CAMOZZI
Automation

Series D2/D5 - Multipole

USE AND MAINTENANCE MANUAL

Version: 1.0

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Product identification

CAMOZZI Automation	Conversion table for the production date	86-1400-0001 Rev. D
		Sheet 01/02

Position 1 and 2: n° of the week			
01	**14**	**27**	**40**
02	**15**	**28**	**41**
03	**16**	**29**	**42**
04	**17**	**30**	**43**
05	**18**	**31**	**44**
06	**19**	**32**	**45**
07	**20**	**33**	**46**
08	**21**	**34**	**47**
09	**22**	**35**	**48**
10	**23**	**36**	**49**
11	**24**	**37**	**50**
12	**25**	**38**	**51**
13	**26**	**39**	**52**

Example of composition.	
03P	
Description	
03	Week n° 03
P	Year 2010

Position 3: One letter for the present Year				
A		1996	2021	2046
B		1997	2022	2047
C		1998	2023	2048
D		1999	2024	2049
E		2000	2025	2050
F		2001	2026	2051
G		2002	2027	2052
H		2003	2028	2053
I		2004	2029	2054
K		2005	2030	2055
L		2006	2031	2056
M		2007	2032	2057
N		2008	2033	2058
O		2009	2034	2059
P		2010	2035	2060
Q		2011	2036	2061
R		2012	2037	2062
S	1988	2013	2038	2063
T	1989	2014	2039	2064
U	1990	2015	2040	2065
V	1991	2016	2041	2066
W	1992	2017	2042	2067
X	1993	2018	2043	2068
Y	1994	2019	2044	2069
Z	1995	2020	2045	2070

Managing authority:	Date:	Created by:	Approved by:
Industrial Engineering	**9 April 2010**	**Marco Bontempi**	**Bruno Ghizzardi**

General recommendations

⚠ Please comply with the recommendations for safe use described in this document:

- Some hazards can only be associated with the product after it has been installed on the machine/equipment. It the responsibility of the end user to identify these hazards and reduce the risks associated with them.
- For information regarding the reliability of the components, contact Camozzi Automation.
- Read the information in this document carefully before using the product.
- Keep this document in a safe place and close at hand for the whole of the product's life cycle.
- Pass this document on to any subsequent owner or user.
- The instructions in this manual must be observed in conjunction with the instructions and additional information concerning the product in this manual, available from the following reference links:
  - Website http://www.camozzi.com
  - Camozzi general catalogue
  - Technical assistance service
- Assembly and commissioning must be performed exclusively by qualified and authorised personnel on the basis of these instructions.
- It is the responsibility of the system/machine designer to ensure the correct selection of the most suitable pneumatic component according to the intended application.
- Use of appropriate personal protective equipment is recommended to minimise the risk of physical injury.
- For all situations not contemplated in this manual and in situations in which there is the risk of potential damage to property, or injury to persons or animals, contact Camozzi for advice.
- Do not make unauthorised modifications to the product. In this case, any damage or injury to property, persons or animals will be the responsibility of the user.
- It is recommended to comply with all safety regulations that apply to the product.
- Never intervene on the machine/system until you have verified that all working conditions are safe.
- Before installation or maintenance, ensure that the required safety locks are active, and then disconnect the electrical mains (if necessary) and system pressure supply, discharging all residual compressed air from the circuit and deactivating residual energy stored in springs, condensers, recipients and gravity.
- After installation or maintenance, the system pressure and electrical power supply (if necessary) must be reconnected, and the regular operation and sealing of the product must be checked. In the event of leaks or malfunction, the product must not be used.
- The product may only be used in observance of the specifications provided; if these requirements are not met, the product may only be used upon authorisation by Camozzi.
- Avoid covering the equipment with paint or other substances that may reduce heat dissipation.

2.1 Product storage and transport

- Adopt all measures possible to avoid accidental damage to the product during transport, and when available use the original packaging.
- Observe the specified storage temperature range of -10 ÷ 50 °C.

2.2 Use

- Make sure that the distribution network voltage and all operating conditions are within the permissible values.
- The product may only be used in observance of the specifications provided; if these requirements are not met, the product may only be used upon authorisation by Camozzi.
- Follow the indications shown on the identification plate.

2.3 Limitations of use

- Do not exceed the technical specifications given in paragraph 2 (General characteristics and conditions of use) and in the Camozzi general catalogue.
- Do not install the product in environments where the air itself may cause hazards.
- With the exception of specific intended uses, do not use the product in environments where direct contact with corrosive gases, chemicals, salt water, water or steam may occur.

2.4 Maintenance

- Incorrectly performed maintenance operations can compromise the good working order of the product and harm surrounding persons.
- Check conditions to prevent sudden release of parts, then suspend the power supply and allow residual stresses to discharge before taking action.
- Assess the possibility of having the product serviced by a technical service center.
- Never disassemble a live unit.
- Isolate the product electrically before maintenance.
- Always remove accessories before maintenance.
- Always wear the correct personal protective equipment as envisaged by local authorities and in compliance with current legislation.
- In the event of maintenance, or replacement of worn parts, exclusively use the original Camozzi kits and ensure that operations are performed by specialised and authorised personnel. Otherwise product approval will be rendered invalid.

2.5 Ecological Information

- At the end of the product's life cycle, it is recommended to separate the materials for recycling.
- Follow the waste disposal regulations in force in your country.
- The product and relative parts all comply with the ROHS and REACH standards.

General characteristics and conditions of use

ELECTRICAL SECTION	
Connection type	25 o 44 poles
Supply voltage	24 V DC +/-10%
Valve maximum absorption	1.5 A
Maximum no. valve positions	22 coils on 11 valve positions (with 25-pole Sub-D connector) 38 coils on 19 valve positions (with 44-pole Sub-D connector)
Coil power	1W (reduction to 50% after 100ms)
Switching valve on subbase	Yellow led
Fault detection on master	Red led – anomaly diagnostic
Operation status on master	Green led – power supply and WLAN operation

PNEUMATIC SECTION		
Valve type		Spool with seals
Valve functions		5/2 monostable and bistable 2x3/2 NC - 2x3/2 NO - 1x3/2 NC+1x3/2 NO 5/3 CC – CP – CO
Material	Body	Aluminium
	Spool	Aluminium
	subbase	Tecnopolymer
	End cover	Tecnopolymer
	Seals	HNBR
Connections		Uses 2 and 4 Thread or bushings, tube size variable according to the pitch
Temperature		0 ÷ 50 °C
Air characteristics		Compressed air filtered and not lubricated in class 7.4.4 according to ISO 8573-1: 2010. If lubrication is required, use only oils with max. viscosity. 32 Cst and the version with external servo drive. The servo drive air quality must be in class 7.4.4 according to ISO 8573-1: 2010 (do not lubricate).
Valve Size		11 mm - 16 mm
Working pressure		-0.9 ÷ 10 bar
Drive pressure		3 ÷ 7 bar - 3.5 ÷ 7 bar (> 6 bar for the 2x3/2 version)
Flow rate		250 ÷ 950 Nl/min
Mounting position		Any
IP protection		IP65

General description of the system

The **Series D Valve Island Multipole** is the new valve unit to be able to ensure optimum productivity and flexibility for use in many industrial automation systems.
The modular single subbases, with an easy valve connection system and reduced dimensions, make the Series D valve island the ideal solution for all industrial applications that require quick and easy installation of pneumatic functions in restricted spaces.
The Series D is a valve island equipped with **COILVISION** technology (par. 7.4) that allows you to monitor and predict the state of wear and efficiency of some parts of the individual coil valves. Through this monitoring and predictive diagnostics system, it is possible, for example, to know the electricity consumption and the possible overheating of the coil. The detected data, alarms and health status can be transmitted via cable to a PLC or via WLAN (optional) to an IIoT Gateway for subsequent sending to the Cloud.

COILVISION
TECHNOLOGY

The smart mode to communicate with the island is **Camozzi UVIX** (Universal Visual Interface), a software that can be installed on a pc/server/gateway and accessed through a browser (cap. 9).

UVIX

4.1 Series D2

Valve islands composed of only size 2 valves (16 mm pitch) are called Series D2 Valve Islands Multipole.

4.2 Series D5

Through the use of specific subbases, mixed valve islands consisting of size 1 valves (11 mm pitch) and size 2 valves (16 mm pitch) can be created. These islands are named Series D5 Valve Islands.
NOTE. There is no need to adhere to an order regarding the position of valves in the composition of the Series D5 Valve Islands Multipole, therefore, valves of both sizes 1 and 2 can be freely mixed.

