ACCESSORIES 5

PNEUMAX GREEN LINE: TECHNOLOGY & INNOVATION

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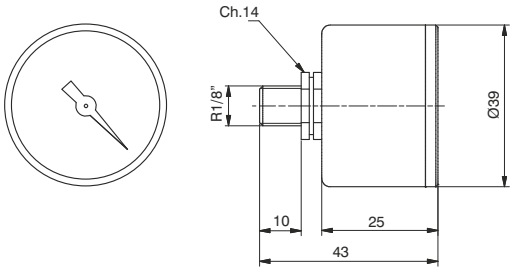
Analog vacuometer



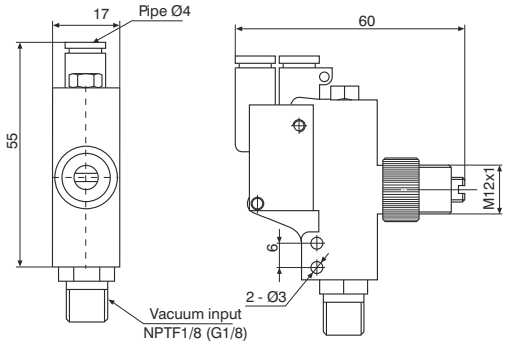
Ordering code

17070.A.D

Technical features

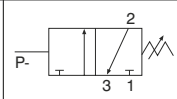
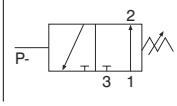
Fluid	Unlubricated filtered air
Scale (-kPa)	0 ÷ 100
Temperature (°C)	-10 ÷ 80
Weight (g)	56

Pneumatic vacuum switch

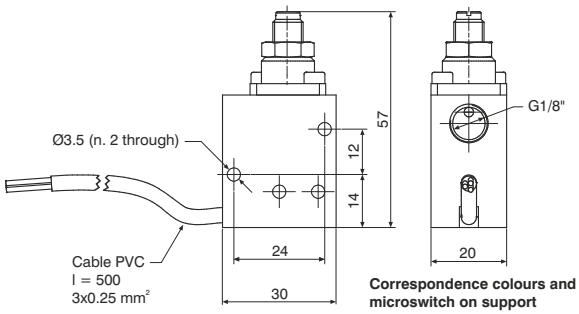


Vacuum switch whose function is, depending on the model, to turn a pneumatic signal on or off when a certain vacuum level is reached. The pressure differential that exists between the maximum value set and the restoration value cannot be adjusted. Especially recommended for the control of vacuum generators with a view to save energy.

Code	19TR4.C	19TR4.A
Type of contact	N.C. (Normally closed)	N.O. (Normally open)
Pressure (bar)	1.5 ~ 8	
Actuation threshold can be set (-kPa)	15 ~ 95	10 ~ 95
Hysteresis (kPa)	12	3
Temperature (°C)	-10 ~ +60°C	
Weight (g)	44	
Connections for vacuum	NPTF1/8 G1/8	

Function	Settable
N.C. (Normally closed)	
N.O. (Normally open)	

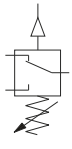
Electromechanical vacuum switch



Correspondence colours and mounted microswitch on support
Black = Common
Blue = N.C.
Grey = N.O.

Ordering code

19VCE.0.C1

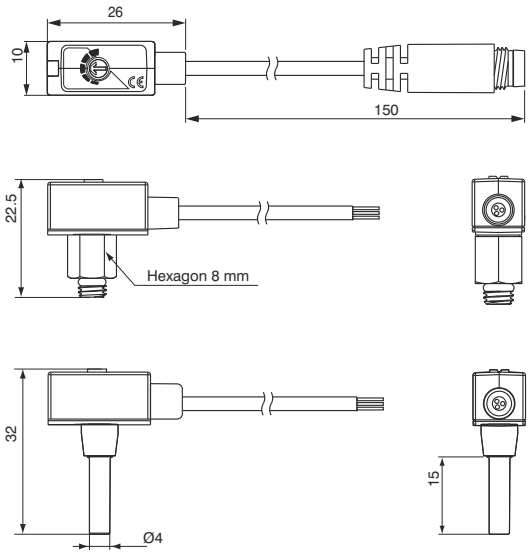


Vacuum switch whose function is to turn an electrical signal on or off when a certain vacuum level is reached. The pressure differential that exists between the maximum value set and the restoration value cannot be adjusted. Recommended for all cases where it is necessary to obtain an electrical signal once a certain level of vacuum is reached to start a work cycle, for control of the already attained grip by the suction cups or for reasons of safety, etc.

Technical features

Fluid	Vacuum
Flow rate	2A - 250 VAC
Regulation (-kPa)	20 ÷ 90
Temperature (°C)	-5 ÷ 70
Protection class	IP 67
Weight (g)	62,5

Mini digital vacuum switch



Ordering code

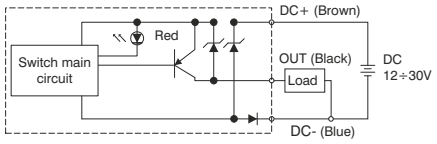
DS.10.V.B.Ⓒ.Ⓛ.Ⓞ

Ⓒ	CONNECTION
	F4=Male M5x0,8
	R4=Plug-in connection Ø4
Ⓛ	CABLE LENGTH
	A=150 mm
	E=3000 mm
Ⓞ	OPTIONS
	0=Without connector
	1=With connector M8 male 3 Pin

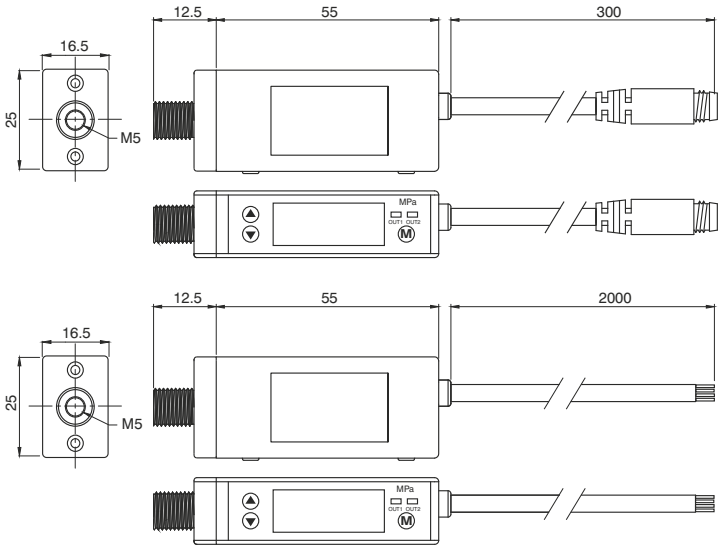
Technical features

Working pressure range		0÷-100.0kPa
Regulation pressure range		0÷-100.0kPa
Maximum supported pressure		600 kPa
Allowed fluids		Air, non-corrosive gases, non-combustible gases
Supply voltage		Da 12 a 30 VDC ±10%
Current consumption		≤ 10mA
Digital output		PNP N.O. 1 outputs Maximum load current: 80mA Maximum supply voltage: 30VDC Voltage drop: ≤0.8V
Repeatability (Digital output)		± 1% Full Scale
Digital output	Type of hysteresis	fixed
	Hysteresis	3% Full Scale max.
Response time		1ms
Protection from short circuit at output		Present
Method of setting threshold		Adjustable, trimmer
Indicator		LED red (output)
Ingress protection rating	Protection class	Ip40
	Ambient temperature	Operational: 0÷60°C, Storage: -20÷70°C (without ice or condensation)
	Ambient humidity	Operational/Storage: 35÷85% (without condensation)
	Vibration	Total amplitude 1.5mm.,10Hz-55Hz-10Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z
	Impacts/shocks	980m/s² (100G), 3 times in each direction of X, Y and Z
Temperature characteristics		±2% Full Scale in a range between 0÷50°C
Type of connection		Male M5x0.8, Plug-in connection Ø4
Electrical cable		Oilproof cable, 3 fili (0.18mm²), Ø2.6mm
Weight		Approximately 50 g (with 3 metres of cable)

