

SciLog DN 3133: "Out-of Box" Sensor Performance Test: 1" TC SciPres

Test Protocol: Eighteen, pre-calibrated pressure sensor (SciPres 1" TC) from three different sensor lots were tested to determine "out-of-box" sensor performance. The tests were carried out at 0, 15 and 30 psi of applied pressure. The sensor responses as well as the associated readings of an in-line, NIST-traceable gauge were recorded. The accuracy and precision of all tested sensors were within established limits. No "out-of-box" sensor failures were found

Lot 1: 1" TC SciPres			Applied 0 psi		Applied 15 psi		Applied 30psi	
Factory Calibrated 12/24/2008			NIST	Sensor	NIST	Sensor	NIST	Sensor
Sensor ID	CF	PZ	Pressure	Response	Pressure	Response	Pressure	Response
S5-210131-1208	1.023	13	0.00	0.00	14.98	14.88	30.01	29.98
S5-210132-1208	1.051	61	0.00	0.00	14.98	15.15	30.01	30.02
S5-210133-1208	1.031	-51	0.00	0.02	14.98	15.01	30.01	30.01
S5-210135-1208	1.051	-32	0.00	0.00	15.01	15.19	30.02	30.03
S5-210136-1208	1.013	12	0.00	0.00	15.01	14.87	30.02	30.01
S5-210137-1208	1.011	6	0.00	0.00	15.01	14.89	30.02	30.01
Group Average	1.030	2	0.00	0.00	15.00	15.00	30.02	30.01
Group SD	0.018	39	0.000	0.008	0.000	0.143	0.000	0.017

Lot 2: 1" TC SciPres			Applied 0 psi		Applied 15 psi		Applied 30psi	
Factory Calibrated 1/13/2009			NIST	Sensor	NIST	Sensor	NIST	Sensor
Sensor ID	CF	PZ	Pressure	Response	Pressure	Response	Pressure	Response
S5-210142-0109	1.029	-29	0.00	0.00	15.03	15.06	30.03	30.02
S5-210144-0109	1.026	-24	0.00	0.00	15.03	15.00	30.03	30.03
S5-210145-0109	1.027	-9	0.00	0.00	15.03	15.03	30.03	30.01
S5-210148-0109	1.045	-6	0.00	0.00	15.03	15.16	30.01	29.99
S5-210149-0109	1.087	2	0.00	0.00	15.03	15.31	30.01	29.98
S5-210189-0109	1.023	-15	0.00	0.01	15.03	15.01	30.01	30.03
Group Average	1.040	-14	0.00	0.00	15.03	15.10	30.02	30.01
Group SD	0.025	12	0.000	0.004	0.000	0.120	0.000	0.021

Lot 3: 1" TC SciPres			Applied 0 psi		Applied 15 psi		Applied 30psi	
Factory Calibrated 1/16/2009			NIST	Sensor	NIST	Sensor	NIST	Sensor
Sensor ID	CF	PZ	Pressure	Response	Pressure	Response	Pressure	Response
S5-210192-0109	1.031	-42	0.00	0.00	15.02	15.04	30.04	30.06
S5-210194-0109	1.038	-19	0.00	0.00	15.02	15.10	30.04	30.06
S5-210195-0109	1.037	-27	0.00	0.00	15.02	15.12	30.04	30.06
S5-210196-0109	1.030	24	0.00	0.01	15.03	15.06	30.02	30.03
S5-210199-0109	1.011	-33	0.00	0.00	15.03	14.91	30.02	30.03
S5-210201-0109	1.043	50	0.00	-0.02	15.03	14.88	30.02	30.02
Group Average	1.032	-8	0.00	0.00	15.03	15.02	30.03	30.04
Group SD	0.011	36	0.000	0.010	0.000	0.100	0.000	0.019