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 IP66 SEATING SPECIFICATION. MINIMUM MOUNTING SURFACE FLATNESS OF 2.5mm [0.010] OVER SYSTEM DIAMETER REQUIRED FOR CARING USE. WHEN MOUNTING TO IRREGULAR SURFACES, USE OF BEDDING COMPOUND RECOMMENDED.
3. USE WITH FUR MOUNTING HARDWARE KITS
4. USE LOCITITE 262 WITH ALL METAL TO METAL THREADED CONNECTIONS THAT DO NOT HAVE LOCKING PATCHES.

WARNING
DO NOT BOTTOM FASTENERS IN BASE.
BOLT LENGTH NOT TO EXCEED 4.5N-m [3.3 ft-lb].

NON-STANDARD PAINT NOTICE: FOR CUSTOMERS WHO CONSIDER SECONDARY PAINTING OF THE CAMERA ASSEMBLY BE AWARE OF THE FOLLOWING CONCERNS:
A. SECONDARY PAINT PUTS THE CAMERA WARRANTY AT RISK. SINCE THE CAMERA PAINT IS A PART OF THE CAMERA DESIGN, A CHANGE IN PAINT IS A CHANGE IN CAMERA DESIGN WHICH MAY AFFECT CAMERA PERFORMANCE AND RELIABILITY.
B. PAINT COLOURS CAN SIGNIFICANTLY AFFECT CAMERA INTERNAL TEMPERATURES. DARKER COLOURS WILL ABSTRACT AN INCREASED AMOUNT OF HEAT FROM A SYSTEM.
C. FOR THOSE WHO STILL CHOOSE TO PAINT THE CAMERA, INSURE SECONDARY PAINT DOES NOT BLOCK AIRFLOW AROUND THE FLIR LOGO. THERE ARE MOISTURE BARRIER, PRESSURE RELIEF VALVES UNDER THE LOWER ICONS WHICH SHOULD MAINTAIN AIRFLOW PATHWAYS FOR PROPER FUNCTION.

ANY FURTHER CONCERNS IN THIS REGARD CONTACT FLIR TECHNICAL SUPPORT.

M400

VISIBLE CAMERA
SPOTLIGHT
IR CAMERA

WARNING
6.
[225.0 Minimum Base Plate Diameter for Effective O-Ring Seal]

[105.0 Bolt Circle]

[15.65]
[30.55]

[5.34]
[135.7]
[273.1]

[100.0 BOLT CIRCLE]

[5.09]

[255.0]

WARNING
5.

CABLE PORT DIMENSIONS DEPEND ON MOUNTING SOLUTION AND CABLE TYPE. SEE SHEETS 2 AND 3 FOR DETAILS.

POWER CONNECTOR
ANALOG VID AND SERIAL CONNECTOR
HD/SDI BNC CONNECTOR
ETHERNET CONNECTOR

INTERPRET DRAWING PER ASME Y14.5M-1994
THIRD ANGLE PROJECTION

METRIC

[5/7/2015]

K. MONCINO

FLIR Systems, Inc.
6769 Hollister Drive
Goleta, CA 93117

© 2020 FLIR Systems, Inc. All rights reserved worldwide. No parts of this manual, in whole or in part, may be copied, photocopied, translated, or transmitted to any electronic medium or machine readable form without the prior written permission of FLIR Systems, Inc.

Names and marks appearing on the products herein are either registered trademarks or trademarks of FLIR Systems, Inc. and/or its subsidiaries. All other trademarks, trade names, or company names referenced herein are the property of their respective owners.

This product is protected by patents, design patents, patents pending, or design patents pending.

The contents of this document are subject to change.

THIS DOCUMENT DOES NOT CONTAIN EXPORT-CONTROLLED INFORMATION

UNLESS OTHERWISE SPECIFIED ALL MEASUREMENTS ARE IN MM.
ALL DIMENSIONS IN [ ] ARE INCHES.
DO NOT SCALE DRAWING.

