QLA-360FER-50

AUTO ACQUISITION ANTENNA POSITIONER FOR MICROWAVE LoS & SATELLITE

The QLA-360FER-50 is a Power Over Ethernet (PoE) antenna positioner designed from the ground up to automatically point and peak directional antennas for microwave Line of Sight and satellite communications.

The built in GPS and digital compass with full featured web based user interface provides rapid and accurate antenna pointing. The user interface includes a stored locations database that allows easy recall of known target or satellite slot locations followed by a final auto peak using radio signal strength. In addition, the threshold repeaking feature maintains the link's maximum quality of service by interfacing directly with your radio or satellite modem to monitor signal strength and automatically realign the link when needed.

The QLA-360FER-50 is typically paired with 4-8 ft antennas, payloads up to 500 lbs (226.8 kg), and offers 360° of azimuth & +110°/0° of elevation range. Download the Interface Control Drawing (ICD) for more details.

TECHNICAL SPECIFICATIONS – QLA-360FER-50	
Power	Power Over Ethernet (POE) 48VDC-56VDC Supply Included
Material / Finish	Aluminum with stainless steel hardware / Hard coat anodize
Positioner Travel	
Azimuth	400° (+/-200°)
Elevation	110° (+110°/0°)
Positioner Drive Rate	
Azimuth	Variable, up to 0.7°/sec no load
Elevation	Variable, up to 0.7°/sec no load
Temperature	
Operational	-22 to 140°F (-30 to 60°C)
Survival	-40 to 158°F (-40 to 70°C)
Feedback Resolution	0.1°
Backlash (Az / El)	less than 0.05° in both axes
Torque	
Operational (Az / El)	100 ft-lbs (135.6 Nm) or 350 ft-lbs (475.5 Nm) in Elevation with Counterweight Kit (-CTWT)
Survival (Az / El)	400 ft-lbs (542.3 Nm)
Payload	500 lbs (226.8 kg)
Dimensions	Height: 19.75" (50.2 cm), Width: 26.0" (66.0 cm), Depth: 26.0" (66.0 cm)
Weight	112 lbs (50.8 kg) or 228 lbs (103.4 kg) with Counterweight Kit (-CTWT)
Mounting Interface	Table top mount (See ICD for details)
Antenna Mount Options	(8) 3/8" Clearance Holes on a 25" dia Bolt Circle (See ICD for details)
Communication Interface	
User Interfaces	Web based hosted internal to unit, Pelco D
Ethernet	10/100 Ethernet
Serial	RS-485
Other	Satellite Modem and LoS Radio SNMP Interfaces for Acquisition and Tracking

Rev C

Q-PAR Antennas USA, LLC – sales@qparusa.com – Tel: 702-208-9973 – Fax: 702-208-9984

REV	DESCRIPTION	DATE	APPROVED
B	CN600564	2018-07-25	CLC

NOTES: UNLESS OTHERWISE SPECIFIED

1. QLA-360FER-50 CONFIGURABLE OPTIONS PER TABLE I
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500140
3. 48 - 56VDC POWER SUPPLY INCLUDED WITH POSITIONER. NOT SHOWN IN DRAWING
4. HARD COAT ANODIZE ALUMINUM CONSTRUCTION WITH STAINLESS STEEL HARDWARE
5. 400° (+/-200°) AZIMUTH TRAVEL WITH 0.7°/SEC DRIVE RATE (NO LOAD)
6. 110° (+110°/0°) ELEVATION TRAVEL WITH 0.7°/SEC DRIVE RATE (NO LOAD)
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. 0.1° FEEDBACK RESOLUTION IN ALL AXES
9. AZIMUTH AND ELEVATION BACKLASH LESS THAN 0.05° IN BOTH AXES
10. 19.75" (50.2 cm) HIGH X 26.0" (66.0 cm) WIDE X 26.0" (66.0 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
11. WEIGHT APPROXIMATELY 112 LBS (50.8 kg) OR 228 LBS (103.4 kg) WITH COUNTERWEIGHT KIT (-CTWT)
12. PAYLOAD SHALL NOT EXCEED 500 LBS OR 100 FT-LBS OF TORQUE OR 350 FT-LBS OF TORQUE WITH COUNTERWEIGHT KIT ABOUT THE ELEVATION AXIS. TO CALCULATE TORQUE, TAKE THE DISTANCE FROM THE PAYLOAD CENTER OF GRAVITY TO DATUM -C- IN FEET AND MULTIPLY BY THE PAYLOAD WEIGHT
13. TABLE TOP MOUNTING HOLES
14. CENTER OF GRAVITY 0.2" (0.5 cm) IN THE X-DIRECTION, 11.3" (28.7cm) IN THE Y-DIRECTION AND 0.5" (1.3 cm) IN THE Z-DIRECTION (WITHOUT COUNTERWEIGHT KIT)