Output circuit wiring scheme



Digital vacuum switch



Ordering code

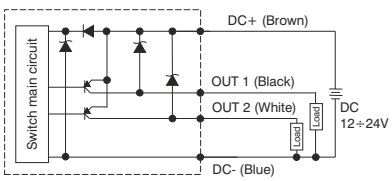
DS.30.C.C.F8.L.O

L	CABLE LENGTH
	B=300 mm
	D=2000 mm
O	OPTIONS
	0=Without connector
	1=With connector M8 male 4 Pin

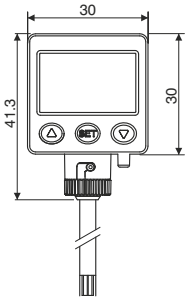
Technical features

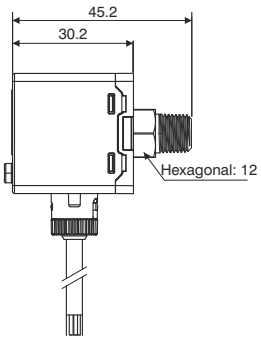
Working pressure range		-100.0÷100.0kPa
Regulation pressure range		-100.0÷100.0kPa
Maximum supported pressure		300 kPa
Allowed fluids		Air, non-corrosive gases, non-combustible gases
Pressure calibration sensitivity	kPa	0.1
	kgf/cm^2	0.001
	bar	0.001
	psi	0.01
	InHg	0.1
	mmHg	1
	mmH$_2$O	0.1
Supply voltage		Da 12 a 24 VDC ± 10%
Current consumption		≤ 60mA
Digital output		PNP N.A. 2 outputs Maximum load current: 80mA Maximum supply voltage: 30VDC Voltage drop: ≤1V
Repeatability (Digital output)		± 0.2% Full Scale ± 1 digit
Digital output	Type of hysteresis	fixed
	Hysteresis	0.003 bar
Response time		≤2,5 ms (anti-interference function: 24ms, 192ms e 768 ms selectable)
Protection from short circuit at output		Present
Display		Display with 3 1/2 digits (sampling 5 times per sec.)
Indicator precision		±2% F. S. ±1 digit (at ambient temperature of 25°C ±3°C)
Indicator		LED Green (output1) LED red (output2)
Ingress protection rating	Protection class	IP40
	Ambient temperature	Operational: 0÷50°C, Storage: -20~60°C (without ice or condensation)
	Ambient humidity	Operation/Storage: 35÷85% (without condensation)
	Supported voltage	1000VAC in 1-min. (between body and cable)
	Insulation resistance	50MΩ min. (at 500VDC, between body and cable)
	Vibration	Total amplitude 1.5mm.,10Hz-55Hz-10Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z
	Impacts/shocks	980m/s^2 (100G), 3 times in each direction of X, Y and Z
Temperature characteristics		±2% Full Scale in a range between 0÷50°C
Type of connection		G1/8"
Electrical cable		Oil resistant cable
Weight		Approximately 67 g (with 2 metres of cable)

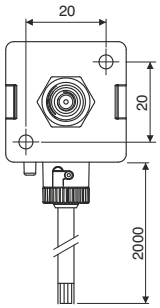
Output circuit wiring scheme



Panel-mounted digital vacuum switch







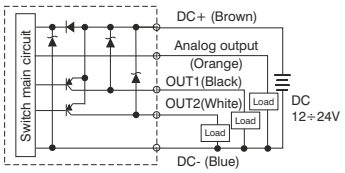
Ordering code

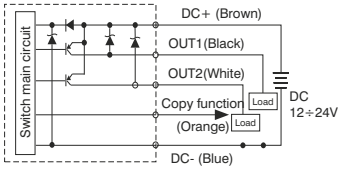
DS.45.Ⓥ.B.Ⓤ.F3.D.0

Ⓥ	VERSION
	C=Vacuum/Pressure (-100 / 100 kPa)
	V=Vacuum (0 / -101,3 kPa)
Ⓤ	OUTPUTS
	C=2 outputs PNP
	E=2 outputs PNP + Analog output (4 / 20 mA)

Technical features		DS.45.C.B.C.F3.D.0 (Composite)	DS.45.V.B.E.F3.D.0 (Vacuum)
Working pressure range		-100.0 ÷100.0kPa	0 ÷ -100.0kPa
Regulation pressure range		-100.0 ÷100.0kPa	0 ÷ -100.0kPa
Maximum supported pressure		300 kPa	
Allowed fluids		Air, non-corrosive gases, non-combustible gases	
Pressure calibration sensitivity	kPa	0.1	
	kgf/cm²	0.001	
	bar	0.001	
	psi	0.01	
	InHg	0.1	
Supply voltage		Da 12 a 24 VDC	
Current consumption		≤ 40mA (without load)	
Digital output		PNP N.A. 2 outputs Maximum load current: 125mA Maximum supply voltage: 24VDC Voltage drop: ≤1.5V	
Repeatability (Digital output)		± 0.2% Full Scale ± 1 digit	
Digital output	Type of hysteresis	Settable	
	Hysteresis	da 0.001 a 0.008 bar	
Response time		≤2,5 ms (anti-interference function: 25ms, 100ms, 250ms, 500ms, 1000ms e 1500ms selectable)	
Protection from short circuit at output		Present	
Display		Display a 3 1/2 cifre (red/Green)	
Indicator precision		±2% F. S. ±1 digit	
Indicator		LED Orange (output1) LED Orange (output2)	
Analog output		Output current: 4÷20mA ±2.5% F. S. Linearity: ±1% F. S. Maximum load resistance: 250Ω supply at 12V e 600Ω supply at 24V Minimum load resistance: 50Ω	
Ingress protection rating	Protection class	Ip65	
	Ambient temperature	Operational: 0÷50°C, Storage: -10÷60°C (without ice or condensation)	
	Ambient humidity	Operation/Storage: 35÷85% (without condensation)	
	Supported voltage	1000VAC in 1min. (between body and cable)	
	Insulation resistance	50MΩ (at 500VDC, between body and cable)	
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z	
	Impacts/shocks	100m/s² (10G), 3 times in each direction of X, Y and Z	
Temperature characteristics		±2.5% Full Scale in a range between 0÷50°C	
Type of connection		G1/8"	
Electrical cable		Oil resistant cable (internal 0.15mm²)	
Weight		Approximately 86 g (with 2 metres of cable)	

