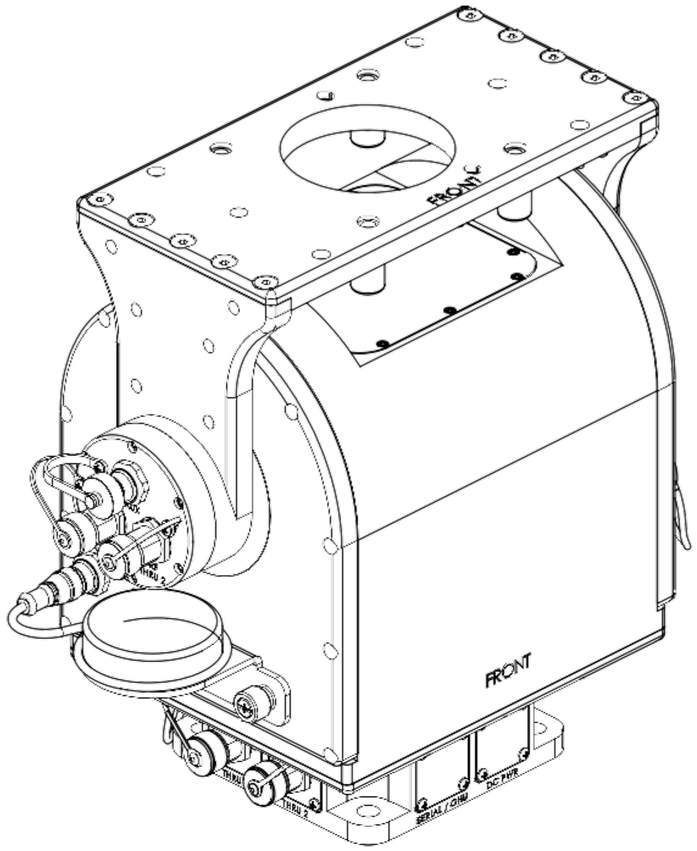
REV	DESCRIPTION	DATE	APPROVED
C	CN601265	2023-06-19	CLC

NOTES: UNLESS OTHERWISE SPECIFIED

1. LINKALIGN-360MPT-20 CONFIGURABLE OPTIONS PER TABLE I
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500196 (LA-360MPT-20), N500229 (LA-360MPT-25) & N500230 (LA-360MPT-26)
3. SEE TABLE II FOR AVAILABLE LINKALIGN-360MPT-20 ACCESSORY OPTIONS
4. POSITIONER POWERED BY POWER OVER ETHERNET 50-57 VDC, 4 PAIR, PASSIVE (INDOOR RATED 50 VDC POWER SUPPLY INCLUDED WITH POSITIONER. NOT SHOWN IN DRAWING). OPTIONAL DC POWER INPUT MAY BE USED AS ALTERNATE CUSTOM CONFIGURATION, 20-60 V. STANDBY POWER DRAWS LESS THAN 10 W. MAXIMUM POWER DRAW, 60 W
5. EXTERNAL CONSTRUCTION COMPRISSED OF HARD COAT ANODIZE ALUMINUM WITH STAINLESS STEEL HARDWARE
6. 400° (+/-200°) AZIMUTH TRAVEL WITH 12°/SEC DRIVE RATE (NO LOAD). DRIVE RATE CUSTOMIZABLE (SEE TABLE I). OPTIONAL CONTINUOUS AZIMUTH RANGE OF MOTION AVAILABLE UTILIZING A SLIP RING AND RF ROTARY JOINT. CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
7. 190° (+/-95°) ELEVATION TRAVEL WITH 11°/SEC DRIVE RATE (NO LOAD). DRIVE RATE CUSTOMIZABLE (SEE TABLE I). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
8. -19° TO 140°F (-28° TO 60°C) OPERATIONAL TEMPERATURE RANGE (NO LOAD) OR -40° TO -140°F (-40° TO 60°C) WITH EXTENDED TEMPERATURE RANGE OPTION (SEE TABLE I). -40° TO 158°F (-40 TO 70°C) NON-OPERATIONAL TEMPERATURE RANGE
9. 0.01° FEEDBACK RESOLUTION
10. AZIMUTH AND ELEVATION BACKLASH LESS THAN 0.8°
11. 11.83" (30.0 cm) HIGH X 11.96" (30.4 cm) WIDE X 6.75" (17.1 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES
12. WEIGHT APPROXIMATELY 25 LBS (11 kg)
13. PAYLOAD NOT TO EXCEED 50 LBS (45.4 kg) OR 20 FT-LBS (67.8 Nm) OF TORQUE ABOUT THE ELEVATION AXIS. TO CALCULATE TORQUE, TAKE THE DISTANCE FROM THE PAYLOAD CENTER OF GRAVITY TO DATUM -B- IN FEET AND MULTIPLY BY THE PAYLOAD WEIGHT. MAXIMUM OPERATING TORQUE MAY BE REDUCED AT TEMPERATURES BELOW -7°F (-22°C) AND/OR WITH PERIPHERAL DEVICES. ELEVATION TORQUE IS CUSTOMIZABLE (SEE TABLE II). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
14. TABLE TOP MOUNTING HOLES USES NEXTMOVE TYPE 4.000-P INTERFACE. ACCESSORIES AVAILABLE TO MATE WITH THIS INTERFACE (SEE TABLE II). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
15. CENTER OF GRAVITY 0.6" (1.5 cm) IN THE X-DIRECTION, 5.4" (13.7 cm) IN THE Y-DIRECTION AND 0" IN THE Z-DIRECTION
16. RF PASS THRU COMPRISED OF TWO 20" (50 cm) DC-3GHz N-TYPE FEMALE TO N-TYPE FEMALE CABLE. RF PASS THRU IS CUSTOMIZABLE (SEE TABLE 1). CONTACT NEXTMOVE FOR ADDITONAL INFORMATION
17. PASS THRU CONNECTORS MAY BE CUSTOMIZED UPON REQUEST. CONTACT NEXTMOVE FOR MORE INFORMATION
18. ETHERNET PASS THRU USES 24 INCH LONG CAT5e ETHERNET CABLE
19. OPTIONAL SIGNAL PASS THRUS WIRES ABLE TO CARRY UP TO 60 VAC / 75 VDC, 2A
20. SUPPLEMENTAL INTERFACE CONTROL DRAWING FOR CUSTOM CONFIGURATIONS AVAILABLE UPON REQUEST



