

# KBE and KBN Series



**BOSCH**

AutoDome, Bilinx, Bosch, the Bosch logo, DiBos, FastAddress and VIDOS are registered trademarks of Bosch Security Systems, inc.

The following trademarks are registered with the United States Patent and Trademark Office:

Pentium is a registered trademark of Intel Corporation

.NET, DirectX, Internet Explorer, Microsoft, Windows, Windows 2000 and Windows XP are registered trademarks of Microsoft Corporation

Due to the nature of this material, this document refers to numerous hardware and software products by their trade names. In most, if not all cases, these designations are claimed as trademarks or registered trademarks by their respective companies in the United States of America. It is not this publisher's intent to use any of these names generically. The reader is therefore cautioned to investigate all claimed trademark rights before using any of these names other than to refer to the product described.

## Preface

This guide describes how to install the KBE and KBN Series.

## Audience

This guide is intended for qualified installation and service personnel who are familiar with the applicable national and local electrical codes.

## Document Conventions

Convention	Meaning
<b>Bold</b>	Denotes a part, item, or assembly.
<i>Italic</i>	Denotes a reference to another paragraph, figure or table.
<u>Underline</u>	Used to emphasize a point.
<code>courier</code>	Denotes the actual name of an object, the exact code that should be typed or a message returned from a system.

## Symbols

You may encounter these symbols within the document. Explanatory text accompanies each symbol, which provides additional information detailing the operation or highlighting safety information.



**NOTICE!** Notices inform you of essential but non-critical information. Read these messages carefully as any directions or instructions contained therein can help you avoid making mistakes.



**CAUTION!** Cautionary messages provide critical information that help you reduce the chance of losing data or damaging the system. Please heed these messages.



**WARNING!** Warnings highlight information, that if overlooked may cause damage to the system or result in personal injury. Take warnings seriously.



**DANGER!** Danger messages denote the presence of electrical equipment that may cause electric shock or electrocution. Take care when you see this symbol to avoid serious injury or death.

## Customer Support and Service

If this unit needs service, contact the nearest Bosch Security Systems Service Center for authorization to return and shipping instructions.

### Service Centers

#### USA

Phone: 800-366-2283 or 585-340-4162

Fax: 800-366-1329

Email: [cctv.repair@us.bosch.com](mailto:cctv.repair@us.bosch.com)

#### Technical Support

Phone: 800-326-1450

Email: [technical.support@us.bosch.com](mailto:technical.support@us.bosch.com)

#### CCTV Spare Parts

Phone: 800-894-5215 or 408-957-3065

Fax: 408-935-5938

Email: [BoschCCTVparts@ca.slr.com](mailto:BoschCCTVparts@ca.slr.com)

#### Canada

Phone: 514-738-2434

Fax: 514-738-8480

#### Europe, Middle East & Asia Pacific Region

Phone: 44 (0) 1495 274558

Fax: 44 (0) 1495 274280

Email: [rmahelpdesk@solectron.com](mailto:rmahelpdesk@solectron.com)

For additional information, see [www.boschsecurity.com](http://www.boschsecurity.com)

## Related Publications

Refer to the latest Bosch Security Systems, Inc. Databook for the most up-to-date datasheets. To obtain a copy of the Databook, please contact your local Bosch representative.

You can also visit the Bosch Security Systems World Wide Web site at: <http://www.boschsecurity.com> to view a current listings of our publications.

## Important Safeguards

1. **Read, Follow, and Retain Instructions** - All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.
2. **Heed Warnings** - Adhere to all warnings on the unit and in the operating instructions.
3. **Attachments** - Attachments not recommended by the product manufacturer should not be used, as they may cause hazards.
4. **Installation Cautions** - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only manufacturer-recommended accessories, or those sold with the product. Mount the unit per the manufacturer's instructions. Appliance and cart combination should be moved with care. Quick stops, excessive force, or uneven surfaces may cause the appliance and cart combination to overturn.
5. **Cleaning** - Unplug the unit from the outlet before cleaning. Follow any instructions provided with the unit. Generally, using a damp cloth for cleaning is sufficient. Do not use liquid cleaners or aerosol cleaners.
6. **Servicing** - Do not attempt to service this unit yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
7. **Damage Requiring Service** - Unplug the unit from the main AC power source and refer servicing to qualified service personnel under the following conditions:
  - When the power supply cord or plug is damaged.
  - If liquid has been spilled or an object has fallen into the unit.
  - If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
  - If the unit does not operate normally, when following the operating instructions. Adjust only those controls specified in the operating instructions. Improper adjustment of other controls may result in damage, and require extensive work by a qualified technician to restore the unit to normal operation.
  - If the unit has been dropped or the cabinet damaged.
  - If the unit exhibits a distinct change in performance, this indicates that service is needed.
8. **Replacement Parts** - When replacement parts are required, the service technician should use replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electrical shock or other hazards.
9. **Safety Check** - Upon completion of servicing or repairs to the unit, ask the service technician to perform safety checks to ensure proper operating condition.
10. **Power Sources** - Operate the unit only from the type of power source indicated on the label. If unsure of the type of power supply to use, contact your dealer or local power company.
  - For units intended to operate from battery power, refer to the operating instructions.
  - For units intended to operate with External Power Supplies, use only the recommended approved power supplies.
  - For units intended to operate with a limited power source, this power source must comply with EN60950. Substitutions may damage the unit or cause fire or shock.
  - For units intended to operate at 24VAC, normal input voltage is 24VAC. Voltage applied to the unit's power input should not exceed 30VAC.

