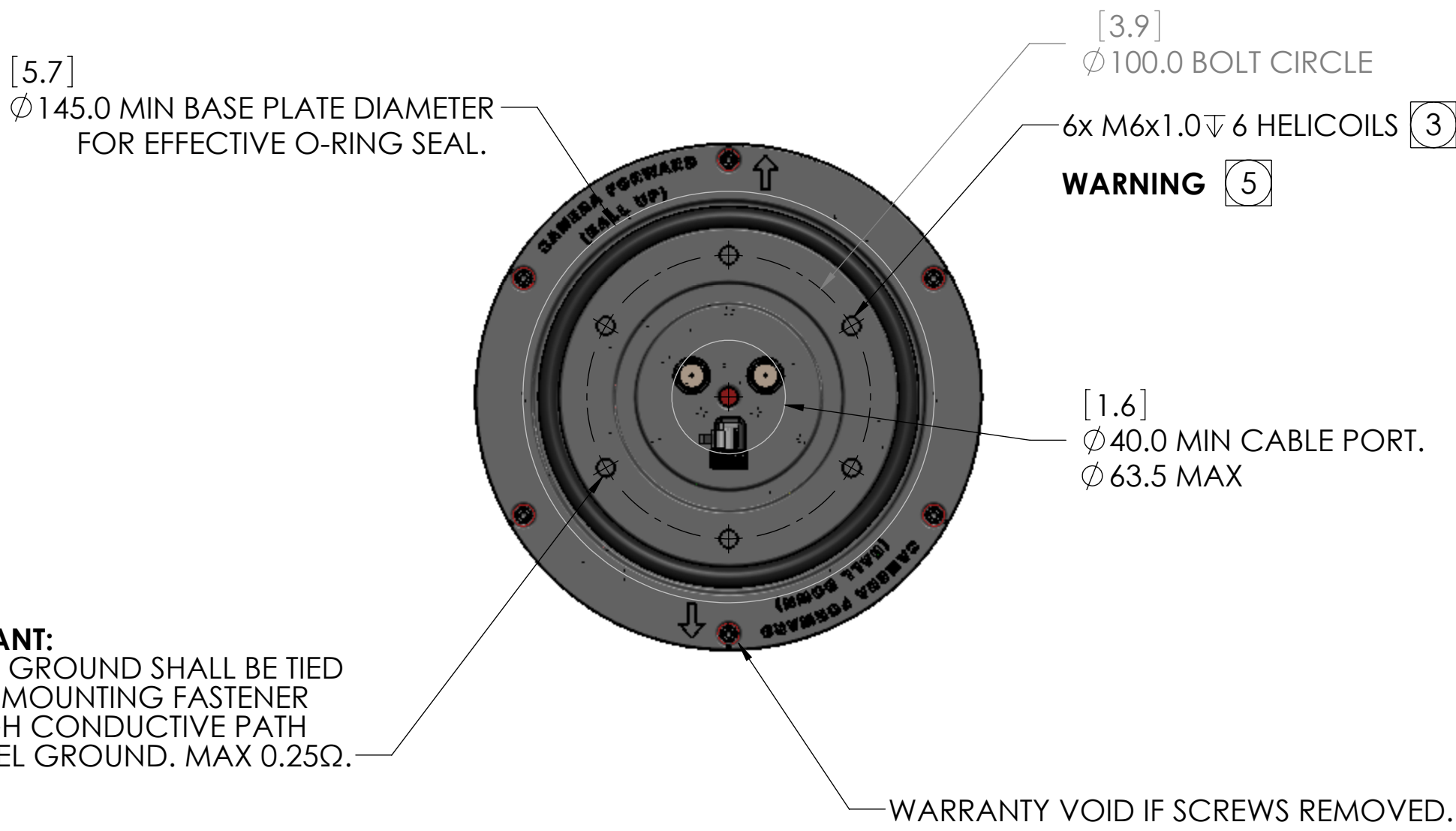
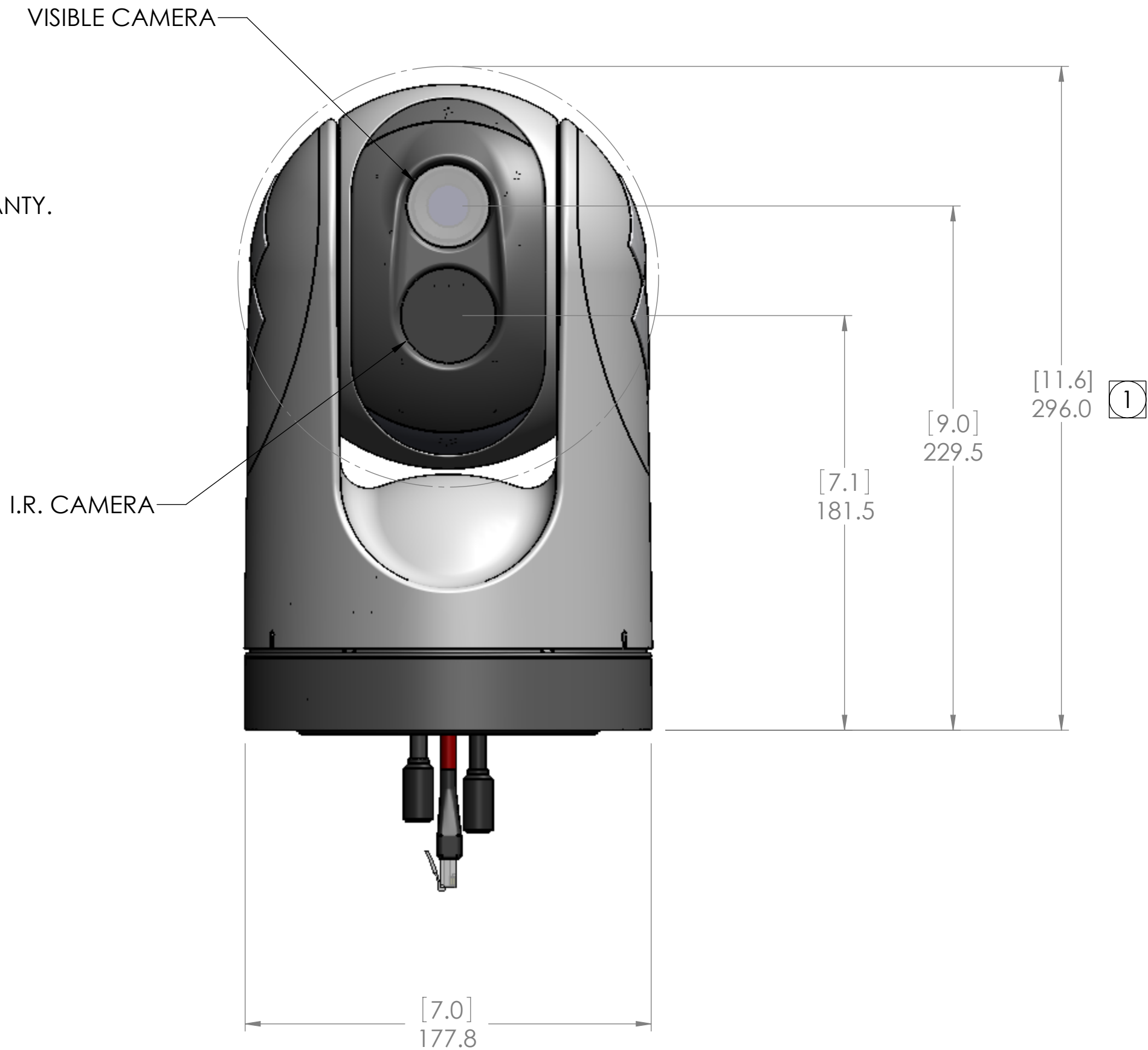


