2

General characteristics

With the introduction of the "T" configuration of solenoid valves with integrated pneumatic connections fitted directly on the sub base the 2500 series (called OPTYMA) is now richer than ever.
Many technical features make the new product interesting:
- Flow rate of 1000 Nl/min
- Low consumption coils placed all in one side of the valve
- Quick mounting of the valve to the base using just one screw
- Possibility to use different pressures along the manifold (including vacuum)
- Possibility to replace the valve without the need to disconnect the connections
- IP65 environmental protection
- Electrical connection directly integrated into the base, 32 electrical signals available (can be used to build up a manifold of 32 monostable valves, 16 bistable valves or any combination within that limit).
The electrical connection is made via 37 pin SUB-D connector.
Possibility to integrate with Field Bus modules (all the most common protocols will be available).
Possibility to connect input modules (even on the base that does not have the Field Bus module.
Large use of technopolymer material reduces the overall weight of the manifold.

Main characteristics

Integrated and optimized electrical connection system
IP65 protection degree
Only one 19mm size
Electrical line connections on one side
Monostable and bistable solenoid valves with the same size dimensions
Easy and fast manifold assembly - tie rod system to hold the sub bases together
All pneumatic connections (push-in) on the same side of the manifold

Construction characteristics

Body	Technopolymer
Operators	Technopolymer
Spools	Nikel plated steel / Technopolymer
Spacers	Technopolymer
Seals	NBR
Piston seals	NBR
Springs	AISI 302 stainless steel
Pistons	Technopolymer

Functions

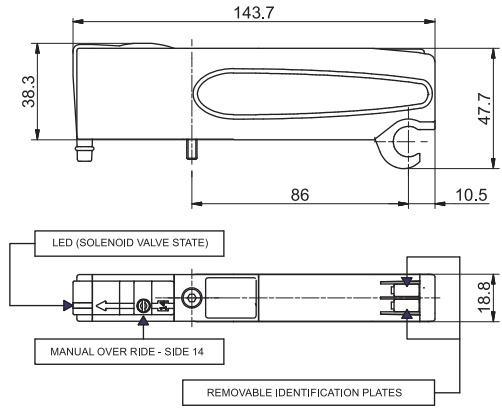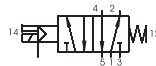| |
|---|
| 5/2 MONOST. SOL. SPRING |
| 5/2 MONOST. SOL. DIFFERENTIAL |
| 5/2 BISTABLE SOL. SOL. |
| 5/3 CC SOL. SOL. |
| 2x3/2 NC-NC (= 5/3 OC) SOL. SOL. |
| 2x3/2 NO-NO (= 5/3 PC) SOL. SOL. |
| 2x3/2 NC-NO SOL. SOL. |

Technical characteristics

Voltage	24 VDC ±10% PNP
Pilot consuption	1,2 Watt
Valve working pressure [1]	from vacuum to 10 bar max.
Pilot working pressure [12-14]	From 3 to 7 bar max.
Operating temperature	-5°C+50°C
Protection degree	Ip65
Life (standard operating conditions)	50.000.000
Fluid	Filtered and lubricated air or not
	(if lubricated air, the lubrication must be continuous)

2

Solenoid - Spring

Ordering code
2541.52.00.39.V

V	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN
	05 = 24 VAC

Weight gr. 129
*Responce time according to ISO 12238

LED (SOLENOID VALVE STATE)

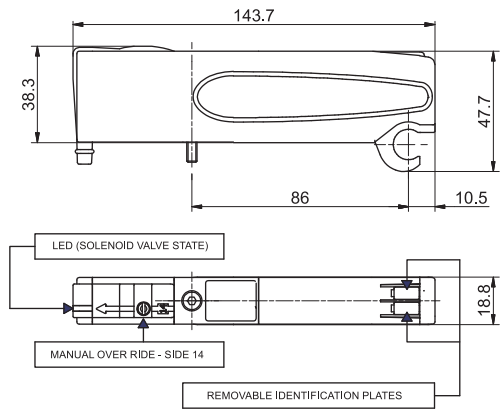MANUAL OVER RIDE - SIDE 14

REMOVABLE IDENTIFICATION PLATES

SHORT FUNCTION CODE "A"

Operational characteristic	Fluid	Pressure range (bar)	Pressure range (bar) pilots 12-14	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	*Activation time (ms)	*Deactivation time (ms)
	Filtered and lubricated air or not	From vacuum to 10	3 - 7 bar	Min. -5°C	Max. +50°C	750 Nl/min	T.R.E. 14 ms	40

Solenoid - Differential

Ordering code
2541.52.00.36.V

V	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN
	05 = 24 VAC

Weight gr. 126
*Responce time according to ISO 12238

LED (SOLENOID VALVE STATE)

MANUAL OVER RIDE - SIDE 14
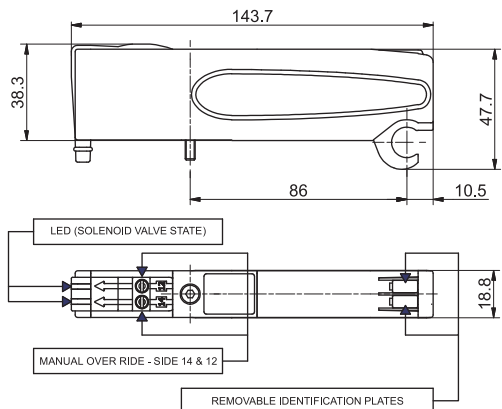
REMOVABLE IDENTIFICATION PLATES

SHORT FUNCTION CODE "B"

Operational characteristic	Fluid	Pressure range (bar)	Pressure range (bar) pilots 12-14	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	*Activation time (ms)	*Deactivation time (ms)
	Filtered and lubricated air or not	From vacuum to 10	3 - 7 bar	Min. -5°C	Max. +50°C	750 Nl/min	T.R.E. 20 ms	29

Solenoid - Solenoid

Ordering code
2541.52.00.35.V

V	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN
	05 = 24 VAC

Weight gr. 134
*Responce time according to ISO 12238

LED (SOLENOID VALVE STATE)

MANUAL OVER RIDE - SIDE 14 & 12

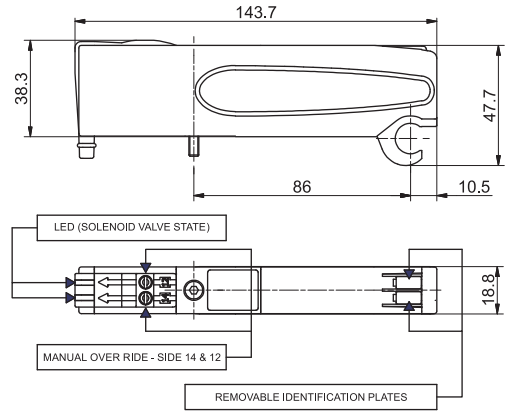REMOVABLE IDENTIFICATION PLATES

SHORT FUNCTION CODE "C"

Operational characteristic	Fluid	Pressure range (bar)	Pressure range (bar) pilots 12-14	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	*Activation time (ms)	*Deactivation time (ms)
	Filtered and lubricated air or not	From vacuum to 10	3 - 7 bar	Min. -5°C	Max. +50°C	750 Nl/min	T.R.E. 10 ms	14

Solenoid - Solenoid - (5/3 Closed centres)

Ordering code

2541.53.31.35.Ⓥ

VOLTAGE
Ⓥ 02 = 24 VDC PNP
12 = 24 VDC NPN
05 = 24 VAC

Weight gr. 132
*Responce time according to ISO 12238

LED (SOLENOID VALVE STATE)

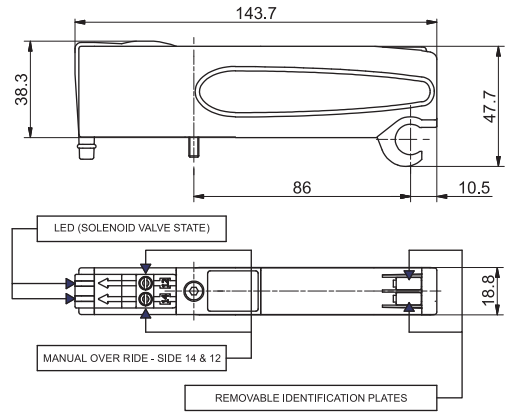MANUAL OVER RIDE - SIDE 14 & 12

REMOVABLE IDENTIFICATION PLATES
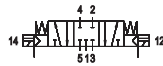
SHORT FUNCTION CODE "E"

Operational characteristic	Fluid	Pressure range (bar)	Pressure range (bar) pilots 12-14	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	*Activation time (ms)	*Deactivation time (ms)
	Filtered and lubricated air or not	From vacuum to 10	3 - 7 bar	Min. -5°C	Max. +50°C	600 Nl/min	T.R.E. 15 ms	20

Solenoid - Solenoid 2x3/2

Ordering code

2541.62.Ⓕ.35.Ⓥ

FUNCTION
44 = NC - NC (5/3 Open centres)
55 = NO - NO (5/3 Pressured centres)
Ⓕ 45 = NC - NO (Normally Closed - Normally Open)
54 = NO - NC (Normally Open - Normally Closed)
VOLTAGE
Ⓥ 02 = 24 VDC PNP
12 = 24 VDC NPN
05 = 24 VAC

Weight gr. 122 - *Responce time according to ISO 12238

LED (SOLENOID VALVE STATE)

MANUAL OVER RIDE - SIDE 14 & 12

REMOVABLE IDENTIFICATION PLATES

SHORT FUNCTION CODE:
NC-NC (5/3 Open centres) = "F"
NO-NC (5/3 Pressured centres) = "G"
NC-NO = "H"

Operational characteristic	Fluid	Pressure range (bar)	Pressure range (bar) pilots 12-14	Temperature °C		Flow rate at 6 bar with Δp=1 (Nl/min)	*Activation time (ms)	*Deactivation time (ms)
	Filtered and lubricated air or not	From vacuum to 10	3 - 7 bar	Min. -5°C	Max. +50°C	700 Nl/min	T.R.E. 15 ms	25

2

2

Right Endplates

Ordering code
2540.03.C

	CONNECTOR TYPE
C	00 = Exhaust electrical connection closed
	25P = 25 poles PNP
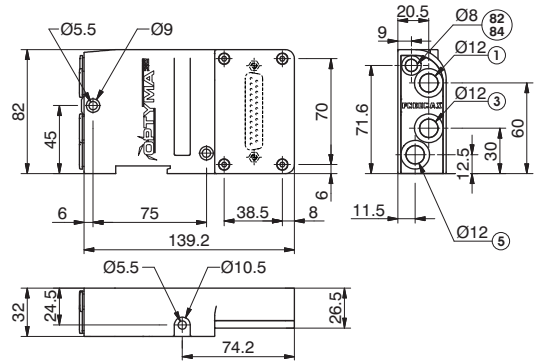
Weight gr. 274
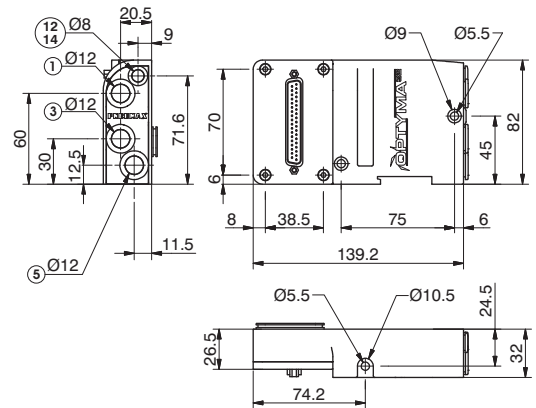
CONDUIT 82/84 = DO NOT PRESSURIZE, SOLENOID PILOTS EXHAUST

Operational characteristic	Fluid	Pressure range (bar)	Temperature °C
	Filtered and lubricated air or not	From vacuum to 10	-5 - +50

Left Endplates - External feeding base

Ordering code
2540.02.C

|	CONNECTOR TYPE
	37P = Connector 37 poles PNP
	25P = Connector 25 poles PNP
C	37N = Connector 37 poles NPN
	25N = Connector 25 poles NPN
	37A = Connector 37 poles AC
	25A = Connector 25 poles AC

Weight gr. 300
12/14 divided from conduct 1

Operational characteristic	Fluid	Pressure range (bar)	Pilot working pressure (bar)	Temperature °C
	Filtered and lubricated air or not	From vacuum to 10	3 - 7	-5 - +50

Left Endplates - Self-feeding Base

Ordering code
2540.12.C

|	CONNECTOR TYPE
	37P = Connector 37 poles PNP
	25P = Connector 25 poles PNP
C	37N = Connector 37 poles NPN
	25N = Connector 25 poles NPN
	37A = Connector 37 poles AC
	25A = Connector 25 poles AC
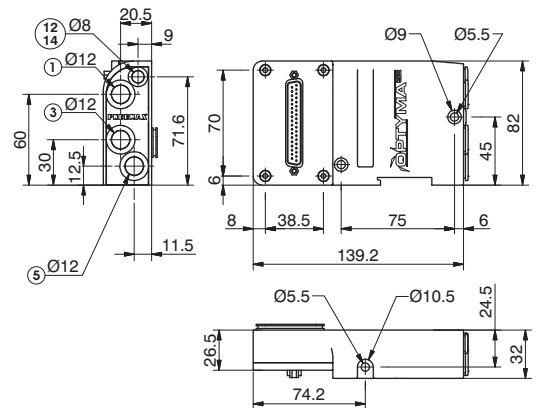
Weight gr. 300
12/14 connected with conduct 1

Operational characteristic	Fluid	Pilot working pressure (bar)	Temperature °C
	Filtered and lubricated air or not	3 - 7	-5 - +50

