

QLA-60EBP-30

AUTO LINK ALIGNMENT AND MAINTENANCE FOR MILLIMETER WAVE LOS



The QLA-60EBP-30 is a Power Over Ethernet (PoE) antenna positioner designed from the ground up to point and automatically peak directional side arm mount antennas for millimeter wave links up to 90GHz.

Millimeter wave radios specifically in the 60GHz to 80GHz range have very narrow beam widths which require very precise pointing and stable masts to maintain a link. Often these links come out of alignment or become less optimized due to thermal expansion of the tower, wind events, or other environmental conditions. The QLA-60EBP-30 corrects for these disturbances to maintain the highest Quality of Service available without the down time and reoccurring cost due to manual realignment.

Once aligned, our software will maintain your link automatically based on an RSSI threshold setting or can be manually peaked on demand from anywhere on your network.

The QLA-60EBP-30 is typically paired with 3 to 4 foot side arm mount antennas, payloads up to 300 lbs (136.07 kg), and offers +/-30° of azimuth and elevation range.

TECHNICAL SPECIFICATIONS – QLA-60EBP-30

Power	Power Over Ethernet (POE) 48VDC-56VDC Supply Included
Material / Finish	Aluminum with stainless steel hardware / Hard coat anodize
Positioner Travel	
Azimuth	60° (+/-30°)
Elevation	60° (+/-30°)
Positioner Drive Rate	
Azimuth	Variable, up to 0.47°/sec no load
Elevation	Variable, up to 0.47°/sec no load
Temperature	
Operational	-22 to 140°F (-30 to 60°C)
Survival	-40 to 158°F (-40 to 70°C)
Feedback Resolution	0.01°
Backlash (Az / El)	less than 0.03° in both axes
Torque	
Operational (both axes)	150 ft-lbs (203.3 Nm)
Survival (both axes)	1500 ft-lbs (2033.7 Nm)
Payload	300 lbs (136.07 kg)
Dimensions	Height: 20.58" (52.3 cm), Width: 13.85" (35.2 cm), Depth*: 16.69" (42.4 cm)
Weight	100 lbs (45.4 kg)
Mounting Interface	Mounts to masts O.D. ranging from 3 - 4.5"
Antenna Mount Options	Qty six 5/8-11 threaded holes for side arm mount antennas (See ICD for details)
Communication Interface	
User Interfaces	Web based hosted internal to unit, Pelco D
Ethernet	10/100 Ethernet
Serial	RS-485

* Depth measured from center of a 4.5 in O.D. mast

REV A

Specifications subject to change without notice

NOTES: UNLESS OTHERWISE SPECIFIED

REV	DESCRIPTION	DATE	APPROVED
C	CN600564	2018-08-06	CLC

1. QLA-60EBP-30 CONFIGURABLE OPTIONS PER TABLE I. PART NUMBER LA-60EBP-30-100 SHOWN THROUGHOUT THIS DRAWING. PoE CABLE SHOWN IS NOT SHOWN
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500145
3. 48 - 56VDC POWER SUPPLY INCLUDED WITH POSITIONER. NOT SHOWN IN DRAWING
4. HARD COAT ANODIZE ALUMINUM CONSTRUCTION WITH STAINLESS STEEL HARDWARE
5. 60° (+/-30°) AZIMUTH TRAVEL WITH 0.47°/SEC DRIVE RATE (NO LOAD)
6. 60° (+/-30°) ELEVATION TRAVEL WITH 0.47°/SEC DRIVE RATE (NO LOAD). POSITIONER CAN BE MOUNTED ON EITHER SIDE OF THE MAST. SOFTWARE FEATURES ALLOW FOR THE ELEVATION DIRECTION TO BE REVERSED
7. -22° TO 140°F (-30° TO 60°C) OPERATIONAL TEMPERATURE RANGE. -40 TO 158°F (-40 TO 70°C) NON-OPERATIONAL TEMPERATURE RANGE
8. 0.01° FEEDBACK RESOLUTION IN BOTH AXES
9. AZIMUTH AND ELEVATION BACKLASH LESS THAN 0.03°
10. ENVELOPE DIMENSIONS WHEN MOUNTED TO A 4.5" O.D. MAST ARE 20.58" (52.3 cm) HIGH X 13.85" (35.2 cm) WIDE X 16.69" (42.4 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
11. WEIGHT APPROXIMATELY 100.0 LBS (45.4 kg) NOT INCLUDING PoE CABLE
12. CENTER OF GRAVITY 7.1" (18.0 cm) IN THE X-DIRECTION, 0.1" (0.3 cm) IN THE Y-DIRECTION AND 0.6" (1.5 cm) IN THE Z-DIRECTION FROM THE CORRESPONDING DATUM A, B, OR C
13. POSITIONER CLAMPS TO 3" - 4.5" OUTSIDE DIAMETER MAST (NOT INCLUDED). 4.5" O.D. MAST SHOWN THOUGHOUT THIS DRAWING
14. TORQUE THE INDICATED POSITIONER CLAMP FASTENERS (1/2-13 X 5.0" LONG STAINLESS STEEL HEX HEAD SCREWS) TO 45 FT-LBS
15. PAYLOAD SHALL NOT EXCEED 300 LBS OR 150 FT-LBS OF OPERATIONAL TORQUE ABOUT THE AZIMUTH OR ELEVATION AXIS NOTED BY DATUM C AND B RESPECTIVELY
16. NON-OPERATIONAL WIND LOADING TORQUE SHALL NOT EXCEED 1500 FT-LBS ON THE AZIMUTH OR ELEVATION AXIS NOTED BY DATUM C AND B RESPECTIVELY
17. ANTENNA MOUNTING PLATE VARIES TO SUPPORT ANTENNA PAYLOADS LISTED IN TABLE I. CUSTOM CONFIGURATIONS ARE ALSO AVAILABLE UPON REQUEST
18. TORQUE ANTENNA MOUNTING HARDWARE (5/8-11 X 1.5" LONG STAINLESS STEEL HEX HEAD SCREWS) TO 150 FT-LB