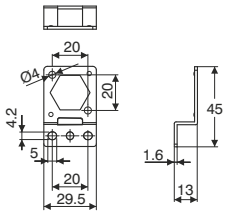
Output circuit wiring scheme





Fastening bracket

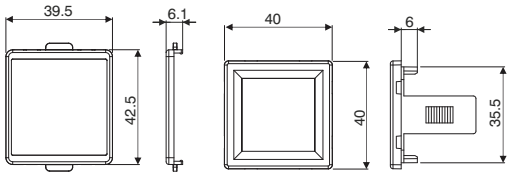
Ordering code
DS.BT10



Panel mount adapter

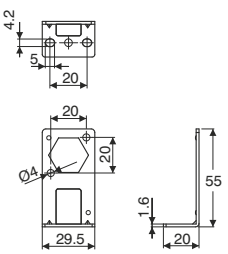
Ordering code
DS.PAE

Accessories



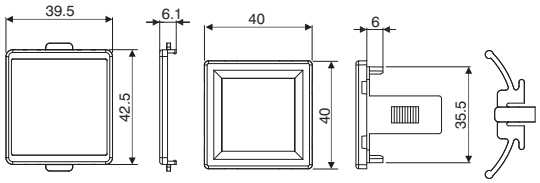
Fastening bracket

Ordering code
DS.BT11



Panel mount adapter with screen protection

Ordering code
DS.PAF

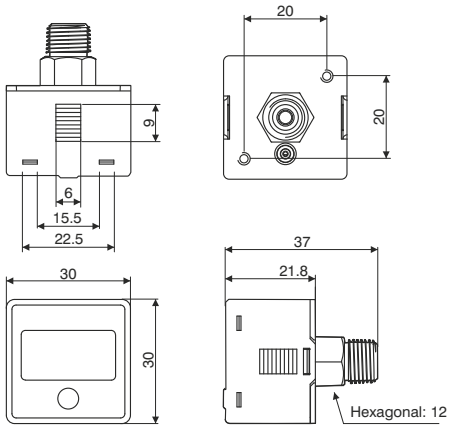


5

Digital battery vacuum gauge

Ordering code

DS.60.V.I.F1.F.0

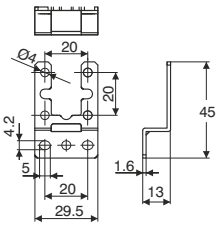


Technical features

Working pressure range		0 ÷ -100.0kPa
Regulation pressure range		0 ÷ -100.0kPa
Maximum supported pressure		300 kPa
Allowed fluids		Air, non-corrosive gases, non-combustible gases
Pressure calibration sensitivity	kPa	0.1
	bar	0.01
	psi	0.1
	mmHg	1
Battery		CR 2032 lithium
Backlight		Not present
Battery life		3 years (5 powerups a day)
Indication of battery level		Present
Battery replaceable		Yes
Display powerup time		Goes off after 60 seconds
Sampling frequency		2 Hz (2 times per second)
Repeatability		±1% F. S. ±1 digit
Display		Display a 3 1/2 cifre
Indicator precision		±2% F. S. ±1 digit (at ambient temperature of 25°C ±3°C)
Ingress protection rating	Protection class	Ip65 (only with connected air pipe)
	Ambient temperature	Operational: 0÷50°C, Storage: -10÷60°C (without ice or condensation)
	Ambient humidity	Operational/Storage 35÷85% (without condensation)
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scanning for 1 minute, 2 hours in each direction of X, Y
	Impacts/shocks	100m/s² (10G), 3 times in each direction of X, Y and Z
Temperature characteristics		±2% Full Scale in a range between 0÷50°C
Type of connection		G1/8"
Weight		Approximately 40 g

Fastening bracket

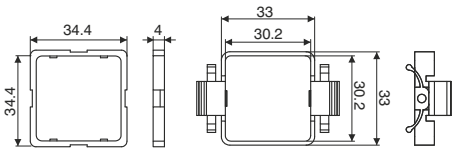
Ordering code
DS.BT5



Panel mount adapter

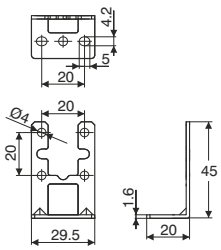
Ordering code
DS.PAC

Accessories



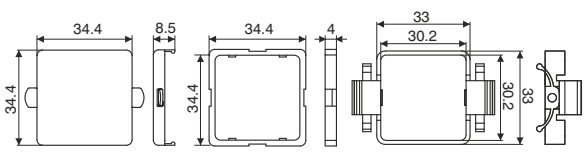
Fastening bracket

Ordering code
DS.BT6



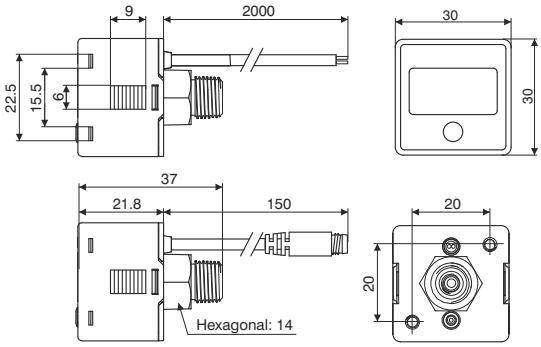
Panel mount adapter with screen protection

Ordering code
DS.PAD



5

Digital vacuum gauge



Ordering code

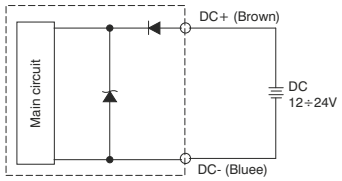
DS.61.V.I.F1.L.O

L	CABLE LENGTH
	A=150 mm
	D=2000 mm
O	OPTIONS
	0=Without connector
	2=With connector M8 male 3 Pin

Technical features

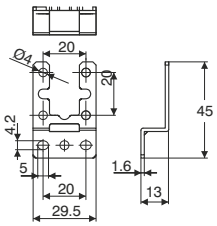
Working pressure range		0 ÷ -100.0kPa
Regulation pressure range		0 ÷ -100.0kPa
Maximum supported pressure		300 kPa
Allowed fluids		Air, non-corrosive gases, non-combustible gases
Pressure calibration sensitivity	kPa	1
	kgf/cm^2	0.01
	bar	0.01
	psi	0.1
Supply voltage		Da 12 a 24 VDC ± 10%
Current consumption		10mA
Repeatability		± 1% Full Scale ± 1 digit
Display		Display with 3 1/2 digits (sampling 5 times per sec.)
Indicator precision		±2% F. S. ±1 digit (at ambient temperature of 25°C ±3°C)
Ingress protection rating	Protection class	IP65 (only with connected air pipe)
	Ambient temperature	Operational: 0÷50°C, Storage: -10÷60°C (without ice or condensation)
	Ambient humidity	Operation/Storage: 35÷85% (without condensation)
	Supported voltage	1000VAC in 1 min. (between body and cable)
	Insulation resistance	50MΩ (at 500VDC, between body and cable)
	Vibration	Total amplitude 1.5mm or 10G,10Hz-55Hz-10Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z
	Impacts/shocks	100m/s² (10G), 3 times in each direction of X, Y and Z
Temperature characteristics		±2% Full Scale in a range between 0÷50°C
Type of connection		G1/8"
Electrical cable		Oil resistant cable (fili interni 0.15mm2)
Weight		Approximately 60g (with 2 metres of cable) e Approximately 40 g (con connettore M8 4 pin maschio)

