



State of West Virginia  
 Department of Administration  
 Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

# Request for Quotation

RFQ NUMBER  
**DPS0726**

PAGE  
**1**

ADDRESS CORRESPONDENCE TO ATTENTION OF:  
**JOHN ABBOTT**  
**304-558-2544**

VENDOR

**Long's Security Cameras System**  
**102 38<sup>th</sup> Street**  
**Charleston, WV 25304**

SHIP TO

**WEST VIRGINIA STATE POLICE**  
**4124 KANAWHA TURNPIKE**  
**SOUTH CHARLESTON, WV**  
**25309 304-746-2141**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
02/15/2007				

BID OPENING DATE: **02/27/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		936-73		
<b>ADDENDUM #01</b>  THIS ADDENDUM IS ISSUED TO MODIFY THE REQUIREMENTS OF THE ORIGINAL SPECIFICATIONS. THE CHANGES ARE AS FOLLOWS:  * TO ALLOW THE OPTION FOR BIDDERS TO PROVIDE A QUOTATION ON REPLACING ALL EQUIPMENT, HARDWARE, SOFTWARE, WIRING, AND RELATED ITEMS NECESSARY TO SECURE THE FACILITY AS STATED IN THE ORIGINAL SPECIFICATIONS. THE WV STATE POLICE RESERVES THE RIGHT TO REQUEST REFERENCES, SAMPLES, OR DEMONSTRATION OF THE ALTERNATE SYSTEM BID, FOR EVALUATION PURPOSES.  NOTE TO ALL BIDDERS: THE ADDED CONSTRUCTION EXHIBIT ONLY APPLIES TO VENDOR'S BIDDING THE OPTION/ALTERNATE SYSTEM.  * EXTEND THE BID OPENING DATE TO 2/27/2007; 1:30 PM  <b>NOTE:</b> Specified is a proprietary card access sys available to only one in state vendor. Proposed LSCS system is available to all vendors.				<b>RECEIVED</b>  2007 FEB 27 P 1:16  PURCHASING DIVISION STATE OF WV		
ADDITION & UPGRADE TO CARD ACCESS SYSTEM W/SOFTWR.  EXHIBIT 5  NOTICE TO PROCEED: THIS CONTRACT IS TO BE PERFORMED WITHIN 30 CALENDAR DAYS AFTER THE NOTICE TO PROCEED IS RECEIVED. UNLESS OTHERWISE SPECIFIED, THE FULLY EXECUTED PURCHASE ORDER WILL BE CONSIDERED NOTICE TO				<b>\$ 40,000.00</b> <b>KEYSCAN SYS</b>		

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *Alan E Long* TELEPHONE: **304-925-0338** DATE: **2-27-07**

TITLE: **Owner** FEIN: **20-3881880** ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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<p>PROCEED.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE MATERIALS OR WORKMANSHIP SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HERE IN.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR KANAWHA COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.</p> <p>( ) BUILDERS RISK INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF BUILDERS RISK - ALL RISK INSURANCE IN AN AMOUNT EQUAL TO 100% OF THE AMOUNT OF THE CONTRACT.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alan E. King</i>	TELEPHONE <b>304-925-0338</b>	DATE <b>2-27-07</b>
TITLE <b>Owner</b>	FEIN <b>20-3881880</b>	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>(XX) BONDS: FIVE PERCENT (5%) OF THE TOTAL AMOUNT OF THE BID PAYABLE TO THE STATE OF WEST VIRGINIA, SHALL BE SUBMITTED WITH EACH BID AS A BID BOND. THE SUCCESSFUL BIDDER SHALL ALSO FURNISH A PERFORMANCE BOND AND LABOR/MATERIAL BOND FOR 100% OF THE AMOUNT OF THE CONTRACT. BONDS MAY BE PROVIDED IN THE FORM OF A CERTIFIED CHECK, IRREVOCABLE LETTER OF CREDIT, OR BOND FURNISHED BY A SOLVENT SURETY COMPANY AUTHORIZED TO DO BUSINESS IN THE STATE OF WEST VIRGINIA. A LETTER OF CREDIT SUBMITTED IN LIEU OF A PERFORMANCE AND LABOR &amp; MATERIAL BOND WILL ONLY BE ALLOWED FOR PROJECTS UNDER \$100,000. PERSONAL OR BUSINESS CHECKS ARE NOT ACCEPTABLE IN LIEU OF THE 5% BID BOND, PERFORMANCE BOND, OR LABOR AND MATERIAL BOND.</p> <p>( ) MAINTENANCE BOND: A TWO (2) YEAR MAINTENANCE BOND COVERING THE ROOFING SYSTEM WILL BE A REQUIREMENT OF THE SUCCESSFUL VENDOR.</p> <p>REV. 11/00</p> <p>EXHIBIT 7</p> <p>DOMESTIC ALUMINUM, GLASS &amp; STEEL IN PUBLIC WORKS PROJECTS</p> <p>IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., SEQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES</p>						

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<p>IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS.</p> <p>FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND TO BE UNREASONABLE. SUCH COST IS UNREASONABLE IF IT IS 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE PRODUCTS. IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS.</p> <p>IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE SUPPLYING FOREIGN ALUMINUM, GLASS OR STEEL.</p> <p>REV. 3/88</p> <p>EXHIBIT 9</p> <p>NOTICE FOR ISSUANCE &amp; ACKNOWLEDGEMENT OF CONSTRUCTION PROJECT ADDENDA</p> <p>THE ARCHITECT/ENGINEER AND/OR AGENCY SHALL BE REQUIRED</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alan E. [Signature]</i>	TELEPHONE <b>304-925-0338</b>	DATE <b>2-27-07</b>
TITLE <b>Owner</b>	FEIN <b>20-3881880</b>	ADDRESS CHANGES TO BE NOTED ABOVE

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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>TO ABIDE BY THE FOLLOWING SCHEDULE IN ISSUING CONSTRUCTION PROJECT ADDENDA FOR STATE AGENCIES:</p> <p>(1) THE ARCHITECT/ENGINEER SHALL PREPARE THE ADDENDUM AND A LIST OF ALL PARTIES THAT HAVE PROCURED DRAWINGS AND SPECIFICATIONS FOR THE PROJECT. THE ADDENDUM AND LIST SHALL BE FORWARDED TO THE BUYER IN THE STATE PURCHASING DIVISION. THE ARCHITECT/ENGINEER SHALL ALSO SEND A COPY OF THE ADDENDUM TO THE STATE AGENCY FOR WHICH THE CONTRACT IS ISSUED.</p> <p>(2) THE BUYER SHALL SEND THE ADDENDUM TO ALL INTERESTED PARTIES AND, IF NECESSARY, EXTEND THE BID OPENING DATE. ANY ADDENDUM SHOULD BE RECEIVED BY THE BUYER WITHIN FOURTEEN (14) DAYS PRIOR TO THE BID OPENING DATE.</p> <p>(3) ALL ADDENDA SHOULD BE FORMALLY ACKNOWLEDGED BY ALL BIDDERS AND SUBMITTED TO THE STATE PURCHASING DIVISION. THE SAME RULES AND REGULATIONS THAT APPLY TO THE ORIGINAL BIDDING DOCUMENT SHALL ALSO APPLY TO AN ADDENDUM DOCUMENT. THE ONLY EXCEPTION MAY BE FOR AN ADDENDUM THAT IS ISSUED FOR THE SOLE PURPOSE OF CHANGING A BID OPENING TIME AND/OR DATE.</p> <p>REV. 11/96</p> <p>EXHIBIT 10</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alan E. J...</i>	TELEPHONE <b>304-925-0330</b>	DATE <b>02-27-07</b>
TITLE <b>Owner</b>	FED. ID <b>20-3881880</b>	ADDRESS CHANGES TO BE NOTED ABOVE

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02/15/2007				

BID OPENING DATE: **02/27/2007** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NOS.:						
NO. 1			✓			
NO. 2						
NO. 3						
NO. 4						
NO. 5						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF THE BIDS.						
<i>Alan E. Day</i>				SIGNATURE		
LONGS SECURITY CAMERA SYSTEMS				COMPANY		
2-27-07				DATE		
REV. 11/96						
CONTRACTORS LICENSE						
WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alan E. Day</i>	TELEPHONE <b>925-0338</b>	DATE <b>2-27-07</b>
TITLE <b>Owner</b>	FEIN <b>20-3881880</b>	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME: ... <i>Longs Security Camera Systems LLC</i></p> <p>CONTRACTORS LICENSE NO.: ... <i>WV040102</i> .....</p> <p>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT</p> <p style="text-align: center;">APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULE AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>REV. 1/2005</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alan E. Long</i>	TELEPHONE <b>304-925-0338</b>	DATE <b>2-27-07</b>
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***** THIS IS THE END OF RFQ DPS0726 ***** TOTAL:						<u>40,000.00</u>
<p>NOTE: Specified system is proprietary</p> <p>NOTE: Proposed system is available to all through direct representation or through distributors.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

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TITLE Owner	FEIN 20-3881880	ADDRESS CHANGES TO BE NOTED ABOVE

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*ORIGINAL PACK*

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/30/2007				
BID OPENING DATE: 02/22/2007		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		936-73		\$40,000.00
<p>REQUEST FOR QUOTATION</p> <p>THE PURCHASING DIVISION IS SOLICITING BIDS FOR THE WEST VIRGINIA STATE POLICE TO PROVIDE AN UPGRADE AND MAKE ADDITIONS TO THE EXISTING CARD ACCESS SYSTEM.</p> <p>ATTACHMENTS: 1. SPECIFICATIONS 2. AFFIDAVIT</p> <p>MANDATORY PRE-BID: A MANDATORY ON-SITE PRE-BID WILL BE AT THE STATE POLICE HEADQUARTERS, 725 JEFFERSON ROAD, SOUTH CHARLESTON, WV 25309, ON FEBRUARY 14, 2007; 1:30 PM.</p> <p>ADDITION &amp; UPGRADE TO CARD ACCESS SYSTEM W/SOFTWR.</p> <p>VENDOR PREFERENCE CERTIFICATE</p> <p>CERTIFICATION AND APPLICATION* IS HEREBY MADE FOR PREFERENCE IN ACCORDANCE WITH WEST VIRGINIA CODE, 5A-3-37 (DOES NOT APPLY TO CONSTRUCTION CONTRACTS).</p> <p>A. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:</p> <p>( ) BIDDER IS AN INDIVIDUAL RESIDENT VENDOR AND HAS RESIDED CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS</p>						

*see addendum cover*

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *Alan E. King* TELEPHONE: **304-925-0338** DATE: **2-27-07**

TITLE: *Owner* FEIN: **20-3881880** ADDRESS CHANGES TO BE NOTED ABOVE

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# STATE OF WEST VIRGINIA VENDOR PREFERENCE CERTIFICATE

Certification and application\* is hereby made for Preference in accordance with West Virginia Code, §5A-3-37. (Does not apply to construction contracts).

**West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

**A. Application is made for 2.5% preference for the reason checked:**

- Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification;
- or
- Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification;
- or
- Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification.

**B. Application is made for 2.5% preference for the reason checked:**

- Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid;
- or
- Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid.

Bidder understands if the Secretary of Tax & Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) rescind the contract or purchase order issued; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Tax & Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

**Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.**

Bidder: Longs Security Camera Systems LLC      Signed: Alvin E Long  
 Date: 2-27-07      Title: Owner

\*Check any combination of preference consideration(s) in either "A" or "B", or both "A" and "B" which you are entitled to receive. You may request up to the maximum of 5% preference for both "A" and "B".

# A F F I D A V I T

**West Virginia Code §5A-3-10a states:**

No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**EXCEPTION:**

The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**LICENSING:**

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

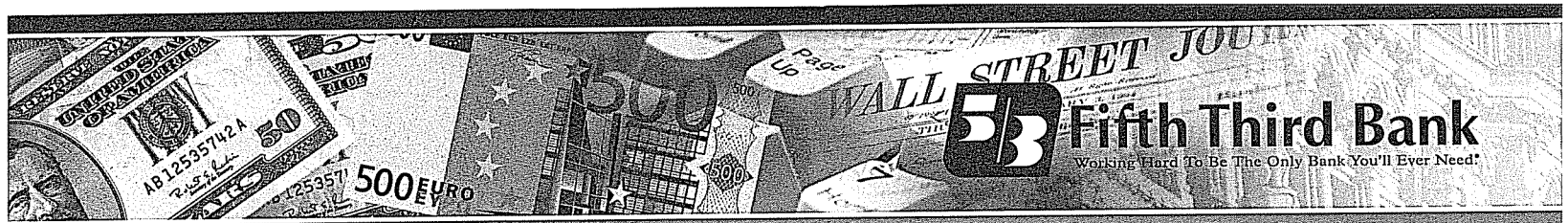
**CONFIDENTIALITY:**

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: Longs' Security Camera Systems LLC

Authorized Signature: Alan E Long Date: 2-27-07



Letter of Credit

State of West Virginia  
Department of Administration  
Purchasing Division

RFQ# DPS0726

To Whom It May Concern:

Be it known that on the 27<sup>th</sup> day of February 2007 Long's Security Camera System has secured a credit line with Fifth Third Bank in Kanawha City, Charleston, WV for the sum of \$2000.00.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Chris Garner'.

Chris Garner  
Financial Center Manager  
4515 MacCorkle Ave SE  
Charleston, WV 25304  
Phone: 304-925-5322



**AGREEMENT ADDENDUM**

In the event of conflict between this addendum and the agreement, this addendum shall control:

1. **ARBITRATION** - Any references to arbitration contained in the agreement are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.
2. **HOLD HARMLESS** - Any clause requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.
3. **GOVERNING LAW** - The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.
4. **TAXES** - Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.
5. **PAYMENT** - Any references to prepayment are deleted. Payment will be in arrears.
6. **INTEREST** - Should the agreement include a provision for interest on late payments, the Agency agrees to pay the maximum legal rate under West Virginia law. All other references to interest or late charges are deleted.
7. **RECOUPMENT** - Any language in the agreement waiving the Agency's right to set-off, counterclaim, recoupment, or other defense is hereby deleted.
8. **FISCAL YEAR FUNDING** - Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.
9. **STATUTE OF LIMITATION** - Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.
10. **SIMILAR SERVICES** - Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.
11. **ATTORNEY FEES** - The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.
12. **ASSIGNMENT** - Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.
13. **LIMITATION OF LIABILITY** - The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision limiting the Vendor's liability for direct damages or limiting the Vendor's liability under a warranty to a certain dollar amount or to the amount of the agreement is hereby deleted. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.
14. **RIGHT TO TERMINATE** - Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor.
15. **TERMINATION CHARGES** - Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.
16. **RENEWAL** - Any reference to automatic renewal is hereby deleted. The agreement may be renewed only upon mutual written agreement of the parties.
17. **INSURANCE** - Any provision requiring the Agency to insure equipment or property of any kind and name the Vendor as beneficiary or as an additional insured is hereby deleted.
18. **RIGHT TO NOTICE** - Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.
19. **ACCELERATION** - Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.
20. **AMENDMENTS** - All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

**ACCEPTED BY:**  
**STATE OF WEST VIRGINIA**

Spending Unit: \_\_\_\_\_

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**VENDOR**

Company Name: Longs' Security Camera Sys LLC

Signed: Alan C. Long

Title: Owner

Date: 2-27-07

# Access Control System

For

## West Virginia State Police Headquarters

Presented To:

State of West Virginia  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305

C/O West Virginia State Police

Presented By:

Alan Long  
Longs' Security Camera Systems LLC  
38<sup>th</sup> Street SE  
Charleston, West Virginia 25304

# Longs' Security Camera Systems

102 38<sup>th</sup> Street SE

Charleston West Virginia 25304

Phone: (304) 925-0338 Fax: (304) 925-0338 Email: longscctv@Charter.net

11 years Experience \* BS Electronic Engineering Technology Degree \* Military Electronics Trained (USMC Avionics)  
Closed Circuit Television System \* Complete Digital Recording Solutions \* Commercial \* Residential

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## Table of Contents

Section #1:	Itemized Bid
Section #2:	Warranty Statement Insurance Document Contractors Licence Reference List Vendors Resume
Section #3	Equipment Submittal Data Sheets This section contains data sheets of the proposed equipment detailing dimension, functions, and features.