NOTE: An electronic option drop down menu, such as the one shown below, will be used in the future to insert the text shown above. This text will be replaced with the actual text to be inserted in the future.
DECK PORT CABLE CLEARANCE
Ø130.0 [5.12] MAX
RIGHT ANGLED CABLES NOT RECOMMENDED FOR MOUNTING SURFACES >10mm THICK.
IF MOUNTING SURFACE IS >10mm THICK, USE STRAIGHT CABLES OR MOUNT TO TOP DOWN RISER
IMPORTANT NOTE:

PAPER SIZE: 22x34in
TEMPLATE SHOULD PRINT 1:1

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

ENSURE PRINTER MARGINS ARE SET TO ZERO AND SCALE IS 100%.

TOP DOWN RISER MOUNTING TEMPLATE

---

[5.88] [3.1] RISER CABLE CLEARANCE HOLE
RECOMMENDED DECK PORT:
30.0 [1.18] MIN
130.0 [5.12] MAX

[7.09] [1.8] MARLIN BASE CUP HOLE CIRCLE

6X [0.25] RISER CLEARANCE HOLES
RECOMMENDED:
M8 SOCKET HEAD CAP SCREWS, OR
5/16" - 18 SOCKET HEAD CAP SCREWS, OR
5/16" - 18 HEX HEAD SHEET METAL SCREWS
TYPE AND LENGTH DEPENDANT ON MOUNTING SURFACE
316 STAINLESS STEEL
APPLY THREAD LOCKER (LOCTITE 262 OR EQUIVALENT)

---

[12.74] [3.23] RISER O.D.

[4.79] [1.2] RISER CABLE CLEARANCE HOLE
RECOMMENDED DECK PORT:
30.0 [1.18] MIN
130.0 [5.12] MAX

---

9/18/2020
SOLIDWORKS MODEL: 432-0012-XX-YY TOP LEVEL ASSEMBLY, MARLIN
MODEL REVISON:
J

© 2020, FLIR Systems Inc. - All Rights Reserved

FLIR Systems, Inc.
6769 Hollister Ave.
Goleta, CA 93117
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.

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

APPLY ADHESIVE SIDE OF GASKET TO JCU BODY.

MOUNTING PANEL THICKNESS RANGE 1.6-4.5 [0.036-1.750], WHEN MOUNTING TO PANEL LESS THAN 6.3 [0.25] REVERSE PADDLES.
CORNERS SHALL BE SHARP.

OPTIONAL DRILL GUIDE

OUTSIDE OF JCU

CUTOUT

OPTIONAL DRILL GUIDE

OUTSIDE OF JCU

PAPER SIZE: 11x17in
TEMPLATE SHOULD PRINT 1:1

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

ENSURE PRINTER MARGINS ARE SET TO ZERO AND SCALE IS 100%
NOTE: CABLE CONFIGURATIONS SHOWN ARE FOR SHORT CABLES INCLUDED WITH EACH UNIT. LONG ACCESSORY CABLES ARE AVAILABLE WHERE NO IN-LINE COUPLING IS NECESSARY. FOR MORE INFORMATION, SEE SHEET 9.

**POWER CABLE**
- Solid Thinned Stranded Wire
- Red: +12-24 VDC (4.4-2.2 AMP NOM)
- Blue: DC RETURN
- Drain Wire: Earth Ground

**Butt Splice or Installer Supplied Connector**

**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.

**Connector**
- RJ45 Waterproof of Enclosure
- Flir PN 4115028
- 100M Run Length Max Without Buffer

**PoE Network Switch**
- IEEE802.3af, T568B Compliant
- Flir PN 4141042
- Manufacturer Specific Environmental Exposure Ratings Apply

