QLA-60EBP-10

AUTO ACQUISITION ANTENNA POSITIONER FOR MILLIMETER WAVE LINE OF SIGHT

The QLA-60EBP-10 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 70–90GHz (E-Band) links.

E-Band systems have very narrow beam widths which require very precise pointing and stable masts to maintain a high quality 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-10 corrects for these disturbances to maintain the highest Quality of Service available without the down time and reoccurring cost due to manual realignment. Initially align your link using a smart phone, computer, or optional joystick. Once aligned, our software will maintain your link automatically based on an RSSI threshold setting or peaked on demand from anywhere on your network.

The QLA-60EBP-10 is typically paired with 1-2 ft side arm mount antennas, payloads up to 100 lbs (45.4 kg), and offers +/-30° of azimuth and elevation range. See the Interface Control Drawing (ICD) for details.

TECHNICAL SPECIFICATIONS – QLA-60EBP-10	
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 0.4°/sec no load
Elevation	Variable, up to 0.4°/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 0.1° in both axes
Torque	
Operational (both axes)	50 ft-lbs (67.8 Nm)
Survival (both axes)	200 ft-lbs (271.2 Nm)
Payload	100 lbs (45.4 kg)
Dimensions	Height: 11.81" (30.0 cm), Width: 10.25" (26.0 cm), Depth*: 10.79" (27.4 cm)
Weight	40 lbs (18.1 kg)
Mounting Interface	Mounts to masts O.D. ranging from 3 - 4.5"
Antenna Mount Options	5/16-18 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 E

Specifications subject to change without notice

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

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

NOTES: UNLESS OTHERWISE SPECIFIED

1. QLA-60EBP-10 CONFIGURABLE OPTIONS PER TABLE I. PART NUMBER LA-60EBP-10-100 SHOWN THROUGHOUT THIS DRAWING. PoE CABLE SHOWN NOT TO SCALE
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500131
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 0.4°/SEC DRIVE RATE (NO LOAD)
6. 60° (+/-30°) ELEVATION TRAVEL WITH 0.4°/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 / ELEVATION BACKLASH LESS THAN 0.1°
10. ENVELOPE DIMENSIONS WHEN MOUNTED TO A 4.5" O.D. MAST ARE 11.81" (30.0 cm) HIGH X 15.11" (38.4 cm) WIDE X 10.25" (26.0 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
11. WEIGHT APPROXIMATELY 40 LBS (18.1 kg) NOT INCLUDING PoE CABLE
12. CENTER OF GRAVITY 5.2" (13.2 cm) IN THE X-DIRECTION, 0.9" (2.3 cm) IN THE Y-DIRECTION AND 0" IN THE Z-DIRECTION MEASURED 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 (3/8-16 X 4.5" LONG STAINLESS STEEL HEX HEAD SCREWS) TO 236 IN-LBS OR 20 FT-LBS
15. PAYLOAD SHALL NOT EXCEED 100 LBS OR 50 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 200 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 (5/16-18 X 1" LONG STAINLESS STEEL HEX HEAD SCREWS) TO 132 IN-LBS OR 11 FT-LBS