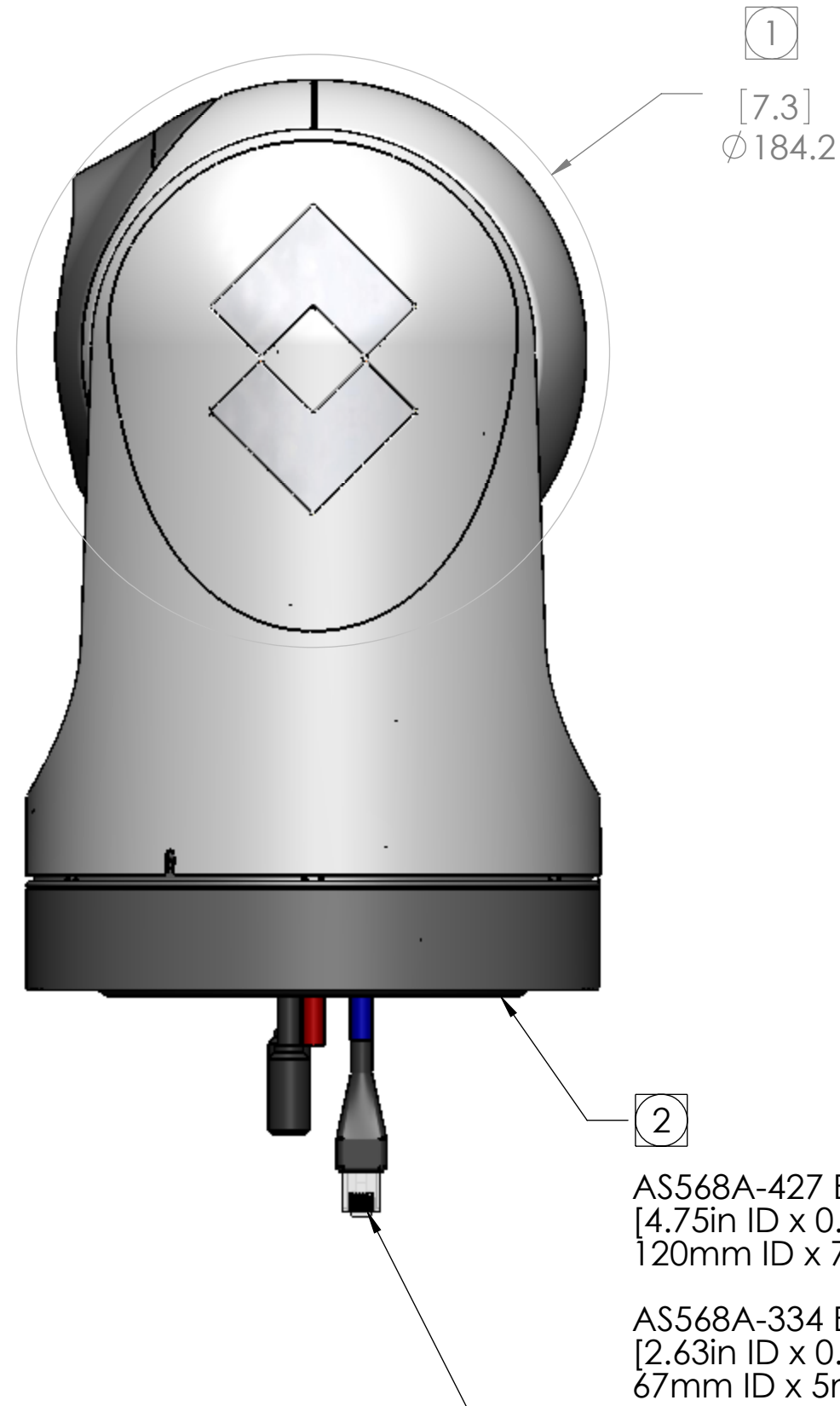
NOTES: UNLESS OTHERWISE SPECIFIED

- 1
- CLEARANCE REQUIRED FOR FREE MOTION OF SYSTEM.
- 2
- O-RING USED FOR SEALING SYSTEM TO MOUNTING STRUCTURE. STANDALONE UNIT MEETS IPX6 SEALING SPECIFICATION. MINIMUM MOUNTING SURFACE FLATNESS OF 1.5mm [0.60in] OVER SYSTEM DIAMETER REQUIRED FOR O-RING USE. WHEN MOUNTING TO IRREGULAR SURFACES, USE OF BEDDING COMPOUND RECOMMENDED.
- 3
- USE WITH FLIR MOUNTING HARDWARE KITS:
4115301 HARDWARE KIT - M-SERIES BASIC MOUNT
500-0396-00 TOP DOWN INSTALLATION KIT
500-0397-00 TOP DOWN INSTALLATION RISER KIT
4.
- USE LOCTITE 242 WITH ALL METAL TO METAL THREADED CONNECTIONS.
- 5
- WARNING**
DO NOT BOTTOM FASTENERS OUT IN BASE.
BOLT LENGTH NOT TO EXCEED 6 mm INTO BASE.
ELECTRONICS WILL BE DAMAGED BY BASE PENETRATION - VOIDING WARRANTY.
BOLT TORQUE NOT TO EXCEED 12 N-m.

M-SERIES
DUAL PAYLOAD



IMPORTANT:
CHASSIS GROUND SHALL BE TIED TO ONE MOUNTING FASTENER FOR HIGH CONDUCTIVE PATH TO VESSEL GROUND. MAX 0.25Ω.



- AS568A-427 EP O-RING
[4.75in ID x 0.25in DIA. EP]
120mm ID x 7mm DIA. EP
- AS568A-334 EP O-RING
[2.63in ID x 0.19in DIA. EP]
67mm ID x 5mm DIA. EP
- CABLES SHOWN FOR REFERENCE ONLY.
NOT TO SCALE, NOR CORRECT LENGTH.
- 381 ± 25mm [15 ± 1in] POWER CABLE, UNTERMINATED TINNED 18AWG WIRE.
457 ± 25mm [18 ± 1in] NETWORK CABLE, RJ45 T568B, MALE.
533 ± 25mm [21 ± 1in] IR VIDEO CABLE, F-TYPE MALE.
584 ± 25mm [23 ± 1in] SWITCHED (IR OR VIS) VIDEO CABLE, F-TYPE MALE.

THIRD ANGLE PROJECTION

METRIC

INTERPRET DRAWING PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED SURFACE ROUGHNESS 32

X = ± .25

XX = ± .13

ANGULAR = ± .5°

FILLET RADII = .13 MAX

THIS DOCUMENT IS CONTROLLED TO FLIR EAR TECHNOLOGY LEVEL 1.

THE INFORMATION CONTAINED IN THIS DOCUMENT PERTAINS TO A DUAL USE PRODUCT CONTROLLED FOR EXPORT BY THE EXPORT ADMINISTRATION REGULATIONS (EAR). FLIR TRADE SECRETS CONTAINED HEREIN ARE SUBJECT TO DISCLOSURE RESTRICTIONS AS A MATTER OF LAW. DIVERSION CONTRARY TO US LAW IS PROHIBITED. US DEPARTMENT OF COMMERCE AUTHORIZATION IS NOT REQUIRED PRIOR TO EXPORT OR TRANSFER TO FOREIGN PERSONS OR PARTIES UNLESS OTHERWISE PROHIBITED.

MATERIAL

N/A

FINISH

N/A

UNLESS OTHERWISE SPECIFIED ALL MEASUREMENTS ARE IN MM. ALL DIMENSIONS IN () ARE INCHES. DO NOT SCALE DRAWING.

CALC WT: 4188.949 GRAMS

PROJECT NO.

APPROVALS

DATE

06/10/2009

CHK

DSGN

ENG

MKENT

06/10/2009

APP

FLIR

FLIR Systems, Inc.
70 Castilian Drive
Goleta, CA 93117

TITLE

M-SERIES ICD, SINGLE / DUAL PAYLOAD

SIZE

D

CAGE

064Y2

DWG NO.

432-0003-00

REV

120

SCALE

1:2

PRINTED:

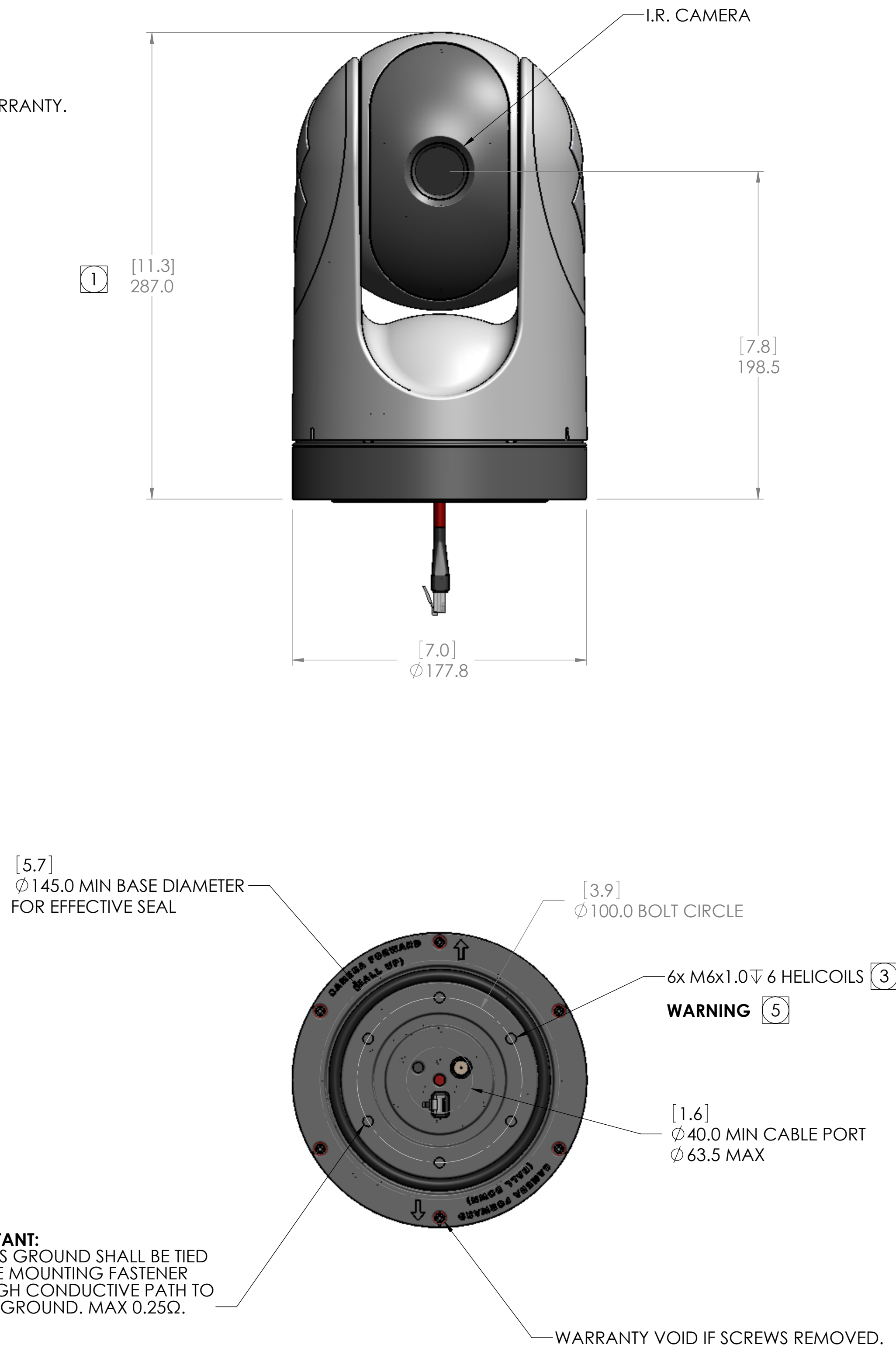
1/20/2011

SHEET

1 OF 11

NOTES: UNLESS OTHERWISE SPECIFIED

- ① CLEARANCE REQUIRED FOR FREE MOTION OF SYSTEM.
- ② O-RING USED FOR SEALING SYSTEM TO MOUNTING STRUCTURE. STANDALONE UNIT MEETS IPX6 SEALING SPECIFICATION. MINIMUM MOUNTING SURFACE FLATNESS OF 1.5mm [0.60in] OVER SYSTEM DIAMETER REQUIRED FOR O-RING USE. WHEN MOUNTING TO IRREGULAR SURFACES, USE OF BEDDING COMPOUND RECOMMENDED.
- ③ USE WITH FLIR MOUNTING HARDWARE KITS:
4115301 HARDWARE KIT - M-SERIES BASIC MOUNT
500-0396-00 TOP DOWN INSTALLATION KIT
500-0397-00 TOP DOWN INSTALLATION RISER KIT
4. USE LOCTITE 242 WITH ALL METAL TO METAL THREADED CONNECTIONS.
- ⑤ **WARNING**
DO NOT BOTTOM FASTENERS OUT IN BASE.
BOLT LENGTH NOT TO EXCEED 6 mm INTO BASE.
ELECTRONICS WILL BE DAMAGED BY BASE PENETRATION - VOIDING WARRANTY.
BOLT TORQUE NOT TO EXCEED 12 N-m.

M-SERIES
SINGLE PAYLOAD

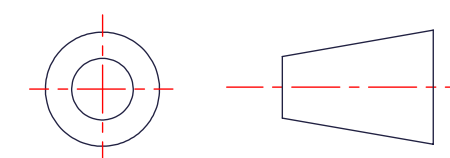
AS568A-427 EP O-RING
[4.75in ID x 0.25in DIA. EP]
120mm ID x 7mm DIA. EP

AS568A-334 EP O-RING
[2.63in ID x 0.19in DIA. EP]
67mm ID x 5mm DIA. EP

CABLES SHOWN FOR REFERENCE ONLY.
NOT TO SCALE, NOR CORRECT LENGTH.

381 \pm 25mm [15 \pm 1in] POWER CABLE, UNTERMINATED TINNED 18AWG WIRE.
457 \pm 25mm [18 \pm 1in] NETWORK CABLE, RJ45 T568B, MALE.
533 \pm 25mm [21 \pm 1in] IR VIDEO CABLE, F-TYPE MALE.

THIRD ANGLE PROJECTION



METRIC

INTERPRET DRAWING
PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32
.X = $\pm .25$
.XX = $\pm .13$
ANGULAR = $\pm .5^\circ$
FILLET RADII = .13 MAX

SIZE	CAGE	DWG NO.	REV
D	064Y2	432-0003-00	120
SCALE	1:5	PRINTED: 1/20/2011	SHEET 2 OF 11

4

3

DWG NO. 432-0003-00

SH 3

REV 120

1

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C

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IMPORTANT NOTE:

PAPER SIZE: 11x17in
TEMPLATE SHOULD PRINT 1:1

DUE TO VARIATION IN SOFTWARE AND
PRINTERS, PLEASE VERIFY SCALE BELOW
BEFORE MODIFYING MOUNTING SURFACE.

[.3]
6x ϕ 6.4 THRU HOLE
EQUALLY SPACED ON
 ϕ 100 [3.94] BOLT CIRCLE

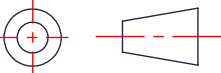
2.00IN

50.0MM

ϕ 40.0 [1.57] MIN CABLE PORT.
 ϕ 63.5 [2.50] MAX

[7.1]
 ϕ 179.4 M-SERIES O.D.

THIRD ANGLE PROJECTION



METRIC

INTERPRET DRAWING
PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32
.X = \pm .25
.XX = \pm .13
ANGULAR = \pm .5°
FILLET RADII = .13 MAX

MOUNTING TEMPLATE
M-SERIES GIMBAL

SIZE B	CAGE 064Y2	DWG NO. 432-0003-00	REV 120
SCALE 1:1	PRINTED: 1/20/2011	SHEET 3 OF 11	

4

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6

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DWG NO. 432-0003-00

SH 4

REV 120

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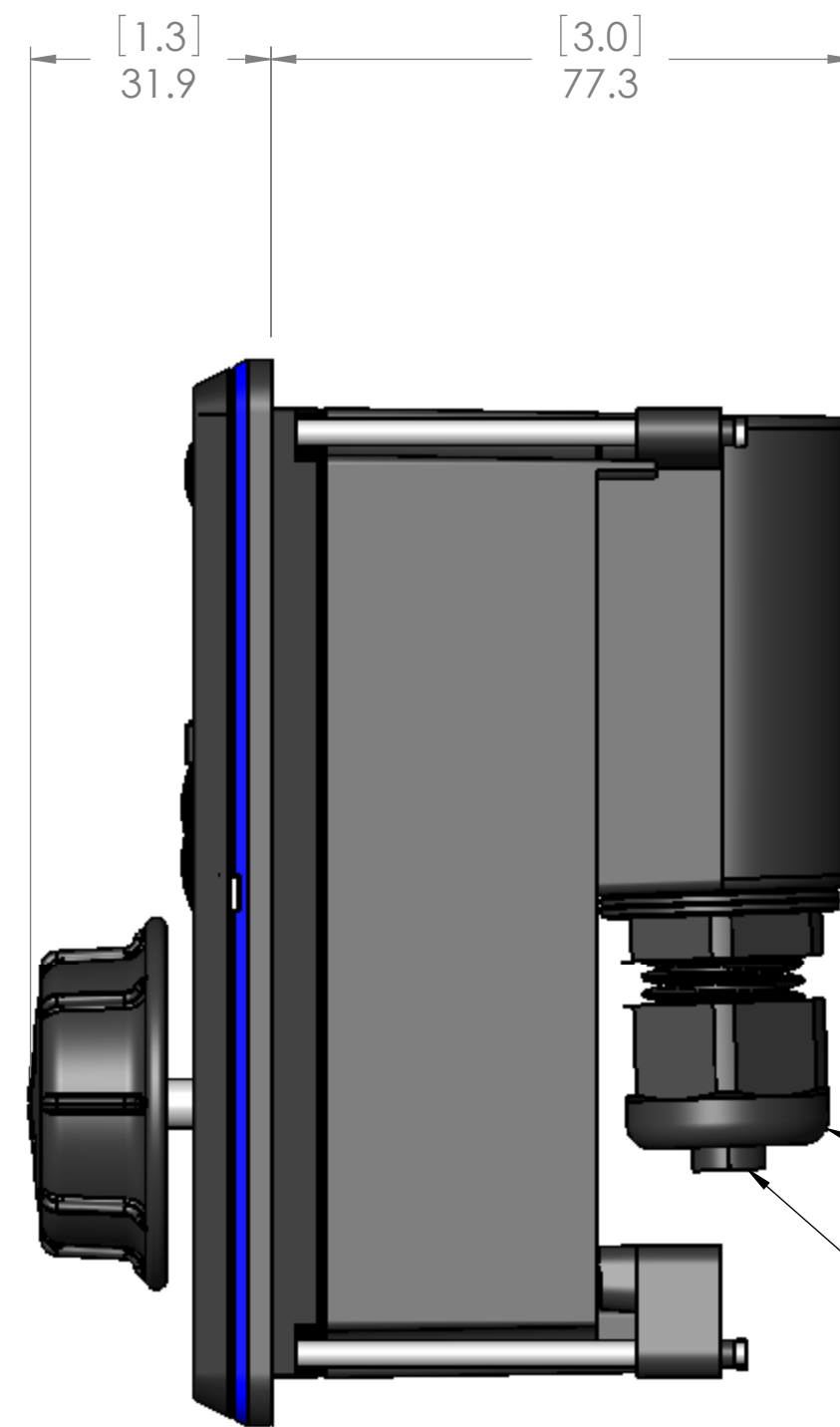
C