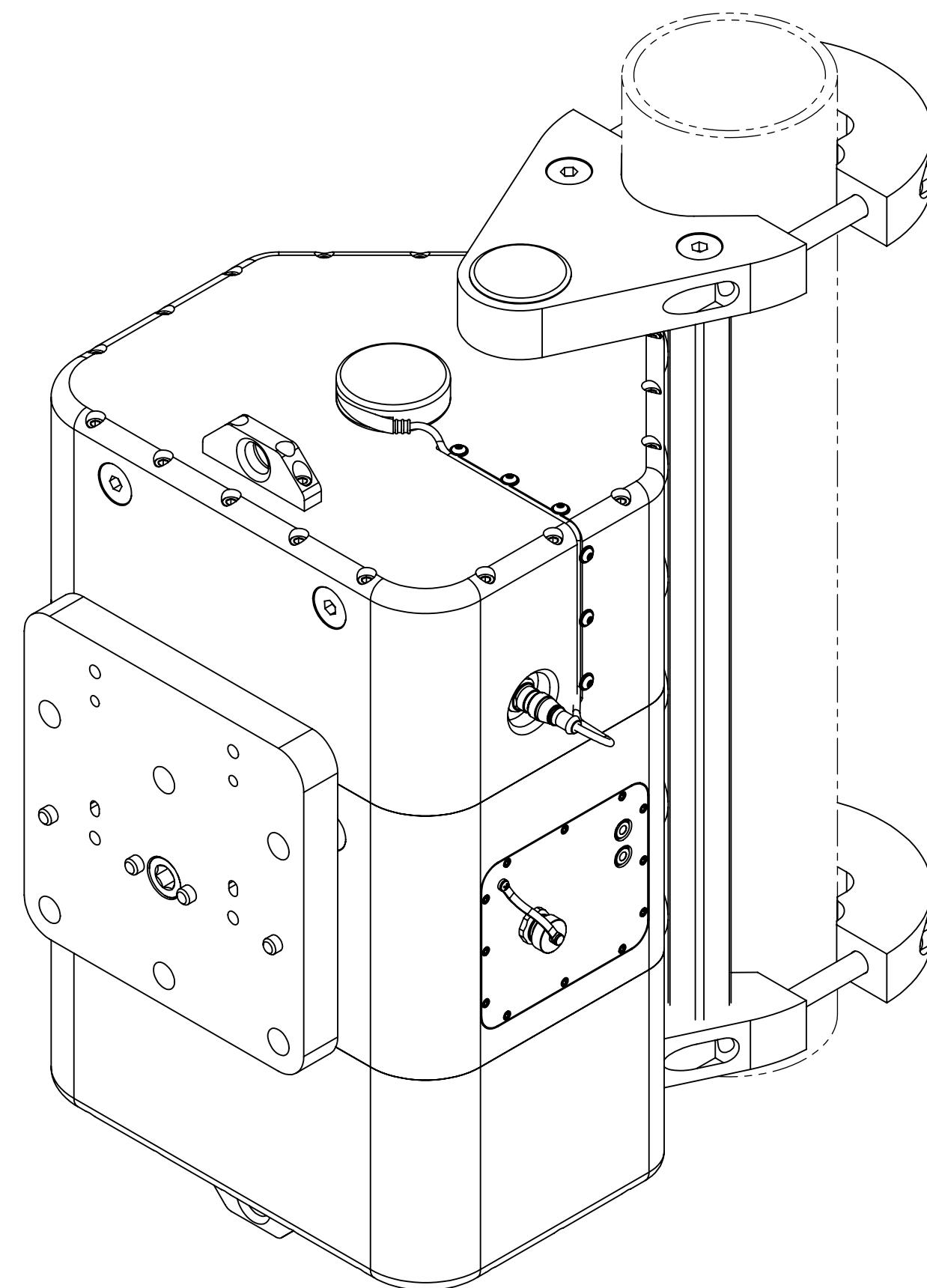


TABLE I

BUILDING A PART NUMBER	STANDARD OPTIONS
LA-60EBP	- 30 - - 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 30 = Az 100 ft-lbs @ 0.1°/s, El 100 ft-lbs @ 0.1°/s, 200 lb payload. Typically paired with 3 ft side arm mount antenna	
MODEL LA-60EBP = LinkAlign-60EBP (+/-30° azimuth, +/-30° elevation)	

<input type="checkbox"/> NOTE	<input type="circle"/> 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 QPARUSA IS PROHIBITED.

