



CustomControlSensors

# Non-Hazardous Areas Adjustable Pressure Switch

## 604V\* - 604GV\* Diaphragm Sensor



### DESCRIPTION

- Highly reliable devices utilizing the CCS Dual-Snap® Belleville disc spring principle pioneered by CCS' engineers.
  - Engineering based on aerospace technology.
  - Rigid, midsize and internally adjustable for convenient field set point adjustment.
  - Repeatable and stable set points.
  - Vibration and shock resistant.
  - High cycle life.
  - High over-pressure capability. (System and Proof)
- Various options for wetted materials and electrical ratings to meet a wide range of application requirements and media compatibility.
  - Suitable for ultra low pressure and vacuum to pressure applications.

SHIPPING WEIGHT: APPROXIMATELY 40 OUNCES (1134 GRAMS)

### SERIES:

- 604V\*
- 604GV\*

### ADJUSTABLE SET POINT RANGE:

#### VACUUM:

- 1 to 28.5" Hg
- 25 to 724 mm Hg

#### PRESSURE:

- 20" Hg Vacuum to 12 PSIG
- 508 mm Hg to 0.83 bar

### OPERATING TEMPERATURE:

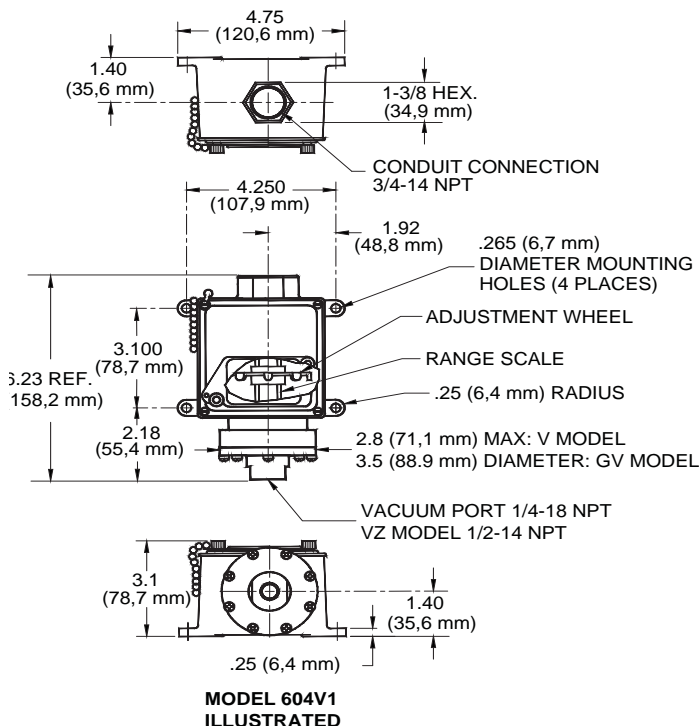
Temperature limits change with o-ring selection.

- 40° to 186°F
- 40° to 86°C

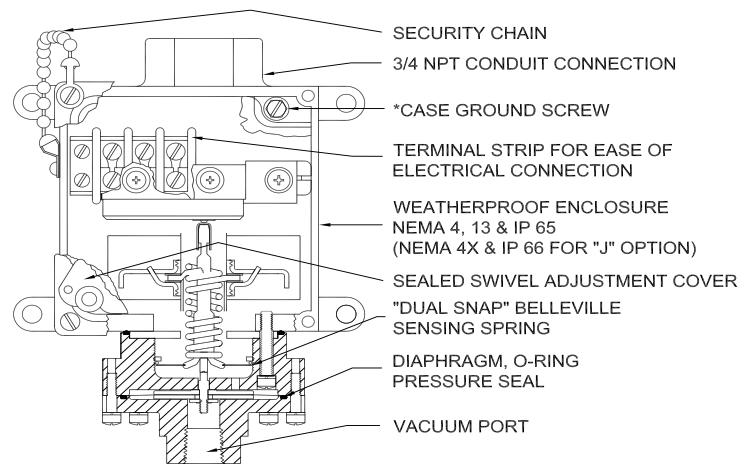
### STANDARD FEATURES:

- CE Mark
- CRN
- CCC
- NEMA: 4,13 / IP65
- Weatherproof
- Internal Case Ground
- U.L. Listed (File No. E72038)
- NACE MR0175 / ISO 15156

### INSTALLATION DRAWING



### DESIGN PRINCIPLES



SERIES 604V & 604GV

**FIELD SETTING:** Open access cover. Adjust wheel as illustrated. Clockwise to increase settings. Counterclockwise to decrease settings.

