

Digital Electro-pneumatic regulator Series ER 100

New 

3

Port G1/4



- » Compact design
- » Digital display
- » Analog and digital input
- » Programmable
- » Zero/span adjustment function
- » Error display function, pressure display
- » Preset memory function 8-set points (3 bits).

TREATMENT

GENERAL DATA ER104 - 5xxx

New

Model	ER104-5 0/1/2 X Analog type	ER104-5 P X Parallel type
Media	ISO 132	ISO 132
Max. working pressure	7 bar	7 bar
Min. working pressure	Control pressure + max. control pressure x ,2	Analog and digital input - Programmable - Zero/span adjustment function - Error display function, pressure display - Preset memory function 8-set points (3 bits).
Pressure control range	0 ÷ 5 Bar	0 ÷ 5 Bar
Class protection	IP 40	IP 40
Power supply voltage	24 V DC +/- 10% (stabilized power supply with a ripple rate of 1% or less)	24 V DC +/- 10% (stabilized power supply with a ripple rate of 1% or less)
Consumption current	0.15 A (or less rush current 0.6 A or less when power is turned on)	0.15 A (or less rush current 0.6 A or less when power is turned on)
Input signal (Input impedance)	0 ÷ 10 V DC (6,7 kΩ) 0 ÷ 5 V DC (10 kΩ) 4 ÷ 20 mA DC(250 Ω)	10 bit
Preset input	8 points	N/A
Output signal Note 1	Analog output 1-5 VDC (load to be connected impedance 500 kW or more) Switch output NPN or PNP, open collector output, 30 V or less, 50 mA or less, voltage drop 2.4 or less, compatible for use with PLC or Relay	Analog output 1-5 VDC (load to be connected impedance 500 kW or more) Switch output NPN or PNP, open collector output, 30 V or less, 50 mA or less, voltage drop 2.4 or less, compatible for use for PLC or Relay
Error Output signal	NPN or PNP open collector output, 30 V or less, 50 mA or less, voltage drop 2,4 V or less, compatible for use with PLC or Relay	NPN or PNP open collector output, 30 V or less, 50 mA or less, voltage drop 2,4 V or less, compatible for use with PLC or Relay
Direct memory setting	0,05 ÷ 5 bar minimum input width 0,01 bar	0,05 ÷ 5 bar minimum input width 0,01 bar
Hysteresis Note 2	0.5% F.S. or less	0.5% F.S. or less
Linearity Note 2	±0.3% F.S. or less	±0.3% F.S. or less
Resolution Note 2	0.2% F.S. or less	0.2% F.S. or less
Repeatability Note 2	0.3% F.S. or less	0.3% F.S. or less
Temperature characteristics: Zero point fluctation	0.15% F.S./°C or less	0.15% F.S./°C or less
Temperature characteristics: Span point fluctation	0.07% F.S./°C or less	0.07% F.S./°C or less
Max. flow rate (ANR) Note 3	400L/min (see diagram page 3)	400L/min (see diagram page 3)
Step response time No load Note 4	0.2sec. or less	0.2sec. or less
Step response time 1000cm ³ load Note 4	0.8sec. or less	0.8sec. or less
Mechanical vibration proof	98 m/s ² or less	98 m/s ² or less
Ambient temperature	5°C + 50 °C	5°C + 50 °C
Fluid temperature	5°C + 50 °C	5°C + 50 °C
Connection port size	G1/4	G1/4
Mounting direction	Free	Free
Mass	250g	250g
Note 1:	Select either analog or switch output.	
Note 2:	The above applies in control pressure 10 to 90 % with 24 VDC power voltage and working pressure set at the maximum control pressure + 1 bar. Pressure may fluctuate if used for applications such as blowing only when the secondary side is a closed circuit.	
Note 3:	The above apply when working pressure and control pressure are maximum.	
Note 4:	The above apply when working pressure is maximum and the step is as follows: 50% F.S. -> 100%F.S. 50% F.S. -> 60% F.S. 50% F.S. -> 40% F.S.	

