



News 2011

Directly operated solenoid valves Series K8, KN, PN

Valve Islands Series F

Electronic proportional micro regulator Series K8P

Modular FRL Series MX





Camozzi News 2011

Small, great innovations

Camozzi spa mission has always been to supply pneumatic solutions for industrial automation.

In our opinion, continuous innovation is an essential condition to meet customer needs. This year we have developed new products to fulfil different requirements from miniaturization with the micro solenoid valve Series K8, to precision with the electronic proportional micro regulator Series K8P, to high performance of the modular FRL Series MX, and the compactness and flexibility of the valve island Series F.





Micro solenoid valve
Series K8

*Miniaturized technology,
high precision within only 8 mm*

As a response to the trend towards ultra miniaturisation in combination with wider market request for fully integrated and embedded systems, Camozzi launches the micro solenoid valve **Series K8**.

This development is considered one of the most important strategic product and milestone for Camozzi. K8 is regarded as a “core product” to be used as pilot solenoids in many of the future generations of valves and in many special solutions within Fluid control and general industrial applications.



ACTUAL SIZE

General data

At the forefront of miniaturization

The micro solenoid valve Series K8, which is patented by Camozzi, is a directly operated 3/2-way and 2/2-way (NC/NO) solenoid valve shaped as a cartridge with an outer diameter of only 8 mm, ideal for direct integration in applications that require very small space, low weight in combination with low energy consumption.

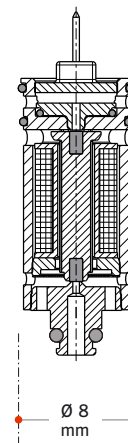
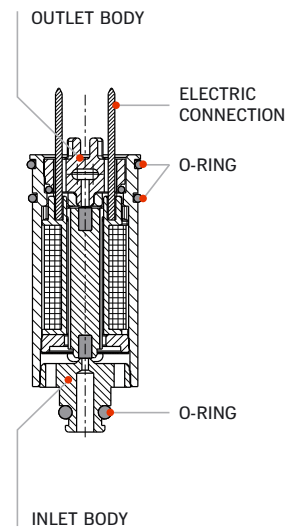
The micro solenoid valve Series K8 is suitable for use in industrial applications and portable equipment, for Life Sciences and other Fluid control equipment.

Maximum reliability

Our experience in the development of miniaturized solenoid valves for industries operating in very demanding sectors, like the medical sector, guarantees today the maximum precision and reliability of each single component to all clients. The micro solenoid valve Series K8 is the proof of our commitment.

Advantages

- > 2/2 – 3/2 way, normally closed and normally open
- > Reduced weight and dimensions
- > Low power consumption
- > Highly dynamic in frequency
- > Excellent flow – size ratio



Valve function	2/2, 3/2 way NC - NO	
Construction	Direct operated poppet valve, cartridge design	
Mounting	In any position	
Working temperature	Fluid: -10 ÷ +50°C	Ambient: -10 ÷ +50°C
Working pressure	0-7 bar	
Nominal diameter	1→2: 0.5 mm	2→3: 0.5 mm
Nominal flow	1→2: Qn 5 NI/min (6 bar Δp 1 bar) 2→3: Qn 8 NI/min (Δp 6 bar)	
Response time	5 ms ON	5 ms OFF
Fluid	Filtered air without lubrication Air Class 5.4.4 (ISO 8573.1)	
Tension	3 - 5 - 6 - 12 - 24 V DC	
Power consumption	0.6 W	
Tension tolerance	±10%	
Protection class	IP 20	
Electrical insulation	500 V AC	
Insulation class	155°C	

News 2011

Directly operated
solenoid valves
Series KN*Mini size,
maxi performance*

The new **Series KN** is the result of a deep research on assembly processes and materials. The pilots Series KN are 10 mm size 3/2 way normally closed valves with a connecting interface according to standard ISO 15218.

- Size: 10 mm
- 3/2 way normally closed
- Power consumption: 1 W hook ÷ 0.25 W holding
- Nominal flow rate: 10 NI/min
- Protection class: IP50
- Body: PTB technopolymer
- Seals: FKM on demand

*General
data***High reliability**

Thanks to its low energy consumption and to its compact design, the miniaturized solenoid valve KN can be used in industrial and Life Science applications. Seals are available in FKM on request to be used with more aggressive fluids.

Mounting flexibility

Ideal for use on manifold, Series KN is also suitable for direct mounting on electronic boards.

Advantages

- > Integrated electronics
- > Low power consumption
- > Compact design

Directly operated
solenoid valves
Series PN*A small solenoid valve
that thinks big*

The solenoid valves **Series PN** are designed to guarantee the highest easiness in installation with at the same time compact design and lightness. Solenoid valves Series PN are 15 mm 3/2 way normally closed valves equipped with a manual override which makes the plants setting easier.

*General
data***Easy installation**

Thanks to its compact design, Series PN is suitable for use in reduced mounting space. The connectors on the top of the body are in line with the cables to reduce the dimensions of the whole system.

Advantages

- > Integrated electronics
- > Low power consumption
- > Compact design

- Size: 15 mm
- 3/2 way normally closed
- Power consumption: 2 W hook ÷ 1 W holding
- Nominal flow rate: 20 NI/min
- Protection class: IP65 (with connector DIN 40050)
- Body: PTB technopolymer
- Seals: FKM on demand
- Montable on single base or manifold
- Vertical electrical connection

Valve islands Series F

*The happy island for reliability
and high performance*

The new valve islands **Series F** are designed to satisfy the most demanding customers who require at the same time both reliability and cost effective solutions. The Series F is a very compact valve system that combines quality, flexibility and installation.

- Completely made in technopolymer (PBT)
- All pneumatic connections on one side
- Modularity: 1
- Size: 14 mm
- Nominal flow rate: 500 NI/min
- Interchangeable cartridge fittings (for tube Ø 4, 6 and 8 mm)
- Cartridge micro pilots: K8
- Temperature range: 0 ÷ 50°C
- Working pressure: -0.9 ÷ 10 bar



General data

High flow rate, maximum reliability

Valve island Series F guarantees the highest reliability in every application where is necessary to maximize the flow rate in reduced spaces.

Mounting flexibility

The islands have integrated boards and are available with multipole connection with maximum 24 coils.

Advantages

- > High flexibility
- > Simple installation
- > Compact design without any electrical or pneumatic sub-base

