

10/04220

BOARD OF COMMISSIONERS
SARPY COUNTY, NEBRASKA
RESOLUTION AWARDING BID FOR CAMERAS & CARD READERS
FOR THE SARPY COUNTY NEW LAW ENFORCEMENT CENTER

WHEREAS, pursuant to Neb. Rev. Stat. §23-104(6)(Reissue 1997), the County has the power to do all acts in relation to the concerns of the County necessary to the exercise of its corporate powers; and,

WHEREAS, pursuant to Neb. Rev. Stat. §23-103 (Reissue 1997), the powers of the County as a body are exercised by the County Board; and,

WHEREAS, bids for this matter have been solicited, made, opened and reviewed pursuant to applicable Nebraska State Statutes; and,

WHEREAS, based on those proceedings, and after a public hearing, this Board has duly deliberated and considered the bids received; and,

WHEREAS, this Board desires to proceed forthwith in order to expedite and facilitate service to the citizens of Sarpy County.

NOW, THEREFORE, BE IT RESOLVED BY THIS BOARD OF COUNTY COMMISSIONERS THAT: the low bid of Dakota Security Systems for the Cameras and Card Readers for the New Law Enforcement Center in the amount of Fifty Seven Thousand One Hundred Fifty Two Dollars and Eighty One Cents (\$57,152.81) is accepted, ratified, and confirmed.

1. This Board's Chairman, Clerk, and Attorney are hereby authorized and directed to execute such ancillary documents as may be required to evidence the contract and take any and all steps necessary or required in order to carry out the terms of such contract after said documents have been reviewed by the Attorney, Fiscal Administrator, and County Administrator.

Dated this 14th day of December, 2010.

Moved by Rusty Hike, and seconded by Jim Nekuda, that the above Resolution be adopted.
Carried.

YEAS
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]

NAYS:
none

ABSENT:
none

ABSTAIN:
none



Attest:
[Signature]
Sarpy County Clerk

Approved as to form and content:
[Signature]
Sarpy County Deputy Attorney

AGREEMENT

This Agreement is entered into by and between the County of Sarpy, in the State of Nebraska, a body politic and corporate, and hereinafter "County", and Dakota Security Systems, Inc., hereinafter "Vendor".

WHEREAS, County is desirous of contracting for Cameras and Card Readers for the Sarpy County Law Enforcement Center; and,

WHEREAS, the Vendor has been awarded this Agreement as a result of the bid made by Vendor in response to the Specifications and Request for Proposals prepared by County;

NOW, THEREFORE, for and in consideration of the declarations and mutual promises and covenants contained herein, the County and Vendor agree as follows:

I. DUTIES OF VENDOR:

- A. Services to be rendered by Vendor under this Agreement shall be all those services necessary and proper for the installation and materials for Cameras and Card Readers in conformity with each and every term, condition, specification, and requirement of the Bid Specifications and the Bid submitted by the Vendor.
- B. All provisions of each document and item referred to in Paragraph A above shall be strictly complied with the same as if rewritten herein, and in the event of conflict among the provisions of said documents, the provisions most favorable to the County shall govern.
- C. Prior to the commencement of any work, Vendor will place on file with the Sarpy County Clerk, the required certificates of insurance, if applicable.
- D. The Vendor agrees to comply with the residency verification requirements of Neb. Rev. Stat. §4-108 through §4-114. The Vendor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Vendor is an individual or sole proprietorship, the following applies:

- 1. The Vendor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at

www.das.state.ne.us.

2. If the Vendor indicates on such attestation form that he or she is a qualified alien, the Vendor agrees to provide the U.S. Citizenship and Immigration Services documentation required to verify the Vendor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
 3. The Vendor understands and agrees that lawful presence in the United States is required and the Vendor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. Sect. 4-108.
- E. Vendor will submit an invoice to County for work completed based on the amounts specified in Vendor's bid. Such invoices shall be submitted to:

Beth Cunard
Sarpy County Purchasing
1210 Golden Gate Drive
Papillion, NE 68046

- F. The County and Vendor hereto specifically acknowledge, stipulate and agree that each and every term of the Bid Specifications and the Vendor's bid constitutes an essential term of this Agreement, and that, therefore, any violation of any term, condition, provision, or requirement constitutes a material breach hereunder, for which County shall have every right under the law to terminate this Agreement, and obtain any and all relief necessary.

II. DUTIES OF COUNTY:

In return for full, faithful and diligent rendering of services set forth above, County agrees to pay to Vendor the amount specified in Vendor's bid upon submission of the required invoice and satisfactory completion of all required work.

III. BREACH:

Should Vendor breach, violate, or abrogate any term, condition, clause or provision of this agreement, the County shall notify Vendor in writing that such an action has occurred. If satisfactory provision does not occur within ten (10) days from such written notice, the County may, at its option, terminate this agreement and obtain an alternate provider to provide all required materials. This provision shall not preclude the pursuit of other remedies for breach of contract as allowed by law.

SAVINGS CLAUSE:

This Agreement shall be interpreted, construed and enforced under the laws of the State of Nebraska. It is understood and agreed by the County and Vendor hereto that if any part, term, condition, or provision of this Agreement is held to be illegal or in conflict with any law of the State of Nebraska or of the United States, the validity of the remaining parts, terms, conditions, or provisions shall not be affected, and the rights and obligations of the County and Vendor shall be construed and enforced as if the Agreement did not contain the particular part, term, condition, or provision held to be invalid.

SCOPE OF AGREEMENT

This Agreement, along with the Bid Specifications, and Bid by Vendor contains the entire Agreement between the County and Vendor, and there are no other written or oral promises, contracts or warrants which may affect it. This Agreement cannot be amended except by written agreement of both the County and Vendor. Notice to the County and Vendor shall be given in writing to the agents for each party named below:

County: Ms. Debra Houghtaling
Clerk of Sarpy County
1210 Golden Gate Drive
Papillion, NE 68046

Vendor: Mr. Matt Vellek
Dakota Security Systems, Inc.
12020 Shamrock Plaza, Suite 200
Omaha, NE 68154

IN WITNESS WHEREOF, we the contracting parties, by our respective and duly authorized agents, hereto affix our signatures and seals in duplicate this 14th day of December, 2010.

(Seal)



ATTEST:

Debra A. Houghtaling
Sarpy County Clerk

COUNTY OF SARPY, NEBRASKA,
A body Politic and Corporate

Janalbrecht
Chairperson 12/14/10
Sarpy County Board of Commissioners

Approved as to form and content:

Mark A. [Signature]
Deputy County Attorney

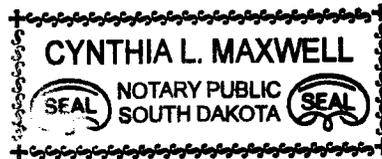
Vendor: DAKOTA Seuring Systems, Inc

By: [Signature] Robert F. PERZINSKI

Title: REGIONAL Vice President

Attest:

Cynthia L. Maxwell
Witness



expira 9-9-16

Bid Tab
Cameras Card Readers
for the
Law Enforcement Center

Bid Opening:
2:00 p.m., Thursday
December 2, 2010

| | Quantity | Electronic Engineering | | Security Equipment Inc. | | Safe-N-Secure | | Sierra Detention Systems | |
|---|----------|------------------------|--------------------|-------------------------|--------------------|---------------|--------------------|--------------------------|--------------------|
| | | Unit Price | Extended Price | Unit Price | Extended Price | Unit Price | Extended Price | Unit Price | Extended Price |
| Option 1 - Card Reader System | | | | | | | | | |
| DSX-1048PKG | 3 | | \$0.00 | \$4,472.00 | \$13,416.00 | \$3,565.00 | \$10,695.00 | \$3,900.00 | \$11,700.00 |
| DSX LAN Module | 1 | | \$0.00 | \$344.00 | \$344.00 | \$295.00 | \$295.00 | \$300.00 | \$300.00 |
| Card Readers with Request to Exit | 16 | | \$0.00 | \$270.00 | \$4,320.00 | \$230.00 | \$3,680.00 | \$260.00 | \$4,160.00 |
| Card Readers | 2 | | \$0.00 | \$140.00 | \$280.00 | \$165.00 | \$330.00 | \$211.00 | \$422.00 |
| Contact Switches | 16 | | \$0.00 | \$8.00 | \$128.00 | \$8.00 | \$128.00 | \$5.00 | \$80.00 |
| Labor | | | | | \$10,670.00 | | \$8,000.00 | | \$11,818.00 |
| Option 1 Subtotal | | | No Bid | | \$29,158.00 | | \$23,128.00 | | \$28,480.00 |
| Option 2 - Cameras | | | | | | | | | |
| Toshiba IK-WB30A | 6 | \$607.10 | \$3,642.60 | \$683.33 | \$4,099.98 | \$670.00 | \$4,020.00 | \$685.00 | \$4,110.00 |
| Toshiba IK-WR12A | 9 | \$711.10 | \$6,399.90 | \$1,358.45 | \$12,226.05 | \$970.00 | \$8,730.00 | \$1,169.00 | \$10,521.00 |
| Axis ZX1755-E | 2 | \$2,228.20 | \$4,456.40 | \$2,186.00 | \$4,372.00 | \$1,825.00 | \$3,650.00 | \$2,994.00 | \$5,988.00 |
| Toshiba Network Video Recorder | 1 | \$8,716.50 | \$8,716.50 | \$8,498.17 | \$8,498.17 | \$8,468.00 | \$8,468.00 | \$10,625.00 | \$10,625.00 |
| Labor | | | \$12,575.00 | | \$9,450.00 | | \$8,120.00 | | \$9,972.00 |
| Option 2 Subtotal | | | \$35,790.40 | | \$38,646.20 | | \$32,988.00 | | \$41,216.00 |
| Option 3 - Card Reader System - Garage | | | | | | | | | |
| DSX LAN Module | 1 | | \$0.00 | \$344.00 | \$344.00 | \$295.00 | \$295.00 | \$300.00 | \$300.00 |
| Request to Exit and Door Position | 3 | | \$0.00 | \$199.00 | \$597.00 | \$85.00 | \$255.00 | \$55.00 | \$165.00 |
| Contact Switches | 3 | | \$0.00 | \$8.00 | \$24.00 | \$8.00 | \$24.00 | \$5.00 | \$15.00 |
| Labor | | | | | \$1,040.00 | | \$2,400.00 | | \$2,490.00 |
| Option 3 Subtotal | | | No Bid | | \$2,005.00 | | \$2,974.00 | | \$2,970.00 |
| Total | | | | | \$69,809.20 | | \$59,090.00 | | \$72,666.00 |

Bid Tab
Cameras Card Readers
for the
Law Enforcement Center

Bid Opening:
2:00 p.m., Thursday
December 2, 2010

| | Quantity | Dakota Security Systems | | Control Masters, Inc. | | Johnson Hardware | | Miller Electric Co. | | Prime Communications | |
|---|----------|-------------------------|--------------------|-----------------------|--------------------|------------------|--------------------|---------------------|--------------------|----------------------|--------------------|
| | | Unit Price | Extended Price | Unit Price | Extended Price | Unit Price | Extended Price | Unit Price | Extended Price | Unit Price | Extended Price |
| Option 1 - Card Reader System | | | | | | | | | | | |
| DSX-1048PKG | 3 | \$2,620.32 | \$7,860.96 | \$2,808.00 | \$8,424.00 | | \$0.00 | \$1,660.00 | \$4,980.00 | \$2,975.30 | \$8,925.90 |
| DSX LAN Module | 1 | \$189.00 | \$189.00 | \$216.00 | \$216.00 | | \$0.00 | \$1,289.00 | \$1,289.00 | \$225.00 | \$225.00 |
| Card Readers with Request to Exit | 16 | \$273.10 | \$4,369.60 | \$187.00 | \$2,992.00 | | \$0.00 | \$453.00 | \$7,248.00 | \$196.79 | \$3,148.64 |
| Card Readers | 2 | \$115.52 | \$231.04 | \$187.00 | \$374.00 | | \$0.00 | \$411.00 | \$822.00 | \$130.99 | \$261.98 |
| Contact Switches | 16 | \$0.00 | \$0.00 | \$8.00 | \$128.00 | | \$0.00 | \$3.60 | \$57.60 | \$15.86 | \$253.76 |
| Labor | | | \$11,839.50 | | \$12,163.00 | | | | \$12,330.00 | | \$11,061.41 |
| Option 1 Subtotal | | | \$24,490.10 | | \$29,962** | | No Bid | | \$26,726.60 | | \$23,876.69 |
| Option 2 - Cameras | | | | | | | | | | | |
| Toshiba IK-WB30A | 6 | \$444.73 | \$2,668.38 | \$473.00 | \$2,838.00 | \$680.33 | \$4,081.98 | \$646.00 | \$3,876.00 | \$555.39 | \$3,332.34 |
| Toshiba IK-WR12A | 9 | \$774.72 | \$6,972.48 | \$626.00 | \$5,634.00 | \$1,121.33 | \$10,091.97 | \$1,146.00 | \$10,314.00 | \$826.01 | \$7,434.09 |
| Axis ZX1755-E | 2 | \$1,571.47 | \$3,142.94 | \$1,991.00 | \$3,982.00 | \$2,072.50 | \$4,145.00 | \$2,737.00 | \$5,474.00 | \$1,794.26 | \$3,588.52 |
| Toshiba Network Video Recorder | 1 | \$6,223.00 | \$6,223.00 | \$14,064.00 | \$14,064.00 | \$10,459.00 | \$10,459.00 | \$8,498.00 | \$8,498.00 | \$10,641.49 | \$10,641.49 |
| Labor | | | \$10,009.36 | | \$6,586.00 | | \$11,019.00 | | \$9,450.00 | | \$9,821.54 |
| Option 2 Subtotal | | | \$29,016.16 | | \$37,417** | | \$39,796.95 | | \$37,612.00 | | \$34,817.98 |
| Option 3 - Card Reader System - Garage | | | | | | | | | | | |
| DSX LAN Module | 1 | \$189.00 | \$189.00 | \$216.00 | \$216.00 | | \$0.00 | \$1,289.00 | \$1,289.00 | \$225.00 | \$225.00 |
| Request to Exit and Door Position | 3 | \$247.85 | \$743.55 | \$187.00 | \$561.00 | | \$0.00 | \$369.00 | \$1,107.00 | \$65.80 | \$197.40 |
| Contact Switches | 3 | \$0.00 | \$0.00 | \$8.00 | \$24.00 | | \$0.00 | \$3.60 | \$10.80 | \$15.86 | \$47.58 |
| Labor | | | \$2,714.00 | | \$2,521.00 | | | | \$1,935.00 | | \$1,932.97 |
| Option 3 Subtotal | | | \$3,646.55 | | \$4,347** | | No Bid | | \$4,341.80 | | \$2,402.95 |
| Total | | | \$57,152.81 | | \$71,726.00 | | | | \$68,680.40 | | \$61,097.62 |

THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No. NEC 57300

AIA Document A312

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

Dakota Security Systems, Inc.
2201 East 54th Street North
Sioux Falls, SD 57104

OWNER (Name and Address):

County of Sarpy
1210 Golden Gate Drive
Papillion, NE 68046

SURETY (Name and Principal Place of Business):

Merchants Bonding Company (Mutual)
2100 Fleur Drive
Des Moines, IA 50321-1158

CONSTRUCTION CONTRACT

Date: January 3, 2011

Amount: \$61,384.20 Sixty One Thousand Three Hundred Eighty Four Dollars and 20/100

Description (Name and Location): Cameras and Card Readers for the Sarpy County Law Enforcement Center

BOND

Date (Not earlier than Construction Contract Date): January 4, 2011

Amount: \$61,384.20 Sixty One Thousand Three Hundred Eighty Four Dollars and 20/100

Modifications to this Bond:

[X] None

[] See Page 3

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)

Dakota Security Systems, Inc.

Signature: [Handwritten Signature]
Name and Title:

SURETY

Company: (Corporate Seal)

Merchants Bonding Company (Mutual)

Signature: [Handwritten Signature]
Name and Title: Kimberly Brown
Attorney-in-Fact

(Any additional signatures appear on page 3)

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER:

Holmes Murphy & Associates, Inc.

5120 S. Solberg Avenue

Sioux Falls, SD 57108

605-336-1090

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3 If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4 When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for

which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

.2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

5 If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6 After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

8 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation avail-

able to sureties as a defense in the jurisdiction of the suit shall be applicable.

10 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12 DEFINITIONS

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Con-

tractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL
Company: _____ (Corporate Seal)

SURETY
Company: _____ (Corporate Seal)

Signature: _____
Name and Title:
Address:

Signature: _____
Name and Title:
Address:

THE AMERICAN INSTITUTE OF ARCHITECTS



Bond No. NEC 57300

AIA Document A312

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

Dakota Security Systems, Inc.
2201 East 54th Street North
Sioux Falls, SD 57104

OWNER (Name and Address):

County of Sarpy
1210 Golden Gate Drive
Papillion, NE 68046

SURETY (Name and Principal Place of Business):

Merchants Bonding Company (Mutual)
2100 Fleur Drive
Des Moines, IA 50321-1158

CONSTRUCTION CONTRACT

Date: January 3, 2011

Amount: \$61,384.20 Sixty One Thousand Three Hundred Eighty Four Dollars and 20/100

Description (Name and Location):Cameras and Card Readers for the Sarpy County Law Enforcement Center

BOND

Date (Not earlier than Construction Contract Date): January 4, 2011

Amount: \$61,384.20 Sixty One Thousand Three Hundred Eighty Four Dollars and 20/100

Modifications to this Bond: [] None [X] See Page 6

CONTRACTOR AS PRINCIPAL

Company: (Corporate Seal)
Dakota Security Systems, Inc.

Signature: [Handwritten Signature]
Name and Title:

SURETY

Company: (Corporate Seal)
Merchants Bonding Company (Mutual)

Signature: [Handwritten Signature]
Name and Title: Kimberly Brown
Attorney-in-Fact

(Any additional signatures appear on page 6)

(FOR INFORMATION ONLY - Name, Address and Telephone)

AGENT or BROKER:
Holmes Murphy & Associates, Inc.
5120 S. Solberg Avenue
Sioux Falls, SD 57108
605-336-1090

OWNER'S REPRESENTATIVE (Architect, Engineer or other party) :

1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2 With respect to the Owner, this obligation shall be null and void if the Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3 With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4. The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the Contractor:

1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5 If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6 When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2 Pay or arrange for payment of any undisputed amounts.

7 The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond

conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15 DEFINITIONS

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone

service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

§ 6 When the Claimant has satisfied the conditions of Section 4, the Surety shall promptly and at the Surety's expense take the following actions:

§ 6.1 Send an answer to the Claimant, with a copy to the Owner, within 4560 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

§ 6.2 Pay or arrange for payment of any undisputed amounts.

§ 6.3 The Surety's failure to discharge its obligations under this Section 6 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a claim. However, if the Surety fails to discharge its obligations under this Section 6, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs to recover any sums found to be due and owing to the Claimant.

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL
Company: _____ (Corporate Seal)

SURETY
Company: _____ (Corporate Seal)

Signature: _____
Name and Title:
Address:

Signature: _____
Name and Title:
Address:

MERCHANTS
BONDING COMPANY
POWER OF ATTORNEY

Know All Persons By These Presents, that the MERCHANTS BONDING COMPANY (MUTUAL), a corporation duly organized under the laws of the State of Iowa, and having its principal office in the City of Des Moines, County of Polk, State of Iowa, hath made, constituted and appointed, and does by these presents make, constitute and appoint

Greg A. Krier, Nancy DeNeui, Bonnie Merz, Cheryl Havelaar, Kurt Ratzlaff, Douglas Muth,
Tracey Anderson, Lori Klein, Grace Hatting, Kimberly Brown

of Sioux Falls and State of South Dakota its true and lawful Attorney-in-Fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf as surety any and all bonds, undertakings, recognizances or other written obligations in the nature thereof, subject to the limitation that any such instrument shall not exceed the amount of:

FIFTEEN MILLION (\$15,000,000.00) DOLLARS

and to bind the MERCHANTS BONDING COMPANY (MUTUAL) thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of the MERCHANTS BONDING COMPANY (MUTUAL), and all the acts of said Attorney-in-Fact, pursuant to the authority herein given, are hereby ratified and confirmed.

This Power-of-Attorney is made and executed pursuant to and by authority of the following Amended Substituted and Restated By-Laws adopted by the Board of Directors of the MERCHANTS BONDING COMPANY (MUTUAL) on November 16, 2002.

ARTICLE II, SECTION 8 - The Chairman of the Board or President or any Vice President or Secretary shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.

ARTICLE II, SECTION 9 - The signature of any authorized officer and the Seal of the Company may be affixed by facsimile to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed.

In Witness Whereof, MERCHANTS BONDING COMPANY (MUTUAL) has caused these presents to be signed by its President and its corporate seal to be hereto affixed, this 23rd day of December, 2010.



MERCHANTS BONDING COMPANY (MUTUAL)

By *Larry Taylor*
President

STATE OF IOWA
COUNTY OF POLK ss.

On this 23rd day of December, 2010, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of the MERCHANTS BONDING COMPANY (MUTUAL), the corporation described in the foregoing instrument, and that the Seal affixed to the said instrument is the Corporate Seal of the said Corporation and that the said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors.

In Testimony Whereof, I have hereunto set my hand and affixed my Official Seal at the City of Des Moines, Iowa, the day and year first above written.



Cindy Smyth
Notary Public, Polk County, Iowa

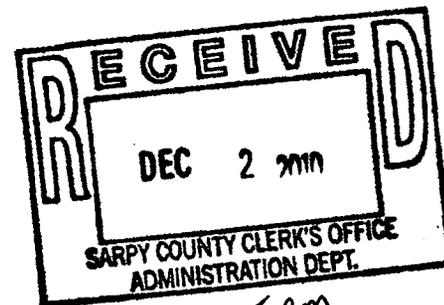
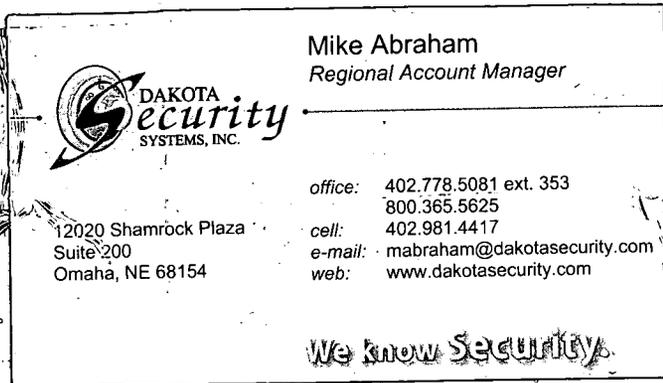
STATE OF IOWA
COUNTY OF POLK ss.

I, William Warner, Jr., Secretary of the MERCHANTS BONDING COMPANY (MUTUAL), do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said MERCHANTS BONDING COMPANY (MUTUAL), which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Company on this 4th day of January, 2011.



William Warner Jr.
Secretary

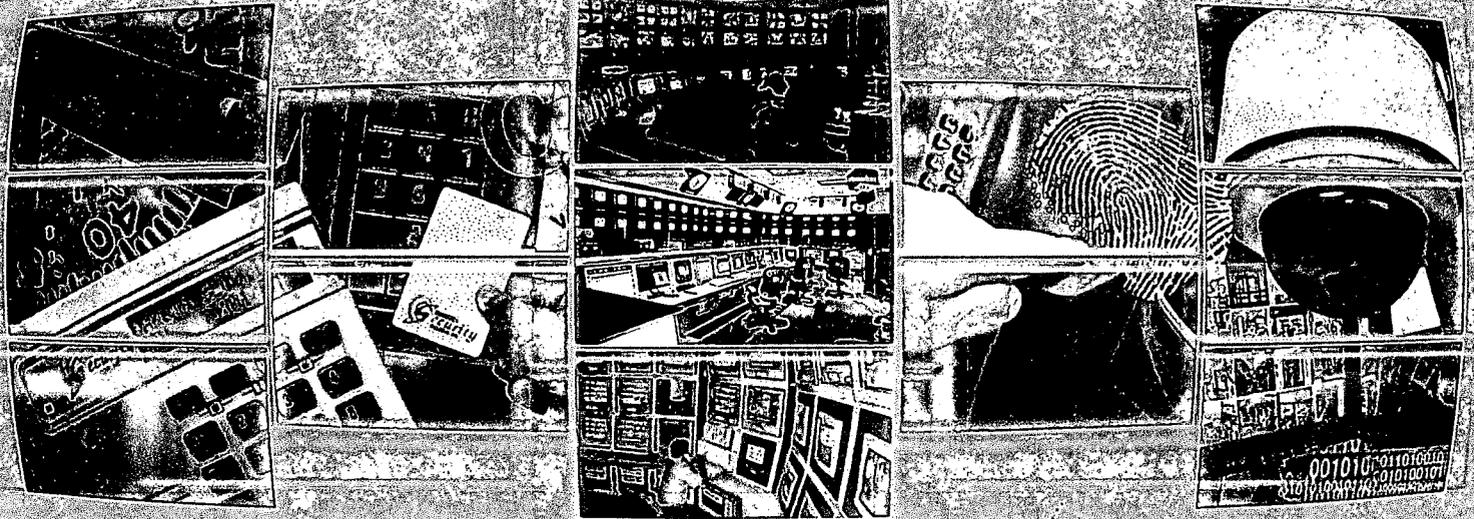


11:25 AM
SM

Deb Houghtating
Sarpy County Board Business office
1210 Golden Gate Drive
Papillion, NE 68046

"Sealed Bid - Cameras And Card Readers"

"Bid OPENING - 2:00 P.M., Thursday, December 2, 2010."



Sarpy County Law Enforcement Center RFP Response

10 OCTOBER 23, 2010

TABLE OF CONTENTS

Cover

Bid Form – Sarpy County Cameras and Card Readers
OPTION 1 – Card Reader System

Bid Form – Sarpy County Cameras and Card Readers
OPTION 2 – Cameras

Bid Form – Sarpy County Cameras and Card Readers
OPTION 3 – Card Reader System – Garage

Bid Form – References, Addendums Acknowledgement, Company
Information

Dakota Security Systems, Inc. Proposal Factors Summary List

Manufacture's Specification Information

- DSX Access Systems - Dakota Security Systems, Inc. Authorized and Factory Trained Dealer Letter
- Access Control System – Card Readers
- Video System - Cameras

Dakota Security Systems, Inc. Company Information

- Experience
- We know Government Security
- We know the Steps to Security
- Dakota Security Systems, Inc. Quality Assurance Program
- Dakota Security Systems, Inc. Change Management Process
- Dakota Security Systems, Inc. – Why Choose Us?

Dakota Security Systems, Inc. Proposal
Sarpy County Nebraska
Law Enforcement Center Project – Cameras & Card Readers
Bid Opening - December 2, 2010 2:00 PM CST

COMPANY NAME: Dakota Security Systems, Inc.

