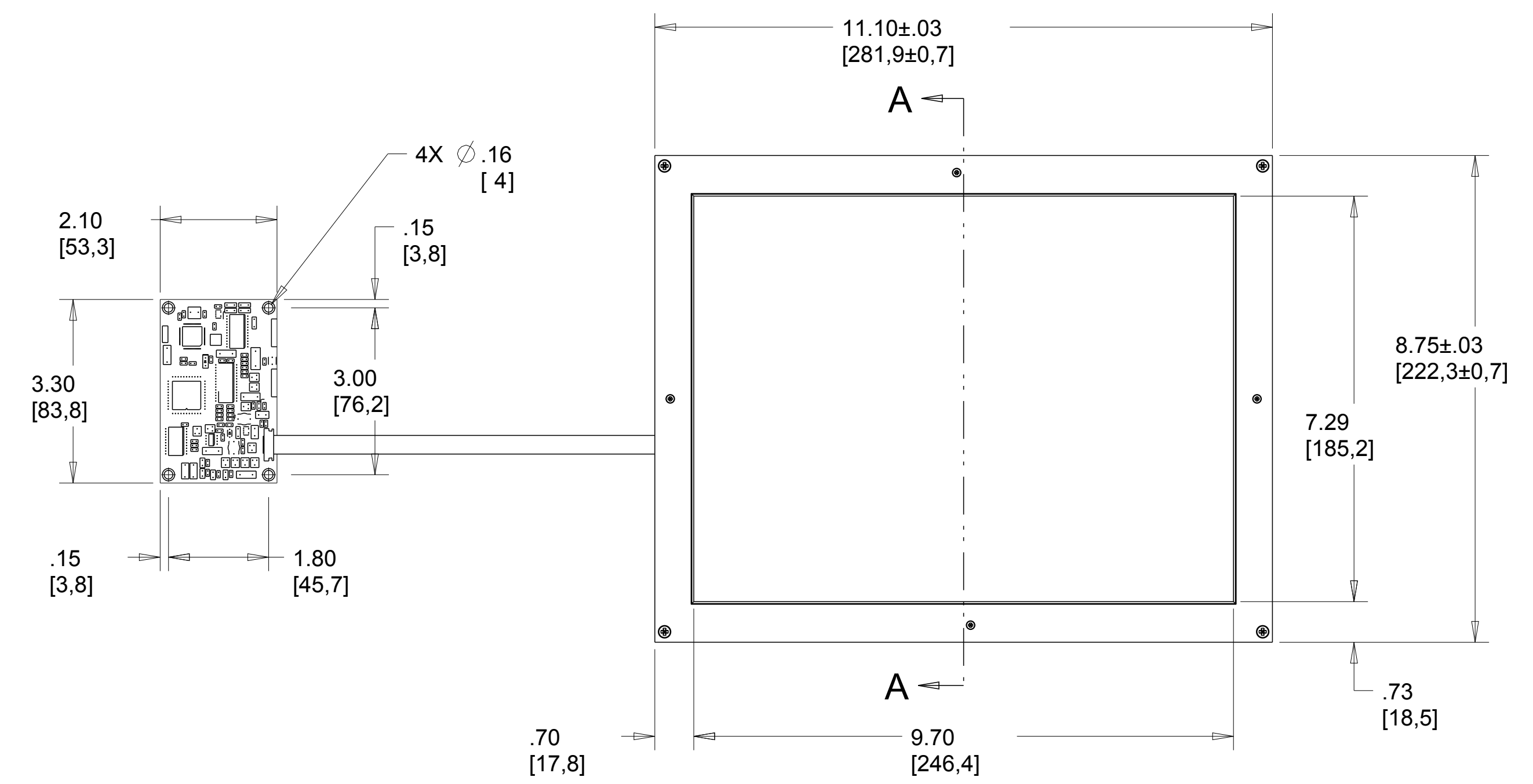
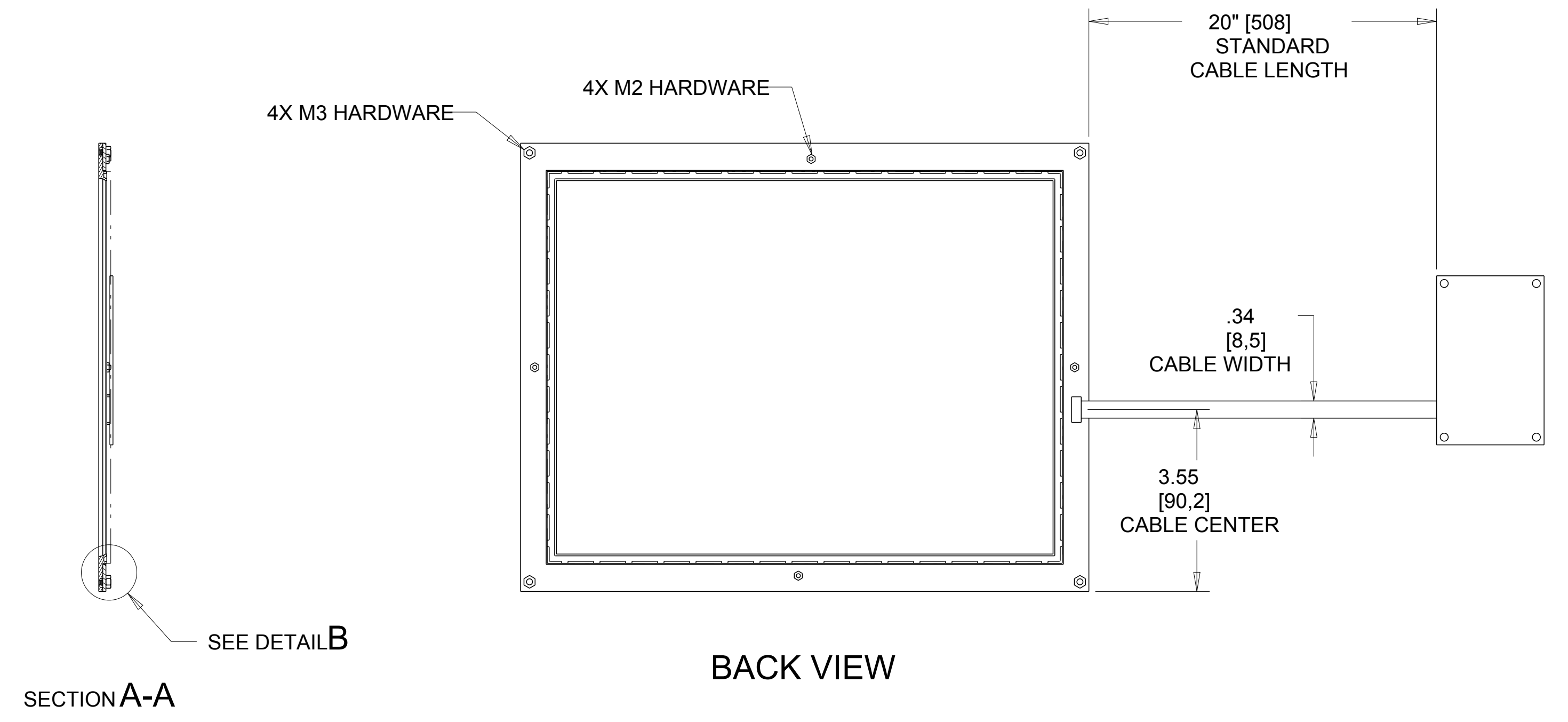


PROPRIETARY TO ELO TOUCH SOLUTIONS, INC. AND SHALL NOT BE DISCLOSED OTHER THAN TO NECESSARY EMPLOYEES OR SUPPLIERS WITHOUT THE EXPRESS WRITTEN CONSENT OF ELO TOUCHSYSTEMS INC.

