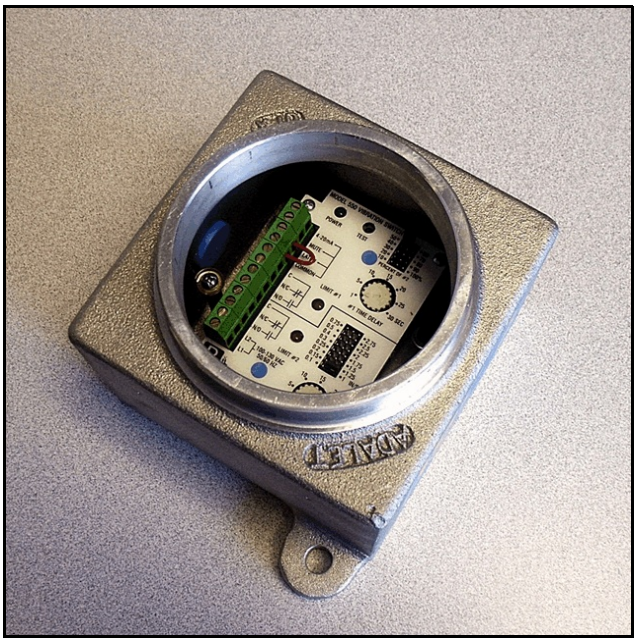
Model 550-X Vibration Switch
Model 550M-X *Metric* Vibration Switch



Features:
Monitors Vibration Velocity in/sec (user adjustable)
Automatic Alarm and/or Shutdown Limits
Adjustable Time Delays (prevents nuisance trips)
LED Limit and Power indicators
Self diagnostic Test button (verifies operation)
Solid State Reliability
Explosion Proof Rated Enclosure

Applications
Fans, Cooling Towers
Motors, Pumps
Blowers, Compressors
Crushers, Shredders, Hammer Mills
Rotating Machinery Monitoring

Specifications:

LIMITS:	Limit #1 (alarm) 10 - 100% of Limit #2 Limit #2 (shutdown) setting range of 550-X = 0.1 to 2.75 in/sec peak 550M-X = 2.5 to 70 mm/sec peak
VELOCITY RANGE:	550-X = 0.1 to 2.75 in/sec peak 550M-X = 2.5 to 70 mm/sec peak
FREQUENCY RANGE:	2 to 1000 Hz (120 to 60,000 RPM)
TIME DELAY:	1 to 30 sec (user adjustable)
POWER:	100-130V, 60 Hz, 0.02VA (L1&L2)
LIMIT OUTPUT:	(2) Form-C Relay SPDT 5A @ 125 VAC; 5A @ 28 VDC
ANALOG OUTPUT:	4 - 20 mA DC. Optional remote panel meters available (P/N - A11347)
REMOTE RESET:	Circuit closure between latch and common terminals will reset limits. An open circuit maintains (latches) the limit relays. Short latch and common terminals for non-latching operation (jumper supplied).
MUTE:	Circuit closure between MUTE and COMMON disables limits.
ACCURACY:	5% of setting
AXIS SENSITIVITY:	Perpendicular to base Omni-directional mounting
INPUT POWER:	100 - 130 VAC 50/60 Hz 190 - 250 VAC optional
ENCLOSURE:	Explosion-proof, Dust-tight
WEIGHT:	5.5 lbs (2.5 kg)
MOUNTING:	1/4" hardware 2 mounting bosses
TERMINALS:	Accepts #12 AWG wire
TEMPERATURE:	-30°F to 165°F (-34°C to 74°C)
SIZE:	5.3125" x 7.4375" x 4.875" (13.5 x 18.9 x 12.4 cm)

Note: Model 550-X and 550M-X explosion-proof housings are listed Class I, Groups C, D; Class II, Groups E,F,G; Class III; NEMA 7 & 9.