**Sarpy County, Nebraska
Cameras and Card Readers
Bid Form**

Option 1 - Card Reader System

| Quantity | Description | Unit Price | Extended Price |
|-----------------------|--|---------------------|-------------------|
| 3 | DSX-1048PKG which includes: DSX-1040E Enclosure, DSX-1040CDM Communication Distribution Module, 4-1042 Intelligent Controllers, and DSX 1040 PDP Power Distribution Panel with emergency recharge power batteries, per package. | \$ 2,620.32 | \$ 7,860.98 |
| 1 | DSX LAN Module | \$ 189.00 | \$ 189.00 |
| 16 | Card Readers with Request to Exit and Door Position Switches | \$ 273.10 | \$ 4,369.65 |
| 2 | Card Readers | 115.52 | 231.04 |
| 16 | U.L. Listed contact switches | \$ Included Above | \$ Included Above |
| -- | Labor (includes labor, misc, bonds) | ----- | \$ 11,839.50 |
| Option 1 Total | | \$ 24,490.17 | |

Card Readers are compatible with the following types of cards:

- FlexCard®
- FlexISO®
- FlexISO® XT
- MIFARE®
- DESFire™
- iCLASS®
- FlexTag™
- FlexKey®

Option 2 - Cameras

| Quantity | Description | Unit Price | Extended Price |
|-----------------------|---|--------------|----------------|
| 6 | Toshiba <u>IK-WB30A-KIT28-12</u> , 2 megapixel resolution, color day/night cameras w/ YV43X28SA-SA2 Megapixel Lens 1/3",2.8-12mm,F1.4 | \$ 444.73 | \$ 2,668.40 |
| 9 | Toshiba <u>IK-WR12A</u> , 2 megapixel resolution, color day/night cameras with 3-9 mm varifocal lens. Optional accessories per installation requirement of each camera location: <ul style="list-style-type: none"> • JK-PHO12 Outdoor Housing • JK-PMA12 Pole Mount Adapter • JK-WM12 Wall Mount Adapter • JK-CMA12 Corner Mount Adapter | \$ 774.72 | \$ 6,972.48 |
| 2 | <u>Axis Q1755-E</u> 60 Hz, 5 megapixel high definition camera with f5.1-51mm, F1.8 – 2.1 autofocus, auto day/night lens. Includes external housing, wall mount bracket, sun shield, and 16 ft. Ethernet cable. <ul style="list-style-type: none"> • VT POLE MOUNT ADAPTER WSFPA | \$ 1,571.47 | \$ 3,142.94 |
| 1 | <u>Toshiba Network Video Recorder</u> , model NVS32-2T - 32 channel <ul style="list-style-type: none"> - 3 GB RAM - Recording rate (30) PPS per camera - Compression MPEG4, H.264 - Internal RAID5 - (8) TB total hard drive capacity expanded with <ul style="list-style-type: none"> • 3 additional HDD-2TB - Includes video manager software, and SCS software with Embedded Windows XP. | \$ 6,223.00 | \$ 6,223.00 |
| - | Labor (includes labor, misc, bond) | - | \$ 10,009.36 |
| Option 2 Total | | \$ 29,016.18 | |

Option 3 - Card Reader System - Garage

| Quantity | Description | Unit Price | Extended Price |
|-----------------------|--|-------------------|-------------------|
| 1 | DSX LAN Module | \$ 189.00 | \$ 189.00 |
| 3 | Request to Exit and Door Position Switches | \$ 247.85 | \$ 743.57 |
| 3 | U.L. Listed contact switches | \$ Included Above | \$ Included Above |
| -- | Labor | -- | \$ 2,714.00 |
| Option 3 Total | | \$ 3,646.57 | |

***Prices are to be F.O.B. - 8335 Platteview Road, Papillion, NE 68046**

ESTIMATED INSTALLATION DATE:

April 15, 2011**

***As detailed in specifications, page 8, item 1*

Company Information:

Years in business:

34 years (since June 1976)

of employees

98

Total sales last 3 years

2009/ \$13,000,000

2008/ \$14,000,000

2007/ \$16,500,000

Dakota Security Systems, Inc. Proposal Factors Summary List

- A. **Compliance with all requirements** – YES.
- B. **Price** – Provided as per RFP.
- C. **The ability, capability, and skills of vendor to perform** – YES see Dakota Security Systems, Inc. company information.
- D. **The character, integrity, reputation, judgment, experience, and efficiency of the vendor**
Excellent see Dakota Security Systems, Inc. company information.
- E. **The quality of previous performance** - Excellent see Security Systems, Inc. company information and references.
- F. **Weather vendor can perform within time specified** – YES see bid form.
- G. **The previous and existing compliance of the supplier with laws** - Excellent see company information and references.
- H. **The life-cost of the personal property or services in relation to the purchase price and specified use.**
Industry standard, Dakota Security Systems, Inc. bid systems and products as detailed within the RFP.
- I. **The life-cost of the personal property or services taking into consideration any commonly accepted standards tests and standards of products, service, usability and user requirements**
Industry standard, Dakota Security Systems, Inc. bid systems and products as detailed within the RFP.
- J. **The energy efficiency ratio as stated by the supplier.**
Industry standard, Dakota Security Systems, Inc. bid systems and products as detailed within the RFP.

Continued

K. The life-cycle costs between alternatives for all classes of equipment, the evidence of expected life, the repair and maintenance costs and the energy consumption on a per year basis.

No alternates utilized.

L. Other positive information bearing a decision to award Dakota Security Systems, Inc. this project.

Dakota Security Systems is an *authorized* and *factory trained* dealer in good standing for DSX Access Systems which is the system specified in this projects RFP documents and is the current system utilized by Sarpy County.

Dakota Security Systems is national industry leader with excellent local references.

Dakota Security Systems, Inc. Proposal
Sarpy County Nebraska
Law Enforcement Center Project – Cameras & Card Readers
Bid Opening - December 2, 2010 2:00 PM CST



DSX ACCESS SYSTEMS, INC.

The Security Professionals' First Choice

November 30, 2010

To Whom It May Concern:

This letter is to certify that Dakota Security Systems located in Sioux Falls, South Dakota is an *authorized* and *factory trained* dealer in good standing for DSX Access Systems. As such, Dakota Security Systems has committed to maintaining a fully trained sales and technical staff and will receive the full support and resources that DSX has to offer. Dakota Security Systems has been a DSX Access Systems dealer since February 2010.

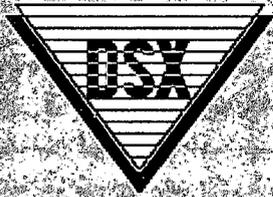
Dakota Security Systems is highly qualified to design, sell, install and service the complete line of card access and ID badging products from DSX Access Systems.

DSX Access Systems is pleased to have Dakota Security Systems as a business partner, and we are confident that any customer will be eminently pleased with the quality of work and professionalism exhibited by their staff.

If anyone should have any questions regarding this subject please call my office at 888-419-8353 extension 142.

Sincerely,

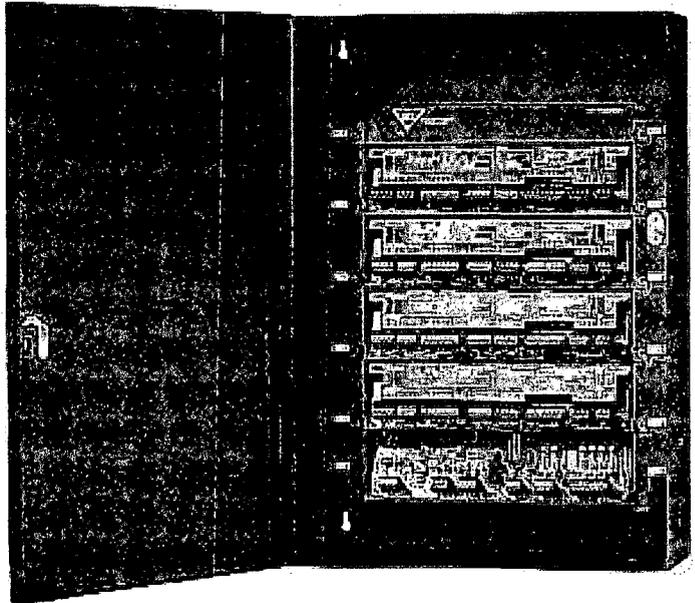
Scott Bennett
National Sales Manager



DSX-1048PKG

Intelligent Controllers

- ▽ Scalable Architecture
- ▽ TCP/IP Communications
- ▽ Individual Intelligence
- ▽ 512K RAM / 512K Flash ROM
- ▽ UL 294
- ▽ 150+ Card and Keypad Formats
- ▽ Real Time Processing and Communications
- ▽ Integrated Power Supply and Distribution
- ▽ Compatible with all existing DSX Controllers



General Information

The DSX-1048PKG Intelligent Controller is an independent processing 8 door package designed to be a cost effective building block platform that allows expansion in a scalable manner. Up to 8 doors can be controlled from 1 enclosure for an efficient space saving package. The controllers are strategically placed throughout the customer location connected together with a two twisted pair cable. Each DSX-1048 operates as a fully intelligent and independent controller that retains all data necessary for system operation in its own RAM. With its integral real-time Clock and Calendar it performs Time Zone control with Holiday overrides for inputs, outputs, and cards even when communication to the PC or other controllers is not available.

Controller Architecture

The DSX-1048 Intelligent Controller may be used in conjunction with all other DSX Controllers as a Master or Slave in the controller network. Any controller may be designated as a Master or Slave controller. The Master or Slave mode of operation is determined by the panels dip switch settings. The first panel of each location is designated as the Master while all others would be considered Slaves. The Master is responsible for communications to the PC and to the Slave panels. Up to 16 - DSX-1048PKG Intelligent Controllers can be used in a single Location providing for 128 readers. Multiple Locations can be grouped for systems that require more than 128 readers/keypads.

Each DSX-1048PKG includes a DSX-1040E Enclosure, a DSX-1040CDM Communication Distribution Module and 4 DSX-1042 Intelligent Controllers. Each DSX-1048 provides 8 Reader Ports, 32

Inputs, and 16 Outputs. Each DSX-1042 has a 12 volt fused power output for it's Card Readers and Keypads. The DSX-1042 contains an AM186 processor, 512K of RAM, 512K of Flash ROM, and a Real Time Clock. The DSX-1048 allows all door and field wiring connections to be made via removable terminal blocks. The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire-RS485 to the next DSX-1048PKG. The DSX-1040CDM also distributes Slave Controller communication to those Slave panels located within the same enclosure.

Used in conjunction with the DSX-1048PKG Intelligent Controller is a DSX-1040PDP or Power Distribution Panel. The DSX-1040PDP houses the controller and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE enclosure, an AS-150 15V power supply for the controllers, an AS-100[12] or [24] for either 12V or 24V locks, and a DSX-1040PDM or Power Distribution Module.

System Power

Each Controller in the DSX-1048PKG is powered from an individually fused 12 volt output from the DSX-1040CDM distribution module located in the same enclosure. The module also provides 5 volt power for those Readers and or Keypads that require it. The DSX-1040CDM receives power from the DSX-1040PDP Power Distribution Panel. The DSX-1040PDP houses the controller and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE Enclosure, an AS-150 15V power supply for the Controllers, an AS-

100-[12] or [24] for either 12V or 24V locks, and a DSX-1040PDM Power Distribution Module. The DSX-1040PDM performs several critical functions. First, it takes the 15V power from the AS-150 and provides an 8 amp fused output to power the DSX-1040CDM which distributes the power to the DSX-1042 Controllers in the DSX-1048PKG. It provides a 12V Battery Charging Circuit to charge backup batteries for the Controllers. It also provides a charging circuit for the optional batteries used to backup the 12 or 24 volt lock power from the AS-100 power supply. The Power Distribution Module has 2 N.O. Relay Outputs, one to signal Loss of AC and one to signal Low Battery. These Outputs can be connected to spare Inputs in the DSX-1048PKG. The module also has a Battery Test Input. This Input when activated shuts off the charging circuit and load tests the battery for 1 minute. This Input can be connected to a spare Output in the DSX-1048PKG and programmed by time zone to occur when desired. The DSX-1040PDM routes Lock Power through individual fuses for each of the 8 outputs. The module also has connection points for a Fire Override relay to break Lock Power.

Reader Technologies

The DSX-1048 is compatible with Wiegand, Barium Ferrite, Proximity, Bar Code, Magnetic Stripe, and Biometric readers. Any combination of reader technologies may be used in the same system. A keypad may be added to most readers to create a card and PIN controlled entry point. The DSX-1048 is compatible with over 140 different card readers / keypads and card formats which makes it the perfect panel for retrofits. Conversion modules exist for some types of other manufacturers proprietary card readers. The panel is compatible with two wire wiegand and clock and data outputs without the use of any modules. Each reader port has 3 LED open collector outputs for Door Secure, Door Open, and Access Denied/Keypad PIN Entry. This will accommodate almost any reader and LED configuration. It is possible to connect the sounder control line of most card readers directly to the Pre-Warn output for a clean and concealed installation providing door held open and alarm annunciation.

Memory

Each Controller has a standard configuration of 512K of Flash ROM and 512K of RAM. The RAM memory allocation is dynamic between database and event storage and set for optimum use by the Host PC according to data entered for that location. Flash ROM allows for the Controllers' operating system to be upgraded without the changing of chips (EPROMS). Having 512K of RAM eliminates the necessity of increasing the memory in controllers as the system grows. When the Controller is in service the amount of RAM and the version of ROM can be viewed from the DSX communications software.

Inputs

The DSX-1048PKG has 32 EOL supervised Inputs capable of two, three, and four state point monitoring with trouble reports. The armed status of each Input can be controlled by up to 4 Time Zones, I/O & Card Linking, and Manually from the PC. Eight Inputs are designated as Door Position and eight Inputs are designated as Exit Request Inputs for the reader controlled doors. The remaining sixteen Inputs are then left for additional monitoring points.



Outputs

The DSX-1048PKG has 16 Programmable Outputs. Eight Outputs are Form-C, 5 Amp rated relays used to control the locks for the reader controlled doors. Eight Outputs are the open collector type, both have an LED for status and are fully programmable. In addition to the 16 programmable Outputs there are 8 Pre-Warn Outputs, (1 for each door) and are used to indicate the reader controlled doors are being held open and are about to go into alarm. Once the door is opened the Output begins pulsing low starting at 1/3 of the door open too long time and changes to a steady low anytime the door is in alarm. These open collector (switched negative) Outputs reset automatically when the door is closed.

Communications

The DSX-1048PKG Intelligent Controller can communicate with the WinDSX Communications Server via TCP/IP LAN communications, Direct Serial Port connection, and Dial-Up Phone Modem.

TCP/IP LAN Communications can be performed from the WinDSX Comm Server PC to a Master Controller. The WinDSX Software without the use of any additional Hardware or Software will redirect what would typically be serial port communications to a TCP/IP address. A LAN serial device at the Master Controller receives the communications over the LAN from the WinDSX PC and converts it to RS-232/RS-485 for the Master Controller. The end result is real time communications similar to that of a direct serial port connection.

Direct Connect Communications from the PC to the Master Controller is performed with a connection from the Host Port of the Master to a serial port of the PC. RS-232 is used for short distance connections. RS-485 communications is used when the direct serial port connection is from 50 to 4000 feet from Controller to PC. In order to communicate with the Master Controller with RS-485 communications requires two MCI modules. One DSX MCI module is placed at the PC to convert the RS-232 signal to RS-485 and a second module is placed at the Master Controller to convert the RS-485 back to RS-232. The Controller communicates with the PC at a default baud rate of 9600.

Dial-Up Modem Communications from the DSX-1042 Master Controller to the PC utilizes a DSX modem at the Controller and one at the PC. At the DSX-1042 Master, the RS-232 Host Communications Port connects to the Modem. The Modem derives its power from the DSX-1042 panel. The Controller will auto-dial to the PC all Alarm and Supervisory conditions. The Controller can also be programmed to dial the PC when its event storage buffer is 80% full.

Controller Communications is handled at each DSX-1048 by a DSX-1040CDM (communications distribution module) using true point to point, regenerative, RS-485, 4-wire communications. This module has 2 RS-485 ports for in and out 4 wire communications to other Controllers. The Controller network communications is regenerated at each DSX-1040CDM allowing up to 4000 feet of distance between Controllers over two twisted pair cable. The DSX-1040CDM has 2 RS-232 Communication Ports. One is used to connect to the Master Controller and is only used in the DSX-1048PKG Enclosure where the Master Controller resides. The other RS-232 port connects to the RS-



232 port of each Slave Controller in that same enclosure. DSX-1048PKG Controllers are connected in a series loop configuration unless a DSX-1035 Quadraplexor is used for Star wiring.

DataBase Downloads

The Controllers utilize a synchronized database that is maintained with the incremental and automatic or scheduled downloading of changes only. This intelligent, independent processing increases the speed of the panels actions and reactions, providing more stability and security to the overall system. The Controllers are downloaded with all parameters the first time they are brought on-line. Once the initial full download occurs all database changes such as the adding and deleting of card holders are sent to the Controllers by way of incremental downloads. The Controllers' transaction buffer automatically adjusts its size to utilize any RAM not allocated for data.

Diagnostic, Supervisory and Status LEDs

The DSX-1048 has 88 diagnostic LEDs to indicate panel status. Thirty two are for Input Status, sixteen are for Output Status, the rest are for Communications, Fuse Status, and Processor Status.

Input / Output / Code Linking

The DSX-1048PKG has powerful Linking capabilities that provide flexible input and output control. Codes, Inputs, and Outputs can Link to other Inputs and Outputs, on the same or different controller, in order to control their armed or on and off state. Linking to Inputs allows for control of their armed state. Linking to Outputs allows for control of their on/off state. Linking responses include: Pulse, Latch, Follow, Toggle, and Time Zone. Inputs can Link to Inputs and Outputs. Outputs can Link to Outputs and Inputs. Codes can Link to both Inputs and Outputs. All I/O Linking is performed at a local (panel) as well as a global (location) level.

DSX-1048 Specifications

Size

| | |
|-------------------|--------------------------|
| DSX-1040E Cabinet | 15.5" W x 22.5" H x 6" D |
| DSX-1040CDM | 11" W x 4.5" H x 1.5" D |
| DSX-1042 | 11" W x 4.5" H x 1.5" D |

Weight

| | |
|-------------------|----------|
| DSX-1040E Cabinet | 19.2 lb. |
| DSX-1040CDM | 1.0 lb. |
| DSX-1042 | 1.2 lb. |
| DSX-1048 - Total | 25.0 lb. |

Finish

Black Powder Coat with White Silkscreen on Enclosure and Black Enamel on DSX-1042.

Conduit Knockouts

1-1/4" to 2" concentric knockouts in Top, Bottom, Sides and Back of enclosure.



Temperature

| | |
|-----------|--------------|
| Operating | 32 to 131 F |
| Storage | -35 to 150 F |

Humidity

| | |
|-----------|--------------------|
| Operating | 0 to 95%, relative |
|-----------|--------------------|

Power Requirements

| | |
|-----------------------|-------------------------------|
| DSX-1042 | 13.5 VDC @ 300ma from 1040CDM |
| DSX-1040CDM | 13.5 VDC @ 150ma from 1040PDP |
| Total Maximum Current | 13.5 VDC @ 8.0A |

Output Voltage

Panel outputs provide a regulated, fused, DC voltage.

| | | |
|-------------|-------|------------------------|
| DSX-1042 | 12VDC | 1A - Fused |
| DSX-1040CDM | 12VDC | 5 - 1.5A fused outputs |
| DSX-1040CDM | 5VDC | 3/8A fused |

Inputs

| | |
|----------------|----|
| EOL Supervised | 32 |
|----------------|----|

16 Inputs are used for standard point monitoring.

16 Inputs are used for door position and exit request monitoring.

All Inputs support two, three, and four state monitoring with five programmable circuit types.

UL Installations require a Tamper Switch to be connected to an Input programmed with a 24hr Time Zone.

Outputs

| | |
|------------------------|---|
| Form C Relays | 8 |
| Relay Output Ratings | 5 AMP 30 VDC / 5 AMP 125 VAC |
| Open Collector Outputs | 8 - negative 100ma |
| LED Outputs | 24 - 3 per reader port - negative 100ma |
| Pre-Alarm Outputs | 8 - 1 per door - negative 100ma |

Access Controlled Entry Points

| | |
|---|------|
| Card Reader or Keypad | 8 |
| Card and Reader Formats | 140+ |
| Any combination of card readers, keypads, or card and keypad controlled entry points may be used. | |

Communication Ports

| | | |
|------------|---|---------------------------------|
| DSX-1042 | | |
| RS-232 In | 1 | Master to PC |
| RS-232 Out | 1 | Panel to DSX-1040CDM 1040CDM |
| RS-232 In | 1 | Master to DSX-1040CDM |
| RS-232 Out | 1 | Slave Communications |
| RS-485 In | 1 | From previous DSX-1048 Package |
| RS-485 Out | 1 | To subsequent DSX-1048 Packages |

Processor

| | |
|-------|-------|
| AM186 | 20Mhz |
|-------|-------|

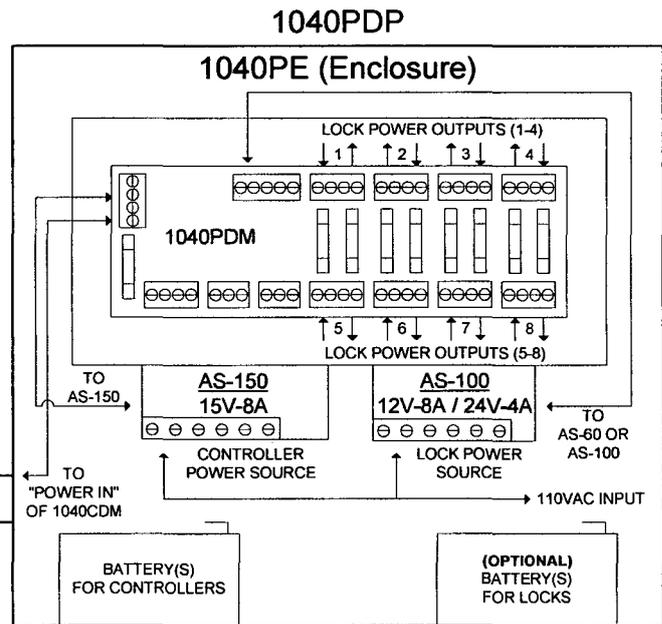
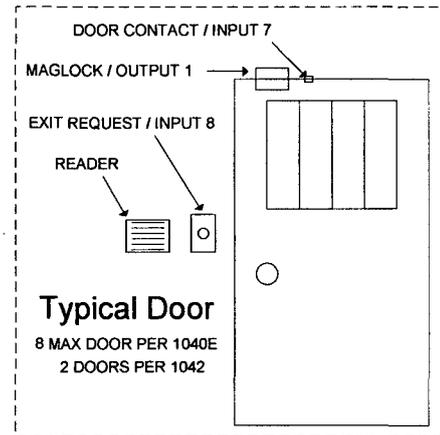
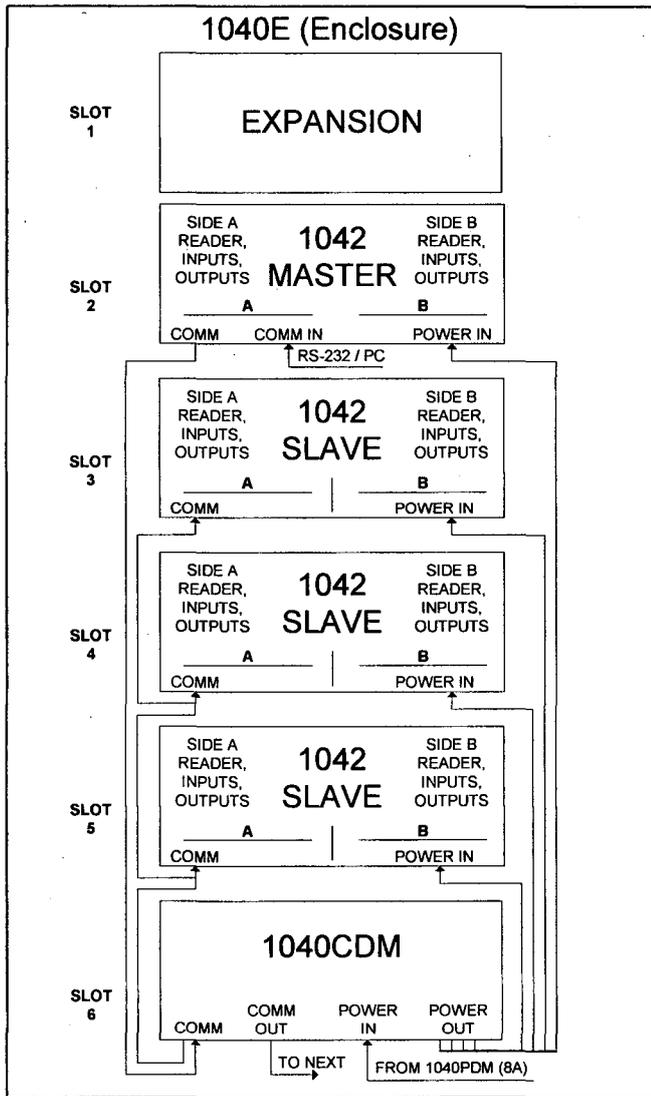
RAM/ROM Memory

| | |
|--------------|------|
| Flash ROM | 512K |
| Standard RAM | 512K |



DSX-1048 Basic Architecture

1048PKG Intelligent Controller Package



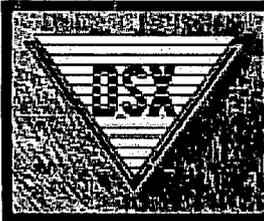
The DSX-1048PKG includes a DSX-1040E Enclosure, a DSX-1040CDM Communication Distribution Module and 4 - 1042 Intelligent Controllers. This provides 8 Reader Ports, 32 Inputs, and 16 Outputs. The DSX-1048 Package comes complete with 32-1K ohm EOL Resistors, Lock & Key, Anchors and Wire Ties, Tamper Switch, an External Power Indicator and a DSX-1040PDP Power Distribution Panel.

The DSX-1040CDM receives RS-485 communications from a possible previous panel and regenerates the 4 wire-RS485 to the next DSX-1048PKG. The DSX-1040CDM module also distributes Slave Controller communication to the Slave panels within the same enclosure. Each DSX-1042 is powered from an individually

fused 12 volt output from the DSX-1040CDM Communications Distribution Module. The DSX-1040CDM receives power from the DSX-1040PDP Power Distribution Panel.

Used in conjunction with the DSX-1048PKG is a DSX-1040PDP or Power Distribution Panel. The DSX-1040PDP houses the panel and lock power supplies, backup batteries, and fused power distribution module. The DSX-1040PDP is comprised of a DSX-1040PE Enclosure, an AS-150 15V power supply for the Controllers, an AS-100-[12] or [24] for either 12V or 24V locks, and a DSX-1040PDM. The DSX-1040PDM performs several critical functions such as supervising Power Supplies and Batteries, distributing power through fused outputs, and providing battery charging circuits.

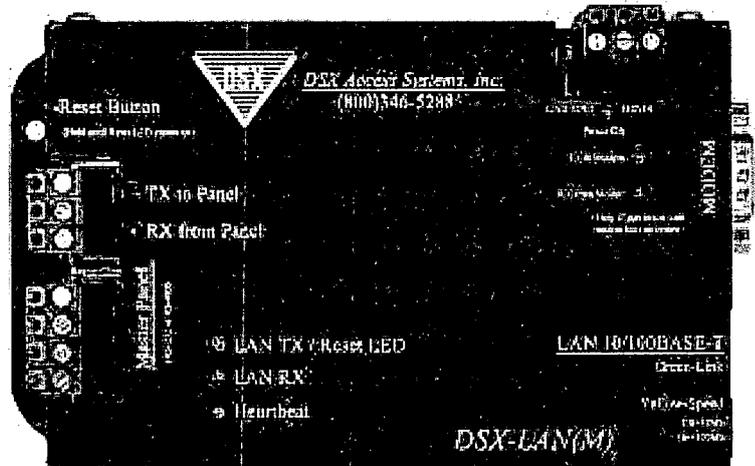




DSX-LAN(M)

LAN Communications Interface

- Powered from DSX Controller
- Auto-sensing 10/100 Base-T / Auto-Duplexing
- RS-232 / RS485 Controller Communication
- Configured through serial port
- Dial-Up Modem Backup - Optional
- Built by DSX for DSX
- Static or Dynamic Communications Server IP
- Simple to Configure w/ 3 entries
- Password Protected Programming



General Application

The DSX-LAN(M) module is typically used to connect a Master Controller to the Host or Comm Server PC over a Local or Wide Area Network. The WinDSX software is inherently TCP/IP capable and can redirect communication, that would normally be transmitted out a serial port, over a LAN/WAN to a particular IP address. The DSX-LAN(M) module receives that communication and converts it to RS-232 or RS-485 that connects directly to the Master Controller. This adds another avenue of flexibility to WinDSX by utilizing TCP/IP communications as well as dial-up modem and direct serial port connectivity. All three means of communication can be used at the same time in the same system. The DSX-LAN(M) is powered from the DSX Controller which can provide battery backup.

