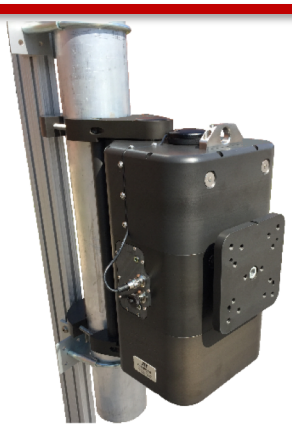
QLA-60EBP-20

AUTO ACQUISITION ANTENNA POSITIONER FOR MILLIMETER WAVE LINE OF SIGHT



The QLA-60EBP-20 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-20 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 smartphone, 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-20 is typically paired with 3 ft side arm mount antennas, payloads up to 200 lbs (90.7 kg), and offers +/-30° of azimuth and elevation range. Download the Interface Control Drawing (ICD) for details.

TECHNICAL SPECIFICATIONS – QLA-60EBP-20	
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 0.7°/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	0.01°
Backlash (Az / El)	less than 0.05° in both axes
Torque	
Operational (both axes)	150 ft-lbs (203.4 Nm)
Survival (both axes)	400 ft-lbs (542.3 Nm)
Payload	200 lbs (90.7 kg)
Dimensions	Height: 16.86" (42.8 cm), Width: 11.50" (29.2 cm), Depth*: 13.29" (33.8 cm)
Weight	51 lbs (23.0 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 C

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	2018-07-26	CLC

NOTES: UNLESS OTHERWISE SPECIFIED

1. QLA-60EBP-20 CONFIGURABLE OPTIONS PER TABLE I. PART NUMBER LA-60EBP-20-100-01SHOWN THROUGHOUT THIS DRAWING. PoE CABLE SHOWN IS NOT TO SCALE
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500133
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 0.7°/SEC DRIVE RATE (NO LOAD)
6. 60° (+/-30°) ELEVATION TRAVEL WITH 0.7°/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 0.05°
10. ENVELOPE DIMENSIONS WHEN MOUNTED TO A 4.5" O.D. MAST ARE 16.86" (42.8 cm) HIGH X 11.50" (29.2 cm) WIDE X 13.29" (33.8 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
11. WEIGHT APPROXIMATELY 51.0 LBS (23.0 kg) NOT INCLUDING PoE CABLE
12. CENTER OF GRAVITY 6.0" (15.2 cm) IN THE X-DIRECTION, 0.1" (0.3 cm) IN THE Y-DIRECTION AND 0.9" (2.3 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 (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 200 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 400 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-LB

