CAMOZZI
Automation

SERIES D
VALVE ISLAND WITH COILVISION TECHNOLOGY

SERIES D - SIZE 1
COMPACT, MODULAR AND FLEXIBLE

FIELDBUS

HIGH NUMBER OF MODULES

CAN BE CONNECTED WITH THE MAIN FIELDBUS PROTOCOLS

FLEXIBILITY IN CONNECTING DIFFERENT I/O MODULES

MULTIPOLE

DIAGNOSTICS AND VALVE COMMUTATION LED

MANUAL OVERRIDES

MODULARITY 1 SUB-BASES WITH INTERCHANGEABLE CARTRIDGES

TECHNICAL CHARACTERISTICS
- Size 10.5 mm
- Flow 250 Nl/min

COILVISION TECHNOLOGY

Series D is the new valve unit able to ensure optimum productivity and flexibility for use in many industrial automation systems.

The modular single sub-bases, 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.
Series D valve island can be connected to the main fieldbus protocols through the serial module. This combination makes it easy to integrate pneumatic and electrical functions in the most advanced automation systems, as it allows an increase in the number of controllable valves and interconnection of analog and digital I/O modules in a single network node.
The Series D valve island is also equipped with CoilVision technology which can monitor and predict the wear and efficiency status of some parts of the solenoid valves.

BENEFITS

Compact design

Individual, modular sub-bases in technopolymer

Flexibility in connecting different I/O modules

Integrated diagnostics and predictivity

Available protocols: PROFIBUS-DP, CANopen, EtherNet/IP, PROFINET, EtherCAT, IO-Link

