C911-P

Pressure switch for gas & air
Suitable for rising pressure, falling pressure, or differential pressure

C911-P

Pressure switch for gas and air

Suitable for rising pressure, falling pressure, and differential pressure

Contents

Description

The C911-P monitors gas or air pressure in a pipeline and activates switch contacts according to the pressure set point. The pressure set point is selected using a dial, visible beneath clear plastic.

The C911-P can be used autonomously or integrated into a multifunctional gas control.

Features

Detects rising, falling, or differential pressure and switches when the set point is reached.

Automatically resets once the set point condition is met.

Monitors natural gas, propane gas, and air.

When monitoring differential pressure, use with air only.

The set point is selected by the user via a hand wheel.

Models are available according to pressure range.

All models are equiped with a 110V lamp to indicate the state of the switch.

A strainer is present in the switch inlet to prevent contamination.

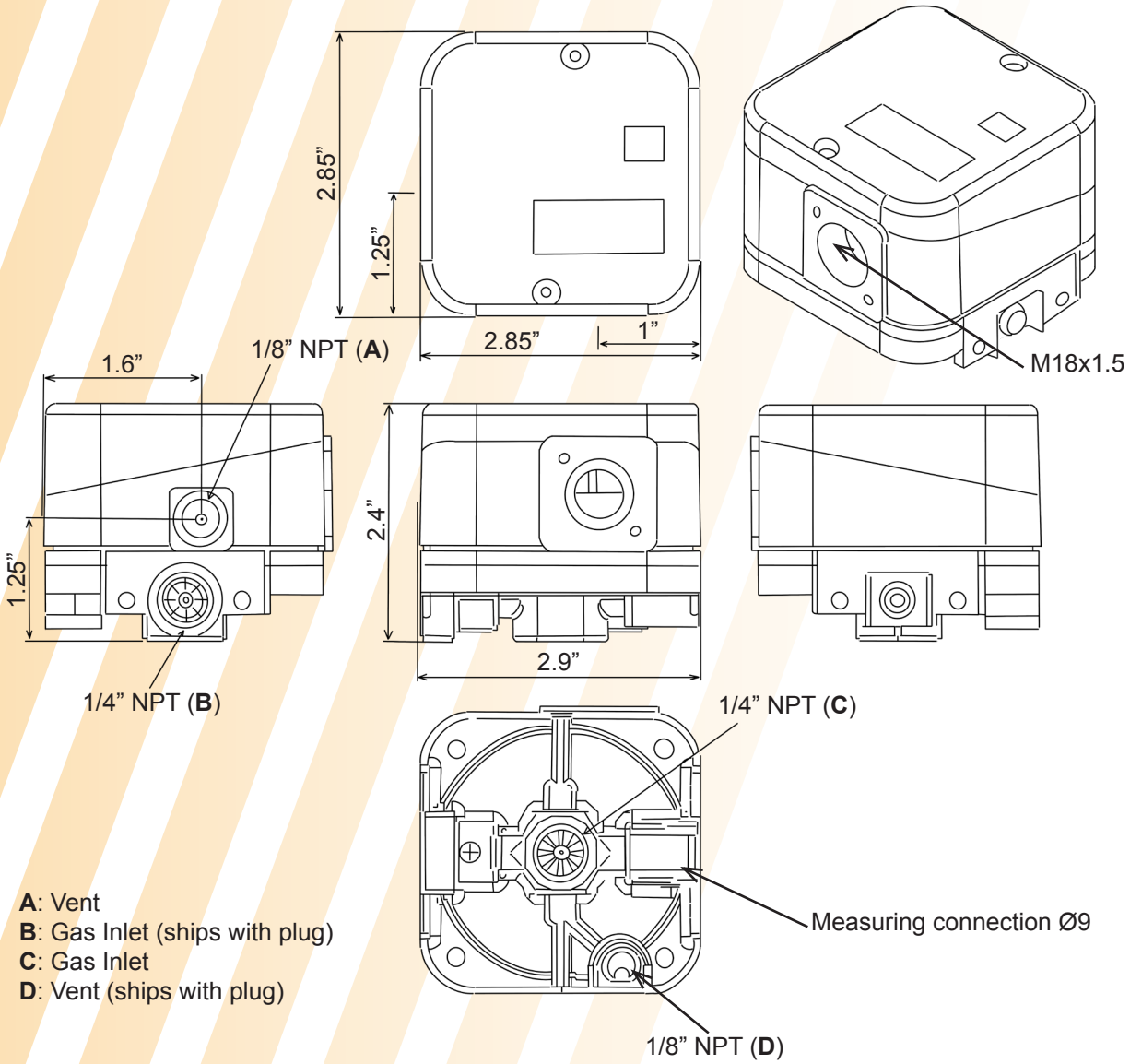
The pressure switch is warranted against manufacturing defect for one (1) year from the date of manufacture.