REVISIONS					
REV	ZONE	BY	DESCRIPTION	DATE	APPROVED
B	--	JMc	RELEASED PER ECO 09-001328; ZN C2 ADDED DIM 20" STANDARD CABLE LENGTH	02/06/09	CCB
C	--	BA	ECO-12-014540: REBRANDED TO ELO TOUCH SOLUTIONS	08/31/12	DD



FRONT VIEW



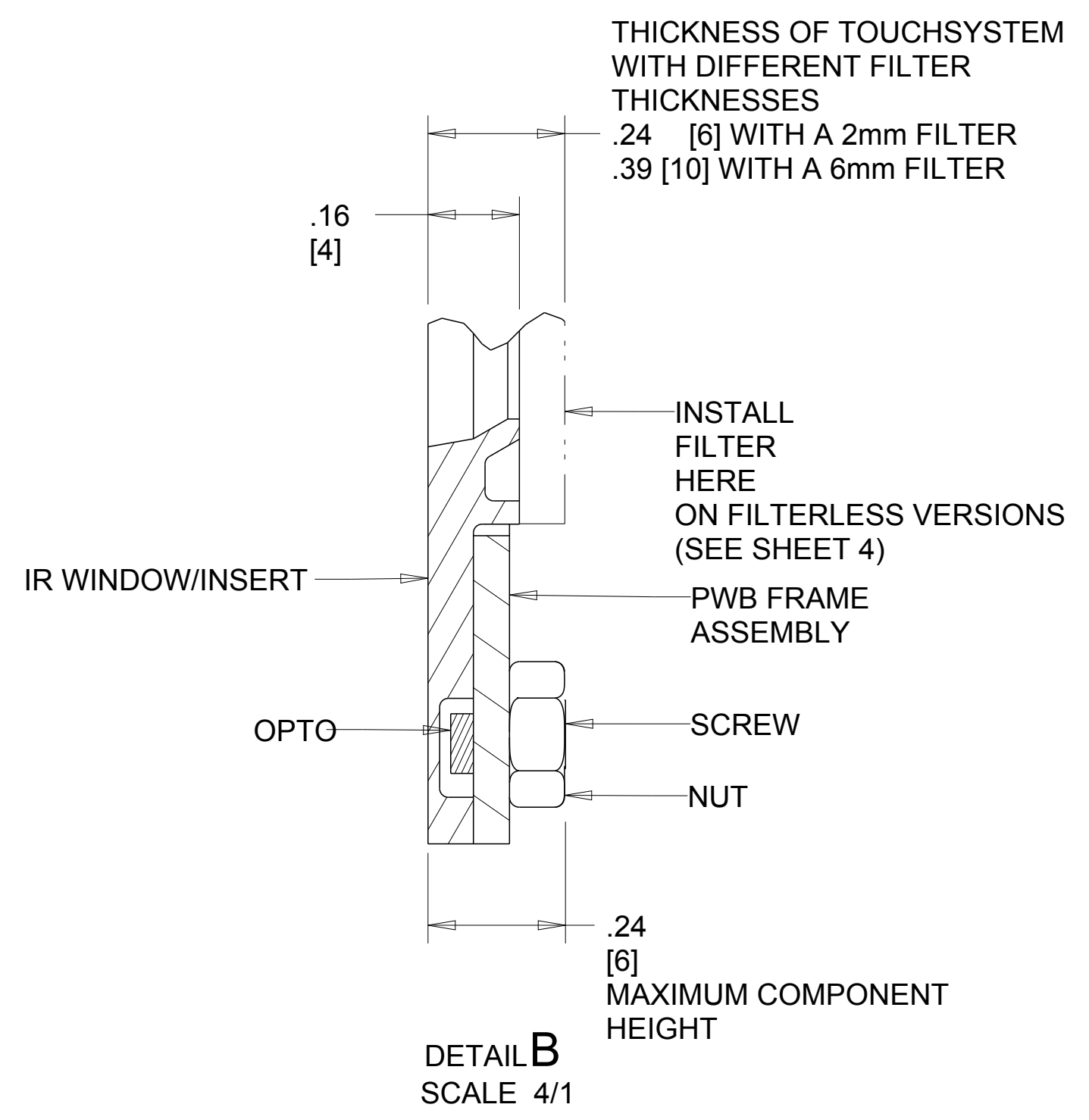
BACK VIEW

SECTION A-A

SEE DETAIL B

PIN OUT FOR P2 CONNECTOR ON CONTROLLER			
SIGNAL NAME	DB-9 PIN	P2 PIN	SOURCED BY
-DCD	1	1	ctrl
-DSR	6	2	ctrl
RXD	2	3	ctrl
-RTS	7	4	host
TXD	3	5	host
-CTS	8	6	ctrl
-DTR	4	7	host
R1	9	8	n/u
SG	5	9	com
n/u	n/c	10	n/u

PIN OUT FOR P4 CONNECTOR ON CONTROLLER		
SIGNAL NAME	P4 PIN	SIGNAL FUNCTION
+REGULATED PWR	1	+5 VOLTS DC +/-5%
PWR COM	2	SUPPLY VOLTAGE NEGATIVE
RESERVED	3	NO CONNECTION ALLOWED
PWR COM	4	SUPPLY VOLTAGE NEGATIVE
LED REMOTE	5	
n/c	6	KEY LOCATION
n/c	7	
FRAME GROUND	8	
-RESET	9	OPEN=NORMAL OPERATION SHORT TO PWR COM=HARDWARE RESET
RESERVED	10	NO CONNECTION ALLOWED



DETAIL B SCALE 4/1

POTENTIAL DISPLAYS AND MEASUREMENTS					
MANUFACTURER	DISPLAY MODEL	ACTIVE AREA X	ACTIVE AREA Y	OUTSIDE X	OUTSIDE Y
HITACHI	TX31D30VC1CAA	246	184.5	280	205.5
NEC	NL10276AC24-05	245.76	184.32	290	255
NEC	NL8060AC31-12G	246	184.5	280	210
SHARP	LQ121S1DG11	246	184.5	290	225
SHARP	LQ121S1DG31	246	184.5	276	209
TOSHIBA	LTM12C275A	246	184.5	290	220
TOSHIBA	LTM12C289	246	184.5	278.3	209

PIP NUMBER	DESCRIPTION	DESCRIPTION
C35522-001	SCN-CT-FLT12.1-OD2-000-L-R	FILTERLESS
E93152-001	SCN-CT-FLT12.1-OD2-018-L-R	2.3mm THICK, GLASS
D20416-001	SCN-CT-FLT12.1-OD2-002-L-R	2mm THICK, ACRYLIC
A71374-001	SCN-CT-FLT12.1-OD2-016-L-R	6mm THICK, GLASS FILTER

ITEM NO.	QTY REQD	DRAWING OR PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				
PART. NO. SEE CHART		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MILLIMETERS		TITLE DIMENSIONAL DRAWING SCN-CT-FLT12.1-ODX-0XX-L-R
METRIC		TOLERANCES ARE: DECIMALS: ±1/2" ANGLES: ±1/2° FRACTIONS: ±1/32"		
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION		
Pro/E prt/asm: MS600370_ICD_12PNT1LP.PRT		DRAWN: A.GRICE DATE: 04.10.06		
Pro/E drw: MS600370_REV.C.DRW		CHECKED: J.GLASS DATE: 02.06.09 DESIGN: A.GRICE DATE: 04.10.09		
SIZE: D	SCALE: 1/2	SHEET: 1 OF 4	DWG. NO: MS600370	REV: C

