



ONE SAFE AIR® is a pneumatic safety component consisting of a ONE air treatment unit arranged in series with a 3/2 electro-pneumatic valve with spool monitoring.

A pressure switch is placed between the ONE unit and the monitored valve to indicate the presence of pressure.

The safety function consists of discharging the circuit downstream the component.

A maximum pressure valve is installed after the monitored valve.

ONE SAFE AIR® comes in various configurations, all based on electric ONE units.



#### TECHNICAL DATA

Operation	mm	Dual 3/2 monostable valve with pressure regulation
Fluid		Filtered unlubricated air (50 µm)
Operating temperature range	°C	-10 to +50
Operating pressure	bar	2.5 to 10
Delivery flow rate at 6.3 bar Δp 0.5 bar (with 1/2" input thread)	Nl/min	2900
Delivery flow rate at 6.3 bar Δp 1 bar (with 1/2" input thread)	Nl/min	3600
Flow rate on free exhaust silencer (ONE) at 6.3 bar	Nl/min	1600
Flow rate on free exhaust silencer (valve) at 6.3 bar	Nl/min	4600
TRA/TRR at 6.3 bar (safety valve)	ms/ms	36/60
TRA/TRR at 6.3 bar	ms/ms	Depending on the APR/60
Solenoid pilot		According Cnomo
Manual actuator		Monostable on solenoid pilot
Coils		30 mm side, Ø 8 hole
		4 W - 24 VDC, 4 VA - 24 VAC, 110 VAC, 220 VA 50/60 Hz
		22 mm side, Ø 8 hole
		2 W - 12 VDC, 24 VDC, 3.5 VA - 24 VAC, 110 VAC, 220 VA 50/60 Hz
		Certified EN 60204.1 and VDE 0580*
Max coil ring nut torque	Nm	1
Maximum safety pressure switch current	A	2
Maximum safety pressure switch voltage	V	250
Pressure switch contacts		Normally closed (NC)
Insulation class of the solenoid ONE		F155
Switching time		100% ED
Electrical connector		M12x1, 5-PIN 90°, according to CEI IEC 60947-5-2 *
Power solenoid ONE	W	3/0.3
Voltage solenoid ONE	V	24VDC ±10%
Type of sensor used		Hall effect
Wall fixing (max. panel thickness 10 mm)		Front, with M5x75 screws or back, with M6x70 screws. The screws are included in the supply.
Maximum torque screws ONE	Nm	3.5 ±0.5
Mounting position		Vertical
Direction of flow		From left to right
Weight	kg	2.5
Compatibility with oils		<a href="https://www.metalwork.it/pneumatic-components/compatibility-materials-0001408.html">https://www.metalwork.it/pneumatic-components/compatibility-materials-0001408.html</a>
Class of protection		IP65 with coil and connector mounted
Noise level		Max. 78 dBA with silenced relief
B10d		20 x 10 <sup>6</sup> cycles
Categoria - ISO EN 13849		4
DC Low		High (>99 %)
CCF		90
PL - ISO EN 13849		Suitable for use in safety circuits up to PL=e

\* To avoid malfunctions, we recommend using Metal Work accessories.



ORDERING CODES

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>L</b>	<b>M</b>
	ONE electric	Air intake	Degree of filtration	Clogged filter signal	Condensate drain	Pressure regulation	Valves	Pressure switch	Air outlet	Various	
EXAMPLE	<b>54</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>S</b>	<b>1</b>
	54 ONE electric	3 1/2"	2 20 µm	0 NO	0 RMSA	4 0.5 to 4 bar	5 V3V manual and V3V electric	0 NO	0 Without bushing	S Safe air®	1 M8 pressure switch (0.3 m) + M8 sensor (0.3 m)
		4 3/4"	5 5 µm	1 YES	1 auto-matic (RA)	8 0.5 to 8 bar	6 V3V manual with padlock and V3V electric	1 YES			3 M8 pressure switch (0.3 m) + 3 wire sensor (2 m)
	5 1"						7 V3V manual and APR electric				6 2 m pressure switch + M8 sensor (0.3 m)
							8 V3V manual with padlock and APR electric				8 2 m pressure switch + 3 wire sensor (2 m)
							9 only V3V electric				
							A only APR electric				

- A ONE electric**
- B Air intake**  
There are 3 different gas cylindrical threads: 1/2", 3/4" and 1".
- C Degree of filtration**  
A cartridge with a degree of filtering of 5 µm (yellow) or 20 µm (white) is available. This value is marked on the plug.
- D Clogged filter signal**  
If the filter gets so clogged up that it causes an excessive drop in pressure as the air passes through, the orange indicator will project from the body by a few millimetres.
- E Condensate drain**  
**RMSA:** the condensate is drained out automatically only by relieving the air pull the knurled knob for having the same result.  
**Automatic (RA):** a floating system that automatically drains the condensate out whenever the level of water in the bowl reaches the set value.
- F Pressure regulation**  
There are 2 possible regulation fields.  
The value is marked on the regulation knob.
- G Valves**  
There are 6 different combinations.
- **5 - V3V manual and V3V electric:** two V3V in series are present, one is manual the other electrical. By operating both the valve the air flow is allowed. If one or two are switched OFF, the air downstream is relieved. The electrical one can also be operated manually by reefing pushed the "TEST" button.
  - **6 - V3V manual with padlock and V3V electric:** like the previous, with the padlock device in "OFF" position.
  - **7 - V3V manual and APR electric:** One manual V3V and one soft start valve are present. When both are operated, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
  - **8 - V3V manual with padlock and APR electric:** like the previous, with the padlock device on the manual V3V in "OFF" position.
  - **9 - V3V electric:** It's present only the electrical V3V. The valve will open if it is powered on. When the power supply is switched off, the valve closes and air downstream is relieved. The valve can also be operated manually by keeping pushed the test button.
  - **A - APR electric:** It's present only the electric soft start valve. When it is powered ON, the pressure starts to increase slowly, with a fine adjustable ramp, and when it reaches about 30-40% of the set value, the valve opens completely and the pressure rises to the set value.
- H Pressure switch**  
The pressure switch has a switching contact, which means you can have a normally-open signal or a normally-close signal. It is also connected to the NC and NO LEDs which come on if the actual pressure is less or greater than the set pressure, respectively. The LEDs only come on if an electric charge is connected to them.
- I Air outlet without bushings**
- L Safe air® versions**
- M Type sensors**