

912 Series Pressure Reducing Regulators

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Introduction

The 912 Series direct-operated, spring-loaded regulators are UL listed regulators used in a variety of service and industrial applications. These regulators have limited-capacity internal relief across the diaphragm to help minimize overpressure.

The 912 Series, with capacity ratings of less than 320 000 BTU/hr (3,60 SCMH), are often used on small portable outdoor appliances.

Underwriters Laboratory requires horizontally mounted regulators to be installed with vent opening protection to prevent blockage by freezing rain. Vent protector Type P331 can be used on a horizontally mounted Type 912. The protector should not be used if the regulator is installed vertically with the vent pointing downward or beneath a protective cover.

Body Sizes and End Connection Styles

Inlet: 1/4-inch FNPT

Outlet: 1/4 or 3/8-inch FNPT

Maximum Allowable Inlet Pressure

250 psig (17,2 bar)

Outlet Pressure Ranges

See Table 2

Features

- Accurate, Sensitive Control
- Weather and Insect Protection
- Easy Maintenance
- UL Listed

Maximum Allowable Outlet Pressure

Emergency Outlet Pressure:

20 psig (1,4 bar)

Recommended Outlet Pressure to Avoid

Internal Part Damage: 3 psi (207 mbar) differential above outlet pressure setting

Body Port Diameter

0.073 or 0.094-inch (1,8 or 2,4 mm)

Flow Coefficient

Wide-Open C_v for Relief Sizing: 4

Temperature Capabilities

-20° to 160°F (-29° to 71°C)

Pressure Registration

Internal

Spring Case Vent Connection

Construction: Untapped with removable screen

Location: Over body outlet except over body inlet for Types 912-101XA and 912-264XA

Approximate Weight

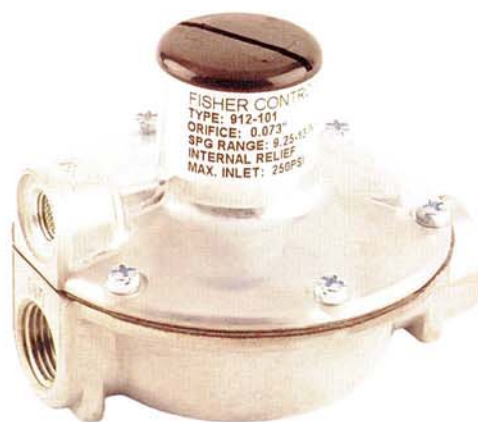
1.3 pounds (0,6 kg)

Option

- Handwheel Adjustment

Additional Technical Data

For more technical information, contact your local LP-Gas Equipment Distributor or log on to: www.emersonprocess.com/regulators/lp



P1024

Figure 1. Type 912-101 Regulator

Table 1. Construction Materials

BODY OR LOWER CASING	SPRING CASE	DISK ASSEMBLY	DIAPHRAGM	DIAPHRAGM PLATE	SPRING SEAT	CONTROL AND RELIEF VALVE SPRING	RELIEF VALVE	VENT SCREEN	GASKET
Zinc	Zinc	Nitrile (NBR) disk with Zinc	Nitrile (NBR) or Nylon	Plated steel	Plated steel	Plated steel	Brass and Zinc	Stainless steel	Composition

Table 2. Outlet Pressure Ranges

SERIES	SPRING RANGE, INCHES W.C. (mbar)	SPRING PART NUMBER	SPRING COLOR	WIRE DIAMETER, INCHES (cm)	SPRING FREE LENGTH, INCHES (cm)
912	3 to 7 (7 to 17)	1B784327222 ⁽¹⁾	Red	0.035 (0,089)	1.09 (2,77)
	5 to 10 (12 to 25)	1B784427222	Orange	0.037 (0,094)	1.37 (3,48)
	9.25 to 13 (23 to 32)	1L507937022	Unpainted	0.038 (0,097)	1.78 (4,52)
	12 to 24 (30 to 60)	1B784527222	Blue	0.047 (0,119)	1.34 (3,40)
912H	0.5 to 2.7 psi (34 to 186 mbar)	1B784627222	Yellow	0.075 (0,190)	1.19 (3,02)
	2.7 to 5 psi (186 to 345 mbar)	1B784727222	Green	0.080 (0,203)	1.31 (3,33)