Output circuit wiring scheme



Fastening bracket

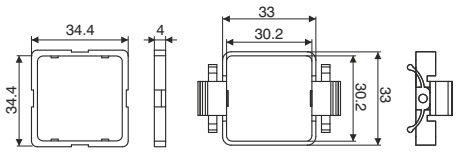
Ordering code
DS.BT5



Panel mount adapter

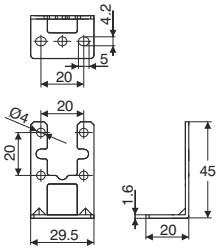
Ordering code
DS.PAC

Accessories



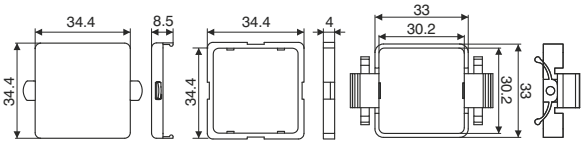
Fastening bracket

Ordering code
DS.BT6



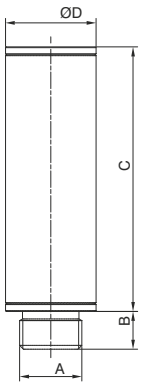
Panel mount adapter with screen protection

Ordering code
DS.PAD



5

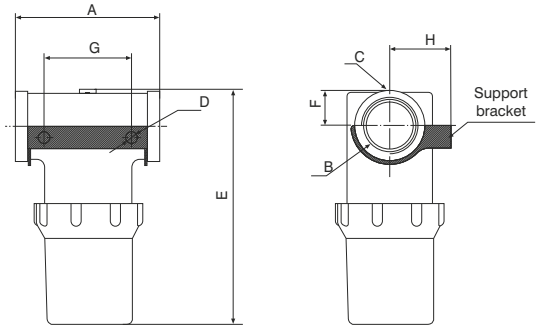
High efficiency silencers



Code	Description	A	B	C	ØD	Weight (g)
19S18.S	Silencer G1/8"	G1/8"	6	30	16	10
19S14.S	Silencer G1/4"	G1/4"	8	50	20	21
19S38.S	Silencer G3/8"	G3/8"	10	70	24	35
19S12.R	Silencer G1/2" Reduced	G1/2"	12	70	29	46
19S12.S	Silencer G1/2"	G1/2"	12	90	35	83
19S34.R	Silencer G3/4" Reduced	G3/4"	12	90	35	86
19S34.S	Silencer G3/4"	G3/4"	12	110	50	144
19S10.R	Silencer G1" Reduced	G1"	14	110	50	144

The use of sound-absorbing material enclosed in appropriate aluminium containers made it possible to create this range of silencers which significantly lower air noisein the vacuum generator discharge stage.
Noise reduction: between -13 and -20 dBA
Working temperature: from -20 to +100 °C

Vertical filters



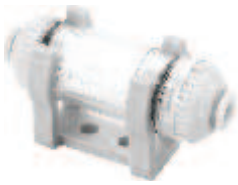
Code	Description	A	B	C	D	E	F	G	Weight (g)
19F38.V.00	Filter G3/8"	76	2-G3/8"	NPSF1/8	2-Ø6.5	71.3	14	45	70
19F12.V.00	Filter G1/2"	91	2-G1/2"	NPSF1/8	2-Ø8.5	131.5	16	50	168
19F34.V.00	Filter G3/4"	91	2-G3/4"	NPSF1/8	2-Ø8.5	138.5	18.5	50	170
19F10.V.00	Filter G1"	126	2-G1"	NPSF1/8	2-Ø10.5	167	23	80	424

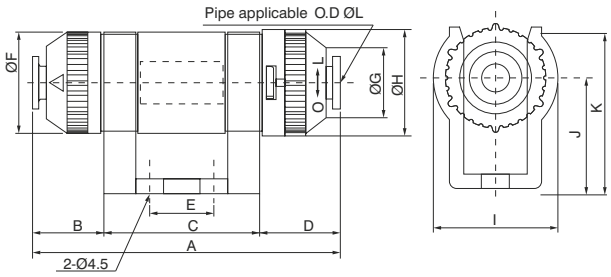
Filter elements

Code	Description
RK1900/0022	Filter element for 19F38.V.00
RK1900/0023	Filter element for 19F12.V.00 AND 19F34.V.00
RK1900/0024	Filter element for 19F10.V.00

Preventing contaminants from reaching the vacuum generator is critical for maintaining its proper operation. Filters of this series have this function, manufactured in a simple way, have threaded connections for installation and a bowl that can be easily taken off to allow fast cleaning of the internal filter cartridge. The various models of filter cover a flow rate range running from 150 to 2520 l/m, Degree of filtration :10 micron, Working temperature:-20 / 80 °C, Working pressure:-100 / 0 kPa.

Line filters





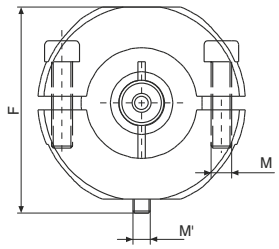
Code	Description	A	B	C	D	E	ØF	ØG	ØH	I	J	K	ØL	Weight (g)
19F04.L.01	Pipe Ø4 - 20 l/min	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	4	14
19F06.L.01	Pipe Ø6 - 20 l/min	53.2	9.1	30	14.1	10	18	11.6	19.5	23	20	29	6	13
19F06.L.02	Pipe Ø6 - 50 l/min	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	6	26
19F08.L.02	Pipe Ø8 - 50 l/min	67	15.5	34	17.5	14	22	15.6	23.1	27	24	35	8	24

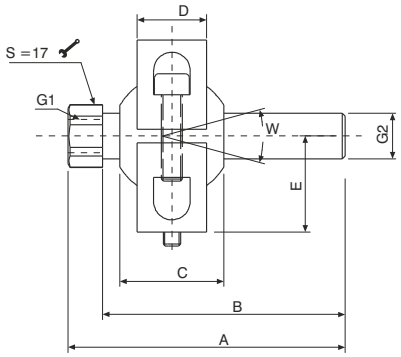
Filter elements

Code	Description
RK1900/0020	Filter element for 19F04.L.01 and 19F06.L.01
RK1900/0021	Filter element for 19F06.L.02 and 19F08.L.02

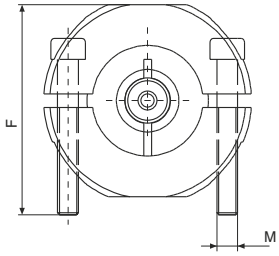
Line filters can handle very fine powders and contaminants without interfering with the intake flow rate. Thanks to the small dimensions they can be installed directly on the suction cups or on the vacuum pipework, and since they have automatic connections, wiring operations are facilitated.
Degree of filtration:10 micron, Working temperature:0-60 °C, Working pressure:-100 / 0 kPa.

