

**Breakout Panels for  
VA6000 Series Switcher  
and CM8500 Matrix System**

**Installation/Operation**

**Manual C842M (9/96)**

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## REVISION HISTORY

<b>Manual #</b>	<b>Date</b>	<b>Comments</b>
C842M	9/96	Original version created per ECO 96-044, 96-042.

# **INSTALLATION/OPERATION MANUAL BREAKOUT PANELS FOR VA6000 SERIES SWITCHER AND CM8500 MATRIX SYSTEM**

## **1.0 WARNINGS**

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by Qualified Service Personnel and conform to all Local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.

### **This product may bear the following marks:**

**This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.**



**This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.**



**CAUTION:**  
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

**CAUTION:**  
RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.

**Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.**

## 2.0 SCOPE

The information contained within this manual covers the installation and operation of the Alarm Breakout Panels for the VA6000 Series Switcher and the Alarm, Wiretron and Relay Breakout Panels for the CM8500 Matrix system.

## 3.0 DESCRIPTION

### VA6000

The Breakout Panels for the VA6000 Series provide a convenient method for physically telescoping up to 20 alarm inputs down into the most appropriate of two headers existing on the Alarm Breakout Panel board for convenient connection to “D” type connectors on the rear of the VA6000.

A ribbon cable connects one of the two available header types (15-pin or 25-pin header) to the appropriate “D” type connector, depending on alarm input population, on the rear of the VA6000. Basically, two classes of ribbon cable are available: one for use with 4 and 8 alarm input models and another for 12 or 20 alarm input models. Cables are further differentiated by length—24 inch (.609 m) or 120 inch (3.048 m) lengths are available.

Additionally, each breakout panel assembly is shipped from the factory installed on a single mounting plate with appropriate mounting hardware. You should automatically receive the correct breakout panel, ribbon cable, mounting plate and hardware if you use Table 1 in Figure 12 as a guide while referencing all other appropriate figures provided in the manual.

### CM8500

The Breakout Panels for the CM8500 Matrix System likewise provide a convenient method for physically telescoping Alarm, Wiretron or Relay inputs down into appropriate headers for eventual connection to “D” type subconnectors on the rear of the CM8500 Matrix bay.

Unlike the VA6000 which is populated with two headers, each with different pin-outs on one breakout panel, the CM8500 utilizes three different breakout panels populated with only one header, with header pin-out configurations for the type of breakout panel being used: Alarm, Wiretron or Relay. For the CM8500, Breakout panels for Alarm and Wiretron inputs utilize, in each case, a single 40-pin header, while Relay Breakout panels incorporate a single 50-pin header.

As was the case for the VA6000, all telescoped inputs for breakout panels used with the CM8500 are connected via the appropriate onboard header to existing “D” type connectors on the rear of the CM8500 Matrix bay via ribbon cables.

The 24 inch (.609 m) and 120 inch (3.048 m) length ribbon cable assemblies for the 40-pin header type connectors have the same configuration and can be used with either the Wiretron Breakout Panel or the Alarm Breakout Panel.

The ribbon cable used with the 50-pin header (also available in the same lengths) is used only with the Relay Breakout Panel for the CM8500 system. Reference Table II, Figure 12 as a guide for ordering information related to CM8500 breakout panels while referencing other appropriate figures in the manual.

**NOTE:** When working with a CM8500 Matrix System, additional subassemblies may be required (if not already installed) on the CM8500 side of the installation in order to utilize the Alarm, Wiretron and Relay connectors on the rear of the CM8500 Matrix bay. These are:

CM8506 Communication circuit card to allow the CM8500 to communicate with Wiretron receiver/drivers. Mounts to Buffer Card.

CM8532 32 alarm/32 relay circuit card kit to allow for direct monitoring of 32 alarms and the use of 32 relay outputs programmable in software.

Consult your CM8500 manual (C501M) for installation requirements and any related information, if needed.

## 4.0 INSTALLATION

Breakout panels come from the factory installed on single mounting plates; an appropriate ribbon cable is included with the assembly. The Breakout panel and plate can be mounted in any convenient, accessible location. Once mounted, all user supplied wiring inputs (alarm, wiretron or relay) can be connected and then the supplied ribbon cable can be run between the header on the breakout panel and the appropriate “D” type connector on the equipment being used, whether VA6000 or CM8500.

Once the panels are physically mounted and all wires and cables are run, the product is ready for use.