# Longs' Security Camera Systems

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11 years Experience \* BS Electronic Engineering Technology Degree \* Military Electronics Trained (USMC Avionics)

Closed Circuit Television System \* Complete Digital Recording Solutions \* Commercial \* Residential

TO: West Virginia State Police	Proposal ID: WVStatePolice
Attn: WV Purchasing Division/John Abbott	Date: 02-27-07
2019 Washington Street East	Terms: Net at Completion
Post Office Box 50130	
Charleston, WV 25305-0130	Sales Tax: Not Included
Phone: 304-558-2544	FOB: Job Site
Fax:	Proposal Expires:

**Project Name: WV State Police Card Access Addition and Upgrades**  
**RFQ: DPS0726**

Proposal is for Longs Security Camera Systems to provide and install replacement upgraded card access system at the West Virginia State Police Headquarters, South Charleston.

Qty	Manufacture	Part Number	Description
1	Keyscan		Free Factory Software Support \$0.00
1	Keyscan	System V	Keyscan System V Software Package \$476.48
1	Keyscan	System VPH	Keyscan System V Photobadging Module \$476.48
1600	Keyscan	HID-C1325-200	HID Keyscan 36 Bit Proximity Cards (packages of 200) \$571.05 Per Pack / \$4,568.40 Total
4	Keyscan	CA8000	8 Reader Panel, 16 Aux Inputs, 8 Time Programmable Outputs \$2550.15 Per Unit / \$10,200.60 Total
1	Keyscan	CA200	2 Reader Panel, 8 Aux Inputs, 4 Time Programmable Outputs \$945.00 Per Unit
10	Altronix	TP1640	16.5V/40VA Plug in Transformer \$10.13 Per Unit / \$101.25 Total
5	Altronix	BT126	12V 7Ah Battery \$19.58 Per Unit / \$97.88
1	Keyscan	NETCOM2P	Keyscan RS-232 to TCP/IP \$317.25 Per Unit
5	Keyscan	CB-485	RS-485 Communication Board \$87.41. Per Unit / \$437.06
33	Keyscan	K-PROX-SG	Keyscan HID Proximity Reader \$136.55 Per Unit / \$4506.23. Total
5	SDC	1581V-DPS	650lbs Maglock w/Built-In Door Position Switch \$219.98 Per Unit / \$1,099.91 Total
5	SDC	423U	Push to Exit w/1-60 Sec Timer \$81.00 Per Unit / \$405.00 Total

5	SDC	MD-31D-B	Request to Exit Device \$143.10 Per Unit / \$715.50 Total
5	Altronix	AL125U	1Amp Power Supply w/ Integrated Fire Alarm Disconnect and Batteries \$87.75 Per Unit / \$438.75 Total
1	LSCS	Lot	Lot Installation Labor and Installation Materials \$13,250.33 Total
			<b>Grand Total \$40,000.00</b>

Please Note the Following:

- Keyscan does not charge for yearly software support or software upgrades.
- Keyscan does not need reader surge suppressors; Keyscan has built-in surge suppression on all reader inputs.
- Keyscan readers do not need a separate part number for trim plates; these plates are included with the reader.
- Keyscan readers do not require stand offs.
- LSCS has provided and additional 800 cards to replace current cards the State Police have in use and in storage.
- Keyscan will use the current card printer and computer.

TERMS AND CONDITIONS:

- Manufacture warranty during normal working hours will be provided on all new equipment provided by Long's Security Cameras Systems. Abuse, Neglect or Acts of God not covered under warranty agreement.
- Two Year Warranty on labor. Any special lift or equipment is to be provided by the owner.
- Sales Tax Not Included
- Long's Security Camera Systems reserve the right to make equipment substitutions on quoted equipment providing the changes do not affect the performance and quality of the system.
- Owner to provide 120 Volts Power to power CCTV equipment as required. Established electrical circuit are usually adequate providing the source is a clean electrical source and un-switched.

Thank you,



Alan E. Long  
Owner  
Long's Security Camera Systems

ACCEPTANCE OF PROPOSAL

\_\_\_\_\_ Approval Signature  
 \_\_\_\_\_ Signatures Title  
 \_\_\_\_\_ Date  
 \_\_\_\_\_ Purchase Order Number

# Longs' Security Camera Systems LLC

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102 38<sup>th</sup> Street • Charleston, WV 25304 • Phone: 304 925-0338 • Fax: 304-925-0338  
e-mail: longscctv@suddenlink.net

## Warranty Statement

The proposed System and Materials are offered according to the following terms and conditions.

- One-year factory warranty on all equipment and all software.
- Two-year warranty on all installation labor.
- One year warranty on all installation materials.
- Warranty coverage includes one-year parts and technical labor.
- Warranty coverage includes Technical Labor between the hours of 8:00AM-4: 30PM Monday –Friday, except Holidays.
- Warranty covers only viability of software. Warranty does not cover existing computers, servers, networks, existing network software and/or any conflict of proposed software with existing software. The owner's network administrator will be responsible for establishing available Network IP addresses and Socket Ports.
- Warranty does not cover any wire and/or hardware associated with existing LAN Network.
- As-Built drawings are warranty for correctness. The owner will be responsible to provide to Longs' Security Camera Systems LLC complete and accurate, to scale, drawings of the facility.
- Warranty does not cover damage from floods, storms and/or any natural disaster defined as an "Acts of God".
- Warranty does not cover equipment and /or software that has been tampered with, abused and/or vandalized.
- Longs' Security Camera Systems LLC can not be responsible for delivery delays caused by strikes, accidents or incidents beyond our control.
- Longs' Security Camera Systems LLC can not be responsible for delays due to improper handling and/or any improper deliveries of equipment by delivery companies.
- Warranty voided should the equipment be modified or has any other unauthorized work performed on the system by anyone other than the Longs' Security Camera Systems LLC within the warranty period.

# ACORD<sup>TM</sup> CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)

02/20/2007

**PRODUCER**

 Insurance Intermediaries, Inc.  
 460 Busch Blvd., Suite 100

Columbus, OH 43229-1737

**INSURED** Long's Security Camera Systems LLC

102 38th St SE

Charleston, WV 25304

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

**INSURERS AFFORDING COVERAGE**
**NAIC#**

INSURER A: Scottsdale Insurance Co.

INSURER B:

INSURER C:

INSURER D:

INSURER E:

**COVERAGES**

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

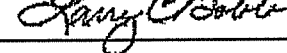
INSR ADD'L LTR	INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE(MM/DD/YY)	POLICY EXPIRATION DATE(MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY	CLS1367547	02/19/2007	02/19/2008	EACH OCCURRENCE	\$ 300,000
		<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 100,000
		<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person)	\$ 5,000
						PERSONAL & ADV INJURY	\$ 300,000
						GENERAL AGGREGATE	\$ 600,000
						PRODUCTS - COMP/OP AGG	\$ 600,000
GEN'L AGGREGATE LIMIT APPLIES PER:							
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
		AUTOMOBILE LIABILITY				COMBINED SINGLE LIMIT (Ea accident)	\$
		<input type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	\$
		<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$
		<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	\$
		<input type="checkbox"/> HIRED AUTOS					
		<input type="checkbox"/> NON-OWNED AUTOS					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	\$
		<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC AGG	\$
							\$
		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	\$
		<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE	\$
							\$
		<input type="checkbox"/> DEDUCTIBLE					\$
		<input type="checkbox"/> RETENTION \$					\$
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY				WC STATUTORY LIMITS	OTHER
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?				E.L. EACH ACCIDENT	\$
		If yes, describe under SPECIAL PROVISIONS below				E.L. DISEASE - EA EMPLOYEE	\$
		OTHER				E.L. DISEASE - POLICY LIMIT	\$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

**CERTIFICATE HOLDER**
**CANCELLATION**

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



## **IMPORTANT**

If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

## **DISCLAIMER**

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.





**WEST VIRGINIA  
CONTRACTOR  
LICENSING  
BOARD**

# CONTRACTOR LICENSE

Authorized by the  
**West Virginia Contractor Licensing Board**

**Number:** WV040102

**Classification:**  
LOW VOLTAGE SYSTEMS

LONGS SECURITY CAMERA SYSTEMS LLC  
102 38TH STREET SE  
CHARLESTON, WV 25304

**Date Issued**

**Expiration Date**

JANUARY 26, 2007	JANUARY 26, 2008
------------------	------------------

Authorized Company Signature

*Michael A. Carl*

Chair, West Virginia Contractor  
Licensing Board

This license, or a copy thereof, must be posted in a conspicuous place at every construction site where work is being performed. This license number must appear in all advertisements, on all bid submissions and on all fully executed and binding contracts. This license cannot be assigned or transferred by licensee. Issued under provisions of West Virginia Code, Chapter 21, Article 11.



# Longs' Security Camera Systems LLC

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102 38<sup>th</sup> Street • Charleston, WV 25304 • Phone: 304 206-7131 • Fax: 304-925-  
E-mail: longscctv@charter.net

## REFERENCE

Pinecrest Hospital  
105 South Eisenhower Drive  
Beckley, WV 25801  
Contact: Tim Summers/Bob Brown  
Phone: 304-256-6600

- Twenty Four Door Card Access System in large extended care facility.
- Nine Door Patient Wandering Systems in large extended care facility
- Security Network to intergrate both system to one access point.

Foodland  
50th Street SE  
Charleston, WV 25304  
Contact: Rick Joseph  
Phone: 304-925-2153

- Fifty Two Camera, 3TB Digital Camera System in retail grocery store.
- Forty Eight Camera, Digital Camera System in retail gracery store.

Kanawha County Schools  
300 Pennsylvania Ave  
Charleston, WV 25302  
Contact: Tim Easterday  
Phone: 304-348-6120

- Ruffner Elementary Camera System
- Dunbar Middle Camera System
- East Bank Middle School Camera System
- Bonham Elementary Camera System

Medical Action Industries  
10 Columbus Blvd  
Clarksburg, WV 26301  
Contact: Bill Seckman  
Phone: 304-6229366

- Fifteen Camers Systems, Digital Recording System in large manufacturing facility.

**Alan E. Long**  
102 38<sup>th</sup> Street SE, Charleston, WV 25304  
Phone (304) 925-2367, E-mail A676Long@Charter.net

## **CAREER OBJECTIVES**

A supervisory and/or sales career position that will be both be challenging and rewarding. A position that utilizes my Electronic Engineering Degree, Electrical/Electronic experience and construction background.

## **EDUCATION**

**BS. West Virginia Institute of Technology**, Montgomery, Graduated December, 1995  
Major: Electronic Engineering Technology; G.P.A. 2.87  
Elective Concentration: Business; G.P.A. 3.57      Overall: G.P.A. 2.92

## **EXPERIENCE**

**Avionics System Technician**, United States Marine Corps, V.M.F.A., Beaufort, SC: July 84 - April 90

- Night crew supervisor of the Communication, Navigation/Radar shop.
- Tested and repaired avionics systems utilizing test equipment and technical manuals.
- Additional responsibilities: Quality control, Safety Supervisor, Hazardous Material Control, Tool Control, Corrosion Control, and Embarkation

**Electrician**, Trudeau Electric, Hilton Head SC: 1990 - 91

- Installed residential and commercial electrical wiring to specifications.
- Tested and repaired residential and commercial electrical wiring.

**Building Systems Salesman**, Simplex Time Recorder Company Inc., NorthGate Business Park, 10 Kenton Drive, Charleston, WV: January 96 - October 97

- Responsible for maintaining and building a customer base.
- Wrote specifications and designed fire alarm, sound, and security systems for engineers and end-users by direction of customer needs and applicable codes.
- Interpreted bid specifications and drawings, utilizing this information to design the appropriate system.

**Building Systems Sales, New Construction**, Electronic Specialty Company, 1325 Dunbar Avenue, PO Box 400, Dunbar, WV, 25064

- Developed specifications and designed fire alarm, sound, and security systems for engineers, architects and end-users by direction of customer needs and applicable codes.
- Interpreted bid specifications and drawings, utilizing this information to design the appropriate system.
- Maintain working knowledge of past, present and up-coming construction project in pre-set territory.
- Responsible for project management to include: system design, product ordering, shipment scheduling and managing project man-hours and service requests.

**Building Systems Sales, End-User Focus**, Buchanan Sound & Electronics, Inc., 420 16<sup>th</sup> Street, Dunbar, Dunbar, WV, 25064

- Develop job-specific specifications and system lay-outs for engineers, architects and end-users by direction of customer needs and applicable codes.
- Developed new customer relationships and maintained current customer relationships by providing competitive product lines coupled with quality customer service.
- Interpreted bid specifications and drawings, utilizing this information to design and bid the appropriate building systems.
- Responsible for project management to include: system design, product ordering, shipment scheduling and managing project man-hours and service requests.
- Maintain working knowledge of past, present and up-coming construction project.
- Maintained working knowledge of represented vendors and products lines.
- Installed and Programmed CCTV and Card Access System Headends.

## **Computer and Programming Skills:**

Microsoft Office, Internet, AutoCad14, Identocard Card Access Badging Systems, Galaxy Card Access Programming, Pelco CCTV Systems, Securtex Digital CCTV Systems

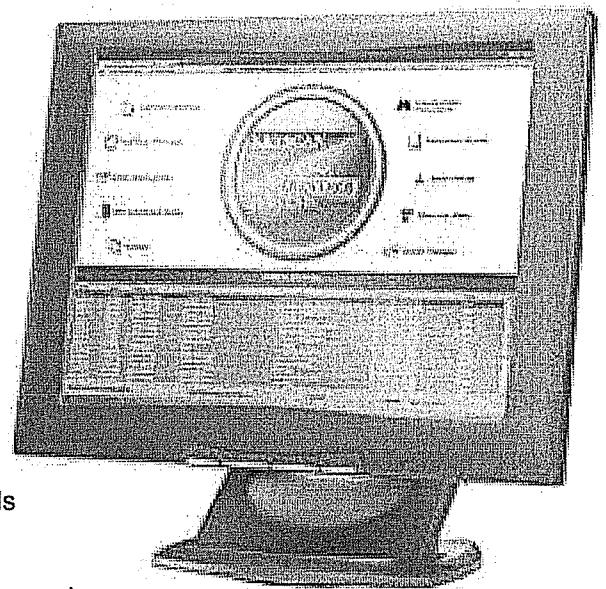


# System V

## Standard Software

Keyscan's Management System V - stretches flexibility to the maximum for total control.

- Supports multiple communication modes - serial, LAN/WAN, and modem
- Has user-selectable languages - English, French, & Spanish
- Emails alarms or critical messages automatically to PCs, cell phones, or pagers
- Has alarm summary, instructions, & interactive maps for timely response
- Offers user-formatted transaction reports for management analysis & overview
- Has time-saving import & export feature for cardholder records
- Offers CCTV integration
- Schedules automatic database backups for protection of site records
- Has a Disaster Recovery utility for added safety of system data
- Includes context-sensitive on-line help with detailed instructions
- Has "First Person In" feature to stop unauthorized persons from gaining access to doors set on timed auto-unlock
- Has a "Not Used Since" feature to conveniently identify non-active cardholders
- Has a "Handicap Accessibility" feature with separate door monitor settings for persons with disabilities
- Includes a temporary card feature with date range and usage countdown beneficial for visitors and memberships
- Allows for expansion as new panels added without having to purchase new software





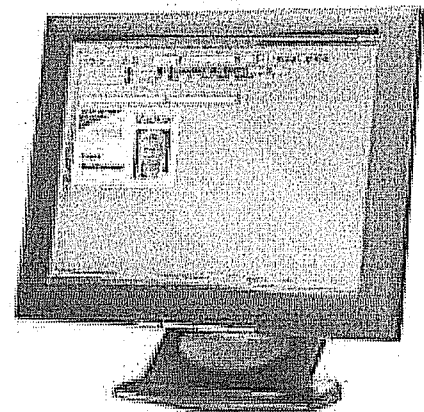
# Photo Badging & Verification

System VPH

Keyscan's Photo Badging & Verification module integrates with System V for a streamlined badging operation and offers the added benefit of greater security.