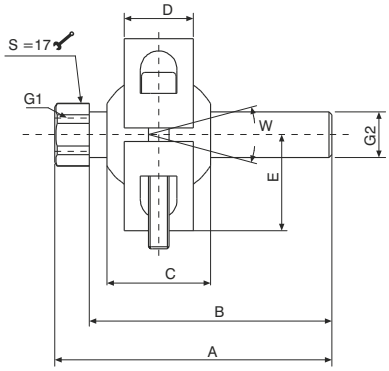
Suction cup supports regulator





Code	A	B	C	D	E	F	G1	G2	M	M'	W	Weight (g)
19SP1.T	80	70	55.6	20	27.5	59.5	G1/8"	G1/4"	M6	M5	30°	174





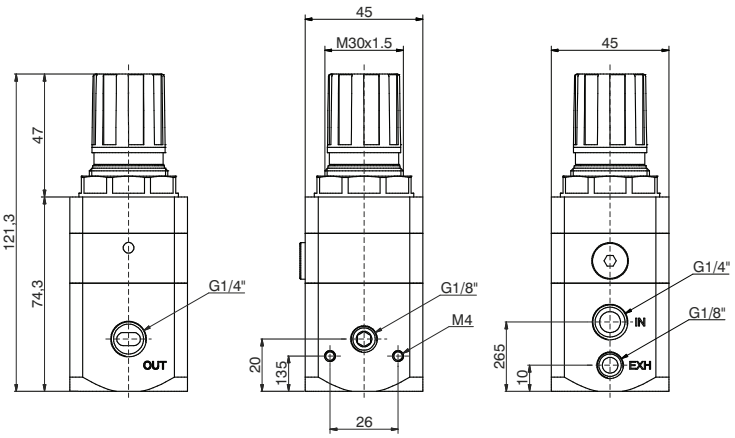
Code	A	B	C	D	E	F	G1	G2	M	W	Weight (g)
19SP2.T	80	70	55.6	20	27.5	61	G1/8"	G1/4"	M6	30°	180

Support for suction cup with adjustability and fastening via a ball bearing that allows it to be kept in the desired position.

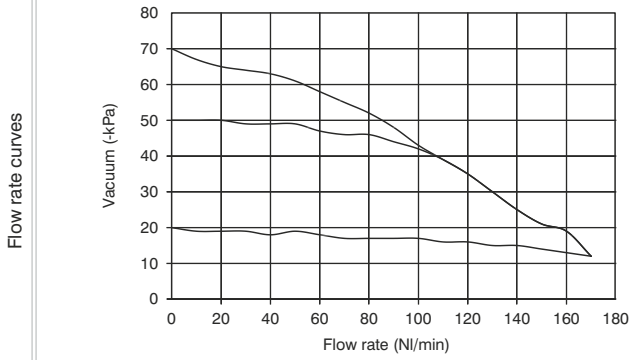
Regulator for vacuum

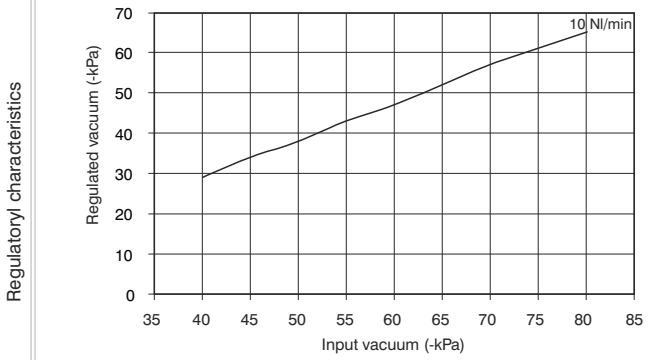
Ordering code

171S2B000V



Example: 171S2B000V
Regulator for vacuum G1/4"





Construction features

- Precision in keeping the set pressure value.
- SSensitivity combined with high flow rate of the downstream overpressure discharge valve.
- High flow rate with very low pressure drop.
- Setting knob can be locked using pressure into the desired position.
- Body made of light alloy.
- Two attachments for vacuum gauge with a cap equipped with a gasket.
- Ring nut for panel mounting.
- Once the reducer has been placed under vacuum, air intake through the appropriate orifice is an attribute and not a defect.

Technical features

Connections	G1/4"
Max. operating pressure (-kPa)	101
Operating temperature °C	-5 ÷ +50
Pressure gauge attachments	G1/8"
Weight (g)	400
Mounting position	any
Maximum tightening torque for connections (Nm)	25
Fluid	Filtered air 20μm
Diameter of panel mounting orifice (mm)	30

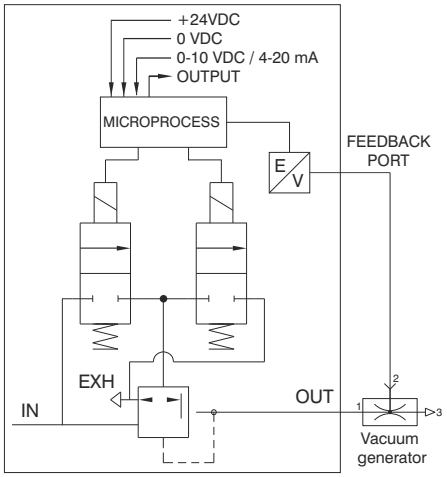
General details

Modern industrial applications demand increasingly higher performance out of pneumatic components. In the specific case of a pneumatic cylinder, it has to act on parameters that determine the force generated and the speed at which the valve stem moves. The same holds true for a rotary actuator where we do not speak of force but rather the application of torque.
These parameters often have to be modified dynamically during operation of the the machine on which they are installed. Traditional solutions that make use of the pneumatic logic associated with use of valves supplied at different pressures often need to be large in size. It was from this requirement that the alternative solution of using a regulator came about, since it can change the pressure value over time. This type of regulator is called an electronically controlled proportional regulator. There are 3 sizes with flow rates of 7; 1,100; and 4,000 Nl/min.The model that manages the positive pressure controling a vacuum generator was then added to this range.

Field of application

Fields of application for proportional regulators are any where it is necessary to dynamically control the force of an actuator, variation of pressure or degree of vacuum. Some examples: locking systems, painting systems, tensioning systems, packaging machinery, pneumatic control braking systems, force control for welding clamps, thickness compensating systems, balancing systems, laser cutting, pressure transducers to control modulating valves, test benches for testing systems, controlling the force of air gauges in sanding systems, management of force exerted by suction cups in handling applications.

