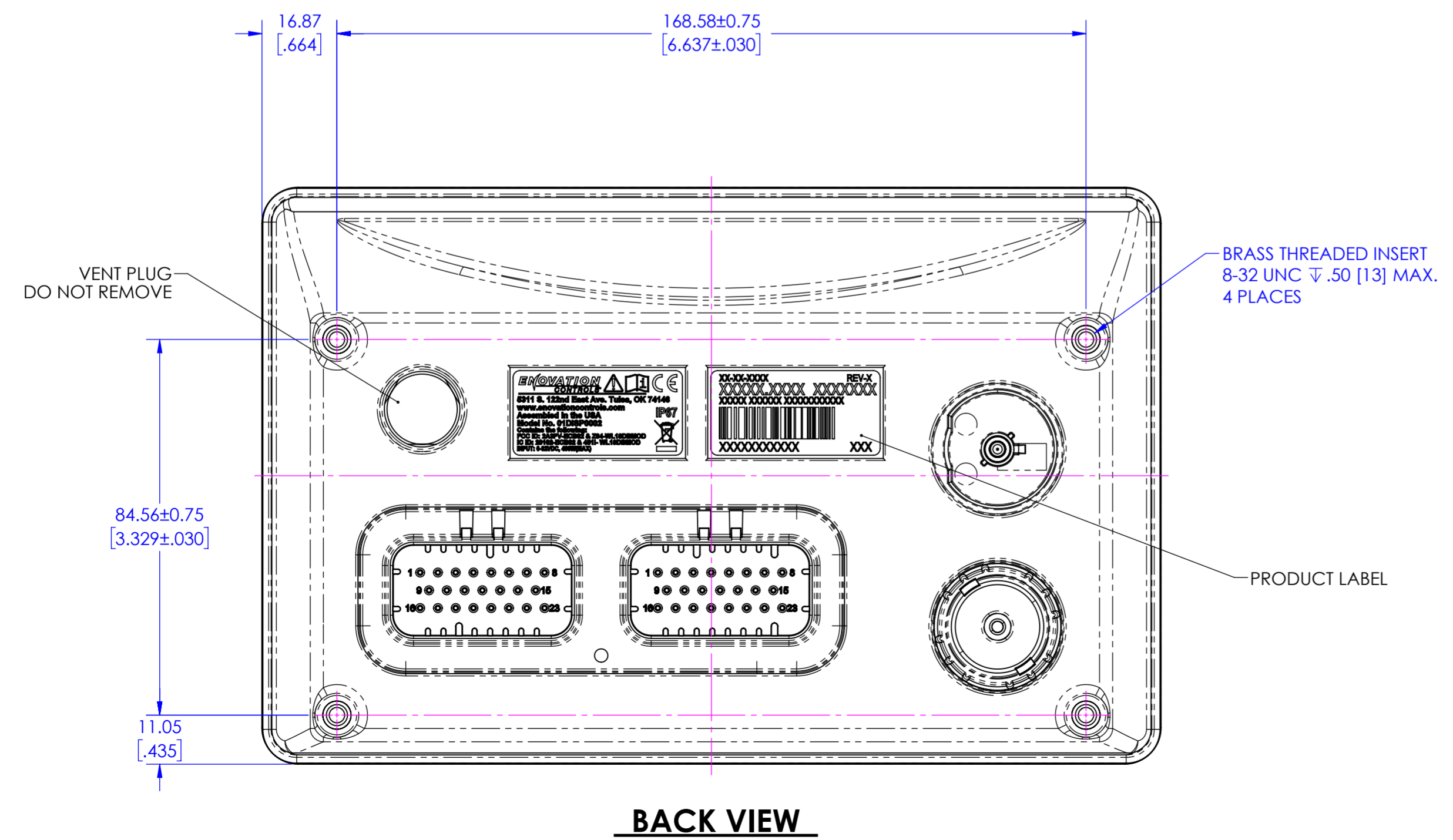
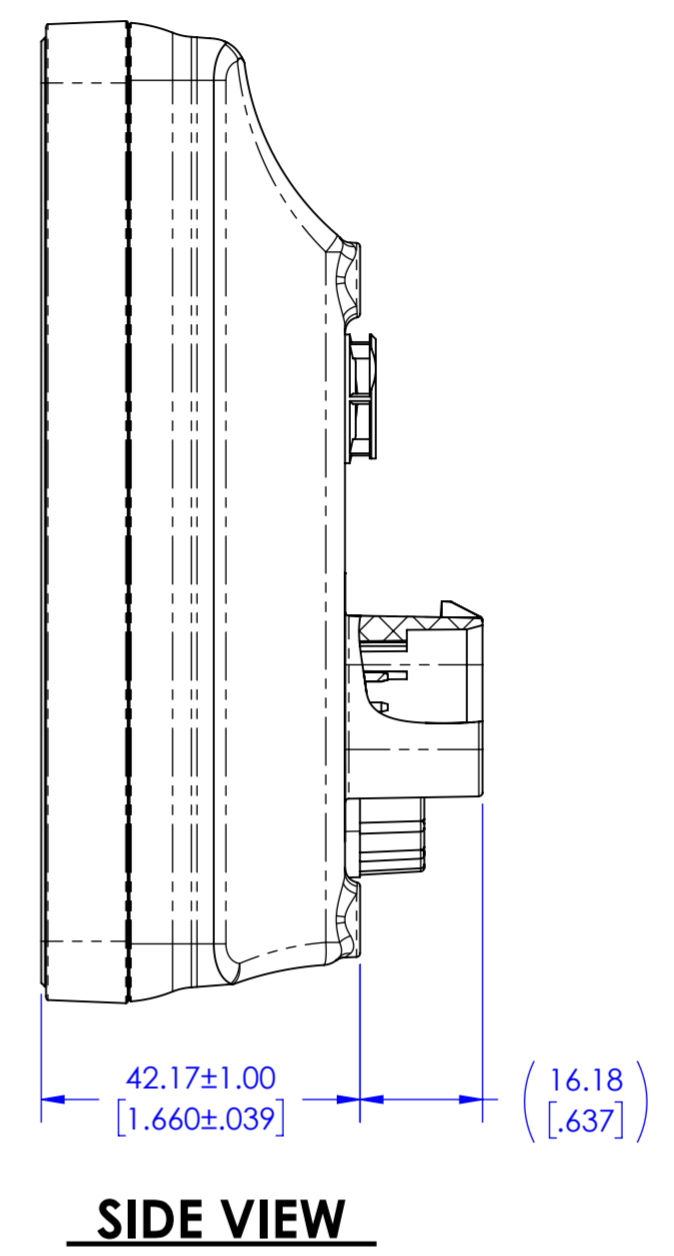