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WITH CABLE INSTALLED, TURN NUT 1/4 TURN BEYOND HAND TIGHT.

GLAND SEAL DESIGNED FOR USE WITH DOUBLE SHIELDED CAT 5 ETHERNET CABLE. USE OF SINGLE SHIELDED CABLE MAY REQUIRE THE USE OF ADDITIONAL SEALANT SUCH AS SILICON OR RTV TO ENSURE SEALING OF ENCLOSURE.

INSERT NETWORK CABLE RJ45 THROUGH GLAND NUT AND SEAL BEFORE INSTALLING.

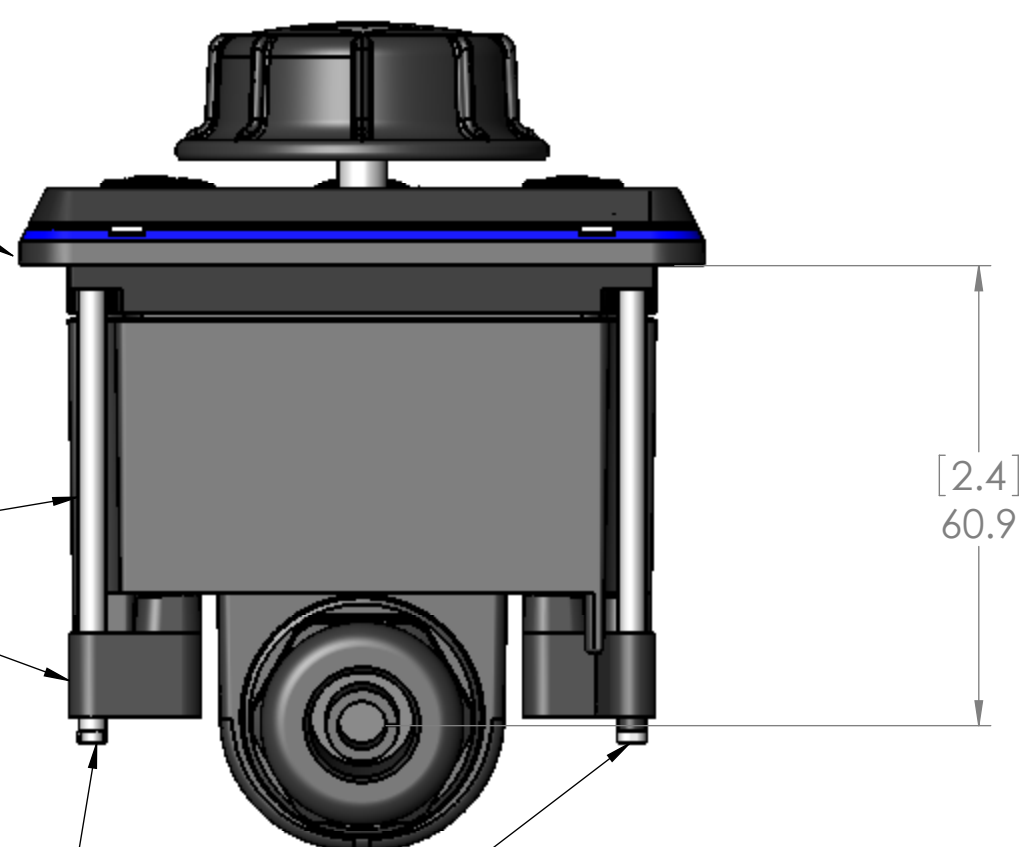
IP66 RATED ABOVE GASKET.

IP64 RATED BEHIND GASKET.

APPLY ADHESIVE SIDE OF GASKET TO JCU BODY.

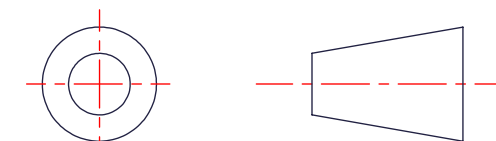
MOUNTING PANEL THICKNESS RANGE 1.6-45 [0.063-1.750]. WHEN MOUNTING TO PANELS LESS THAN 6.3 [0.25] REVERSE PADDLES AS ILLUSTRATED.

DURING INITIAL TIGHTENING, ENSURE MOUNTING TABS ON SCREWS SWING FREE OF REAR HOUSING. WITH TABS RUN UP AGAINST REAR OF INSTRUMENT PANEL, TIGHTEN 1/4-1/2 TURN BEYOND HAND TIGHT.



METRIC

THIRD ANGLE PROJECTION



INTERPRET DRAWING PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32
.X = ±.25
.XX = ±.13
ANGULAR = ±.5°
FILLET RADII = .13 MAX

M-SERIES JCU

SIZE	CAGE	PIECE PART	REV
D	064Y2	500-0385-00	120
SCALE	1:1	PRINTED: 1/20/2011	SHEET 4 OF 11

4

3

DWG NO.

432-0003-00

SH 5

REV 120

1

D

CORNERS SHALL
BE SHARP.

[2.9]
72.4
OPTIONAL
DRILL GUIDE

C

[4.9]
123.2
OPTIONAL
DRILL GUIDE

B

[.25]
Ø 6.4

A

[3.100±.049]
78.74±1.25
CUTOUT

[3.6]
90.4
OUTSIDE
OF JCU

[5.100±.049]
129.54±1.25
CUTOUT

[5.6]
141.4
OUTSIDE
OF JCU

IMPORTANT NOTE:

PAPER SIZE: 11x17in
TEMPLATE SHOULD PRINT 1:1

DUE TO VARIATION IN SOFTWARE AND
PRINTERS, PLEASE VERIFY SCALE BELOW
BEFORE MODIFYING MOUNTING SURFACE.

FITS JCU P.N. 500-0385-00

2.00IN

50.0MM

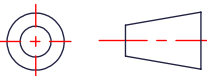
D

C

B

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THIRD ANGLE PROJECTION



METRIC

INTERPRET DRAWING
PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32

.X = ±.25

.XX = ±.13

ANGULAR = ±.5°

FILLET RADII = .13 MAX

MOUNTING TEMPLATE
M-SERIES JCU

SIZE
B

CAGE

064Y2

DWG NO.

432-0003-00

REV
120

SCALE 1:1

PRINTED: 1/20/2011

SHEET 5 OF 11

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D

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M-SERIES
SINGLE /DUAL PAYLOAD



POWER CABLE
18AWG TINNED STRANDED WIRE
RED WIRE: +12-24 VDC (3.8-1.9 AMP MAX)
BLK WIRE: DC RETURN
GRN WIRE: EARTH GROUND

BUTT SPICE OR INSTALLER
SUPPLIED CONNECTOR

INSTALLER SUPPLIED POWER CABLE
GAUGE OF WIRE TO BE APPROPRIATE
FOR SUPPLY VOLTAGE AND LENGTH OF
CABLE RUN TO ENSURE ADEQUATE
CURRENT CARRYING CAPABILITY.