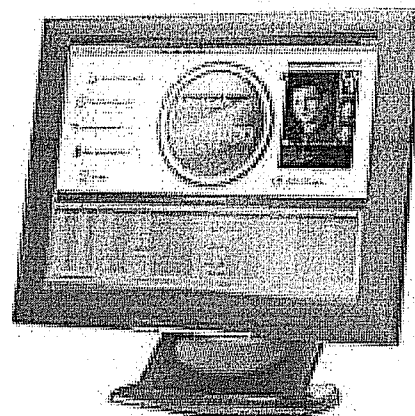
## Photo Badging

- Has a full suite of drawing tools and graphic import feature for logos, backgrounds, and images
- Supports and prints a variety of industry-standard barcode types
- Creates unlimited template designs to distinguish departments or areas of authorization
- Share cardholder images with other departments such as human resources



## Photo Verification

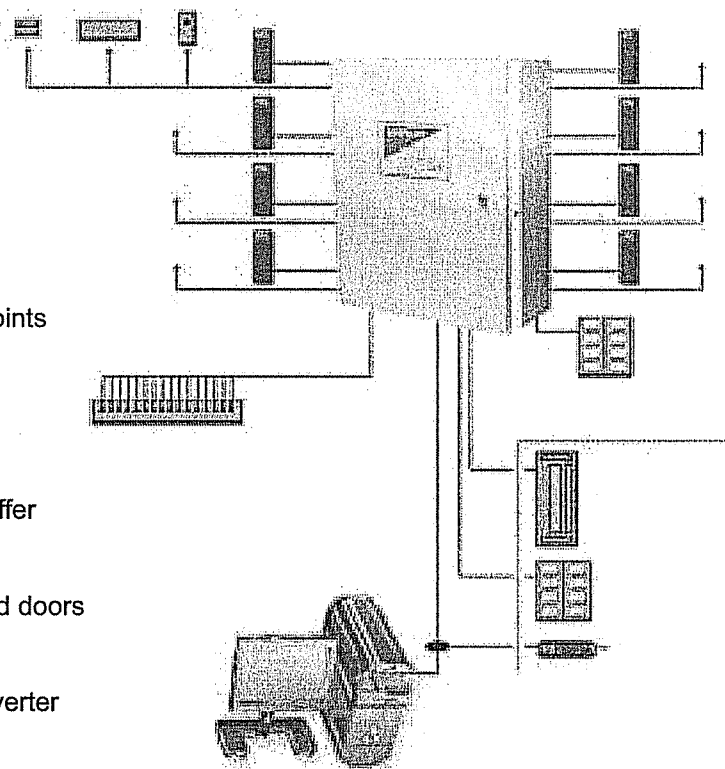
- Displays cardholder image and transaction details immediately following site activity
- Compare on-screen image to actual cardholder
- Has an "Always On Top" setting for constant monitoring of photo verification window even if other programs are open
- Ideal for monitoring main access points where security is critical



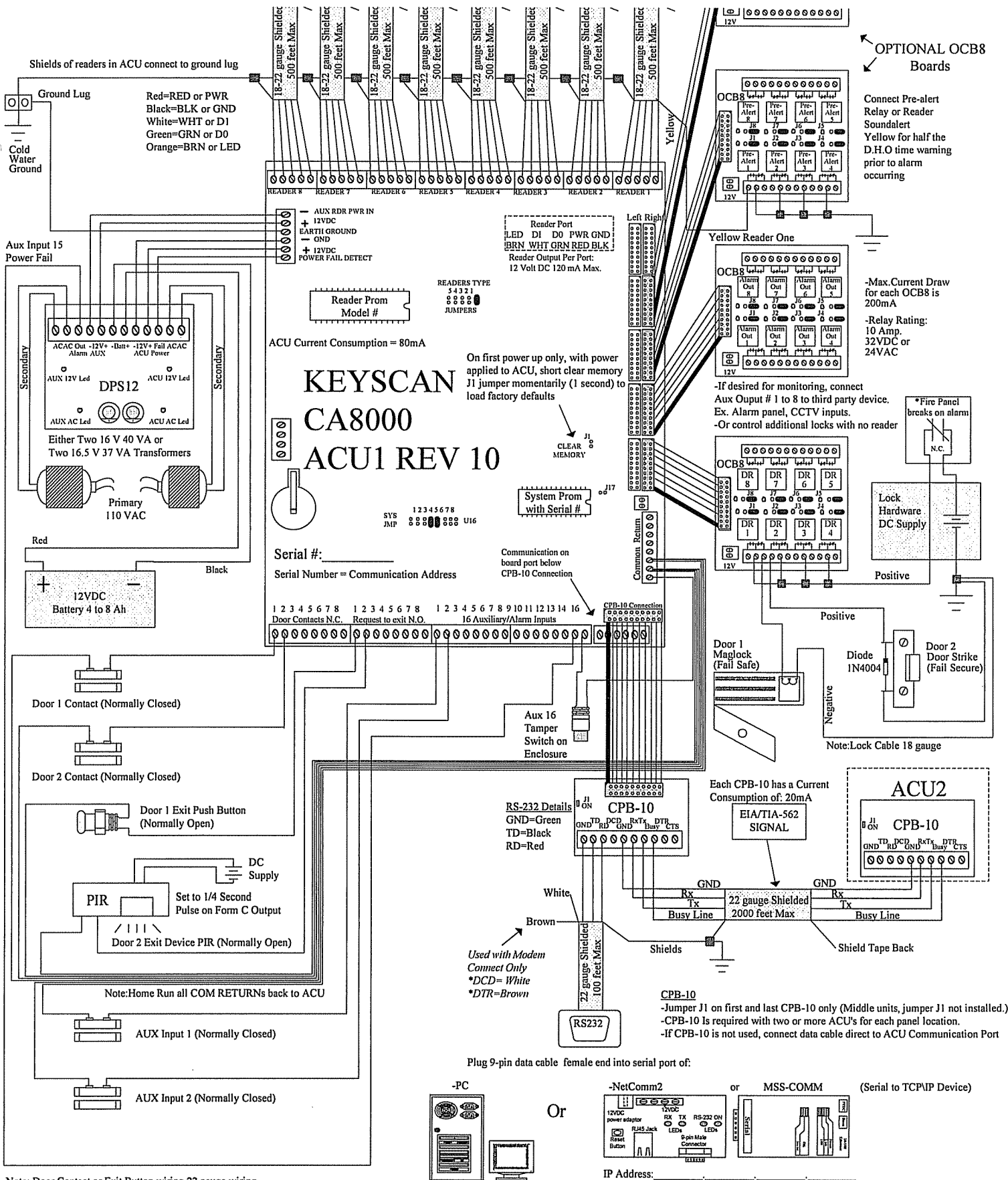


Keyscan's CA 8000 is a cost-effective 8-door control system.

- Supports any combination of 8 readers or keypads
- 16 auxiliary input points
- 8 time-programmable outputs
- Separate power supply input for proximity readers
- Up to 64 programmable supervised input points and output points - optional
- Stores up to 32,000 cards per site with no limit on the number of sites
- Retains last 6000 transactions in activity buffer
- Monitors forced entry and door held open conditions for all reader-controlled doors
- Controls unlimited remote sites with optional dial-up modem or TCP/IP converter
- Downloads data via modem to any system connected PC at pre-programmed times
- Heavy-duty 10 amp relays ensure long life and reliability
- Dual processors for uninterrupted system performance - panels operate during uploading and downloading of data
- Removable terminal blocks for easier installation and service
- Reads most competitors' proprietary card formats
- Reads multiple card formats simultaneously - beneficial on system takeovers
- 2 year warranty



Example Configuration

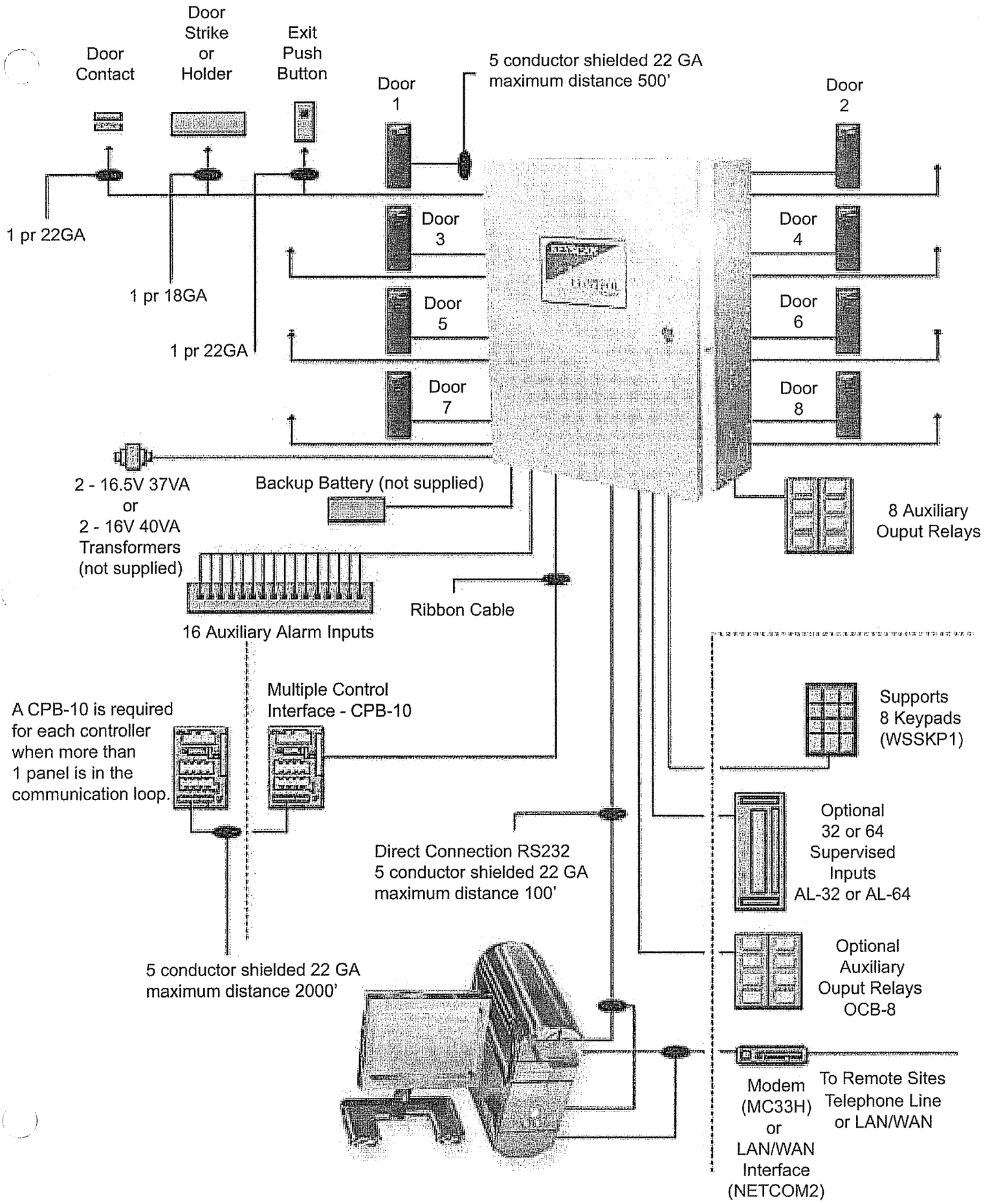


Note: Door Contact or Exit Button wiring 22 gauge wiring

Door Name 1:	Reader Numbers and Direction:
Door Name 2:	Reader Numbers and Direction:
Door Name 3:	Reader Numbers and Direction:
Door Name 4:	Reader Numbers and Direction:
Door Name 5:	Reader Numbers and Direction:
Door Name 6:	Reader Numbers and Direction:
Door Name 7:	Reader Numbers and Direction:
Door Name 8:	Reader Numbers and Direction:

-PC Or -NetComm2 or MSS-COMM (Serial to TCP/IP Device)  
 IP Address: \_\_\_\_\_

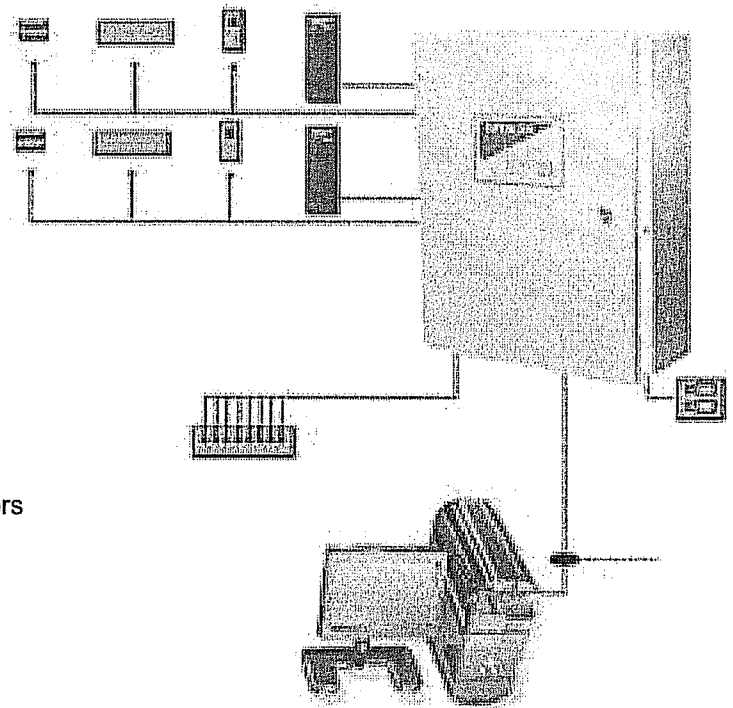
# CA 8000 - 8 Reader Control



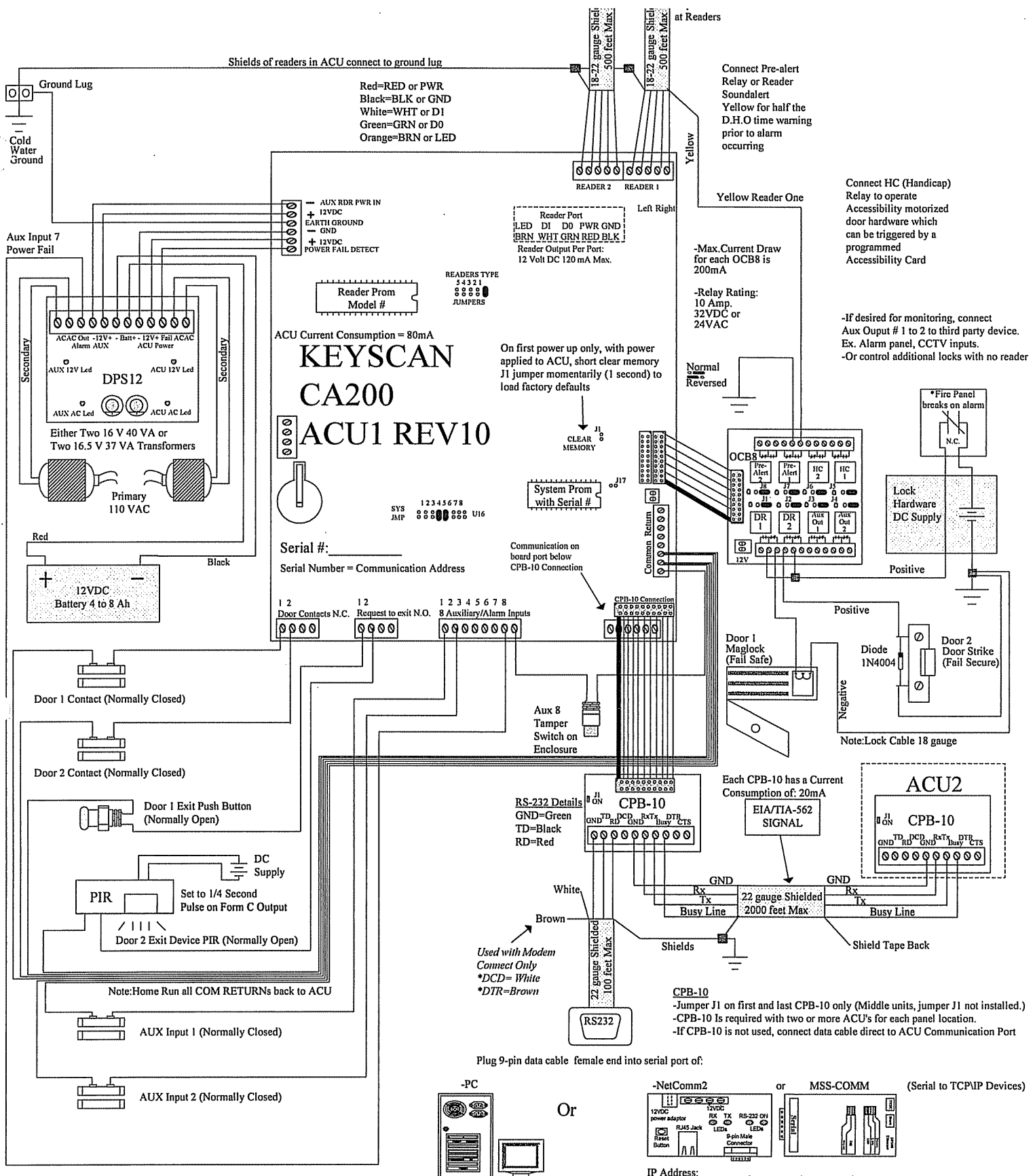


Keyscan's CA 200 door access control panel has these high-end features in a 2-reader system:

- Supports any combination of 2 readers or keypads
- 8 alarm inputs to monitor auxiliary input points
- 2 time-programmable outputs (re-programmable to 4 if handicap outputs not used)
- Stores up to 32,000 cards per site with no limit on the number of sites
- Retains last 6000 transactions in activity buffer
- Monitors forced entry and door held open conditions for all reader-controlled doors
- Controls unlimited remote sites with optional dial-up modem or TCP/IP converter
- Downloads data via modem to any system connected PC at pre-programmed times
- Heavy-duty 10 amp relays ensure long life and reliability
- Dual processors for uninterrupted system performance - panels operate during uploading and downloading of data
- Removable terminal blocks for easier installation and service
- Each reader has its own terminal block
- Mix or match access control units for economical installation
- Reads most competitors' proprietary card formats
- Reads multiple card formats simultaneously - beneficial on system takeovers
- 2 year warranty



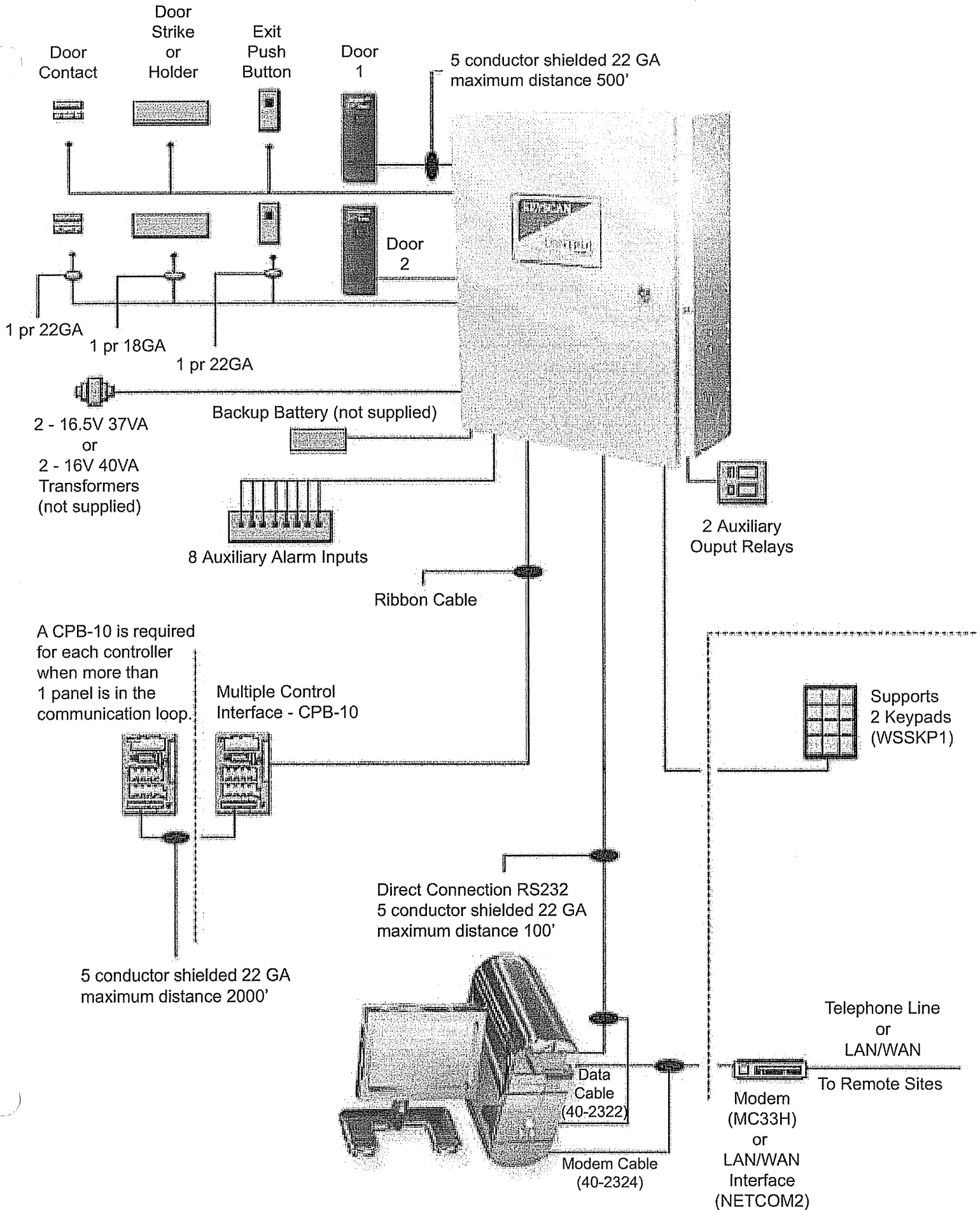
Example Configuration



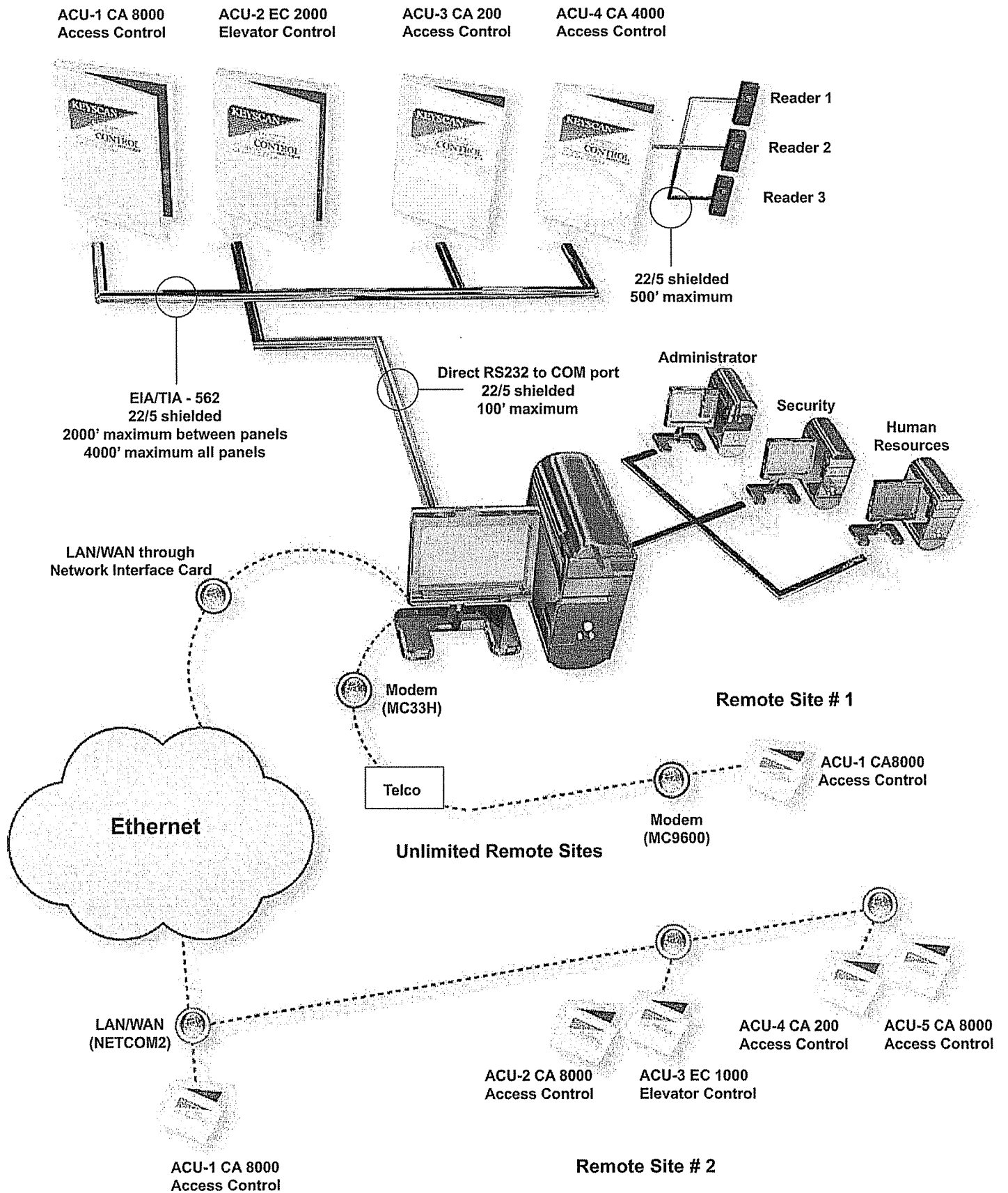
Note: Door Contact or Exit Button wiring 22 gauge wiring

Door Name 1:	Assigned Reader Numbers and Direction:
Door Name 2:	Assigned Reader Numbers and Direction:
Auxiliary Input Name 1:	Auxiliary Input Name 5:
Auxiliary Input Name 2:	Auxiliary Input Name 6:
Auxiliary Input Name 3:	Auxiliary Input Name 7:
Auxiliary Input Name 4:	Auxiliary Input Name 8:

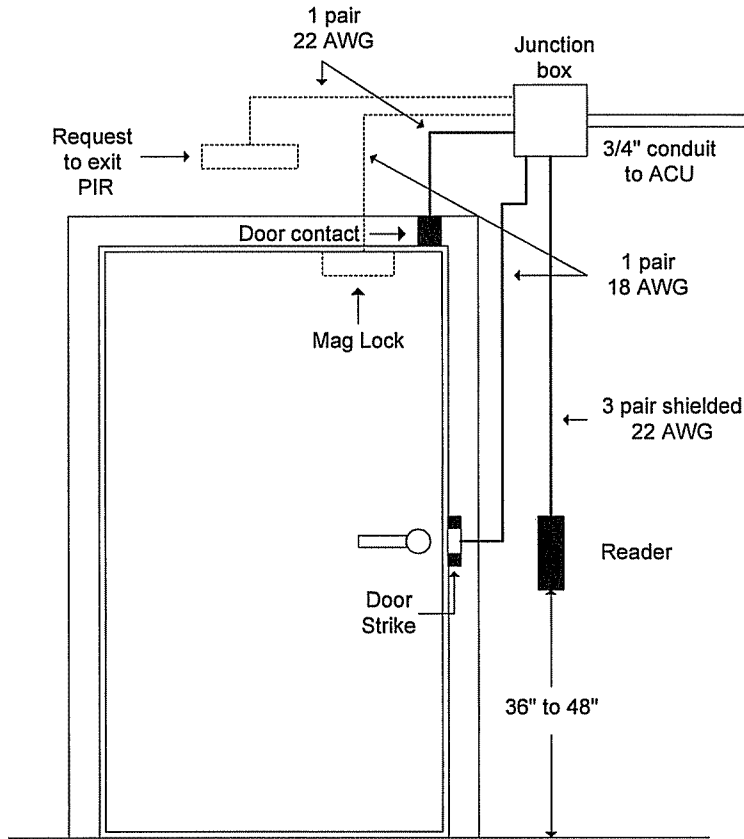
# CA 200 - 2 Reader Control



# Typical System Layout

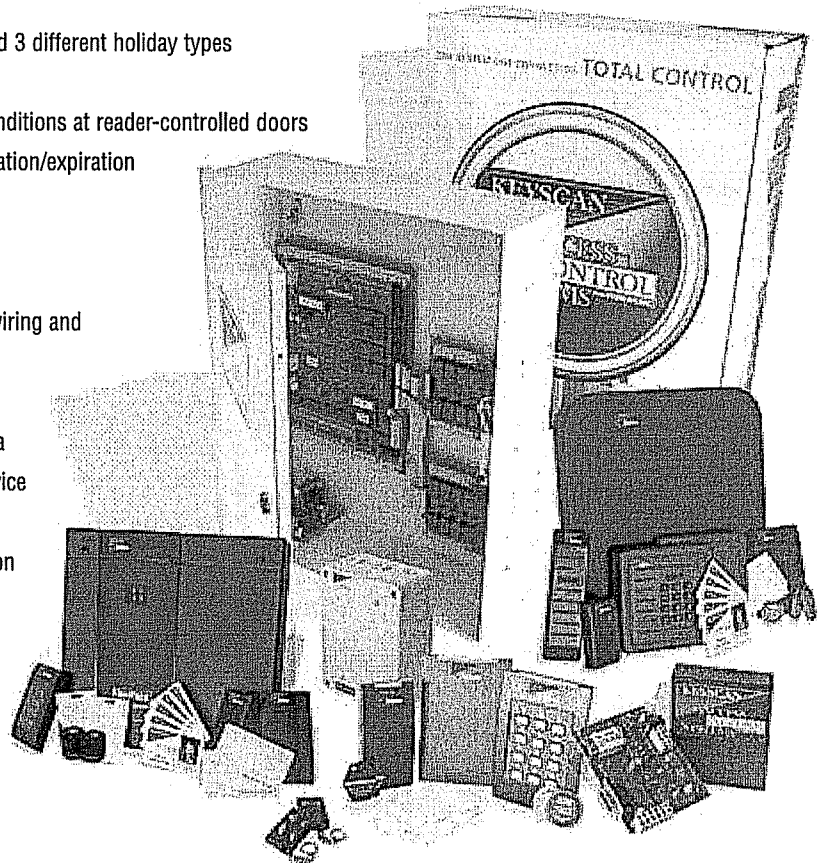


Multiple Access and Elevator Controls per Site



## CONTROL UNIT STANDARD FEATURES

- Stores up to 32,000 cards per site with no limit on number of sites
- Create up to 512 door groups and 512 elevator groups
- Retains last 6000 transactions in activity memory buffer
- Create up to 256 time zones, 512 different schedules, and 3 different holiday types
- Create up to 64 holiday dates
- Monitors door forced open and door held open alarm conditions at reader-controlled doors
- Monitors temporary cards with programmable date activation/expiration and/or usage countdown
- Unlimited remote sites via TCP/IP or dial-up modem
- Heavy-duty 10 amp relays for long life and reliability
- Large, well constructed enclosure with ample room for wiring and circuit boards
- Dual processors for enhanced system performance - panels operate during uploading and downloading of data
- Removable terminal blocks for easier installation and service
- Individual reader terminal blocks
- Mix or match access control units for optimum installation
- Simple jumper settings for most Wiegand protocols
- Programs daylight savings and standard time to change automatically
- 2 year warranty



## CONTROL UNIT TECHNICAL SPECIFICATIONS

### OPERATING VOLTAGES

Input transformers: 16 VAC, 37-40 VA Class II  
Internal Power Supply: 13.5 VDC @ 1.2 amps  
Battery Backup: 12VDC 7 Amp/Hr.

