Series 3 Plug-In valve islands, Multipole and Fieldbus
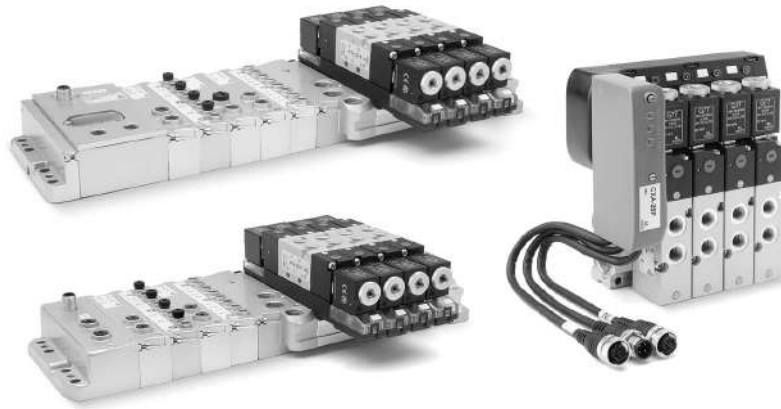
SERIES 3 PLUG-IN VALVE ISLANDS

Plug-In system for Series 3 solenoid valves, G1/8 port.
Valve functions: 2x3/2, 5/2 and 5/3-way CO CC CP.
Multipole with a 25-pin Sub-D connector.
It can interface with all major serial communication protocols.

» Flexible assembly through monostable and bistable 2- and 3-position modules

» Electrical connection and front pneumatic outputs

» Available protocols: PROFIBUS-DP, DeviceNet, CANopen, EtherNet/IP, EtherCAT, PROFINET

The Multipole version of Series 3 Plug-In valve island can be easily installed thanks to the front position of the Sub-D connector. The accessories of the new connection system to the Series CX serial nets enable to handle up a multipole valve island by means of a Sub-D connector or through a node integrated in the island.
The modularity of the electric and pneumatic parts allows to install up to a maximum of 22 solenoids on 22 valve positions.

The electric and pneumatic modules have 2- and 3-position modularity. To optimize the signals distribution, electric modules are available for monostable and bistable valves. The pneumatic modularity enables the creation of zones with differentiated pressure.
Manuals, instruction sheets and configuration files can be found on catalogue.camozzi.com or on the QR code on the lable of the product.

GENERAL DATA

| PNEUMATIC SECTION	
Valve construction	spool type with seals
Valve functions	5/2 - 5/3 CC - 5/3 CO - 5/3 CP - 2x3/2 NO - 2x3/2 NC - 1 3/2 NO + 1 3/2 NC
Materials	AL body, stainless steel spool, NBR seals, technopolymer
Mounting	through-out holes in the manifold
Ports	valve = G1/8 - manifold = G3/8
Installation	in any position
Operating temperature	from 0°C to 60°C (with dry air at -20°C)
Nominal flow rate	Qn 700 Nl/min
Nominal diameter	7 mm
Fluid	Filtered air, class 7.4.4 according to ISO 8573-1-2010, without lubrication. If lubricated air is used, it is recommended to use ISO VG32 oil, and to never interrupt the lubrication.
ELECTRICAL SECTION - MULTIPOLE VERSION	
Max absorption	3 A
Type of connection	Multipole 25-pin male Sub-D
Supply voltage	24 V DC +/- 10%
Max number of solenoids	22 on 22 valve positions
Signalling	yellow LED
Duty cycle	ED 100%
Protection class	IP65
ELECTRICAL SECTION - FIELDBUS VERSION	
General characteristics	see the section about the Series CX multi-serial module (2.3.50)
Max absorption	digital outputs/analogic inputs and outputs 3A digital/analogic inputs 3 A
Voltage tolerances	logic supply 24 V DC +/- 10% power supply 24 V DC +/- 10%

MULTIPOLE VERSION AND MULTIPOLE WITH SUB-D ADAPTER
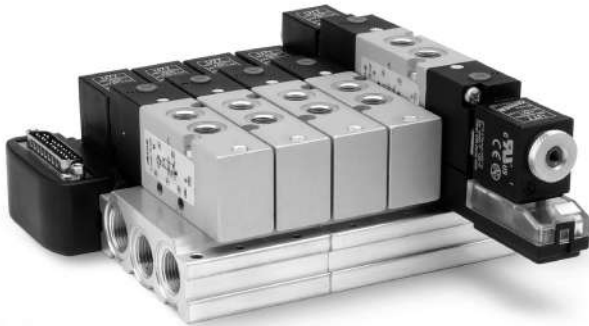
In the Multipole version the front position of the 25 pin Sub-D connector makes the connection easier. The connectors with pre-wired cable, which are available in different lengths and with axial or radial orientation, simplify the electrical connection. The Island can be configured up to a max. of 22 solenoids, using monostable and bistable electrical modules, on 22 valve positions, for example 22 monostable solenoid valves.