GENERAL DATA ER104 - 9xxx

New

Model	ER104-9 0/1/2 X Analog type	ER104-9P X Parallel type
Media	ISO 132	ISO 132
Max. working pressure	10 bar	10 bar
Min. working pressure	Control pressure + Max. control pressure + 1	Control pressure + Max. control pressure +
Pressure control range	0,5 ÷ 9 bar	0,5 ÷ 9 bar
Class protection	IP 40	IP 40
Power supply voltage	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)
Consumption current	0.15 A or less rush current 0.6 A or less when power is turned on	0.15 A or less rush current 0.6 A or less when power is turned on
Input signal (Input impedance)	0 a 10 VDC (6.7kΩ) 0 a 5 VDC (10kΩ) 4 a 20 mADC (250 Ω)	10bit
Preset input	8 points	N/A
Output signal Note 1	Analog output 1-5 VDC (load to be connected impedance 500 KW or more) Switch output NPN or PNP, open collector output, 30 V or less, 50 mA or less voltage drop 2.4.V or less, compatible for usage in PLC and Relay.	Analog output 1-5 VDC (load to be connected impedance 500 KW or more) Switch output NPN or PNP, open collector output, 30 V or less, 50 mA or less, voltage drop 2.4.V or less, compatible for usage in PLC and Relay.
Error output signal	NPN or PNP, open collector output, 30 V or less, 50 mA or less, voltage drop 2.4 or less, compatible for usage in PLC and Relay	NPN or PNP, open collector output, 30 V or less, 50 mA or less, voltage drop 2.4 or less, compatible for usage in PLC and Relay
Direct memory setting	0,05 ÷ 9 bar minimum input width 0,01 bar setting resolution 0,02 bar	0,05 ÷ 9 bar minimum input width 0,01 bar setting resolution 0,02 bar
Hysteresis Note 2	0.5% F.S. or less	0.5% F.S. or less
Linearity Note 2	±0.3% F.S. or less	±0.3% F.S. or less
Resolution Note 2	0.2% F.S. or less	0.2% F.S. or less
Repeatability Note 2	0.3% F.S. or less	0.3% F.S. or less
Temperature characteristics: Zero point fluctuation	0.15% F.S./°C or less	0.15% F.S./°C or less
Temperature characteristics: Span point fluctuation	0.07% F.S./°C or less	0.07% F.S./°C or less
Max. flow rate Note 3	400L/min (see diagram)	400L/min (see diagram)
Step response time No load Note 4	0.82sec. or less	0.2sec. or less
Step response time 1000 cm³ load Note 4	0.8 sec. or less	0.8 sec. or less
Mechanical vibration proof	98 m/s ² or less	98 m/s ² or less
Ambient temperature	5°C ÷ 50 °C	5°C ÷ 50 °C
Fluid temperature	5°C ÷ 50 °C	5°C ÷ 50 °C
Connecting port size	G1/4	G1/4
Mounting direction	Free	Free
Mass	250g	250g
Note 1	Select either analog or switch output.	
Note 2	The above applies in control pressure 10 to 90 % with 24 VDC power voltage and working pressure set at the maximum control pressure + 1 bar. Pressure may fluctuate if used for applications such as blowing only when the secondary side is a closed circuit.	
Note 3	The above apply when working pressure and control pressure are maximum.	
Note 4	The above apply when working pressure and control pressure is maximum and the step is as follows: 50% F.S. -> 100%F.S. 50% F.S. -> 60% F.S. 50% F.S. -> 40% F.S.	

STANDARD CODES

Models

ER104-50AP	ER104-52AP	ER104-5PSP	ER104-90SP	ER104-92SP
ER104-50SP	ER104-52SP	ER 104-90AP	ER104-92AP	ER104-9PSP

CODING EXAMPLE

ER	1	04	-	5	0	AN
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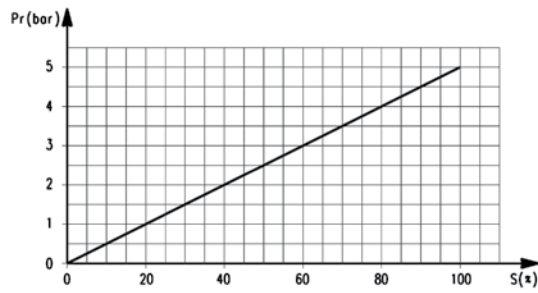
ER	SERIES
1	SIZE: 1 = size 1
04	PORT: 04 = G1/4
5	WORKING PRESSURE: 5 = 0 ÷ 5 bar 9 = 0.5 ÷ 9 bar
0	INPUT: 0 = 0 - 10 V DC 1 = 0 - 5 V DC 2 = 4 - 20 mA P = Parallel 10 bit
AN	OUTPUT: AN = 1 - 5 V analog, error (NPN) AP = 1 - 5 V analog, error (PNP) SN = switch (NPN), error (NPN) SP = switch (PNP), error (PNP)