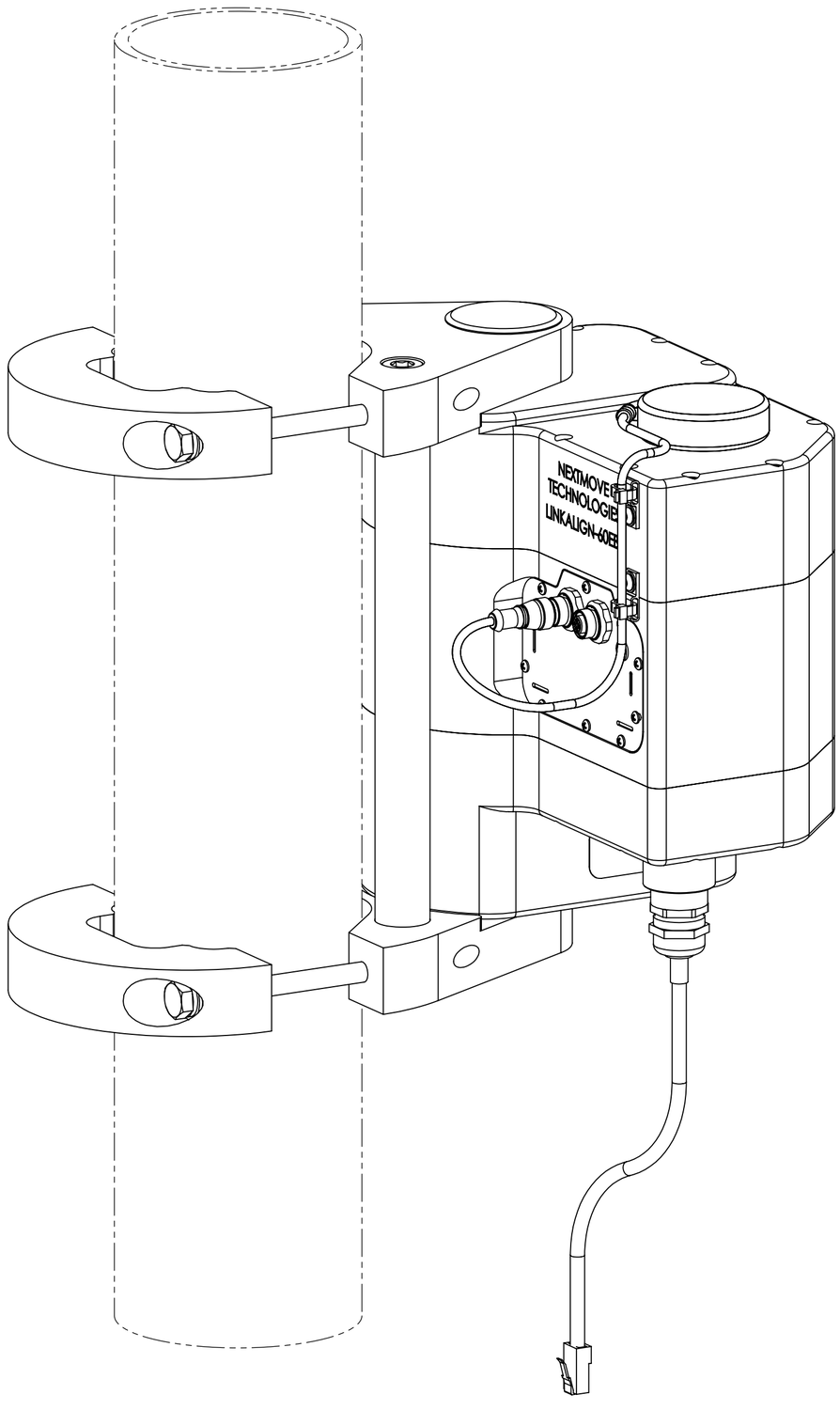


TABLE I

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

LA-60EBP - 10 - ____ - 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

10 = Az 50 ft-lbs @ 0.4°/s, El 50 ft-lbs @ 0.4°/s, 100 lb payload. Typically paired with 1-2 ft side arm mount antenna

MODEL

LA-60EBP = LinkAlign-60EBP (+/-30° azimuth, +/-30° elevation)

SYMBOL KEY

NOTE PL ITEMS

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	S. CHEYNE	2016-04-08
CHECKED	C. CHEYNE	2018-08-06
ME APPR.	S. CHEYNE	2016-04-08
EE APPR.		