Thanks to the 2- or 3-position pneumatic modularity, diaphragms and plates of supplementary supply, it is possible to create zones with differentiated pressure. The Multipole version of Series 3 valve island can be connected by means of a Sub-D adapter. In this way a standard Multipole Island can be inserted as expansion in the subnet of the Fieldbus version.

VERSIONS: FIELDBUS WITH CPU MODULE AND EXPANSION FIELDBUS

The Individual Fieldbus version of Series 3 can be interfaced through a specific module with the Series CX multi-serial module according to the different communication protocols (PROFIBUS-DP, DeviceNet, CANopen, EtherNet/IP, EtherCAT, PROFINET).
Like the Multipole one, the Fieldbus version is able to create islands with 22 coils on 22 valve positions adding a wide range of electrical modules like digital/analog inputs/outputs of 0-10 V and 4-20 mA.

It is possible to insert Initial Subnet Modules in the version with CPU module. These Modules enable to create a subnet with tree structure or in series. On the subnet you can connect Expansion Islands. These expansions have the same possibilities to use the different electric modules, like digital and analog inputs and outputs and further Initial Subnet Modules. Also with this version the same rules as the CPU module and Multipole apply.

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SERIES 3 PLUG-IN VALVE ISLANDS

CODING EXAMPLE - MULTIPOLE VERSION

| 3 | P | 8 | - | 03A | - | BDACAC | - | 2BC3MU2BMXU2B2M | - | G77 |

| Code	Description
3	SERIES
P	TYPE: P = Plug-In
8	SIZE: 8 = 1/8
03A	CONNECTION: 000 = no connector/cable CONNECTOR WITH CABLE AXIAL OUTPUT: 03A = 3 m 05A = 5 m 10A = 10 m 15A = 15 m 20A = 20 m 25A = 25 m CONNECTOR WITH CABLE RADIAL OUTPUT: 03R = 3 m 05R = 5 m 10R = 10 m 15R = 15 m 20R = 20 m 25R = 25 m CONNECTOR WITHOUT CABLE: 4XA = 25-pin axial 4XR = 25-pin radial
BDACAC	CONFIGURATION OF SUBBASE: A = 2 positions with bistable board B = 3 positions with bistable board C = 2 positions with monostable board D = 3 positions with monostable board
2BC3MU2BMXU2B2M	VALVE FUNCTION: E = empty position M = 5/2 Monostable, internal servo-pilot supply B = 5/2 Bistable, internal servo-pilot supply C = 2 x 3/2 NC, internal servo-pilot supply A = 2 x 3/2 NO, internal servo-pilot supply G = 1 x 3/2 NC + 1 x 3/2 NO, internal servo-pilot supply H = 5/3 Closed Centres, internal servo-pilot supply K = 5/3 Exhaust Centres, internal servo-pilot supply N = 5/3 Pressure Centres, internal servo-pilot supply D = 5/2 Monostable, external servo-pilot supply Y = 5/2 Bistable, external servo-pilot supply Q = 2 x 3/2 NC, external servo-pilot supply R = 2 x 3/2 NO, external servo-pilot supply S = 1 x 3/2 NC + 1 x 3/2 NO, external servo-pilot supply V = 5/3 Closed Centres, external servo-pilot supply Z = 5/3 Exhaust Centres, external servo-pilot supply W = 5/3 Pressure Centres, external servo-pilot supply L = plate with closed free position X = supply plate and supplementary exhausts T = diaphragm on channels 1, 3, 5 U = diaphragm in supply 1 J = diaphragm exhausts 3 and 5
G77	SOLENOID MATERIAL: G = PA U = PET

3P8-03R-ADCB-2B3MT2M3V-G77: valve island with 10 positions, radial connector and 3-meter cable.
Bases: the first with 2 bistables positions, the second with 3 monostable pos., the third with 2 monostable pos., the fourth with 3 bistable pos.
Valves: 2 bistable, 3 monostables, diafragm on channels 1,3,5, 2 monostables, 3 Closed Centres, 24 V Solenoids.