Technical Specifications C911-P

Pressure connection	Positive: NPT 1/4”, Negative: NPT 1/8” (See Dimensions)	
Measuring connection	Test nipple integrated in aluminum housing, ø9, 10 mm length with screw plug	
Electrical connection	M18x1.5	
Electrical rating	Switching voltage	AC eff. min. 24V max. 250V DC min. 24V max. 48V
	Nominal current	AC eff. max. 6A
	Switching current	AC eff. max. 4 A at cos 1 AC eff. max. 2 A at cos 0.6 AC eff. min. 20 mA DC min. 20 mA, DC max. 100 mA DC
Type	Adjustable set point	
Materials	Body	Aluminum die casting
	Diaphragm	H-NBR
	Switching contact	Au plated on AgSno2
	Switch part	Polycarbonate
Ambient temperature	+5°F to +140°F (-15 ~ 60 °C)	
Storage temperature	-20°F to +175°F (-30 ~ 80 °C)	
Control fluid	Positive	Natural gas, Propane gas, Air
	Negative	Air
Enclosure	IP65	
Leak - Tightness	Non-leakage (Pmax. x1.5 for 1 minute) or Standard EN1854 (7.2.2)	
Endurance	50,000 Cycles (ON: 5s / OFF: 5s)	
	Test pressure: Pmax. x1.2	
	Standard: EN1854 (7.4.3)	
Torque Spec. (Cover Screws)	8.5 kgf-cm	

Model		C911-P3	C911-P5	C911-P10	C911-P50	C911-P150	C911-P500
Max. permissible pressure (inrush pressure)		500 mbar					1 bar
Stand pressure setting range	**Factory set point (mbar)**	0.4 - 3	0.5 - 5	2 - 10	5 - 50	30 - 150	100 - 500
	Factory set point (“wc)	0.16 - 1.2	0.2 - 2	0.8 - 4	2 - 20	12 - 60	40 - 200
	Switching diff. (∆P) (mbar)	≤ 0.3	≤ 0.4	≤ 0.4	≤ 1.5	≤ 5	≤ 13
	Switching diff. (∆P) (“wc)	≤ 0.12	≤ 0.16	≤ 0.16	≤ 0.60	≤ 2	≤ 5.22
	Adjustable tolerance	± 15%					
	Differential	± 15%					

Dimensions
C911-P

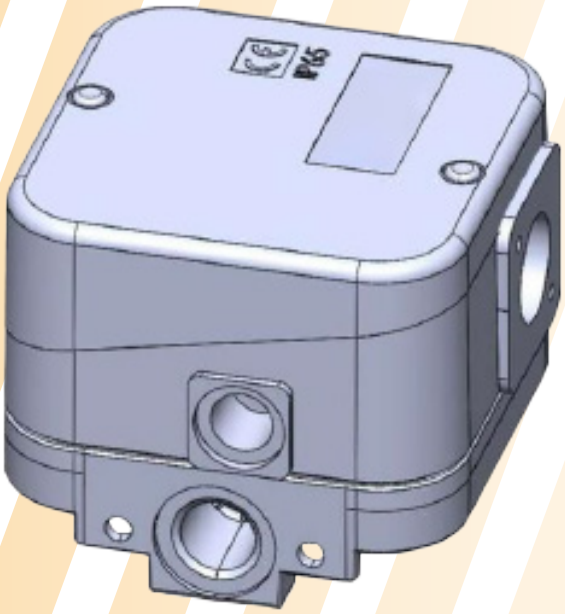


A: Vent
B: Gas Inlet (ships with plug)
C: Gas Inlet
D: Vent (ships with plug)

