RACAL INSTRUMENTS™

1260-134

HIGH POWER SWITCH

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Before undertaking any troubleshooting, maintenance or exploratory procedure, read carefully the **WARNINGS** and **CAUTION** notices.

This equipment contains voltage hazardous to human life and safety, and is capable of inflicting personal injury.

If this instrument is to be powered from the AC line (mains) through an autotransformer, ensure the common connector is connected to the neutral (earth pole) of the power supply.

Before operating the unit, ensure the conductor (green wire) is connected to the ground (earth) conductor of the power outlet. Do not use a two-conductor extension cord or a three-prong/two-prong adapter. This will defeat the protective feature of the third conductor in the power cord.

Maintenance and calibration procedures sometimes call for operation of the unit with power applied and protective covers removed. Read the procedures and heed warnings to avoid “live” circuit points.

Before operating this instrument:

1. Ensure the proper fuse is in place for the power source to operate.

2. Ensure all other devices connected to or in proximity to this instrument are properly grounded or connected to the protective third-wire earth ground.

If the instrument:

- fails to operate satisfactorily
- shows visible damage
- has been stored under unfavorable conditions
- has sustained stress

Do not operate until performance is checked by qualified personnel.

EC Declaration of Conformity

We

Astronics Test Systems
4 Goodyear
Irvine, CA 92618

declare under sole responsibility that the

1260-134 Multiplexer Plug In Module
P/N 407662

conforms to the following Product Specifications:

Safety: EN 61010-1

EMC: EN50081-1
CISPR 11:1990/EN 55011 (1991): Group 1 Class A
IEC 801-2:1991/EN 50082-1 (1992): 4 kV CD, 8 kV AD
IEC 801-3:1984/EN 50082-1 (1992): 3 V/m, 27-500 MHz
IEC 801-4:1988/EN 50082-1 (1992): 1 kV

Supplementary Information:

The above specifications are met when the product is installed in an Astronics Test Systems Adapt-a-Switch Carrier with faceplates installed over all unused slots, as applicable. The carrier is installed in a certified mainframe.

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC.

Irvine, CA, November 12, 1998

Quality Manager

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DOCUMENT CHANGE HISTORY

Revision	Date	Description of Change
A	9/23/08	Revised per EO 29396 Revised format to current standards. Company name revised throughout manual. Manual now revision letter controlled. Added Document Change History Page v.
No change	03/24/09	Back of cover sheet. Revised Warranty Statement, Return of Product, Proprietary Notice and Disclaimer to current standards. Removed Reshipment Instructions in (Chap. 2-1) and removed (Chap 4). Information. now appears in first 2 sheets behind cover sheet. Updated table of contents to reflect changes made.

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Chapter 1

SPECIFICATIONS

Introduction

The 1260-134 is a 16 (1X4) 2 wire multiplexer plug-in switch module developed for the 1260-100 Adapt-a-Switch Carrier. The 1260-134 includes the following features:

- Standard Adapt-a-Switch plug-in design, providing for ease of replacement
- Data-Driven embedded descriptor, allowing immediate use with any Option-01T switch controller, regardless of firmware revision level.