User-supplied wiring, from the 24VAC supply to unit, must be in compliance with electrical codes (Class 2 power levels). Do not ground the 24VAC supply at the terminals or at the unit's power supply terminals.
11. **Coax Grounding** - If an outside cable system is connected to the unit, ensure that the cable system is grounded. U.S.A. models only - Section 810 of the National Electrical Code, ANSI/NFPA No.70, provides information regarding proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
12. **Grounding** - This unit may be equipped with a 3-wire grounding plug (a plug with a third pin, for grounding). This safety feature allows the plug to fit into a grounding power outlet only. If unable to insert the plug into the outlet, contact an electrician to arrange replacement of the obsolete outlet. Do not defeat the safety purpose of the grounding plug.
  - Outdoor equipment should only be connected to the unit's inputs after this unit has had its grounding plug connected to a grounded outlet or its ground terminal properly connected to a ground source.
  - The unit's input connectors must be disconnected from outdoor equipment before disconnecting the grounding plug or grounding terminal.
  - Proper safety precautions such as grounding should be followed for any outdoor device connected to this unit.
13. **Lightning** - For added protection during a lightning storm, or when this unit is left unattended and unused for long periods of time, unplug the unit from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.

**For Indoor Product**

1. **Water and Moisture** - Do not use this unit near water - for example, in a wet basement, in an unprotected outdoor installation or in any area classified as a wet location.
2. **Object and Liquid Entry** - Never push objects of any kind into this unit through openings, as they might touch dangerous voltage points or create short circuits, resulting in a fire or electrical shock. Never spill liquid of any kind on the unit.
3. **Power Cord and Power Cord Protection** - For units intended to operate with 230VAC, 50Hz, the input and output power cord must comply with the latest versions of IEC Publication 227 or IEC Publication 245. Power supply cords should be routed so they are not likely to be walked on or pinched. Pay particular attention to location of cords and plugs, convenience receptacles, and the point of exit from the appliance.
4. **Overloading** - Do not overload outlets and extension cords; this can result in a risk of fire or electrical shock.

**For Outdoor Product**

**Power Lines** - An outdoor system should not be located in the vicinity of overhead power lines, electric lights or power circuits, or where it may contact such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching power lines or circuits, as this contact might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.

**For Rack-mount Product**

1. **Ventilation** - Do not place this equipment in a built-in installation or rack, unless proper ventilation is provided, or the manufacturer's instructions were followed. The equipment must not exceed its maximum operating temperature requirements.
2. **Mechanical Loading** - When rack-mounting the equipment, ensure that a hazardous condition is not created by uneven mechanical loading.

**WARNING:**

Electrostatic-sensitive device. Use proper CMOS/MOSFET handling precautions to avoid electrostatic discharge.



**NOTE:** Grounded wrist straps must be worn and proper ESD safety precautions observed when handling the electrostatic-sensitive printed circuit boards.



This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Cover Removal**

Warning: Removal of the cover should only be performed by qualified service personnel - not user serviceable. The unit should always be unplugged before removing the cover and remain unplugged while the cover is removed.

**24 VAC Units**

Do not exceed 30VAC input. Voltage applied to the unit's power input should not exceed 30VAC. Normal input voltage is 24VAC. User supplied wiring from 24VAC supply to unit must be in compliance with electrical codes (Class 2 power levels). Do not ground 24VAC supply at power supply terminals or at unit's power supply terminals.



This equipment is to be isolated from the mains supply by a limited power source as specified in EN60950.

**220-240V, 50Hz Power Cords**

220-240V, 50Hz power cords, input and output, must comply with the latest versions of IEC Publication 227 or IEC Publication 245.

## FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:







- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and radiates radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his expense.

Intentional or unintentional changes or modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such changes or modifications could void the user's authority to operate the equipment. If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: *How to Identify and Resolve Radio-TV Interference Problems*. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

**WARNING:** This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures.

## Safety Precautions

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK. DO NOT OPEN!	
<b>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</b>		
	This symbol indicates the presence of uninsulated "dangerous voltage" within the product's enclosure that can cause an electric shock.	
	This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.	
	Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.	
	Power Disconnect. Units with or without ON-OFF switches have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.	

## INFORMATIONS FCC ET ICES

(modèles utilisés aux États-Unis et au Canada uniquement)

Ce produit est conforme aux normes FCC partie 15. la mise en service est soumise aux deux conditions suivantes:

- (1) cet appareil ne peut pas provoquer d'interférence nuisible et
- (2) cet appareil doit pouvoir tolérer toutes les interférences auxquelles il est soumis, y compris les interférences qui pourraient influencer sur son bon fonctionnement.

