



CustomControlSensors

# Hazardous Areas Adjustable Pressure Switch

## 646DZE\* - 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)
- Certified explosion proof hermetically sealed electrical assembly for environmental protection.
- Various options for wetted materials and electrical ratings to meet a wide range of application requirements and media compatibility.

SHIPPING WEIGHT: APPROXIMATELY 60 OUNCES (1700 GRAMS)

### SERIES:

646DZE\*

### ADJUSTABLE SET POINT RANGE:

#### DIFFERENTIAL PRESSURE:

- .4 to 1000 PSID
- .028 to 68.94 bar
- 2.76 to 6895 kPa

### OPERATING TEMPERATURE:

Temperature limits change with O-ring selection.

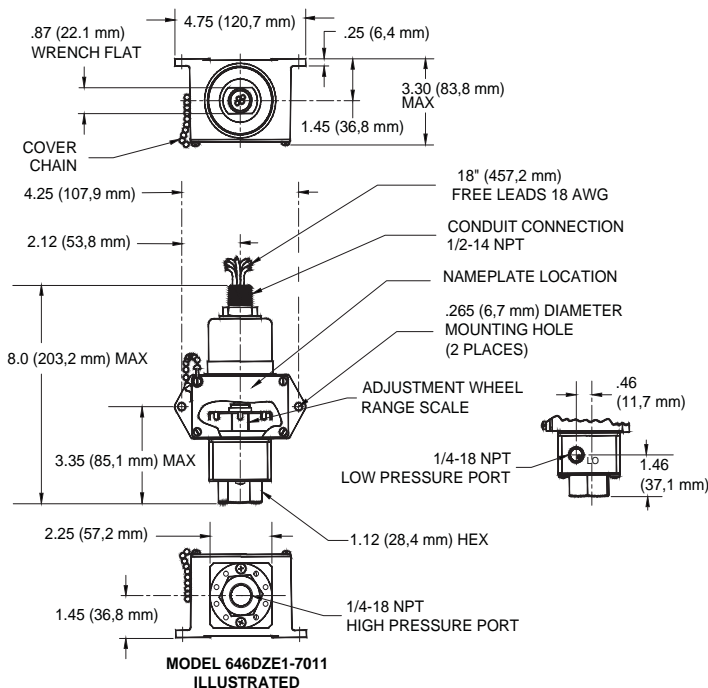
- 40° to 186°F
- 40° to 86°C

### STANDARD FEATURES:

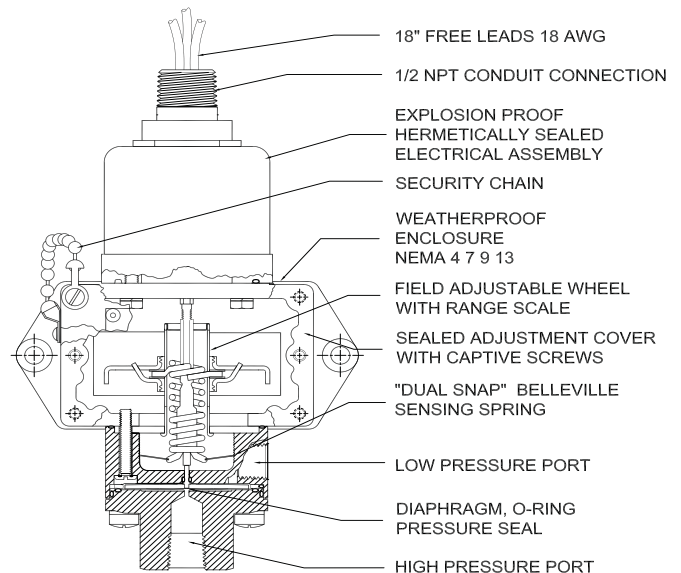
- CE Mark
- CCC
- CRN
- Dual Seal: ANSI/ISA-12.27.01
- NACE MRO175 / ISO 15156
- NEMA: 4, 7, 9, 13 / IP66
- U.L. / CSA Listed
- Hermetically Sealed Electrical Assembly



### INSTALLATION DRAWING



### DESIGN PRINCIPLES



### 646DZE SERIES

**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.

[ccsdualsnap.com](http://ccsdualsnap.com)



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## 646DZE\* - Diaphragm Sensor

### OPERATING AND ORDERING DATA

SERIES 646DZE*	WETTED PARTS: 1/4"-18 NPT 300 STAINLESS STEEL PRESSURE PORT, POLYIMIDE DIAPHRAGM, VITON O-RING						
	ADJUSTABLE SET POINT RANGE		APPROX. DEAD BAND PSI (BAR)	MAX SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)		
	INCREASING PRESSURE PSID (BAR)	DECREASING PRESSURE PSID (BAR)			BOTH PORTS SIMULT.	HIGH OVER LOW	LOW OVER HIGH
646DZE*1	1.2-18 (0.083-1.24)	0.4-17.2 (0.028-1.19)	.8 (0.055)	400 (28)	750 (52)	750 (52)	400 (28)
646DZEM*1	1.4-18 (0.097-1.24)	0.5-17.1 (0.034-1.18)	.9 (0.062)				
646DZE*2	6-75 (0.414-5.2)	2-71 (0.14-4.9)	4 (0.28)				
SERIES 646DZE*-7011	WETTED PARTS: 1/4"-18 NPT 300 STAINLESS STEEL PRESSURE PORT, STAINLESS STEEL DIAPHRAGM, VITON O-RING						
	ADJUSTABLE SET POINT RANGE		APPROX. DEAD BAND PSI (BAR)	MAX SYSTEM PRESSURE PSIG (BAR)	PROOF PRESSURE PSIG (BAR)		
	INCREASING PRESSURE PSID (BAR)	DECREASING PRESSURE PSID (BAR)			BOTH PORTS SIMULT.	HIGH OVER LOW	LOW OVER HIGH
646DZE*1-7011	2-18 (0.138-1.24)	0.5-16.5 (0.034-1.14)	1.5 (0.103)	400 (28)	750 (52)	750 (52)	100 (6.9)
646DZE*2-7011	9-75 (0.62-5.2)	3-69 (0.21-4.76)	6 (0.414)				
646DZE*4-7011	10-75 (0.69-5.2)	3-68 (0.21-4.68)	7 (0.48)	3000 (207)	5000 (345)	5000 (345)	3000 (207)
646DZE*11-7011	20-150 (1.38-10.3)	6-136 (0.414-9.37)	14 (0.97)				
646DZE*3-7011	50-375 (3.45-25.9)	16-341 (1.1-23.5)	34 (2.34)				
646DZE*5-7011	330-1000 (22.8-69)	250-920 (17.24-63.4)	80 (5.52)				

### 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: 646DZEM1-7011)

### PRESSURE CONVERSION

1 BAR = 14.5 PSI  
1 kPa = 0.145 PSI

### OPTIONS MODEL CODES

- F:** Ethylene Propylene O-Ring
- M:** DPDT Electrical
- Y:** ATEX / GOST Certified Electrical Assembly (Consult CCS Sales Department for GOST options and requirements.)
- X:** Double Break Electrical Assembly

### OPTIONAL STANDARD MODIFIED SUFFIXES

- 7008:** Gold Contacts
- 7054:** 2 Meter Free Leads
- 7076:** 18 inch Teflon Free Leads (Low Temp Wire)

### CERTIFICATIONS

Consult CCS website for complete certification and approval listing.

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

### 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 646\*\*Y, II 2 GD Ex d IIC, Ex tb IIIC, Baseefa 05ATEX0011X. (Option Y)

### 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	2	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

