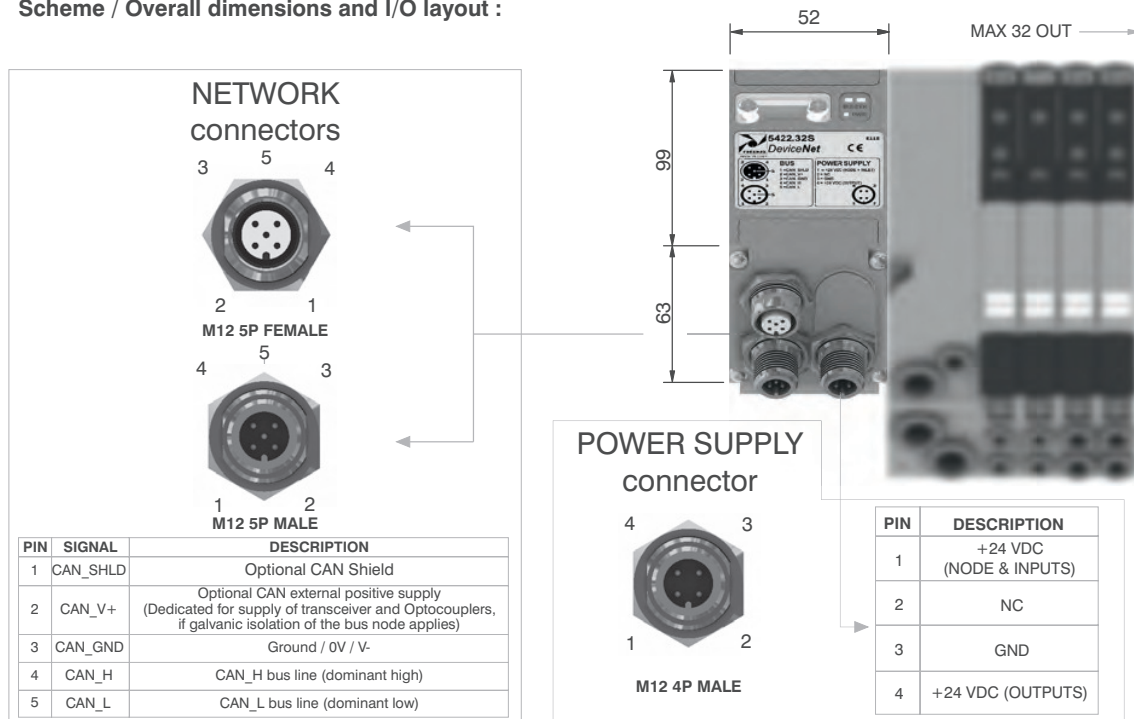
DeviceNet module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
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 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus DeviceNet is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to DeviceNet Specifications Volume I, release 2.0.
 Transmission speed can be set by 3 dip-switches.
 The node address can be set by 6 dip-switches using BCD numeration.
 The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5422.32S



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5422.32S
	Specifications	DeviceNet Specifications Volume I, release 2.0.
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P connectors male-female Type A (IEC 60947-5-2)
	Baud rate	125 - 250 - 500 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m at 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C



General:

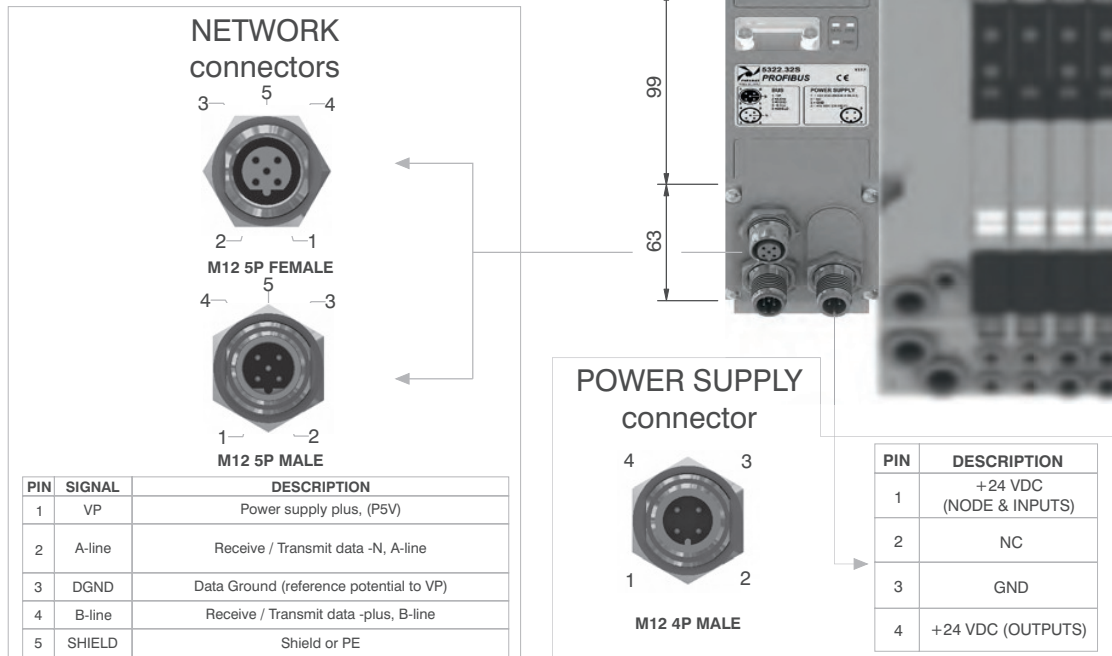
PROFIBUS DP module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-S solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5222.08S.
 PROFIBUS DP module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus PROFIBUS DP is possible via 2 M12 type B 5P male - female circular connectors; these two are connected in parallel and according to PROFIBUS Interconnection Technology (Version 1.1 : August 2001).
 The node address can be set using BCD numeration: 4 dip-switches for the units and 4 dip-switches for the tens.
 The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5322.32S



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5322.32S
	Specifications	PROFIBUS DP
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	50 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P male-female connectors Type B
	Baud rate	9,6-19,2-93,75-187,5-500-1500-3000-6000-12000 Kbit/s
	Addresses, possible numbers	From 1 to 99
	Max nodes in net	100 (slave + master)
	Bus maximum recommended length	100 m at 12 Mbit/s - 1200 m at 9,6 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

General:

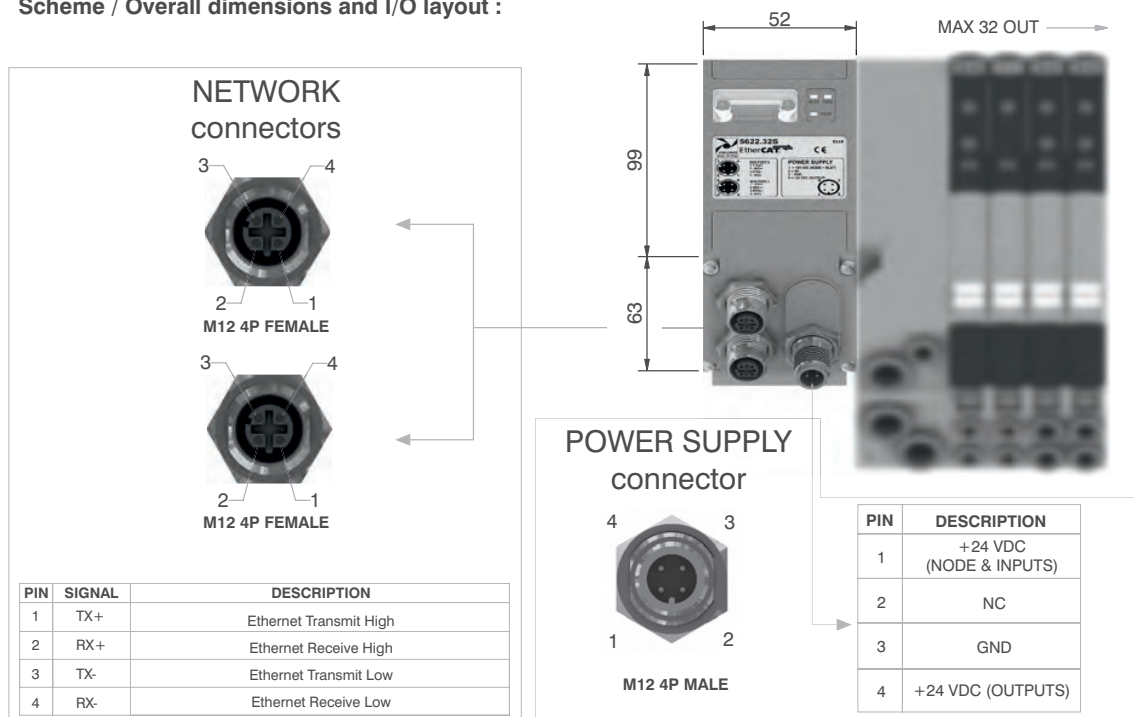
EtherCAT® module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-S solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5222.08S.
 EtherCAT® module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the managable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs mantaning powered the node and inputs, if present.
 Connection to Bus EtherCAT® is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel. They are according to EtherCAT® Specifications ETG.1000 series.
 By specifications, node ID should be automatically set during network configuration.

Ordering code

5622.32S



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5622.32S
	Specifications	EtherCAT® Specifications ETG.1000 series
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	310 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors Type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	From 0 to 65535 (from 1 to 63 with dip-switches)
	Max nodes in net	65536 (master + slaves)
	Bus maximum recommended length	100 m
	Bus diagnosis	1 status green led + 2 activity green led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C



General:

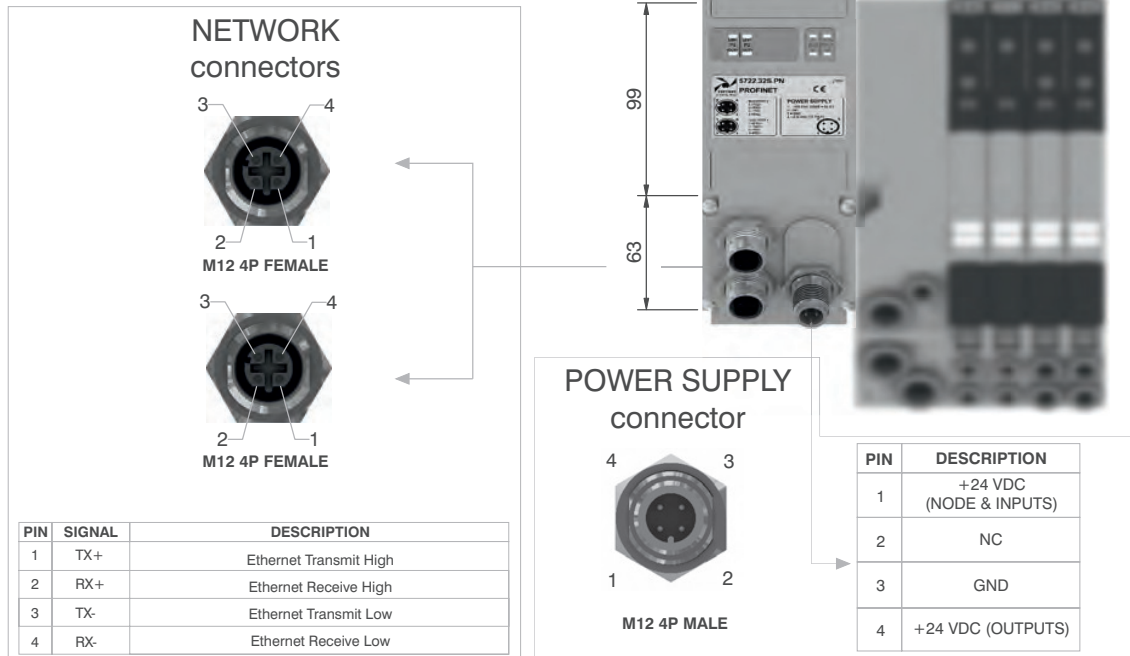
PROFINET IO RT/IRT module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-S solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5222.08S.
 The PROFINET IO RT/IRT module, regardless the number of Input module connected, reports to have connected 8 Input modules.
 Regardless of the number of Input modules connected, the managable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus PROFINET IO RT/IRT is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.
 The node address is assigned during configuration.

Ordering code

5722.32S.PN



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5722.32S.PN
	Specifications	PROFINET IO RT/IRT
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
Outputs	Power supply diagnosis	Green led PWR / Green led OUT
	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
Network	Max output simultaneously actuated	32
	Network connectors	2 M12 4P female connectors Type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

General:

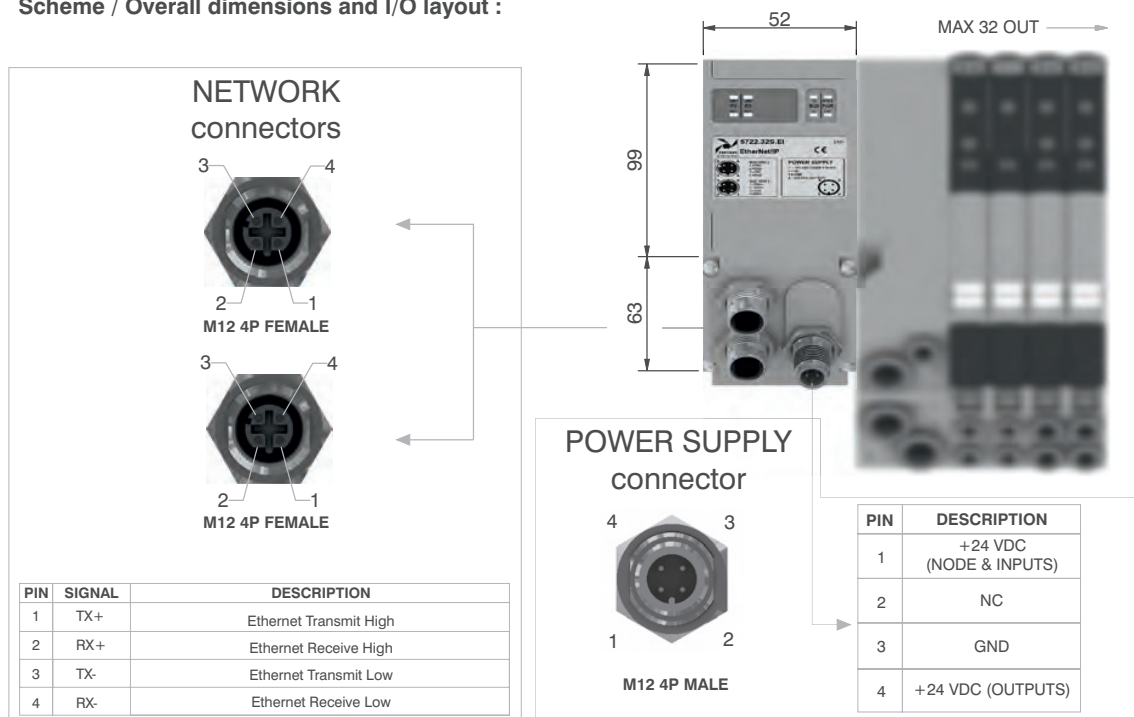
EtherNet/IP module is directly integrated on Optyma-S solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-S solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5222.08S.
 The EtherNet/IP module, regardless the number of Input module connected, reports to have connected 8 Input modules.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus EtherNet/IP is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.
 The node address is assigned during configuration.

Ordering code

5722.32S.EI



Scheme / Overall dimensions and I/O layout :



Technical characteristics

Model	5722.32S.EI	
Specifications	The EtherNet/IP Specification	
Case	Reinforced technopolymer	
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors Type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
Temperature range	From 0° to +50° C	



General:

Modules have 8 connectors M8 3P female.

The Inputs are PNP equivalent 24 VDC ±10%.

To each connector it is possible to plug both 2 wires Inputs (switches, magnetic switches pressure switches, etc) or 3 wires Inputs (proximity, photocells, electronic sensors, etc).

The maximum current available for all 8 Inputs is 300 mA.

Each module includes a 300 mA resettable fuse. If a short circuit or a overcharge (overall current >300mA) occur the safety device acts cutting the 24 VDC power supply to all M8 connectors on the module and switching off the green led PWR. Any other Input module connected to the node will remain powered and will function correctly.

Once the cause of the fault disappears the green led PWR light up indicating the ON state and the node will re-start to operate.

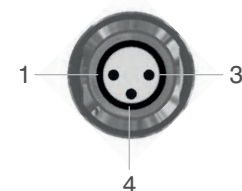
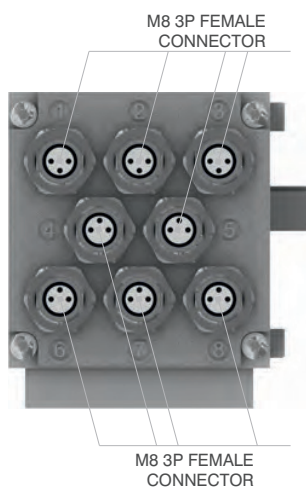
The maximum number of Input modules supported is 4.

Ordering code

5222.08S

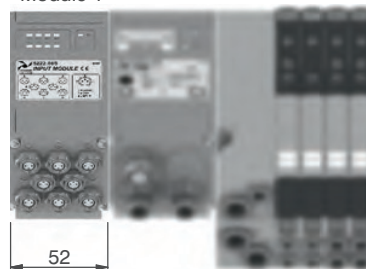


Scheme / Overall dimensions and I/O layout :

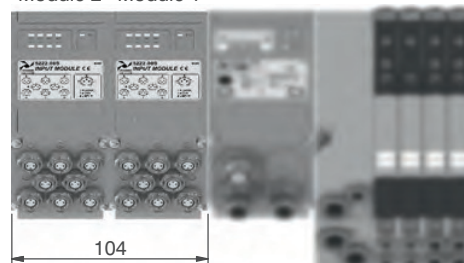


PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

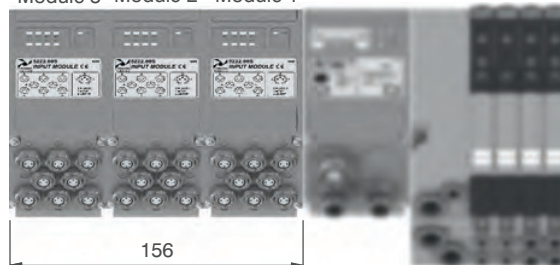
Module 1



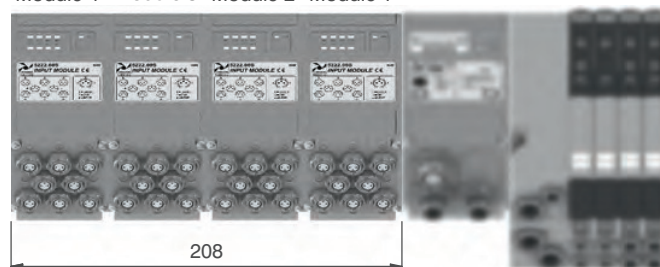
Module 2 Module 1



Module 3 Module 2 Module 1



Module 4 Module 3 Module 2 Module 1





2

M12A 4P female Socket

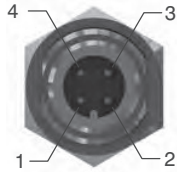
Ordering code

5312A.F04.00

Power supply straight connector.