1. Also spring used for Type 912N-194.

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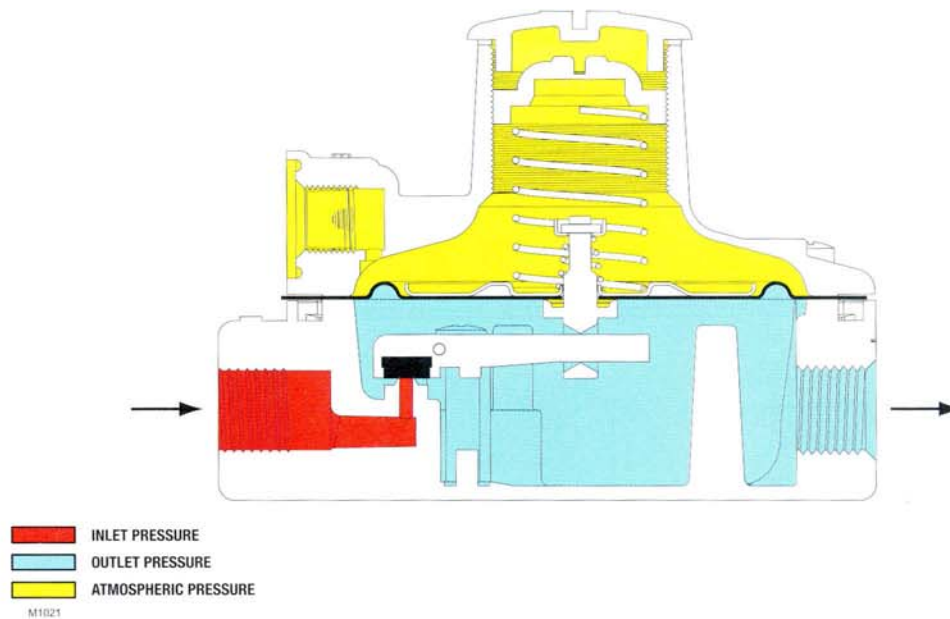


Figure 2. Operational Schematics

Table 3. Capacities⁽¹⁾

TYPE NUMBER	OUTLET PRESSURE SETTING	CAPACITIES IN BTU/hr (SCMH) PROPANE ⁽²⁾		
		Inlet Pressure, Psig (bar)		
		10 (0,69)	25 (1,7)	100 (6,9)
912-101	11-inches w.c. (27 mbar)	110 437 (1,24)	200 561 (2,26)	493 744 (5,56)
912-101XA	11-inches w.c. (27 mbar)	110 437 (1,24)	200 561 (2,26)	493 744 (5,56)
912-104	11-inches w.c. (27 mbar)	100 764 (1,13)	270 048 (3,04)	348 643 (3,92)
912-109	7-inches w.c. (17 mbar)	122 932 (1,38)	231 757 (2,61)	556 217 (6,26)
912-122	11-inches w.c. (27 mbar)	110 437 (1,24)	200 561 (2,26)	493 744 (5,56)
912-197	20-inches w.c. (50 mbar)	139 054 (1,57)	185 406 (2,09)	304 307 (3,43)
912-264	20-inches w.c. (50 mbar)	74 565 (0,84)	124 947 (1,41)	268 032 (3,02)
912-264XA	20-inches w.c. (50 mbar)	74 565 (0,84)	124 947 (1,41)	268 032 (3,02)
912-267	4.5-inches w.c. (11 mbar)	122 932 (1,38)	217 650 (2,45)	---
912H-108 ⁽²⁾	1.5 psig (103 mbar)	130 993 (1,47)	201 528 (2,27)	469 560 (5,29)
912H-520 ⁽²⁾	3.5 psig (241 mbar)	143 085 (1,61)	251 910 (2,84)	586 446 (6,60)
912H-534 ⁽²⁾	1.5 psig (103 mbar)	94 718 (1,07)	151 146 (1,70)	370 812 (4,17)
912N-194	5-inches w.c. (12 mbar)	100 764 (1,13)	151 146 (1,70)	---

1. Flow capacity based on 2-inch w.c. (5 mbar) droop.
2. Flow capacity based on 20% droop for 912H Series.
3. Metric conversion is based on 2516 BTU/ft³ of gas at 60°F (16°C).