**AVERTISSEMENT:** Suite à différents tests, cet appareil s'est révélé conforme aux exigences imposées aux appareils numériques de Classe A en vertu de la section 15 du règlement de la Commission fédérale des communications des États-Unis (FCC). Ces contraintes sont destinées à fournir une protection raisonnable contre les interférences nuisibles quand l'appareil est utilisé dans une installation commerciale. Cette appareil génère, utilise et émet de l'énergie de fréquence radio, et peut, en cas d'installation ou d'utilisation non conforme aux instructions, générer des interférences nuisibles aux communications radio. L'utilisation de ce produit dans une zone résidentielle peut provoquer des interférences nuisibles. Le cas échéant, l'utilisateur devra remédier à ces interférences à ses propres frais.

Au besoin, l'utilisateur consultera son revendeur ou un technicien qualifié en radio/télévision, qui procédera à une opération corrective. La brochure suivante, publiée par la Commission fédérale des communications (FCC), peut s'avérer utile : « How to Identify and Resolve Radio-TV Interference Problems » (Comment identifier et résoudre les problèmes d'interférences de radio et de télévision). Cette brochure est disponible auprès du U.S. Government Printing Office, Washington, DC 20402, États-Unis, sous la référence n° 004-000-00345-4.

Avvertissement : Ce produit est un appareil de Classe A. Son utilisation dans une zone résidentielle risque de provoquer des interférences. Le cas échéant, l'utilisateur devra prendre les mesures nécessaires pour y remédier.

## Sécurité

Attention: l'installation doit exclusivement être réalisée par du

	<b>ATTENTION</b> RISQUE D'ÉLECTROCUTION. NE PAS OUVRIR !	
<b>ATTENTION : POUR ÉVITER TOUT RISQUE D'ÉLECTROCUTION, N'ESSEYER PAS DE RETIRER LE CAPOT (OU LE PANNEAU ARRIÈRE). CET APPAREIL NE CONTIENT AUCUN COMPOSANT SUSCEPTIBLE D'ÊTRE RÉPARÉ PAR L'UTILISATEUR. CONFIEZ LA RÉPARATION DE L'APPAREIL À DU PERSONNEL QUALIFIÉ.</b>		
	Ce symbole signale que le produit renferme une « tension potentiellement dangereuse » non isolée susceptible de provoquer une électrocution.	
	Ce symbole invite l'utilisateur à consulter les instructions d'utilisation et d'entretien (dépannage) reprises dans la documentation qui accompagne l'appareil.	
	Attention: l'installation doit exclusivement être réalisée par du personnel qualifié, conformément au code national d'électricité américain (NEC) ou au code d'électricité local en vigueur.	
	Coupure de l'alimentation. Qu'ils soient pourvus ou non d'un commutateur ON/OFF, tous les appareils reçoivent de l'énergie une fois le cordon branché sur la source d'alimentation. Toutefois, l'appareil ne fonctionne réellement que lorsque le commutateur est réglé sur ON. Le débranchement du cordon d'alimentation permet de couper l'alimentation des appareils.	



**AVERTISSEMENT:**

cet appareil est sensible aux décharges électrostatiques. Pour éviter tout risque de décharge électrostatique, observez les précautions de manipulation du CMOS/MOSFET appropriées.



**REMARQUE:** lors de la manipulation des cartes à circuits imprimés sensibles aux décharges électrostatiques, portez des bracelets antistatiques mis à la terre et observez les consignes de sécurité relatives aux décharges électrostatiques.

**ATTENTION: pile au lithium**

Le remplacement incorrect de la pile risque de provoquer une explosion. Remplacez la pile exclusivement par une pile identique ou par un type de pile équivalent recommandé par le fabricant.



Débarrassez-vous de la pile usagée conformément aux instructions de son fabricant.

**Enlèvement du capot**

Avertissement: L'enlèvement du capot ne doit être effectué que par un technicien spécialisé. Il n'y a pas de pièces remplaçables ou réglables par l'utilisateur. Il faut toujours débrancher l'appareil avant d'enlever le capot et le laisser débranché jusqu'à la remise en place du capot.

**24 VAC Units**

Ne pas excéder 30 V c.a. La tension appliquée à l'entrée d'alimentation de l'appareil ne doit pas excéder 30 V c.a. La valeur normale de la tension d'entrée est 24 V c.a. Le circuit électrique reliant l'alimentation 24 V c.a. à l'appareil doit être conforme aux codes électriques (niveaux d'alimentation de classe 2). Ne pas mettre l'alimentation 24 V c.a. à la masse au niveau des bornes de l'alimentation ou de l'appareil.



Cet équipement doit être isolé de l'alimentation secteur par une source de puissance limitée, conformément à la norme EN60950.

**Cordons d'alimentation 220-240 V, 50 Hz**

Les cordons d'alimentation 220-240 V, 50 Hz, d'entrée ou de sortie, doivent être conformes à la dernière version de la publication IEC 227 ou IEC 245.



