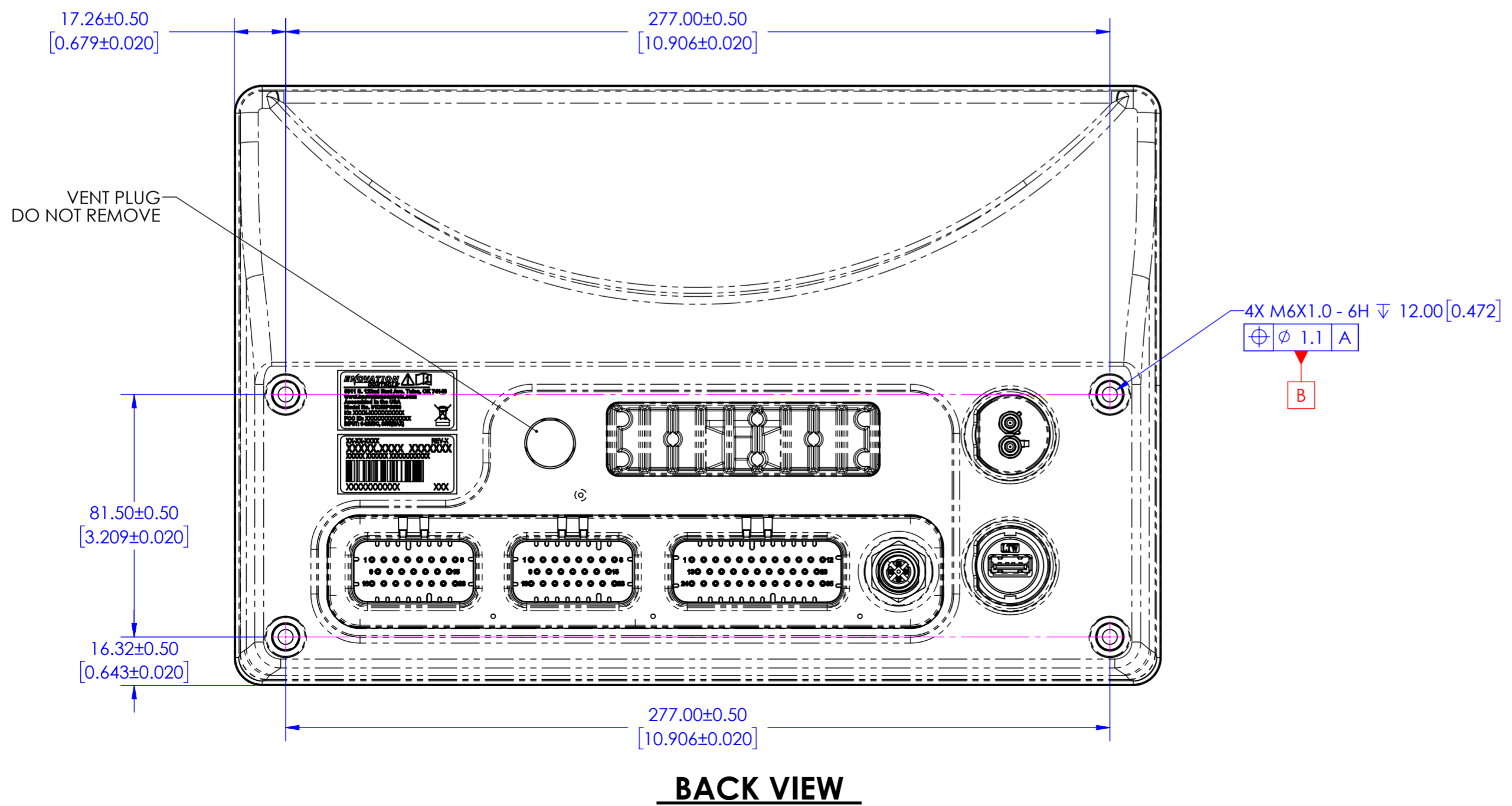
