



Extreme CCTV™
SURVEILLANCE SYSTEMS

Precision Engineered Opto-Electronics™

INSTALLATION INSTRUCTIONS

EX10 Waterproof Camera



www.ExtremeCCTV.com

Toll free: 1-888-409-2288

MAN-10-03



IMPORTANT

For best results, please read this Instruction Booklet prior to installing the EX10 camera.



WARNING !

CSA Certified / UL Listed CLASS 2 power adaptors must be used in order to comply with electrical safety standards.



Extreme CCTV®
SURVEILLANCE SYSTEMS

Made in Canada

12-24 Vdc, 4W(max)

24 Vac, 60 Hz, 4W(max)



189936

Certified to:

UL 50 / UL 2044

CSA C22.2 No. 1-M94

CSA Type 6 / NEMA 6

CSA C22.2 No. 0-M1991

CSA C22.2 No. 94.M91

CSA C22.2 No. 94-M91

NEC Class 2 Limited Power Circuit See Installation

Instructions For Proper Connections



EU Directives covered by this declaration:

72/9/EC Low Voltage Directives

89/336/EEC Electromagnetic Compatibility Directive

Only qualified personnel shall install any
EXTREME CCTV™ surveillance camera.

EXTREME CCTV™ will not be responsible for injuries or damages resulting from the improper installation or use of any camera sold by **EXTREME CCTV™**, their agents, distributors or dealers.

INDEX

	<u>Page</u>
Description.....	1
Unpacking.....	3
Parts List.....	3
Items Required for Installation.....	3
Initial Preparations.....	4
Guidelines.....	4
Section 1. Housing Separation.....	5
Section 2. Input Power Connections.....	8
Section 3. Camera Re-Assembly.....	9
Section 4. Camera Mounting.....	11
Section 5. Troubleshooting Guide.....	14
Section 6. General Specifications.....	16

DESCRIPTION

The **EX10** waterproof camera consists of a two-piece injection molded watertight housing with a tough polycarbonate viewing window.

This compact egg-shaped camera can be used for applications wherever environmentally sealed CCD cameras are required. The camera is especially suited for wash-down applications in food processing and industrial clean-room installations or very cold conditions.

The *EX10* can be ordered in monochrome or color versions. A rigid nylon mounting bracket is included with the camera, however, an optional metal U-bracket is also available.

A voltage regulator circuit automatically allows for *12V dc* or *24V ac* operation without any wiring changes. Its wider voltage range also provides protection from voltage surge, transient spikes, and reverse voltage.

The *EX10* is available in several models to meet individual requirements or specific needs.

Contact Extreme CCTV® for information.

- sales@ExtremeCCTV.com
- Tel: 1-888-409-2288 (Toll free NA)

See the Light. Get the Picture.™

UNPACKING

Care should be taken when unpacking. Check the parts list and confirm all items have been located. Inspect the equipment thoroughly to ensure nothing was damaged in transit.

Contact Extreme CCTV® if a problem is noted.

- quality@ExtremeCCTV.com
- Tel: 1-604-420-7711 or

see the rear of the booklet for contact numbers.

PARTS LIST (items supplied with unit)

- *EX10* camera unit
- Installation Instructions booklet
- Mounting bracket

ITEMS REQUIRED FOR INSTALLATION

(not supplied with unit)

- Small slotted screwdriver
- Philips screwdriver
- Hardware for camera mounting (screws, washers, etc.)

INITIAL PREPARATIONS

- Determine the operating voltage at the installation site. The camera has been pre-wired for 12Vdc or 24V ac operation before shipment. *See Section 2 – Input Power Connections.*
- Determine the optimum location for the camera. *See Section 4 - Camera Mounting*
- All cameras have been tested prior to shipment. After the wiring has been reconnected, it is advisable to check the camera's operation before installation.

GUIDELINES

The installation of the *EX10* camera is explained in Sections 1 to 4 listed below.

It is important that these steps are followed in sequence:

1. Housing Separation
2. Input Power Connections
3. Camera Re-Assembly
4. Camera Mounting

1. HOUSING SEPARATION

Separating the two halves of the camera housing allows access to the Voltage Regulator Board (VRB) and camera. This is only used as a reference since all the settings are preset at the factory.

Step 1.1 - Remove the two housing screws located on each side of the *EX10* camera housing.
Refer to **Figure 1-1** on page 6.