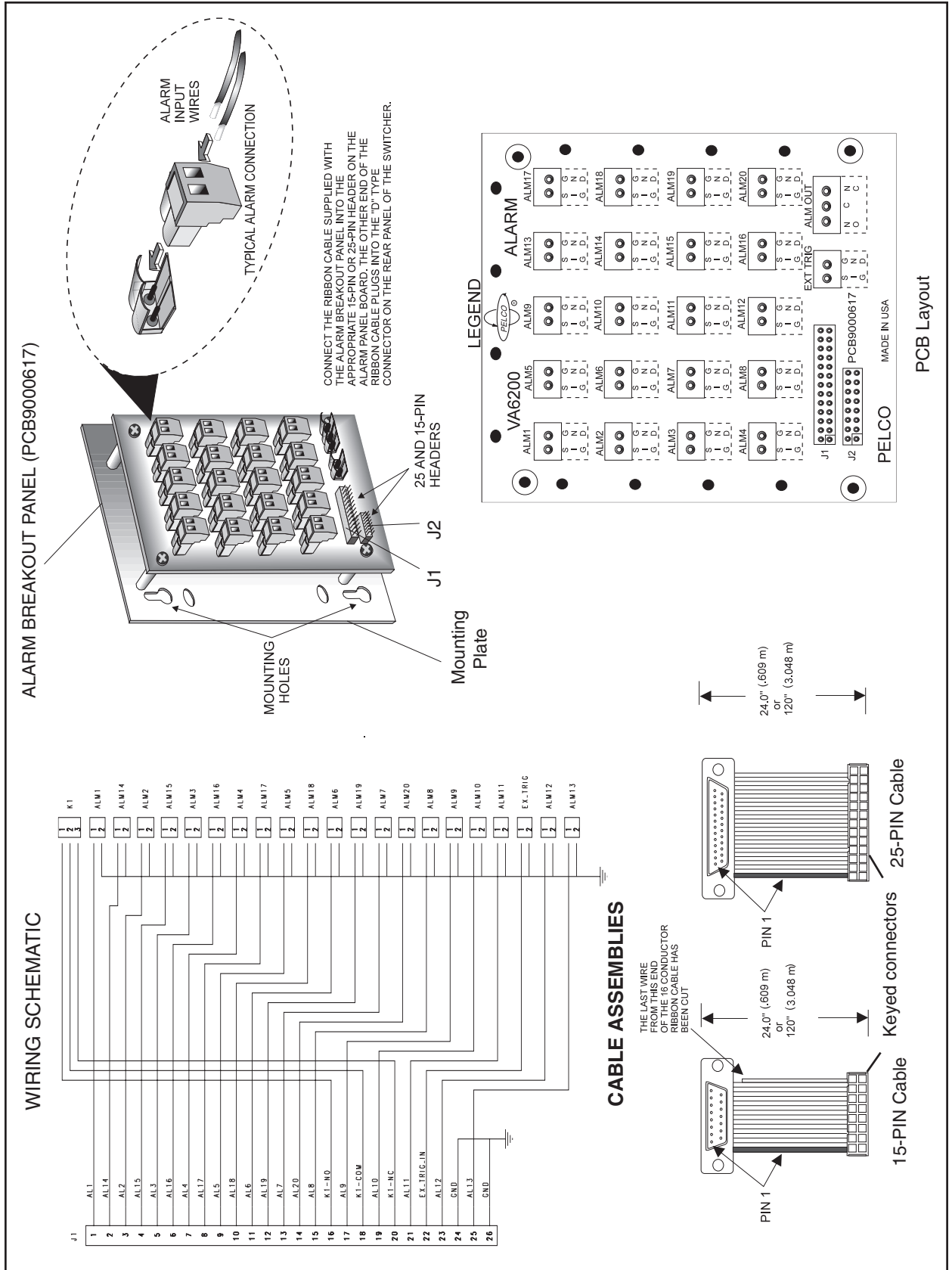
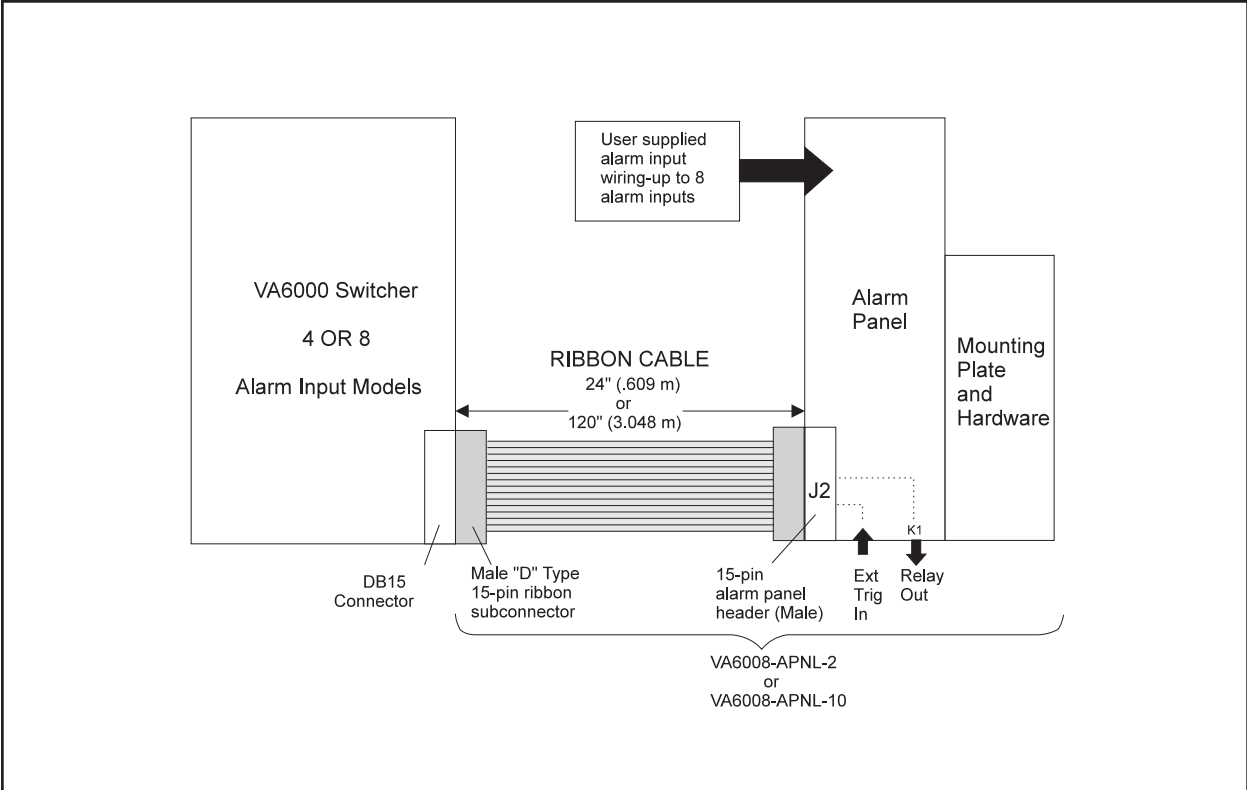