Modular base

Ordering code
254❶.01Ⓥ

|	CONNECTIONS
❶	1 = G1/8" Female
	4 = Cartridge Ø 4
	6 = Quick fitting tube Ø 6
	8 = Quick fitting tube Ø 8
Ⓥ	VERSION
	M= Monostable
	B= Bistable
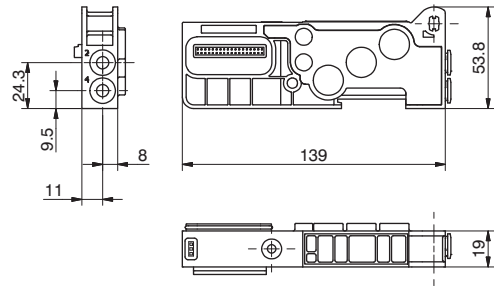
Weight gr. 96,5
SHORT FUNCTION CODE "1" (Monostable)
SHORT FUNCTION CODE "2" (Bistable)

Operational characteristic	Fluid	Pressure range (bar)	Temperature °C
	Filtered and lubricated air or not	From vacuum to 10	-5 - +50

2

Closing plate

Intermediate Inlet/Exhaust module
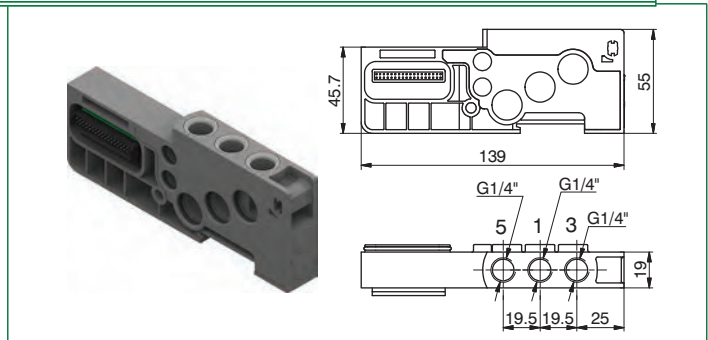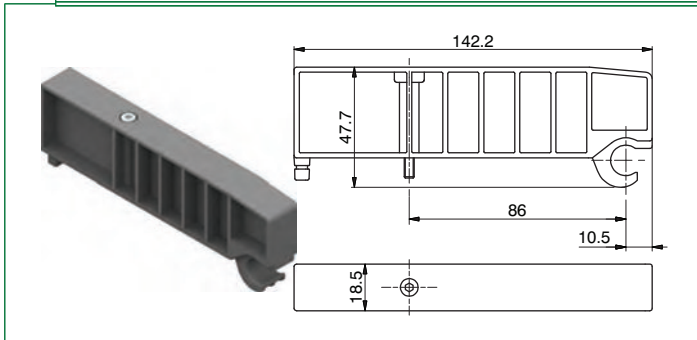
Ordering code		Ordering code	
2530.00	Weight gr. 53,5 SHORT FUNCTION CODE "T"	**2540.10**	Weight gr. 115 SHORT FUNCTION CODE "W"

Operational characteristic	Fluid	Pressure range (bar)	Temperature °C
	Filtered and lubricated air or not	From vacuum to 10	-5 - +50

Nut

tie-rod Joint

Ordering code		Ordering code	
2540.KD.00		**2540.KG.00**	

Weight gr. 10
The Kit includes Nr. 4 pieces
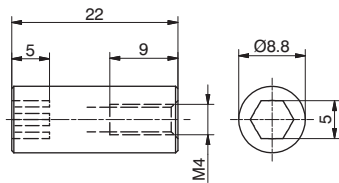
Weight gr. 2,5
The Kit includes Nr. 2 pieces
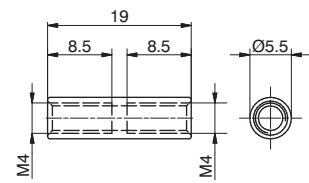
Extension (1 Position)

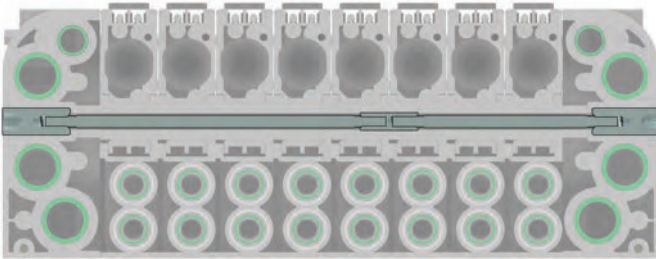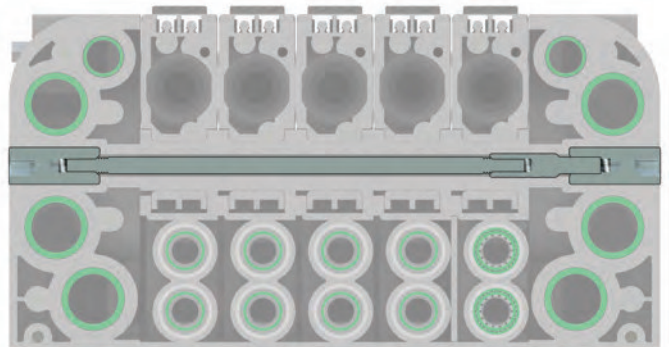| Ordering code |
|---|
| **2540.KP.01** |

Weight gr. 3,5
The Kit includes Nr. 2 pieces
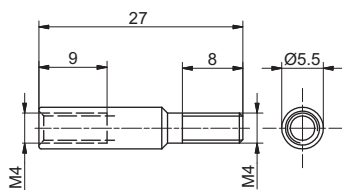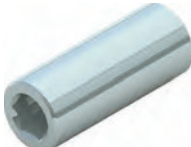
2

Set with single tie-rod, up to 16 positions
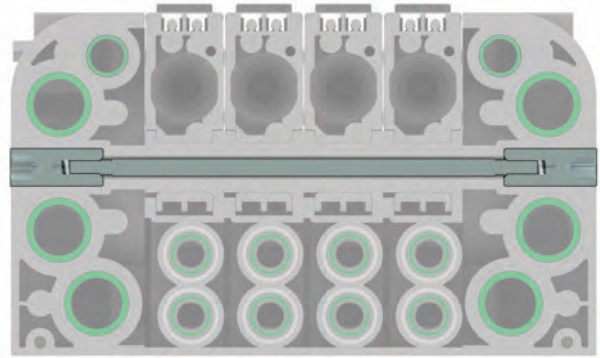
Set with 2 tie-rods more tie-rod Joint, from 17 up to 32 positions

Set with tie-rod, more extension adding a valve

ACCESSORIES TABLE FOR VALVES SETTING

Set of POSITIONS	N° 4 pieces	N° 2 pieces	N° 2 pieces	N° 2 pieces
1	2540.KD.00	2540.KT.01	/	/
2	2540.KD.00	2540.KT.02	/	/
3	2540.KD.00	2540.KT.03	/	/
4	2540.KD.00	2540.KT.04	/	/
5	2540.KD.00	2540.KT.05	/	/
6	2540.KD.00	2540.KT.06	/	/
7	2540.KD.00	2540.KT.07	/	/
8	2540.KD.00	2540.KT.08	/	/
9	2540.KD.00	2540.KT.09	/	/
10	2540.KD.00	2540.KT.10	/	/
11	2540.KD.00	2540.KT.11	/	/
12	2540.KD.00	2540.KT.12	/	/
13	2540.KD.00	2540.KT.13	/	/
14	2540.KD.00	2540.KT.14	/	/
15	2540.KD.00	2540.KT.15	/	/
16	2540.KD.00	2540.KT.16	/	/
17	2540.KD.00	2540.KT.08	2540.KG.00	2540.KT.07
18	2540.KD.00	2540.KT.08	2540.KG.00	2540.KT.08
19	2540.KD.00	2540.KT.09	2540.KG.00	2540.KT.08
20	2540.KD.00	2540.KT.09	2540.KG.00	2540.KT.09
21	2540.KD.00	2540.KT.10	2540.KG.00	2540.KT.09
22	2540.KD.00	2540.KT.10	2540.KG.00	2540.KT.10
23	2540.KD.00	2540.KT.11	2540.KG.00	2540.KT.10
24	2540.KD.00	2540.KT.11	2540.KG.00	2540.KT.11
25	2540.KD.00	2540.KT.12	2540.KG.00	2540.KT.11
26	2540.KD.00	2540.KT.12	2540.KG.00	2540.KT.12
27	2540.KD.00	2540.KT.13	2540.KG.00	2540.KT.12
28	2540.KD.00	2540.KT.13	2540.KG.00	2540.KT.13
29	2540.KD.00	2540.KT.14	2540.KG.00	2540.KT.13
30	2540.KD.00	2540.KT.14	2540.KG.00	2540.KT.14
31	2540.KD.00	2540.KT.15	2540.KG.00	2540.KT.14
32	2540.KD.00	2540.KT.15	2540.KG.00	2540.KT.15

Tie-rod M4

Ordering code

2540.KT.℗

N. POSITIONS
01 = Nr. 1 Position	
02 = Nr. 2 Positions	
03 = Nr. 3 Positions	
04 = Nr. 4 Positions	
05 = Nr. 5 Positions	
06 = Nr. 6 Positions	
07 = Nr. 7 Positions	
08 = Nr. 8 Positions	
09 = Nr. 9 Positions	
10 = Nr. 10 Positions	
11 = Nr. 11 Positions	
12 = Nr. 12 Positions	
13 = Nr. 13 Positions	
14 = Nr. 14 Positions	
15 = Nr. 15 Positions	
16 = Nr. 16 Positions	

℗

$L \pm 0.3$

M4
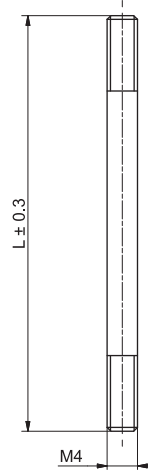
CODE LIST	
CODE	"L" DIMENSION
2540.KT.01	55
2540.KT.02	74
2540.KT.03	93
2540.KT.04	112
2540.KT.05	131
2540.KT.06	150
2540.KT.07	169
2540.KT.08	188
2540.KT.09	207
2540.KT.10	226
2540.KT.11	245
2540.KT.12	264
2540.KT.13	283
2540.KT.14	302
2540.KT.15	321
2540.KT.16	340

Diaphragm plug

Ordering code

2530.17

Weight gr. 6,5

Polyethylene Silencer Series SPL-R

Ordering code

SPLR.Ⓕ

Ⓕ
DIAMETER	
8 = 8 mm	
12 = 12 mm	

Cable complete with connector, 25 Poles IP65

Ordering code

2300.25.Ⓛ.℗

Ⓛ
CABLE LENGHT	
03 = 3 meters	
05 = 5 meters	
10 = 10 meters	

℗
CONNECTORS	
10 = In line	
90 = 90° Angle	

Cable complete with connector, 37 Poles IP65

Ordering code

2400.37.Ⓛ.℗

Ⓛ
CABLE LENGHT	
03 = 3 meters	
05 = 5 meters	
10 = 10 meters	

℗
CONNECTORS	
10 = In line	
90 = 90° Angle	

Cable complete with connector, 25 Poles IP65

Ordering code

2400.25.Ⓛ.25

Ⓛ
CABLE LENGHT	
03 = 3 meters	
05 = 5 meters	
10 = 10 meters	

The electrical connection is achieved by a 37 pin connector and can manage up to 32 solenoid pilots.
It is also possible use a 25 sub-D pin connector and, in this case, it is possible to manage a maximum of 22 outputs.
The management and distribution of the electrical signals between each valve is obtained thanks to an electrical connector which receives the signals from the previous module, uses one, two or none depending on the type, and carries forward to the next module the remaining.
Bistable valves, 5/3 and 2x3/2 valves which have two solenoid pilots built in, use two signals; the first is directed to the pilot side 14 the second to the pilot side 12. Modular bases can be fitted with two type of electrical connector: the monostable version uses only one signal (connected to the pilot side 14) and carries forward the remaining, the bistable version which always uses two signals.
This solution allows the modification of the manifold (replacement of monostable valves without bistable for example) without having to reset the PLC output layout.
On other hand this solution limits the maximum number of valves to 16 when it is used a 37 pin connector or 11 when it is used a 25 pin connector.
Intermediate supply/exhaust module uses an electrical connector directly forwarding signals to the next one without any kind of modification.
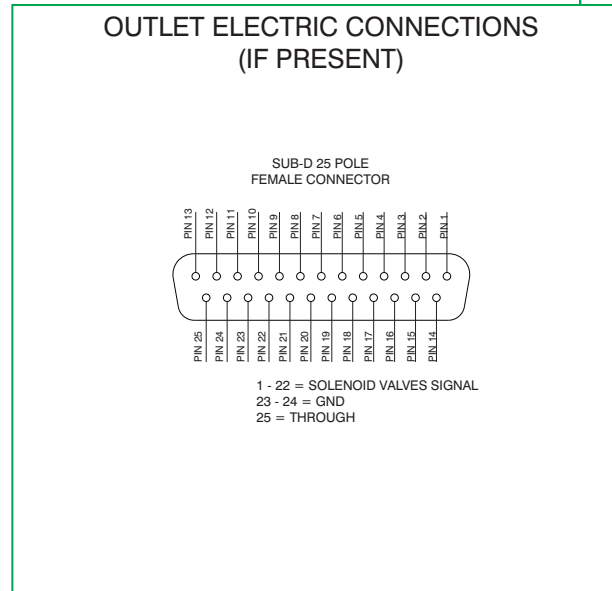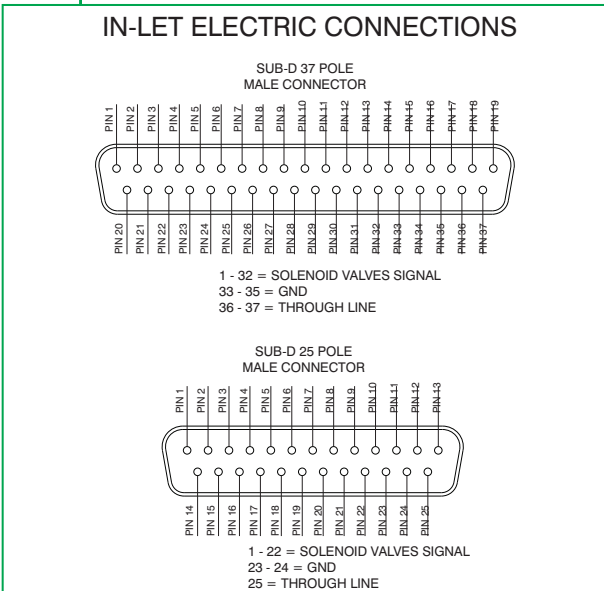This allows the use of intermediate modules in any position of the manifold.
All the electrical signals that have not been used on the manifold can be used placing at the end of the manifold the end plate complete with the 25 sub-D female connector.
The number of available signals depends of the connector used to the type of the left end plate and by the total signals used along the manifold:

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

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

IN-LET ELECTRIC CONNECTIONS

SUB-D 37 POLE
MALE CONNECTOR

PIN 1 ... PIN 19
PIN 20 ... PIN 37

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

SUB-D 25 POLE
MALE CONNECTOR

PIN 1 ... PIN 13
PIN 14 ... PIN 25

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

OUTLET ELECTRIC CONNECTIONS
(IF PRESENT)

SUB-D 25 POLE
FEMALE CONNECTOR

PIN 13 ... PIN 1
PIN 25 ... PIN 14

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

2
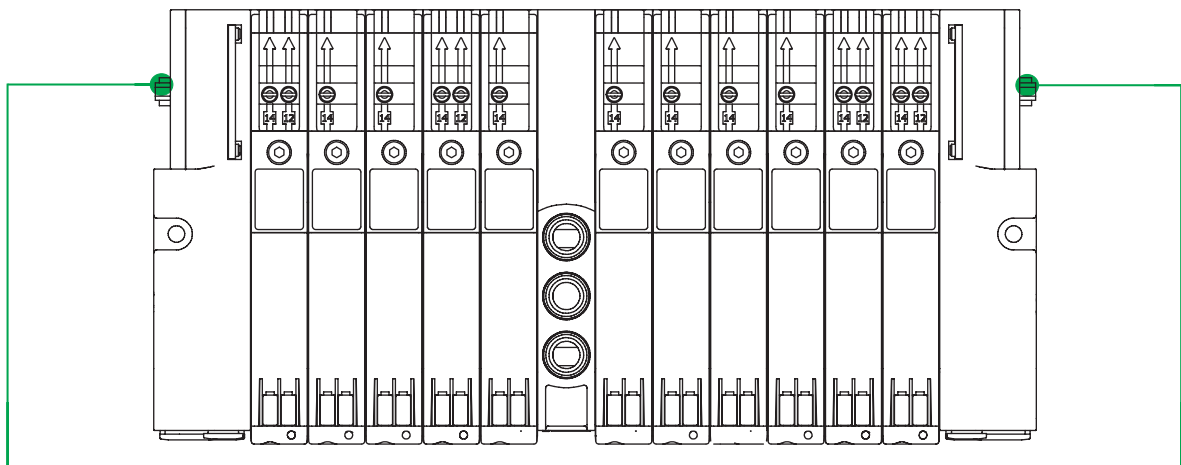
37 PIN Connector correspondence for valves assembled on mixed bases
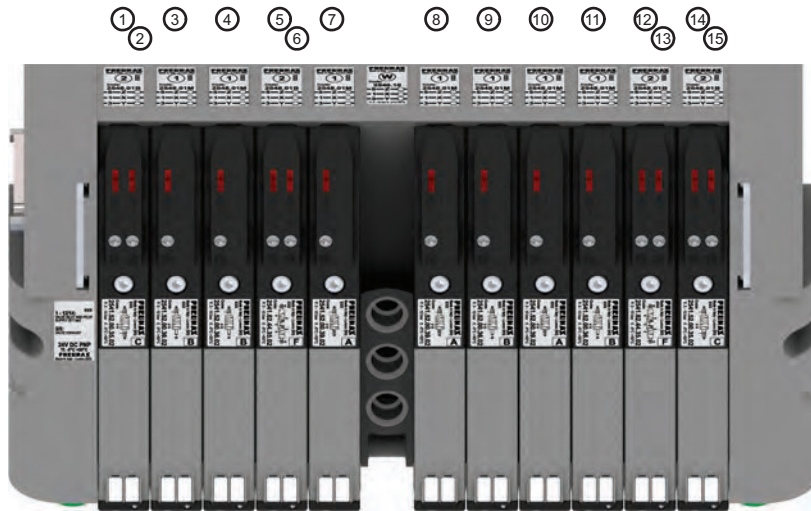
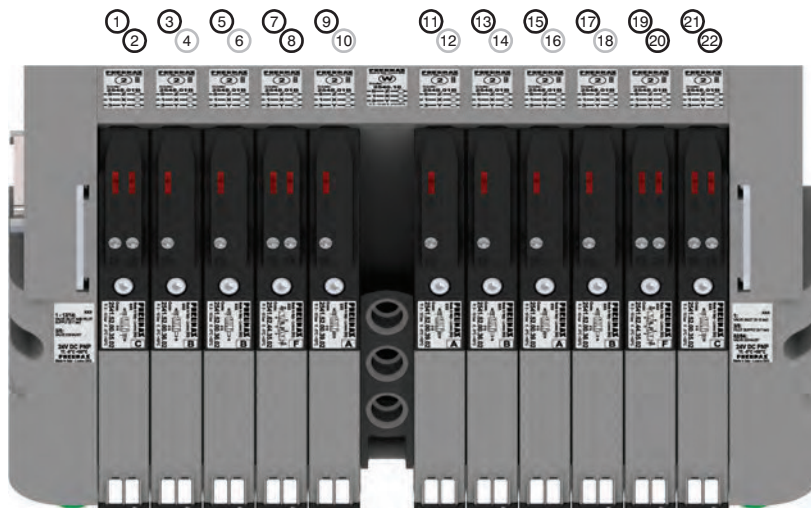| PIN 1	= PILOT 14 EV POS.1
PIN 2	= PILOT 12 EV POS.1
PIN 3	= PILOT 14 EV POS.2
PIN 4	= PILOT 14 EV POS.3
PIN 5	= PILOT 14 EV POS.4
PIN 6	= PILOT 12 EV POS.4
PIN 7	= PILOT 14 EV POS.5
PIN 8	= PILOT 14 EV POS.7
PIN 9	= PILOT 14 EV POS.8
PIN 10	= PILOT 14 EV POS.9
PIN 11	= PILOT 14 EV POS.10
PIN 12	= PILOT 14 EV POS.11
PIN 13	= PILOT 12 EV POS.11
PIN 14	= PILOT 14 EV POS.12
PIN 15	= PILOT 12 EV POS.12

| POS.	1	2	3	4	5	6	7	8	9	10	11	12

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	= NOT CONNECTED
PIN 5	= PILOT 14 EV POS.3
PIN 6	= NOT CONNECTED
PIN 7	= PILOT 14 EV POS.4
PIN 8	= PILOT 12 EV POS.4
PIN 9	= PILOT 14 EV POS.5
PIN 10	= NOT CONNECTED
PIN 11	= PILOT 14 EV POS.7
PIN 12	= NOT CONNECTED
PIN 13	= PILOT 14 EV POS.8
PIN 14	= NOT CONNECTED
PIN 15	= PILOT 14 EV POS.9
PIN 16	= NOT CONNECTED
PIN 17	= PILOT 14 EV POS.10
PIN 18	= NOT CONNECTED
PIN 19	= PILOT 14 EV POS.11
PIN 20	= PILOT 12 EV POS.11
PIN 21	= PILOT 14 EV POS.12
PIN 22	= PILOT 12 EV POS.12

POS.	1	2	3	4	5	6	7	8	9	10	11	12

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

37P

POS.	1	2	3	...	30	31	32

25P
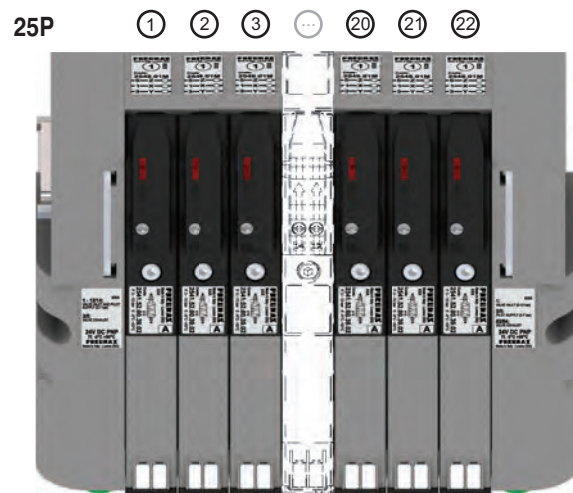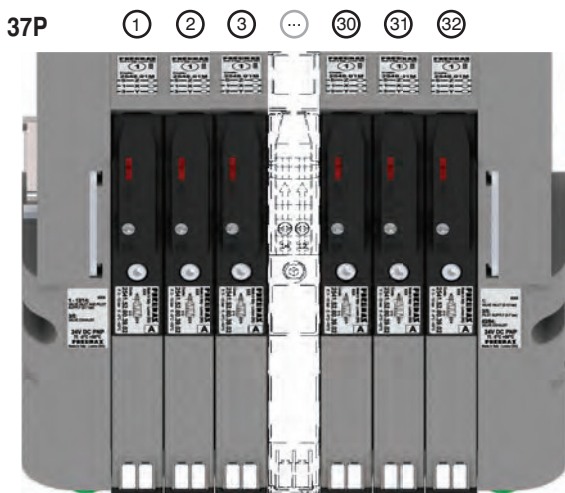
POS.	1	2	3	...	20	21	22

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.

Ordering code

2540.08T

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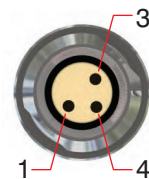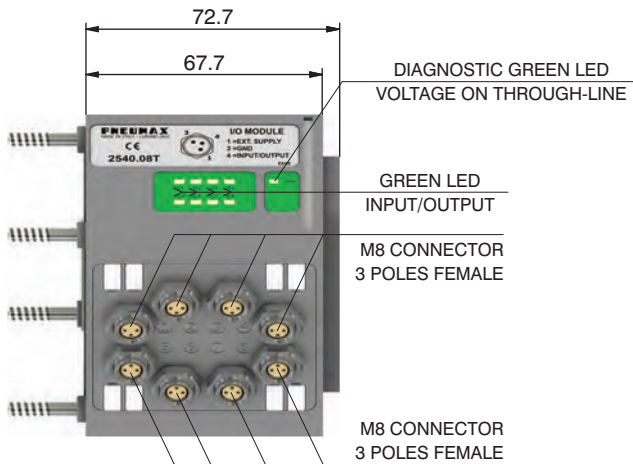
It is possible to connect the manifold to up to two I/O modules.

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.

2

72.7

67.7

DIAGNOSTIC GREEN LED
VOLTAGE ON THROUGH-LINE

GREEN LED
INPUT/OUTPUT

M8 CONNECTOR
3 POLES FEMALE

M8 CONNECTOR
3 POLES FEMALE

3

1   4

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 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

SUB-D TYPE 37 POLE MALE CONNECTOR

PIN 1 ... PIN 19 / PIN 20 ... PIN 37

1 - 32 = SIGNALS
33 - 35 = GND
36 - 37 = THROUGH LINE

SUB-D TYPE 25 POLE MALE CONNECTOR

PIN 1 ... PIN 13 / PIN 14 ... PIN 25

1 - 22 = SIGNALS
23 - 24 = GND
25 = THROUGH LINE

PIN	DESCRIPTION
1	THROUGH LINE
4	SIGNAL
3	GND

2
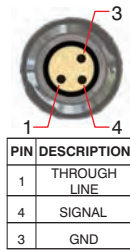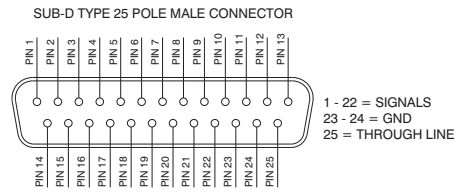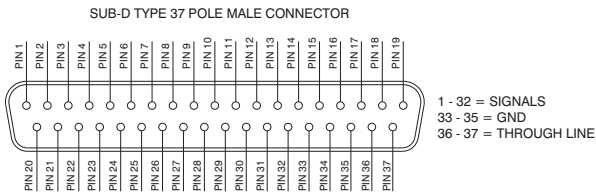
Connection modes:

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

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

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

A) Control via multi-pole :

M8 connector used as Input:

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

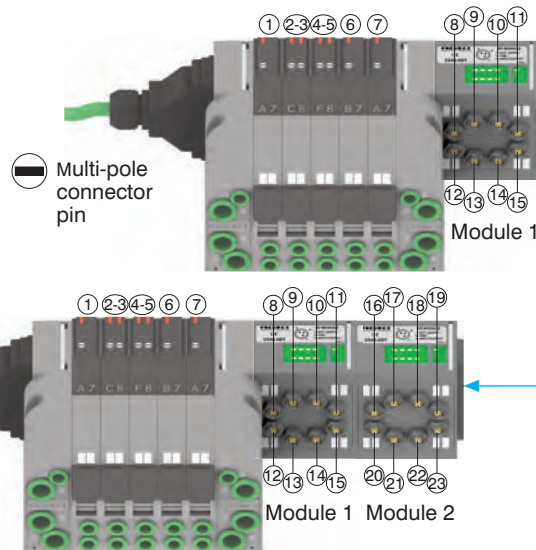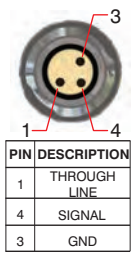*M8 connector used as Output:*

Output voltage will 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.