Recipients

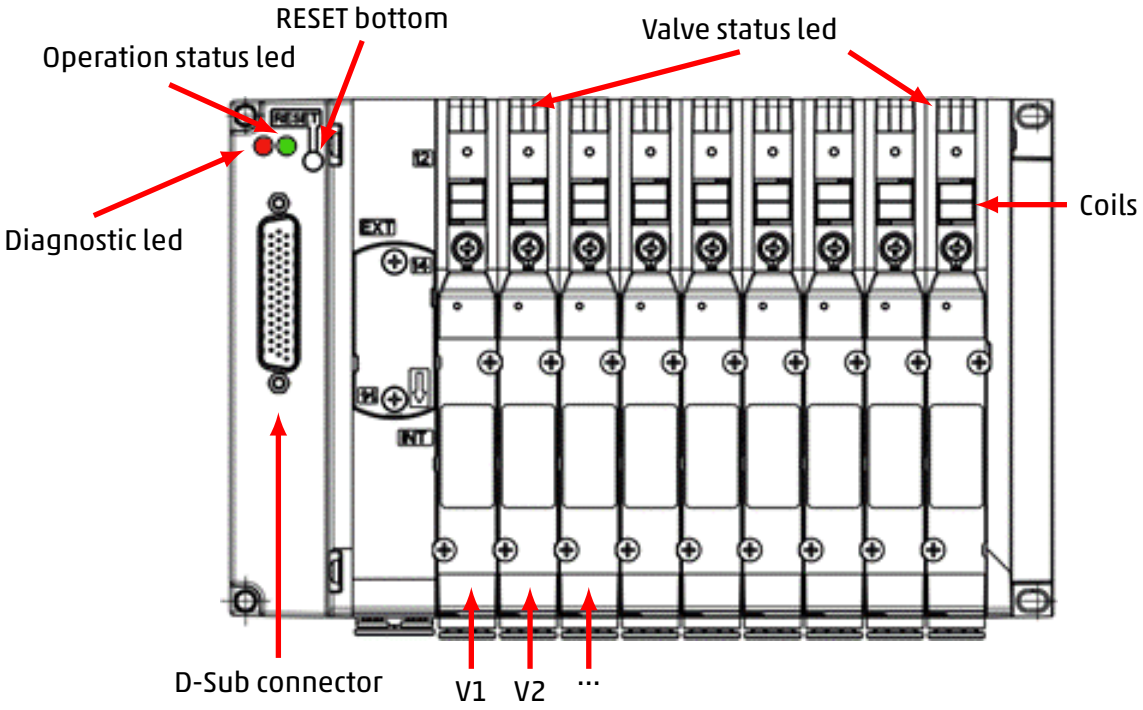
The manual is intended exclusively for qualified experts in control and automation technologies who have experience in the installation and commissioning.

Installation

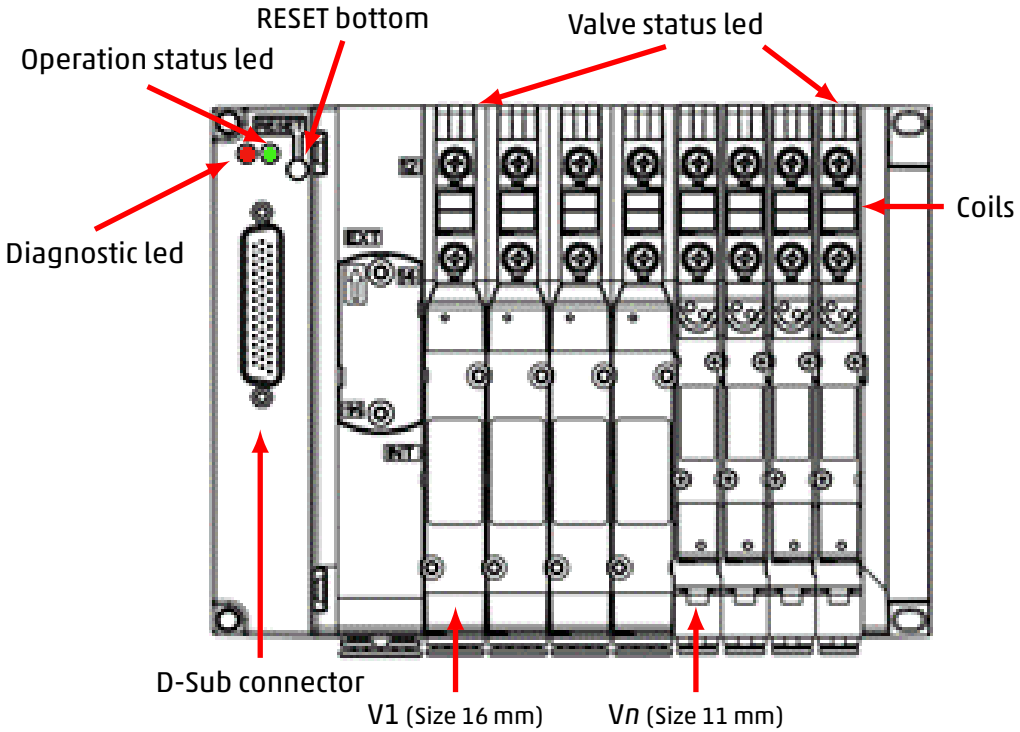
- During the unpacking phase, be very careful not to damage the product.
- Check for damage due to transportation or storage of the product.
- Separate the packaging materials in order to allow their recovery or disposal in compliance with the regulations in force in your country.
- Before putting the component into operation, check that the declared characteristics and performances correspond to those required.
- During the installation of the component, provide for specific surge protection devices.
- During the installation of the component, check that there is no danger due to mechanical movements.
- Install the component in an area where the set-up and maintenance phases are easily performed and cannot create dangers for the operator.
- Close any unused connections with the appropriate covers or protective caps, in the case of the 3/5 and 82/84 exhaust channels with appropriate silencers.
- The components must be fixed correctly, using the appropriate anchors, where available, and checking that the fixing remains effective even in the presence of high cycles or strong vibrations.
- Provide for the installation of dehumidifiers in order to avoid the formation of humidity and condensation in the internal components.
- If the device is used to operate an actuator whose accidental movement can generate a hazard, provide for appropriate locking devices for the moving part of the actuator.
- Make sure the connectors are connected and fastened correctly.
- Use only power supplies capable of ensuring safe electrical disconnection of the voltage supply according to IEC 742 / EN 60742 / VDE 0551 with a minimum insulation resistance of 4 kV Protected Extra Low Voltage (PELV).
- It is the user's task to adopt the necessary measures to prevent damage to the system caused by non-periodic overvoltage peaks on the power lines following power cuts on high energy equipment.
- Voltage interruptions are allowed according to the PS2 severity level.

6.1 Connecting and diagnostic elements

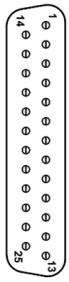
6.1.1 Series D2 Valve Island



6.1.2 Series D5 Valve Island



6.2 Multipole connector

Symbol	Pin	Cables Color	Function
	1	WHITE	Valve 2 – Coil 14
	2	BROWN	Valve 1 – Coil 12
	3	GREEN	Valve 2 – Coil 14
	4	YELLOW	Valve 2 – Coil 12
	5	GREY	Valve 3 – Coil 14
	6	PINK	Valve 3 – Coil 12
	7	BLUE	Valve 4 – Coil 14
	8	RED	Valve 4 – Coil 12
	9	BLACK	Valve 5 – Coil 14
	10	VIOLET	Valve 5 – Coil 12
	11	GREY/PINK	Valve 6 – Coil 14
	12	RED/BLUE	Valve 6 – Coil 12
	13	WHITE/GREEN	Valve 7 – Coil 14
	14	BROWN/GREEN	Valve 7 – Coil 12
	15	WHITE/YELLOW	Valve 8 – Coil 14
	16	YELLOW/BROWN	Valve 8 – Coil 12
	17	WHITE/GREY	Valve 9 – Coil 14
	18	GREY/BROWN	Valve 9 – Coil 12
	19	WHITE/PINK	Valve 10 – Coil 14
	20	PINK/BROWN	Valve 10 – Coil 12
	21	WHITE/BLUE	Valve 11 – Coil 14
	22	BROWN/BLUE	Valve 11 – Coil 12
	23	WHITE/RED	Diagnostic output
	24	BROWN/RED	+ 24Vdc
	25	WHITE/BLACK	Negative Common