# Table of Contents

---

<b>1</b>	<b>Unpacking</b>	<b>1</b>
1.1	Parts List	1
<hr/>		
<b>2</b>	<b>Description</b>	<b>1</b>
2.1	Model Summary	1
<hr/>		
<b>3</b>	<b>Installation</b>	<b>1</b>
3.1	Operating Voltage	1
3.2	Preparing the Unit	1
3.3	Preparing the Mount	1
3.4	Housing	2
3.5	Line Power and Video Signal Connection	2
3.6	Connections for U Suffix, F Suffix, and N Suffix	2
3.6.1	U (Twisted Pair) Suffix Connections	2
3.6.2	Wiring Do's	3
3.6.3	Wiring Don'ts	3
3.6.4	F (Fiber Optic) Suffix Connections	4
3.6.5	N (Network) Suffix Connections	6
<hr/>		
<b>4</b>	<b>Camera Lens Adjustment</b>	<b>7</b>
<hr/>		
<b>5</b>	<b>Sunshield</b>	<b>8</b>
<hr/>		
<b>6</b>	<b>Model Numbers and System Specifications</b>	<b>8</b>



# 1 Unpacking

This equipment should be unpacked and handled with care. If an item appears to have been damaged in shipment, notify the shipper immediately.

Verify that all the parts listed in the Parts List below are included. If any items are missing, notify your Bosch Security Systems Sales or Customer Service Representative.

The original packing carton is the safest container in which to transport the unit and must be used if returning the unit for service. Save it for possible future use.

## 1.1 Parts List

Qty	Item
1	Unit (verify package model number ordered)
1	Feed-through mount
1	Instruction booklet packet

Refer to *Section 6 Model Numbers and System Specifications* for a detailed list of the Camera, Lens, Housing, and Feed-through Mount model numbers included with the various package model numbers.

# 2 Description

The KBE and KBN Series are complete camera packages that include a camera and lens pre-wired into a housing. A feed-through wall mount is also provided, as well as a sunshield on outdoor packages.

## 2.1 Model Summary

Refer to *Section 6 Model Numbers and System Specifications* for the resolution, lens, and system specifications for the various package models.

# 3 Installation



This installation should be made by a qualified service person and conform to all local codes.

## 3.1 Operating Voltage

All Recommended operating voltage is 24 VAC, 60 Hz.

## 3.2 Preparing the Unit

Remove the mount and the housing assembly from the carton.

## 3.3 Preparing the Mount

Prepare and secure the mount to the wall or mounting surface as described in the LTC 9215/00 Installation Manual included in the Instruction Booklet Packet.

## 3.4 Housing

Feed the cabling from the housing foot through the mount. Attach the housing to the mount using the two (2) 1/4-20 screws and washers provided in the hardware kit. For additional information, refer to the LTC 9215/00 Mount Installation Manual and UHO-HBGS-10 Series Housing Installation Manual.

## 3.5 Line Power and Video Signal Connection

The external video coax cable is equipped with a female BNC connector for transmission of video. Route and connect video cable to the BNC connector. The external power cable is provided to allow for necessary stripping/preparation by the installer. For additional information, refer to the Installation Manuals included in the Instruction Booklet Packet.

Color	Connection
Green	Ground
White	24 V
Black	24 V

## 3.6 Connections for U Suffix, F Suffix, and N Suffix

The connections for models containing fiber optic, network, or twisted pair interfaces are covered as follows:

### 3.6.1 U (Twisted Pair) Suffix Connections

These models include an unshielded twisted pair transmitter added to the standard construction.

1. Make all power connections in accordance with the KBE and KBN Series Instruction Manual.
2. Pass the supplied orange string through the mounting foot of the camera housing and the furnished mount. See *Figure 3.2*. A fitting may be used in the mounting foot if desired.
3. Attach the end of the string to the unshielded twisted pair (UTP) video cable and pull it through the mount and the unused hole in the mounting foot of the camera housing as shown in *Figure 3.3*.
4. Connect the UTP video cable to the the -VID+ pins on UTP transmitter. Observe polarity; the video connection is polarity-sensitive. See *Figure 3.1*.



**Figure 3.1** Connecting the UTP Cable to the Transmitter

Reference	Description
1	Negative (-) terminal for twisted pair video lead
2	Positive (+) terminal for twisted pair video lead

5. Seal the hole in the mounting foot of the camera housing with RTV or an equivalent seal. If a fitting was used in the mounting foot, apply the seal around the UTP cable before tightening the fitting to prevent slippage.

6. Attach the housing to the mount in accordance with the KBE and KBN Series Instruction Manual.

### 3.6.2

#### Wiring Do's

1. Use point to point unshielded twisted pair wire, 24 AWG or thicker, stranded or solid, Category 2, 3, 4, or 5.
2. The video signal may coexist in the same wire bundle as other video, telephone, data, control signals, or low voltage power.
3. Measure the wire distance. Use only receivers designed for that distance.
4. Make sure the pair of wires carrying the video signal is sent as a twisted pair, not a split pair.