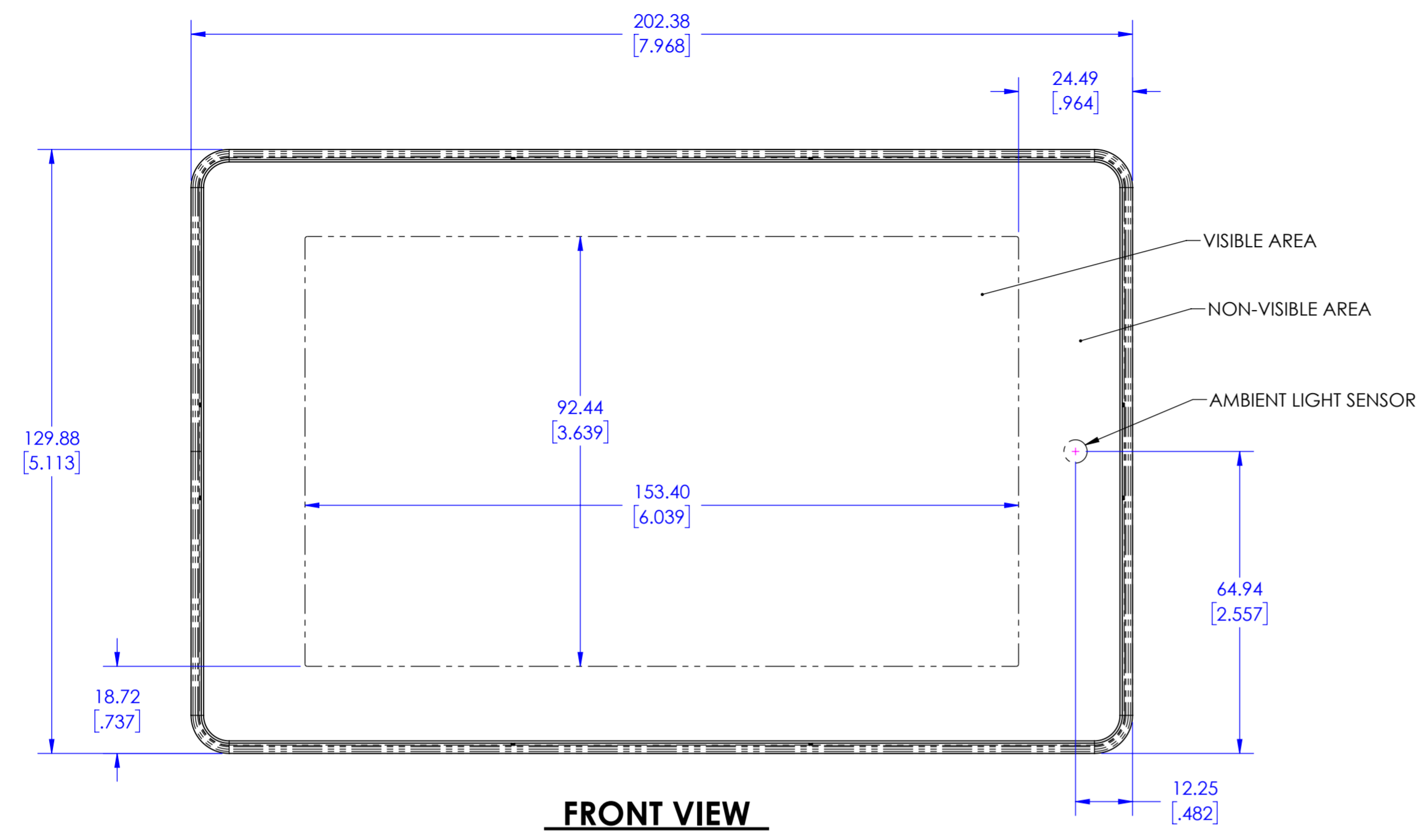


