

REV	DESCRIPTION	DATE	APPROVED
A	IR800574	2019-09-25	CLC

NOTES: UNLESS OTHERWISE SPECIFIED

1. QPAR LINKALIGN-360MPT-50 CONFIGURABLE OPTIONS PER TABLE I. SHOWN WITHOUT COUNTERWEIGHTS. QPAR LINKALIGN-360MPT-50 SUPPLIED WITH 150 LBS OF COUNTERWEIGHTS (EQUIVALENT TO 150 FT-LBS OF TORQUE)
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500170
3. SEE TABLE II FOR AVAILABLE QPAR LINKALIGN-360MPT-50 ACCESSORY OPTIONS
4. 48VDC POWER SUPPLY INCLUDED WITH POSITIONER. NOT SHOWN IN DRAWING
5. HARD COAT ANODIZE ALUMINUM CONSTRUCTION WITH STAINLESS STEEL HARDWARE
6. 540° (+/-270°) AZIMUTH TRAVEL WITH 12°/SEC DRIVE RATE (NO LOAD)
7. 180° (+/-90°) ELEVATION TRAVEL WITH 12°/SEC DRIVE RATE (NO LOAD)
8. -40° TO 140°F (-30° TO 60°C) OPERATIONAL TEMPERATURE RANGE. -40° TO 158°F (-40 TO 70°C) NON-OPERATIONAL TEMPERATURE RANGE
9. 0.1° FEEDBACK RESOLUTION IN ALL AXES
10. AZIMUTH AND ELEVATION BACKLASH LESS THAN 0.1°
- 11 36.80" (93.5 cm) HIGH X 25.43" (64.6 cm) WIDE X 13.90" (35.3 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
12. WEIGHT APPROXIMATELY 415 LBS (188 kg) INCLUDING 150 LBS (68 kg) OF COUNTERWEIGHTS
13. PAYLOAD SHALL NOT EXCEED 500 LB (159 kg) (INCLUDING COUNTERWEIGHTS) OR 500 FT-LBS OF TORQUE ABOUT THE ELEVATION AXIS. EFFORT SHOULD BE MADE TO BALANCE ELEVATION PAYLOAD AS MUCH AS POSSIBLE BY USING THE (6) 25 LB COUNTERWEIGHTS PROVIDED. TO CALCULATE TORQUE, TAKE THE DISTANCE FROM THE PAYLOAD CENTER OF GRAVITY TO DATUM -B- IN FEET AND MULTIPLY BY THE PAYLOAD WEIGHT. CUSTOM CONFIGURATIONS AVAILABLE UPON REQUEST
- 14 TABLE TOP MOUNTING HOLES
- 15 CENTER OF GRAVITY 0" IN THE X-DIRECTION, 15.1" (38.4 cm) IN THE Y-DIRECTION AND 0" IN THE Z-DIRECTION