DIAGRAMS

New

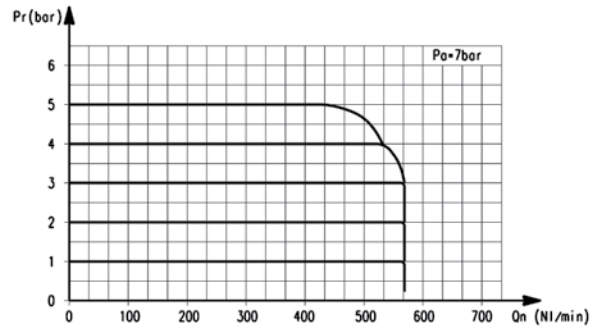
3

TREATMENT



ER-104-5xxx
Characteristics I/O

Pr = outlet pressure in bar
S = input signal %

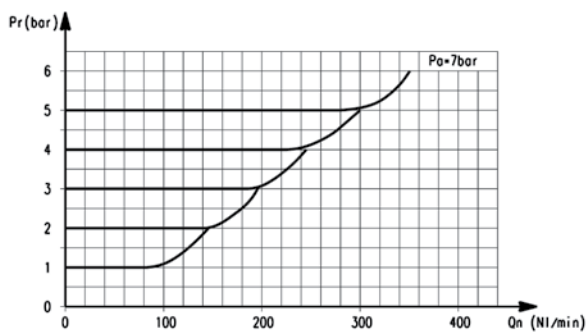


ER-104-5xxx
Characteristics flow rate

Pr = outlet pressure in bar
Qn = flow in L/min
Pa = operating pressure 7 Bar

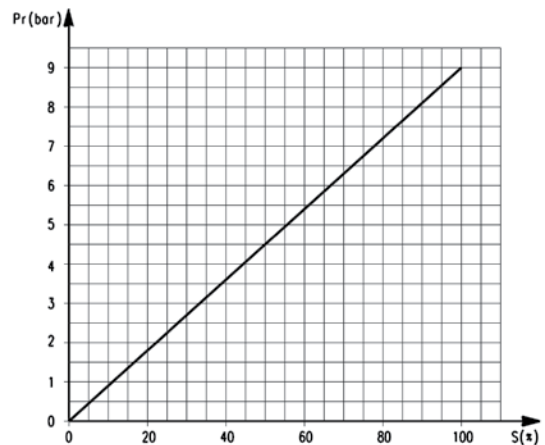
DIAGRAMS

New



ER-104-9xxx
Characteristics flow rate

Pr = outlet pressure in bar
Qn = flow in L/min
Pa = operating pressure 7 Bar

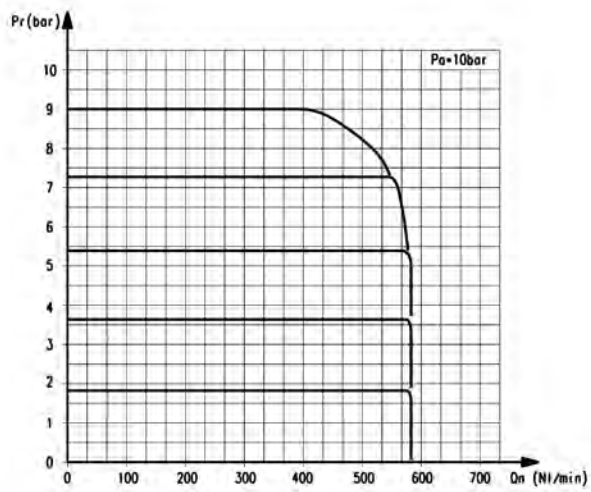


ER-104-9xxx
Characteristics I/O

Pr = outlet pressure in bar
S = input signal %

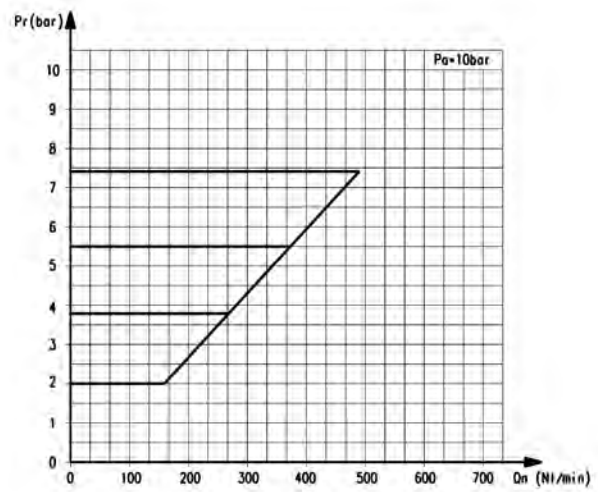
DIAGRAMS

New



ER-104-9xxx
Characteristics flow rate

Pr = outlet pressure in bar
Qn = flow in L/min
Pa = operating pressure



ER-104-9xxx
Characteristics exhaust

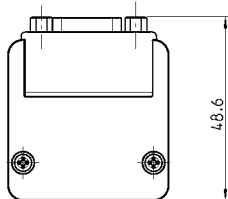
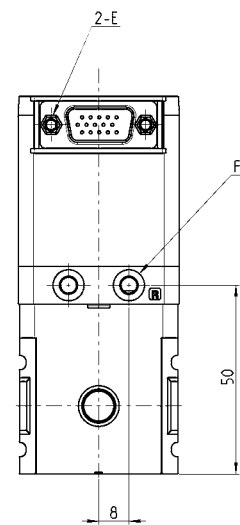
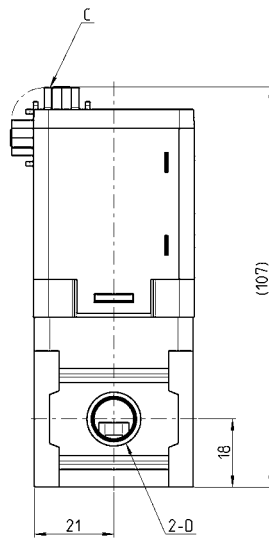