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REVISIONS						
ZONE	REV.	ECO#	DESCRIPTION	DATE (YYYY.MM.DD)	BY	APPVD
-	A-	C05876	INITIAL PRODUCTION RELEASE	2023.09.13	JP	CR
-	A1	C06036	REVISED DESCRIPTION "PV-P70" WAS "COSMO", ADDED HOW TO ORDER INFO (SHEET 2)	2023.11.16	JP	CL
-	A2	C06089	CORRECTED CONNECTOR B PIN OUT TABLE (SHEET 3)	2024.01.08	JP	CR
-	A3	C06395	ADDED CE MARK TO COMPLIANCE LABEL	2024.06.14	JP	VE



- NOTES:
- MUST MEET CRITERIA OF ENOVATION CONTROLS QUALITY SPEC. 4E00715.
 - SEE SHEET 2 FOR FOR SPECIFICATIONS AND ORDERING INFO.
 - SEE SHEET 3 FOR CONNECTOR PIN OUT.
 - SEE SHEET 4 FOR COSMETIC SPECIFICATIONS.
 - MOUNTING TORQUE: RECOMMENDED: 22 TO 28 IN-LBS, MAX: 30 IN-LBS (VEHICLE ASSEMBLY REFERENCE ONLY).
 - DIMENSIONS IN PARENTHESIS () ARE FOR REFERENCE ONLY. STANDARD TOLERANCES DO NOT APPLY TO THESE DIMENSIONS.

SHEET TOLERANCE: ±1.0mm [±.039in]		SHALL MEET REQUIREMENTS OF ENC 4E00711 ENVIRONMENTAL COMPLIANCE SPECIFICATION		METRIC DO NOT SCALE DRAWING		ENOVATION CONTROLS	
MATERIAL: -		PRODUCE PART FROM CAD MODEL 78020138.SLDASM		TECHNICAL SPECIFICATIONS, DISPLAY, 7" PV-P70			
FINISH: -		PART NUMBER: 78020138		DRAWING NUMBER: 78020138		REVISION: A3	
		SCALE: 1:1 AND NOTED		SHEET SIZE: A2		SHEET: 1 OF 5	

HOW TO ORDER

PV-P70-XXXX

PLATFORM OPTIONS

TNA2 = Touch, Not Connected, Audio 2 Zone
TC0A2 = Touch, Wifi + Bluetooth, Audio 2 Zone

ELECTRICAL & ENVIRONMENTAL SPECIFICATIONS

HARDWARE

- DISPLAY:**
7" (202.38mm (H) X 129.88mm (V)) LVDS TT LCD with LED backlight
- COLOR:**
24-bit color
- RESOLUTION:**
800 X 480 PIXELS
- CONTRAST RATIO:**
1000:1 (Typ.)
- BRIGHTNESS:**
1000 cd/m2
- DISPLAY SURFACE:**
Anti-glare
- TOUCH PANEL:**
Glove touch PCAP
- REAL TIME CLOCK:**
Li-Ion battery backup
- CONNECTORS:**
 - (1) Ampseal 23 pin
 - (1) Ampseal 23 pin
 - (1) USB Bulkhead
 - (1) GPS Fakra Antenna Jack (Optional)
- VIDEO INPUTS:**
(2) NTSC/PAL (Single channel viewable, Differential)
- SENSORS:**
 - Internal GPS (Optional)
 - Accelerometer (Optional)

COMMUNICATION

- CAN:**
(2) CAN 2.0B according to ISO-11898-2; J1939 and CANopen; proprietary messaging
- USB:**
(1) USB 2.0 High Speed Host (Optional)
- WIFI:**
802.11 b/g/n radio (Optional)
- BLUETOOTH:**
Fully integrated Bluetooth 5.0 class 1 (Optional)

ELECTRICAL

- OPERATING VOLTAGE:**
9 - 32 VDC, reverse polarity protected
- OUTPUTS:**
 - (4) 500mA Switched Low-side
 - (1) Analog Out (0 - 5V)
 - (1) High-Side Digital (Battery level 10A)
- INPUTS:**
 - (4) Analog 0-5VDC, 4-20mA, or resistive, 10-bit resolution
 - (1) Discrete digital, active-high