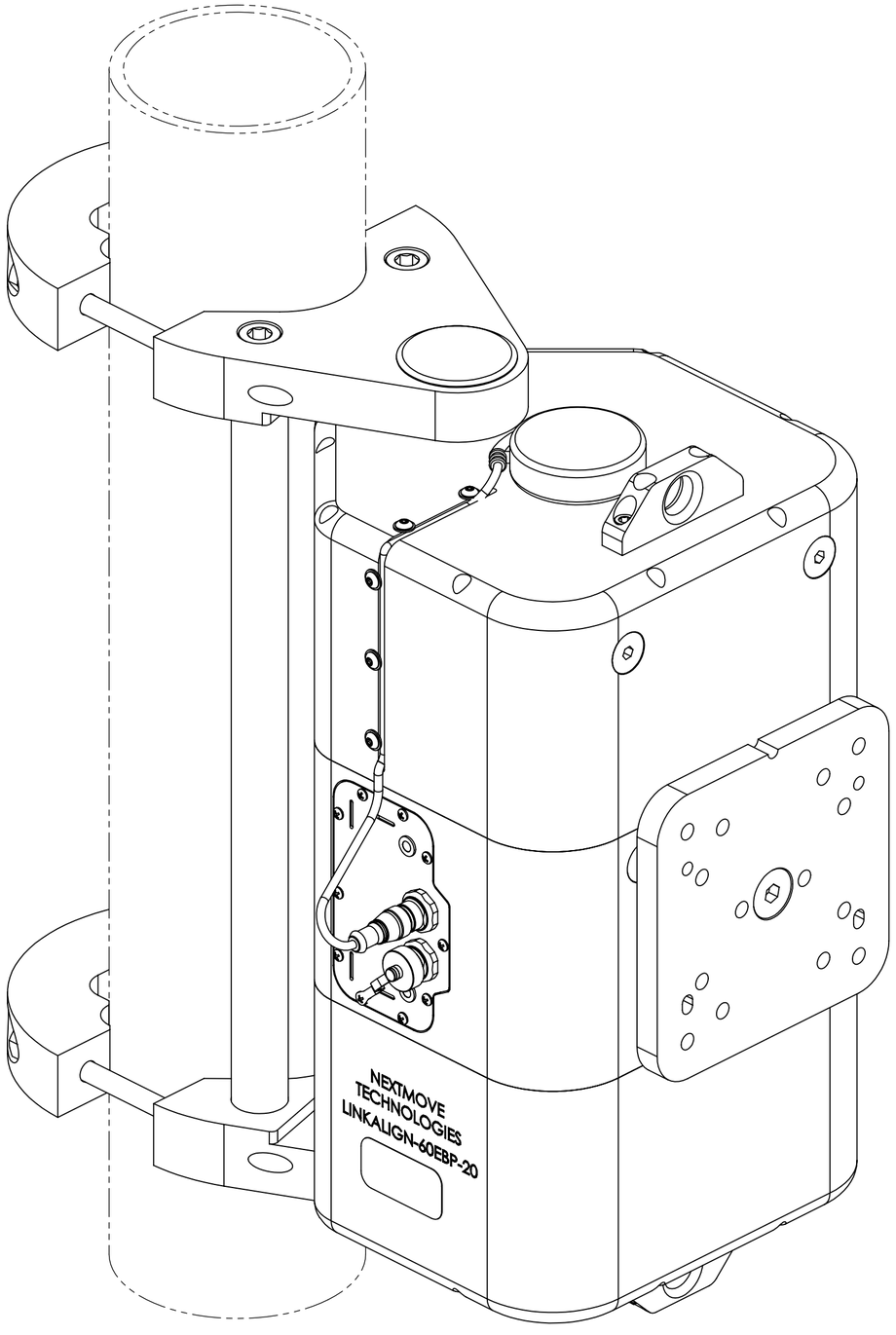


TABLE I

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

LA-60EBP - 20 - ____ - 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

20 = Az 150 ft-lbs @ 0.7°/s, El 150 ft-lbs @ 0.7°/s, 200 lb payload. Typically paired with 3 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	C. CHEYNE	2017-06-13
CHECKED	S. CHEYNE	2017-06-13
ME APPR.	S. CHEYNE	2017-06-13
EE APPR.		

