



# VACUUM TECHNOLOGY

## CATALOGUE

# Manual regulator Series 1700

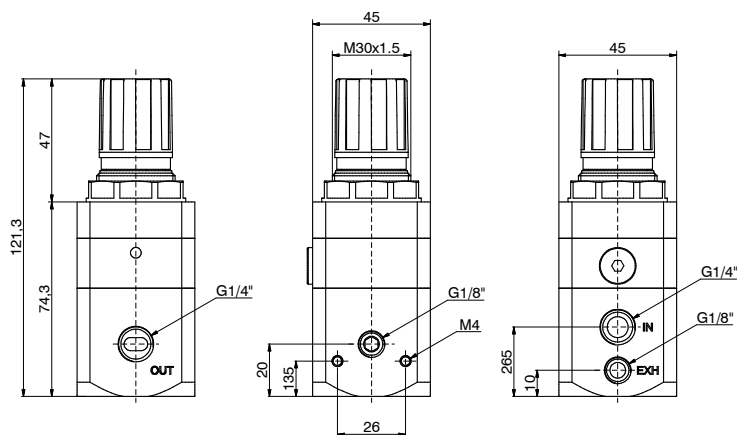
Vacuum degree regulation for applications requiring high stability and accuracy.



It have the function of regulating the negative vacuum pressure, keeping it stable at set value regardless of flow and variations in the degree of vacuum in the primary network. The units are of a double diaphragm construction and have been designed to exploit to their advantage any existing pressure differential between the

secondary depression and atmospheric pressure. The degree of vacuum is obtained by rotating the adjusting knob, rotating it clockwise to increase the amount of vacuum and anti clockwise to decrease it. They are used in all centralized systems where regardless of the vacuum in the main network a lower vacuum level is required for other applications.

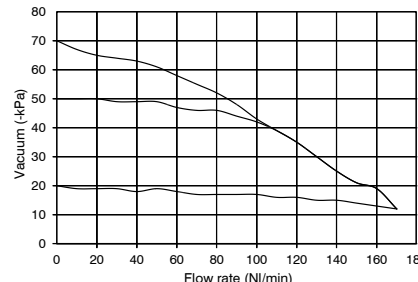
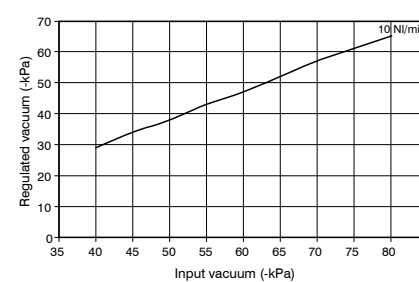
## Regulator for vacuum



Ordering code

**171S2B000V**

Example: 171S2B000V  
Regulator for vacuum G1/4"