NOTES CONTINUED ON SHEET 7

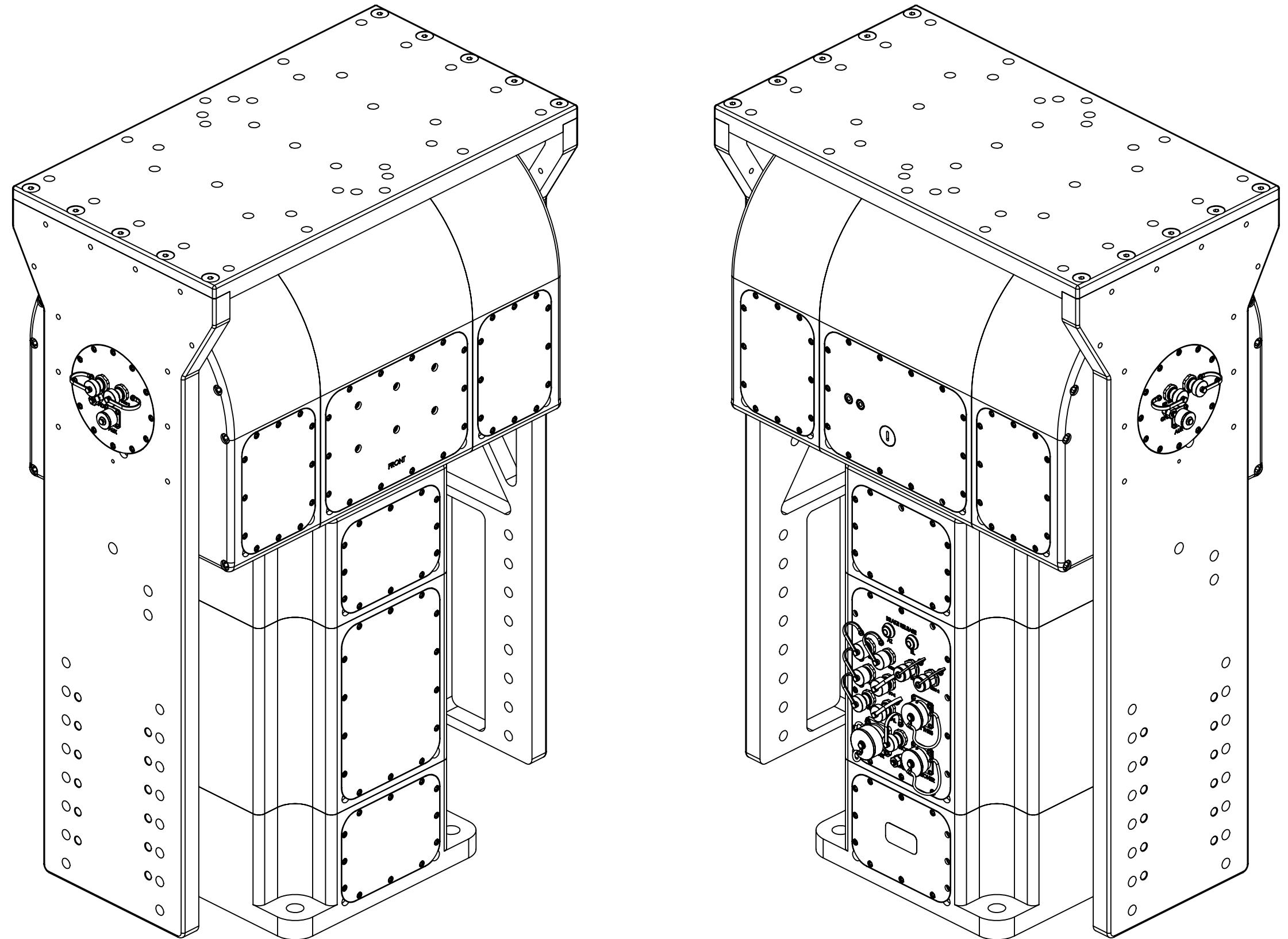

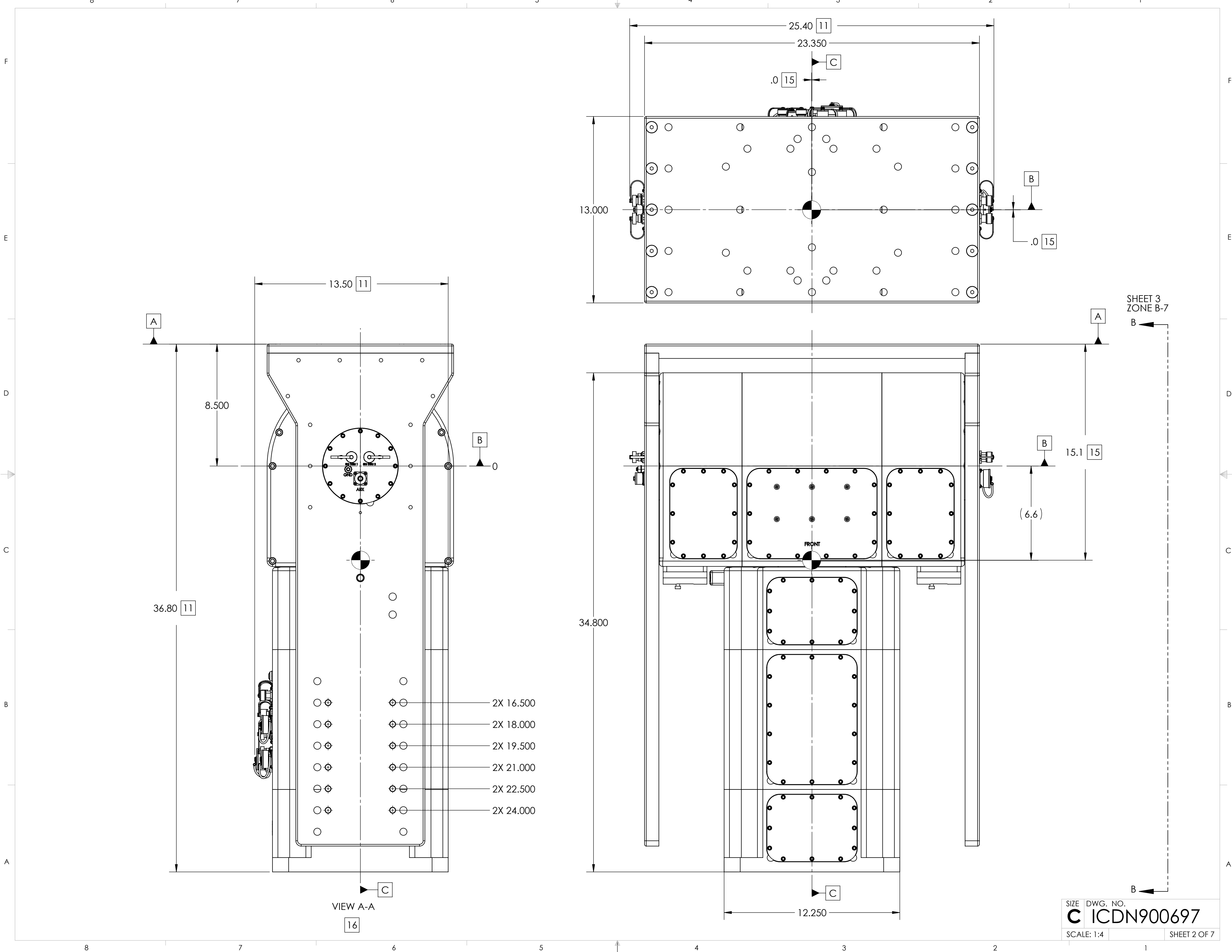


TABLE I	
BUILDING A PART NUMBER	STANDARD OPTIONS
LA-360MPT - 50 - - 100	<<EXAMPLE
	SHIELDED ETHERNET CABLE STANDARD LENGTHS
	050 = 50 ft
	100 = 100 ft
	150 = 150 ft
	200 = 200 ft
	250 = 250 ft
	300 = 300 ft
	XXX = Custom length in feet
	XXXC = Add "C" to end of cable length for unterminated mating connector
	CUSTOM CONFIGURATION