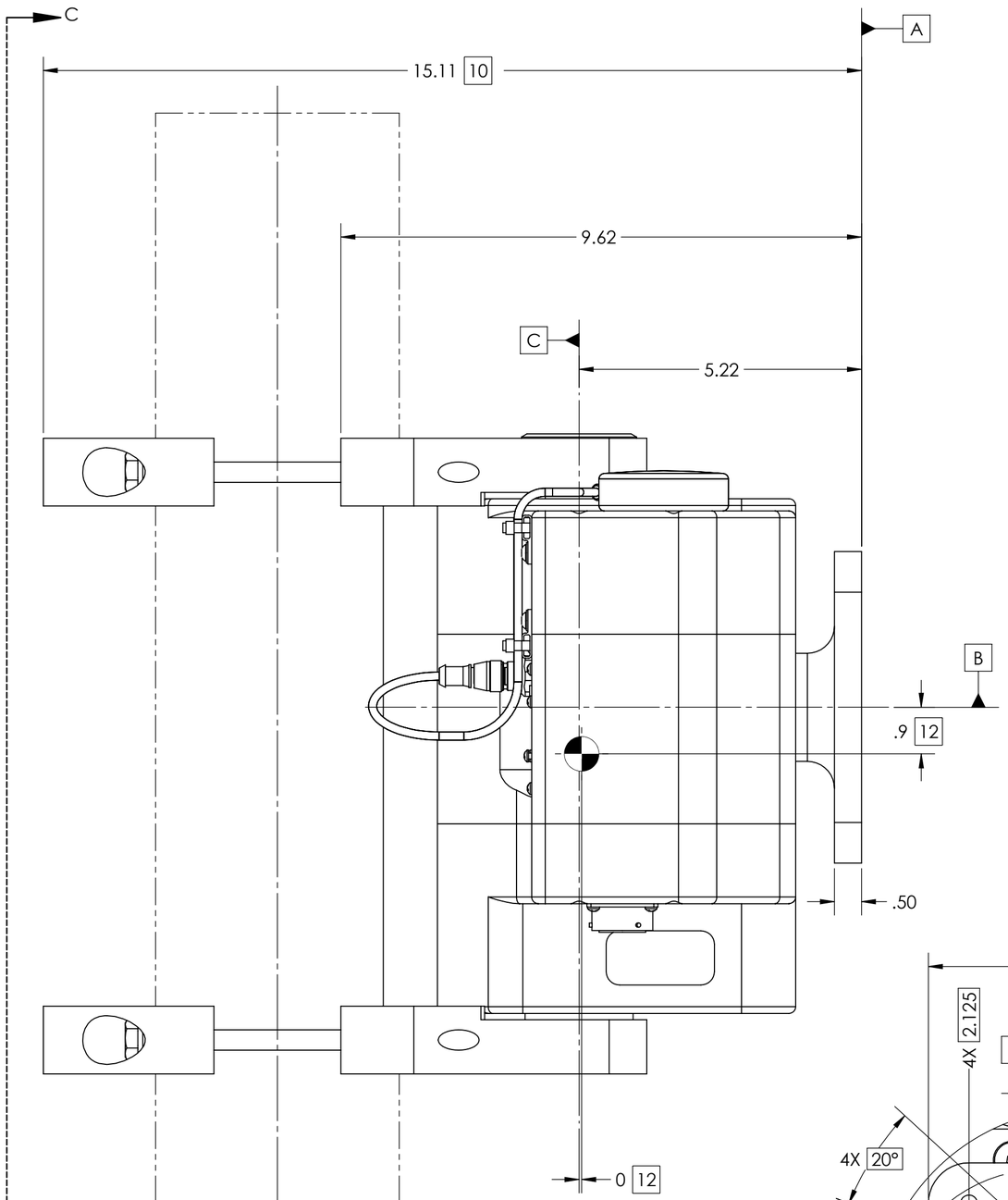
PART NO.
SEE TABLE I

QPAR Antennas USA, LLC

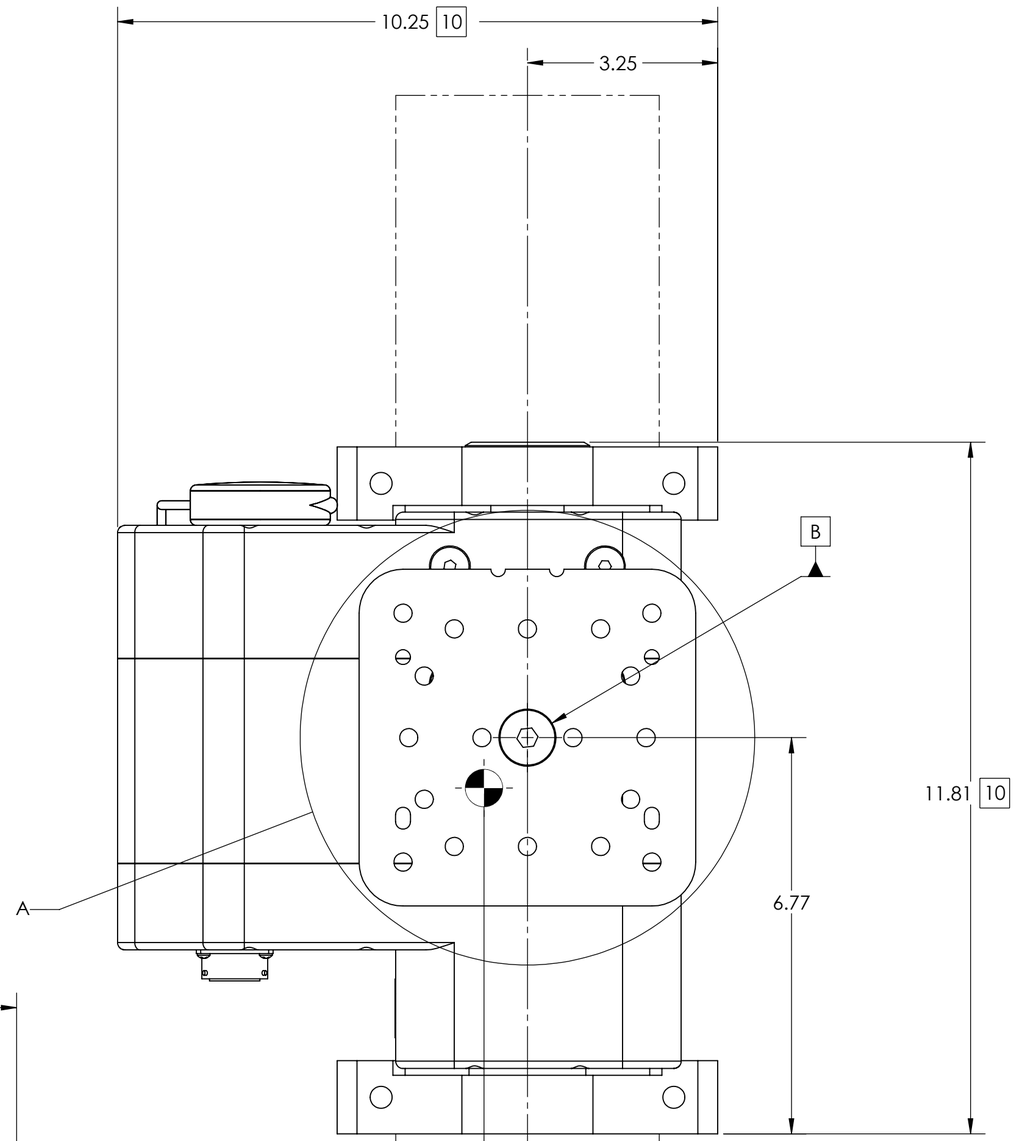
TITLE:
LINKALIGN-60EBP-10
INTERFACE CONTROL
DRAWING