Symbol	Pin	Cables Color	Function
	1	WHITE	Valve 1 – Coil 14
	2	BROWN	Valve 1 – Coil 12
	3	GREEN	Valve 2 – Coil 14
	4	YELLOW	Valve 2 – Coil 12
	5	GREY	Valve 3 – Coil 14
	6	PINK	Valve 3 – Coil 12
	7	BLUE	Valve 4 – Coil 14
	8	RED	Valve 4 – Coil 12
	9	BLACK	Valve 5 – Coil 14
	10	VIOLET	Valve 5 – Coil 12
	11	GREY/PINK	Valve 6 – Coil 14
	12	RED/BLUE	Valve 6 – Coil 12
	13	WHITE/GREEN	Valve 7 – Coil 14
	14	BROWN/GREEN	Valve 7 – Coil 12
	15	WHITE/YELLOW	Valve 8 – Coil 14
	16	YELLOW/BROWN	Valve 8 – Coil 12
	17	WHITE/GREY	Valve 9 – Coil 14
	18	GREY/BROWN	Valve 9 – Coil 12
	19	WHITE/PINK	Valve 10 – Coil 14
	20	PINK/BROWN	Valve 10 – Coil 12
	21	WHITE/BLUE	Valve 11 – Coil 14
	22	BROWN/BLUE	Valve 11 – Coil 12
	23	WHITE/RED	Valve 12 – Coil 14
	24	BROWN/RED	Valve 12 – Coil 12
	25	WHITE/BLACK	Valve 13 – Coil 14
	26	BROWN/BLACK	Valve 13 – Coil 12
	27	GREY/GREEN	Valve 14 – Coil 14
	28	YELLOW/GREY	Valve 14 – Coil 12
	29	PINK/GREEN	Valve 15 – Coil 14
	30	YELLOW/PINK	Valve 15 – Coil 12
	31	GREEN/BLUE	Valve 16 – Coil 14
	33	YELLOW/BLUE	Valve 16 – Coil 12
	33	GREEN/RED	Valve 17 – Coil 14
	34	YELLOW/RED	Valve 17 – Coil 12
	35	GREEN/BLACK	Valve 18 – Coil 14
	36	YELLOW/BLACK	Valve 18 – Coil 12
	37	GREY/BLUE	Valve 19 – Coil 14
	38	PINK/BLUE	Valve 19 – Coil 12
	39	GREY/RED	Diagnostic output
	40	PINK/RED	Not used
	41	GREY/BLACK	+24 Vdc
	42	PINK/BLACK	
	43	BLUE/BLACK	Negative common
	44	RED/BLACK	

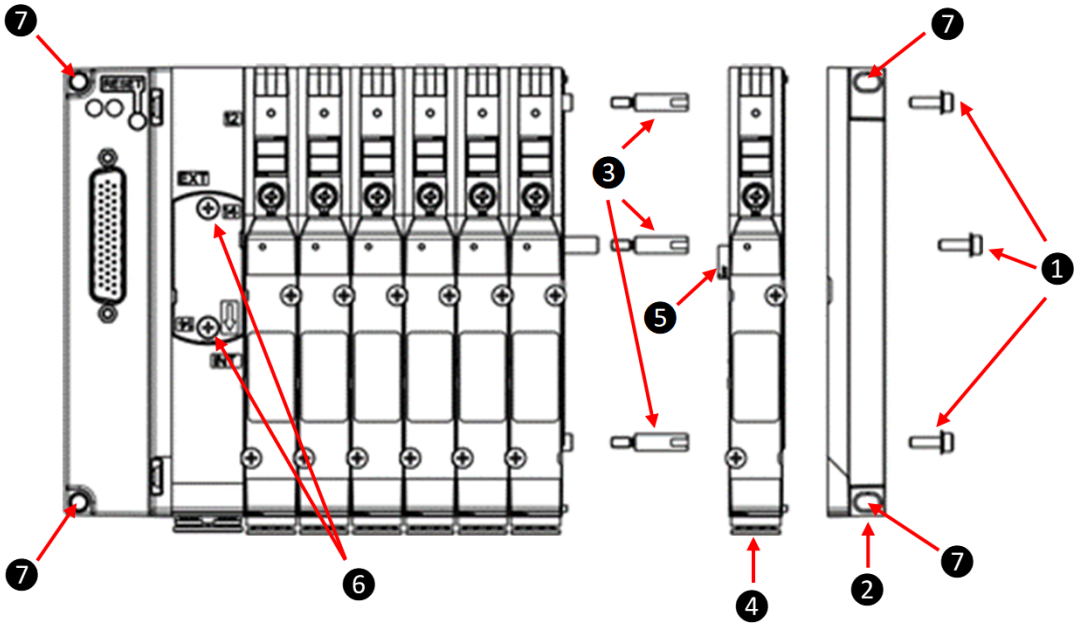
NOTE. It is suggested to connect all the not used wired to the same negative common of the power supply (Pin 25 for 25 pins D-sub version and 43/44 pins for the 44 pins D-sub version).

6.3 Electrical characteristics

The Series D valve island multipole requires a fixed 24Vdc (+/- 10%) power supply that is made through pins 24 (+) and 25 (-) of the 25-pin D-sub connector or pins 41-42 (+) and 43-44 (-) of the 44-pole connector.
The signals for activating the Coil valves are PNP type, it is possible to activate a maximum of 22 Coil pilots on 11 valve positions in the version with 25-pole connector and a maximum of 38 Coil pilots on 19 valve positions in the version with 44-pole connector.
The Series D multipole has a digital output (Pin 23 of the D-sub 25-pole connector or pin 40 of the D-sub 44-pole open collector diagnostic connector, the connection of the diagnostic output is optional

6.4 Assembly

6.4.1 Series D subbases assembly



Dismantle and fit the Series D subbases as follows:

1. Switch off the power supply of the valve island (removed the multipole connector) to avoid problems for the device or user.
2. Unscrew the screws ❶ closing the right terminal ❷ and open the valve pack
3. Remove the valves subbases from the tie-rods and replace with the new subbases.
4. If a subbase is added, screw the tie rods in a single position up to the stop on the tie rods in the subbases ❸ .
5. Insert the subbase ❹ on the tie rods paying attention to the connection between the card and the *edgecard* connector ❺ and the correct positioning of the interface gasket between the subbases.
6. Reassemble the right terminal ❷ and tighten the screws ❶ with tightening torque 0.9 Nm.
7. Screw the Series D valves onto the subbases with a tightening torque of 0.25 Nm (The same torque must be applied in case of assembly / disassembly of the internal / external power supply cover ❻).
8. In case of fixing direct ❼ (not with the Din Rail) , apply torque less than 1.5 Nm

If it is necessary to assemble many valve positions, assemble the valve on the subbase and then join components together.

NOTE. After an island modification, the mapping procedure is required (par. 7.2).

6.4.2 Dismantling and fitting Serie D coil valves

Dismantle and fit the Serie D coil valves on the same size subbases as follows:

1. Unscrew the 2 screws above the Serie D coil valves.
2. Pull the valves carefully and without tilting from the subbase to avoid damages.
3. Add the new valves carefully and without tilting to the subbase to avoid damages.
4. Tighten the 2 screws (Torque max 0.5 Nm).
5. Reset the subbase information from UVIX interface or controller/PLC.

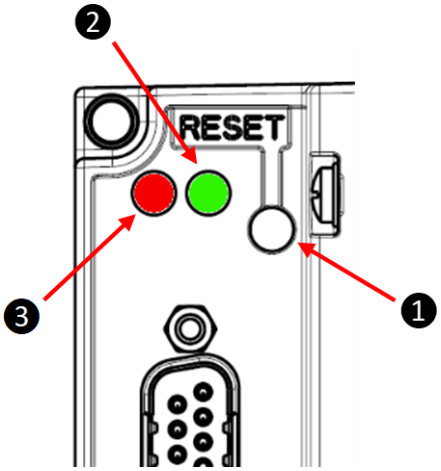
Commissioning

7.1 Start-up operation

The Series D valve island multipole at startup performs a check of the composition of the entire system, this called **mapping**. Specifically, the composition of the system is determined by the type and location of coil valve subbases.
The system mapping is saved in the internal memory of the multipole master. If the mapping has never been stored or the configuration of the system has been modified, a new mapping request must be made (par. 7.2). During the mapping operation, the general diagnostic LEDs of each connected accessory device light up in sequence, from the first position to the n position. If the mapping finishes successfully, the diagnostic LEDs of each recognized subbase are switched off and the valve island is in normal opearation (*Work*). If the mapping is not completed correctly, a diagnostic alarm will be triggered (par. 8.1.2) and the valve island is in error state and will not proceed with any other operations.

7.2 Mapping

The Series D valve island multipole is extremely flexible and its configuration can be modified by removing, replacing or changing the positions of the coil valve subbases. Each time a change is made, the mapping procedure must be carried again out to correctly configure the entire system.
The master of the valve island must be aware of the composition of the entire island: number and type and location of coil valve subbases.
The mapping procedure must be carried out at the island's startup by physically interacting with it.