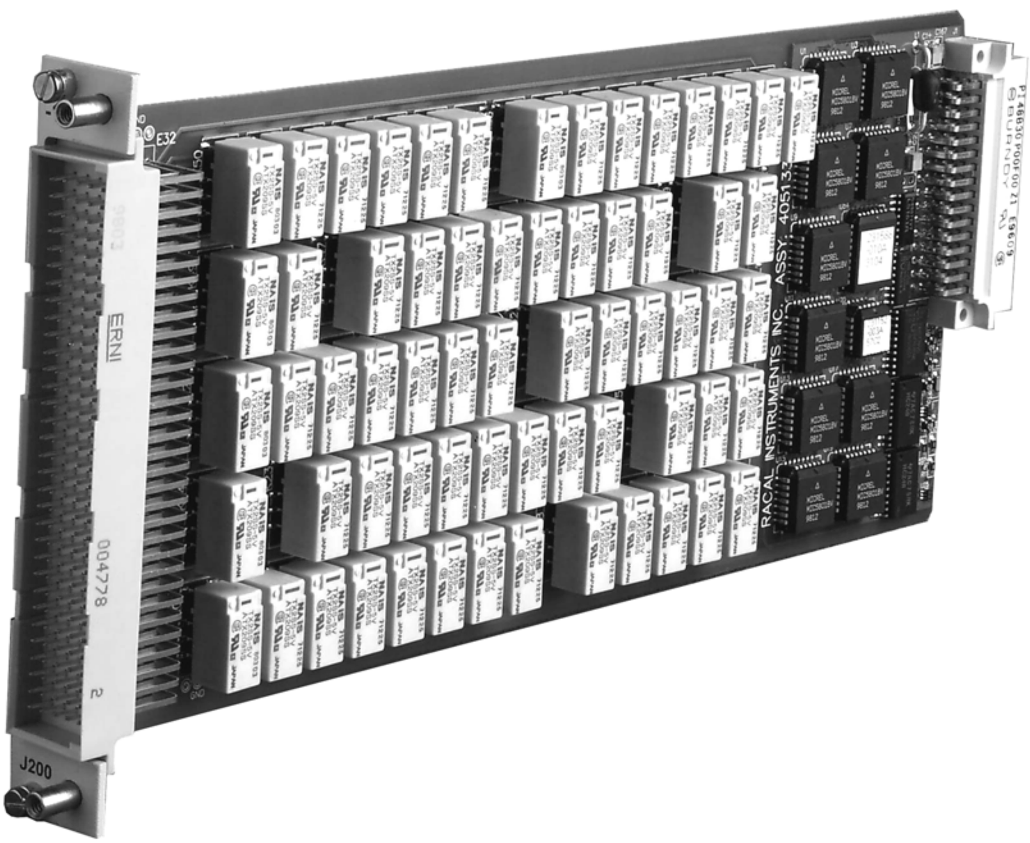

Figure 1-1, The 1260-134

Specifications

Bandwidth (-3dB)	100 MHz
Insertion Loss	
10 MHz	< 0.5 dB
50 MHz	< 1 dB
Isolation	
100 KHz	> 50 dB
1 MHz	> 40 dB
Crosstalk	
100 KHz	< -50 dB
1 MHz	< -40 dB
Switching Voltage	
AC	250 V, Max
DC	220 V, Max
Switching Current	
AC	2 A, Max
DC	2 A, Max
Switching Power	
AC	125 VA, Max
DC	60 W, Max
Path resistance	< 500 mΩ
Thermal EMF	< 10 uV
Capacitance	
Channel to Chassis	< 100 pF
Open Channel	< 5 pF
Insulation resistance	> 10^9 Ω
Relay Settling Time	< 10 ms
Shock	30g, 11 ms, ½ sine wave
Vibration	0.013 in. P-P, 5-55 Hz
Bench Handling	4 in., 45°
Cooling	See 1260-100 cooling data
Temperature	
Operating	0°C to +55°C
Non-operating	-40°C to +75°C
Relative Humidity	85% + 5% non-condensing at < 30°C

Altitude	
Operating	10,000 feet
Non-operating	15,000 feet
Power Requirements	
+5 VDC	150mA + 30mA per energized relay (2A Max.)
Weight	1.0 lb. (0.45 kg.)
MTBF	749095 hours (MIL-HDBK-217E)
Dimensions	4.5”H X 0.75”W X 9.5”D

About MTBF

The 1260-134 MTBF is 749095 hours, calculated in accordance with MIL-HDBK-217E, with the exception of the electromechanical relays. Relays are excluded from this calculation because relay life is strongly dependent upon operating conditions. Factors affecting relay life expectancy are:

1. Switched voltage
2. Switched current
3. Switched power
4. Maximum switching capacity
5. Maximum rated carrying current
6. Load type (resistive, inductive, capacitive)
7. Switching repetition rate
8. Ambient temperature

The most important factor is the maximum switching capacity, which is an interrelationship of maximum switching power, maximum switching voltage and maximum switching current. When a relay operates at a lower percentage of its maximum switching capacity, its life expectancy is longer. The maximum switching capacity specification is based on a resistive load, and must be further de-rated for inductive and capacitive loads.

For more details about the above life expectancy factors, refer to the data sheet for the switch plug-in module.

The relay used on the 1260-134 plug-in is part no. 310256-001.

The relay manufacturer's specifications for this relay are:

Life Expectancy
    Mechanical   100,000,000 operations
    Electrical   100,000 operations at full rated load (resistive)

For additional relay specifications, refer to the relay manufacturer's data sheet.

Ordering Information

Listed below are part numbers for both the 1260-134 switch module and available mating connector accessories. Each 1260-134 uses a single mating connector.

ITEM	DESCRIPTION	PART #
1260-134 Switch Module	Switch Module, 16 (1X4) 2 wire multiplexer, 2 A Consisting of: P/N 405133-001 PCB Assembly P/N 980824-134 Manual	407662
160-pin Mating Connector	160 Pin Conn. Kit with pins	407664
Cable Assy. 6ft, Sleeved	160 Pin Cable Assy, 6 Ft, 24 AWG	407408-001
Additional Manual		980824-134

Chapter 2

INSTALLATION INSTRUCTIONS

Unpacking and Inspection

1. Remove the 1260-134 module and inspect it for damage. If any damage is apparent, inform the carrier immediately. Retain shipping carton and packing material for the carrier's inspection.

2. Verify that the pieces in the package you received contain the correct 1260-134 module option and the 1260-134 Users Manual. Notify Astronics Test Systems, if the module appears damaged in any way. Do not attempt to install a damaged module into a VXI chassis.

3. The 1260-134 module is shipped in an anti-static bag to prevent electrostatic damage to the module. Do not remove the module from the anti-static bag unless it is in a static-controlled area.