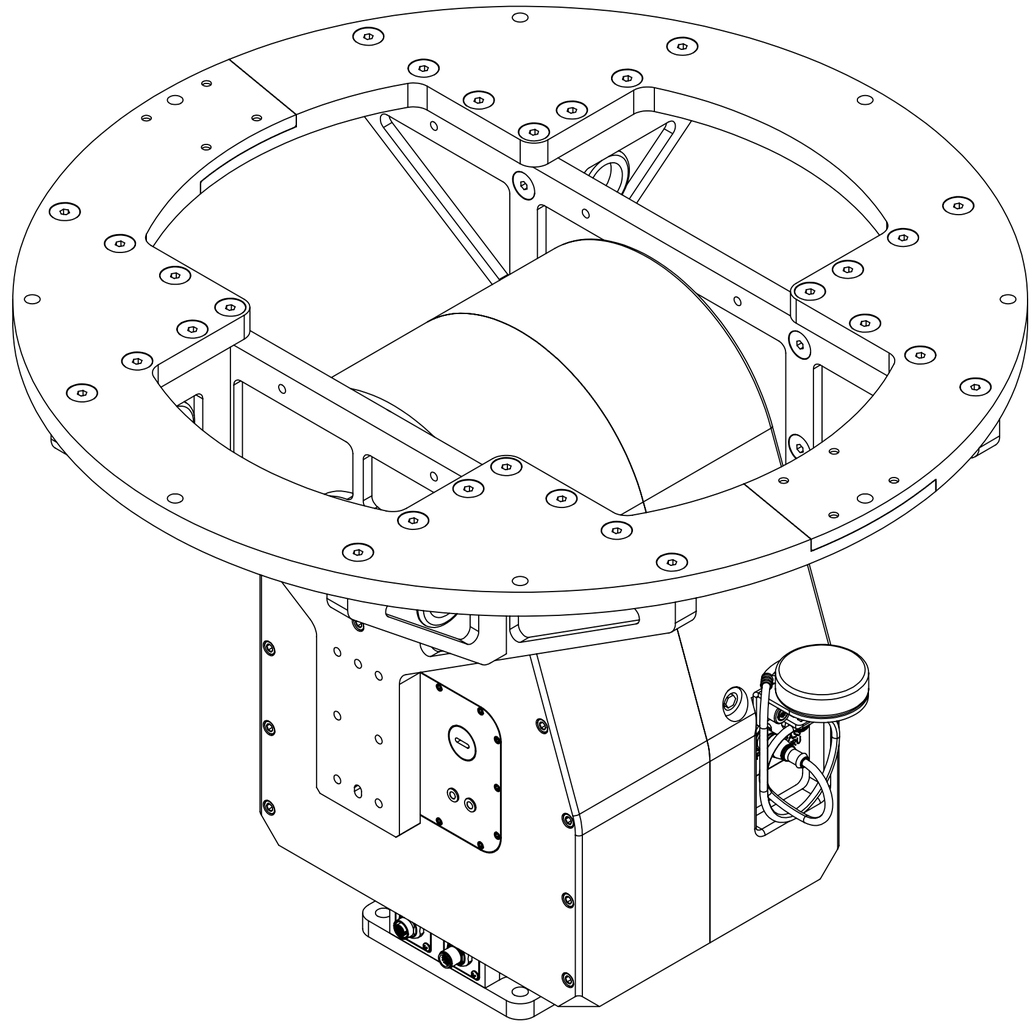


TABLE I

BUILDING A PART NUMBER ***STANDARD OPTIONS***

LA-360FER - 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
CW = (2) Adjustable 50 lb counterweights with extention arms. Max elevation torque of 350 ft-lbs

MOTOR DRIVES AND PAYLOAD

50 = Az 100 ft-lbs @ 0.7°/s, El 100 ft-lbs @ 0.7°/s, 500 lb payload. Typically paired with 4-8 ft antenna (+/-200° azimuth, +110/0° elevation)

MODEL

LA-360FER = LinkAlign-360FER (See motor drives and payload section for positioner travel range info)

SYMBOL KEY

NOTE PL ITEMS

PROPRIETARY AND CONFIDENTIAL

Q-PAR Antennas USA, LLC
4445 Topaz St. - Las Vegas, NV
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	2017-03-13
CHECKED	S. CHEYNE	2017-03-13
ME APPR.	S. CHEYNE	2017-03-15
EE APPR.		