Functional diagram

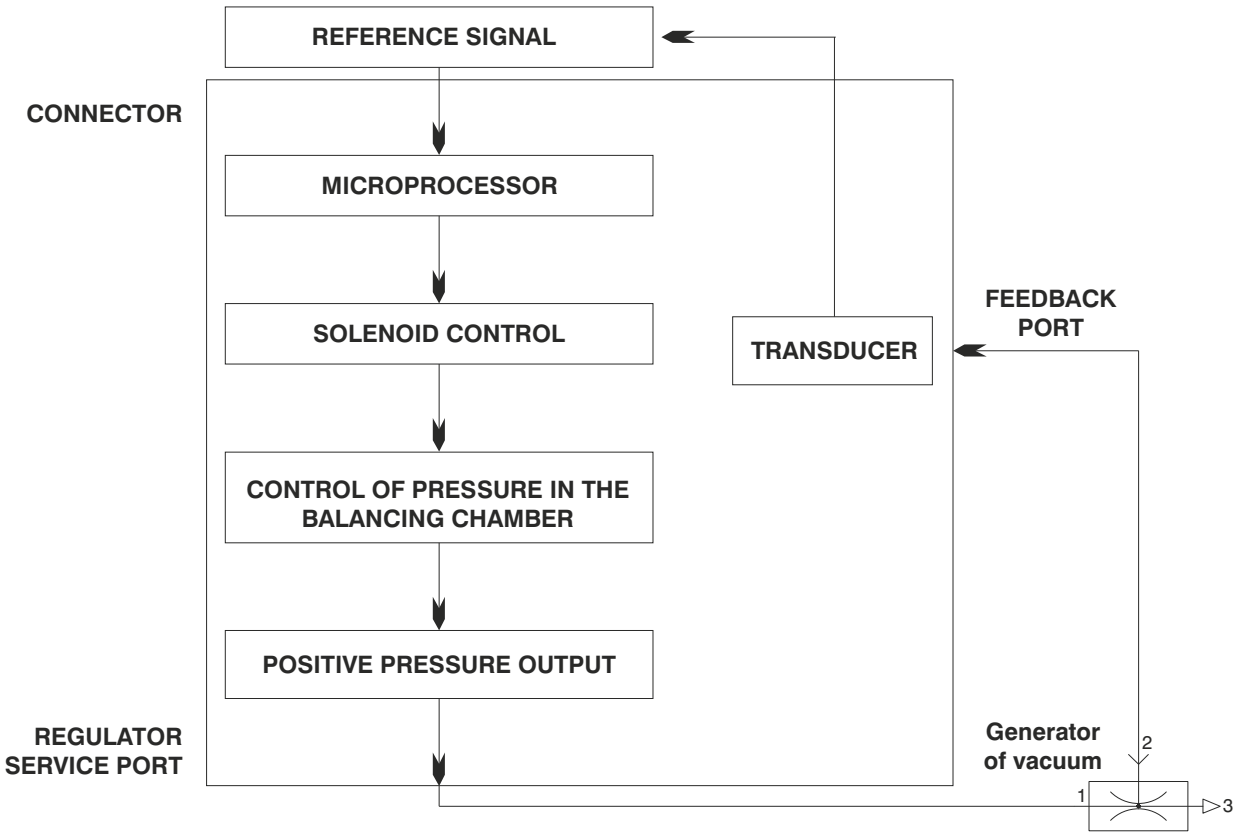


Product description

The pneumatic connections of the regulator require the aperture for supply and discharge to be on one side and the aperture for use on the opposite side. On the other two remaining sides there are apertures of G1/8" that are plugged up with removable plugs, however it is possible to connect a pressure gauge through them or use the connections as outputs. On the side where the service connection is, there is an M5 aperture where you can connect the return vacuum signal (to the pressure transducer).This option makes it possible to pick up the signal from a remote point rather than directly from the service connection. In the upper part of tregulators there are control solenoid valves, the pressure sensor and the electronics forcontrol. The part for electronically controlling the regulators is the same for all the 3 sizes. The new range of proportional regulators is supplied as standard with all the functionality initially considered only as optional; the only selections necessary in the ordering phase are thus related to the type of signal for control of voltage(T) or current (C) and the range of working pressures.

CLOSED LOOP scheme (internal control circuit)

The proportional regulator is defined as CLOSED LOOP because a pressure transducer in the circuit transmits a continuous analog signal to the microprocessor that compares the reference value with the one that is detected and behaves accordingly, supplying the control solenoid valves in the correct way.



Characteristics

Pneumatic

Fluid	5 micron filtered and dehumidified air		
Input minimum pressure	As a function of the type of vacuum generator		
Input max pressure	10 bar		
Output pressure	Ordering code	0009	
	Pressure value	0 ÷ 9 bar	
Nominal flow rate from 1 to 2 (6 bar Δp 1 bar)	**Size 0**	**Size 1**	**Size 3**
	7 Nl /min	1.100 Nl /min	4.000 Nl/min
Discharge flow rate (at 6 bar with overpressure of 1 bar)	7 Nl /min	1.300 Nl /min	4.500 Nl/min
Air consumption	< 1 Nl/min	< 1 Nl/min	< 1 Nl/min
Supply connection	M5	G 1/4"	G 1/2"
Service connection	M5	G 1/4"	G 1/2"
Discharge connection	Ø1.8	G 1/8"	G 3/8"
Maximum tightening torque for connections	3 Nm	15 Nm	15 Nm

Electric

Supply voltage	24VDC ± 10% (stabilised with ripple <1%)	
Current consumption in standby	55mA	
Current consumption with actuated EV	145mA	
Reference signal	Voltage	*0 ÷ 10 V *0 ÷ 5 V *1 ÷ 5 V
	Current	*4 ÷ 20 mA *0 ÷ 20 mA
Input impedance	Voltage	10KΩ
	Current	250Ω
Analog output Voltage	*0 ÷ 10V *0 ÷ 5V	
Analog output Current	*4 ÷ 20mA *0 ÷ 20mA	
Digital inputs	24VDC ±10%	
Digital outputs	24 VDC PNP (max current 50 mA)	
Connector	D-sub 15 poles	

Funzionali

Linearity	< ± 0.3 % F.S.
Hysteresis	<0.3 % F.S.
Repeatability	< ± 0.3 % F.S.
Sensitivity	< ± 0.3 % F.S.
Mounting position	Any
Protection class	IP65 (with proper nut mounted)
Ambient temperature (°C)	-5° ÷ 50°C / 23° ÷ 122°F