Step 1.2 - Slide both sections of the housing apart without damaging the camera connecting leads. Disconnect the camera connector to completely separate the two halves of the housing. Ensure that the “O” ring gasket does not pull out of its groove during separation. If the gasket does separate, it is important that it is not lost. Re-insertion the gasket into the groove.
Refer to **Figure 1-2** on page 7.

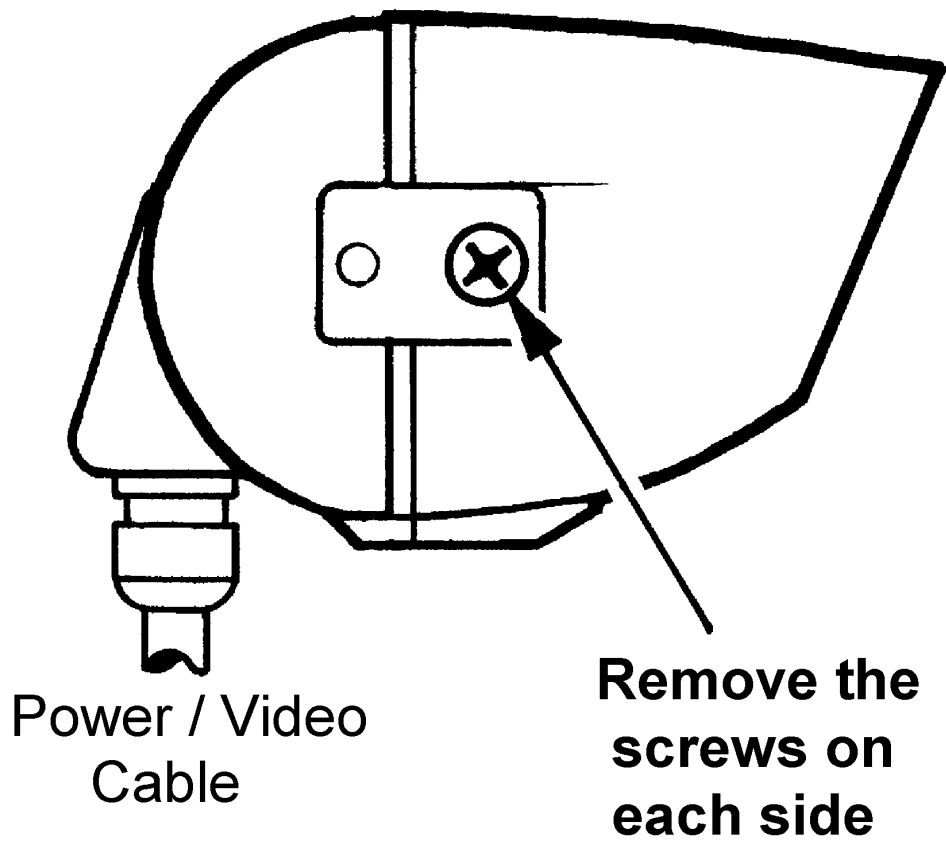


FIGURE 1 – 1
Housing
Step 1.1 - Screw Removal

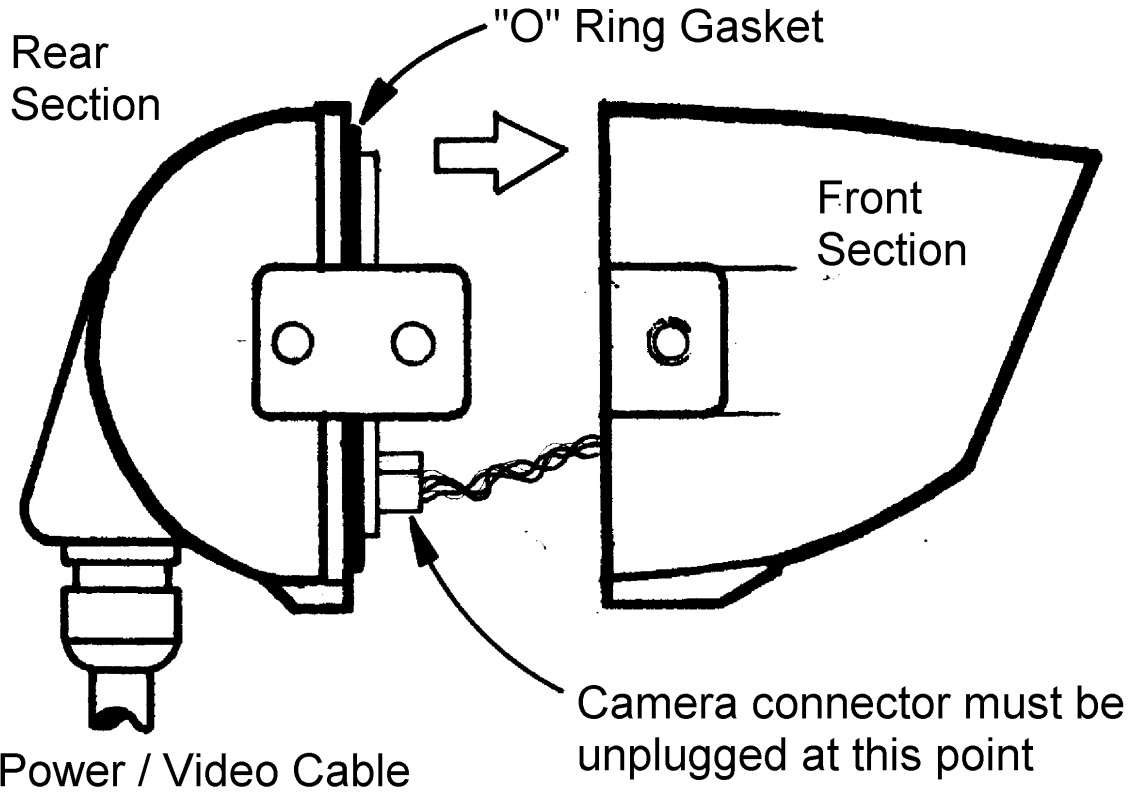


FIGURE 1 – 2
Housing
Step 1.2 - Housing Separation

2. INPUT POWER CONNECTIONS

The camera unit is pre-connected with an electrically isolated power board for 24V ac or 12V dc operation with no wiring change or wiring polarity. See **Figure 2-1** on page 8 for wiring details.

Note:

Input voltage is 10.5VDC to 40VDC for DC input. The AC input range is 12VAC to 28VAC.

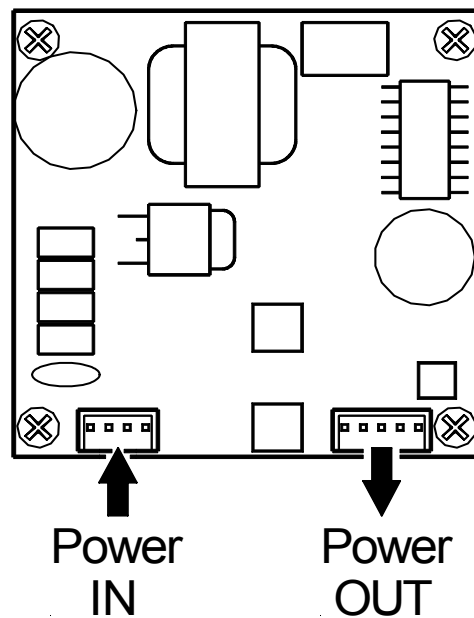


FIGURE 2 - 1
12VDC or 24VAC
Electrically Isolated Board

3. CAMERA RE-ASSEMBLY

Make sure all wires are properly connected and tightened into the terminal blocks as explained in *Section 2*.

Step 3.1 - Check that the orange “O” ring gasket in the rear half of the camera housing has not been dislodged or distorted.

Step 3.2 - Re-connect the camera wiring harness plug back into its connector on the Voltage Regulator Board.

Step 3.3 - Carefully slide the two halves of the camera housing together, making sure that the “O” ring gasket seats properly and the camera harness wires are not pinched.
Refer to ***Figure 3-1*** on page 10.

Step 3.4 - Once the front and rear sections are mated, insert and tighten the housing screws into each side.