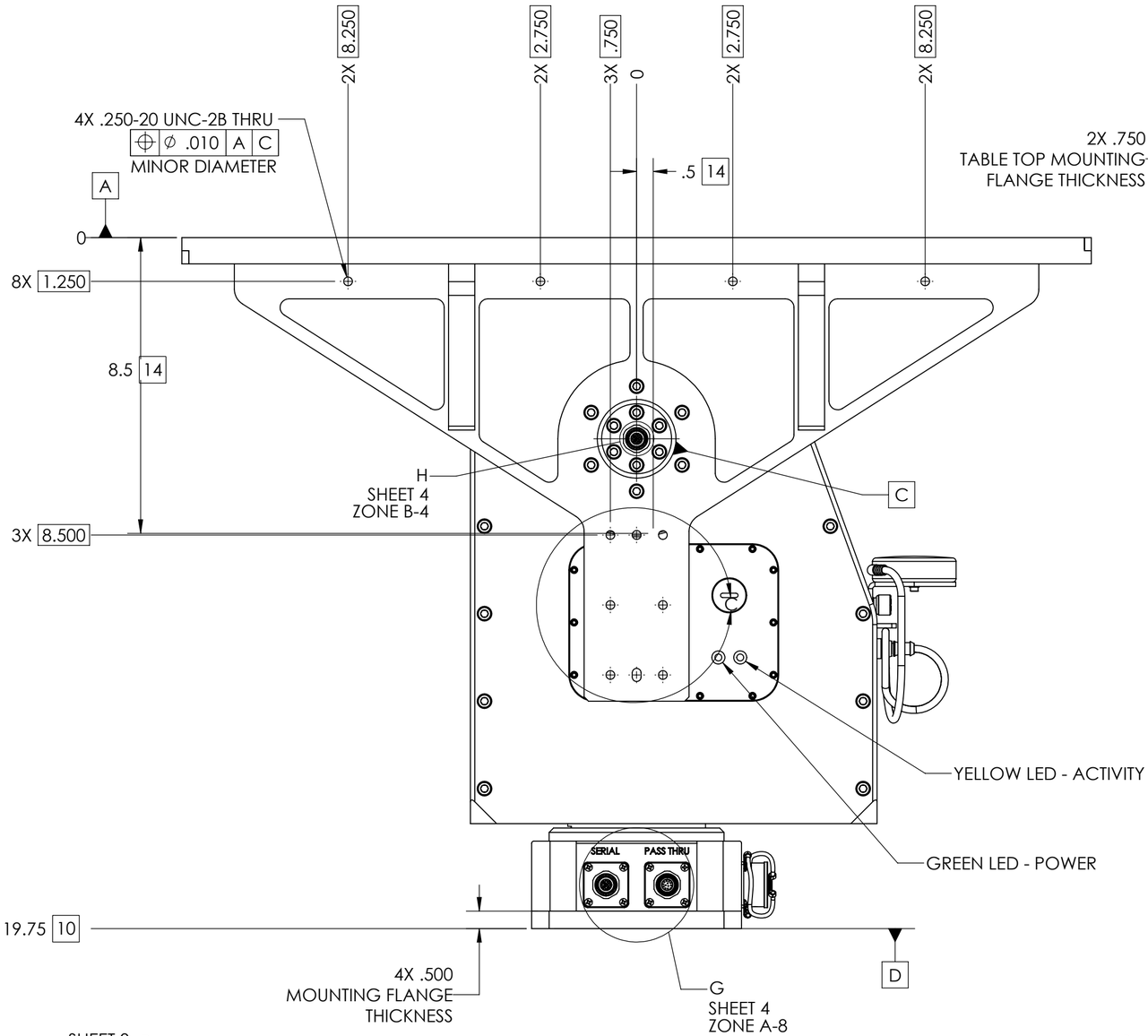
PART NO.
SEE TABLE I

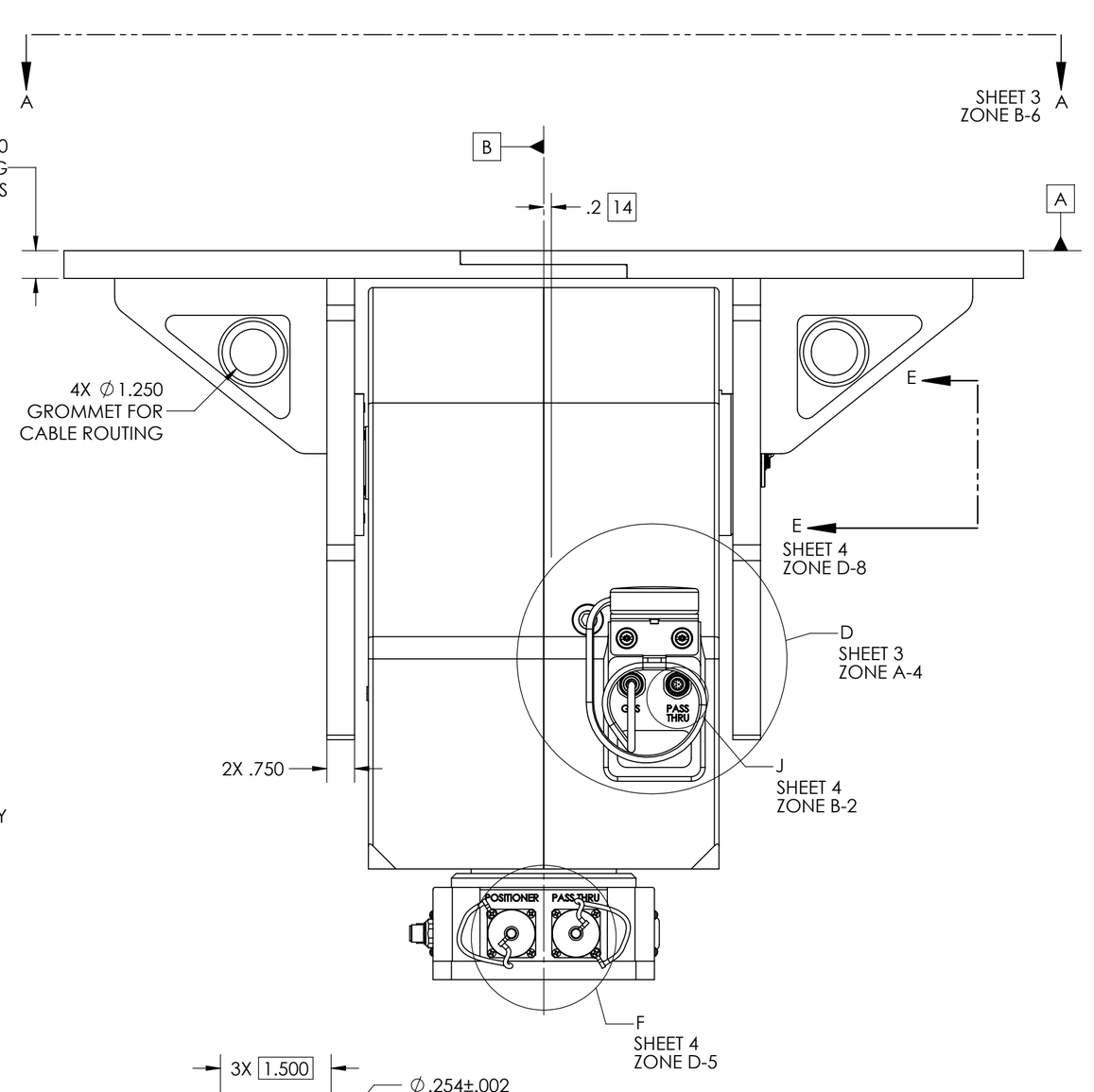