The DSX-LAN(M) module is sold in two different configurations. The DSX-LAN which is the module with IP communications as the only method of connectivity. The DSX-LAN(M) has dial up modem backup. The DSX-LAN module must be ordered with the (M) option along with the DSX modem to support the dial-up backup feature.

Other Applications

The DSX-LAN can also be used at Slave Controllers with the use of the PC Master Software. PC Master is a DSX software application that emulates a Master Controller. It gets its download from the Comm Server PC and communicates with all of the Slaves just like a Master Controller does. What is different about the PC Master software is its ability to com-

municate with each Slave Controller via TCP/IP or with a serial port connection. This allows Slave Controllers to be placed on the LAN and each one or each group of controllers to have a LAN connections using a LAN module. Modem backup is not available for slave controller communication.

Dial-up Modem Backup

The DSX-LAN(M) module has a 9 pin serial port that is used to connect a DSX modem for communications redundancy. When the LAN(M) module determines a loss of network connectivity it switches to "Modem Mode" which allows the controller to call the Comm Server or Host PC via the modem when necessary. When the Network connection is re-established the Controller reconnects over the LAN. The modem and the LAN(M) module are powered from the Controller and are connected to each other via the supplied serial cable. Call for availability of this feature

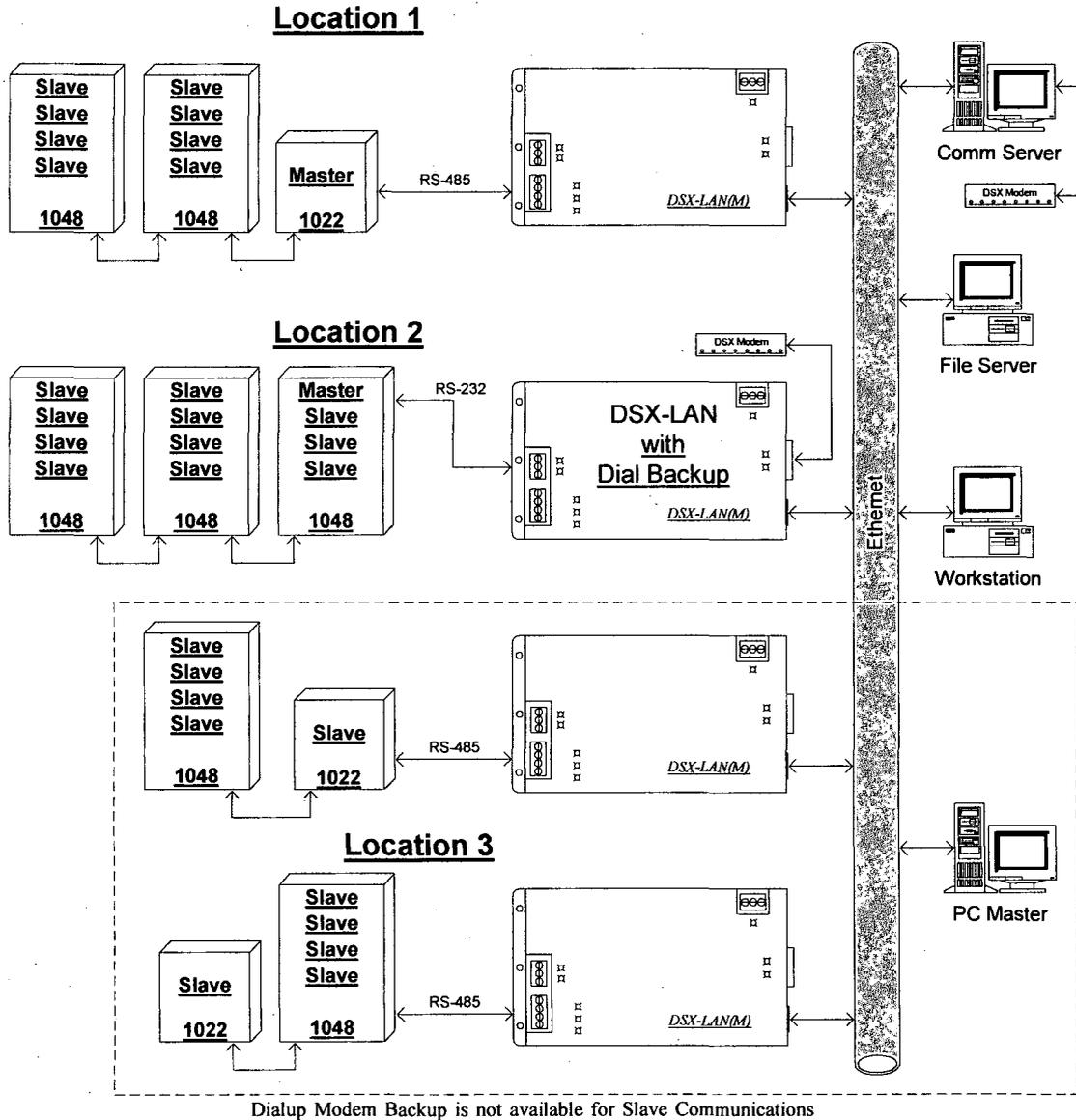
Power

The DSX-LAN(M) is powered from one of the Controllers 12VDC outputs requiring a mere 300ma. Powering the module from the DSX Controller provides a good stable battery backed up source.

Mounting

The DSX-LAN(M) is designed to fit in the same Equipment Cabinet as the DSX-1048 and DSX-1022 Controllers. It can mount on the inside or rest in the bottom of the enclosure. It has three mounting holes and removable terminal blocks.

DSX-LAN(M)



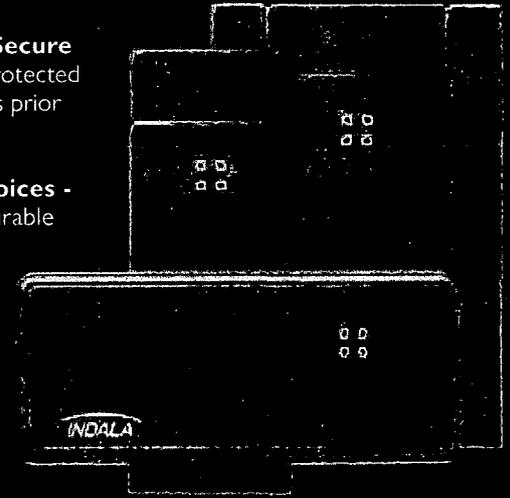
DSX-LAN(M) Specifications

| | | | |
|--|--------------------------|----------------------------|-------------------|
| Size | | Power Requirements | |
| DSX-LAN(M) | 5.5" W x 3.5" H x 1.0" D | DC Input Voltage | 12 VDC @ 300 ma |
| Weight | | Communication Ports | |
| DSX-LAN | 12.0 oz. | RS-232 for Controller | 1 - 50 feet max |
| Finish | | RS-232 for Modem | 1 - Optional |
| Black Powder Coat with White Silkscreen. | | RS-485 for Controller | 1 - 4000 feet max |
| Temperature/Humidity | | 10/100 Base-T | 1 - Autosensing |
| Operating | 0 to 70 C | Warranty | |
| | | Limited | 2 Year |

Indala Standard Card Readers

Classic, Mullion (Slim), Wallswitch

- ▶ **Indala FlexSecur® Technology for the Industry's Most Secure Proximity Readers** - Exclusive Indala FlexSecur® Password-Protected Security between card and reader screens out unauthorized cards prior to sending access control data to the host system.
- ▶ **Superior Format Control for the Most Application Choices** - Indala offers card formats of up to 172 bits, and readers configurable for Wiegand, Magstripe, and Serial output formats.
- ▶ **The Standard Series Readers Are Part of an Expansive Product Portfolio That Meets Every Proximity Reader Requirement** - The HID Indala Proximity portfolio includes classic, mullion/slim, wallswitch, mid-range, long-range, and heavy-duty keypad readers for every application.



ACCESS choice.

The Indala 125 kHz Standard product line is part of HID's latest line of highly-secure proximity readers. With a read range of up to five inches, Indala Standard Proximity readers are suitable for a variety of applications. These high-quality Indala Proximity Readers deliver outstanding and consistent performance with intelligent programming technology, uniform core modules, and a range of stylish bezel designs including Curve, Arch, Linear, and Wave in a variety of colors. All Indala Standard Proximity readers are available in three popular form factors: Classic, Mullion (Slim) and Wallswitch for the ultimate choice.

Exclusive FlexSecur® Security Technology.

All HID Indala 125 kHz Proximity Readers feature FlexSecur technology, which provides an added level of access system security through a verification process at the reader. A feature unique to the HID Indala product line, FlexSecur screens out unauthorized cards prior to sending access control data to the host system.

This additional verification step enhances the security of your access system in two ways:

1. The entire card data field is encrypted prior to programming the card. Therefore, the data on the card cannot be decoded to determine the actual information on the card. Only the reader is able to decrypt the data and transmit it to the access control system.
2. Cards and readers can be programmed uniquely for each site, protecting the end user against unauthorized entry attempts by using cards from another facility. Again, this is unique to the HID Indala product line.

Key Features:

Classic Reader

- ▶ Uniquely designed to replace a Wiegand Reader.
- ▶ Dimensions are the same as the Classic Wiegand Swipe reader. Mounting holes match.
- ▶ Ideal for transitioning existing Wiegand users to proximity.

Mullion (Slim) Reader

- ▶ Can be mounted on any wall where limited space is an issue or where a slim, modern look is preferred to a wallswitch-size reader.
- ▶ Ideal for mounting on door frames.
- ▶ Suitable for indoor or outdoor use.

Wallswitch Reader

- ▶ The Wallswitch reader is similar in size to most U.S. switch plates.
- ▶ Wallswitch reader can be mounted on a single gang box.
- ▶ Suitable for indoor or outdoor use.

Features

Reader Form Factors and Bezel Style Choices

Stylish readers are available in mullion-mount and wallswitch in many attractive, "snap-on" bezel styles and colors.

Indoor/Outdoor Flexibility

All readers are fully potted and have weatherproof electronics assemblies, making them suitable for internal and external applications.

Easy Installation

Readers easily mount on a door mullion or single gang electrical box.

Audio Tone Programming Flexibility

Independently controllable audio tone can be tied to LED function or separately controlled.

Compatible with Any Control Panel

Wiegand or Magnetic Stripe (Clock & Data) output easily interfaces with most existing access-control panels.

Unbeatable Warranty and Technical Support

Customers can select HID Indala 125 kHz Proximity Readers with confidence because HID offers a lifetime product warranty and global Technical Support.

Card Programming

The ProxSmith® Programmer System and Application Programming Interface puts flexibility and convenience in the hands of OEM and security professionals. With the ability to quickly program a card or reader on site, users no longer need to rely on the factory for custom formatted cards or readers. Plus, the ProxSmith Programmer System delivers the high level of security you expect from the HID Indala product line.

| | Classic | Mullion (Slim) | Wallswitch |
|------------------------------|---|--|---|
| Mounting | replaces HID Indala Classic Wiegand Swipe reader | metal door frame, mullion | metal or plastic single gang outlet box |
| Dimensions | 2.3"H x 5.3"W x 0.8"T (5.8 x 13.5 x 2.0 cm) | Wave: 5.5"H x 1.7"W x 1.1"T (14.0 x 4.3 x 2.8 cm) Curve: 4.9"H x 1.7"W x 1.1"T (12.4 x 4.3 x 2.8 cm) Arch: 4.5"H x 1.7"W x 0.8"T (11.4 x 4.3 x 2.0 cm) Linear: 5.5"H x 1.7"W x 0.8"T (14.0 x 4.3 x 2.0 cm) | Wave: 5.5"H x 3.3"W x 1.1"T (14.0 x 8.4 x 2.8 cm) Curve: 5.0"H x 3.8"W x 1.1"T (12.7 x 9.6 x 2.8 cm) Arch: 4.5"H x 3.0"W x 0.8"T (11.4 x 7.6 x 2.0 cm) Linear: 4.6"H x 3.0"W x 0.9"T (11.7 x 7.6 x 2.3 cm) |
| Power Supply | 4-16 VDC | | |
| Current Requirements | 65 mA | | |
| Operating Temperature | -31 to 149°F (-35 to 65°C) | | |
| Operating Humidity | 0-95% RH, non-condensing | | |
| Transmit Frequency | 125 kHz | | |
| Environmental | IP55 | | |
| Certifications | UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea), NCC (Taiwan), MIC (Japan), iDA (Singapore), RoHS | | |
| Base Part Number | 603 Core Module: FP-0500A Package Part Number*: Linear, Classic, Black: FP4551A | 603 Core Module: FP-0500A Package Part Number*: Wave, Slim, Black: FP1511A Wave, Slim, Blue: FP1514A Curve, Slim, Black: FP2511A Arch, Slim, Black: FP3511A Arch, Slim, Grey: FP3515A Arch, Slim, White: FP3516A Arch, Slim, Beige: FP3517A Linear, Slim, Black: FP4511A Linear, Slim, Beige: FP4517A | 603 Core Module: FP-0500A Package Part Number*: Wave, Wallswitch, Black: FP1521A Wave, Wallswitch, Blue: FP1524A Curve, Wallswitch, Black: FP2521A Arch, Wallswitch, Black: FP3521A Arch, Wallswitch, Grey: FP3525A Arch, Wallswitch, White: FP3526A Arch, Wallswitch, Beige: FP3527A Linear, Wallswitch, Black: FP4521A Linear, Wallswitch, Grey: FP4525A Linear, Wallswitch, White: FP4526A Linear, Wallswitch, Beige: FP4527A |
| Color | Linear (Black) | Wave - Black, Blue Curve - Black Arch - Black, Grey, White, Beige Linear - Black, Beige | Wave - Black, Blue Curve - Black Arch, Linear - Black, Grey, White, Beige |
| Options | Selectable Output Type: Wiegand, ABA Track II, Serial TTL (requires use of BIL 232/422 Module) Termination: Wire Pigtail Field Programmable Tri-State LED (red, green, amber) Configurable for single or dual line LED control. QuickFlash LED and Beep can be enabled/disabled. | | |
| Warranty | Lifetime | | |
| Read Ranges** | Classic | Mullion (Slim) | Wallswitch |
| FlexISO® Card | Up to 5" (12 cm) | | Up to 5" (12 cm) |
| FlexISO® XT | Up to 5" (12 cm) | | Up to 4" (10 cm) |
| FlexCard® | Up to 5" (12 cm) | | Up to 5" (12 cm) |
| FlexTag™ | Up to 3" (7 cm) | | Up to 3" (7 cm) |
| FlexKey® | Up to 2" (5 cm) | | Up to 2" (5 cm) |
| FlexISO® MIFARE® | Up to 5" (12 cm) | | Up to 4" (10 cm) |
| FlexISO® DESFire™ | Up to 5" (12 cm) | | Up to 4" (10 cm) |
| FlexISO® iCLASS® | Up to 5" (12 cm) | | Up to 4" (10 cm) |

*Package includes Core Electronics Module and bezel.
** Dependent upon installation conditions.

Specifications are subject to change without notice.
© 2009 HID Global Corporation. All rights reserved. HID, the HID logo, Indala, ProxSmith, FlexSecur and iCLASS are trademarks or registered trademarks of HID Global in the U.S. and/or other countries. All other trademarks, service marks, and product or service names are trademarks or registered trademarks of their respective owners. Rev. 05/2009

MKT-STANDARD-DS-EN

hidglobal.com



ACCESS experience.

HID Global Offices:

Corporate North America
115370 Barranca Pkwy
Irvine, CA 92618
U.S.A.
Phone: (800) 237-7769
Phone: (949) 732-2000
Fax: (949) 732-2360

Asia Pacific
19/F 625 King's Road
North Point
Island East
Hong Kong
Phone: +852 3160-9800
Fax: +852 3160-4809

Latin America
Circunvalación Ote. #201 B
Despacho 2
Col. Jardines del Moral
Leon 37160, Gto.
Mexico
Phone: +52 477 779 1492
Fax: +52 477 779 1493

Europe, Middle East & Africa
Haverhill Business Park
Phoenix Road
Haverhill
Suffolk
GB9 7AE
England
Phone: +44 (0) 1440 714 850
Fax: +44 (0) 1440 714 840

Indala Prox 125 kHz Proximity – Credentials

Indala Prox

| |  FlexCard® |  FlexISO® |  FlexISO® XT |  FlexISO® MIFARE® |  FlexISO® DESFire™ |  FlexISO® iCLASS® |  FlexTag™ |  FlexKey® |
|--------------------------------------|---|--|--|---|--|--|--|--|
| Base Part Number | FPCRD | FPISO | FPIXT | FPMXI | FPDXI | 202X-IND | FPTAG | FPKEY |
| Read Range: * | | | | | | | | |
| Wallswitch Reader | Up to 5" (12 cm) | Up to 5" (12 cm) | Up to 4" (10 cm) | | | Up to 3" (7 cm) | | Up to 2" (5 cm) |
| Classic Reader | Up to 5" (12 cm) | | | Up to 3" (7 cm) | | Up to 2" (5 cm) | | |
| Mullion (Slim) Reader | Up to 5" (12 cm) | | | Up to 3" (7 cm) | | Up to 2" (5 cm) | | |
| Mid-Range Reader | Up to 12" (30 cm) | | | Up to 7" (17 cm) | | | | |
| Long-Range Reader | Up to 25" (63 cm) | Up to 26" (66 cm) | Up to 24" (61 cm) | | | Up to 14" (35 cm) | Up to 16" (40.64 cm) | |
| Heavy-Duty PinProx Keypad Reader | Up to 3.75" (9.52 cm) | | | Up to 1.75" (4.45 cm) | | Up to 3.5" (8.89 cm) | | |
| Membrane Keypad Reader | Up to 4" (10 cm) | | | Up to 3" (7 cm) | | Up to 3.5" (8.89 cm) | | |
| Memory Size/ Application Areas | N/A | | 1k Byte (8,192 bits) or 4k Bytes (32,768 bits) MIFARE 1k: memory arranged in 16 64-byte Sectors MIFARE 4k: memory arranged in 40 Sectors: 32 sectors of 64 bytes, 8 sectors of 256 bytes | 4k Bytes (32,768 bits) | 2k bit (256 Byte) card – 2 application areas 16k bit (2k Byte) – 2 or 16 application areas 32k bit (4k Byte) card – 16k bit in 2 or 16 application areas plus 16k bit user configurable. | | N/A | |
| HID Proximity 125 kHz | Yes. | | | | | | | |
| Contact Smart Chip Module Embeddable | Optional | | | | | | No | |
| Wiegand Strip | No | | | | | | | Yes |
| Magnetic Stripe | No | Optional | | | | No | | |
| Printable ** | Yes | | | | | | No | |
| Slot Punch | Vertical | Horizontal or Vertical optional | | | Vertical optional | | No | Keyring |
| Visual Security Options | Yes. | | | | | | N/A | |
| Warranty | Lifetime | Two Years | Lifetime | Two Years | | Lifetime | | |

* Dependant upon installation conditions.

** Some types of printing processes can take these credentials out of ISO compliance for thickness. Consult factory for more information.



www.GE-Interlogix.com

Steel Door Contact

³/₄" and 1" contacts
1078/1076 Series

Overview

The GE Interlogix 1078 Series Steel Door contacts are designed specifically for use in the steel doors commonly found in commercial building applications. The unique housing design features a rugged unibody construction with flexible ribbed sides for quick, secure installation without gluing. The magnet housing isolates the magnet from the surrounding steel for maximum gap distances, both make and break. Over seven models including: Wide Gap, SPDT, DPDT, and Biased for High Security applications make the 1078 Series the most widely used and comprehensive line available.

On available models a terminal connection (T) makes installation easier. Simply strip the wire, insert it into the terminal block and tighten. The terminal accepts any wire size from 14 to 22 gauge, and has a unique one piece design for added strength.

An optional Rare Earth Magnet is available. It is designed for use in metal entry/exit doors with a channel in the top of the door. The magnet eliminates the need to cut a mounting hole in the door channel. The flexible magnet housing can be compressed to accommodate a variety of channel widths for quick, easy installation. Adhesive is recommended.

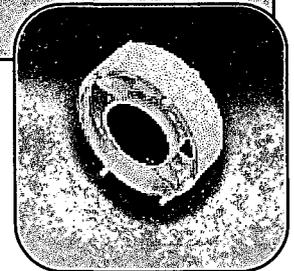
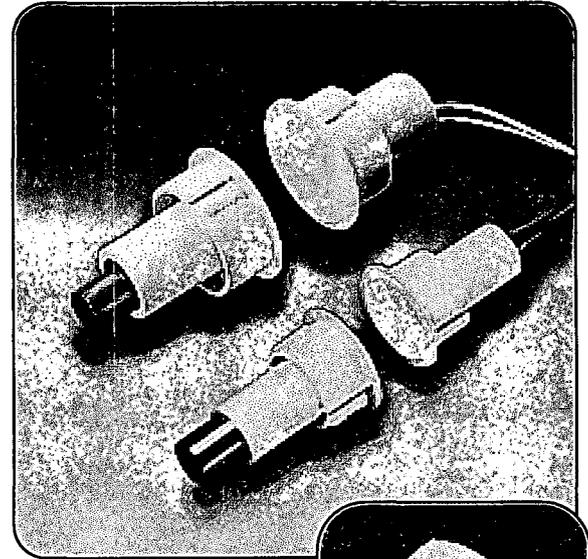
Architectural and Engineering Specifications

The contact contains a hermetically sealed magnetic reed switch. The reed shall be potted in the contact housing with a polyurethane based compound. Contact and magnet housing shall snap-lock into a ³/₄" or 1" dia. hole. Housings shall be molded of flame retardant ABS plastic. Color of housings shall be off-white, grey or mahogany brown. The magnet shall be made of Alnico V. Rare Earth Magnet shall be made of neodymium iron boron.

Designed for use in Steel Doors

Snap-lock insulation bushing for tight fit and maximum gap in steel.

Both contact and magnet plastic housings are constructed of one piece of thick-walled ABS plastic for maximum strength and durability.



Optional 1840
Rare Earth Magnet

Standard Features

- Fly leads and terminal options available
- Designed specifically for use in steel doors
- Special ribbed sides allow for easy installation
- Rugged unibody construction for maximum durability and reliability
- Terminal models available for easier installation
- Regular, Wide Gap, SPDT, DPDT, and High Security models available
- Rare Earth Magnet designed for steel door with top channel available

Model numbers

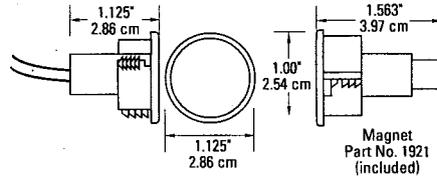
1076, 1076W, 1076C, 1076CW, 1076D, 1078, 1078W, 1078C, 1078CT, (R)1078, 1078CTW

Steel Door Contact

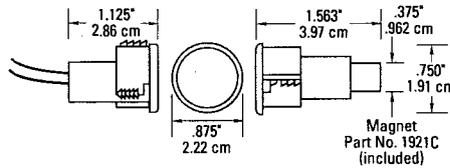
3/4" and 1" contacts
1078/1076 Series

Dimensions

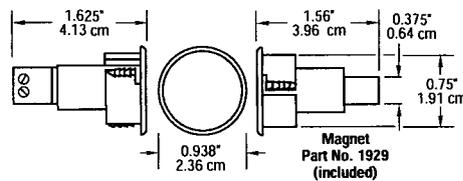
Models:
(R)1078, 1078W, 1076,
1076W, 1076D



Models:
1078C, 1076C,
1076CW, 1076CH



Models:
1078CT, 1076CTW,



(R) prefix indicates
Rare Earth Magnet

Specifications

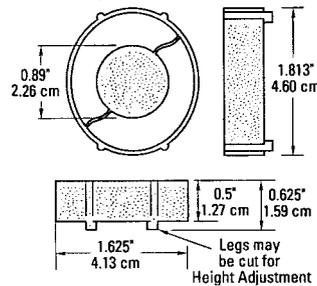
Form A: (R)1078, 1078W, 1078C, 1078CT, 1078CTW

Voltage 100V AC/DC max.
Current 0.5 A max.
Power 7.5 W max.

Form C: 1076, 1076W, 1076D, 1076C(D), 1076CW, 1076CH

Voltage 30V AC/DC max.
Current 0.25 A max.
Power 3.0 W max.

Rare Earth Magnet



Protected by
U.S. Patent 5,844,458.



Ordering Information

| Model | Dia. | Loop Type | Electrical Config. | Hole Required | | Gap Distance* | | | Color |
|---------|------|----------------|--------------------|---------------|---------------|---------------|------------|------------|---------|
| | | | | Contact | Magnet | Wood* | Steel* | Rare Earth | |
| 1076 | 1" | Open or Closed | SPDT | 1" x 1.125" | 1" x 1.563" | 1" | Up to 1/2" | Up to 5/8" | M, N, G |
| 1076W | 1" | Open or Closed | SPDT | 1" x 1.125" | 1" x 1.563" | 2" | Up to 1" | | M, N, G |
| 1076D | 1" | Open or Closed | DPDT | 1" x 1.125" | 1" x 1.563" | 3/4" | Up to 3/8" | Up to 5/8" | M, N, G |
| 1078 | 1" | Closed | N/O | 1" x 1.125" | 1" x 1.563" | 1" | Up to 1/2" | Up to 5/8" | M, N, G |
| 1078W | 1" | Closed | N/O | 1" x 1.125" | 1" x 1.563" | 2" | Up to 1" | | M, N, G |
| 1076C | 3/4" | Open or Closed | SPDT | .75" x 1.125" | .75" x 1.563" | 7/8" | Up to 3/8" | Up to 5/8" | M, N, G |
| 1076CW | 3/4" | Open or Closed | SPDT | .75" x 1.125" | .75" x 1.563" | 2" | Up to 3/4" | | M, N |
| 1078C | 3/4" | Closed | N/O | .75" x 1.125" | .75" x 1.563" | 1/2" | N/A | | M, N, G |
| (R)1078 | 1" | Closed | N/O | 1" x 1.125" | 1" x 1.563" | 1" | Up to 1/2" | Up to 5/8" | M, N |
| 1078CT | 3/4" | Closed | N/O | .75" x 1.625" | .75" x 1.56" | 7/8" | 1/2" | 5/8" | M, N |
| 1078CTW | 3/4" | Closed | N/O | .75" x 1.625" | .75" x 1.56" | 5/8" | 3/4" | N/A | N |

* Gap distances are nominal make distance $\pm 20\%$. Gap specifications are for switch to make. Break distance is approximately 1.1 to 1.5 times make.



GE Interlogix

www.GE-Interlogix.com

12345 SW Leveton Drive
Tualatin, OR 97062
Phone: 503-692-4052
USA & Canada: 800-547-2556
Technical Service: 800-648-7424
Faxback: 800-483-2495

2266 Second Street North
North St. Paul, MN 55109
Phone: 651-777-2690
USA & Canada: 800-777-5484
Technical Service: 800-777-2624

DS160/161

Request To Exit PIR sensors

Installation Instructions

1.0 Description

The DS160/161 is a passive-infrared (PIR) detector designed for request to exit (REX) interior applications. It is UL Listed as an access control device under the UL 294 Standard.

The technology designed into the DS160/161 is based on the principal that all objects emit infrared energy. The warmer an object is, the more infrared energy emitted. Its PIR technology allows the DS160/161 to detect the change in infrared energy that occurs when a person passes through its field of view.

The DS160/161 has features such as Sequential Logic Input (SLI) to eliminate unauthorized entry. SLI allows you to arm the detector using any dry contact device, such as a second detector, card reader, or the access control system. This provides better control for this type of application.

