

PROPRIETARY AND CONFIDENTIAL

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REVISIONS

REV	ECN	DESCRIPTION	BY/DATE	CHK	APPR
A	14230	INITIAL RELEASE. SAME AS REV X1.	KG 05/16/18	LN	MH
B	14279	ADDED CABLE SPECIFICATION TABLE, NOTE 9 WHITE/BLUE SIG/PWR WAS: GND/RTN WHITE GND/RTN WAS: WHITE SIG/PWR	RA.06/14/18	KG	W

D

D

C

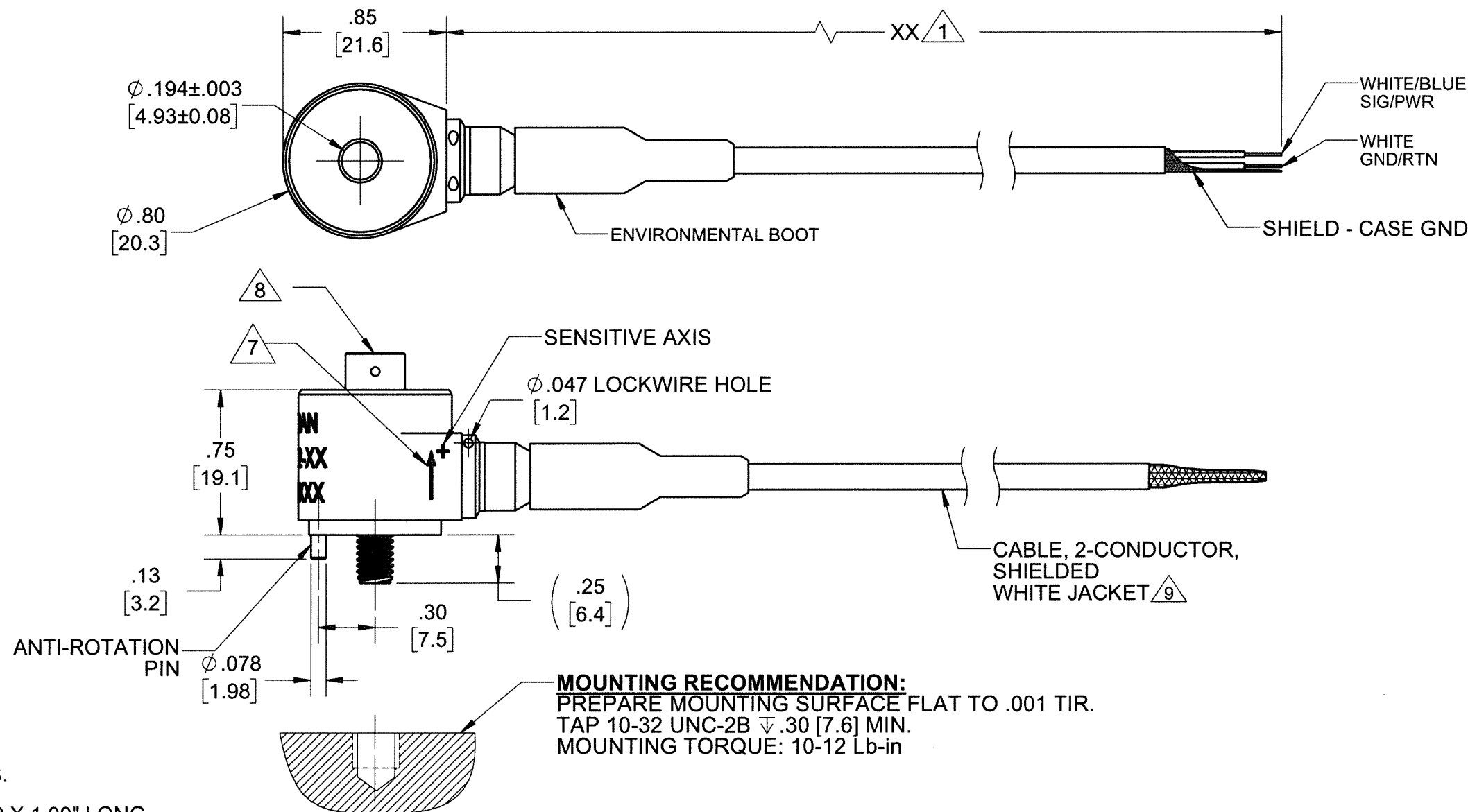
C

B

B

A

A



- 9 SEE TABLE FOR CABLE SPECIFICATIONS.
 - 8 MOUNTING SCREW MODEL 6543A3, 10-32 X 1.00" LONG, QTY. 1, SUPPLIED.
 - 7 ARROW INDICATES ACCELERATION DIRECTION FOR POSITIVE OUTPUT.
 - 6. OPERATING TEMPERATURE FOR ASSEMBLY: -67 TO 257 °F.
 - 5 DELETED
 - 4 DELETED
 - 3. HOUSING MATERIAL: 300 SERIES STAINLESS STEEL.
 - 2. WEIGHT: 42 GRAMS MAX, (LESS CABLE).
 - 1 PART NO. 3168D2-XX ("XX" DENOTES LENGTH IN FEET).
- NOTES: UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED: INTERPRET DIM & TOL PER ASME Y14.5M - 1994. REMOVE BURRS. COUNTERSINK INTERNAL THDS 90° TO MAJOR DIA. CHAM EXT THDS 45° TO MINOR DIA. THD LENGTHS AND DEPTHS ARE FOR MIN FULL THDS. DIMENSIONS APPLY AFTER FINISHING.		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DIMENSIONS IN BRACKETS [] ARE IN MILLIMETERS TOLERANCES ARE:			
DECIMALS .XX ±.03 .XXX ±.010	METRIC .X ± 0.8 .XX ±0.25	ANGLES ±1°	APPROVALS		
ORIG	LN	08/11/14	TITLE: OUTLINE/INSTALLATION DWG, MECHANICALLY FILTERED ACCEL, MODEL 3168D2-XX		
CHK	MH	05/17/18	SIZE B	CAGE CODE 2W033	