Installation

Installation of the 1260-134 Switching Module into a 1260-100 Carrier assembly is described in the Installation section of the 1260-100 Adapt-a-Switch Carrier Manual.

Module Configuration

The 1260-134 contains sixteen 1x4 multiplexers. Each channel of each multiplexer is independently controlled. Thus, the user can simultaneously connect any combination of four input channels to the common port of the multiplexer.

For a block diagram of the 1260-134, refer to **Figure 2-1**.

Front Panel Connectors

The 1260-134 has one 160-pin front-panel connector, labeled J200. It is a 160-pin, modified DIN style, with 0.025” square posts as pins. It has one pin for each input and one for each output. See **Figure 2-2** for numbering. **Table 2-1** shows the mapping of channel numbers to connector pins. Information about available mating connectors is provided immediately after **Table 2-1**.

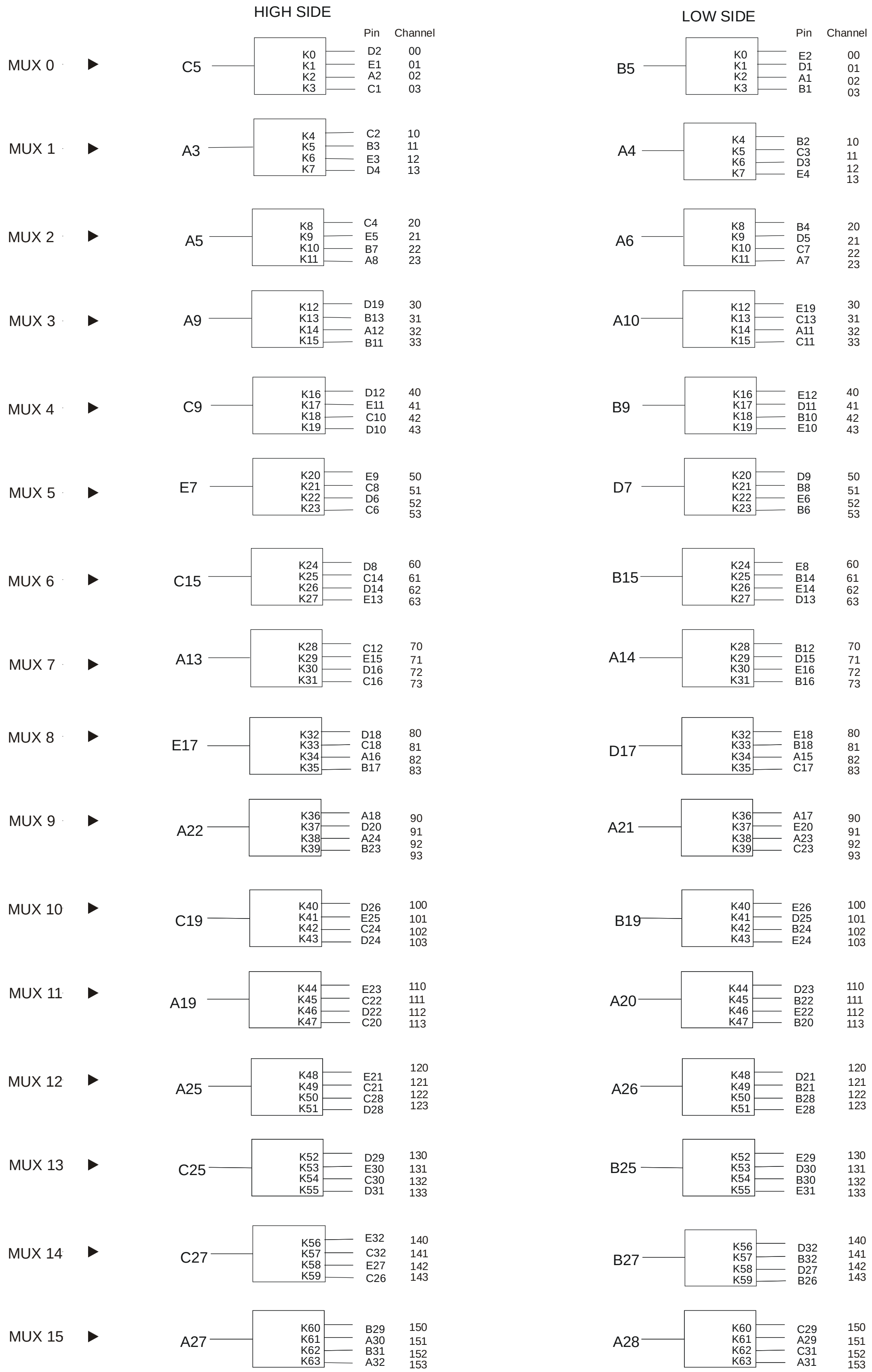

Figure 2-1, Block Diagram of 1260-134

Figure 2-2, Front-Panel Connector Pin Numbering

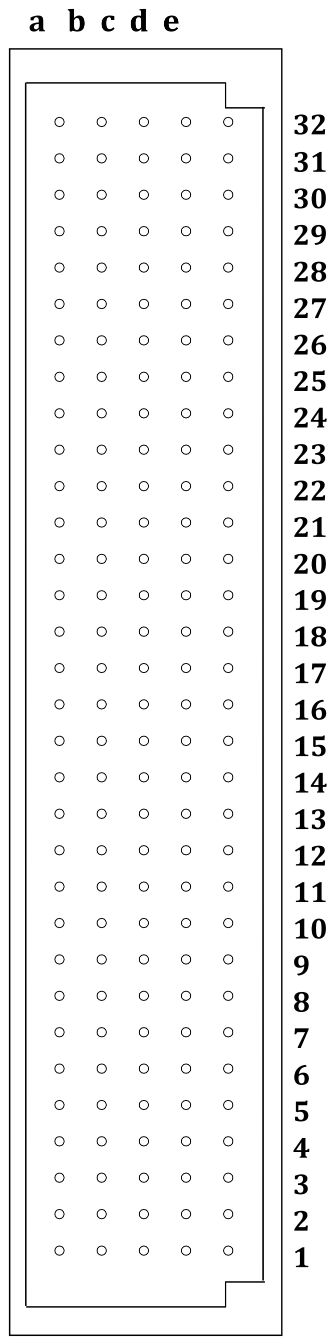

Table 2-1, 1260-134 Front-Panel Connections

MUX	Channel	Pin	
		High	Low
0	Common	C5	B5
	Input 0	D2	E2
	Input 1	E1	D1
	Input 2	A2	A1
	Input 3	C1	B1
1	Common	A3	A4
	Input 10	C2	B2
	Input 11	B3	C3
	Input 12	E3	D3
	Input 13	D4	E4
2	Common	A5	A6
	Input 20	C4	B4
	Input 21	E5	D5
	Input 22	B7	C7
	Input 23	A8	A7
3	Common	A9	A10
	Input 30	D19	E19
	Input 31	B13	C13
	Input 32	A12	A11
	Input 33	B11	C11
4	Common	C9	B9
	Input 40	D12	E12
	Input 41	E11	D11
	Input 42	C10	B10
	Input 43	D10	E10
5	Common	E7	D7
	Input 50	E9	D9
	Input 51	C8	B8
	Input 52	D6	E6
	Input 53	C6	B6
6	Common	C15	B15
	Input 60	D8	E8
	Input 61	C14	B14
	Input 62	D14	E14
	Input 63	E13	D13
7	Common	A13	A14
	Input 70	C12	B12
	Input 71	E15	D15