8 7 6 5 4 3 2 1

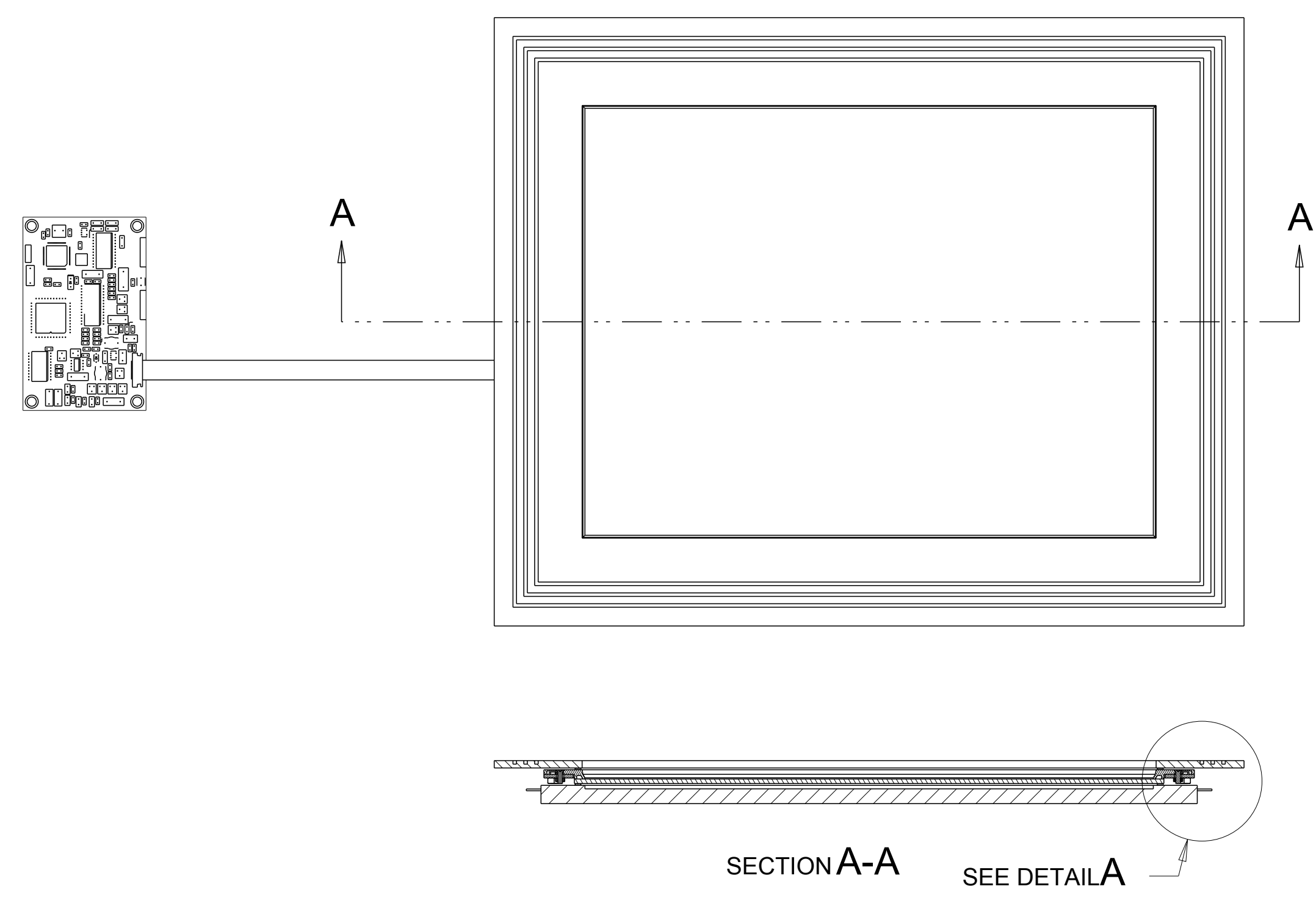
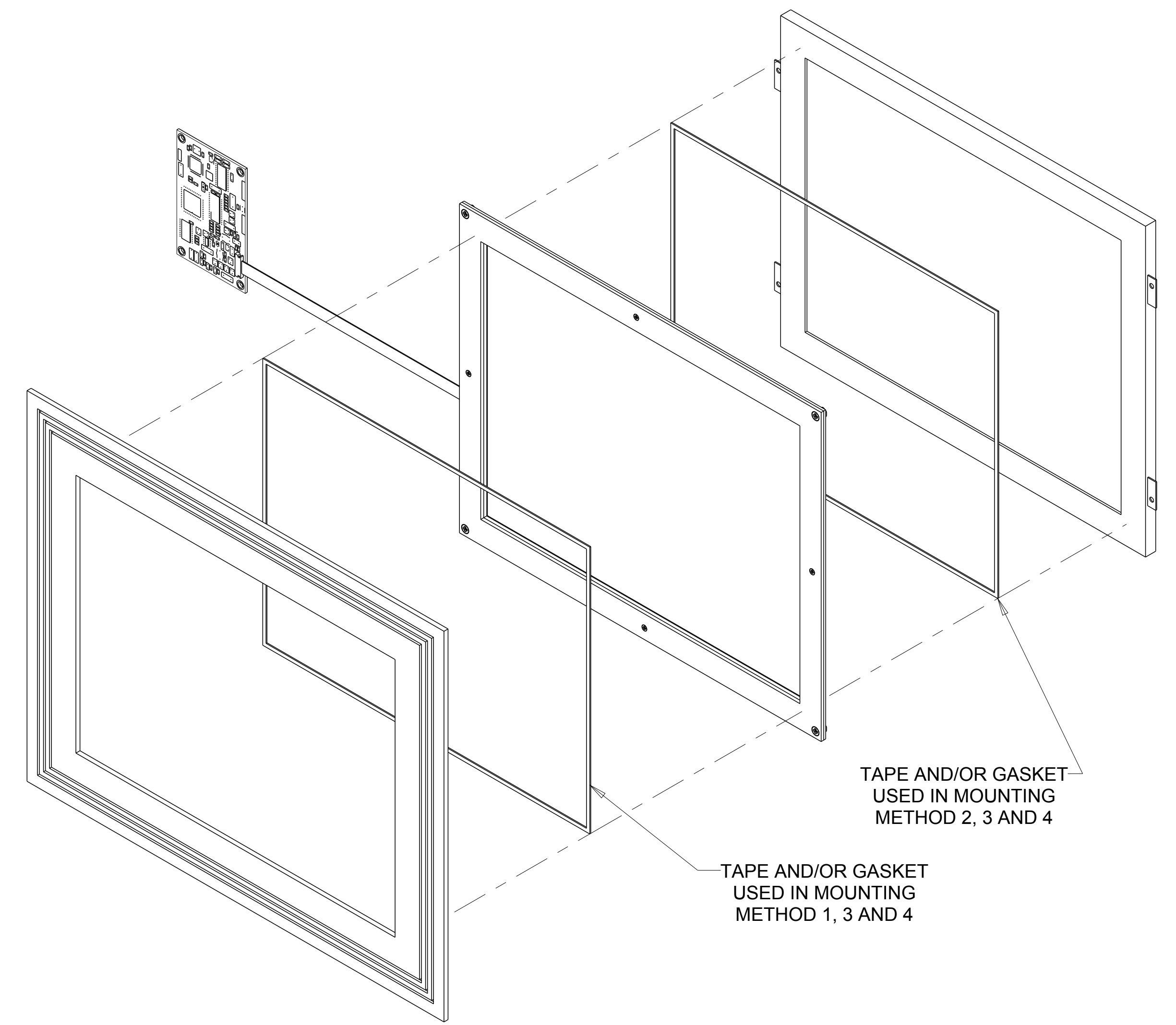
8 7 6 5 4 3 2 1

SHT 1 OF 4 REV C DWG NO: MS600370

PROPRIETARY TO ELO TOUCH SOLUTIONS, INC. AND SHALL NOT BE DISCLOSED OTHER THAN TO NECESSARY EMPLOYEES OR SUPPLIERS WITHOUT THE EXPRESS WRITTEN CONSENT OF ELO TOUCHSYSTEMS INC.