Upper view Slave connector



PIN	DESCRIPTION
1	+24 VDC Node
2	
3	0 V
4	+24 VDC Output

M8 3P male Plug

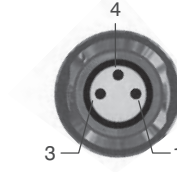
Ordering code

5308A.M03.00

Input straight connector.



Upper view Slave connector



PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

M12A 5P female Socket

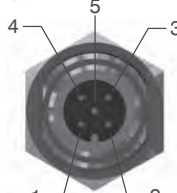
Ordering code

5312A.F05.00

Network straight connector: for Bus CANOpen®, DeviceNet.



Upper view Slave connector



PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

M12A 5P male Plug

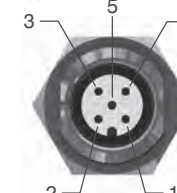
Ordering code

5312A.M05.00

Network straight connector: for BUS CANOpen®, DeviceNet.



Upper view Slave connector



PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

M12B 5P female Plug

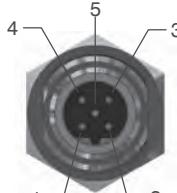
Ordering code

5312B.F05.00

Network straight connector: for Bus PROFIBUS DP.



Upper view Slave connector



PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

M12B 5P male Plug

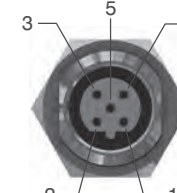
Ordering code

5312B.M05.00

Network straight connector: for BUS PROFIBUS DP.



Upper view Slave connector



PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

M12D 4P male Plug

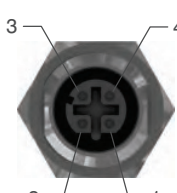
Ordering code

5312D.M04.00

Network straight connector: for EtherCAT®, PROFINET IO RT/IRT, EtherNet/IP.



Upper view Slave connector



PIN	SIGNAL	DESCRIPTION
1	TX+	Ethernet Transmit High
2	RX+	Ethernet Receive High
3	TX-	Ethernet Transmit Low
4	RX-	Ethernet Receive Low

M12 Plug

Ordering code

5300.T12



M8 Plug

Ordering code

5300.T08



Trademarks: EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

2

General :

Using the 2540.03.25P 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.

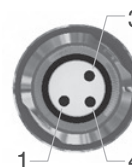
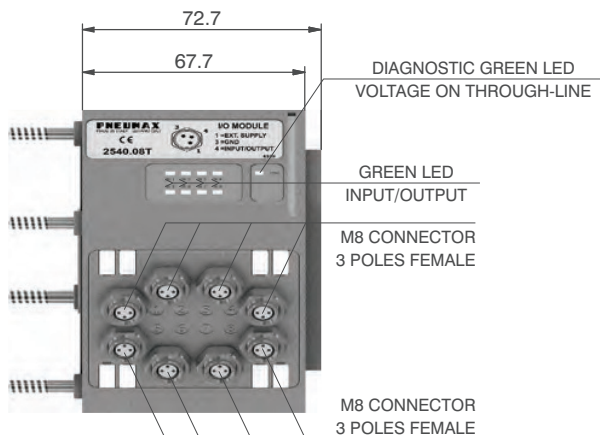
Please note: For an LED to function, a signal of at least +15VDC must be present on pin 4 of the connector. If this signal is lower, the LED will not light, this does not compromise the normal Input / Output function of the unit.

Ordering code

2540.08T



Overall dimensions and I/O layout :



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 (photoceles, 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 2540.02.25P or 2540.12.25P)

Pin 36-37 of the 37 pin multi-pole connector (code 2540.02.37P or 2540.12.37P)

Output features:

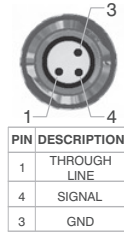
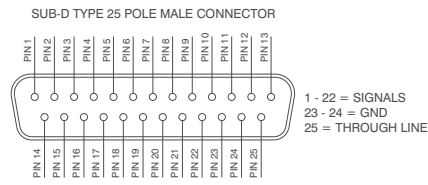
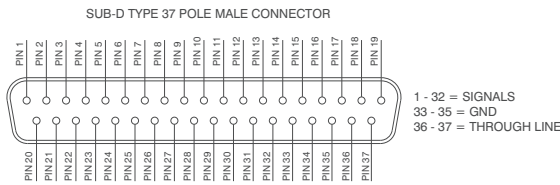


Attention: The output connections are not protected against short-circuit. Please pay attention when wiring (avoid Pin 4 being connected to Pin 3 or Pin 1).

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



Connection modes:

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

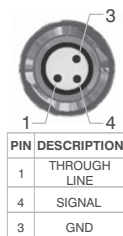
- A) Control via multi-pole connection
- B) Control via fieldbus

A) Control via multi-pole :

M8 connector used as Input:



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



In order to use the I/O module, the correct right hand endplate with 25 pole female outlet connector must be used.
(Code 2540.03.25P).

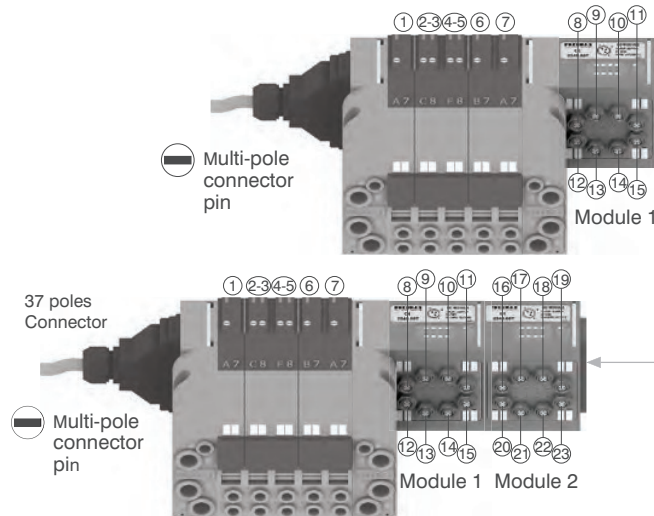


M8 connector used as Output:

Output voltage will be the same as is applied at the multi-pole connector pin.
The maximum output current depends upon the power unit used, but we recommend no more than 250mA.



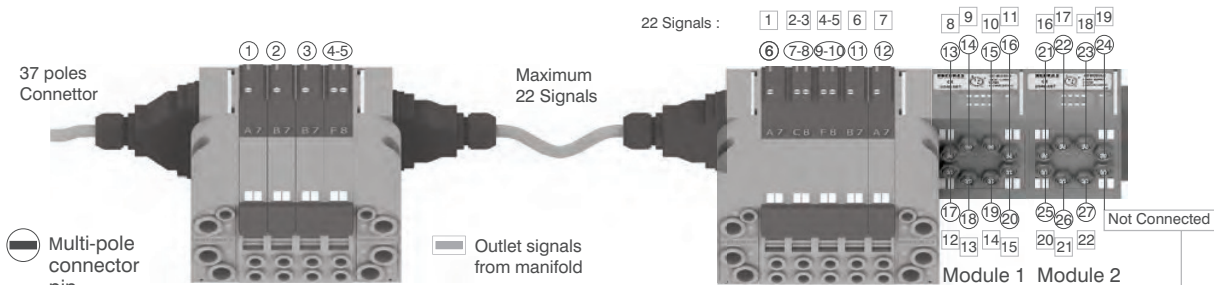
Attention: Since every cable has a degree of resistance, there will always be a voltage drop depending on the cable's length, sectional area and the current.



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

Attention: No more additions are possible

Attention : Optyima 32-T 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.

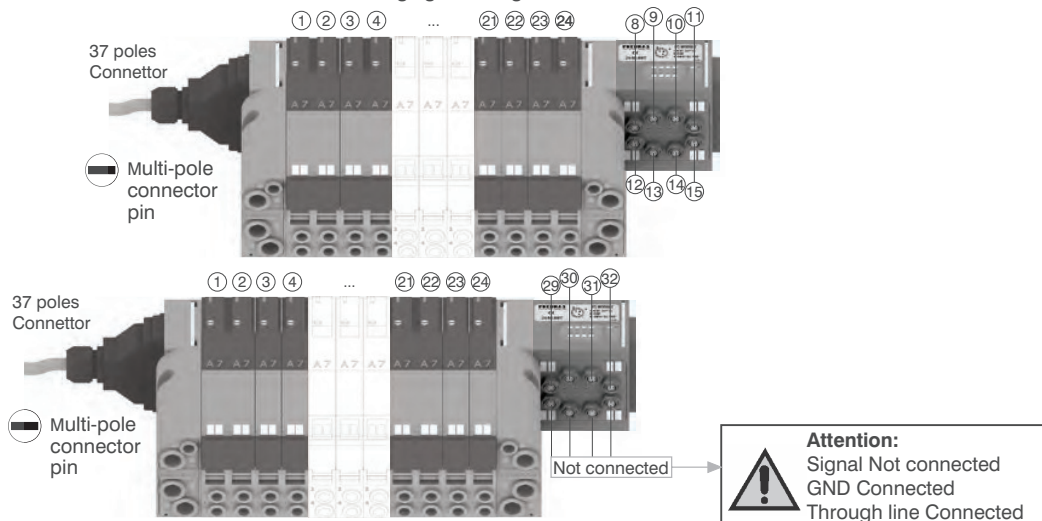


Attention: Signal Not connected
GND Connected
Through line Connected

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. 22 17

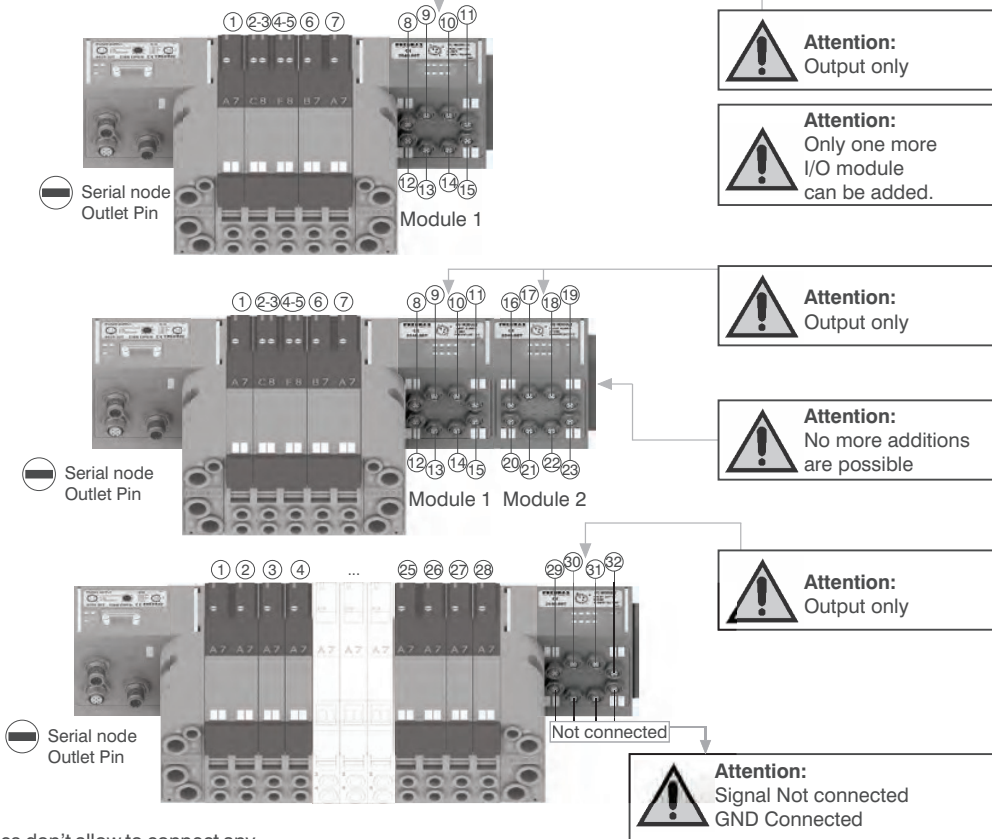
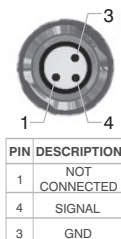


Please note: Optyima 32-T solenoid valve manifolds manage up to 32 signals. If the manifold uses more than 24 signals the I/O module will manage only the remainder. Connections that are not managing useful signals will remain unconnected.

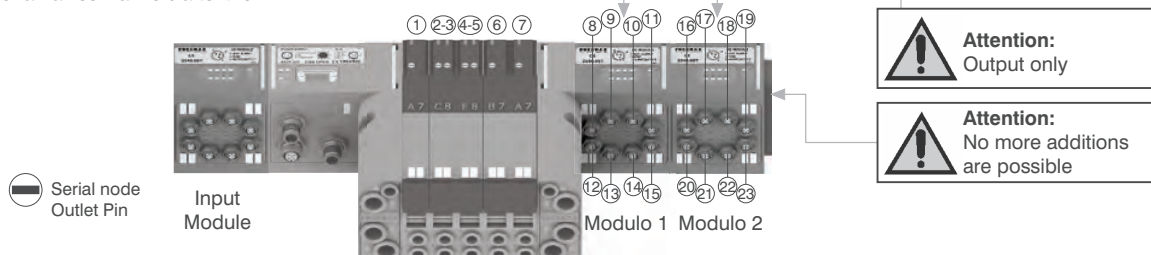


B) Control via fieldbus:

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.

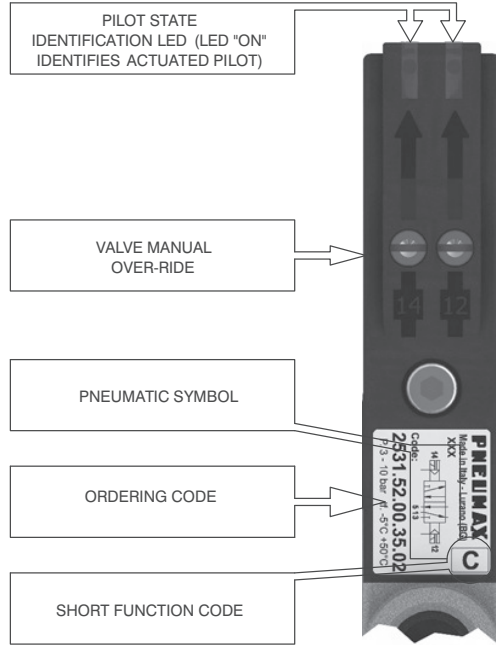
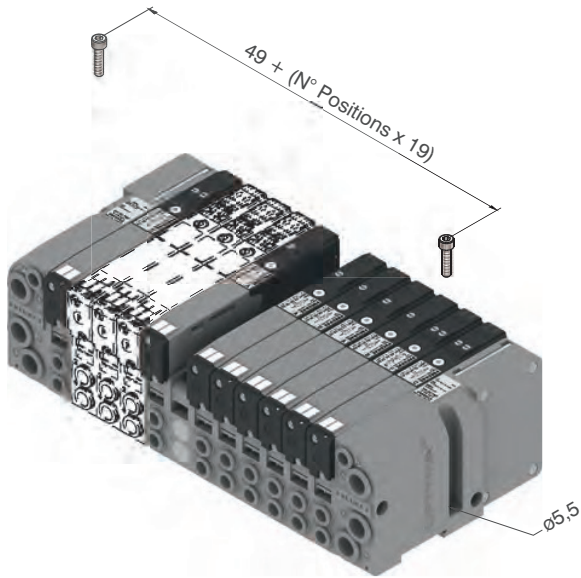


Please note: I/O modules don't allow to connect any additional valves manifold after them.