PIN	DESCRIPTION
1	THROUGH LINE
4	SIGNAL
3	GND

Multi-pole connector pin

Module 1

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

37 poles Connector

Multi-pole connector pin

Module 1 Module 2

Attention: No more additions are possible

Attention : Optyma 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.

37 poles Connettor

22 Signals :

Maximum 22 Signals

Multi-pole connector pin

Outlet signals from manifold

Not Connected

Module 1 Module 2
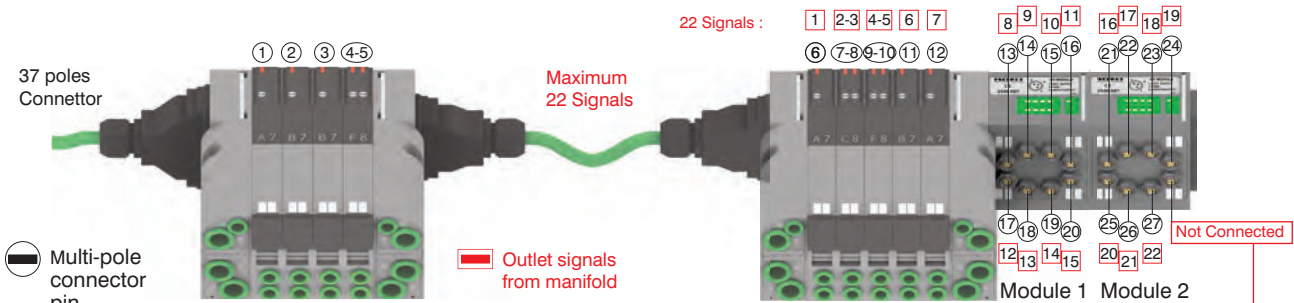
Please note: this example considers a 37 pin multi-pole connector.
The same configuration managed by a 25 pin multi-pole connector will stop at number 22 of multi-pole connector and at number 17 of the manifold. 22 17

Attention: Signal Not connected GND Connected Through line Connected

Specifications may be subject to change without prior notice

2

Please note: Optyma 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.

37 poles Connettor

Multi-pole connector pin

37 poles Connettor

Multi-pole connector pin
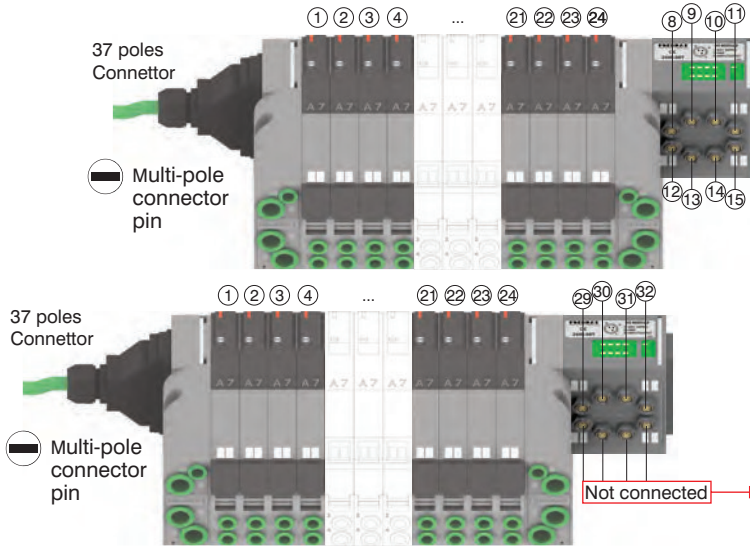
Not connected

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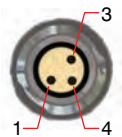
The maximum output current for each output is 100mA. The correspondence between control byte and each single output depends on how many electrical signals are used by the manifold and by the relative position of the I/O module.

PIN	DESCRIPTION
1	NOT CONNECTED
4	SIGNAL
3	GND

Serial node Outlet Pin
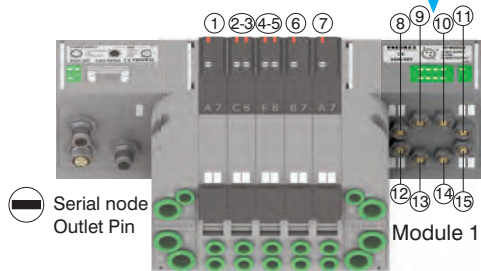
Module 1

Attention:
Output only

Attention:
Only one more
I/O module
can be added.
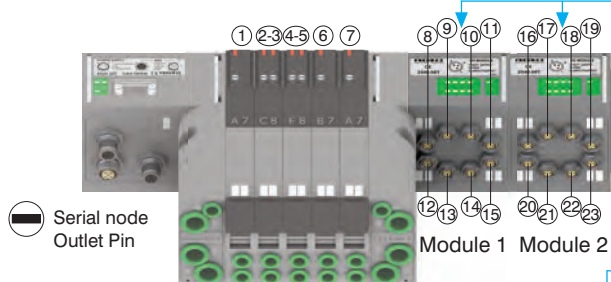
Serial node Outlet Pin

Module 1 Module 2

Attention:
Output only

Attention:
No more additions
are possible

Serial node Outlet Pin

Not connected

Attention:
Output only
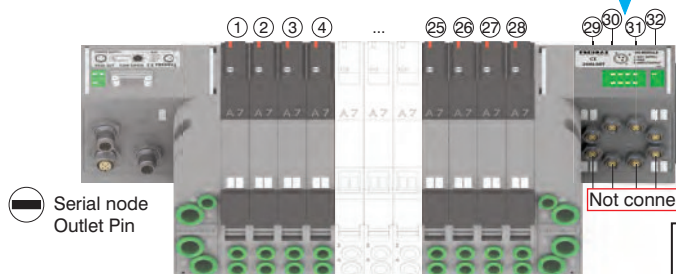
Attention:
Signal Not connected
GND Connected

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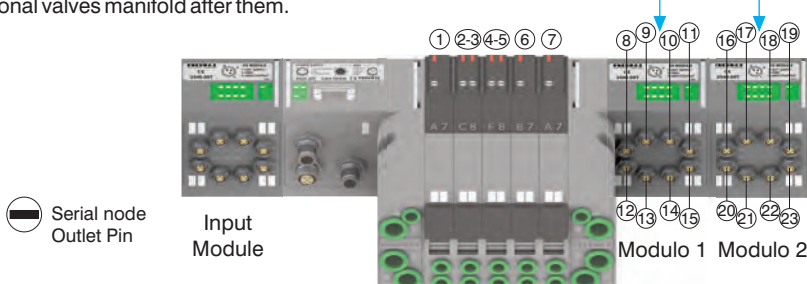
Serial node Outlet Pin

Input Module

Modulo 1 Modulo 2

Attention:
Output only

Attention:
No more additions
are possible

2

From the top

49 + (N° Positions x 19)

ø5,5

PILOT STATE IDENTIFICATION LED (LED "ON" IDENTIFIES ACTUATED PILOT)

VALVE MANUAL OVER-RIDE

PNEUMATIC SYMBOL

ORDERING CODE

SHORT FUNCTION CODE

DIN rail fixing

CUSTOMIZABLE REMOVABLE LABLES

VALVE COUPLING SCREW
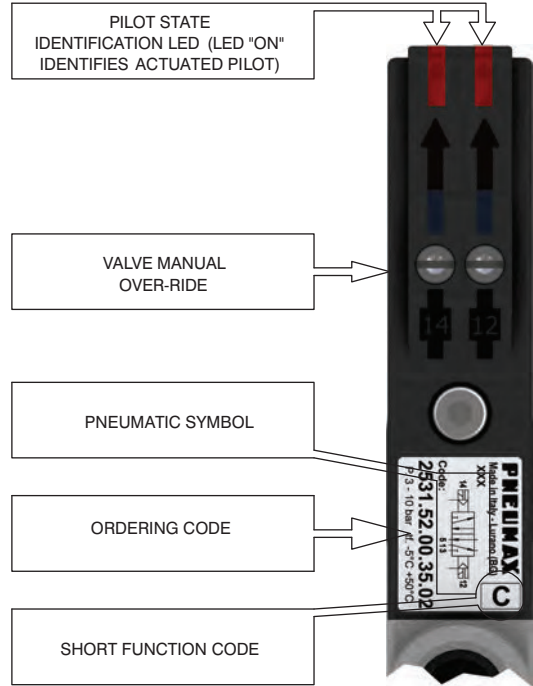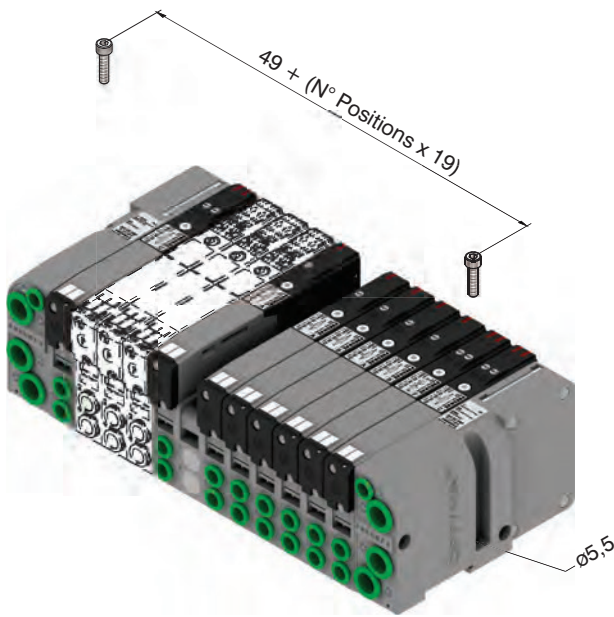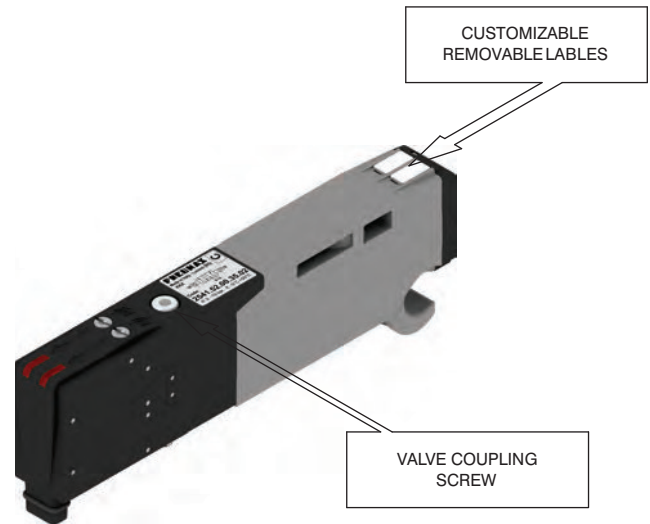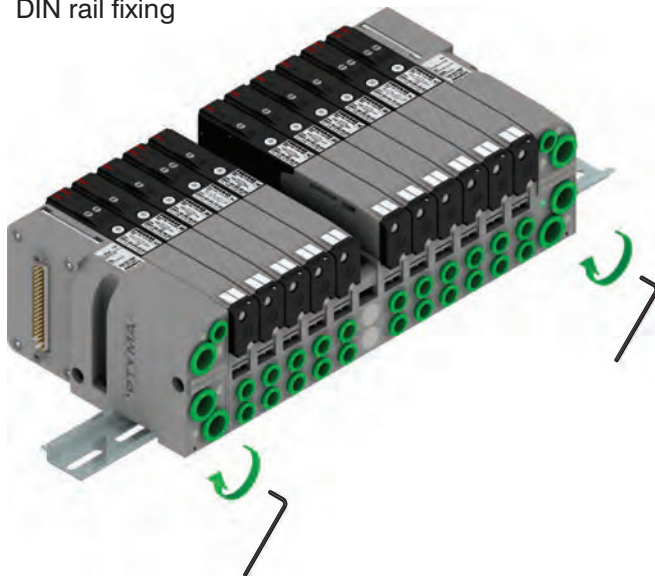
Maximum possible size according to valves seats

64 + (N° Positions x 19)