REVISIONS				
REV	CHANGE BY	CHANGE DESCRIPTION	CHANGE DATE	APPROVED

MOUNTING METHODS

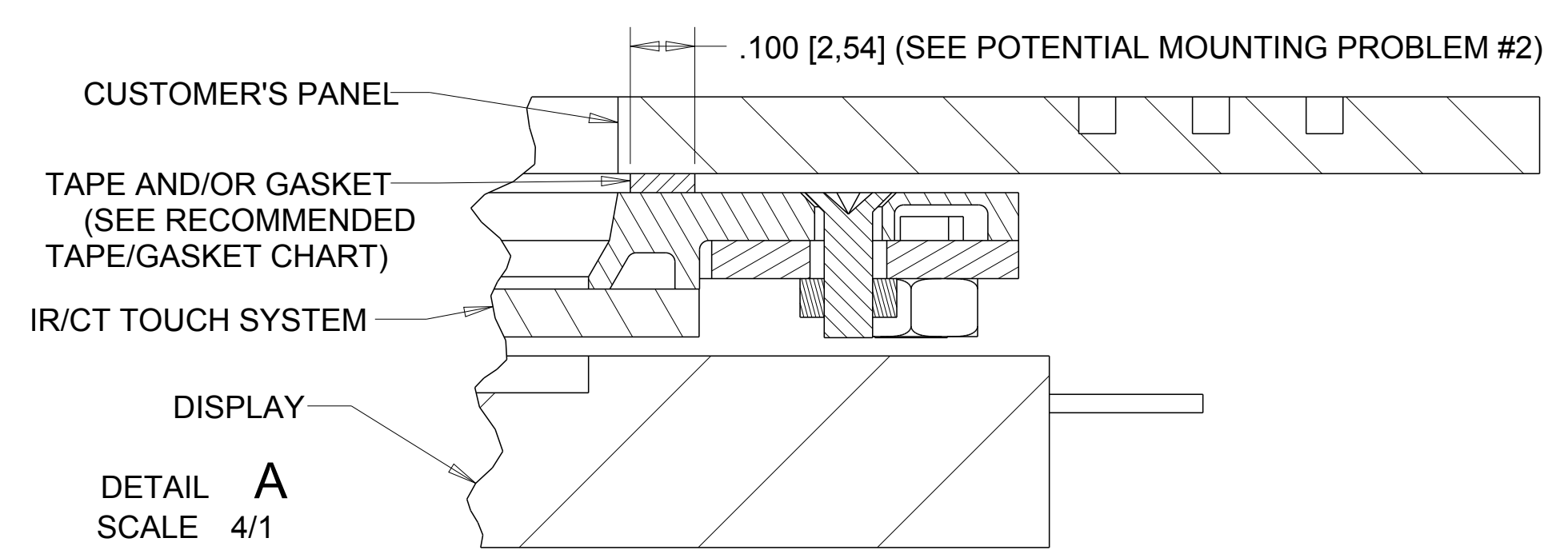


RECOMMENDED TAPES/GASKETS				
BETWEEN CUSTOMER PANEL AND TOUCH SYSTEM (DOUBLE AND SINGLE SIDED ADHESIVE TAPE)				
MOUNTING METHOD	MFG	MFG PART NUMBER	THICKNESS	COMPRESSED THICKNESS
1, 2 AND 3	3M	9500PL	.005 in (0.13 mm)	.005 in (0.13 mm)
	3M	4920	.015 in (0.4 mm)	.015 in (0.4 mm)
	EASTERN	2032AB	.032 in (0.8 mm)	.025 in (0.64 mm)
4	ROGERS CORP	4701-30	.09 in (2.29 mm)	.03 in (0.76 mm)
BETWEEN DISPLAY AND TOUCH SYSTEM (SINGLE SIDED ADHESIVE TAPE ONLY)				
MOUNTING METHOD	MFG	MFG PART NUMBER	THICKNESS	COMPRESSED THICKNESS
2, 3 AND 4	ROGERS CORP	4701-30	.09 in (2.29 mm)	.03 in (0.76 mm)

TAPE AND/OR GASKET USED IN MOUNTING METHOD 2, 3 AND 4

TAPE AND/OR GASKET USED IN MOUNTING METHOD 1, 3 AND 4

SECTION A-A SEE DETAIL A

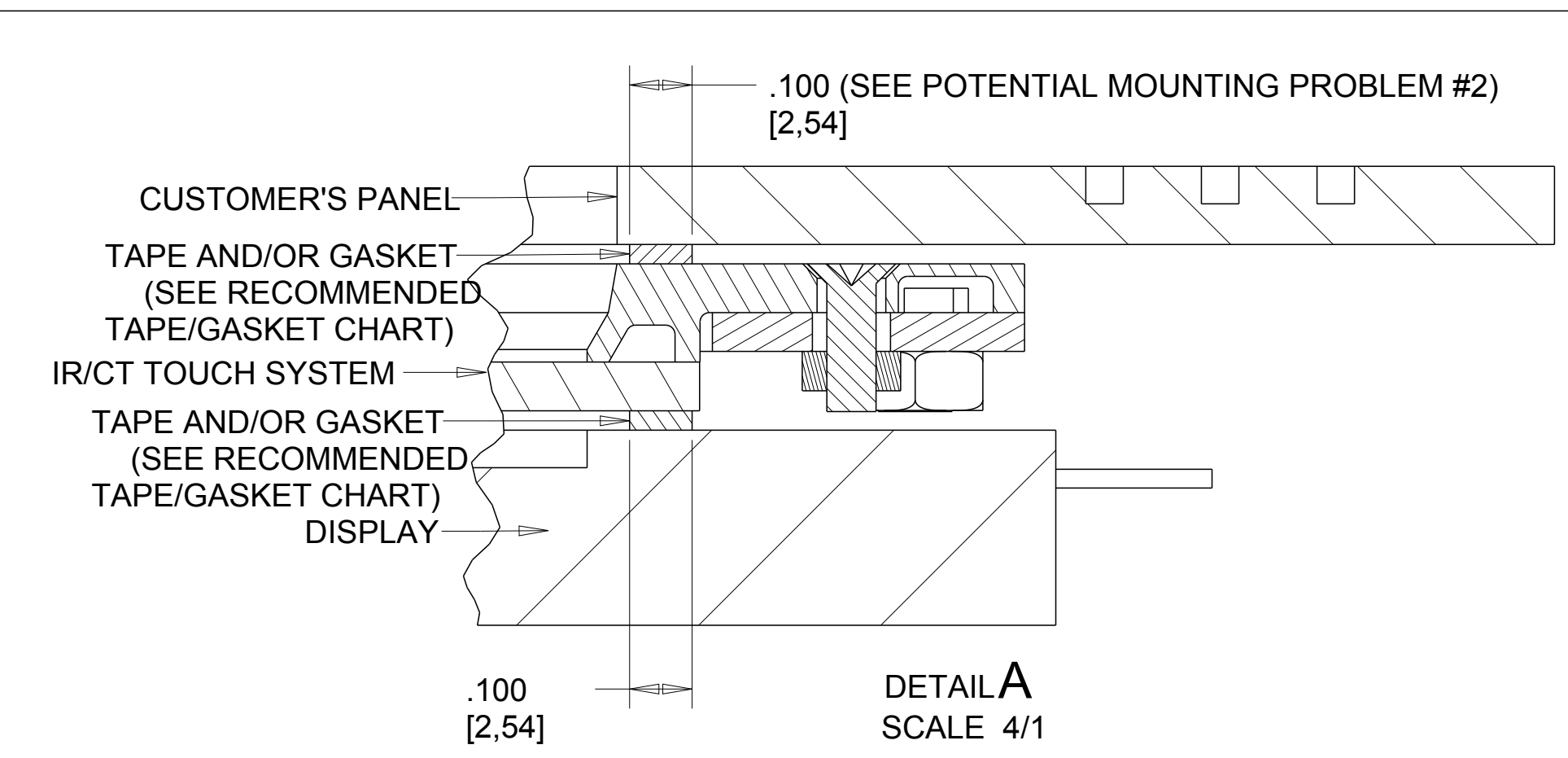


METHOD 1 MOUNTING
TOUCH SYSTEM IS TAPED ONLY TO THE CUSTOMER PANEL

ADVANTAGE: WATER/DUST SEAL BETWEEN THE CUSTOMER PANEL AND TOUCH SYSTEM.

DISADVANTAGE: DUST CAN ENTER BETWEEN THE TOUCH SYSTEM AND THE DISPLAY.