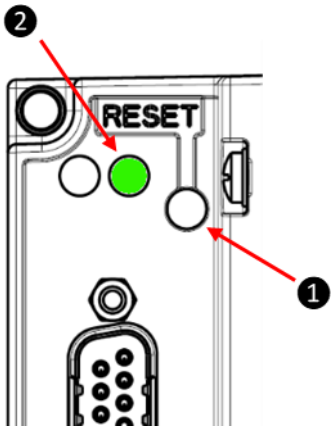
1. Disconnect the power supply.
2. Remove the cap that covers the RESET button ❶.
3. Using a thin tip screwdriver, press and hold the RESET button.
4. Switch on the power and keep the RESET button pressed for 3 seconds..
5. Replace the cap that covers the RESET button ❶.

Successful numbering is indicated by the simultaneous flashing of the LEDs on the subbases and the LED operating status ❷ (green led). Otherwise, that is, if the numbering was not correctly done, the red diagnostic led ❸ will light up (red led), and the LED of the last valve position correctly numbered. To solve this problem, please refer to paragraph 8.1.2.

* Example for Series D1 Valve Island Multipole.

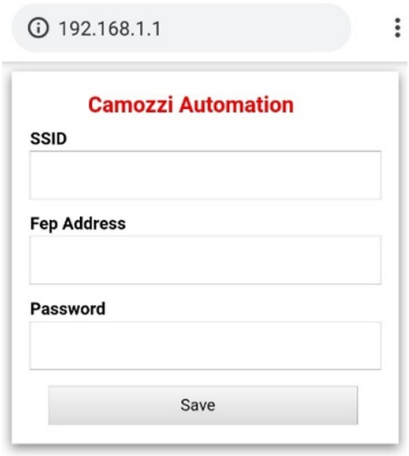
7.3 WLAN connection (optional)

⚠ Before connecting a Series D valve island to a WLAN, it is necessary to have read the information and followed the instructions in UVIX Manual. The following steps are necessary to configure the WLAN



connection:

1. Check that the letter W is present in the sixth position of the code, e.g. DMC.W.
2. Remove the cap that covers the RESET button ❶.
3. Provide power to the island (operating status led ❷ flashing green), press the RESET button for at least 5 seconds.
4. The island is configured as an Access Point and generates the *CamozziWiFi* WLAN network.
5. Using a PC or portable device, connect to the *CamozziWIFI* network, access with the password *!!camozzi*.
6. Open a browser and connect to the address 192.168.1.1, where the following page (mini-app) will appear:



7. Enter the credentials of the network to which you want to connect the island, for example:
   - SSID: camozziUVIX
   - FEP ADDRESS: 192.168.0.5
   - PASSWORD: camozziUVIX
8. The valve island is configured as a Client and connects to the network for data transmission.
9. Replace the cap that covers the RESET button ❶.

7.4 Coilvision

The subbases of Series D valves are equipped with **Coilvision** technology. This technology was developed to constantly monitor the functional parameters of the coil that drives the spool. Each actuation of the coil, in different cyclic configurations and environmental conditions, is analysed to acquire information which, when processed by software algorithms, allows the health of the component to be diagnosed and predicted.
The information on the health status of the coil valve is data supplied by the valve islando to the Camozzi UVIX browser interface 9 in the form of a percentage and gauge indicator. Via UVIX, you can also receive a replace coil valve warning when its performance has deteriorated.

Diagnostic

The Series D valve island has an *open collector* diagnostic output with which it signals the faults that may occur to the single valve / subbase.

- Pin-23 of the 25-pin D-sub connector.
- Pin 39 of the 44-pin D-sub connector.

The maximum controllable current is 50mA and is equipped with short circuit protection.
The types of the alarms are:

- Mapping absent.
- Mapping errror.
- Communication absent.
- Overheating subbase.
- Overheating of one or more coil valve pilots.
- Overcurrent of one or more coil valve pilots.
- One or more pilots in open circuit (interrupted coil).
- Activation abnormality of one or more pilots.

The valve ssland diagnostics are also indicated visually.

- The subbases indicate the type of alarm by means of a coded flashing of the LED associated with the single pilot (par. 8.4).
- The multipole head of the valve island signals, with the operating and diagnostic status LEDs, the general behaviour of the island itself (par. 8.3).

In addition, if WLAN communication is present, diagnostics are sent to the Camozzi UVIX interface to be displayed on a browser.

8.1 Alarms

8.1.1 Mapping absent

After requesting a new system mapping (par. 7.2), an error has occurred and the procedure failed. The mapping ends at the first subbase with the diagnostic LED off. The valve island is in a blocking state of error.
Solution: repeat the mapping procedure and replace where necessary the subbase where the mapping ends (first subbase with diagnostic LED off). If the problem persists, contact Camozzi support.

8.1.2 Mapping error

During the mapping phase, a coil valve error has occurred on the subbase. The mapping has failed at the first subbase with the diagnostic LED off. The valve island is in a blocking state of error.
Solution: repeat the mapping procedure and replace where necessary the subbase where the mapping ends (first subbase with diagnostic LED off). If the problem persists, contact Camozzi support.

8.1.3 Communication absent

The communication between the island master and at least one subbase is lost: no messages are received in response to alarm or diagnostic requests sent by the master. The island can continue to work but cannot interact with the subbases in error.
Solution: restart the island; if the problem persists, contact Camozzi support.

8.1.4 Overheating subbase

One or more subbases have reached or exceeded the limit temperature over which the normal operation of the subbase itself is not guaranteed and, if the condition persists, it can lead to the failure of some component on the board. This alarm is not blocking and the island continues to operate.
Solution: if the problem persists, it is recommended to replace the subbase that is presenting the error.

8.1.5 Overheating coil

One or more pilots have reached or exceeded the limit temperature over which the normal operation of the pilot itself is not guaranteed and, if the condition persists, it can lead to the failure. This alarm is not blocking and the island continues to operate.
Solution: if the problem persists, it is recommended to replace the subbase that is presenting the error.

8.1.6 Overcurrent coil

One or more pilots have reached or exceeded the limit current over which the normal operation of the pilot itself is not guaranteed and, if the condition persists, it can lead to the failure. This alarm is defualt blocking and the valve can not be controlled except by restarting the island. Using the Camozzi UVIX interface, the blocking alarm can be disabled (par. 9.6.4.4).
Solution: if the error is blocking, restart the island. If the error is non-blocking, reactivate the valve. If the problem persists, replace the valve that is presenting the error.

8.1.7 Interrupted coil

One or more pilots are in open circuit and do not activate the valve. This alarm is defualt blocking and the valve can not be controlled except by restarting the island. Using the Camozzi UVIX interface, the blocking alarm can be disabled (par. 9.6.4.4).
Solution: if the error is blocking, restart the island. If the error is non-blocking, reactivate the valve. If the problem persists, replace the valve that is presenting the error.

8.1.8 Fault coil

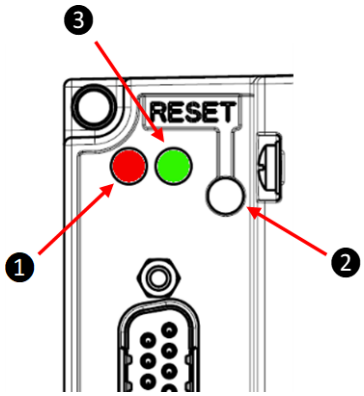
One or more pilots are experiencing anomalies during their activation. This event does not guarantee that the valve has activated correctly. This alarm is not blocking by default and, therefore, the valve can be continuously commanded. The pilot activation anomaly alarm can be disabled through a dedicated procedure (par. 8.2).
Solution: if the problem persists, it is recommended to replace the valve that is presenting the error.

8.2 Procedure for enabling/disabling the diagnostic of the fault coil

The multipole master indicates the valves alarms through the red diagnostic LED ❶ and the digital output to connect a PLC.
The diagnostic of the fault coil can be enabled (default) or disabled through the manual procedure with the RESET button ❷.

- 3 consecutive presses (in 2 seconds), the diagnostic of the fault coil is disabled.
- 2 consecutive presses (in 2 seconds), the diagnostic of the fault coil is enabled

At the end of one of the two procedures, the island indicates the correct reception of the procedure and its configuration saving with three-second of flash of the green LED ❸.
The diagnostic of the fault coil via LED will remain active on the individual subbases.



8.3 Valve island diagnostic

Diagnostic of the valve island multipole are handled by the diagnostic LED and the operation LED.
In addition, diagnostic information regarding the valve island can be viewed via the UVIX interface, if the WLAN module is present.

