



CustomControlSensors

Hazardous Areas Adjustable / Pre-Set Pressure Switch

642GE* - 642DE* - 642VE* - 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, compact and internally adjustable for factory setting or convenient field set point adjustment.
- Repeatable and stable set points.
- Vibration and shock resistant.
- High cycle life.
- High over-pressure capability. (System and Proof)
- Certified explosion proof hermetically sealed electrical assembly for environmental protection.
- Various options for electrical ratings to meet a wide range of application requirements and media compatibility.



642DE Series Shown.

SHIPPING WEIGHT: APPROXIMATELY 16 OUNCES (453 GRAMS)

SERIES:

- 642GE*
- 642DE*
- 642VE*

ADJUSTABLE SET POINT RANGE:

GAGE & DIFFERENTIAL:

- 1.0 to 80 PSI
- .069 to 5.52 bar
- 6.89 to 552 kPa

VACUUM:

- 2.0 to 28.5" Hg
- 50.8 to 247 mm Hg

OPERATING TEMPERATURE:

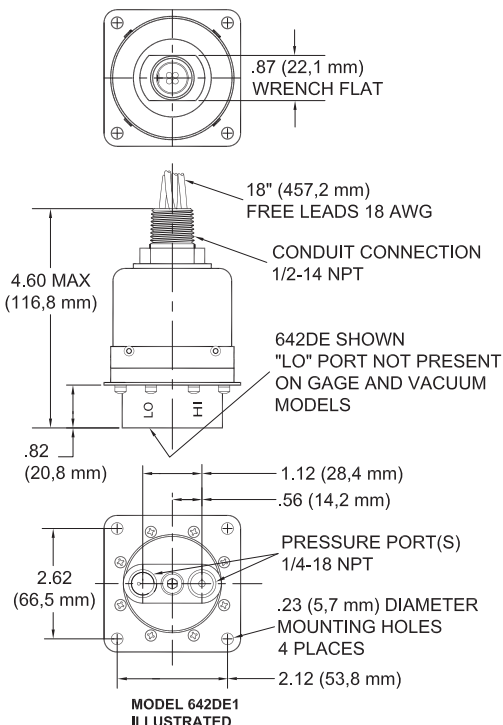
Temperature limits change with O-ring selection.

- 40° to 186°F
- 40° to 86°C

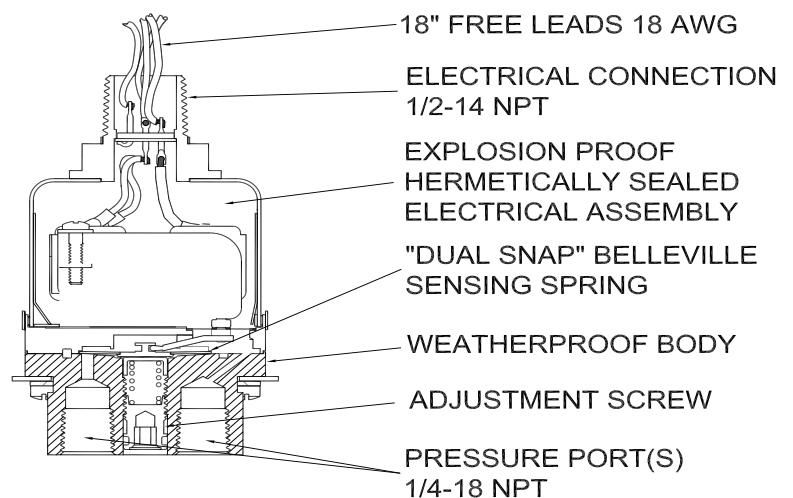
STANDARD FEATURES:

- CE Mark
- CCC
- CRN
- NEMA: 4, 7, 9,13 / IP66
- U.L. / CSA Listed
- Hermetically Sealed Electrical Assembly

INSTALLATION DRAWING



DESIGN PRINCIPLES



642DE SERIES SHOWN

FIELD SETTING (642DE800* Series Only): Insert 3/16" Allen wrench into adjustment screw (located in pressure port). Turn clockwise to decrease settings. Counterclockwise to increase settings.

NOTE: DO NOT USE ELECTRICAL HEX FOR TORQUING.