	Input 72	D16	E16
	Input 73	C16	B16

MUX	Channel	Pin	
		High	Low
8	Common	E17	D17
	Input 80	D18	E18
	Input 81	C18	B18
	Input 82	A16	A15
	Input 83	B17	C17
9	Common	A22	A21
	Input 90	A18	A17
	Input 91	D20	E20
	Input 92	A24	A23
	Input 93	B23	C23
10	Common	C19	B19
	Input 100	D26	E26
	Input 101	E25	D25
	Input 102	C24	B24
	Input 103	D24	E24
11	Common	A19	A20
	Input 110	E23	D23
	Input 111	C22	B22
	Input 112	D22	E22
	Input 113	C20	B20
12	Common	A25	A26
	Input 120	E21	D21
	Input 121	C21	B21
	Input 122	C28	B28
	Input 123	D28	E28
13	Common	C25	B25
	Input 130	D29	E29
	Input 131	E30	D30
	Input 132	C30	B30
	Input 133	D31	E31
14	Common	C27	B27
	Input 140	E32	D32
	Input 141	C32	B32
	Input 142	E27	D27
	Input 143	C26	B26
15	Common	A27	A28
	Input 150	B29	C29
	Input 151	A30	A29
	Input 152	B31	C31
	Input 153	A32	A31

Mating Connectors

Mating connector accessories are available:

160-Pin Connector Kit with pins, P/N 407664

160-Pin Cable Assembly, 6 Ft., 24 AWG,
P/N 407408-001

The 160-Pin Connector Kit consists of a connector housing and 170 crimp pins. After wire attachment, the pin is inserted into the housing and will snap into place, providing positive retention.

The suggested hand tool for the crimp pins is P/N 990898. The corresponding pin removal tool is P/N 990899.

The 160-Pin Cable Assembly uses 24 AWG cable with crimp pins to mate with the 1260-134. The other cable end is unterminated. Refer to **Table 2-1** for channel-to-pin mapping information.

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Chapter 3
MODULE OPERATION

Setting the Module Address

The Option-01T switch controller identifies each Adapt-a-Switch plug-in or conventional 1260-Series module by a *module address* that is unique to that module. The module address is a number from 1 through 12, inclusive.

