

Series MX-PRO electronic proportional regulator

New 

Ports: G1/2

Manifold ports: G1/2

Modular - Available with built-in pressure gauges or ports for gauges



- » High precision
- » Low electric consumption
- » High exhaust flow
- » Modular with Series MX2
- » Available also in the MANIFOLD and external servo pilot supply versions

Series MX-PRO electronic proportional pressure regulator is the result of combining advanced technology of Series K8P electronic proportional micro regulator, with reliability and high performance of Series MX2 modular regulators.

This new regulator ensures high precision in pressure regulation, high flow rate and low consumption. Moreover, it can take the most of Series MX ease of assembly to provide particularly compact Manifolds.

GENERAL DATA

Construction	modular, compact, diaphragm type
Materials	see tables on the following pages
Ports	G1/2
Mounting	vertical in-line, wall-mounting (by means of clamps)
Working temperature	0°C + 50°C
Max inlet pressure	11 bar (10 bar), 4 bar (3 bar)
Regulated pressure	0.5 + 10 bar, 0.15 + 3 bar
Overpressure exhaust	with relieving (standard) without relieving
Nominal flow	see flow diagrams (following pages)
Air specifications	Filtered compressed air, non lubricated, class 3.4.3 according to ISO 8573.1 standard. If lubrication is necessary, please use only oils with maximum viscosity of 32 Cst and the version with external servo-pilot supply. The servo-pilot supply air quality class must be 3.4.3 according to ISO 8573.1 standard.
Pressure gauge	version with built-in pressure gauge (standard) version with G1/8 port
Analogical input	0-10 V DC Ripple \leq 0.2% 4-20 mA
Analogical output	0.5-9.5 V DC [Feedback]
Supply / Consumption	19-28 V DC - ~1 W
Linearity	$\leq \pm$ 1% FS
Hysteresis	\pm 0.5% FS
Repeatability	\pm 0.5% FS
Sensibility	0.3% FS
Protection class	IP51
Electrical connection	M8 4 Pin (Male)

CODING EXAMPLE

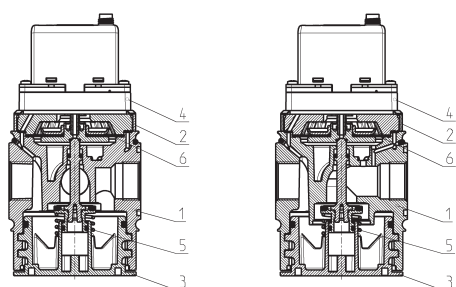
MX	2	-	1/2	-	R	CV	2	0	4	-	LH
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MX	SERIES
2	SIZE: 2 = G1/2
1/2	PORTS: 1/2 = G1/2
R	TYPE OF REGULATOR: R = pressure regulator M = Manifold pressure regulator (G1/2 only)
CV	COMMAND: CV = electrical command 0-10 V DC CA = electrical command 4-20 mA EV = electrical command 0-10 V DC with external servo pilot supply EA = electrical command 4-20 mA with external servo pilot supply
2	OPERATING PRESSURE (1 bar = 14,5 psi): 1 = 0.15 ÷ 3 bar 2 = 0.5 ÷ 10 bar (standard)
0	DESIGN TYPE: 0 = relieving (standard) 1 = without relieving
4	PRESSURE GAUGE: 0 = without pressure gauge (with threaded port for gauges) 2 = with built-in pressure gauge 0-6 and working pressure 0.15 ÷ 3 bar 4 = with built-in pressure gauge 0-12 and working pressure 0.5 ÷ 10 bar (standard)
LH	FLOW DIRECTION: = from left to right (standard) LH = from right to left

For the assembly of a single component with fixing flanges or wall-mounting, see the section "FRL Series MX Assembled" (pag. 3/1.50.01)