FUNCTIONS OF SOLENOID VALVES SERIES 3
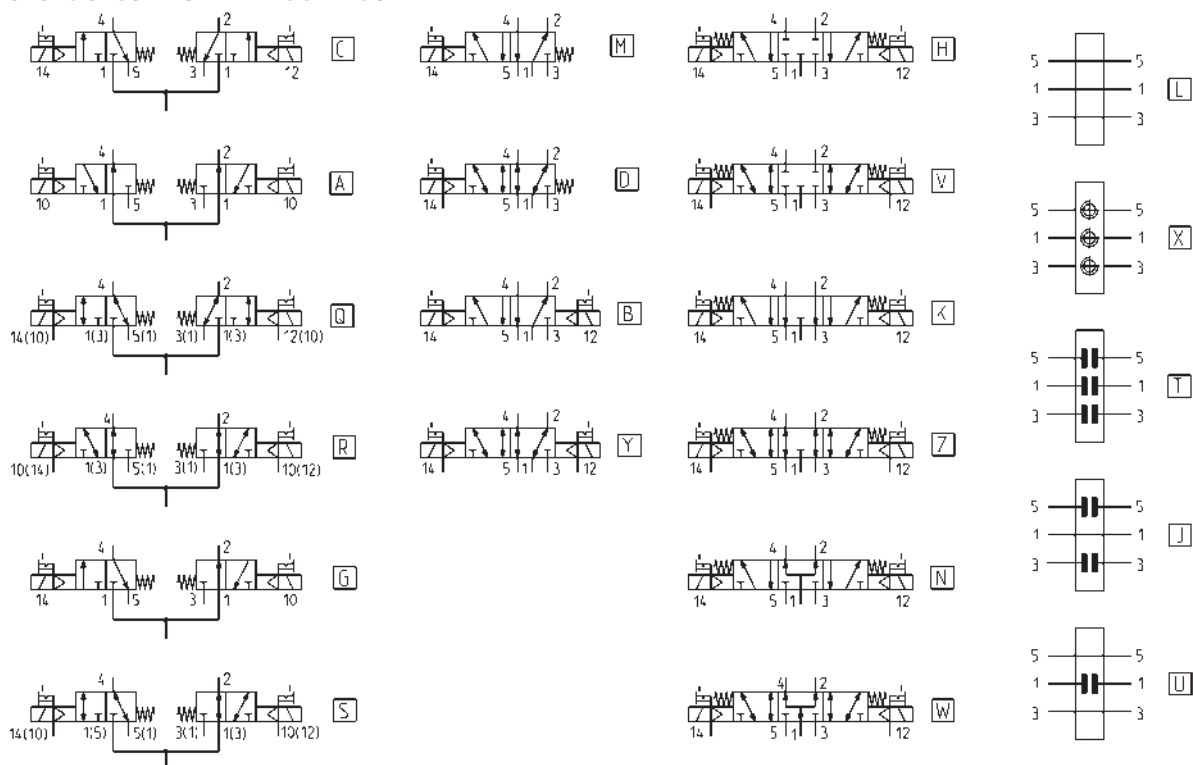
Mod.	Function	Actuation/return	Servo-pilot	Working pressure (bar)	Pilot pressure (bar)	Code
338D-015-02	2 x 3/2 NC	solenoid/spring	internal	2,5 ÷ 10	-	C
348D-015-02	2 x 3/2 NO	solenoid/spring	internal	2,5 ÷ 10	-	A
398D-015-02	1 x 3/2 NC + 1 x 3/2 NO	solenoid/spring	internal	2,5 ÷ 10	-	G
358-015-02	5/2 monostable	solenoid/spring	internal	2,5 ÷ 10	-	M
358-011-02	5/2 bistable	solenoid/solenoid	internal	1,5 ÷ 10	-	B
368-011-02	5/3 CC	solenoid/solenoid	internal	2 ÷ 10	-	H
378-011-02	5/3 CO	solenoid/solenoid	internal	2 ÷ 10	-	K
388-011-02	5/3 CP	solenoid/solenoid	internal	2 ÷ 10	-	N
338D-E15-02	2 x 3/2 NC	solenoid/spring	external	-0,9 ÷ 10	2,5 ÷ 10	Q
348D-E15-02	2 x 3/2 NO	solenoid/spring	external	-0,9 ÷ 10	2,5 ÷ 10	R
398D-E15-02	1 x 3/2 NC + 1 x 3/2 NO	solenoid/spring	external	-0,9 ÷ 10	2,5 ÷ 10	S
358-E15-02	5/2 monostable	solenoid/spring	external	-0,9 ÷ 10	2,5 ÷ 10	D
358-E11-02	5/2 bistable	solenoid/solenoid	external	-0,9 ÷ 10	1,5 ÷ 10	Y
368-E11-02	5/3 CC	solenoid/solenoid	external	-0,9 ÷ 10	2 ÷ 10	V
378-E11-02	5/3 CO	solenoid/solenoid	external	-0,9 ÷ 10	2 ÷ 10	Z
388-E11-02	5/3 CP	solenoid/solenoid	external	-0,9 ÷ 10	2 ÷ 10	W
CNVL/1L	free position (electrical and pneumatic cover)	-	-	-	-	L
CNVL-3P1	plate for supply and outlets	-	-	-	-	X
CNVL-3H-TP (x1)	diaphragm for supply (1)	-	-	-	-	U
CNVL-3H-TP (x2)	diaphragm for outlets (3-5)	-	-	-	-	J
CNVL-3H-TP (x3)	diaphragm for supply (1) and outlets (3-5)	-	-	-	-	T