Installation Notes

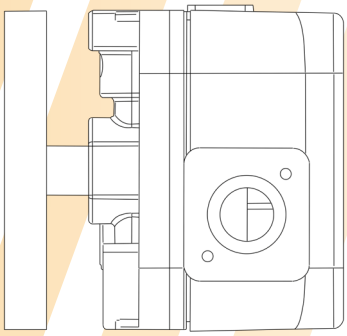
1. Only use silicone tube which has been sufficiently cured.
2. Vapors containing silicone can adversley affect the function of electrical contacts. In the case of low switching capabilities (ex. 24V, less than 20mA), we recommend using an RC module or electronic (no-contact) switch in air containing silicone or oil.
3. Fall or shock can adversely affect the safety functions. Such products must not be put into operation, even if they do no exhibit damage.
4. In case of high humidity or aggressive gas (ex. H2S), we recommend using a pressure switch with gold-plated contacts.
5. Closed-circuit current monitoring is recommended under difficult operating conditions.
6. Do not use at lower pressure than the minimum setting.

Installation Instructions C911-P



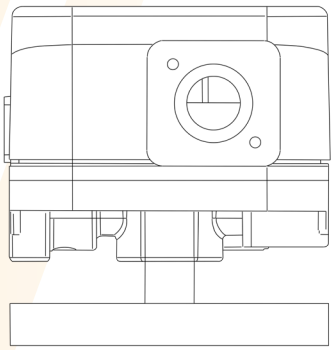
M18x1.5

M18x1.5 Cable Gland *C911-PCG* (not included)



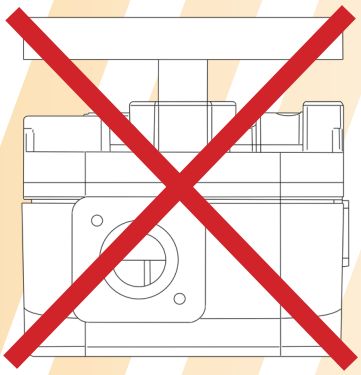
Standard Position

If a different position is used, pay attention to changes in switch behavior.

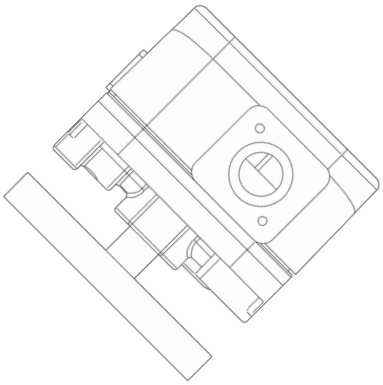


Horizontal Position

In this position, the switch actuates at a higher pressure.