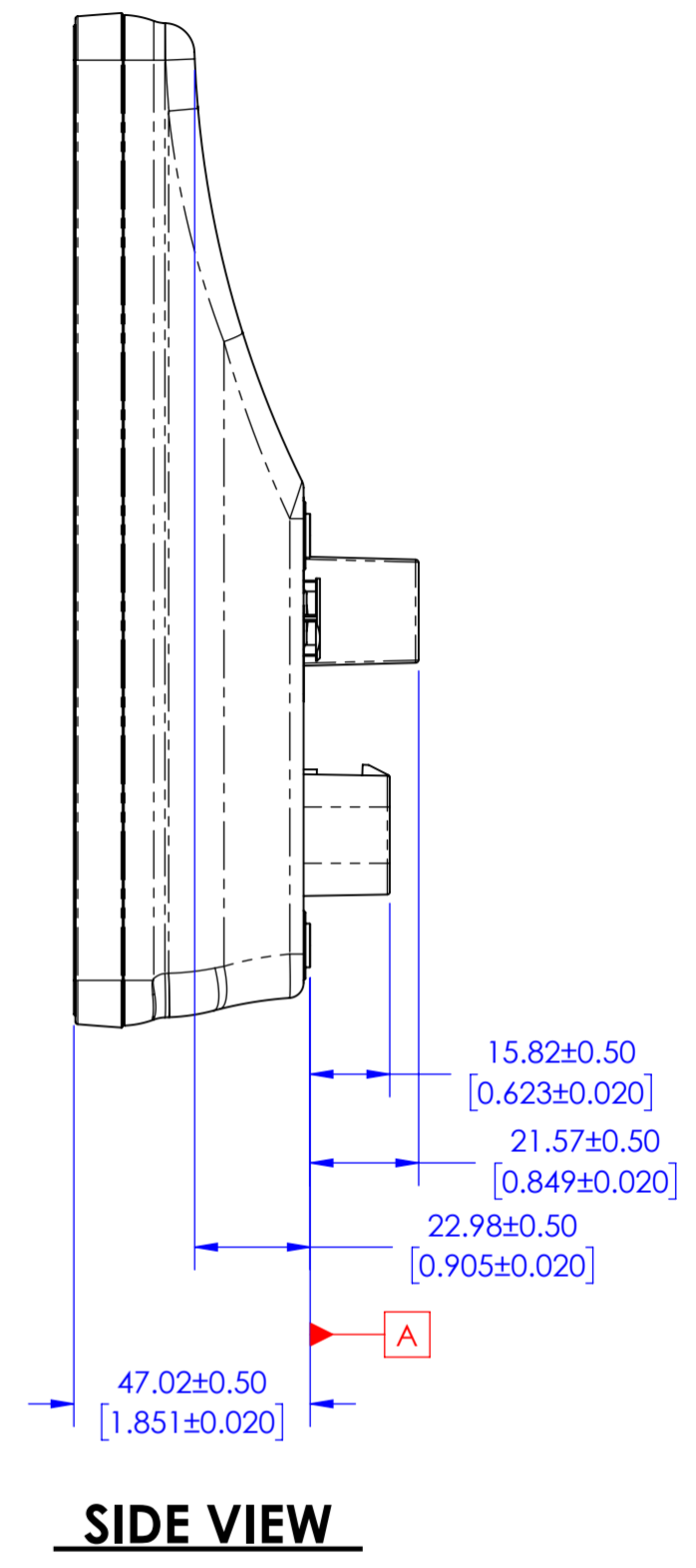