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Plain City, OH 43064-8080 USA

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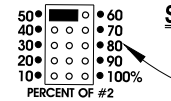
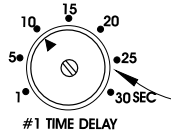
FEATURE	DESCRIPTION
VELOCITY RANGE	0.1 TO 2.75 IN/SEC PEAK (ENGLISH UNITS)
FREQ. RANGE	2 TO 1,000 HERTZ (120 TO 60,000 RPM)
LIMITS	TWO USER ADJUSTABLE LIMITS: LIMIT #1 (WARNING) 10% TO 100% OF LIMIT #2 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 LIMIT #2 (SHUTDOWN) 0.1 TO 2.75 IN/SEC 0.1, .15, .2, .25, .3, .4, .5, .75, 1, 1.25, 1.5, 1.75, 2, 2.25, 2.5, 2.75 IN/SEC
LIMIT OUTPUTS	INDUSTRIAL SEALED FORM-C TYPE RELAY (DRY-CONTACT) SPDT EACH LIMIT HAS ONE NORMALLY-OPEN (N/O) & ONE NORMALLY-CLOSED (N/C) OUTPUT 5-AMPERE @ 125 VAC, 5-AMPERE @ 28 VDC
LIMIT INDICATOR	LEDS (RED) ENERGIZE ON LIMIT-TRIP (LIMIT #1 AND LIMIT #2)
TIME DELAY	TWO USER-ADJUSTABLE LIMIT-TRIP TIME DELAY OF 1 TO 30 SECONDS. LABELED SELECTIONS: 1, 5, 10, 15, 20, 25, AND 30
LIMIT LATCH (REMOTE RESET) & MUTE	CIRCUIT CLOSURE BETWEEN LATCH AND COMMON TERMINALS WILL RESET THE LIMITS. AN OPEN CIRCUIT MAINTAINS (LATCHES) THE LIMIT RELAYS. SHORT THE LATCH & COMMON FOR NON-LATCHING OPERATION (AUTOMATIC RESET). CIRCUIT CLOSURE BETWEEN MUTE & COMMON DISABLES LIMITS.
ANALOG OUTPUT	4-20 MA DC INTO 500 OHMS MAXIMUM. OPTIONAL REMOTE PANEL METER P/N A-11347
SENSITIVE AXIS	PERPENDICULAR TO THE MOUNTING BASE. OMNI-DIRECTIONAL MOUNTING.
INPUT POWER	L1 & L2: 100-130 VAC 50/60 HERTZ (190-250 VAC OPTIONAL)
ENCLOSURE	CAST ALUMINUM W/THREADED SCREW-TYPE COVER. CLASS I GROUPS C & D; CLASS II GROUPS E, F &G; CLASS III; ADALET CAT. NO. XJD S5757
MOUNTING	¼" HARDWARE – 2-PLACES MNTG BOLT HOLE LUGS (BOSSES)
ELECTRICAL	¾" N.P.T. CONDUIT FITTING ENTRY; CAPTIVE TERMINALS FOR #12 AWG
WIRE SIZE	5" X 7" X 4" (13 CM X 18 CM X 12 CM); WT 6.25LBS (2.8KG)
TEMPERATURE	-30° F TO 165° F (-34° C TO 74° C)

SETUP EXAMPLE

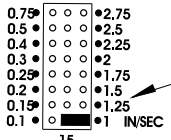


STEP 2: SET LIMIT #1

3. USE JUMPER TO SET LIMIT #1 TRIP POINT TO A PERCENTAGE OF LIMIT #2.
EXAMPLE = 50% (OF LIMIT #1 1.00 IN/SEC = 0.50 IN/SEC)