QPAR ANTENNAS IUSA IIC
San Diego, CA 92020
www.qparusa.com

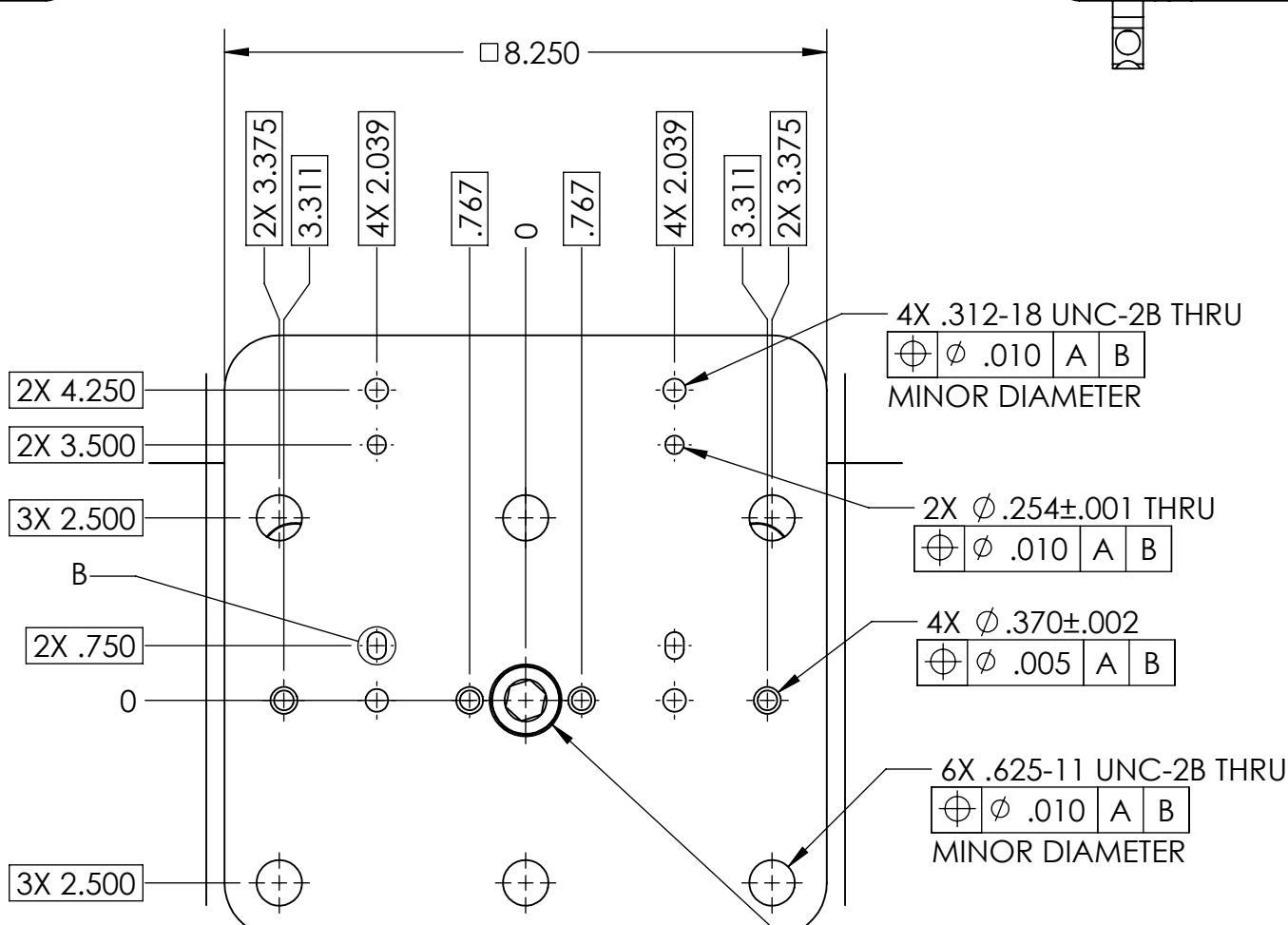