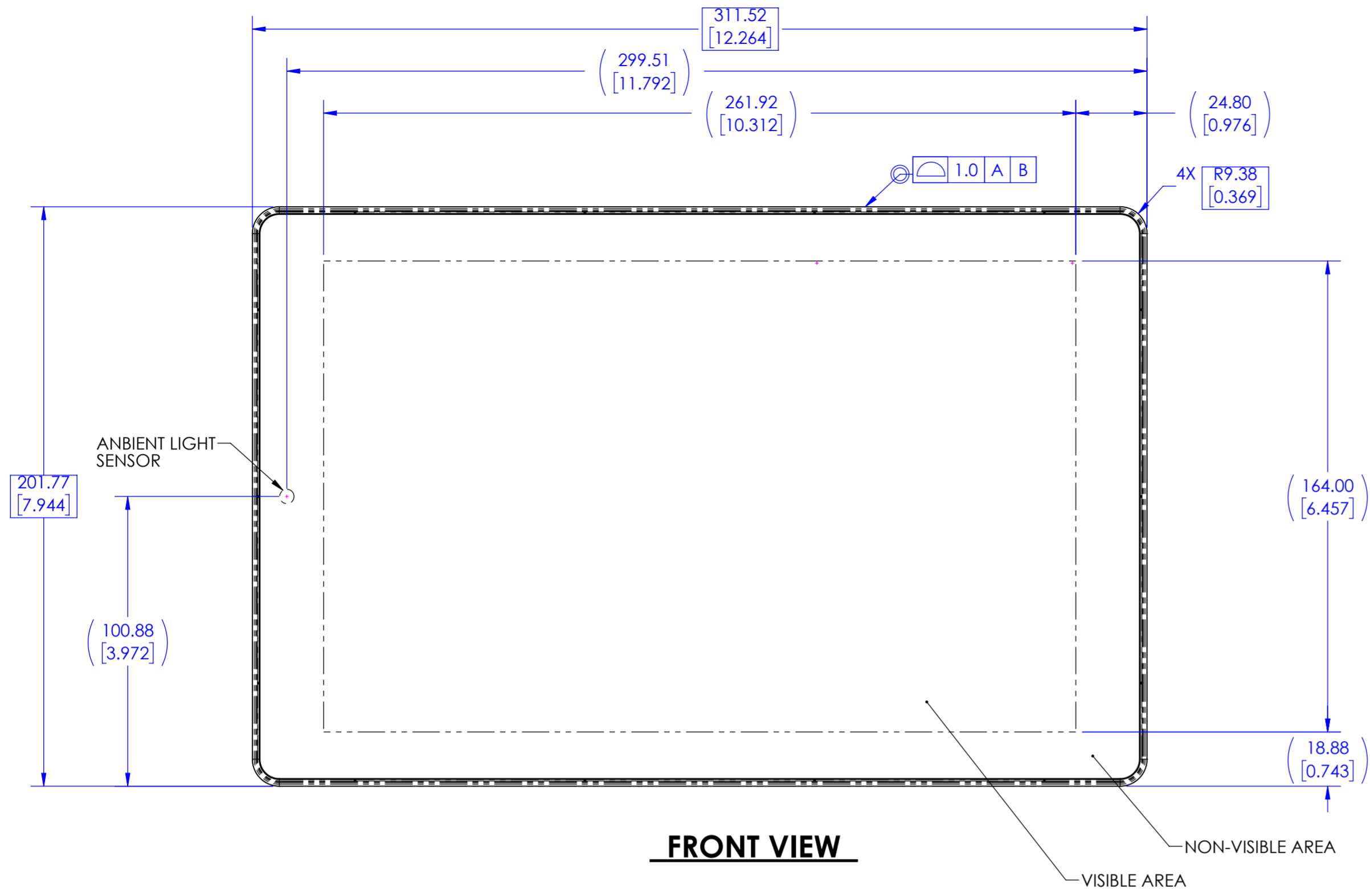