### OPERATING ENVIRONMENT

32° to 120° F. 0° to 49° C., Humidity: 0% to 90% R.H., non-condensing

### RELAY OUTPUTS

Form C contacts, 10 Amps Max. 24 VAC or 32 VDC

### COMMUNICATIONS

EIA/TIA 562 with CPB-10

### READER TECHNOLOGIES

- Proximity
- Contactless Smart Card
- iClass
- Radio Frequency (wireless parking applications)
- Biometrics
- Bar Code
- Mag Stripe

### ENCLOSURE

Single locking box CEMA / NEMA Type 1  
Dimensions: 20 1/4" (51.4cm) H x 16 3/8" (41.6cm) W x 5 5/8" (14.3cm) D  
Net Weight: 15.8 lbs (7.2kg)



### CB-485

- Establishes RS-485 communication between multiple access control units (ACU) and the PC
- Reliable PC to ACU communication
- Enhanced communication speed
- Increases maximum wiring distance on ACU communication loop
- Easily connects to ACU via ribbon cable
- Mounts directly in ACU enclosure
- Uses two twisted pairs on CAT5 cable

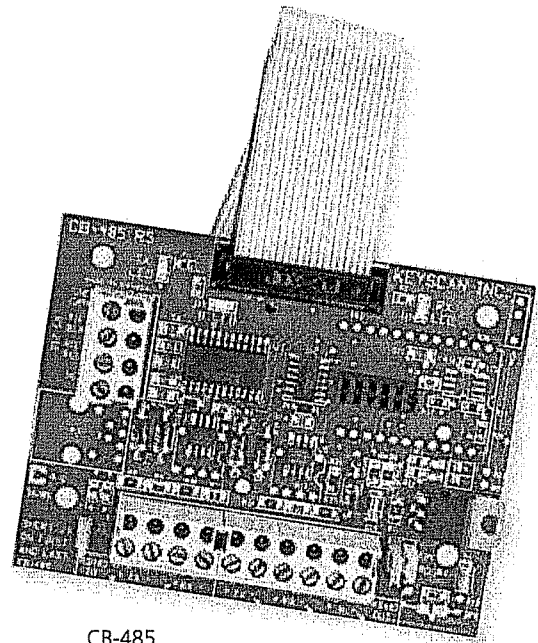
### Optional CB-485 configuration with NETCOM2P

#### (Network TCP/IP module)

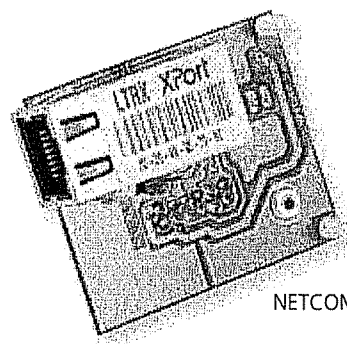
- NETCOM2P plugs into socket on CB-485
- Delivers multiple ACU communication to PC over a LAN/WAN (TCP/IP)
- Suitable for 10/100 Ethernet/Fast Ethernet applications
- Uses static IP address

### CB-485M

- CB-485M expands system capability with built-in dial up modem to link remote sites
- Designed specifically for Keyscan access control units
- Uses standard analog phone line
- Pre-loaded setup parameters
- Mounts directly in ACU enclosure
- Only one CB-485M required for multiple ACUs on same communication loop



CB-485



NETCOM2P

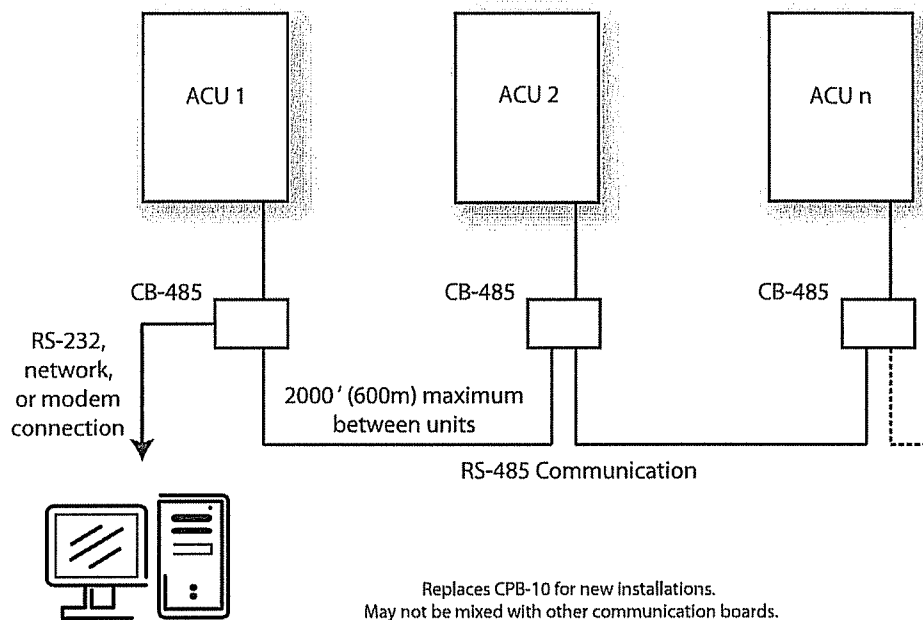
# CB-485/CB-485M

## RS-485 Communication Board

### FEATURES AND BENEFITS

- Maximum distance of up to 2000 feet (600m) between ACUs
- Cost effective and ease of connection between panels using CAT5
- Can communicate to PC using direct connect, or with optional NETCOM2P module (TCP/IP), or with CB-485M (modem)

### APPLICATIONS



### SPECIFICATIONS

#### Power

5VDC from ACU

CB-485 - 110 mA, CB-485M - 360 mA, CB-485 with NETCOM2P - 250mA

#### Baud Rates

up to 57,600 (CB-485 only)

#### Cable

CB-485 to CB-485 – CAT5, 4 conductor

CB-485M to CB-485 – CAT5, 6 conductor

RS-485 Full Duplex communication

Maximum distance between two access

control units - 2000 feet (600m)

CB-485 boards must be daisy chained (parallel) to each other  
ACU-PC - 100 feet max (30m)

#### Dimensions

CB-485 3 5/8" x 2" (9.0 cm x 6.9 cm)

#### Environmental Tolerances

Suitable for commercial and industrial applications

Relative Humidity: 0% to 90% R.H., non-condensing

Operating Temperatures: -20° to 71° C (-4° to 160° F)

Storage Temperatures: -20° to 85° C (-4° to 185° F)

#### KEYSCAN INC.

901 Burns Street East

Whitby, Ontario L1N 6A6

Phone: 905.430.7226 Toll Free: 1.888.539.7226 Fax: 905.430.7275

www.keyscan.ca

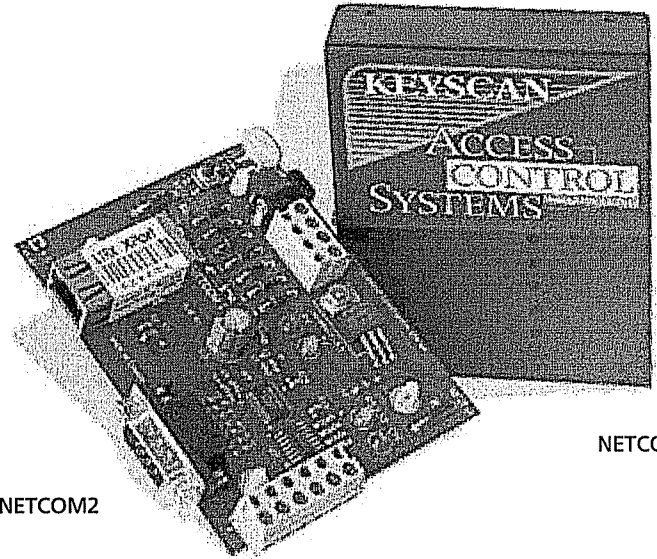
Want more information? Contact your local representative at:





# NETCOM2 & NETCOM2H

## RS232 TCP/IP CONVERTER



NETCOM2

NETCOM2H

- Keyscan's NETCOM2 is for 10/100 Ethernet/Fast Ethernet applications.
- Keyscan's NETCOM2H is an external version in a housing and C/W power supply.
- Enables Keyscan Access Control Units to be connected and communicate over a network.
- NETCOM2 provides serial connection from the Access Control Unit(s) via 10/100 RJ45 network interface to communicate with the PC.
- Uses static TCP/IP addresses to allow communications over existing LAN or WAN networks.
- Unlimited remote NETCOM2's can be added to a system, offering an enterprise solution.
- NETCOM2 Powered from ACU 12VDC with Battery.
- NETCOM2H powered from provided 12V DC transformer.
- Fast, easy, trouble-free installation to place Access Control Units on a network.

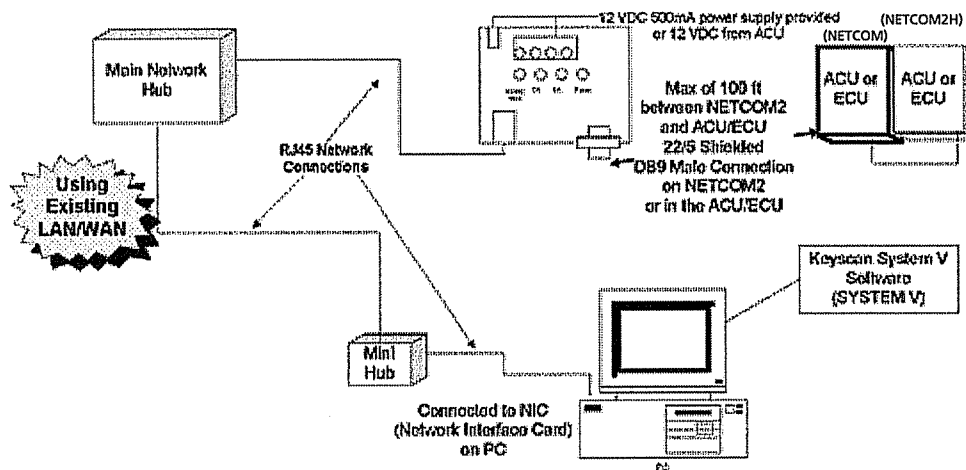
# NETCOM2 & NETCOM2H

## RS232 TCP/IP CONVERTER

### FEATURES AND BENEFITS

- Allows one or more Access Control Units to communicate on a LAN/WAN.
- Fast easy installation for the Access Control Unit (ACU).
- Configuration for the NETCOM2 simplified with Keyscan's software interface.
- Static TCP/IP communication protocol between the PC NIC (Network Interface Card) and Access Control Unit(s) (NETCOM2).
- Requires Static IP addresses for proper operation
- Save Modem Line costs for controlling Remote Locations using existing LAN/WAN's.
- The NETCOM2 can be installed inside the ACU and wired directly to the ACU with the RJ45 Network Connection or located by the Network Hub and be wired up to 100' from the ACU.
- The NETCOM2H comes complete with a housing and power supply for external Network connections.
- Simplifies both installation and maintenance procedures.

### APPLICATIONS



### SPECIFICATIONS

#### NETCOM2 Requirements:

Input power: 10.2 to 32 VDC, 210 mA  
NETCOM2 Powered by Access Control Unit  
NETCOM2H power supply included

#### Cable Maximums:

ACU/ECU to NETCOM2 – 100 ft (22 AWG 3 pair shielded)  
NETCOM2 to PC – Existing LAN or WAN (static TCP/IP Protocol)

Agency Approvals: complies with Class B limits of EN 55022:1998  
Direct & Indirect ESD - complies with EN55024:1998

#### Dimensions:

3.031" x 3.896" (77mm x 99mm)  
With Housing: 3.85" x 4.5" (97.85mm x 114.3mm)

#### Environmental Tolerances:

Suitable for commercial and industrial applications.  
Operating Temperature: -20° to 71° C (-4° to 158° F)  
Storage Temperature: -20° to 85° C (-4° to 158° F)

#### KEYSCAN INC.

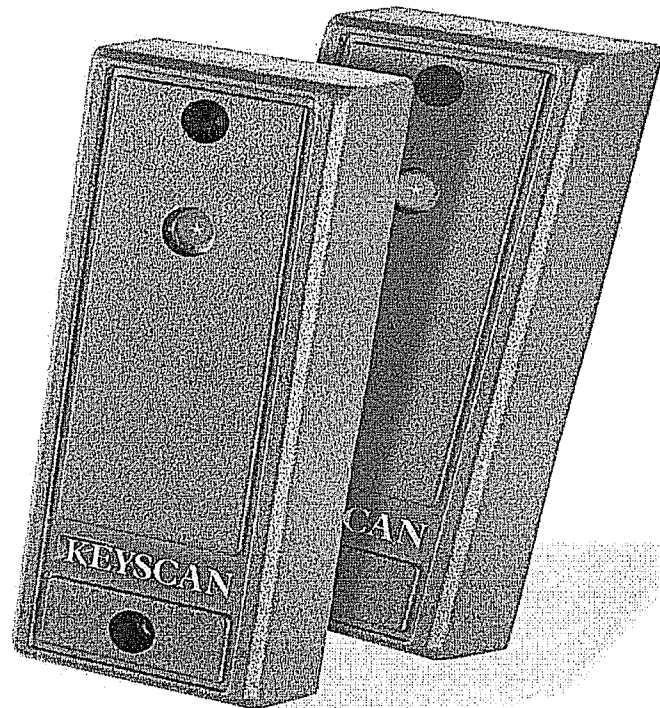
901 Burns Street East  
Whitby, Ontario Canada L1N 6A6  
Tel: 905.430.7226 Toll Free: 1.888.539.7226 Fax: 905.430.7275  
Web: www.keyscaan.ca

Want more information? Contact your local representative at:



# K-PROX

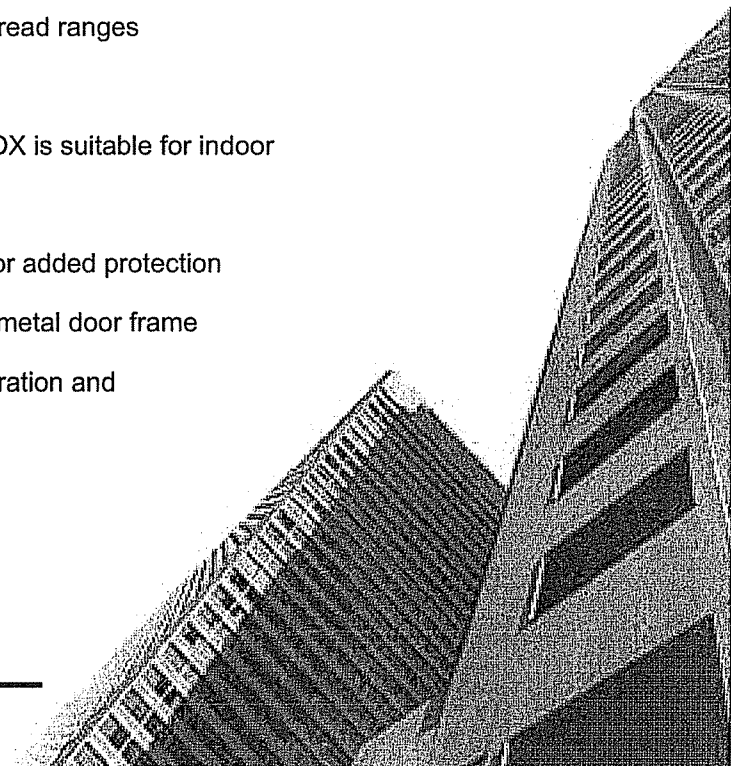
## Keyscan Proximity Reader



- Compatible with HID proximity cards and tags over a range of Wiegand bit protocols
- Employs proximity - RFID technology with non-contact read ranges up to 6 inches (non-metal mount)
- Cost-effective, compact, single-body design, the K-PROX is suitable for indoor and outdoor applications
- Electronics secured in tamper-resistant epoxy potting for added protection
- Installs on any surface including mounting directly to a metal door frame
- Durable, weather-resistant construction for reliable operation and long usage even in harsh environments
- Limited lifetime warranty against defects in materials and workmanship

[www.keysca.ca](http://www.keysca.ca)

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# K-PROX

## Keyscan Proximity Reader

### Features and Benefits

---

- Uses proven digital radio frequency identification technology
- Suitable for mounting on all surfaces including metal door frames
- HID compatible over a wide range of Wiegand bit protocols
- Designed for indoor and outdoor environments
- Compact size, single body design for easy installation

### Specifications

---

#### Size

- 4" (10.2 cm) x 1.5" (3.8 cm) x 0.6" (1.6 cm)

#### Read Range

- Off metal - up to 6" (15.2 cm)
- On metal - up to 4" (10.2 cm)

#### Input Voltage

- 12VDC at reader

#### Typical Current Draw

- Nominal draw is 40 mA
- Maximum draw is 80 mA during card read

#### Operating Temperature

- - 40° C to 65° C (- 40° F to 149° F)

#### Cable Distance

- Wiegand interface 500 feet (152 metres) 6 conductor shielded 22 AWG
- 12" wire pigtail standard

#### Indoor/Outdoor Design

- Secured in a rugged, tamper-resistant epoxy potting designed to withstand harsh weather conditions
- Easily installed in any location

#### Certifications

- CSA, FCC, CE, C-Tick



---

#### Keyscan Inc.

901 Burns Street East  
Whitby, Ontario, Canada L1N 6A6  
Tel: 905.430.7226 Toll Free: 1.888.539.7226  
Fax: 905.430.7275  
www.keysca.ca

Want more information? Contact your local representative at





CSA INTERNATIONAL

# Certificate of Compliance

**Certificate:** 1706447 (LR 110441-1)

**Master Contract:** 187789

**Project:** 1706447

**Date Issued:** 2005/09/07

**Issued to:** Keyscan Inc.

1099 Kingston Rd Suite 206  
Pickering, ON L1V 1B5  
Canada  
Attention: Ms. Nancy Bell-Dorfman

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicator 'NRTL/C'*



**Issued by:** Joseph Kwong, P. Eng.

**Authorized by:** Akbar Lalani, Product Group Manager

## PRODUCTS

**CLASS 4812 85** - SIGNAL APPLIANCES - Systems - Certified to US Standards  
**CLASS 4812 05** - SIGNAL APPLIANCES - Systems

Access control systems, Keyscan Models CA200, CA4000, CA8000, 16V ac, 40VA, Class 2 input; relay output contacts, 24V ac/32V dc, 10A.