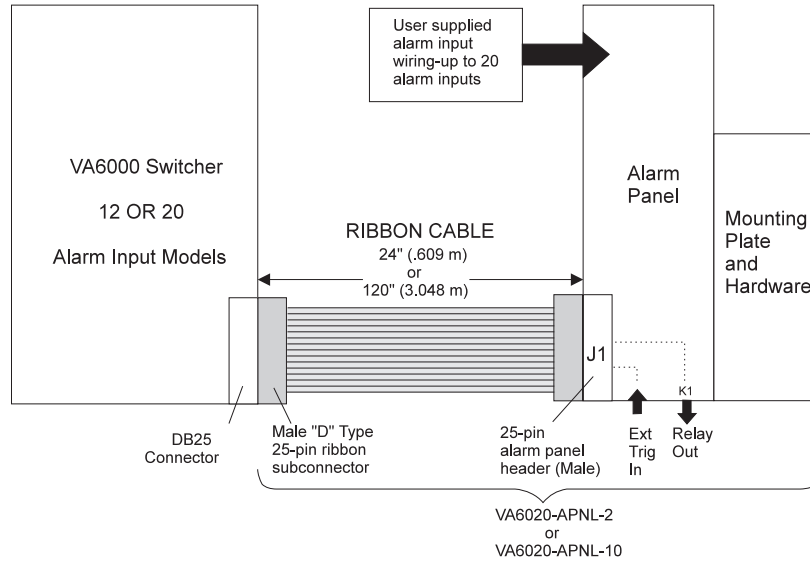
Figure 1. Alarm Breakout Panel Assembly Information—VA6000 Series



The table below lists the pin-out relationship between the alarm panel header, J2, and the 15-pin connector on the rear of the VA6000 switcher for 8 input alarms. The pattern serves equally well for VA models with 4 input alarms: the first 4 Pin Numbers correspond to like numbered ALM numbers, with pins 5-10 unused and pins 11-15 serving the same functions as in the 8 input VA6000 Switcher model.

Alarm Pin-outs 1-8/VA6000 Rear Panel Connector		J2 Header Pin-out on Alarm Breakout for VA6000
ALM #	15-Pin Female Conn. on Switcher Pin Numbers	Pin Numbers
1	1	1
2	2	3
3	3	5
4	4	7
5	5	9
6	6	11
7	7	13
8	8	15
not used	9	2 (not used)
not used	10	4 (not used)
K1 - NO	11	6
K1 - COM	12	8
K1 - NC	13	10
Ext.Trig.	14	12
Comm	15	14

**Figure 2.** Installation Configuration and Pin Mapping for 4/8 Alarm Inputs-VA6000 Alarm Breakout Panel



The table below lists the pin-out relationship between the alarm panel header, J1, and the 25-pin connector on the rear of the VA6000 switcher for 20 input alarms. The pattern serves equally well for VA models with 12 input alarms: the first 12 Pin Numbers correspond to like numbered ALM numbers with pins 13-20 unused and pins 21-25 serving the same functions as in the 20 input VA6000 Switcher models.

Alarm Pin-outs 1-16/CM8500 Rear Panel-P4		J1 Header Pin-out on Alarm Breakout for CM8500	
ALM #	25-Pin Female Conn. on Switcher	Pin Number	
	Pin Number		
1	1		1
2	2		3
3	3		5
4	4		7
5	5		9
6	6		11
7	7		13
8	8		15
9	9		17
10	10		19
11	11		21
12	12		23
13	13		25
14	14		2
15	15		4
16	16		6
17	17		8
18	18		10
19	19		12
20	20		14
K1 - NO	21		16
K1 -COM	22		18
K1 - NC	23		20
Ext.Trig.	24		22
Comm	25		24