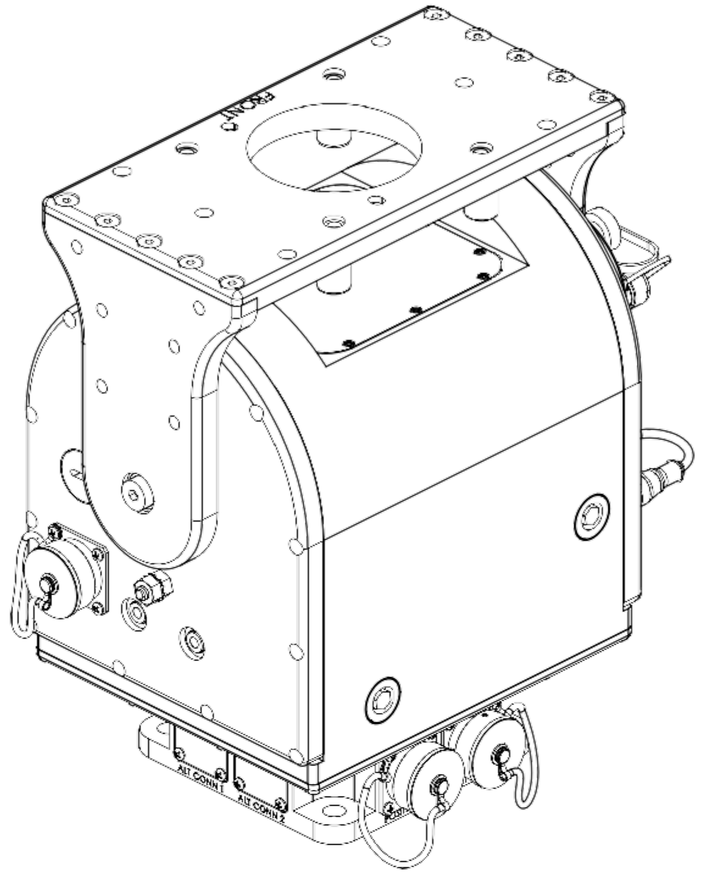


TABLE II (MPT-20 ACCESSORY OPTIONS)

ACCESSORY DESCRIPTION	ACCESSORY PART NUMBER	ACCESSORY ICD
LINKALIGN-360POL-10 POLARIZATION POSITIONER	LA-360POL-10-X	ICDN900387
QUICKMOUNT 2 INCH OD MAST ADAPTER	ACC-N900728-1	ICDN900728
LIGHTWEIGHT FOLDING TRIPOD, 2 INCH OD MAST	ACC-N900320-1	ICDN900320
TRIPOD ASSEMBLY, LIGHTWEIGHT, 2 INCH OD MAST	ACC-N901395-T	ICDN901395
QUADPOD ASSEMBLY, LIGHTWEIGHT, 2 INCH OD MAST	ACC-N901395-Q	ICDN901395
TRIPOD ASSEMBLY, HEAVY DUTY, 2 INCH OD MAST	ACC-N900413-1	ICDN900413
TRANSIT CASE, MPT/VPR-20	TC-LA-360MPT/VPR-20-1	N/A

TABLE I

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

LA-360MPT - 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
DC = DC Input Power
2RF18G05 = (2) Custom DC-18 GHz Flexcore 210, RF Pass Thrus
4RF3G01 = (4) Custom DC-3 GHz N-Type, RF Pass Thrus
4RF5.8G02 = (4) Custom DC-5.8 GHz SMA Type, RF Pass Thrus
2PT10 = (2) 10 Pin Signal Pass Thrus
GR = GHU Ready
ET1 = Extended Temperature

MOTOR DRIVES AND PAYLOAD

20 = Az Travel @ 12°/s, El Travel @ 11°/s, El torque 20 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna
25 = Az Travel @ 12°/s, El Travel @ 1°/s, El torque 75 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna
26 = Az Travel @ 12°/s, El Travel @ 4°/s, El torque 75 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna

MODEL

LA-360MPT = LinkAlign-360MPT (+/-200° azimuth, +/-95° elevation)

SYMBOL KEY

NOTE PL ITEMS

PROPRIETARY AND CONFIDENTIAL
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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	2021-03-24
CHECKED	S. CHEYNE	2021-03-24
ME APPR.	C. CHEYNE	2021-03-24
EE APPR.	J. MINEKIME	2021-03-24