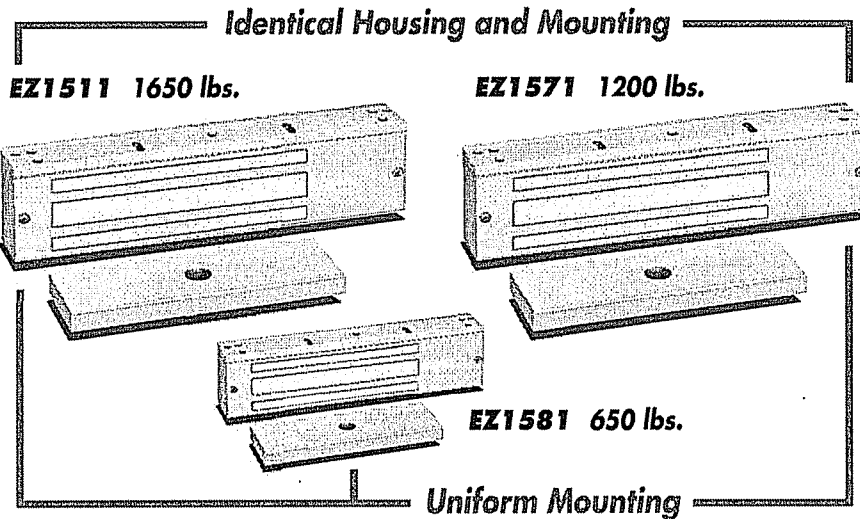
## APPLICABLE REQUIREMENTS

CSA Std C22.2 No. 205-M1983 - Signal Equipment

UL Std No. 294 - Access Control System Units

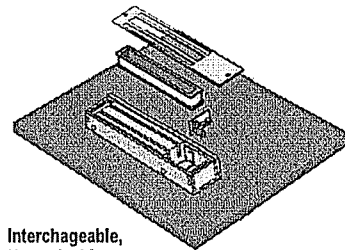
The 'NRTL/C' indicator adjacent to the CSA Mark signifies that the product has been evaluated to the applicable ANSI/UL and CSA Standards, for use in the U.S. and Canada. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and Health Administration (OSHA) to laboratories which have been recognized to perform certification to U.S. Standards.

# EMLOCKS

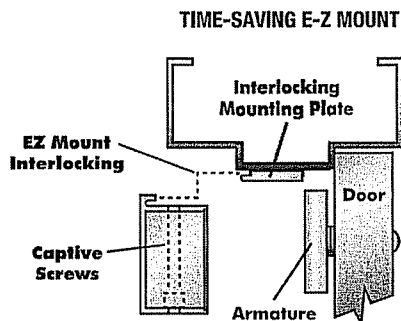


## New EMLock Design

- Interchangeable & Upgradeable Modular Assemblies
- Uniform Design & Installation
- Identical Housing, Template & Accessories - \*(1650 lb/1200 lb locks)
- Lifetime Serviceability
- EZ Mount Assembly



Interchangeable,  
Upgradeable,  
Modular Assemblies



Request your FREE EMLock CD presentation online:



ISO 9001-2000  
FM 52705



CSFM  
Listed

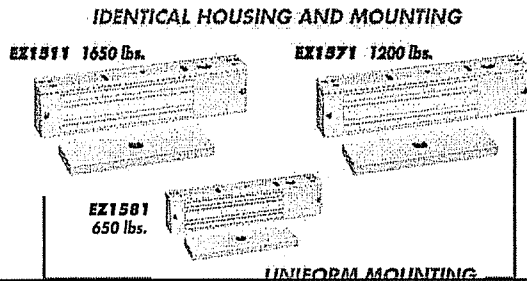
MEA  
Listed



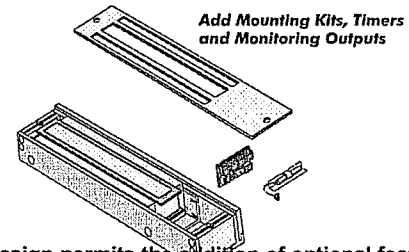
Manufacturers of Premium  
Grade Access Hardware

Box 6219 • Westlake Village, CA 91359-6219  
805.494.0622 FAX: 805.494.8861

**Uniform Design and Installation of all Models**

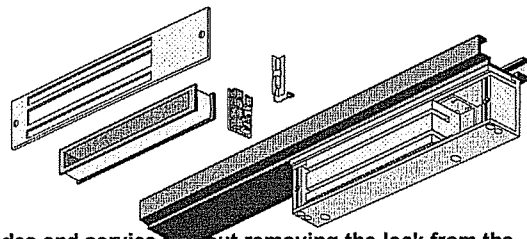


**Distributor and Installer Flexibility**



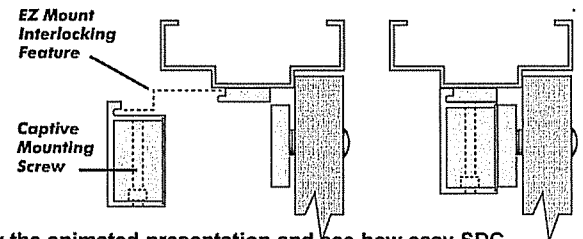
The modular design permits the addition of optional features, enabling standard locks to conform to several applications.

**Lifetime Serviceability and Upgradeability**



Upgrades and service without removing the lock from the frame eliminates lock replacement lead time and labor

**Interlocking EZ Mount Assembly**



View the animated presentation and see how easy SDC EmLock installation is at [www.sdcsecurity.com](http://www.sdcsecurity.com)

**Specifications**

**GK**

**1510 Series Grade 1**  
1650 lb / 748 Kg Holding Force





**Electrical Specifications**

Voltage: 12/24VDC Voltage Sensing Input  
Single: 350mA @ 24VDC; 670mA @ 12VDC  
Double: 700mA @ 24VDC; 1.34mA @ 12VDC

**Mechanical Specifications**

Single: 11" L x 2.75" H x 1.562" D  
(279.4 x 69.9 x 39.7 mm)  
Double: 22" L x 2.75" H x 1.562" D  
(558.8 x 69.9 x 39.7 mm)

**Common Configurations (Alum. Finish)**

1511V	Single EmLock	
1511V-DPS	Door Sensor	
1511V-BA	Bond Sensor	
1511V-AT	Relock Timer	
1511V-BADPS	Door/Bond Sensor	
1511V-TJ1V	Top Jamb kit	
1511V-HDB1V	Glass Door kit	
1512V	Double EmLock	
1512V-2DPS	2 Door Sensor	
1512V-2BA	2 Bond Sensor	
1512V-AT	Timer	
1512V-TJ2V	Top Jamb kit	
1512V-HDB2V	Glass Door kit	

**1570 Series Grade 2**  
1200 lb / 544 Kg Holding Force  
Low Power Consumption





**Electrical Specifications**

Voltage: 12/24VDC Voltage Sensing Input  
Single: 125mA @ 24VDC; 250mA @ 12VDC  
Double: 250mA @ 24VDC; 500mA @ 12VDC

**Mechanical Specifications**

Single: 11" L x 2.75" H x 1.562" D  
(279.4 x 69.9 x 39.7 mm)  
Double: 22" L x 2.75" H x 1.562" D  
(558.8 x 69.9 x 39.7 mm)

**Common Configurations (Alum. Finish)**

1571V	Single EmLock	
1571V-DPS	Door Sensor	
1571V-BA	Bond Sensor	
1571V-AT	Relock Timer	
1571V-BADPS	Door/Bond Sensor	
1571V-TJ1V	Top Jamb kit	
1571V-HDB1V	Glass Door kit	
1572V	Double EmLock	
1572V-2DPS	2 Door Sensor	
1572V-2BA	2 Bond Sensor	
1572V-AT	Timer	
1572V-TJ2V	Top Jamb kit	
1572V-HDB2V	Glass Door kit	

**1580 Series Grade 3**  
650 lb / 295 Kg Holding Force




**Electrical Specifications**

Voltage: 12/24VDC Voltage Sensing Input  
Single: 220mA @ 24VDC; 440mA @ 12VDC  
Double: 440mA @ 24VDC; 880mA @ 12VDC

**Mechanical Specifications**

Single: 8.75" L x 2.125" H x 1.25" D  
(222.2 x 54 x 31.8 mm)  
Double: 17.5" L x 2.125" H x 1.25" D  
(444.5 x 54 x 31.8 mm)

**Common Configurations (Alum. Finish)**

1581V	Single EmLock	
1581V-DPS	Door Sensor	
1581V-BA	Bond Sensor	
1581V-BADPS	Door/Bond Sensor	
1581V-TJ81V	Top Jamb kit	
1581V-HDB1V	Glass Door kit	
1582V	Double EmLock	
1582V-2DPS	2 Door Sensor	
1582V-2BA	2 Bond Sensor	
1582V-TJ82V	Top Jamb kit	
1582V-HDB2V	Glass Door kit	

**Listings and Performance Specifications**

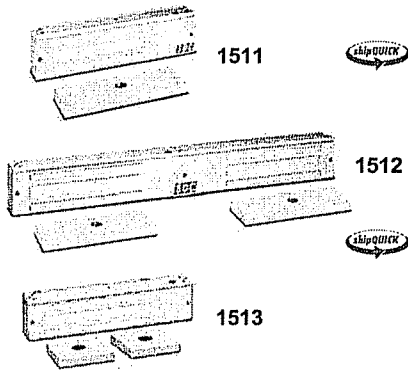
**GK**

UL Listed U.S./Canada: GWXT Auxiliary Locks,  
CVXJ Burglary Resistant Electrically Operated Door Lock  
UL10C Position Positive Pressure Compliant  
ANSI/BHMA A156.23: 1510 - Grade 1; 1570 - Grade 2; 1580 Grade 3  
BHMA Certified Holding Force: 1510 - Grade 1; 1570 - Grade 2;  
1580 Grade 3

CSFM California State Fire Marshal Listed 3774-0324:100  
MEA City of New York 61-95-E  
UBC Classified in accordance with Uniform Building Code  
standard 7-2 "Fire Test for Door Assemblies"

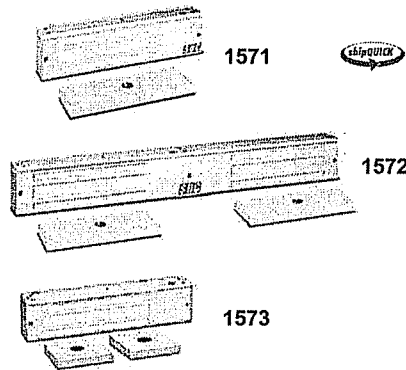
**1 EMLOCK MODELS**

1511

**GK****Grade 1****1650 lb / 748 Kg Holding Force**

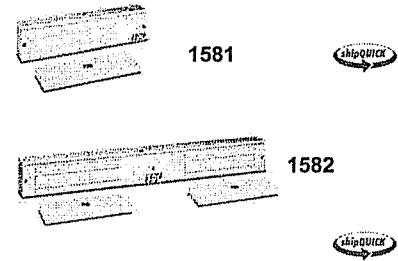
1511 Single Emlock

1512 Double Emlock

1513 Single Emlock, split armature  
for pair of doors**Grade 2****1200 lb / 544 Kg Holding Force**

1571 Single Emlock

1572 Double Emlock

1573 Single Emlock, split armature  
for pair of doors**Grade 3****650 lb / 295 Kg Holding Force**

1581 Single Emlock

1582 Double Emlock

**2 FINISHES**

1511

V

**GK****Anodized Finishes**V 628 Aluminum (Standard) No Charge  
X 313 Dark Bronze  
Y 335 Black**Plated Finishes**C 605 Bright Brass      G 612 Satin Bronze  
D 606 Dark Bronze      P 625 Bright Chrome  
F 611 Bright Bronze      Q 626 Satin Chrome**3 OPTIONAL INPUTS & OUTPUT**

1511

V

DPS BA

**GK**

See Modular Program price list when ordering separately for field upgrades. Different part numbers and pricing apply.

**AT Adjustable Timer** - Built in field adj. 0-30 sec. relock delay. Specify one for single or double EmLocks  
(not available with 1580 series).**DPS Door Position Sensor** - Indicates door open and door closed.  
SPDT Dry, 250 mA @ 30VDC. Specify (2) for double EmLocks**BA Magnetic Bond Sensor** - Indicates locked with full holding power and unlocked, low holding power,  
low voltage, tampering and obstruction between armature and magnetic core. Specify (2) for double EmLocks  
• 1510 & 1570 Series: SPDT Dry, 250 mA @ 30VDC.  
• 1580 Series: SPST N.O., Dry, 250 mA @ 30VDC.**L3 Tri-color status LED indicator** - Field selectable Red, Green, Amber.  
Indicates lock energized when wired to lock input.  
Indicates de-energized/unlocked or "Enter/Go" when wired to built-in TD Module  
Indicates energized and de-energized or "Enter/Go" when wired to access control auxiliary output.  
Indicates door is closed and locked and door is unlocked when wired to BA.**ATS Anti-Tamper Sensor** - Indicates access cover removal. SPDT Dry, 1 Amp @ 30VDC

Over 100 SDC products are available for shipment the same day or by the next business day. End users and installers are encouraged to use the shipQUICK Inventory list so you know first hand which SDC products your SDC distributor can expedite for you. Request a shipQUICK Inventory through our customer service staff or download a copy directly from the SDC website.

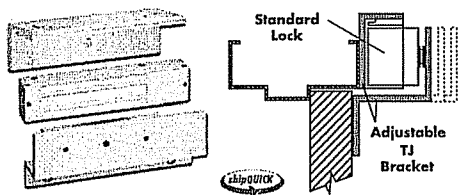
**SDC****SECURITY DOOR CONTROLS**  
3580 Willow Lane • Westlake Village, CA 91361  
www.sdcsecurity.com



**4 TOP JAMB MOUNTING BRACKETS**

1511 V DPS BA TJ1

**GK**



Kits for 1200 lb and 1650 lb locks

TJ1 Single  
TJ2 Double

Special Anodized Finish: Single TJ  
Double TJ

Special Plated Finish: Single TJ  
Double TJ

Kits for 650 lb locks

TJ81 Single  
TJ82 Double

TJ1V indicates standard aluminum

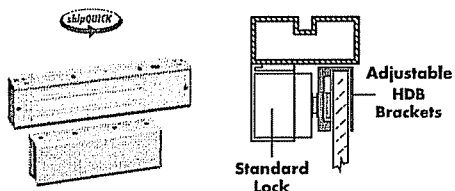
See page 20 Section 2 for special finish designation.

**5 UNIVERSAL GLASS DOOR MOUNTING KIT**

1511 V DPS BA HDB1

**GK**

- Universal glass door kits are compatible with lock models, except 1513 and 1573
- Field adjustable for 1/2", 5/8" and 3/4" all glass Herculite doors



Kits for 1511, 1571, 1581  
HDB1 Single

Special Anodized Finish:

Special Plated Finish:  
Aluminum Standard: Example - HDB1V  
See page 20 Section 2 for special finish designation.