DO NOT USE IN THIS POSITION

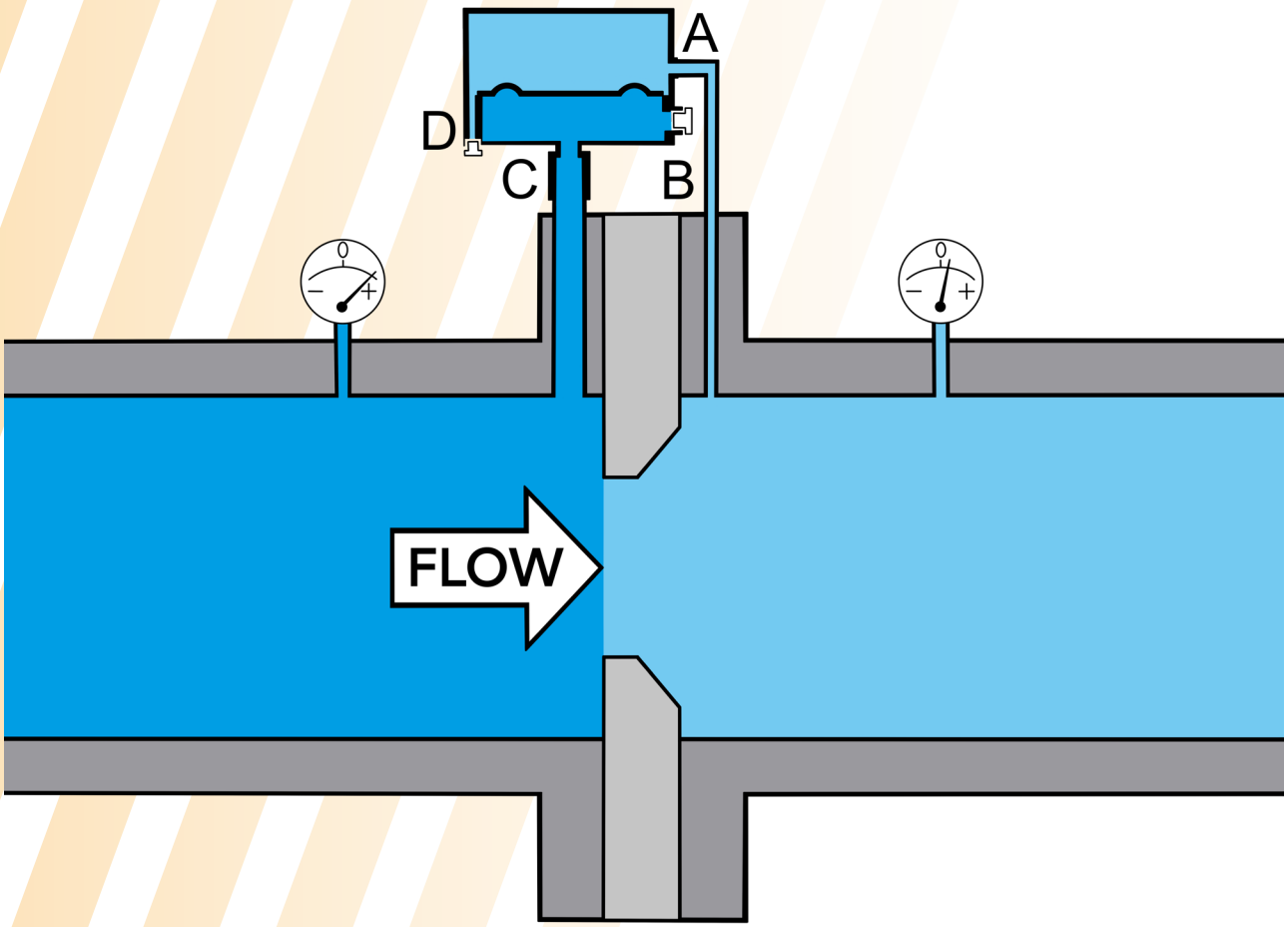


Intermediate Position

In this position, the switch actuates at a higher pressure.

