FO-55113-B

HONEYWELL PART NUMBER
DCXL SERIES CHART 2

DCXL D

SERIES
COMPENSATED (mV)

PRESSURE RANGE [1]
01, 05, 10, 20, 30 IN H_2O

PACKAGE TYPE
S - SNAP

PRESSURE REFERENCE
D - DIFFERENTIAL AND GAGE [3]

CATALOG LISTINGS
DCXL01DS
DCXL05DS
DCXL10DS
DCXL20DS
DCXL30DS

REV	DOCUMENT	CHANGED BY	CHECK
C	0042165	SS 31JUL08	BLR

NOTES
[1] REFERENCE CONDITIONS (UNLESS OTHERWISE NOTED): SUPPLY VOLTAGE, Vs = 12 Vdc, TA = 25°C, COMMON MODE LINE PRESSURE = 0 PSIG. PRESSURE MEASUREMENTS ARE WITH PRESSURE APPLIED TO PORT 2
[2] SHIFT IS RELATIVE TO 25°C
[3] SHIFT IS WITHIN THE FIRST HOUR OF EXCITATION APPLIED TO THE DEVICE
[4] LINEARITY IS DETERMINED USING BEST STRAIGHT LINE CURVE FIT THROUGH ZERO, 1/2 FULL SCALE, AND FULL SCALE; HYSTERESIS IS MECHANICAL ONLY
[5] GAGE AND DIFFERENTIAL USE "D" SUFFIX. PRODUCT IS THE SAME
[6] SPAN IS THE ALGEBRAIC DIFFERENCE BETWEEN OUTPUT END POINTS OF OFFSET AND OUTPUT AT STATED PRESSURE
[7] PRESSURE RANGE DEPICTS THE FULL SCALE PRESSURE OF THE SENSOR
[8] FS REPRESENTS THE OUTPUT VALUE AT FULL SCALE PRESSURE

ELECTRICAL SPECIFICATIONS

PARAMETER [1]	PRESSURE RANGE (in H_2O)	MIN	NOM	MAX	UNITS
OFFSET VOLTAGE	ALL	-0.50	0.00	+0.50	mV
SPAN ($P_2 > P_1$) [6]	01	9.00	10.00	11.00	mV
	05, 10, 20, 30	19.00	20.00	21.00	
TEMPERATURE EFFECT ON OFFSET (0°C-50°C) [2]	01	---	---	±.250	mV
	05, 10, 20, 30	---	---	±.150	
TEMPERATURE EFFECT ON SPAN (0°C-50°C) [2]	01, 05	---	---	±.200	mV
	10, 20, 30	---	---	±.150	
OFFSET WARM-UP SHIFT [3]	01	---	.100	---	mV
	05, 10, 20, 30	---	.050	---	
OFFSET POSITION SENSITIVITY (±1g)	01	---	.050	---	mV
	05, 10	---	.010	---	
	20, 30	---	.005	---	
OFFSET LONG TERM DRIFT (ONE YEAR)	01	---	.200	---	mV
	05, 10, 20, 30	---	.100	---	
COMBINED LINEARITY AND MECHANICAL HYSTERESIS ERROR [4][5][8]	ALL	---	---	0.25	FSO
INPUT RESISTANCE	01	---	4.5	---	KΩ
	05, 20	---	10	---	
	10	---	13	---	
	30	---	12	---	
OUTPUT RESISTANCE	01, 05, 10, 30	---	1.5	---	KΩ
	20	---	2	---	