MODIFICATION OF A VALVE FUNCTION

In case a solenoid valve type M is inserted in a free position and a monostable or bistable electrical conveyor is already available, the following components must be ordered:
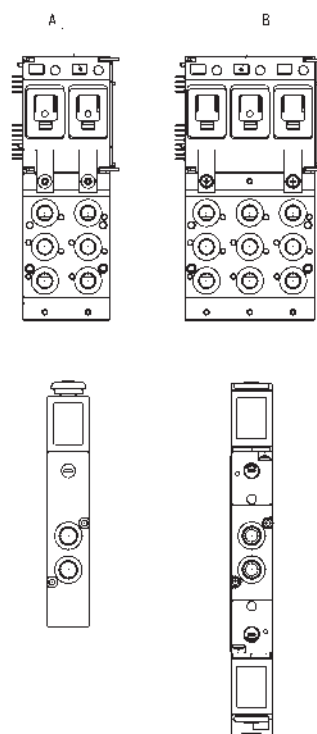
2x screws Cod. CNVL/21
3x interface seals Cod. CNVL-3H/7N
1x solenoid valve 358-015-02-(G77-U77)

In case a solenoid valve type B is inserted in a free position and a bistable electrical conveyor is already available*, the following components must be ordered:

1x electrical module with bistable solenoid valve Cod. 3PAC-R-IF1
1x solenoid valve 358-015-02-(G77-U77)