PROPRIETARY and CONFIDENTIAL This document, including the information hereon, is the property of ENOVATION CONTROLS, INC., its subsidiaries, and/or affiliates (hereinafter "ENOVATION CONTROLS"). It may be used only to purchase or supply goods and/or services relative to ENOVATION CONTROLS and must be returned upon ENOVATION CONTROLS request. It is CONFIDENTIAL and must be maintained in confidence. It may not be reproduced, copied or have other items prepared therefrom and may not be disclosed to others, in whole or in part, without ENOVATION CONTROLS prior written consent. ALL RIGHTS RESERVED.

REVISIONS		DATE	BY	APPVD	
ZONE	REV.	ECO#	DESCRIPTION	(YYYY.MM.DD)	
-	A-	C05800	INITIAL DRAWING RELEASE	2023.06.16	JP LB
-	A1	C05866	ADDED HOW TO ORDER VARIANT FOR EMBEDDED MAPS (SHEET 2)	2023.07.26	JP LB



NOTES:
 1. REFER TO ENOVATION CONTROLS 3D CAD MODEL 78020680 FOR NON DIMENSIONED FEATURES.
 2.0 A B APPLIES TO ALL UNDIMENSIONED GEOMETRY FROM THE TRUE SURFACE.

DIMENSIONING AND TOLERANCING PER ASME Y14.5 - 2009 APPLY. UNLESS OTHERWISE SPECIFIED		SHALL MEET REQUIREMENTS OF ENC 4E00711 ENVIRONMENTAL COMPLIANCE SPECIFICATION		METRIC DO NOT SCALE DRAWING			
Tolerances Inch: X ± .1 .XX ± .03 .XXX ± .010	Tolerances Metric: X ± .2 X ± .7 XX ± .25	PRODUCE PART FROM CAD MODEL 78020681.SLDASM					
MATERIAL: -		DESCRIPTION: TECH SPECS, PRISONER 12 PV-U120L-TSA5		PART NUMBER: 78020681		DRAWING NUMBER: 78020681	
FINISH: -		SCALE: 1:1.5 AND NOTED		SHEET SIZE: A2		SHEET: 1 OF 4	
						REVISION: A1	

HOW TO ORDER

PV-U120L-TSA5-XXXX

PLATFORM OPTIONS
 QDAB = DAB+ (Digital Audio Broadcast)
 QWX = Weather Band
 QWXM-1 = Embedded Maps North America

ELECTRICAL & ENVIRONMENTAL SPECIFICATIONS

HARDWARE

- DISPLAY:**
12" (133.38mm (H) X 355.68mm (V)) LVDS TT LCD with LED backlight
- COLOR:**
24-bit color
- RESOLUTION:**
1280 X 800 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:**
 - (2) Ampseal 23 pin
 - (1) Ampseal 35 pin
 - (1) M12 4 pin
 - (1) USB Pig tail
 - (1) Radio Antenna Jack
- VIDEO INPUTS:**
3 NTSC/PAL (Single channel viewable)

COMMUNICATION

- CAN:**
(2) CAN 2.0B according to ISO-11898-2; J1939 and CANopen; proprietary messaging
- SERIAL:**
(1) RS-485 Serial (MODBUS master/slave)
- USB:**
(2) USB 2.0 Full Speed Host
- ETHERNET:**
(1) Ethernet 10/100 Base-T
- WIFI:**
802.11 b/g radio
- BLUETOOTH:**
Fully integrated Bluetooth 2.1 class 1
- AUDIO BUS:**
(1) A2B

INFOTAINMENT

- STEREO:**
 - (4) Outputs (20Hz-20KHz)
 - (1) Subwoofer (configurable, 30Hz-250Hz)
 - (2) Auxiliary Inputs
 - (3) Amp Turn On/Accessory
- FM TUNER:**
Frequency Range: 87.9MHz-107.9MHz
- AM TUNER:**
Frequency Range: 530kHz-1710kHz
- WX TUNER: (WX OPTION)**
Frequency Range: 162.4MHz-162.55MHz
- DAB+ TUNER: (DAB OPTION)**
Frequency Range: 170MHz-240MHz
- USB MEDIA:**
MP3, M4A Playback
- BLUETOOTH:**
Audio Streaming