Q-PAR Antennas USA, LLC

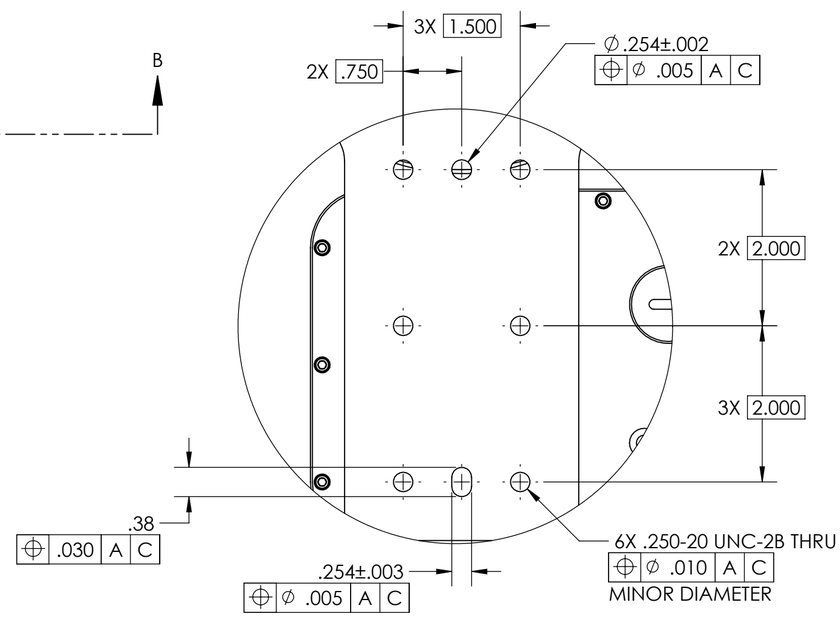
TITLE:
QLA-360FER-50
INTERFACE CONTROL DRAWING