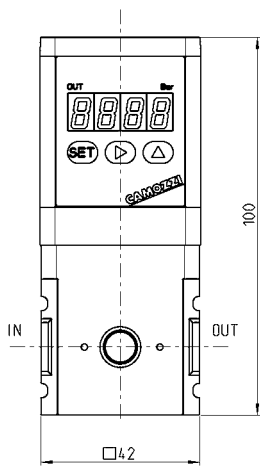
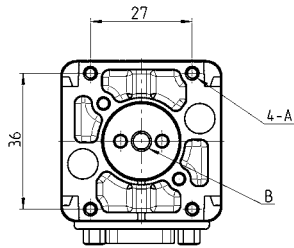
Pr = outlet pressure in bar
Qn = flow in L/min
Pa = operating pressure

Proportional regulator Series ER 100

New

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TREATMENT



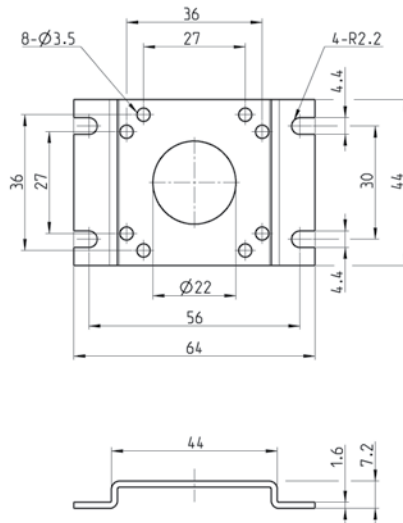
DIMENSIONS

Mod.	A	B	C	D	E	F
ER104	M3 depth 6	Ø5.3 EXH port	D sub-connector 15 pins/plugs	G1/4	4-40 UNC	Ø4.2 Port R (pilot air exhaust port)

Bracket ER1-B1

New

Floor installation type.



DIMENSIONS

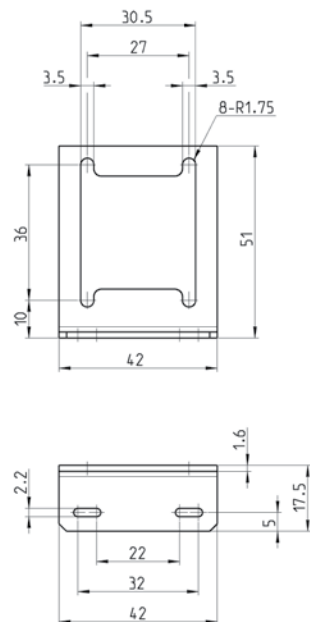
Mod.

ER1-B1

Bracket ER1-B2

New

Wall installation type.



DIMENSIONS

Mod.

ER1-B2

Digital Electro-pneumatic regulator Series ER 200

New 

3

Ports G1/4 and G3/8



- » Compact design
- » Digital display
- » Analog and digital input
- » Programmable
- » Zero/span adjustment function
- » Error display function, pressure display
- » Preset memory function 8-set points (3 bits).