ELECTRICAL

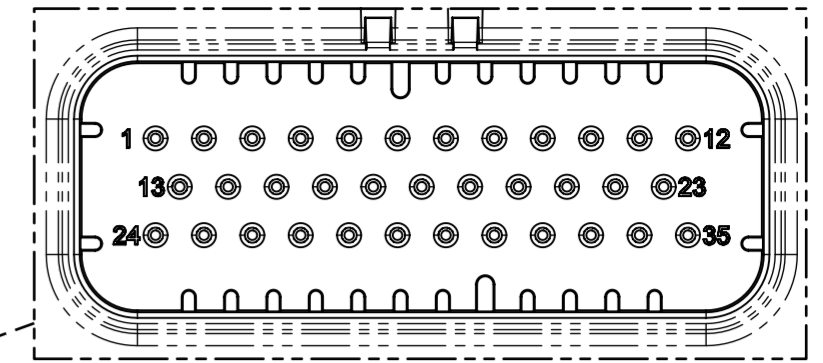
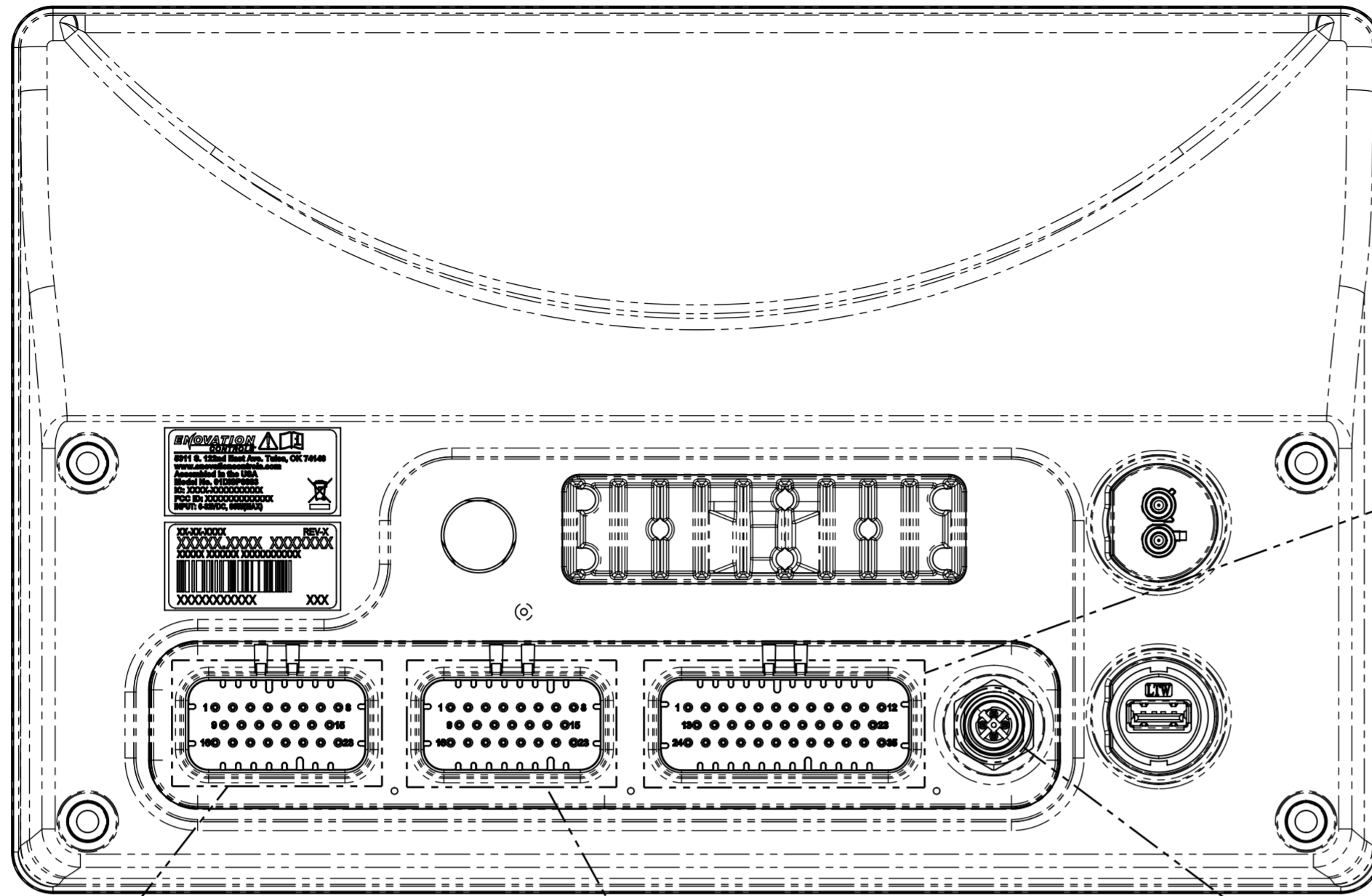
- OPERATING VOLTAGE:**
6 - 36 VDC, reverse polarity protected
- OUTPUTS:**
 - (1) 500mA Switched Low-side
 - (1) Frequency Out (2Hz - 3KHz)
- INPUTS:**
 - (3) Analog 0-5VDC, 4-20mA, or resistive, 10-bit resolution
 - (5) Discrete digital, active-high
 - (1) Frequency In (2Hz - 10kHz) 5Vpk-pk min, 120Vpk-pk max