	= Standard options - leave blank
	MOTOR DRIVES AND PAYLOAD
	50 = Az & El 500 ft-lbs @ 12°/s, 350 lb payload. Typically paired with 1 - 2.4 meter antenna
	MODEL
	LA-360MPT = LinkAlign-360MPT (See motor drives and payload section for positioner travel range info)

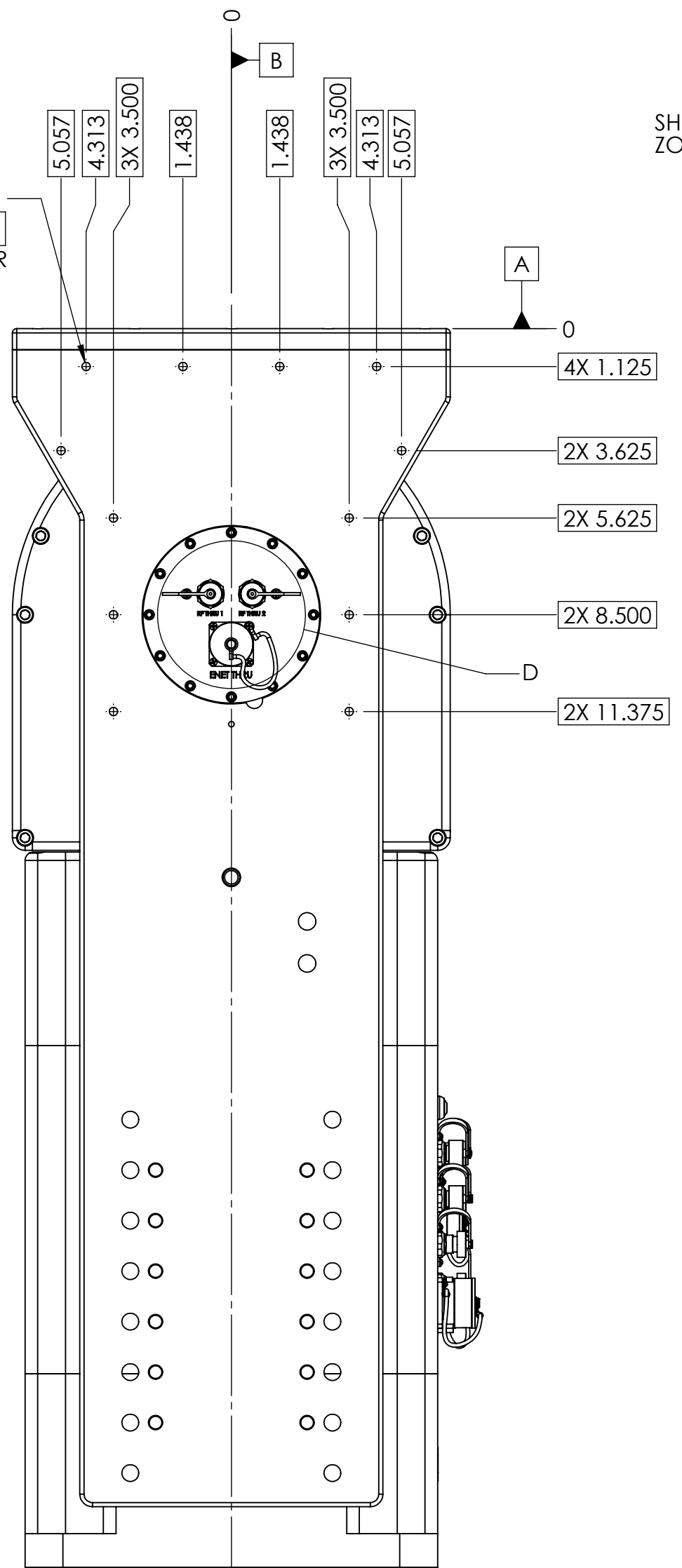
TABLE II (MPT-5X ACCESSORY OPTIONS)		
ACCESSORY DESCRIPTION	ACCESSORY PART NUMBER	ACCESSORY ICD
CROSS ELEVATION DRIVE ASSEMBLY KIT, MPT-5X	ACC-N900652-1	ICDN900652