A built-in sounder can be automatically activated if the door is propped open. The sounder can be controlled from any dry contact device. The DS160/161 detection pattern provides dense C-shaped coverage ideal for most REX applications. In addition, complete pattern control allows it to be adjusted to a single zone or placed over a doorknob, for example. There are fifteen possible coverage patterns to accommodate most applications. This, combined with the ability to monitor the door and intelligently control the lock, adds considerable security to these types of applications.

The DS160/161 uses Motion Analyzer II signal processing to help prevent false activation due to environmental conditions. The relay output consists of two Form "C" contacts that can be adjusted to latch from approximately 0.5 to 64 seconds. The latch time features two modes of operation, resettable (where the relay timer will not time out as long as someone is in the field of view) and non-resettable (where the relay will remain latched for a fixed period of time). The relay can also be programmed to fail safe or fail secure in the event of power loss.

The DS160/161 may either be ceiling or wall mounted, and its pattern may be aimed and/or masked for more effective use based upon installation needs. It is not designed as a primary means of exit for emergency egress applications.

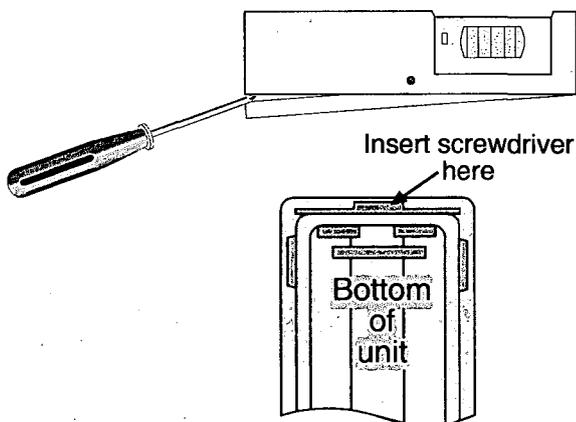
The DS160/161 is available in a light grey (DS160) or a black (DS161) enclosure along with an optional trim plate (light grey TP160 or black TP161) that can cover a single gang box. Panic hardware must be used with this or any other egress device.

2.0 Specifications

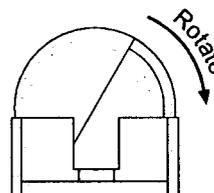
- | | |
|--|---|
| <ul style="list-style-type: none"> • Input Power: 12 VDC to 30 VDC or AC • Current Draw: 39 mA at 12 VAC, 76 mA at 30 VAC Alarm 39 mA at 12 VDC, 60 mA at 30 VDC Alarm 8 mA nominal standby current • Relay: Two Form "C" contact sets rated for 1 A each at 30 VDC or AC max for resistive loads. • Sounder: 85 dB with adjustable volume | <ul style="list-style-type: none"> • Temperature: -20°F to +120°F (-29°C to +49°C). For UL Listed installations, the temperature range is +32°F to +120°F (0°F to +49°C). • Humidity: 0% to 95% non-condensing. 0% to 85% non-condensing for UL Listed installations. • Dimensions (xWxD): 1.8 in. x 7 in. x 1.75 in. (4.5 cm x 17.8 cm x 4.4 cm) • Trim plate (HxW): Optional. TP160 (light gray); TP161 (black) 3 in. x 8.25 in. (7.6 cm x 21 cm) |
|--|---|

3.0 Installation

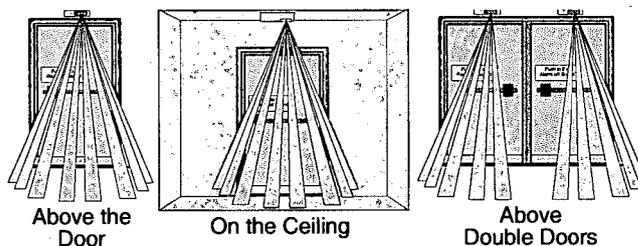
3.1 Remove the cover using a small flat blade screwdriver.



3.2 Rotate the detector clockwise to remove it from the base.



3.3 Select a mounting location

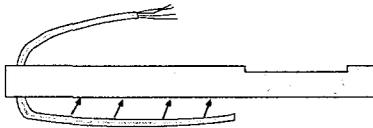




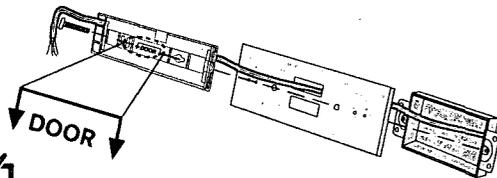
Before you mount the unit, review *Section 7 Coverage Patterns* for more information on the placement and location of the DS160/161.

IMPORTANT

3.4 Route the wiring through the base before mounting the base to the wall or ceiling. See *Section 3.5* when using the optional trim plate (TP160 or TP161).



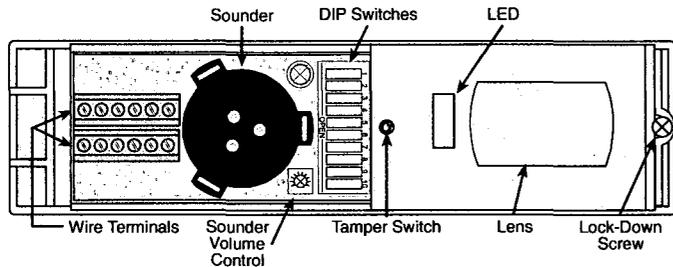
3.5 When using the optional trim plate (TP160 or TP161), run the wiring through the trim plate and into the base before mounting the base and trim plate onto a single gang electrical box.



The arrows on the base indicate its correct mounting orientation relative to the door.

IMPORTANT

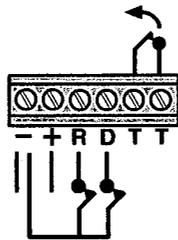
3.6 Note the location of detector features.



4.0 Wiring

4.1 Power, Remote Input, Door Contacts, and Tamper

- (-) Connect to the negative side of the power supply.
- (+) Connect to the positive side of the power supply. The voltage must be between 12 VAC and 30 VAC or DC.
- (R) Terminal R is for Sequential Logic Input (SLI), the keycard input or for remote control of the sounder. The contact must be Normally Closed (NC). See *Section 5.7* for more information.
- (D) Terminal D allows the detector to monitor door contacts. See *Sections 5.6* and *5.7* for more information. If used, these contacts must be Normally Closed (NC) door contacts. **Do Not share these contacts with any alarm systems.**
- (T) and (T) Normally Closed (NC) Tamper contacts.

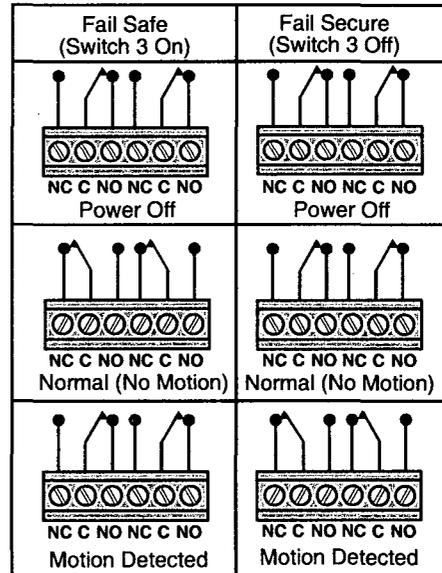


Before wiring the unit, review *Wiring Examples* in *Sections 4* and *5* for more information on the wiring of the DS160/161.

IMPORTANT

4.2 Contact Output Wiring

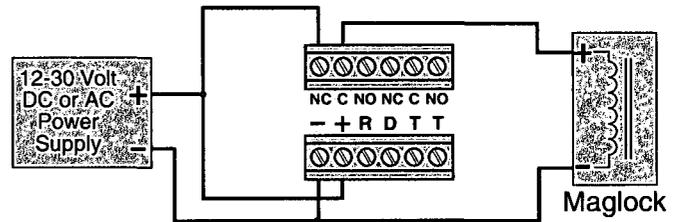
The normal settings of the contact outputs change depending on the setting of the Relay Mode Switch (S3). See *Section 5.3*.



4.3 Wiring Examples

4.3.1 Basic Hookup

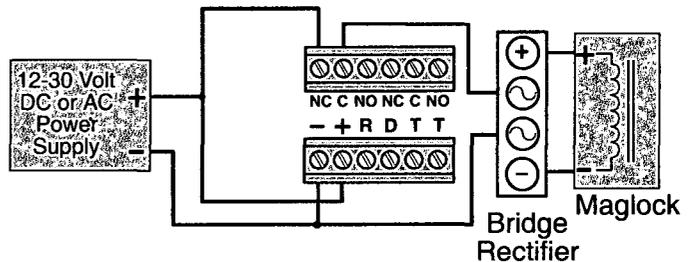
The basic hookup includes the DS160/161, a power supply, and a magnetic lock. When the sensor sees motion, power is removed from the magnetic lock.



Relay contacts shown with Switch 3 ON (Failsafe Mode) and Power On

4.3.2 Spike Protection

Many magnetic locks and electric door strikes have built-in spike protection (also be called diode protected). If your lock is not spike protected, install a bridge rectifier, such as a KBL005, between the relay contacts and the magnetic lock/door strike as shown below.



Relay contacts shown with Switch 3 ON (Failsafe Mode) and Power On.



Failure to spike protect the detector can shorten the life of the relay contacts.

IMPORTANT

5.0 Switch Settings

You can change the switch settings by pressing the rocker to the ON or OFF position.



5.1 LED Operation - Switch 1

Switch 1 ON - LED operates normally when motion is detected.

Switch 1 OFF - LED is turned off.

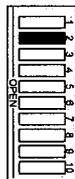


5.2 Timer Reset Mode - Switch 2

Switch 2 ON - The relay timer starts when the detector sees motion and restarts if there is additional motion. The relay only drops out when there is no more motion and the timer expires.

Switch 2 OFF - The relay timer starts when the detector sees motion. It drops out when the timer runs out, even if the motion continues. If the motion continues, the timer restarts.

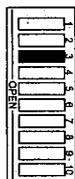
See *Section 5.4* to select the time period.



5.3 Relay Mode - Switch 3

Switch 3 Off - The relays operate in the Fail Secure Mode. The Fail Secure Mode must be authorized by your Local Authority. See *Section 4.2 Contact Output Wiring*, for the contact information.

Switch 3 ON - The relays operate in the Fail Safe Mode. See *Section 4.2 Contact Output Wiring* for the contact information.

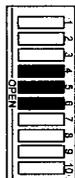


5.4 Relay Timer - Switches 4, 5, and 6

Setting Switches 4, 5, and 6 determines the amount of time the output relays energize (between 0.5 sec and 64 sec) when motion is detected.

Use the following chart to set the relay timer.

| Relay Timer | Switch | | |
|-------------|--------|-----|-----|
| | 4 | 5 | 6 |
| 1/2 Second | OFF | OFF | OFF |
| 1 Second | OFF | OFF | ON |
| 2 Seconds | OFF | ON | OFF |
| 4 Seconds | OFF | ON | ON |
| 8 Seconds | ON | OFF | OFF |
| 16 Seconds | ON | OFF | ON |
| 32 Seconds | ON | ON | OFF |
| 64 Seconds | ON | ON | ON |

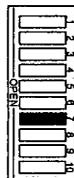


5.5 Signal Processing - Switch 7

The Signal Processing setting determines how sensitive to movement the detector is.

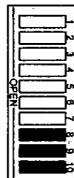
Switch 7 ON - High sensitivity (REX Mode).

Switch 7 OFF - Low sensitivity (security sensor).



5.6 Door Secure Mode - Switches 8, 9, and 10

If the detector activates, but the door does not open, the relay drops out after 10 sec. If the detector activates and the door opens and then closes, the relay drops out after 2 sec. This prevents unauthorized people from entering.



Set the relay timer (see *Section 5.4*) for 16 sec or longer for the Door Secure Mode to operate properly.

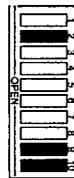
Switches 8, 9, and 10 ON - Door Secure Mode is enabled. Wire according to *Section 5.7.5* for door secure.

Switches 8, 9, and 10 OFF - Door Secure Mode is disabled.

5.7 Remote Input Function - Switches 2, 9, and 10

The Remote Input Function switches determine what the DS160/161 does when the contact attached to Terminal R is closed.

Keycard Input - An input to the Terminal R activates the detector. Normally, this is used with a keycard reader outside of the door/building. The internal sounder does not activate when the keycard input is selected. The keycard inputs are affected by Resettable/Non-resettable Mode (Switch 2). The relay remains activated for as long as the keycard input is closed. The timer starts when the keycard input is force activated. If Switch 2 is on, toggling the keycard input again restarts the timer (the suggested setting). When Switch 2 is off, toggling the keycard input does not restart the timer.



Direct Sounder Enabled - The sounder is turned on for long as the contact on Terminal R is open. It does not affect the relay or timer.

Sequential Logic Input - The detector only activates if the Sequential Logic Input (Terminal R) is open, or for 10 sec after it closes again. Movement after 10 sec after the contact on Terminal R closes is ignored.

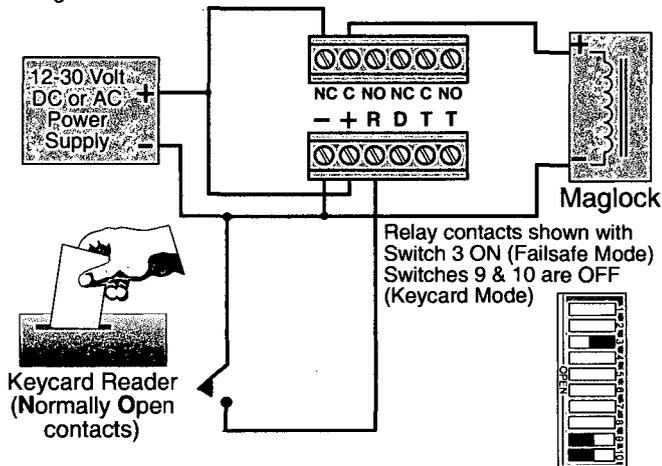
Monitor Door Contacts - Door contacts connected to Terminal D monitor if the door is open or closed. If the detector activates and the door is open when 10 sec remain on the timer, the sounder turns on. If the door opens without activating the detector, the sounder turns on. The sounder remains on until the door closes or the detector activates. For this feature to work, set the timer a minimum of 16 sec.

Use the following chart to set the Remote Input function.

| Function | Switch | |
|------------------------|--------|-----|
| | 9 | 10 |
| Keycard Input | OFF | OFF |
| Direct Sounder Enable | OFF | ON |
| Sequential Logic Input | ON | OFF |
| Monitor Door Contacts | ON | ON |

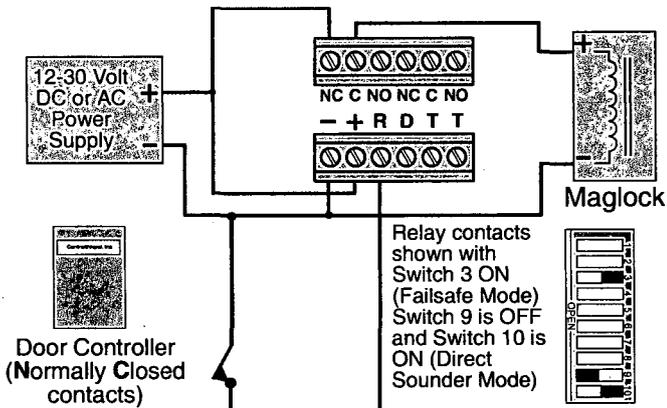
5.7.1 Wiring Example: DS160/161 and a Keycard Reader

Normally, this setup is used when a keycard reader is on one side of the door and the DS160/161 is on the other side. Either swiping a keycard or a motion detected by the DS160/161 removes power from the magnetic lock.



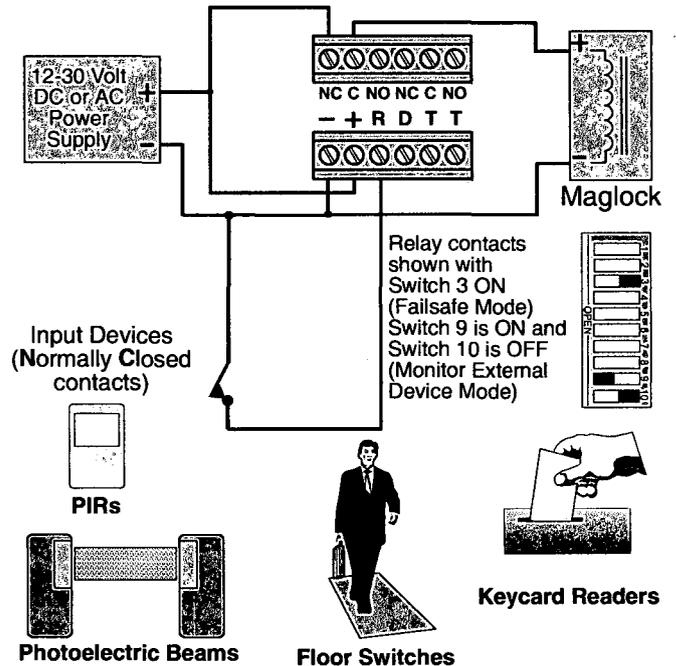
5.7.2 Wiring Example: Direct Sounder Enable

The Direct Sounder Enable setting can be used to activate the DS160/161 sounder from a remote contact. The DS160/161 internal sounder remains on as long as the external contacts remain open. The sounder input can come from devices such as a door controller or door contacts. Turning the sounder on does not affect the relay or relay timer. The direct sounder input does not remove power from the magnetic lock.



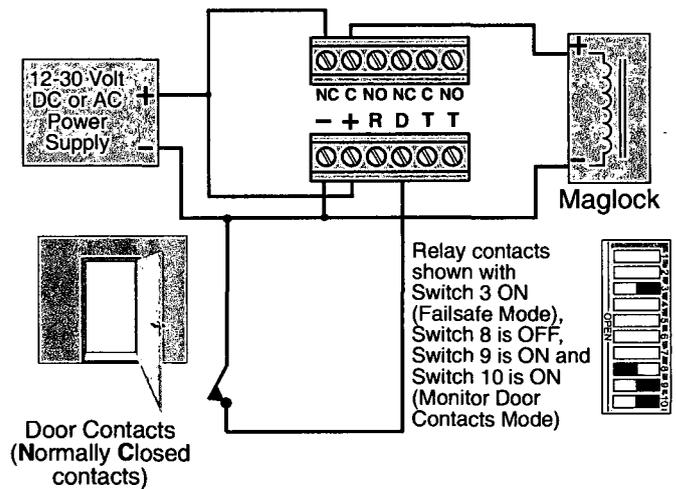
5.7.3 Wiring Example: Sequential Logic Input

The detector only activates by motion when the Sequential Logic Input (Terminal R) is open, or for 10 sec after it closes. For example, when a second detector placed before the DS160/161 activates, and for 10 sec after it resets, the DS160/161 activates when it detects motion. Any movement after 10 sec after the contact on Terminal R closes is ignored.



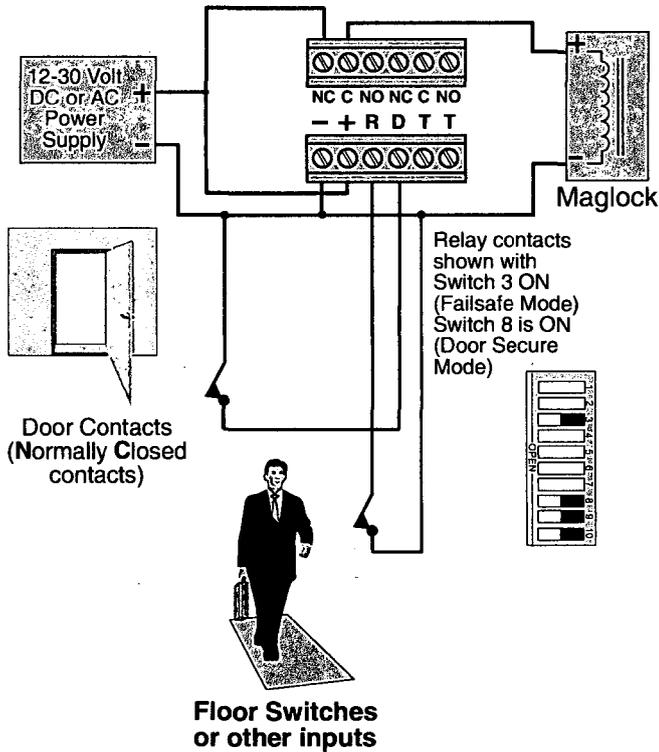
5.7.4 Wiring Example: Monitor Door Contacts (First Option)

In the Monitor Door Contacts Mode, a person entering the field of view of the detector activates the relay and timer. Door contacts connected to Terminal D monitor if the door is open or closed. If the relay timer gets to 10 sec or less (only if set up for 16 sec or greater [see Section 5.4]) and the door is still open, the DS160/161 internal sounder activates. The sounder also activates if the door is opened without first activating the detector or keycard input. The sounder remains on until the door closes or by someone moving in the field of view.



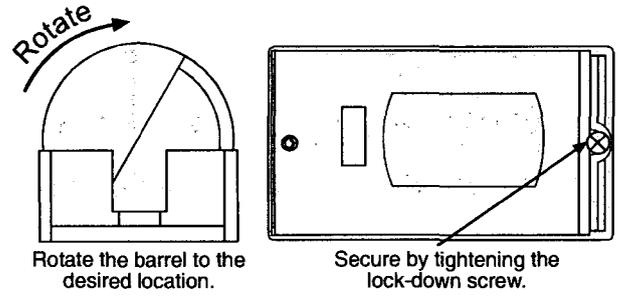
5.7.5 Wiring Example: Monitor Door Contacts (Second Option)

If the detector is activated but the door is not opened, the relay drops out after 10 sec. If the detector is activated and the door opens, then closes, the relay drops out after 2 sec. This prevents unauthorized people from entering.

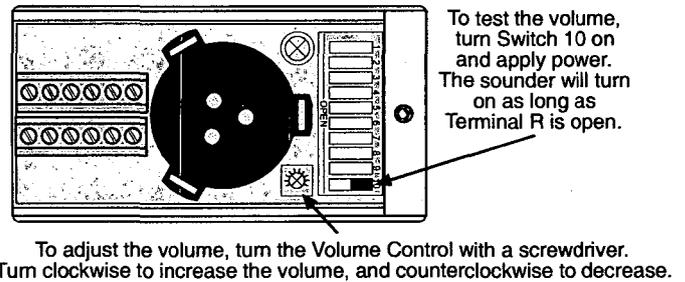


6.0 Complete Installation

6.1 Secure the detector inside base.

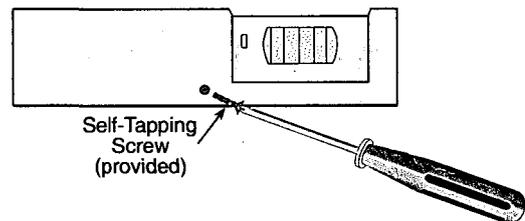


6.2 Adjust the sounder volume.



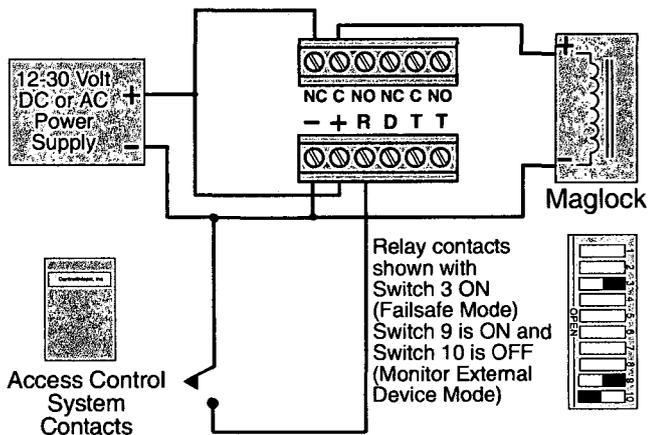
6.3 Replace the cover and secure with screw.

Use a drill to remove screw knockout in the cover only, then start screw and tighten to secure.



5.7.6 Disabling the Request-To-Exit (Example 1)

The DS160/161 can be disabled by using Terminal R and an external device such as an access control or burglar alarm system. When the contact connected to Terminal R closes, the DS160/161 disables after a 10-sec delay. The DS160/161 returns to normal operation as described in Section 5.7.3 after the contact closes.



IMPORTANT

The NFPA 101 Life Safety Code® requires secured doors to have a "manual release device that shall result in direct interruption of power to the lock-independent of the access control system electronics".

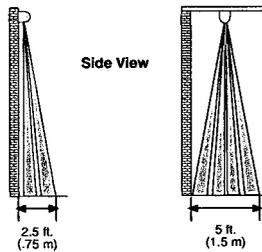
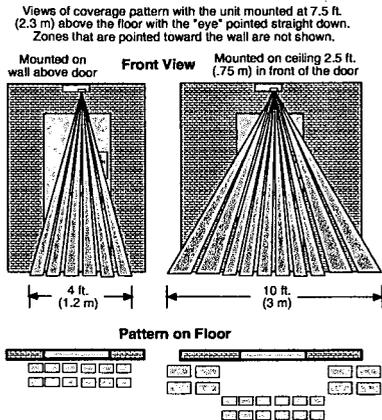
7.0 Coverage Patterns

The coverage (detection area) of the DS160/161 varies depending on the mounting height above the floor, angle of the lens, and if the unit is mounted on a wall above the door or on the ceiling.

The unit can also be masked to allow only some parts of the coverage pattern to be active.

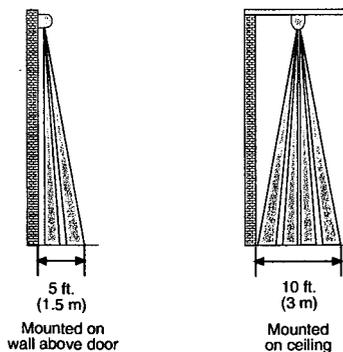
7.1 Examples

When the unit is mounted on the wall and the lens is pointed straight down, some detection zones point toward the wall and do not detect movement.



The higher the unit is mounted, the larger the coverage area. Do not mount the DS160/161 more than 15 ft. (4.6 m) above the floor.

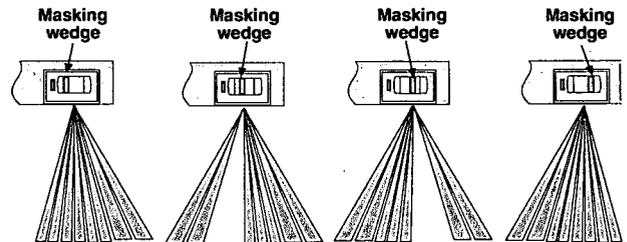
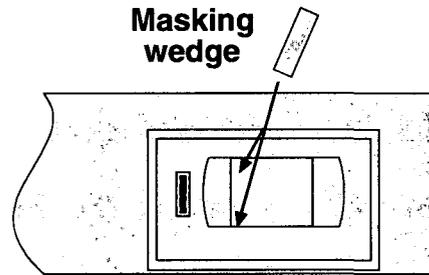
Side view of coverage pattern with the unit mounted at 15 ft. (4.6 m) above the floor with the "eye" pointed straight down



When the DS160/161 is mounted on the wall above the door, you can move the coverage pattern away from the wall by rotating the detector's lens.

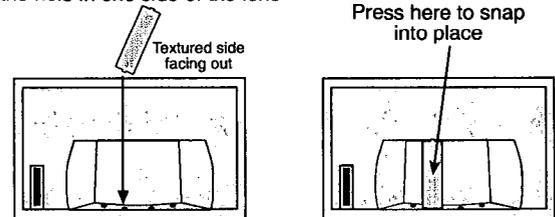
7.2 Masking

The DS160/161 is supplied with three masking wedges used to disable any part of the coverage pattern. Each wedge covers approximately 25% of the coverage pattern.