VALVE SUPPLY PORTS - CONNECTIONS 1 - T12

PILOT SUPPLY PORT CONNECTION 12/14 - T8

PILOT EXHAUST PORTS CONNECTION 82/84 - T8

VALVE OUTLET - CONNECTIONS 2&4 - T8

VALVE EXHAUST PORTS - CONNECTIONS 3&5 - T12
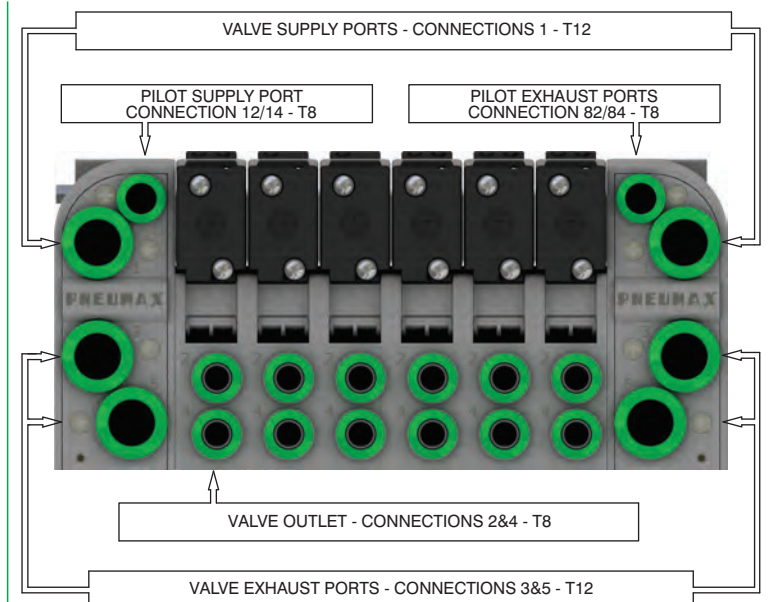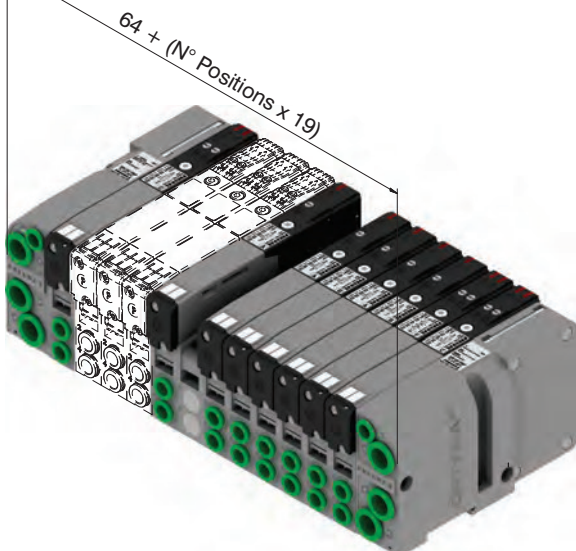
Manual override actuation
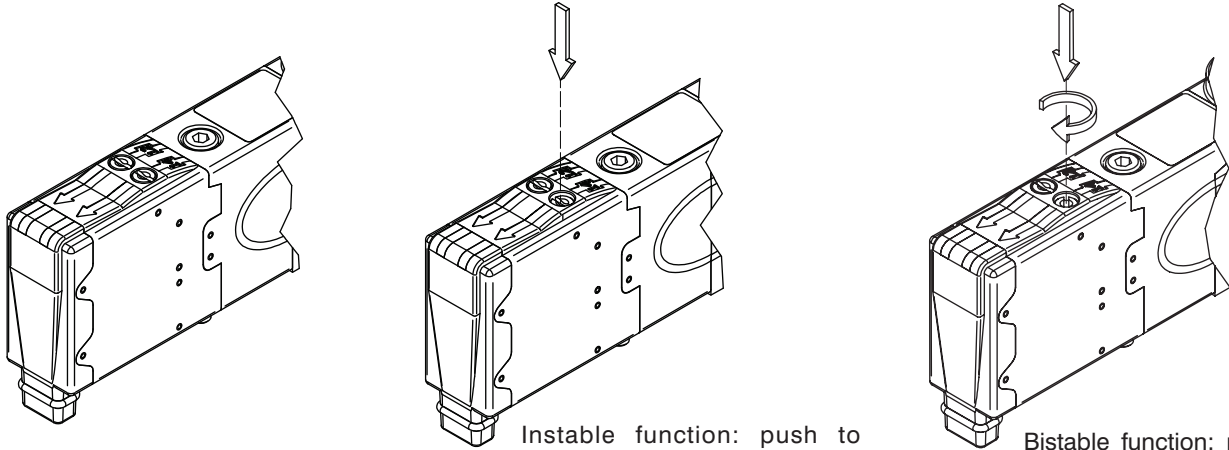
Instable function: push to actuate (when released it moves back to the original position).

Bistable function: push and turn to get the bistable function

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

Valve Installation

Manifold assembly

2

Manifold Layout configuration

```
┌───┬────┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┬───┐ ┌───┬───┐
│ T │ MP │ . │ _ │ . │ _ │ _ │ _ │ _ │ _ │ _ │ _ │ _ │ _ │ _ │ _ │ │ _ │ _ │
└───┴────┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┴───┘ └───┴───┘
```

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate plus closed right endplate
B= 37 poles - self feeding left endplate plus closed right endplate
C= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
C2= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modules
D= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
D2= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modules
E= 25 poles - external feeding left endplate plus closed right endplate
F= 25 poles - self feeding left endplate plus closed right endplate
G= 25 poles - external feeding left endplate plus 25 poles OUT closed right endplate
G1= 25 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
G2= 25 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modules
H= 25 poles - self feeding left endplate plus 25 poles OUT closed right endplate
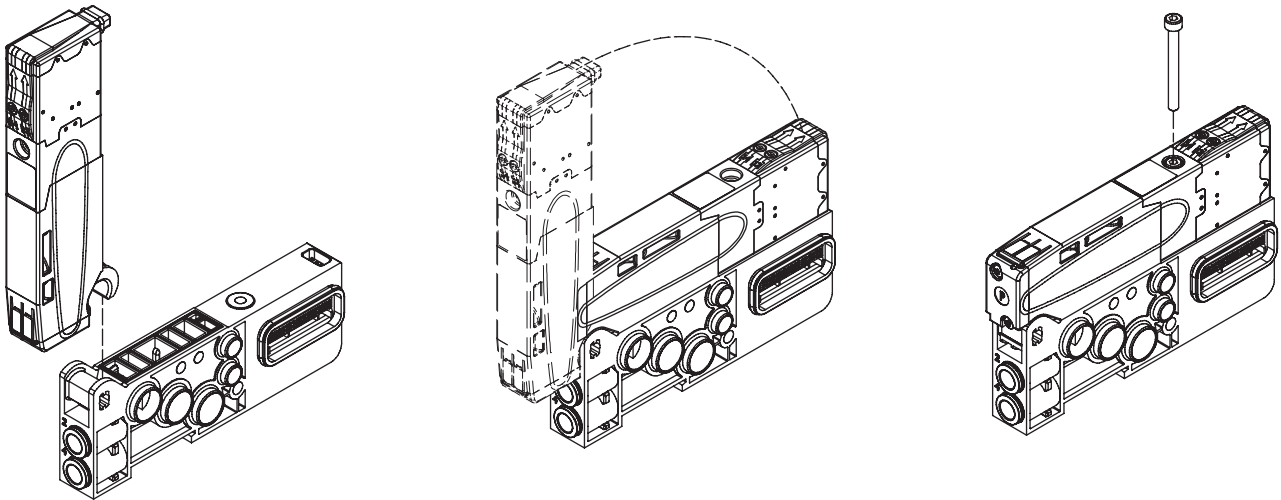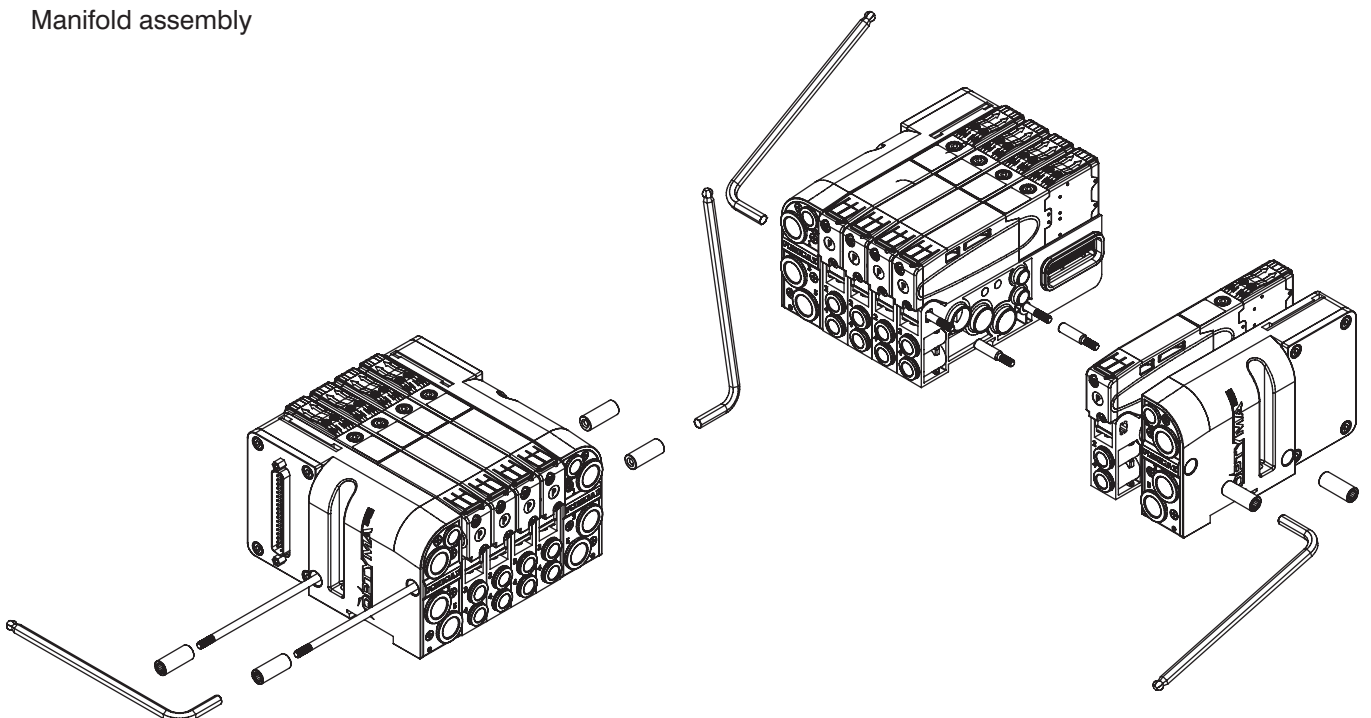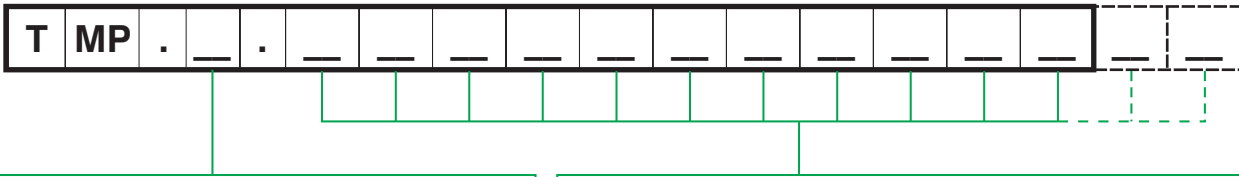H1= 25 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
H2= 25 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modulos

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.