Module status and alarms	Operative LED	Diagnostic LED	UVIX
Normal operation (WLAN OFF)	 1 flash GREEN @100 ms every 1 s	 RED OFF	
Normal operation (WLAN ON)	 1 flash GREEN @300 ms every 3 s	 RED OFF	
Manual operation (WLAN ON)	 2 flashes GREEN @300 ms every 3 s	 RED OFF	
Alarm of mapping absent (8.1.1)	 GREEN OFF	 1 flash RED @100 ms every 1 s	Mapping absent
Alarm of mapping error (8.1.2)	 GREEN OFF	 2 flashes RED @100 ms every 1 s	Mapping error
Alarm of communication absent (8.1.3)	Falshing (see the previous states)	 2 flashes RED @100 ms every 1 s	**NOTE.** On the individual subbase page, *Communication alarm* is indicated.

Module status and alarms	Operative LED	Diagnostic LED	UVIX
Valve alarmS	Falshing (see the previous states)	 1 flash RED @100 ms every 1 s	**N.B.** See alarms related to subbase diagnostic (par.8.4)
Alarm of undervoltage multipole master (<21,6V)	Falshing (see the previous states)	 3 flashes RED @100 ms every 1 s	Undervoltage valve island
Alarm of overheating multipole master	Lampeggiante (vedi uno degli stati precedenti)	 5 flashes RED @100 ms every 1 s	Overheating valve island

8.4 Subbases diagnostic

The diagnostic of the subbases for the valves is defined by a coded blinking of the yellow LED associated with the single pilot. In addition, it is possible to see the diagnostic information regarding the single valve and its subbase via the UVIX interface, if the WLAN module is present.

Module status and alarms	LED status	UVIX
Normal operation without alarms	 YELLOW OFF	The valve is not controlled.
	 YELLOW ON	The valve has been operated correctly.
Overheating subbase (8.1.4)	 5 flashes YELLOW @100 ms every 1 s	Overheating subbase
Overheating coil (8.1.5)	 3 flashes YELLOW @100 ms every 1 s	Overheating coil 14/12
Overcurrent coil (8.1.6)	 3 flashes YELLOW @100 ms every 1 s	Overcurrent coil 14/12
Interrupted coil (8.1.7)	 2 flashes YELLOW @100 ms every 1 s	Interrupted coil 14/12
Fault coil (8.1.8)	 1 flash YELLOW @100 ms every 1 s	Fault coil 14/12

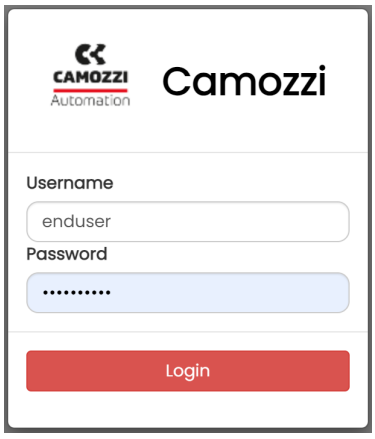
UVIX

9.1 Introduction

Camozzi's proprietary environment, called UVIX, allows the user to monitor and configure all new generation Camozzi devices (*Camozzi Smart Devices*) that support connection to it.
Devices can be connected to UVIX in two ways: wireless or USB. This system has been implemented with a *web-based* architecture so that information can be accessed straightforwardly using a browser.
Monitoring consists of displaying all the device variables, whether they relate to operation, diagnostics, or parameterization.
For details on the UVIX architecture, its installation, and general operations, see the UVIX Manual.

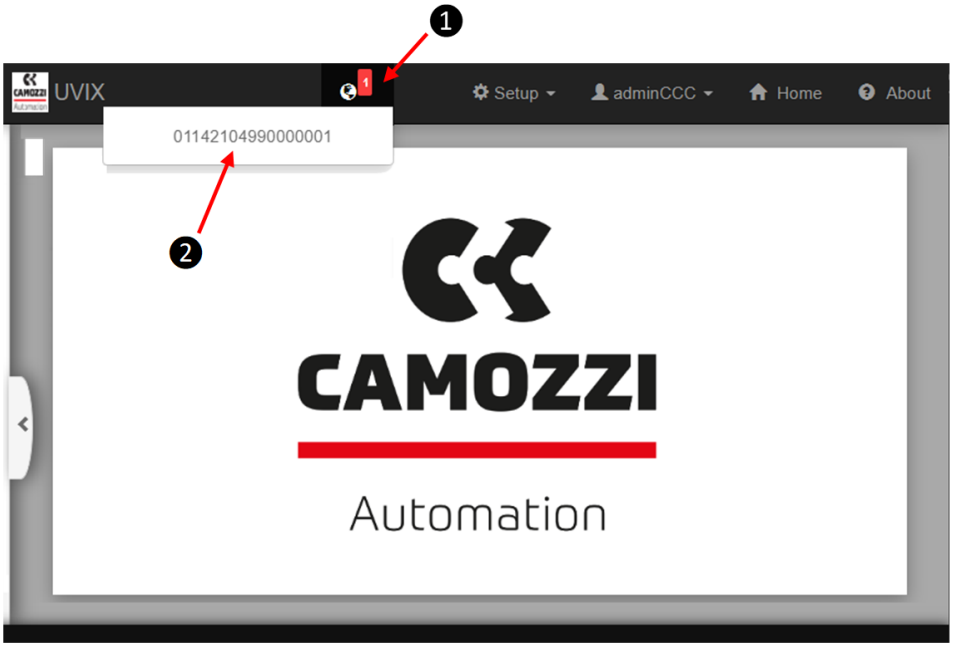
9.2 Login

Access to Camozzi UVIX can take place in VIEW mode using the *enduser* user and the *enduser* password or in CONFIGURATION mode using the *user* user and the *customer* password.

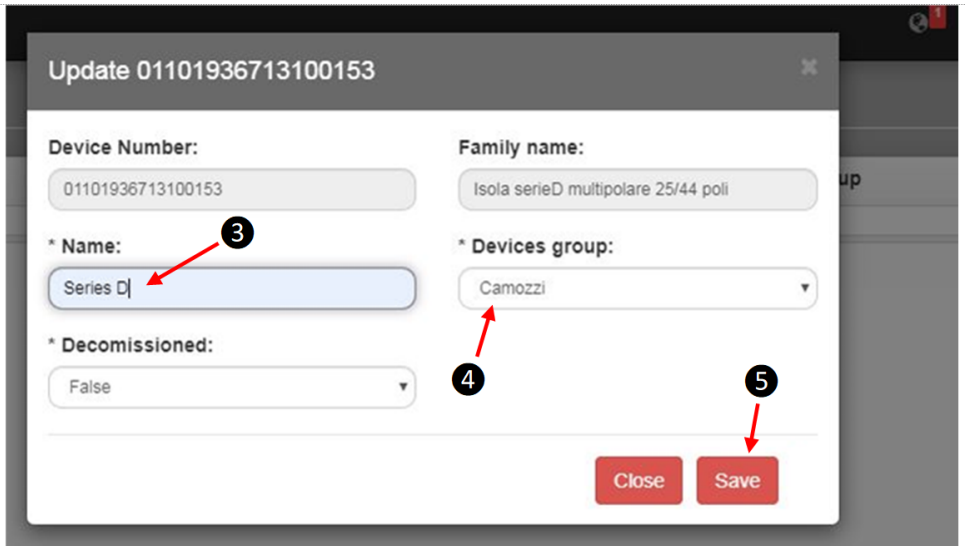


9.3 Device assignment

The system signals the presence of a new Series D island connected to the WLAN network.



1. Click on the icon ❶ to display the *Serial number* of the Series D island.
2. Click on the *Serial Number* ❷ to open the configuration screen.

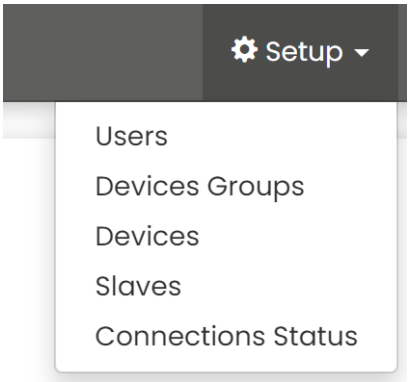


3. Assign an identifier to the device in the *Name* window ❸.
4. Assign the device to a *Devices Group* ❹ that must have been previously created (par. 9.4).
5. Save the configuration with the *Save* bottom ❺.