Valve functions

2x3/2 NC

2x3/2 NO

1 3/2 NC + 1 3/2 NO

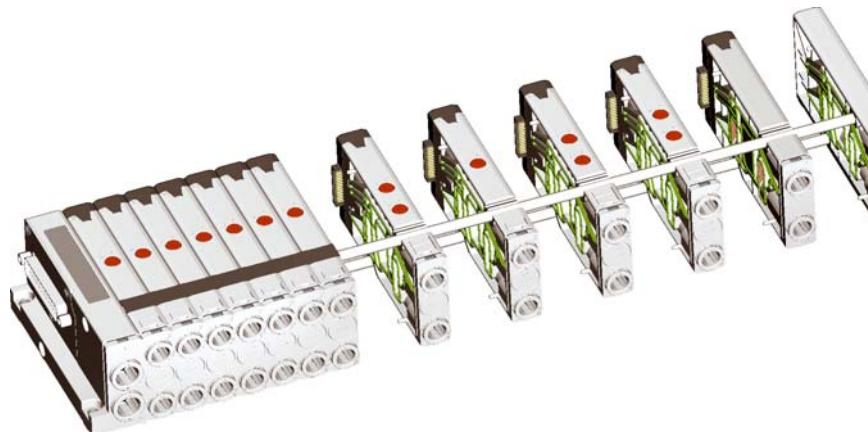
5/2 Monostable and Bistable

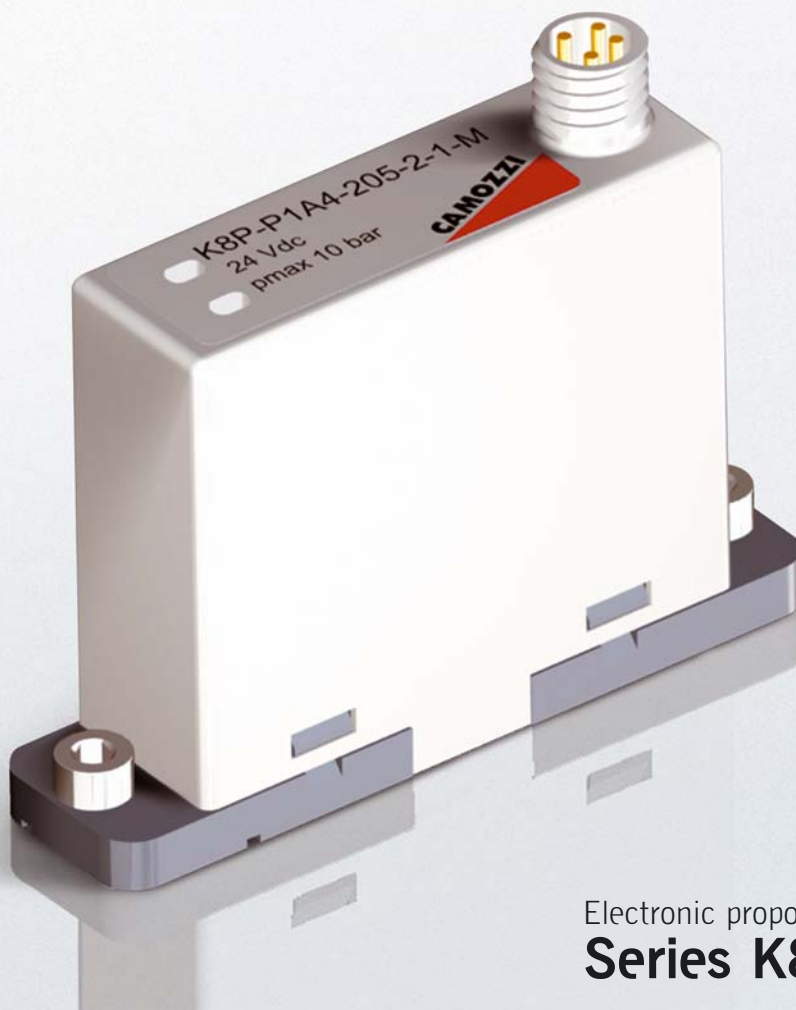
5/3 Centres Closed

2 x 2/2 NC

2 x 2/2 NO

1 2/2 NC + 1 2/2 NO





Electronic proportional micro regulator **Series K8P**

Intelligence is the beating heart of high performances

The electronic proportional micro regulator **Series K8P**, born from the experience in the miniaturized valves Series K8 development, guarantees an excellent pressure regulation and high dynamism as well as a self-regulation of performance with a low energy consumption. The K8P is a high-performance proportional pressure regulator which is suitable

for use in all those applications where high precision, quick response time and low consumption are required. The proportional regulator adjusts the outlet pressure through the operation of two K8 monostable valves according to the inlet signal (from 0 to 10 V DC) and to the retroactivity of the internal pressure sensor. In the regulator control algorithm a self-adjusting function has been integrated in order to guarantee the highest performance apart from the connected volume.

General data

Solutions for every sector

The K8P can be used with inert gas in order to maintain a constant pressure in pneumatic cylinders or in expansion valves. Moreover, it has been designed to maintain a constant pressure during chemical reactions in Life Science application, guarantee a constant pulling power of the wires in a winding machines and modulate the pressure during the polishing process in wood machines as well as control the opening of diaphragm valves.

Flexible and precise

The micro regulator K8P can be used as pilot valve in order to control the opening of high flow valves. It allows to check the power in lifting systems through proportional pressure control.

Advantages

- > High precision
- > Reduced response time
- > Minimum consumption
- > Self-regulation function
- > Flexibility of use
- > Compact design

Functioning principles

Continuous monitoring

As the inlet signal increases from 0 to 10 V DC also the outlet pressure increases relatively and the internal valves begin consequently to work. The outlet pressure is continuously monitored by a pressure sensor which checks the functioning of the pressure itself creating thus a retroactivity of the inlet signal.

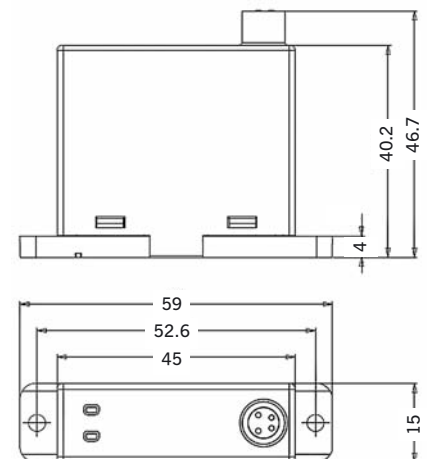
Automatic regulation

The signal retroactivity circuit enables the regulator to constantly check the outlet pressure and adjust it continually till to reach the outlet pressure in proportion to the inlet signal. At the same time the regulator can supply an analogical outlet signal from 0 to 10 V DC which is proportional to the pressure measured by the internal sensor.