APP	LN	05/17/18	DWG NO 127-3168D2-XX	REV B	
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION USA	SCALE: 1:1	SHEET 1 OF 2	

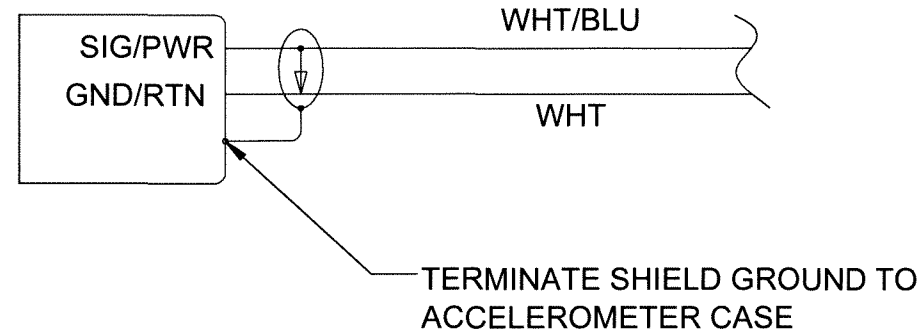
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1 CABLE LENGTH TOLERANCE

≤1FT	+1/ -0 IN
>1 FT - 5 FT	+2/ -0 IN
> 5 FT - 10 FT	+4/ -0 IN
>10 FT - 25FT	+6 / -0 IN
>25 FT	+5% / -0%

3168D2-XX
ACCELEROMETER
(REF)



ELECTRICAL SCHEMATIC

2-CONDUCTORS CABLE 	
AWG	22-19/34 NICKEL PLATED COPPER
WIRE TYPE	MIL-W-22759/41
INSULATION MATERIAL	EXTRUDED XL-ETFE, (DOUBLE JACKET) OD .050" ±.002
SHIELD	38 AWG SILVER PLATED COPPER BRAID 90% COVER 30° ANGLE
JACKET	EXTRUDED WHITE IRRADITED TEFLON® (XL-ETFE) .005 TO .010 WALL THICKNESS
DIAMETER	.140 ± .005
TEMPERATURE	200°C (WIRE RATED)
VOLTAGE	600 VOLTS

DYTRAN INSTRUMENTS, INC. **MASTER** Chatsworth, CA **ONLY IF IN RED**

TITLE: **OUTLINE/INSTALLATION DWG,
MECHANICALLY FILTERED
ACCEL, MODEL 3168D2-XX**

SIZE B	CAGE CODE 2W033	DWG NO 127-3168D2-XX	REV B
SCALE: 1:1	PART NO: 3168D2-XX	SHEET 2 OF 2	

MODEL NUMBER 3168D2-XX	PERFORMANCE SPECIFICATION		DOC NO. PS3168D2-XX
	ACCELEROMETER, IEPE, SINGLE AXIS		REV C, ECN 15075, 05/15/19



- RUGGED, LIGHTWEIGHT
- MECHANICALLY AND ELECTRICALLY FILTERED
- THROUGH HOLE MOUNT
- CASE ISOLATED
- HERMETICALLY SEALED

PHYSICAL

Weight, Max. (Less Cable)	1.5	oz	42	grams
Housing	300 Series S.S		300 Series S.S	
Material Isolation	Case Isolated		Case Isolated	