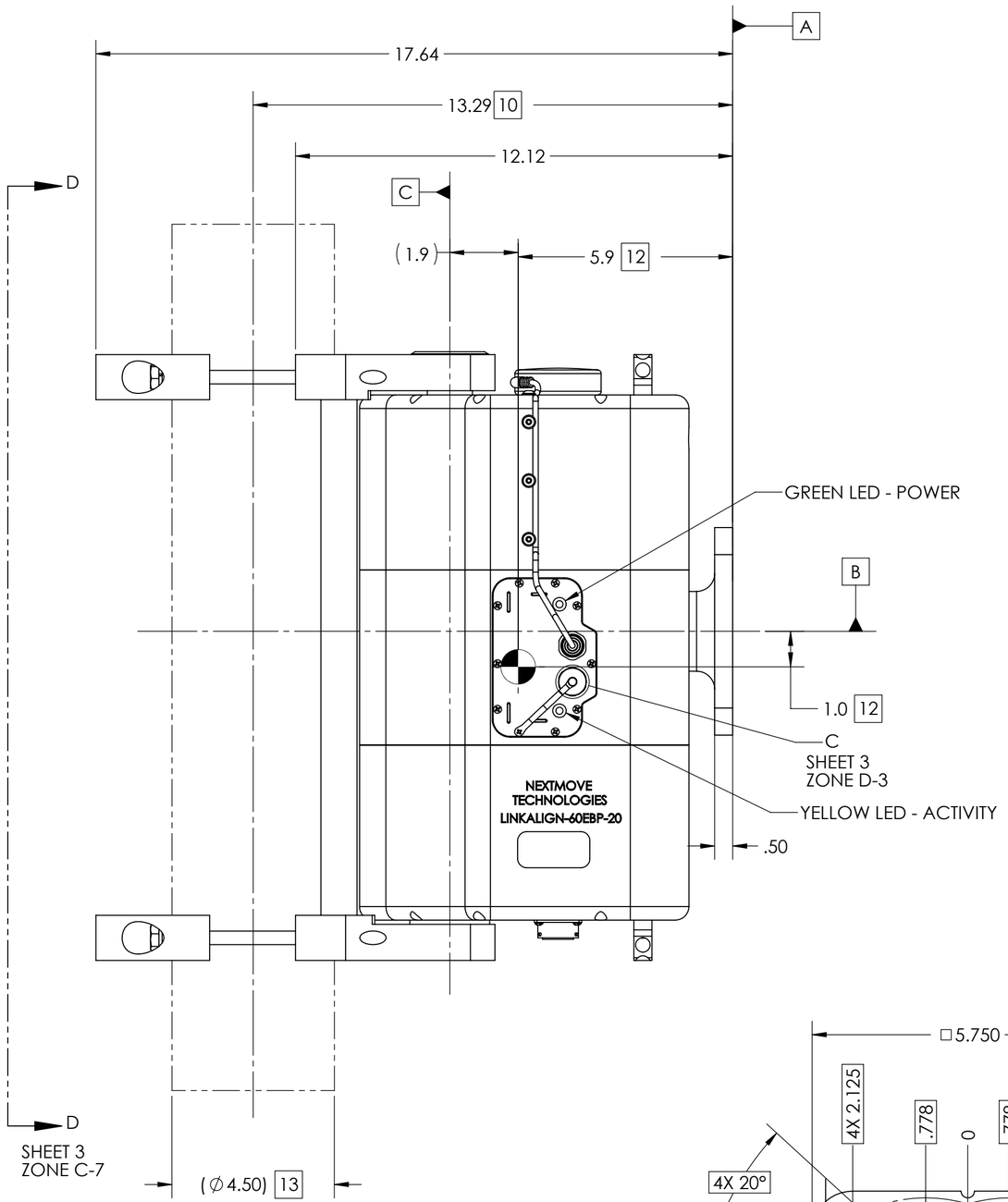
PART NO.
SEE TABLE I

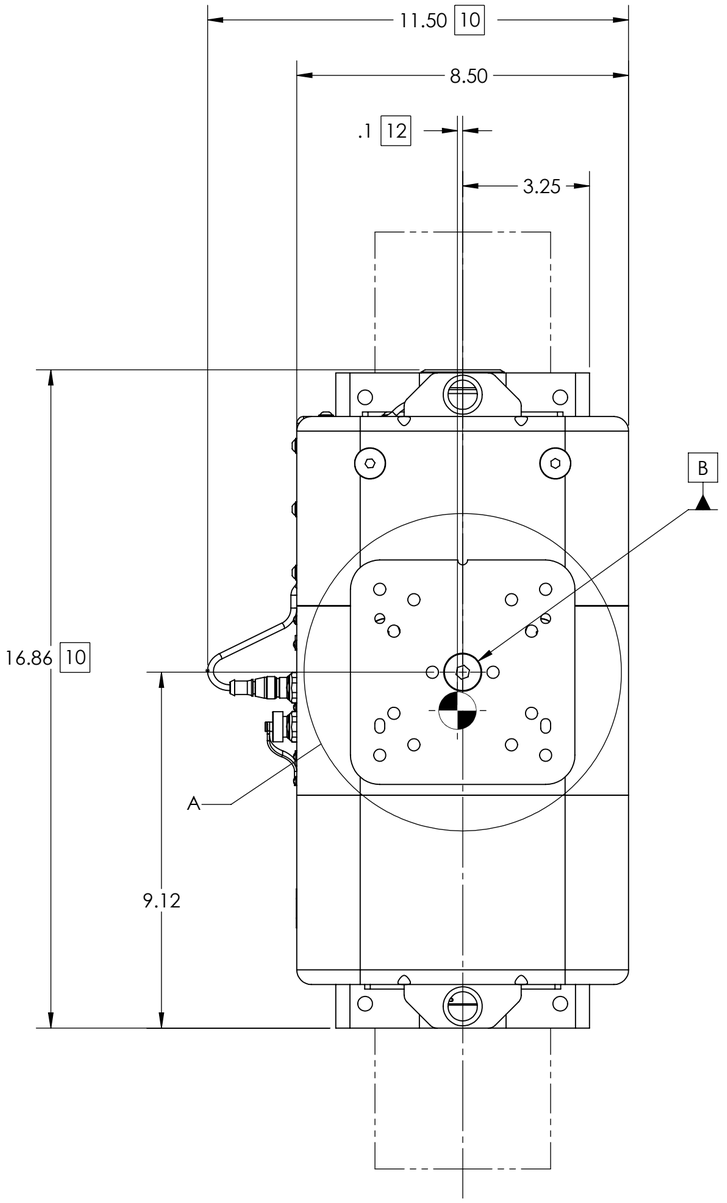
QPAR Antennas USA, LLC

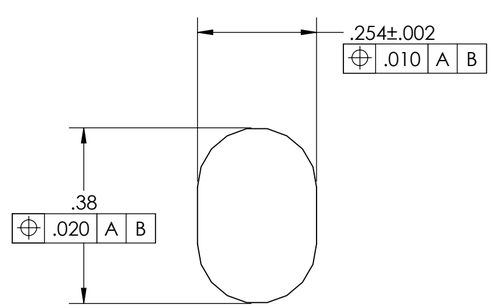
TITLE:
QLA-60EBP-20
INTERFACE CONTROL
DRAWING