### 3.6.3

#### Wiring Don'ts

1. DO NOT USE SHIELDED TWISTED PAIR WIRE, as this will severely degrade the distance performance. Short runs may be used with some signal degradation. Multi-pair wire with an overall shield is OK.
2. DO NOT USE UNTWISTED WIRE, as this will reduce the inherent immunity to interference.
3. DO NOT allow your installation to have bridge/ taps, loading coils, talk-battery, or MOV type protectors. Bridge taps refer to a twisted pair connected to two twisted pairs (such as an extension phone). Bridge taps cause reflections as the signal propagates, resulting in ghosts in the image.
4. If the phone company is providing the cable runs between buildings, make sure it is dry copper (i.e. it should have none of the following: dial tone, 48 V, loading coils, bridge taps, switching, or long paths to the phone company's central office and back).
5. Due to near-end cross talk, DO NOT send a transmit and receive signal in the same wire bundle. Exceptions: Less than 1000 ft (304.8 m), or Category 5 cable up to 609.6 m (2000 ft).
6. For safety, never put signals in the same conduit as high voltage wiring.

### 3.6.4 F (Fiber Optic) Suffix Connections

These models include a fiber optic transmitter added to the standard construction.

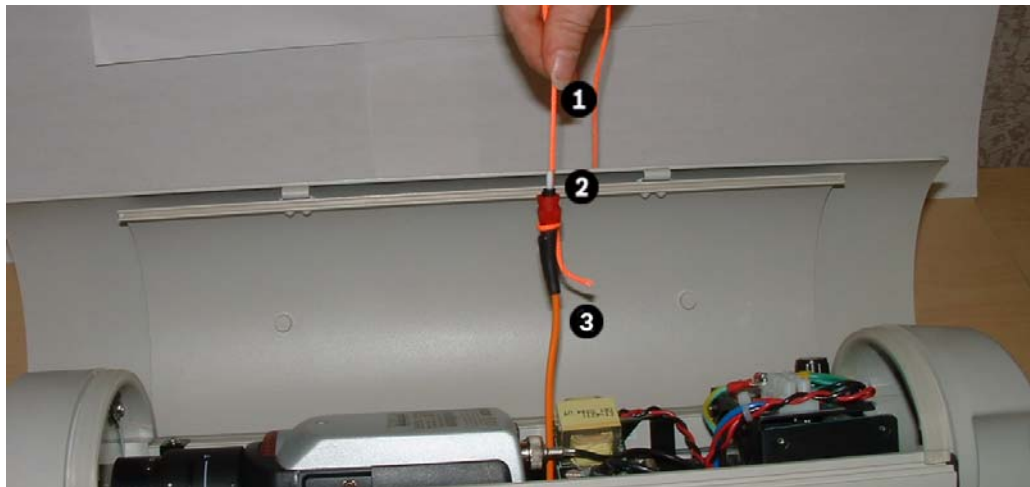
1. Make all power connections in accordance with the KBE and KBN Series Instruction Manual.
2. Pass the supplied orange string through the mounting foot of the camera housing and the furnished mount. See *Figure 3.2*. Note that a fitting is not used in the mounting foot when a terminated fiber optic cable is used.



**Figure 3.2** Passing the String through the Mount

Reference	Description
1	Orange String

3. Attach the end of the string to the fiber optic video cable and pull it through the mount and the unused hole in the mounting foot of the camera housing. See *Figure 3.3*.



**Figure 3.3** Pulling the Fiber Optic Cable

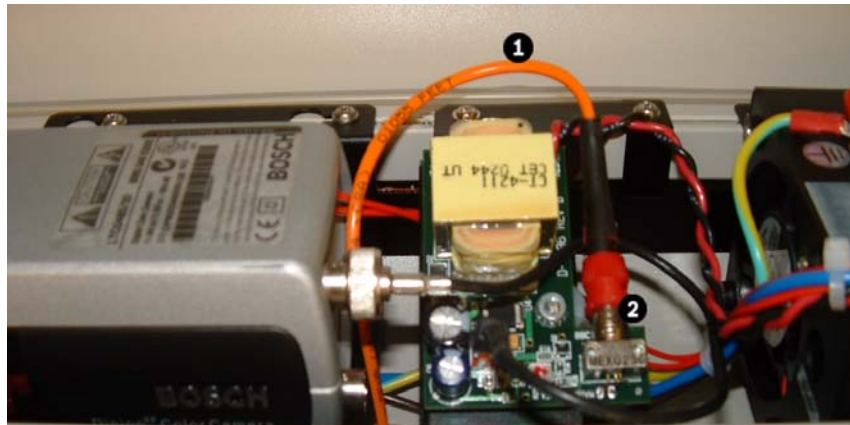
Reference	Description
1	Orange string
2	ST / RJ-45 connector
3	Fiber optic video cable / UTP/CAT5 cable



4. Connect the fiber optic cable to the fiber optic video connector on the fiber optic transmitter. See *Figure 3.4*.



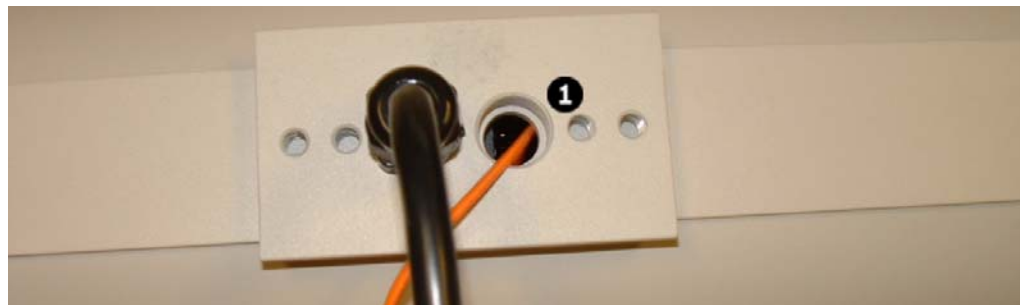
**CAUTION!** Make sure that the bend radius of the fiber optic cable is in accordance with the cable manufacturer’s specifications when dressing the fiber optic cable.