The module address assigned to the 1260-134 depends on the carrier slot into which the 1260-134 is inserted, and on the position of the logical address DIP switch on the carrier side panel. The switch has two settings:

- 1-6 (closed): When the switch is set to this position, the module addresses of the plug-ins in the 1260-100 Carrier are from 1 through 6. The module with address 1 is in the left slot of the top row. The plug-ins are addressed in the following pattern:

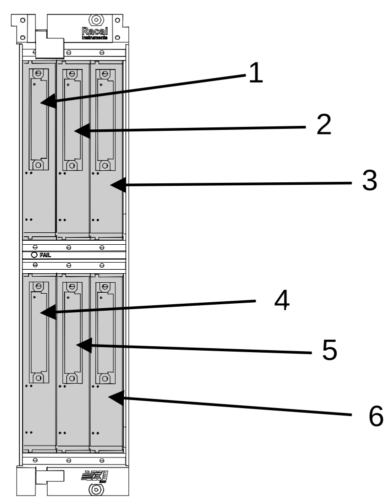

Figure 3-1, Front-View – Module Addresses for 1 through 6

- 7 - 12 (open): When the switch is set to this position, the module addresses of the plug-ins in the 1260-100 Carrier are from 7 through 12, in the following pattern:

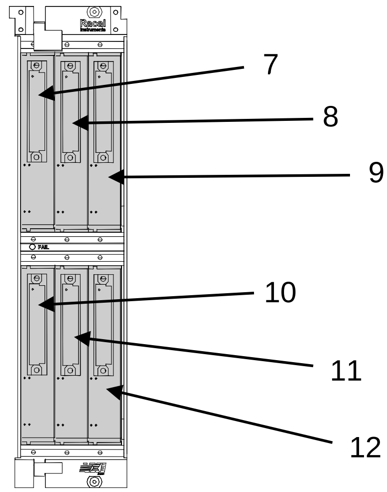

Figure 3-2, Front-View – Module Addresses for 7 through 12

When setting module addresses for Adapt-a-Switch Carriers and conventional 1260-Series modules, be sure that no address is used by more than one plug-in or 1260-Series C-Size switching module.

For instructions on setting module addresses for a conventional 1260-Series module, see the label on the side panel of the module.

Operating Modes

The 1260-134 may be operated either in *message-based* mode or in *register-based* mode.

In the *message-based* mode, the 1260-01T switch controller interprets commands sent by the slot 0 controller, and determines the appropriate data to send to the control registers of the 1260-134 module.

A conceptual view of the message-based mode of operation is shown in **Figure 3-3**.

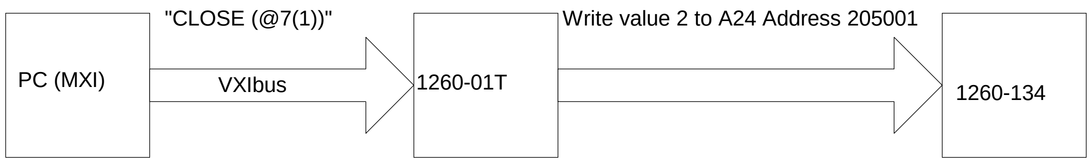

Figure 3-3, Message-Based Mode of Operation

In the *register-based* mode, the user writes directly to the control registers on the 1260-134 module. The 1260-01T command module does not monitor these operations, and does not keep track of the relay states on the 1260-134 module in this mode.

A conceptual view of the register-based mode is shown in **Figure 3-4** below.

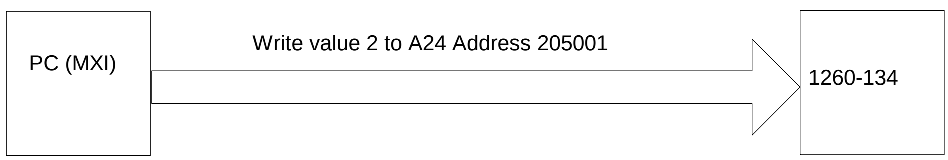

Figure 3-4, Register-Based Mode of Operation

Since the 1260-01T switch controller does not keep track of relay states during the register-based mode, it is advisable to use **either** the message-based or the register-based mode, and continue to use the same mode throughout the application program.

In general, the message-based mode of operation is easier to use with utility software such as the National Instruments VXI Interactive Control (VIC) program. The message-based mode allows the user to send ASCII text commands to the 1260-01T and to read replies from the 1260-01T. In addition, some features, such as the SCAN list, are available only in the message-based mode of operation.

The register-based mode provides faster control of relay channels. In this mode, relay operations are processed in less than 9 microseconds, not counting relay settling time or software overhead inherent in I/O libraries such as VISA. To determine the relay settling time, refer to Relay Settling Time in the

Specifications section.

Consult the 1260-01T User's Manual for a comparison of the message-based and register-based modes of operation.

Operating In Message-Based Mode

Channel Descriptors For The 1260-134

The standard 1260-01T commands are used to operate the 1260-134 module. These commands are described in the 1260-01T User's Manual.

