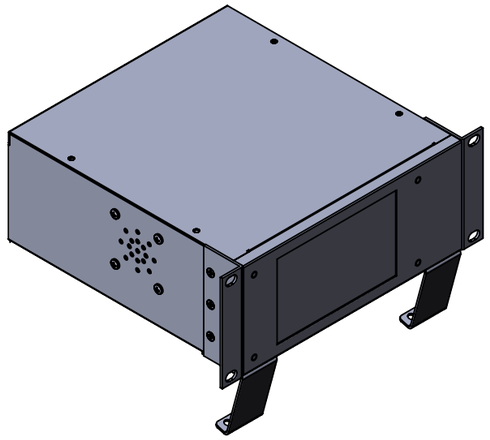
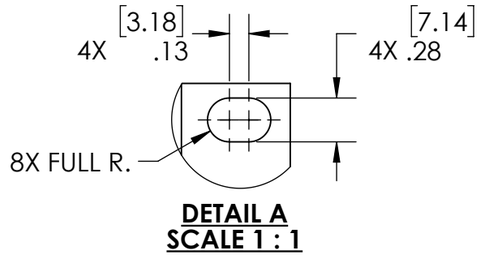
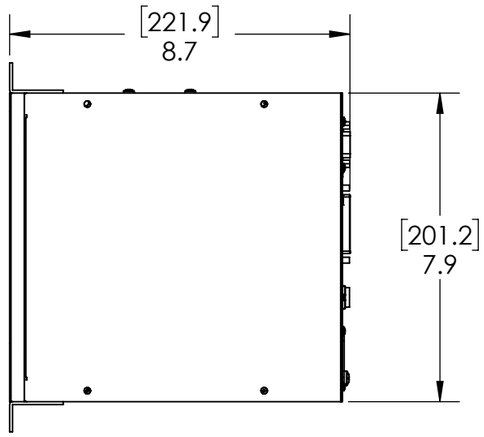
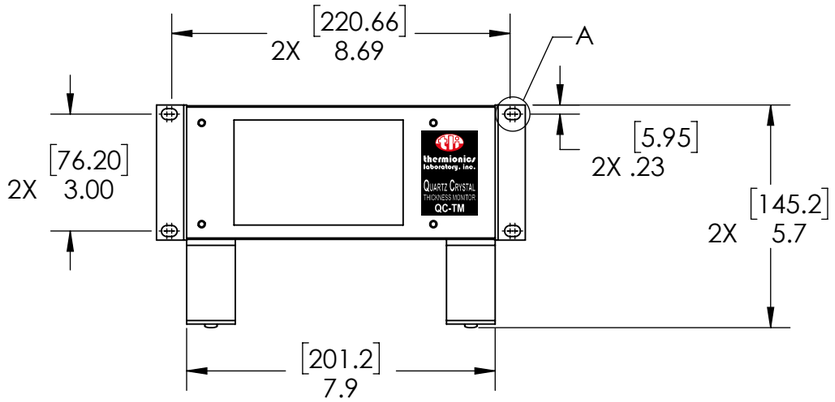
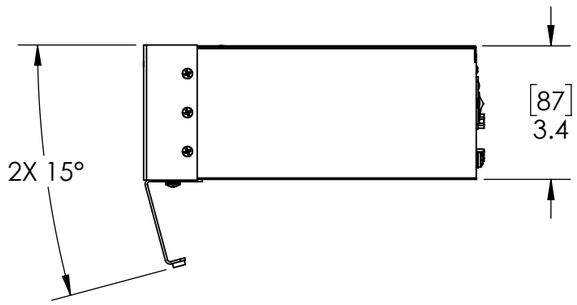


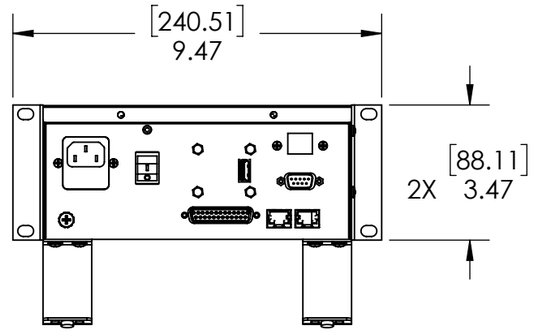


DETAIL A
SCALE 1 : 1









DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± N/A
ANGULAR: MACH ± BEND ± .5°
ONE PLACE DECIMAL ±.1
TWO PLACE DECIMAL ±.01
THREE PLACE DECIMAL ±.005
SURFACE FINISH 63 R.M.S.