**Figure 3.4** Connecting the Fiber Optic Cable to the Transmitter

Reference	Description
1	Fiber optic cable
2	Video connector on fiber optic transmitter

5. If an unterminated fiber optic cable is being used, a fitting may be used in the mounting foot of the camera housing. The fiber optic cable should be terminated with an ST connector in accordance with the connector manufacturer’s recommendations.
6. Seal the hole in the mounting foot of the camera housing with RTV or an equivalent seal. See *Figure 3.5*. If a fitting was used in the mounting foot along with an unterminated fiber optic cable, apply the seal around the optical cable before tightening the fitting, to prevent slippage. A split rubber sleeve (not supplied) may be used for this purpose.



**Figure 3.5** Seal the Hole in the Housing Foot

Reference	Description
1	Seal with RTV

7. Attach the housing to the mount in accordance with the KBE and KBN Series Instruction Manual.

### 3.6.5 N (Network) Suffix Connections

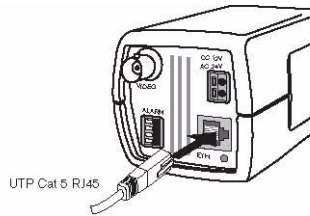
These models include an IP-based camera that enables network video and configuration capabilities.

1. Make all power connections in accordance with the KBE and KBN Series Instruction Manual.



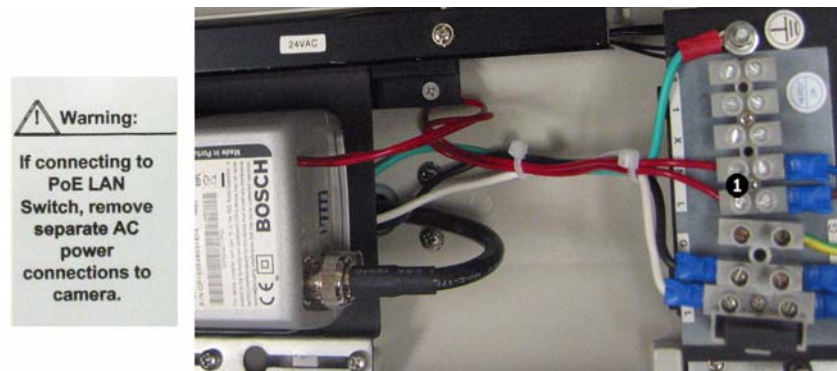
**WARNING!** Never supply power via the Ethernet connection (PoE) when power is supplied via the power connector.

2. Connect the camera to a 10/100 Base-T network (*Figure 3.6*).
3. Use a shielded UTP Category 5 cable with RJ-45 connectors.



**Figure 3.6** Network Connection

4. Power can be supplied one of two ways: 24 VAC power connection (factory configured), or via the Ethernet cable compliant with the Power-over-Ethernet (IEEE 802.3af) standard. Note: For POE remove 24 VAC connections at terminals shown in *Figure 3.7*.



**Figure 3.7** Power Wire Connection

Reference	Description
1	Power terminals

5. Pass the supplied orange string through the mounting foot of the camera housing and the furnished mount. See *Figure 3.2*. A fitting may be used in the mounting foot if desired.
6. Attach the end of the string to the Cat5/Cat6 cable and pull it through the mount and the unused hole in the mounting foot of the camera housing. See *Figure 3.3*.
7. Connect the Cat5/ Cat6 cable to the network connector on the back of the camera. See *Figure 3.6*.
8. If an unterminated Cat5/Cat6 cable is being used, a fitting may be used in the mounting foot of the camera housing. The network cable should be terminated with an RJ-45 connector in accordance with the connector manufacturer's recommendations.
9. Seal the hole in the mounting foot of the camera housing with RTV or an equivalent seal. See *Figure 3.5*. If a fitting was used in the mounting foot, apply the seal around the network cable before tightening the fitting, to prevent slippage. A split rubber sleeve (not supplied) may be used for this purpose.

## 4 Camera Lens Adjustment

The camera and lens come factory configured and ready for operation. If custom setup is required, refer to the camera Installation Instructions included in the Instruction Booklet Packet.



**Figure 4.1** Removing the Bracket

## 5 Sunshield

A sunshield is provided with the outdoor packages.