Each 1260-01T relay command uses a *channel descriptor* to select the channel(s) of interest. The syntax for a channel descriptor is the same for all 1260 series modules. In general, the following syntax is used to select a single channel:

```
(@ <module address> ( <channel> ) )
```

Where:

- <module address> is the address of the 1260-134 module. This is a number is in the range from 1 through 12, inclusive.

- <channel> is the 1260-134 channel to operate. This is a number in the range from 0-3, 10-13, 20-23 ……etc. See Table 2-1.

Multiple individual channels may be specified using the following channel descriptor syntax:

```
@ <module address> ( <chan1> , <chan2>
, . . ., <chanN> ))
```

A range of channels may be specified using the following channel descriptor syntax:

```
@ <module address> ( <first channel> :
<last channel> ))
```

The following examples illustrate the use of the channel descriptors for the 1260-134:

`OPEN (@8(0))`	Open channel 0 on the 1260-134 that has module address 8.
`CLOSE (@8(0,3))`	Close channels 0 and 3 on the 1260-134 that has module

	address 8.
`CLOSE (@2(10:13))`	Close channels 10 through 13 inclusive on the 1260-134 that has module address 2.

Reply To The MOD:LIST? Command

The 1260-01T returns a reply to the MOD:LIST? command. This reply is unique for each different 1260 series switch module. The syntax for the reply is:

<module address> : <module-specific identification string>

The <module-specific identification string> for the 1260-134 is:

```
1260-134 16 1X4 2A MUX
```

So, for a 1260-134 whose <module address> is set to 8, the reply to this query would be:

```
8: 1260-134 16 1X4 2A MUX
```

Operating The 1260-134 in Register-Based Mode

In register-based mode, the 1260-134 is operated by directly writing and reading control registers on the 1260-134 module. For the channel assignments for each control register, see Table 3-1.. When a control register is written to, all channels controlled by that register are operated simultaneously.

The control registers are located in the VXIbus A24 Address Space. The A24 address for a control register depends on:

1. The A24 Address Offset assigned to the 1260-01T module by the Resource Manager program. The Resource Manager program is provided by the VXIbus slot-0 controller vendor. The A24 Address Offset is placed into the “Offset Register” of the 1260-01T by the Resource Manager.

2. The <module address> of the 1260-134 module. This is a value in the range from 1 and 12 inclusive.

3. The 1260-134 control register to be written to or read from. Each control register on the 1260-134 has a unique address.

The base A24 address for the 1260-134 module may be calculated by:

(A24 Offset of the 1260-01T) + (1024 x Module Address of 1260-134).

The A24 address offset is usually expressed in hexadecimal. A typical value of 204000_{16} is used in the examples that follow.

A 1260-134 with a module address of 7 would have the base A24 address computed as follows:

Base A24 Address of 1260-134 = $204000_{16} + (400_{16} \times 7_{10})$
= $205C00_{16}$

The control registers for Adapt-a-Switch plug-ins and conventional 1260-Series modules are always on odd-numbered A24 addresses. The three control registers for the 1260-134 reside at the first three odd-numbered A24 addresses for the module:

(Base A24 Address of 1260-134) + 1 = Control Register 0

(Base A24 Address of 1260-134) + 3 = Control Register 1

(Base A24 Address of 1260-134) + 5 = Control Register 2

So, for our example, the first three control registers are located at:

205C01	Control Register 0, controls channels 150, 143, 142, etc.
205C03	Control Register 1, controls channels 153, 151, 141, etc.
205C05	Control Register 2, controls channels 93, 100, 101, etc.

Table 3-1 shows the channel assignments for each control register.

Table 3-1, Control Register Channel Assignments

Control Register	Channels							
	Bit 7 (MSB)	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0 (LSB)**
0	130	131	132	133	140	142	143	150
1	152	122	123	Unused	Unused	141	151	153
2	113	Unused	120	121	101	100	Unused	93
3	92	81	111	112	110	103	102	Unused
4	72	73	Unused	80	82	83	90	91
5	32	31	Unused	61	62	63	70	71
6	53	52	51	42	41	40	Unused	33
7	3	10	11	30	23	Unused	60	Unused
8	2	13	43	50	Unused	20	21	22
9	12	Unused	Unused	Unused	Unused	Unused	0	1

Setting a control bit to 1 closes the corresponding channel, and clearing the bit to zero opens the corresponding channel. Thus, if you write the value 1000 0101 binary = 133 decimal = 85 hexadecimal to Control Register 0, channels 130, 142, and 150 will close, while channels 131, 132, 133, 140, and 143 will open.

The present control register value may be read back by reading an 8-bit value from the control register address. **The value is inverted.** In other words, the eight-bit value read back is the one's complement of the value written.

If you want to change the state of a single relay without affecting the present state of the other relays controlled by the control register, you must:

1. Read the control register
2. Invert the bits (perform a one's complement on the register data)
3. Perform a bit-wise AND operation, leaving all but the specific control register bit for the relay to change
4. **To open**: continue to step 5. **To close**: OR in the bit for the relay to close.
5. Write the modified value back to the control register.