* In case a monostable conveyor has been already mounted, it must be replaced by a bistable one, provided that the maximum number of 22 signals is not exceeded.
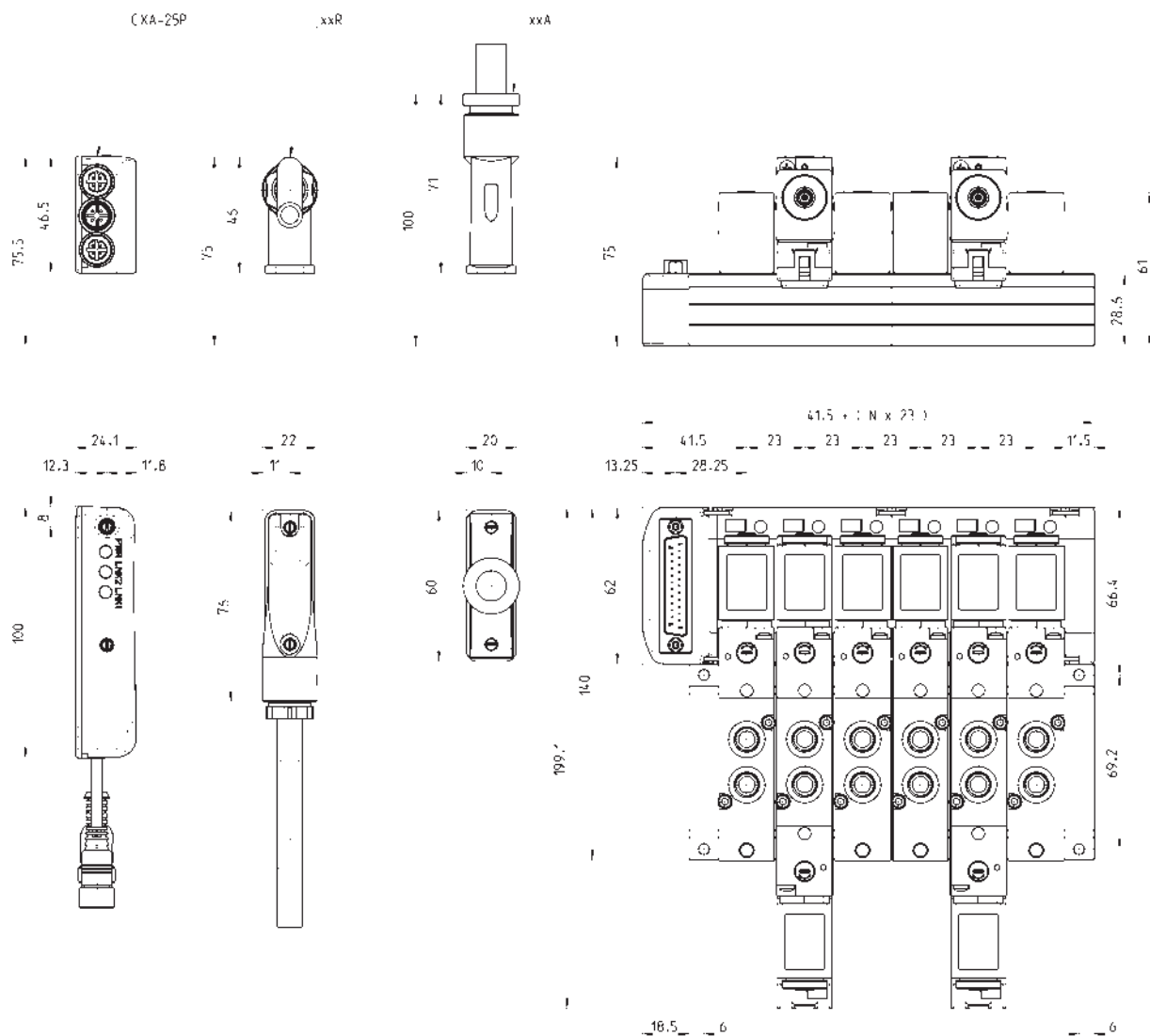
DRAWING NOTE:
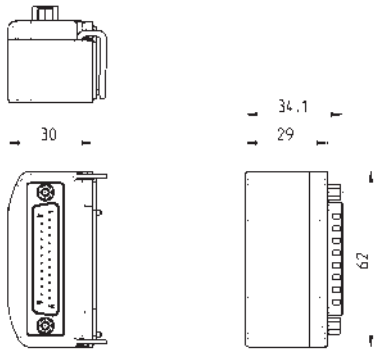A = grey label (monostable)
B = white label (bistable)

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MULTIPOLE version - DIMENSIONS

SERIES 3 PLUG-IN VALVE ISLANDS

CXA-25P   .xxR   xxA

25-pin Sub-D connector module

Initial module to connect the Intermediate Electrical Modules
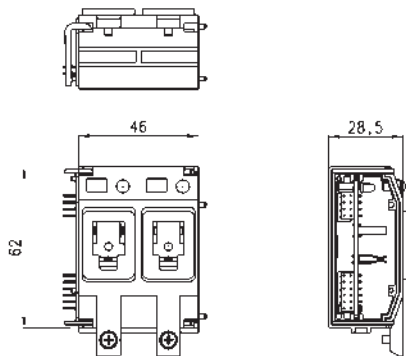
Mod.
3PBC-N-XS0