**Fabrication cable for PoE Devices (IEEE802.3af)**
- RG6 BNC

**Isolation Transformer**
- BNC Female to Female

**Coax**
- RG179 F-Type

**NMEA Interface**

**Pelco Interface**

**Connectors**
- Manufacturer Specific Environmental Exposure Ratings Apply

**Interconnect Diagram**

**Multiple JCU - PoE Switch**

© 2020, FLIR Systems Inc. - All Rights Reserved

Flir Systems, Inc.
6769 Hollister Ave.
Goleta, CA 93117
NOTE: CABLE CONFIGURATIONS SHOWN ARE FOR SHORT CABLES INCLUDED WITH EACH UNIT. LONG ACCESSORY CABLES ARE AVAILABLE WHERE NO IN-LINE COUPLING IS NECESSARY. FOR MORE INFORMATION, SEE SHEET 9.
**CABLE OPTIONS**

<table>
<thead>
<tr>
<th>FLIR PART NUMBER</th>
<th>CABLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>308-0261-01-00</td>
<td>POWER CABLE - RA, 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0263-01-00</td>
<td>POWER CABLE - RA, 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0265-01-00</td>
<td>CABLE - AV AND SERIAL RA, 1M</td>
</tr>
<tr>
<td>308-0267-00</td>
<td>CABLE - HD/SDI 1M</td>
</tr>
<tr>
<td>308-0269-00</td>
<td>CABLE - ETHERNET TO RJ45, 1M</td>
</tr>
<tr>
<td>308-0262-01-00</td>
<td>POWER CABLE - 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0264-01-00</td>
<td>CABLE - AV AND SERIAL, 1M</td>
</tr>
<tr>
<td>4141864</td>
<td>CABLE - HD/SDI, 100FT</td>
</tr>
</tbody>
</table>

**AVAILABLE AS ACCESSORIES**

<table>
<thead>
<tr>
<th>FLIR PART NUMBER</th>
<th>CABLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>308-0261-30-00</td>
<td>POWER CABLE - RA, 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0263-30-00</td>
<td>POWER CABLE - RA, 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0265-30-00</td>
<td>CABLE - AV AND SERIAL RA, 100FT</td>
</tr>
<tr>
<td>308-0267-30-00</td>
<td>CABLE - HD/SDI, 100FT</td>
</tr>
<tr>
<td>308-0269-30-00</td>
<td>CABLE - ETHERNET TO RJ45, 100FT</td>
</tr>
<tr>
<td>308-0262-30-00</td>
<td>POWER CABLE - 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0264-30-00</td>
<td>CABLE - AV AND SERIAL, 100FT</td>
</tr>
</tbody>
</table>

**CABLE OPTIONS**

<table>
<thead>
<tr>
<th>FLIR PART NUMBER</th>
<th>CABLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>308-0261-01-00</td>
<td>POWER CABLE - RA, 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0263-01-00</td>
<td>POWER CABLE - RA, 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0265-01-00</td>
<td>CABLE - AV AND SERIAL RA, 1M</td>
</tr>
<tr>
<td>308-0267-00</td>
<td>CABLE - HD/SDI 1M</td>
</tr>
<tr>
<td>308-0269-00</td>
<td>CABLE - ETHERNET TO RJ45, 1M</td>
</tr>
<tr>
<td>308-0262-01-00</td>
<td>POWER CABLE - 12 AWG, 1M</td>
</tr>
<tr>
<td>308-0264-01-00</td>
<td>CABLE - AV AND SERIAL, 1M</td>
</tr>
<tr>
<td>4141864</td>
<td>CABLE - HD/SDI, 100FT</td>
</tr>
</tbody>
</table>

**AVAILABLE AS ACCESSORIES**

<table>
<thead>
<tr>
<th>FLIR PART NUMBER</th>
<th>CABLE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>308-0261-30-00</td>
<td>POWER CABLE - RA, 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0263-30-00</td>
<td>POWER CABLE - RA, 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0265-30-00</td>
<td>CABLE - AV AND SERIAL RA, 100FT</td>
</tr>
<tr>
<td>308-0267-30-00</td>
<td>CABLE - HD/SDI, 100FT</td>
</tr>
<tr>
<td>308-0269-30-00</td>
<td>CABLE - ETHERNET TO RJ45, 100FT</td>
</tr>
<tr>
<td>308-0262-30-00</td>
<td>POWER CABLE - 12 AWG, 100FT</td>
</tr>
<tr>
<td>308-0264-30-00</td>
<td>CABLE - AV AND SERIAL, 100FT</td>
</tr>
</tbody>
</table>