SIZE	DWG. NO.	REV
C	ICDN900448	B

SCALE: 1:3 SHEET 1 OF 5

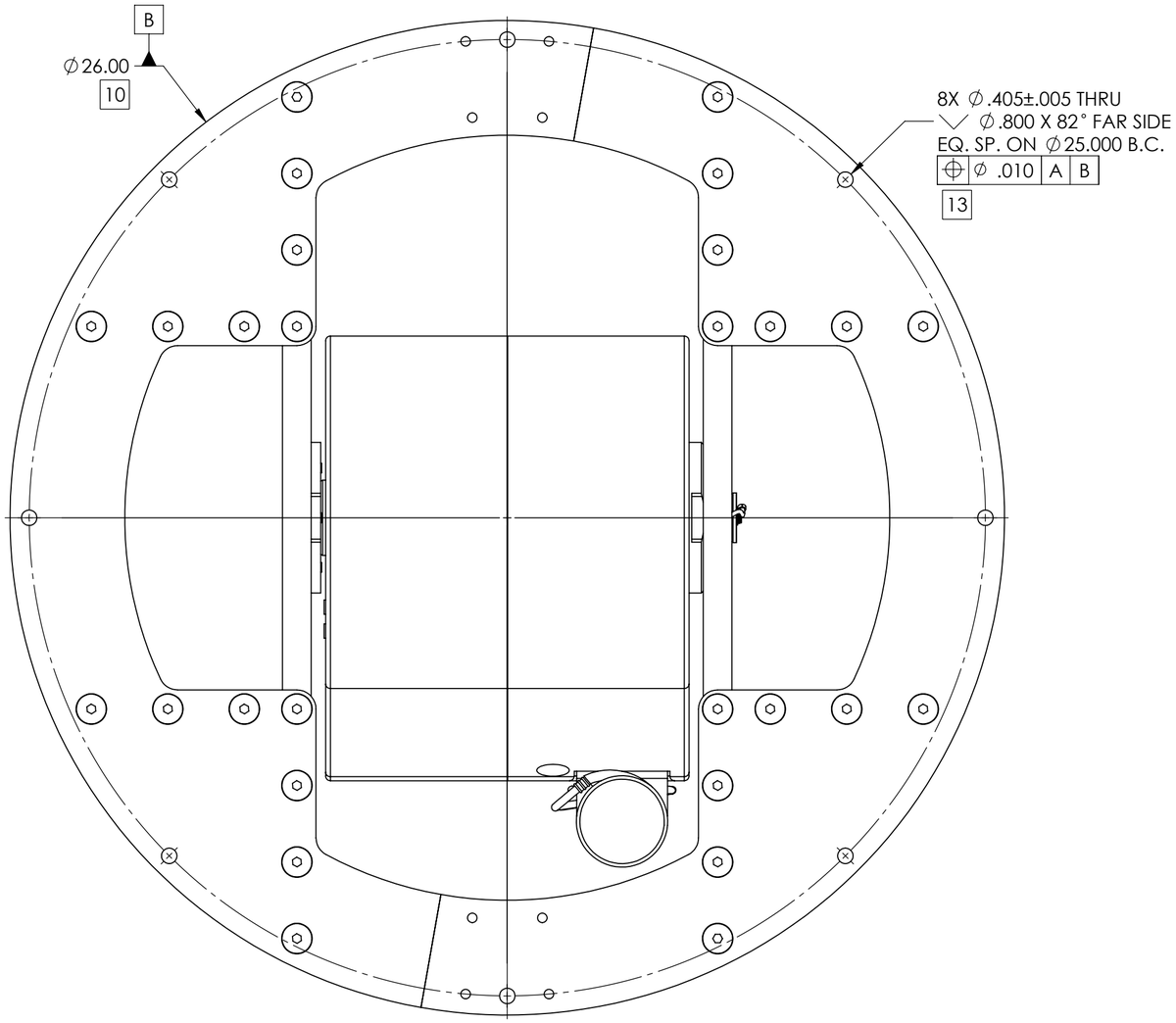




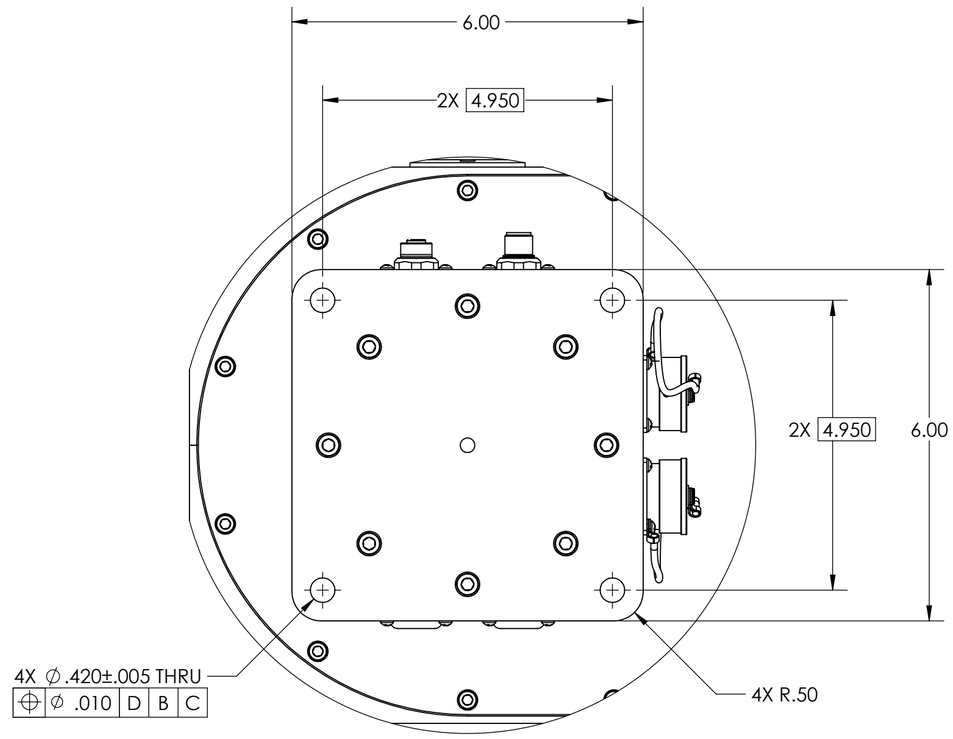


DETAIL C
SCALE 2 : 3
2 PLACES

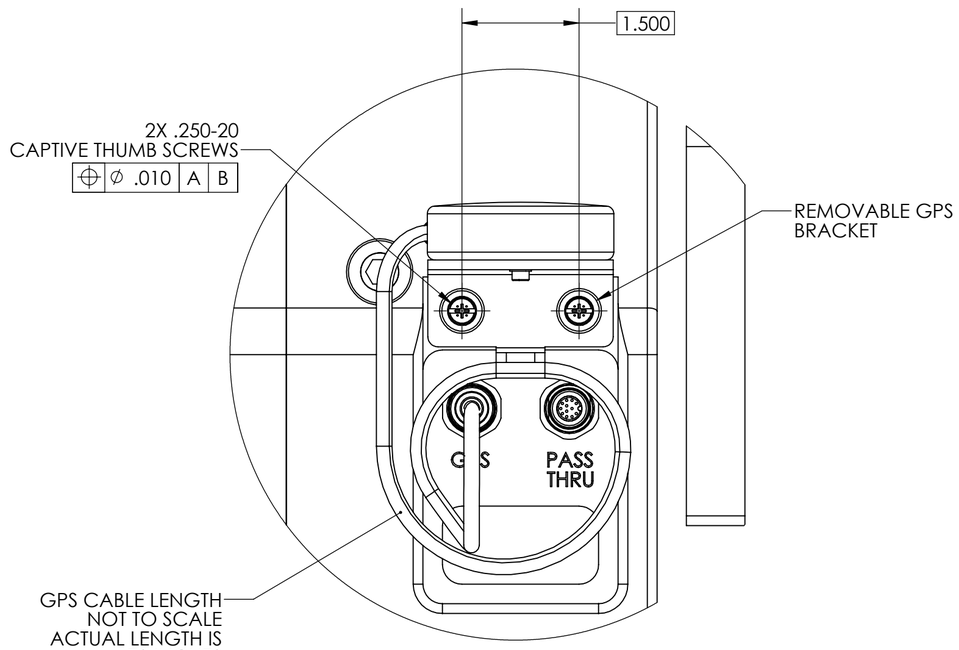
SIZE	DWG. NO.	
C	ICDN900448	
SCALE: 1:3		SHEET 2 OF 5



VIEW A-A
SHEET 2
ZONE F-1

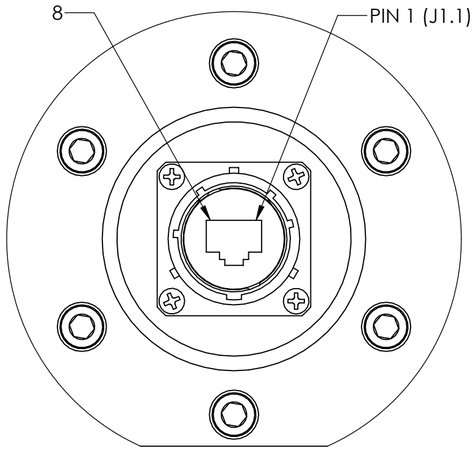


VIEW B-B
SHEET 2