## 6 Model Numbers and System Specifications

Model No.	Camera	Lens	Housing	Mount	Resolution	Included Lens	System
<b>MONOCHROME 1/3 in. STANDARD RESOLUTION</b>							
KBN-335V28-20	LTC 0335/20	LTC 3364/50	LTC 9480/00	LTC 9215/00S	380	2.8-10 mm Vari-focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-335V28-20	LTC 0335/20	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	380	2.8-10 mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
KBN-335V55-20	LTC 0335/20	LTC 3374/50	LTC 9480/00	LTC 9215/00S	380	5-50 mm Vari- focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-335V55-20	LTC 0335/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	380	5-50 mm Vari- focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
<b>MONOCHROME 1/3 in. HIGH RESOLUTION</b>							
KBN-355V28-20	LTC 0355/20	LTC 3364/50	LTC 9480/00	LTC 9215/00S	570	2.8-10 mm Vari-focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-355V28-20	LTC 0355/20	LTC 3364/50	UHO-HBGS-10	LLTC 9215/00	570	2.8-10 mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
KBN-355V55-20	LTC 0355/20	LTC 3374/50	LTC 9480/00	LTC 9215/00S	570	5-50 mm Vari- focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-355V55-20	LTC 0355/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	570	5-50 mm Vari- focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
<b>MONOCHROME 1/3 in. HIGH RESOLUTION SENSITIVITY</b>							
KBN-385V28-20	LTC 0385/20	LTC 3364/50	LTC 9480/00	LTC 9215/00S	570	2.8-10 mm Vari-focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-385V28-20	LTC 0385/20	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	570	2.8-10 mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-385V28-20F	LTC 0385/20	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	570	2.8-10 mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ Fiber
KBE-385V28-20U	LTC 0385/20	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	570	2.8-10 mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ UTP
KBN-385V55-20	LTC 0385/20	LTC 3374/50	LTC 9480/00	LTC 9215/00S	570	5-50 mm Vari- focal	Indoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-385V55-20	LTC 0385/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	570	5-50 mm Vari- focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-385V55-20F	LTC 0385/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	570	5-50 mm Vari- focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ Fiber
KBE-385V55-20U	LTC 0385/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	570	5-50 mm Vari- focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ UTP
<b>1/2 in. HIGH RESOLUTION, HIGH SENSITIVITY</b>							
KBE-510V75-20	LTC 0510/20	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	570	7.5-75mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz
KBE-510V75-20F	LTC 0510/20	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	570	7.5-75mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ Fiber
KBE-510V75-20U	LTC 0510/20	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	570	7.5-75mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ UTP
KBE-510V41-20	LTC 0510/20	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	570	4.0-12mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz

Model No.	Camera	Lens	Housing	Mount	Resolution	Included Lens	System
KBE-510V41-20F	LTC 0510/20	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	570	4.0-12mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ Fiber
KBE-510V41-20U	LTC 0510/20	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	570	4.0-12mm Vari-focal	Outdoor, Monochrome EIA, 24 VAC, 60 Hz, w/ UTP
<b>COLOR 1/3 in. STANDARD RESOLUTION</b>							
KBN-435V28-20	LTC 0435/20	LTC 3364/50	LTC 9480/00	LTC 9215/00S	330	2.8-10 mm Vari-focal	Indoor, Color NTSC, 24 VAC, 60 Hz
KBE-435V28-20	LTC 0435/20	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	330	2.8-10 mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBN-435V55-20	LTC 0435/20	LTC 3374/50	LTC 9480/00	LTC 9215/00S	330	5-50 mm Vari- focal	Indoor, Color NTSC, 24 VAC, 60 Hz
KBE-435V55-20	LTC 0435/20	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	330	5-50 mm Vari- focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
<b>1/3 in. HIGH RESOLUTION</b>							
KBN-455V28-20	LTC 0455/21	LTC 3364/50	LTC 9480/00	LTC 9215/00S	540	2.8-10 mm Vari-focal	Indoor, Color NTSC, 24 VAC, 60 Hz
KBE-455V28-20	LTC 0455/21	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	540	2.8-10 mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBN-455V55-20	LTC 0455/21	LTC 3374/50	LTC 9480/00	LTC 9215/00S	540	5-50 mm Vari- focal	Indoor, Color NTSC, 24 VAC, 60 Hz
KBE-455V55-20	LTC 0455/21	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	540	5-50 mm Vari- focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
<b>1/3 in., HIGH RESOLUTION, HIGH SENSITIVITY</b>							
KBN-485V28-20	LTC 0485/21	LTC 3364/50	LTC 9480/00	LTC 9215/00S	540	2.8-10 mm Vari-focal	Indoor, Color NTSC, 24V AC, 60 Hz
KBE-485V28-20	LTC 0485/21	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	540	2.8-10 mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBE-485V28-20F	LTC 0485/21	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	540	2.8-10 mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-485V28-20U	LTC 0485/21	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	540	2.8-10 mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/UTP
KBN-485V55-20	LTC 0485/21	LTC 3374/50	LTC 9480/00	LTC 9215/00S	540	5-50 mm Vari- focal	Indoor, Color NTSC, 24V AC, 60 Hz
KBE-485V55-20	LTC 0485/21	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	540	5-50 mm Vari- focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBE-485V55-20F	LTC 0485/21	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	540	5-50 mm Vari- focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-485V55-20U	LTC 0485/21	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	540	5-50 mm Vari- focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/UTP
<b>1/2 in. HIGH RESOLUTION, HIGH SENSITIVITY</b>							
KBE-610V75-20	LTC 0610/21	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	540	7.5-75mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBE-610V75-20F	LTC 0610/21	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	540	7.5-75mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-610V75-20U	LTC 0610/21	LTC 3274/41	UHO-HBGS-10	LTC 9215/00	540	7.5-75mm Vari-focal	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/UTP
KBE-610V41-20	LTC 0610/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Color NTSC, 24 VAC, 60 Hz
KBE-610V41-20F	LTC 0610/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-610V41-20U	LTC 0610/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Color NTSC, 24 VAC, 60 Hz, w/UTP