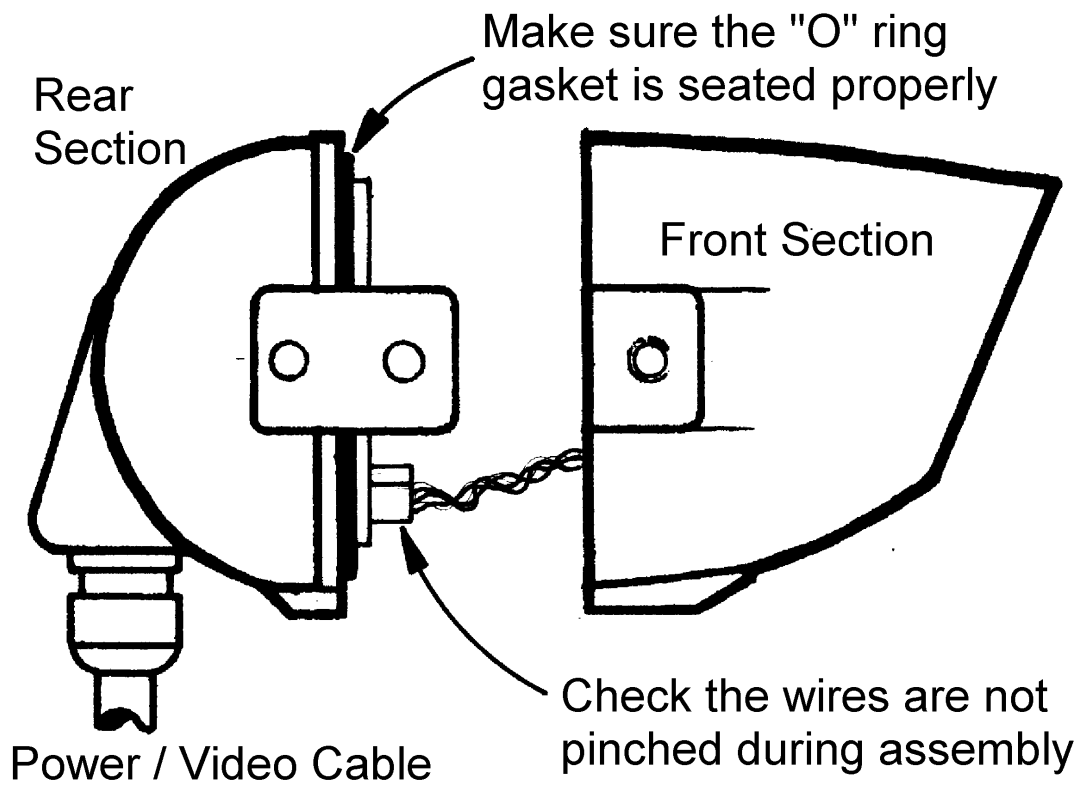


FIGURE 3 – 1
Camera Housing Re-assembly
Steps 3.1, 3.2, 3.3

4. CAMERA MOUNTING

Caution: The selected mounting location should not place the camera in a situation where its environmental specifications could be exceeded. See Section 6, page 16.

The supplied mounting bracket contains two holes for attachment to any suitable flat surface. The type of mounting hardware is dependent on the selected surface. e.g., wood, metal, plaster, gyproc, etc.

Refer to **Figure 4-1** on page 12.

Once the bracket has been secured, attach the camera housing to the adjustable camera bracket with the supplied mounting knob. Adjust for desired camera viewing angle and tighten the screw located at tip of the mounting bracket.

Refer to **Figure 4-2** on page 13.

Note: The power / video cable should be secured in a way that no undue stress is placed on the camera housing or its mounting bracket.