Intermediate electrical module - 2 positions, mono and bistable

To be mounted with subbases with 2 positions.
The type label in correspondence of LEDs is:
- grey in monostable intermediate modules
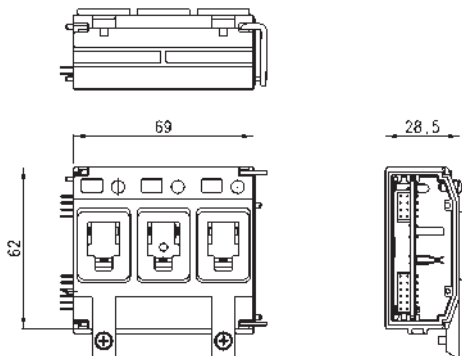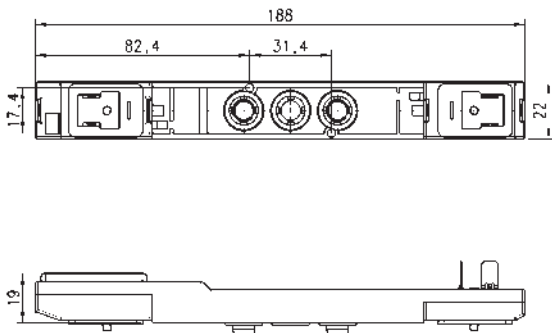- white in bistable intermediate modules

Mod.	
3PAC-M-XI2	Monostable module
3PAC-R-XI2	Bistable module

Intermediate electrical module - 3 positions, mono and bistable

To be mounted with subbases with 3 positions.
The type label in correspondence of LEDs is:
- grey in monostable intermediate modules
- white in bistable intermediate modules

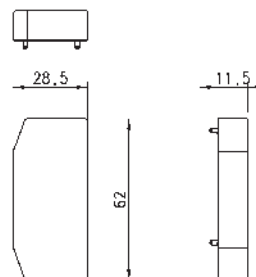| Mod.	
3PAC-M-XI3	Monostable module
3PAC-R-XI3	Bistable module

Electrical Module for a bistable solenoid valve

Supplied with:
2x screws for valve mounting
2x screws for solenoid mounting
1x interface seal
2x interface seals for solenoid
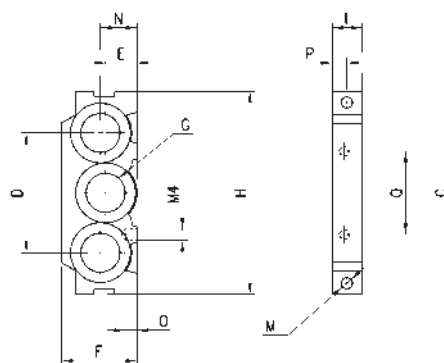
Mod.
3PAC-R-IF1

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End cap for electric module

DIMENSIONS

Mod.
3PAC-R-TP1

Terminal module Mod. CNVL-3H
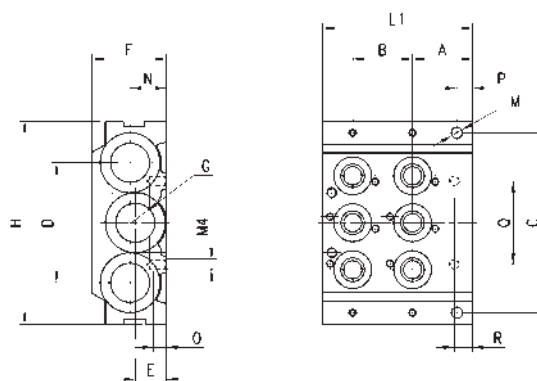

The following is supplied:
2x fixing nuts

DIMENSIONS

Mod.	C	D	E	F	H	I	M	N	O	P	Q	G
CNVL-3H	69.5	46	12	29	78	11.5	4.3	14	5	6	32	3/8

Initial/terminal pneumatic Module - 2 positions

Supplied with:
3x O-rings
2x fixing screws
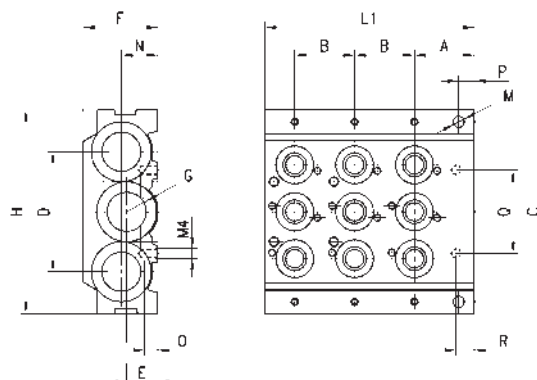2x junction plugs
6x interface seals module/valve

DIMENSIONS

Mod.	A	B	C	D	E	F	G	H	L1	M	N	O	P	Q	R
CNVL-3H2	23	23	69,5	46	12	29	3/8	78	57,5	4,3	14	5	6	32	7

Initial/terminal pneumatic Module - 3 positions

Supplied with:
3x O-rings
2x fixing screws
2x junction plugs
9x interface seals module/valve

DIMENSIONS
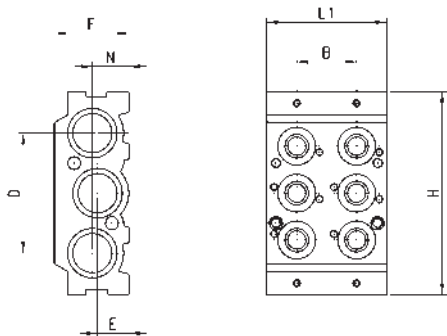
Mod.	A	B	C	D	E	F	G	H	L1	M	N	O	P	Q	R
CNVL-3H3	23	23	69,5	46	12	29	3/8	78	80,5	4,3	14	5	6	32	7

Intermediate pneumatic Module - 2 positions

Supplied with:
3x O-Rings
2x fixing screws
2x junction plugs
6x interface seals module/valve

DIMENSIONS							
Mod.	B	D	E	F	H	L1	N
CNVL-3I2	23	46	12	29	78	46	14

Intermediate pneumatic Module - 3 positions

Supplied with:
3x O-rings
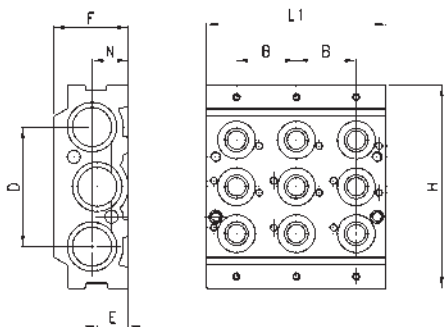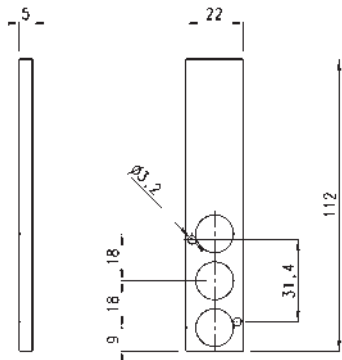2x fixing screws
2x junction plugs
9x interface seals module/valve

Mod.	B	D	E	F	H	L1	N
CNVL-3I3	23	46	12	29	78	69	14

Excluder tap for free position (cod. L)

Supplied with:
3x O-rings
2x screws

Mod.
CNVL/1L

Intermediate plate for manifolds with outlets (cod. X)

Supplied with:
3x O-rings
2x screws

Mod.
CNVL-3P1

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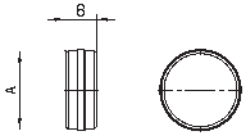General terms and conditions for sale are available on www.camozzi.com.

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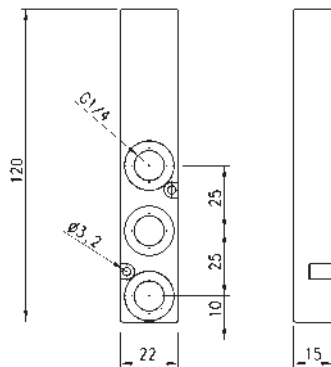
Diaphragm for separation channels 1 - 3 - 5
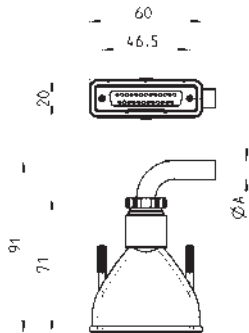
Supplied with:
1x diaphragm.

If you need cod. U, please order N° 1 piece.
If you need cod. J, please order N° 2 pieces.
If you need cod. T, please order N° 3 pieces.