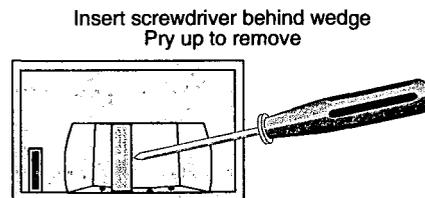


Insert a masking wedge by placing the bottom peg in first. Then press on the center of the wedge until it snaps into place.

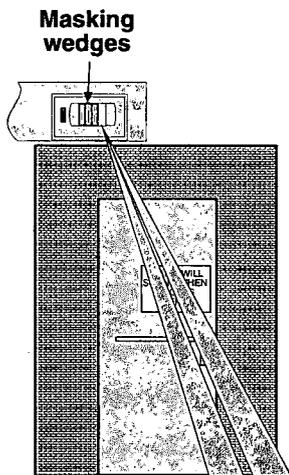
Select a section of the lens to mask
Insert the tab on the end of the wedge
in the hole in one side of the lens



Remove a wedge by placing the tip of a small screwdriver behind the wedge and prying it up. Do not scratch the lens when removing the wedge.



Up to three masking wedges can be used if you only want to detect in a very small area, such as around a doorknob or crash bar.



The coverage pattern depends on how high the DS160/161 is mounted, location of the unit and the position of the detector lens. If you want a setup as shown above, mount the DS160/161 just above the door, on the hinge side, with the lens pointed down and slightly out.

IMPORTANT

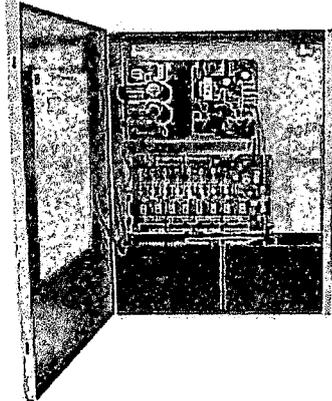


Altronix®

AL400ULACM, AL400ULACMCB **Power Supply/Chargers w/Multi-Output** **Access Power Controllers**

Rev. DSAL400ULACM - A25F

Overview



- The AL400ULACM / AL400ULACMCB converts an 115VAC 60Hz input into eight (8) independently controlled 12VDC or 24VDC Fail-Safe and/or Fail-Secure outputs with a total of 4 amp @ 12VDC or 3 amp @ 24VDC continuous supply current. Outputs are activated by an open collector sink or normally open (NO) dry trigger input from an Access Control System, Card Reader, Keypad, Push Button, PIR, etc. These units will route power to a variety of access control hardware devices including Mag Locks, Electric Strikes, Magnetic Door Holders, etc. The outputs will operate in both Fail-Safe and/or Fail-Secure modes. The units are designed to be powered by one common power source (factory installed) which will provide power for both the board operation and locking devices, or two (2) totally independent power sources, one (1) providing power for board operation and the other for lock / accessory power. The FACP Interface enables Emergency Egress, Alarm Monitoring, or may be used to trigger other auxiliary devices. The fire alarm disconnect feature is individually selectable for any or all of the eight (8) outputs.

AL400ULACM

- Eight (8) independently controlled fuse protected outputs.

AL400ULACMCB

- Eight (8) independently controlled PTC protected outputs.

Specifications

- 12VDC or 24VDC outputs.
- 12VDC @ 4 amp supply current or 24VDC @ 3 amp supply current.
- Class 2 Rated power limited outputs.
- Power supply input options:
 - a) One (1) common power input for ACM8/ACM8CB and lock power (factory installed).
 - b) Two (2) isolated power inputs - One (1) to power the ACM8/ACM8CB and one (1) for lock accessory power, (external power supply is required). (Current is determined by the power supply connected, not to exceed a maximum of 10 amp total).
- Eight (8) Access Control System trigger inputs. Input options:
 - a) Eight (8) normally open (NO) inputs.
 - b) Eight (8) open collector inputs.
 - c) Any combination of the above.
- Eight (8) independently controlled outputs. Output options:
 - a) Eight (8) Fail-Safe and/or Fail-Secure power outputs.
 - b) Eight (8) form "C" 5 amp rated relay outputs (AL400ULACM only).
 - c) Any combination of the above (AL400ULACM only).
- Eight (8) auxiliary power outputs (unswitched)
- Output ratings:
 - Fuses are rated @ 3.5 amp (AL400ULACM).
 - PTCs are rated @ 2.5 amp (AL400ULACMCB).
- ACM8 board main fuse is rated at 10 amp.
- Input 115VAC 60Hz rated @ 1.9 amp.
- Filtered and electronically regulated outputs (built-in power supply).
- Red LEDs indicate outputs are triggered (relays energized).
- Fire Alarm disconnect (latching or non-latching) is individually selectable for any or all of the eight (8) outputs. Fire Alarm disconnect input options:
 - a) Normally open (NO) or normally closed (NC) dry contact input.
 - b) Polarity reversal input from FACP signaling circuit.
- Alarm output relay indicates that FACP input is triggered (form "C" contact rated @ 1 amp 28VDC not evaluated by UL).
- Green LED indicates when FACP disconnect is triggered.
- Built-in charger for sealed lead acid or gel type batteries.
- AL400ULXB (Power Supply Board) maximum charge current .7 amp.
- Automatic switch over to stand-by battery when AC fails.
- AC input and DC output LED indicators.
- Zero voltage drop when unit switches over to battery backup (AC failure condition).
- Short circuit and thermal overload protection.
- AC fail supervision (form "C" contact).
- Battery fail and battery presence supervision (form "C" contact).
- Enclosure accommodates up to two (2) 12AH batteries.
- Product weight:
 - AL400ULACM: 11.1 lbs.
 - AL400ULACMCB: 10.1 lbs.
- Shipping weight:
 - AL400ULACM: 9.8 lbs.
 - AL400ULACMCB: 11.4 lbs.

Agency Approvals



UL Listed for Access Control Systems Units (UL 294).

MEA Approved

MEA - NYC Department of Buildings Approved.



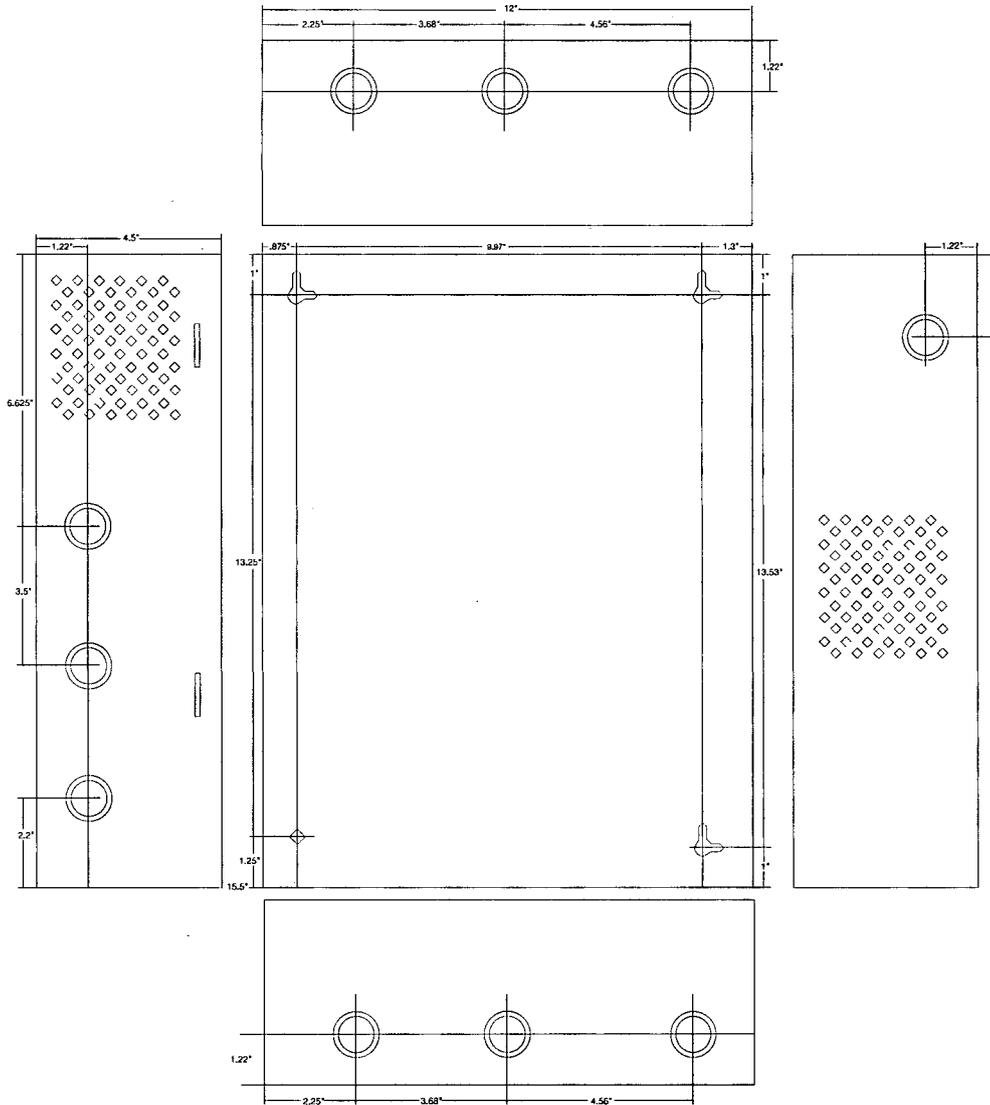
CUL Listed - CSA Standard C22.2 No.205-M1983 Signal Equipment.



CSFM - California State Fire Marshal Approved.

Enclosure Dimensions

15.5"H x 12"W x 4.5"D



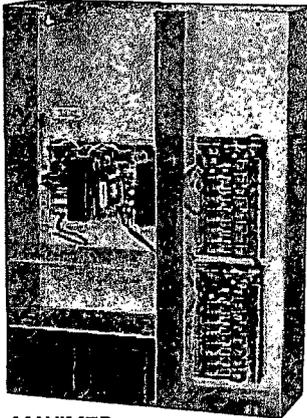


Altronix®

Maxim7D Access Power Controller

Rev. DSMAXIM7D - H13J

Overview



MAXIM7D

This unit distributes and switches power to access control systems and accessories. Unit converts a 115VAC 60Hz input into sixteen (16) independently controlled 24VDC Class 2 Rated PTC protected power-limited outputs. The outputs are activated by an open collector sink or normally open (NO) dry trigger input from an Access Control System, Keypad, Push Button, REX PIR, etc. Units will route power to a variety of access control hardware devices including: Mag Locks, Electric Strikes, Magnetic Door Holders, etc. Outputs will operate in both Fail-Safe and/or Fail-Secure modes. The FACP Interface enables Emergency Egress, Alarm Monitoring, or may be used to trigger other auxiliary devices. The fire alarm disconnect feature is individually selectable for any or all of the sixteen (16) outputs. All interconnecting equipment must be UL Listed.

Specifications

- 24VDC outputs.
- Maximum output current: 24VDC @ 9.4 amp.
- Class 2 Rated power limited outputs.
- 115VAC 60Hz, 6.5 amp input.
- Input fuse rated @ 10 amp/250V.
- Power supply input options:
 - a) Two (2) common power input for either ACM8CB and lock power (factory installed).
 - b) Two (2) isolated power inputs (external power supply is required), (current is determined by the power supply connected, not to exceed a maximum of 10 amp total).
- Sixteen (16) Access Control System trigger inputs. Input options:
 - a) Sixteen (16) normally open (NO) inputs.
 - b) Sixteen (16) open collector inputs.
 - c) Any combination of the above.
- Sixteen (16) independently controlled outputs can be Fail-Safe and/or Fail-Secure power outputs.
- Sixteen (16) auxiliary power outputs (unswitched) (outputs are rated @ 2 amp).
- ACM8CB boards main fuse is rated at 10 amp. Output PTC are rated @ 2.5 amp.
- Red LEDs indicate outputs are triggered (relays energized).
- Fire Alarm disconnect (latching or non-latching) is individually selectable for any or all of the sixteen (16) outputs.
- Fire Alarm disconnect input options:
 - a) Normally open (NO) or normally closed (NC) dry contact input.
 - b) Polarity reversal input from FACP signaling circuit.
- Alarm output relay indicates that FACP input is triggered (form "C" contact rated @ 1 amp 28VDC).
- Green LED indicates FACP disconnect is triggered.
- Filtered and electronically regulated outputs (built-in power supply board(s)).
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 3.6 amp.
- Automatic switch over to stand-by battery when AC fails.
- Zero voltage drop when unit switches over to battery backup (AC failure condition).
- Thermal and short circuit protection with auto reset.
- AC input and DC output LED indicators.
- AC fail supervision (form "C" contact).
- Low battery and battery presence supervision (form "C" contact).
- Enclosure accommodates up to four (4) 12AH batteries.
- Product weight: 39.0 lbs.
- Shipping weight: 43.0 lbs.

Agency Approvals



UL Listed for Access Control System Units (UL 294).



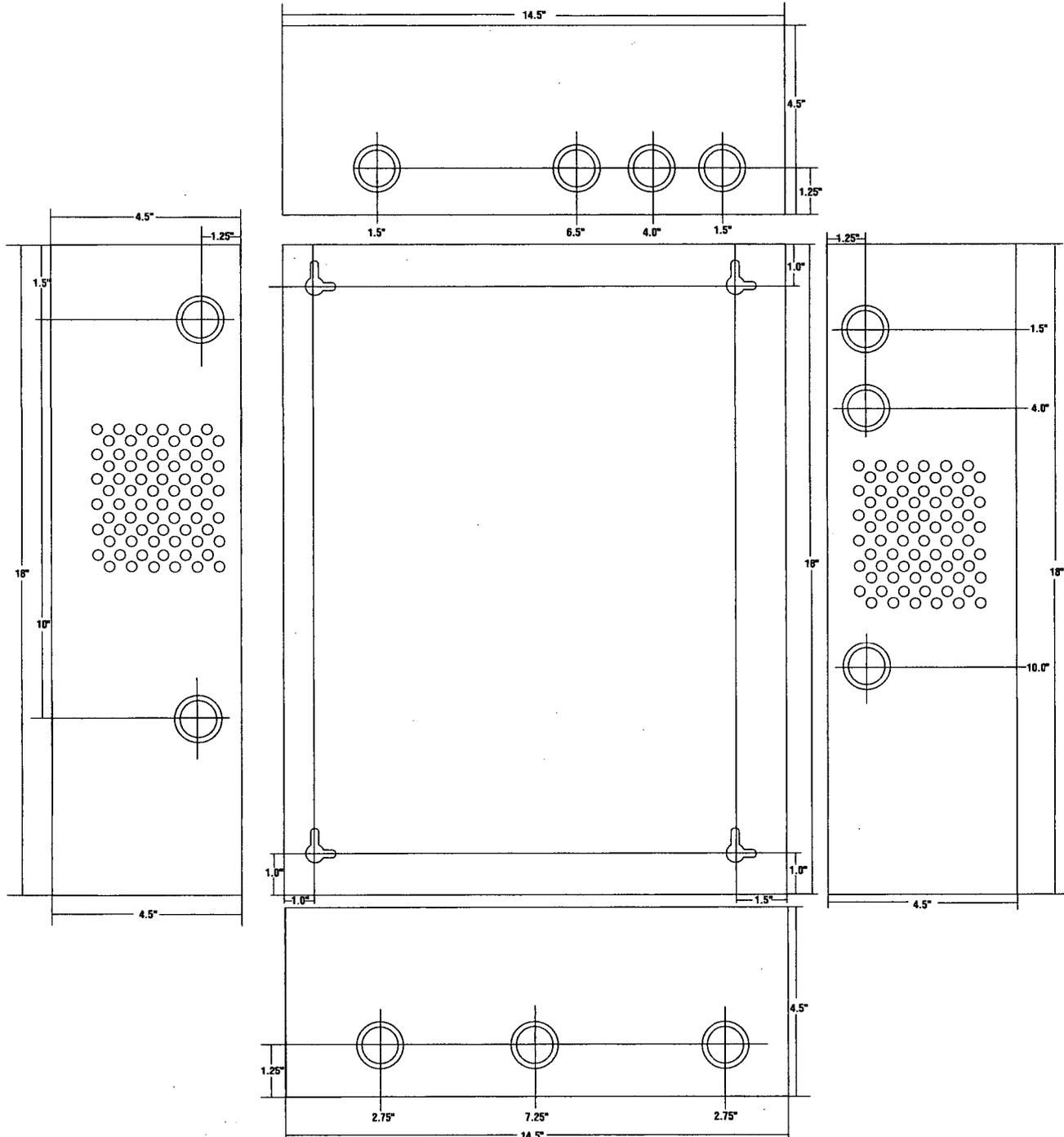
CUL Listed - CSA Standard C22.2 No.205-M1983, Signal Equipment.



CSFM
California State Fire Marshal Approved.

Enclosure Dimensions (approximate)

26"H x 19"W x 6.25"D



Universal SLA-VRLA Batteries UB-1270 (40800)



Group Type: UB - 12 V SLA 0.8 to 10Ah **Weight:** 6 Lbs
Voltage: 12 V **Length:** 6
AH: 7 AH **Width:** 2.6
Terminal: F1 **Height:** 3.7
BCI:



PRODUCT DATA SHEET

Controlled Document - Engineering Drive

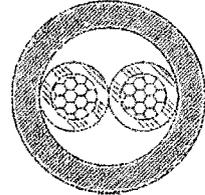
1530 Shields Drive
Waukegan, IL 60085
Toll-Free (800) 323-9355
Fax: (847) 689-1192

PART NUMBER: 71702
DESCRIPTION: 16/2 STRANDED CMP/CL3P FT6 PLENUM CABLE
CONSTRUCTION: This cable consists of two bare copper insulated conductors and an overall jacket.
APPROVALS: UL Standard 13, 444; NEC Articles 725 & 800.
APPLICATION: Communications Cable, Class 3 Power Limited Circuit Cable used for Plenum Applications.

Construction Parameters:

Conductor 16 AWG Bare Copper
Stranding 19/.0117"
Insulation Material Low Smoke PVC
Insulation Thickness 0.006" Nom.
Insulated Conductor Diameter 0.070" Nom.
Number of Conductors 2
Lay Length 5.00" Nom.
Jacket Material Low Smoke PVC
Jacket Thickness 0.014" Nom.
Overall Cable Diameter 0.168" Nom.
Approximate Cable Weight 25.6 Lbs/1M' Nom.
Flame Rating NFPA 262 Steiner Tunnel Smoke and Flame Test

Cable Cross-Section



Electrical Properties:

Temperature Rating -20°C to 75°C
Operating Voltage 300V Max per NEC Article 800
Capacitance Between Conductors @ 1 KHz 45 pF/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz ---
DC Resistance per Conductor @ 20°C 3.92 Ohms/1M' Nom.

Insulation Colors Black Red
Jacket Color Beige

Legend (Surface Ink Print) COLEMAN CABLE 71702 16 AWG 2/C C(ETL) US (ETL CODE) TYPE CMP/CL3P 75C -- TYPE CMP FT6

This product complies with European Directive 2002/95/EC (RoHS)
On special orders, the customer will accept all factory lengths and +/- 10 percent of total order requested.
Cable has a rip cord for easy jacket removal. The jacket is sequentially footmarked.

The information presented here is, to the best of our knowledge, true and accurate. Since conditions of use are beyond Coleman Cable's control all product data presented is for informational purposes only and does not create a binding obligation or liability on Coleman Cable or confer any rights on any customer. The sale of product(s) is conditioned upon acceptance of a purchase order subject to Coleman Cable's standard terms and conditions contained therein, including without limitation Coleman Cable's standard warranty. Coleman Cable disclaims all liability in connection with the use of information contained herein or otherwise.

This specification is proprietary intellectual property of Coleman Cable. Any information contained herein shall not be disclosed to any party without written consent of Coleman Cable.

Customer Name _____ Date Signed _____

Customer Approval _____

Specification Issue Date: April 19, 2006



PRODUCT DATA SHEET

Controlled Document - Engineering Drive

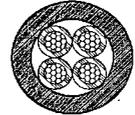
1530 Shields Drive
Waukegan, IL 60085
Toll-Free (800) 323-9355
Fax: (847) 689-1192

PART NUMBER: 72304
DESCRIPTION: 22/4 STRANDED CL3P/CMP FT6 PLENUM CABLE
CONSTRUCTION: This cable consists of four bare copper insulated conductors and an overall jacket.
APPROVALS: UL Standard 13 and 444, NEC Articles 725 and 800.
APPLICATION: Class 3 Power Limited Circuit Cable and Communications Cable Used in Plenum Applications

Construction Parameters:

Conductor 22 AWG Bare Copper
Stranding 7/30
Insulation Material Low Smoke PVC
Insulation Thickness 0.006" Nom.
Insulated Conductor Diameter 0.041" Nom.
Number of Conductors 4
Lay Length Parallel
Jacket Material Low Smoke PVC
Jacket Thickness 0.014" Nom.
Overall Cable Diameter 0.127" Nom.
Approximate Cable Weight 15.8 Lbs/1M' Nom.
Flame Rating NFPA 262 Steiner Tunnel Smoke and Flame Test

Cable Cross-Section



Electrical Properties:

Temperature Rating -20°C to 75°C
Operating Voltage 300V Max per NEC Article 800
Capacitance Between Conductors @ 1 KHz 31 pF/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz -----
DC Resistance per Conductor @ 20°C 16.19 Ohms/1M' Nom.

Insulation Colors Black Red White Green
Jacket Color Beige

Legend (Surface Ink Print) COLEMAN CABLE 72304 22 AWG 4/C C(ETL) US (ETL CODE) TYPE CMP/CL3P 75C
- TYPE CMP FT6

This product complies with European Directive 2002/95/EC (RoHS)
On special orders, the customer will accept all factory lengths and +/- 10 percent of total order requested.
Cable has a rip cord for easy jacket removal. The jacket is sequentially footmarked.

The information presented here is, to the best of our knowledge, true and accurate. Since conditions of use are beyond Coleman Cable's control all product data presented is for informational purposes only and does not create a binding obligation or liability on Coleman Cable or confer any rights on any customer. The sale of products(s) is conditioned upon acceptance of a purchase order subject to Coleman Cable's standard terms and conditions contained therein, including without limitation Coleman Cable's standard warranty. Coleman Cable disclaims all liability in connection with the use of information contained herein or otherwise.

This specification is proprietary intellectual property of Coleman Cable. Any information contained herein shall not be disclosed to any party without written consent of Coleman Cable.

Customer Name _____ Date Signed _____

Customer Approval _____

Specification Issue Date: July 19, 2006



PRODUCT DATA SHEET

Controlled Document - Engineering Drive

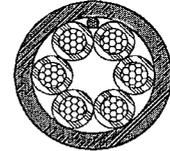
1530 Shields Drive
Waukegan, IL 60085
Toll-Free (800) 323-9355
Fax: (847) 689-1192

PART NUMBER: 75906
DESCRIPTION: 18/6 STRANDED SHIELDED CL3P/CMP/FPLP FT6 PLENUM CABLE
CONSTRUCTION: This cable consists of six bare copper insulated conductors, cabled with an overall shield and drain wire, and an overall jacket.
APPROVALS: UL Standard 13 and 444, NEC Articles 725 and 800.
Power Limited Circuit Cable And Communications Cable Used in Plenum Applications

Construction Parameters:

Cable Cross-Section

| | |
|------------------------------|--|
| Conductor | 18 AWG Bare Copper |
| Stranding | 7/1.0152" |
| Insulation Material | Low Smoke PVC |
| Insulation Thickness | 0.010" Nom. |
| Insulated Conductor Diameter | 0.066" Nom. |
| Number of Conductors | 6 |
| Lay Length | 5.00" Nom. |
| Shield | Alum/Mylar |
| Drain | 24 AWG 7/24 Tinned Copper |
| Jacket Material | Low Smoke PVC |
| Jacket Thickness | 0.017" Nom. |
| Overall Cable Diameter | 0.232" Nom. |
| Approximate Cable Weight | 51.4 Lbs/1M' Nom. |
| Flame Rating | NFPA 262 Steiner Tunnel Smoke and Flame Test |



Electrical & Environmental Properties:

| | |
|--|--------------------|
| Temperature Rating | -20°C to 75°C |
| Operating Voltage | 300 V RMS Max. |
| Capacitance Between Conductors @ 1 KHz | 50 pF/ft Nom. |
| Capacitance Between Conductors to Shield @ 1 KHz | 92 pF/ft Nom. |
| DC Resistance per Conductor @ 20°C | 6.29 Ohms/1M' Nom. |

| | |
|-------------------|--|
| Insulation Colors | Black Red White Green Brown Blue |
| Jacket Color | Beige (Other colors available for minimum order) |

| | |
|----------------------------|---|
| Legend (Surface Ink Print) | COLEMAN CABLE 75906 18 AWG 6/C C(ETL) US (ETL CODE) TYPE CMP/CL3P/FPLP 75C – TYPE CMP FT6 |
|----------------------------|---|

This product complies with European Directive 2002/95/EC (RoHS)
On special orders, the customer will accept all factory lengths and +/- 10 percent of total order requested.
Cable has a rip cord for easy jacket removal. The jacket is sequentially footmarked.

The information presented here is, to the best of our knowledge, true and accurate. Since conditions of use are beyond Coleman Cable's control all product data presented is for informational purposes only and does not create a binding obligation or liability on Coleman Cable or confer any rights on any customer. The sale of products(s) is conditioned upon acceptance of a purchase order subject to Coleman Cable's standard terms and conditions contained therein, including without limitation Coleman Cable's standard warranty. Coleman Cable disclaims all liability in connection with the use of information contained herein or otherwise.

This specification is proprietary intellectual property of Coleman Cable. Any information contained herein shall not be disclosed to any party without written consent of Coleman Cable.