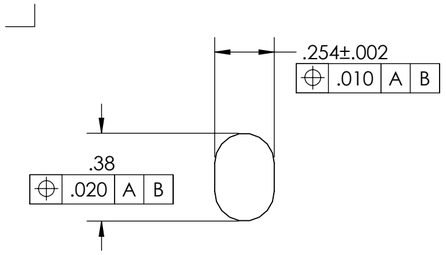
SIZE	DWG. NO.	REV
C	ICDN900374	C

SCALE: 1:2 SHEET 1 OF 4

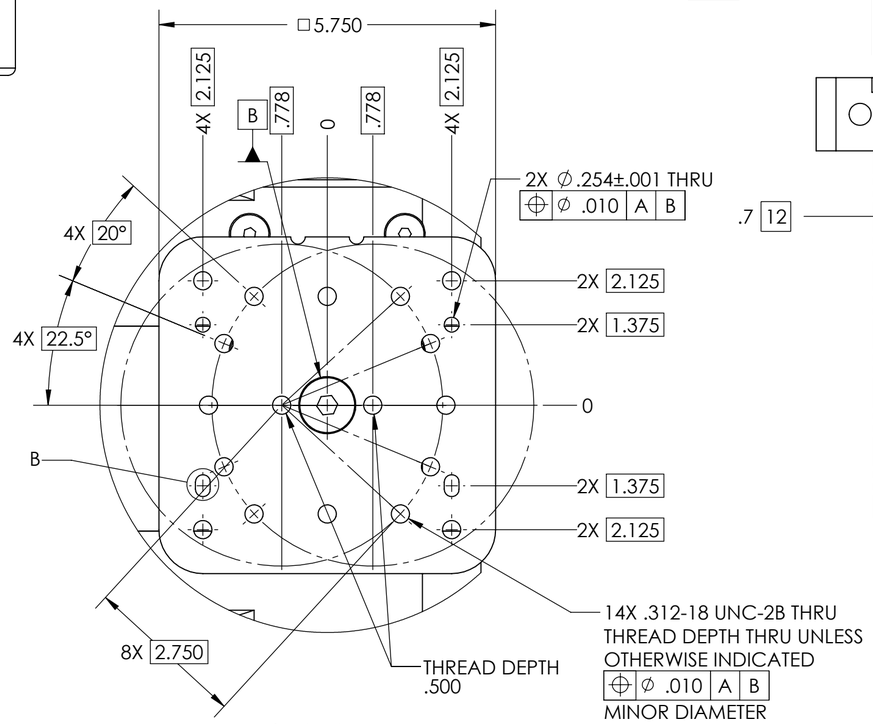


SHEET 3
ZONE A-7





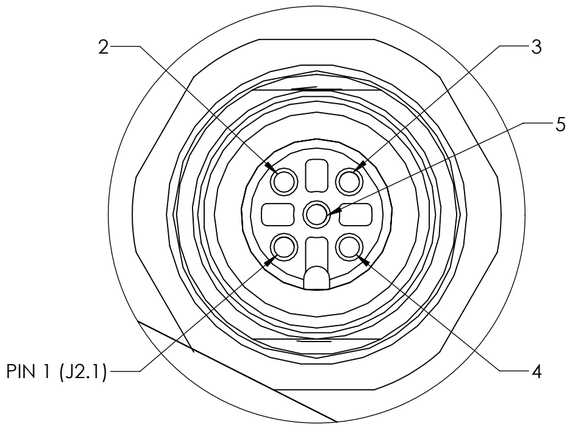
DETAIL B
SCALE 2 : 1



DETAIL A
ANTENNA MOUNTING FEATURES
17

SIZE	DWG. NO.