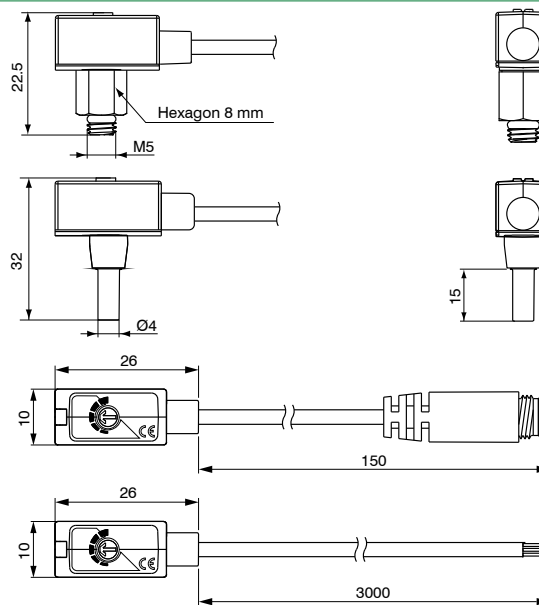
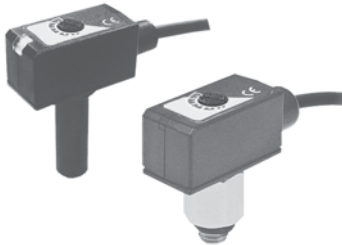
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|------------------------------|-----|------------------------|------------|----------------------------|-------|------------|-----|-------------------|-------------|--------------------------|----|-------|--------------------|
| Flow rate chart                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Adjustment characteristic |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
|                                         | <b>Construction characteristics</b> <ul style="list-style-type: none"><li>- Precision in keeping the set pressure value.</li><li>- Sensitivity combined with high flow rate of the downstream overpressure discharge valve.</li><li>- High flow rate with very low pressure drop.</li><li>- Setting knob can be locked using pressure into the desired position.</li><li>- Body made of light alloy.</li><li>- Two attachments for vacuum gauge with a cap equipped with a gasket.</li><li>- Ring nut for panel mounting.</li><li>- Once the reducer has been placed under vacuum, air intake through the appropriate orifice.</li></ul> |                           | <b>Technical characteristics</b> <table><tr><td>Connections</td><td>G1/4"</td></tr><tr><td>Max. working pressure (-kPa)</td><td>101</td></tr><tr><td>Working temperature °C</td><td>-5 ... +50</td></tr><tr><td>Pressure gauge connections</td><td>G1/8"</td></tr><tr><td>Weight (g)</td><td>400</td></tr><tr><td>Mounting position</td><td>indifferent</td></tr><tr><td>Max. fitting torque (Nm)</td><td>25</td></tr><tr><td>Fluid</td><td>Filtered air 20 μm</td></tr><tr><td>Diameter of panel mounting orifice (mm)</td><td>30</td></tr></table> | Connections | G1/4" | Max. working pressure (-kPa) | 101 | Working temperature °C | -5 ... +50 | Pressure gauge connections | G1/8" | Weight (g) | 400 | Mounting position | indifferent | Max. fitting torque (Nm) | 25 | Fluid | Filtered air 20 μm |
| Connections                             | G1/4"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Max. working pressure (-kPa)            | 101                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Working temperature °C                  | -5 ... +50                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Pressure gauge connections              | G1/8"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Weight (g)                              | 400                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Mounting position                       | indifferent                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Max. fitting torque (Nm)                | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Fluid                                   | Filtered air 20 μm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |
| Diameter of panel mounting orifice (mm) | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |                              |     |                        |            |                            |       |            |     |                   |             |                          |    |       |                    |

# ACCESSORIES AND INSTRUMENTS

Vacuum switch, vacuum gauge, silencers and filters

## Series DS

### Mini digital vacuum switch

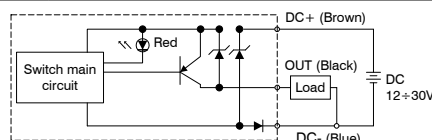


| Ordering code                     |  |
|-----------------------------------|--|
| <b>DS.10.V.B.ⓐ.ℓ.ⓐ</b>            |  |
| CONNECTION                        |  |
| ⓐ F4= Male M5                     |  |
| R4= Plug-in connection Ø4         |  |
| CABLE LENGTH                      |  |
| ℓ A=150 mm *                      |  |
| E=3000 mm **                      |  |
| OPTIONS                           |  |
| 0= Without connector              |  |
| ⓐ 1= With connector M8 male 3 Pin |  |