Model No.	Camera	Lens	Housing	Mount	Resolution	Included Lens	System
<b>DAY/NIGHT 1/3 in. HIGH RESOLUTION</b>							
KBN-495V28-20	LTC 0495/21	LTC 3664/40	LTC 9480/00	LTC 9215/00S	540	2.8-11 mm Vari-focal, IR Corrected	Indoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-495V28-20	LTC 0495/21	LTC 3664/40	UHO-HBGS-10	LTC 9215/00	540	2.8-11 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-495V28-20F	LTC 0495/21	LTC 3664/40	UHO-HBGS-10	LTC 9215/00	540	2.8-11 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-495V28-20U	LTC 0495/21	LTC 3664/40	UHO-HBGS-10	LTC 9215/00	540	2.8-11 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/UTP
KBN-495V75-20	LTC 0495/21	LTC 3674/20	LTC 9480/00	LTC 9215/00S	540	7.5-50 mm Vari-focal, IR Corrected	Indoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-495V75-20	LTC 0495/21	LTC 3674/20	UHO-HBGS-10	LTC 9215/00	540	7.5-50 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-495V75-20F	LTC 0495/21	LTC 3674/20	UHO-HBGS-10	LTC 9215/00	540	7.5-50 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-495V75-20U	LTC 0495/21	LTC 3674/20	UHO-HBGS-10	LTC 9215/00	540	7.5-50 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/UTP
<b>DAY/NIGHT 1/2 in. HIGH RESOLUTION</b>							
KBE-620V14-20	LTC 0620/21	LTC 3774/30	UHO-HBGS-10	LTC 9215/00	540	10-40 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-620V14-20F	LTC 0620/21	LTC 3774/30	UHO-HBGS-10	LTC 9215/00	540	10-40 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-620V14-20U	LTC 0620/21	LTC 3774/30	UHO-HBGS-10	LTC 9215/00	540	10-40 mm Vari-focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/UTP
KBE-620V41-20	LTC 0620/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz
KBE-620V41-20F	LTC 0620/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/Fiber
KBE-620V41-20U	LTC 0620/21	LTC 3764/20	UHO-HBGS-10	LTC 9215/00	540	4-12 mm Vari- focal, IR Corrected	Outdoor, Day/Night NTSC, 24 VAC, 60 Hz, w/UTP
<b>IP, COLOR 1/3 in. HIGH RESOLUTION</b>							
KBE-455V28-20N	NWC-0455-20P	LTC 3364/50	UHO-HBGS-10	LTC 9215/00	540	2.8-10 mm Vari-focal	Outdoor, Color IP NTSC, 24 VAC, 60 Hz
KBE-455V55-20N	NWC-0455-20P	LTC 3374/50	UHO-HBGS-10	LTC 9215/00	540	5-50 mm Vari- focal	Outdoor, Color IP NTSC, 24 VAC, 60 Hz
<b>IP, DAY/NIGHT 1/3 in. HIGH RESOLUTION</b>							
KBE-495V28-20N	NWC-0495-20P	LTC 3664/40	UHO-HBGS-10	LTC 9215/00	540	2.8-11 mm Vari-focal, IR Corrected	Outdoor, IP, Day/Night NTSC, 24 VAC, 60 Hz
KBE-495V75-20N	NWC-0495-20P	LTC 3674/20	UHO-HBGS-10	LTC 9215/00	540	7.5-50 mm Vari-focal, IR Corrected	Outdoor, IP, Day/Night NTSC, 24 VAC, 60 Hz



**Americas:**

Bosch Security Systems  
130 Perinton Parkway  
Fairport, New York, 14450  
USA  
Phone +1 800 289 0096  
Fax +1 585 223 9180  
**[www.boschsecurity.us](http://www.boschsecurity.us)**

**Europe, Middle East, Asia:**

Bosch Security Systems B.V.  
Postbus 80002  
5600 JB Eindhoven  
Phone: +31 40 2577 200  
Fax: +31 40 2577 202  
[nl.securitysystems@bosch.com](mailto:nl.securitysystems@bosch.com)  
[www.boschsecurity.nl](http://www.boschsecurity.nl)  
**[www.boschsecurity.com](http://www.boschsecurity.com)**

**[www.boschsecurity.com](http://www.boschsecurity.com)****Asia-Pacific:**

Bosch Security Systems Pte Ltd.  
38C Jalan Pemimpin  
Singapore 577180  
Phone +65 6319 3450  
Fax +65 63139 3499  
**[www.boschsecurity.com](http://www.boschsecurity.com)**