Customer Name _____ Date Signed _____
Customer Approval _____

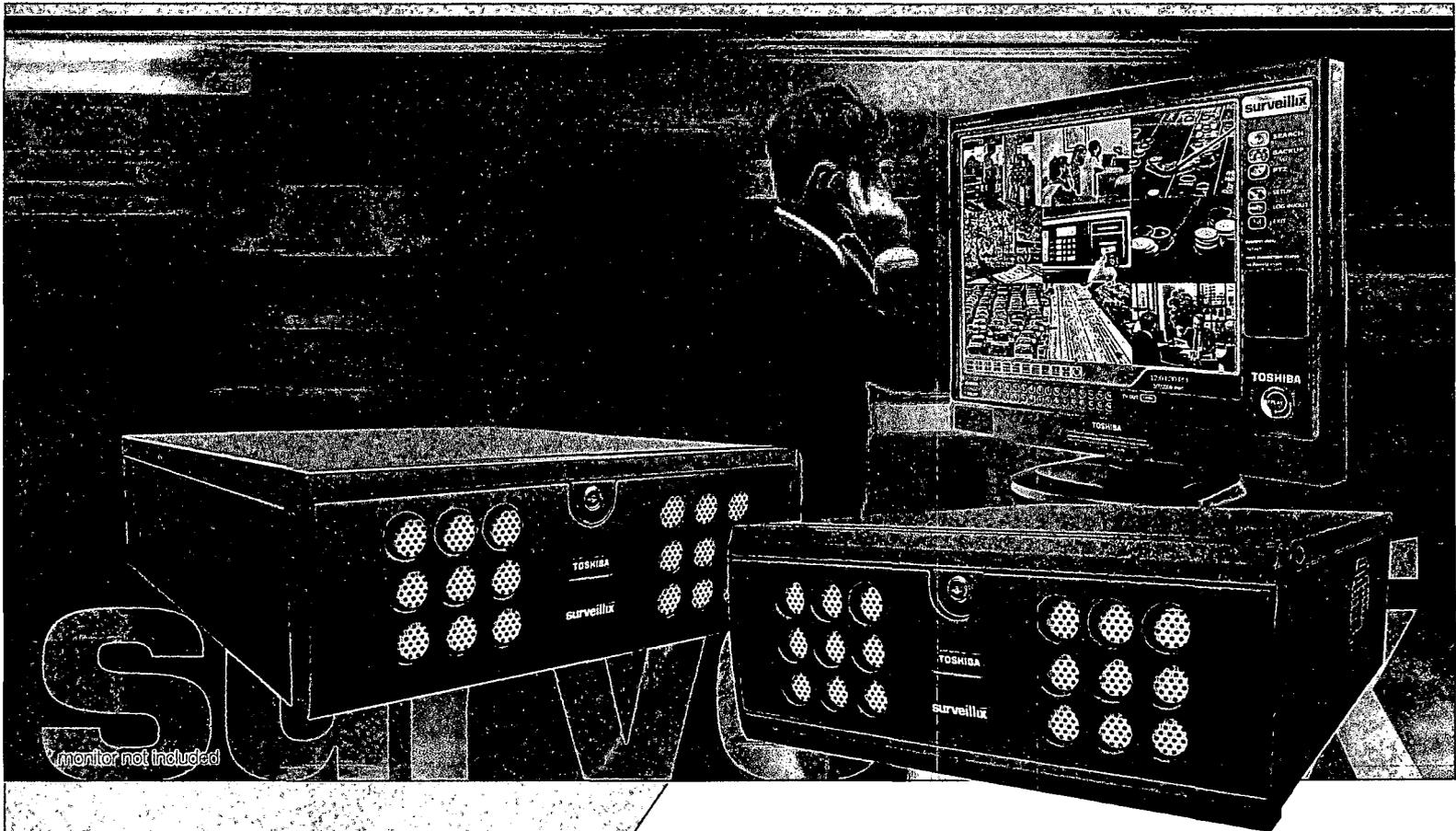
Specification Issue Date: July 19, 2006

TOSHIBA

Leading Innovation >>>

NVS/IPS Series

Network Video Recorders



UP TO
**32 NETWORK
CAMERAS**

*Supports megapixel
network cameras*

Advanced Network Based Digital Recording

- Record up to 32 network-based cameras.
- Records IP based cameras both locally and globally via the Internet.
- Recorded image resolutions as high as the network camera supports.
- Complete remote access, setup control, user administration, video backup, live viewing, and powerful search capabilities.
- Megapixel camera support for super high resolution images.
- Dual monitor support on all systems.
- Support for major network video device manufacturers including Toshiba, Sony, Panasonic, AXIS, Lumenera, ACTi, Arecont Vision, and Vantage.*

*Detailed list at www.toshibasecurity.com

NVS Series

Network Video Recorders

With available Internal RAID 5 HDD capabilities and field-replaceable hard disk drives, the NVS series is designed to support network-based cameras. Capable of recording at super high resolutions and at speeds of up to 30 PPS per camera, the NVS offers unmatched versatility.

| | |
|------------------------------------|---|
| <i>Recording Resolutions</i> | Recording resolutions dependent on the supported resolutions of the network cameras |
| <i>IP Video Input</i> | Up to 32 Ch. |
| <i>Video Output</i> | DVI-D x 1, SVGA x 1 |
| <i>Recording Rate</i> | Up to 30 PPS Per Camera* |
| <i>Audio Recording</i> | Up to 16 CH (on supported network cameras) |
| <i>PTZ Controls</i> | Via IP Protocols |
| <i>Image Compression</i> | Proprietary MJPEG, MPEG4, H.264 |
| <i>Storage Capacity</i> | Up to 8 Terabytes |
| <i>LAN</i> | 100/1000 Gigabit Ethernet |
| <i>Critical Recording Archive</i> | DVD Multi Burner, Network, USB |
| <i>Password Control</i> | User Defined Access Level |
| <i>Power Interruption Recovery</i> | Automatic restart after power interruption/ recording operation resumes |
| <i>Remote Connection</i> | TCP/IP, UDP, Internet, LAN, WAN |
| <i>Power Input</i> | AC 100~240V Input (50 Hz/60 Hz) |
| <i>Central Processing Unit</i> | Intel® Core™2 Quad 2 Ghz+ |
| <i>RAM</i> | 2 GB (8/16 CH models), 3 GB (32 CH models) |
| <i>Operating System</i> | Microsoft® Windows® XP Embedded |
| <i>Dimensions (h x w x d)</i> | 7" x 17.3" x 21.75" (180mm x 440mm x 552mm) |
| <i>Weight</i> | 47-52 lbs (21.3-23.5 kg) 64 - 84 lbs (29.38 kg) with packaging |

IPS Series

Network Video Recorders

Designed to support both video encoders and network cameras, the IPS is a robust network based video surveillance solution in a streamlined 3U chassis. Capable of recording at megapixel resolutions and up to 30 PPS per camera, cameras can be connected both locally or from remote locations over the Internet.

| | |
|------------------------------------|---|
| <i>Recording Resolutions</i> | Recording resolutions dependent on the supported resolutions of the network cameras |
| <i>IP Video Input</i> | Up to 32 Ch. |
| <i>Video Output</i> | DVI-D x 1, SVGA x 1* |
| <i>Recording Rate</i> | Up to 30 PPS Per Camera** |
| <i>PTZ Controls</i> | Via IP Protocols |
| <i>Storage Capacity</i> | Up to 4 Terabytes |
| <i>LAN</i> | 100/1000 Gigabit Ethernet |
| <i>Critical Recording Archive</i> | DVD Multi Burner, Network, USB |
| <i>Password Control</i> | User Defined Access Level |
| <i>Power Interruption Recovery</i> | Automatic restart after power interruption/ recording operation resumes |
| <i>Remote Connection</i> | TCP/IP, UDP, Internet, LAN, WAN |
| <i>Power Input</i> | AC 100~240V Input (50 Hz/60 Hz) |
| <i>Central Processing Unit</i> | Intel® Core™2 Quad 2 Ghz+ |
| <i>RAM</i> | 2 GB (8/16 CH models), 3 GB (32 CH models) |
| <i>Operating System</i> | Microsoft® Windows® XP Embedded |
| <i>Dimensions (h x w x d)</i> | 5.8" x 17.25" x 19.5" (148mm x 438mm x 495mm) |
| <i>Weight</i> | 30-33 lbs (13.6-15 kg) 40-43 lbs (18-19.5 kg) with packaging |

* Monitor not included. Monitor is required for setup and maintenance.

** Total recording throughput dependent on multiple factors including: system specs, camera codec, camera settings, camera resolution, and network bandwidth. Refer to the Toshiba IP platform estimator for more information on the specifics of your installation.

Specifications subject to change without notice.

NVS SERIES PART NUMBERS

NVS32-1T/2T/3T/4T/6T/8T
NVS16-1T/2T/3T/4T/6T/8T
NVS8-500G/1T/2T/3T/4T/6T/8T

OPTIONAL ACCESSORIES FOR NVS

- Internal RAID5 (DVR-R5)
- Additional Hard Drives (1TB: HDD-1TB, 2TB: HDD-2TB)
- Redundant Power Supply (2-RDNT-PS)
- 16CH Audio Card (16-AUD)
- Extended Warranties (EW-S3Y/S4Y/S5Y)

For more information, contact your sales representative.

IPS SERIES PART NUMBERS

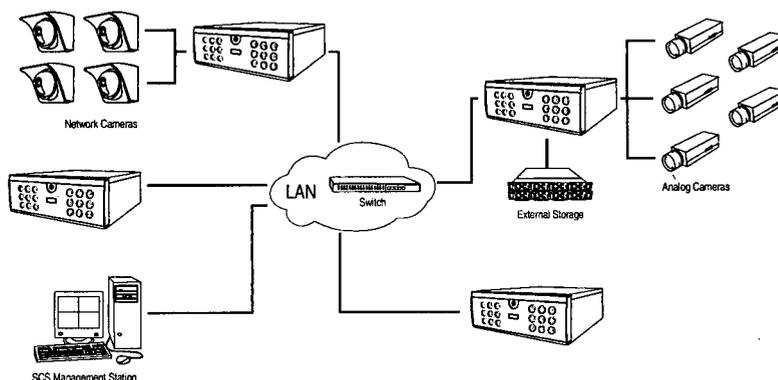
IPS32-500G/1T/2T/4T
IPS16-500G/1T/2T/4T
IPS8-500G/1T/2T/4T

OPTIONAL ACCESSORIES FOR IPS

- Extended Warranties (EW-S3Y/S4Y/S5Y)
- SCS-OPT SCS Connectivity Upgrade

For more information, contact your sales representative.

SAMPLE NVS/IPS CONFIGURATION

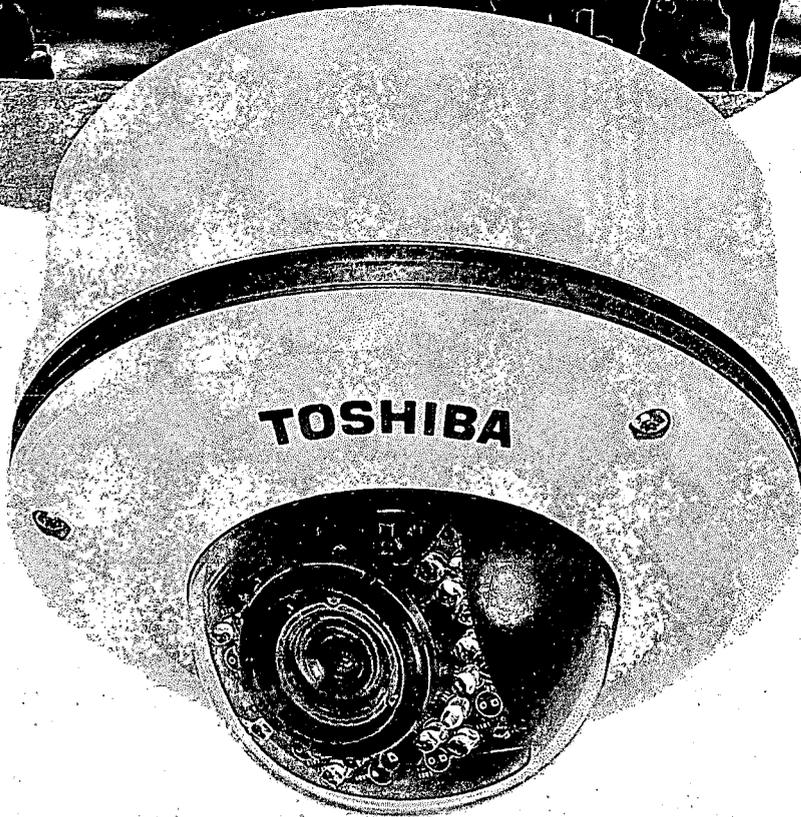
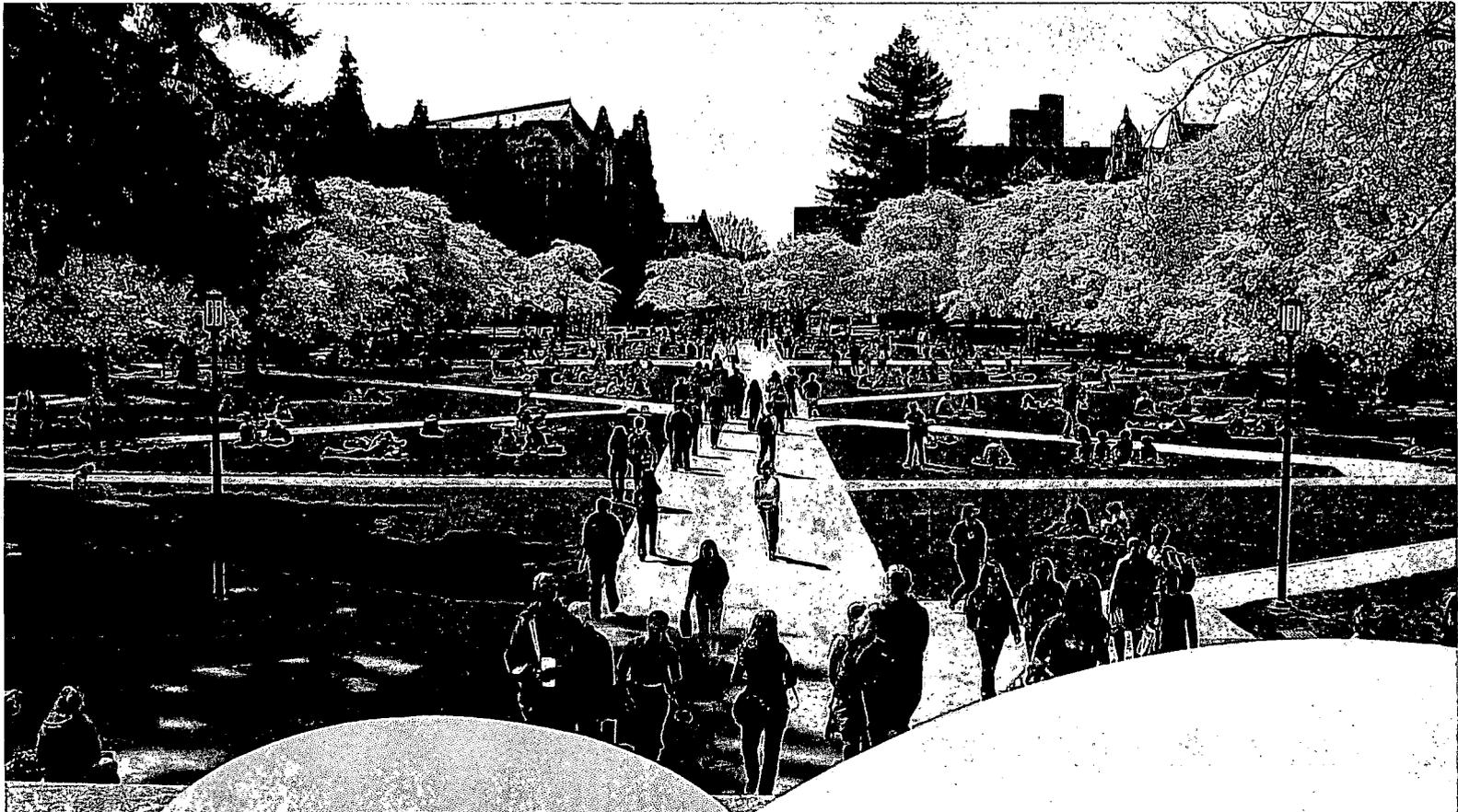


TOSHIBA

Leading Innovation >>>

IK-WR12A

IP NETWORK MEGAPIXEL DOME WITH
EXTREME LOW LIGHT CAPABILITIES



- IP66 rated weatherproof for outdoor with built-in heater/blower (-22° F to 122° F)
- IR LEDs provide 0.0 lux min. illumination
- IR LEDs enables video capture in total darkness for true 24/7 surveillance
- Vandal-resistant housing protects camera against tampering and damage
- 2MP resolution (1600 x 1200)
- Vari-focal 3-9 mm with 4x digital zoom
- Quad streaming MPEG4 and Motion JPEG
- Two-way audio
- Power over Ethernet, 12V DC or 24V AC
- Day/night imaging
- SD/SDHC card slot for local recording
- Privacy mask

IK-WR12A

IP NETWORK MEGAPIXEL DOME

IMAGING

| | |
|---------------------------|------------------------------|
| Image Sensor | 1/3.2-inch CMOS |
| Effective Picture Element | 1600 x 1200 |
| Scanning System | Progressive |
| Lens | Vari-Focal f=3mm to 9mm |
| Angle of view | H: 30° to 87°, V: 22° to 64° |
| Focus system | Manual |
| Image Compression Format | JPEG, MPEG4 (dual codec) |
| Minimum illumination | 0.0 lux/F1.2 with IR LED on |
| White Balance | AWB |
| Gain AGC | Auto |
| BLC | Yes |
| Flickerless | Yes, 50Hz/60Hz selectable |
| Privacy Mask | Yes |
| Tamper Detection | Yes |
| Motion Detection | Yes |
| ePTZ | Yes |
| Zoom | 3X optical, 4x digital |
| Day/night | Removable IR-cut filter |

ENVIRONMENT

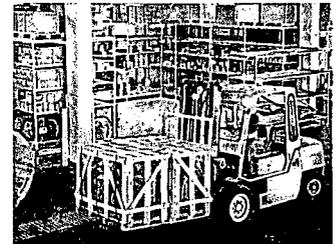
| | |
|---------------------|------------------------------------|
| IP Code | IP66 |
| Heater/Fan (Blower) | Built in |
| Temperature range | -22° F to 122° F (-30° C to 50° C) |

NETWORKING

| | |
|-------------------------|--|
| Support-protocol | TCP/ IP, HTTP, HTTPS, UPnP, SNMP RTSP/RTP/RTCP, IGMP, SMTP, FTP, DHCP, NTP, DNS, DDNS, PPPoE |
| Internet protocol | IPv4, IPv6 |
| Camera Setup Program | Installation Wizard ActiveX |
| MPEG4/JPEG | Simultaneous four streamings |
| Band width control | QoS, CoS |
| Image Sizes | 1600x1200, 1280x960, 800x600, 640x480, 320x240, 176 x144 |
| Frames per second (fps) | SVGA: 30 fps (MPEG, JPEG) UXGA: 15 fps (MPEG), 15 fps (JPEG) |
| Security | Multi level ID/Password, IP address filtering, HTTPS, 802.1x port-based authentication |
| DDNS | no-ip.com changeIP.com |
| Audio I/O | MIC IN / LINE OUT 2-way audio (SIP) |
| Multi-cast/Uni-cast | Yes |
| Alarm recording | Yes |
| Recording in client PC | Yes |
| Recording to SD Card | Yes (SD, SDHC) |
| Export/upload function | Yes |
| E-mail, FTP | Yes |
| Daylight savings | Yes |

INTERFACE

| | |
|-----------------------|----------------------------------|
| Ethernet Connectors | 10 Base-T/100 Base-Tx RJ-45 |
| Audio in/out terminal | Yes (Mic In / Line out) |
| Web browser | Internet Explorer® V8.0 or later |
| Operating System | MS Windows® XP, Vista, 7 |



The IK-WR12A is weatherproof and vandal-resistant. It has an IP66 rating, meaning that its electronics are protected against dust, water/moisture/humidity, and impact. It will also detect tampering by blockage or spray paint. Install it with confidence in high-risk schools, jails, retail, parking lots, warehouses, airports, or anywhere outdoors. The advanced codec technology allows you to easily view, control, and manage all networked cameras using a standard web browser or Toshiba's surveillance management software from any networked computer.

MECHANICAL

| | |
|-----------------------|---|
| Dimensions | 6.8" (ø) x 5.3" (H) |
| IR Illuminators | Effective up to 20 meters |
| Humidity of operation | 20 to 90% |
| Weight | 4.81 lbs (2,184 g) |
| Power Requirements | DC 12V±10%, AC 24V±10%, PoE |
| Power Consumption | 7.2W (12VDC), 14.4W (24VAC) |
| ROHS | Compliant |
| Standards | FCC/A and B, IC (ICES-003), UL60950, CSA C22.2 |

OPTIONAL ACCESSORIES

| | |
|----------|----------------------|
| JK-PHO12 | Outdoor Housing |
| JK-PMA12 | Pole Mount Adapter |
| JK-CMA12 | Corner Mount adapter |
| JK-PMH12 | Pendant Mount Head |
| JK-WM12 | Wall Mount |
| JK-PMP12 | Pendant Mount Pipe |

INCLUDED ACCESSORIES AC adaptor, Bottom base, User's manual and install software (CD-ROM), Quick Start guide & Important Safeguards, Warranty, Alignment Sticker, Ceiling hole template sticker, Hex Key Wrench, RJ45 Female/Female Coupler, Silica Gel, Screws (x7), Anchors (x4)

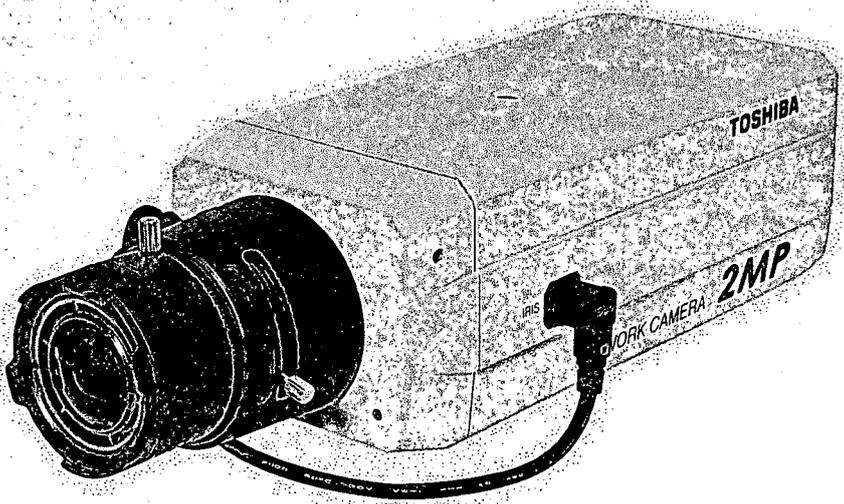
TOSHIBA
Leading Innovation >>>

IK-WB30A
IP NETWORK VIDEO CAMERA



THE TOSHIBA IK-WB30A IS

- 2-MEGAPIXEL
- TRUE DAY/NIGHT ^{A66}
- MPEG4 & MJPEG
- PoE (802.3af)



- **2-Megapixel CMOS Sensor**
Clear, crisp video surveillance images up to 1600 x 1200 resolution
- **True Day-Night Capability**
Acts as both an IR night vision camera and a high-resolution color camera during the daylight hours
- **Quad Streaming MPEG4 and MJPEG**
Simultaneous compression transfers MPEG4 images over limited bandwidth networks, plus stores high-resolution MJPEG to an NVR
- **Power over Ethernet (PoE)**
Reduces time, cost and complexity of IP camera installations by running data and power over same CAT5e or 6a cable
- **SD Card Slot**
Record "at camera" on-SD card
- **Electronic Pan-Tilt-Zoom (ePTZ)**
Transmits thumbnail image of entire field of-view and allows you to instantly move to a target region for close-up shots

IK-WB30A

IP NETWORK VIDEO CAMERA

CAMERA SPECIFICATIONS

| | |
|---------------------------|---|
| Lens mount | CS (lens not included) |
| Zoom (Digital) | 4x |
| Image Sensor | 1/3.2 Inch CMOS |
| Effective Picture Element | 1600 (H) x 1200 (V) |
| Scanning System | Progressive |
| Compression Format | JPEG, MPEG4 dual codec |
| Compression rate steps | JPEG /MPEG4 6 steps |
| Audio I/O | MIC IN / LINE OUT, 2-way audio (SIP) supported |
| Minimum illumination *1 | 0.04 lux / F1.4 (Night mode, Max gain 4x, 1/30 sec) 0.01 lux / F1.4 (Night mode, Max gain 8x, 1/5 sec) |
| Electric shutter | 1/5-1/40,000 sec |
| Day/Night (mechanical) | Removeable IR-cut filter |
| White Balance | AWB |
| AGC | Auto |
| BLC | Yes |
| Flicker less | Yes 50Hz/60Hz selectable |
| Privacy Mask | Yes |
| Tamper Detection | Yes |
| Motion Detection | Yes |

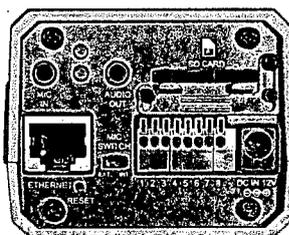
NETWORK SPECIFICATIONS

| | |
|--------------------------------|--|
| Support-protocol | TCP/ IP, HTTP, HTTPS, UPnP, RTSP/RTP/RTCP, IGMP, SMTP,FTP, DHCP,NTP,DNS,DDNS,PPPoE, SNMP |
| Internet protocol | IPv4, IPv6 |
| Camera setup program | Installation Wizard |
| Application plug-in | ActiveX |
| MPEG4/JPEG | Simultaneous four streamings |
| Maximum access user | Up to 10 clients (Live view) |
| Band width control | QoS, CoS |
| Image sizes (JPEG) | 1600 x 1200, 1280 x 960, 800 x 600, 640 x 480, 320x240, 176 x 144 |
| Image sizes (Mpeg4) | 1600 x 1200, 1280 x 960, 800 x 600, 640 x 480, 320 x 240, 176 x 144 |
| Max frames-per-second (fps) *1 | 30fps at SVGA, 15fps at UXGA (MJPEG) 30fps at SVGA, 15fps at UXGA (MPEG4) |
| Security | Multi level ID/Password, IP address filtering, HTTPS, 802.1x port-based authentication |
| DDNS | no-ip.com changelP.com |
| Multi-cast/Uni-cast | Yes |
| Alarm recording, e-mail, FTP | Yes |
| Recording on SD card | Yes (supported SD, SDHC card) |
| ePTZ | Yes |
| Export/upload function | Yes |
| Daylight savings | Yes |

*1 Individual results may vary.

SUGGESTED APPLICATIONS

- Schools
- Public spaces
- Casinos
- Military
- Border security
- Retails outlets
- Corporate
- many more...



INTERFACE SPECIFICATIONS

| | |
|-------------------------------|---------------------------------|
| Ethernet Connectors | 10 Base-T/100 Base-Tx_RJ-45 |
| Built-in microphone | Yes |
| Audio in/out terminal | 2-way audio (Mic In / Line out) |
| Digital input/output terminal | in x 1, out x 1 |
| RS485 (PT base control) | Pelco-D protocol supported |

NETWORK U/I SPECIFICATIONS

| | |
|---------------------|---|
| Web browser support | Internet Explorer® Ver 7.0 or 8.0 |
| Available OS | Windows XP®, Windows Vista Business® |

OVERALL SPECIFICATIONS

| | |
|--------------------------|---|
| Dimensions | 6.0" (L) x 2.8" (W) x 2.2" (H) (excluding protusion) |
| Temperature of operation | 14°-122° F (-10° to +50° C) |
| Humidity | 20% to 90% |
| Weight | 1.34 lbs (606 g) |
| Power requirements | DC 12V±10%, 24VAC ±10%, and PoE |
| Current consumption | 12 VDC/0.6A, 24 VAC/0.6A |
| OS | Linux Ver2.6 |
| Camera rating | FCC/B verification, IC (ICES-003) |
| AC adapter rating | UL609050-1, CSA C22.2 FCC/B verification |
| RoHS | Yes |

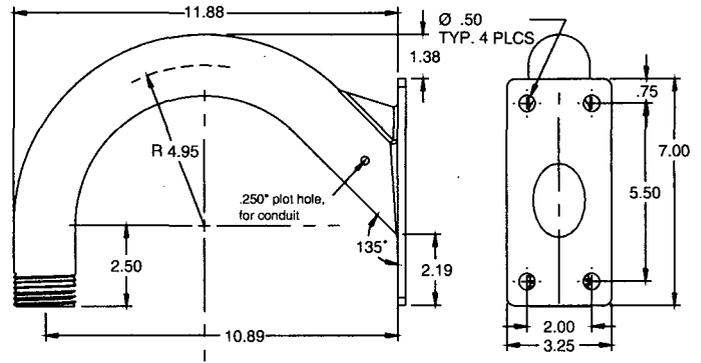
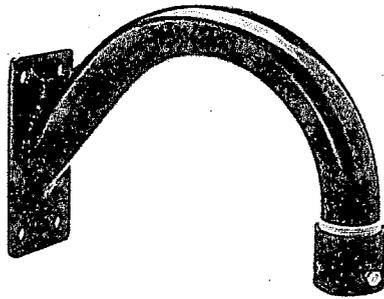
©2010 Toshiba America Information Systems, Inc. All rights reserved. All products and names mentioned are the property of their respective owners. While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice.