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal (can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals (can be used with monostable and bistable solenoid valves indifferently)
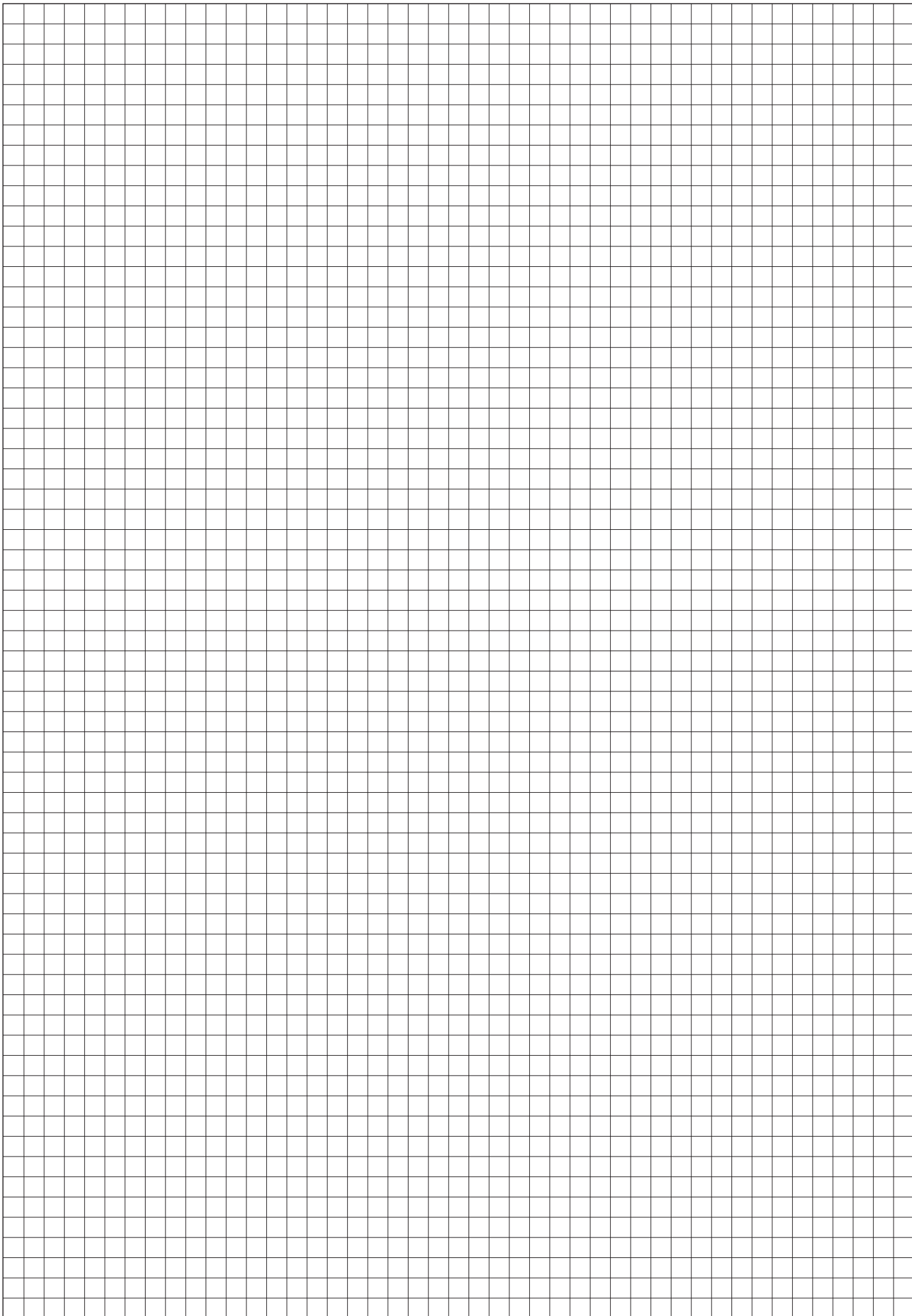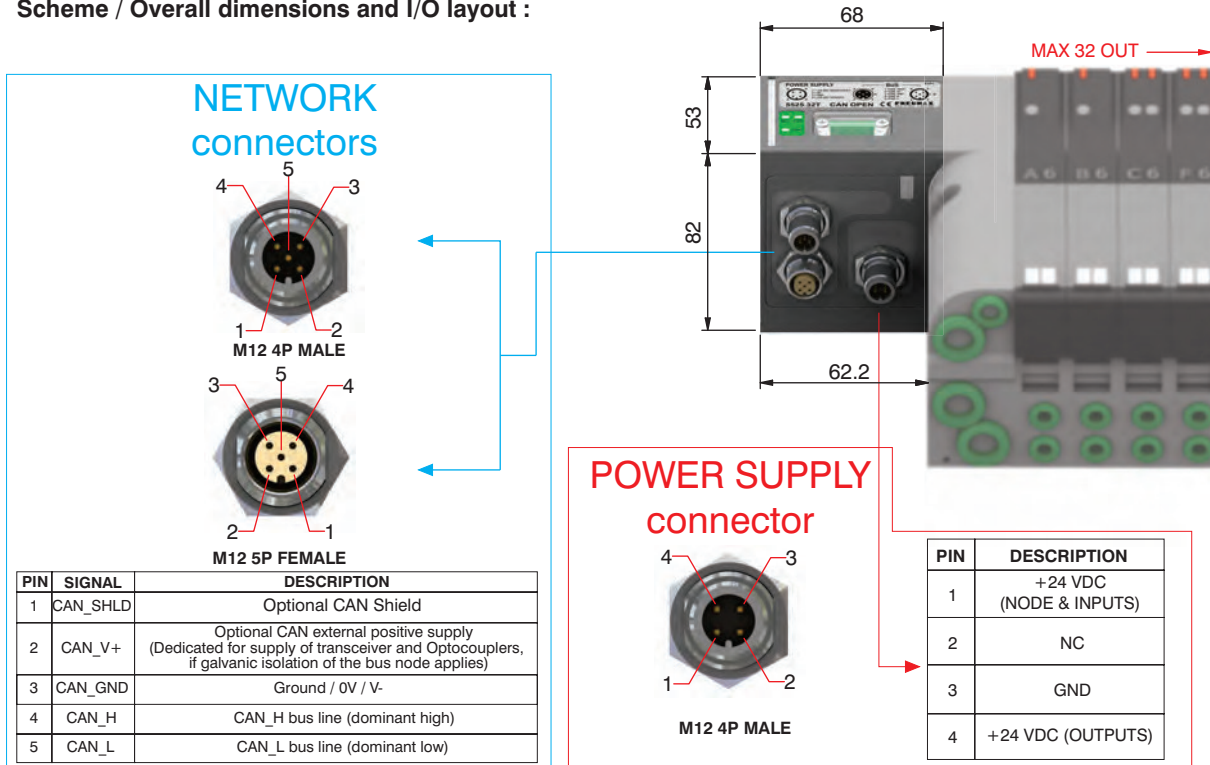
2

2

General:

CANopen® 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.

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 :

NETWORK connectors

M12 4P MALE

M12 5P FEMALE

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)

68

53

82

62.2

MAX 32 OUT →

POWER SUPPLY connector

M12 4P MALE

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

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 (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

Manifold layout configuration complete with CANopen® node

T _ . _ . _ _ _ _ _ _ _ _ _ _ _ _ _ _

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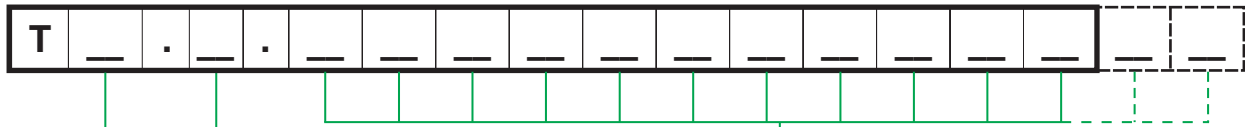
BUS CONFIGURATION :

CA= CANopen® 32 OUT
CB= CANopen® 32 OUT
plus 8 INPUTS
CC= CANopen® 32 OUT
plus 16 INPUTS
CD= CANopen® 32 OUT
plus 24 INPUTS
CE= CANopen® 32 OUT
plus 32 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate
plus closed right endplate
B= 37 poles - self feeding left endplate
plus closed right endplate
C= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
C2= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules
D= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
D2= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules

SHORT CODE FUNCTION / CONNECTION :

A1 = 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2 = 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3 = 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4 = 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5 = 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6 = 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7 = 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8 = 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1 = 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2 = 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3 = 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4 = 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5 = 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6 = 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7 = 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8 = 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2 = 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4 = 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6 = 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8 = 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2 = 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4 = 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6 = 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8 = 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2 = 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4 = 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6 = 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8 = 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2 = 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4 = 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6 = 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8 = 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2 = 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4 = 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6 = 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8 = 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1 = FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2 = FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3 = FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4 = FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5 = FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6 = FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7 = FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8 = FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4 = POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
(can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
(can be used with monostable and bistable solenoid valves indifferently)

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.

2

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 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 maintaning 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.
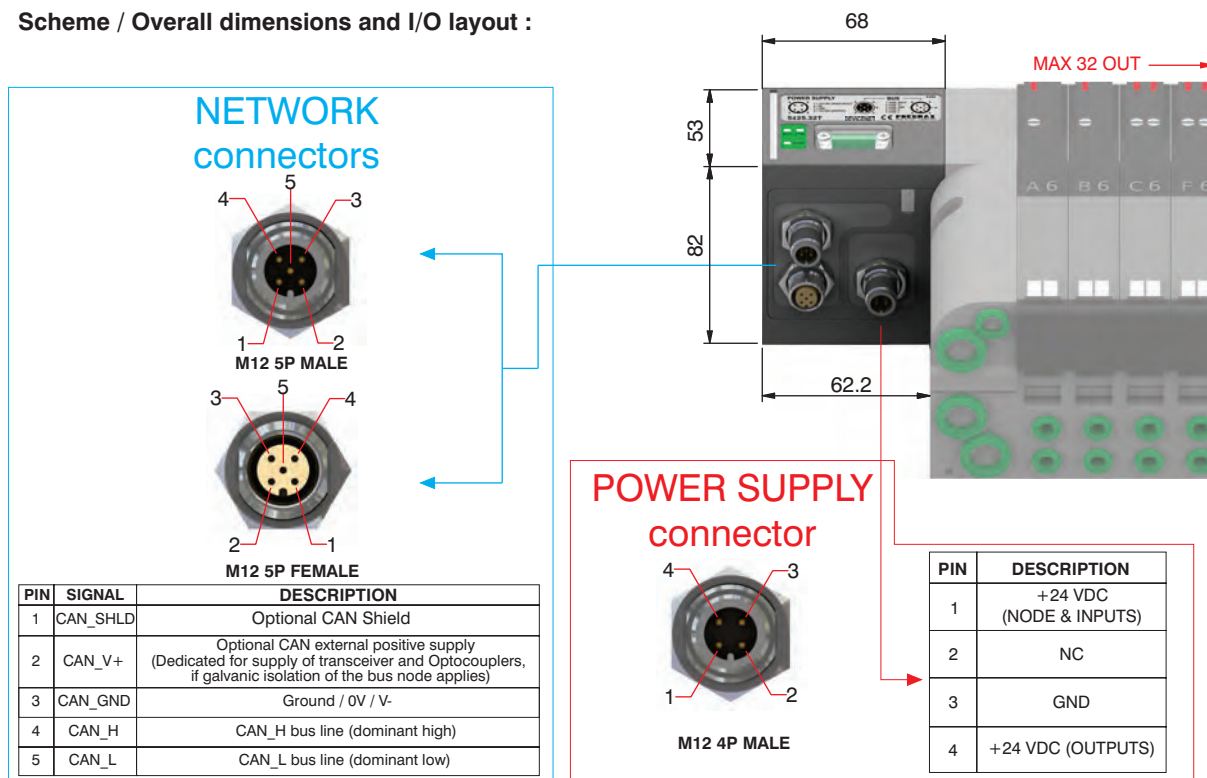The node address can be set by 6 dip-switches using BCD numeration.
The module includes an internal terminating resistance that can be activated by a dip-switch.

Ordering code

5425.32T

Scheme / Overall dimensions and I/O layout :

NETWORK connectors

M12 5P MALE

M12 5P FEMALE

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)

MAX 32 OUT

POWER SUPPLY connector

M12 4P MALE

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	+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 (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

Manifold layout configuration complete with DeviceNet® node

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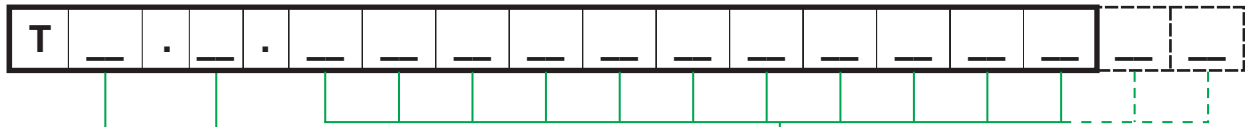
BUS CONFIGURATION :

DA= DeviceNet® 32 OUT
DB= DeviceNet® 32 OUT
        plus 8 INPUTS
DC= DeviceNet® 32 OUT
        plus 16 INPUTS
DD= DeviceNet® 32 OUT
        plus 24 INPUTS
DE= DeviceNet® 32 OUT
        plus 32 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate
      plus closed right endplate
B= 37 poles - self feeding left endplate
      plus closed right endplate
C= 37 poles - external feeding left endplate
      plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate
      plus 25 poles OUT closed right endplate
      plus 1 I/O module
C2= 37 poles - external feeding left endplate
      plus 25 poles OUT closed right endplate
      plus 2 I/O modules
D= 37 poles - self feeding left endplate
      plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate
      plus 25 poles OUT closed right endplate
      plus 1 I/O module
D2= 37 poles - self feeding left endplate
      plus 25 poles OUT closed right endplate
      plus 2 I/O modules

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
              (can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
              (can be used with monostable and bistable solenoid valves indifferently)

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.
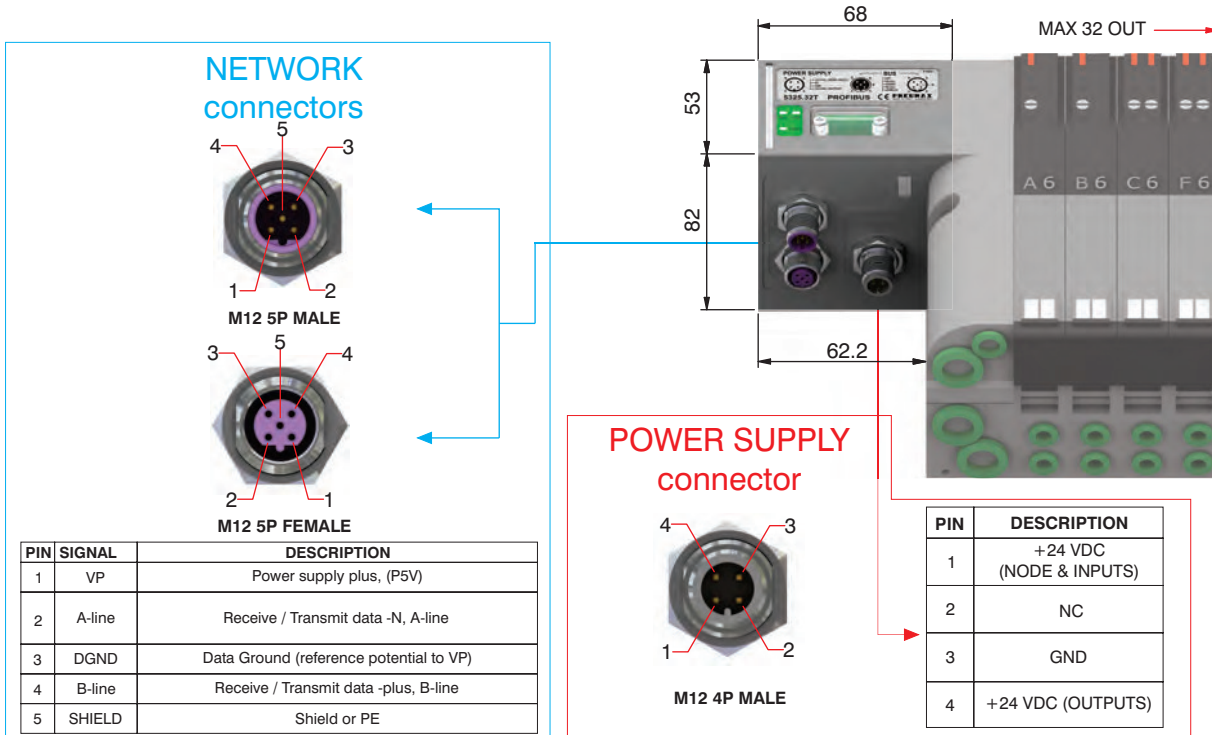
General:

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 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 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 maintaning 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

5325.32T

Scheme / Overall dimensions and I/O layout :