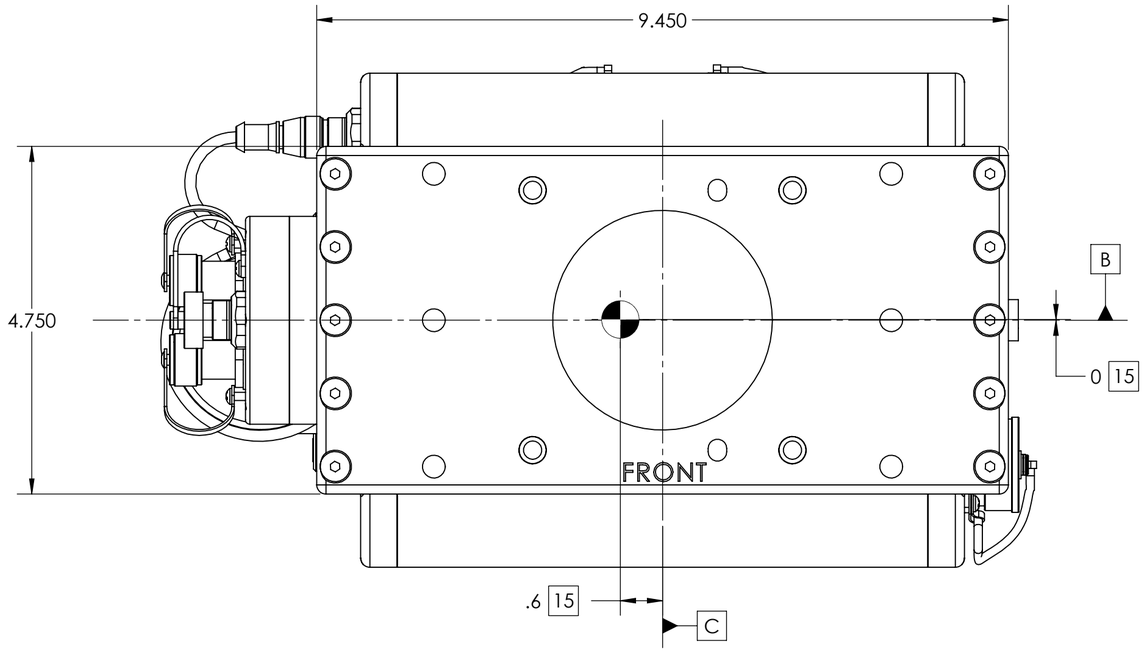
PART NO.
SEE TABLE I

QPAR ANTENNAS USA, LLC

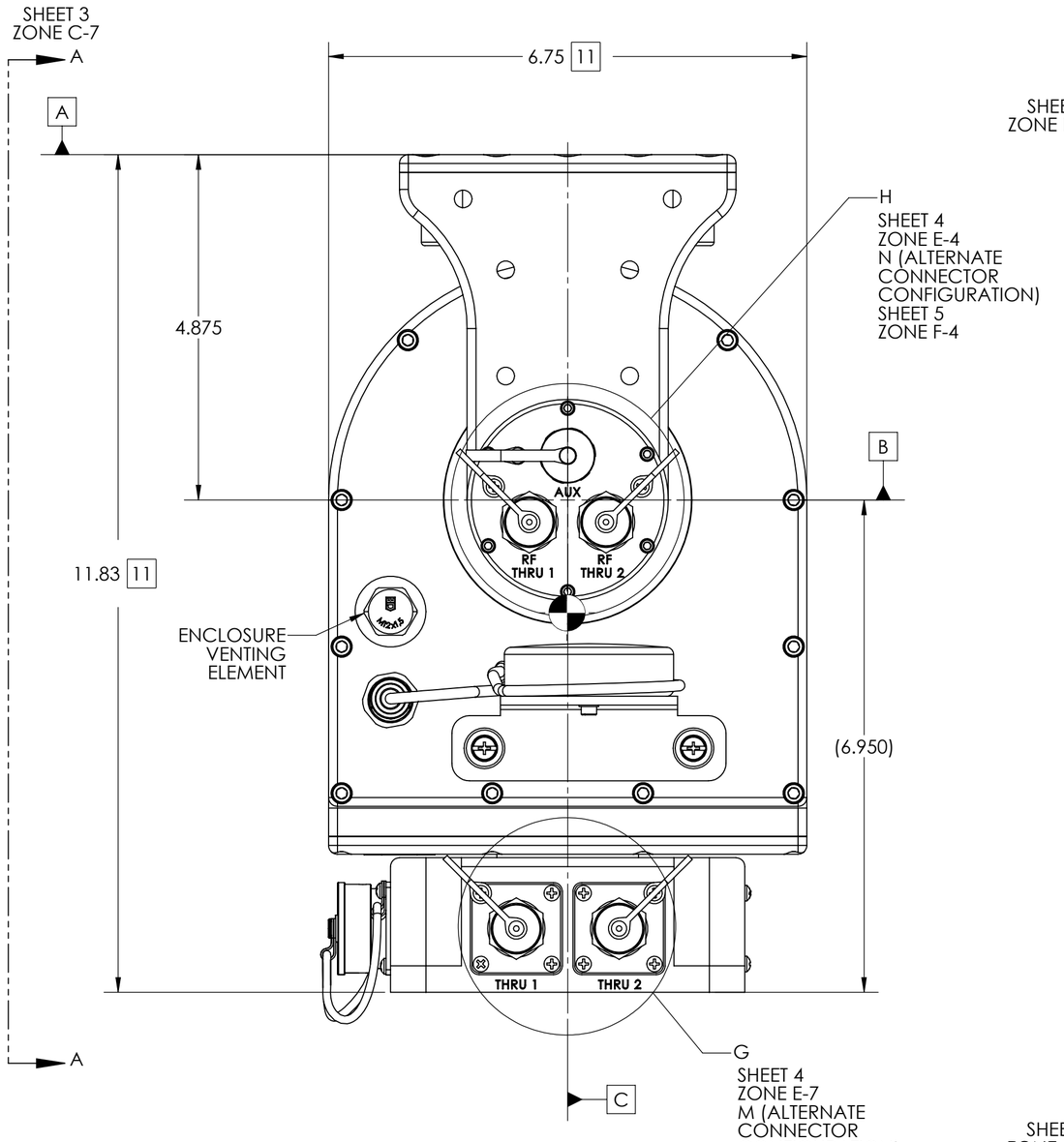
TITLE:
LINKALIGN-360MPT-20 INTERFACE CONTROL DRAWING

SIZE	DWG. NO.	REV
C	ICDN900879	C

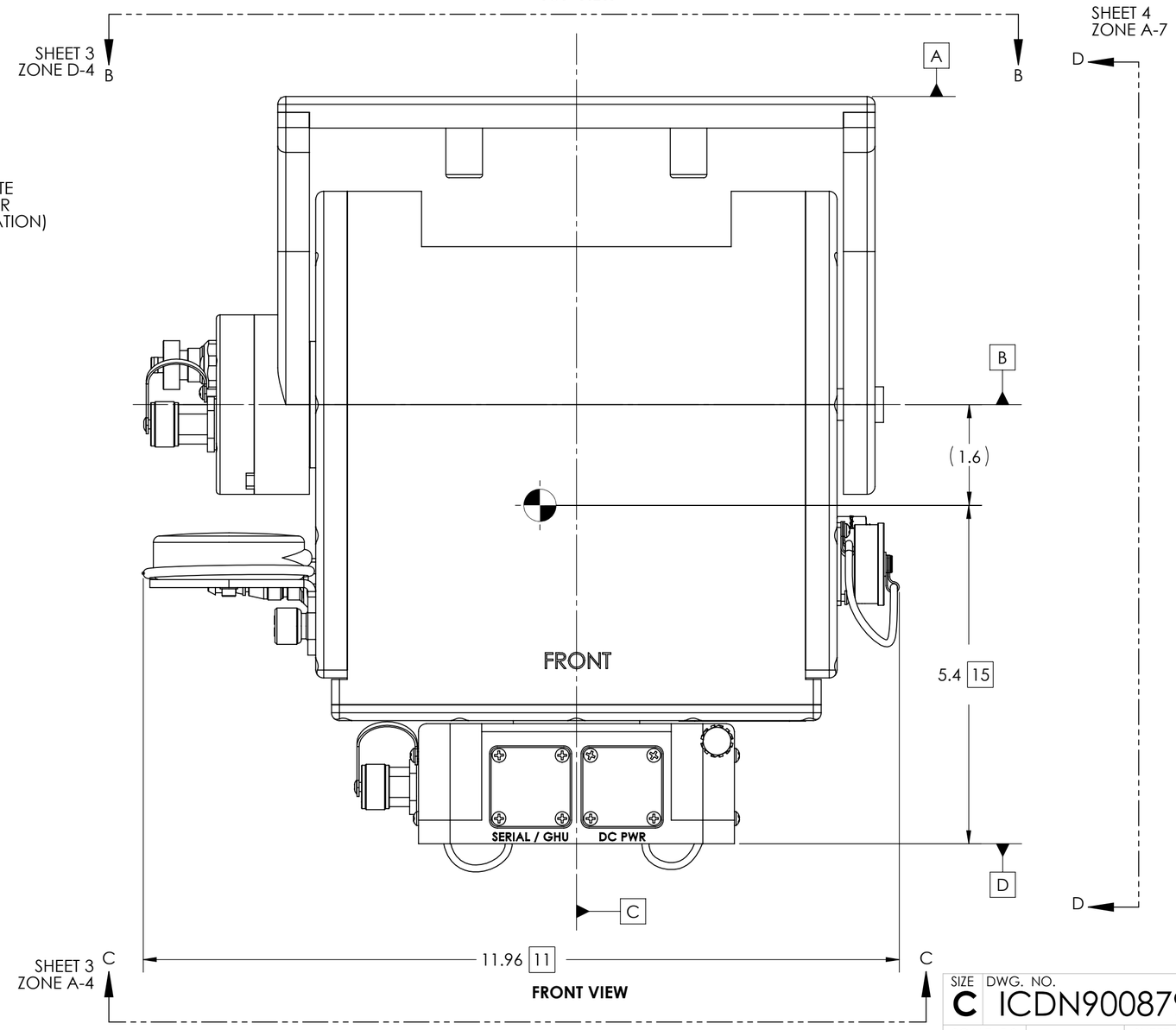
SCALE: 1:2 SHEET 1 OF 5



TOP VIEW

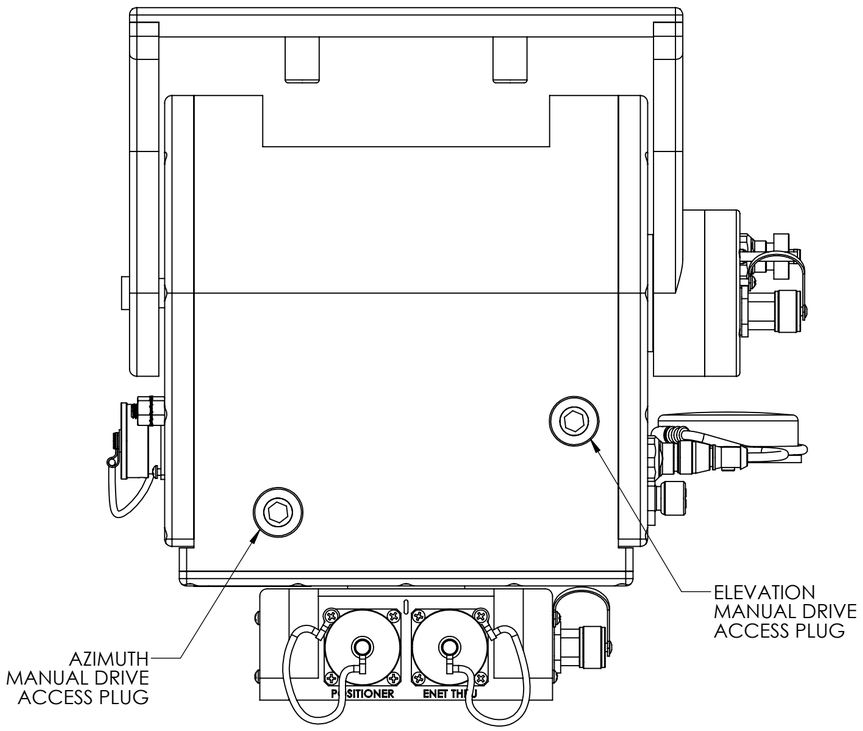