SYMBOL KEY <input type="checkbox"/> NOTE <input type="checkbox"/> PL ITEMS PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF QPARUSA. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF QPAR ANTENNAS USA IS PROHIBITED. QPAR ANTENNAS USA, LLC San Diego, CA 92020 www.qparusa.com	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: ANGLE ± 5 DEGREES TWO PLACE DECIMAL ±.030 THREE PLACE DECIMAL ±.010 INTERPRET DIM AND TOL PER ASME Y14.5M - 1994 THIRD ANGLE PROJECTION  DO NOT SCALE DRAWING	DRAWN C. CHEYNE 2019-09-25 CHECKED S. CHEYNE 2019-09-25 ME APPR. C. CHEYNE 2019-09-25 EE APPR.	QPAR ANTENNAS USA, LLC TITLE: QPAR LINKALIGN-360MPT-5X INTERFACE CONTROL DRAWING
		PART NO. SEE TABLE I	SIZE DWG. NO. REV C ICDN900697 A



SHEET 3
ZONE B-7

8X .250-20 UNC-2B THRU
 \varnothing .010 C A B
 MINOR DIAMETER

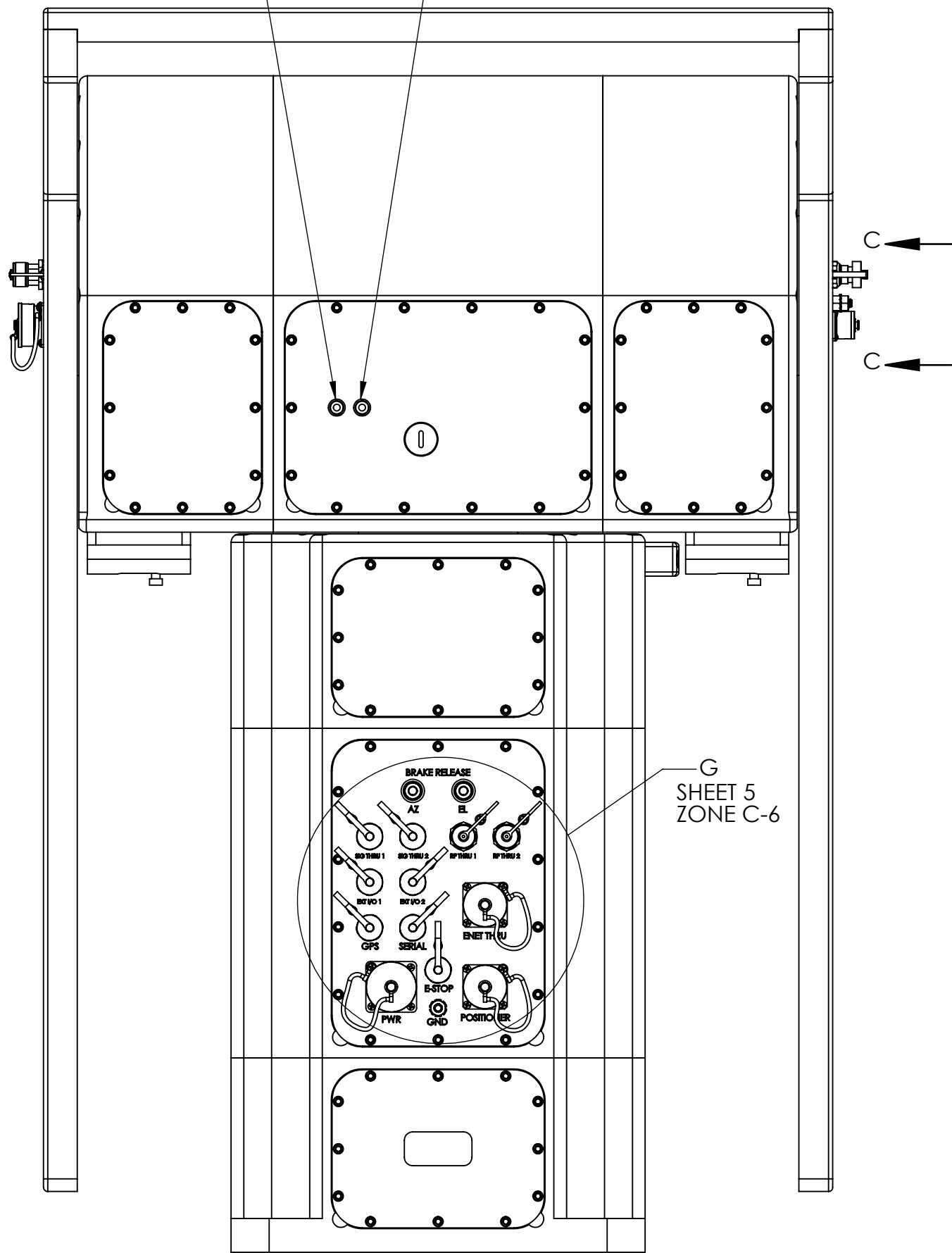


VIEW B-B
 SHEET 2
 ZONE E-1

SHEET 4
 ZONE D-5

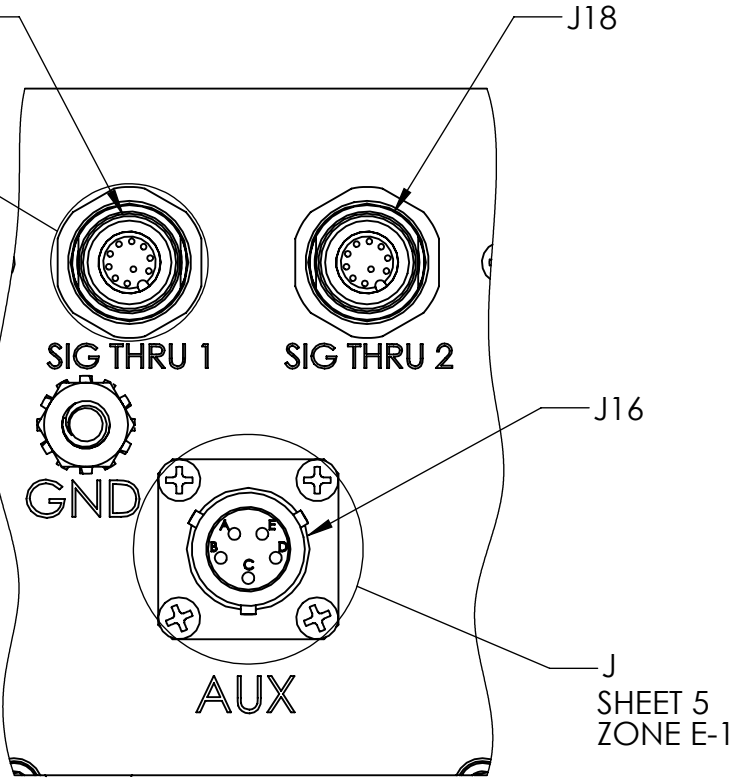
YELLOW LED (ACTIVITY)

GREEN LED (POWER)