ATTACH
GROUNDING STRAP
TO MOUNTING STUD

CONNECTOR
RJ45 WATERPROOF ENCLOSURE
FLIR PN 4115028

RG59U VIDEO CABLE
F-TYPE MALE TERMINATION

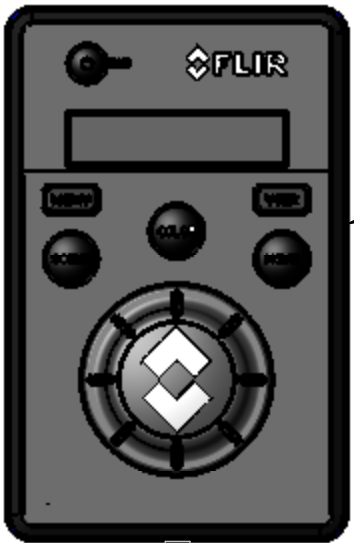
CONNECTOR
F-TYPE FEMALE TO FEMALE
FLIR PN 4115330

SWITCHED (IR OR VIS) VIDEO CABLE
(DUAL PAYLOAD ONLY)

IR VIDEO CABLE

INSTALLER SUPPLIED VIDEO CABLE
SHALL BE RATED RG59U OR BETTER

JCU



FLIR P.N. 500-0385-00

NETWORK CABLE FOR PoE DEVICES (IEEE802.3af)
8 CONDUCTOR T568B, ETHERNET, DOUBLE SHIELDED
FLIR PN 308-0163-25 OR EQUIVALENT
NOTE: TO MAINTAIN IEC 60945 EMI COMPLIANCE,
USE OF DOUBLE SHIELDED CABLE REQUIRED.

DISPLAY



INTERCONNECT DIAGRAM
SINGLE JCU

SIZE D	CAGE 064Y2	DWG NO. 432-0003-00	REV 120
SCALE 1:2	PRINTED: 1/20/2011	SHEET 6 OF 11	

D

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M-SERIES
SINGLE / DUAL PAYLOAD



POWER CABLE
18AWG TINNED STRANDED WIRE
RED WIRE: +12-24 VDC (3.8-1.9 AMP MAX)
BLK WIRE: DC RETURN
GRN WIRE: EARTH GROUND

BUTT SPLICE OR INSTALLER
SUPPLIED CONNECTOR

ATTACH
GROUNDING STRAP
TO MOUNTING STUD

CONNECTOR
RJ45 WATERPROOF ENCLOSURE
FLIR PN 4115028

RG59U VIDEO CABLE
F-TYPE MALE TERMINATION

INSTALLER SUPPLIED POWER CABLE
GAUGE OF WIRE TO BE APPROPRIATE FOR
SUPPLY VOLTAGE AND LENGTH OF CABLE
RUN TO ENSURE ADEQUATE CURRENT
CARRYING CAPABILITY.

CONNECTOR
F-TYPE FEMALE TO FEMALE
FLIR PN 4115330

INSTALLER SUPPLIED VIDEO CABLE
SHALL BE RATED RG59U OR BETTER

MANUFACTURER SPECIFIC ENVIRONMENTAL
EXPOSURE RATINGS APPLY

POE NETWORK SWITCH
IEEE802.3af, T568B COMPLIANT
INSTALLER SUPPLIED

JCU 1



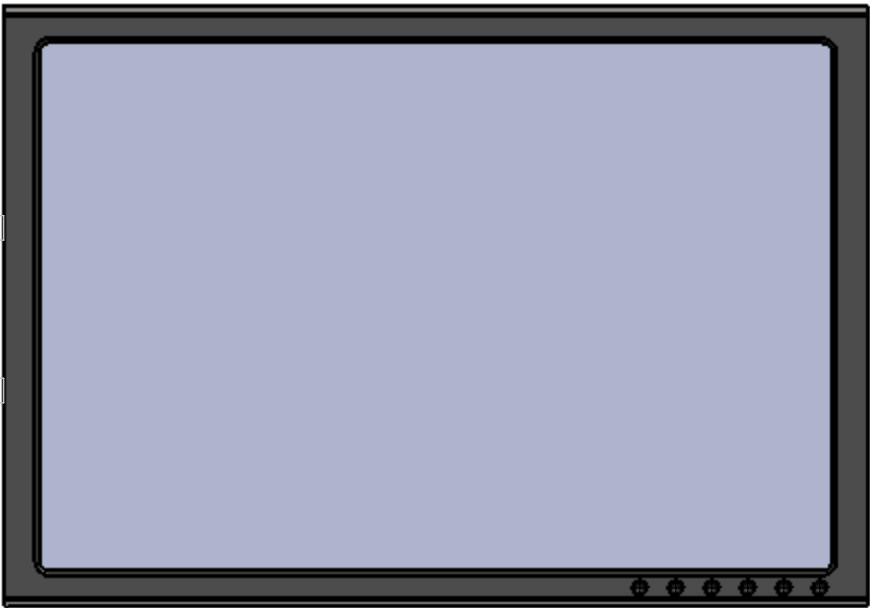
JCU 2



FLIR P.N. 500-0385-00

NETWORK CABLE FOR PoE DEVICES (IEEE802.3af)
8 CONDUCTOR T568B, ETHERNET, DOUBLE SHIELDED
FLIR PN 308-0163-25 OR EQUIVALENT
NOTE: TO MAINTAIN IEC 60945 EMI COMPLIANCE,
USE OF DOUBLE SHIELDED CABLE REQUIRED.

DISPLAY

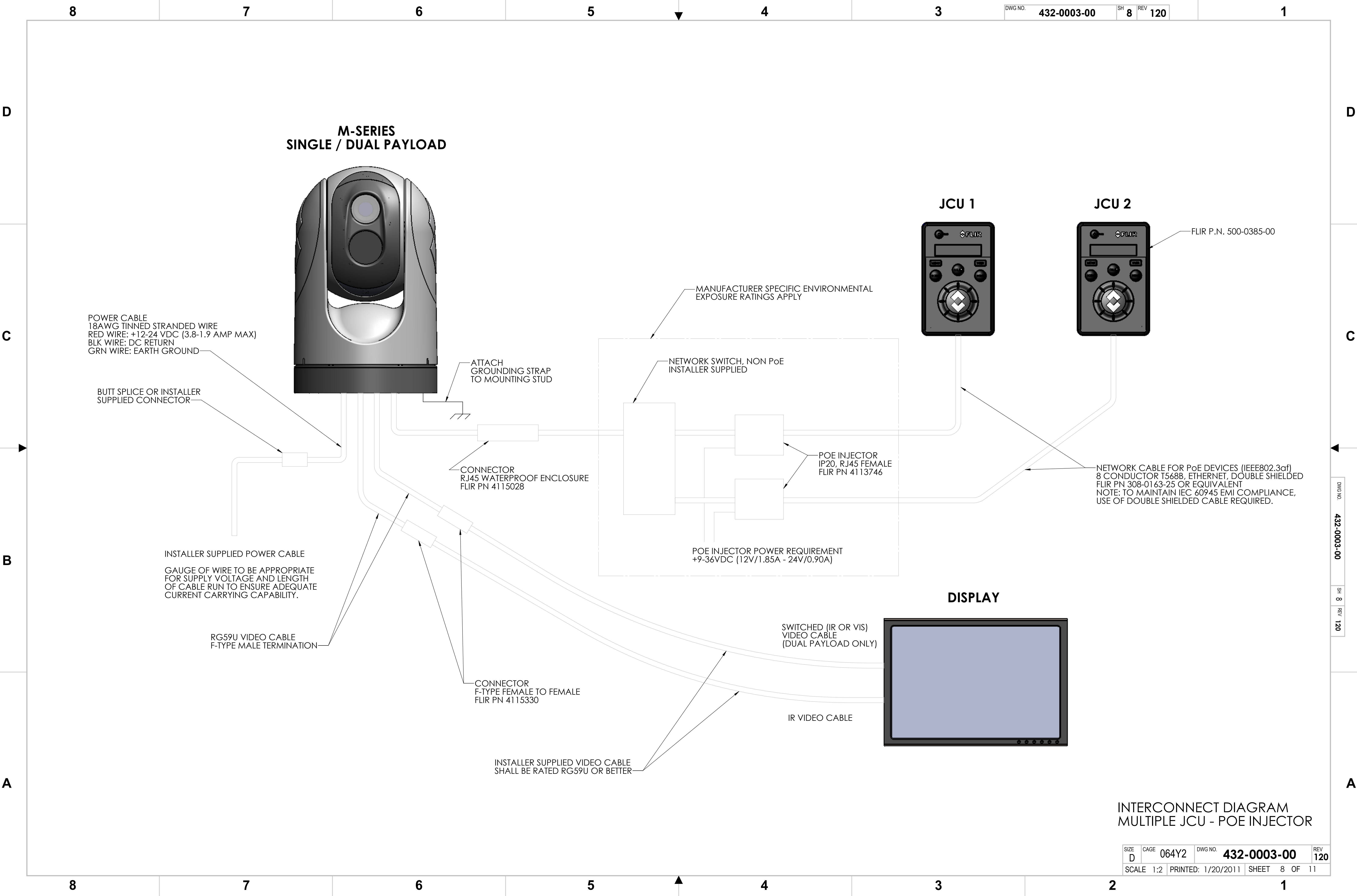


SWITCHED (IR OR VIS)
VIDEO CABLE
(DUAL PAYLOAD ONLY)