Kits for 1512, 1572, 1582  
HDB2 Double, 2 single kits

Special Anodized Finish:

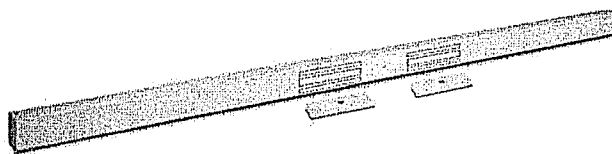
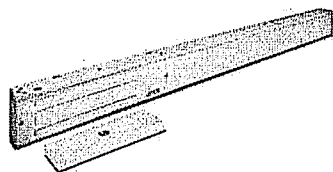
Special Plated Finish:

**6 ARCHITECTURAL HOUSINGS**

HORIZONTAL HOUSING  
1511 V 36

VERTICAL HOUSING  
1512 V V82

**GK**



Full Width Housings - appear as part of the frame to provide a superior architectural appearance.

Vertical Housings - Side jamb mount, accommodates two 1571 or two 1511 EmLocks providing 2400 or 3300 lbs of holding force.

Compatible with Models: 1511, 1512, 1571, 1572 with or without HDB kits.

Specify housings with your EmLocks.

**Single Door Housings**

30 30"  
36 36"  
40 40"  
48 48"

CH\_\_ Custom, Specify Length

**Double Door Housings**

60 60"  
72 72"  
84 84"  
96 96"

CH\_\_ Custom, Specify Length

**Vertical Housings**

82 84" high opening

CV\_\_ Custom, Specify Length

**Aluminum Standard**

Example: 1511V30

**Special Finishes**

See page 20 Section 2 for special finish designation and finish price.

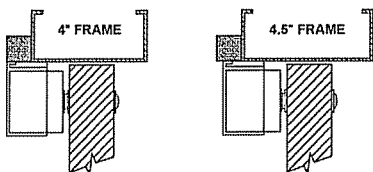
**UNIVERSAL HEADER BRACKET**

**GK**

Used in lieu of angle brackets, Universal Header Brackets provides a faster mounting solution, saving time and labor costs for several EmLock models. Reduce potential for mis-sized and misaligned mounting holes, broken taps, removal of broken taps. Combined with interlocking E-Z mount assembly, save up to a half days labor with the installation of 12 locks.

**Features**

- Solid 1" bar provides higher security and superior aesthetics.
- Machined wire chase provides concealed and secure wiring.
- Multiple predrilled and tapped mounting holes to accommodate the use of several different locks on either 4" or 4.5" aluminum frames



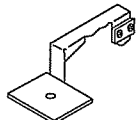
Bracket for 1511, 1513, 1571, 1573  
UB11 1" x 1" x 11"

Aluminum Standard  
Example: UB1V

Bracket for 1512, 1572  
UB12 1" x 1" x 22"

Special Finishes  
See page 22 for special finish designation





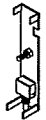
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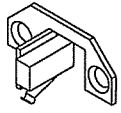
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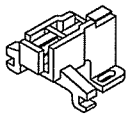
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514



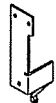
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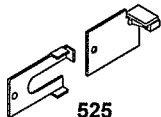
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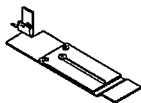
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519



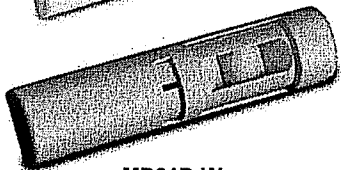
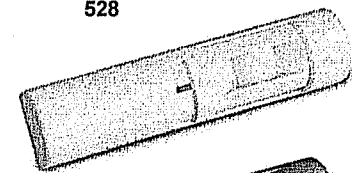
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527



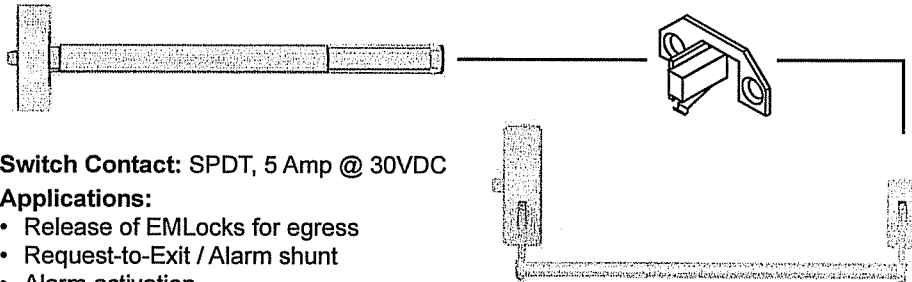
528



MD31D-W  
MD31D-B

### Exit Device Switch Kits

Switch kits are field installed in the inactive hinge pad of rim mount exit devices, mortise exit devices, concealed vertical rod exit devices and surface vertical rod exit devices.



**Switch Contact:** SPDT, 5 Amp @ 30VDC

#### Applications:

- Release of EMLocks for egress
- Request-to-Exit / Alarm shunt
- Alarm activation
- Remote exit annunciation

#### Model

#### Make & Model to be Modified

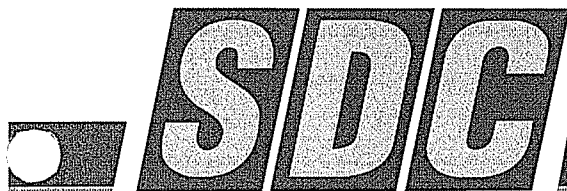
510	Von Duprin 33, 90
510-2	Von Duprin 33, 90 DPDT
511	Von Duprin 55
512	Von Duprin 88
514	Dor-O-Matic 990, 1090, 1990, 2090
516	Sargent 9600, 9700, 9800, 9900
517	Adams Rite 8300, 8400, 8700, 8800
518	Precision Apex Series
519	Jackson 1095
519-2	Jackson 1095 DPDT
521	Corbin 7000
525	Monarch 18 & 19
527	Sargent 80
527-2	Sargent 80 DPDT
528	Sargent 20/60
531	Yale 7000 (dogging mechanism required), Corbin 4000
535	Kawneer mid panel line, Dor-O-Matic 1390
540	Arrow 5300/5400
542	Hagar 4700
590	Dor-O-Matic 1690

**Note:** When modification to exit devices not listed by SDC is required, consult factory. Modification of any kind to a UL Listed product may void UL Listing

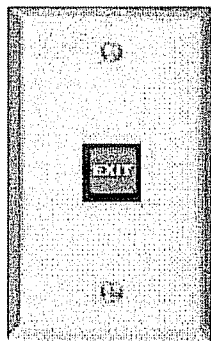
### Request-to-Exit PIR Sensor

The SDC MD31D passive infrared detector is specifically designed for request-to-exit applications. It has an adjustable 1-60 second time delay. The coverage field is internally pointable. When angled 14° down, coverage may be 5 x 6 feet at 7 feet high to 10 x 12 feet at 15 feet high. The MD31D projects a wrap around "U" pattern down and away from the door to inhibit tampering. The MD31D may be mounted to the frame header, wall or ceiling. Complies with NFPA applications.

MD31D-W	PIR motion detector, white
MD31D-B	PIR motion detector, black
Input:	12 or 24VDC/VAC @ 26mA max
Contact:	2 SPDT dry, 2 Amp @ 30VDC
Operating Temp:	-20°F to 120°F (-29°C to 49°C)
Dimensions:	1.5"H x 6.25"W x 1.5"D (38.1 x 148.8 x 38.1mm)



## Exit Switches



### 400 Series

The SDC 400 series are compact, unobtrusive and contemporary in design making it the perfect choice where esthetics are a priority. Built to last, the 400 series are backed by proven reliability and longevity.

3/4" Button - Green Lens - Dull Stainless Steel Finish

1 Gang	Narrow	Contact	Sign
401U	401NU	AA (On/Off) SPDT	none
402U	402NU	Momentary SPDT	EXIT
403U	403NU	With Timer Module 1-60 sec. 12/24V AC/DC, 2A SPDT Contact	EXIT
404U	404NU	Momentary DPDT	EXIT
405U	405NU	AA (On/Off) DPDT	none

### Finishes

Suffix 'U' above indicates standard finish stainless steel  
For special finish use suffix below in lieu of "U"

C 605 Bright Brass    D 606 Dull Brass    F 611 Bright Bronze  
G 612 Dull Bronze    H 613 Oil Rubbed Bronze    P 625 Bright Chrome

### Options

L1G 1 Green LED    L3 Tri-color LED - Red, Green, Amber  
L1R 1 Red LED    E Add Exit sign To AA Function Switch  
L2 1 Red, 1 Green LED    R Red Button in lieu of green

### Specifications

Contact: 5 Amp @ 30VDC  
Wire Leads: 6", 20 Gauge  
1 Gang: 2 7/8" x 4 1/2" x 20 Ga. (73 x 114 x 0.912 mm)  
Narrow: 1 3/4" x 4 1/2" x 20 Ga. (45 x 114 x 0.912 mm)

### Example

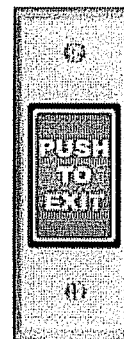
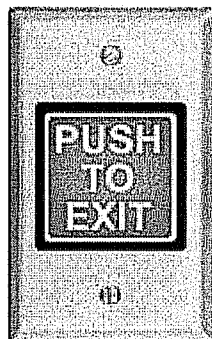
Model	Finish	Option
402	U	L2
422	U	L2



CSFM Listed  
Access Control Accessory  
3625-0324:107



Enterprise Engineering  
Laboratories Listed  
UL 294 Test Standard Compliant



### 410 & 420 Series

The illuminated momentary switch button is two inches square for easy activation and is visually conspicuous. The standard "PUSH TO EXIT" signage is large for easy identification. The high impact resistant material stands up to abuse.

The "PUSH to EXIT" signage complies with NFPA requirements. The 422A is designed for access and egress applications for the disabled and is equipped with the blue button and disabled access symbol.

1 Gang; 2" Button, Green Illuminated Lens - Stainless Steel

Narrow; 1 1/4"x1" Button, Green Illuminated Lens - Stainless Steel

1 Gang	Narrow	Contact	Sign
422U	412NU	Momentary SPDT	PUSH TO EXIT
423U	413NU	Integrated 1-60 sec Timer 12/24VDC, 2A SPDT Contact	PUSH TO EXIT

2" Button - Blue Illuminated lens only

422AU	Momentary SPDT	♿
423AU	Integrated 1-60 sec Timer 12/24VDC, 2A SPDT Contact	♿

### Finishes

Suffix 'U' above indicates standard finish stainless steel  
For special finish use suffix below in lieu of "U"

C 605 Bright Brass    D 606 Dull Brass    F 611 Bright Bronze  
G 612 Dull Bronze    H 613 Oil Rubbed Bronze    P 625 Bright Chrome

### Options

L1G 1 Green LED    L3 Tri-color LED - Red, Green, Amber  
L1R 1 Red LED    R Red Button in lieu of green  
L2 1 Red, 1 Green LED

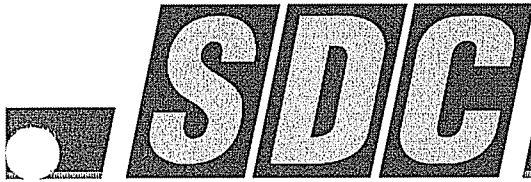
### Specifications

Contact: SPDT, 10 Amp @ 30VDC  
Timer: SPDT 2 Amp @ 12/24VDC  
Wire Leads: 6", 20 Gauge  
1 Gang: 2 7/8" x 4 1/2" x 20 Ga. (73 x 114 x 0.912 mm)  
Narrow: 1 3/4" x 4 1/2" x 20 Ga. (45 x 114 x 0.912 mm)

**SECURITY DOOR CONTROLS**



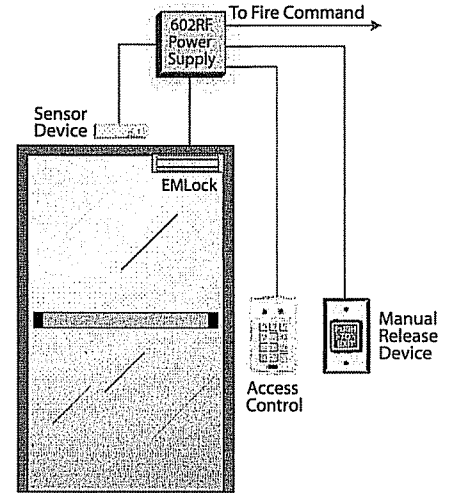
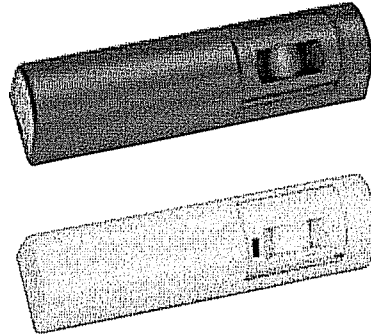
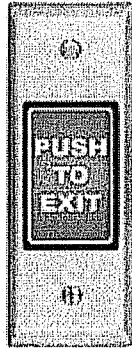
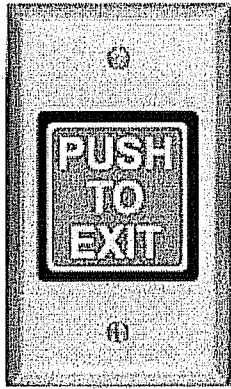
ISO 9001:2000  
FM 52705



P.O. Box 6219, Westlake Village, CA 91359-6219  
 3580 Willow Lane, Westlake Village, CA 91361-4921  
 (805) 494-0622 (800) 413-8783 Fax: (805) 494-8861  
 Email: [service@sdsecurity.com](mailto:service@sdsecurity.com) [www.SDCsecurity.com](http://www.SDCsecurity.com)

## 400M Manual Release Device / MD31D Sensor Device

### Egress Devices for Code Compliant Access-Controlled Egress Doors



#### Manual Release Device

The 400M series exit switch complies with national fire and building code requirements for manual releasing devices as specified for Access-Controlled Egress Doors.

#### 413MNU

Narrow Request-To-Exit Switch  
 1-3/4" x 1" Button, 1-3/4" Faceplate  
 For narrow frame mount applications

#### 423MU

Single Gang Request-To-Exit Switch  
 2" square button, wall mount.

#### Features

- 30 second relock delay, fixed
- Retriggerable - pushing the switch at anytime restarts the timer cycle
- Failsafe mode releases lock when power to the switch is lost
- Sign: PUSH TO EXIT
- Illuminated push button

#### Specifications

**Input:** 35mA @ 12/24VDC  
**Output:** SPST, Normally Off,  
 1 Amp @ 12/24VDC

#### Sensor Device

The MD31D series REX sensor complies with national fire and building code requirements for sensor device as specified for Access-Controlled Egress Doors.

#### MD31DW

PIR Request-to-Exit Sensor, White

#### MD31DB

PIR Request-to-Exit Sensor, Black

#### Features

- 1-60 second relock delay
- Failsafe mode releases lock when power to the sensor is lost.
- Frame, wall or ceiling mounted
- Pointable U shape coverage field from 5' x 6' to 10' x 12'

#### Specifications

**Input:** 12/24V AC/DC @ 26mA max  
**Output:** 2 SPDT Dry, 2 Amp @ 30VDC  
**Operating temp:** -20° F to 120° F  
 (-29° C to 49° C)  
**Dimensions:** 1.5" H x 6.25" W x 1.5" D  
 (38.1 H x 148.8 W x 38.1 D mm)

#### Code Compliance

413MNU and 423MU exit switches used together with the MD31D PIR sensor comply with the manual releasing device and sensor device requirements of national building and fire life safety codes.

- ICC International Building Code 1008.1.3.4
- ICC International Fire Code 1008.1.3.4
- NFPA 101 Life Safety Code 7.2.1.6.2  
Access-Controlled Egress Doors
- NFPA 1 Uniform Fire Code 14.5.3.2  
Access-Controlled Egress Doors
- BOCA National Building Code 1017.4.5  
Access-Controlled Egress Doors
- SBCCI Standard Building Code 1012.7  
Access-Controlled Egress Doors



3625-0324-107



Enterprise Engineering Laboratories Listed



294 Access Control Systems Unit

**SECURITY DOOR CONTROLS**

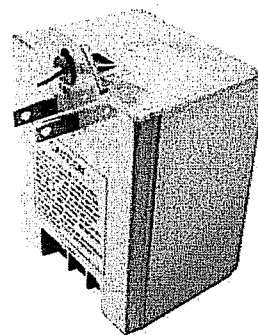


ISO 9001 : 2000  
FM 52705

# Altronix<sup>®</sup> Plug-In Transformers

## Specification Chart (all transformers listed are 120VAC input):

Model #	Output	Amp	UL Listed	Approx. Ship Wt.
TP1220	12VAC/20VA	1.7	X	1 lb.
TP1620	16.5VAC/20VA	1.2	X	12.9 oz.
TP1640	16.5VAC/40VA	2.4	X	1.8 lbs.
TP1650	16.5VAC/50VA	3	X	1.95 lbs.
TP2420	24VAC/20VA	.8	X	1.2 lbs.
TP2440	24VAC/40VA	1.67	X	1.7 lbs.
TP2450	24VAC/50VA	2	X	1.9 lbs.