FINISH:

DO NOT SCALE DRAWING | REVISION

thermionics laboratory inc.
Hayward Ca. 94545

	NAME	SIGNATURE	DATE
DESIGN/ENG.			
CHK'D			
APPV'D			
MFG			
Q.A			

USED ON | NEXT ASSY. | FINAL

TITLE:
QUARTZ CRYSTAL THICKNESS MONITOR, OUTLINE DRAWING

MATERIAL:

DWG NO. QC-TM | A3

WEIGHT: | SCALE:1:4 | SHEET 1 OF 2

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* HALF RACK CHASSIS FOR 19 INCH RACK MOUNT OF TABLE TOP

* HIGH FREQUENCY INTERNAL REFERENCE OSCILLATOR PROVIDES <0.01A RESOLUTION FOR ALUMINUM

* OPERATES WITH 5 MHz OR 6 MHz CRYSTALS

* ALL NEW INNOVATIVE CRYSTAL OSCILLATOR DESIGN FOR OUTSTANDING STABILITY AND NOISE IMMUNITY

* EXTENSIVE MATERIALS LIBRARY, ALSO ALLOWING FOR USER DEFINABLE MATERIALS

* COLOR LCD TOUCH SCREEN FOR GRAPHICAL AND NUMERICAL DISPLAY OF PRIMARY REAL-TIME PROCESS DATA, PROVIDING AND INTUITIVE AND USER FRIENDLY OPERATOR INTERFACE

* TOUCH SCREEN CAPABILITIES: IN-PROCESS PARAMETER MODIFICATION, I/O STATUS AND CONTROL. REAL TIME GRAPHICAL DISPLAY OF: RATE V/S TIME AND THICKNESS V/S TIME.

* ALL SYSTEM, FILM AND SETUP FILES MAY BE SAVED VIA A FRONT PANEL USB PORT, AS WELL AS UPLOADED TO INSTRUMENT

* CAN ACCOMMODATE UP TO 99 MATERIALS

* 2 CRYSTAL SENSOR INPUTS INCLUDED.

* SENSOR CRYSTAL FREQUENCY: 5 OR 6 MHz

* RESOLUTION: <0.02Hz (<0.01A FOR Al @ 6MHz

* ACCURACY: +/- 0.5% THICKNESS

* THICKNESS DISPLAY: 0.000 - 999.99 KÅ

* RATE DISPLAY: 0.00 - 999 Å/S

* MEASUREMENT UPDATE: 10 PER SECOND

* INPUTS (OPTIONAL) OPTICALLY ISOLATED, ACTIVE (12 TO 24V DC), OR PASSIVE (CONTACT CLOSURE): START/ZERO, STOP, SOURCE SHUTTER, SENSOR SHUTTER

* OUTPUTS (OPTIONAL): RELAY CONTACTS NO/NC @ MAX 1A, 24 DC OR AC: TARGET THICKNESS REACHED, CRYSTAL FAIL, SOURCE SHUTTER, SENSOR SHUTTER

* DAC OUTPUTS: 0-5VDC (THICKNESS AND RATE)

* POWER INPUT: 90-264 VAC, 47-63 Hz

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± N/A
ANGULAR: MACH ± BEND ± .5°
ONE PLACE DECIMAL ± .1
TWO PLACE DECIMAL ± .01
THREE PLACE DECIMAL ± .005
SURFACE FINISH 63 R.M.S.

FINISH:

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thermionics laboratory inc.
Hayward Ca. 94545

	NAME	SIGNATURE	DATE		USED ON	NEXT ASSY.
DESIGN/ENG.						FINAL
CHK'D						
APPV'D						
MFG						
Q.A						

TITLE:
QUARTZ CRYSTAL THICKNESS MONITOR, OUTLINE DRAWING

MATERIAL:

DWG NO. QC-TM

A3

WEIGHT:

SCALE:1:4

SHEET 2 OF 2

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