Installation Instructions C911-P

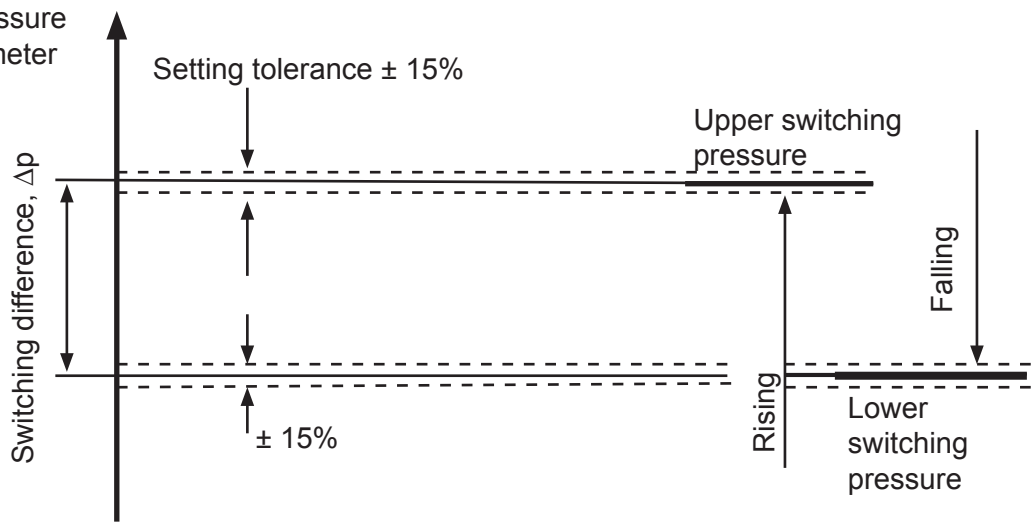
Differential Air Pressure



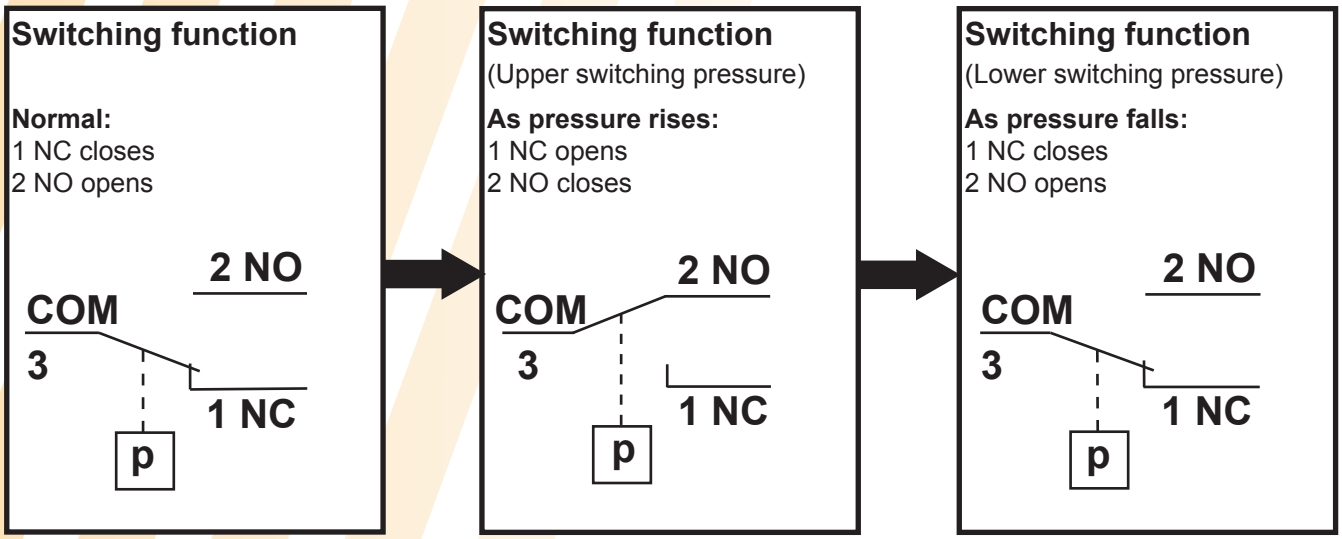
Installation Instructions C911-P

Function Diagram 1

Definition of switching difference Δp
The switching difference Δp is the pressure difference between the upper and lower switching pressures.

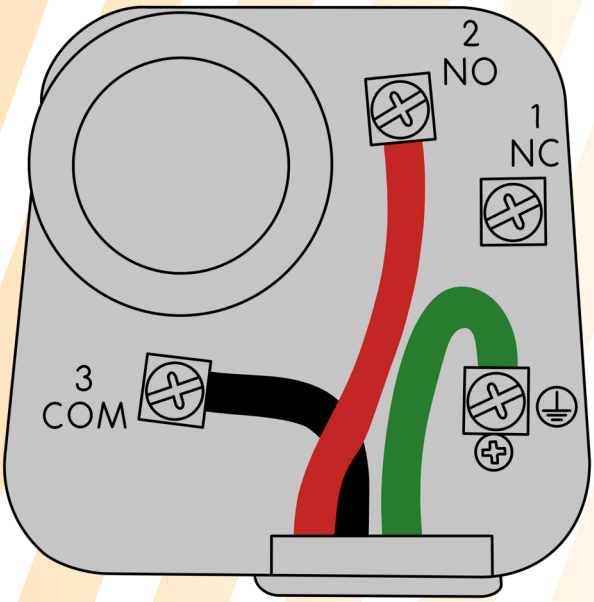


Function Diagram 2



Installation Instructions C911-P

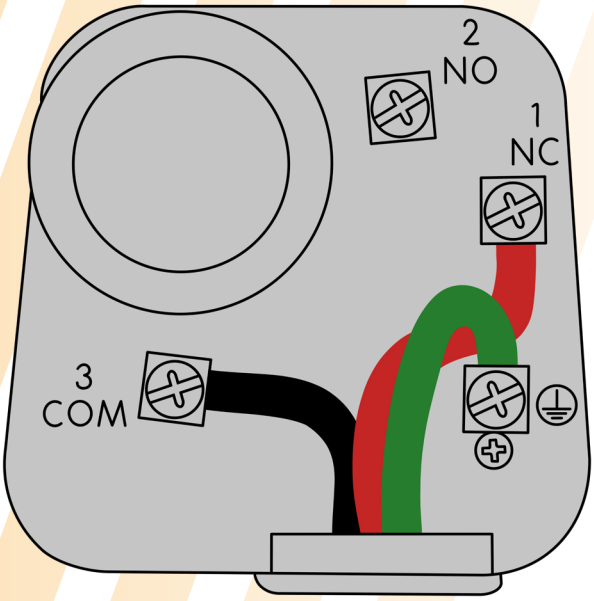
Monitor Falling Pressure



Wire to the Common and Normally Open contacts to monitor falling pressure (Low Gas Pressure Switch).