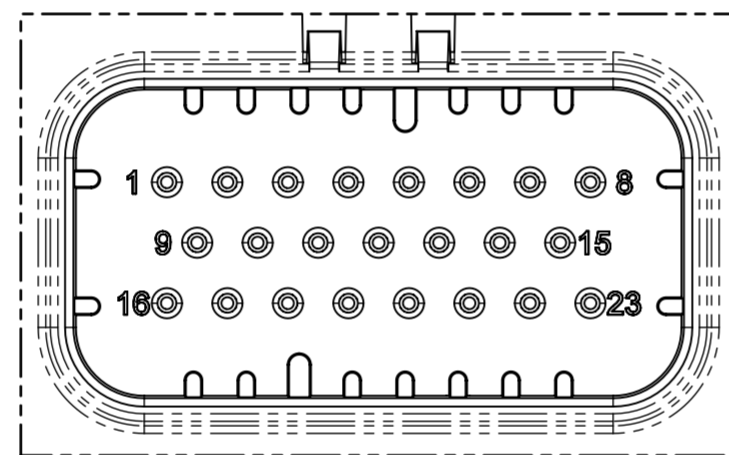
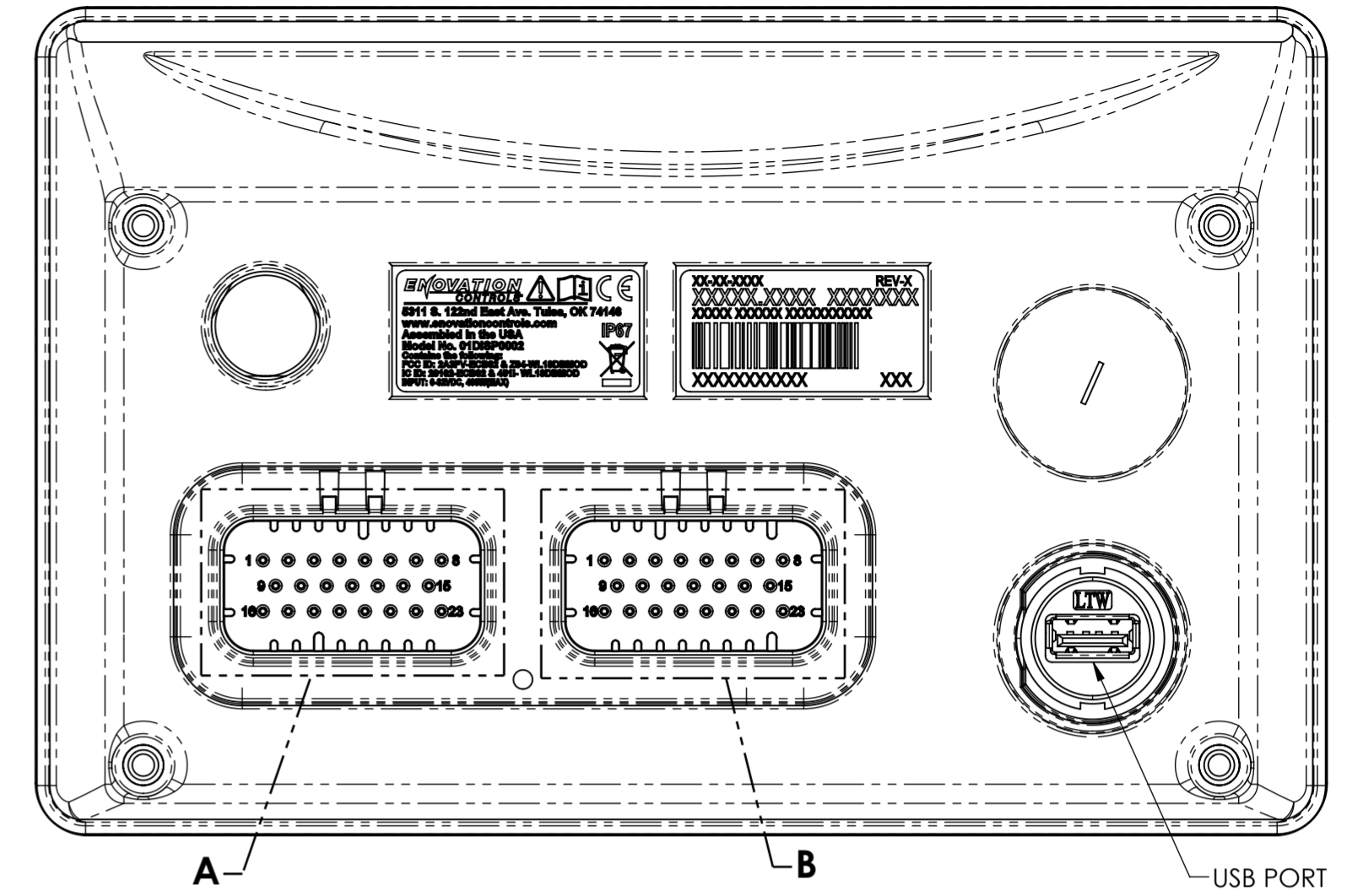
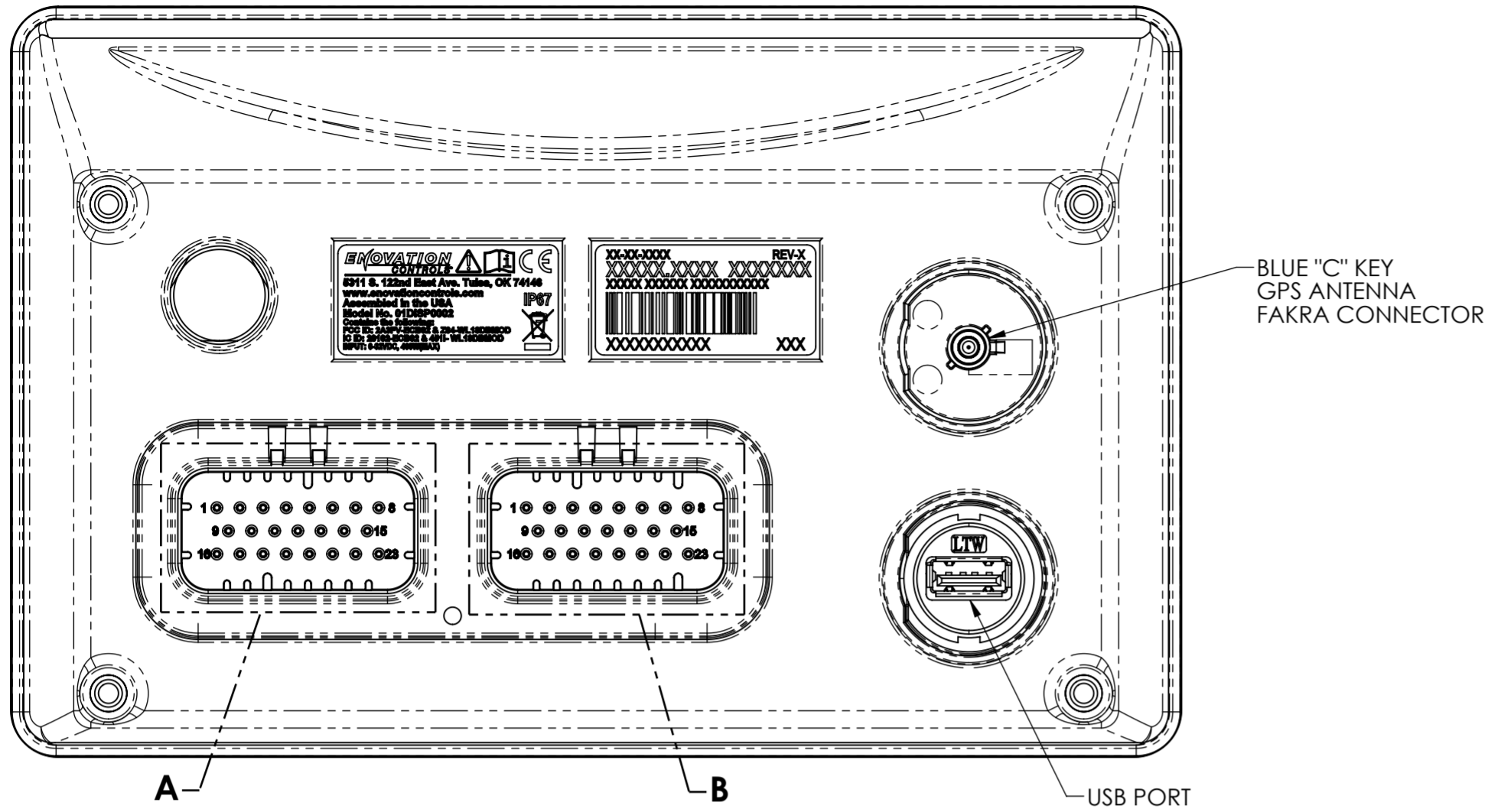
INFOTAINMENT (TCLS,TCPS) (Optional)