C	ICDN900374
SCALE: 1:2	SHEET 2 OF 4

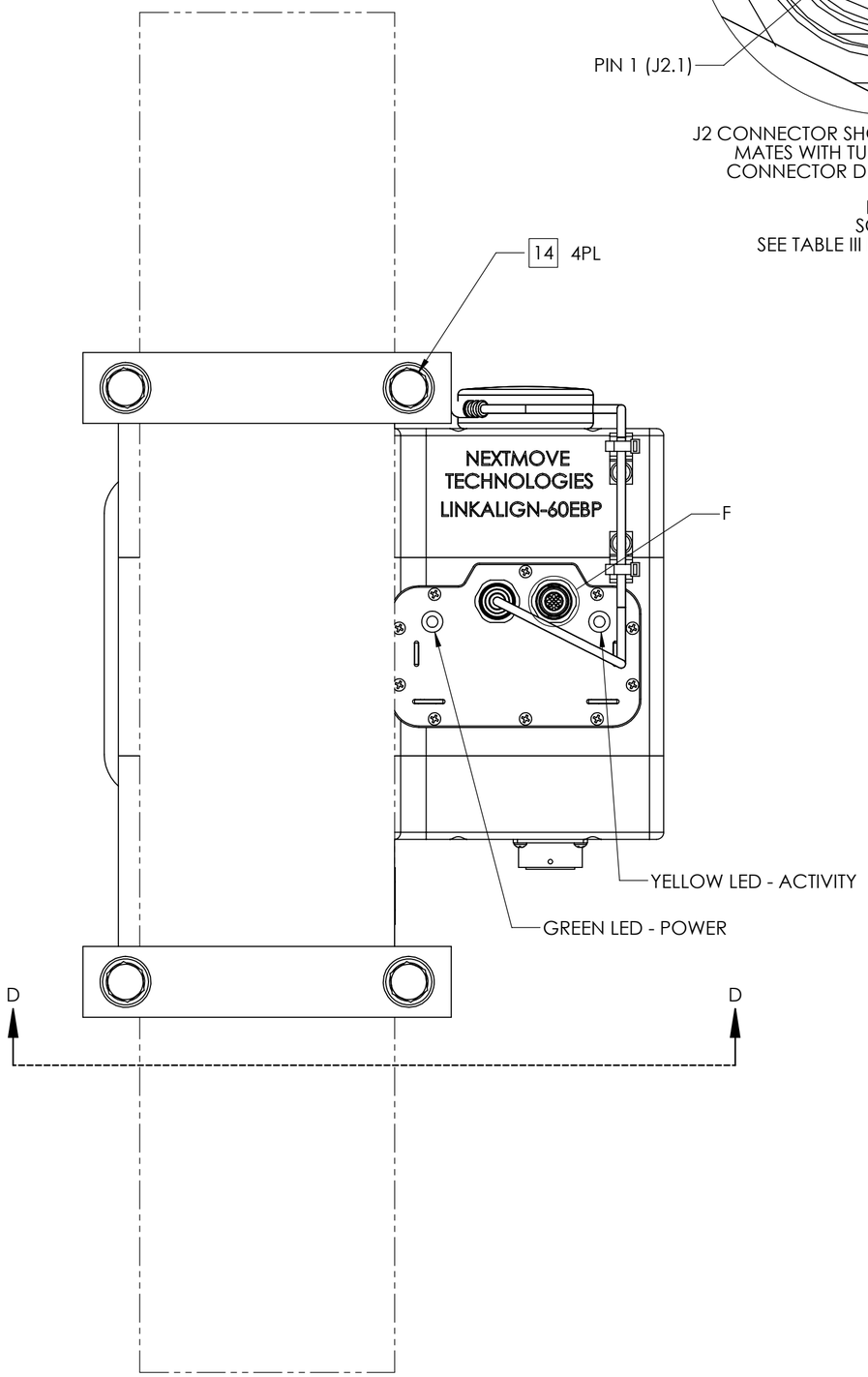
INTERCONNECT FOR SERIAL / OPTIONAL PELCO-D JOYSTICK INTERFACE



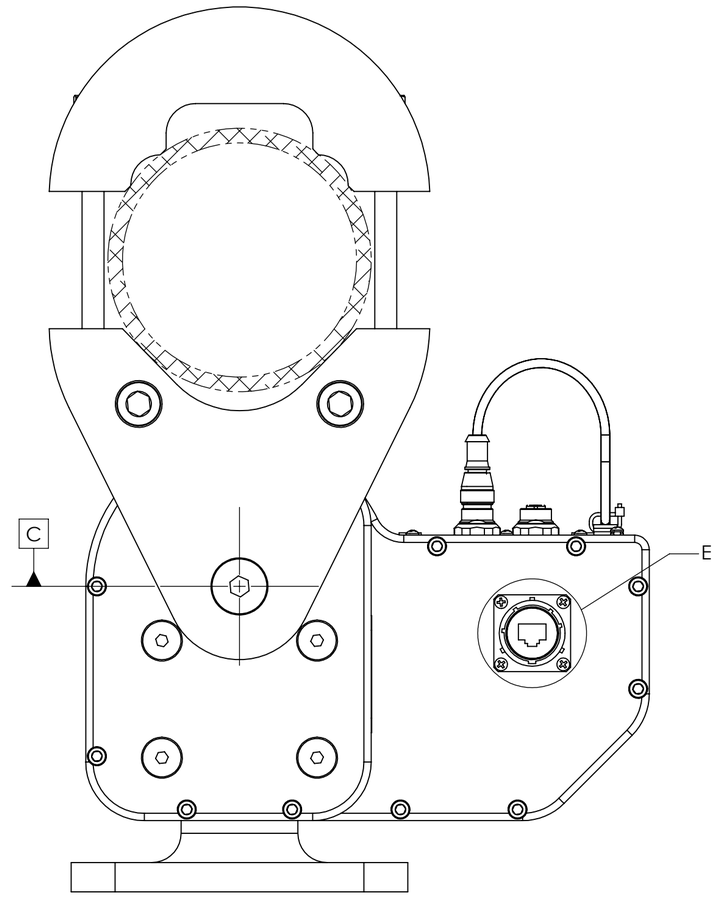
J2 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N 8151-0/PG9
CONNECTOR DUST CAP NOT SHOWN