**Figure 3.** Installation Configuration and Pin Mapping for 12/20 Alarm Inputs-VA6000 Alarm Breakout Panel

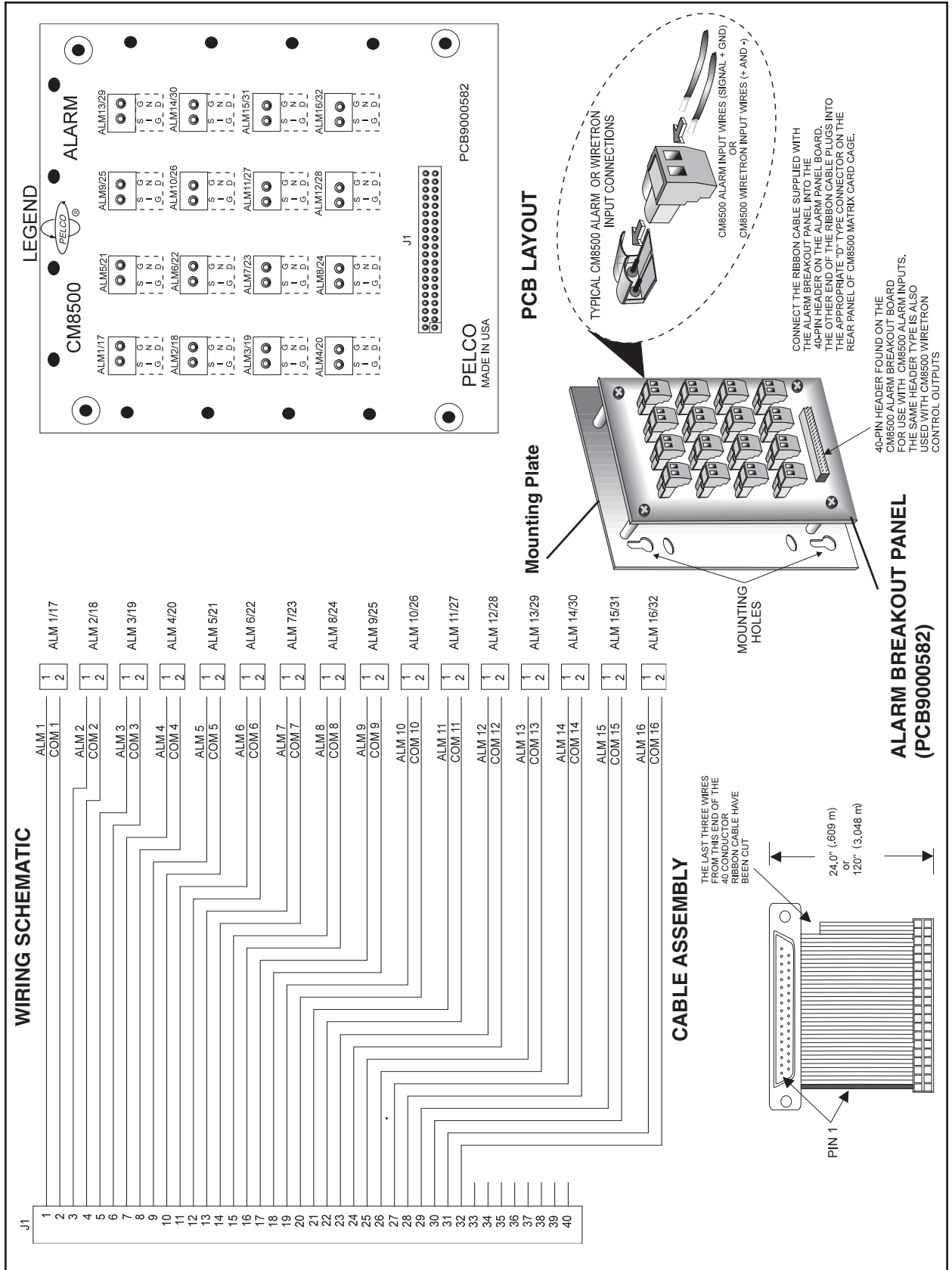
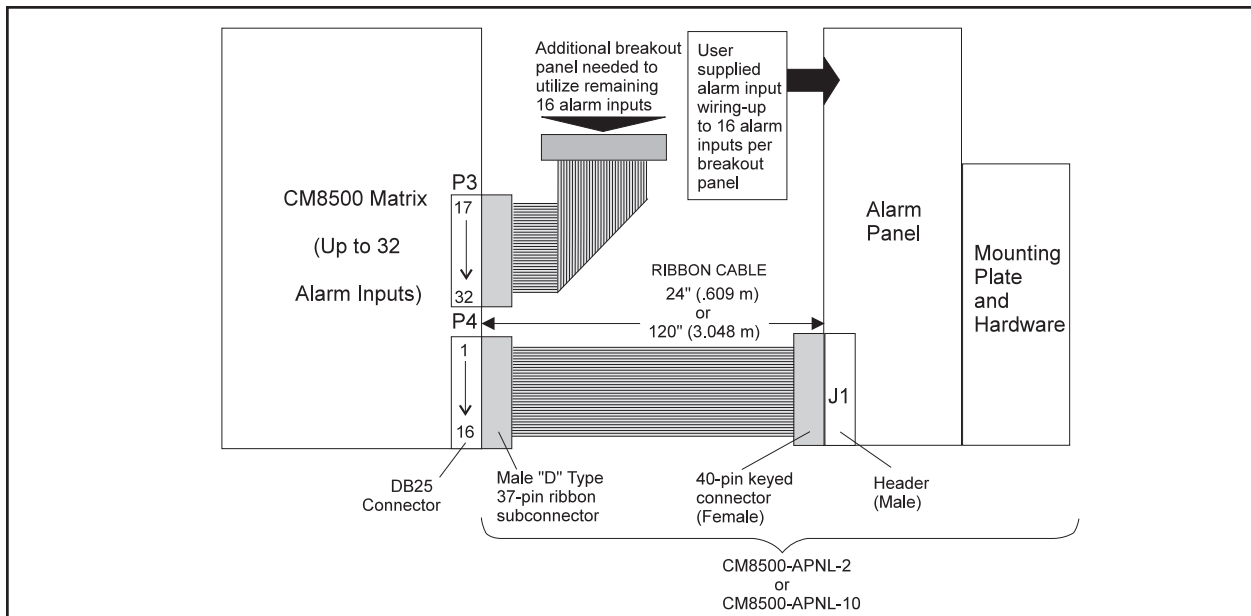


Figure 4. Alarm Breakout Panel Assembly Information—CM8500 Series





The table below lists the pin-out relationship between the alarm panel header, J1, and P4 on the CM8500 for the first 16 alarms. The pattern serves equally well for alarms 17-32: P4 becomes P3 and the listed alarms go from 17-32 instead of 1-16.

Alarm Pin-outs 1-16/CM8500 Rear Panel-P4			J1 Header Pin-out on Alarm Breakout for CM8500
ALM #	Pin Number		Pin Number
	Alarm	Com	
1	1	...	1
	...	20	2
2	2	...	3
	...	21	4
3	3	...	5
	...	22	6
4	4	...	7
	...	23	8
5	5	...	9
	...	24	10
6	6	...	11
	...	25	12
7	7	...	13
	...	26	14
8	8	...	15
	...	27	16
9	9	...	17
	...	28	18
10	10	...	19
	...	29	20
11	11	...	21
	...	30	22
12	12	...	23
	...	31	24
13	13	...	25
	...	32	26
14	14	...	27
	...	33	28
15	15	...	29
	...	34	30
16	16	...	31
	...	35	32