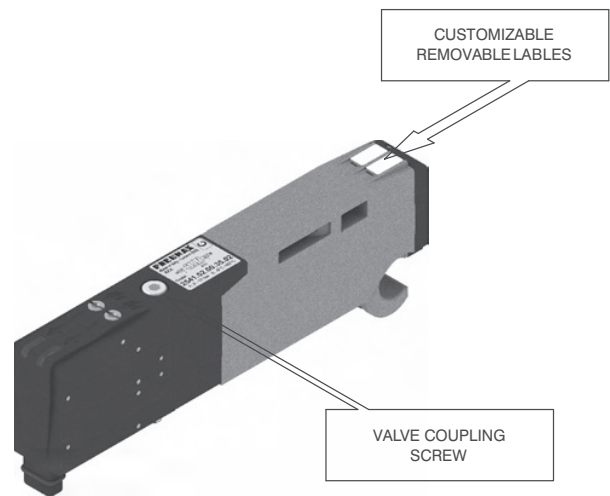
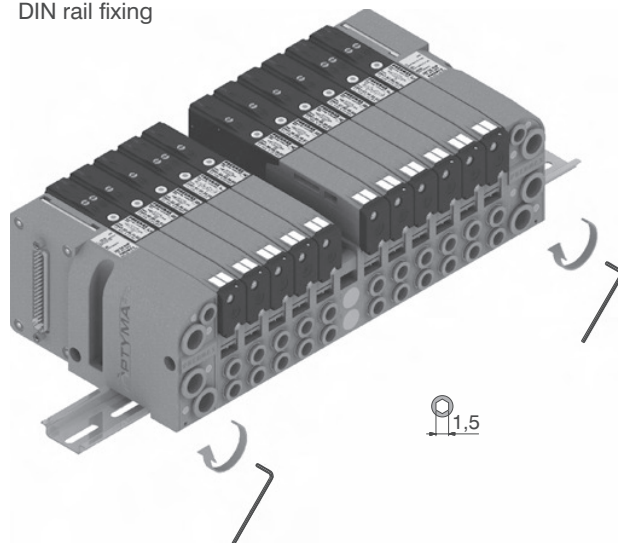


From the top

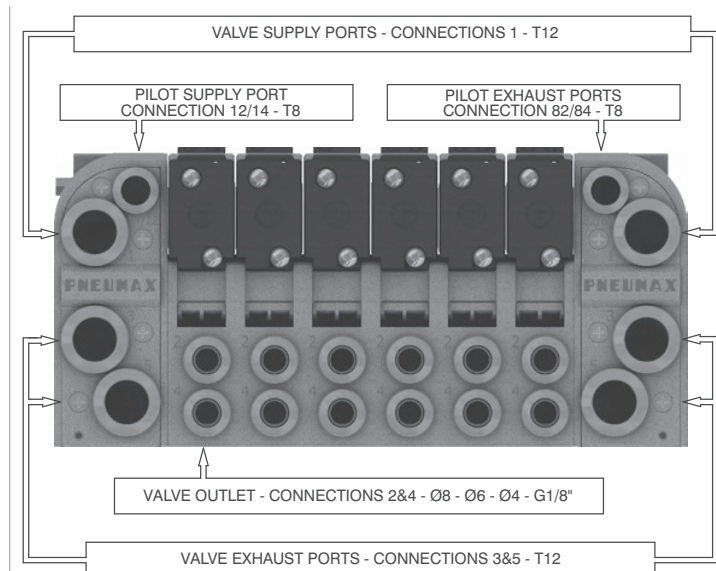
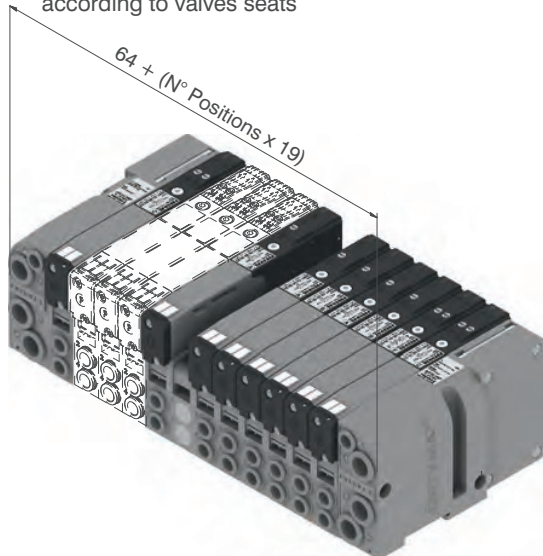


2

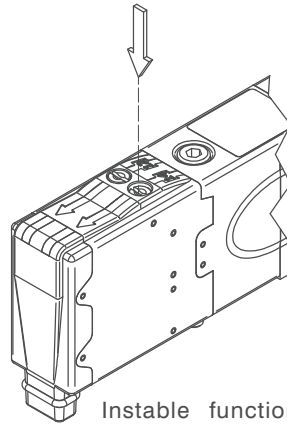
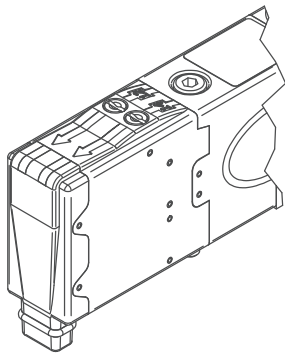
DIN rail fixing



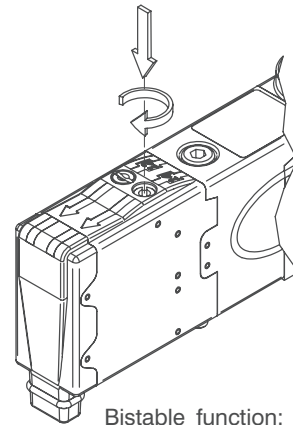
Maximum possible size according to valves seats



Manual override actuation



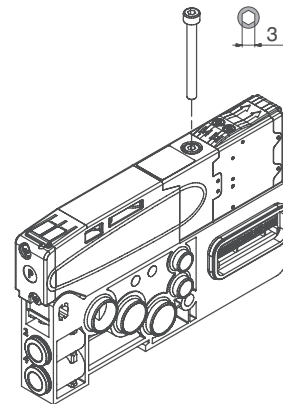
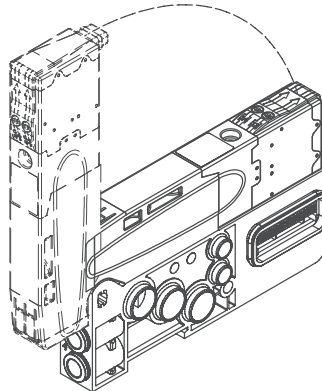
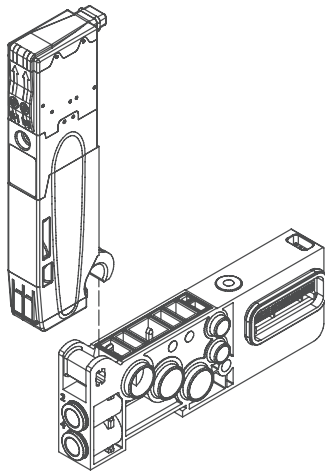
Instable function: push to actuate (when released it moves back to the original position).



Bistable function: push and turn to get the bistable function

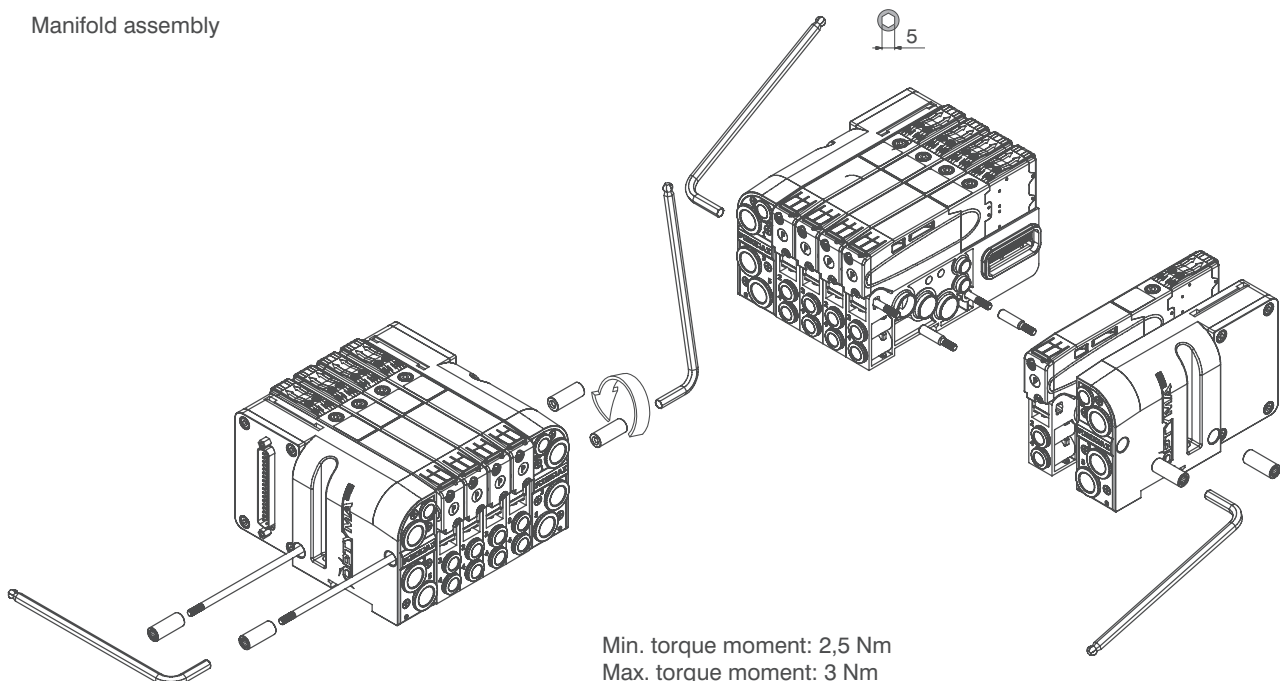
NOTE : It is strongly suggested to replace the original position after using

Valve Installation



NOTE: Torque moment 1 Nm

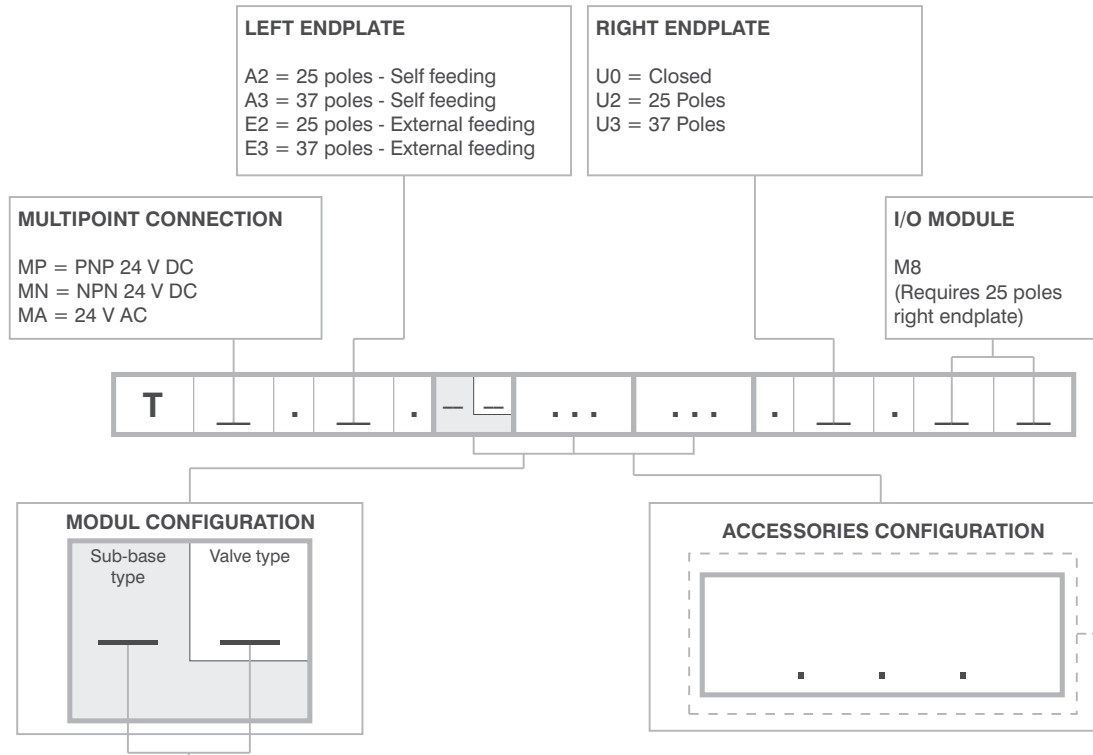
Manifold assembly



Min. torque moment: 2,5 Nm
Max. torque moment: 3 Nm



Manifold Layout configuration



SHORT CODE FUNCTION / CONNECTION :

- | | |
|--|--|
| A1= 5/2 Sol.-Spring + BASE 1 - CARTR. G1/8" GAS | F2= 2x3/2 NC-NC (= 5/3 OC) Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS |
| A2= 5/2 Sol.-Spring + BASE 2 - CARTR. G1/8" GAS | F4= 2x3/2 NC-NC (= 5/3 OC) Sol.-Sol. + BASE 2 - CARTR. Ø4 |
| A3= 5/2 Sol.-Spring + BASE 1 - CARTR. Ø4 | F6= 2x3/2 NC-NC (= 5/3 OC) Sol.-Sol. + BASE 2 - CARTR. Ø6 |
| A4= 5/2 Sol.-Spring + BASE 2 - CARTR. Ø4 | F8= 2x3/2 NC-NC (= 5/3 OC) Sol.-Sol. + BASE 2 - CARTR. Ø8 |
| A5= 5/2 Sol.-Spring + BASE 1 - CARTR. Ø6 | G2= 2x3/2 NO-NO (= 5/3 PC) Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS |
| A6= 5/2 Sol.-Spring + BASE 2 - CARTR. Ø6 | G4= 2x3/2 NO-NO (= 5/3 PC) Sol.-Sol. + BASE 2 - CARTR. Ø4 |
| A7= 5/2 Sol.-Spring + BASE 1 - CARTR. Ø8 | G6= 2x3/2 NO-NO (= 5/3 PC) Sol.-Sol. + BASE 2 - CARTR. Ø6 |
| A8= 5/2 Sol.-Spring + BASE 2 - CARTR. Ø8 | G8= 2x3/2 NO-NO (= 5/3 PC) Sol.-Sol. + BASE 2 - CARTR. Ø8 |
| B1= 5/2 Sol.-Diff. + BASE 1 - CARTR. G1/8" GAS | H2= 2x3/2 NC-NO Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS |
| B2= 5/2 Sol.-Diff. + BASE 2 - CARTR. G1/8" GAS | H4= 2x3/2 NC-NO Sol.-Sol. + BASE 2 - CARTR. Ø4 |
| B3= 5/2 Sol.-Diff. + BASE 1 - CARTR. Ø4 | H6= 2x3/2 NC-NO Sol.-Sol. + BASE 2 - CARTR. Ø6 |
| B4= 5/2 Sol.-Diff. + BASE 2 - CARTR. Ø4 | H8= 2x3/2 NC-NO Sol.-Sol. + BASE 2 - CARTR. Ø8 |
| B5= 5/2 Sol.-Diff. + BASE 1 - CARTR. Ø6 | I2= 2x3/2 NO-NC Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS |
| B6= 5/2 Sol.-Diff. + BASE 2 - CARTR. Ø6 | I4= 2x3/2 NO-NC Sol.-Sol. + BASE 2 - CARTR. Ø4 |
| B7= 5/2 Sol.-Diff. + BASE 1 - CARTR. Ø8 | I6= 2x3/2 NO-NC Sol.-Sol. + BASE 2 - CARTR. Ø6 |
| B8= 5/2 Sol.-Diff. + BASE 2 - CARTR. Ø8 | I8= 2x3/2 NO-NC Sol.-Sol. + BASE 2 - CARTR. Ø8 |
| C2= 5/2 Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS | T1= Free valve space plug + BASE 1 - CARTR. G1/8" GAS |
| C4= 5/2 Sol.-Sol. + BASE 2 - CARTR. Ø4 | T2= Free valve space plug + BASE 2 - CARTR. G1/8" GAS |
| C6= 5/2 Sol.-Sol. + BASE 2 - CARTR. Ø6 | T3= Free valve space plug + BASE 1 - CARTR. Ø4 |
| C8= 5/2 Sol.-Sol. + BASE 2 - CARTR. Ø8 | T4= Free valve space plug + BASE 2 - CARTR. Ø4 |
| E2= 5/3 CC Sol.-Sol. + BASE 2 - CARTR. G1/8" GAS | T5= Free valve space plug + BASE 1 - CARTR. Ø6 |
| E4= 5/3 CC Sol.-Sol. + BASE 2 - CARTR. Ø4 | T6= Free valve space plug + BASE 2 - CARTR. Ø6 |
| E6= 5/3 CC Sol.-Sol. + BASE 2 - CARTR. Ø6 | T7= Free valve space plug + BASE 1 - CARTR. Ø8 |
| E8= 5/3 CC Sol.-Sol. + BASE 2 - CARTR. Ø8 | T8= Free valve space plug + BASE 2 - CARTR. Ø8 |

NOTE:

While configuring the manifold always be careful that the maximum number of electrical signals available is 32.
 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 exemple : 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.

ACCESSORIES

- | | |
|---|--|
| U2 = Power supply
2 positions module | Z = Diaphragm plug
on pipe 5 |
| U4 = Power supply
4 positions module | XY = Diaphragm plug
on pipe 1 & 3 |
| W = Intermediate supply
& exhaust module | ZX = Diaphragm plug
on pipe 5 & 1 |
| X = Diaphragm plug
on pipe 1 | ZY = Diaphragm plug
on pipe 5 & 3 |
| Y = Diaphragm plug
on pipe 3 | ZXY = Diaphragm plug
on pipe 5, 1 & 3 |



General:

CANopen® module is directly integrated on Optyima-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyima-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).

The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08T.

CANopen® module recognizes automatically the presence of the Input modules on power on.

Regardless of the number of Input modules connected, the managable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus CANopen® is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to CiA Draft Recommendation 303-1 (V. 1.3 : 30 December 2004).

Transmission speed can be set by 3 dip-switches.

The node address can be set by 6 dip-switches using BCD numeration.