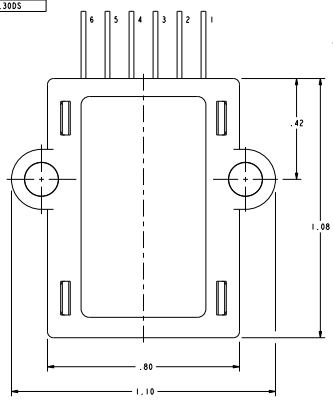
MAXIMUM RATINGS

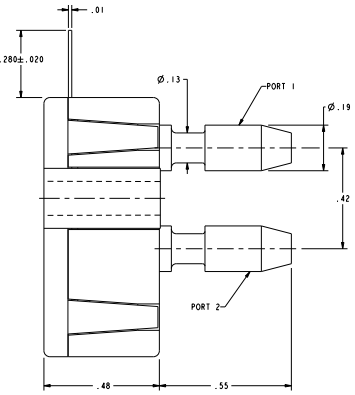
PARAMETER	PRESSURE RANGE (in H_2O)	MIN	MAX	UNITS
OPERATING TEMPERATURE RANGE	ALL	-25	85	°C
STORAGE TEMPERATURE	ALL	-40	125	°C
PROOF PRESSURE (VERIFIED BY TEST)	ALL	---	5	PSI
BURST PRESSURE (VERIFIED BY DESIGN)	01	---	7	PSI
	05, 10	---	10	
	20	---	15	
	30	---	25	
EXCITATION VOLTAGE	ALL	0	16	V
COMMON MODE PRESSURE	ALL	---	50	PSIG

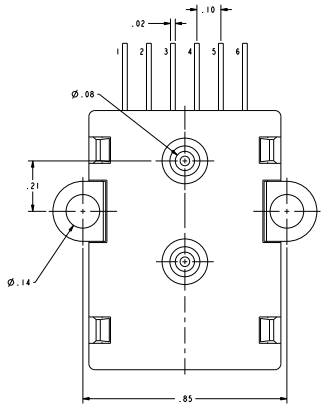
MEDIA CAPABILITY, WETTED MATERIALS (APPLY CLEAN DRY AIR ONLY)	
PRESSURE PORT 2 (HIGH)	SILICON DIAPHRAGM, GLASS FILLED NYLON, AND ALUMINA CERAMIC
PRESSURE PORT 1 (LOW)	SILICON DIAPHRAGM, GLASS FILLED NYLON, AND ALUMINA CERAMIC

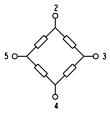
PRESSURE COMPATIBILITY:
MEASURES DIFFERENTIAL OR GAGE PRESSURE AND VACUUM. PRESSURE MAY BE APPLIED TO PORT 1 OR PORT 2. FOR PRESSURE TO PORT 1 THE OUTPUT POLARITY IS REVERSED. VACUUM MAY BE APPLIED TO EITHER PORT 1 OR PORT 2. FOR VACUUM TO PORT 2 THE OUTPUT POLARITY IS REVERSED

RATIOMETRIC OUTPUT:
THE OUTPUT VOLTAGE OF THE SENSOR IS RATIOMETRIC, PROPORTIONAL, TO THE EXCITATION VOLTAGE. FOR THIS MODEL SENSOR ALL SPECIFICATIONS WILL CHANGE PROPORTIONALLY TO ANY CHANGES IN THE EXCITATION VOLTAGE. THE EXCITATION MAY VARY BETWEEN 3 TO 16 VOLTS. ALL SPECIFICATIONS WILL NOMINALLY BE CHANGED BY A RATIO OF $V_{EXCITATION}/12.0$ VOLTS. FOR EXAMPLE: IF THE EXCITATION VOLTAGE IS 5.0 VOLTS THEN BOTH THE FULL SCALE OUTPUT VOLTAGE AND THE OFFSET VOLTAGE WOULD BE 5/12TH THE SPECIFIED VALUE









EQUIVALENT CIRCUIT

PIN OUT	
1	NC
2	$+V_{SUPPLY}$
3	$+V_{OUTPUT}$
4	$-V_{SUPPLY}$
5	$-V_{OUTPUT}$
6	NC

DESIGN UNITS: INCH
TOLERANCES UNLESS NOTED:
NO PLACES X ± 0.040
ONE PLACE .X ± 0.030
TWO PLACE .XX ± 0.015
THREE PLACE .XXX ± 0.005
FOUR PLACE .XXXX ± 0.0005
ANGLES X ± 1°
THIRD ANGLE PROJECTION

DRAWN	BM	21APR05
CHECK	AK	21APR05

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Pro/ENGINEER 3D

Honeywell

TITLE
PRESSURE SENSOR

SIZE	TYPE	DRAWING NAME	REV
D	1	DCXLSERIESCHART2	C

SCALE 5:1 SHEET 1 OF 1