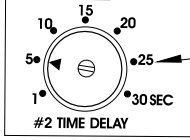


4. TURN #1 TIME DELAY FOR LIMIT TRIP DELAY.
EXAMPLE = 10 SECONDS.



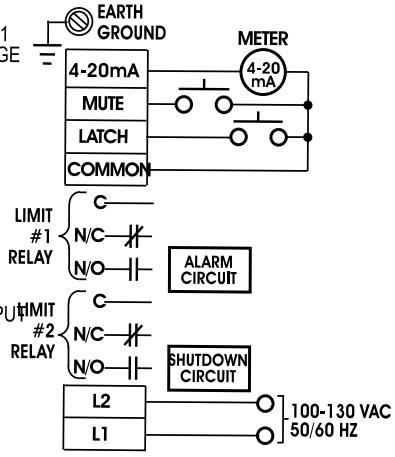
STEP 1: SET LIMIT #2

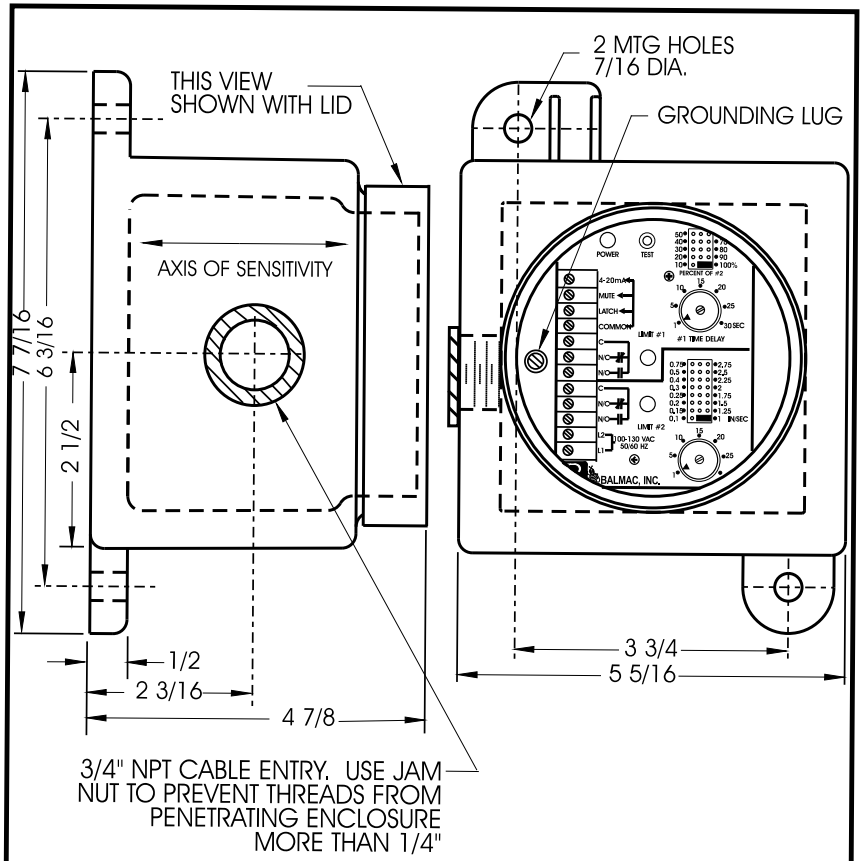
1. USE JUMPER TO SET FULL SCALE (20mA) ANALOG OUTPUT & LIMIT #2 TRIP POINT.
EXAMPLE = 1.00 IN/SEC.



2. TURN #2 TIME DELAY FOR LIMIT TRIP DELAY.
EXAMPLE = 5 SECONDS.

SAMPLE WIRING DIAGRAM:





REV.	DESCRIPTION	DATE
C	Adalet, XJD, Uncoated, Balmac Ref, FA A-12698	7/21/06
B	Encl was Killark GRB MOD SPM-13815-A	8/18/99
A	Production Release.	9/18/98

SCALE: DO NOT SCALE DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED

DIMENSION	FRACTION	DECIMAL
UP TO 6"	± 1/64	± .005
6" TO 24"	± 1/32	± .010
OVER 24"	± 1/16	± .015

BALMAC, INC.
www.balmacinc.com

MODEL	550X
USED ON	--
CUSTOMER	-
DWG DATA	12684.CDR

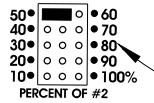
DRAWN BY: S.Craw — DATE: 9/21/2006
CHECKED BY: S.Cline — DATE: 9/21/2006