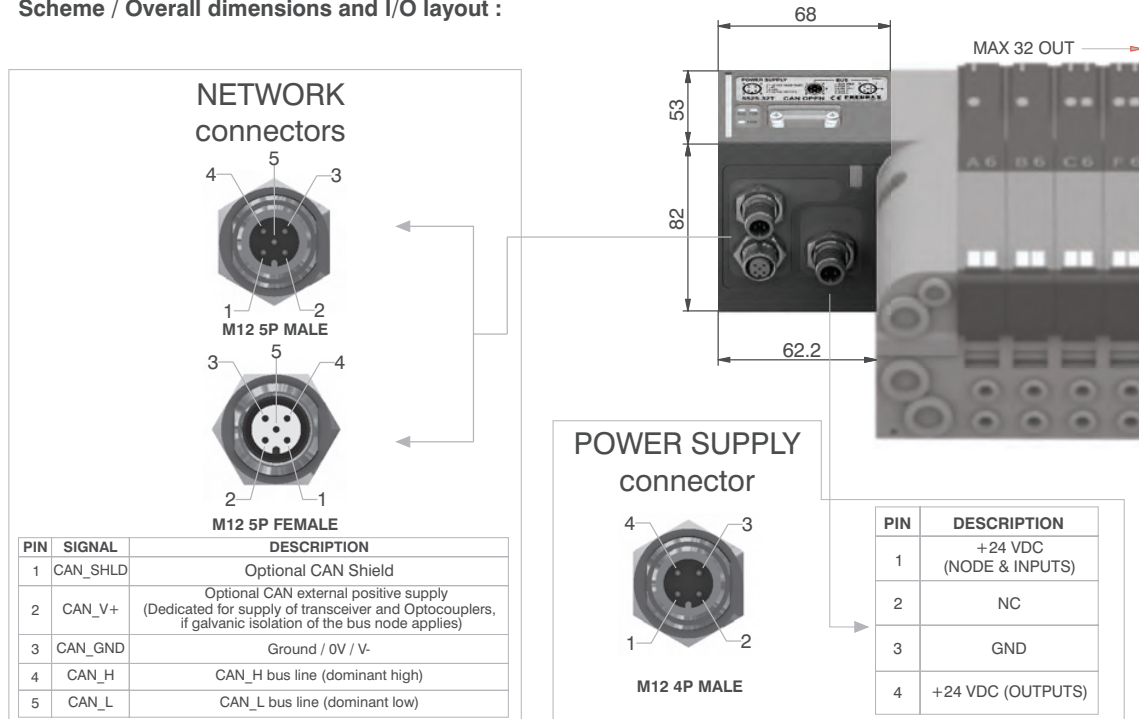
The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5525.32T



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5525.32T
	Specifications	CiA Draft Standard Proposal 301 V 4.10 (15 August 2006)
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P connectors male-female type A (IEC 60947-5-2)
	Baud rate	10 - 20 - 50 - 125 - 250 - 500 - 800 - 1000 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m at 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C



General:

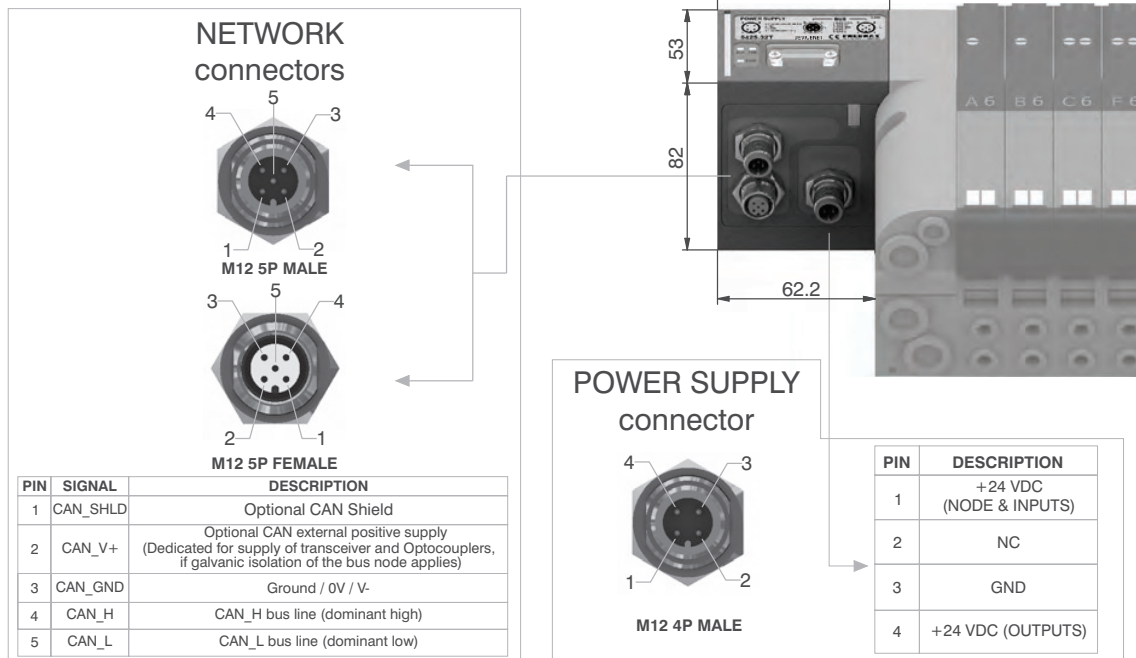
DeviceNet module is directly integrated on Optyma-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08T.
 DeviceNet module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus DeviceNet is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to DeviceNet Specifications Volume I, release 2.0.
 Transmission speed can be set by 3 dip-switches.
 The node address can be set by 6 dip-switches using BCD numeration.
 The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5425.32T



Scheme / Overall dimensions and I/O layout :



PIN	SIGNAL	DESCRIPTION
1	CAN_SHLD	Optional CAN Shield
2	CAN_V+	Optional CAN external positive supply (Dedicated for supply of transceiver and Optocouplers, if galvanic isolation of the bus node applies)
3	CAN_GND	Ground / 0V / V-
4	CAN_H	CAN_H bus line (dominant high)
5	CAN_L	CAN_L bus line (dominant low)

PIN	DESCRIPTION
1	+24 VDC (NODE & INPUTS)
2	NC
3	GND
4	+24 VDC (OUTPUTS)

Technical characteristics

	Model	5425.32T
	Specifications	DeviceNet Specifications Volume I, release 2.0.
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
	Outputs	PNP equivalent outputs
Maximum current for output		100 mA
Maximum output number		32
Max output simultaneously actuated		32
Network		Network connectors
	Baud rate	125 - 250 - 500 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m at 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C

General:

PROFIBUS DP module is directly integrated on Optyma-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyma-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code). The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 8 Input modules 5225.12T, and a max number of 4 Input modules 5225.08T.

PROFIBUS DP module recognizes automatically the presence of the Input modules on power on. Regardless of the number of Input modules connected, the manageable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus PROFIBUS DP is possible via 2 M12 type B 5P male - female circular connectors; these two are connected in parallel and according to PROFIBUS Interconnection Technology (Version 1.1 : August 2001).

The node address can be set using BCD numeration: 4 dip-switches for the units and 4 dip-switches for the tens.

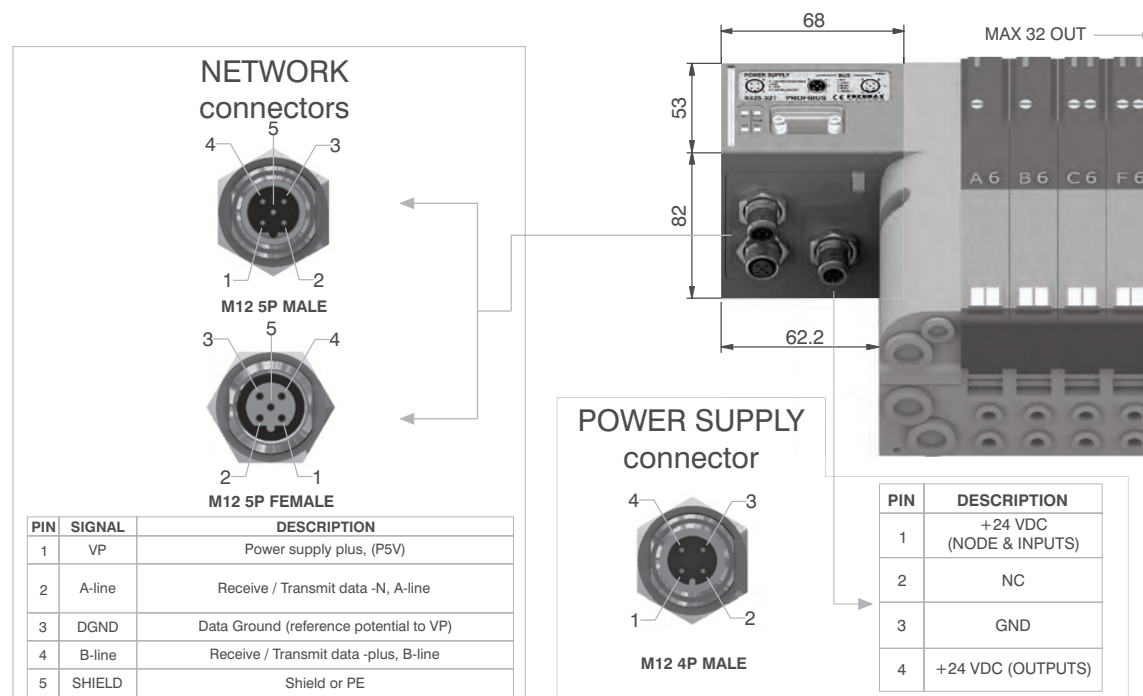
The module includes an internal terminating resistance that can be activated by 2 dip-switch.

Ordering code

5325.32T



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5325.32T
	Specifications	PROFIBUS DP
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	50 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P male-female connectors type B
	Baud rate	9,6 - 19,2 - 93,75 - 187,5 - 500 - 1500 - 3000 - 6000 - 12000 Kbit/s
	Addresses, possible numbers	From 1 to 99
	Max nodes in net	100 (slave + master)
	Bus maximum recommended length	100 m at 12 Mbit/s - 1200 m at 9,6 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C



General:

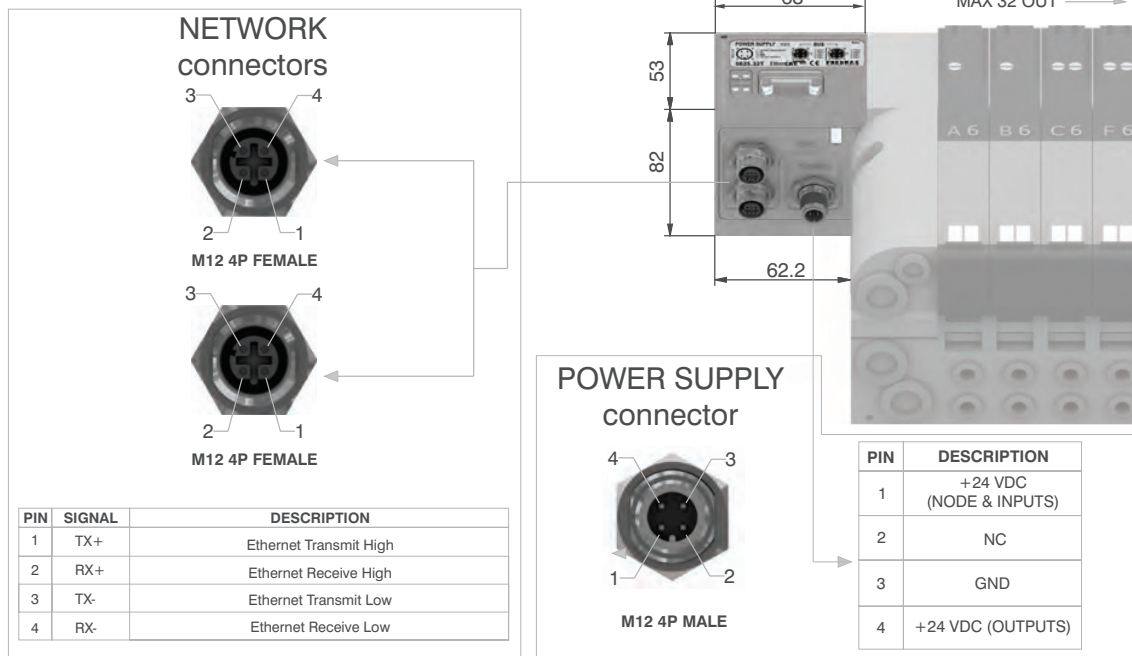
EtherCAT® module is directly integrated on Optyma-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08T.
 EtherCAT® module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus EtherCAT® is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel. They are according to EtherCAT® Specifications ETG.1000 series.
 By specifications, node ID should be automatically set during network configuration, but it is also possible to set the address via 6 dip-switches on the module, using BCD numeration.

Ordering code

5625.32T



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5625.32T
	Specifications	EtherCAT® Specifications ETG.1000 series
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	310 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Max output simultaneously actuated	32
	N.max. uscite azionabili contemp.	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possibile numbers	From 0 to 65535 (from 1 to 63 with dip-switches)
	Max nodes in net	65536 (master + slaves)
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 status green led + 2 activity green led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

General :

PROFINET IO RT/IRT module is directly integrated on Optyma-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyma-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).

The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 8 Input modules 5225.12T, and a max number of 4 Input modules 5225.08T.

The PROFINET IO RT/IRT module, regardless the number of Input module connected, reports to have connected 8 Input modules.

Regardless of the number of Input modules connected, the manageable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus PROFINET IO RT/IRT is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.

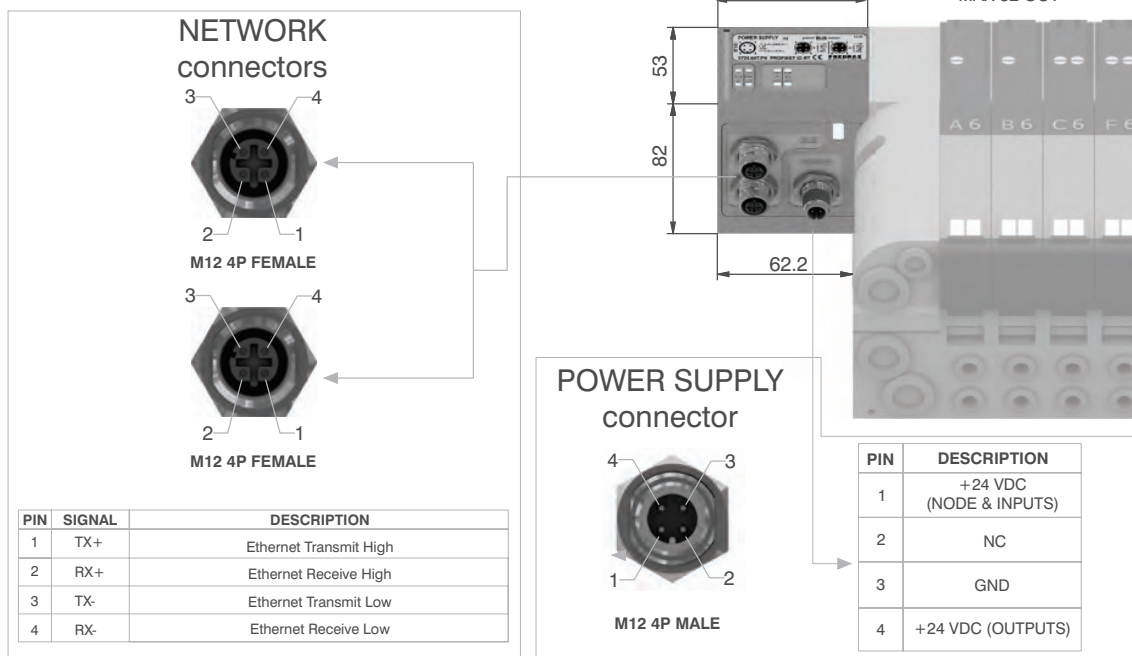
The node address is assigned during configuration.

Ordering code

5725.32T.PN



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5725.32T.PN
	Specifications	PROFINET IO RT/IRT
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C



General :

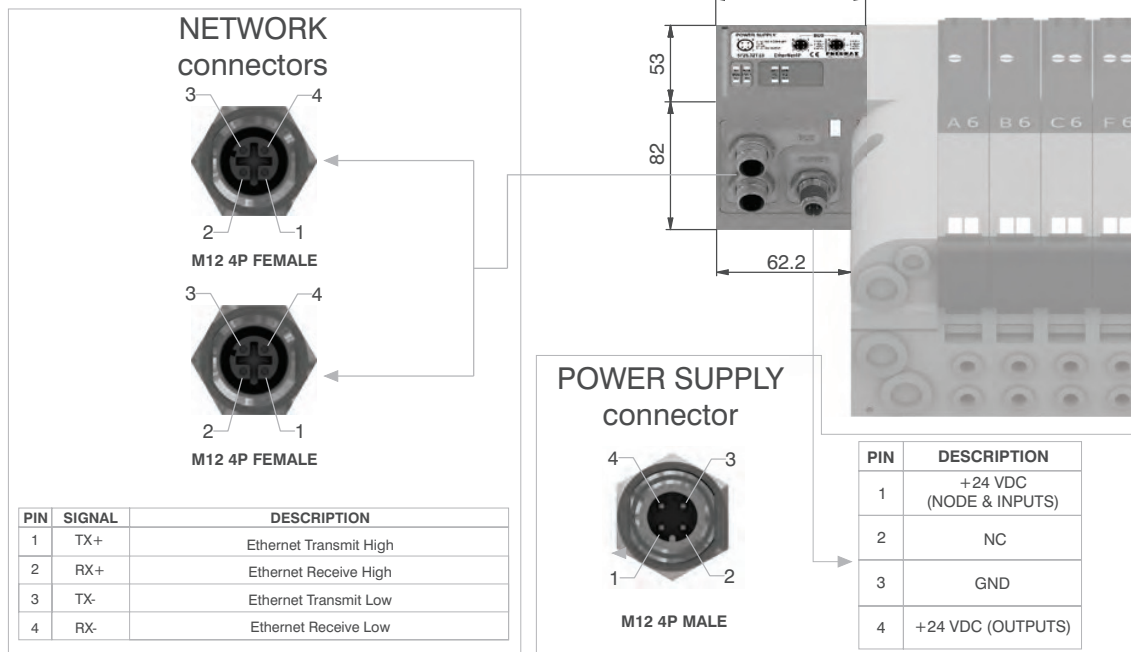
EtherNet/IP module is directly integrated on Optyma-T solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-T solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 8 Input modules 5225.12T, and a max number of 4 Input modules 5225.08T.
 The EtherNet/IP module, regardless the number of Input module connected, reports to have connected 8 Input modules.
 Regardless of the number of Input modules connected, the managable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus EtherNet/IP is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.
 The node address is assigned during configuration.

Ordering code

5725.32T.EI



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5725.32T.EI
	Specifications	The EtherNet/IP Specification
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C



2

General :

Modules have 8 connectors M8 3P female.

The Inputs are PNP equivalent 24 VDC ± 10%.

To each connector it is possible to plug both 2 wires Inputs (switches, magnetic switches pressure switches, etc) or 3 wires Inputs (proximity, photocells, electronic sensors, etc).

The maximum current available for all 8 Inputs is 200 mA.

Each module includes a 200 mA resettable fuse. If a short circuit or an overcharge (overall current >200mA) occur the safety device acts cutting the 24 VDC power supply to all M8 connectors on the module and switching off the green led PWR. Any other Input module connected to the node will remain powered and will function correctly.

Once the cause of the fault disappears the green led PWR light up indicating the ON state and the node will re-start to operate.

The maximum number of Input modules supported is 4 for CANopen®, DeviceNet and EtherCAT®.

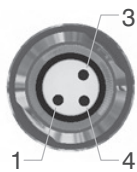
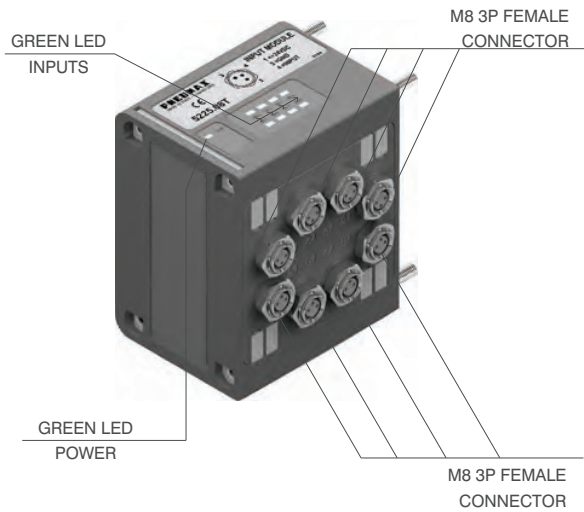
The maximum number of Input modules supported is 8 for PROFIBUS DP, PROFINET IO RT/IRT and EtherNet/IP.