**ANALOG VIDEO AND SERIAL CABLE PINOUT TABLE**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>NAME</th>
<th>PIN NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREEN</td>
<td>NMEA TX-P</td>
<td>1</td>
</tr>
<tr>
<td>GREEN/WHITE</td>
<td>NMEA TX-N</td>
<td>2</td>
</tr>
<tr>
<td>RG179</td>
<td>ANALOG VIDEO OUT</td>
<td>3</td>
</tr>
<tr>
<td>NATURAL</td>
<td>ANALOG VIDEO RETURN</td>
<td>4</td>
</tr>
<tr>
<td>BROWN/WHITE</td>
<td>PELCO RX-N</td>
<td>5</td>
</tr>
<tr>
<td>BROWN</td>
<td>PELCO RX-P</td>
<td>6</td>
</tr>
<tr>
<td>BLUE</td>
<td>PELCO RX-P</td>
<td>7</td>
</tr>
<tr>
<td>ORANGE/WHITE</td>
<td>NMEA RX-N</td>
<td>8</td>
</tr>
<tr>
<td>ORANGE</td>
<td>NMEA RX-P</td>
<td>9</td>
</tr>
<tr>
<td>DRAIN</td>
<td>PELCO SHIELD</td>
<td>10</td>
</tr>
<tr>
<td>DRAIN</td>
<td>NMEA SHEILD</td>
<td>11</td>
</tr>
<tr>
<td>BLUE/WHITE</td>
<td>PELCO TX-N</td>
<td>12</td>
</tr>
</tbody>
</table>

**POWER CABLE PINOUT TABLE**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>SIGNAL NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>BATT +</td>
</tr>
<tr>
<td>BLACK</td>
<td>BATT -</td>
</tr>
<tr>
<td>DRAIN</td>
<td>CHASSIS GROUND</td>
</tr>
</tbody>
</table>

**A/V AND SERIAL CABLE CONNECTOR PINOUT**

**ETHERNET CABLE CONNECTOR PINOUT**

**ETHERNET CABLE PINOUT TABLE**

<table>
<thead>
<tr>
<th>WIRE COLOR</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>P2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P1 WIRE COLOR</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ORANGE/WHITE</td>
<td>TXRX A+</td>
</tr>
<tr>
<td>2 ORANGE</td>
<td>TXRX A</td>
</tr>
<tr>
<td>3 BLUE</td>
<td>TXRX C+</td>
</tr>
<tr>
<td>4 BLUE/WHITE</td>
<td>TXRX C-</td>
</tr>
<tr>
<td>5 GREEN/WHITE</td>
<td>TXRX B+</td>
</tr>
<tr>
<td>6 GREEN</td>
<td>TXRX B</td>
</tr>
<tr>
<td>7 BROWN/WHITE</td>
<td>TXRX D+</td>
</tr>
<tr>
<td>8 BROWN</td>
<td>TXRX D-</td>
</tr>
<tr>
<td>9 NA</td>
<td>NA</td>
</tr>
<tr>
<td>10 DRAIN</td>
<td>DRN</td>
</tr>
</tbody>
</table>

**IMPORTANT:** CHASSIS GROUND WIRE TO BE TIED SECURELY TO THE NEGATIVE BATTERY TERMINAL

**METRIC**

**FLIR Systems, Inc.**

6769 Hollister Ave.

Goleta, CA 93117
**HIDDEN CABLE MOUNTING SCHEME:**

Mounting directly through customer decking, or other surfaces. Structure opposite M400 to be a sealed enclosure and a dry space. Camera shown in ball up configuration.