During operation, if the gas pressure falls below the set point, the diaphragm lowers, activating the switch.

Monitor Rising Pressure



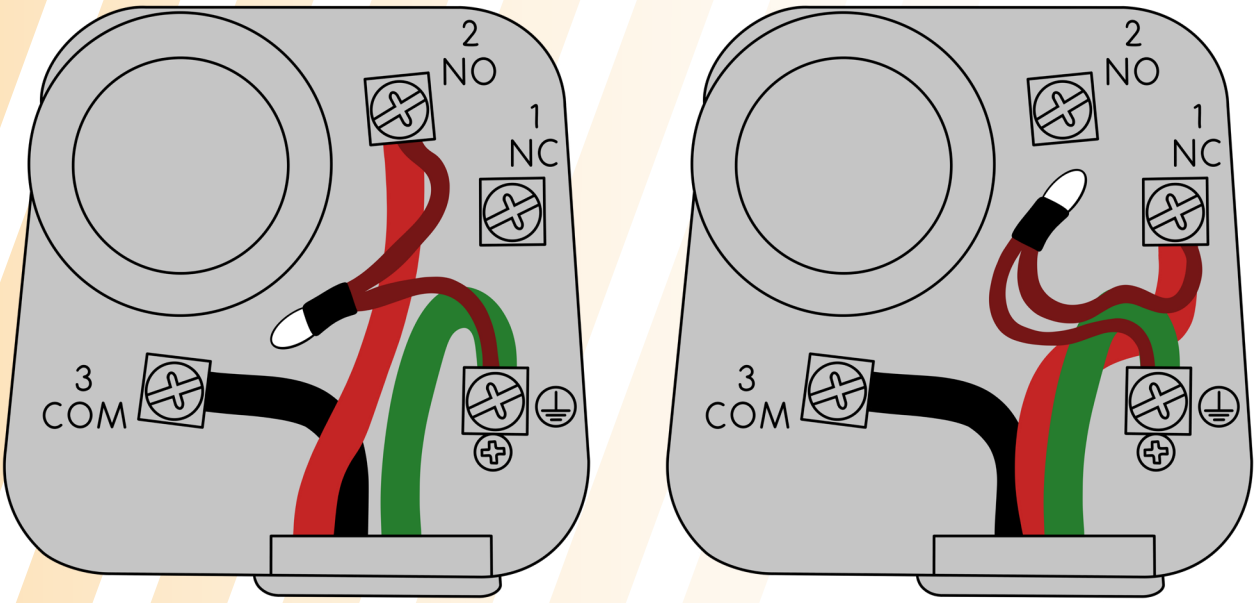
Wire to the Common and Normally Closed contacts to monitor rising pressure (High Gas Pressure Switch).

During operation, if the gas pressure exceeds the set point, the pressure overcomes the spring tension and pushes the diaphragm against the switch, breaking the electrical connection.