ZONE B-8
SCALE 1 : 2



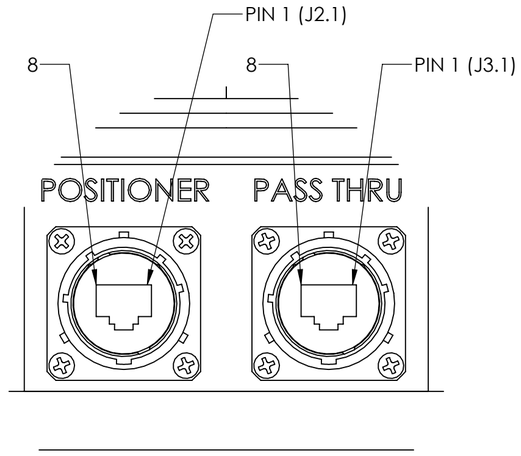
DETAIL D
SCALE 2 : 3
SHEET 2
ZONE D-1

SIZE	DWG. NO.
C	ICDN900448
SCALE: 1:3	SHEET 3 OF 5



J1CONNECTOR SHOWN FROM MATING SIDE
MATES WITH AMPHENOL P/N - RJF68

SECTION E-E
SHOWN WITHOUT PROTECTIVE COVERS
SHEET 2
ZONE D-2
SCALE 1 : 1
SEE TABLE III FOR J1 PASS THRU CONNECTOR PINOUT DETAILS