SUGGESTED TAPE: SEE RECOMENDED TAPE TABLE

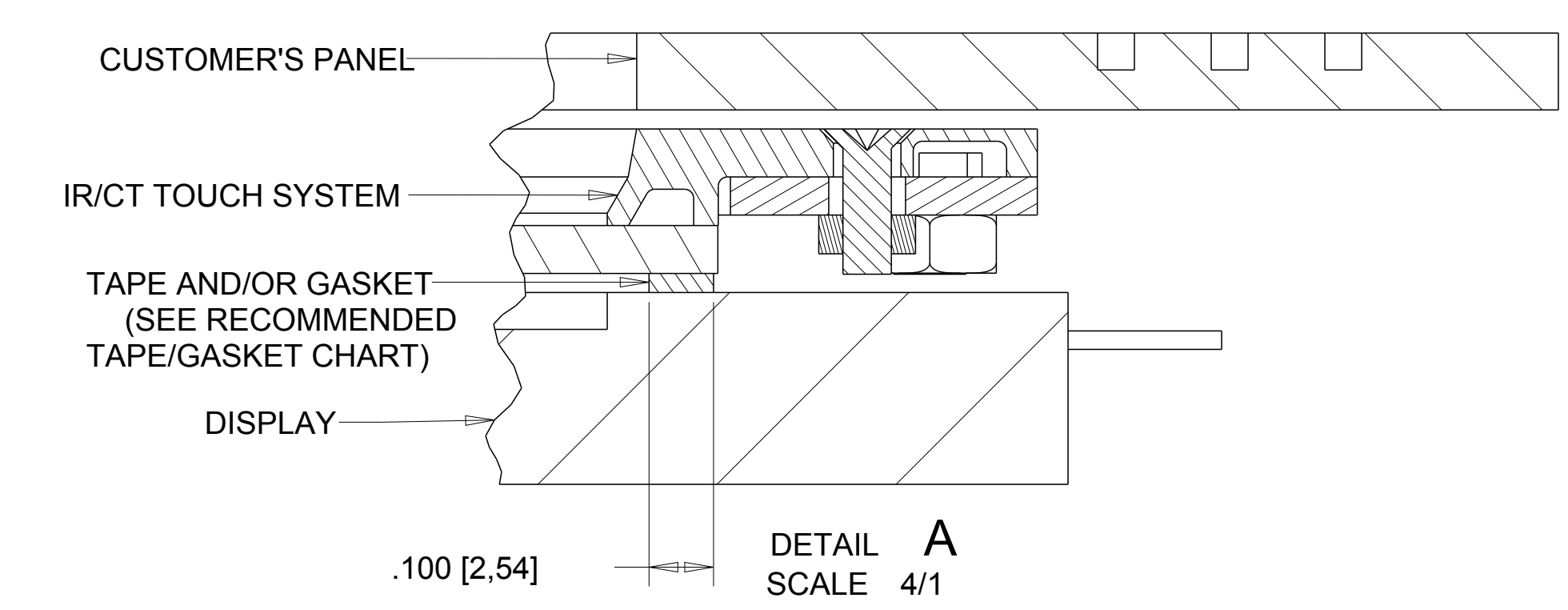


METHOD 3 MOUNTING
TOUCH SYSTEM IS "SANDWICHED" BETWEEN THE CUSTOMER PANEL AND THE DISPLAY. THE TAPE CAN BE IN STRIPS TO FORM A RECTANGLE ON THE CUSTOMERS PANEL OR ON THE IR/CT TOUCH SYSTEM

ADVANTAGE: BOTH WATER AND DUST SEAL CAN BE ACHEIVED ON THE OPERATOR SIDE OF DEVICE AND A DUST SEAL CAN BE ACHIEVED BETWEEN THE TOUCH SYSTEM AND THE DISPLAY.

DISADVANTAGE: SEE POTENTIAL MOUNTING PROBLEMS #1

SUGGESTED TAPE: SEE RECOMENDED TAPE TABLE

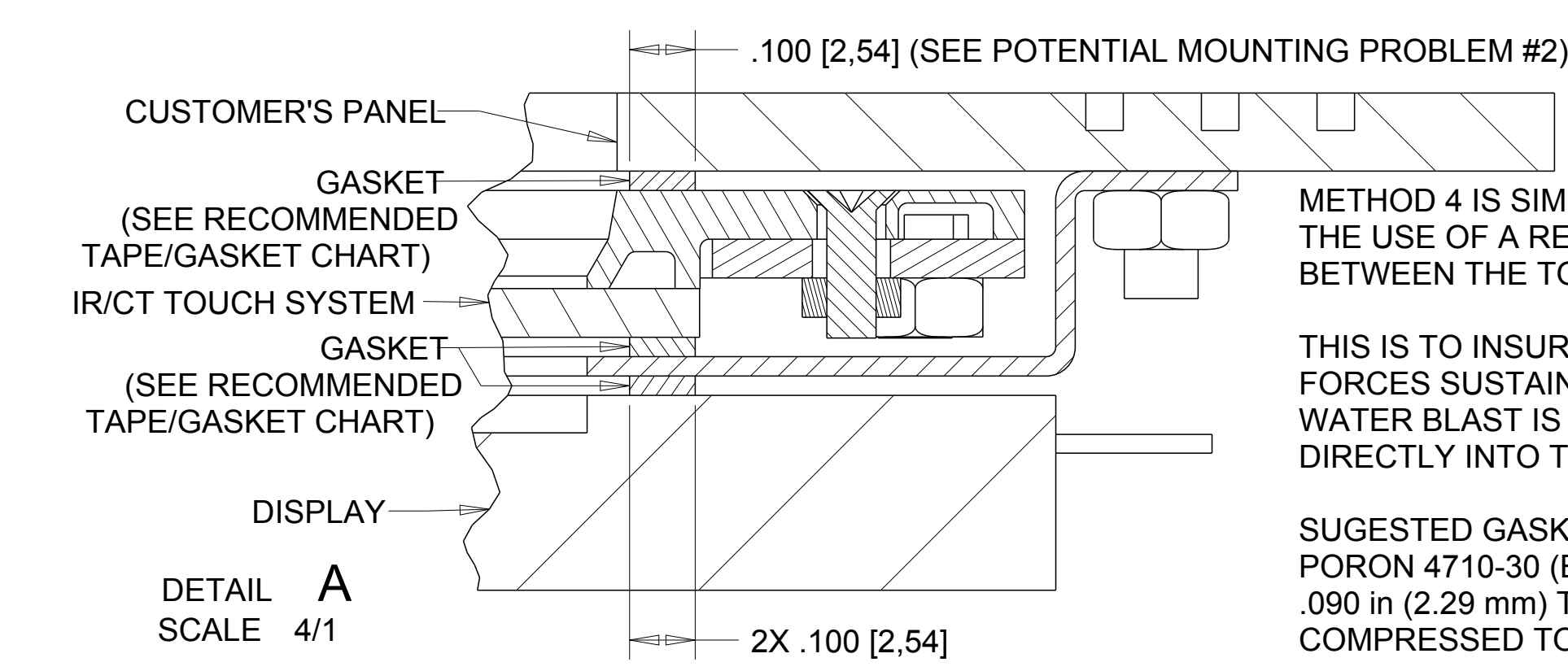


METHOD 2 MOUNTING
TOUCH SYSTEM IS TAPED ONLY TO THE DISPLAY

ADVANTAGE: ALIGNMENT DIRECTLY TO THE DISPLAY

DISADVANTAGE: A POSSIBLE WATER/DUST LEAKAGE BETWEEN THE CUSTOMER PANEL AND THE TOUCH SYSTEM.

SUGGESTED TAPE: SEE RECOMENDED TAPE TABLE



METHOD 4 MOUNTING
IS A NEMA 4, 4X AND 12 SEAL FROM THE OPERATOR SIDE OF THE DEVICE.

METHOD 4 IS SIMILAR TO METHOD 3, WITH THE EXCEPTION OF THE USE OF A RECTANGULAR BRACKET SANDWICHED BETWEEN THE TOUCH SYSTEM AND THE DISPLAY.

THIS IS TO INSURE THAT THE FORCES SUSTAINED FROM THE WATER BLAST IS NOT TRANSFERED DIRECTLY INTO THE DISPLAY.

SUGESTED GASKET MATERIAL: PORON 4710-30 (BY:ROGERS CORP.) .090 in (2.29 mm) THICK, COMPRESSED TO .030 in (0.76 mm).

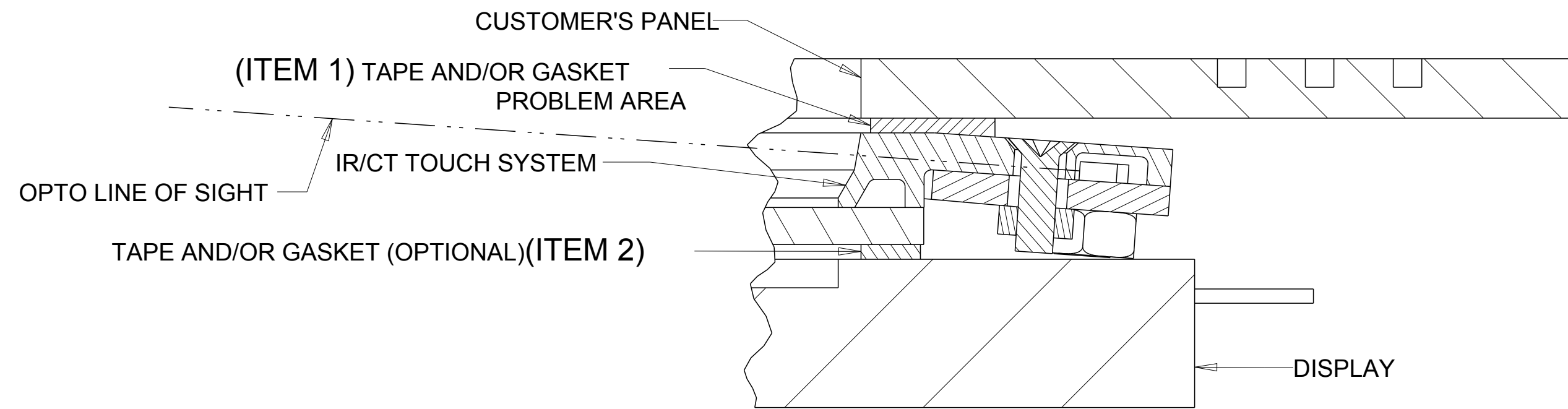
DWG TITLE				
TITLE				
MKTG DWG, SCN-CT-FL112.1-ODX-0XX-L-R				
SIZE	SCALE	SHEET	DWG. NO	REV
D	1/2	2 OF 4	MS600370	C