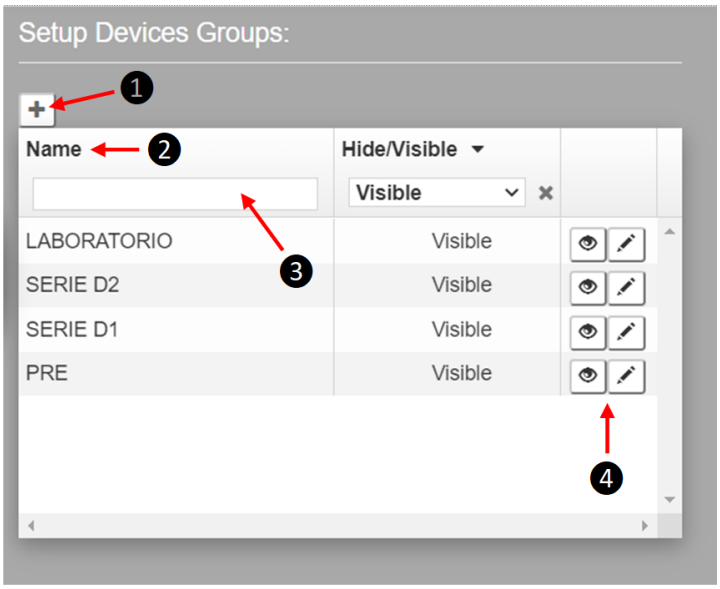
9.4 Device Group

Camozzi UVIX allows you to organize the display of devices into groups: *Device Group*.
It is possible to add new device groups by specifying their name, or view and / or modify the device groups already present in the master data.

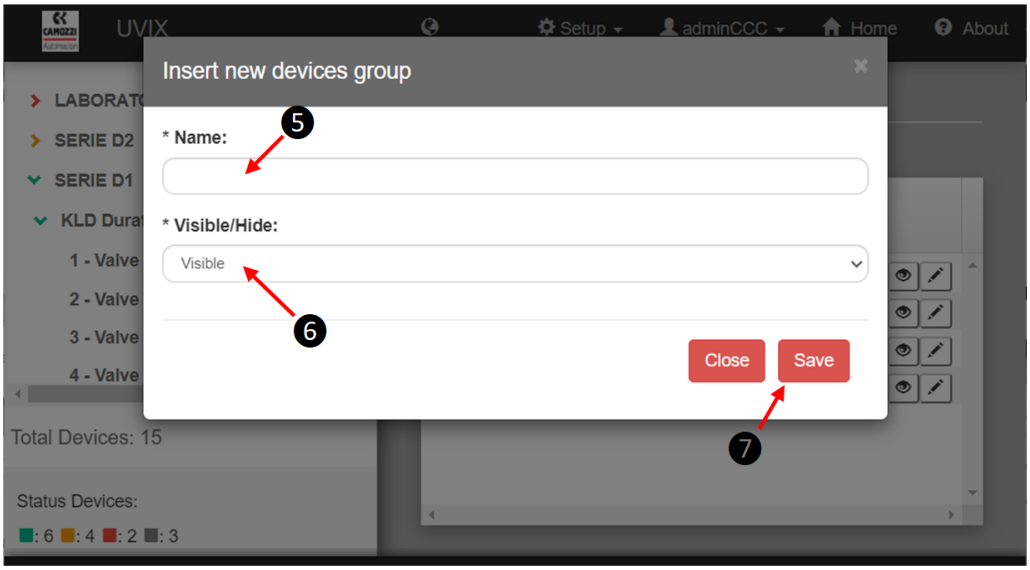
1. Click on the *Setup* icon and select the *Devices Group* item.



2. Create a new devices group clicking on the cross bottom ❶:
   - Sort the device groups alphabetically in ascending / descending order ❷.
   - Filter the values contained in the relevant column ❸.
   - View device group details to edit properties ❹.

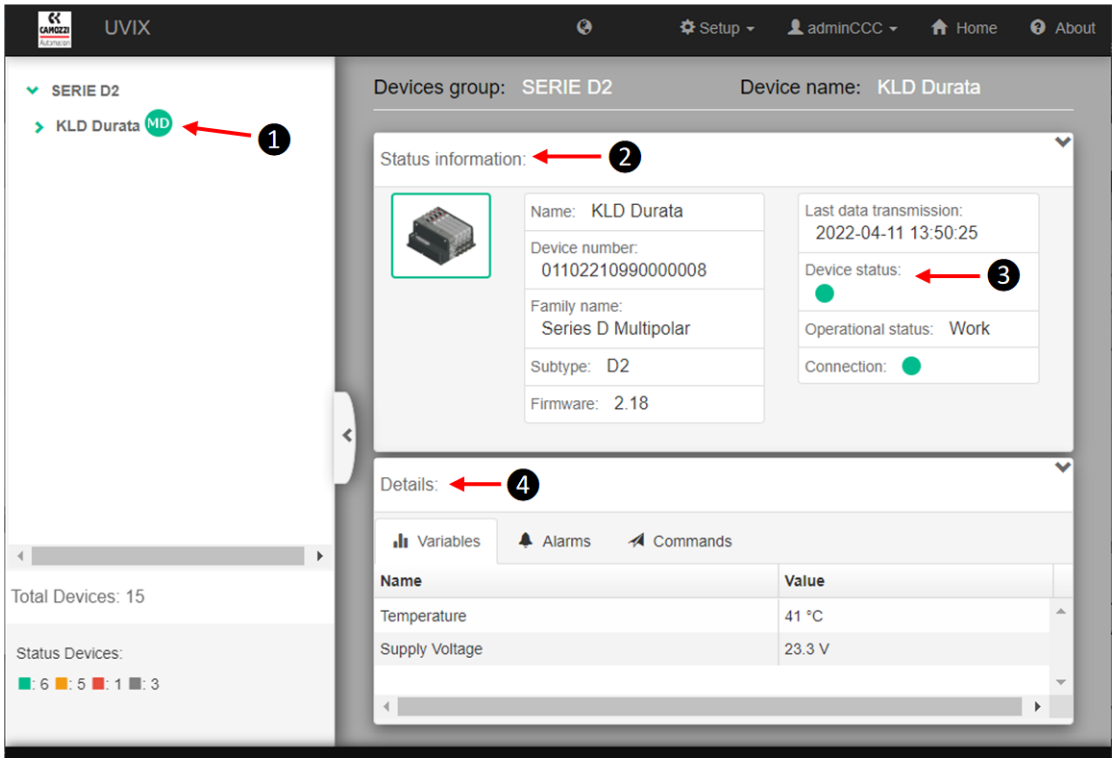


3. Once the button ❶ is pressed, a new window will open. In this window, it is possible to enter the name ❺ of the *Device Group* and make it visible or not in the main tree using the *Visible/Hide* option ❻. Press the *Save* bottom ❼ to save the new group in the database.



9.5 General information and valve island status

The connected Series D valve island is displayed in the list of devices ❶ on the left side of the screen. Click on the name to view the relative screen with general information ❷, the status of the island ❸ and the tabs ❹.
In the details window, you can select tabs to view variables, alarms, and remote commands.



9.5.1 Status information

Select a Series D multipole valve island to view the main information.

- *Name*: device name, assigned when recognized and added in UVIX.
- *Device number*: device identification number (17 characters).
- *Family name*: device family name, *Series D multipole*.
- *Subtype*: type of valve island according to the connected subbase, *D2* o *D5*.
- *Firmware*: firmware version.
- *Last data transmission*: date and time of the last transmission between valve island and UVIX.
- *Device status* stato generale del modulo: *Not available*, *Ok*, *Alarm*.
- *Operative status*: operating status of the module.
  - *Init* → initialization of the valve island.
  - *Enumeration* → numbering of the subbases connected to valve island (required if subbases are replaced or moved with respect to the original configuration).
  - *Mapping* → mapping of the subbases connected to the valve island (required to check that there have been no changes since the last system configuration).
  - *Work* → normal operation.
  - *Manual* → manual operation.
- *Connection*: WLAN connection status, *Online*, *Offline*.

9.5.2 Variables

The first tab of the details page deals shows the variables that are monitored by the valve island.

- *Temperature*: internal temperature of the valve island.
- *Supply voltage*: voltage that powers the valve island. Without this supply voltage, the valve island is turned off.

9.5.3 Alarms

The second tab on the details page displays possible valve island alarms.

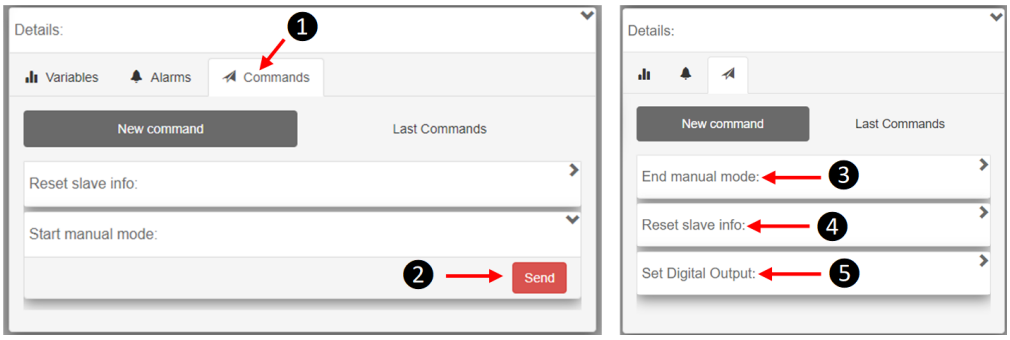
- *Mapping absent*: indicates that there are no subbases connected to the valve island.
- *Mapping error*: this can occur if the positions of the subbases of the coil valves have been changed, moving them from their original position or adding new ones, or if a subbase fails to respond to the mapping request.
- *Overheating valve island*: overheating of the valve island master.
- *Undervoltage valve island*: supply voltage of the valve island lower than the voltage given in the specifications.
- *Configuration error*: configuration error.