For example, to close channel 123:

1. Read Control Register 1 (this register controls channels 122, 123, 141, 151, 152, and 153 with channel 153 represented by the LSB)

2. Invert the bits in the value read in step 1

3. AND with 1101 1111 binary (the zero is in the position corresponding to channel 123)

4. OR with 0010 0000 binary

5. Write the value to Control Register 1

The VISA I/O library may be used to control the module. The VISA function viOut8() is used to write a single 8-bit byte to a control register, while viIn8() is used to read a single 8-bit byte from the control register. The following code example shows the use of viOut8() to update the 1260-134 module.

1260-134 Example Code

```
#include <visa.h>

/* This example shows a 1260-01T at logical address 16 and a VXI/MXI */
/* interface */
#define RI1260_01_DESC     "VXI::16"

/* For a GPIB-VXI interface, and a logical address of 77 */
/* the descriptor would be:  "GPIB-VXI::77" */


/* this example shows a 1260-134 with module address 7 */
#define MOD_ADDR_134  7


void example_operate_1260_134(void)
{
      ViUInt8 creg_val;
      ViBusAddress creg0_addr;
      ViBusAddress creg1_addr;
      ViBusAddress creg2_addr;
      ViSession hdl1260;    /* VISA handle to the 1260-01T */
      ViSession hdlRM;      /* VISA handle to the resource manager */
      ViStatus error;       /* VISA error code */

      /* open the resource manager */
      /* this must be done once in application program */
      error = viOpenDefaultRM (&hdlRM);

      if (error < 0) {
            /* error handling code goes here */
      }

      /* get a handle for the 1260-01T */
      error = viOpen (hdlRM, RI1260_01_DESC, VI_NULL,VI_NULL, &hdl1260);
      if (error < 0) {
            /* error handling code goes here */
      }


      /* form the offset for control register 0 */
      /* note that the base A24 Address for the 1260-01T */
      /* is already accounted for by VISA calls viIn8() and */
```

```
/* viOut8() */

   /* module address shifted 10 places = module address x 1024 */
creg0_addr = (MOD_ADDR_134 << 10) + 1;
creg1_addr = creg0_addr + 2;
creg2_addr = creg1_addr + 2;

/* close channel 123 without affecting the state of */
/* channels 122, 141, 151, 152, and 153 */
error = viIn8 (hdl1260, VI_A24_SPACE, creg1_addr, &creg_val);
if (error < 0) {
     /* error handling code goes here */
}

/* invert the bits to get the present control register value */
creg_val = ~creg_val;

/* AND to leave every channel except 123 unchanged */
creg_val &= ~ (0x20);

/* OR in the bit to close channel 123 */
creg_val |= 0x20;

/* write the updated control register value */
error = viOut8 (hdl1260, VI_A24_SPACE, creg1_addr, creg_val);
if (error < 0) {
     /* error handling code goes here */
}

/* open channel 93 without affecting channels 100, 101, 120, 121,
 and 113 */
error = viIn8 (hdl1260, VI_A24_SPACE, creg2_addr, &creg_val);
if (error < 0) {
     /* error handling code goes here */
}

/* invert the bits to get the present control register value */
creg_val = ~creg_val;

/* AND to leave every channel except 93 unchanged */
/* leave bit 0 clear to open channel 93 */
creg_val &= ~ (0x01);

/* write the updated control register value */
error = viOut8 (hdl1260, VI_A24_SPACE, creg2_addr, creg_val);
if (error < 0) {
     /* error handling code goes here */
}
```

```
    /* close the VISA session */
    error = viClose( hdl1260 );
    if (error < 0) {
        /* error handling code goes here */
    }
}
```