Mod.	A	B
CNVL-3H-TP	15,6	6

Straight Sub-D 25 pin female connector with axial cable

Protection class IP65

Mod.	$\emptyset$A	PIN	cable length (m)
G3X-3	7.7	16	3
G3X-5	7.7	16	5
G3X-10	7.7	16	10
G3X-15	7.7	16	15
G3X-20	7.7	16	20
G3X-25	7.7	16	25
G4X-3	9	25	3
G4X-5	9	25	5
G4X-10	9	25	10
G4X-15	9	25	15
G4X-20	9	25	20
G4X-25	9	25	25

Right angle Sub-D 25 pin female connector with axial cable

Protection class IP65
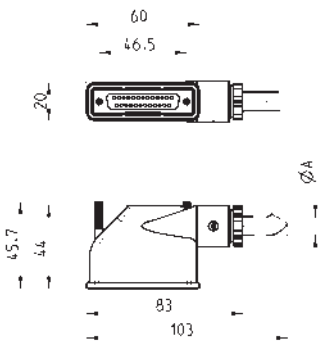
Mod.	$\emptyset$A	PIN	cable length (m)
G3X1-3	7.7	16	3
G3X1-5	7.7	16	5
G3X1-10	7.7	16	10
G3X1-15	7.7	16	15
G3X1-20	7.7	16	20
G3X1-25	7.7	16	25
G4X1-3	10	25	3
G4X1-5	10	25	5
G4X1-10	10	25	10
G4X1-15	10	25	15
G4X1-20	10	25	20
G4X1-25	10	25	25

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SERIES 3 PLUG-IN VALVE ISLANDS

Cable with straight connectors

For PROFINET, EtherCAT, EtherNet/IP and subnet
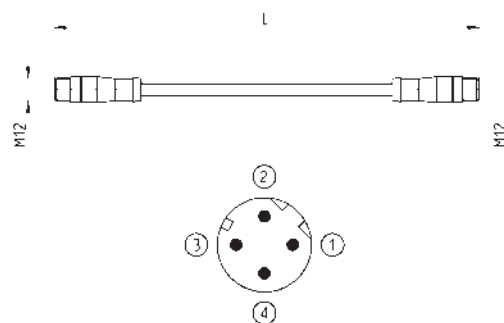
Mod.	description	type of connector	connection	L [cable length] (m)
CS-SB04HB-D100	moulded cable	straight	2x M12 D 4 pin male	1
CS-SB04HB-D500	moulded cable	straight	2x M12 D 4 pin male	5
CS-SB04HB-DA00	moulded cable	straight	2x M12 D 4 pin male	10
CS-SB04HB-DD00	moulded cable	straight	2x M12 D 4 pin male	15
CS-SB04HB-DG00	moulded cable	straight	2x M12 D 4 pin male	20
CS-SB04HB-DJ00	moulded cable	straight	2x M12 D 4 pin male	25

Cable with 90° angular connectors

For PROFINET, EtherCAT, EtherNet/IP and subnet
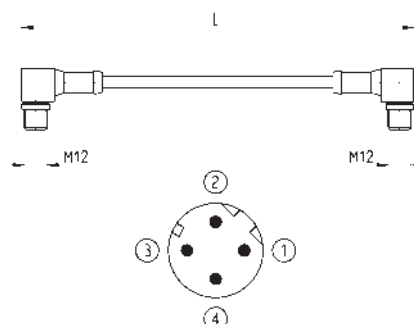
Mod.	description	type of connector	connection	L [cable length] (m)
CS-SC04HB-D100	moulded cable	90°	2x M12 D 4 pin male	1
CS-SC04HB-D500	moulded cable	90°	2x M12 D 4 pin male	5
CS-SC04HB-DA00	moulded cable	90°	2x M12 D 4 pin male	10
CS-SC04HB-DD00	moulded cable	90°	2x M12 D 4 pin male	15
CS-SC04HB-DG00	moulded cable	90°	2x M12 D 4 pin male	20
CS-SC04HB-DJ00	moulded cable	90°	2x M12 D 4 pin male	25

M8 and M12 connector cover caps
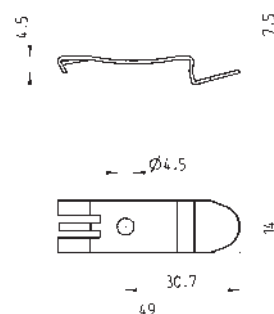
For digital and analog input/output modules and subnet

Mod.	A	B	C [Connection]
CS-DFTP	10	11	M8
CS-LFTP	13.5	13	M12

Mounting brackets for DIN rail

DIN EN 50022 (mm 7,5 x 35 - width 1)

Supplied with:
2x plates
2x screws M4x6 UNI 5931

Mod.
PCF-E520