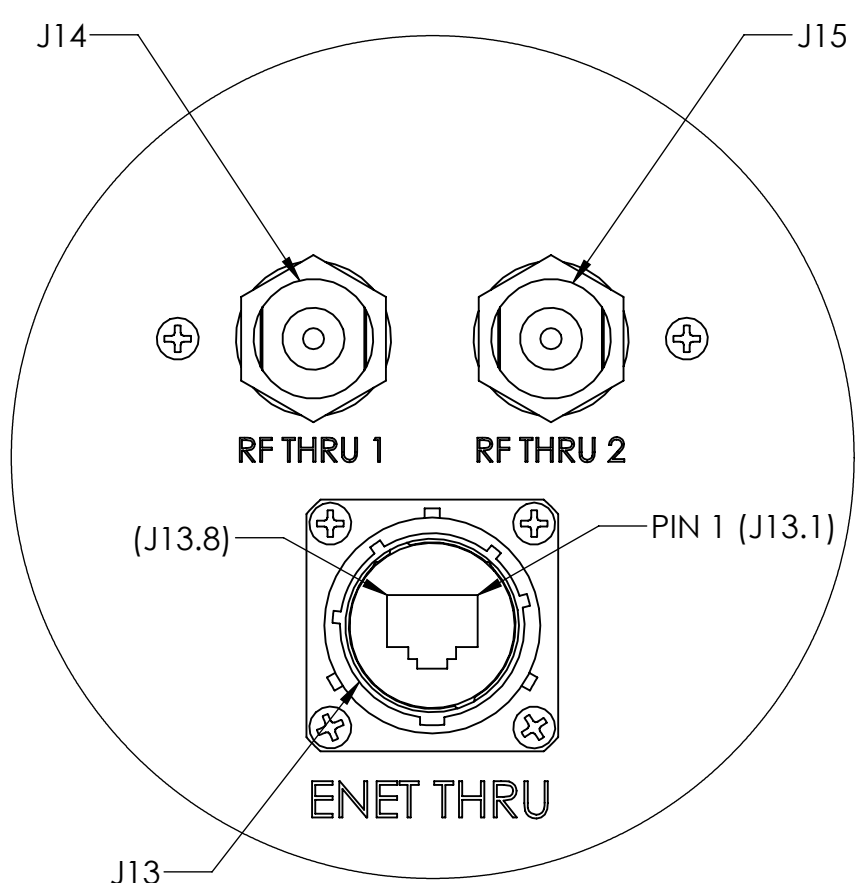


SHEET 4
 ZONE A-5

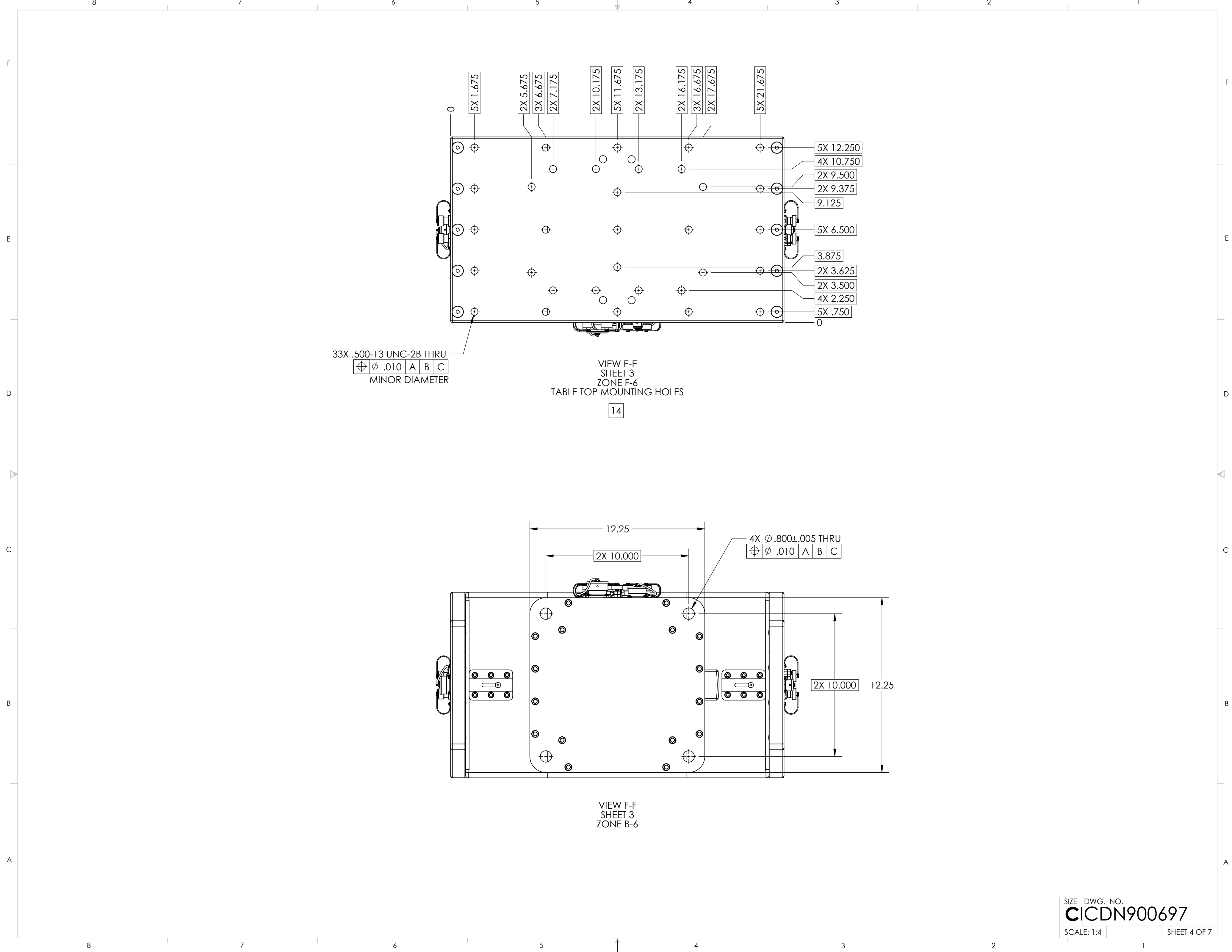
SHEET 5
 ZONE E-3



VIEW C-C
 SCALE 1 : 1
 SHOWN WITHOUT PROTECTIVE CAPS



DETAIL D
 SCALE 1 : 1
 SHOWN WITHOUT PROTECTIVE COVERS
 SEE TABLE IX FOR J10, J11 & J12 CONNECTOR PINOUT DETAILS



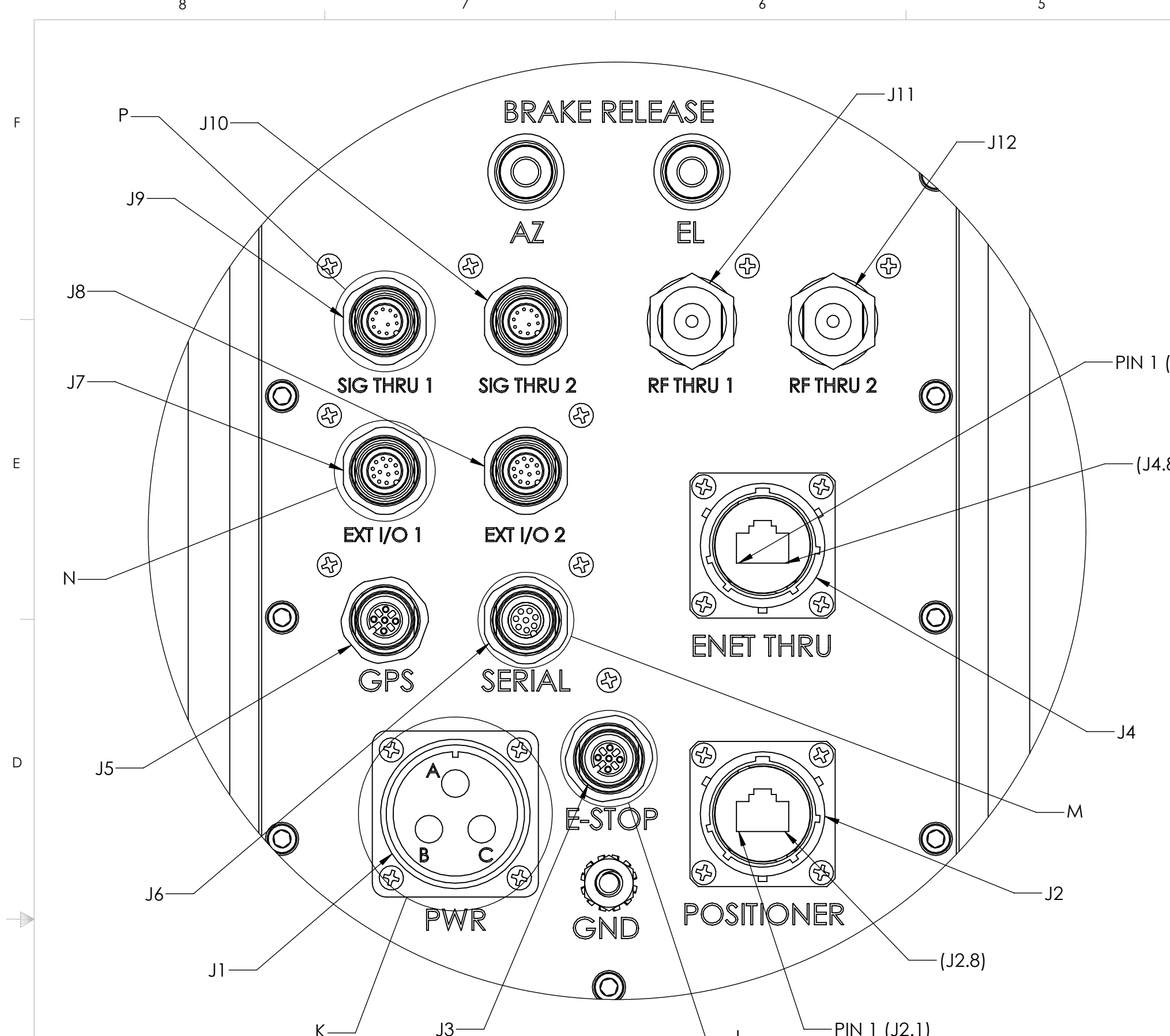
33X .500-13 UNC-2B THRU
 \varnothing .010 A B C
 MINOR DIAMETER