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Chapter 4

OPTIONAL ASSEMBLIES

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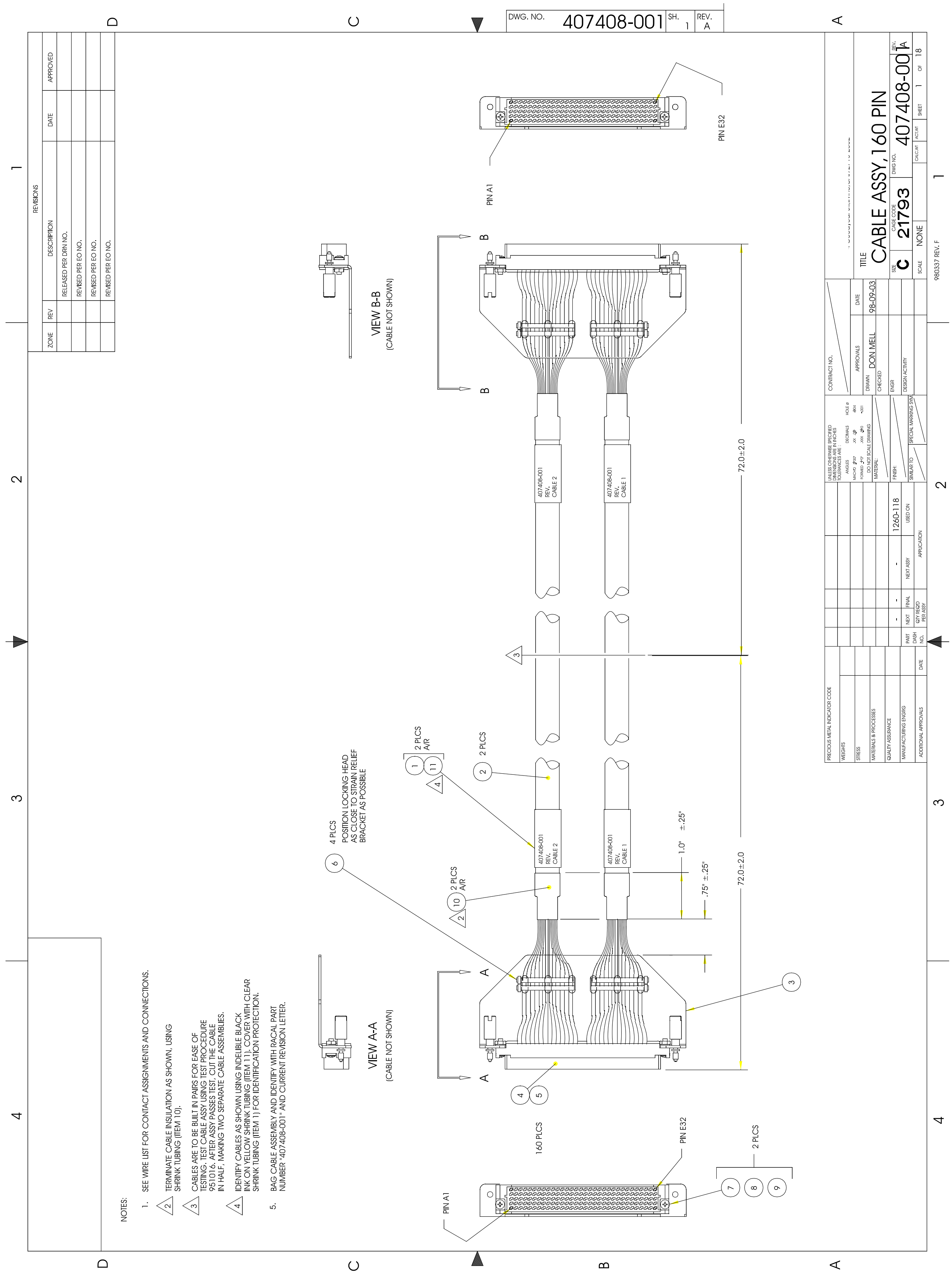
Assembly 407664
Connector kit, 160 Pin, Crimp Rev Date 7/30/98 Revision A

#	Component	Description	U/M	Qty Reqd.	REF
1	602258-116	CON-CAB-RCP160C,100S	-E EA	1.000	
2	602258-900	TRMCRP-SNP-U-F26-20G	-E EA	170.000	


DWG. NO. 407408-001 SH. 1 REV. A
REVISIONS
ZONE REV DESCRIPTION DATE APPROVED
RELEASED PER DRN NO.
REVISED PER EO NO.
REVISED PER EO NO.
REVISED PER EO NO.
REVISED PER EO NO.
NOTES:
1. SEE WIRE LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
2 TERMINATE CABLE INSULATION AS SHOWN, USING SHRINK TUBING (ITEM 10).
3 CABLES ARE TO BE BUILT IN PAIRS FOR EASE OF TESTING. TEST CABLE ASSY USING TEST PROCEDURE 951016. AFTER ASSY PASSES TEST, CUT THE CABLE IN HALF, MAKING TWO SEPARATE CABLE ASSEMBLIES.
4 IDENTIFY CABLES AS SHOWN USING INDELIBLE BLACK INK ON YELLOW SHRINK TUBING (ITEM 11). COVER WITH CLEAR SHRINK TUBING (ITEM 1) FOR IDENTIFICATION PROTECTION.
5. BAG CABLE ASSEMBLY AND IDENTIFY WITH RACAL PART NUMBER "407408-001" AND CURRENT REVISION LETTER.
VIEW A-A
(CABLE NOT SHOWN)
VIEW B-B
(CABLE NOT SHOWN)
4 PLCS
POSITION LOCKING HEAD AS CLOSE TO STRAIN RELIEF BRACKET AS POSSIBLE
2 PLCS A/R
2 PLCS
160 PLCS
PIN A1
PIN E32
407408-001 REV. CABLE 1
407408-001 REV. CABLE 2
72.0±2.0
1.0" ±.25"
.75" ±.25"
TITLE
CABLE ASSY,160 PIN
SIZE C
CAGE CODE 21793
DWG NO. 407408-001
REV. A
SCALE NONE
SHEET 1 OF 18
DRAWN DON MELL 98-09-03
USED ON 1260-118
NEXT ASSY
APPLICATION
980337 REV. F