9.5.4 Comands

⚠ Commands are visible only if logged in *user* mode.

The third tab of details on the valve island shows the commands that can be sent via UVIX to the device ❶. Click on the Send bottom ❷ to put the Series D valve island to *Manual Mode*.

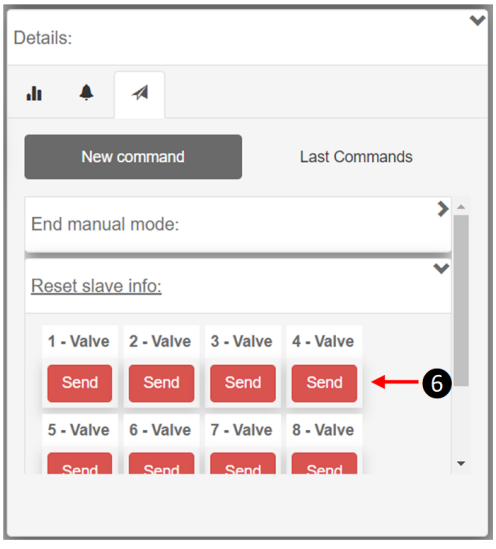
NOTE. In this mode the commands to the multipole connector are deactivated.



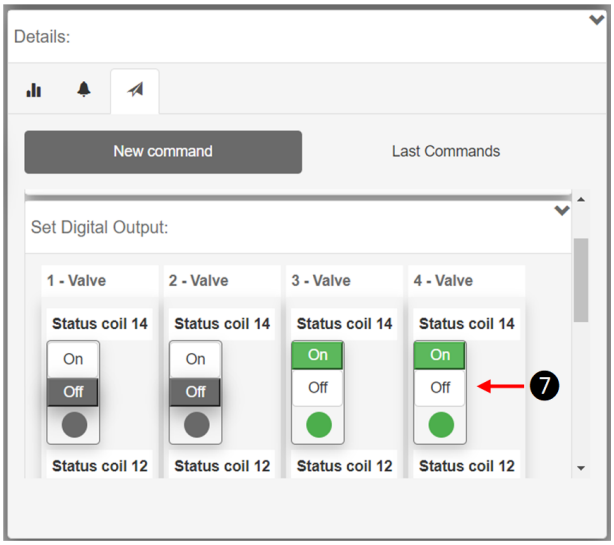
The valve island switches to manual mode appear on the screen:

- *End manual mode* ❸ : returns the valve island to the *automatic* state.
- *Reset slave info* ❹ : resets the state of health and the number of cycles performed by the valve which is mounted on a subbase. Click on the *Send* bottom ❻ to reset the information saved in the subbase.

  NOTE. The information relating to the state of health of the valve and the number of operations performed by the single Coil pilot is recorded by the subbase on which the valve is mounted, should the replacement of a Coil valve become malfunctioning or for which the system has highlighted a low state of health (preventive maintenance) it is necessary to reset this information. In this way the system will resume recording only the information relating to the new valve fitted.

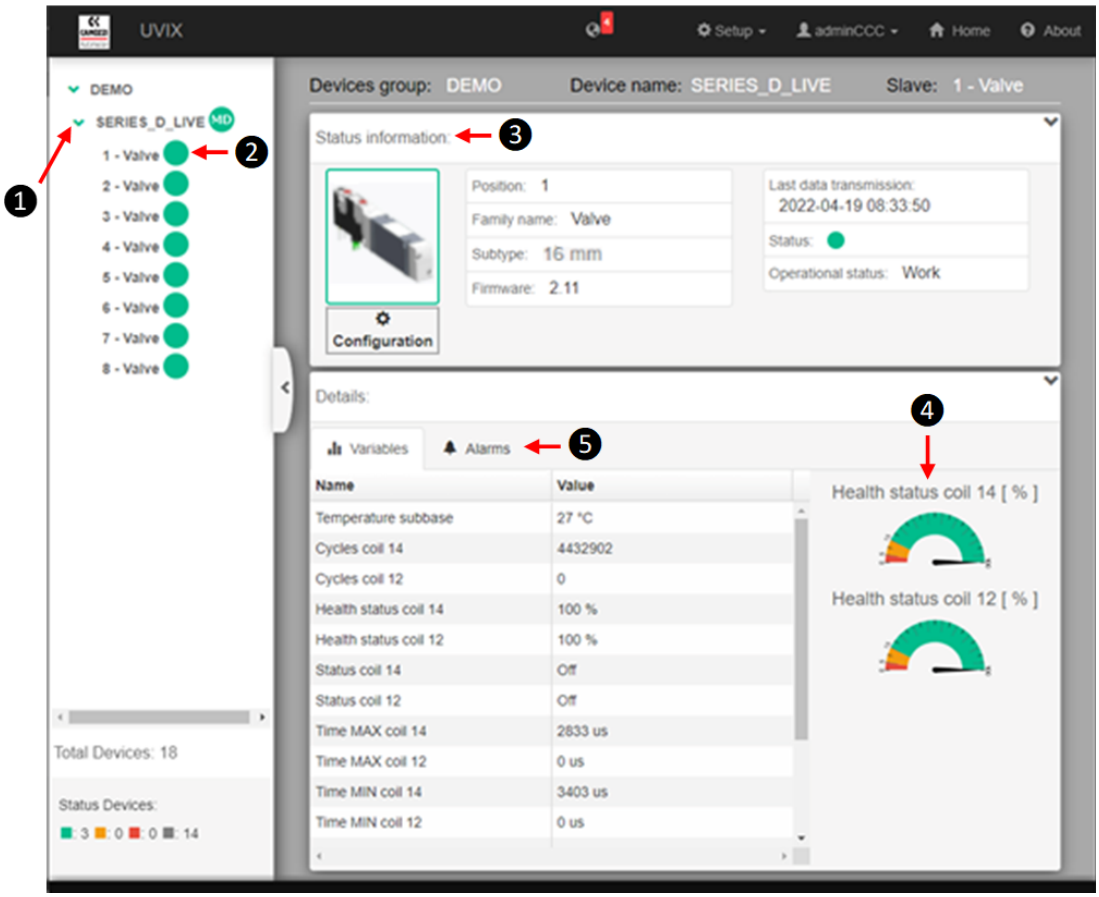


- *Set Digital Output*: allows remote operation of the single coil of the valve island. Click on the *On* and *Off* bottoms ❼ to pilot the single Coil pilot and to switch the coils.
  NOTE. Make sure that the Coil valves are activated in total safety.



9.6 Series D coil valves and subbases

Click on the drop-down menu ❶ to open the list of valves mounted on the Series D island and click on the valves ❷ to display the content screen: general information ❸, the health status of the individual valve pilot ❹, the tabs for details ❺.