TREATMENT

SPECIFICATION ER2XX-5XXX

New

Model	ER204-5 0/1/2 X ER238-5 0/1/2 X Analog type	ER204-5P X ER238-5P X Parallel type
Media	Cleaned air	Cleaned air
Max. working pressure	7 bar	7 bar
Min. working pressure	Control pressure + max. control pressure + 1 bar	Control pressure + max. control pressure + 1 bar
Pressure control range	0 ÷ 5 bar	0 ÷ 5 bar
Class protection	IP 40	IP 40
Power supply voltage	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)
Consumption current	0.15 A (rush current 0.6 A or less)	0.15 A (rush current 0.6 A or less)
Input signal(Input Impedance)	0 to 10 VDC (6.7k Ω) 0 to 5 VDC (10k Ω) 4 to 20 mA DC (250 Ω)	10bit
Preset input	8 points	N/A
Output signal Note 1	Analog output 1-5 VDC (load to be connected impedance 500 kΩ or more) Switch output NPN or PNP, open collector output, 30 V , 50 mA voltage drop 2.4 V , compatible for usage in PLC and Relay.	Analog output 1-5 VDC (load to be connected impedance 500 kΩ or more) Switch output NPN or PNP, open collector output, 30 V , 50 mA voltage drop 2.4 V , compatible for usage in PLC and Relay.
Error output signal	NPN or PNP open collector, 30 V , 50 mA voltage drop 2.4 V compatible for usage in PLC and Relay.	NPN or PNP open collector, 30 V , 50 mA voltage drop 2.4 V compatible for usage in PLC and Relay.
Direct memory setting	0,05 ÷ 5 bar minimum input width 0,01 bar	0,05 ÷ 5 bar minimum input width 0,01 bar
Hysteresis Note 2	0.5% F.S. or less	0.5% F.S. or less
Linearity Note 2	±0.3% F.S. or less	±0.3% F.S. or less
Resolution Note 2	0.2% F.S. or less	0.2% F.S. or less
Repeatability Note 2	0.3% F.S. or less	0.3% F.S. or less
Temperature characteristics: zero point fluctuation	0.15% F.S./°C or less	0.15% F.S./°C or less
Temperature characteristics: span point fluctuation	0.07% F.S./°C or less	0.07% F.S./°C or less
Max. flow rate(ANR) Note 3	1500L/min	1500L/min
Step response time: no load	0.2sec. or less	0.2sec. or less
Step response time: With load 1000 cm³	0.8sec. or less	0.8sec. or less
Mechanical vibration proof	98 m/s ² or less	98 m/s ² or less
Ambient temperature	5°C + 50 °C	5°C + 50 °C
Fluid temperature	5°C + 50 °C	5°C + 50 °C
Connecting port size IN/OUT	G1/4 - G3/8	G1/4 - G3/8
Connecting port size EXHAUST	G3/8	G3/8
Mounting	Free	Free
Weight	450g	450g
Note 1:	Select either analog or switch output.	
Note 2:	The above applies in control press. 10 to 90% with 24 VDC power voltage and working press. set at the maximum control press. + 1 bar. Pressure may fluctuate if used for applications such as blowing only when the secondary side is a closed circuit.	
Note 3:	The above apply when working pressure and control pressure are maximum.	
Note 4:	The above apply when working pressure is maximum and the step is as follows: 50% F.S. -> 100% F.S. 50% F.S. -> 60% F.S. 50% F.S. -> 40% F.S.	

SPECIFICATIONS ER2XX-9XXX

New

3

TREATMENT

Model	ER204-9 0/1/2 X ER238-9 0/1/2 X Analog type	ER238-9P X ER238-9P X Parallel type
Media	Cleaned air	Cleaned air
Max. working pressure	10 bar	10 bar
Min. working pressure	Control pressure + max. control pressure + 1 bar	Control pressure + max. control pressure + 1 bar
Pressure control range	0,5 - 9 bar	0,5 - 9 bar
Class protection	IP 40	IP 40
Power supply voltage	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)	DC24V ± 10% (stabilized power supply with a ripple rate of 1% or less)
Consumption current	0.15 A (rush current 0.6 A or less)	0.15 A (rush current 0.6 A or less)
Input signal (Input impedance)	0 to 10 VDC (6.7k Ω) 0 to 5 VDC (10k Ω) 4 to 20 mADC (250 Ω)	10bit
Preset input	8 points	N/A
Output signal	Analog output 1-5 VDC (load to be connected impedance 500 kΩ) Switch output NPN or PNP, open collector, 30 V , 50 mA , voltage drop 2.4 V , compatible for usage in PLC and Relay	Analog output 1-5 VDC (load to be connected impedance 500 kΩ) Switch output NPN or PNP, open collector, 30 V , 50 mA , voltage drop 2.4 V , compatible for usage in PLC and Relay
Error output signal	NPN or PNP open collector, 30 V , 50 mA voltage drop 2.4 V compatible for usage in PLC and Relay	NPN or PNP open collector, 30 V , 50 mA voltage drop 2.4 V compatible for usage in PLC and Relay
Direct memory setting	0,05 - 9 bar - minimum input 0,01 bar errore massimo 0,02 bar	0,05 - 9 bar - minimum input 0,01 bar errore massimo 0,02 bar
Hysteresis Note 2	0.5% F.S. or less	0.5% F.S. or less
Linearity Note 2	±0.3% F.S. or less	±0.3% F.S. or less
Resolution Note 2	0.2% F.S. or less	0.2% F.S. or less
Repeatability Note 2	0.3% F.S. or less	0.3% F.S. or less
Temperature characteristics: Zero point fluctuation	0.15% F.S./°C or less	0.15% F.S./°C or less
Temperature characteristics: Span point fluctuation	0.07% F.S./°C or less	0.07% F.S./°C or less
Max. flow rate(ANR) Note 3	1500L/min	1500L/min
Step response time No load	0.2 sec. or less	0.2 sec. or less
Step response time Load 1000 cm³	0.8 sec. or less	0.8 sec. or less
Mechanical vibration proof	98 m/s ²	98 m/s ²
Ambient temperature	5 to 50 °C	5 to 50 °C
Fluid temperature	5 to 50 °C	5 to 50 °C
Connecting port size IN/OUT	G1/4 - G3/8	G1/4 - G3/8
Connecting port size EXHAUST	G3/8	G3/8
Mounting	Free	Free
Weight	450g	450g
Note 1:	Select either analog or switch output	
Note 2:	The above applies in control press. 10 to 90% with 24 VDC power voltage and working press. set at the maximum control press. + 1 bar. Pressure may fluctuate if used for applications such as blowing only when the secondary side is a closed circuit.	
Note 3:	The above apply when working pressure and control pressure are maximum.	
Note 4:	The above apply when working pressure is maximum and the step is as follows: 50% F.S. -> 100% F.S. 50% F.S. -> 60% F.S. 50% F.S. -> 40% F.S.	