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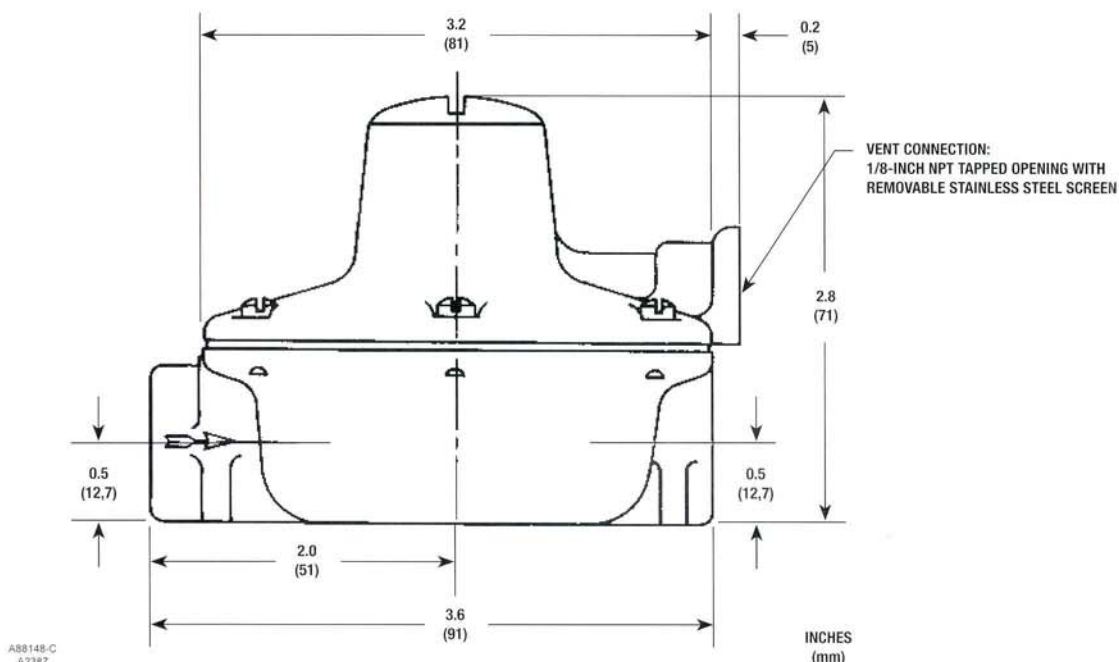


Figure 3. Dimensions

Ordering Guide

Ordering Information				
TYPE NUMBER	BODY SIZES AND END CONNECTION STYLE	ORIFICE SIZES, INCHES (mm)	OUTLET PRESSURE RANGES, INCHES W.C. (mbar)	VENT ORIENTATION
912-101	1/4 x 3/8-inch FNPT	0.073 (1.8)	9.25 to 13 (23 to 32)	Over Outlet
912-101XA	1/4 x 3/8-inch FNPT	0.073 (1.8)	9.25 to 13 (23 to 32)	Over Inlet
912-104	1/4 x 1/4-inch FNPT	0.073 (1.8)	9.25 to 13 (23 to 32)	Over Outlet
912-109	1/4 x 3/8-inch FNPT	0.073 (1.8)	5 to 10 (12 to 25)	Over Outlet
912-122 ⁽¹⁾	1/4 x 3/8-inch FNPT	0.073 (1.8)	9.25 to 13 (23 to 32)	Over Outlet
912-197	1/4 x 3/8-inch FNPT	0.094 (2.4)	12 to 24 (30 to 60)	Over Outlet
912-264	1/4 x 3/8-inch FNPT	0.073 (1.8)	12 to 24 (30 to 60)	Over Outlet
912-264XA	1/4 x 3/8-inch FNPT	0.073 (1.8)	12 to 24 (30 to 60)	Over Inlet
912-267	1/4 x 3/8-inch FNPT	0.073 (1.8)	3 to 7 (7 to 17)	Over Outlet
912H-108	1/4 x 3/8-inch FNPT	0.094 (2.4)	0.5 to 2.7 psi (34 to 186 mbar)	Over Outlet
912H-520	1/4 x 1/4-inch FNPT	0.094 (2.4)	2.7 to 5 psi (186 to 345 mbar)	Over Outlet
912H-534	1/4 x 1/4-inch FNPT	0.073 (1.8)	0.5 to 2.7 psi (34 to 186 mbar)	Over Outlet
912N-194 ⁽²⁾	1/4 x 1/4-inch FNPT	0.073 (1.8)	3 to 7 (7 to 17)	Over Outlet

1. Includes Type M318 POL adaptor – MPOL by 1/4-inch NPT.
2. Not U.L. Listed.

To order, refer to the Ordering Information table above and specify the type number that satisfies your requirement. Then, contact or visit your local LP-Gas Equipment Distributor for availability.