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 2014/30/EU

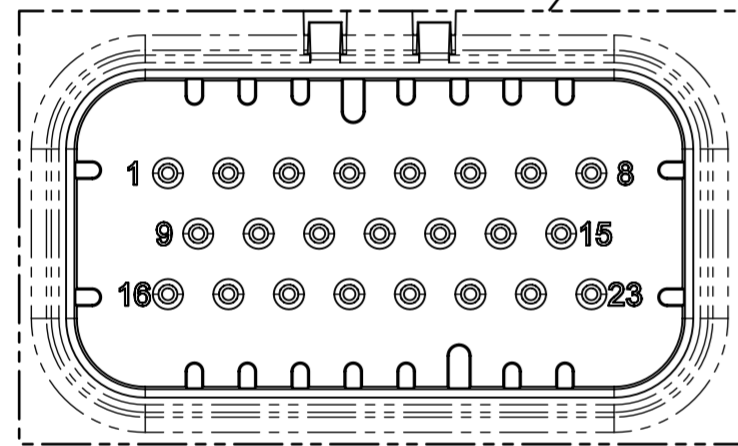
DESCRIPTION			
TECH SPECS, PRISONER 12 PV-U120L-TSA5			
PART NUMBER	DRAWING NUMBER	REVISION	
78020681	78020681	A1	
CAD FILE	SCALE	SHEET SIZE	SHEET
78020681.SLDASM	1:5 AND NOTED	A3	2 OF 4

CONNECTOR PIN-OUT SPECIFICATIONS



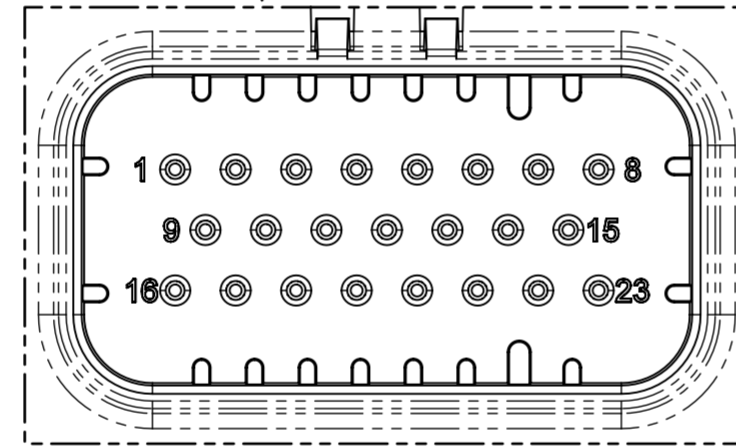
35-POS CONNECTOR-C
(MATING CONNECTOR AMP 776164-1 BLACK)

PIN #	FUNCTION
1	Video In 4 P
2	Video In 4 N
3	A2B P
4	A2B N
5	Line In 1 Left
6	Line In 1 Left Return
7	Line In 1 Right
8	Line In 1 Right Return
9	Line In 2 Left
10	Line In 2 Left Return
11	Line In 2 Right
12	Line In 2 Right Return
13	A2B Shield
14	A2B Ground
15	A2B 5V
16	Line Out 5 Left P
17	Line Out 5 Left N
18	Line Out 4 Left P
19	Line Out 4 Left N
20	Line Out 3 Left P
21	Line Out 3 Left N
22	Line Out 2 Left N
23	Line Out 2 Left P
24	Amp Turn-on 3
25	Amp Turn-on 2
26	Amp Turn-on 1
27	No Connect
28	Line Out 5 Right P
29	Line Out 5 Right N
30	Line Out 4 Right P
31	Line Out 4 Right N
32	Line Out 3 Right P
33	Line Out 3 Right N
34	Line Out 2 Right P
35	Line Out 2 Right N