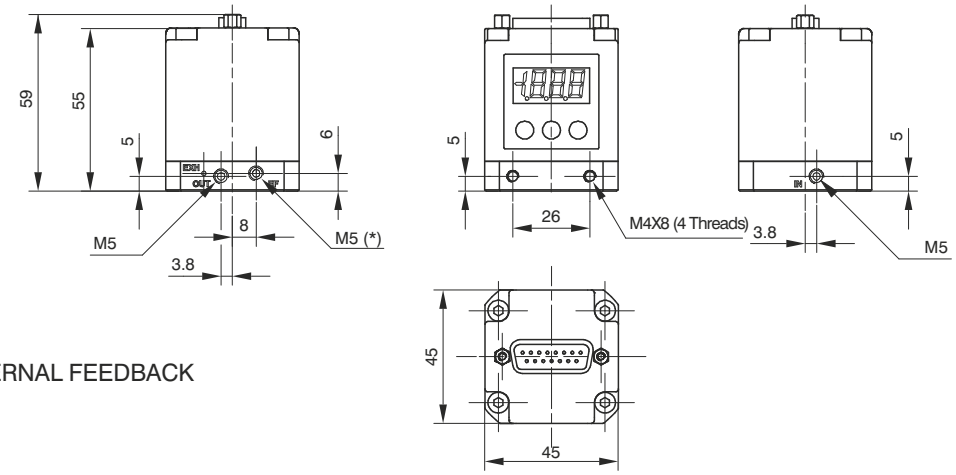
Costruttive

Body	Anodised aluminium		
Shutters	Brass with vulcanised NBR		
Diaphragm	Rubberised fabric		
Sealing gaskets	NBR		
Cover electrical part	Technopolymer		
Springs	AISI 302		
Weight	**Size 0**	**Size 1**	**Size 3**
	168 g	360 g	850 g