SERIES D - SIZE 4
ROBUST, RELIABLE AND FOR HIGH FLOW RATES

MULTIPOLE

DIAGNOSTICS AND VALVE COMMUTATION LED

MANUAL OVERRIDES

METAL MODULARITY 1 SUB-BASES

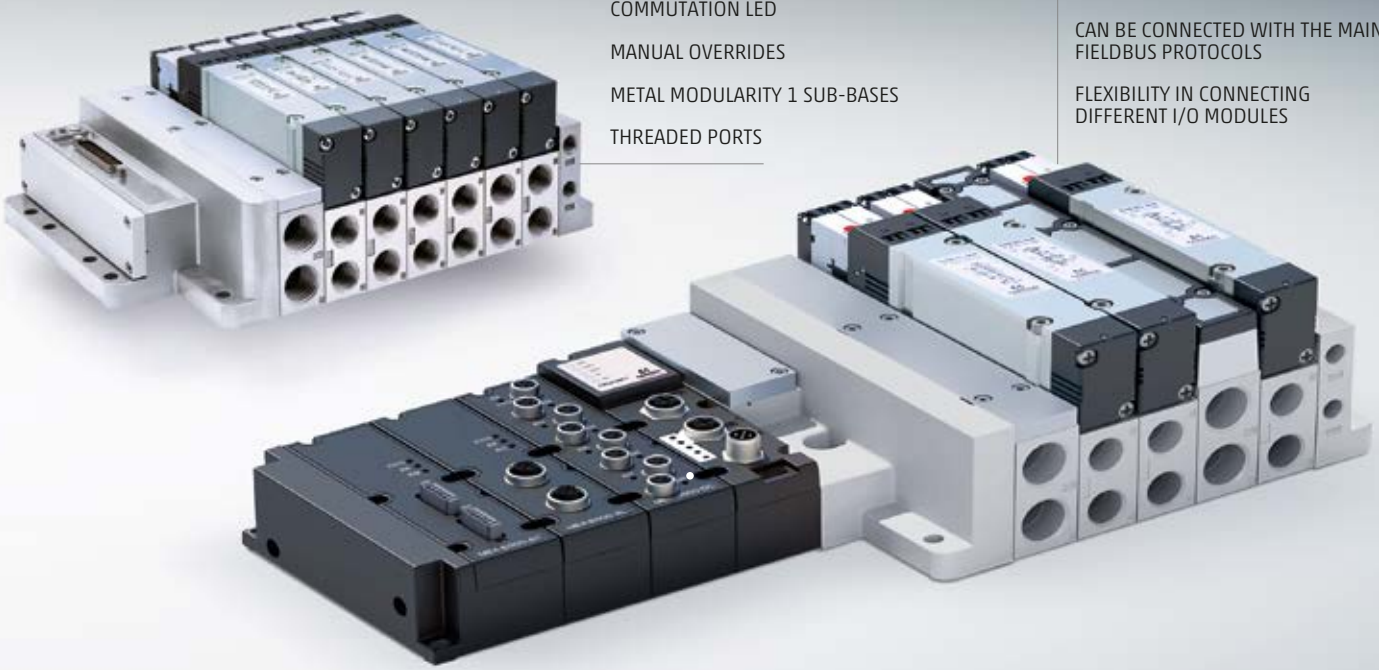
THREADED PORTS

FIELDBUS

HIGH NUMBER OF MODULES

CAN BE CONNECTED WITH THE MAIN FIELDBUS PROTOCOLS

FLEXIBILITY IN CONNECTING DIFFERENT I/O MODULES



TECHNICAL CHARACTERISTICS
- Size 25 mm
- Flow 2000 Nl/min

COILVISION TECHNOLOGY

Series D - Size 4 valve island is particularly suitable for all those applications that require high flow rates and solutions with a robust and compact design.

The Size 4 is entirely made of aluminium to guarantee high performance, especially in industrial environments with particularly harsh conditions.

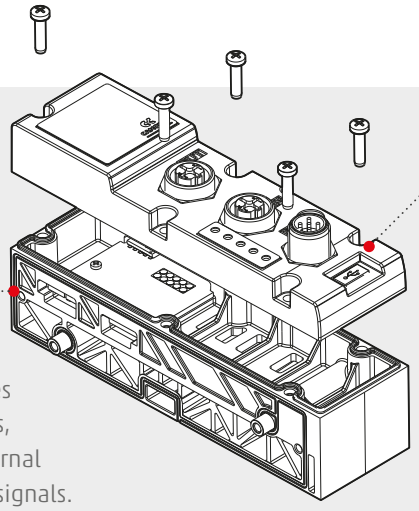
As well as having the same structure and technical principles of the Series D family, the valve island is also equipped with CoilVision technology, to monitor the health status of each solenoid valve.

BENEFITS

- High flow rates
- Robust design
- Reliability
- Integrated diagnostics and predictivity
- Flexibility in connecting different I/O modules
- Available protocols: PROFIBUS-DP, CANopen, EtherNet/IP, PROFINET, EtherCAT, IO-Link

The serial module enables control of the Series D valve island with the most common fieldbus protocols, making it easier to integrate pneumatic and electric functions in the most advanced automation systems.

Every communication protocol has its own peculiarities. In case of replacing the fieldbus, it will not be necessary to redesign the space in which the island is located as the CX4 module maintains the same dimensions.