- STEREO:**
 - (2) Outputs (Stereo, 20Hz-20KHz, Differential)
 - (1) Subwoofer (Mono, configurable, 30Hz-250Hz)
 - (1) Amp Turn On/Accessory
- USB MEDIA:**
MP3, M4A Playback
- BLUETOOTH:**
Audio Streaming

ENVIRONMENTAL

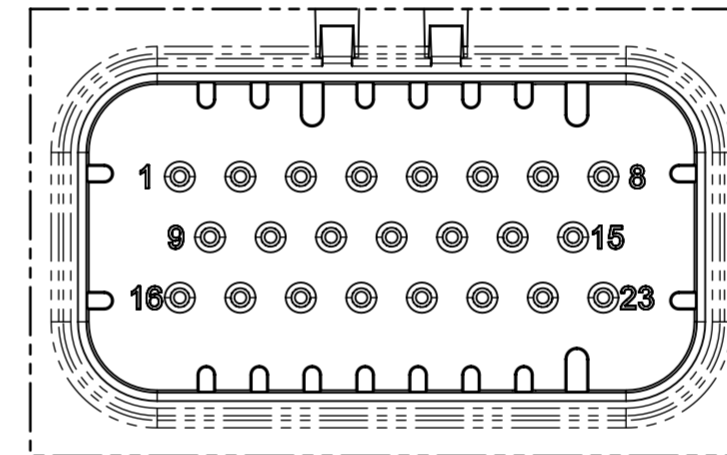
- OPERATING:**
-40°C to +70°C [-40°F to +158°F]
- STORAGE:**
-40°C to +85°C [-40°F to +185°F]
- PROTECTION:**
IP66 and IP67, front and back, for outdoor use
- VIBRATION:**
ISO 15003: 3.9 Grms (10 - 350Hz), 3 axis
- SHOCK:**
±50G in 3 axis
- EMC/EMI:**
SAE J1113, ISO 13766, CE per 2014/53/EU