**Figure 5.** Installation Configuration and Pin Mapping for the CM8500 Alarm Breakout Panel

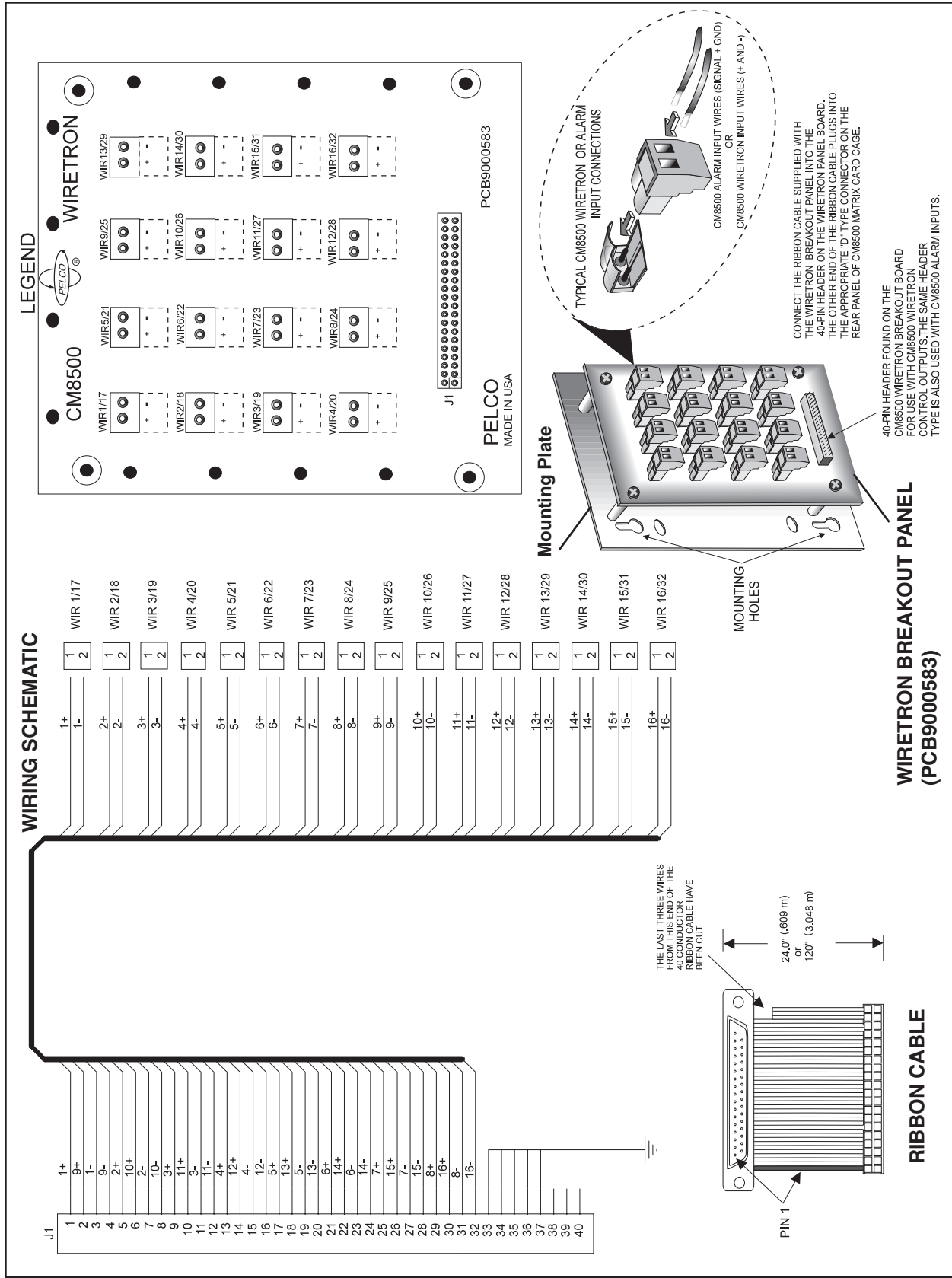
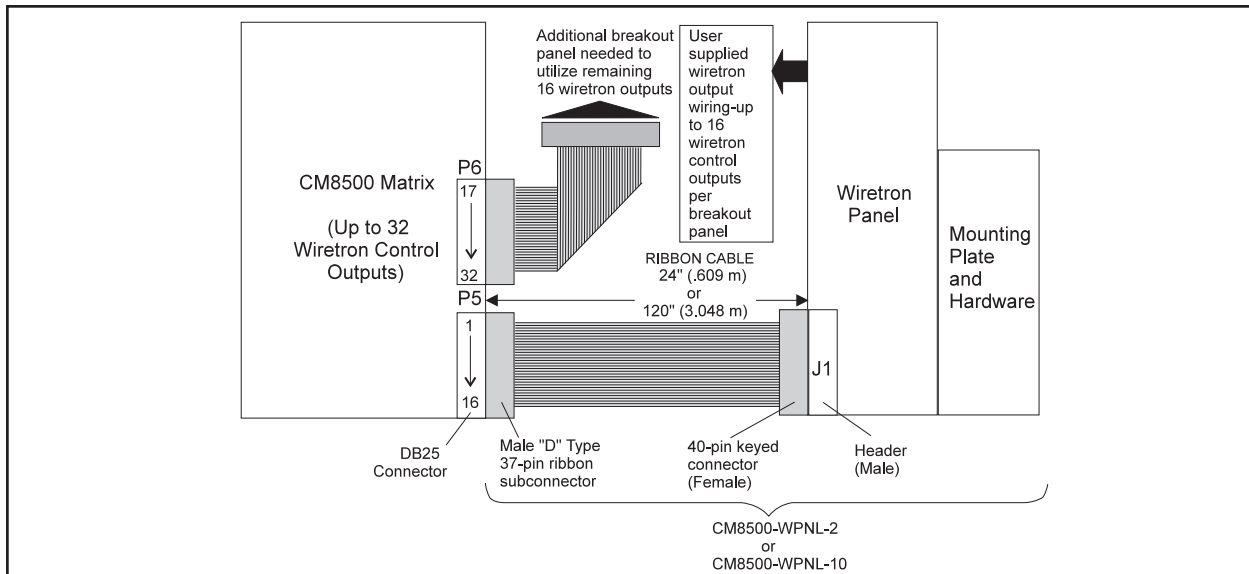