STANDARD CODES

Models

ER238-50AP	ER238-52AP	ER238-5PSP	ER238-90SP	ER238-92SP
ER238-50SP	ER238-52SP	ER238-90AP	ER238-92AP	ER238-9PSP

CODING EXAMPLE

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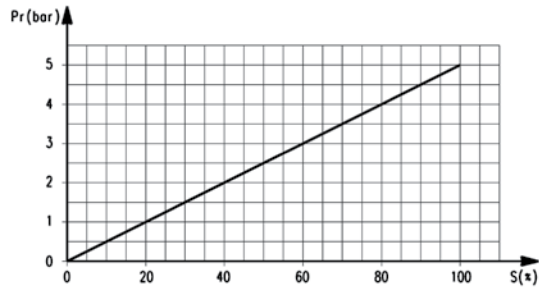
ER	SERIES
2	SIZE: 2 = size 2
04	PORT: 04 = G1/4 38 = G3/8
5	WORKING PRESSURE: 5 = 0 ÷ 5 bar 9 = 0.5 ÷ 9 bar
0	INPUT: 0 = 0 - 10 V DC 1 = 0 - 5 V DC 2 = 4 - 20 mA P = Parallel 10 bit
AN	OUTPUT: AN = 1 - 5 V analog error (NPN) AP = 1 - 5 V analog, error (PNP) SN = switch(NPN), error(NPN) SP = switch (PNP), error (PNP)