IR VIDEO CABLE

INTERCONNECT DIAGRAM
MULTIPLE JCU - POE SWITCH

SIZE D	CAGE 064Y2	DWG NO. 432-0003-00	REV 120
SCALE 1:2	PRINTED: 1/20/2011	SHEET 7 OF 11	

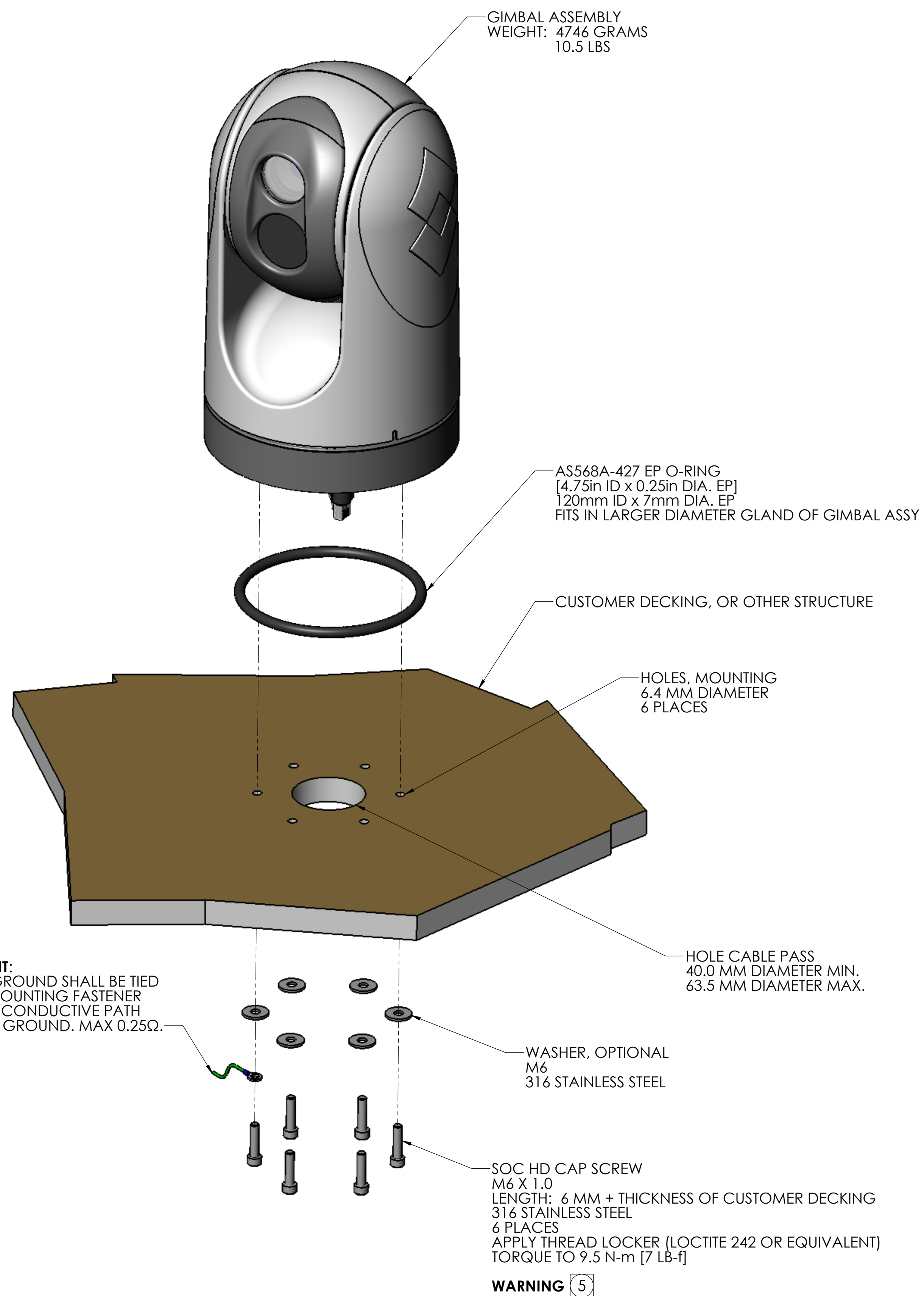


D

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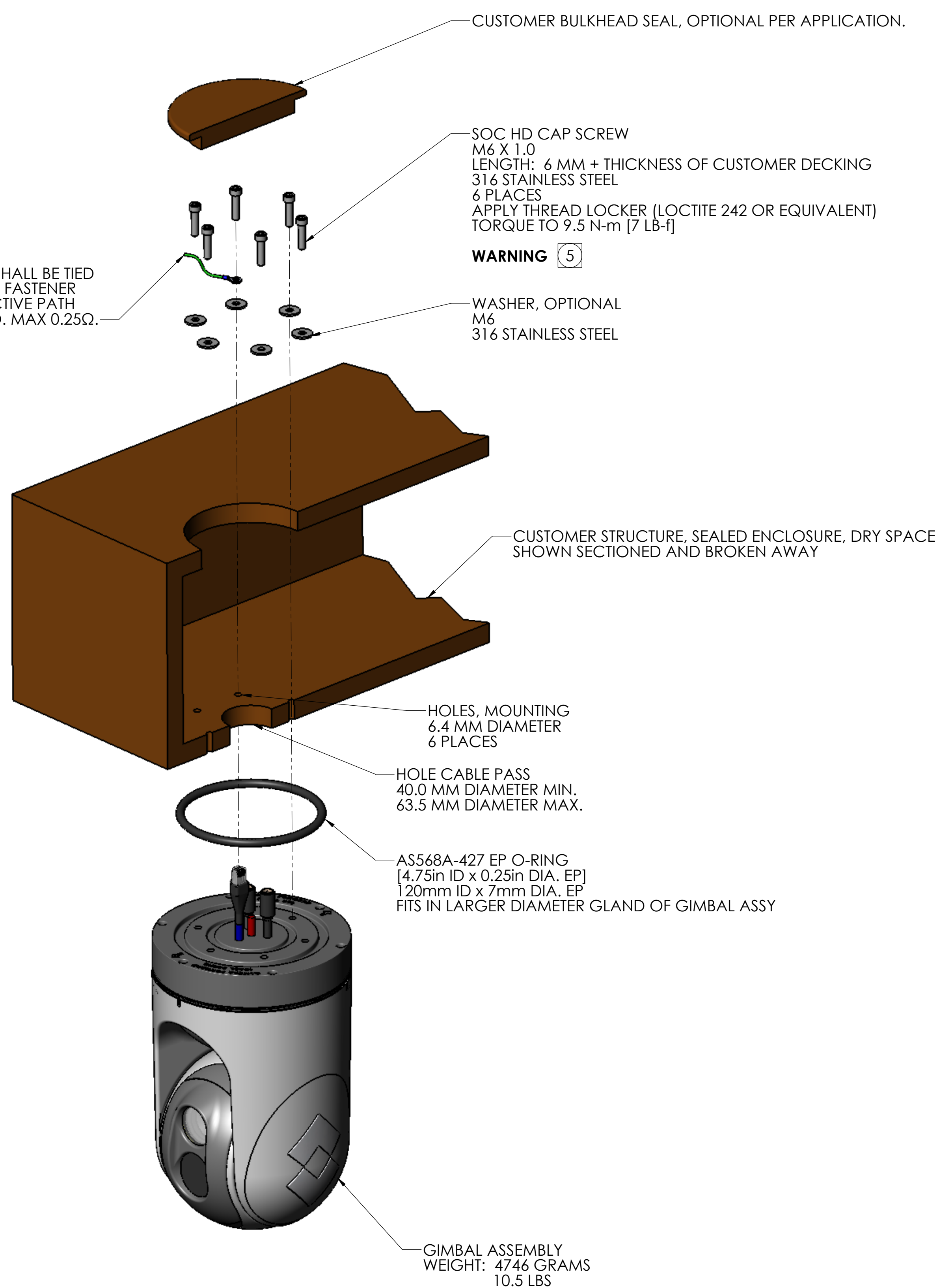
HIDDEN CABLING MOUNTING SCHEME:

MOUNTING DIRECTLY THRU CUSTOMER DECKING, OR OTHER SURFACES.
STRUCTURE OPPOSITE GIMBAL TO BE SEALED ENCLOSURE AND A DRY SPACE.
CAMERA BALL UP CONFIGURATION

ENTIRE ASSEMBLY VIEW CAN BE ROTATED 180°
FOR BALL DOWN INSTALLATION.