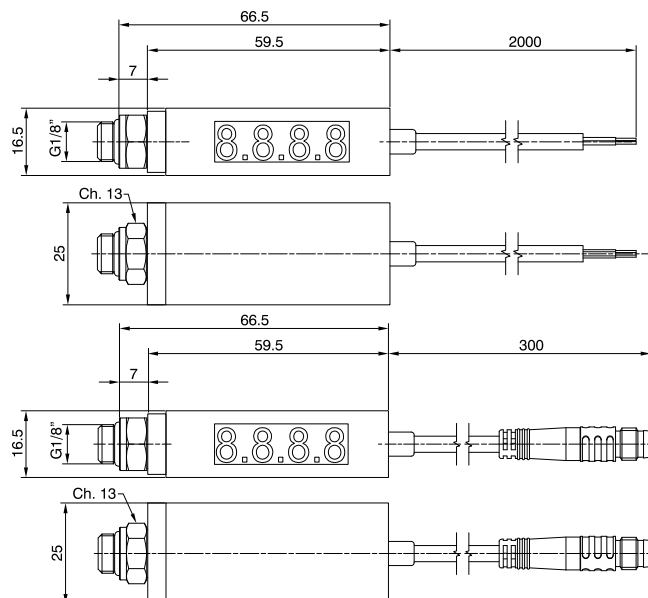
\* only with M8 connector  
\*\* only without connector

| 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                          |                     | From 12 to 30 VDC $\pm 10\%$                                                                                      |
| Current consumption                     |                     | $\leq 10$ mA                                                                                                      |
| Digital output                          |                     | PNP N.O. 1 outputs<br>Maximum load current: 80 mA<br>Maximum supply voltage: 30 VDC<br>Voltage drop: $\leq 0.8$ V |
| Repeatability (Digital output)          |                     | $\pm 1\%$ 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               | IP Rating           | IP40                                                                                                              |
|                                         | Ambient temperature | Operational: 0°C ... 60°C, Storage: -20°C ... 70°C (without ice or condensation)                                  |
|                                         | Ambient humidity    | Operational/Storage: 35 ... 85% (without condensation)                                                            |
|                                         | Vibration           | Total amplitude 1.5 mm, 10 Hz - 55 Hz - 10 Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z      |
| Impacts/shocks                          |                     | 980m/s <sup>2</sup> (100G), 3 times in each direction of X, Y and Z                                               |
| Temperature characteristics             |                     | $\pm 2\%$ Full Scale in a range between 0°C ... 50°C                                                              |
| Type of connection                      |                     | Male M5x0.8, Plug-in connection Ø4                                                                                |
| Electrical cable                        |                     | Oilproof cable, 3 wires (0.18mm <sup>2</sup> ), Ø2.6 mm                                                           |
| Weight                                  |                     | Approximately 50 g (with 3 metres of cable)                                                                       |

### Output circuit wiring scheme



**Digital vacuum switch**



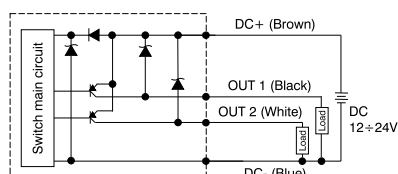
| Ordering code           |                                 |
|-------------------------|---------------------------------|
| <b>DS.30.C.C.F8.L.0</b> |                                 |
| <b>CABLE LENGTH</b>     |                                 |
| <b>L</b>                | B=300 mm *                      |
|                         | D=2000 mm **                    |
| <b>OPTIONS</b>          |                                 |
| <b>0</b>                | 0= Without connector            |
|                         | 2= With M8 4 Pin male connector |

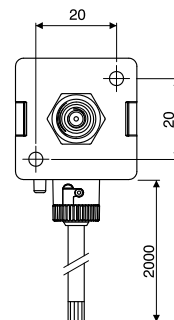
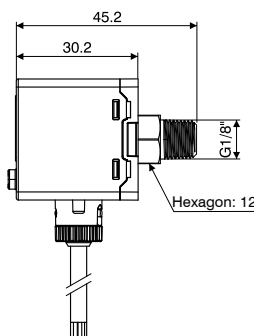
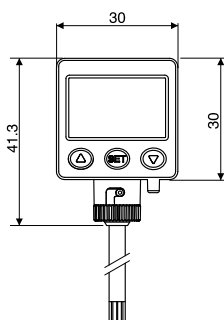
\* only with M8 connector  
\*\* only without connector