Series MX-PRO electronic proportional regulators - materials

R = pressure regulator
M = Manifold pressure regulator



R

M

PARTS	MATERIALS
1 = Body	Aluminium
2 = Covering	Polyacetal
3 = Valve holder plug	Polyacetal
4 = Upper base	Polyamide
5 = Lower spring	Zinc-plated steel
6 = Diaphragm	NBR
Seals	NBR

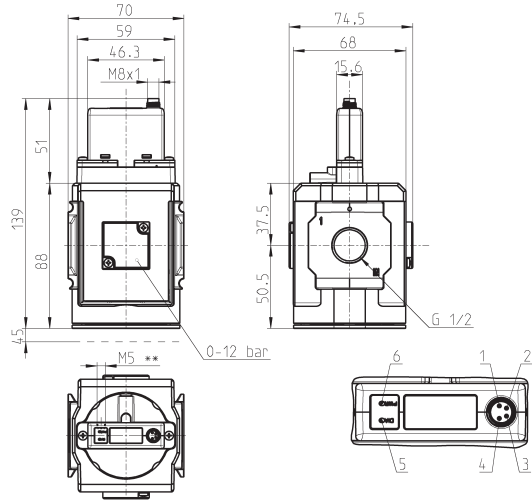
Series MX-PRO electronic proportional regulators



- Male connector M8 4 poles
- Pin 1: +24 V DC (Power supply)
- Pin 2: Command analogical signal
0-10 V DC or 4-20 mA
- Pin 3: 0 V (Ground) common also
for the command signal
- Pin 4: Output analogical signal
(according to the
regulated pressure)
- 5 red LED
- 6 green LED

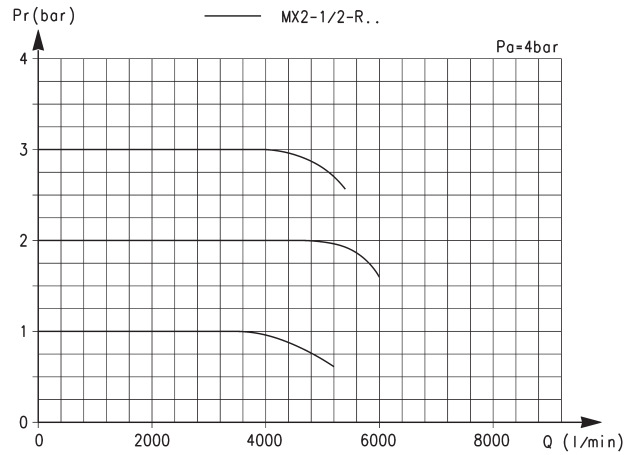
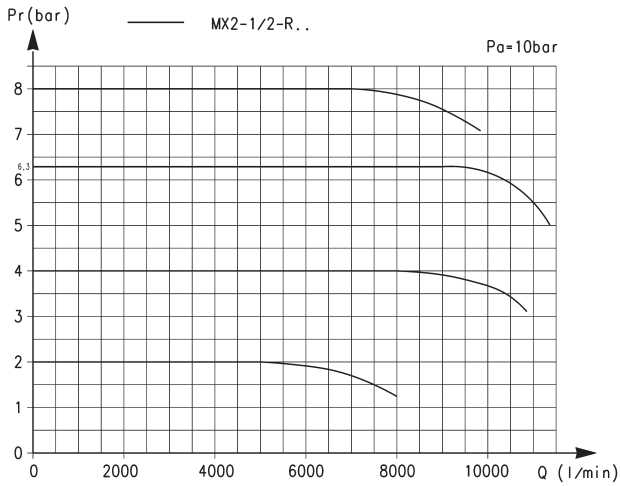
Accessories: see MX accessories (3/1.49)
Assembled FRL: see Series MX (3/1.50)
Connection cables: see Series K8P (2/15.37)

DRAWING NOTE
** = in the versions with external servo pilot supply only (MX2-1/2-REV... and MX2-1/2-REA...)