### Installation Instructions:

1. Connect wires to plug-in transformer.
2. Plug in the transformer to an outlet and secure transformer with screw provided.

**Note:** Measure output voltage before connecting devices. This helps avoid potential damage.

**WARNING:** This installation should be made by qualified service personnel and should conform to all local codes and in accordance with the National Electrical Codes.

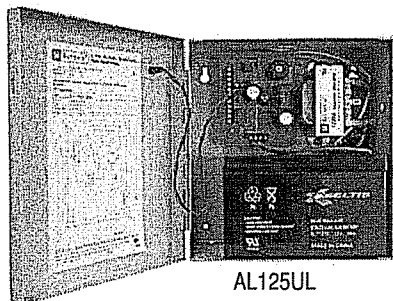
Altronix is not responsible for any typographical errors. Product specifications are subject to change without notice.



# AL125UL, AL125ULX, AL125ULP Multi-Output Power Supply Chargers w/Fire Alarm Interface

Rev. DSAL125UL - B14F

## Overview



AL125UL

- AL125UL, AL125ULX, AL125ULP are Power Limited Power Supply/Chargers that will convert 115VAC 50/60Hz input, into two individually PTC protected 12VDC or 24VDC outputs (see specifications). They are intended for use in applications requiring UL Listing for Access Control (UL294) and applications requiring an interface with Fire Alarm Control Panels.

### AL125UL

- 12VDC or 24VDC @ 1 amp supply current

### AL125ULX

- AL125UL w/larger enclosure.

### AL125ULP

- 12VDC @ 1 amp or 24VDC @ .5 amp supply current.
- Plug-in transformer (24VAC/40VA) included.

## Specifications

- Two (2) 12VDC or 24VDC, Class 2 Rated power limited outputs.
- Filtered and electronically regulated output.\*
- Input 115VAC 50/60Hz:
  - AL125UL & AL125ULX rated @ .6 amp.
  - AL125ULP - 24VAC @ 40VA.
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current: 400mA.
- Automatic switch over to stand-by battery when AC fails.
- AC power and unit status indicator on the front panel.
- Normally Open [NO] trigger input.
- Supervised Fire Alarm Disconnect (Latching w/reset or Non-Latching).
- AL125UL - includes power supply, transformer and enclosure.
- Accommodates one (1) 12VDC/7AH battery.
- AL125ULP - includes power supply, plug-in transformer (24VAC/40VA) and enclosure. Accommodates one (1) 12VDC/7AH battery or two (2)12VDC/4AH batteries.
- AL125ULX - includes power supply, transformer, cam lock and enclosure. Accommodates up to two (2) 12VDC/7AH batteries.
- Product weight:
  - AL125UL: 5.1 lbs.
  - AL125ULX: 8.20 lbs.
  - AL125ULP: 4.8 lbs.
- Shipping weight:
  - AL125UL: 5.6 lbs.
  - AL125ULX: 9.15 lbs.
  - AL125ULP: 5.3 lbs.

\*Note: When unit is powered by battery back up (AC Fail condition) the voltage range is 9.3V-13.2V and 19.55V-26.4V for 12 and 24 volt operation respectively.

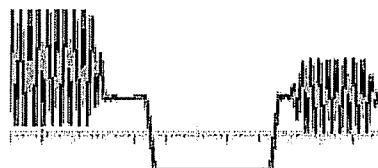
## Agency Approvals



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



CUL Listed - CSA Standard C22.2 No.1-98, Audio, Video and Similar Equipment.



## Digital Integration Category 5E Cable

Rev.2. 5/02

### Description:

- Multiple pair Category 5E cable
- Enhanced UTP Category Cable
- 4 pair 24AWG unshielded
- Thermoplastic insulation
- Each pair twisted in varied lays
- Thermoplastic jacket

### Applications:

High performance horizontal wiring that meets or exceeds industry standards for:

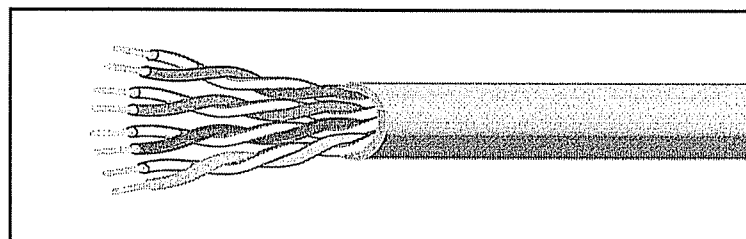
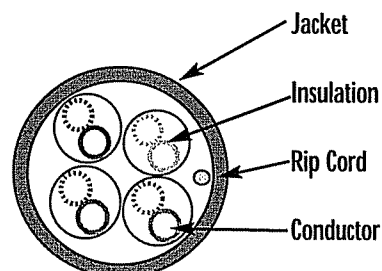
- Analog and Digital voice systems
- Intercom systems
- Security (CCTV) systems
- 10 Base-T, 100 Base-T, and 1000 Base-T
- FDDI TP-PMD
- 16Mbps Token Ring
- Home Networking
- ATM 155Mbps
- 550 Mhz Broadband video and standards under development such as: 622Mbps ATM

### Rating:

- UL listed NEC type CMR or MPR as defined in NEC Article 800
- Constructed in accordance with UL Standard 444
- Complies with UL 1666 Vertical Tray Flame Test
- Meets and Exceeds TIA/EIA 568-B.2 Specifications
- Verified to Category 5E requirements by independent third party testing laboratory

### Installation Characteristics:

Cable Weight:	22lbs/1000ft (33kg/km)
Bending Radius:	1" (25.4mm)Min (4x Cable O.D.)
Pulling Tension:	25lbf (110N)
Operating Temp:	-34°C to +60°C (-30°F to +140°F)
Storage Temp:	-34°C to +75°C (-30°F to +167°F)
Installation Temp:	-0°C to +60°C (-32°F to +140°F)



### Color Code:

Pair No.	1st Conductor	2nd Conductor
1	White/Blue	Blue
2	White/Orange	Orange
3	White/Green	Green
4	White/Brown	Brown

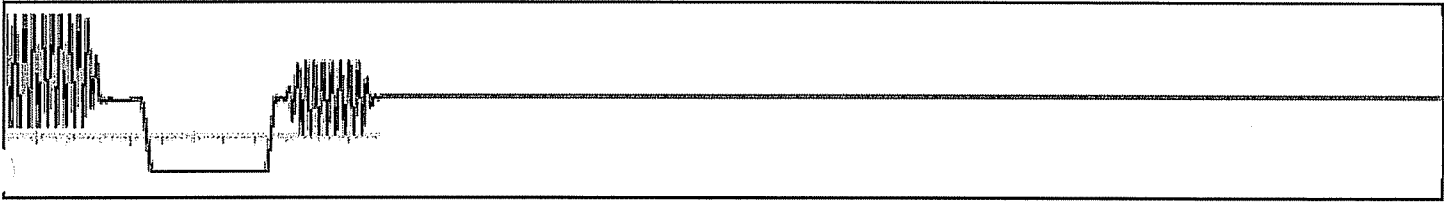
Mechanical Characteristics	
Number of Pairs	4
Awg. Size	24
Conductor Type	Solid Bare Copper
Insulation	Thermoplastic
Nom. Jacket Thickness	.020 in (.51mm)
Nom. O.D.	.194 in. (4.93mm)
Jacket Type Color	Gray, Blue, Pink, White

**WEST PENN**  
**WIRE**

2833 West Chestnut Street  
Washington, Pennsylvania 15301

Phone: 1-800-245-4964  
Fax: 724-222-6420





Frequency Mhz	Attenuation			NEXT		ACR*	PS-NEXT		PS-ACR	ELFEXT	PS-ELFEXT	SRL (db)	RL (db)
	db/100m	db/100ft	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m	db/100m
	avg.	min.	min.	avg.	min.	min.	avg.	min.	min.	min.	min.	min.	min.
.772	1.6	1.8	5.5	79	68.0	66.2	72	69.0	67.2	--	--	--	--
1.0	1.8	2.0	6.3	74	66.3	64.3	70	67.3	65.3	63.8	60.8	23.0	22.0
4.0	3.8	4.1	13	65	57.3	53.2	60	58.3	54.2	51.7	48.7	23.0	23.0
8.0	5.4	5.8	18	61	52.8	47.0	57	53.8	48.1	45.7	42.7	23.0	24.5
10.0	6.0	6.5	20	59	51.3	44.8	55	52.3	46.0	43.8	40.8	23.0	25.0
16.0	7.6	8.2	25	56	48.3	40.1	52	49.3	41.2	39.7	36.7	23.0	25.0
20.0	8.6	9.3	28	55	49.8	37.5	50	47.8	38.7	37.7	34.7	23.0	25.0
25.0	9.7	10.4	32	53	48.3	34.9	49	46.3	36.1	35.8	32.8	22.0	24.3
31.25	11.0	11.5	36	51	46.9	32.2	48	44.9	33.4	33.9	30.9	21.1	23.6
62.5	16.1	16.7	52	47	42.4	22.4	42	39.4	22.7	27.8	24.8	18.1	21.5
100.0	21.0	21.6	67	44	39.3	14.3	40	37.3	15.7	23.8	20.8	16.0	20.1
155.0	26.9	27.6	85	42	36.5	5.4	37	34.1	6.5	19.9	16.9	14.1	18.8
200.0	31.1	31.9	97	40	34.8	2.9	36	32.8	0.9	17.7	14.7	13.0	18.0
350.0	43.0	44.2	135	36	31.2	--	32	29.2	--	12.9	9.9	10.6	16.3

**TIA/EIA 568-B.2 CABLE MINIMUM SPECIFICATION: 100Mhz**

- Attenuation: 22dB
- NEXT: 35.3dB
- PS-NEXT: 32.3dB
- ELFEXT: 23.8dB
- PS-ELFEXT: 20.8dB
- Return Loss 20.1dB



2833 West Chestnut Street  
Washington, Pennsylvania 15301

Phone: 1-800-245-4964  
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# Technical Data Sheet Communication Cables

# WEST PENN WIRE



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www.westpenn-wpw.com

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<b>PART NUMBER:</b>	<b>221</b>
<b>DESCRIPTION:</b>	22/2 STRANDED BARE COPPER CONDUCTORS, UNSHIELDED WITH AN OVERALL JACKET.
<b>NEC RATING:</b>	CMR, NEC Article 800
<b>APPROVALS:</b>	(UL) C(UL) Listed or c(ETL)us Listed
<b>APPLICATION:</b>	Indoor for: Intercom, Security, Sound, Audio, Background Music, and Power Limited Control Circuits

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## Construction Parameters:

Conductor	22 AWG Bare Copper
Stranding	7x30
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.127" Nom.
Approximate Cable Weight	11 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

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## Electrical & Environmental Properties:

Temperature Rating	-20°C To +60°C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	25 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	17 Ohms/1M' Nom.
Insulation Colors	Black ,Red
Jacket Color	Gray, Blue
RoHS Compliant	Yes

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## Mechanical Properties:

Max. Recommended Pull Tension	18.2 lbs.
Min. Bend Radius (Install)	1.3"

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Specification Issue Date: 7/06

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---

<b>PART NUMBER:</b>	<b>224</b>
<b>DESCRIPTION:</b>	18/2 STRANDED BARE COPPER CONDUCTORS, UNSHIELDED WITH AN OVERALL JACKET
<b>NEC RATING:</b>	CMR, NEC Article 800
<b>APPROVALS:</b>	(UL) C(UL) Listed or c(ETL)us Listed
<b>APPLICATION:</b>	Indoor for: Intercom, Security, Sound, Audio, Background Music, and Power Limited Control Circuits

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## Construction Parameters:

Conductor	18 AWG Bare Copper
Stranding	7x26
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	2
Shield	None
Drain	None
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.155" Nom.
Approximate Cable Weight	16.1 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

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## Electrical & Environmental Properties:

Temperature Rating	-20°C To +60°C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	30 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	6.2 Ohms/1M' Nom.
Insulation Colors	Black ,Red
Jacket Color	Gray, Black, Blue, Red, Violet, Yellow
RoHS Compliant	Yes

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## Mechanical Properties:

Max. Recommended Pull Tension	42 lbs.
Min. Bend Radius (Install)	1.6"

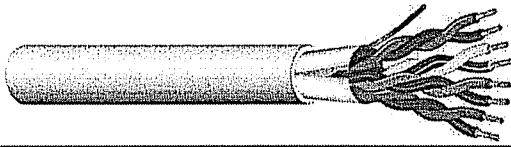
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# Technical Data Sheet Communication Cables



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<b>PART NUMBER:</b>	<b>3653</b>
<b>DESCRIPTION:</b>	22 AWG.- 4 PAIR Stranded bare copper conductors, shielded with an overall jacket.
<b>NEC RATING:</b>	CMR, NEC Article 800
<b>APPROVALS:</b>	(UL) C(UL) Listed or c(ETL)us Listed
<b>APPLICATION:</b>	Indoor for: Intercom, Security, Sound, Audio, Background Music, and Power Limited Control Circuits.

---

## Construction Parameters:

Conductor	22 AWG Bare Copper
Stranding	7x30
Insulation Material	PVC
Insulation Thickness	0.010" Nom.
Number of Conductors	8 (4 Pair)
Shield	Overall 100% Aluminum Foil
Drain	Stranded Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.015" Nom.
Overall Cable Diameter	0.244" Nom.
Approximate Cable Weight	40 Lbs/1M' Nom.
Flame Rating	UL 1666 Riser Flame Test

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## Electrical & Environmental Properties:

Temperature Rating	-20°C To +60°C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	55 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	99 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	17 Ohms/1M' Nom.
Insulation Colors	Black/Red-Red, Black/White-White, Black/Green-Green, Black/Blue-Blue
Jacket Color	Gray
RoHS Compliant	--

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## Mechanical Properties:

Max. Recommended Pull Tension	92 Lbs.
Min. Bend Radius (Install)	2.4"

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# Technical Data Sheet

## Data Grade RS-485 Cables



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<b>PART NUMBER:</b>	<b>D4852</b>
<b>DESCRIPTION:</b>	2 Pair 24 Awg. Stranded tinned copper conductors, shielded with an overall jacket.
<b>NEC RATING:</b>	CM, NEC Article 800
<b>APPROVALS:</b>	(UL) Listed
<b>APPLICATION:</b>	Indoor data cable for: Computer Application, Low-Capacitance Data.

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### Construction Parameters:

Conductor	24 AWG Tinned Copper
Stranding	7x32
Insulation Material	Polyolefin
Insulation Thickness	0.035" Nom.
Number of Conductors	4 (2 Pair)
Shield	100% Aluminum Polyester Foil
Drain	Stranded Tinned Copper
Jacket Material	PVC
Jacket Thickness	0.032" Nom.
Overall Cable Diameter	0.305" Nom.
Approximate Cable Weight	62 Lbs/1M' Nom.
Flame Rating	UL 1685

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### Electrical & Environmental Properties:

Temperature Rating	-20deg C to 60deg C
Operating Voltage	300 V RMS
Max.Capacitance Between Conductors @ 1 KHz	12.8 pf/ft Nom.
Capacitance Between Conductors to Shield @ 1 KHz	23 pf/ft Nom.
DC Resistance per Conductor @ 20deg C	24 Ohms/1M' Nom.
Velocity of Propagation	66% Nom.
Impedance	120Ω Nom
Insulation Colors	1. Blue- White/Blue, 2. Orange-White/Orange
Jacket Color	Gray
RoHS Compliant	--

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### Mechanical Properties:

Max. Recommended Pull Tension	87 lbs.
Min. Bend Radius (Install)	3"

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