NOTE HOME DIRECTION FOR BALL UP/ DOWN, INSTALL AS INDICATED ON BASE OF UNIT.

IMPORTANT:
CHASSIS GROUND SHALL BE TIED TO ONE MOUNTING FASTENER FOR HIGH CONDUCTIVE PATH TO VESSEL GROUND. MAX 0.25Ω.



HIDDEN CABLING MOUNTING SCHEME:

MOUNTING DIRECTLY TO CUSTOMER STRUCTURE, ACTUAL STRUCTURES MAY VARY.
CAMERA BALL DOWN CONFIGURATION

ENTIRE ASSEMBLY VIEW CAN BE ROTATED 180°
FOR BALL UP INSTALLATION.

NOTE HOME DIRECTION FOR BALL UP/ DOWN, INSTALL AS INDICATED ON BASE OF UNIT.

SCALE: 3/8

IMPORTANT:
CHASSIS GROUND SHALL BE TIED
TO ONE MOUNTING FASTENER
FOR HIGH CONDUCTIVE PATH
TO VESSEL GROUND. MAX 0.25Ω.

WASHER, OPTIONAL
M6
316 STAINLESS STEEL
6 PLACES

HOLES, MOUNTING
6.4 MM DIAMETER
6 PLACES

HOLE CABLE PASS
40.0 MM DIAMETER MIN.
63.5 MM DIAMETER MAX.

NUT, HEX (NYLOCK AND ACORN NUTS, OPTIONAL)
M6 X 1.0
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)

MOUNT, CAMERA
CUSTOMER SUPPLIED
UNIT SHOWN EXAMPLE ONLY

SPACER, THRU
6.4 ID X 17.3 OD X 3.2 THICK
316 STAINLESS STEEL
6 PLACES

STUD, MALE
M6 X 1.0 (LENGHT 19 MM + THICKNESS OF MOUNT)
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)

WARNING 5

GIMBAL ASSEMBLY
WEIGHT: 4746 GRAMS
10.5 LBS

EXPOSED CABLING MOUNTING SCHEME:

CUSTOMER PROVIDED MOUNTING BRACKET / SURFACE
CAMERA BALL DOWN CONFIGURATION

NOTE HOME DIRECTION FOR BALL UP/ DOWN, INSTALL AS INDICATED ON BASE OF UNIT.

IMPORTANT:
CHASSIS GROUND SHALL BE TIED
TO ONE MOUNTING FASTENER
FOR HIGH CONDUCTIVE PATH
TO VESSEL GROUND. MAX 0.25Ω.

WASHER, OPTIONAL
M6
316 STAINLESS STEEL
6 PLACES

HOLE CABLE PASS
40.0 MM DIAMETER MIN.
50.4 MM DIAMETER MAX.
(FOR O-RING SEAL)

HOLES, MOUNTING
6.4 MM DIAMETER
6 PLACES

CONDUIT AND FITTINGS
CUSTOMER SUPPLIED
PARTS SHOWN, EXAMPLE ONLY

NUT, HEX (NYLOCK AND ACORN NUTS, OPTIONAL)
M6 X 1.0
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)

CONDUIT HUB

MOUNT, CAMERA
CUSTOMER SUPPLIED
UNIT SHOWN EXAMPLE ONLY

STUD, MALE
M6 X 1.0 (LENGHT 16 MM + THICKNESS OF MOUNT)
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)

WARNING 5

AS568A-334 EP O-RING
[2.65in ID x 0.19in DIA. EP]
67mm ID x 5mm DIA. EP
FITS IN SMALLER DIAMETER GLAND OF GIMBAL ASSY

GIMBAL ASSEMBLY
WEIGHT: 4746 GRAMS
10.5 LBS

EXPOSED CABLING MOUNTING SCHEME:

CUSTOMER PROVIDED MOUNTING BRACKET / SURFACE
CAMERA BALL DOWN CONFIGURATION

NOTE HOME DIRECTION FOR BALL UP/ DOWN, INSTALL AS INDICATED ON BASE OF UNIT.

D

D

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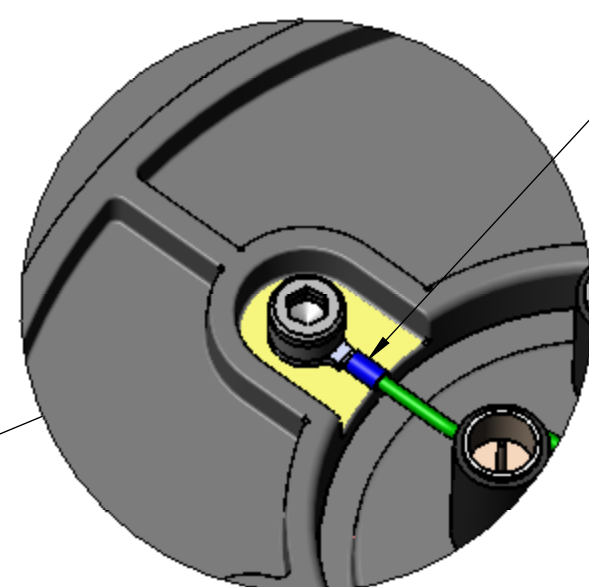
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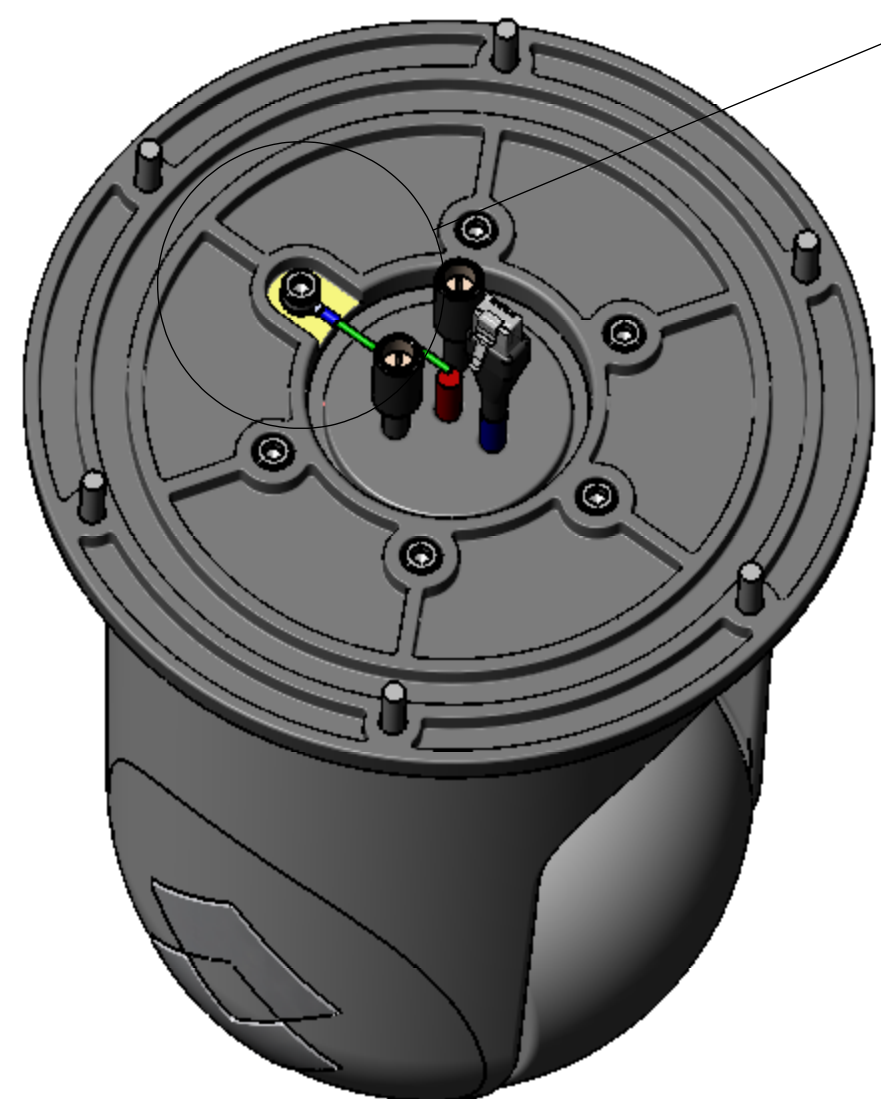
A