Mod.	Ports	Electrical command	Operating pressure (1 bar = 14,5 psi)	Relieving	Pressure gauge
MX2-1/2-RCV102	G1/2	0-10 V DC	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-RCV112	G1/2	0-10 V DC	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-RCV204	G1/2	0-10 V DC	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-RCV214	G1/2	0-10 V DC	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-RCA102	G1/2	4-20 mA	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-RCA112	G1/2	4-20 mA	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-RCA204	G1/2	4-20 mA	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-RCA214	G1/2	4-20 mA	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-RCV100	G1/2	0-10 V DC	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-RCV110	G1/2	0-10 V DC	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-RCV200	G1/2	0-10 V DC	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-RCV210	G1/2	0-10 V DC	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-RCA100	G1/2	4-20 mA	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-RCA110	G1/2	4-20 mA	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-RCA200	G1/2	4-20 mA	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-RCA210	G1/2	4-20 mA	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-REV100	G1/2	0-10 V DC	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-REV102	G1/2	0-10 V DC	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-REV110	G1/2	0-10 V DC	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-REV112	G1/2	0-10 V DC	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-REV200	G1/2	0-10 V DC	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-REV204	G1/2	0-10 V DC	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-REV210	G1/2	0-10 V DC	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-REV214	G1/2	0-10 V DC	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-REA100	G1/2	4-20 mA	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-REA102	G1/2	4-20 mA	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-REA110	G1/2	4-20 mA	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-REA112	G1/2	4-20 mA	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-REA200	G1/2	4-20 mA	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-REA204	G1/2	4-20 mA	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-REA210	G1/2	4-20 mA	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-REA214	G1/2	4-20 mA	0.5 + 10 bar	no	with built-in pressure gauge 0-12

FLOW DIAGRAMS - STANDARD VERSION



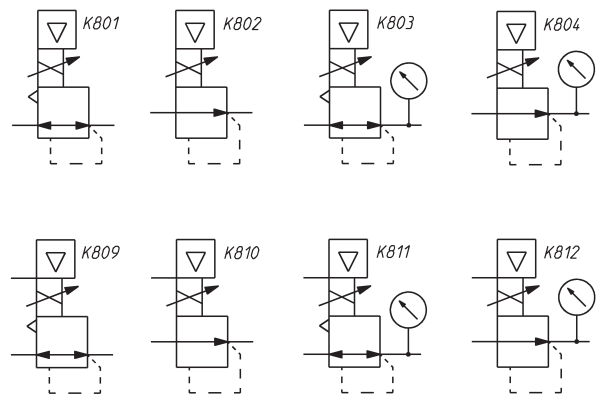
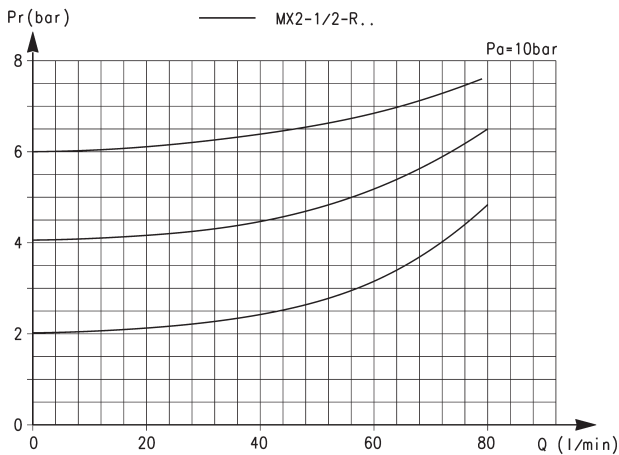
Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

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FLOW DIAGRAM AND PNEUMATIC SYMBOLS - STANDARD VERSION



Exhaust flow diagram

Pr = Regulated pressure
Q = Flow

Pa = Inlet pressure

K801 = relieving, electrical command
K802 = NO relieving, electrical command
K803 = relieving, electrical command, built-in pressure gauge
K804 = NO relieving, electrical command, built-in pressure gauge
K809 = relieving, electrical command, ext. servo pilot supply
K810 = NO relieving, electrical command, ext. servo pilot supply
K811 = reliev., el. com., built-in pr. gauge, ext. servo pilot supply
K812 = NO relieving, el. com., built-in pr. gauge, ext. servo pilot sup.