VIEW E-E
 SHEET 3
 ZONE F-6
 TABLE TOP MOUNTING HOLES

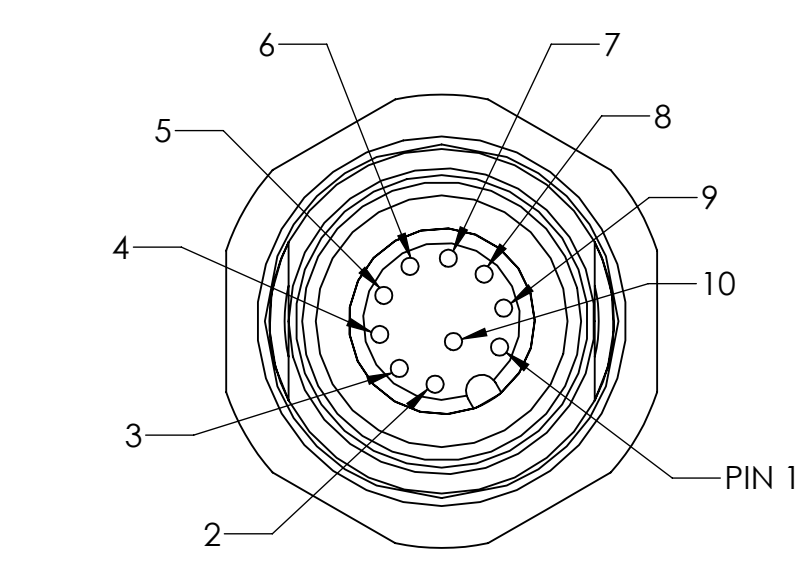
14

4X \varnothing .800 \pm .005 THRU
 \varnothing .010 A B C

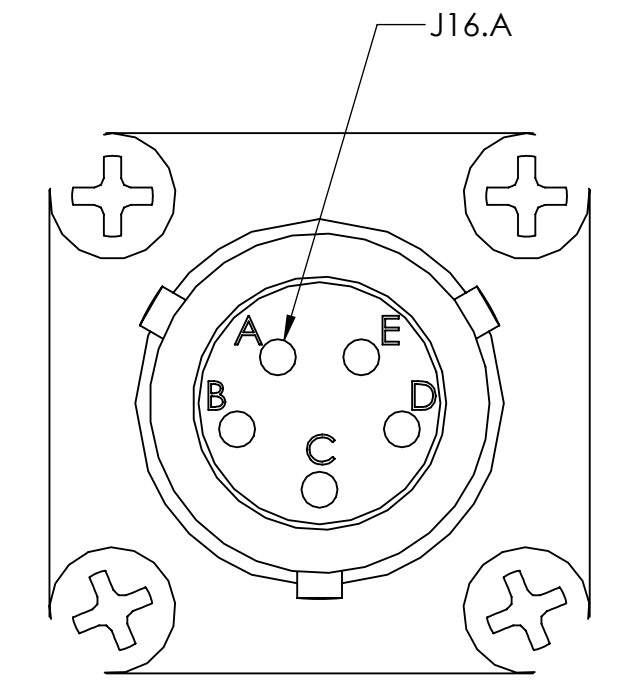
VIEW F-F
 SHEET 3
 ZONE B-6



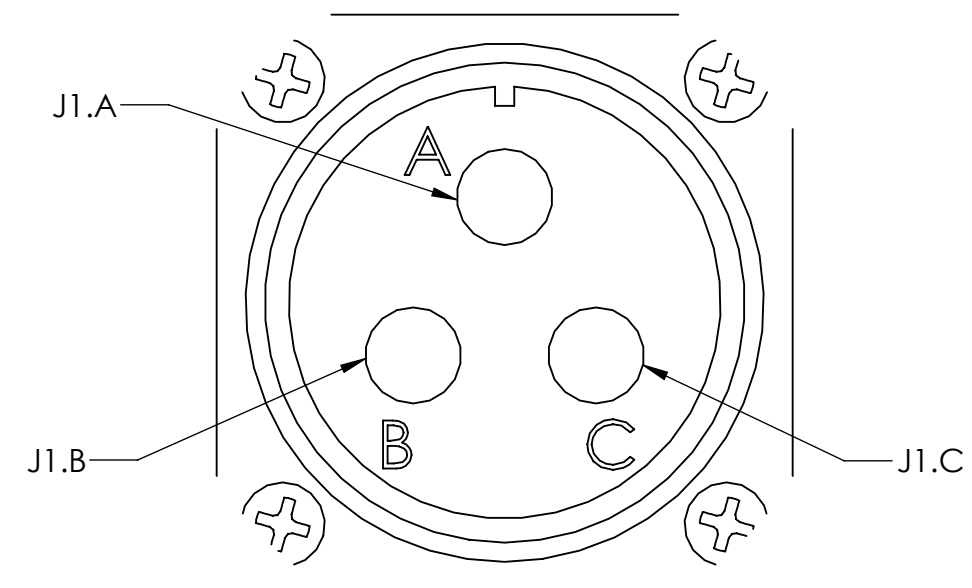
DETAIL G
SCALE 1 : 1
SHEET 3
ZONE C-4
SHOWN WITHOUT PROTECTIVE CAPS



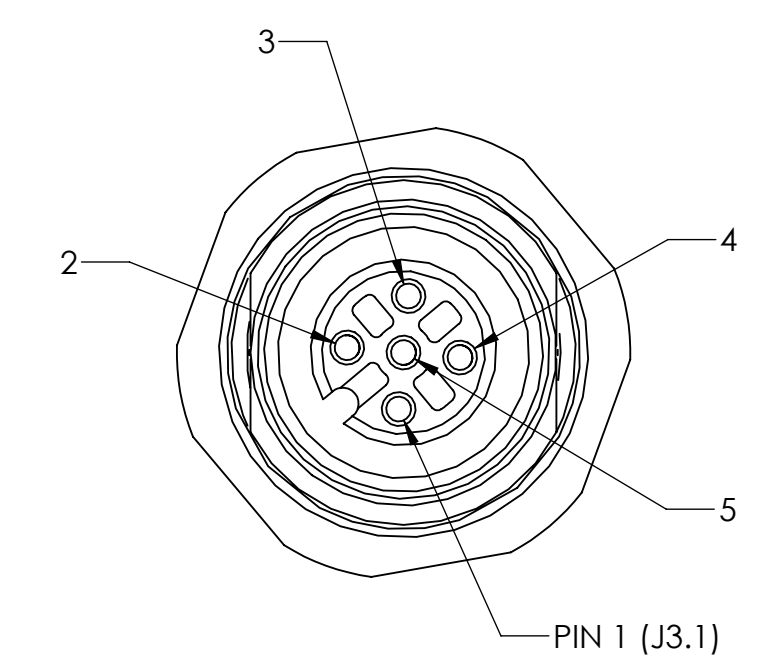
J17 & J18 SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RS 10T-* (* LENGTH IN METERS)
DETAIL H
SCALE 3 : 1
SHEET 3
ZONE D-2
SEE TABLE IX FOR CONNECTOR PINOUT DETAILS