Ordering code

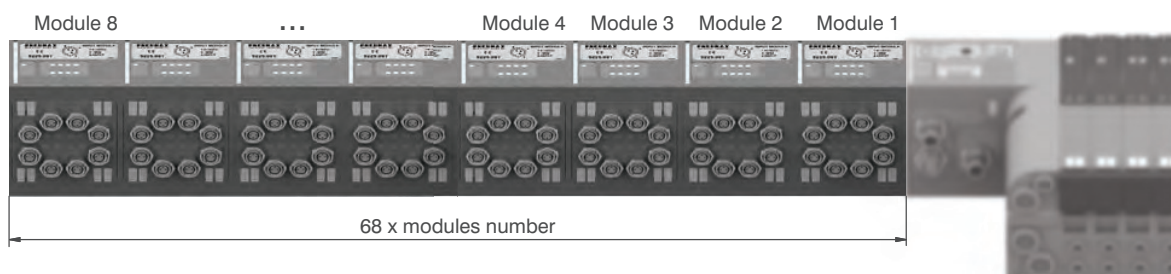
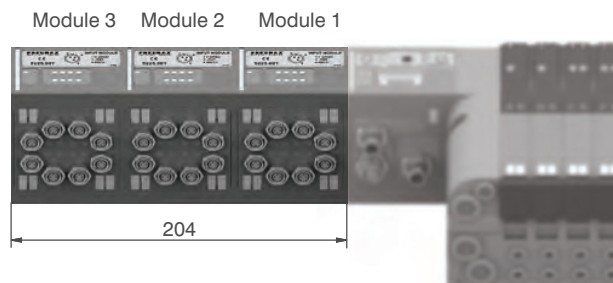
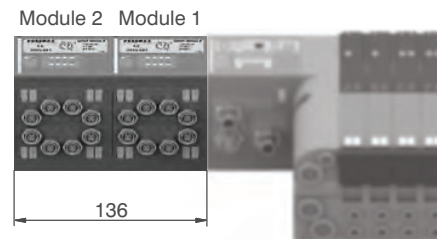
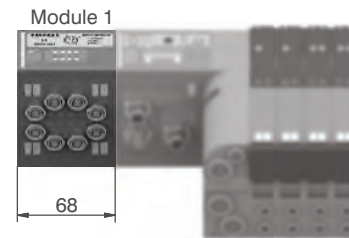
5225.08T



Scheme / Overall dimensions and I/O layout :



PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND





General :

Modules have 4 connectors M12 5P female.

The Inputs are PNP equivalent 24 VDC ±10%.

To each connector it is possible to plug both 2 wires Inputs (switches, magnetic switches pressure switches, etc) or 3 wires Inputs (proximity, photocells, electronic sensors, etc).

The maximum current available for all 8 Inputs is 200 mA.

Each module includes a 200 mA resettable fuse. If a short circuit or a overcharge (overall current >200mA) occur the safety device acts cutting the 24 VDC power supply to all M12 connectors on the module and switching off the green led PWR. Any other Input module connected to the node will remain powered and will function correctly.

Once the cause of the fault disappears the green led PWR light up indicating the ON state and the node will re-start to operate.

The maximum number of Input modules supported is 4 for CANopen®, DeviceNet and EtherCAT®.

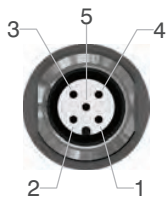
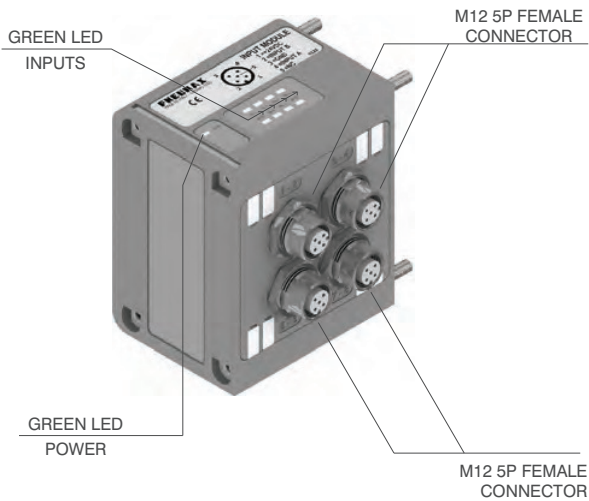
The maximum number of Input modules supported is 8 for PROFIBUS DP, PROFINET IO RT/IRT and EtherNet/IP.

Ordering code

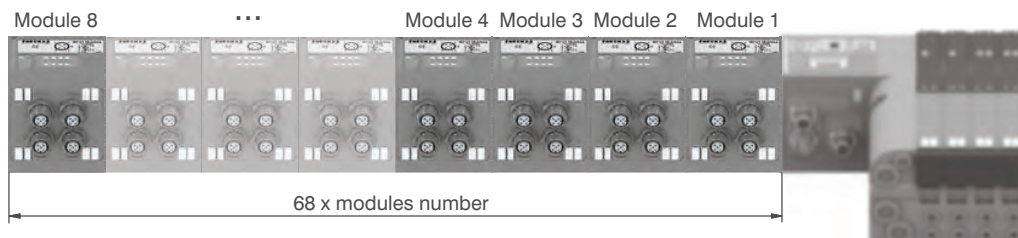
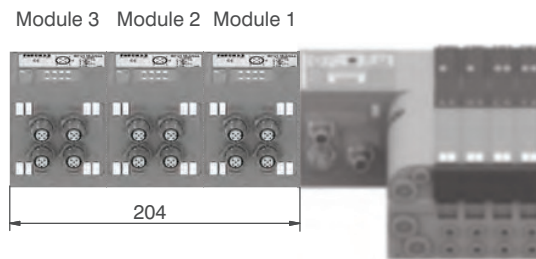
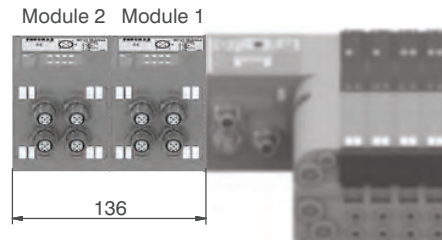
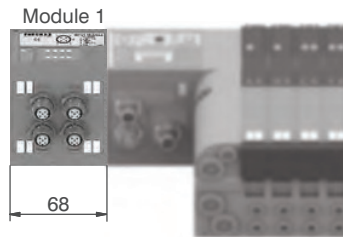
5225.12T



Scheme / Overall dimensions and I/O layout :



PIN	DESCRIPTION
1	+24 VDC
2	INPUT B
3	GND
4	INPUT A
5	NC





2

General :

This module is fitted with two M8 3 pin female connectors.

With this module is possible to read two analogue inputs (voltage or current).

The inputs are sampled at 12 bit.

For practicality the sampled value is transmitted with 16 bit, of which the four less significant are fixed at zero.

Available models:

5225.2T.00T (voltage signal 0 - 10V);

5225.2T.01T (voltage signal 0 - 5V);

5225.2C.00T (current signal 4 - 20mA);

5225.2C.01T (current signal 0 - 20mA).

Each module includes a 300 mA self-mending fuse. Should a short circuit or a overcharge (overall current >300mA) occur the safety device intervenes cutting the 24VDC power supply to all M8 connectors on the module and switching off the green LED PWR. Any other Input module connected to the node will remain powered and will function correctly. Once the cause of the fault is removed the green LED lights up indicating the ON state and the node will re-start to operate.

This module is counted as four 8 digital INPUT modules.

The maximum number of Input modules supported is 4 for CANopen®, DeviceNet and EtherCAT®.

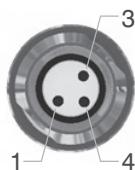
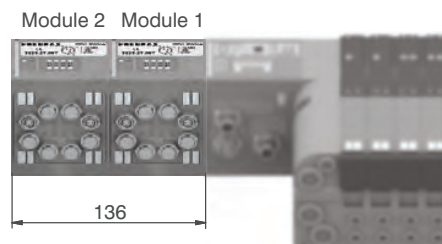
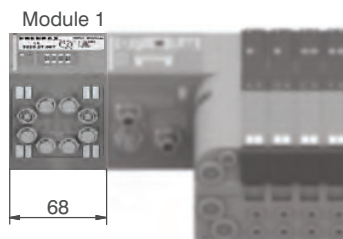
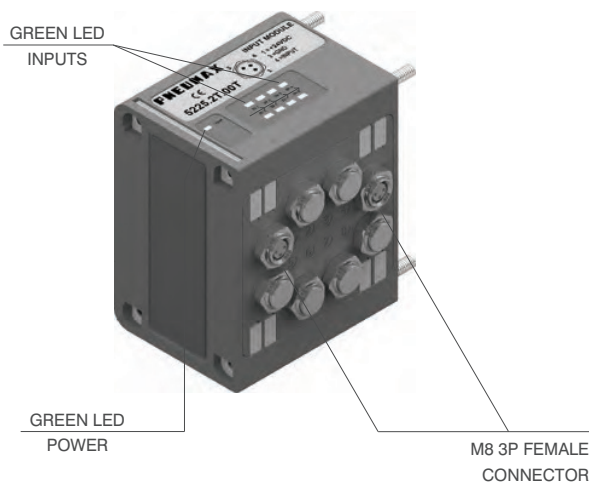
The maximum number of Input modules supported is 8 for PROFIBUS DP, PROFINET IO RT/IRT and EtherNet/IP.

Ordering code

5225.2 _ . _ _ T



Scheme / Overall dimensions and I/O layout :



PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND



General :

This module is fitted with two M8 3 pin female connectors.

With this module is possible to read two PT 100 probes.

The inputs are sampled at 12 bit.

For practicality the sampled value is transmitted with 16 bit, of which the four less significant are fixed at zero.

It is possible to plug 3-wires probes or 2-wires probes.

The temperature is expressed in tenths of degree.

The temperature range is 0 – 250°C, beyond which the green LED for probe presence doesn't light on.

The module returns a value correspondent to 250°C when the probe is not connected.

Available models:

5225.2P00T (2-wires probes);

5225.2P01T (3-wires probes).

Each module includes a 300 mA self-mending fuse. Should a short circuit or a overcharge (overall current >300mA) occur the safety device intervenes cutting the 24VDC power supply to all M8 connectors on the module and switching off the green LED PWR. Any other INPUT module connected to the node will remain powered and will function correctly.

Once the cause of the fault is removed the green LED lights up

indicating the ON state and the node will re-start to operate.

This module is counted as four 8 digital INPUT modules.

The maximum number of Input modules supported is 4 for CANopen®, DeviceNet and EtherCAT®.

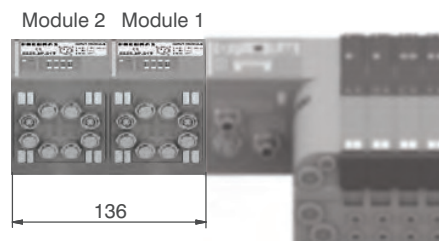
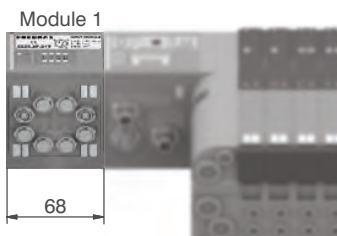
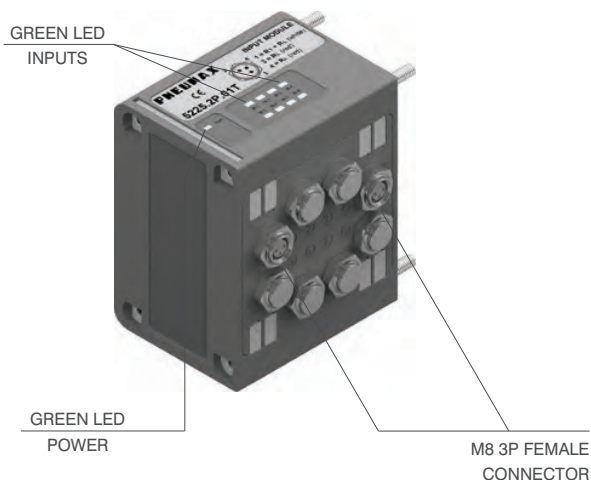
The maximum number of Input modules supported is 8 for PROFIBUS DP, PROFINET IO RT/IRT and EtherNet/IP.

Ordering code

5225.2P . __T



Scheme / Overall dimensions and I/O layout :



3 WIRES

PIN	DESCRIPTION
1	RT (white)
4	RL (red)
3	RL (red)

2 WIRES

PIN	DESCRIPTION
1	RT (white)
4	NC
3	RL (red)



2

M12A 4P female Socket

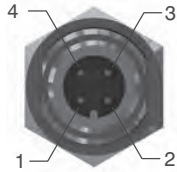
Ordering code

5312A.F04.00

Power supply straight connector.



Upper view Slave connector



PIN	DESCRIPTION
1	+24 VDC Node
2	
3	0 V
4	+24 VDC Output

M8 3P male Plug

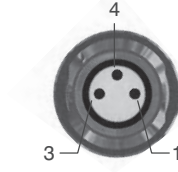
Ordering code

5308A.M03.00

Input straight connector.



Upper view Slave connector



PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

M12A 5P female Socket

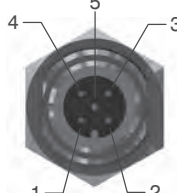
Ordering code

5312A.F05.00

Network straight connector: for Bus CANOpen®, DeviceNet.



Upper view Slave connector



PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

M12A 5P male Plug

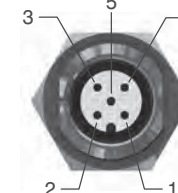
Ordering code

5312A.M05.00

Network straight connector: for BUS CANOpen®, DeviceNet.



Upper view Slave connector



PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

M12B 5P female Plug

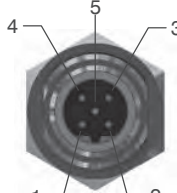
Ordering code

5312B.F05.00

Network straight connector: for Bus PROFIBUS DP.



Upper view Slave connector



PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

M12B 5P male Plug

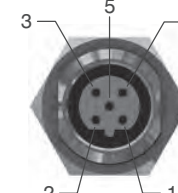
Ordering code

5312B.M05.00

Network straight connector: for BUS PROFIBUS DP.



Upper view Slave connector



PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

M12D 4P male Plug

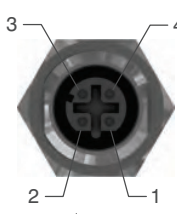
Ordering code

5312D.M04.00

Network straight connector: for EtherCAT®, PROFINET IO RT/IRT, EtherNet/IP.



Upper view Slave connector



PIN	SIGNAL	DESCRIPTION
1	TX+	Ethernet Transmit High
2	RX+	Ethernet Receive High
3	TX-	Ethernet Transmit Low
4	RX-	Ethernet Receive Low

M12 5P male Plug

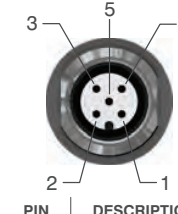
Ordering code

5312A.M05.00

Input straight connector.



Upper view Slave connector



PIN	DESCRIPTION
1	+24 VDC
2	INPUT B
3	GND
4	INPUT A
5	NC

M12 Plug

Ordering code

5300.T12



M8 Plug

Ordering code

5300.T08



Trademarks: EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

2

General :

Using the 2530.03.25P 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.

Ordering code

2530.08F



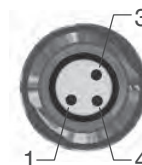
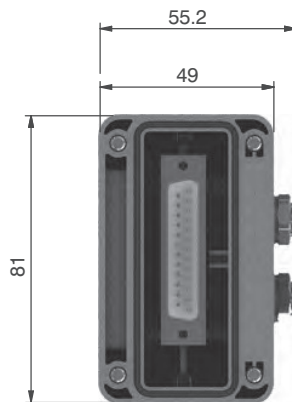
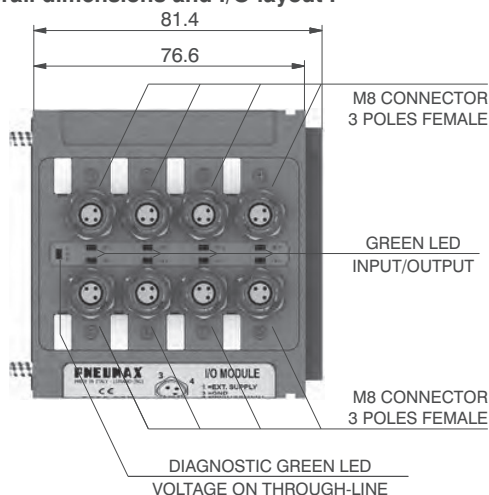
Please note: If the manifold is connected by a multi-core connection, each connection can be used as either an input or an output, while if the manifold is connected to a serial node the connections can only be used as an output.

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 :



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 2530.02.25P or 2530.12.25P)

Pin 36-37 of the 37 pin multi-pole connector (code 2530.02.37P or 2530.12.37P)

Output features:

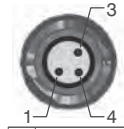
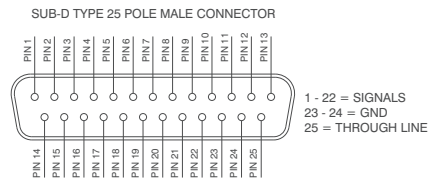
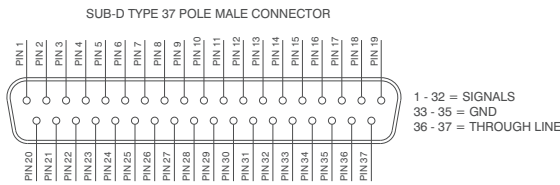


Attention: The output connections are not protected against short-circuit. Please pay attention when wiring (avoid Pin 4 being connected to Pin 3 or Pin 1).

General characteristics	Model	2530.08F
	Case	Reinforced technopolymer
	I/O Connector	M8 connector 3 poles female (IEC 60947-5-2)
	PIN1 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:

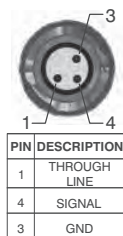
- A) Control via multi-pole connection
- B) Control via fieldbus

A) Control via multi-pole :

M8 connector used as Input:



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



In order to use the I/O module, the correct right hand endplate with 25 pole female outlet connector must be used.
(Code 2530.03.25P).

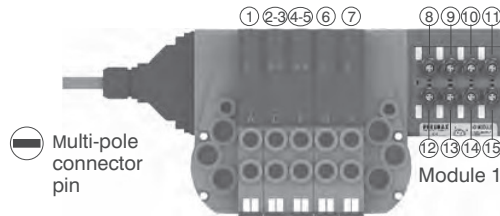


M8 connector used as Output:

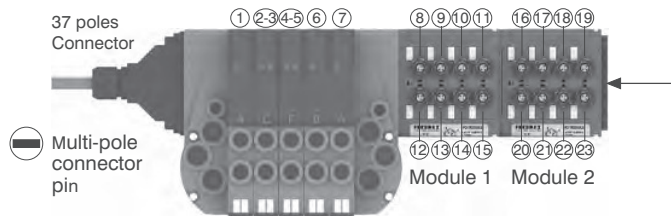
Output voltage will be the same as is applied at the multi-pole connector pin.
The maximum output current depends upon the power unit used, but we recommend no more than 250mA.