NETWORK connectors

M12 5P MALE

M12 5P FEMALE

MAX 32 OUT

PIN	SIGNAL	DESCRIPTION
1	VP	Power supply plus, (P5V)
2	A-line	Receive / Transmit data -N, A-line
3	DGND	Data Ground (reference potential to VP)
4	B-line	Receive / Transmit data -plus, B-line
5	SHIELD	Shield or PE

POWER SUPPLY connector

M12 4P MALE

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

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
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

2

Manifold layout configuration complete with PROFIBUS node

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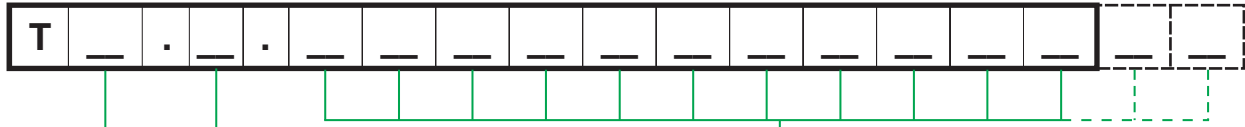
BUS CONFIGURATION :

PA= PROFIBUS 32 OUT
PB= PROFIBUS 32 OUT
plus 8 INPUTS
PC= PROFIBUS 32 OUT
plus 16 INPUTS
PD= PROFIBUS 32 OUT
plus 24 INPUTS
PE= PROFIBUS 32 OUT
plus 32 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate
plus closed right endplate
B= 37 poles - self feeding left endplate
plus closed right endplate
C= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
C2= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules
D= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
D2= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
(can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
(can be used with monostable and bistable solenoid valves indifferently)

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.
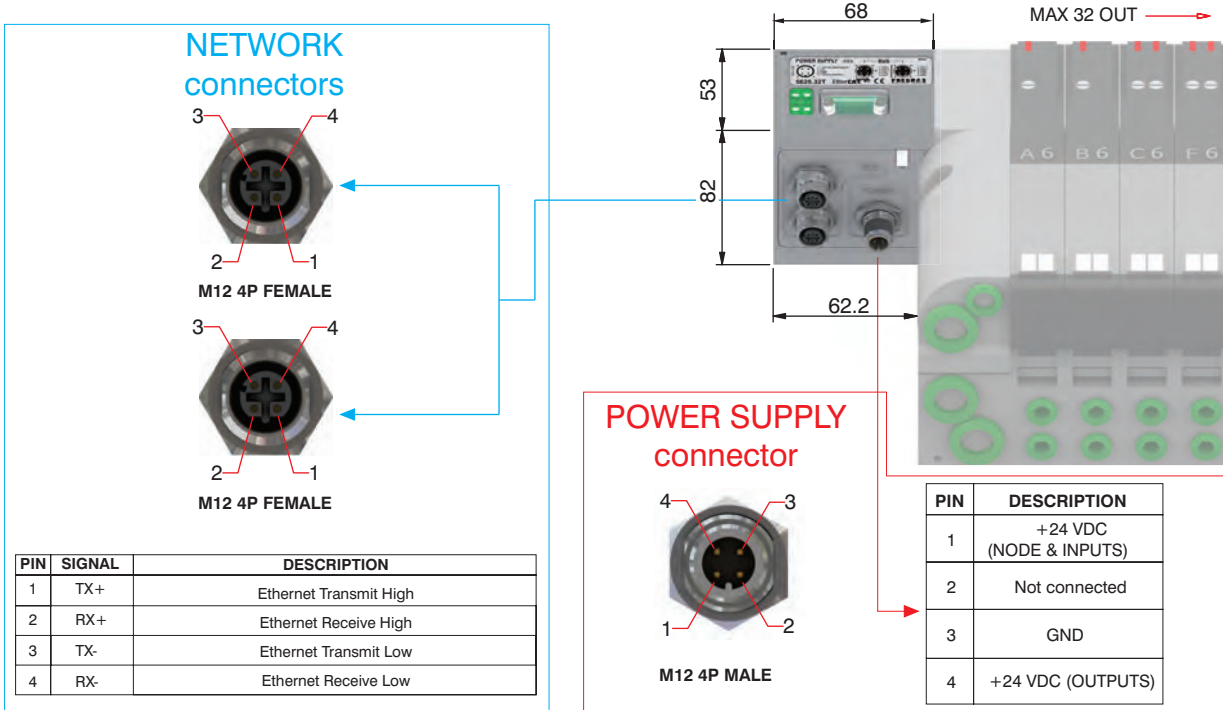
2

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 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

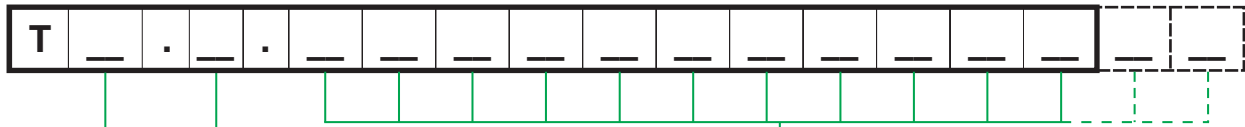**5625.32T**

Scheme / Overall dimensions and I/O layout :

NETWORK connectors

M12 4P FEMALE

M12 4P FEMALE

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

POWER SUPPLY connector

M12 4P MALE

PIN	DESCRIPTION
1	+24 VDC (NODE & INPUTS)
2	Not connected
3	GND
4	+24 VDC (OUTPUTS)

MAX 32 OUT

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	5625.32_100.xml
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

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Manifold layout configuration complete with Ether**CAT**® node

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BUS CONFIGURATION :

EA=	EtherCAT® 32 OUT
EB=	EtherCAT® 32 OUT + 8 INPUTS
EC=	EtherCAT® 32 OUT + 16 INPUTS
ED=	EtherCAT® 32 OUT + 24 INPUTSI
EE=	EtherCAT® 32 OUT + 32 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate plus closed right endplate
B= 37 poles - self feeding left endplate plus closed right endplate
C= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
C2= 37 poles - external feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modules
D= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 1 I/O module
D2= 37 poles - self feeding left endplate plus 25 poles OUT closed right endplate plus 2 I/O modules

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
(can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
(can be used with monostable and bistable solenoid valves indifferently)

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.
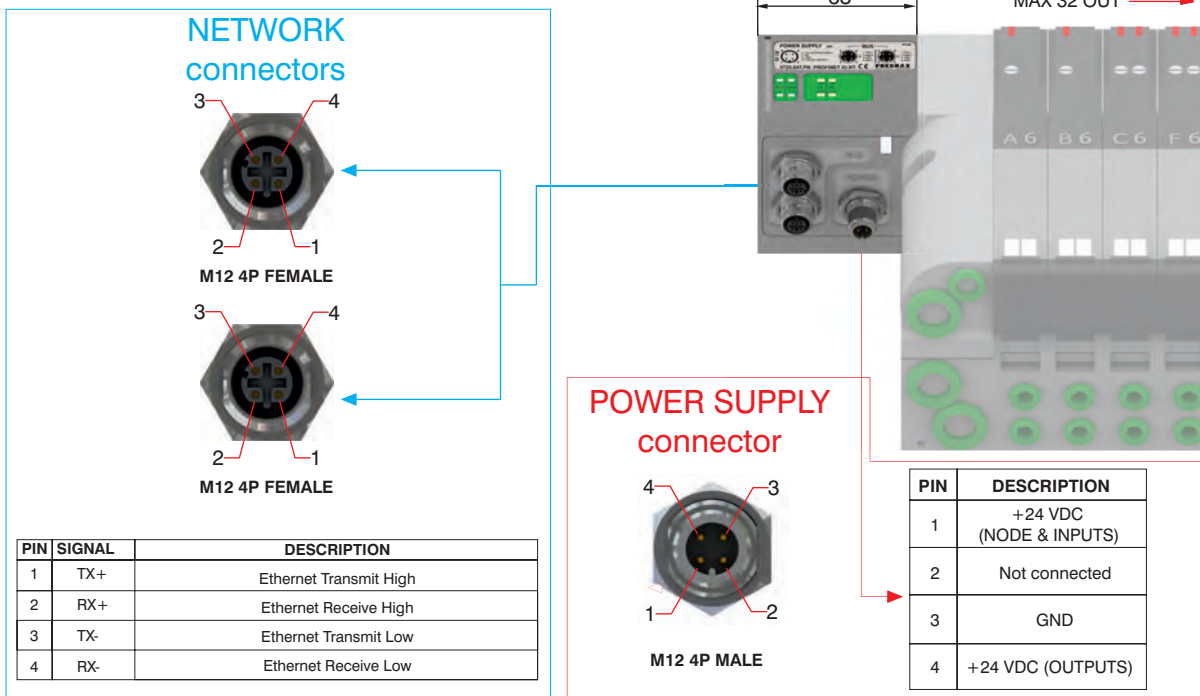
2

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 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 maintaning 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

**5725.64T.PN**

Scheme / Overall dimensions and I/O layout :

NETWORK connectors

M12 4P FEMALE

M12 4P FEMALE

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

68

MAX 32 OUT

POWER SUPPLY connector

M12 4P MALE

PIN	DESCRIPTION
1	+24 VDC (NODE & INPUTS)
2	Not connected
3	GND
4	+24 VDC (OUTPUTS)

Technical characteristics

	Model	5725.64T.PN
	Specifications	PROFINET IO RT/IRT Device V3
	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, possibile 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	GSDML-V2.1-PNEUMAX-OPTYMA-20120801.xml
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

Manifold layout configuration complete with **PROFINET IO RT/IRT** node

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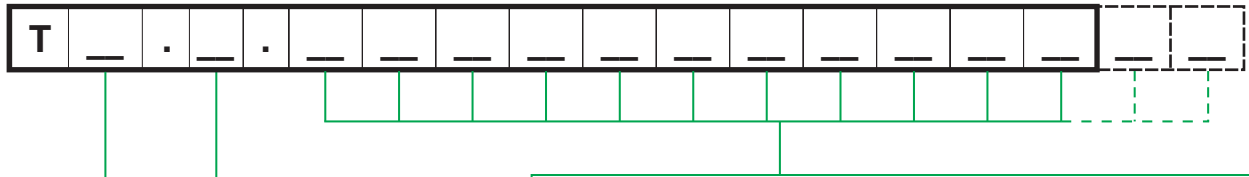
BUS CONFIGURATION :

NA= PROFINET IO RT/IRT 32 OUT
NB= PROFINET IO RT/IRT 32 OUT
+ 8 INPUTS
NC= PROFINET IO RT/IRT 32 OUT
+ 16 INPUTS
ND= PROFINET IO RT/IRT 32 OUT
+ 24 INPUTS
NE= PROFINET IO RT/IRT 32 OUT
+ 32 INPUTS
NF= PROFINET IO RT/IRT 32 OUT
+ 40 INPUTS
NG= PROFINET IO RT/IRT 32 OUT
+ 48 INPUTS
NH= PROFINET IO RT/IRT 32 OUT
+ 56 INPUTS
NI= PROFINET IO RT/IRT 32 OUT
+ 64 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate
plus closed right endplate
B= 37 poles - self feeding left endplate
plus closed right endplate
C= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
C2= 37 poles - external feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules
D= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 1 I/O module
D2= 37 poles - self feeding left endplate
plus 25 poles OUT closed right endplate
plus 2 I/O modules

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.

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
(can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
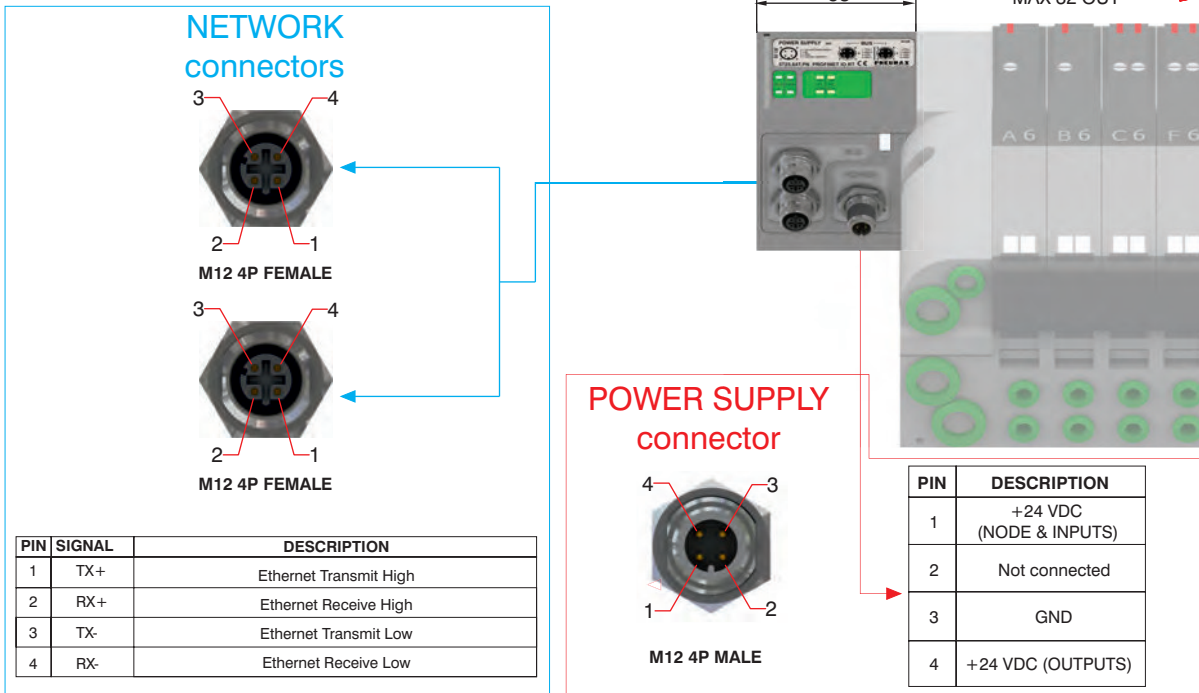(can be used with monostable and bistable solenoid valves indifferently)