DETAIL F
SCALE 4 : 1
SEE TABLE III FOR PINOUT DETAILS

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

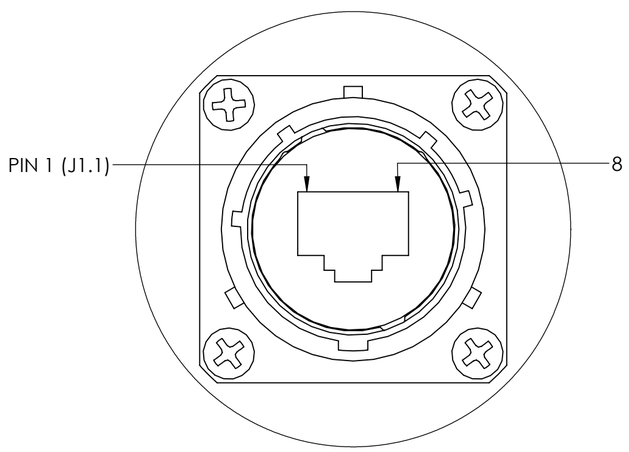


VIEW C-C
SHEET 2
ZONE A-8



SECTION D-D

INTERCONNECT FOR POSITIONER PoE

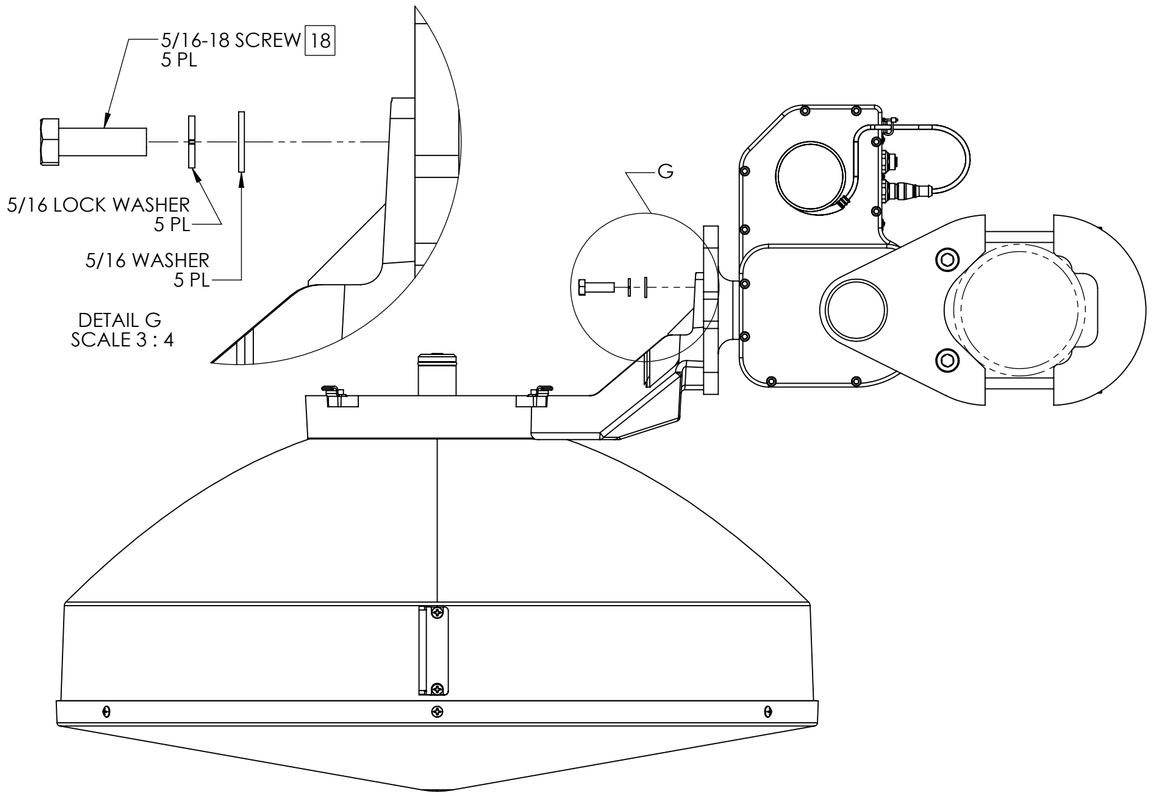


J1 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH AMPHENOL P/N - RJF6B