**Technical features**

|                                         |                       |                                                                                                                      |
|-----------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------|
| Working pressure range                  |                       | -100.0 ... 100.0 kPa                                                                                                 |
| Regulation pressure range               |                       | -100.0 ... 100.0 kPa                                                                                                 |
| Maximum supported pressure              |                       | 300 kPa                                                                                                              |
| Allowed fluids                          |                       | Air, non-corrosive gases, non-combustible gases                                                                      |
| Pressure calibration sensitivity        | kPa                   | 0.1                                                                                                                  |
|                                         | 2 kgf/cm <sup>2</sup> | 0.001                                                                                                                |
|                                         | bar                   | 0.001                                                                                                                |
|                                         | psi                   | 0.01                                                                                                                 |
|                                         | InHg                  | 0.1                                                                                                                  |
|                                         | mmHg                  | 1                                                                                                                    |
|                                         | mmH <sub>2</sub> O    | 0.1                                                                                                                  |
| Supply voltage                          |                       | From 12 to 24 VDC ± 10%                                                                                              |
| Current consumption                     |                       | ≤ 60mA                                                                                                               |
| Digital output                          |                       | PNP N.O. 2 outputs<br>Maximum load current: 80 mA<br>Maximum supply voltage: 30 VDC<br>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: 24 ms, 192 ms and 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               | IP Rating             | IP40                                                                                                                 |
|                                         | Ambient temperature   | Operational: 0 ... 50°C, Storage: -20°C ... 60°C (without ice or condensation)                                       |
|                                         | Ambient humidity      | Operational/Storage: 35 ... 85% (without condensation)                                                               |
|                                         | Supported voltage     | 1000 VAC in 1-min. (between body and cable)                                                                          |
|                                         | Insulation resistance | 50MΩ min. (at 500VDC, between body and cable)                                                                        |
|                                         | Vibration             | Total amplitude 1.5 mm. or 10 G, 10 Hz - 55Hz - 10 Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z |
|                                         | Impacts/shocks        | 980 m/s <sup>2</sup> (100G), 3 times in each direction of X, Y and Z                                                 |
| Temperature characteristics             |                       | ±2% Full Scale in a range between 0°C ... 50°C                                                                       |
| Type of connection                      |                       | G1/8 (Swivel)                                                                                                        |
| Electrical cable                        |                       | Oil resistant cable                                                                                                  |
| Weight                                  |                       | Approximately 67 g (with 2 metres of cable)                                                                          |

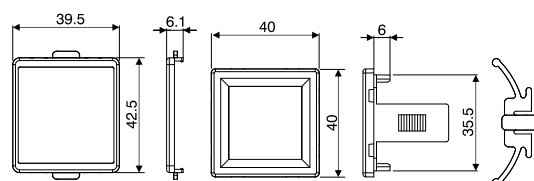
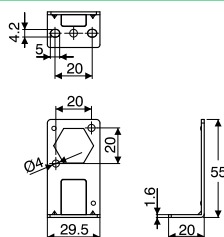
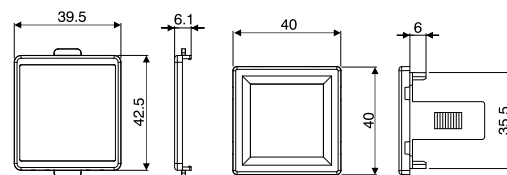
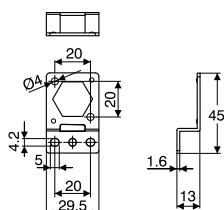
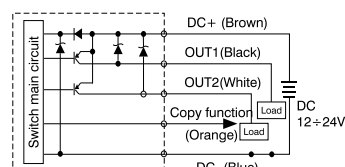
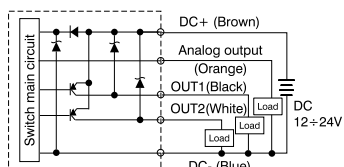
**Output circuit wiring scheme**

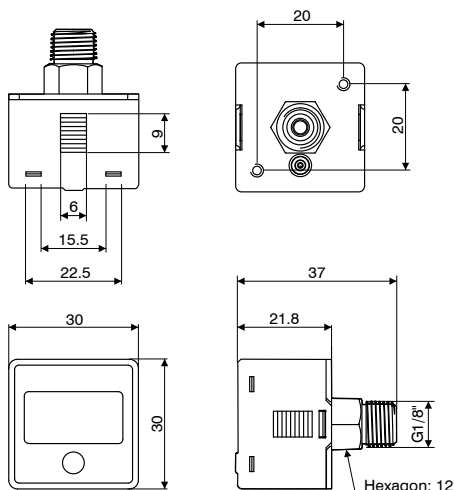




|                         |                                                  |
|-------------------------|--------------------------------------------------|
| Ordering code           |                                                  |
| <b>DS.45.V.U.F3.D.0</b> |                                                  |
|                         | VERSION                                          |
| <b>V</b>                | C = Vacuum/Pressure<br>(-100 / 100 kPa)          |
|                         | V = Vacuum (0 / -101,3 kPa)                      |
|                         | OUTPUTS                                          |
| <b>U</b>                | E = 2 PNP outputs + Analog<br>output (4 / 20 mA) |
|                         | L = 2 PNP outputs +<br>copy function             |

|                                         |                       | Technical features                                                                                                                                                      |                           |
|-----------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                         |                       | DS.45.C.0.F3.D.0 (Composite)                                                                                                                                            | DS.45.V.0.F3.D.0 (Vacuum) |
| Working pressure range                  |                       | -100.0 ... 100.0 kPa                                                                                                                                                    | 0 ... -100.0 kPa          |
| Regulation pressure range               |                       | -100.0 ... 100.0 kPa                                                                                                                                                    | 0 ... -100.0 kPa          |
| Maximum supported pressure              |                       | 300 kPa                                                                                                                                                                 |                           |
| Allowed fluids                          |                       | Air, non-corrosive gases, non-combustible gases                                                                                                                         |                           |
| Pressure calibration sensitivity        | kPa                   | 0.1                                                                                                                                                                     |                           |
|                                         | 2 kgf/cm²             | 0.001                                                                                                                                                                   |                           |
|                                         | bar                   | 0.001                                                                                                                                                                   |                           |
|                                         | psi                   | 0.01                                                                                                                                                                    |                           |
|                                         | InHg                  | 0.1                                                                                                                                                                     |                           |
| Supply voltage                          |                       | From 12 to 24 VDC                                                                                                                                                       |                           |
| Current consumption                     |                       | ≤40 mA (without load)                                                                                                                                                   |                           |
| Digital output                          |                       | PNP N.O. 2 outputs<br>Maximum load current: 125 mA<br>Maximum supply voltage: 24 VDC<br>Voltage drop: ≤1.5V                                                             |                           |
| Repeatability (Digital output)          |                       | ± 0.2% Full Scale ± 1 digit                                                                                                                                             |                           |
| Digital output                          | Type of hysteresis    | Settable                                                                                                                                                                |                           |
|                                         | Hysteresis            | from 0.001 to 0.008 bar                                                                                                                                                 |                           |
| Response time                           |                       | ≤2,5 ms (anti-interference function: 25 ms, 100 ms, 250 ms, 500 ms, 1000 ms and 1500 ms selectable)                                                                     |                           |
| Protection from short circuit at output |                       | Present                                                                                                                                                                 |                           |
| Display                                 |                       | Display with 3 1/2 digits (red/green)                                                                                                                                   |                           |
| Indicator precision                     |                       | ±2% F. S. ±1 digit                                                                                                                                                      |                           |
| Indicator                               |                       | LED orange (output1) LED orange (output2)                                                                                                                               |                           |
| Analog output                           |                       | Output current: 4 ... 20 mA ±2.5% F. S.<br>Linearity: ±1% F. S.<br>Maximum load resistance: 250Ω supply at 12 V and 600Ω supply at 24 V<br>Minimum load resistance: 50Ω |                           |
| Ingress protection rating               | IP Rating             | IP65                                                                                                                                                                    |                           |
|                                         | Ambient temperature   | Operational: 0°C ... 50°C, Storage: -10°C ... 60°C (without ice or condensation)                                                                                        |                           |
|                                         | Ambient humidity      | Operation/Storage: 35 ... 85% (without condensation)                                                                                                                    |                           |
|                                         | Supported voltage     | 1000 VAC in 1min. (between body and cable)                                                                                                                              |                           |
|                                         | Insulation resistance | 50MΩ (at 500 VDC, between body and cable)                                                                                                                               |                           |
|                                         | Vibration             | Total amplitude 1.5 mm or 10 G, 10 Hz - 55 Hz - 10 Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z                                                    |                           |
|                                         | Impacts/shocks        | 100 m/s² (10 G), 3 times in each direction of X, Y and Z                                                                                                                |                           |
| Temperature characteristics             |                       | ±2.5% Full Scale in a range between 0°C ... 50°C                                                                                                                        |                           |
| Type of connection                      |                       | G1/8 (BSPP), M5 female                                                                                                                                                  |                           |
| Electrical cable                        |                       | Oil resistant cable (internal 0.15 mm²)                                                                                                                                 |                           |
| Weight                                  |                       | Approximately 86 g (with 2 metres of cable)                                                                                                                             |                           |