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.

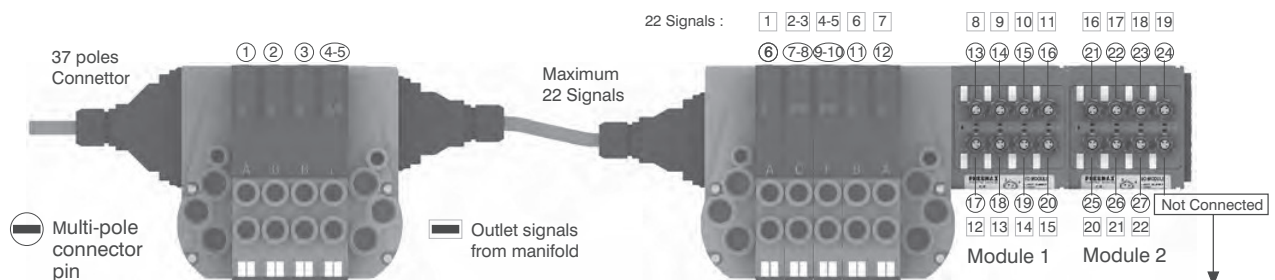


Attention: Only one more I/O module can be added.



Attention: No more additions are possible

Attention : Optyma 32-F 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.

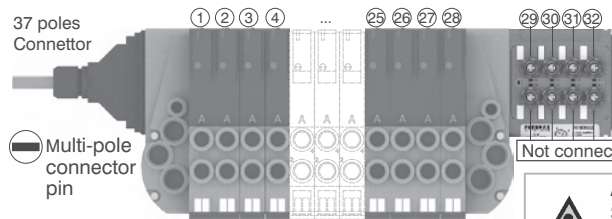
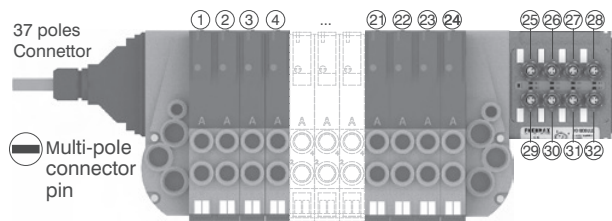


Attention: Signal Not connected
GND Not connected
Through line Connected

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. 22 17



Please note: Optyma 32-F 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.



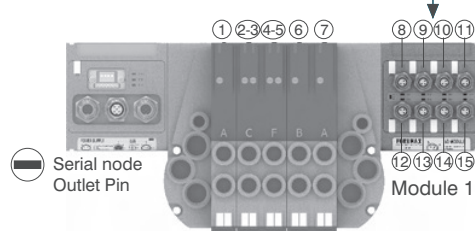
Attention:
Signal Not connected
GND Connected
Through line Connected

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.

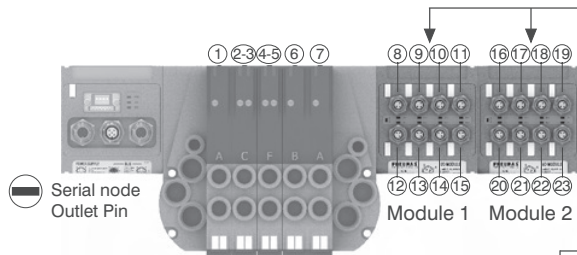
The maximum output current for each output is 100mA. The correspondence between control byte and each single output depends on how many electrical signals are used by the manifold and by the relative position of the I/O module.

PIN	DESCRIPTION
1	NOT CONNECTED
4	SIGNAL
3	GND



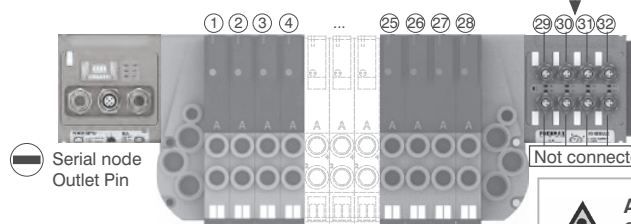
Attention:
Output only

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



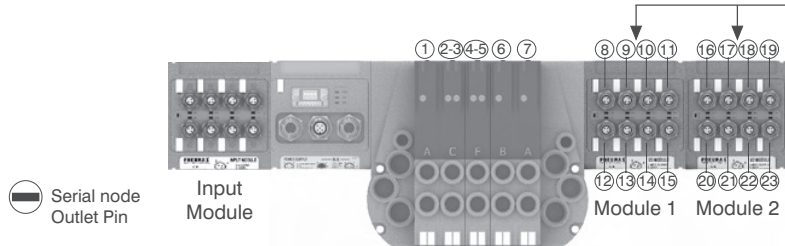
Attention:
Output only

Attention:
No more additions are possible



Attention:
Signal Not connected
GND Connected

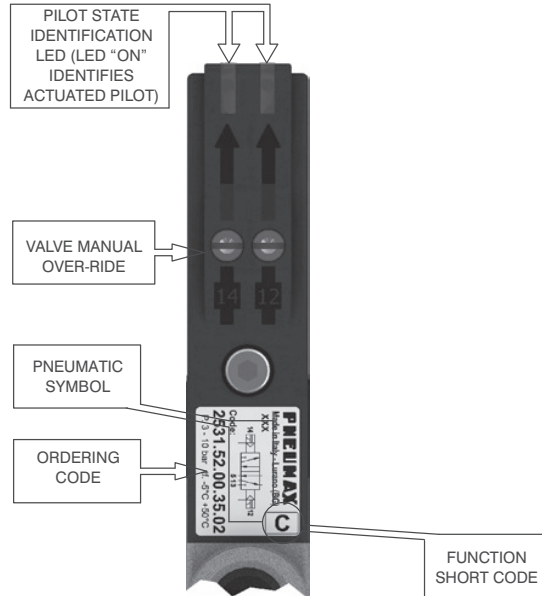
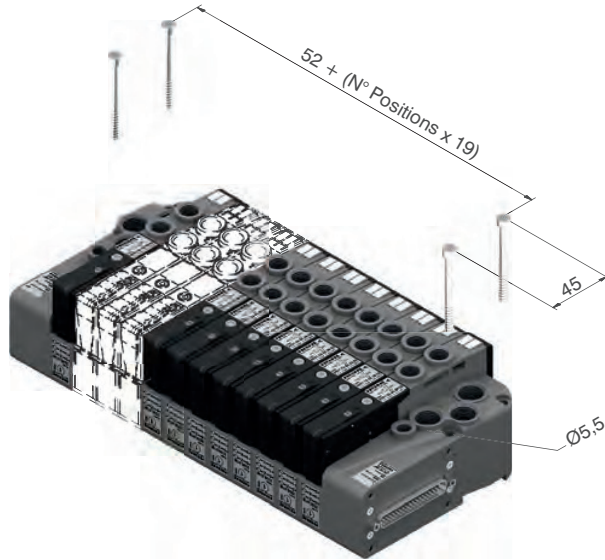
Please note: I/O modules don't allow to connect any additional valves manifold after them.



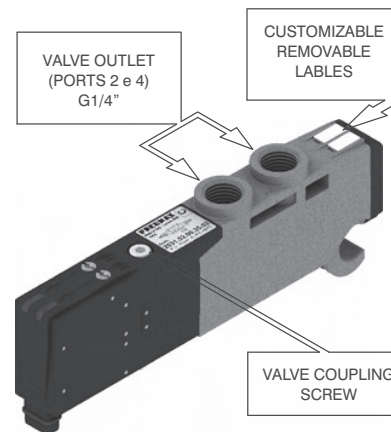
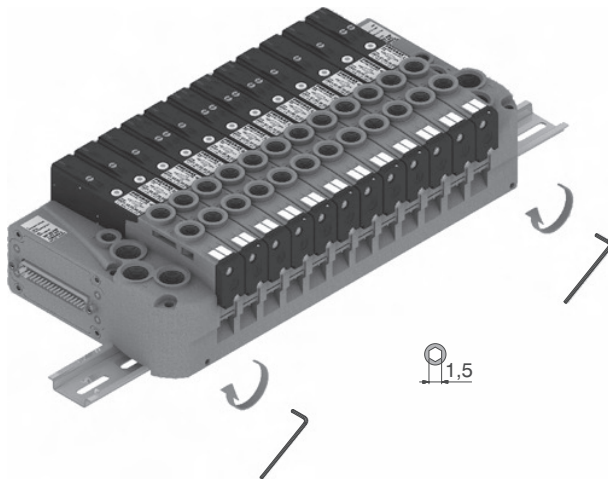
Attention:
Output only

Attention:
No more additions are possible

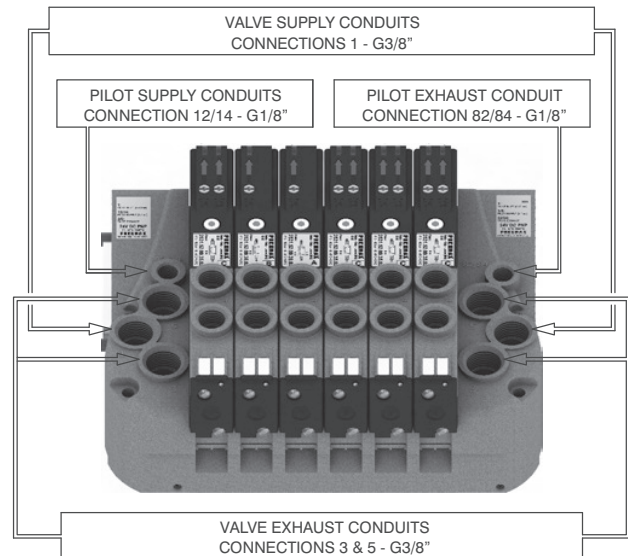
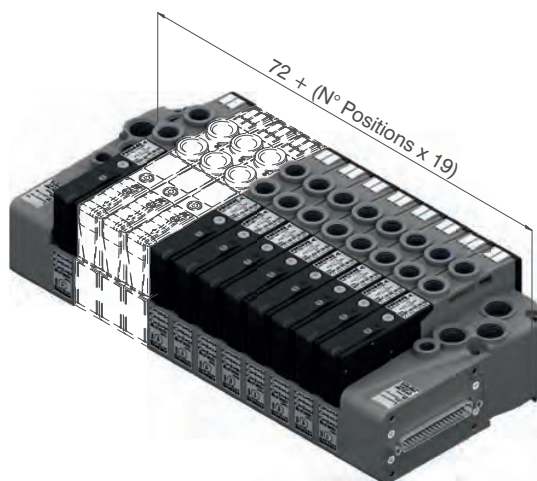
From the top



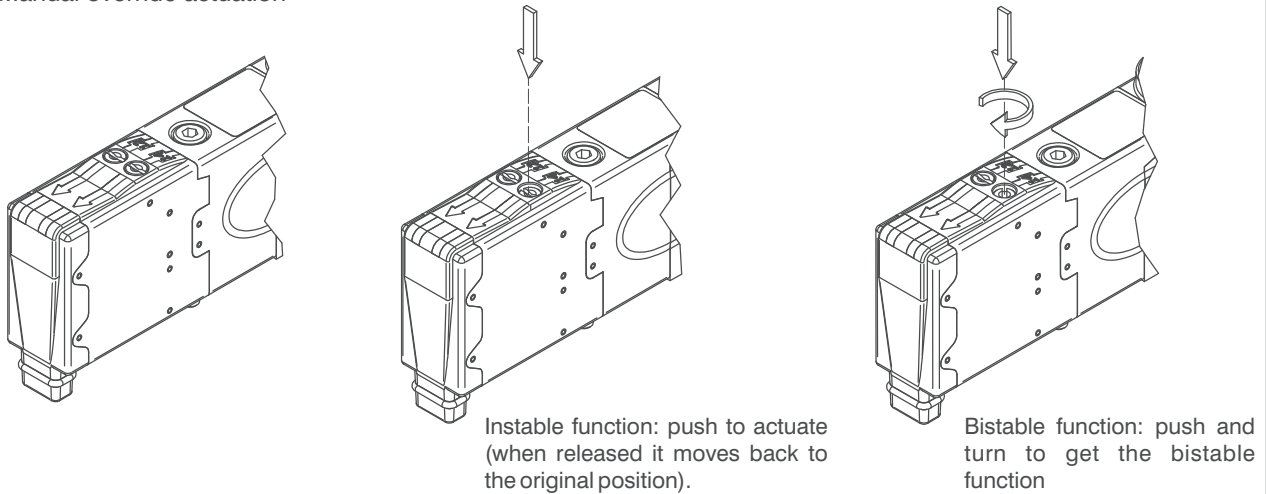
DIN rail fixing



Maximum possible size according to valves seats

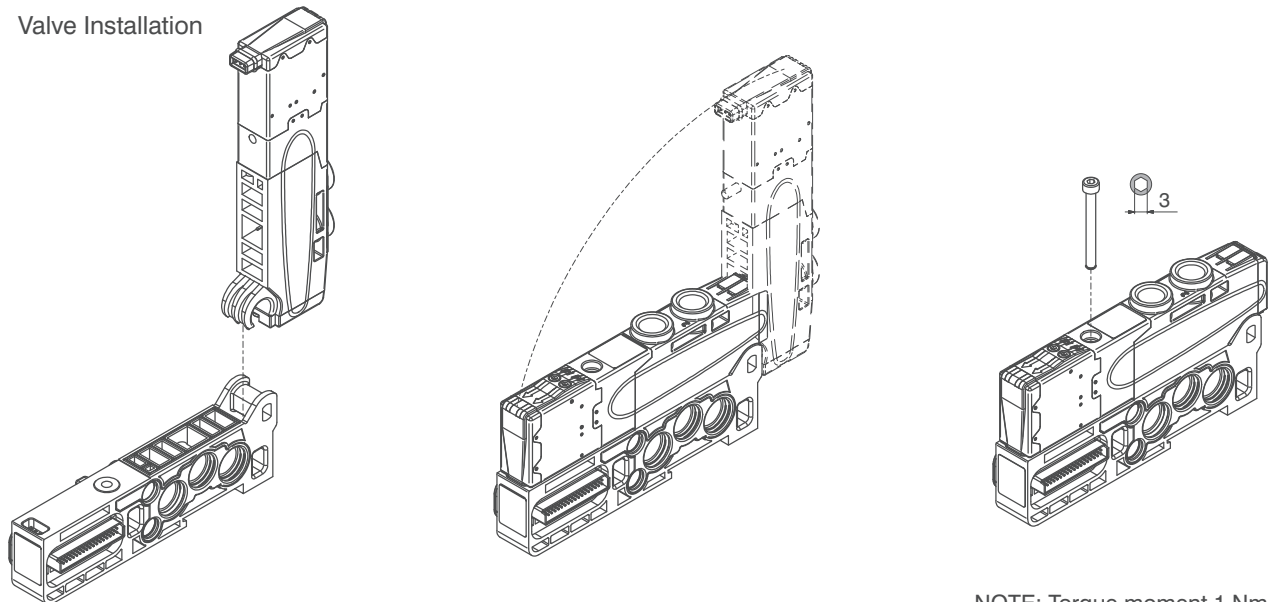


Manual override actuation



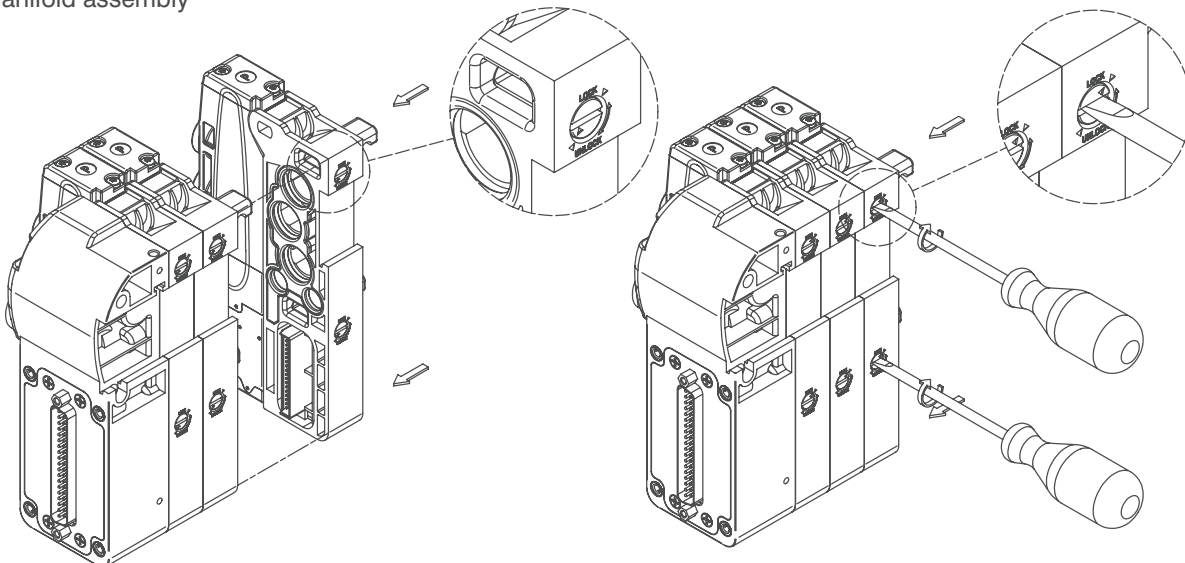
NOTE : It is strongly suggested to replace the original position after using