LEFT VIEW

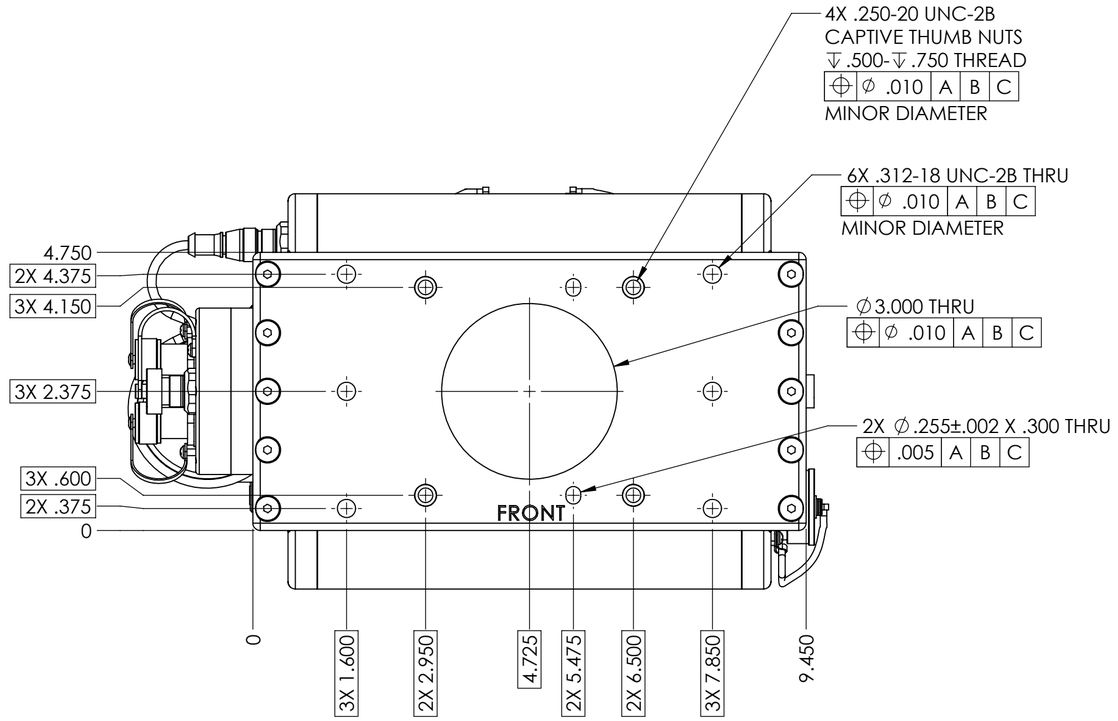


FRONT VIEW

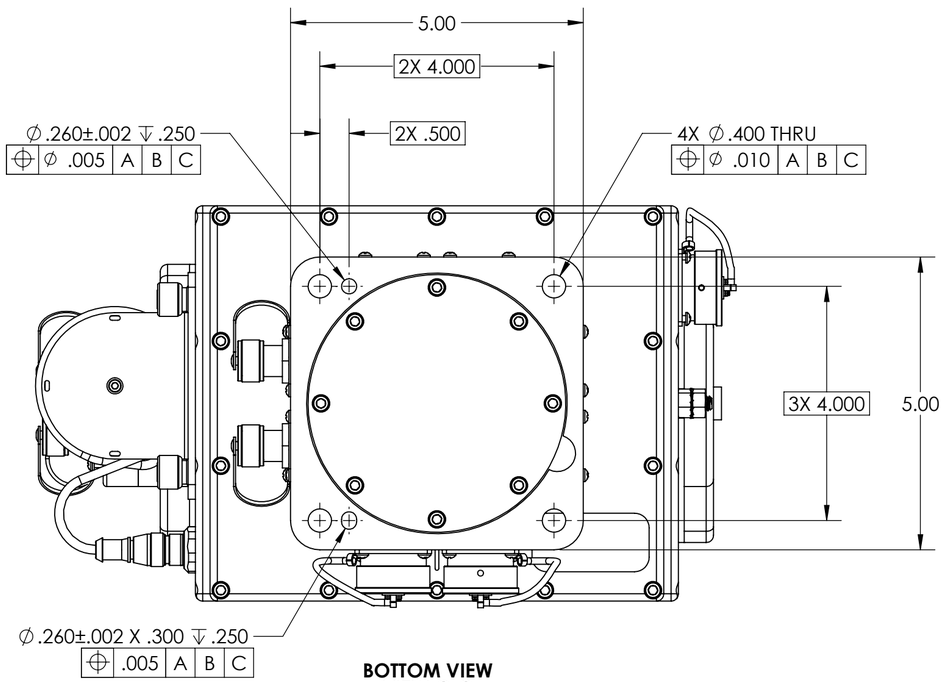
SIZE	DWG. NO.
C	ICDN900879
SCALE: 5:8	SHEET 2 OF 5



REAR VIEW
VIEW A-A
SCALE 1 : 2
SHEET 2
ZONE D-8



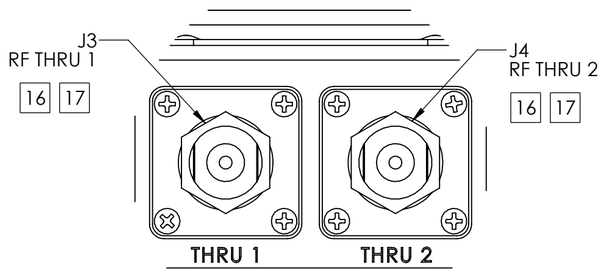
TOP VIEW
VIEW B-B
SCALE 1 : 2
SHEET 2
ZONE D-5



BOTTOM VIEW
VIEW C-C