Figure 6. Wiretron Breakout Panel Assembly Information—CM8500 Series



The table below lists the pin-out relationship between the wiretron panel header, J1, and P5 on the CM8500 for the first 16 wire control positions. The pin mappings serve equally well for wire controls 17-32: P5 becomes P6 and the listed WIR numbers go from 17-32 instead of 1-16.

Wire Control Pin-outs 1-16/CM8500 Rear Panel-P5			J1 Header Pin-out on Wiretron Breakout Panel for CM8500
WIR #	Pin Number		Pin Number
	+	-	
1	1	...	1
	...	2	3
2	3	...	5
	...	4	7
3	5	...	9
	...	6	11
4	7	...	13
	...	8	15
5	9	...	17
	...	10	19
6	11	...	21
	...	12	23
7	13	...	25
	...	14	27
8	15	...	29
	...	16	31
9	20	...	2
	...	21	4
10	22	...	6
	...	23	8
11	24	...	10
	...	25	12
12	26	...	14
	...	27	16
13	28	...	18
	...	29	20
14	30	...	22
	...	318	24
15	32	...	26
	...	33	28
16	34	...	30
	...	35	32

**Figure 7.** Installation Configuration and Pin Mapping for the CM8500 Wiretron Breakout Panel

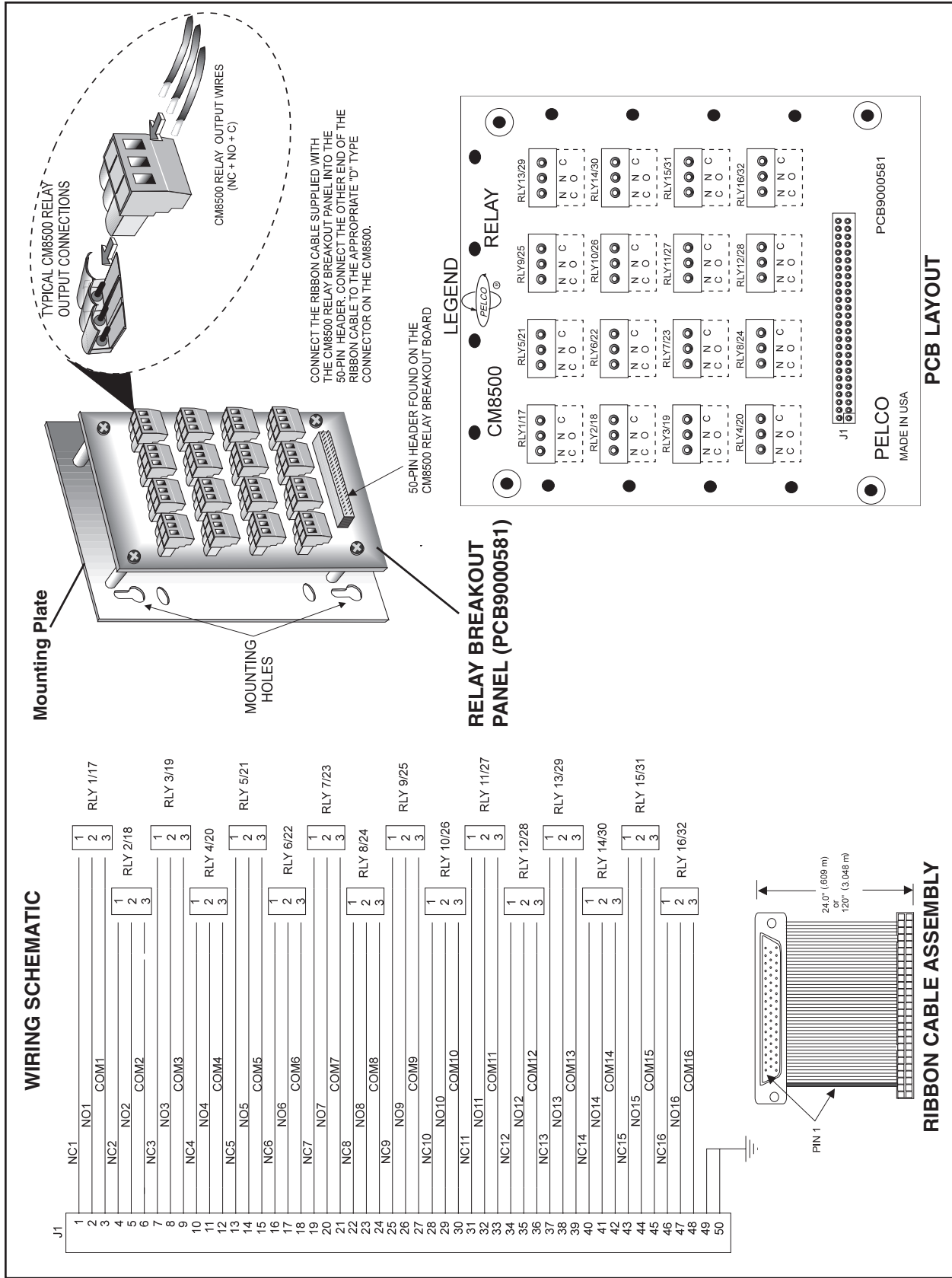
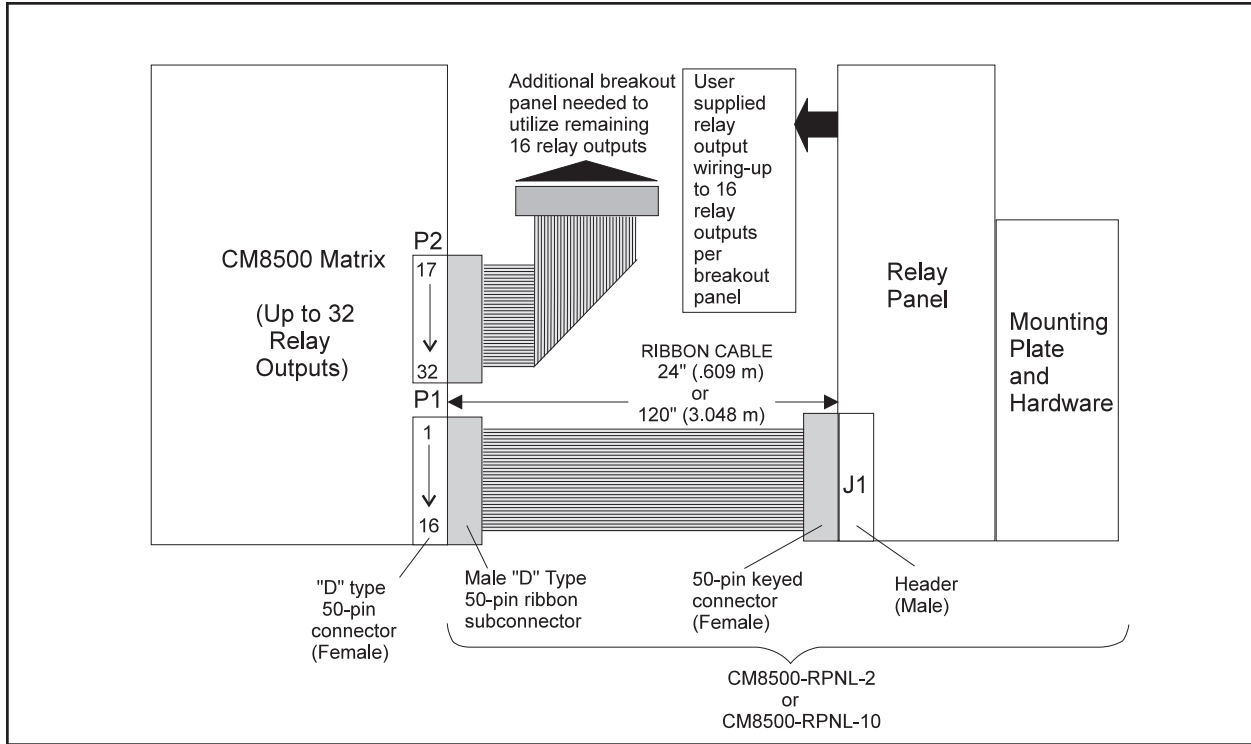
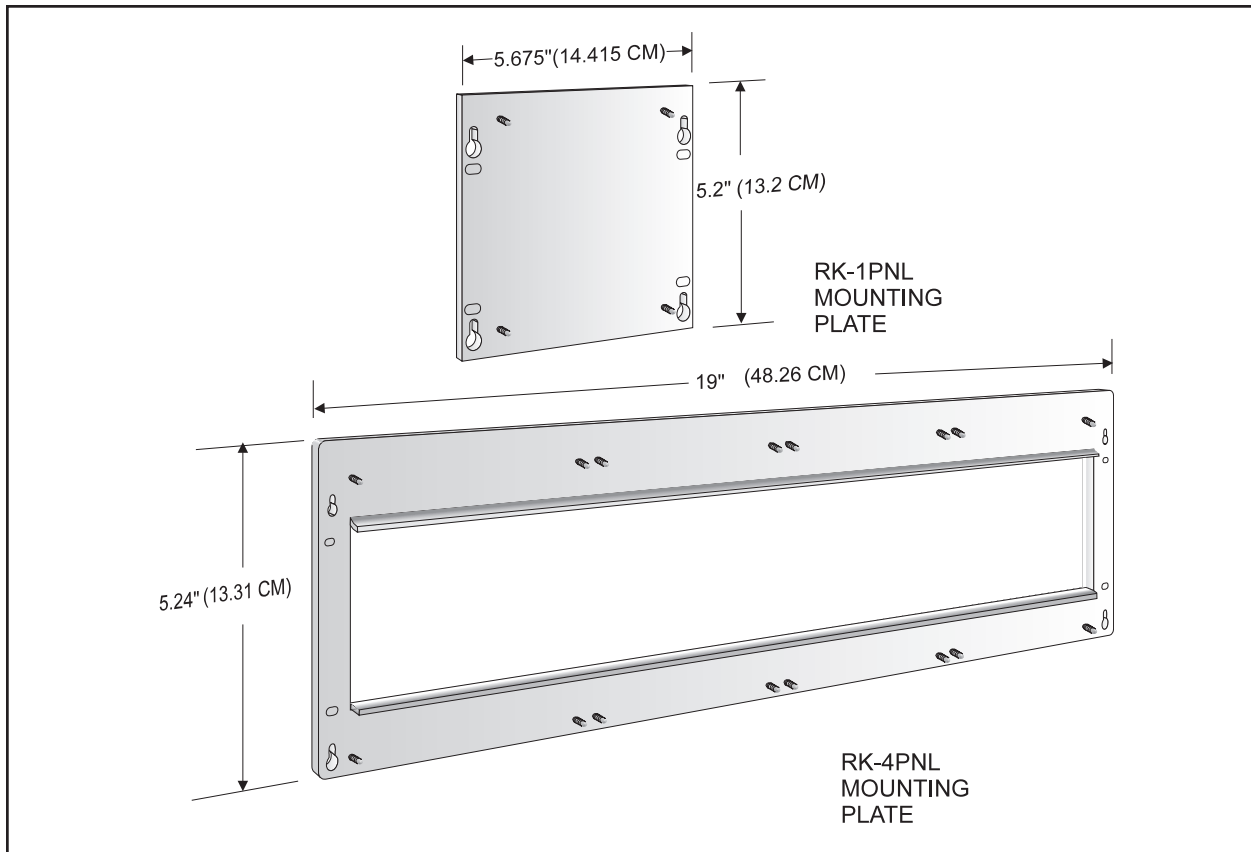