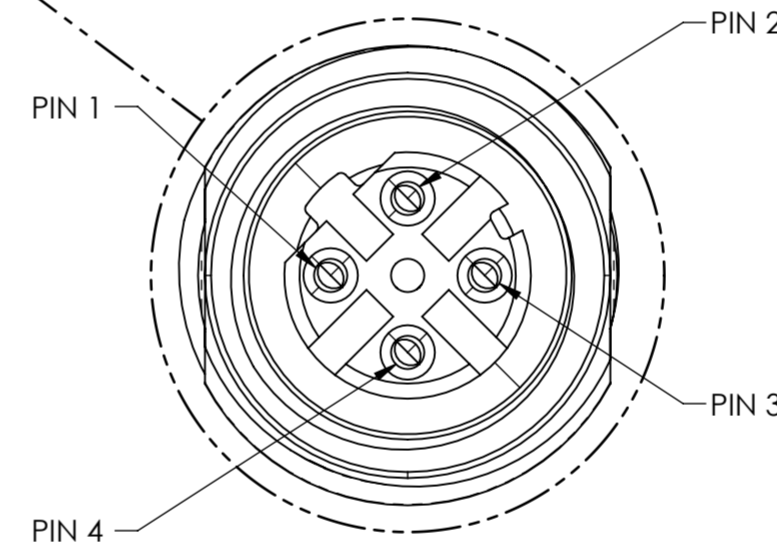
23-POS CONNECTOR-A
(MATING CONNECTOR AMP 770680-1 BLACK)

PIN #	FUNCTION
1	Digital In 1
2	Analog In 3
3	Analog In 2
4	Analog In 1
5	CAN 1 L
6	CAN 1 H
7	Battery
8	Ground
9	Analog In 3 Return
10	Analog In 2 Return
11	Analog In 1 Return
12	Digital In 3
13	Digital In 2
14	Frequency Out 1
15	Ignition
16	No Connect
17	No Connect
18	CAN 2 L
19	CAN 2 H
20	Digital In 4
21	Digital In 5
22	Open Drain Out
23	Frequency Out 2



23-POS CONNECTOR-B
(MATING CONNECTOR AMP 770680-4 GRAY)

PIN #	FUNCTION
1	Video In 1 P
2	Video In 2 P
3	Video In 3 P
4	RS485 H
5	RS485 L
6	Line Out 1 Right N
7	Line Out 1 Right P
8	Line Out 1 Left N
9	Video In 1 N
10	Video In 2 N
11	Video In 3 N
12	Radio Control VIN
13	Frequency In
14	Frequency In Return
15	Line Out 1 Left P
16	USB1 N
17	USB1 P
18	USB1 VBUS
19	USB1 Ground
20	USB1 Shield
21	Radio Control Bus
22	Radio Control Shield
23	Radio Control Ground



4-POS CONNECTOR-D
(MATING CONNECTOR M-12, 4 POS, D-CODED, MALE)