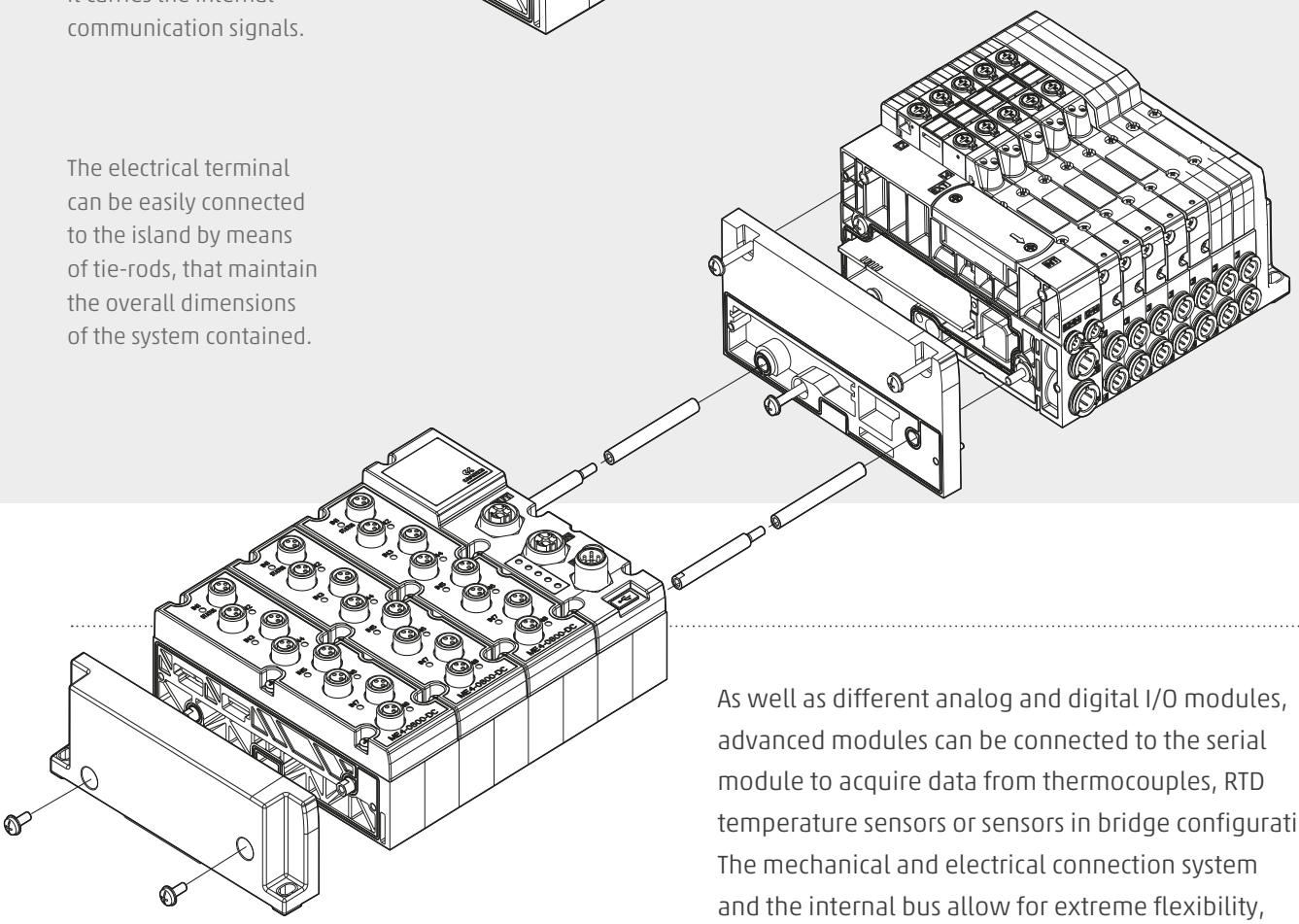


BASE:
The same for all fieldbus nodes and I/O modules, it carries the internal communication signals.

COVER:
Contains the interface electronics towards the external network.

Each module is composed of two separate elements, base and cover, that simplify assembly and replacement of the node, without the need to disassemble the entire island.

The electrical terminal can be easily connected to the island by means of tie-rods, that maintain the overall dimensions of the system contained.



As well as different analog and digital I/O modules, advanced modules can be connected to the serial module to acquire data from thermocouples, RTD temperature sensors or sensors in bridge configuration. The mechanical and electrical connection system and the internal bus allow for extreme flexibility, so you are free to add, move, remove and replace different modules as well as replace its communication protocol. All this in restricted spaces.

Series D - Size 1 General Data

PNEUMATIC SECTION	
Valve construction	spool with seals
Valve functions	5/2 monostable and bistable 2 x 3/2 NC 2 x 3/2 NO 5/3 CC - CP - CO 1 x 3/2 NC +1 x 3/2 NO
Materials	spool: AL – spool seals: HNBR – other seals: NBR – body: AL – end caps and subbase: polymer
Connections	port 2 and 4: tube Ø 4, tube Ø 6 exhaust 3 and 5: tube Ø 8 supply 1: tube Ø 8 exhaust 82/84: tube Ø 4 supply 12/14: tube Ø 4
Temperature	0 ÷ 50 °C
Air characteristics	compressed, filtered and non-lubricated air in class 7.4.4 according to ISO 8573-1:2010. If lubrication should be necessary, only use oils with a maximum viscosity of 32 Cst and the version with external servo pilot. The air quality for the servo pilot should be of class 7.4.4 according to ISO 8573-1:2010 (do not lubricate).
Valve size	10.5 mm
Operation pressure	-0.9 ÷ 10 bar
Pilot pressure	2.5 ÷ 7 bar 4.5 ÷ 7 bar (with working pressure exceeding 6 bar for the version 2x3/2)
Flow rate	250 Nl/min
Mounting position	any position
Protection Class	IP65

ELECTRICAL SECTION - MULTIPOLE VERSION	
Type of Sub-D connector	25 or 44 pins
Max. absorption	0.8 A (with Sub-D connector 25 pins) 1 A (with Sub-D connector 44 pins)
Supply voltage	24 V DC +/-10%
Max. number of coils to operate	22 on 11 valve positions (with Sub-D connector 25 pins) 38 on 19 valve positions (with Sub-D connector 44 pins)
Signalling LED	green LED - presence of power red LED - anomaly Valve: yellow LED - presence of power blinking yellow LED - operating fault