SCALE 1 : 2
SHEET 2
ZONE A-5
TABLE TOP MOUNTING HOLES
NEXTMOVE TYPE 4.000-P INTERFACE

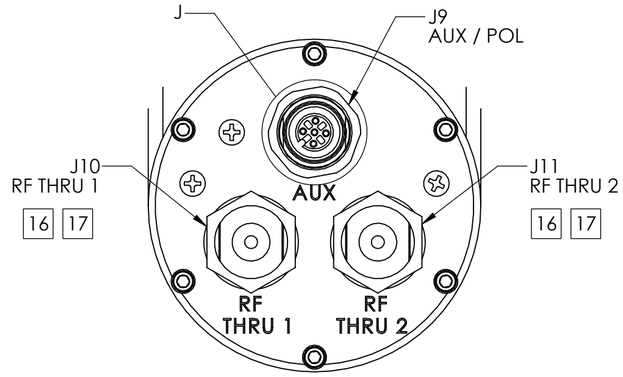
14

SIZE	DWG. NO.
C	ICDN900879
SCALE: 5:8	SHEET 3 OF 5



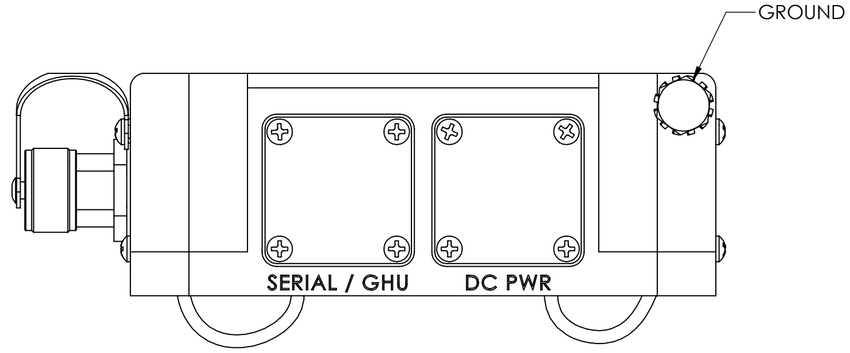
CONNECTORS SHOWN FROM MATING SIDE
J3 & J4 MATES WITH N-TYPE MALE RF CONNECTOR
STANDARD RF PASS THRUS - DC-3GHz