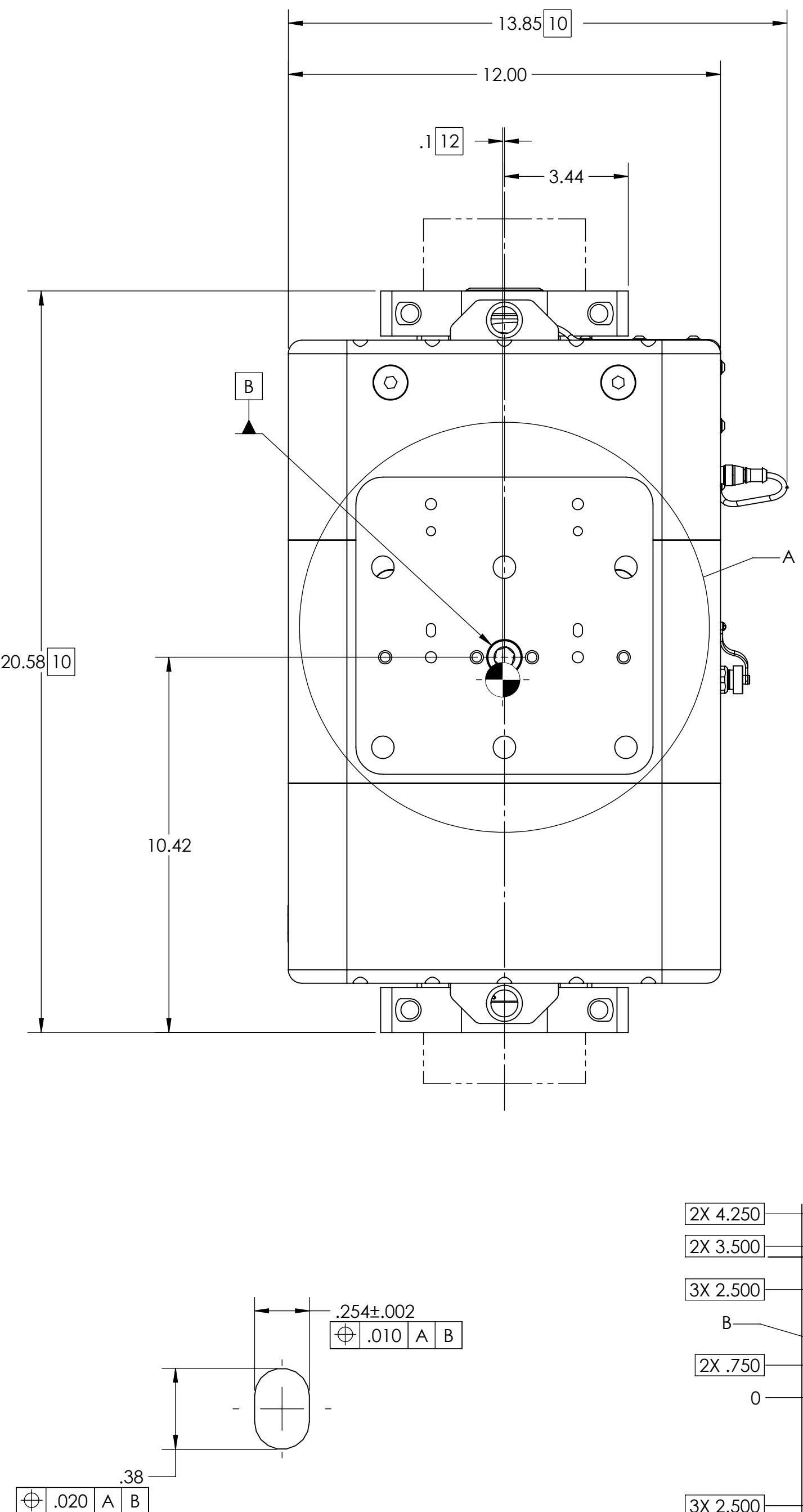
THIRD ANGLE PROJECTION
DO NOT SCALE DRAWING