TITLE: MODEL 550X VIBRATION SWITCH

DRAWING NO.: SP A-12684 — REV.: C

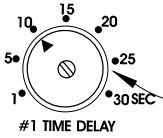
FEATURE	DESCRIPTION
VELOCITY RANGE	2.5 TO 70 MM/SEC
FREQ. RANGE	2 TO 1,000 HERTZ (120 TO 60,000 RPM)
LIMITS	TWO USER ADJUSTABLE LIMITS: LIMIT #1 (WARNING) 10% TO 100% OF LIMIT #2 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 LIMIT #2 (SHUTDOWN) 0.1 TO 2.75 IN/SEC 2.5, 4, 5, 6.5, 7.5, 10, 13, 19, 25.5, 32, 38, 44.5, 51, 57, 63.5, 70 MM/SEC
LIMIT OUTPUTS	INDUSTRIAL SEALED FORM-C TYPE RELAY (DRY-CONTACT) SPDT EACH LIMIT HAS ONE NORMALLY-OPEN (N/O) & ONE NORMALLY-CLOSED (N/C) OUTPUT 5-AMPERE @ 125 VAC, 5-AMPERE @ 28 VDC
LIMIT INDICATOR	LEDS (RED) ENERGIZE ON LIMIT-TRIP (LIMIT #1 AND LIMIT #2)
TIME DELAY	TWO USER-ADJUSTABLE LIMIT-TRIP TIME DELAY OF 1 TO 30 SECONDS. LABELED SELECTIONS: 1, 5, 10, 15, 20, 25, AND 30
LIMIT LATCH	CIRCUIT CLOSURE BETWEEN LATCH AND COMMON TERMINALS
(REMOTE RESET) & MUTE	WILL RESET THE LIMITS. AN OPEN CIRCUIT MAINTAINS (LATCHES) THE LIMIT RELAYS. SHORT THE LATCH & COMMON FOR NON-LATCHING OPERATION (AUTOMATIC RESET). CIRCUIT CLOSURE BETWEEN MUTE & COMMON DISABLES LIMITS.
ANALOG OUTPUT	4-20 MA DC INTO 500 OHMS MAXIMUM. OPTIONAL REMOTE PANEL METER P/N A-11347
SENSITIVE AXIS	PERPENDICULAR TO THE MOUNTING BASE. OMNI-DIRECTIONAL MOUNTING.
INPUT POWER	L1 & L2: 100-130 VAC 50/60 HERTZ (190-250 VAC OPTIONAL)
ENCLOSURE	CAST ALUMINUM W/THREADED SCREW-TYPE COVER. CLASS I GROUPS C & D; CLASS II GROUPS E, F &G; CLASS III; ADALET CAT. NO. XJD S5757
MOUNTING	¼" HARDWARE – 2-PLACES MNTG. BOLT HOLE LUGS (BOSSES)
ELECTRICAL	¾" N.P.T. CONDUIT FITTING ENTRY; CAPTIVE TERMINALS FOR #12 AWG
WIRE SIZE	5" X 7" X 4" (13 CM X 18 CM X 12 CM); WT 6.25LBS (2.8KG)
TEMPERATURE	-30° F TO 165° F (-34° C TO 74° C)

SETUP EXAMPLE



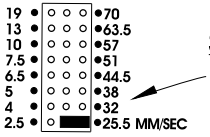
STEP 2: SET LIMIT #1

3. USE JUMPER TO SET LIMIT #1 TRIP POINT TO A PERCENTAGE OF LIMIT #2.
EXAMPLE = 50% (OF LIMIT #1 255MM/SEC = 12.25 MM/SEC)