DWG. NO. MS600370 REV. 2 OF 4



POTENTIAL MOUNTING PROBLEMS

POTENTIAL MOUNTING PROBLEM #1



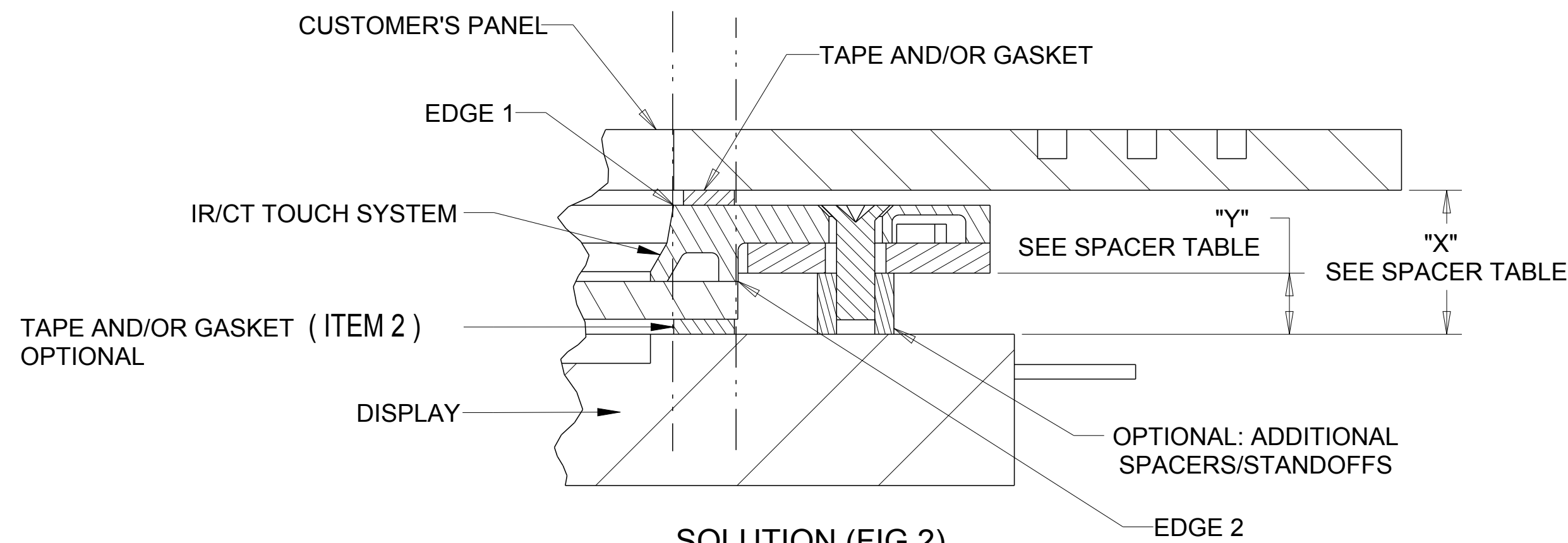
PROBLEM (FIG 1)

GASKET (ITEM 1) TOO WIDE

PROBLEM (FIG 1): THIS DESIGN CAUSES THE TOUCH SYSTEM TO TILT. THE PROPER OPTO ALIGNMENT IS NOT ACHIEVED DUE TO EXTRA WIDTH OF TAPE/GASKET MOUNTED TO CUSTOMER PANEL. SEE SOLUTIONS BELOW.

SPACER TABLE FOR FIG 2	
DISTANCE "X"	SPACER LENGTH "Y"
6mm	3mm
7mm	4mm
8mm	5mm

* PROVIDES .5mm OVER CORRECTION WHICH SLIGHTLY ENHANCES OPTICAL SIGNAL

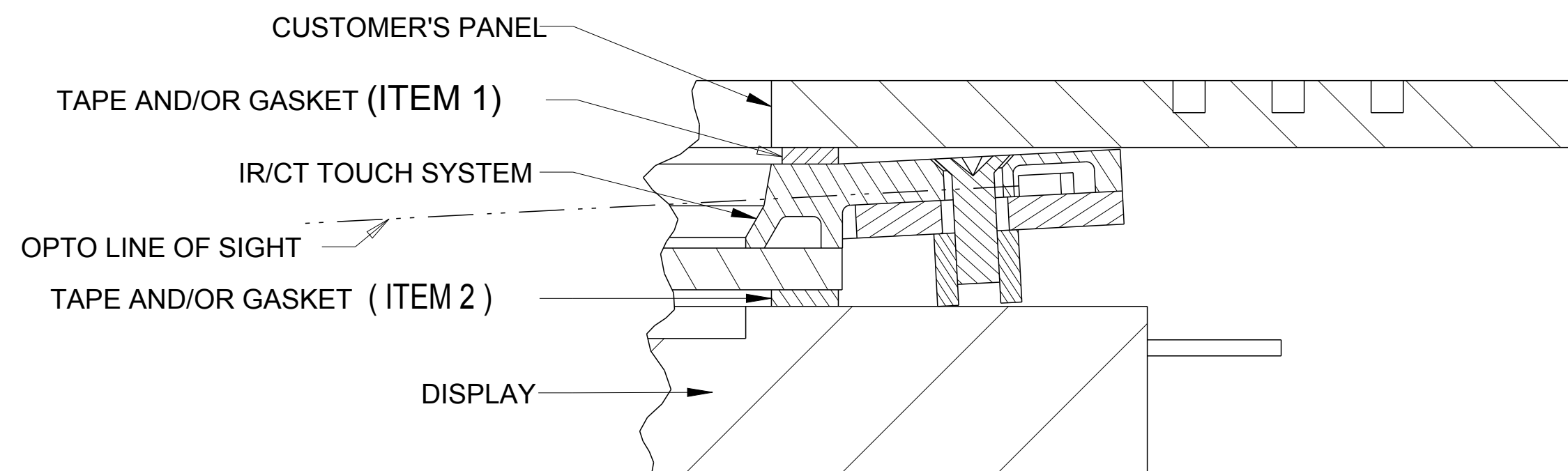


SOLUTION (FIG 2)

SOLUTION (FIG 2)

SOLUTION (FIG 2): MAKE THE GASKET (ITEM 1) SO THAT THE INSIDE OPENING LINES UP WITH THE EDGE OF THE TOUCH SYSTEM (EDGE 1) AND THE OUTER OPENING LINES UP WITH THE OUTER EDGES OF THE FILTER (EDGE 2).

RECOMMENDED SPACER INSTALLATION WITH THE SOLUTION SEE TABLE FOR SPACER LENGTH.

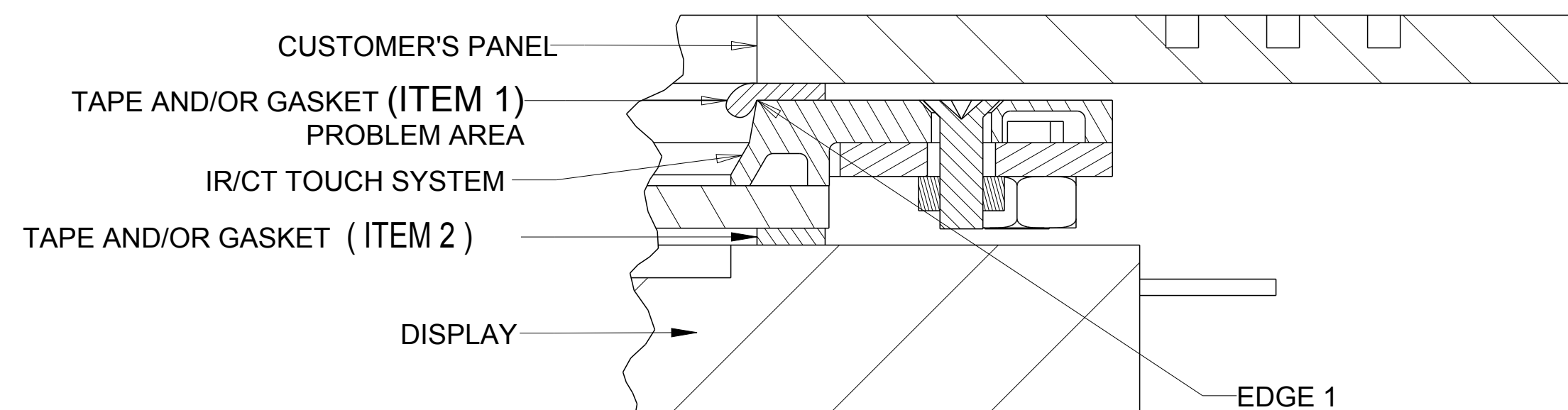


OVER CORRECTION (FIG 3)

OVER CORRECTION (FIG 3)

SPACER INSTALLATION MAY CAUSE SLIGHT OVER CORRECTION OF OPTO LINE OF SIGHT (FIG 3). CORRECTION SHOULD BE LESS THAN 1mm.