Toshiba America Information Systems, Inc.
Surveillance & IP Video Products, Imaging Systems Division
9740 Irvine Boulevard, Irvine, California 92618
1-877-855-1349 • www.toshibasecurity.com

TOSHIBA
Leading Innovation >>>

Gooseneck Wall Mount JK-WM

TOSHIBA



DESCRIPTION

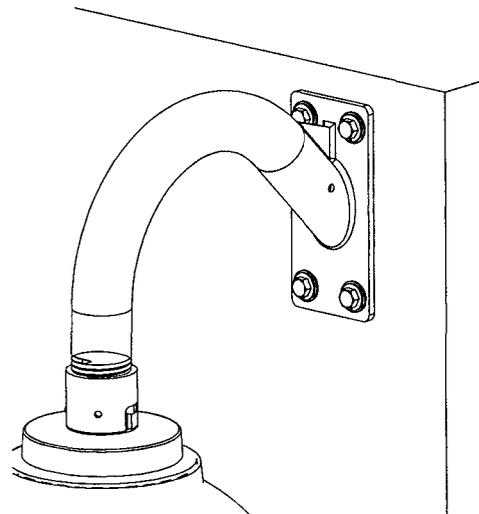
With its distinctive gooseneck design, the JK-WM presents a sleek, attractive look. This wall mount is designed to be used with Toshiba's JK-PHI and JK-PHO housings.

FEATURES:

- Durable powder coat finish
- All aluminum construction
- 1 1/2" pipe thread on end for quick and easy dome mounting
- 60 lb load rating

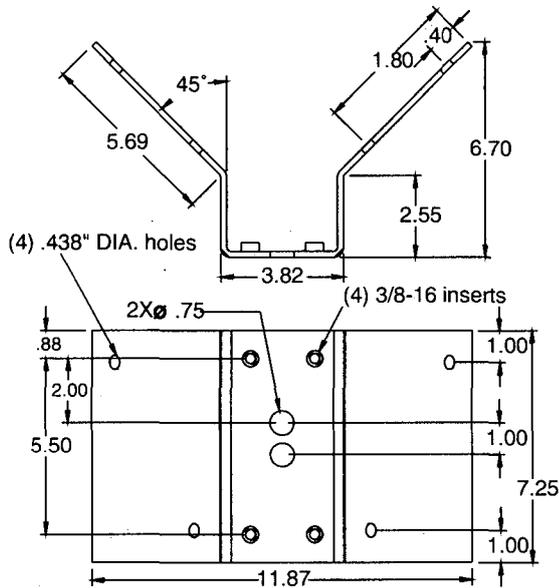
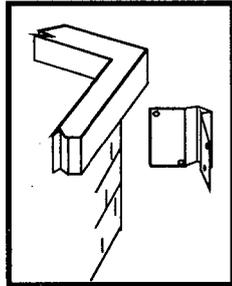
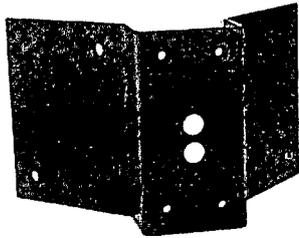
APPLICATIONS:

The JK-WM is designed to be used with the JK-PHI and JK-PHO housings



| Model | Unit Weight | Shipping Weight | Shipping Box Dim. |
|--|-------------|--------------------------------------|-------------------|
| WM20G | | <i>Call manufacturer for details</i> | |
| * Shipping weights depend on box dimensions. | | | |

Corner Adapter JK-CMA



DESCRIPTION:

Constructed of aluminum, the JK-CMA is a corner adapter designed to work with Toshiba's JK-PHI, JK-PHO housings in conjunction with the JK-WM wall mount.

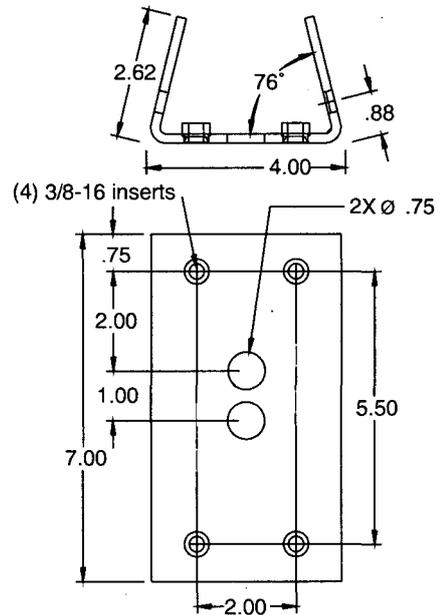
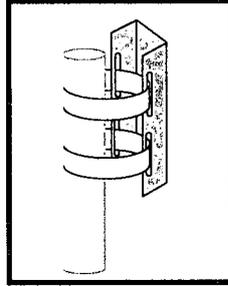
FEATURES:

- Durable powder coat finish
- All aluminum construction
- Threaded bolt inserts to make installation easier and quicker
- 75 lb load rating

| Model | Unit Weight | Shipping Weight | Shipping Box Dim. |
|--|-------------------------------|-----------------|-------------------|
| ACA2 | Call manufacturer for details | | |
| * Shipping weights depend on box dimensions. | | | |

Pole Mount Adapter JK-PMA

TOSHIBA



DESCRIPTION

THE JK-PMA is an aluminum pole bracket which allows Toshiba's dome housings to be mounted to an existing pole. Use with the JK-PHI and JK-PHO housings with the JK-WM wall mount bracket.

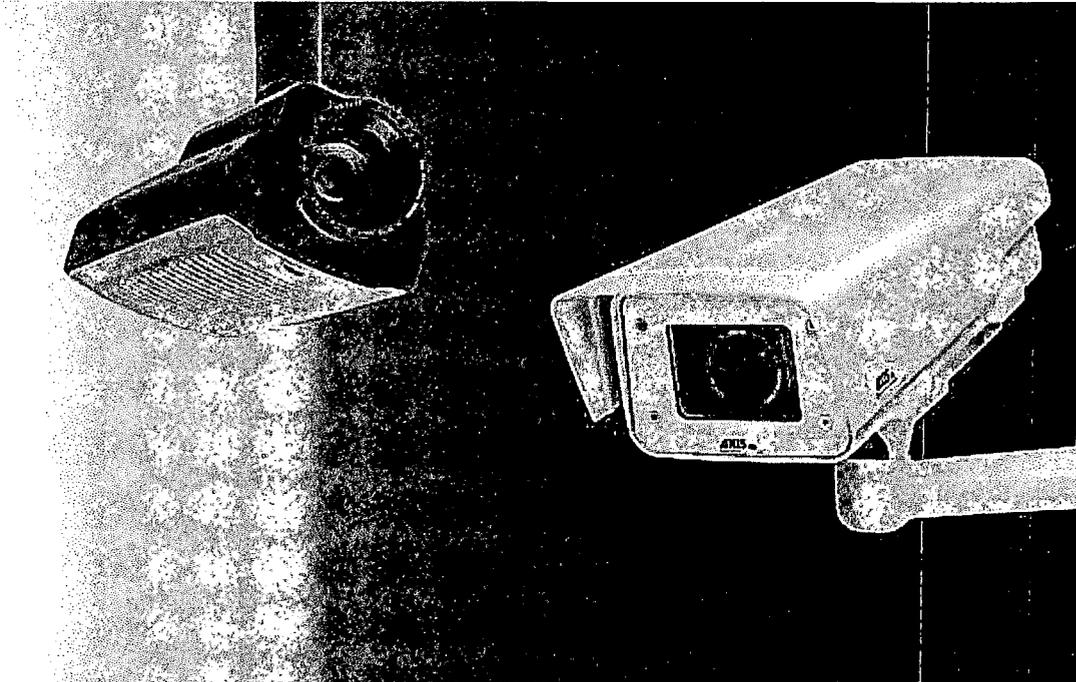
FEATURES

- Mounts to poles 3" - 15" dia.
- Durable powder coat finish
- All aluminum construction
- Threaded bolt inserts to make installation quicker and easier
- 75 lb load rating

| Model | Unit Weight | Shipping Weight | Shipping Box Dim. |
|--|-------------------------------|-----------------|-------------------|
| APM3 | Call manufacturer for details | | |
| * Shipping weights depend on box dimensions. | | | |

AXIS Q1755/-E Network Cameras

HDTV network cameras with zoom and H.264.



- > HDTV image quality
- > Zoom and autofocus with pan/tilt head support
- > Power over Ethernet
- > Gatekeeper functionality
- > Outdoor-ready model with Arctic Temperature Control

The indoor AXIS Q1755 and the outdoor-ready model, AXIS Q1755-E, are day and night HDTV cameras, designed for securing areas where high-quality identification is needed, for example, at casinos, passport controls, airports, railway stations and for perimeter surveillance.

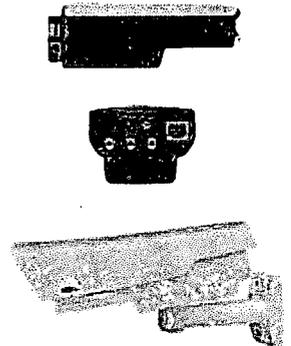
AXIS Q1755/-E Network Cameras deliver HDTV 1080i or 720p in compliance with the SMPTE 274M and 296M standards regarding resolution, color fidelity, 16:9 format and full frame rate. The cameras enable multiple, individually configurable streams in H.264 and Motion JPEG. H.264 greatly optimizes bandwidth and storage without compromising image quality.

AXIS Q1755/-E cameras have 10x optical zoom, 12x digital zoom and autofocus. They provide the desired field of view immediately and in perfect focus. The cameras can also pan and tilt when an optional pan/tilt motor is used.

Installation is made easy with Power over Ethernet (PoE, IEEE 802.3af), which eliminates the need for power cables. The cameras also have an SD/SDHC memory card slot for storing recordings locally.

AXIS Q1755/-E cameras offer video motion detection, audio detection, active tampering alarm and the Gatekeeper functionality, which enables the cameras to automatically zoom in when there is activity in the scene, and then zoom out after a preset time interval.

The IP66-rated outdoor-ready model operates in temperatures from -40 °C to 45 °C (-40 °F to 113 °F) using PoE and High PoE, and features Axis' unique Arctic Temperature Control for powering up at very low temperatures following a power failure.



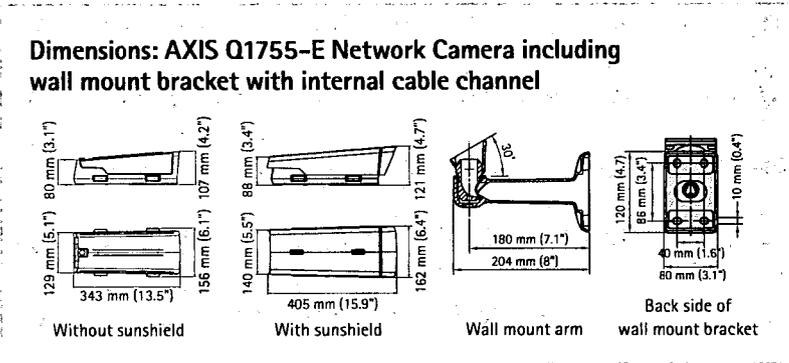
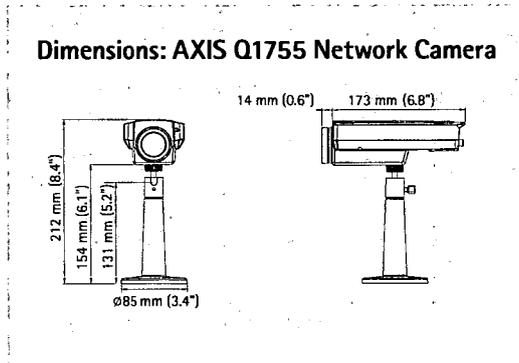
Technical Specifications – AXIS Q1755/-E Network Cameras

| Camera | |
|--|---|
| Models: Indoor | AXIS Q1755 60 Hz; AXIS Q1755 50 Hz |
| Models: Outdoor | AXIS Q1755-E 60 Hz; AXIS Q1755-E 50 Hz |
| Image sensor | 1/3" progressive scan CMOS 2 megapixel |
| Lens | F 5.1 - 51 mm, F1.8 - 2.1, autofocus, automatic day/night Near focus limit 10 mm (wide) or 800 mm (tele) Horizontal angle of view: 50° - 5.4° M37x0.75 mounting thread for optional lens adaptor |
| Minimum illumination | Color: 2 lux at 30 IRE, F1.8 B/W: 0.2 lux at 30 IRE, F1.8 |
| Shutter time | 1/10000 s to 1/2 s |
| Zoom | 10x optical and 12x digital, total 120x |
| Video | |
| Video compression | H.264 (MPEG-4 Part 10/AVC) Motion JPEG |
| Resolutions | HDTV 1080i 1920x1080, HDTV 720p 1280x720 Standard NTSC/PAL for installation |
| Frame rate H.264/ Motion JPEG | 30/25 fps in all resolutions |
| Video streaming | Multiple, individually configurable streams in H.264 and Motion JPEG Controllable frame rate and bandwidth VBR/CBR H.264 |
| Image settings | Compression, brightness, sharpness, white balance, exposure control, backlight compensation, rotation, mirroring of images, text and image overlay, privacy mask |
| Audio | |
| Audio streaming | Two-way |
| Audio compression | AAC LC 8/16 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz Configurable bit rate |
| Audio input/output | Built-in microphone, external microphone or line input, line output |
| Network | |
| Security | Password protection, IP address filtering, HTTPS encryption*, IEEE 802.1X network access control*, digest authentication, user access log |
| Supported protocols | IPv4/v6, HTTP, HTTPS*, QoS Layer 3 DiffServ, FTP, SMTP, Bonjour, UPnP, SNMPv1/v2c/v3(MIB-II), DNS, DynDNS, NTP, RTSP, RTP, TCP, UDP, IGMP, RTCP, ICMP, DHCP, ARP, SOCKS, Pelco-D |

| System integration | |
|--|--|
| Application Programming Interface | Open API for software integration, including VAPIX® from Axis Communications, available at www.axis.com |
| Intelligent video | Video motion detection, active tampering alarm, audio detection, Gatekeeper |
| Alarm triggers | Video motion detection, active tampering alarm, audio detection, temperature, external input |
| Alarm events | File upload via FTP, HTTP and email; notification via email, HTTP and TCP; external output activation |
| Video buffer | 96 MB pre- and post alarm |
| General | |
| Casing | Camera: Metal (zinc) AXIS Q1755-E: IP66-rated, IK10 impact-resistant aluminum enclosure |
| Processor and memory | ARTPEC-3, 256 MB RAM, 128 MB Flash |
| Power | AXIS Q1755: 8-20 V DC max. 11.2 W ; 20-24 V AC max. 17.4 VA; Power over Ethernet IEEE 802.3af Class 3 AXIS Q1755-E: Power over Ethernet (PoE) IEEE 802.3af Class 3 or High Power over Ethernet (High PoE) |
| Connectors | RJ-45 10BASE-T/100BASE-TX PoE, terminal block for power I/O terminal block for two configurable inputs/outputs 3.5 mm mic/line in, 3.5 mm line out RS-422/RS-485 Video out: 3x RCA Y/Pb/Pr (HD), 1x RCA Composite (SD) |
| Local storage | SD/SDHC memory card slot (card is not included) |
| Operating conditions | AXIS Q1755: 0 °C to 45 °C (32 °F to 113 °F); Humidity 20-80% RH (non-condensing) AXIS Q1755-E: -30 °C to 45 °C (-22 °F to 113 °F) with PoE; down to -40 °C (-40 °F) with High PoE Arctic Temperature Control enables camera start-up at temperatures as low as -40 °C (-40 °F) with High PoE |
| Approvals | EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 55024, EN 61000-6-1, EN 61000-6-2, EN 60950-1, FCC Part 15, Subpart B, Class B, VCCI, Class B ITE, C-tick AS/NZS CISPR 22, ICES-003, Class B AXIS Q1755-E: IP66, IK10 |
| Weight | AXIS Q1755: 1.0 kg (2.2 lb.); AXIS Q1755-E: 3.5 kg (7.7 lb.) |
| Included accessories | Connector kits, Installation Guide, CD with installation tools, recording software and User's Manual, Windows decoder 1-user license AXIS Q1755-E: wall mount bracket, sunshield, 5 m (16 ft.) Ethernet cable with pre-mounted gasket |
| Optional accessories | Wall bracket accessories, AXIS PoE Midspan 1-port, AXIS TB123 High PoE Midspan 1-port, AXIS T90A Illuminators, YP3040 Pan-Tilt Motor, AXIS T8412 Installation Display, AXIS Camera Station and video management software from Axis' Application Development Partners |

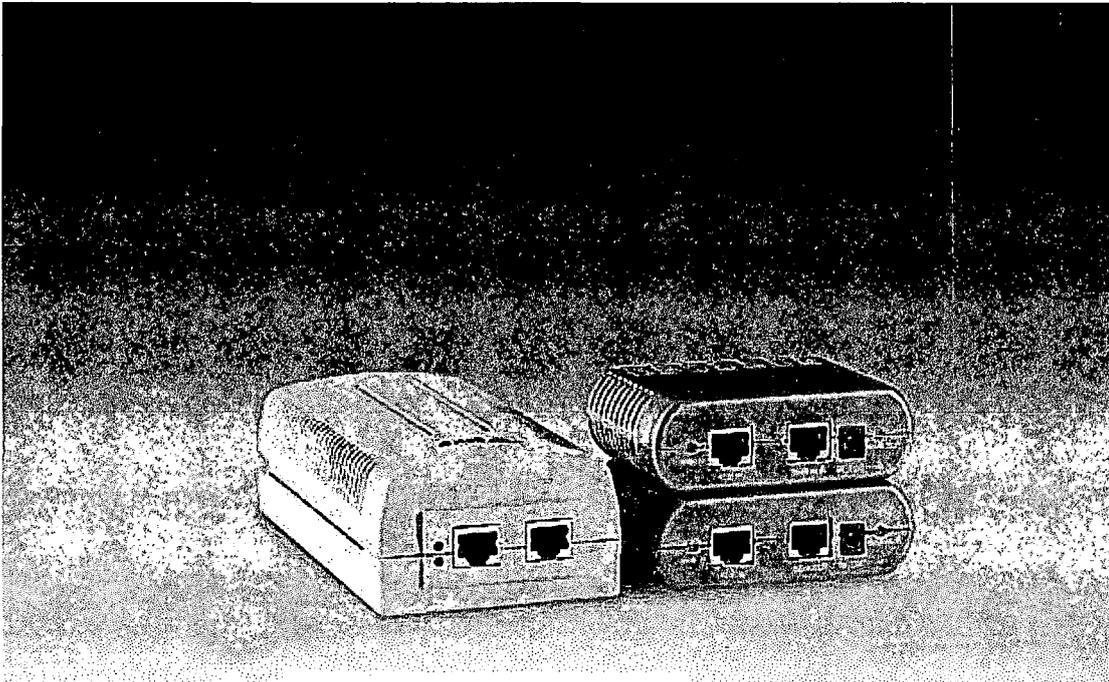
*This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (www.openssl.org)

More information is available at www.axis.com



Axis High Power over Ethernet midspans & splitters

High Power over Ethernet for Axis PTZ & PTZ dome network cameras.



- > Reduced installation costs
- > Support for Axis PTZ and PTZ dome network cameras
- > IEEE 802.3at
- > IEEE 802.3af compliance

Axis High Power over Ethernet midspans and splitters offer an easy, fast and cost-effective solution for powering network video products – specifically PTZ (pan/tilt/zoom) and PTZ dome network cameras – without the need to install power outlets and electrical cabling.

Axis High Power over Ethernet (High PoE) midspans and splitters enable Axis network video products to receive data and power over the same Ethernet cable.

The High PoE products make it easier to install network video products in areas where power cabling and outlets are unavailable, thereby reducing installation costs.

These midspans and splitters are used to power network devices that require more power, as specified by the IEEE 802.3at standard. The midspans are also IEEE 802.3af compliant, meaning that they can be used with all Axis network video products with built-in PoE support.

The function of a midspan is to inject power into a network cable. A splitter, which separates data and power coming over an Ethernet cable, is used for a network video product without built-in support for PoE.

Technical Specifications – Axis High Power over Ethernet midspans

| Midspan | |
|------------------------------------|--|
| Model | AXIS T8123 High PoE 30 W Midspan 1-port AXIS T8124 High PoE 60 W Midspan 1-port |
| Function | Data and power are fed to a network video product through an Ethernet cable; use together with a High PoE splitter for a network video product without built-in PoE support |
| Data rate | 10/100/1000 Mbps |
| Data & Power | |
| Connectors | Shielded RJ-45, EIA 568A and 568B |
| Network cables | Shielded category 5 (or higher) |
| Wiring | Data provided over pairs 1/2 and 3/6 for 10/100 Ethernet, over all four pairs for Gigabit Ethernet Power over spare pairs 4/5 (+) and 7/8 (-) |
| Output power | AXIS T8123: 55 V DC (max. 30 W) AXIS T8124: 54-57 V DC (max. 60 W) |
| Input power | AXIS T8123: AC Input Voltage: 100 to 240 V AC (max. 37 W) AC Frequency: 50 - 60 Hz AXIS T8124: AC Input Voltage: 100 to 240 V AC (max. 74 W) AC Frequency: 50 - 60 Hz |
| Installation and management | Plug-and-play installation; automatically detects PoE and High PoE-enabled devices and supplies inline power Local LED management display |

| General | |
|--------------------------------------|--|
| Display and indicators | Port interfaces are located on the front panel System indicator: AC power Channel indicator: power For more information, see www.axis.com/techsup |
| Compliance | IEEE 802.3at, IEEE 802.3af, RoHS, WEEE, CE |
| Mounting | Wall or shelf mounting |
| Approvals | FCC Part 15, Class B with FTP cabling CE: EN 55022 Class B (Emissions), EN 55024 (Immunity), VCCI Safety: CB, UL/cUL per EN 60950-1, GS Mark per EN 60950-1, KCC, UL-AR |
| Operating conditions | AXIS T8123: 0 - 40° C (32 - 104°F) Humidity max. 95% RH (non-condensing) AXIS T8124: -10 - 45°C at 60W (14 - 113°F) -10 - 55°C at 30W (14 - 131°F) Humidity max. 95% RH (non-condensing) |
| Dimensions (HxWxD) and weight | 51.3 x 87.9 x 166 mm (2.0" x 3.46" x 6.53") AXIS T8123: 350 g (0.771 lbs) AXIS T8124: 400 g (0.881 lbs) |

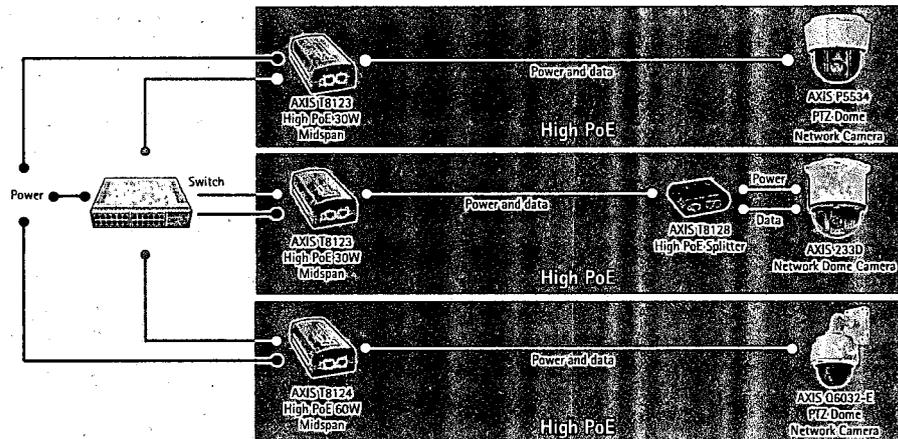
Technical Specifications – Axis High Power over Ethernet splitters

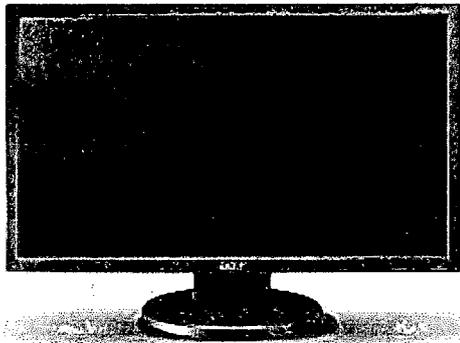
| Splitters | |
|-----------------------|--|
| Models | AXIS T8126 High PoE Splitter 12V AXIS T8128 High PoE Splitter 24V |
| Function | Separate data and power coming over a network cable for a network video product without built-in PoE support |
| Data & Power | |
| Connectors | Data & power in: Shielded RJ 45 Data out: Shielded RJ-45 Power out: DC barrel connector; with '+' centered |
| Output current | AXIS T8126: 2 A at 12 V DC AXIS T8128: 1 A at 24 V DC |
| Input power | max. 30 W |
| Installation | Plug-and-play installation between midspan and camera |

| General | |
|--------------------------------------|---|
| Compliance | WEEE, CE |
| Operating conditions | 0 - 40° C (32 - 104°F) Humidity max. 90% RH (non-condensing) |
| Approvals | FCC Part 15 Class A FTP, Class A UTP EN55022 (CISPR 22) Class A Immunity EN55024 (CISPR 24) |
| Dimensions (HxWxD) and weight | 94 x 31 x 73 mm (3.7" x 1.12" x 2.87") 112 g (0.247 lbs) |
| Included accessories | AXIS T8126 - cable adapters for AXIS 213 PTZ, AXIS 214 PTZ, AXIS 215 PTZ, AXIS 225FD, AXIS 210, video encoders AXIS T8128 - cable adapter for AXIS 231D+, AXIS 232D+, AXIS 233D For a complete list of supported products, please refer to www.axis.com/products/pol/high_poe/supported.htm |

More information is available at www.axis.com

System overview





Acer® V243H (EPEAT)

Enjoy a big 24" wide-screen display that features a DVI (HDCP) connector and 2ms gray-to-gray response time.

This environmentally friendly LCD has earned the EPEAT® (Electronic Product Environmental Assessment Tool) Silver rating, meaning that in addition to meeting the 23 required criteria, they have also met at least 50% of the 28 optional criteria.

- [PermaLink](#)
- [Pricing & Upgrades](#)
- [Print](#)

Benefits Configurations Technical specifications

- | | |
|---|--|
| <ul style="list-style-type: none">• Fast response time• The 2ms gray-to-gray response time means your games and video will move more smoothly. | <ul style="list-style-type: none">• High-definition digital imaging• High-definition graphics are optimised via the digital DVI interface with HDCP support. You get expanded connectivity possibilities with multiple media devices with real high-definition content. |
| <ul style="list-style-type: none">• Sharp, crisp viewing• The generous dynamic contrast ratio of 80000:1 synchronized with a brightness of 300cd/m² | <ul style="list-style-type: none">• Environmentally friendly• EPEAT® assesses eight categories of environmental attributes, such as energy conservation, end-of-life |

creates brilliant images.

management,
reduction/elimination of
environmentally sensitive
materials and material selection.