Efficiency always under control

Two leds have been put on the micro regulator K8P. These leds indicate the regulator functioning and any possible error that can occur during the operation.

Fluids	Natural gas
Range regulated pressure	1 ÷ 9 bar - 0 ÷ 3 bar
Analogical input	0 - 10 V
Analogical output (feedback)	0 - 10 V
Maximum capacity 6 bar	8 NI/min
Supply- use	24 V - ~1 W
Function	3/2 NC
Hysteresis	±0.5% FS
Repeatability	±0.5 % FS
Sensibility	0.2 % FS
Electrical connection	M8 4 pin



News 2011

Modular FRL Series MX

Serie MX



*New Series MX,
the best way to treat air*

With the **Series MX** Camozzi completes the offer of air treatment components with a range of modular FRL which are available in two sizes with ports of 3/8", 1/2", 3/4" (for size MX2) and of 3/4", 1" (for size MX3). The Series MX has been designed to offer high performances and absolute reliability in every application at an excellent quality-price level. Technical solutions and several patented innovations have been also introduced which make installation and maintenance easier.

General data

Clean design

The new design, together with compact dimensions and reduced weight, meets application requirements especially in the field of assembly lines and robotic systems.

Different types of filtering elements

The 5 different types of available filtering elements, 25 μm , 5 μm , coalescing filter of 1 μm and 0.01 μm , and activated carbon filter make Series MX suitable for applications fields such as machine tools and food sector.

Strong and light

The combination of different materials, the aluminium body with the polymer cover and the polycarbonate bowl with polymer cover guarantee both rugged durability and light weight, which are essential conditions for use in graphics and printing fields.

Safety guaranteed

The system of anti-tampering for the pressure regulation represents the best solution to meet the demanding application requirements of the automotive field.

Easy to assembly

The easy connection among the bodies through the use of a rapid clamp system allows the removal and replacement of one element from the FRL group with no need to disassemble the other components and therefore ensuring fast maintenance.

Advantages

- > High performances
- > Compact and light
- > Anti-tampering solution (regulator and filter-regulator)
- > Easy and fast maintenance

Configure your assembled group on-line at:
<http://catalogue.camozzi.com/configurators/mx>.

*Camozzi
in the world*

Camozzi spa
Società Unipersonale
Via Eritrea, 20/I
25126 Brescia

Italy
Tel. +39 030/37921
Fax +39 030/2400430
info@camozzi.com
www.camozzi.com

Camozzi GmbH Pneumatic
Porschestraße 1
D-73095 Albershausen

Germany
Tel. +49 7161/91010-0
Fax +49 7161/91010-99
info@camozzi.de
www.camozzi.de

Camozzi GmbH Pneumatic
Löfflerweg 18
A-6060 Hall in Tirol

Austria
Tel. +43 5223/52888-0
Fax +43 5223/52888-500
info@camozzi.at
www.camozzi.at

Camozzi Pneumatics Ltd.
The Fluid Power Centre
Watling Street
Nuneaton - Warwickshire
CV11 6BQ

United Kingdom
Tel. +44 (0)24/7637 4114
Fax +44 (0)24/7634 7520
info@camozzi.co.uk
www.camozzi.co.uk

Camozzi Pneumatique Sarl
5, Rue Louis Gattefossé
Parc de la Bandonnière
69800 Saint Priest

France
Tel. +33 478/213408
Fax +33 472/280136
info@camozzi.fr
www.camozzi.fr

Camozzi Benelux B.V.
De Vijf Boeken 1 A
2911 BL Nieuwerkerk a/d IJssel

The Netherlands
Tel. +31 180/316677
Fax +31 180/316616
info@camozzi.nl
www.camozzi.nl

Camozzi Pneumatik AB
Box 9214
Bronsyxegatan 7
20039 Malmö

Sweden
Tel. +46 40/6005800
Fax +46 40/6005899
info@camozzi.se
www.camozzi.se

Camozzi Aps
Metalvej 7 F
4000 Roskilde

Denmark
Tel. +45 46/750202
Fax +45 46/750203
info@camozzi.dk
www.camozzi.dk

Camozzi Pneumatic Ltd.
Floor 14, Leningradskaya Street, 1-A
Himki, Moscow Region
141400 Moskau

Russian Federation
Tel. +7 495/7354961
Fax +7 495/7354961
info@camozzi.ru
www.camozzi.ru