POTENTIAL MOUNTING PROBLEM #2



GASKET INTERFERENCE INTO OPTO LINE OF SIGHT (FIG 4)

GASKET INTERFERENCE INTO OPTO LINE OF SIGHT (FIG 4)

PROBLEM: WHEN THE GASKET IS COMPRESSED IT MAY BLEED OVER INTO THE LINE OF SIGHT OF THE OPTO'S AS SEEN IN FIG 4.

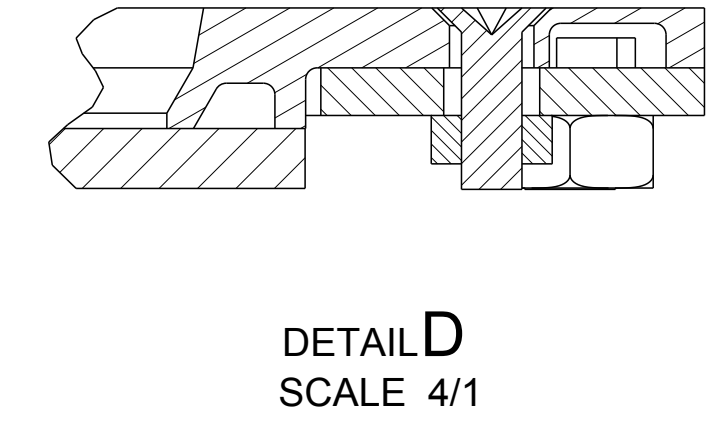
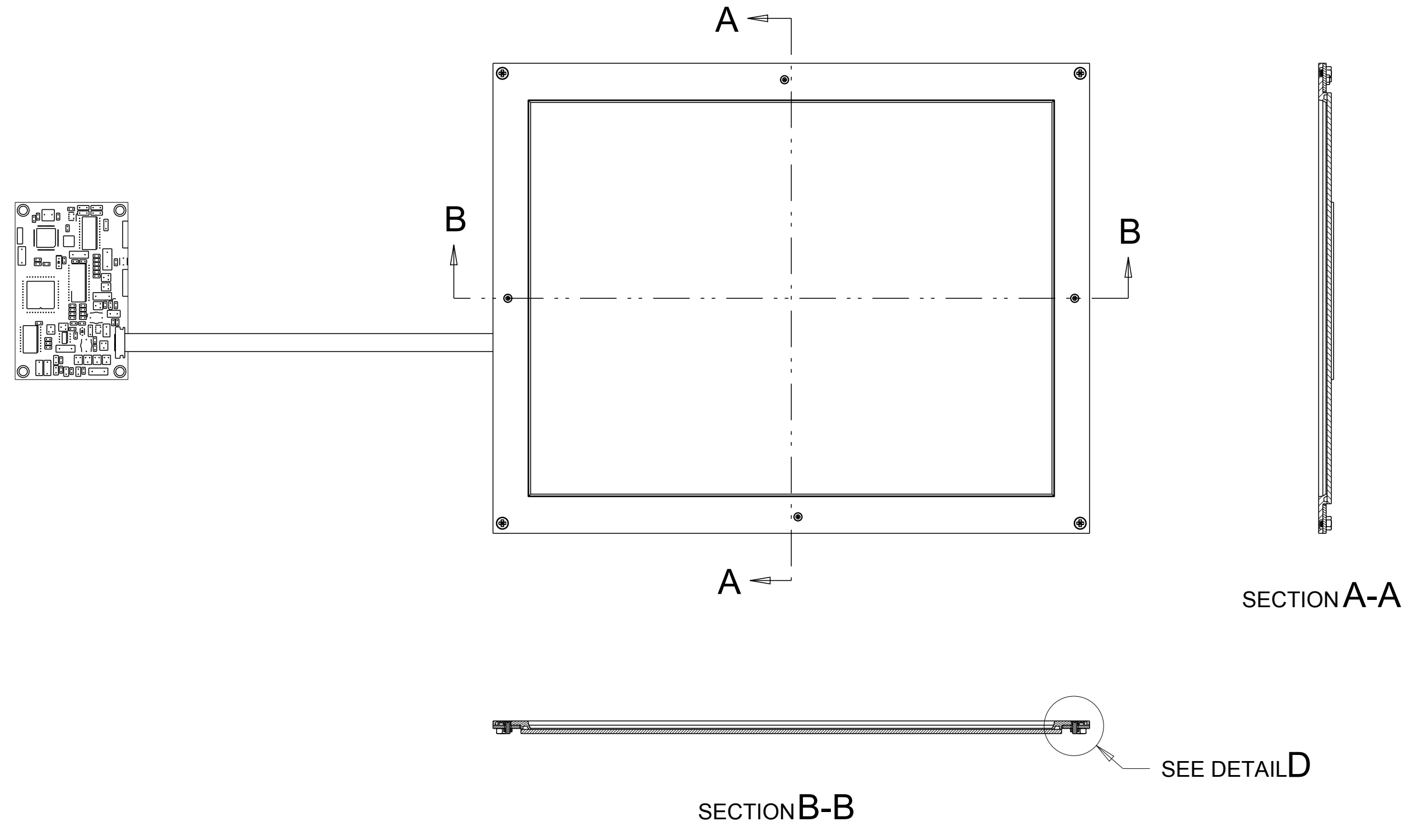
SOLUTION: SET THE GASKET AWAY FROM EDGE 1 ABOUT .5mm TO 1mm (AS SEEN IN FIG 3) TO PROVIDE OPTIMUM GASKET EXPANSION DURING COMPRESSION WITHOUT BLEEDING OVER EDGE 1 INTO THE OPTO'S LINE OF SIGHT OR CUT GASKET OFF SO OPTO LINE OF SIGHT IS NOT OBSTRUCTED.

DWG TITLE				
TITLE				
MKTG DWG, SCN-CT-FL12.1-ODX-0XX-L-R				
SIZE	SCALE	SHEET	DWG. NO.	REV
D	1/2	3 OF 4	MS600370	C

REV 3 OF 4 MS600370

REVISIONS				
REV	CHANGE BY	CHANGE DESCRIPTION	CHANGE DATE	APPROVED

ADHERING A FILTER TO A NO-FILTER CT TOUCH SYSTEM



- STEP 1**
APPLY PROTECTIVE TAPE TO THE TOUCH SYSTEM AS SHOWN IN FIGURE 1, BETWEEN CIRCUIT BOARDS AND INSERT ON ALL 4 SIDES, LAY THE TAPE OVER THE CIRCUIT BOARDS, TO PROTECT THE CIRCUITRY FROM THE ADHESIVE DURING APPLICATION AND CURING.
- STEP 2**
APPLY ADHESIVE AND FILTER IN ACCORDANCE TO CT SPECIFICATION 2000-0340. SEE FIGURE 2.
FILTER SIZE FOR THE 12LP IS
7.65 in (194.31 mm) X 10.06 in (255.52 mm)
- STEP 3**
AFTER CURING REMOVE TAPE AND ADHESIVE FROM ASSEMBLY IN ACCORDANCE TO SPECIFICATION CT 2000-0340. SEE FIGURE 3
- STEP 4**
THE FINAL ASSEMBLY SHOULD LOOK LIKE FIGURE 4.

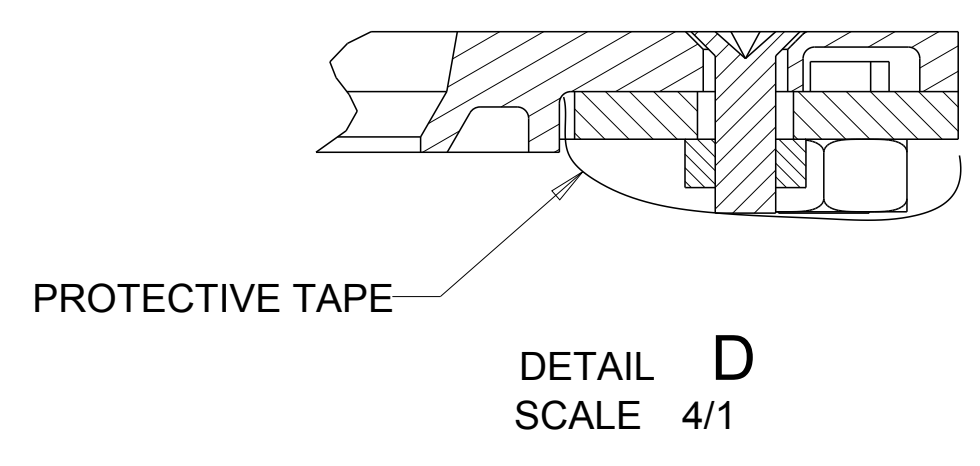


FIGURE 1

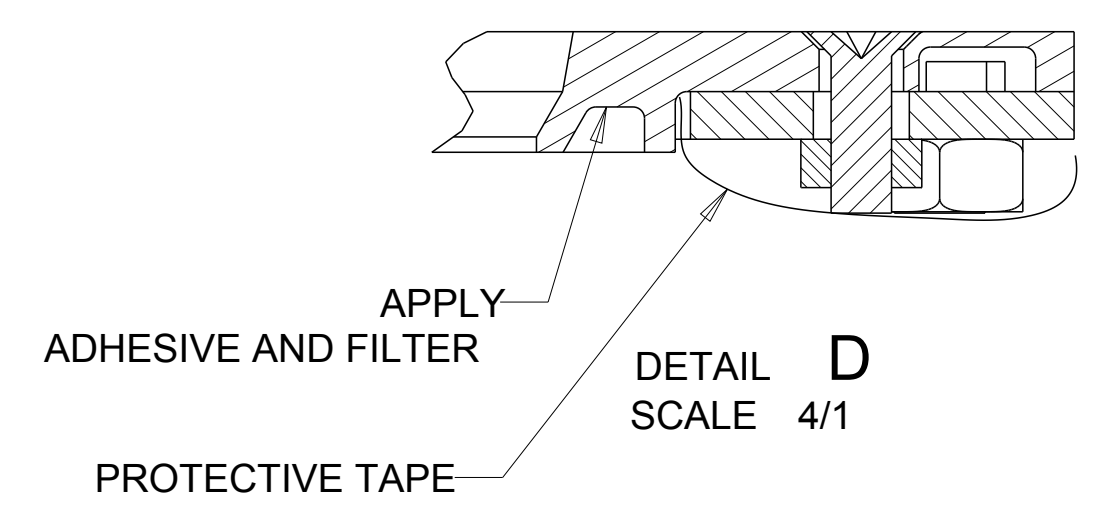


FIGURE 2

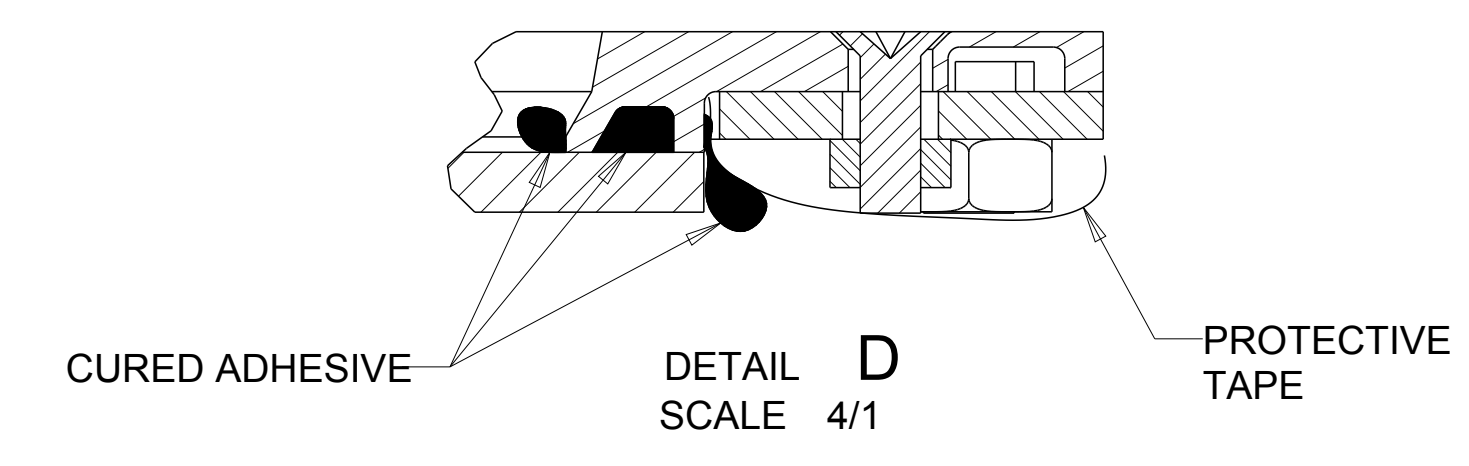


FIGURE 3

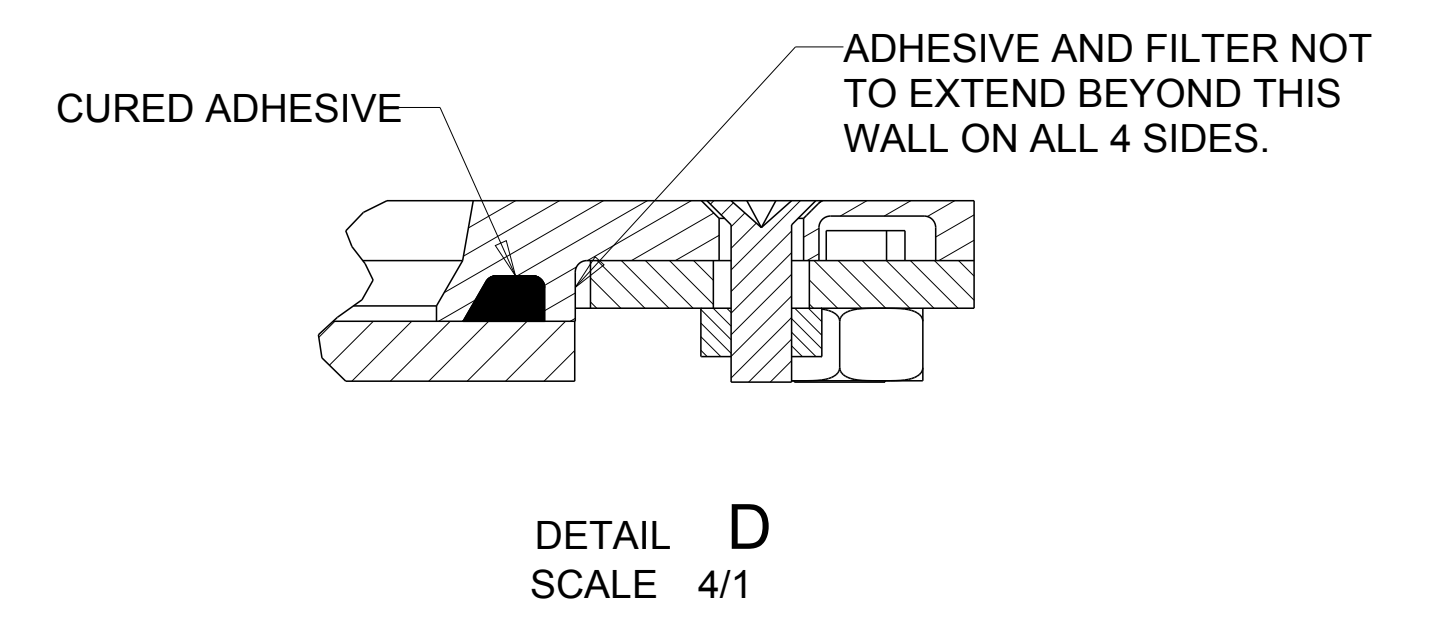


FIGURE 4

DWG TITLE				
TITLE				
MKTG DWG, SCN-CT-FL12.1-ODX-0XX-L-R				
SIZE	SCALE	SHEET	DWG. NO	
D	1/2	4 OF 4	MS600370	REV C

SHT 4 OF 4 REV C DWG. NO. MS600370