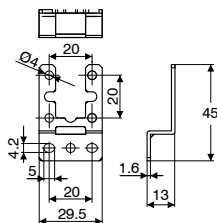
**Digital battery vacuum gauge**


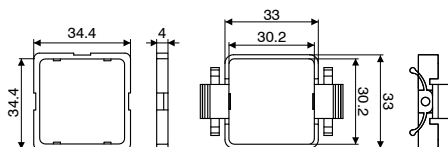
Ordering code

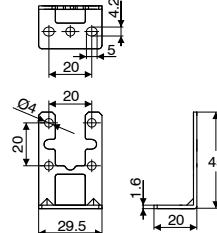
**DS.60.V.I.F1.F.0**
**Caratteristiche tecniche**

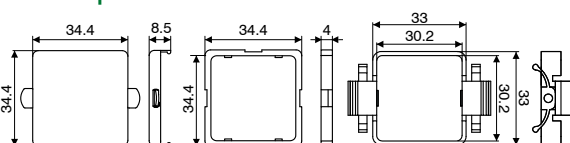
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|----------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------------|
| Working pressure range           |                     | 0 ... -100.0 kPa                                                                                                    |
| Regulation pressure range        |                     | 0 ... -100.0 kPa                                                                                                    |
| 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 with 3 1/2 digits                                                                                           |
| Indicator precision              |                     | ±2% F.S. ± 1 digit (at ambient temperature of 25°C ±3°C)                                                            |
| Ingress protection rating        | IP Rating           | IP65 (only with connected air tube)                                                                                 |
|                                  | Ambient temperature | Operational: 0°C ... 50°C, Storage: -10°C ... 60°C (without ice or condensation)                                    |
|                                  | Ambient humidity    | Operational/Storage 35 ... 85% (without condensation)                                                               |
|                                  | Vibration           | Total amplitude 1.5 mm or 10 G,10 Hz - 55 Hz - 10 Hz scanning for 1 minute, 2 hours in each direction of X, Y and Z |
|                                  | Impacts/shocks      | 100 m/s² (10G), 3 times in each direction of X, Y and Z                                                             |
| Temperature characteristics      |                     | ±2% Full Scale in a range between 0°C ... 50°C                                                                      |
| Type of connection               |                     | R1/8, M5 female                                                                                                     |
| Weight                           |                     | Approximately 40 g                                                                                                  |

**Fastening bracket**

Ordering code  
**DS.BT5**

**Panel mount adapter**

Ordering code  
**DS.PAC**

**Fastening bracket**

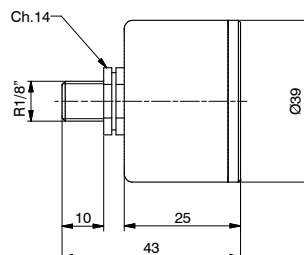
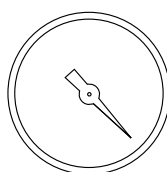
Ordering code  
**DS.BT6**