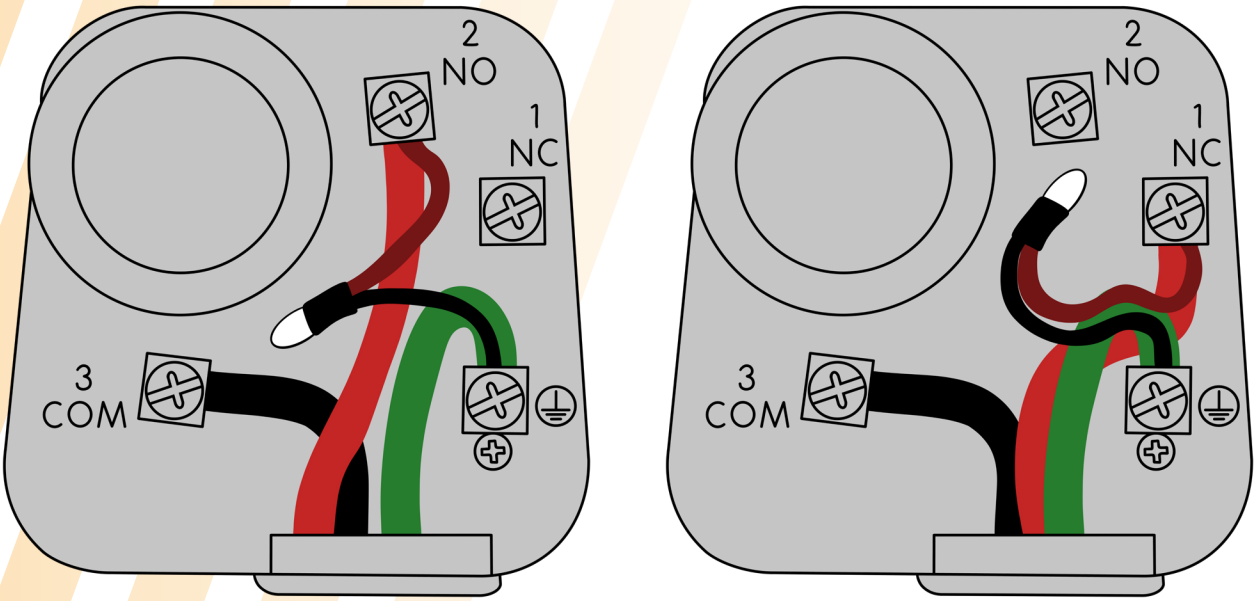
Installation Instructions C911-P

Light Installation

For 120V (std) and 230V AC lights, terminate one lead to the operative terminal, and terminate the other to GRND.



The red lead of the 24V light should be installed on the operative contact. The black lead should be installed to GRND (zero volts DC).



The light should illuminate when the pressure condition is satisfied, and go out otherwise.

Selection Guide
C911-P

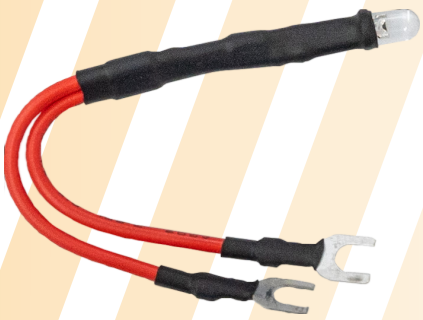
C911-P Model Key

		C911-P	3
C911-P	autoreset pressure switch for gas and air		
3	range = 0.4-3.0 mbar (0.16-1.20 “wc)		
5	range = 0.5-5.0 mbar (0.2-2.0 “wc)		
10	range = 2.0-10 mbar (0.8-4.0 “wc)		
50	range = 2.5-50 mbar (1.0-20 “wc)		
150	range = 30-150 mbar (12-60 “wc)		
500	range = 100-500 mbar (40-200 “wc)		

Notes
- All models include a pilot lamp for 110V AC.
- All models include a strainer at the gas connection.
- All models have NPT gas connections (see page 3).
- Accessories (shown below) sold and shipped separately.

Accessories

C911-PL24	pilot lamp for 24V AC/DC
C911-PL230	pilot lamp for 230V AC
C911-PCG	M18x1.5 cable gland
C911-PADP	straight thread adapter, M18x1.5 x 1/2 FNPT


Pilot Lamp


Cable Gland


Straight Adapter

Standards and approvals

The product complies with the essential requirements of the following European Directives and their amendments:

2009/142/EC (Gas Appliances Directive) **CE-Reg.-No. E-30-00205-17**

The product has been approved by Factory Mutual [NFPA 86 (Class 3510), Ingress Protection (IEC 60529)].

Certificate No.: PR460545

The product is eligible to bear the CSA Mark shown with adacent indicators ‘C’ and ‘US’ for Canada and US or with adjacent indicator ‘US’ for US only or without either indicator for Canada only. [CSA C22.2 No. 24-15 (Ninth edition) (R2019) - Temperature-indicating and -regulating equipment; UL 353 (Fifth Edition; Reprint with Revisions through and Including November 08, 2011) - Limit Controls

Certificate No.: 80175235

Combustion 911 is an Olsträd company.

Combustion 911
600 Mogadore Road
Kent, OH 44240

ph: 330.678.4328

combustion911.com
support_ab@combustion911.com

The information in this document contains general descriptions of technical options available and based on current specifications.

The company reserves the right to make changes in specifications and models as design improvements are introduced, without prior notice.