**NOTE:** DO NOT USE ELECTRICAL HEX FOR TORQUING.





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## 604V\* - 604GV\* Diaphragm Sensor

### OPERATING AND ORDERING DATA

SERIES 604V*	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING									
	ADJUSTABLE SET POINT RANGE				APPROX. DEAD BAND INCHES Hg (mm Hg)	SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)			
	INCREASING VACUUM INCHES Hg (mm Hg)		DECREASING VACUUM INCHES Hg (mm Hg)							
604V*1	3.5-28.5 (89-724)		1-26 (25-660)		2.5 (64)	150 (10.3)	250 (17.2)			
SERIES 604VZ*	WETTED PARTS: 1/2"-14 NPT 316 STAINLESS STEEL PRESSURE PORT, POLYIMIDE DIAPHRAGM, VITON O-RING									
	ADJUSTABLE SET POINT RANGE				APPROX. DEAD BAND INCHES Hg (mm Hg)	SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)			
	INCREASING VACUUM INCHES Hg (mm Hg)		DECREASING VACUUM INCHES Hg (mm Hg)							
604VZ*1	3.5-28.5 (89-724)		1-26 (25-660)		2.5 (64)	150 (10.3)	250 (17.2)			
SERIES 604GV* CROSSOVER (VACUUM TO GAGE)	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING									
	ADJUSTABLE SET POINT RANGE VACUUM INCHES Hg (mm Hg)		APPROX. DEAD BAND VACUUM INCHES Hg (mm Hg)		ADJUSTABLE SET POINT RANGE GAGE PRESSURE PSIG (BAR)		APPROX. DEAD BAND GAGE PRESSURE PSI (BAR)		SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)
	INCREASING VACUUM	DECREASING VACUUM	AT TOP OF RANGE	AT BOTTOM OF RANGE	INCREASING PRESSURE	DECREASING PRESSURE	AT TOP OF RANGE	AT BOTTOM OF RANGE		
604GV*2	1.5-18 (38-457)	0.5-17 (3-493)	1.0 (25)	1.0 (25)	1.0-10 (0.068-0.68)	0.5-9.5 (0.034-0.65)	0.5 (0.034)	0.5 (0.034)	500 (34.5)	750 (52)
SERIES 604GVZ* CROSSOVER (VACUUM TO GAGE)	WETTED PARTS: 1/4"-18 NPT STAINLESS STEEL PRESSURE PORT, POLYIMIDE DIAPHRAGM, VITON O-RING									
	ADJUSTABLE SET POINT RANGE VACUUM INCHES Hg (mm Hg)		APPROX. DEAD BAND VACUUM INCHES Hg (mm Hg)		ADJUSTABLE SET POINT RANGE GAGE PRESSURE PSIG (BAR)		APPROX. DEAD BAND GAGE PRESSURE PSI (BAR)		SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)
	INCREASING VACUUM	DECREASING VACUUM	AT TOP OF RANGE	AT BOTTOM OF RANGE	INCREASING PRESSURE	DECREASING PRESSURE	AT TOP OF RANGE	AT BOTTOM OF RANGE		
604GVZ*2	1.5-18 (38-457)	0.5-17 (3-493)	1.0 (25)	1.0 (25)	1.0-10 (0.068-0.68)	0.5-9.5 (0.034-0.65)	0.5 (0.034)	0.5 (0.034)	500 (34.5)	750 (52)

### HOW TO ORDER

Follow these steps to build your part number:

1. Specify the series based on your required set point, range, dead band, system pressure and proof pressure.
2. Add desired options model code letter.
3. Add the applicable standard suffix number.

(Ex: 604GVZ2-7005)

### PRESSURE CONVERSION

1 BAR = 14.5 PSI  
1 kPa = 0.145 PSI

### OPTIONS MODEL CODES

- A: Viton® O-Ring (STD on VZ models)
- F: Ethylene Propylene O-Ring
- J: CSA Approved (File No. LR22665) (SPDT ONLY)
- M: DPDT Electrical
- X: Double Break Switching Element

### OPTIONAL STANDARD MODIFIED SUFFIXES

- 7005: Viton/Dacron Diaphragm, Viton O-Ring & Stainless Steel Port Cap (Z Models only)
- 7008: Gold Contacts
- 7011: Stainless Steel Diaphragm

### ELECTRICAL CHARACTERISTICS RATING OF SWITCH ELEMENT

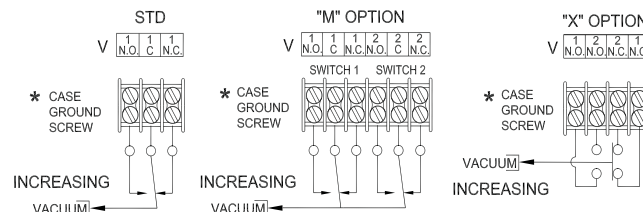
VOLTS	AMPERES		
	SPDT Res.	DPDT "M" Res.	Dbl Brk "X" Res.
125 AC - 50/60 Hz	15	5	15
250 AC - 50/60 Hz	15	5	15
480 AC - 50/60 Hz	15	-	15
28 DC	6	5	-
125 DC	.5	.5	1
250 DC	.2	-	.5
*125 AC - 50/60 Hz	1 max	1 max	-
*30 DC	1 max	1 max	-

\*Gold Contacts -7008 Suffix

Note: Additional modified standard suffixes are available, consult CCS sales department or CCS Representative.

### SCHEMATIC AND WIRING CODE

Note: In gage mode, wiring diagram will be in reverse.



### CERTIFICATIONS

Consult CCS website for complete certification and approval listing.