**Panel mount adapter with screen protection**

Ordering code  
**DS.PAD**




## Series 1900

### Vacuum Gauge



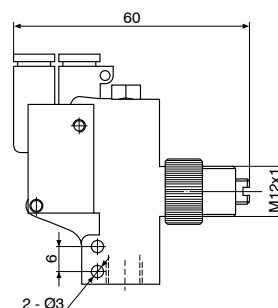
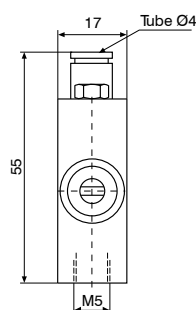
Ordering code

**17070A.V**

#### Technical features

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

### Pneumatic vacuum switch

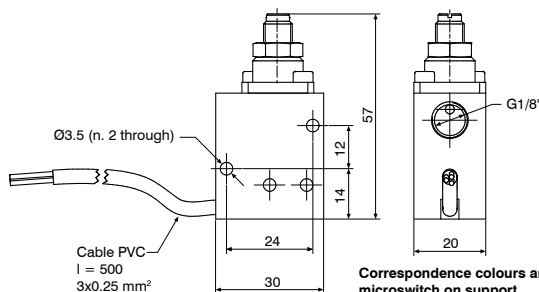


Vacuum switch whose function is, depending on the model, to turn a pneumatic signal on or off when a certain vacuum level is reached. The pressure differential that exists between the maximum value set and the restoration value cannot be adjusted. Especially recommended for the control of vacuum generators 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                | M5                     |                      |

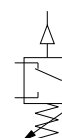
| Function               | Settable |
|------------------------|----------|
| N.C. (Normally closed) |          |
| N.O. (Normally open)   |          |

### Electromechanical vacuum switch



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

Ordering code

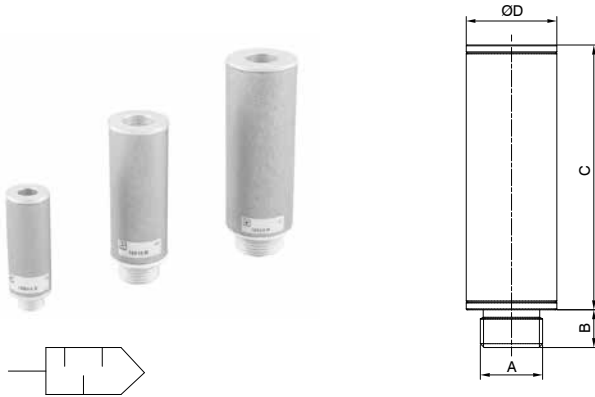
**19VCE.0.C1**


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    |
| IP Rating         | IP67         |
| Weight (g)        | 62,5         |

## 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 noise in the vacuum generator discharge stage.

Noise reduction: from -13 to -20 dBA

Working temperature: from -20 to +100 °C

## Vertical filters



| Code       | Description  | Flow rate (l/min) | Volume (cm <sup>3</sup> ) | A   | B      | D         | E     | F    | G  | Weight (g) |
|------------|--------------|-------------------|---------------------------|-----|--------|-----------|-------|------|----|------------|
| 19F38.V.00 | Filter G3/8" | 150               | 45                        | 76  | 2-G3/8 | 2 - Ø6.5  | 71.3  | 14   | 45 | 70         |
| 19F12.V.00 | Filter G1/2" | 900               | 195                       | 91  | 2-G1/2 | 2 - Ø8.5  | 131.5 | 16   | 50 | 168        |
| 19F34.V.00 | Filter G3/4" | 900               | 205                       | 91  | 2-G3/4 | 2 - Ø8.5  | 139   | 18.5 | 50 | 170        |
| 19F10.V.00 | Filter G1"   | 2520              | 495                       | 126 | 2-G1   | 2 - Ø10.5 | 167   | 23   | 80 | 424        |