SIZE C | DWG. NO. ICDN900447 | REV C

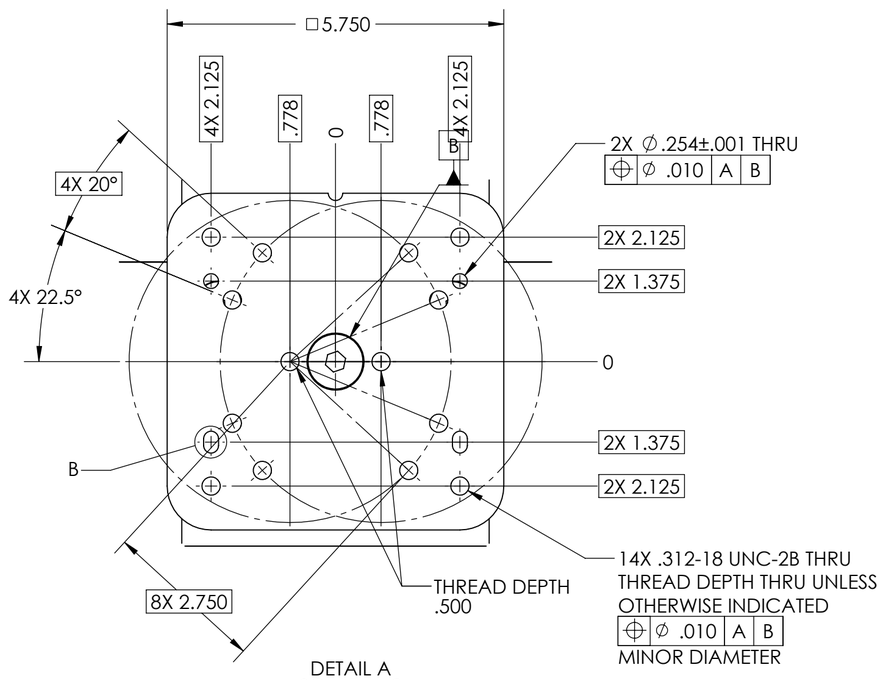
SCALE: 1:2 | SHEET 1 OF 4





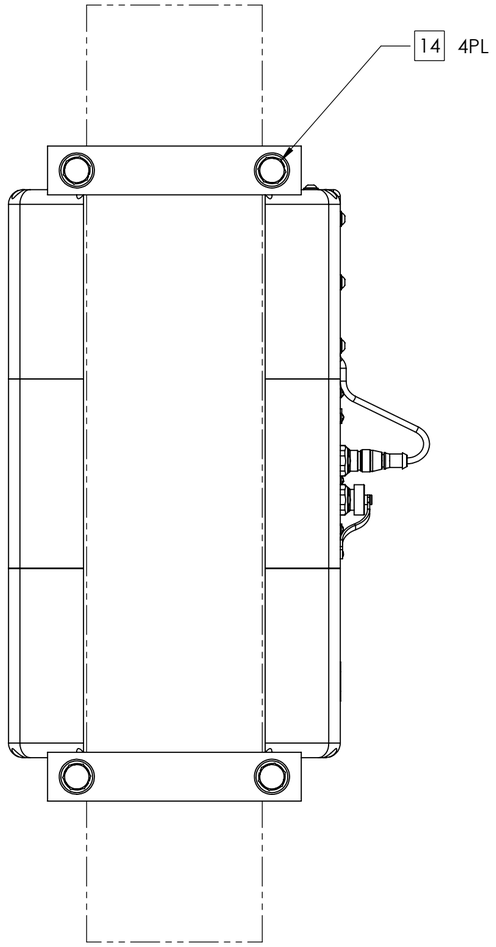


DETAIL B
SCALE 4 : 1

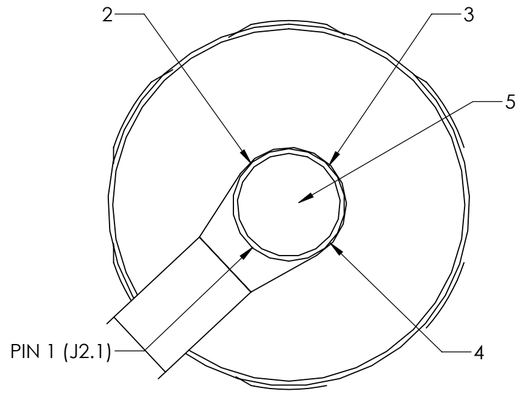


DETAIL A
SCALE 1 : 2
ANTENNA MOUNTING FEATURES
17

SIZE	DWG. NO.
C	ICDN900447
SCALE: 1:3	SHEET 2 OF 4



VIEW D-D
SHEET 2
ZONE B-8

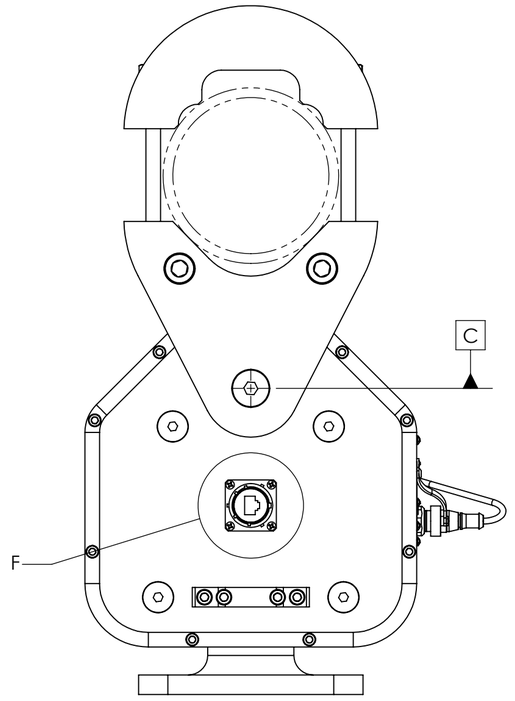


INTERCONNECT FOR SERIAL/OPTIONAL PELCO-D JOYSTICK INTERFACE

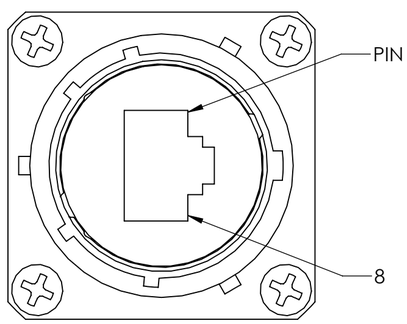
J2 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N 8151-0/PG9
CONNECTOR DUST CAP NOT SHOWN

DETAIL C
SCALE 4 : 1
SHEET 2
ZONE D-5
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 E-E