DIAGRAMS

New

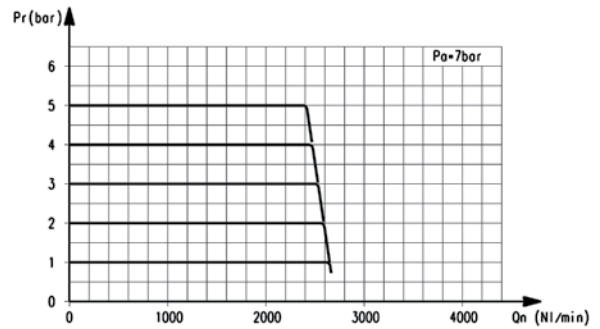
3

TREATMENT



ER-2xx-5xxx
Characteristics I/O

Pr = outlet pressure
S = input signal in %

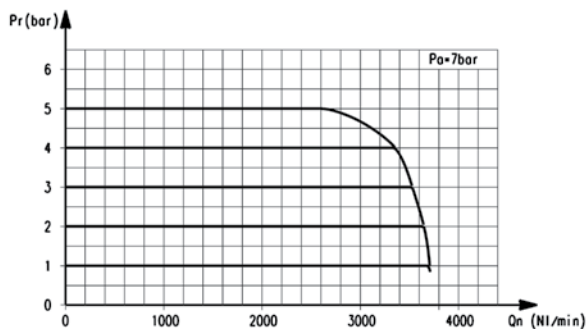


ER-204-5xxx
Flow Characteristics

Pr = outlet pressure in bar
Qn = flow in L/min
Pa = working pressure 7 Bar

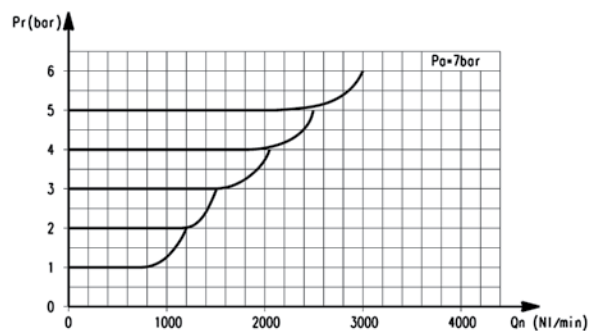
DIAGRAMS

New



ER-238-5xxx
Flow Characteristics

Pr = outlet pressure in
Qn = flow in L/min
Pa = working pressure 7 Bar

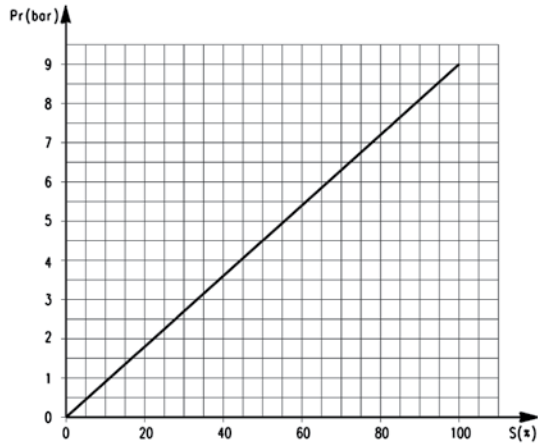


ER-2xx-5xxx
Exhaust Characteristics

Pr = outlet pressure in bar
Qn = flow in L/min
Pa = working pressure 7 bar

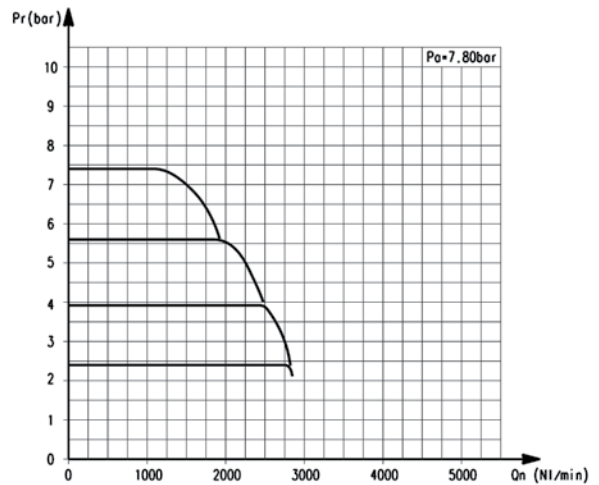
DIAGRAMS

New



ER-2xx-9xxx
Characteristics I/O

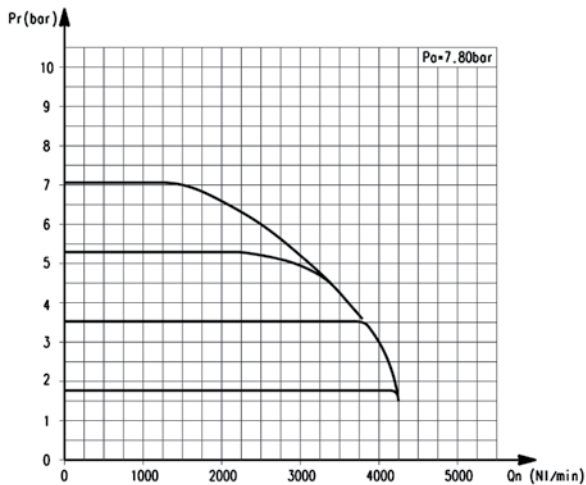
Pr = output pressure in bar
S = inlet signal in %
Pa = working pressure 7 bar



ER-204-9xxx
Flow characteristics
Pr = output pressure in bar
Qn = flow in L/min
Pa = working pressure 7,80 bar