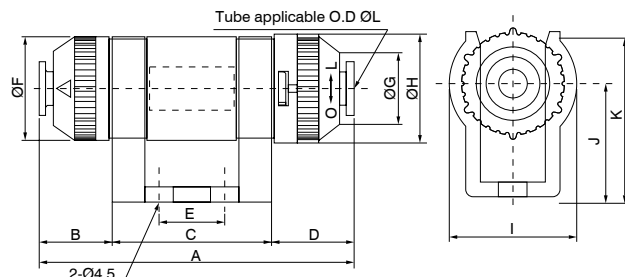
### Filter elements

| 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 | Tube 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 | Tube 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 | Tube Ø6 - 50 l/min | 67   | 15,5 | 34 | 17,5 | 14 | 22 | 15,6 | 23,1 | 27 | 24 | 35 | 6  | 26         |
| 19F08.L.02 | Tube Ø8 - 50 l/min | 67   | 15,5 | 34 | 17,5 | 14 | 22 | 15,6 | 23,1 | 27 | 24 | 35 | 8  | 24         |

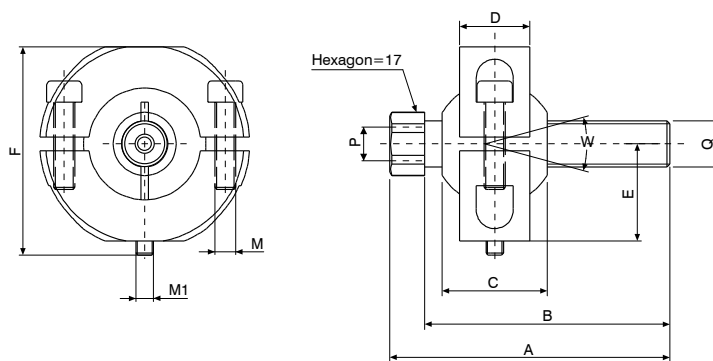
### Filter elements

| 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 |

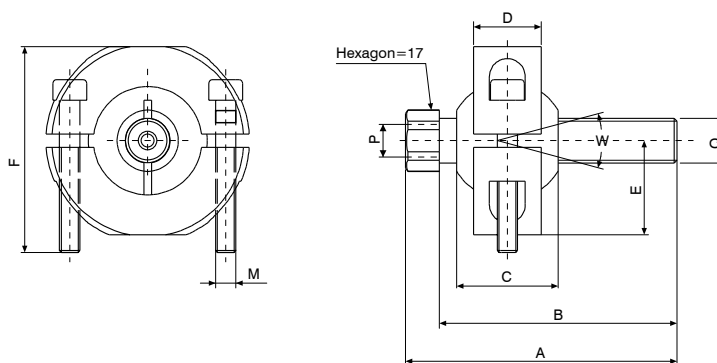
Line filters can handle very fine powders and contaminants without interfering with the intake flow rate. Thanks to the small dimensions they can be installed directly on the suction cups or on the vacuum pipework, and since they have automatic connections, wiring operations are facilitated.

Degree of filtration: 10 micron, working temperature: 0-60 °C, working pressure: -100 / 0 kPa.

► **Suction Cup Support**



| Code    | A  | B  | C  | D  | E    | F    | P    | Q    | M  | M1 | W   | Weight (g) |
|---------|----|----|----|----|------|------|------|------|----|----|-----|------------|
| 19SP1.T | 80 | 70 | 30 | 20 | 27.5 | 59.5 | G1/4 | G1/4 | M6 | M5 | 30° | 174        |



| Code    | A  | B  | C  | D  | E    | F  | P    | Q    | M  | W   | Weight (g) |
|---------|----|----|----|----|------|----|------|------|----|-----|------------|
| 19SP2.T | 80 | 70 | 30 | 20 | 27.5 | 61 | G1/4 | 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.