9.6.1 Status information

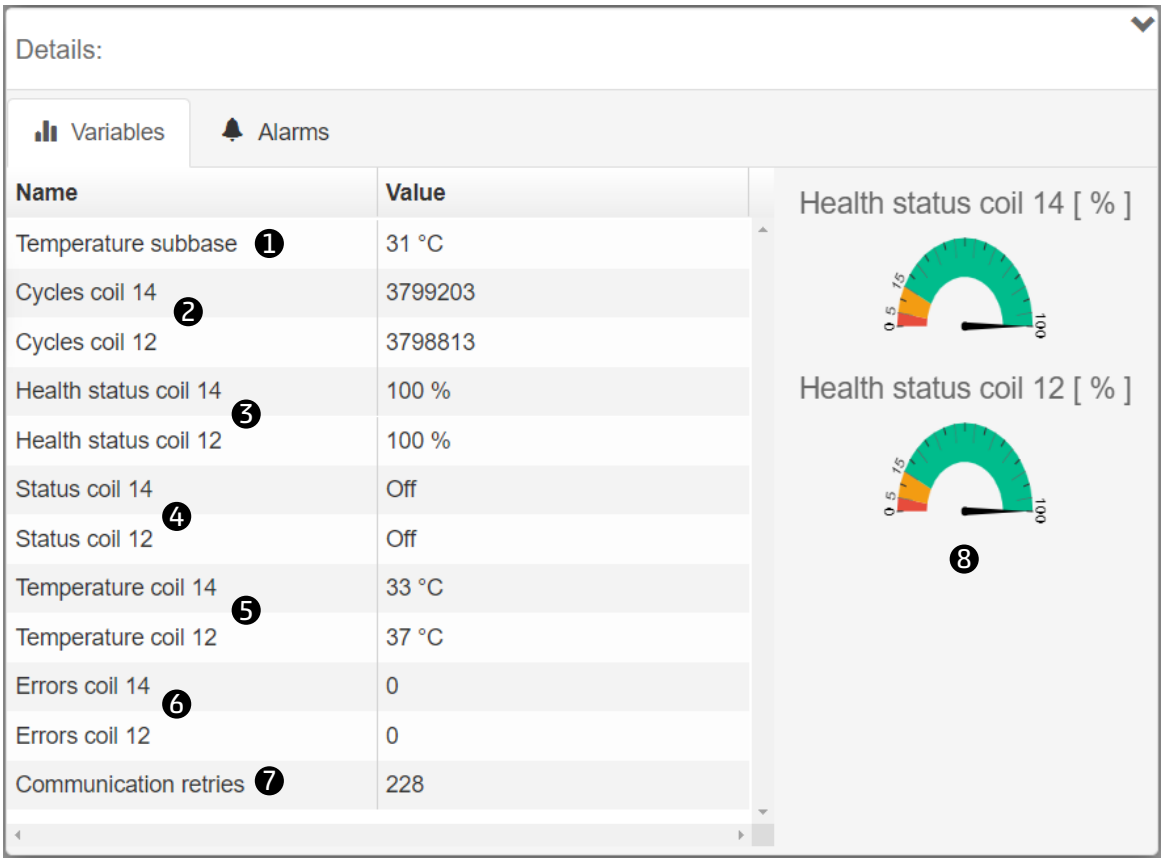
On the first page of UVIX, you can select one of the coil valves connected to the CX4 module in the configuration of a Series D valve island to view the general information of the individual subbase.

- *Position*: position of the subbase in the assigned valve island after mapping.
- *Family name*: name of the accessory module family, *Valve*.
- *Subtype*: coil valve family sub-type, 11 mm or 16 mm.
- *Firmware*: firmware version.
- *Last data transmission*: date and time of the last transmission of the variables between the subbase and UVIX.
- *Status*: general status of the coil valve, *Not available*, *Ok*, *Alarm*.
- *Operative status*: operating status of the subbase.
  - *Init* → initialization (mapping and configuration of parameters).
  - *Work* → normal operation.
  - *Error* → subbase error.

9.6.2 Variables

The first tab on the details page shows the variables that are monitored by the subbase of an individual coil valve. These variables can be reset using the commands by selecting the valve island to which the subbases are connected (par. 9.5.4).

- ❶ Subbase temperature.
- ❷ Cycles performed by the pilots in position 14 and position 12.
- ❸ Percentage health status of the pilots in position 14 and position 12.
- ❹ Status of the pilots in position 14 and position 12 (*On*/*Off*).
- ❺ Temperature of the pilots in position 14 and position 12.
- ❻ Errors of the pilots in position 14 and position 12.
- ❼ Communication errors between the valve island master and the selected subbase.
- ❽ Gauge indicators that show graphically the percentage health status of the two pilots.



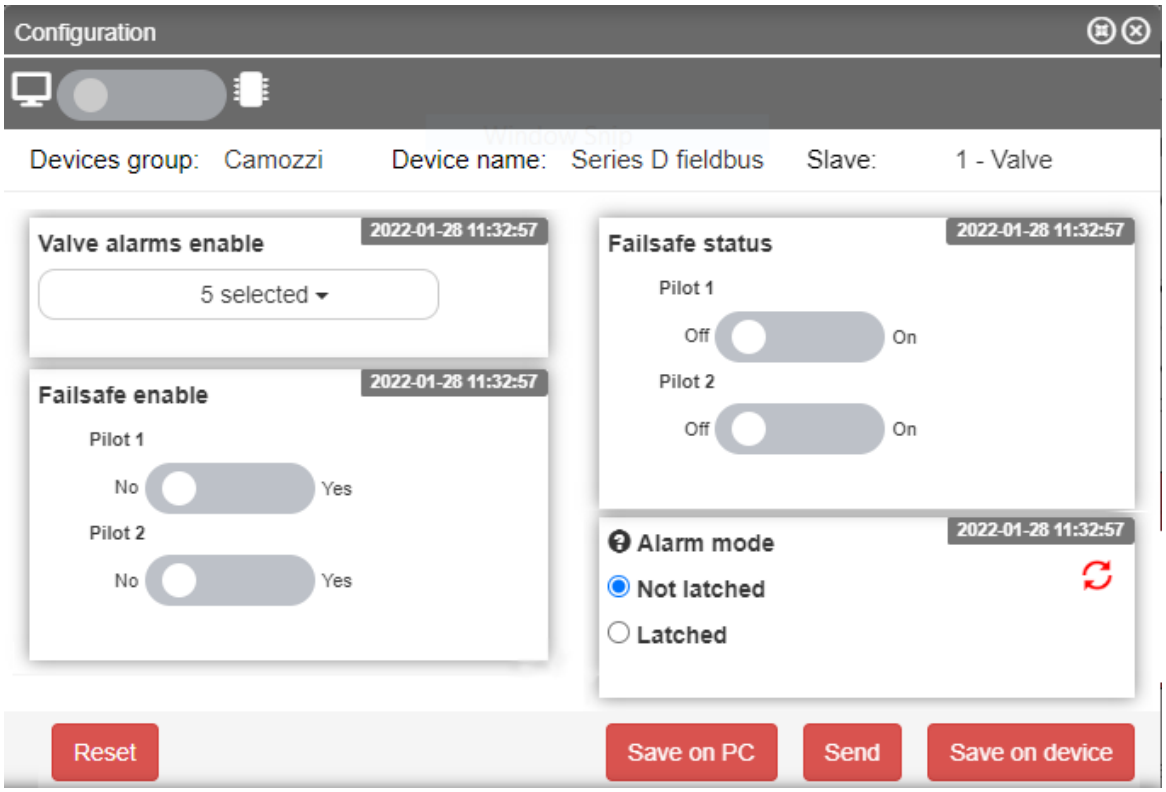
9.6.3 Alarms

The second details tab displays the alarms of the subbase of the selected valve.

- ❶ Communication alarm due to communication failure between valve island and subbase.
- ❷ Subbase overheating.
- ❸ Overheating of the pilots in position 14 and position 12.
- ❹ Overcurrent of the pilots in position 14 and position 12.
- ❺ Interrupted coil alarm in position 14 and position 12.
- ❻ Abnormal activation of the pilots in position 14 and position 12.
- ❼ Configuration alarm of subbase parameters.
- ❽ Replace valve warning.

9.6.4 Configuration

From the status information page, some parameters related to coil valve operation can be configured.
NOTE. The system indicates with the ↻ that the setting of the parameter in Camozzi UVIX does not correspond to the state physically set in the subbase. This icon will be displayed when a parameter is changed and will no longer be displayed if the new configuration is sent to the subbase using the *Send* button.



9.6.4.1 Valve alarms enable

By clicking on the drop-down menu it is possible to enable or disable the single alarm for the subbase in configuration. If one of the events for which the alarm has been enabled occurs, an error message is sent. The selectable alarms are:

- OHS – *Overheating subbase*.
- OH – *Overheating coils*.
- OC – *Overcurrent coils*.
- I – *Interrupted coils*.
- E – *Fault coils*.

NOTE. Alarms are enabled by default.

9.6.4.2 Failsafe enable

The *Failsafe* function allows the subbase to set the status of the valve pilots to a defined state (active or inactive) when there is no communication with the multipole island head. This parameter allows you to enable or disable the *Failsafe* function (default disabled).

9.6.4.3 Failsafe status

This parameter is combined with that of *Failsafe enable*. If this parameter is enabled, the status indicates in which state the pilots are to be set if there is no communication with the master:

- *ON*: the pilots are in the active state.
- *OFF*: the pilots are turned off.

9.6.4.4 Alarm mode

For the single valve position, it is possible to set the alarms of (*Interrupted coil*) and (*Overcurrent coil*) in two ways:

- *Not latched*: it is possible to set the single valve position so that the error generated by the Coil pilot is indicated but the alarm is not blocking for the valve that will continue to operate.
- *Latched*: the fault is blocked (default), the pilot in error is turned off and can no longer be piloted until the fault has been removed.

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