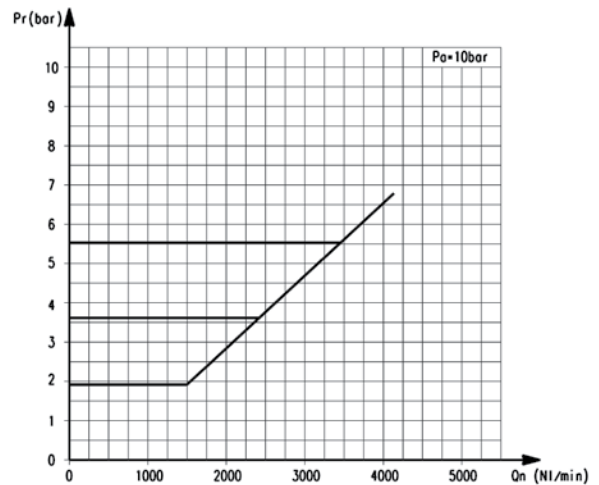
DIAGRAMS

New



ER-238-9xxx
Flow characteristics

Pr = output pressure in bar
Qn = flow in L/min
Pa = working pressure 7,80 bar



ER-2xx-9xxx
Exhaust characteristics

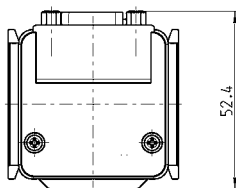
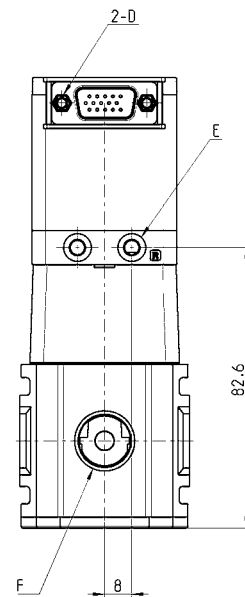
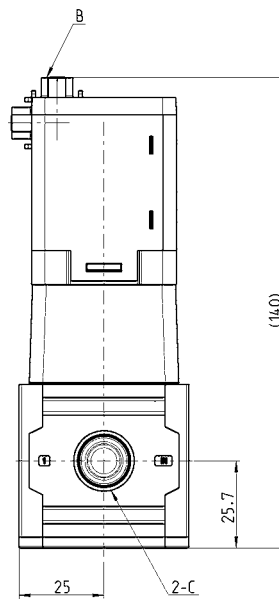
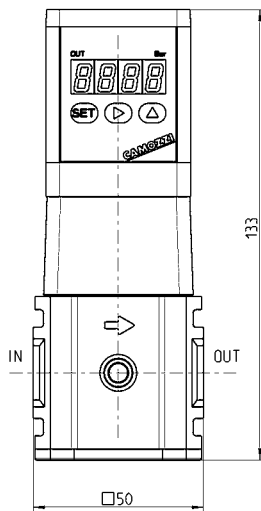
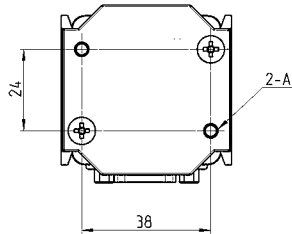
Pr = output pressure in bar
Qn = flow in L/min
Pa = working pressure 10 bar

Proportional regulators Series ER 200

New

3

TREATMENT

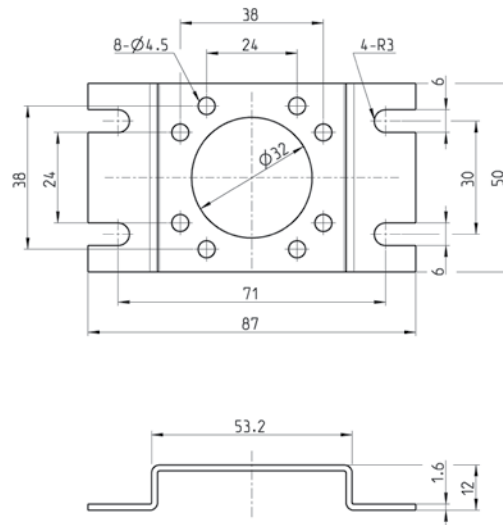


Mod.	A	B	C	D	E	F
ER204	M4 depth 12	D sub-connector 15 pins/plugs	G1/4	4-40 UNC	Ø4.2 Port R (pilot air exhaust port)	G3/8 EXH port
ER238	M4 depth 12	D sub-connector 15 pins/plugs	G3/8	4-40 UNC	Ø4.2 Port R (pilot air exhaust port)	G3/8 EXH port

Bracket ER2-B1

New

ER2-B1:
floor installation type mounting

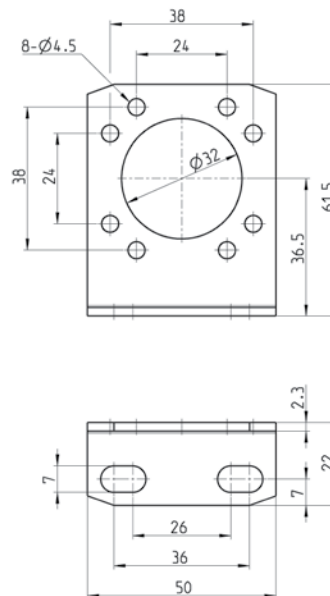


Mod.
ER2-B1

Bracket ER2-B2

New

ER2-B2:
wall installation type mounting



Mod.
ER2-B2