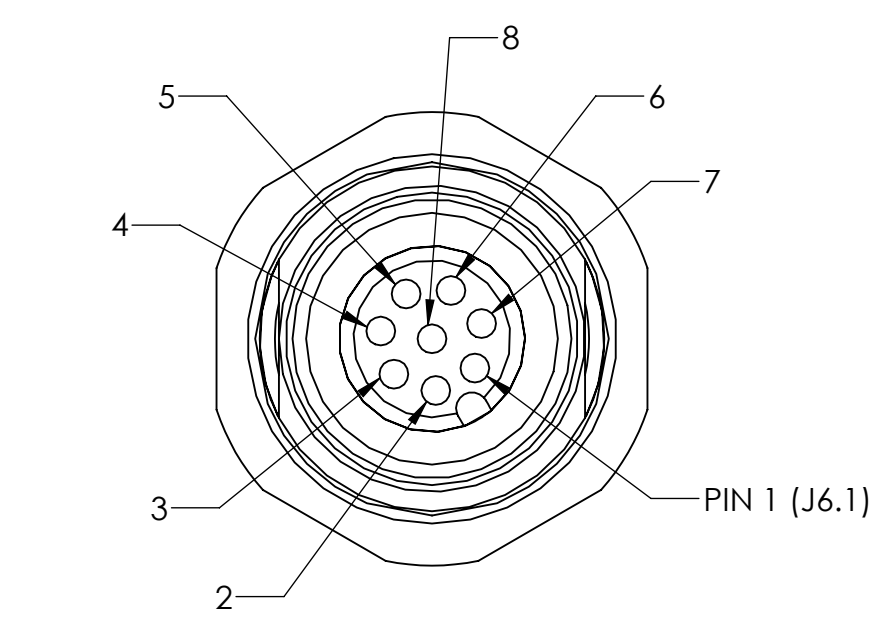
J16 CONNECTOR SHOWN FROM MATING SIDE
AMPHENOL P/N PT02E-10-5S
DETAIL J
SCALE 3 : 1
USED FOR OPTIONAL CROSS ELEVATION ACCESSORY
SEE TABLE II FOR ACCESSORY DETAILS
SEE TABLE VII FOR CONNECTOR PINOUT DETAILS



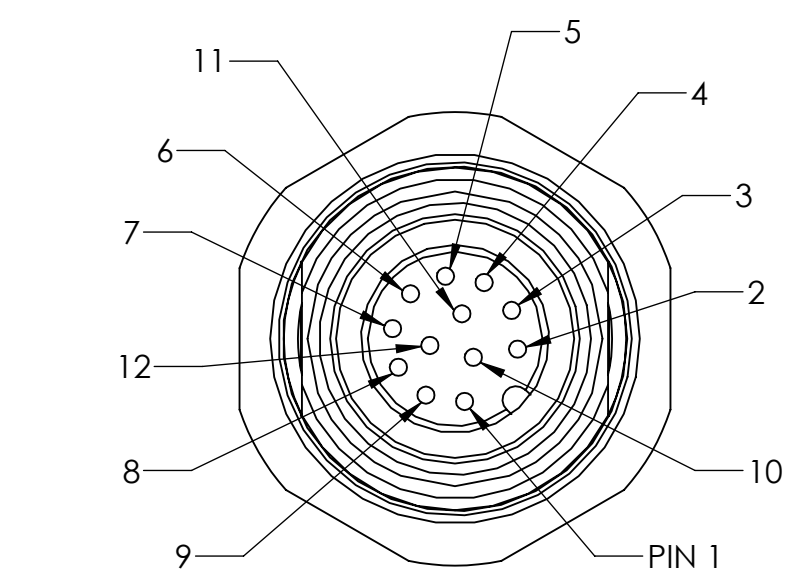
J1 CONNECTOR SHOWN FROM MATING SIDE
AMPHENOL P/N MS3102E20-19P
DETAIL K
SCALE 2 : 1
SEE TABLE III FOR CONNECTOR PINOUT DETAILS



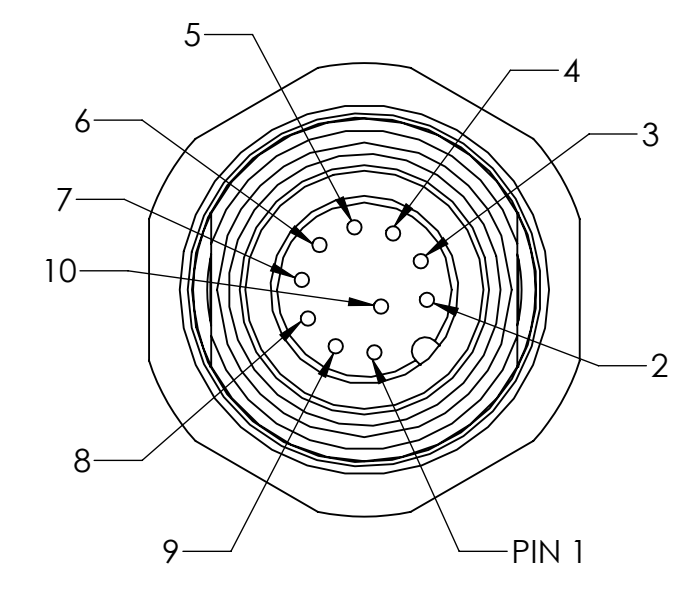
J3 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RS 4.5-T-* (* LENGTH IN METERS)
DETAIL L
SCALE 3 : 1
SEE TABLE V FOR CONNECTOR PINOUT DETAILS



J6 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RS 8-T-* (* LENGTH IN METERS)
DETAIL M
SCALE 3 : 1
SEE TABLE VI FOR CONNECTOR PINOUT DETAILS



J7 & J8 CONNECTORS SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RK 12-T-* (* LENGTH IN METERS)
DETAIL N
SCALE 3 : 1
SEE TABLE VIII FOR CONNECTOR PINOUT DETAILS



J9 & J10 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RK 10-T-* (* LENGTH IN METERS)
DETAIL P
SCALE 3 : 1
SEE TABLE IX FOR CONNECTOR PINOUT DETAILS

CONNECTOR DESIGNATION	FUNCTION
J1.A	P48V_RTN
J1.B	P48V
J1.C	GND

CONNECTOR DESIGNATION	FUNCTION
J2.1	DATA PAIR 1
J2.2	DATA PAIR 1
J2.3	DATA PAIR 2
J2.4	+48-56VDC PoE POWER INPUT
J2.5	+48-56VDC PoE POWER INPUT
J2.6	DATA PAIR 2
J2.7	DC RETURN FOR PoE INPUT
J2.8	DC RETURN FOR PoE INPUT