DESCRIPTION				
TECHNICAL SPECIFICATIONS, DISPLAY, 7" PV-P70				
PART NUMBER	DRAWING NUMBER			REVISION
78020138	78020138			A3
CAD FILE	SCALE	SHEET SIZE	SHEET	
78020138.SLDASM	1:2 AND NOTED	A3	2 OF 5	



**DETAIL A
SCALE 2 : 1**

23 POSITION CONNECTOR - A (MATING CONNECTOR AMP 770680-2 NATURAL)	
PIN #	FUNCTION
1	DIGITAL OUT HS 1
2	DIGITAL OUT HS 1
3	HS DRIVER BATTERY
4	HS DRIVER BATTERY
5	HS DRIVER GROUND
6	HS DRIVER GROUND
7	BATTERY
8	GROUND
9	DIGITAL IN 1
10	DIGITAL IN 2
11	DIGITAL IN 3
12	DIGITAL IN 4
13	ANALOG RETURN
14	ANALOG RETURN
15	IGNITION
16	CAN1 L
17	CAN1 H
18	CAN2 L
19	CAN2 H
20	ANALOG IN 1
21	ANALOG IN 2
22	ANALOG IN 3
23	ANALOG IN 4

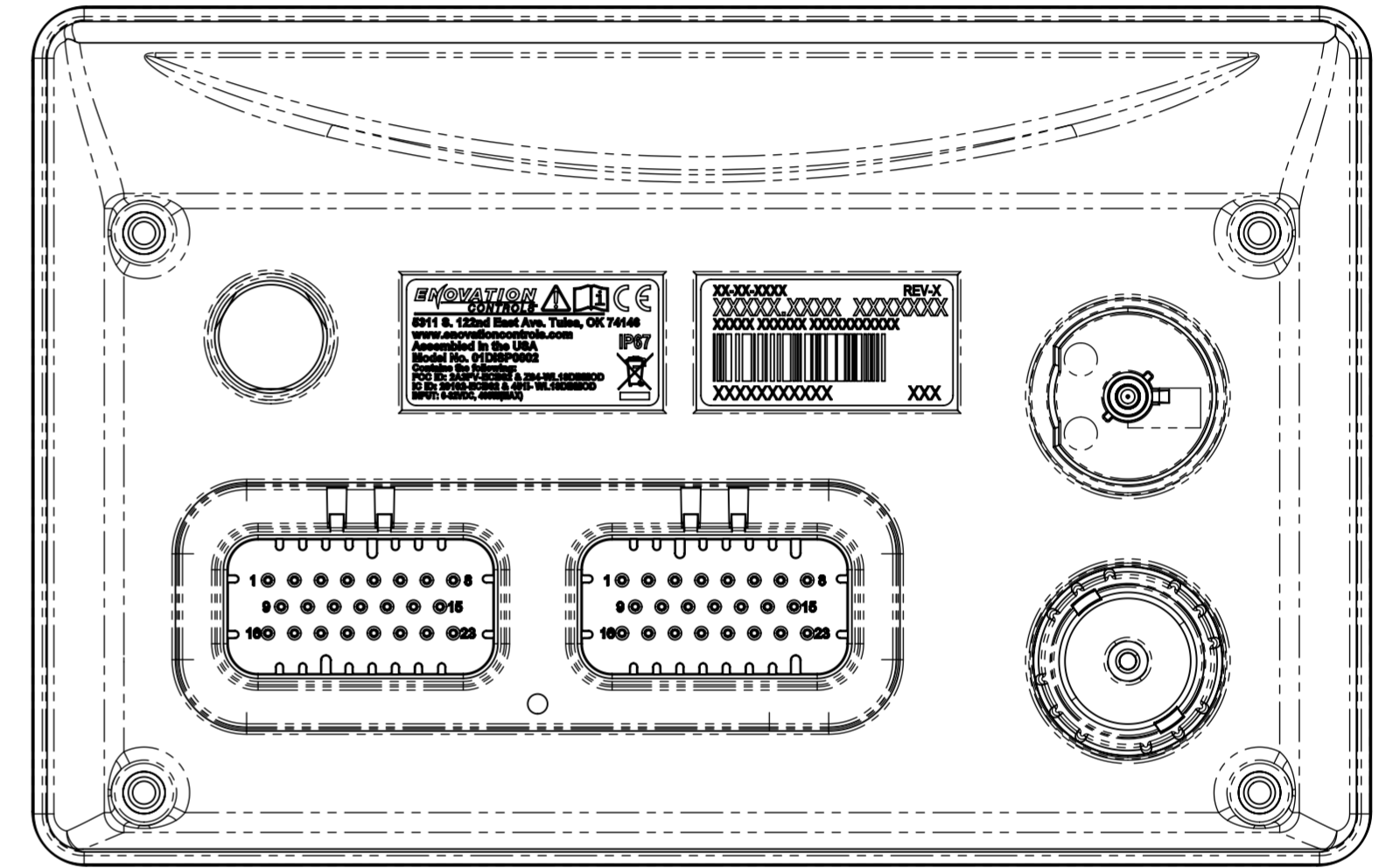
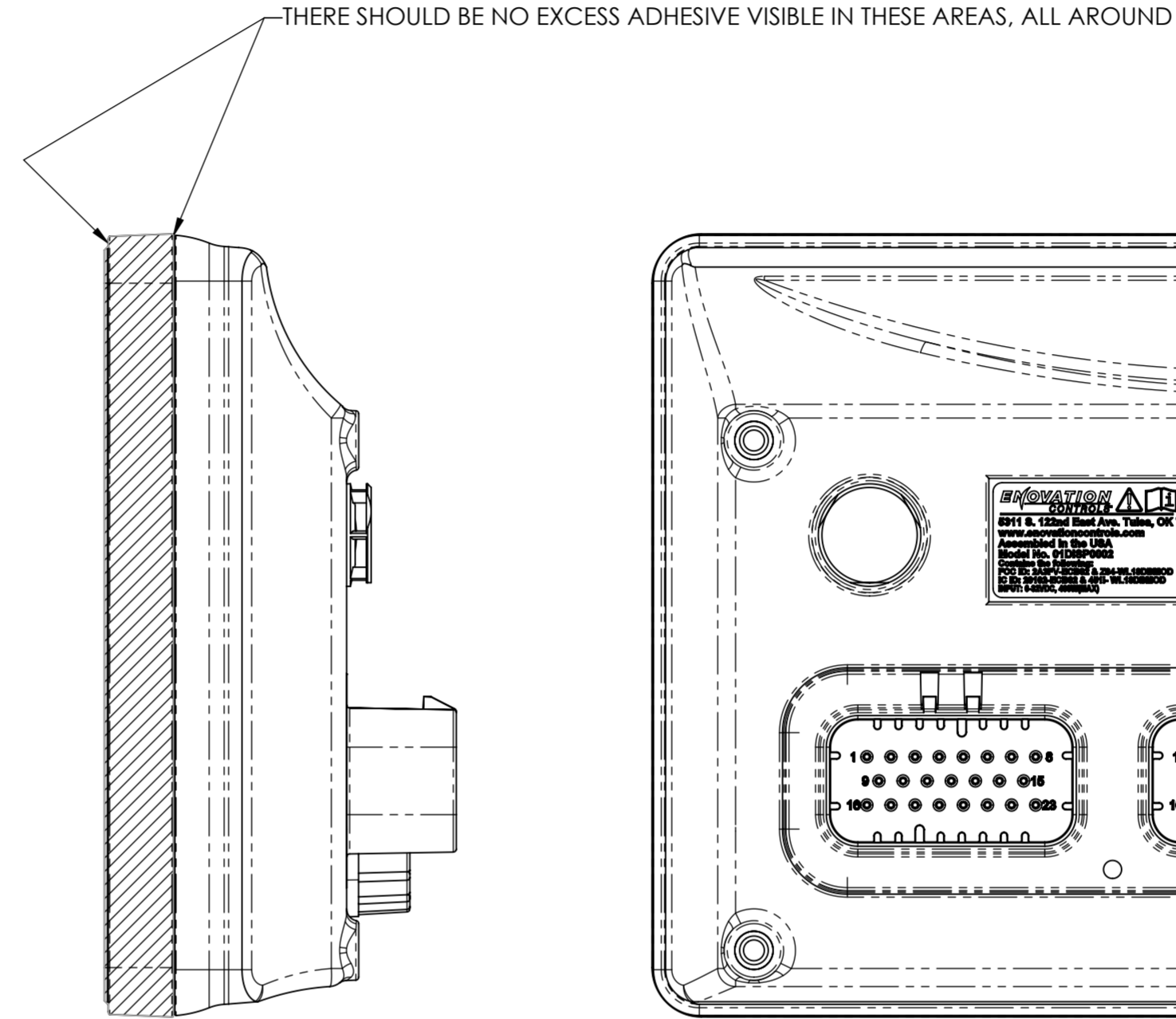


**DETAIL B
SCALE 2 : 1**

23 POSITION CONNECTOR - B (MATING CONNECTOR AMP 770680-5 BLUE)	
PIN #	FUNCTION
1	NC
2	LINE OUT 3 LEFT P
3	LINE OUT 3 LEFT N
4	DIGITAL OUT OD 1
5	DIGITAL OUT OD 2
6	VIDEO2 IN P
7	VIDEO1 IN P
8	ANALOG OUT RETURN
9	NC
10	AMP TURN-ON
11	DIGITAL OUT OD 3
12	DIGITAL OUT OD 4
13	VIDEO2 IN N
14	VIDEO1 IN N
15	ANALOG OUT
16	LINE OUT 1 LEFT P
17	LINE OUT 1 LEFT N
18	LINE OUT 1 RIGHT P
19	LINE OUT 1 RIGHT N
20	LINE OUT 2 LEFT P
21	LINE OUT 2 LEFT N
22	LINE OUT 2 RIGHT P
23	LINE OUT 2 RIGHT N