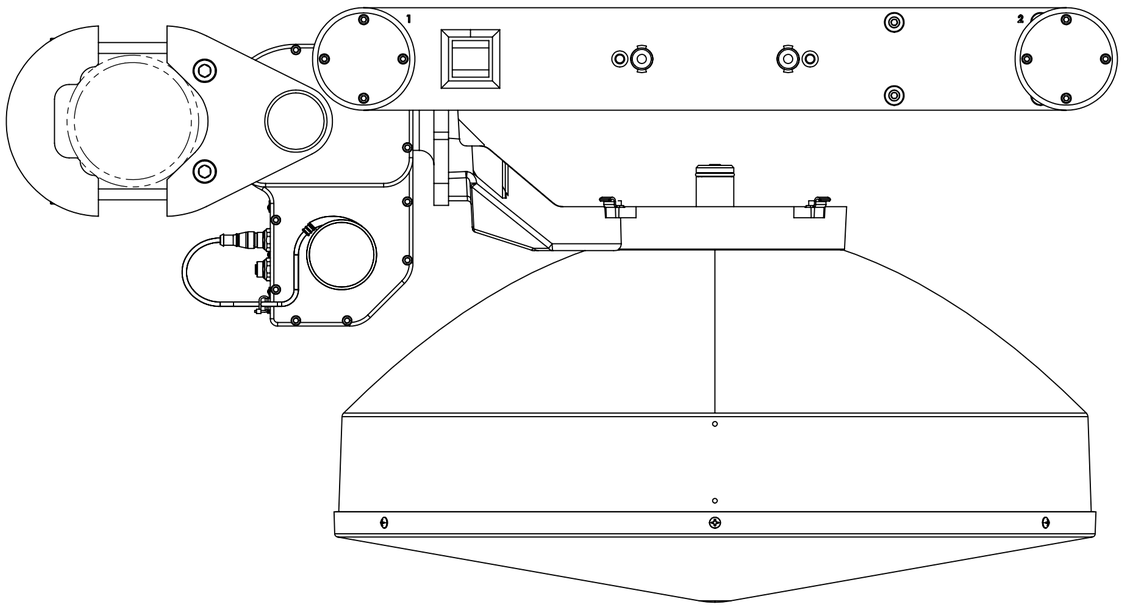
DETAIL E
SCALE 2 : 1
SEE TABLE II FOR PINOUT DETAILS

TABLE II (PoE CONNECTOR)	
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

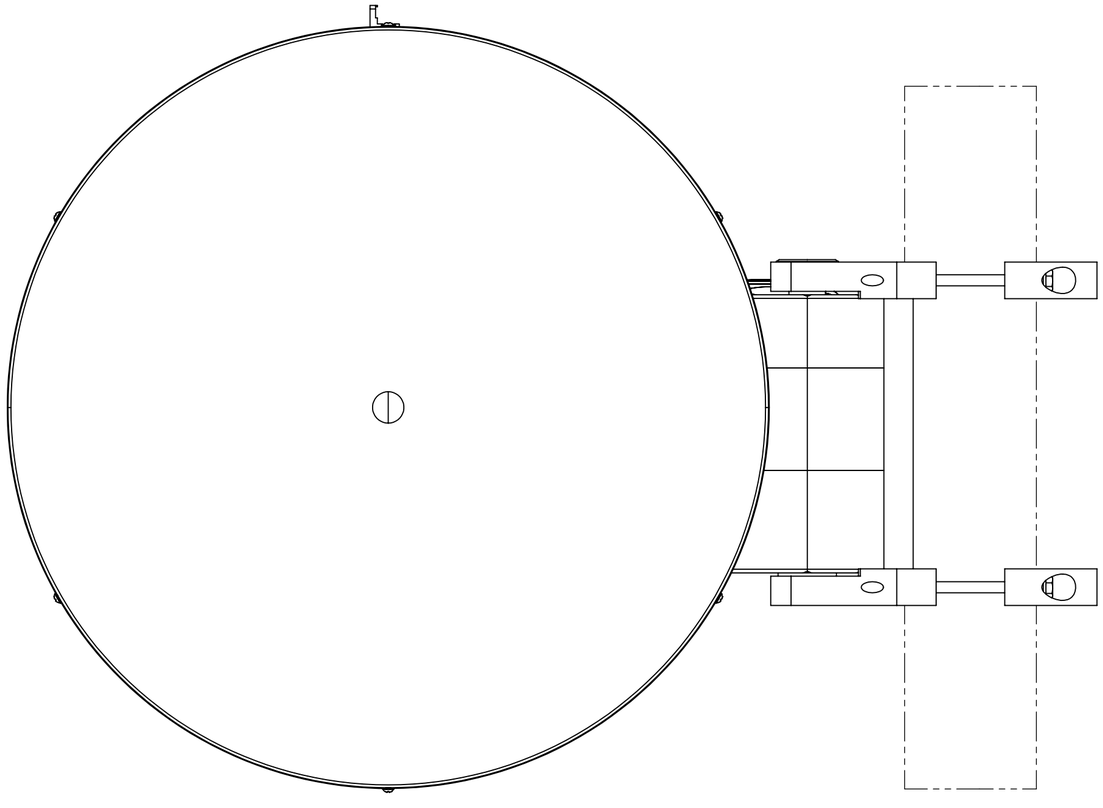
SIZE	DWG. NO.	
C	ICDN900374	
SCALE: 1:2		SHEET 3 OF 4