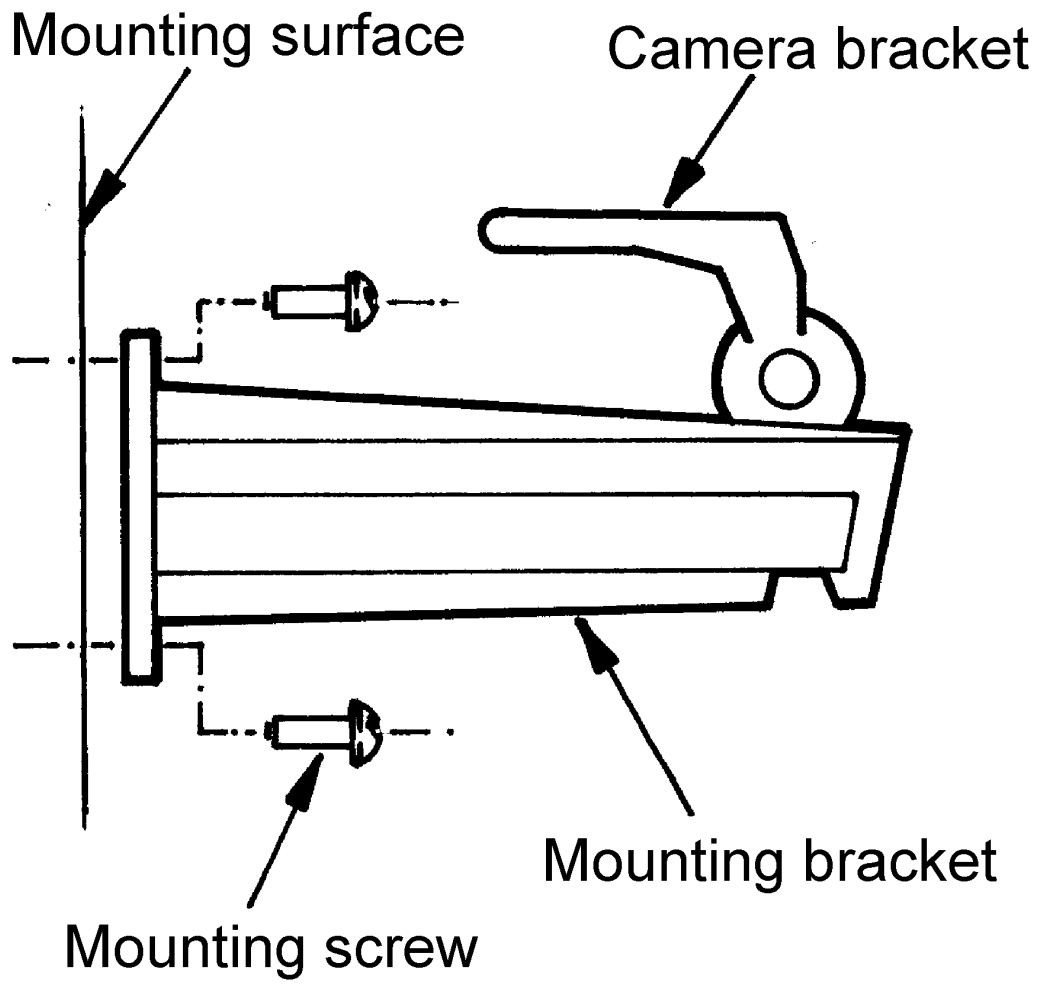


FIGURE 4 – 1
Mounting Bracket

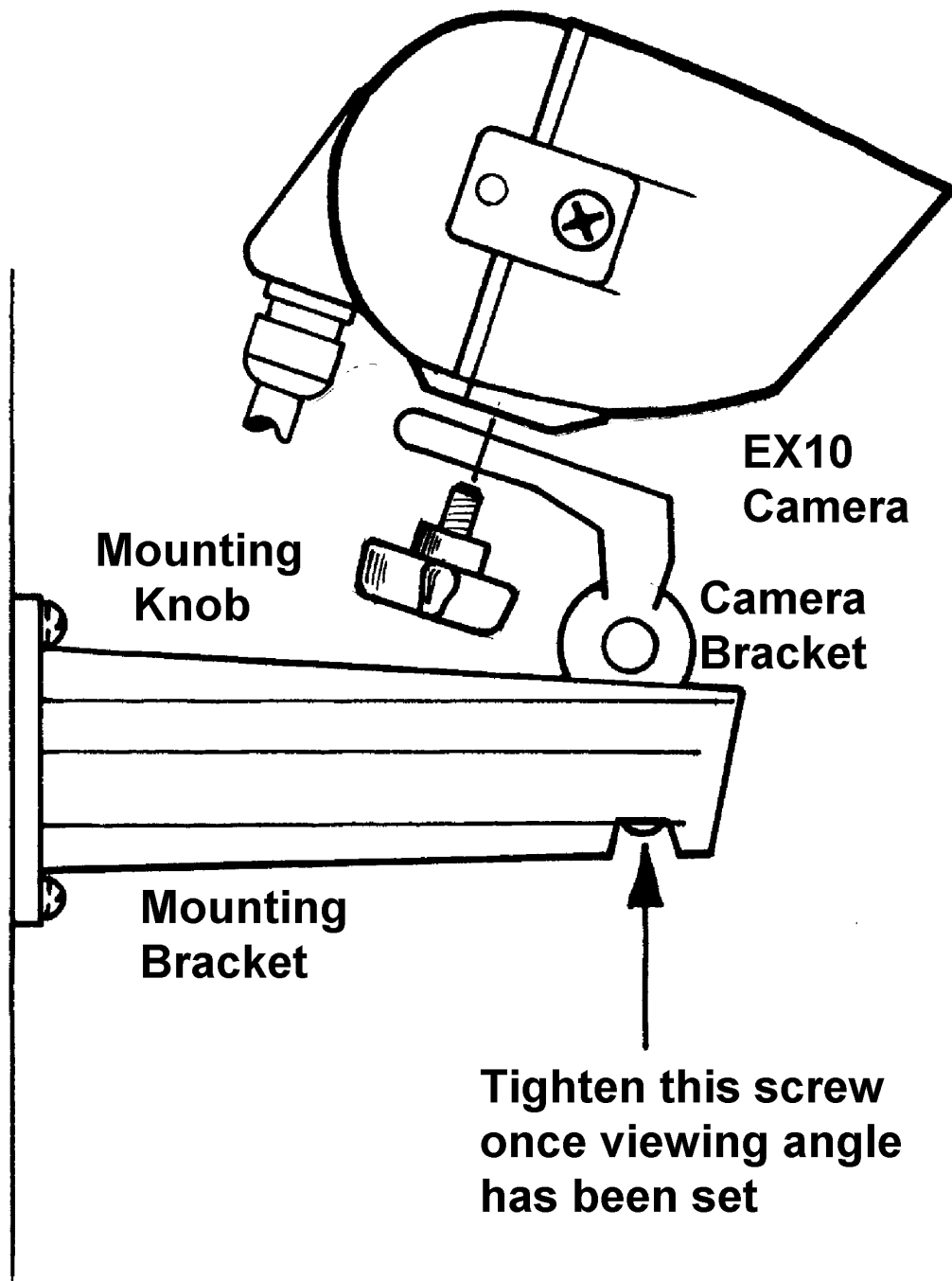


FIGURE 4 – 2
Camera mounting

5. TROUBLESHOOTING GUIDE

<i>PROBLEM</i>	<i>POSSIBLE CAUSE</i>	<i>LIKELY SOLUTION</i>
No Video	<p>1. <u>Power Supply</u>: -Connections....</p> <p>-Voltage Range...</p> <p>2. <u>Video Connections</u>:</p>	<p>Check input power connections at the cable leads. Check for loose wires.</p> <p>If connected to DC, check voltage input range of 10.5 – 40 V.</p> <p>If connected to AC, check input voltage range of 12 – 28 V.</p> <p>Measure the voltage at the circuit board's Input Power Connector.</p> <p>Determine if wiring polarity at "Video Connector" terminal block is correct. Check BNC Connector.</p>

<p>No Video (cont'd.)</p>	<p>2. Video Connections: (cont'd.)</p>	<p>If still no video, connect the camera directly to the monitor. Check the video signal. If okay, the problem is with the interconnections. If still no video, contact Extreme CCTV (see back cover for contact details).</p>