SYMBOL KEY	UNLESS OTHERWISE SPECIFIED:	DRAWN	C. CHEYNE	2018-05-01
<input type="checkbox"/> NOTE	<input type="circle"/> PL ITEMS	CHEKED	S. CHEYNE	2018-05-01
DIMENSIONS ARE IN INCHES	TOLERANCES:	ME APPR.	C. CHEYNE	2018-05-01
ANGLE ± 5 DEGREES	TO TWO PLACE DECIMAL ±.030	EE APPR.		
INTERPRET DIM AND TOL PER	TO THREE PLACE DECIMAL ±.010			
ASME Y14.5M - 1994				
SEE TABLE I	PART NO.	SIZE	DWG. NO.	REV
			C ICDN900498	C
SCALE: 1:3				

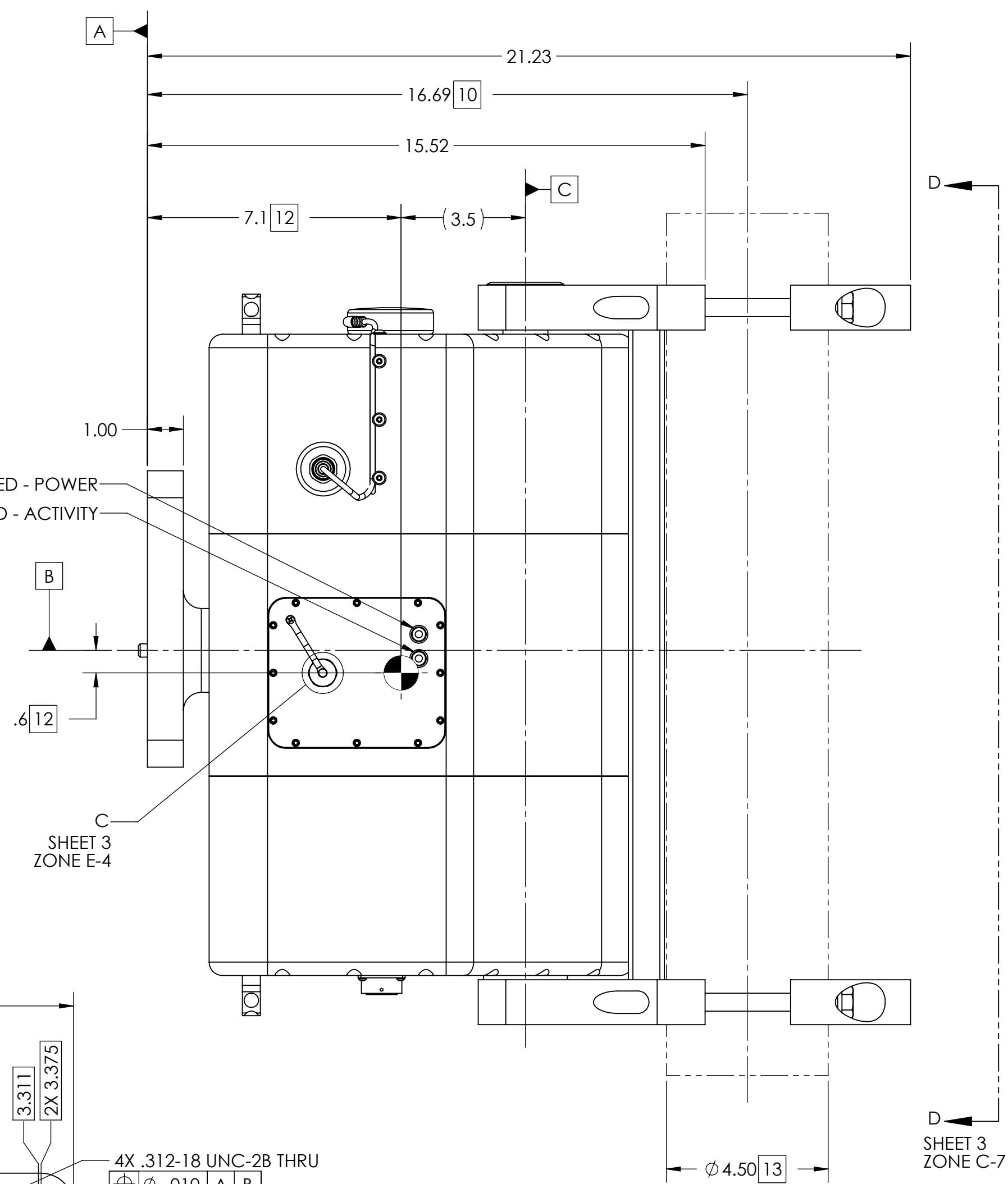
QPAR Antennas USA, LLC

TITLE:
QLA-60EBP-30
INTERFACE CONTROL
DRAWING

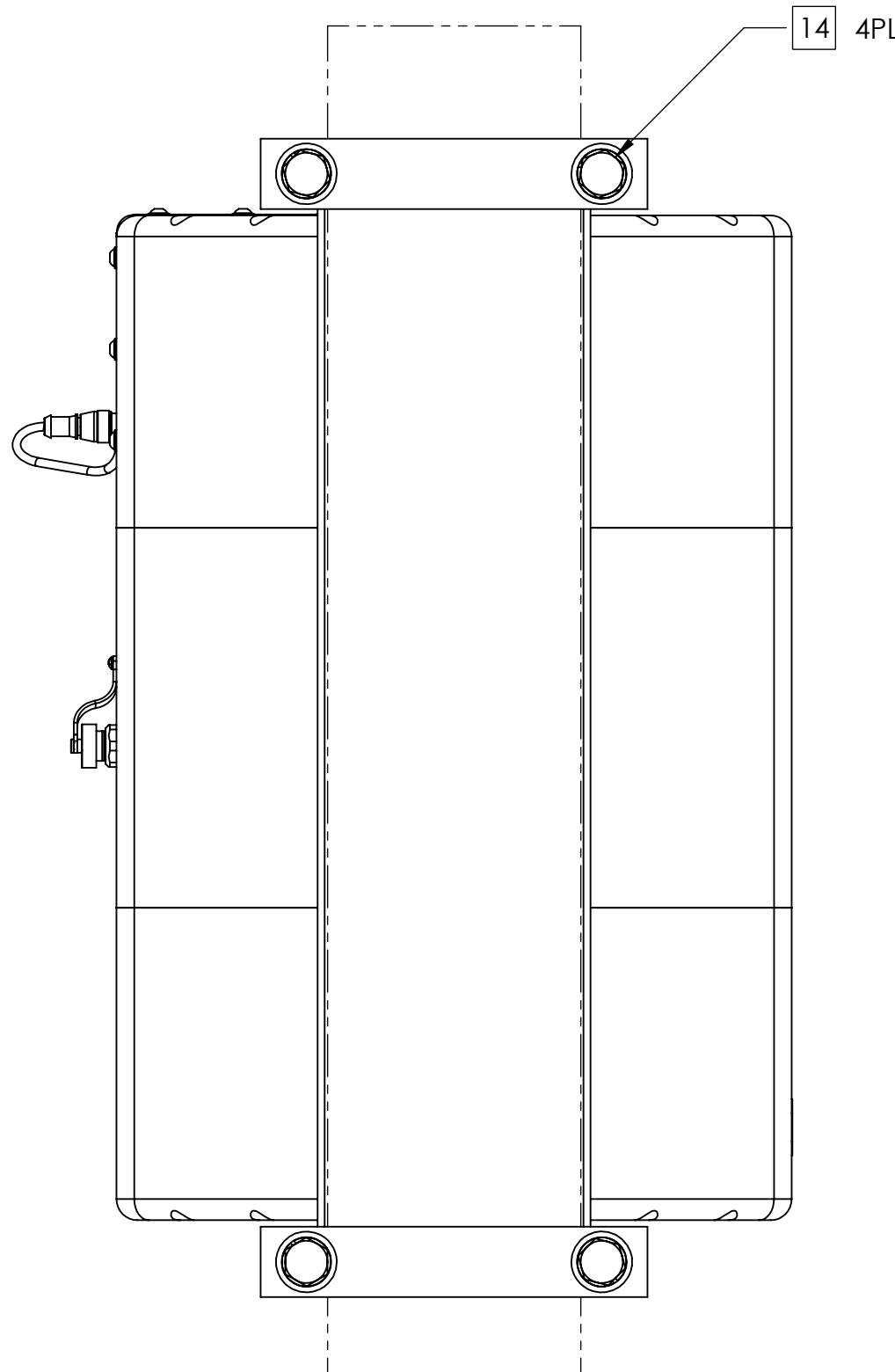
SHEET 1 OF 3



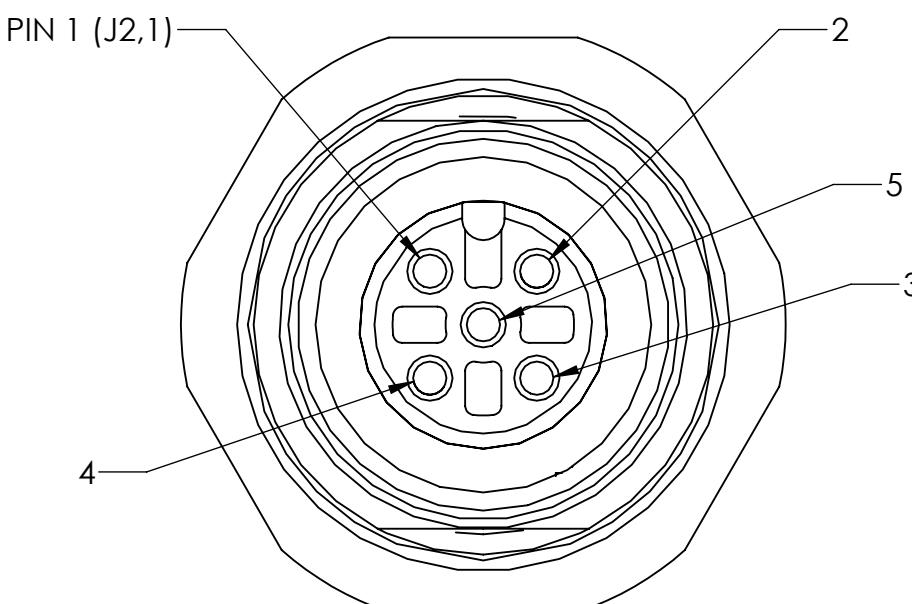
DETAIL B
SCALE 2 : 1
2 PLACES



DETAIL A
SCALE 2 : 5
ANTENNA MOUNTING FEATURES



VIEW D-D
SHEET 2
ZONE B-1



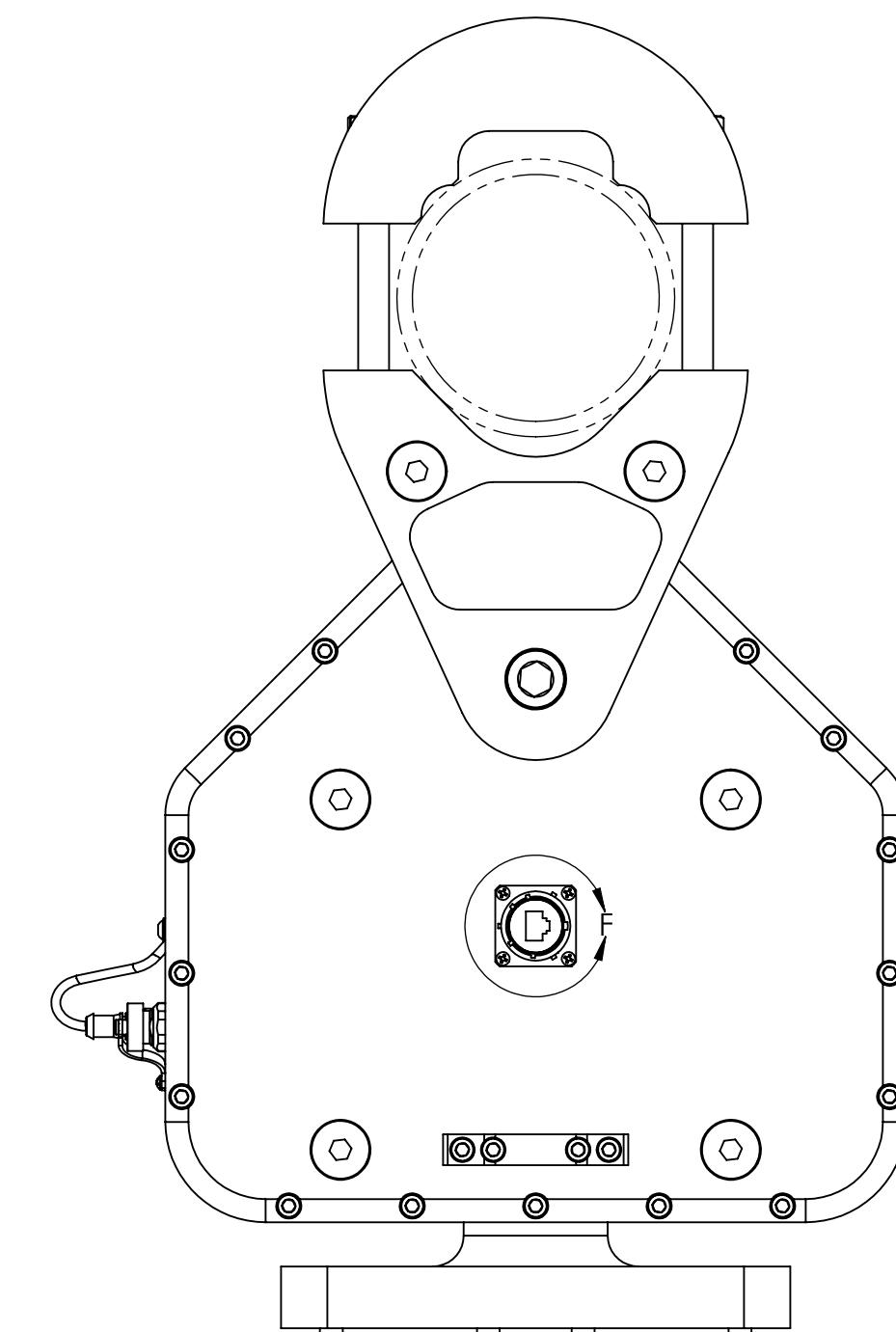
INTERCONNECT FOR SERIAL/OPTIONAL PELCO-D JOYSTICK INTERFACE