Camozzi-Pneumatic-Simferopol, LLC
38 Larionova St
95018 Simferopol

Ukraine
Tel. +380 652/515700
Fax +380 652/518198
info@camozzi.ua
www.camozzi.ua

Camozzi Pneumatic
Karbushева St. 9 Off. 412
246029 Gomel

Byelorussia
Tel. +375 232/478064
232/473920 - 232/478417
Fax +375 232/478417
camozzi@mail.gomel.by

Camozzi Pneumatic Kazakhstan LLP
Shevchenko/Radostovec,
165b/72g, off. 503
050009 Almaty

Kazakhstan
Tel. +7 727/3335334
Fax +7 727/3335334
info@camozzi.kz
www.camozzi.kz

Camozzi Pneumatics Inc.
2160 Redbud Blvd., TX 75069
P.O. Box 2386, TX 75070
McKinney - Texas

USA
Tel. +1 972/5488885
Fax +1 972/5482110
info@camozzi-usa.com
www.camozzi-usa.com

**Camozzi Neumatica de Mexico
S.A. de C.V.**
Lago Tanganica 707
Col. Ocho Cedros 2ª sección
50170 Toluca

México
Tel. +52 722/2707880
Fax +52 722/2707860
camozzi@camozzi.com.mx
www.camozzi.com.mx

Camozzi do Brasil Ltda.
Rua Estácio de Sá, 1042
13080-010 Campinas SP

Brazil
Tel. +55 19/21374500
Fax +55 19/21374530
sac@camozzi.com.br
www.camozzi.com.br

Camozzi Neumatica S.A.
Prof. Dr. Pedro Chutro 3048
1437 Buenos Aires

Argentina
Tel. +54 11/49110816
Fax +54 11/49124191
info@camozzi.com.ar
www.camozzi.com/ar

Camozzi Venezuela S.A.
Calle 146 con Av. 62
N°146-180
P.O. Box 529

Zona Industrial Maracaibo
Edo. Zulia
Venezuela
Tel. +58 261/7360821
Fax +58 261/7360401
info@camozzi.com.ve
www.camozzi.com.ve

Camozzi Iran Co. Ltd.
Motahari Ave. No. 243
Teheran

Iran
Tel. +98 21/88732130
Fax +98 21/88738552
general_secretary@camozziran.com

**Shanghai Camozzi Pneumatic
Control Components Co, Ltd.**
415, Ren De Road
200434 Shanghai

China
Tel. +86 21/65363650
Fax +86 21/65360613
info@camozzi.com.cn
www.camozzi.com.cn

**Shanghai Camozzi Automation
Control Co, Ltd.**
717, Shuang Dan Road,
Malu Town

201801 Jiading Ind. District
Shanghai
China

Tel. +86 21/59100999
Fax +86 21/59100333
info@camozzi.com.cn
www.camozzi.com.cn

Camozzi India Private Limited
No D-44 Phase II Ext.,
Hosiery Complex
Noida - 201 305
Uttar Pradesh

India
Tel. +91 120/4055252
Fax +91 120/4055200
info@camozzi-india.com

Camozzi Malaysia SDN. BHD.
30 & 32, Jalan Industri USJ 1/3
Taman Perindustrian USJ 1
47600 Subang Jaya

Selangor
Malaysia
Tel. +60 3/80238400
Fax +60 3/80235626
camozzijb@myjaring.net
www.camozzi.com/my

Camozzi R.O. in Hochiminh City
7th Fl., 61-61A Tran Quang Dieu St.,
Ward 13, Dist. 3, HCMC,

Vietnam
Tel. +84 8/6290 3721
Fax +84 8/6290 3720
info@camozzi.com.vn
www.camozzi.com.vn

*What makes us
different*

Global vision, local service
and passion for excellence

- Innovative next-generation products
- Optimisation of internal processes
- Complete and customised solutions
- Focus on product quality and customer service

Contacts

info@camozzi.com



Camozzi spa Design and Development Centre, Polpenazze, Italy

Camozzi spa
Società Unipersonale
Via Eritrea, 20/1
25126 Brescia - **Italia**
Tel. +39 030 37921
Fax +39 030 3792244
info@camozzi.com
www.camozzi.com

Technical assistance
Products inquiries and
requests for support:
Tel. +39 030 3792790
service@camozzi.com

Special products enquiries:
Tel. +39 030 3792390
service@camozzi.com