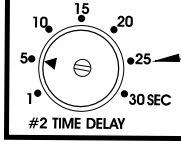


4. TURN #1 TIME DELAY FOR LIMIT TRIP DELAY.
EXAMPLE = 10 SECONDS.

STEP 1: SET LIMIT #2

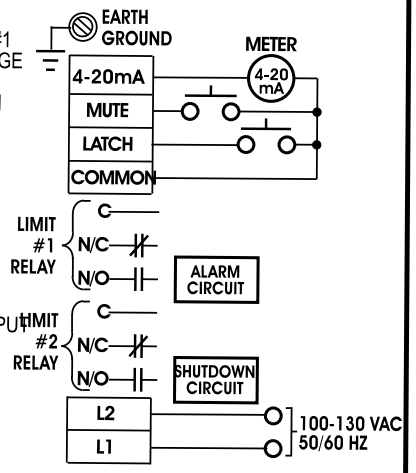


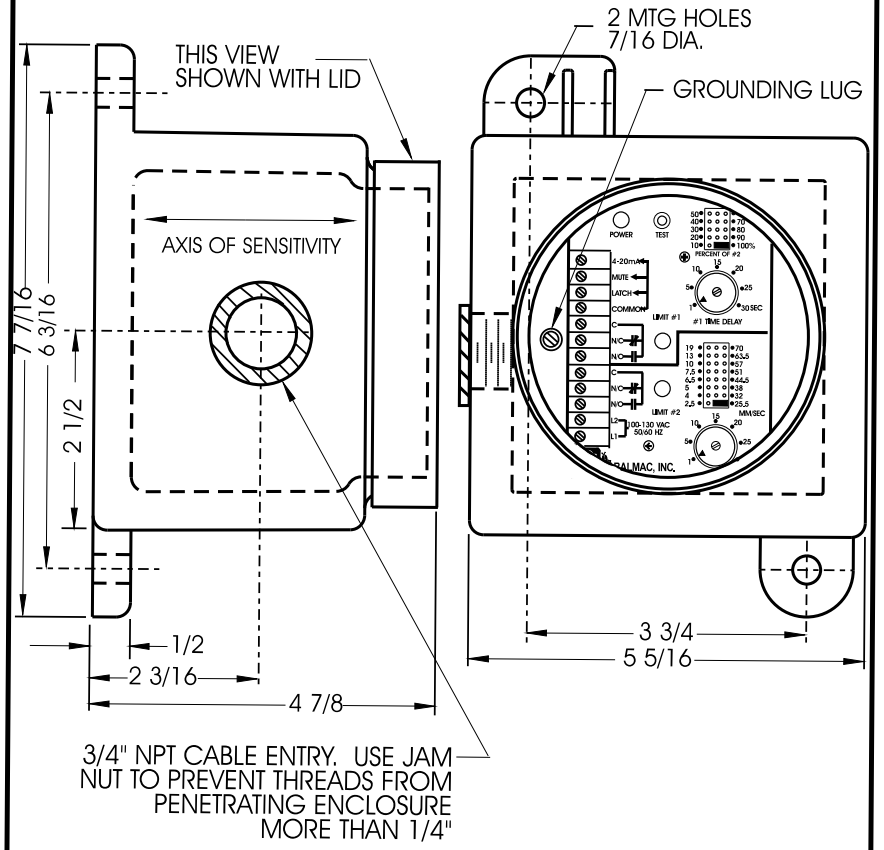
1. USE JUMPER TO SET FULL SCALE (20mA) ANALOG OUTPUT & LIMIT #2 TRIP POINT.
EXAMPLE = 25.5 MM/SEC.



2. TURN #2 TIME DELAY FOR LIMIT TRIP DELAY.
EXAMPLE = 5 SECONDS.

SAMPLE WIRING DIAGRAM:





REV.	DESCRIPTION	DATE
B	Encl was Killark GRB MOD SPM-13815-A	8/18/99
A	Production Release.	9/18/98

SCALE: DO NOT SCALE DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED

DIMENSION	FRACTION	DECIMAL
UP TO 6"	± 1/64	± .005
6" TO 24"	± 1/32	± .010
OVER 24"	± 1/16	± .015

BALMAC, INC.
www.balmacinc.com

MODEL	550XM
USED ON	--
CUSTOMER	-
DWG DATA	12685.CDR

DRAWN BY: KJacobs — DATE: 9/18/98
CHECKED BY: R. Delong — DATE: 10/13/98

TITLE: MODEL 550XM VIBRATION SWITCH

DRAWING NO.: SP A-12685 — REV.: B