CONNECTOR DESIGNATION	FUNCTION
J3.1	NOT USED
J3.2	E-STOP NC
J3.3	E-STOP COM
J3.4	E-STOP NO
J3.5	NOT USED

CONNECTOR DESIGNATION	FUNCTION
J6.1	5V
J6.2	GND
J6.3	12V
J6.4	GND
J6.5	RS232, UART4 Tx
J6.6	RS232, UART4 Rx
J6.7	RS232, UART5 Tx
J6.8	RS232, UART5 Rx

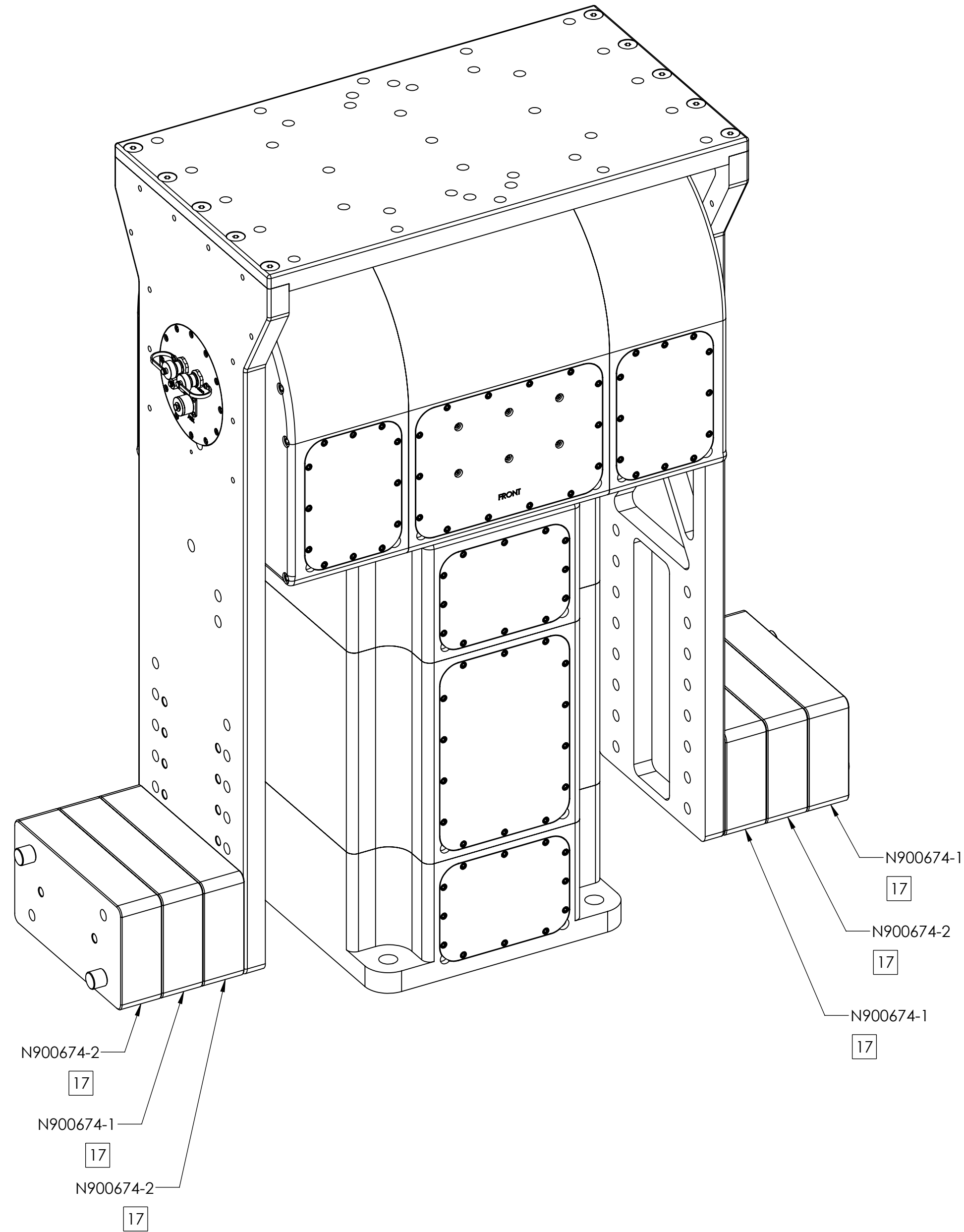
CONNECTOR DESIGNATION	FUNCTION
J16.A	GND
J16.B	MOTOR +
J16.C	MOTOR -
J16.D	POT WIPER
J16.E	+3.3V

CONNECTOR DESIGNATION	FUNCTION
J7.1	ADC_1+
J7.2	GND
J7.3	IN2, IN_GPIO_1_27
J7.4	IN1, IN_GPIO_1_16
J7.5	COM
J7.6	IN3, IN_GPIO_1_24
J7.7	OUT1, OUT_GPIO_1_15
J7.8	OUT4, OUT_GPIO_1_22
J7.9	ADC_1-
J7.10	OUT3, OUT_GPIO_1_21
J7.11	IN4, IN_GPIO_1_14
J7.12	OUT2, OUT_GPIO_1_17
J8.1	ADC_2+
J8.2	GND
J8.3	N/C
J8.4	N/C
J8.5	N/C
J8.6	N/C
J8.7	N/C
J8.8	N/C
J8.9	ADC_2-
J8.10	N/C
J8.11	N/C
J8.12	N/C

FROM	TO
J4.1	J13.1
↓	↓
J4.8	J13.8
J9.1	J17.1
↓	↓
J9.10	J17.10
J10.1	J18.1
↓	↓
J10.10	J18.10
J11.1	J14.1
J12.1	J15.1

NOTES CONTINUED:

- 16 COUNTERWEIGHTS SHOWN AT MAXIMUM ADDITIONAL ELEVATION TORQUE OF 500 FT-LBS TO ADJUST ELEVATION TORQUE COUNTERWEIGHT LOCATIONS MAY BE ADJUSTED USING MOUNTING HOLES ON ELEVATION ARM. SEE DIMENSIONS ON VIEW A-A (SHEET 2) TO CALCULATE TORQUE VALUES AT RESPECTIVE MOUNTING HOLE LOCATIONS
- 17 COUNTERWEIGHTS MUST ALTERNATE FROM N900674-1 TO N900674-2 OR VICE VERSA WHEN COUNTERWEIGHTS ARE STACKED TOGETHER



SHOWN WITH COUNTERWEIGHTS

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