Figure 8. Wiretron Breakout Panel Assembly Information—CM8500 Series



**Figure 9.** Installation Configuration for the CM8500 Wiretron Breakout Panel



**Figure 10.** Rack Panel Mounting Plate Dimensions

The table below lists the pin-out relationship between the relay panel header, J1, and P1 on the CM8500 for the first 16 relay output positions. The pin mappings serve equally well for relay outputs 17-32: P1 becomes P2 and the listed RELAY numbers go from 17-32 instead of 1-16.

Relay 1-16 Pin-outs CM8500 Rear Panel-P1				J1 Header Pin-out on Relay Breakout Panel for CM8500
RELAY #	Pin Number			Pin Number
	NC	NO	COM	
1	1	...	...	1
	...	2	...	2
	...	...	3	3
2	4	...	...	4
	...	5	...	5
	...	...	6	6
3	7	...	...	7
	...	8	...	8
	...	...	9	9
4	10	...	...	10
	...	11	...	11
	...	...	12	12
5	13	...	...	13
	...	14	...	14
	...	...	15	15
6	16	...	...	16
	...	17	...	17
	...	...	18	18
7	19	...	...	19
	...	20	...	20
	...	...	21	21
8	22	...	...	22
	...	23	...	23
	...	...	24	24
9	25	...	...	25
	...	26	...	26
	...	...	27	27
10	28	...	...	28
	...	29	...	29
	...	...	30	30
11	31	...	...	31
	...	32	...	32
	...	...	33	33
12	34	...	...	34
	...	35	...	35
	...	...	36	36
13	37	...	...	37
	...	38	...	38
	...	...	39	39
14	40	...	...	40
	...	41	...	41
	...	...	42	42
15	43	...	...	43
	...	44	...	44
	...	...	45	45
16	46	...	...	46
	...	47	...	47
	...	...	48	48

**Figure 11.** Pin Mapping for the CM8500 Relay Breakout Panel

## 5.0 MODELS

VA6008-APNL-2	VA6000 alarm breakout panel for up to 8 alarm inputs; 2-foot (.609 m) interconnecting ribbon cable supplied.
VA6008-APNL-10	Same as VA6008-APNL-2, except 10-foot (3.048 m) interconnecting ribbon cable.
VA6020-APNL-2	VA6000 alarm breakout panel for up to 20 alarm inputs; 2-foot (.609 m) interconnecting ribbon cable supplied.
VA6020-APNL-10	Same as VA6020-APNL-2 except 10-foot (3.048 m) interconnecting ribbon cable.
CM8500-APNL-2	Alarm breakout panel for up to 16 alarm inputs/panel; 2-foot (.609 m) interconnecting ribbon cable supplied.
CM8500-APNL-10	Same as CM8500-APNL-2, except 10-foot (3.048 m) interconnecting ribbon cable.

CM8500-WPNL-2	Wiretron breakout panel for up to 16 outputs/panel; 2-foot (.609 m) interconnecting ribbon cable supplied.
CM8500-WPNL-10	Same as CM8500-WPNL-2, except 10-foot (3.048 m) interconnecting ribbon cable.
CM8500-RPNL-2	Relay breakout panel for up to 16 outputs/panel; 2-foot (.609 m) interconnecting ribbon cable supplied.
CM8500-RPNL-10	Same as CM8500-RPNL-2, except 10 foot (3.048 m) interconnecting ribbon cable.

## 6.0 OPTIONAL ACCESSORIES

RK-1PNL	Rack kit for mounting one breakout panel (see Figure 10).
RK-4PNL	Rack kit for mounting up to four breakout panels (see Figure 10).

<b>Table I. Alarm Breakout Panel Assembly Part Numbers for VA6000 Series Switchers</b>			
# Of Inputs Cable Length	4 or 8 Alarm Inputs	12 or 20 Alarm Inputs	
24 in (.609 m) cable	<b>VA6008-APNL-2</b>	<b>VA6020-APNL-2</b>	
120 in (3.048 m) cable	<b>VA6008-APNL-10</b>	<b>VA6020-APNL-10</b>	

<b>Table II. Breakout Panel Assembly Part Numbers for CM8500 Matrix System</b>			
Input Type Cable Length	Alarm Inputs	Wiretron Control Outputs	Relay Outputs
24 in (.609 m) cable	<b>CM8500-APNL-2</b>	<b>CM8500-WPNL-2</b>	<b>CM8500-RPNL-2</b>
120 in (3.048 m) cable	<b>CM8500-APNL-10</b>	<b>CM8500-WPNL-10</b>	<b>CM8500-RPNL-10</b>

Figure 12. Simplified Part Number Ordering Tables

## 7.0 WARRANTY AND RETURN INFORMATION

### WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura™ Series distributed network-based video products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

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### RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors  
473 Eccles Avenue  
South San Francisco, CA 94080 USA  
Phone: 650-737-1700  
Fax: 650-737-0933

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International customers call 1-559-292-1981 or  
FAX 1-559-348-1120

(Product specifications subject to change  
without notice.)

### C842M