**WARNING:**

- Socket head cap screw with locking patch
- M4 x 1.0
- Length: 6mm + thickness of customer decking
- 6 places
- Apply corrosion inhibitor (US7 TEF-GEL)
- Torque to 4.5 Nm (3.3 lb-ft)

**AS568-436 EPDM O-RING**

- [5.85in ID x .275in DIA] (49mm ID x 7mm DIA)

**AS568-444 EPDM O-RING**

- [7.72in ID x .275in DIA] (96mm ID x 7mm DIA)

**CUSTOMER DECKING, OR OTHER STRUCTURE.**

Max deck thickness for right angled cables without top down riser: 10mm

**CABLE PORT FOR DIMENSIONS SEE SHEETS 2 AND 3**

**HOLE MOUNTING 6.4mm DIAMETER 6 PLACES**

- WASHER, OPTIONAL M6 316 STAINLESS STEEL
- SOCKET HEAD CAP SCREW WITH LOCKING PATCH M6 X 1.0
- Length: 6mm + Thickness of Customer Decking
- 6 PLACES
- APPLY CORROSION INHIBITOR (US7 TEF-GEL)
- TORQUE TO 4.5 Nm (3.3 lb-ft)

**WARNING:**

- WASHER, OPTIONAL M6 316 STAINLESS STEEL
- HOLES, MOUNTING 6.4mm DIAMETER 6 PLACES

**CABLE PORT FOR DIMENSIONS SEE SHEETS 2 AND 3**

**HIDDEN CABLE MOUNTING SCHEME:**

Mounting directly through customer structure. Actual structures may vary. Structure opposite M400 to be a sealed enclosure and a dry space. Camera shown in ball down configuration.

**M400 ICD**

- M400 WEIGHT: <12.25 kg (27lb)
M400 WEIGHT: <12.25 kg (27lb)

TOP DOWN RISER
FLIR PN 4141973

HIGHLY RECOMMENDED FOR INSTALLATIONS ONTO METAL SURFACES

AS568-436 EPDM O-RING
[5.85in ID x .275in DIA]
[49mm ID x 7mm DIA]

AS568-444 EPDM O-RING
[7.72in ID x .275in DIA]
[96mm ID x 7mm DIA]

SOCKET HEAD CAP SCREW WITH LOCKING PATCH
M6 X 1.0
LENGTH: 16mm
316 STAINLESS STEEL
6 PLACES
APPLY CORROSION INHIBITOR (USS TEF-GEL)
TORQUE TO 4.5 N-m (3.3 lb-ft)

WARNING

CUSTOMER DECKING, OR OTHER STRUCTURE.
MAX DECK THICKNESS FOR RIGHT ANGLED CABLES WITHOUT TOP DOWN RISER: 10mm

GASKET, TOP DOWN RISER INCLUDED IN TOP DOWN RISER KIT
FLIR PN 4141973

CUSTOMER DECKING, OR OTHER STRUCTURE.
MAX DECK THICKNESS FOR RIGHT ANGLED CABLES WITHOUT TOP DOWN RISER: 10mm

FASTENERS BETWEEN TOP DOWN RISER AND MOUNTING SURFACE TO BE SUPPLIED BY THE INSTALLER. RECOMMENDED FASTENERS DETAILED ON PAGE 3.

CABLE PORT FOR DIMENSIONS SEE SHEETS 2 AND 3

MOUNTING HOLES AS DETAILED ON PAGE 3

CABLE PORT FOR DIMENSIONS SEE SHEETS 2 AND 3

CUSTOMER SUPPLIED MOUNTING BRACKET/SURFACE
BALL UP CONFIGURATION SHOWN

CUSTOMER SUPPLIED MOUNTING BRACKET/SURFACE
BALL DOWN CONFIGURATION SHOWN

EXPOSED CABLE MOUNTING SCHEME:

© 2020, FLIR Systems Inc. - All Rights Reserved

FLIR Systems, Inc.
6769 Hollister Ave.
Goleta, CA 93117