Valve Installation



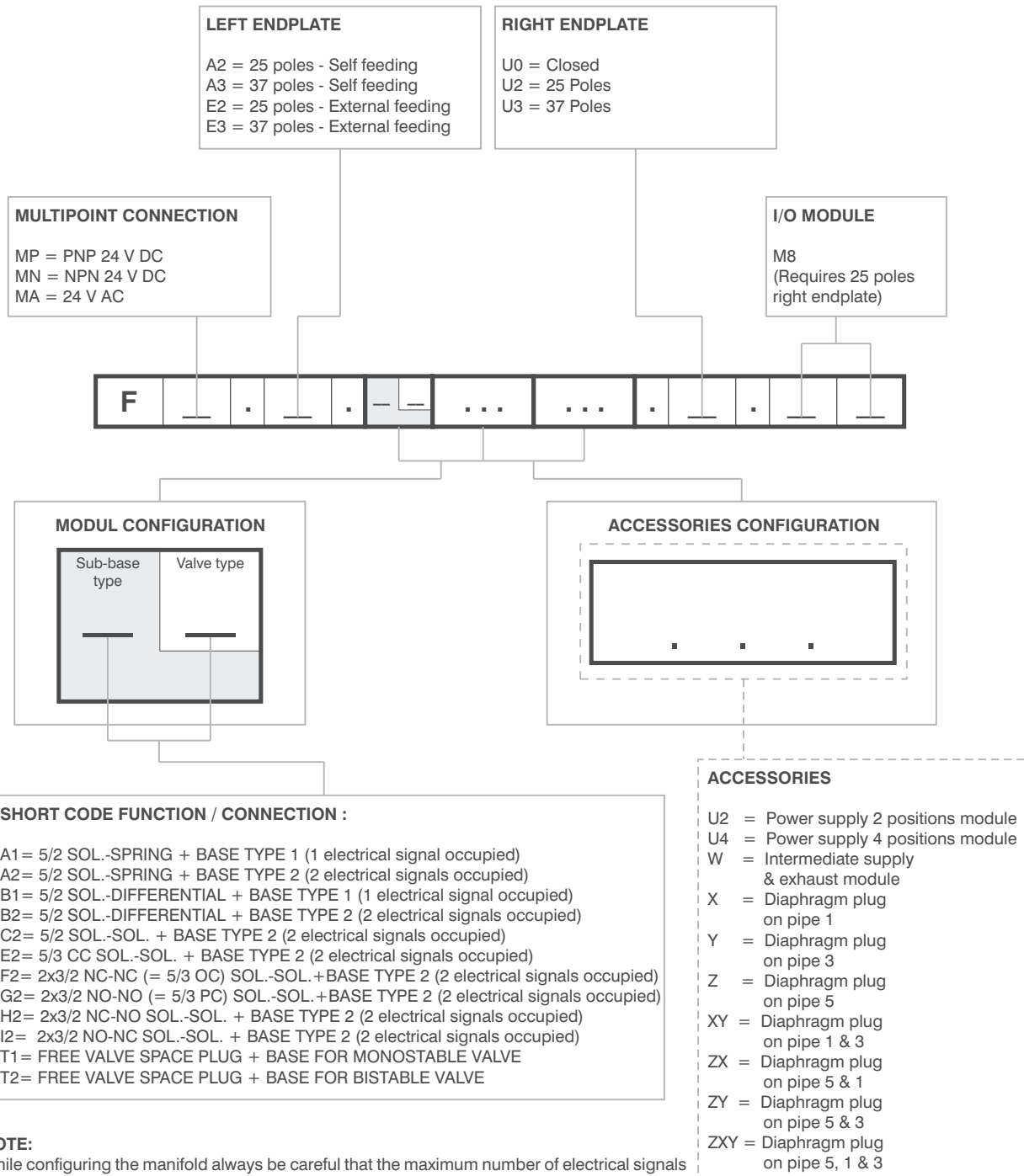
NOTE: Torque moment 1 Nm

Manifold assembly





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.



General:

CANopen® module is directly integrated on Optyima-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyima-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).

The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.

CANopen® module recognizes automatically the presence of the Input modules on power on.

Regardless of the number of Input modules connected, the manageable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus CANopen® is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to CiA Draft Recommendation 303-1 (V. 1.3 : 30 December 2004).

Transmission speed can be set by 3 dip-switches.

The node address can be set by 6 dip-switches using BCD numeration.

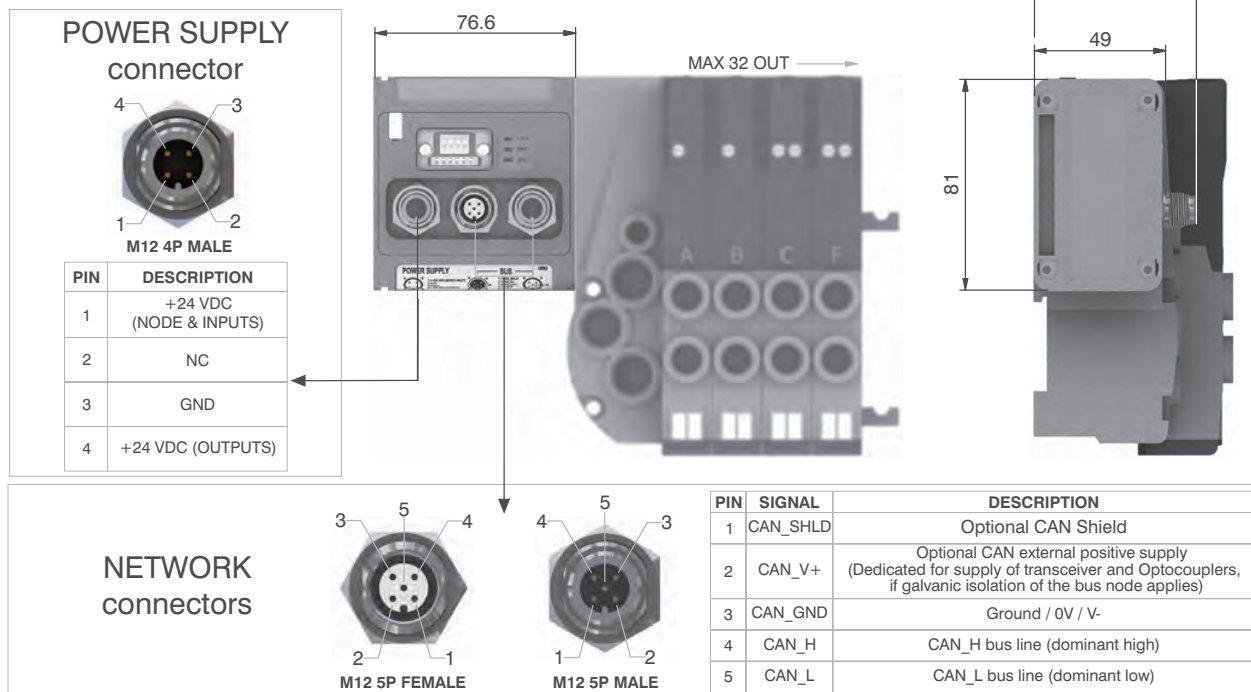
The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5525.32F



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5525.32F
	Specifications	CiA Draft Standard Proposal 301 V 4.10 (15 August 2006)
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P connectors male-female type A (IEC 60947-5-2)
	Baud rate	10 - 20 - 50 - 125 - 250 - 500 - 800 - 1000 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m a 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C



General:

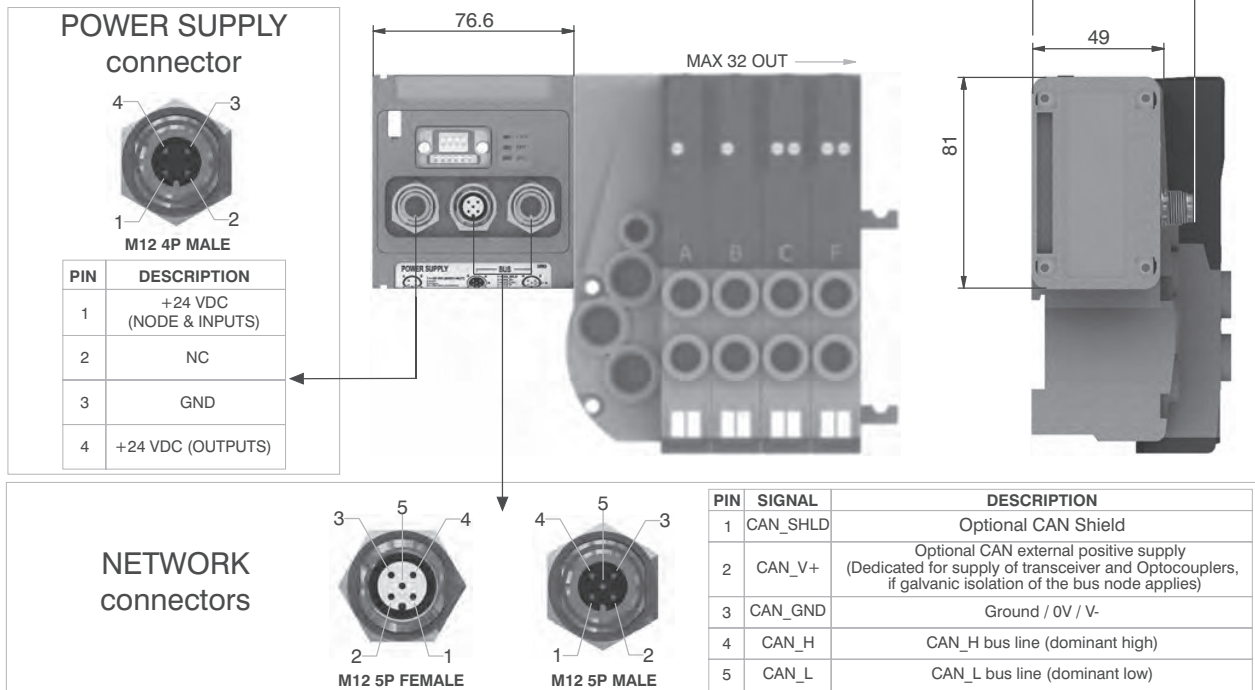
DeviceNet module is directly integrated on Optyma-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.
 DeviceNet module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the manageable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus DeviceNet is possible via 2 M12 5P male - female circular connectors; these two are connected in parallel and according to DeviceNet Specifications Volume I, release 2.0.
 Transmission speed can be set by 3 dip-switches.
 The node address can be set by 6 dip-switches using BCD numeration.
 The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5425.32F



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5425.32F
	Specifications	DeviceNet Specifications Volume I, release 2.0.
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	30 mA
	Power supply diagnosis	Green led PWR
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P connectors male-female type A (IEC 60947-5-2)
	Baud rate	125 - 250 - 500 Kbit/s
	Addresses, possible numbers	From 1 to 63
	Max nodes in net	64 (slave + master)
	Bus maximum recommended length	100 m at 500 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C

General:

PROFIBUS DP module is directly integrated on Optyma-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyma-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code). The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.

PROFIBUS DP module recognizes automatically the presence of the Input modules on power on. Regardless of the number of Input modules connected, the manageable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus PROFIBUS DP is possible via 2 M12 type B 5P male - female circular connectors; these two are connected in parallel and according to PROFIBUS Interconnection Technology (Version 1.1 : August 2001).

The node address can be set using BCD numeration: 4 dip-switches for the units and 4 dip-switches for the tens.

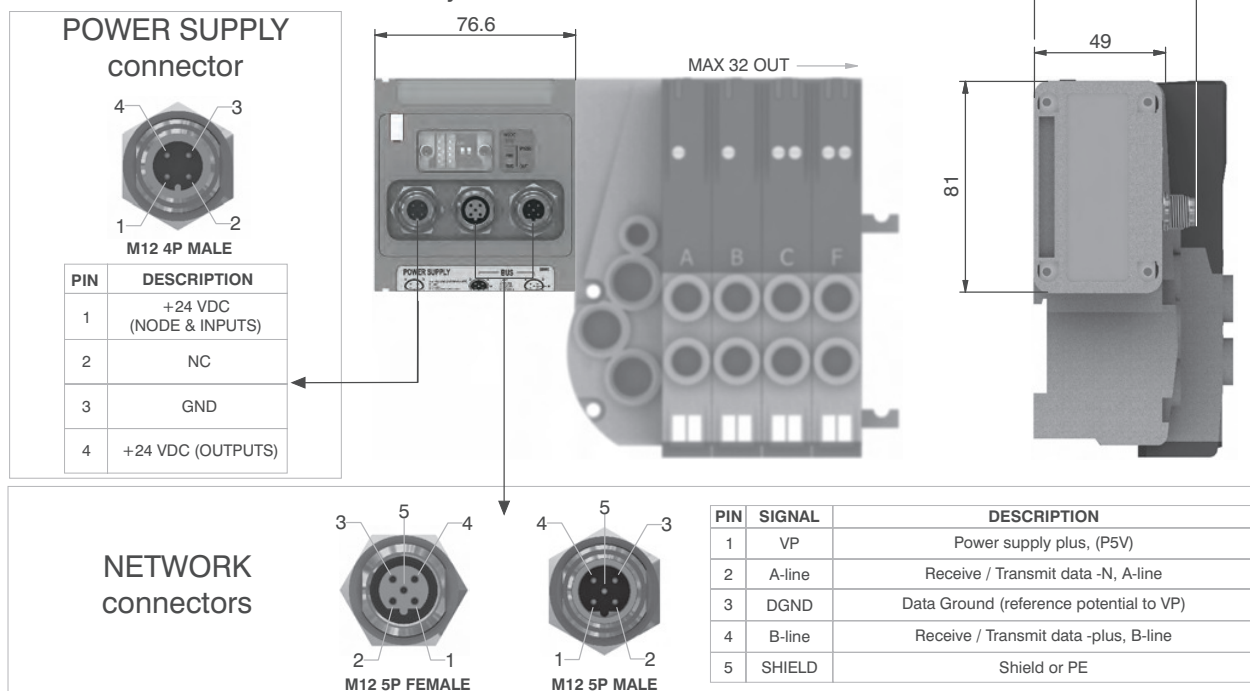
The module includes an internal terminating resistance that can be activated by 2 dip-switch.

Ordering code

5325.32F



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5325.32F
	Specifications	PROFIBUS DP
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	50 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 5P male-female connectors type B
	Baud rate	9,6 - 19,2 - 93,75 - 187,5 - 500 - 1500 - 3000 - 6000 - 12000 Kbit/s
	Addresses, possible numbers	From 1 to 99
	Max nodes in net	100 (slave + master)
	Bus maximum recommended length	100 m at 12 Mbit/s - 1200 m at 9,6 Kbit/s
	Bus diagnosis	Green led + Red led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From -0° to +50° C



General:

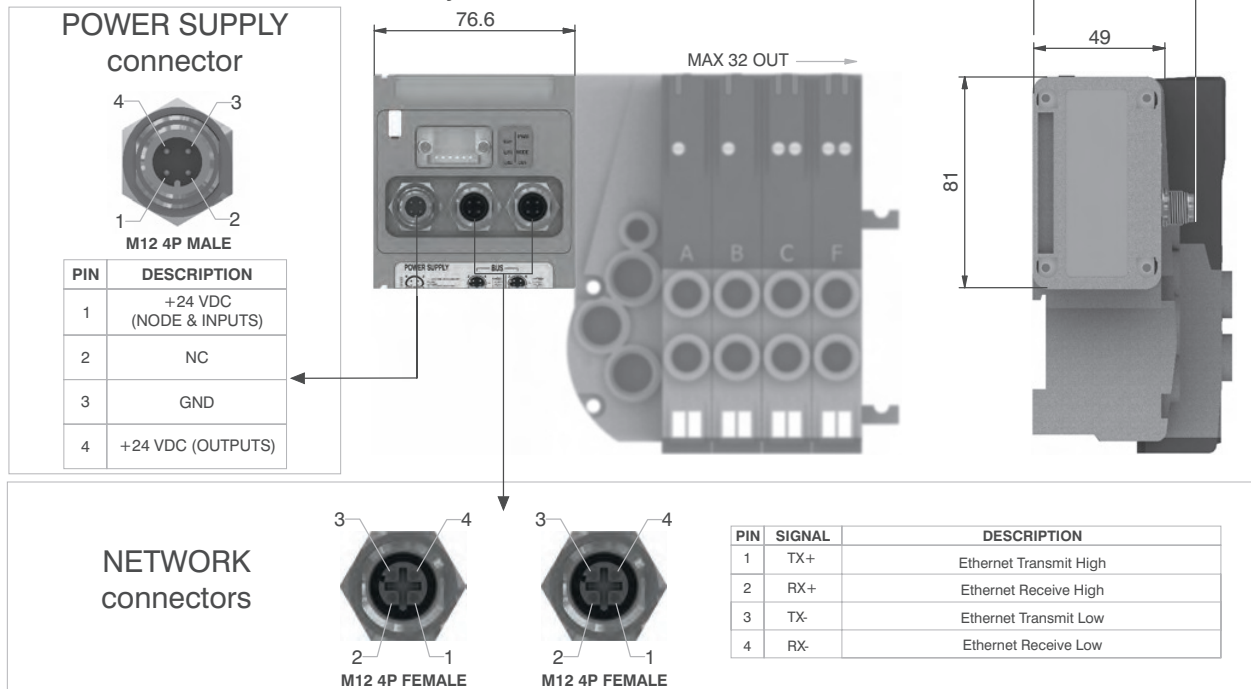
EtherCAT® module is directly integrated on Optyma-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.
 EtherCAT® module recognizes automatically the presence of the Input modules on power on.
 Regardless of the number of Input modules connected, the managable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus EtherCAT® is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel. They are according to EtherCAT® Specifications ETG.1000 series.
 By specifications, node ID should be automatically set during network configuration, but it is also possible to set the address via 6 dip-switches on the module, using BCD numeration.

Ordering code

5625.32F



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5625.32F
	Specifications	EtherCAT® Specifications ETG.1000 series
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without inputs)	310 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for output	100 mA
	Max output simultaneously actuated	32
	N.max. uscite azionabili contemp.	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possibile numbers	From 0 to 65535 (from 1 to 63 with dip-switches)
	Max nodes in net	65536 (master + slaves)
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 status green led + 2 activity green led
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

General:

PROFINET IO RT/IRT module is directly integrated on Optyma-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.

Optyma-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).

The node can be easily installed also on solenoid valves manifold already mounted on equipment.

Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.

The PROFINET IO RT/IRT module, regardless the number of Input module connected, reports to have connected 8 Input modules.

Regardless of the number of Input modules connected, the manageable solenoid valves are 32.

Node power supply is made by a M12 4P male circular connector.

The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.

Connection to Bus PROFINET IO RT/IRT is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.