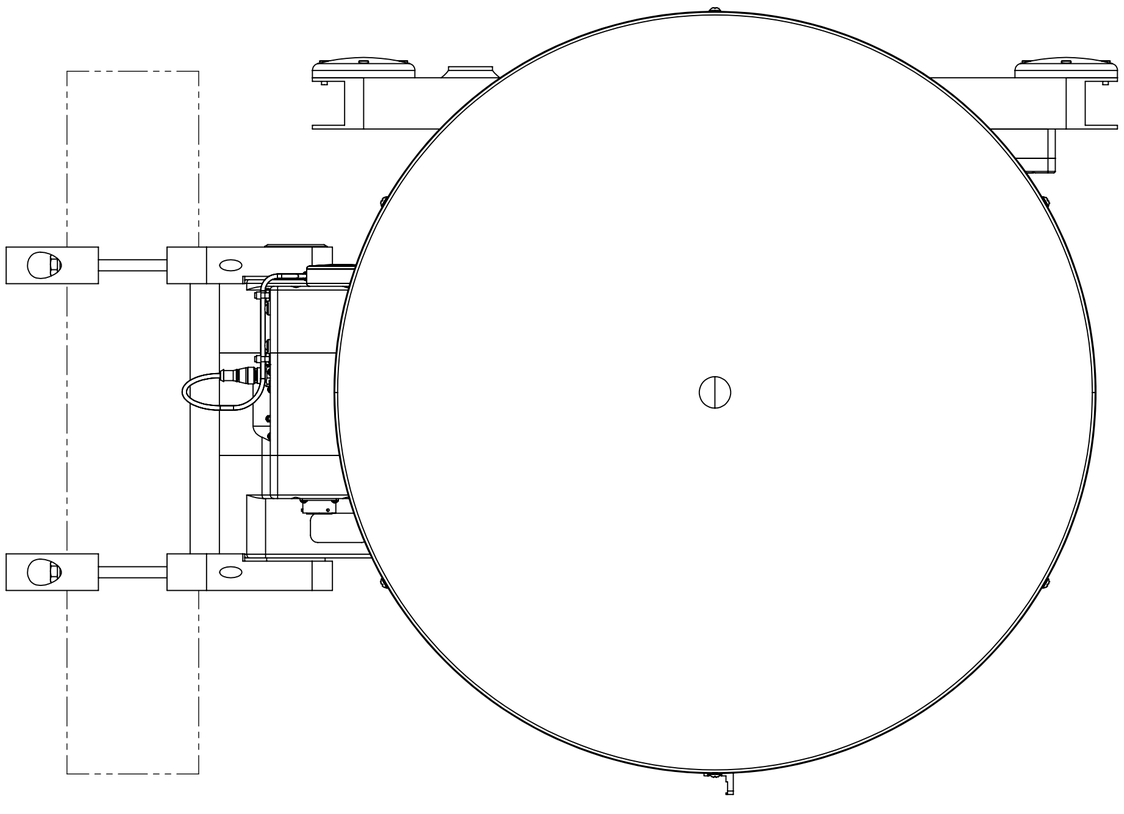


DEFAULT ELEVATION ORIENTATION 6



REVERSE ELEVATION ORIENTATION 6





mWAVE HRP2-800 SHOWN FOR REFERENCE ONLY

SIZE	DWG. NO.	
C	ICDN900374	
SCALE: 1:4		SHEET 4 OF 4