.. V243H AJbd V243H AJbd 24" wide-screen TFT LCD, 1920 x 1080 resolution,
80000:1 dynamic contrast ratio, 170°/160° horizontal/vertical
viewing angles, VGA and DVI (HDCP) connectors, 300 cd/m²
brightness, 2ms gray-to-gray response time, black color
Part NumberET.FV3HP.A02 Where to Buy

| | |
|--------------------------|---|
| Size/Type | • 24" wide-screen TFT LCD |
| Panel Technology | • TN (twisted nematic) |
| Maximum Resolution | • 1920 x 1080 |
| Maximum Refresh Rate | • 60Hz |
| Horizontal Frequency | • 30KHz - 80KHz |
| Vertical Frequency | • 55Hz - 75Hz |
| Dynamic Contrast Ratio | • 80000:1 |
| Horizontal Viewing Angle | • 170° |
| Vertical Viewing Angle | • 160° |
| Brightness | • 300 cd/m ² |
| Response Time | • 2ms gray-to-gray |
| Pixel Pitch | • 0.276mm |
| Maximum Colors | • 16.7 million |
| Color Saturation | • 72% NTSC |
| Bit | • Six + HiFRC (high frame rate control) |
| Acer® CrystalBrite | • No |

| | |
|------------------------|--|
| Technology | |
| Signal Connectors | <ul style="list-style-type: none"> • VGA, DVI (HDCP) |
| Power | <ul style="list-style-type: none"> • 100V - 240V power supply |
| Power Consumption | <p>Internal AC adapter</p> <ul style="list-style-type: none"> • Energy Star® on: 32.5W • Energy Star® sleep: 1.2W • Energy Star® off: 0.8W |
| Audio | <ul style="list-style-type: none"> • No speakers |
| Mechanical Adjustments | <ul style="list-style-type: none"> • Tilt: -5° ~ 15° • Swivel: No • Pivot: No • Height adjustment: No • Detachable foot-stand: Yes |
| Kensington® Lock | <ul style="list-style-type: none"> • Supported |
| VESA Wall Mount | <ul style="list-style-type: none"> • Supported |
| Dimensions & Weight | <ul style="list-style-type: none"> • 22.3" (567.0mm) W x 7.9" (200.0mm) D x 15.8" (402.0mm) H • 11.7 lb. (5.3 kg) |
| Compliance | <ul style="list-style-type: none"> • Energy Star® • EPEAT® Silver |
| Chassis Color | <ul style="list-style-type: none"> • Black |
| Limited Warranty* | <ul style="list-style-type: none"> • Three-year parts and labor limited warranty* <p>*For a free copy of the standard limited warranty end-users should see a reseller where Acer products are sold or write to Acer America Corporation, Warranty Department, P.O. Box 6137, Temple, TX 76503.</p> |

Specifications are subject to change without notice.



PRODUCT DATA SHEET

Controlled Document – Engineering Drive

1530 Shields Drive
 Waukegan, IL 60085
 Toll-Free (800) 323-9355
 Fax: (847) 689-1192

PART NUMBER: 966956
DESCRIPTION: 24 AWG /4 Pair PLENUM CATEGORY 5e DATA CABLE
COMPLIANCE: > UL Listed Type CMP > ANSI/TIA/EIA 568
 (Meets or exceeds) > C(UL) Listed CMP FT6 > ICEA S-90-661
 > ETL Verified Category 5 & 5e > TIA/EIA 568
 > UL Classified Category 5

Construction Parameters:

| | | |
|-------------|---|------------------|
| Conductors: | Solid Copper | DIAMETER* |
| Dielectric: | Solid FEP | 0.020 |
| Assembly: | Each pair has different lay length for cross-talk prevention and ripcord added. | 0.036 |
| Jacket: | PVC | - |
| | | 0.200 |

* = Nominal value

Electrical Properties:

| | |
|--|---------------------------------|
| DC Resistance Max. (ohms/100m @ 20° C): | 9.38 |
| DC Resistance Unbalance Max. (%): | 5 |
| Characteristic Impedance (ohms): | 85-115 |
| Pair-to-Ground Cap. Unbal. Max. (pF/100m): | 330 |
| SRL Minimum (dB) @ 1.0-20.0 MHz: | 23 |
| 20.0-100.0 MHz: | 23 – 10log ₁₀ (F/20) |
| Attenuation Max. @100 MHz (db/100m): | 22.0 |

*The attenuation value is for information only. The maximum loss for any pair at room temp. is to be determined using the formula
 Att (f) ≤ 1.967 [SQR (f)] + 0.023 (f) + 0.050/SQR (f)*

Crosstalk

| | |
|------------------------------|------|
| NEXT @100 MHz (db/100m): | 35.3 |
| PSNEXT @100 MHz (db/100m): | 32.3 |
| ELFEXT @100 MHz (db/100m): | 23.8 |
| PSELFEXT @100 MHz (db/100m): | 20.8 |

The cross talk values are for information only. The min. crosstalk loss for any pair combination at room temp. is to be greater than the value determined using the formulas:

$$NEXT(f_{MHz}) \geq NEXT(0.772) - 15 \log_{10}(f_{MHz}/0.772)$$

$$PSNEXT(f_{MHz}) \geq PSNEXT(0.772) - 15 \log_{10}(f_{MHz}/0.772)$$

$$ELFEXT(f_{MHz}) \geq ELFEXT(0.772) - 20 \log_{10}(f_{MHz}/0.772)$$

$$PSELFEXT(f_{MHz}) \geq PSELFEXT(0.772) - 20 \log_{10}(f_{MHz}/0.772)$$

Miscellaneous Information:

Pair Colors: W/BL with BL, W/OR with O, W/GR with GR, W/BR with BR
 Jacket Color: Standard colors are Blue and Gray
 Jacket Print: COLEMAN CABLE CATEGORY 5e E# 24 AWG TYPE CMP (UL)c(UL)---FT6
 (ETL) VERIFIED TO CATEGORY 5e TESTED TO 350MHZ
 (Also printed with sequential footage, date code and reel #)
 Flame rating: UL-910 Steiner Tunnel Smoke and Flame Test
 Applicable NEC Article: 800
 Applicable TIA/EIA: 568-A-5 & 568-8B (draft)
 Approx. Weight (lb/1000 ft): 26

This product complies with European Directive 2002/95/EC (RoHS)

On special orders the customer will accept all factory lengths and ± 10% of total order requested.

The information presented here is, to the best of our knowledge, true and accurate. Since conditions of use are beyond Coleman Cable's control, all product data presented is for informational purposes only and does not create a binding obligation or liability on Coleman Cable or confer any rights on any customer. The sale of product (s) is conditioned upon acceptance of a purchase order subject to Coleman Cable's standard terms and conditions contained therein, including without limitation Coleman Cable's standard warranty. Coleman cable disclaims all liability in connection with the use of information contained herein or otherwise

Issued: 02/17/06

* = Nominal value
 By: PEP



2201 E. 54th St. North Sioux Falls, SD 57104
Toll Free 800.365.5625 Fax 605.271.7001
www.dakotasecurity.com

Experience

Founded in 1976, Dakota Security Systems, Inc. designs, installs and services state of the art electronic and physical security systems to protect our clients' property and personnel. With a focus on security and security only, Dakota Security Systems has developed extensive expertise and a reputation to overcome the toughest security challenges. Supported by a network of regional offices, Dakota Security Systems successfully delivers nation-wide installation and service to customers within Government, Healthcare, Agriculture, Education, Financial and Correction industries.

Dakota Security is a privately-held, veteran owned company, providing exceptional customer service for a demanding customer base. Dakota Security Systems has a dedicated staff of experienced security technicians, IT professionals, systems engineers, certified project managers, in addition to a strong team of focused leaders, managers and customer service professionals with over 450 years of combined experience.

Dakota Security Systems prides itself on being a total solution provider, capable of managing the complete lifecycle of a security system from commissioning to retirement. In all of our projects, the focus is on three critical phases of the customer relationship:

1. Design

- *Take pride in our knowledge of the security industry and the use of that knowledge*
- *Take a personal approach to understanding the customer's individual needs*
- *Evaluate customer's standard operating procedures and help determine the most effective security methods and systems to reach their objectives*
- *Make recommendations for a system that is both effective in its function and is cost effective*

2. Implementation

- *Certified Security Project Managers continually monitor the progress of the projects and assure that project milestones and functional objectives are reached*
- *Precision installation crews are trained to deliver results, working closely with customer points of contact to ensure job site harmony with employees and other trades*

3. Support

- *Highly-trained team of experienced service technicians dedicated top resolving technical problems quickly*
- *Twenty-Four hour service call response for critical security systems*
- *Real time communication with central station to inform customers of alarm conditions*

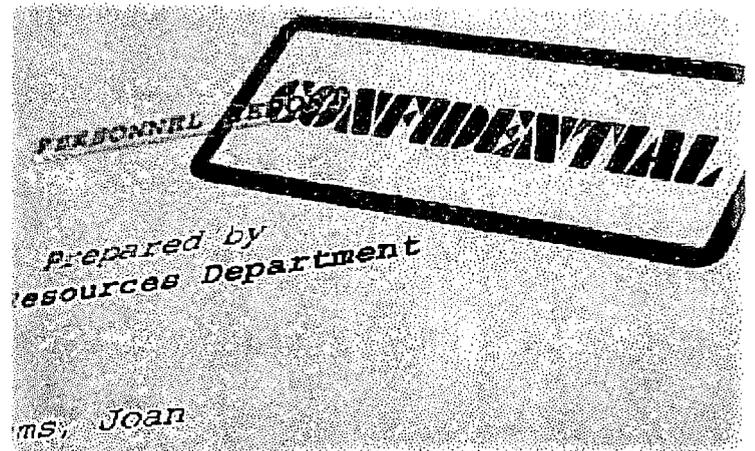
We know security.



We know Government Security.

In the aftermath of 9/11, the government is under tremendous pressure to secure its borders, its facilities and protect its people. Dakota Security Systems provides integrated systems that can schedule and control the movement of people, employees, and goods to and from critical areas, as well as monitor those areas continuously. This is particularly important in complex security environments such as government buildings that must be both highly secure and accessible to the public. Dakota Security Systems understands that you face unique challenges and can limit your vulnerability to risks by addressing the following items:

- FIPS 2.0
- Terrorism
- Infrastructure Monitoring
- Public Safety
- Access Control
- Theft
- Liability Claims
- Regulatory Compliance
- Surveillance



DAKOTA
Security
SYSTEMS, INC.

www.dakotasecurity.com



We know the Steps to Security.

Understand

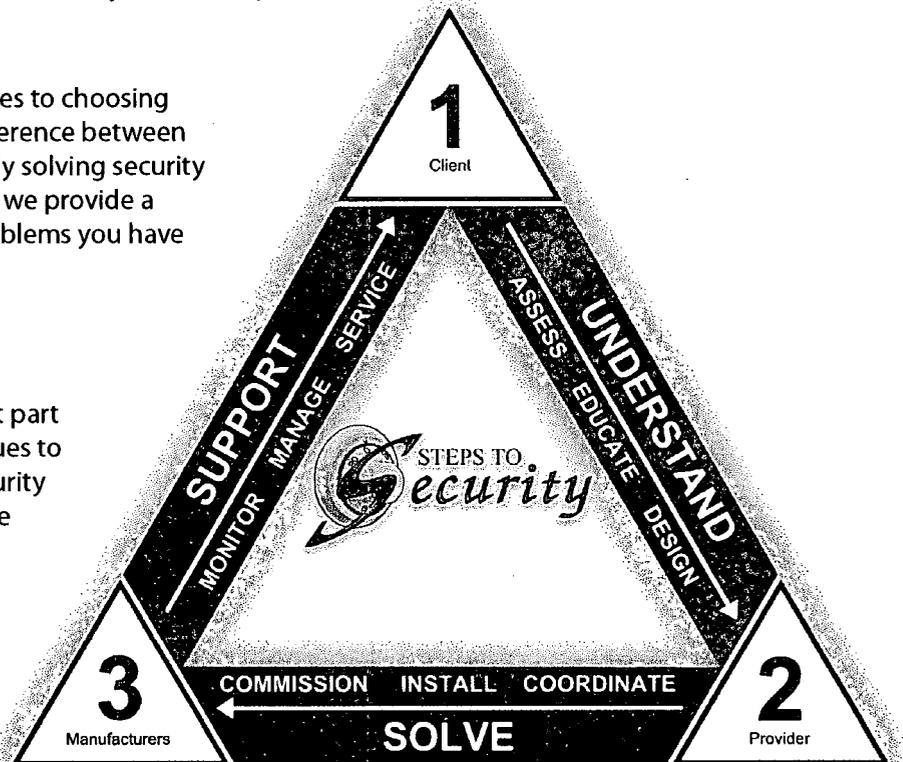
One size definitely does not fit all, especially when it comes to security. Dakota Security focuses on identifying the unique security needs of your organization by assessing not only your facility but also your business objectives and policies.

Solve

There are many options available when it comes to choosing a security partner. That choice is often the difference between simply having equipment installed and actually solving security problems. When you choose Dakota Security, we provide a tangible connection between the security problems you have and the solution we deploy.

Support

We know that our job doesn't end with the installation of equipment. The most important part of our job is ensuring that your system continues to provide you with peace of mind that your security goals are being accomplished. We will be there when you need us. 24/7/365.





Quality Assurance Program

The Dakota Security Systems Quality Assurance Program is designed to maintain overall customer satisfaction by providing a security system comprised of quality components, installed with unequalled workmanship standards. Through careful monitoring of this program, Dakota Security Systems is well equipped to offer this type of service to our clients. Our comprehensive quality assurance program includes the following elements:

Purchased Product Controls

A supplier rating system monitors performance and provides data to assist suppliers in assessing their improvement efforts.

Controls include:

- Supplier audits
- Receiving inspection
- Project material kitting and outgoing inspection

Employee Training

The philosophy that underpins our Quality Assurance Program is that the untapped resources inherent in employees and the development of their skills and knowledge are the most valuable assets any organization can possess. Our commitment to training is based on widely accepted research which confirms that the development of employees within organizations improves overall performance. Our Training Program "Dakota University" consists of a series of training courses that provide specific knowledge about systems, product, and installation and service standards that are vital to the success of our partnerships. Consistently high standards in program presentation have earned Dakota Security Systems, Inc. an excellent reputation in the industry to our approach to training and learning.

We are committed to:

- Encouraging our employees to grow and develop professionally
- Train new employees quickly using our standardized "Dakota University" Training Program available for every office location
- Provide a variety of formal training sessions utilizing vendors, manufacturers, industry professionals and associations and veteran employees including
 - Security Industry Association Certified Security Project Management Program <http://www.siaonline.org/education/CSPmanager.html>
 - National Institute for Certification in Engineering Technologies – NICET
 - PSA Security Network

Process Control

Custom Job Control Sheets and "As-Planned" drawings, including Riser Diagrams, are generated for each project. Detailed instructions and "punch-list" sheets accompany the installation or service data package. Standard Operating Procedures and technician sign-off sheets are maintained in the employee handbook.

Inspection and Testing

Pre- and post-installation material and equipment inspection and testing ensure defect prevention. Data generated by technicians and inspectors is recorded and reviewed at the final audit inspection by the project manager. Digital photography is used extensively during all stages of a project to ensure results.

Statistical Techniques

Statistical software is used throughout the process to facilitate process capability studies along with in process monitoring of critical quality characteristics. Historical data is constantly used to assess the effectiveness of process improvements.

Continuous Improvement

To maintain the highest levels of customer satisfaction, Dakota Security Systems uses the elements listed above as well as other methods to ensure continuous improvement throughout our operation.



Change Management

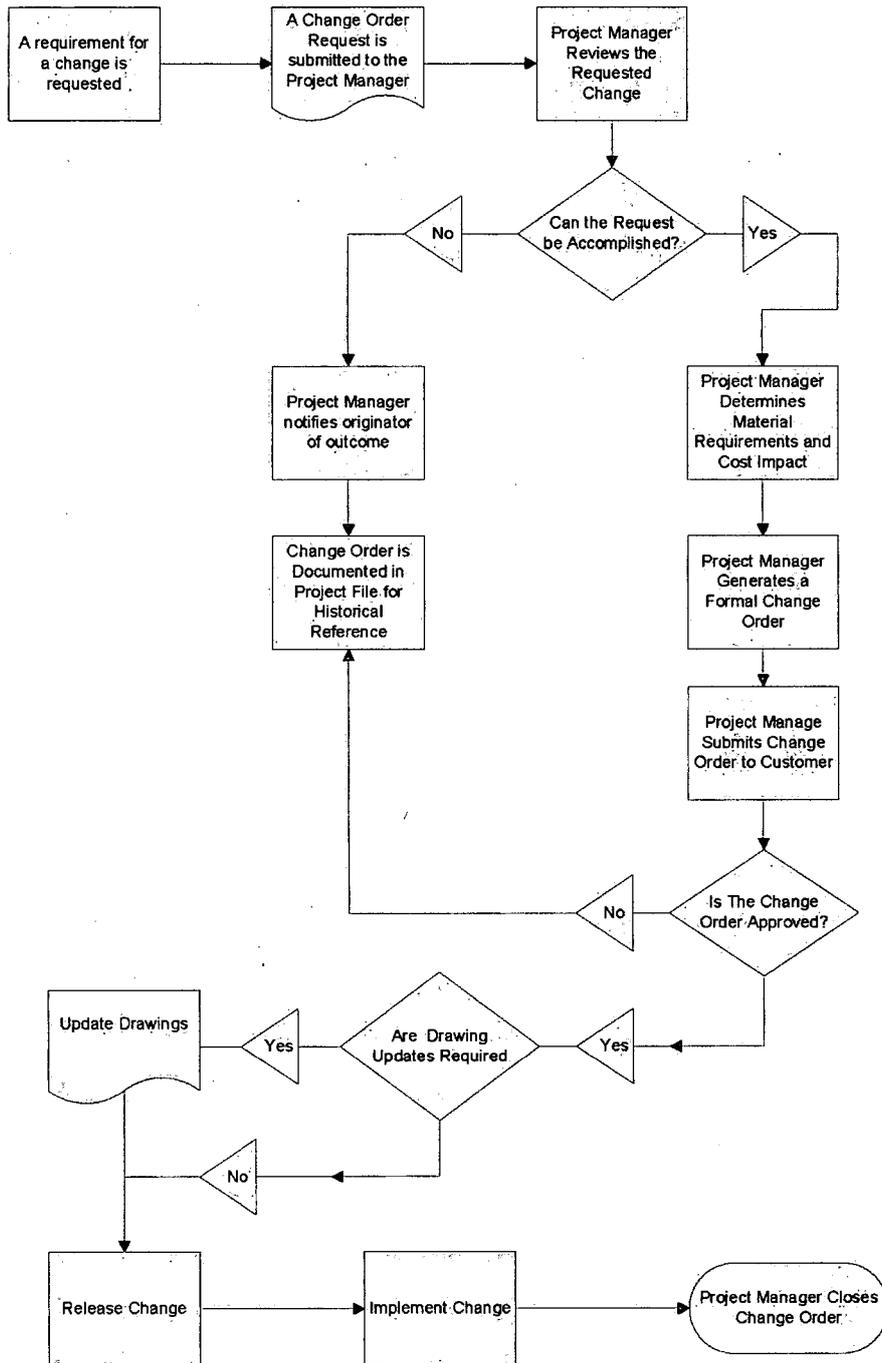
Dakota Security Systems, Inc. focuses on managing and controlling the inevitable changes in project scope. The need for scope change can come from customers, project team members, the environment, product obsolescence, technological advances and funding changes. Members from all interested parties (the customer, project manager, property manager, etc.) must approve change orders.

The Dakota Security Systems Change Management Procedure outlines how scope changes are evaluated, processed and integrated into the project. The following steps are taken in Dakota Security Systems Change Order System.

1. The need for a change in the scope of work is identified by either the customer or the project manager. If the request originates with the customer, he/she notifies the project manager of the request.
2. The Project Manager reviews the request and determines if the change is achievable. If the request cannot be accomplished, the Project Manager notifies the originator of the request of the outcome, and files the request for historical reference.
3. If the Project Manager determines that the request is achievable, he/she determines the material requirements and cost impact to the project.
4. If the change affects the contractual scope of work, the Project Manager documents the required change in the form of a "Change Order", which clearly describes the change and how it will impact the budget, schedule, and project deliverables.
5. The Change Order is issued to the customer for review and approval prior to any change order work commencement.
6. If the Change Order is not approved, the information is documented in the Job Notes register for historical reference, and no changes are made to the scope of work. If the Change Order has been approved, the project determines if AutoCAD drawings need to be updated.
7. Project AutoCAD drawings are revised if necessary.
8. The Project Manager implements the scope of work change and the Change Order documentation is filed in the customer file for historical reference.



CHANGE MANAGEMENT PROCESS



Why Choose Us?



www.dakotasecurity.com

We know Security



With the focus on security and security only, Dakota Security Systems has developed extensive expertise to overcome the toughest security challenges. Our experienced personnel will handle the entire life cycle of your project by providing a turnkey solution for every critical stage of your project. From design to service, you can count on Dakota Security Systems to have the solution. We know security and are looking forward to getting to know your organization.

- Founded in 1976.
- Average growth of 30% annually.
- 20,000 square foot headquarters located in Sioux Falls, South Dakota.
- Supported by a network of regional offices.
- Currently serving multiple Fortune 100 companies throughout the United States.
- Nation-wide installation and service capabilities.
- Extensive network of service partners throughout the United States.
- Dakota Security University training provides extensive product and industry education to employees.

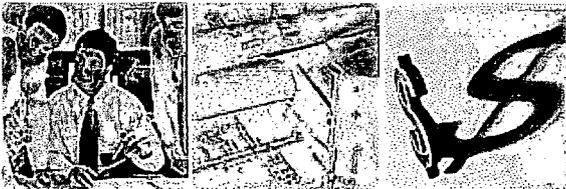
We know our Mission



Dakota Security Systems Inc. designs, installs and services state of the art electronic and physical security systems to protect our clients' property and personnel. These systems utilize the best equipment the industry has to offer and provide the features, performance and reliability that our customers demand from their security systems. Our highly-trained experts can design, install and service these systems.

We strive to develop business partnerships with our customers that provide the best quality, value and the highest level of customer service the industry has to offer. Loyalty and honesty above all else are the characteristics that will define the relationships that we have with our employees, customers and vendors.

We know how to Deliver.



Consulting

Design

Bidding

DESIGN

In the initial stages of your project, Dakota Security focuses on understanding the needs of your organization and developing a solution to meet those needs. We will put our security experts to work for you to design a system that protects your property and personnel.

INSTALLATION

The next step in our relationship will focus on the precise delivery of your designed system, keeping you informed throughout every step of the process. Our highly trained professionals will take the time to ensure that every component is installed with meticulous detail.



Project
Management

Installation

Integration



Training

Monitoring

Maintenance/
Service

SUPPORT

The final and ongoing stage in our relationship is support. To ensure that your system provides you with years of reliable service, Dakota Security will continue to provide exemplary support after the installation. We will be available 24/7/365 to respond in the event of an emergency. We guarantee we will be there when you need us.

We know our Customers



Why Choose Us?

We know **Security**

We know our **Mission**

We know the **Products**

 **SERVICE SATISFACTION SURVEY**

Dear Valued Customer:
Dakota Security Systems would like to thank you for giving us the opportunity to serve you. We value your opinion and ask if you could take a couple of minutes to answer the following survey questions. We appreciate your business and overall evaluation of Dakota Security Systems.

Please answer the following questions on a scale from 1 - 5
(5 = Strongly Agree to 1 = Strongly Disagree)

| | |
|--|---|
| 1. I know where to call for service. | 5 |
| 2. I received a response within an hour of when I called for service. | 5 |
| 3. I was treated by a technical support person who helped me with my service issue. | 5 |
| 4. The technical support person was courteous and professional. | 5 |
| 5. If a service visit was required I received a window of time and a date of when they would arrive. | 5 |
| 6. The service technician adhered to the timetable or called to inform me if they were delayed. | 5 |
| 7. The service technician was courteous and professional. | 5 |

©2004 Dakota Security Systems, Inc.

"Great customer service!"

"All the staff were very helpful."

"This was exceptional service."

"All of you are great to work with."

"The installers were very professional."

"The service we received was excellent."

"Always good working with your **friendly people**."

"The guys did a **great job!** Thank you so much!"

"Our account manager is **very prompt and responsive**."

"**Very happy** with the response time."

"I consistently get a **very high level of service** from Dakota Security that **exceeds my expectations**."



INSTALLATION SATISFACTION SURVEY

Dear Valued Customer:
Dakota Security Systems would like to thank you for giving us the opportunity to serve you. We value your opinion and ask if you could take a couple of minutes to answer the following questions. We appreciate your business and overall evaluation of Dakota Security Systems.

Please answer the following questions on a scale from 1 - 5:
(5 = Strongly Agree to 1 = Strongly Disagree)

- | | |
|---|---|
| 1. I am satisfied with the installation of my security equipment. | 5 |
| 2. The installers presented themselves in a professional and timely manner. | 5 |
| 3. The installers cleaned up after themselves when installation was finished. | 5 |
| 4. I was provided with a phone number to call if future service was needed. | 5 |
| 5. I am satisfied with the equipment that I purchased from Dakota Security Systems. | 5 |
| 6. I am satisfied with the sales representative I worked with. | 5 |
| 7. The sales proposals were easy to understand. | 5 |
| 8. My sales representative provided accurate information and timely follow-up. | 5 |

We know your **Business**

We know how to **Deliver**

We know our **Customers**

We know what you Want!



DAKOTA
Security
SYSTEMS, INC.

Sioux Falls

2201 E. 54th St. North
Sioux Falls, SD 57104
800.365.5625

Des Moines

201 SE Shurfine Drive
Suite 3
Ankeny, IA 50021
877.990.9430

Chicago

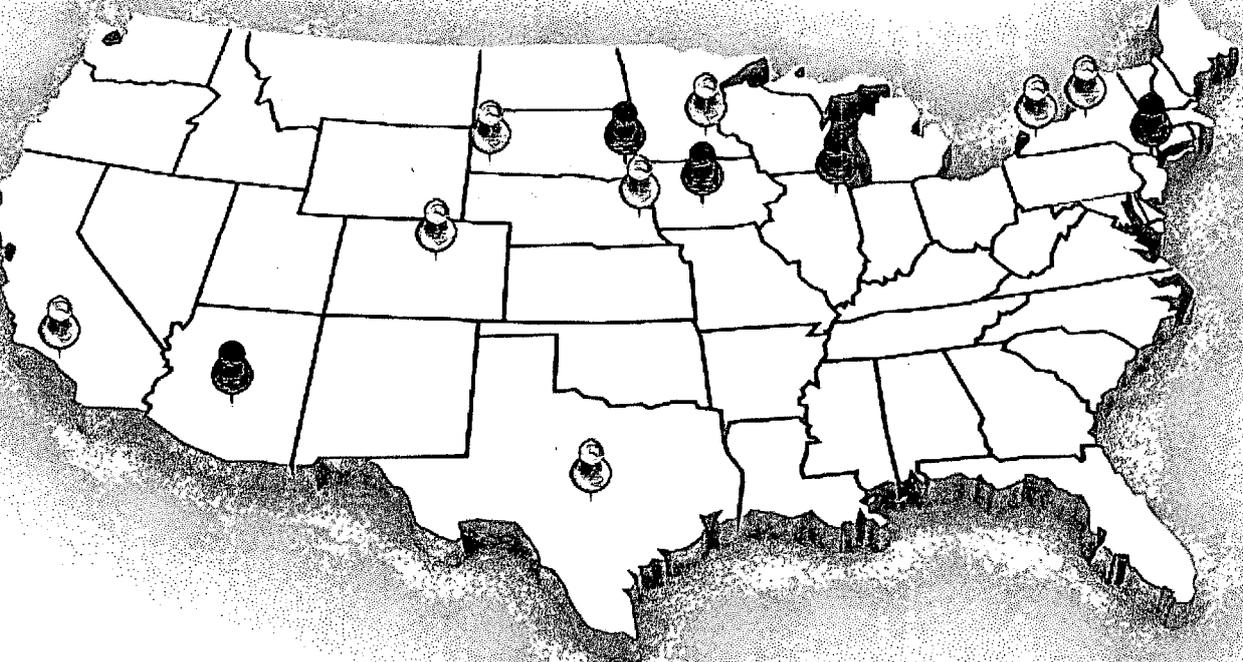
414 S. Vermont St.
Palatine, IL 60067
847.358.5200

New York

500 Church Street
Ridgefield, NJ 07657
866.325.6825

Phoenix

8146 N. 23rd Ave.
Suite D
Phoenix, AZ 85021
800-365-5625



 Regional Offices

 Remote Locations

www.dakotasecurity.com