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 maintaning 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

**5725.64T.EI**

Scheme / Overall dimensions and I/O layout :

NETWORK connectors

M12 4P FEMALE

M12 4P FEMALE

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

POWER SUPPLY connector

M12 4P MALE

PIN	DESCRIPTION
1	+24 VDC (NODE & INPUTS)
2	Not connected
3	GND
4	+24 VDC (OUTPUTS)

MAX 32 OUT

Technical characteristics

	Model	5725.64T.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, possibile 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	GSDML-V2.1-PNEUMAX-OPTYMA-20120801.xml
	IP protection grade	IP65 when assembled
	Temperature range	From 0° to +50° C

Manifold layout configuration complete with **EtherNet/IP** node

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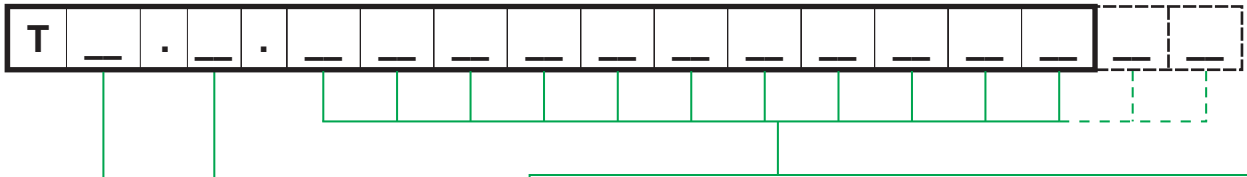
BUS CONFIGURATION :

IA= PROFINET IO RT/IRT 32 OUT
IB= PROFINET IO RT/IRT 32 OUT
       + 8 INPUTS
IC= PROFINET IO RT/IRT 32 OUT
       + 16 INPUTS
ID= PROFINET IO RT/IRT 32 OUT
       + 24 INPUTS
IE= PROFINET IO RT/IRT 32 OUT
       + 32 INPUTS
IF= PROFINET IO RT/IRT 32 OUT
       + 40 INPUTS
IG= PROFINET IO RT/IRT 32 OUT
       + 48 INPUTS
IH= PROFINET IO RT/IRT 32 OUT
       + 56 INPUTS
II= PROFINET IO RT/IRT 32 OUT
       + 64 INPUTS

ENDPLATES SELECTION:

A= 37 poles - external feeding left endplate
        plus closed right endplate
B= 37 poles - self feeding left endplate
        plus closed right endplate
C= 37 poles - external feeding left endplate
        plus 25 poles OUT closed right endplate
C1= 37 poles - external feeding left endplate
        plus 25 poles OUT closed right endplate
        plus 1 I/O module
C2= 37 poles - external feeding left endplate
        plus 25 poles OUT closed right endplate
        plus 2 I/O modules
D= 37 poles - self feeding left endplate
        plus 25 poles OUT closed right endplate
D1= 37 poles - self feeding left endplate
        plus 25 poles OUT closed right endplate
        plus 1 I/O module
D2= 37 poles - self feeding left endplate
        plus 25 poles OUT closed right endplate
        plus 2 I/O modules

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.

SHORT CODE FUNCTION / CONNECTION :

A1= 5/2 SOL.-SPRING + BASE 1 - CARTR. G1/8" F.
A2= 5/2 SOL.-SPRING + BASE 2 - CARTR. G1/8" F.
A3= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø4
A4= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø4
A5= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø6
A6= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø6
A7= 5/2 SOL.-SPRING + BASE 1 - CARTR. Ø8
A8= 5/2 SOL.-SPRING + BASE 2 - CARTR. Ø8
B1= 5/2 SOL.-DIFF. + BASE 1 - CARTR. G1/8" F.
B2= 5/2 SOL.-DIFF. + BASE 2 - CARTR. G1/8" F.
B3= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø4
B4= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø4
B5= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø6
B6= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø6
B7= 5/2 SOL.-DIFF. + BASE 1 - CARTR. Ø8
B8= 5/2 SOL.-DIFF. + BASE 2 - CARTR. Ø8
C2= 5/2 SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
C4= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø4
C6= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø6
C8= 5/2 SOL.-SOL. + BASE 2 - CARTR. Ø8
E2= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
E4= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø4
E6= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø6
E8= 5/3 CC SOL.-SOL. + BASE 2 - CARTR. Ø8
F2= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
F4= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø4
F6= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø6
F8= 2x3/2 NC-NC (= 5/3 CA) SOL.-SOL. + BASE 2 - CARTR. Ø8
G2= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
G4= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø4
G6= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø6
G8= 2x3/2 NO-NO (= 5/3 CP) SOL.-SOL. + BASE 2 - CARTR. Ø8
H2= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. G1/8" F.
H4= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø4
H6= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø6
H8= 2x3/2 NC-NO SOL.-SOL. + BASE 2 - CARTR. Ø8

T1= FREE VALVE SPACE PLUG + BASE 1 - CARTR. G1/8" F.
T2= FREE VALVE SPACE PLUG + BASE 2 - CARTR. G1/8" F.
T3= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø4
T4= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø4
T5= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø6
T6= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø6
T7= FREE VALVE SPACE PLUG + BASE 1 - CARTR. Ø8
T8= FREE VALVE SPACE PLUG + BASE 2 - CARTR. Ø8

W = INTERMEDIATE SUPPLY & EXHAUST MODULE
U4= POWER SUPPLY MODULE 4 POSITIONS

X = DIAPHRAGM PLUG ON PIPE 1
Y = DIAPHRAGM PLUG ON PIPE 3
Z = DIAPHRAGM PLUG ON PIPE 5

NOTE:
BASE 1 = Modular base with electrical circuit that uses 1 electrical signal
        (can be used with monostable solenoid valves only)
BASE 2 = Modular base with electrical circuit that uses 2 electrical signals
        (can be used with monostable and bistable solenoid valves indifferently)

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 a 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.
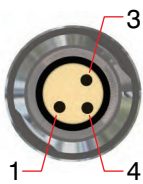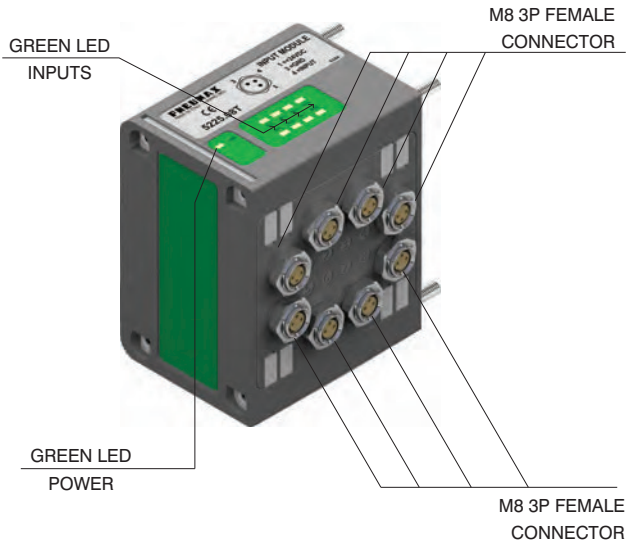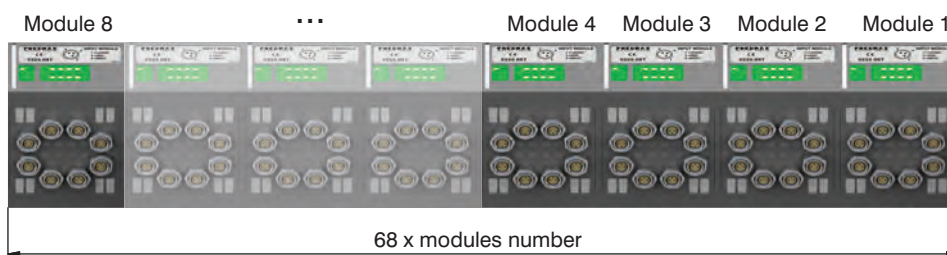The maximum number of Input modules supported is 4.

Ordering code

5225.08T

Scheme / Overall dimensions and I/O layout :

GREEN LED
INPUTS

M8 3P FEMALE
CONNECTOR

GREEN LED
POWER

M8 3P FEMALE
CONNECTOR

PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

Module 1

68

Module 2   Module 1

136

Module 3   Module 2   Module 1

204

Module 4   Module 3   Module 2   Module 1

272

Specifications may be subject to change without prior notice

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 a 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 EtheCAT.
The maximum number of Input modules supported is 8 for PROFIBUS DP and PROFINET IO RT/IRT.

Ordering code

5225.12T

2

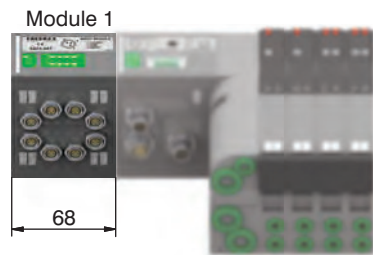### Scheme / Overall dimensions and I/O layout :

GREEN LED
INPUTS

M8 3P FEMALE
CONNECTOR

GREEN LED
POWER

M8 3P FEMALE
CONNECTOR

Module 1

68

Module 2   Module 1

136

Module 3   Module 2   Module 1

204

PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

Module 8   . . .   Module 4   Module 3   Module 2   Module 1

68 x modules number

2

POWER SUPPLY connector
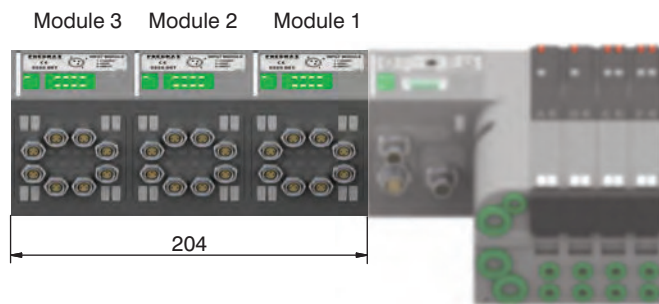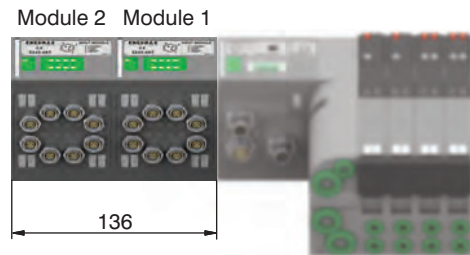
**Socket for Power Supply
STRAIGHT CONNECTOR
M12A 4P FEMALE**

Ordering code

5312A.F04.00

**Upper view
Slave connector**

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

NETWORK connectors

**Socket for Bus CANopen/DeviceNet
STRAIGHT CONNECTOR
M12A 5P FEMALE**

Ordering code

5312A.F05.00
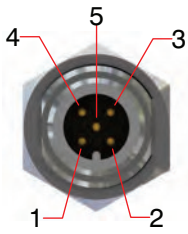
PIN	DESCRIPTION
1	(CAN_SHIELD)
2	(CAN_V+)
3	CAN_GND
4	CAN_H
5	CAN_L

**Upper view
Slave connector**

**Plug for Bus CANopen/DeviceNet
STRAIGHT CONNECTOR
M12A 5P MALE**

Ordering code
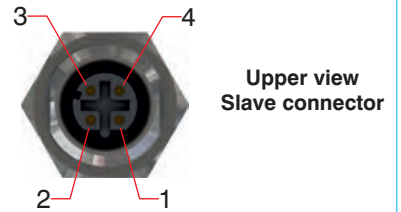
5312A.M05.00
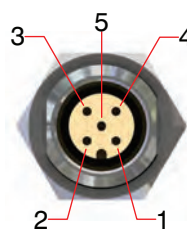
**Plug for Bus EtherCATâ /
PROFINET IO RT/IRT / EtherNet/IP
STRAIGHT CONNECTOR
M12D 4P MALE**

Ordering code

5312D.M04.00

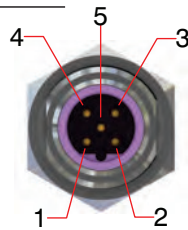| PIN	SIGNAL	DESCRIPTION
1	TX+	Ethernet Transmit High
2	RX+	Ethernet Receive High
3	TX-	Ethernet Transmit Low
4	RX-	Ethernet Receive Low

**Upper view
Slave connector**

**Socket for Bus PROFIBUS DP
STRAIGHT CONNECTOR
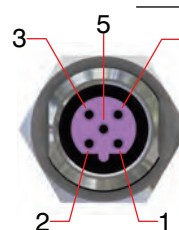M12B 5P FEMALE**

Ordering code

5312B.F05.00

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

**Upper view
Slave connector**

**Plug for Bus PROFIBUS DP
STRAIGHT CONNECTOR
M12B 5P MALE**

Ordering code

5312B.M05.00

INPUT connectors

**Plug for Input module
STRAIGHT CONNECTOR
M8 3P MALE**

Ordering code

5308A.M03.00

**Upper view
Slave connector**
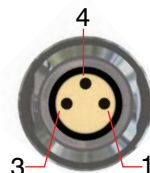
PIN	DESCRIPTION
1	+24 VDC
4	INPUT
3	GND

**Plug for Input module
STRAIGHT CONNECTOR
M12A 5P MALE**

Ordering code

5312A.M05.00

Plugs

M12 plug

Ordering code

5300.T12

M8 plug

Ordering code

5300.T08
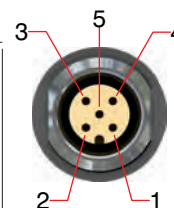
PIN	DESCRIPTION
1	+24 VDC
2	INPUT B
3	GND
4	INPUT A
5	NC

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