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OPERATING AND ORDERING DATA

SERIES 642GE*	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING							
	FIXED SET POINT RANGE (SPECIFY RANGE ON ORDER)		APPROXIMATE DEAD BAND PSI (BAR)		SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)		
	INCREASING PRESSURE PSIG (BAR)	DECREASING PRESSURE PSIG (BAR)	AT BOTTOM OF RANGE	AT TOP OF RANGE				
642GE*1	1.5-10 (0.103-0.69)	1.0-9 (0.069-0.62)	0.5 (0.03)	1.0 (0.069)	160 (11.03)	250 (17.24)		
642GE*2	11-80 (0.76-5.52)	9.6-72 (0.66-4.96)	1.4 (0.096)	8 (0.55)				
SERIES 642DE*	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING							
	FIXED SET POINT RANGE (SPECIFY RANGE ON ORDER)		APPROXIMATE DEAD BAND PSI (BAR)		SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)		
	INCREASING PRESSURE PSIG (BAR)	DECREASING PRESSURE PSIG (BAR)	AT BOTTOM OF RANGE	AT BOTTOM OF RANGE		BOTH PORTS SIMULT.	HIGH OVER LOW	LOW OVER HIGH
642DE*1	1.5-80 (0.103-5.52)	1.0-72 (0.069-4.96)	0.5 (0.034)	8 (0.55)	160 (11.03)	250 (17.24)	250 (17.24)	120 (8.27)
SERIES 642DE*800*	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING							
	ADJUSTABLE SET POINT RANGE		APPROXIMATE DEAD BAND PSI (BAR)	SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)			
	INCREASING PRESSURE PSIG (BAR)	DECREASING PRESSURE PSIG (BAR)			BOTH PORTS SIMULT.	HIGH OVER LOW	LOW OVER HIGH	
	642DE*8101	1.5-5 (0.103-0.34)	1.0-4.5 (0.069-0.31)	0.5 (0.034)	160 (11.03)	250 (17.24)	250 (17.24)	120 (8.27)
	642DE*8102	2-13 (0.14-0.89)	0.5-11.5 (0.034-0.79)	1.5 (0.103)	160 (11.03)			
642DE*8103	12-24 (0.83-1.65)	9.5-21.5 (0.66-1.48)	2.5 (0.17)	160 (11.03)				
642DE*8104	23-35 (1.59-2.41)	19-31 (1.31-2.14)	4.0 (0.28)	160 (11.03)				
SERIES 642VE*	WETTED PARTS: 1/4"-18 NPT ALUMINUM PRESSURE PORT, POLYIMIDE DIAPHRAGM, BUNA N O-RING							
	FIXED SET POINT RANGE (SPECIFY RANGE ON ORDER)		APPROXIMATE DEAD BAND PSI (BAR)		SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)		
	INCREASING PRESSURE INCHES Hg (mm Hg)	DECREASING PRESSURE INCHES Hg (mm Hg)	AT BOTTOM OF RANGE	AT TOP OF RANGE				
642VE*1	3.0-28.5 (76.2-724)	2-25.5 (50.8-647.7)	1.0 (0.069)	3.0 (0.21)	60 (4.14)	120 (8.27)		

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: 642GE1-7054)

PRESSURE CONVERSION

1 BAR = 14.5 PSI
1 kPa = 0.145 PSI

OPTIONS MODEL CODES

A: Viton® O-Ring
M: DPDT Electrical
Y: ATEX / GOST Certified Electrical Assembly (Consult CCS Sales Department for GOST options and requirements.)

OPTIONAL STANDARD MODIFIED SUFFIXES

7054: 2 Meter Free Leads
7076: 18 inch Teflon Free Leads (Low Temp Wire)

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

CERTIFICATIONS

Consult CCS website for complete certification and approval listing.

ELECTRICAL ENCLOSURE CERTIFICATIONS

* c-UL, U.L./CSA Explosion Proof: Div. 1, 2 hermetically sealed electrical assembly P/N 17-51 (17-73 for M model option), listed by both Underwriter's Laboratories, Inc. (File No. E32961) and Canadian Standard Association (CSA) Testing Laboratories (File No. LR22921) for hazardous locations, Class 1, Groups A, B, C, and D; Class 2 Groups E, F, and G.
* ATEX - Baseefa certified for potentially explosive atmospheres. Models 642**Y, II 2 GD Ex d IIC, Ex tb IIIC, Baseefa 07ATEX0108X. (Option Y)

ELECTRICAL CHARACTERISTICS SCHEMATIC AND WIRING CODE

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	2	5	-
125 DC	.5	.5	.4
250 DC	.2	-	.2
*125 AC - 50/60 Hz	1 max	1 max	-
*30 DC	1 max	1 max	-

*Gold Contacts -7008 Suffix