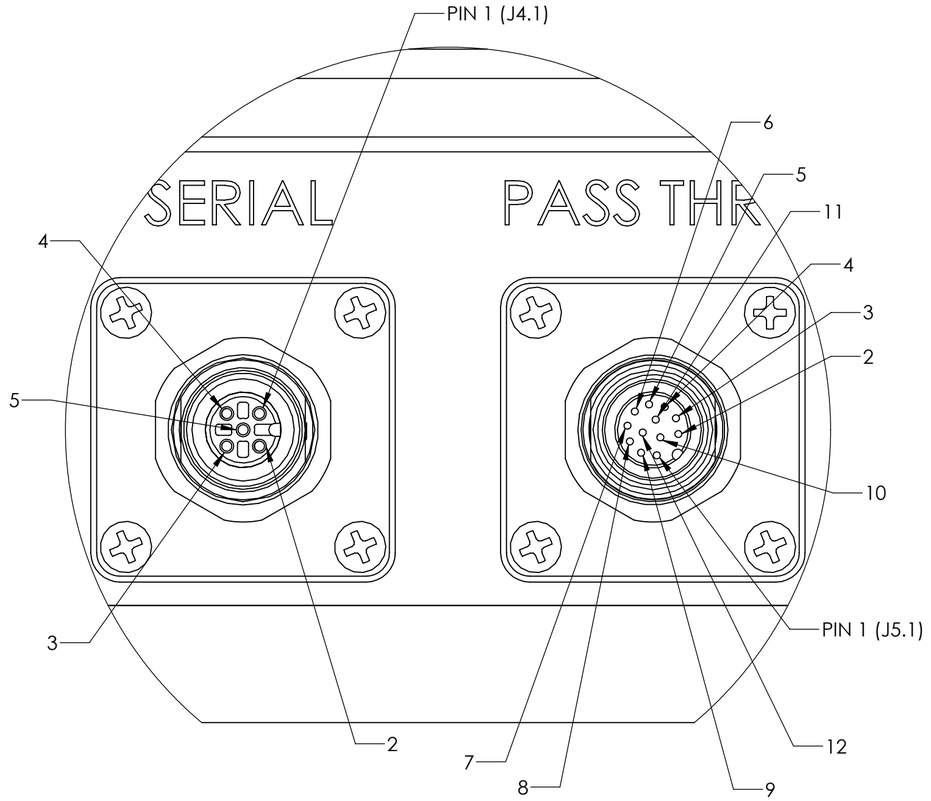


J2 & J3 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH AMPHENOL P/N - RJF68

DETAIL F
SHEET 2
ZONE C-2
SCALE 1 : 1
SHOWN WITHOUT PROTECTIVE COVERS
SEE TABLE II FOR J2 PoE CONNECTOR PINOUT DETAILS
SEE TABLE III FOR J3 PASS THRU CONNECTOR PINOUT DETAILS

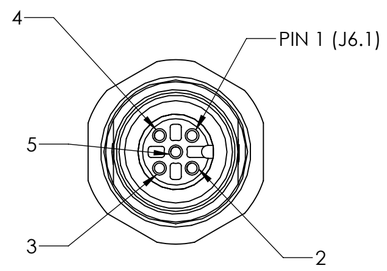
TABLE II (CONNECTOR FUNCTION)	
CONNECTOR DESIGNATION	**FUNCTION**
J2.1	DATA PAIR 1
J2.2	DATA PAIR 1
J2.3	DATA PAIR 2
J2.4	+48-56VDC PoE POWER INPUT
J2.5	+48-56VDC PoE POWER INPUT
J2.6	DATA PAIR 2
J2.7	DC RETURN FOR PoE INPUT
J2.8	DC RETURN FOR PoE INPUT
J4.1	DC RETURN FOR JOYSTICK
J4.2	NOT USED
J4.3	(B) TxD-/RxD- DATA LINE
J4.4	(A) TxD+/RxD+ DATA LINE
J4.5	DC POWER FOR JOYSTICK
J6.1	POT GND
J6.2	+12VDC MOTOR
J6.3	MOTOR GND
J6.4	POT WIPER
J6.5	+3.3V

TABLE III (WIRING DIAGRAM)	
FROM	**TO**
J1.1	J3.1
J1.2	J3.2
J1.3	J3.3
J1.4	J3.4
J1.5	J3.5
J1.6	J3.6
J1.7	J3.7
J1.8	J3.8
J5.1	J7.1
J5.2	J7.2
J5.3	J7.3
J5.4	J7.4
J5.5	J7.5
J5.6	J7.6
J5.7	J7.7
J5.8	J7.8
J5.9	J7.9
J5.10	J7.10
J5.11	J7.11
J5.12	J7.12



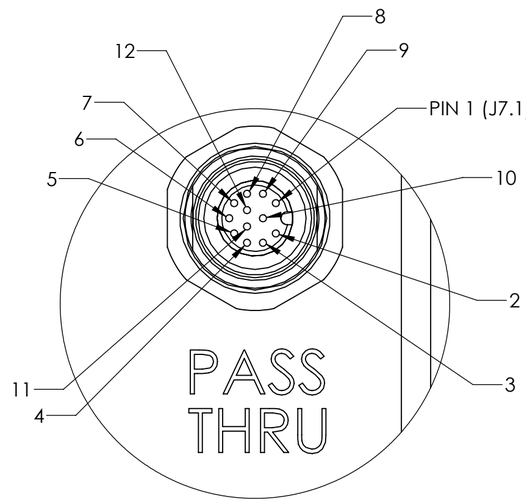
J4 & J5 CONNECTOR SHOWN FROM MATING SIDE
J4 MATES WITH TURCK P/N - 8151-0/PG9
J5 MATES WITH TURCK P/N - B 81121-0/PG9