*** Can be selected using keyboard or with RS-232**

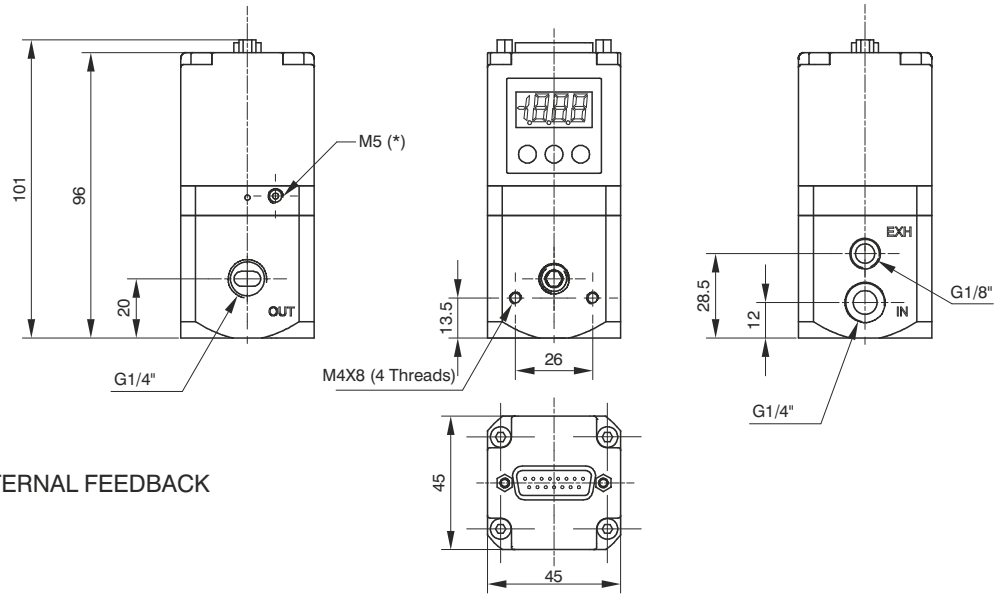
Overall dimensions

Size 0



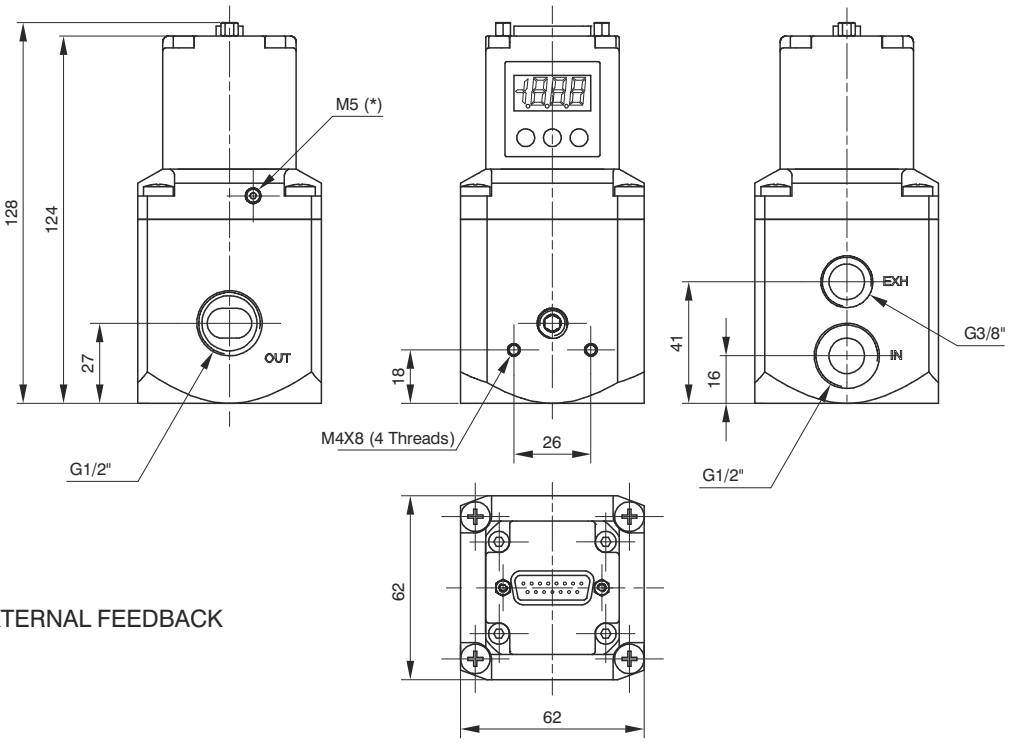
* = CONNECTION FOR EXTERNAL FEEDBACK

Size 1



* = CONNECTION FOR EXTERNAL FEEDBACK

Size 3

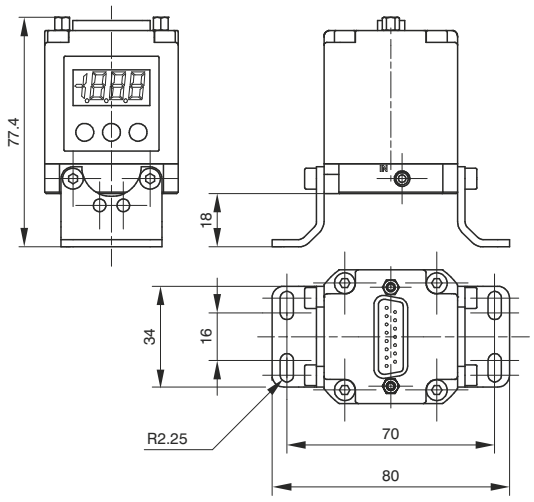


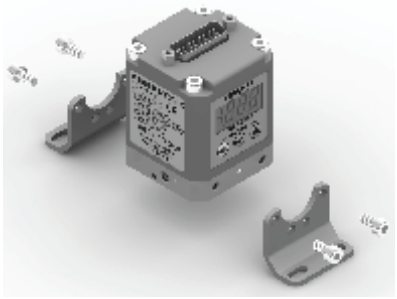
* = CONNECTION FOR EXTERNAL FEEDBACK

5

Fastening option

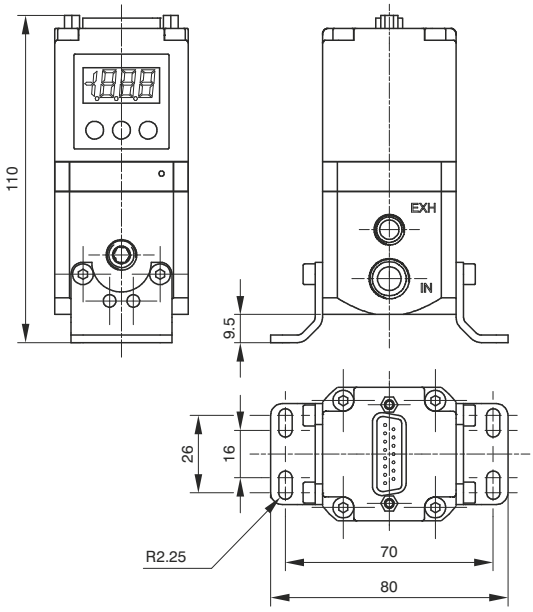
In addition to the possibility of fastening it directly to the wall using the M4 apertures present on the body, there is also the option of using the fastening bracket code 170M5 as can be seen in the figures shown below.

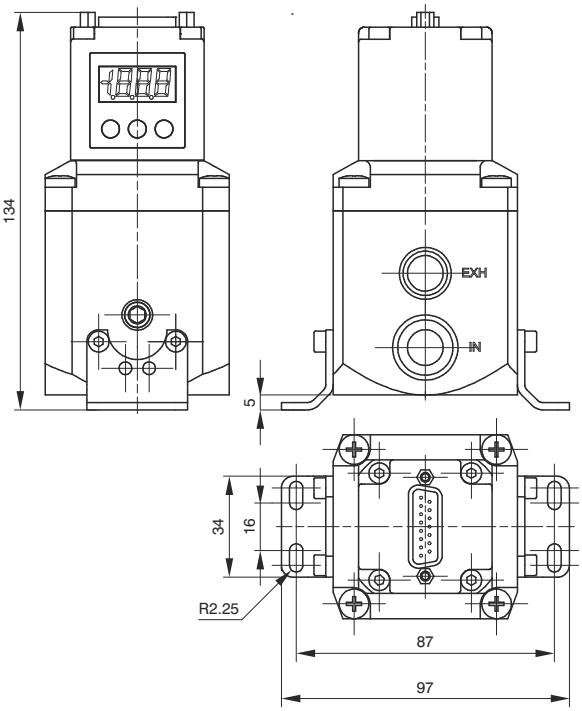


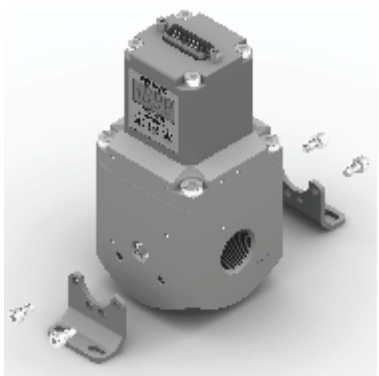


SIZE 0

SIZE 1







SIZE 3

Installation/ Operation

PNEUMATIC CONNECTION

Pneumatic connection can be made through the threaded apertures M5 (for Size 0 regulators), G 1/4" (for Size 1 regulators) and G 1/2" (for Size 3 regulators) present on the body.

Before making the connections, it is recommended that any contaminants present in the connection pipes be eliminated in order to prevent powders or chips from ending up inside the unit. It is also recommended that the circuit is supplied with a pressure no greater than 10 bar and that the compressed air is dry (too much condensation may cause malfunction of the equipment) and filtered at 5 microns. The minimum supply pressure required depends on the characteristics of the vacuum generator.

By putting a silencer in the discharge path it is possible to change the response time of the unit; periodically check to make sure that the silencer has not become dirty, and, if it is dirty, replace it.

ELECTRICAL CONNECTION

The electrical connection can be created using a female SUB-D 15 poles

Put the electrical connections together in accordance with the diagram shown in the figure at bottom.

Attention: WRONG CONNECTIONS MAY DAMAGE THE DEVICE

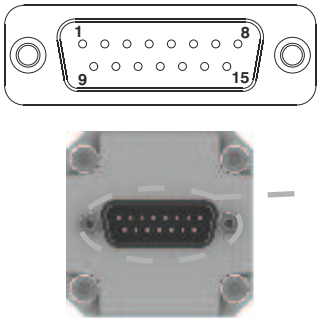
NOTES ON OPERATION

If the electricity supply is cut off, the output pressure will be kept at the set value. However, maintenance of this exact value is not guaranteed given the fact that the solenoid valve cannot be actuated.

To discharge the circuit downstream, clear the reference, make sure the display shows a pressure value equal to zero, and then cut off the electrical power supply.

A version of the device is available as an option that discharges the circuit downstream right at the time the electricity is cut off (final letter A in the ordering code).If the air supply is stopped and the power supply is maintained, you may hear a humming noise being generated due to the solenoids; it is possible to activate an operating parameter (P18) that allows the regulator to be protected any time the pressure is not reached within 4 seconds after the moment the reference signal is sent. In this case, the system will intervene by interrupting control of the solenoid valves. Every 20 seconds the unit will start the restoration procedure until standard operating conditions are reintegrated.

REGULATOR CONNECTOR VIEWED FROM ABOVE



CONNECTOR PIN:
1 = DIGITAL INPUT 1
2 = DIGITAL INPUT 2
3 = DIGITAL INPUT 3
4 = DIGITAL INPUT 4
5 = DIGITAL INPUT 5
6 = DIGITAL INPUT 6
7 = DIGITAL INPUT 7
8 = ANALOG INPUT / DIGITAL INPUT 8
9 = SUPPLY (24 VDC)
10 = DIGITAL OUTPUT (24 VDC PNP)
11 = ANALOG OUTPUT (CURRENT)
12 = ANALOG OUTPUT (VOLTAGE)
13 = Rx RS-232
14 = Tx RS-232
15 = GND

Ordering codes

19_E2P._ . D . 0090 . __

SIZE :
- **0** = Size 0
- **1** = Size 1
- **3** = Size 3

CONTROL :
- **C** = Signal in current (4-20 mA / 0-20 mA)
- **T** = Signal in voltage (0-10 V / 0-5 V / 1-5 V)

RANGE OF PRESSURE:
- **0090** = from 0 to 90%

VARIANT :
- **E** = External pressure feedback
- **AE** = External pressure feedback+ Exhaust downstream pressure when power supply is removed

Accessories

Model with connector SUB-D 15 poles	
	**5300.F15.00.00** : Direct connector + Nut IP65 *
	5300.F15.00.03 : Direct connector + Cable 3 metres
	5300.F15.00.05 : Direct connector + Cable 5 metres
	5300.F15.90.00 : Connector 90° + Nut IP65 *
	5300.F15.90.03 : Connector 90° + Cable 3 metres
	5300.F15.90.05 : Connector 90° + Cable 5 metres

*** No cable**

Fastening bracket
170M5