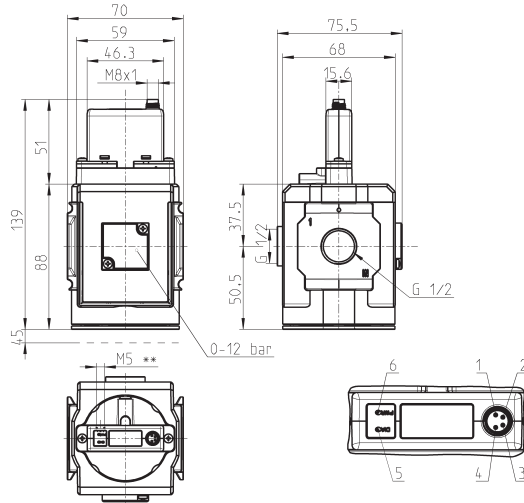
Series MX-PRO Manifold regulators - dimensions



- Male connector M8 4 poles
- Pin 1: +24 V DC (Power supply)
- Pin 2: Command analogical signal
0-10 V DC or 4-20 mA
- Pin 3: 0 V (Ground) common also
for the command signal
- Pin 4: Output analogical signal
(according to the
regulated pressure)
- 5 red LED
- 6 green LED

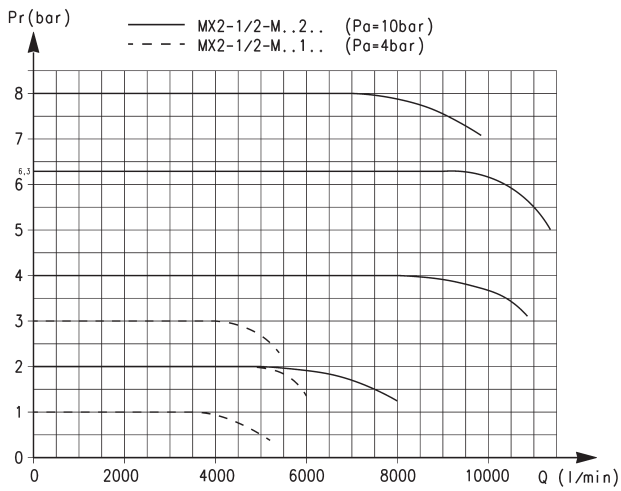
Accessories: see MX accessories (3/1.49)
Assembled FRL: see Series MX (3/1.50)
Connection cables: see Series K8P (2/15.37)

DRAWING NOTE
** = in the versions with external servo pilot supply only (MX2-1/2-REV... and MX2-1/2-REA...)