DETAIL G
SCALE 1 : 1
SHEET 2 ZONE A-6
LEFT VIEW, AZIMUTH BASE CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE V FOR STANDARD J3 & J4 CONNECTOR PINOUT DETAILS
SEE SHEET 5 DETAIL M ZONE E-7 FOR
ALTERNATE J3 & J4 CONNECTOR CONFIGURATIONS



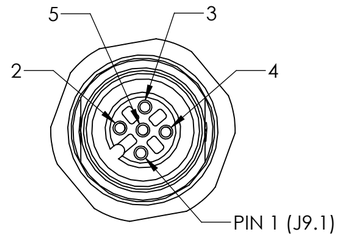
CONNECTORS SHOWN FROM MATING SIDE
J9 USED FOR NEXTMOVE OPTIONAL POLARIZATION ACCESSORY
J10 & J11 MATES WITH N-TYPE MALE RF CONNECTOR
STANDARD RF PASS THRUS - DC-3GHz

DETAIL H
SCALE 1 : 1
SHEET 2 ZONE C-5
LEFT VIEW, ELEVATION PANEL CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE V FOR J10 & J11 STANDARD CONNECTOR PINOUT DETAILS
SEE SHEET 5 DETAIL N ZONE E-4 FOR ALTERNATE
CONNECTOR CONFIGURATIONS



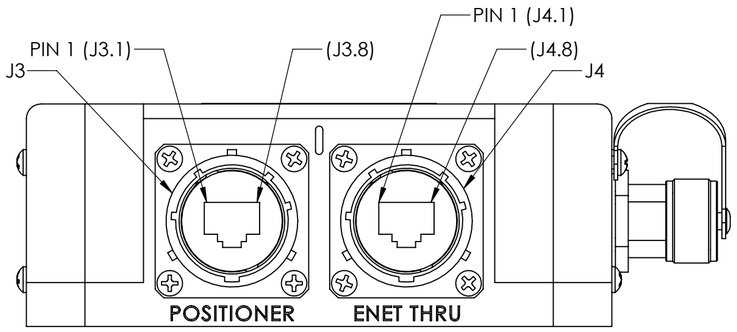
VIEW E-E
SCALE 1 : 1
FRONT VIEW, AZIMUTH BASE CONNECTORS

STANDARD CONFIGURATION - NO CONNECTORS
SEE SHEET 5, VIEW R, ZONE A-7 FOR ALTERNATE
CONNECTOR CONFIGURATIONS



J9 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH TURCK P/N RS 4.5-T-* (* LENGTH IN METERS)

DETAIL J
SCALE 2 : 1
LEFT VIEW, ELEVATION PANEL CONNECTOR
SEE TABLE IV FOR J9 AUX/POL CONNECTOR PINOUT DETAILS

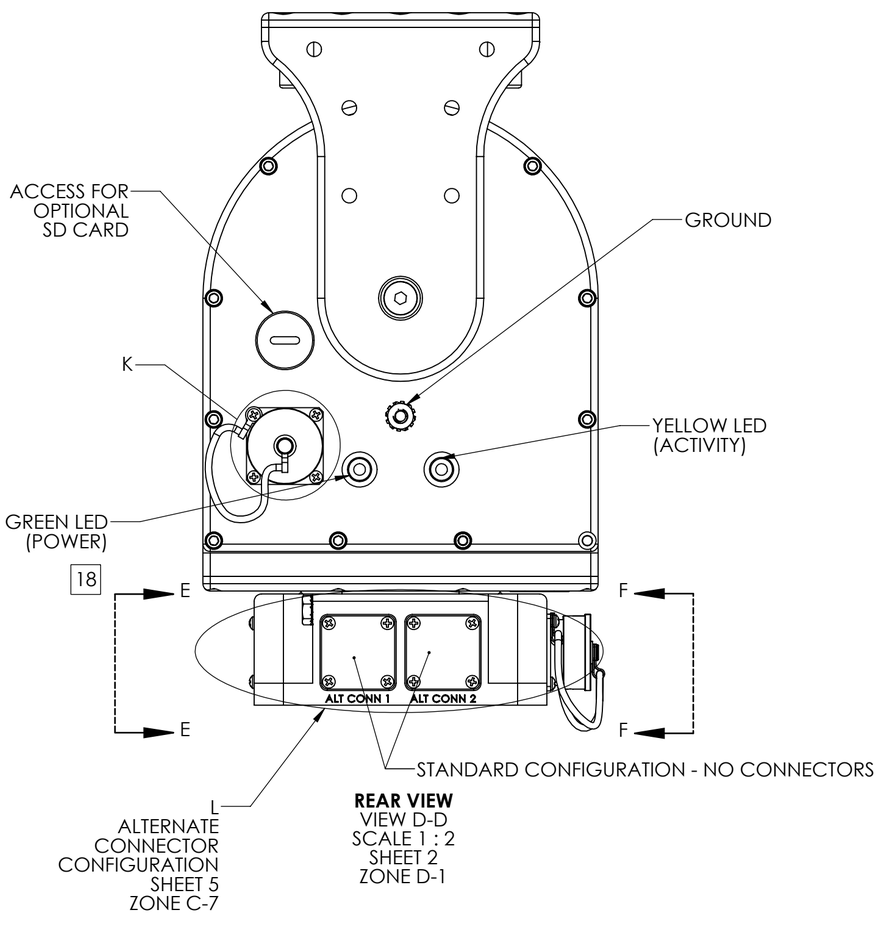


CONNECTORS SHOWN FROM MATING SIDE
J1 & J2 MATES WITH AMPHENOL P/N - RJF6B

VIEW F-F
SCALE 1 : 1
REAR VIEW, AZIMUTH BASE CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE III FOR J1 PoE CONNECTOR PINOUT DETAILS
TABLE V FOR J2 PASS THRU CONNECTOR PINOUT DETAILS