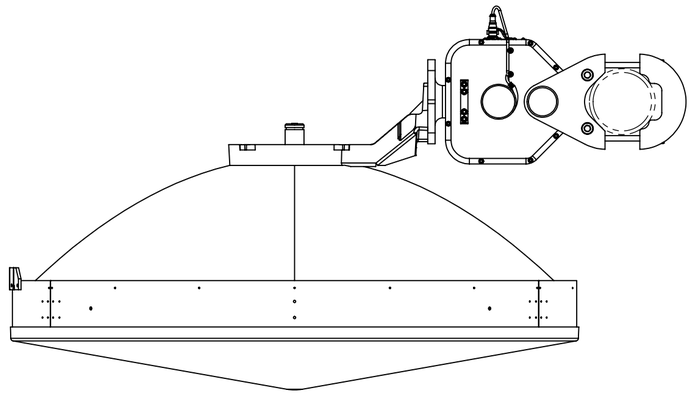
INTERCONNECT FOR POSITIONER PoE

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

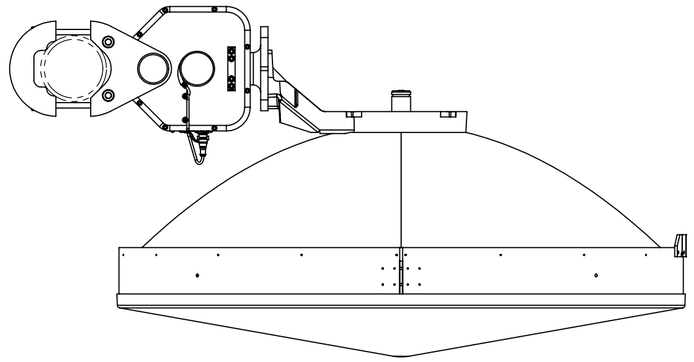
DETAIL F
SCALE 2 : 1
SEE TABLE II FOR PINOUT DETAILS

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

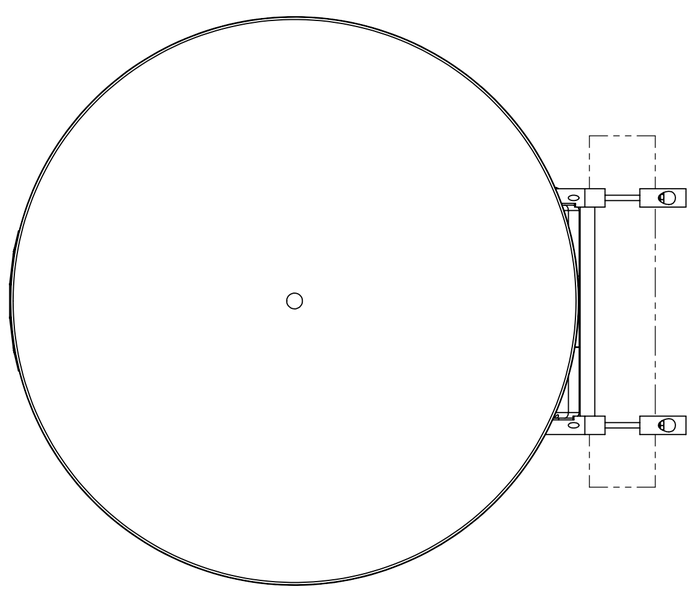
SIZE	DWG. NO.
C	ICDN900447
SCALE: 1:3	SHEET 3 OF 4

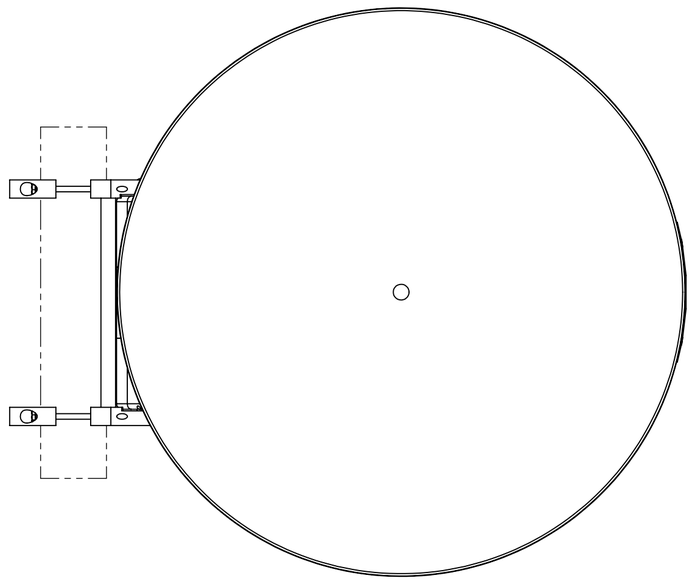


DEFAULT ELEVATION ORIENTATION 6



REVERSE ELEVATION ORIENTATION 6





mWAVE HRP2-800 SHOWN FOR REFERENCE ONLY

SIZE C | DWG. NO. ICDN900447

SCALE: 1:8 | SHEET 4 OF 4