DESCRIPTION
**TECHNICAL SPECIFICATIONS, DISPLAY,
 7" PV-P70**

PART NUMBER 78020138	DRAWING NUMBER 78020138	REVISION A3
CAD FILE 78020138.SLDASM	SCALE 1:1 AND NOTED	SHEET SIZE A2
		SHEET 3 OF 5

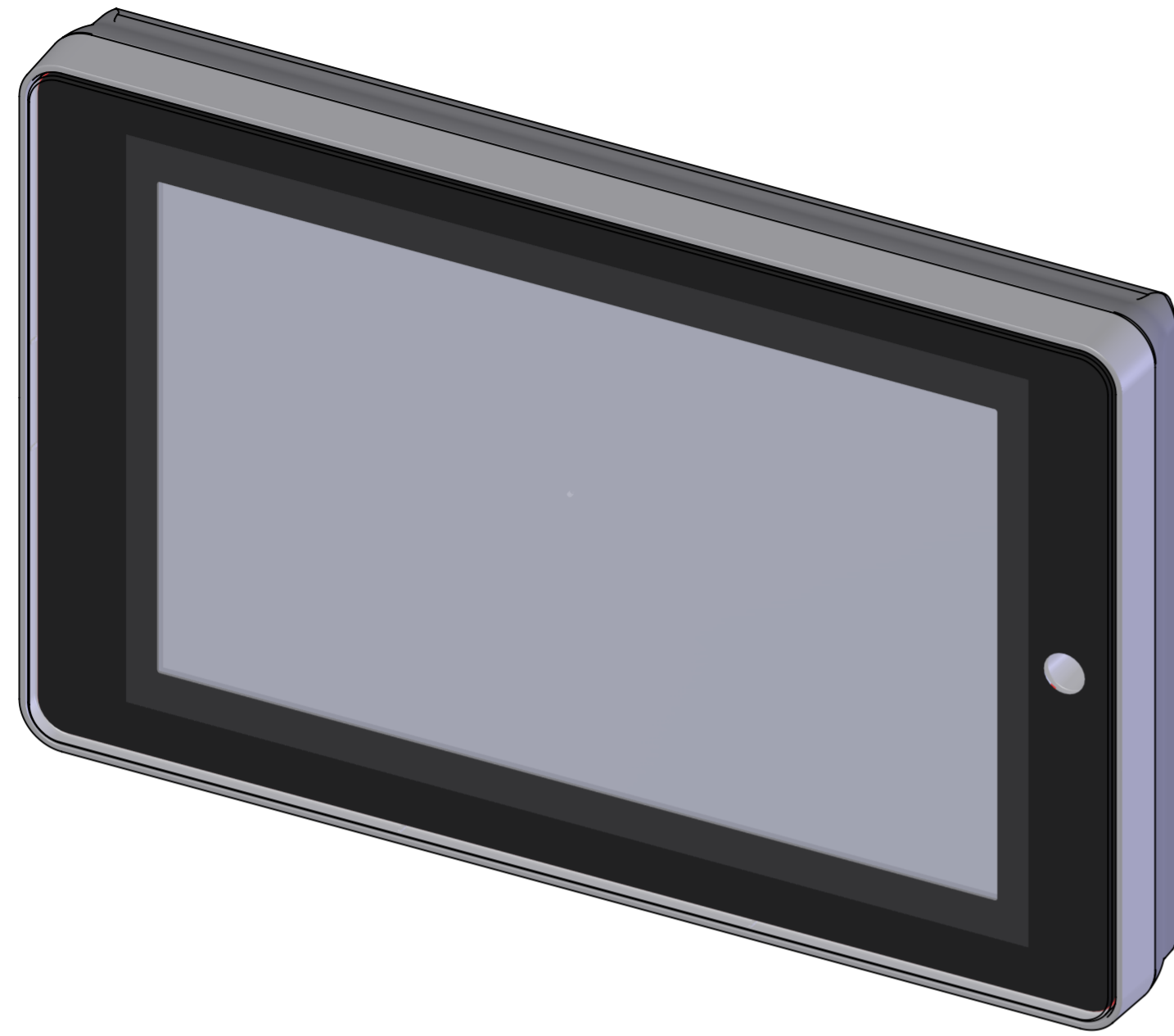


 SURFACE "A"

NOTES:

- 1.  SURFACE "A" MUST MEET CRITERIA OF ENOVATION CONTROLS QUALITY SPEC. 4E00715.

DESCRIPTION TECHNICAL SPECIFICATIONS, DISPLAY, 7" PV-P70			
PART NUMBER 78020138	DRAWING NUMBER 78020138	REVISION	
SCALE 78020138.SLDASM	SCALE 1:1 AND NOTED	SHEET SIZE A2	SHEET 4 OF 5
			A3



DESCRIPTION			
TECHNICAL SPECIFICATIONS, DISPLAY, 7" PV-P70			
PART NUMBER	DRAWING NUMBER	REVISION	
78020138	78020138	A3	
CAD FILE	SCALE	SHEET SIZE	SHEET
78020138.SLDASM	1:1 AND NOTED	A2	5 OF 5