PIN #	FUNCTION
1	Ethernet TX+
2	Ethernet RX+
3	Ethernet TX-
4	Ethernet RX-

DESCRIPTION
TECH SPECS, PRISONER 12 PV-U120L-TSA5

PART NUMBER
78020681

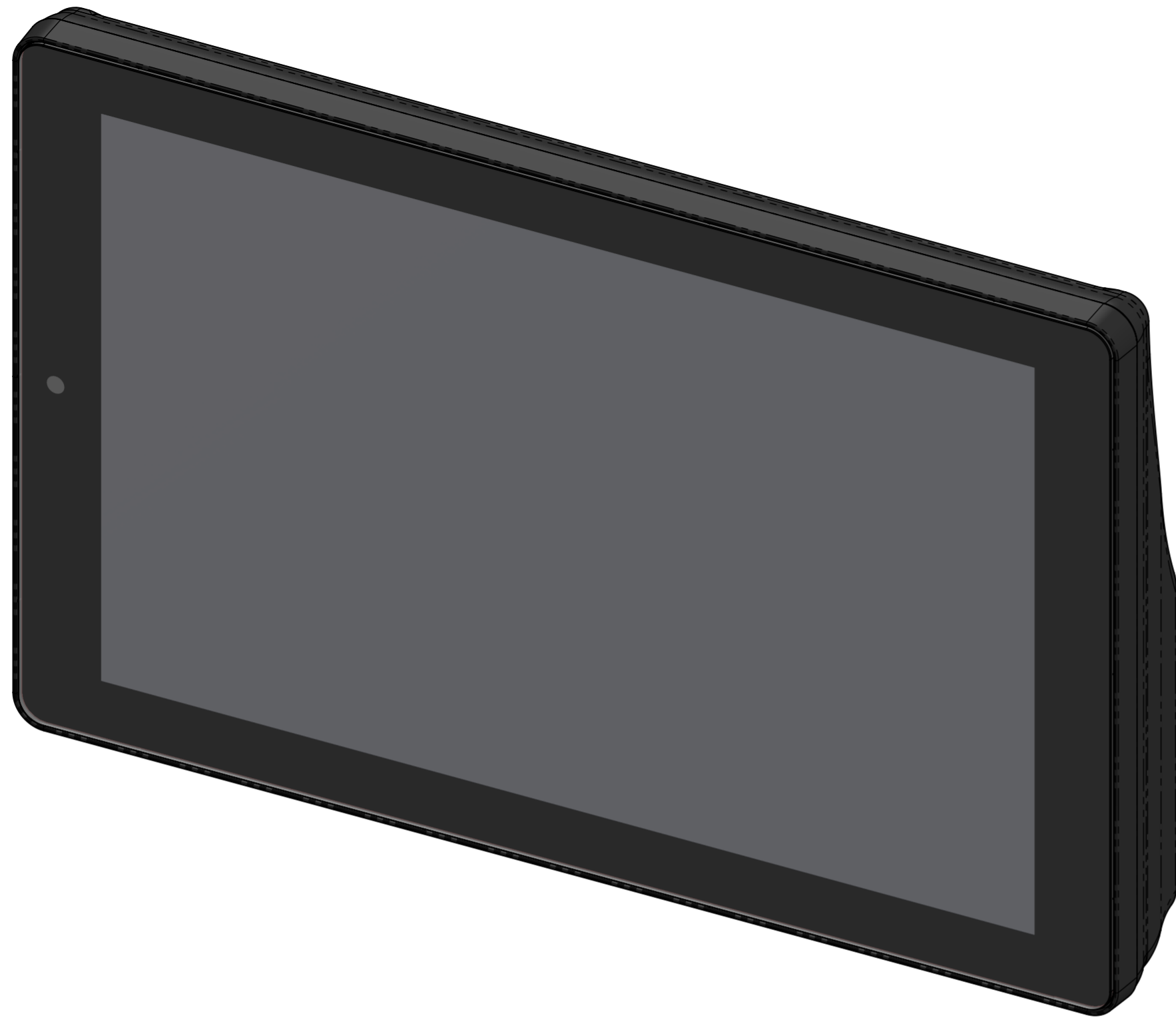
DRAWING NUMBER
78020681

REVISION
A1

SCALE
1:1.25 AND NOTED

SHEET SIZE
A2

SHEET
3 OF 4



DESCRIPTION TECH SPECS, PRISONER 12 PV-U120L-TSA5			
PART NUMBER 78020681	DRAWING NUMBER 78020681	REVISION A1	
CAD FILE 78020681.SLDASM	SCALE 1:1.25 AND NOTED	SHEET SIZE A2	SHEET 4 OF 4