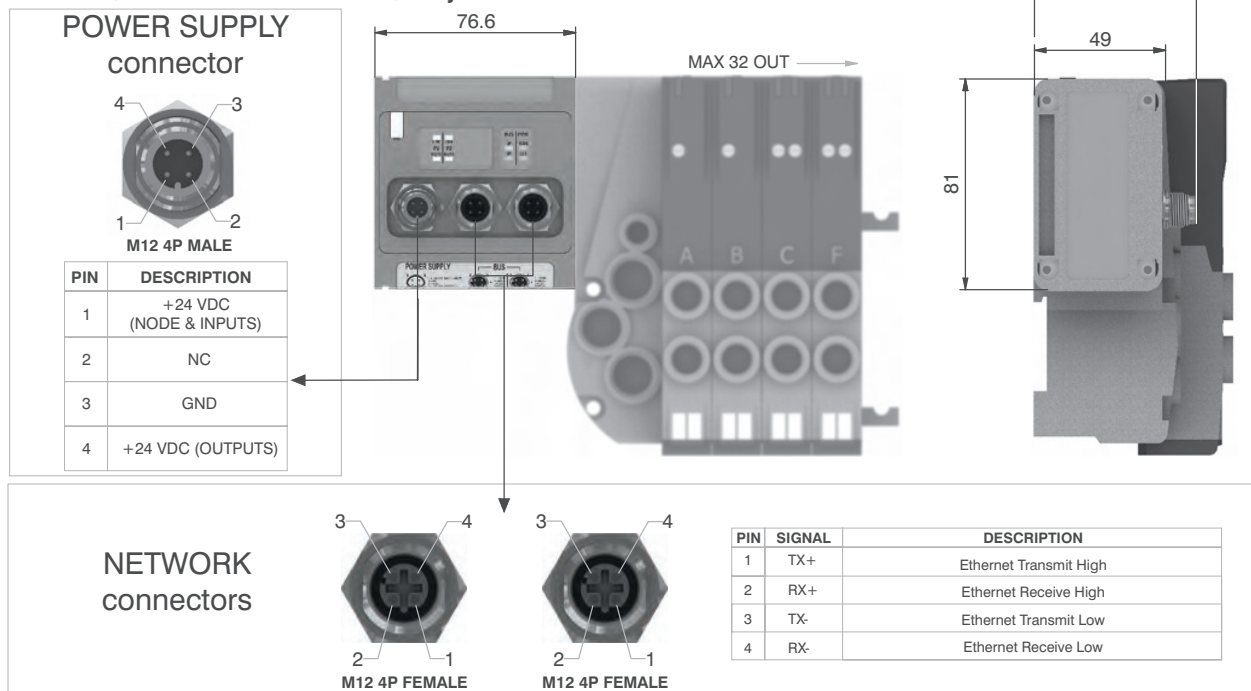
The node address is assigned during configuration.

Ordering code

5725.32F.PN



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5725.32F.PN
	Specifications	PROFINET IO RT/IRT
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP40 when assembled
	Temperature range	From 0° to +50° C



General:

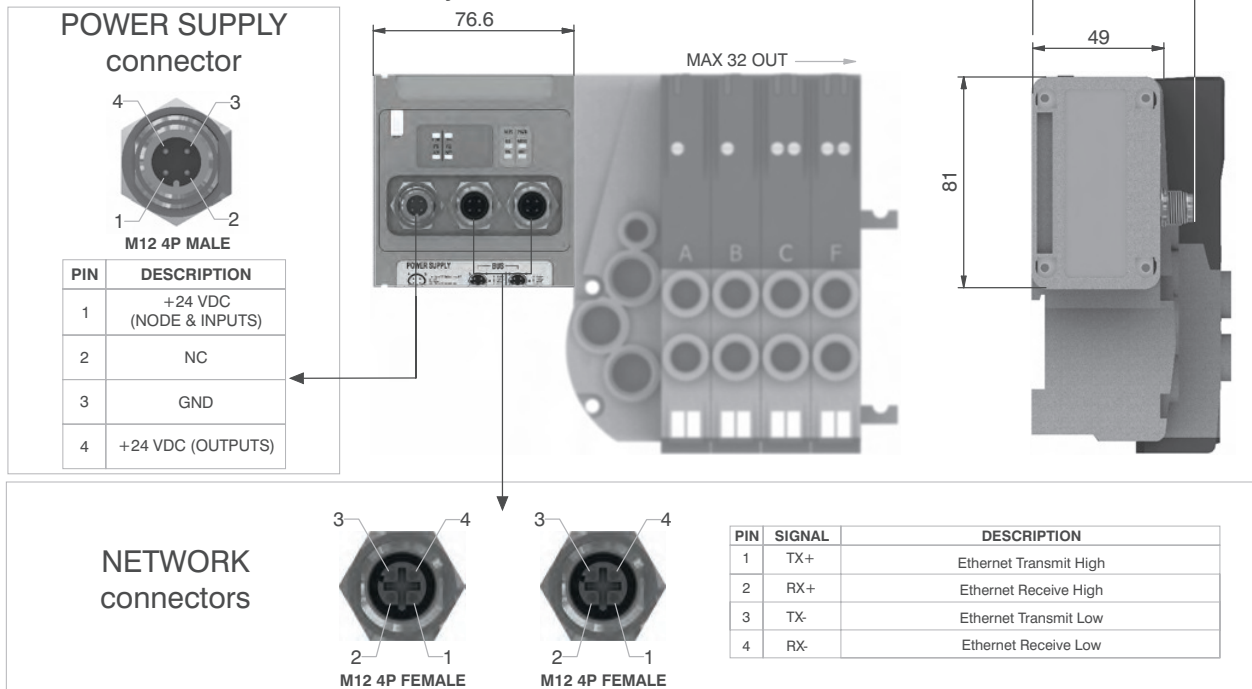
EtherNet/IP module is directly integrated on Optyma-F solenoid valves manifold via a 37 poles connector, normally used for multipolar cable connection.
 Optyma-F solenoid valves connected to node must be PNP equivalent (final 02 in ordering code).
 The node can be easily installed also on solenoid valves manifold already mounted on equipment.
 Module can manage up to 32 solenoid valves, and, in the same time, a max number of 4 Input modules 5225.08F.
 The EtherNet/IP module, regardless the number of Input module connected, reports to have connected 8 Input modules.
 Regardless of the number of Input modules connected, the managable solenoid valves are 32.
 Node power supply is made by a M12 4P male circular connector.
 The separation between node 24 VDC Power supply and outputs 24 VDC allows to switch off the outputs maintaining powered the node and inputs, if present.
 Connection to Bus EtherNet/IP is possible via 2 M12 4P type D female circular connectors. These two connectors lead the signal to two different communication ports, so they are not connected in parallel.
 The node address is assigned during configuration.

Ordering code

5725.32F.EI



Scheme / Overall dimensions and I/O layout :



Technical characteristics

	Model	5725.32F.EI
	Specifications	The EtherNet/IP Specification
	Case	Reinforced technopolymer
Power supply	Power supply connection	M12 4P male connector (IEC 60947-5-2)
	Power supply voltage	+24 VDC +/- 10%
	Node consumption (without outputs)	400 mA
	Power supply diagnosis	Green led PWR / Green led OUT
Outputs	PNP equivalent outputs	+24 VDC +/- 10%
	Maximum current for each output	100 mA
	Maximum output number	32
	Max output simultaneously actuated	32
Network	Network connectors	2 M12 4P female connectors type D (IEC 61076-2-101)
	Baud rate	100 Mbit/s
	Addresses, possible numbers	As an IP address
	Max nodes in net	As an Ethernet Network
	Maximum distance between 2 nodes	100 m
	Bus diagnosis	1 green and 1 red LED for status + 4 LEDs for link & activity
	Configuration file	Available from our web site: http://www.pneumaxspa.com
	IP protection grade	IP40 when assembled
	Temperature range	From 0° to +50° C



General:

Modules have 8 connectors M8 3P female.

The Inputs are PNP equivalent 24 VDC ±10%.

To each connector it is possible to plug both 2 wires Inputs (switches, magnetic switches pressure switches, etc) or 3 wires Inputs (proximity, photocells, electronic sensors, etc).

The maximum current available for all 8 Inputs is 200 mA.

Each module includes a 200 mA resettable fuse. If a short circuit or an overcharge (overall current >200mA) occur the safety device acts cutting the 24 VDC power supply to all M8 connectors on the module and switching off the green led PWR. Any other Input module connected to the node will remain powered and will function correctly.

Once the cause of the fault disappears the green led PWR light up indicating the ON state and the node will re-start to operate.

The maximum number of Input modules supported is 4.

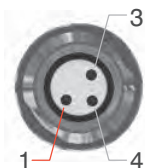
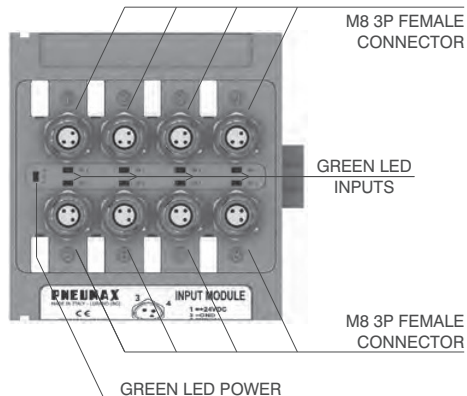
Ordering code

5225.08F



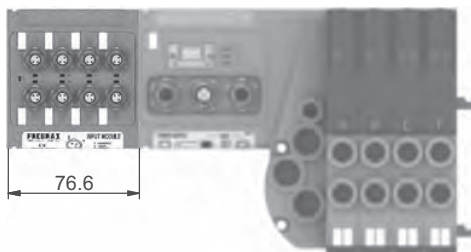
2

Scheme / Overall dimensions and I/O layout :

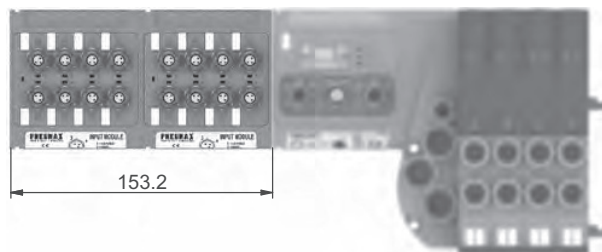


PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

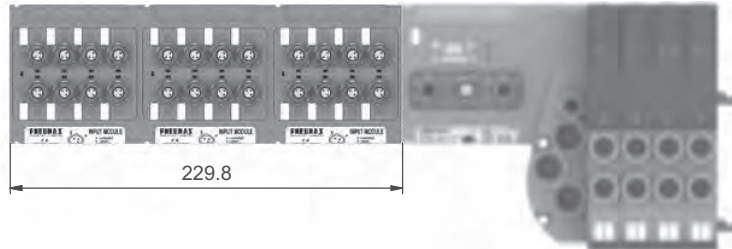
Module 1



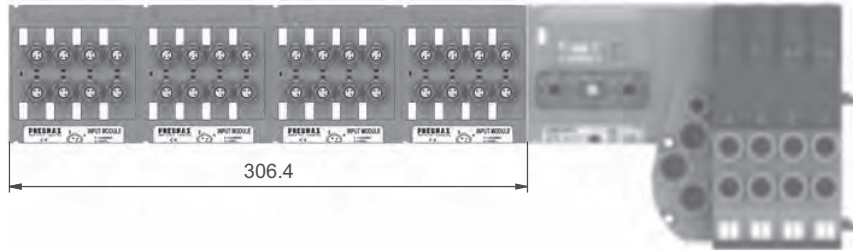
Module 2 Module 1



Module 3 Module 2 Module 1



Module 4 Module 3 Module 2 Module 1





General :

Modules are fitted with SUB-D 25 pin female connector.

The INPUTS are PNP equivalent 24VDC \pm 10%.

To the connector it is possible to connect both 2 wires INPUTS (switches, magnetic switches pressure switches etc) or 3 wires (proximity, fotocellule, electronic end of stroke sensors etc).

The maximum current available for all 16 INPUTS is 750 mA.

Each module includes a 750 mA self-mending fuse. Should a short circuit or a overcharge (overall current >750mA) occur the safety device intervenes cutting the 24VDC power supply to all pins and switching off the green led PWR. Any other INPUTS module connected to the node will remain powered and will function correctly.

Once the cause of the fault is removed the green led light up indicating the ON state and the node will re-start to operate. This 16INPUTS module is counted as 2 8 INPUTS modules.

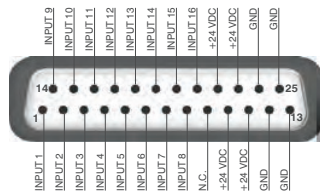
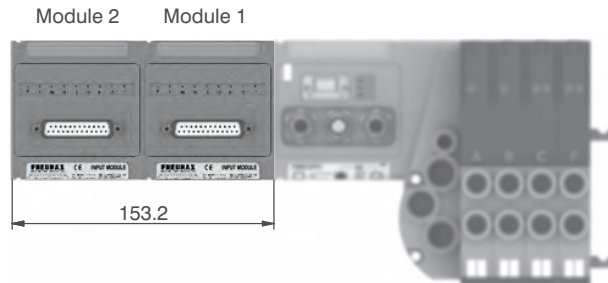
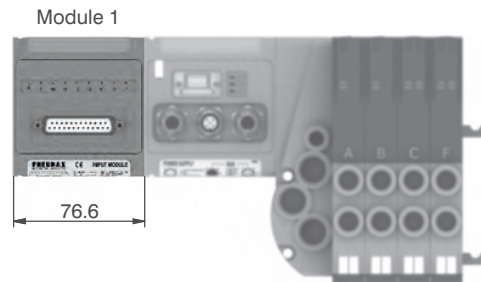
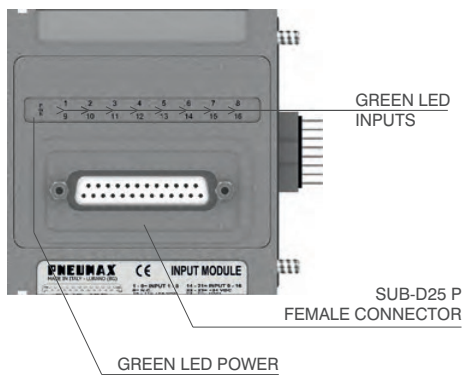
The Maximum number of 8 INPUTS modules supported is 4.

Ordering code

5225.25F



Scheme / Overall dimensions and I/O layout :





2

General :

This module is fitted with two M8 3 pin female connectors.

With this module is possible to read two analogue inputs (voltage or current).
The inputs are sampled at 12 bit.

For practicality the sampled value is transmitted with 16 bit, of which the four less significant are fixed at zero.

Available models:

- 5225.2T.00F (voltage signal 0 - 10V);
- 5225.2T.01F (voltage signal 0 - 5V);
- 5225.2C.00F (current signal 4 - 20mA);
- 5225.2C.01F (current signal 0 - 20mA).

Each module includes a 300 mA self-mending fuse. Should a short circuit or a overcharge (overall current >300mA) occur the safety device intervenes cutting the 24VDC power supply to all M8 connectors on the module and switching off the green LED PWR. Any other Input module connected to the node will remain powered and will function correctly.
Once the cause of the fault is removed the green LED lights up indicating the ON state and the node will re-start to operate.

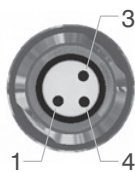
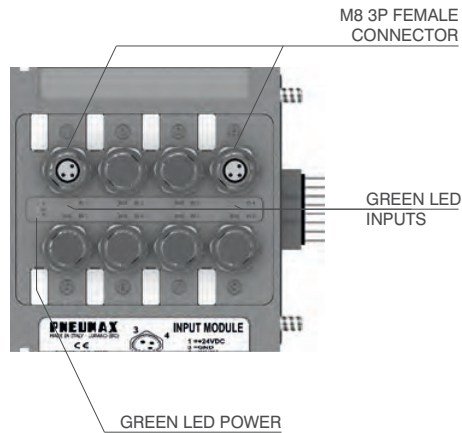
This module is counted as four 8 digital INPUT modules.

Ordering code

5225.2 _ . _ _ F

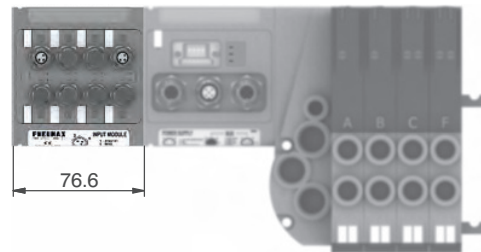


Scheme / Overall dimensions and I/O layout :

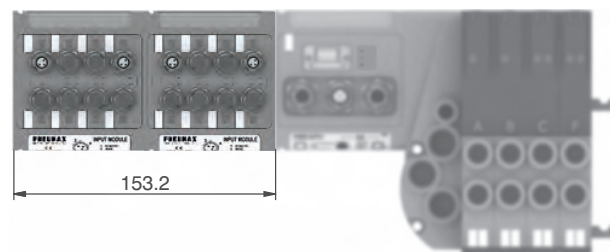


PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

Module 1



Module 2 Module 1






2

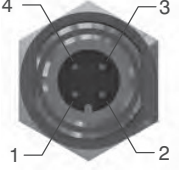
M12A 4P female Socket

Ordering code
5312A.F04.00

Power supply straight connector.



Upper view Slave connector




PIN	DESCRIPTION
1	+24 VDC Node
2	
3	0 V
4	+24 VDC Output


M8 3P male Plug

Ordering code
5308A.M03.00

Input straight connector.



Upper view Slave connector




PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

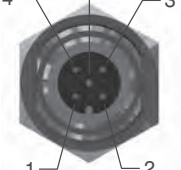
M12A 5P female Socket

Ordering code
5312A.F05.00

Network straight connector: for Bus CANOpen®, DeviceNet.



Upper view Slave connector




PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

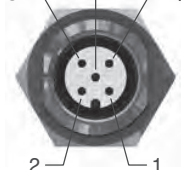
M12A 5P male Plug

Ordering code
5312A.M05.00

Network straight connector: for BUS CANOpen®, DeviceNet.



Upper view Slave connector




PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

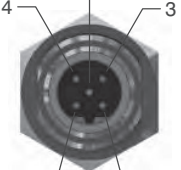
M12B 5P female Plug

Ordering code
5312B.F05.00

Network straight connector: for Bus PROFIBUS DP.



Upper view Slave connector




PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

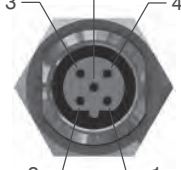
M12B 5P male Plug

Ordering code
5312B.M05.00

Network straight connector: for Bus PROFIBUS DP.



Upper view Slave connector




PIN	DESCRIPTION
1	Power Supply
2	A-line
3	DGND
4	B-line
5	SHIELD

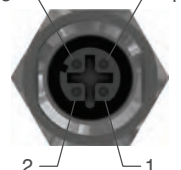
M12D 4P male Plug

Ordering code
5312D.M04.00

Network straight connector: for EtherCAT®, PROFINET IO RT/IRT, EtherNet/IP.



Upper view Slave connector



PIN	SIGNAL	DESCRIPTION
1	TX+	Ethernet Transmit High
2	RX+	Ethernet Receive High
3	TX-	Ethernet Transmit Low
4	RX-	Ethernet Receive Low

M12 Plug

Ordering code
5300.T12



M8 Plug

Ordering code
5300.T08



Trademarks: EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.