CONNECTOR SHOWN FROM MATING SIDE
J12 MATES WITH AMPHENOL P/N - RJF6B

DETAIL K
SCALE 1 : 1
RIGHT VIEW, ELEVATION SIDE PLATE CONNECTOR
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE V FOR J12 PINOUT DETAILS



REAR VIEW
VIEW D-D
SCALE 1 : 2
SHEET 2
ZONE D-1

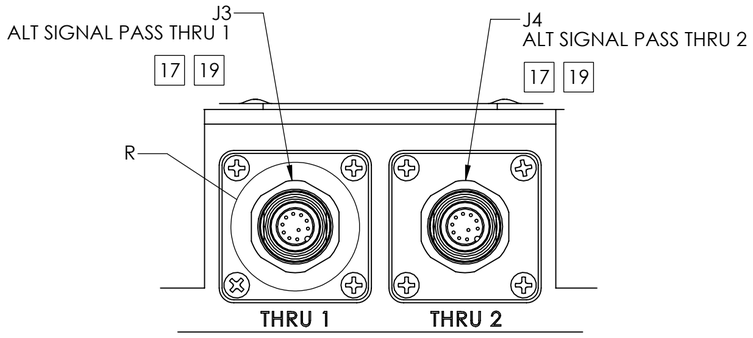
TABLE III (PoE CONNECTOR)	
CONNECTOR DESIGNATION	**FUNCTION**
J1.1	DATA PAIR 1
J1.2	DATA PAIR 1
J1.3	DATA PAIR 2
J1.4	+48 VDC PoE POWER INPUT
J1.5	+48 VDC PoE POWER INPUT
J1.6	DATA PAIR 2
J1.7	DC RETURN FOR PoE INPUT
J1.8	DC RETURN FOR PoE INPUT

TABLE IV (AUX/POLARIZATION CONNECTOR)	
CONNECTOR DESIGNATION	**FUNCTION**
J9.1	GND
J9.2	+/-12 VDC MOTOR
J9.3	+/-12 VDC MOTOR
J9.4	POT WIPER
J9.5	+3.3V

TABLE V (PASS THRU CONNECTORS)	
FROM	**TO**
J3 (RF THRU 1)	J10 (RF THRU 1)
J4 (RF THRU 2)	J11 (RF THRU 2)
J2.1 (ENET THRU)	J12.1 (ENET THRU)
↓	↓
J2.8 (ENET THRU)	J12.8 (ENET THRU)

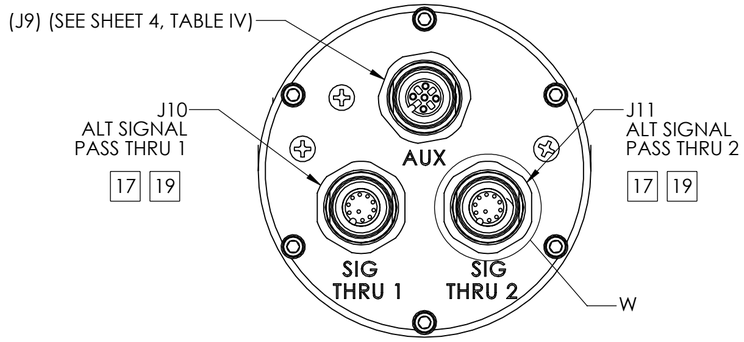
SIZE	DWG. NO.
C	ICDN900879
SCALE: 5:8	SHEET 4 OF 5

ALTERNATE CONNECTOR CONFIGURATIONS



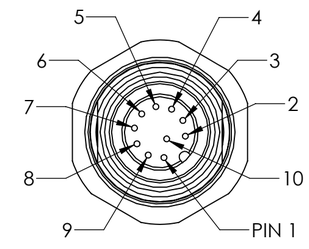
CONNECTORS SHOWN FROM MATING SIDE

DETAIL M
SCALE 1 : 1
SHEET 2 ZONE A-6
LEFT VIEW, AZIMUTH BASE CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE IX FOR FOR ALTERNATE J3 & J4 CONNECTOR PINOUT DETAILS



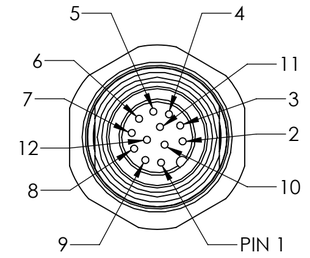
CONNECTORS SHOWN FROM MATING SIDE

DETAIL N
SCALE 1 : 1
SHEET 2 ZONE C-6
LEFT VIEW, ELEVATION PANEL CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE VII FOR FOR ALTERNATE CONNECTOR PINOUT DETAILS



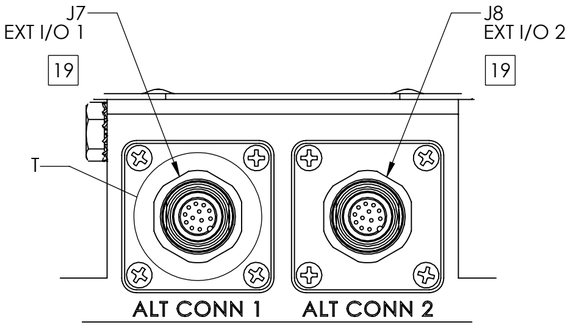
J3 & J4 ALT SIGNAL CONNECTORS
MATES WITH TURCK
P/N RK 10-T-* (* LENGTH IN METERS)

DETAIL R
SCALE 2 : 1
LEFT VIEW, AZIMUTH BASE CONNECTOR
2 PLACES
SEE TABLE IX FOR FOR ALTERNATE J3 & J4
SIGNAL CONNECTOR PINOUT DETAILS