DETAIL G
SHEET 2
ZONE C-6
SCALE 2 : 1
SEE TABLE II FOR J4 SERIAL CONNECTOR PINOUT DETAILS
SEE TABLE III FOR J5 PASS THRU CONNECTOR PINOUT DETAILS



J6 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N - 8151-0/PG9

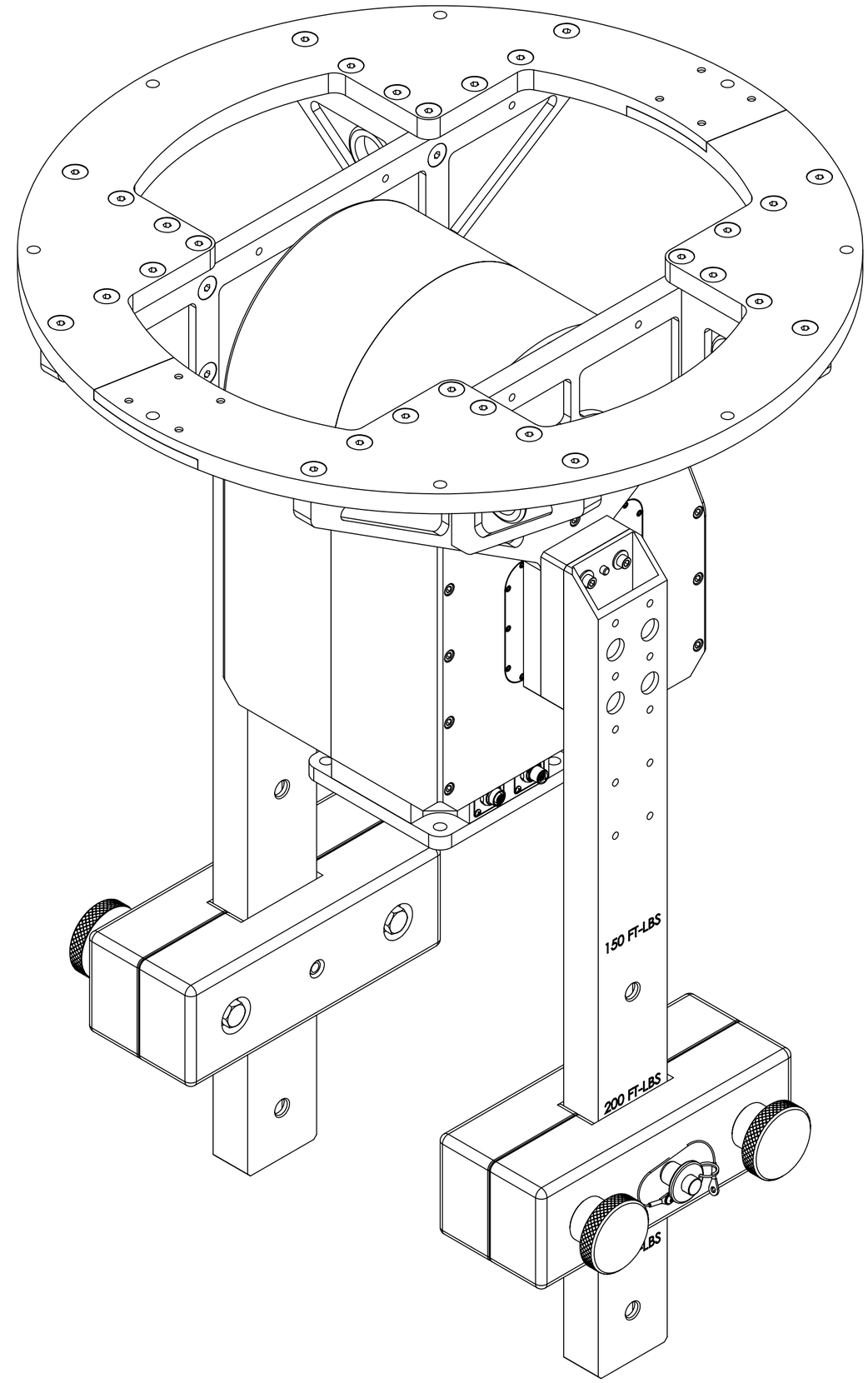
DETAIL H
SHEET 2
ZONE E-7
SCALE 2 : 1
SEE TABLE II FOR J6 POLARIZATION CONNECTOR PINOUT DETAILS



J7 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N - B 81121-0/PG9

DETAIL J
SHEET 2
ZONE D-2
SCALE 2 : 1
SHOWN WITHOUT GPS CABLE
SEE TABLE III FOR J7 PASS THRU CONNECTOR PINOUT DETAILS

SIZE	DWG. NO.	
C	ICDN900448	
SCALE: 1:3		SHEET 4 OF 5



SHOWN WITH COUNTERWEIGHT KIT

SIZE	DWG. NO.
C	ICDN900448
SCALE: 1:3	SHEET 5 OF 5