~ Calibration Certificate ~ SNLW 230304

Model Number:		356A01			
Serial Number:	LW230801 (x axis)				
Description:	ICP® Triaxial	Accelerometer			
Manufacturer:		PCB	Method:	Back-to-Back Compar	rison AT401-3
		Calibration	Data		
Sensiti	ivity @ 100 Hz	4.49 mV/g	Duiu	Output Bias	10.2 VDC
Sensitivity @ 100 Hz		(0.458 mV/m/s^2)	Trar	nsverse Sensitivity	4.2 %
Diaghayaa	Time Constant	0.44 seconds	1141	isverse sensitivity	
Discharge	Time Constant	0.44 seconds			
		Sensitivity	Plot		
3.0-	Temperature: 73 °F (23 °C)	R	telative Humidity: 48 %	
2.0-					
1.0-					
dB _{0.0} -					
-1.0-					
-2.0-					
-3.0-		100.0		1000.0	5000.0
10.0 Hz		Data Poi	n to	1000.0	0000.0
Frequency (Hz	:) Dev. (%)	Frequency (Hz)	Dev. (%)		
10	-0.4	300	0.4		
15	-0.3	500	0.4		
30	-0.1	1000	0.6		
50	0.1	3000	1.9		
REF. FREQ.	0.0	5000	3.3		
Acceleration Level (pk): 1 'The acceleration level arm (g) = 0.008 x (freq) ² . *The As Found: I	ny be limited by shaker displacement e gravitational constant used for calculat n/a	at low frequencies. If the listed level cannot be obtaine ions by the calibration system is; 1 g = 9.80665 m/s². Condition of		ss the following formula to set the vibration a	mplitude: Acceleration Level
As Left:	New Unit, In Tolera				
 This certific Calibration See Manufa Measureme 	cate shall not be reprise performed in competurer's Specification of uncertainty (95%)	Notes thru Project 683/287323 and roduced, except in full, without pliance with ISO 9001, ISO in Sheet for a detailed listing confidence level with covera 10-99 Hz; +/- 1.5%, 100-199	PTB Traceablut written appropriate (19012-1, ANSI of performance ge factor of 2)	oval from PCB Piezotron Z540.3 and ISO 17025. specifications. for frequency ranges tes	
Technician:		Robert Zsebehazy R.Z.		Date:	9/21/2017
ACCREDITE! CALIBRATION CERT #1	D (01862.02 TE	THE PLEASE PROPERTY OF	TION DIVISION enue, Depew, NY away 903, Halifax	14043 NC 27839	CAL2-3588845513.664+