PERFORMANCE

Sensitivity +/- 5% [1]	10	mV/g	1.02	mV/ m/s ²	
Range F.S. For ± 5 Volts Output	500	g pk	4903	m/s ² pk	
Frequency Range, ± 3dB	1 to 10000	Hz	1 to 10000	Hz	
Resonant Frequency	> 40	kHz	> 40	kHz	
Mechanical Filter Resonance	> 13	kHz	> 13	kHz	
Linearity [2]	± 1	%F.S	± 1	%F.S	
Transverse Sensitivity, Max.	5%		5%		
Equivalent Electrical Noise Floor, Max.	0.007	grms	0.07	m/s ² rms	
Spectral Noise, Typ	1.25 Hz	0.0008	g/sqr(Hz)	0.00785	m/s ² /sqr(Hz)
	10Hz	0.0002	g/sqr(Hz)	0.00196	m/s ² /sqr(Hz)
	100Hz	0.00008	g/sqr(Hz)	0.00078	m/s ² /sqr(Hz)
	1000Hz	0.00009	g/sqr(Hz)	0.00088	m/s ² /sqr(Hz)
	10000Hz	0.00002	g/sqr(Hz)	0.00020	m/s ² /sqr(Hz)

ENVIRONMENTAL

Maximum Vibration	600	±gpk	5884	± m/s ² pk
Maximum Shock	5000	±gpk	49033	± m/s ² pk
Temperature Range (Operational)	-67 to 257	°F	-55 to 125	°C
Seal	Hermetic		Hermetic	
Base Strain Sensitivity	0.0003	g/μe	0.00294	m/s ² / μe
Magnetic sensitivity, Typ	0.00035	g/Gauss	0.00004	m/s ² /Gauss

ELECTRICAL

Supply Current [3]	2 to 10	mA	2 to 10	mA
Compliance Voltage Range	18 to 30	VDC	18 to 30	VDC
Output Impedance, Typ	100	Ω	100	Ω
Bias Voltage	7.5 to 13.0	VDC	7.5 to 13.0	VDC
Discharge Time Constant	0.5 to 1.0	sec	0.5 to 1.0	sec
Warm up Time	<4	sec	<4	sec
Overload Recovery	<50	μsec	<50	μsec
Sensitivity Change Vs.Current	<1	%	<1	%
Electrical Isolation, Min	10	GΩ	10	GΩ
Electrical Filter Corner Frequency (2 pole)	10	kHz	10	kHz

This family also includes:

Model	Sensitivity (mV/g)	Range (Gpeak)	Oper. Temp(°F)	Cable Length (FT)

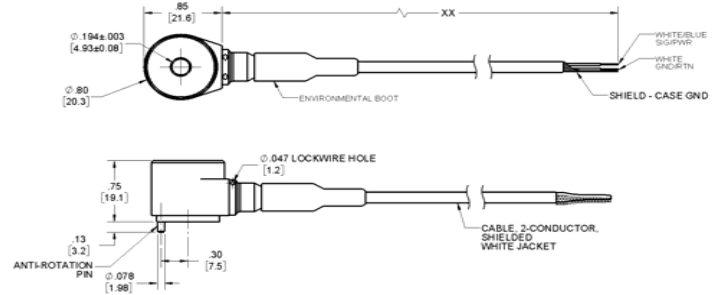
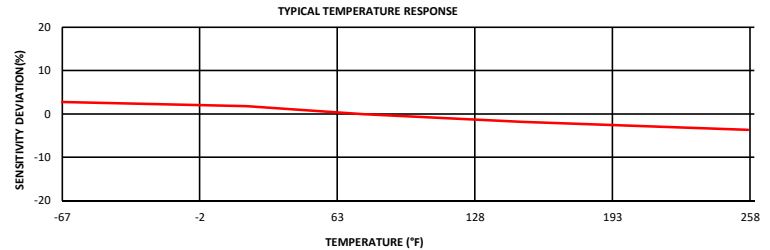
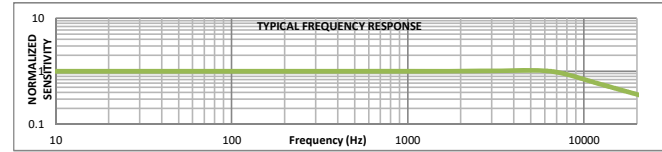
Refer to the performance specifications of the products in this family for detailed description.

Supplied Accessories:

- 1) Accredited Calibration Certificate (ISO 17025)
- 2) Mounting screw, 10-32 x 1.0" long, Model 6543A3, Qty. 1

Notes:

- [1] Measured at 100 Hz, 1 G rms per ISA RP 37.2.
- [2] Measured using zero-based best straight-line method, % of F.S. or any lesser range.
- [3] Do not apply power to this device without current limiting, 20 mA MAX. To do so will destroy the integral IC amplifier.
- [4] In the interest of constant product improvement, we reserve the right to change specifications without notice. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary overtime. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.



Units on the line drawing are in inches, units in brackets are in millimeters. Refer to 127-3168D2-XX for more information.