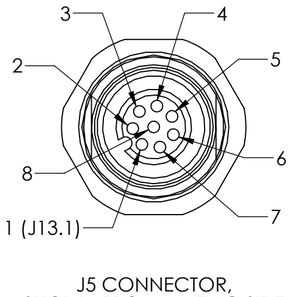
J7 & J8 CONNECTORS,
SHOWN FROM MATING SIDE,
MATES WITH TURCK
P/N RK 12-T-* (* LENGTH IN METERS)

DETAIL T
SCALE 2 : 1
RIGHT VIEW, AZIMUTH BASE CONNECTOR
2 PLACES
SEE TABLE VI FOR ALTERNATE J7 & J8 EXT I/O
CONNECTOR PINOUT DETAILS



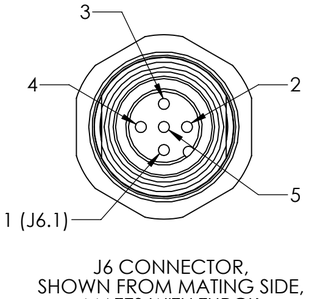
CONNECTORS SHOWN FROM MATING SIDE

DETAIL L
SCALE 1 : 1
SHEET 4 ZONE A-8
RIGHT VIEW, AZIMUTH BASE CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE VI FOR FOR ALTERNATE J7 & J8 CONNECTOR PINOUT DETAILS



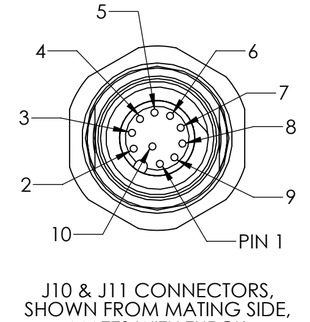
J5 CONNECTOR,
SHOWN FROM MATING SIDE,
MATES WITH TURCK
P/N RS 8-T-* (* LENGTH IN METERS)

DETAIL U
SCALE 2 : 1
FRONT VIEW, AZIMUTH BASE CONNECTOR
SEE TABLE VII FOR ALTERNATE J5 SERIAL
CONNECTOR PINOUT DETAILS



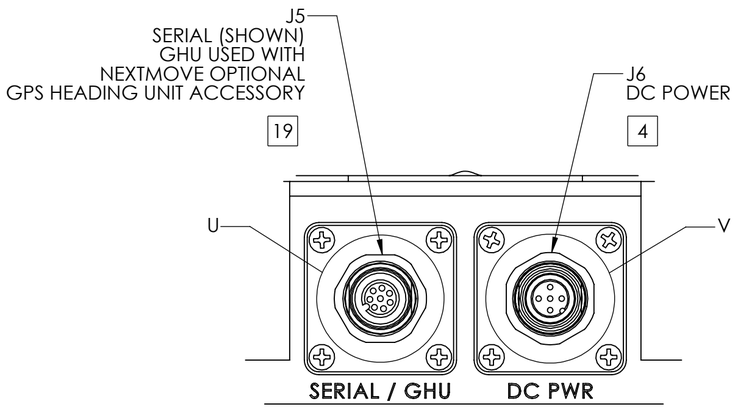
J6 CONNECTOR,
SHOWN FROM MATING SIDE,
MATES WITH TURCK
P/N RK 4.5-T-* (* LENGTH IN METERS)

DETAIL V
SCALE 2 : 1
FRONT VIEW, AZIMUTH BASE CONNECTOR
SEE TABLE VIII FOR ALTERNATE J6 DC POWER
CONNECTOR PINOUT DETAILS



J10 & J11 CONNECTORS,
SHOWN FROM MATING SIDE,
MATES WITH TURCK
P/N RS 10T-* (* LENGTH IN METERS)

DETAIL W
SCALE 2 : 1
LEFT VIEW, ELEVATION PANEL CONNECTOR
2 PLACES
SEE TABLE IX FOR ALTERNATE J10 & J11 SIGNAL
PASS THRU CONNECTOR PINOUT DETAILS



CONNECTORS SHOWN FROM MATING SIDE

DETAIL P
SCALE 1 : 1
SHEET 4 ZONE E-2
FRONT VIEW, AZIMUTH BASE CONNECTORS
SHOWN WITHOUT PROTECTIVE CAPS
SEE TABLE VII & VIII FOR FOR ALTERNATE J5 & J6 CONNECTOR PINOUT DETAILS

TABLE VI (EXT I/O)

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	IN6, IN_GPIO_0_6
J8.4	IN5, IN_GPIO_3_16
J8.5	COM
J8.6	IN7, IN_GPIO_1_26
J8.7	OUT5, OUT_GPIO_0_13
J8.8	OUT8, OUT_GPIO_1_28
J8.9	ADC_2-
J8.10	OUT7, OUT_GPIO_1_25
J8.11	IN 8, IN_GPIO_2_0
J8.12	OUT6, OUT_GPIO_3_21

TABLE VII (SERIAL CONNECTOR)

CONNECTOR DESIGNATION	FUNCTION
J5.1	5V
J5.2	GND
J5.3	12V
J5.4	GND
J5.5	RS232, UART4 Tx
J5.6	RS232, UART4 Rx
J5.7	RS232, UART5 Tx
J5.8	RS232, UART5 Rx

TABLE VIII (POWER CONNECTOR)

CONNECTOR DESIGNATION	FUNCTION
J6.1	N/C
J6.2	N/C
J6.3	+20-60 VDC POWER INPUT
J6.4	N/C
J6.5	GND

TABLE IX (PASS THRU CONNECTORS)

FROM	TO
J3.1 (SIG PASS THRU1)	J10.1 (SIG PASS THRU1)
↓	↓
J3.10 (SIG PASS THRU1)	J10.1 (SIG PASS THRU1)
J4.1 (SIG PASS THRU2)	J11.1 (SIG PASS THRU2)
↓	↓
J4.10 (SIG PASS THRU2)	J11.10 (SIG PASS THRU2)

SIZE C | DWG. NO. ICDN900879
SCALE: 1:4 | SHEET 5 OF 5