TEL: 888-684-0013 ·

~ Calibration Certificate ~

Model Number	r:	356A01			
Serial Number	: LW	230801 (y axis)			
Description:	ICP® Triaxia	l Accelerometer			
Manufacturer:_		PCB	Method:	Back-to-Back Compariso	on AT401-3
		Calibratio	on Data		
Sensi	tivity @ 100 Hz	4,64 mV/g	n Daia	Output Bias	10.5 VDC
Scholling & 100 112		(0.474 mV/m/s²)	Tran	sverse Sensitivity	4.1 %
Discharge Time Constant		0.45 seconds		•	
J					
		0	ite. Di sa		
	Temperature: 73 °F (Sensitiv (23°C)	•	elative Humidity: 48 %	
3.0-				Outro Hamming. 10 70	
2.0-					
dB 0.05					
0.0					
-1.0~					
-2.0-					:
-3.0-\- 10.0 Hz	, , , , , , , , , , , , , , , , , , ,	100.0		1000.0	8000.0
		Data 1		г.	II.) D (0()
Frequency (H 10	(z) Dev. (%) -0.3	Frequency (Ha 300	z) Dev. (%) 0.3	Frequency (7000	Hz) Dev. (%) 2.7
15	-0.2	500	0.4	8000	3.2
30	-0.1	1000	0.5	0000	J.2
50	0.0	3000	1.1		
REF. FREQ		5000	1.7		
Acceleration Level (pk) ¹ . The acceleration level r	may be limited by shaker displacement	at low frequencies. If the listed level cannot be of	olanned, the calibration system uses	s the following formula to set the vibration amplit	ude; Acceleration Level
(g) = 0.008 x (freq)^2 . ^2T	he gravitational constant used for calcula	tions by the calibration system is: $1 g = 9.80665 \text{ m/s}$ $Condition$.		
As Found:	n/a		*		
As Left:	New Unit, In Toler				
1 Calibratio	: NICT Traccable	<i>No</i> thru Project 683/287323 a		e thru Project 17014	
2. This certifi	icate shall not be rep	roduced, except in full, wit	hout written appro	val from PCB Piezotronic	s, Inc.
Calibration	n is performed in con	apliance with ISO 9001, IS	O 10012-1, ANSI	Z540.3 and ISO 17025.	
4. See Manuf	facturer's Specification	on Sheet for a detailed listing confidence level with cover	ng of performance	specifications. for frequency ranges tested	during calibration
are as follow	ent uncertainty (93%) s: 5-9 Hz; +/- 2.0%,	10-99 Hz; +/- 1.5%, 100-	1999 Hz; +/- 1.0%	6, 2-10 kHz; +/- 2.5%.	
Technician:		Robert Zsebehazy R		Date:9/	21/2017
		®PCB PIE	ZOTRONICS"	:	
	<u>.</u>		BRATION DIVISION		
ACCREDITE CALIBRATION CERT	F1862.02	Calibration Performed at: 10869 I	Highway 903, Halifax,	NC 27839	
PAGE I of I	TE	L: 888-684-0013 FAX: 7	16-685-3886 · w	ww.pco.com	CAL2-3588847157.178+0

~ Calibration Certificate ~ Per ISO 16063-21

Model Number:		356A01					
Serial Number:							
Description:			_				
Manufacturer:		РСВ	Method:	Back-to-Back Comparis	on AT401-3		
		Calibr	ation Data				
Sensitiv	Sensitivity @ 100 Hz			Output Bias	10.4 VDC		
		(0.470 mV/m/s²)	Tran	sverse Sensitivity	3.6 %		
Discharge 7	Time Constant	0.51 seconds					
			itivity Plot				
3.0-	Temperature: 73 °F (23 °C)			Relative Humidity: 48 %			
2.0~					i i		
1.0-							
dB _{0.0} -		X					
-1.0-							
-2.0-							
-3.0-		400.0		1000.0	8000.0		
10.0 Hz		100.0		1000.0	8000.0		
	D (0()		ta Points	Euggnenar	(He) Day (9()		
Frequency (Hz) 10	Dev. (%) -0.5	Frequency 300	(Hz) Dev. (%)	Frequency 7000			
15	-0.2	500	0.5	8000			
30	-0.2	1000		0000	0.0		
50	0.1	3000					
REF. FREQ.	0.0	5000	1.8				
KEI. I KEQ.	0.0	2001					
Acceleration Level (pk) ¹ . 10: 'The acceleration level may (g) = 0.008 x (freq) ² The g	be limited by shaker displacement provitational constant used for calculate	at low frequencies. If the listed level canno ions by the calibration system is; 1 g = 9.806	t be obtained, the calibration system uses 65 m/s?. tion of Unit	s the following formula to set the vibration amp	litude: Acceleration Level		
	<u>/a</u> lew Unit, In Tolera	ance					
AS LCH: N	TOWN ONLY HE TOTAL		Notes				
 This certification i Calibration i See Manufaction Measurement 	ate shall not be represented in constructions. Specification tuncertainty (95%)	opliance with ISO 9001 on Sheet for a detailed I confidence level with a	without written appro , ISO 10012-1, ANSI isting of performance coverage factor of 2) f	oval from PCB Piezotronic Z540.3 and ISO 17025.			
Technician:		Robert Zsebehazy	R.Z.	Date:9	/21/2017		
ACCREDITED CALIBRATION CERT #18]	Headquarters: 3425 Wal	VIEZOTRONICS VIBRATION DIVISION Iden Avenue, Depew, NY 869 Highway 903, Halifax,	14043 NC 27839			