Mod.	Ports	Electrical command	Operating pressure (1 bar = 14,5 psi)	Relieving	Pressure gauge
MX2-1/2-MCV102	G1/2	0-10 V DC	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-MCV112	G1/2	0-10 V DC	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-MCV204	G1/2	0-10 V DC	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-MCV214	G1/2	0-10 V DC	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-MCA102	G1/2	4-20 mA	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-MCA112	G1/2	4-20 mA	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-MCA204	G1/2	4-20 mA	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-MCA214	G1/2	4-20 mA	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-MCV100	G1/2	0-10 V DC	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-MCV110	G1/2	0-10 V DC	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-MCV200	G1/2	0-10 V DC	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-MCV210	G1/2	0-10 V DC	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-MCA100	G1/2	4-20 mA	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-MCA110	G1/2	4-20 mA	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-MCA200	G1/2	4-20 mA	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-MCA210	G1/2	4-20 mA	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-MEV100	G1/2	0-10 V DC	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-MEV102	G1/2	0-10 V DC	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-MEV110	G1/2	0-10 V DC	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-MEV112	G1/2	0-10 V DC	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-MEV200	G1/2	0-10 V DC	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-MEV204	G1/2	0-10 V DC	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-MEV210	G1/2	0-10 V DC	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-MEV214	G1/2	0-10 V DC	0.5 + 10 bar	no	with built-in pressure gauge 0-12
MX2-1/2-MEA100	G1/2	4-20 mA	0.15 + 3 bar	yes	without pressure gauge
MX2-1/2-MEA102	G1/2	4-20 mA	0.15 + 3 bar	yes	with built-in pressure gauge 0-6
MX2-1/2-MEA110	G1/2	4-20 mA	0.15 + 3 bar	no	without pressure gauge
MX2-1/2-MEA112	G1/2	4-20 mA	0.15 + 3 bar	no	with built-in pressure gauge 0-6
MX2-1/2-MEA200	G1/2	4-20 mA	0.5 + 10 bar	yes	without pressure gauge
MX2-1/2-MEA204	G1/2	4-20 mA	0.5 + 10 bar	yes	with built-in pressure gauge 0-12
MX2-1/2-MEA210	G1/2	4-20 mA	0.5 + 10 bar	no	without pressure gauge
MX2-1/2-MEA214	G1/2	4-20 mA	0.5 + 10 bar	no	with built-in pressure gauge 0-12

FLOW DIAGRAMS - MANIFOLD VERSION

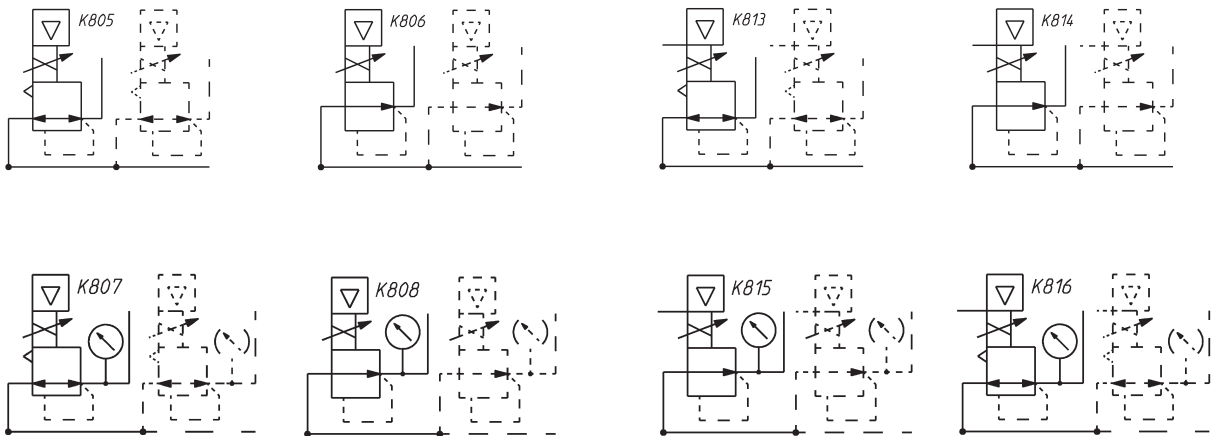


Pr = Regulated pressure

Q = Flow

Pa = Inlet pressure

PNEUMATIC SYMBOLS - MANIFOLD VERSION



K805 = MANIFOLD reg., relieving, electrical command
 K806 = MANIFOLD reg., NO relieving, electrical command
 K807 = MANIFOLD reg., relieving, electrical command
 and built-in pressure gauge
 K808 = MANIFOLD reg., NO relieving, electrical command
 and built-in pressure gauge

K813 = MANIFOLD reg., relieving, electrical command,
 and external servo pilot supply
 K814 = MANIFOLD reg., NO relieving, electrical command,
 and external servo pilot supply
 K815 = MANIFOLD reg., relieving, electrical command,
 built-in pressure gauge and external servo pilot supply
 K816 = MANIFOLD reg., NO relieving, electrical command,
 built-in pressure gauge and external servo pilot supply