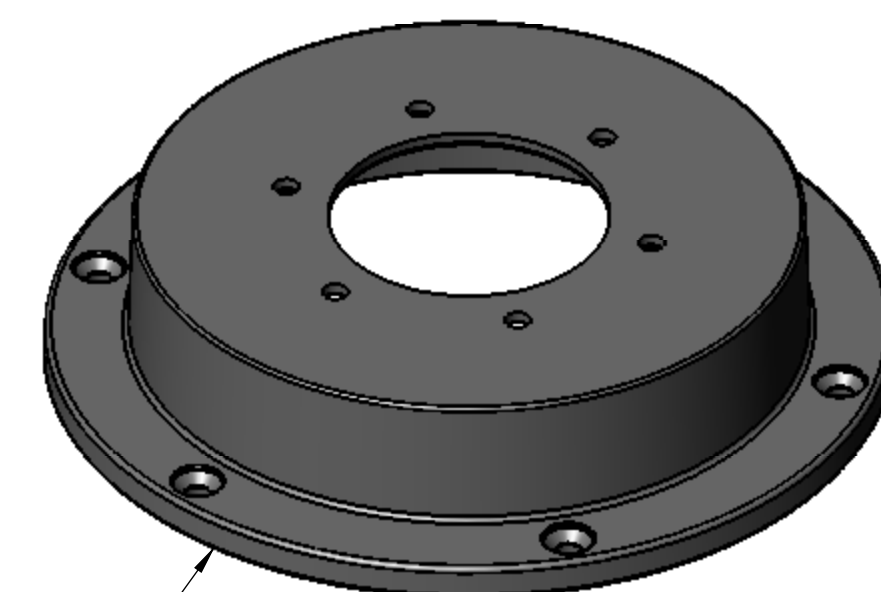
CHASSIS GROUND SHALL BE TIED TO MOUNTING FASTENER FOR HIGH CONDUCTIVE PATH TO VESSEL GROUND. MAX 0.25Ω. (CUSTOMER SUPPLIED)

DETAIL A
SCALE 1 : 1

GROUNDING SCHEME



GIMBAL ASSEMBLY
WEIGHT: 4746 GRAMS
10.5 LBS



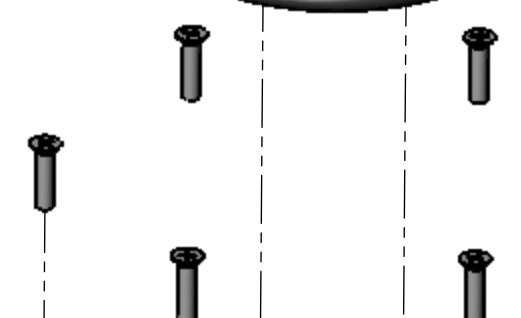
ALTERNATE TO MOUNT SHOWN IN ASSEMBLY
PELAGIC BASE CONNECTOR COMPARTMENT
FLIR P/N 500-0397-00

TOP DOWN BASE
FLIR P/N 500-0396-00
SEE FLIR P/N 500-0397-00 (ALTERNATE)

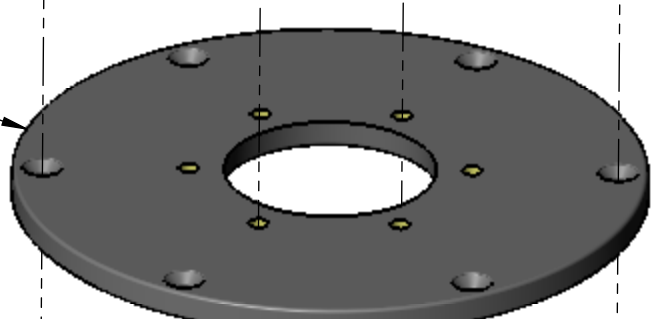
AS568A-427 EP O-RING
[4.75in ID x 0.25in DIA. EP]
120mm ID x 7mm DIA. EP
FITS IN LARGER DIAMETER GLAND OF GIMBAL ASSY



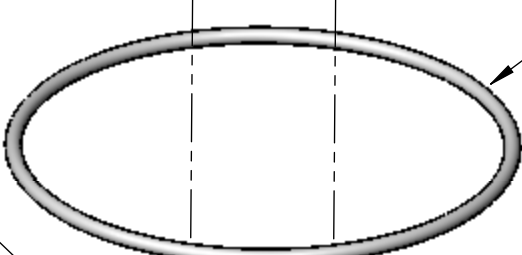
M6 SCREWS, FLAT HEAD SOC CAP OR,
1/4"-20 SCREWS, FLAT HEAD SOC CAP OR,
#14 X 1.5 SCREWS, FLAT HEAD PHILLIPS SHEET METAL
TYPE AND LENGTH DEPENDANT ON MOUNTING SURFACE
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)



AS568A-440 EP O-RING
[6.75in ID x 0.25in DIA. EP]
171mm ID x 7mm DIA. EP
FITS IN LARGER DIAMETER GLAND OF GIMBAL ASSY

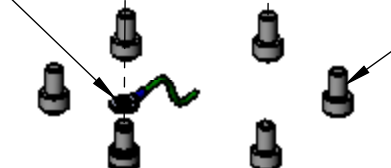


SOC HD CAP SCREW
M6 X 1.0 X 10 MM LONG
316 STAINLESS STEEL
6 PLACES
APPLY THREAD LOCKER (LOCTITE 242 OR EQUIVALENT)
TORQUE TO 9.5 N-m [7 LB-f]

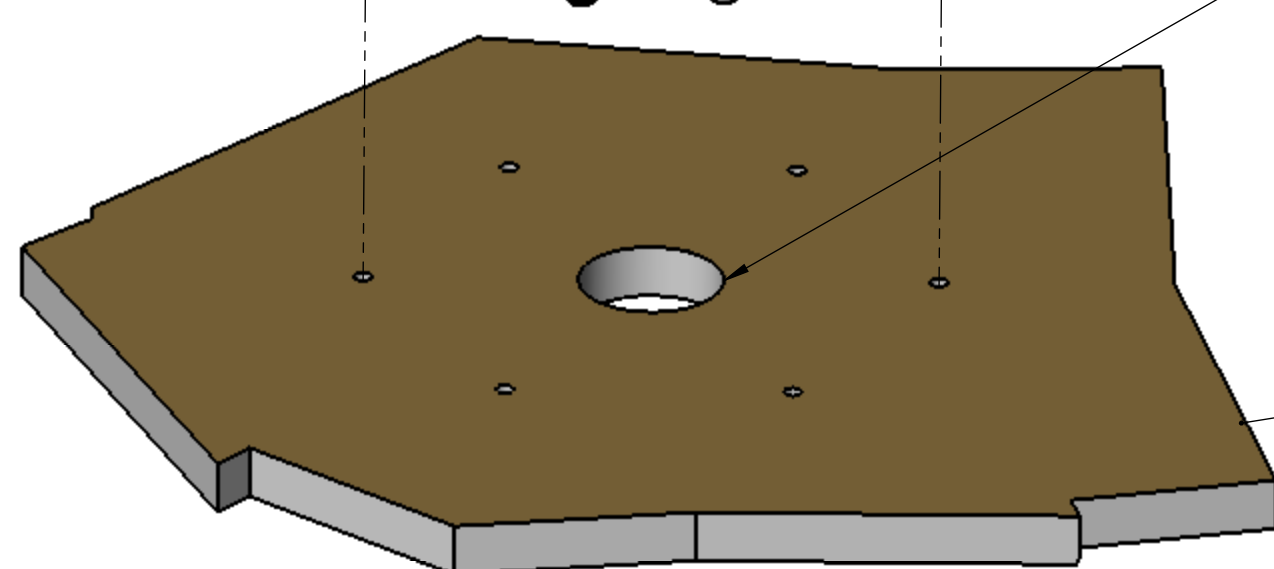


WARNING 5

HOLE CABLE PASS
40.0 MM DIAMETER MIN.
63.5 MM DIAMETER MAX.



CHASSIS GROUND



CUSTOMER DECKING, OR OTHER STRUCTURE

HIDDEN CABLING MOUNTING SCHEME

FLIR PROVIDED MOUNTING BRACKET(S)
CAMERA BALL UP CONFIGURATION

ENTIRE ASSEMBLY VIEW CAN BE ROTATED 180°
FOR BALL DOWN INSTALLATION

NOTE HOME DIRECTION FOR BALL UP/ DOWN, INSTALL AS INDICATED ON BASE OF UNIT.

SCALE: 3/8