J2 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N 8151-0/PG9
CONNECTOR DUST CAP NOT SHOWN

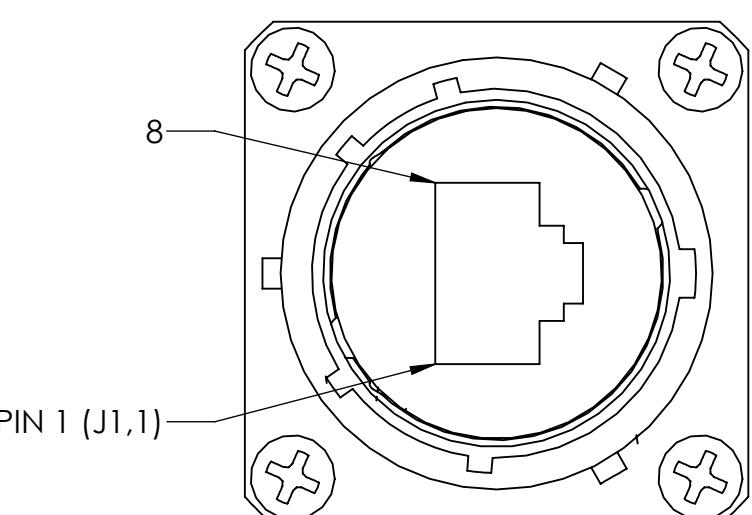
DETAIL C
SCALE 4 : 1
SHEET 2
ZONE C-4
SEE TABLE III FOR PINOUT DETAILS
SCALE 4 : 1

TABLE III (SERIAL CONNECTOR)

CONNECTOR DESIGNATION	FUNCTION
J2.1	DC RETURN FOR QPARUSA JOYSTICK
J2.2	NOT USED
J2.3	(B) TxD-/RxD- DATA LINE
J2.4	(A) TxD+/RxD+ DATA LINE
J2.5	DC POWER FOR QPARUSA JOYSTICK



VIEW E-E



INTERCONNECT FOR POSITIONER PoE

J1 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH AMPHENOL P/N - RJF6B

DETAIL F
SCALE 2 : 1
SEE TABLE II FOR PINOUT DETAILS

CONNECTOR DESIGNATION	FUNCTION
J1.1	DATA PAIR 1
J1.2	DATA PAIR 1
J1.3	DATA PAIR 2
J1.4	+48-56VDC PoE POWER INPUT
J1.5	+48-56VDC PoE POWER INPUT
J1.6	DATA PAIR 2
J1.7	DC RETURN FOR PoE INPUT
J1.8	DC RETURN FOR PoE INPUT