ELECTRICAL SECTION - FIELDBUS VERSION	
Available protocols	PROFIBUS-DP, CANopen, EtherNet/IP, PROFINET,EtherCAT, IO-Link
Max. absorption	2.5 A
Supply voltage	24 V DC +/-10% logic supply 24 V DC +/-10% power supply
Max. number of coils to operate	128 on 64 valve positions
Max. number of digital input	128
Max. number of analog input	16
Max. number of digital output	128
Max. number of analog output	16

Series D - Size 4 General Data

PNEUMATIC SECTION	
Valve construction	spool with seals
Valve functions	5/2 monostable and bistable 2 x 3/2 NC 2 x 3/2 NO 5/3 CC - CP - CO 1 x 3/2 NC +1 x 3/2 NO
Materials	spool: AL – spool seals: HNBR – other seals: NBR – body: AL – end caps: polymer - individual subbase: AL
Connections	inlet 2 and 4: threaded G 3/8 exhaust 3 and 5: G 1/2 or integrated silencer supply 1: G 1/2 exhaust 82/84: G 1/8 supply 12/14: G 1/8
Temperature	0 ÷ 50 °C
Air characteristics	compressed, filtered and non-lubricated air in class 7.4.4 according to ISO 8573-1:2010. If lubrication should be necessary, only use oils with a maximum viscosity of 32 Cst and the version with external servo pilot. The air quality for the servo pilot should be of class 7.4.4 according to ISO 8573-1:2010 (do not lubricate).
Valve size	25 mm
Operation pressure	-0.9 ÷ 10 bar
Pilot pressure	2.5 ÷ 7 bar 4.5 ÷ 7 bar (with working pressure exceeding 6 bar for the version 2x3/2)
Flow rate	2000 Nl/min
Mounting position	any position
Protection Class	IP65

ELECTRICAL SECTION - MULTIPOLE VERSION	
Type of Sub-D connector	25 or 44 pins
Max. absorption	0.8 A (with Sub-D connector 25 pins) 1 A (with Sub-D connector 44 pins)
Supply voltage	24 V DC +/-10%
Max. number of coils to operate	22 on 11 valve positions (with Sub-D connector 25 pins) 38 on 19 valve positions (with Sub-D connector 44 pins)
Signalling LED	green LED - presence of power red LED - anomaly Valve: yellow LED - presence of power blinking yellow LED - operating fault

ELECTRICAL SECTION - FIELDBUS VERSION	
Available protocols	PROFIBUS-DP, CANopen, EtherNet/IP, PROFINET,EtherCAT, IO-Link
Max. absorption	2.5 A
Supply voltage	24 V DC +/-10% logic supply 24 V DC +/-10% power supply
Max. number of coils to operate	128 on 64 valve positions
Max. number of digital input	128
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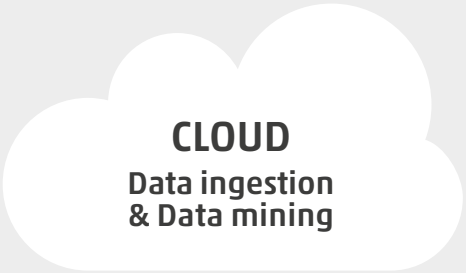
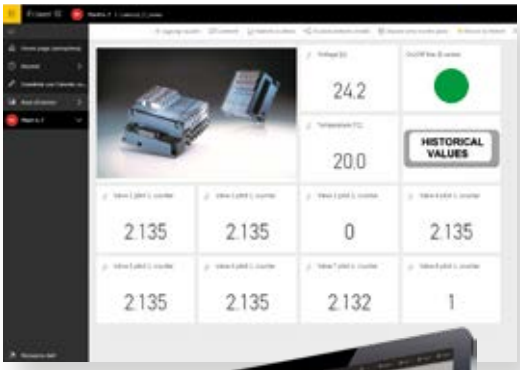


IIoT gateway



UVIX

Powered by DIGITAL
Industrial Cyber-Physical Systems

Series D
valve island

Series PRE
Proportional pressure regulator

Series DRCS
Drive for motors

DIAGNOSTIC CHARACTERISTICS

- ON/OFF status of each valve
- Health status
- Short circuit or solenoid fault
- Temperature monitoring of the Master module and the solenoids
- Interrupted solenoid
- Over and under voltage
- Cycle counter
- Power consumption

COILVISION
TECHNOLOGY

CoilVision technology has been developed to constantly monitor the operating parameters of the solenoid that drives the spool.
Each operation of the solenoid, in different cyclic configurations and environmental conditions, is analysed to acquire information that is processed by software algorithms to diagnose and predict the health status of the component.

M.K COMUNICAZIONE - MI

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