<hr/> <p>Poor Picture Quality</p> <p>Snowy Image</p> <p>Horizontal Scan Lines, Rolling Up or Down.</p>	<hr/> <p>Poor Video Signal</p> <p>Noisy Power Supply</p> <p>Ground Looping on 24V ac.</p>	<hr/> <p>Ensure video cable is correctly matched and terminated with 75 ohms at each end. Make sure video cables are similar types.</p> <p>Check connections. Relocate or replace power supply.</p> <p>Check the coax cable shield is not touching ground, e.g. at couplings.</p>

6. GENERAL SPECIFICATIONS

TV System Color – NTSC (PAL optional)
Monochrome – EIA (CCIR optional)

Video Signal Output..... 1 V p-p, 75 Ohm

Operational Range..... -60°C to +60°C
(-76°F to 140°F)

Power Supply (dc) 10.5 – 40V
Power Supply (ac) 12 – 28V

Housing..... Injection molded nylon
Viewing window Polycarbonate (clear)
Mounting bracket Reinforced nylon

Dimensions 5.19”L(132mm)x 3”D(76mm)

Weight.....0.83 lbs. (375g)

Subject To Change Without Notice.



Extreme CCTV®

SURVEILLANCE SYSTEMS

Canada	3021 Underhill Avenue, Burnaby, BC V5A 3C2
USA	3873 - C Airport Way, PO Box 9754, Bellingham, WA 98227
tel	1-888-409-2288 (toll free) 1-604-420-7711
fax	1-604-420-3300
e-mail	tech@ExtremeCCTV.com
Web	www.ExtremeCCTV.com
Europe	Colbourne Cres. Cramlington, Northumberland United Kingdom, NE23 1WB
Tel	+44 (0) 1670.730.187
Fax	+44 (0) 1670.730.188

Dealer / Distributor: