

RACAL INSTRUMENTS

1260-12

ACTUATOR RELAY

PUBLICATION NO. 980673-001

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EADS NORTH AMERICA DEFENSE TEST AND SERVICES PRODUCT**

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If you have any questions about software driver downloads or our privacy policy, please contact us at

info@eads-nadefense.com

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1. Product serial number
2. Product model number
3. Your company and contact information

You may contact your customer service advisor by:

E-Mail:	Helpdesk@eads-nadefense.com	
Telephone:	+1 800 722 3262	(USA)
Fax:	+1 949 859 7309	(USA)

RETURN of PRODUCT

Authorization is required from EADS North America Defense Test and Services, Inc. before you send us your product for service or calibration. Call or contact the Customer Support Department at 1-800-722-3262 or 1-949-859-8999 or via fax at 1-949-859-7139. We can be reached at: helpdesk@eads-nadefense.com.

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FOR YOUR SAFETY

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



CAUTION
RISK OF ELECTRICAL SHOCK
DO NOT OPEN



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.



CAUTION
SENSITIVE ELECTRONIC DEVICES
DO NOT SHIP OR STORE NEAR
STRONG ELECTROSTATIC,
ELECTROMAGNETIC, MAGNETIC OR
RADIOACTIVE FIELDS

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.

Racal Instruments

EC Declaration of Conformity

We

Racal Instruments Inc.
4 Goodyear Street
Irvine, CA 92718

declare under sole responsibility that the

**1260-12 Actuator Relay
P/N 404774**

conforms to the following Product Specifications:

Safety: EN 61010-1

EMC: 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 a Racal Instruments certified mainframe with faceplates installed over all unused slots, as applicable.

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

Irvine, CA, January 24, 1996


Quality Manager

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NOTE FOR SYSTEMS WITH 1260-OPT 01T

The "Module-Specific Syntax" section of this manual shows the command syntax for the 1260-01S Smart Card. If you are using the newer 1260-01T Smart Card, the commands will NOT work as shown.

Consult the 1260-01T Manual for a description of the commands which may be used with the 1260-01T Smart Card.

The channel numbers described in this manual are valid for the 1260-01T. The channel numbers continue to be used for the 1260-01T.

The syntax of the commands which use channel numbers has changed for those cards controlled by the 1260-01T.

The new syntax used to close a channel is:

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

For example, with for a relay module whose <module address> is set to 7, closing <channel> 0 is performed with the command:

CLOSE (@ 7 (0))

Using the older 1260-01S, the command would be (as shown in this manual):

CLOSE 7.0

Many other command syntax differences exist. Please consult chapter 2 of the 1260-01T manual for a description of the commands which are available for the 1260-01T.

Control Information for the 1260-12

The following information describes the control-register-to-relay-channel mapping for a 1260-12 Relay Module. This information may be used to control a 1260-12 when using a 1260-01T in the register-based mode of operation.

Each relay on this module is controlled by setting or clearing a single bit within a Control Register. Control Registers on the module operate 8 channels simultaneously. There are eight control bits per Control Register. Setting the bit to a 1 closes the relay; setting the bit to a 0 opens the relay.

The table below shows the mapping from logical channels to control bits. The logical channels are used when operating the relay module in message-based mode. The control bits within the Control Registers are used to operate the module in register-based mode.

Each Control Register is located 2 addresses from the previous Control Register. That is, each Control Register is located at an odd address. This is shown in Table 2-2 of the 1260-01T manual. Control Register 0 is located at the "Base A24 Address" for the module. Consult the "Register-Based Operation" Section of Chapter 2 of the 1260-01T manual for a description of calculating control register addresses.

Channel	Control Register	Control Bit
0	0	0
1	0	1
2	0	2
3	0	3
4	0	4
5	0	5
6	0	6
7	0	7
8	1	0
9	1	1
10	1	2
11	1	3
12	1	4
13	1	5
14	1	6
15	1	7
16	2	0
17	2	1
18	2	2
19	2	3

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Chapter 1

MODULE SPECIFICATION

Introduction

The 1260-12 Relay Actuator Module is a 20-channel double-pole, double-throw switching module.

Specifications

User Connector	Quick Disconnect
Maximum Switchable Voltage (Terminal-Terminal or Terminal-Chassis)	220 VDC, 250 VAC RMS
Maximum Switchable Current	2 A DC or RMS
Maximum Switchable Power Per Channel	60 W DC, 62.5 VA AC

DC Performance

Path Resistance	200 m Ω at 2A
Isolation	>10 ⁹ Ω

AC Performance

Capacitance	
Open Channel	<25 pF
Channel-Chassis	<25 pF
Hi-Lo	<50 pF
Bandwidth, (-3 dB, 50 Ω Termination)	35 MHz (typical)
Insertion Loss, (50 Ω Termination)	<.20 dB at 100 kHz <.25 dB at 1 MHz <0.5 dB at 10 MHz
Crosstalk, (50 Ω Termination)	<-75 dB at 100 kHz <-60 dB at 1 MHz <-40 dB at 10 MHz

General

Cooling	
Airflow	1.0 liter/sec
Backpressure	0.05 mm H ₂ O
Cooling (With Option 01S/T)	
Airflow	2.0 liters/sec
Backpressure	0.2 mm H ₂ O
Power Requirements	+5V:0.4A (2.8A with Option 01 installed) +24V: 10 mA per energized relay
Weight	1.17 kg (2.59 lbs) 1.30 kg (2.87 lbs) with Option 01 installed
Minimum Option 01 Firmware Revision	17.1

INSTALLATION INSTRUCTIONS

Unpacking and Inspection

1. Remove the 1260-12 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 1260-12 module option and the 1260-12 Users Manual. Notify EADS North America Defense Test and Services, Inc. if the module appears damaged in any way. Do not attempt to install a damaged module into a VXI chassis.
3. The 1260-12 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.

Figure 2-1, 1260-12



Reshipment Instructions

1. Use the original packing when returning the switching module to EADS North America Defense Test and Services, Inc. for calibration or servicing. The original shipping carton and the instrument's plastic foam will provide the necessary support for safe reshipment.
2. If the original packing material is unavailable, wrap the switching module in an ESD Shielding bag and use plastic spray foam to surround and protect the instrument.
3. Reship in either the original or a new shipping carton.

Option 01 Installation

Installation of the Option 01 into the 1260-12 is described in the Installation section of the 1260 Series VXI Switching Cards Manual.

Module Installation

Installation of the 1260-12 Switching Module into a VXI mainframe, including the setting of DIP switches, is described in the Installation section of the 1260 Series VXI Switching Cards Manual. The ID byte DIP switches, SW1-5 and SW1-6, should both be set to OFF.

MODULE SPECIFIC SYNTAX

General

The Module Specific Syntax for the 1260-12 is required in the use of the OPEN and CLOSE commands. It will also appear in data output by the Master in response to the PDATAOUT and PSETUP commands.

NOTE:

The 1260-12 Relay Actuator Module is supported by Option 01 Operating Systems at Revision levels 2.1 and above.

Syntax

The Module Specific Syntax for the 1260-12 Relay Actuator module is as follows:

<module address>.<channel>

where <module address> is the address.

<channel> is the reference number of the relay to be closed, value 0 - 19.

NOTE:

The <module address> used here is not the VXIbus defined logical address of the 1260 Master. It is peculiar to the 1260 Series and describes the switching module in relation to the Master. This address corresponds to the binary value of the switch setting of SW1 on the switching module PCB.

Each <channel> is a double-pole, double-throw relay with two normally open and two normally closed connections. The connections are between the Common and the Open pins if the <channel> is OPEN, and between the Common and the Closed pins if the <channel> is CLOSED. The pin connections made by each CLOSE <card address>.<channel> command are given in **Figure 3-2.**

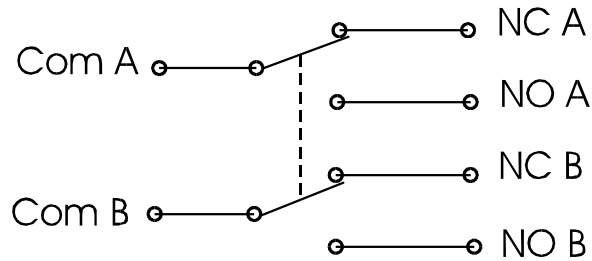


Figure 3-1, Relay Diagram

PSETUP Command

The PSETUP command causes the specified module setup to be displayed as a response. The syntax used is:

```
PSETUP <module address>[;<module address>]
      [<module address>]
```

where <module address> is the switch card address.

The responses to the PSETUP command for the 1260-12 Relay Actuator Module are as follows:

```
<module address>.1260-12 RELAY ACTUATOR MODULE
<module address>.BBM
<module address>.END
```

The response to the PSETUP command consists of a header on the first line. The header describes the model number. The next line designates the setup mode for the scanning which, by default, is Break-Before-Make (BBM). The last line containing the "END" characters denotes no more information to report.

PDATAOUT Command

The PDATAOUT command causes the specified module to transmit the state of the CLOSED relays (within the switching module) to the 1260 Controller. The syntax used is:

```
PDATAOUT <module address>[;<module address>]
        [<module address>]
```

The responses to the PDATAOUT command are as follows:

```
<module address>.1260-12 RELAY ACTUATOR MODULE
```

<module address>.<channel>[,<channel>][,<channel>].....

<module address>.END

The response to the PDATAOUT command consists of a header on the first line, as with the PSETUP response. The next line details the channels currently closed on the module, and is blank when no channels are closed. Again, the last line is denoted by the "END" string of characters.

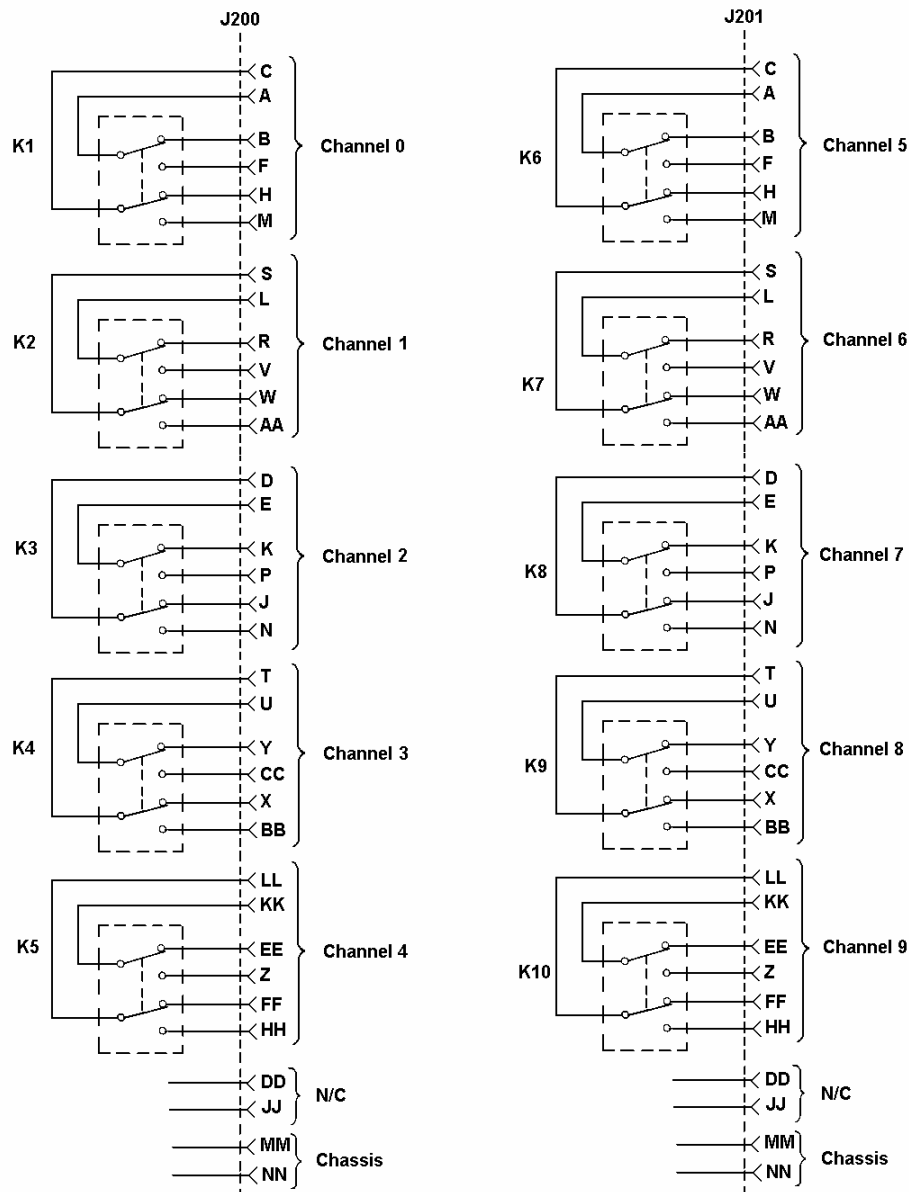


Figure 3-2, 1260-12 Wiring Diagram

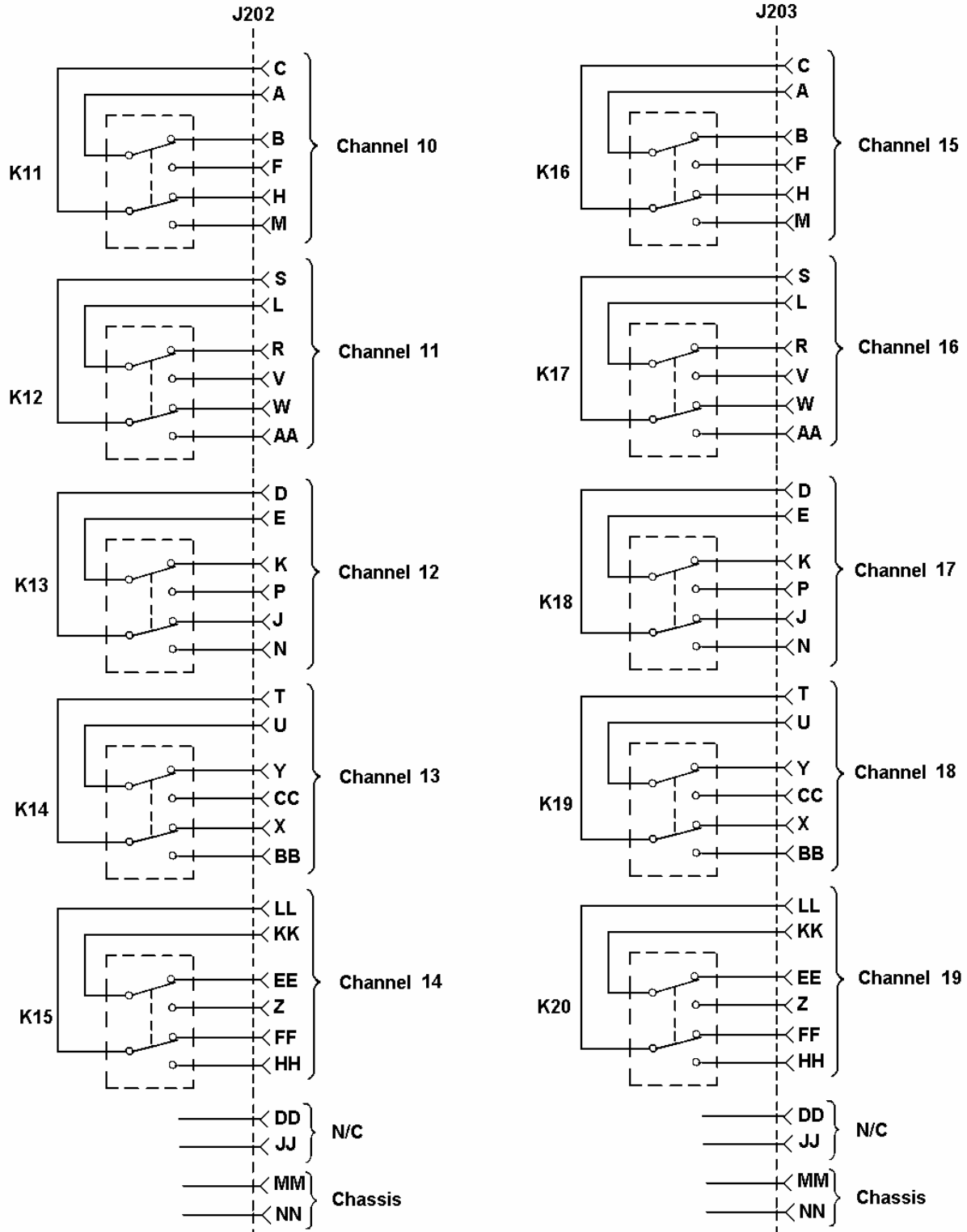


Figure 3-3, 1260-12 Wiring Diagram (continued)

Refer to **Figure 3-4** for the pin configurations of connectors J200, J201, J202 and J203 on the 1260-12.

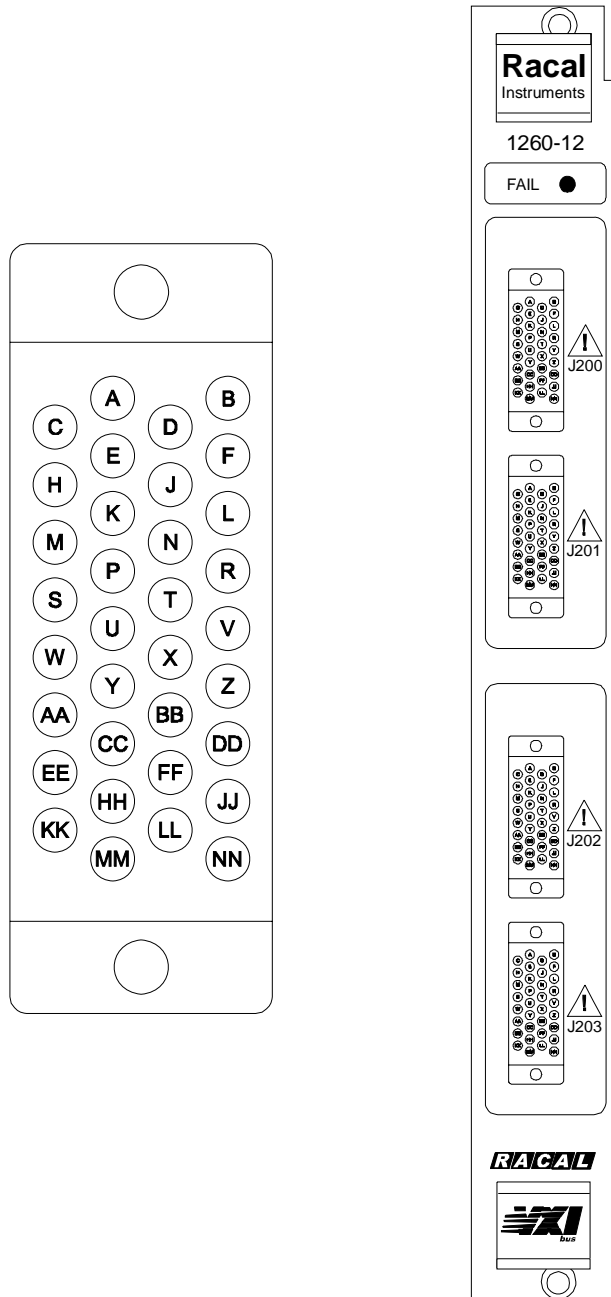


Figure 3-4, 1260-12 Pin Connections

The part number for the mating connectors for 1260-12 connectors J200 and J201 is 601855-034, and the pins required for the mating connector are Part Number 601857. 34 pins are required to fully populate each mating connector.

Chapter 4

Optional Harness Assemblies

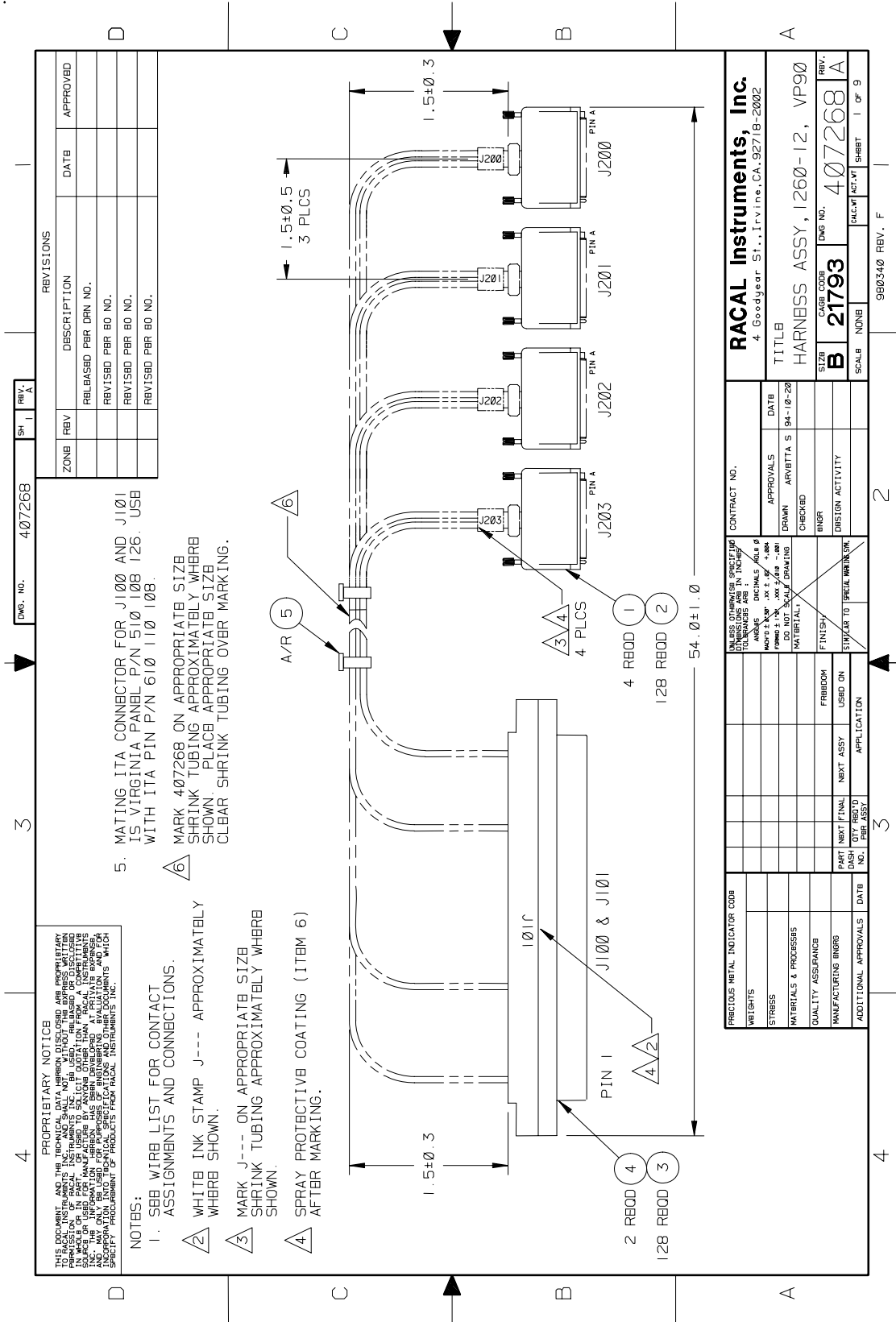
The following harness assemblies are used to connect 1260-12 to Freedom Series Test Receiver Interfaces.

Each harness documentation consists of an assembly drawing, parts list, system wire list and wire list.

407268 Harness	Virginia Panel, Inc. Series VP90 Interface
407269	TTI Testron, Inc. Interface Harness (TTI Receiver must be above chassis)

For more information on complete line of Test Receiver Interface solutions, contact your Sales Representative.

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ENGINEERING PARTS LIST

ITEM	BIN	PART NO.	DESCRIPTION	QTY	REFERENCE
1		601855-034	CONN-CAB-PLG34CP	4	J200-J203
2		602092-001	CON,SGMC MALE CRIMP	128	W/J200-J203
3		602201-806	PATCHCORD,SIGNAL,,24AWG,60IN	128	W/J100-J101
4		602201-001	CON-RCV-PLGO64C.--- D-VP90	2	J100-J101
5		610777	TIE-CA-LKG-.062-.075	A/R	
6		910541	POLYUPETHANE CONF. COAT	A/R	

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HARNESS ASSEMBLY, 1260-12, VP90	A	21793	407268	
	DRN	SHEET 2 of 9		

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
	BLK (J100)	AA	Uxx-SLOT yy (J200,J201)	CABLE	407268	SYSTEM WIRE LIST
	BLK (J101)	AA	Uxx-SLOT yy (J202,J203)	CABLE	407268	

This system wire list serves as a template for incorporating this harness assembly into the overall system wire list. It does not in any way affect the fabrication of this harness assembly.

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HARNESS ASSEMBLY, 1260-12, VP90	A	21793	407268	A
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
1	J100-1 (602201-001)	J200-B 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0A, NC
2	J100-33 (602201-001)	J200-F 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0A, NO
3	J100-2 (602201-001)	J200-A 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0A, COM
4	J100-34 (602201-001)	J200-H 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0B, NC
5	J100-3 (602201-001)	J200-M 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0B, NO
6	J100-35 (602201-001)	J200-C 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 0B, COM
7	J100-4 (602201-001)	J200-R 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1A, NC
8	J100-36 (602201-001)	J200-V 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1A, NO
9	J100-5 (602201-001)	J200-L 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1A, COM
10	J100-37 (602201-001)	J200-W 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1B, NC
11	J100-6 (602201-001)	J200-AA 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1B, NO
12	J100-38 (602201-001)	J200-S 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 1B, COM
13	J100-7 (602201-001)	J200-K 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2A, NC
14	J100-39 (602201-001)	J200-P 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2A, NO
15	J100-8 (602201-001)	J200-E 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2A, COM
16	J100-40 (602201-001)	J200-J 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2B, NC
17	J100-9 (602201-001)	J200-N 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2B, NO
18	J100-41 (602201-001)	J200-D 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 2B, COM
19	J100-10 (602201-001)	J200-Y 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3A, NC
20	J100-42 (602201-001)	J200-CC 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3A, NO
21	J100-11 (602201-001)	J200-U 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3A, COM
22	J100-43 (602201-001)	J200-X 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3B, NC
23	J100-12 (602201-001)	J200-BB 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3B, NO
24	J100-44 (602201-001)	J200-T 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 3B, COM
25	J100-13 (602201-001)	J200-EE 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 4A, NC

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
26	J100-45 (602201-001)	J200-Z 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 4A, NO
27	J100-14 (602201-001)	J200-KK 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 4A, COM
28	J100-46 (602201-001)	J200-FF 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 4B, NC
29	J100-15 (602201-001)	J200-HH 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 4B, NO
30	J100-47 (602201-001)	J200-LL 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 4B, COM
31	J100-16 (602201-001)	J200-MM 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND
32	J100-48 (602201-001)	J200-NN 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND
33	J100-17 (602201-001)	J201-B 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5A, NC
34	J100-49 (602201-001)	J201-F 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5A, NO
35	J100-18 (602201-001)	J201-A 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5A, COM
36	J100-50 (602201-001)	J201-H 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5B, NC
37	J100-19 (602201-001)	J201-M 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5B, NO
38	J100-51 (602201-001)	J201-C 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 5B, COM
39	J100-20 (602201-001)	J201-R 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6A, NC
40	J100-52 (602201-001)	J201-V 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6A, NO
41	J100-21 (602201-001)	J201-L 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6A, COM
42	J100-53 (602201-001)	J201-W 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6B, NC
43	J100-22 (602201-001)	J201-AA 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6B, NO
44	J100-54 (602201-001)	J201-S 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 6B, COM
45	J100-23 (602201-001)	J201-K 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 7A, NC
46	J100-55 (602201-001)	J201-P 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 7A, NO
47	J100-24 (602201-001)	J201-E 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 7A, COM
48	J100-56 (602201-001)	J201-J 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 7B, NC
49	J100-25 (602201-001)	J201-N 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 7B, NO

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HARNESS ASSEMBLY, 1260-12, VP90	A	21793	407268	A
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
50	J100-57 (602201-001)	J201-D 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 7B, COM
51	J100-26 (602201-001)	J201-Y 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8A, NC
52	J100-58 (602201-001)	J201-CC 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8A, NO
53	J100-27 (602201-001)	J201-U 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8A, COM
54	J100-59 (602201-001)	J201-X 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8B, NC
55	J100-28 (602201-001)	J201-BB 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8B, NO
56	J100-60 (602201-001)	J201-T 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 8B, COM
57	J100-29 (602201-001)	J201-EE 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9A, NC
58	J100-61 (602201-001)	J201-Z 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9A, NO
59	J100-30 (602201-001)	J201-KK 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9A, COM
60	J100-62 (602201-001)	J201-FF 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9B, NC
61	J100-31 (602201-001)	J201-HH 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9B, NO
62	J100-63 (602201-001)	J201-LL 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 9B, COM
63	J100-32 (602201-001)	J201-MM 602092-001	24 AWG WHT	602201-806	54"	CHASSIS GROUND
64	J100-64 (602201-001)	J201-NN 602092-001	24 AWG WHT	602201-806	54"	CHASSIS GROUND
65	J101-1 (602201-001)	J202-B 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10A, NC
66	J101-33 (602201-001)	J202-F 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10A, NO
67	J101-2 (602201-001)	J202-A 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10A, COM
68	J101-34 (602201-001)	J202-H 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10B, NC
69	J101-3 (602201-001)	J202-M 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10B, NO
70	J101-35 (602201-001)	J202-C 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 10B, COM
71	J101-4 (602201-001)	J202-R 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 11A, NC
72	J101-36 (602201-001)	J202-V 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 11A, NO
73	J101-5 (602201-001)	J202-L 602092-001	24 AWG WHT	602201-806	54"	CHANNEL 11A, COM

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

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HARNESS ASSEMBLY, 1260-12, VP90	A	21793	407268	A
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
74	J101-37 (602201-001)	J202-W 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 11B, NC
75	J101-6 (602201-001)	J202-AA 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 11B, NO
76	J101-38 (602201-001)	J202-S 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 11B, COM
77	J101-7 (602201-001)	J202-K 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12A, NC
78	J101-39 (602201-001)	J202-P 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12A, NO
79	J101-8 (602201-001)	J202-E 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12A, COM
80	J101-40 (602201-001)	J202-J 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12B, NC
81	J101-9 (602201-001)	J202-N 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12B, NO
82	J101-41 (602201-001)	J202-D 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 12B, COM
83	J101-10 (602201-001)	J202-Y 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13A, NC
84	J101-42 (602201-001)	J202-CC 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13A, NO
85	J101-11 (602201-001)	J202-U 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13A, COM
86	J101-43 (602201-001)	J202-X 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13B, NC
87	J101-12 (602201-001)	J202-BB 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13B, NO
88	J101-44 (602201-001)	J202-T 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 13B, COM
89	J101-13 (602201-001)	J202-EE 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14A, NC
90	J101-45 (602201-001)	J202-Z 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14A, NO
91	J101-14 (602201-001)	J202-KK 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14A, COM
92	J101-46 (602201-001)	J202-FF 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14B, NC
93	J101-15 (602201-001)	J202-HH 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14B, NO
94	J101-47 (602201-001)	J202-LL 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 14B, COM
95	J101-16 (602201-001)	J202-MM 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND
96	J101-48 (602201-001)	J202-NN 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND
97	J101-17 (602201-001)	J203-B 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15A, NC

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
98	J101-49 (602201-001)	J203-F 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15A, NO
99	J101-18 (602201-001)	J203-A 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15A, COM
100	J101-50 (602201-001)	J203-H 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15B, NC
101	J101-19 (602201-001)	J203-M 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15B, NO
102	J101-51 (602201-001)	J203-C 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 15B, COM
103	J101-20 (602201-001)	J203-R 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16A, NC
104	J101-52 (602201-001)	J203-V 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16A, NO
105	J101-21 (602201-001)	J203-L 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16A, COM
106	J101-53 (602201-001)	J203-W 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16B, NC
107	J101-22 (602201-001)	J203-AA 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16B, NO
108	J101-54 (602201-001)	J203-S 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 16B, COM
109	J101-23 (602201-001)	J203-K 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17A, NC
110	J101-55 (602201-001)	J203-P 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17A, NO
111	J101-24 (602201-001)	J203-E 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17A, COM
112	J101-56 (602201-001)	J203-J 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17B, NC
113	J101-25 (602201-001)	J203-N 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17B, NO
114	J101-57 (602201-001)	J203-D 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 17B, COM
115	J101-26 (602201-001)	J203-Y 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18A, NC
116	J101-58 (602201-001)	J203-CC 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18A, NO
117	J101-27 (602201-001)	J203-U 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18A, COM
118	J101-59 (602201-001)	J203-X 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18B, NC
119	J101-28 (602201-001)	J203-BB 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18B, NO
120	J101-60 (602201-001)	J203-T 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 18B, COM
121	J101-29 (602201-001)	J203-EE 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19A, NC
122	J101-61 (602201-001)	J203-Z 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19A, NO

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

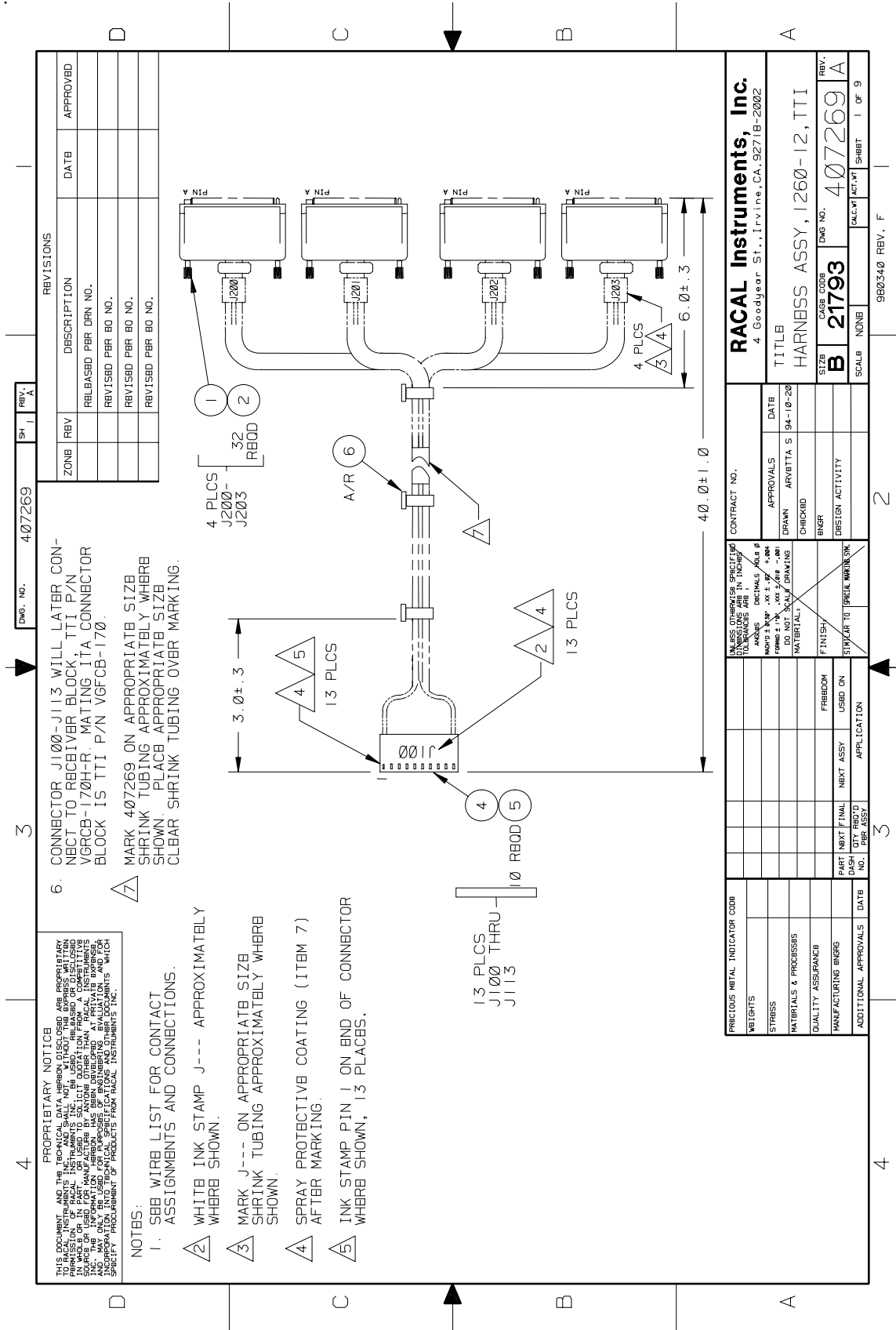
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
123	J101-30 (602201-001)	J203-KK 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19A, COM
124	J101-62 (602201-001)	J203-FF 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19B, NC
125	J101-31 (602201-001)	J203-HH 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19B, NO
126	J101-63 (602201-001)	J203-LL 602092-001	24 AWG WHT	602201- 806	54"	CHANNEL 19B, COM
127	J101-32 (602201-001)	J203-MM 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND
128	J101-64 (602201-001)	J203-NN 602092-001	24 AWG WHT	602201- 806	54"	CHASSIS GROUND

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

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REV. A		REV. A	
ZONE	REV	DESCRIPTION	DATE
		RELEASED PBR DRN NO.	
		REVISED PBR BO NO.	
		REVISED PBR BO NO.	
		REVISED PBR BO NO.	

6. CONNECTOR J100-J113 WILL LATER CONNECT TO RECEIVER BLOCK, TTI P/N VGRCB-170H-R. MATING ITA CONNECTOR BLOCK IS TTI P/N VGFCB-170.

7. MARK 407269 ON APPROPRIATE SIZB SHRINK TUBING APPROXIMATELY WHEREB SHOWN. PLACB APPROPRIATB SIZB CLEAR SHRINK TUBING OVER MARKING.

PROPRIETARY NOTICE
THIS DOCUMENT AND THE TECHNICAL DATA HEREON DISCLOSED ARE PROPRIETARY AND UNCLASSIFIED. THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF RACAL INSTRUMENTS, INC. IT IS TO BE USED ONLY FOR THE PURPOSES AND IN THE MANNER SPECIFIED BY THE CONTRACTING OFFICE. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF RACAL INSTRUMENTS, INC.

- NOTES:
- SBB WIRB LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
 - WHITB INK STAMP J--- APPROXIMATELY WHEREB SHOWN.
 - MARK J--- ON APPROPRIATE SIZB SHRINK TUBING APPROXIMATELY WHEREB SHOWN.
 - SPRAY PROTECTIVE COATING (ITEM 7) AFTER MARKING.
 - INK STAMP PIN 1 ON END OF CONNECTOR WHEREB SHOWN, 13 PLACBS.

PRECIOUS METAL INDICATOR CODE		CONTRACT NO.	
WEIGHTS		APPROVALS	DATE
STRESS		DRAWN	ARVBTTA S 94-10-20
MATERIALS & PROCESSES		CHECKED	
QUALITY ASSURANCE		INGR	
MANUFACTURING INGR		DESIGN ACTIVITY	
ADDITIONAL APPROVALS	DATE	PART NEXT FINAL	USED ON
		DASH (DTS) (RQD)	APPLICATION
		NO. PER ASSY	

RACAL Instruments, Inc.
4 Goodgear St., Irvine, CA, 92718-2002

TITLE
HARNESS ASSY, 1260-12, TTI

SIZE
B 21793

DWG NO.
407269

SCALE
NONE

REV. 1 OF 9

ENGINEERING PARTS LIST

ITEM	BIN	PART NO.	DESCRIPTION	QTY	REFERENCE	
1		601855-034	CON-CAB-PLG34CP.	4	J200-J203	
2		602092-001	CONT,SGMC MALE CRIMP	128	W/J200-J203	
3		524999	WRTEF-STR24G-9-9-9	A/R		
4		602193-010	CON-CAB-RCP0I0C.I00S	13	J100-J112	
5		602199-001	CONTACT,CRIMP.RECPT.28-22GA	130	W/J100-J112	
6		610777	TIE-CA-LKG-.062-.075	A/R		
7		910541	POLYURETHANE CONF. COAT			
RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718						
DOCUMENT TITLE			SIZE	CODE NO.	DOCUMENT NO.	REV
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
	BLK AAx RW 01 (J100)	Uxx-SLOT yy (J200)	CABLE	407269		SYSTEM WIRE LIST
	BLK AAx RW 02 (J101)	Uxx-SLOT yy (J200)	CABLE	407269		
	BLK AAx RW 03 (J102)	Uxx-SLOT yy (J200)	CABLE	407269		
	BLK AAx RW 04 (J103)	Uxx-SLOT yy (J200-J201)	CABLE	407269		
	BLK AAx RW 05 (J104)	Uxx-SLOT yy (J201)	CABLE	407269		
	BLK AAx RW 06 (J105)	Uxx-SLOT yy (J201)	CABLE	407269		
	BLK AAx RW 07 (J106)	Uxx-SLOT yy (J201-J202)	CABLE	407269		
	BLK AAx RW 08 (J107)	Uxx-SLOT yy (J202)	CABLE	407269		
	BLK AAx RW 09 (J108)	Uxx-SLOT yy (J202)	CABLE	407269		
	BLK AAx RW 10 (J109)	Uxx-SLOT yy (J202-J203)	CABLE	407269		
	BLK AAx RW 11 (J110)	Uxx-SLOT yy (J203)	CABLE	407269		
	BLK AAx RW 12 (J111)	Uxx-SLOT yy (J203)	CABLE	407269		
	BLK AAx RW 13 (J112)	Uxx-SLOT yy (J203)	CABLE	407269		

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE HARNESS ASSEMBLY, 1260-12, TTI	SIZE	CODE NO.	DOCUMENT NO.	REV
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
1	J100-1 602199-001	J200-B (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0A, NC
2	J100-2 602199-001	J200-F (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0A, NO
3	J100-3 602199-001	J200-A (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0A, COM
4	J100-4 602199-001	J200-H (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0B, NC
5	J100-5 602199-001	J200-M (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0B, NO
6	J100-6 602199-001	J200-C (601855-034)	24 AWG WHT	524999	40"	CHANNEL 0B, COM
7	J100-7 602199-001	J200-R (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1A, NC
8	J100-8 602199-001	J200-V (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1A, NO
9	J100-9 602199-001	J200-L (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1A, COM
10	J100-10 602199-001	J200-W (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1B, NC
11	J101-10 602199-001	J200-AA (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1B, NO
12	J101-9 602199-001	J200-S (601855-034)	24 AWG WHT	524999	40"	CHANNEL 1B COM
13	J101-8 602199-001	J200-K (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2A, NC
14	J101-7 602199-001	J200-P (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2A, NO
15	J101-6 602199-001	J200-E (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2A, COM
16	J101-5 602199-001	J200-J (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2B, NC
17	J101-4 602199-001	J200-N (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2B, NO
18	J101-3 602199-001	J200-D (601855-034)	24 AWG WHT	524999	40"	CHANNEL 2B, COM
19	J101-2 602199-001	J200-Y (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3A, NC
20	J101-1 602199-001	J200-CC (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3A, NO
21	J102-1 602199-001	J200-U (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3A, COM
22	J102-2 602199-001	J200-X (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3B, NC
23	J102-3 602199-001	J200-BB (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3B, NO
24	J102-4 602199-001	J200-T (601855-034)	24 AWG WHT	524999	40"	CHANNEL 3B, COM
25	J102-5 602199-001	J200-EE (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4A, NC

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HARNESS ASSEMBLY, 1260-12, TTI	A	21793	407269	A
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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
26	J102-6 602199-001	J200-Z (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4A, NO
27	J102-7 602199-001	J200-KK (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4A, COM
28	J102-8 602199-001	J200-FF (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4B, NC
29	J102-9 602199-001	J200-HH (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4B, NO
30	J102-10 602199-001	J200-LL (601855-034)	24 AWG WHT	524999	40"	CHANNEL 4B, COM
31	J103-10 602199-001	J200-MM (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
32	J103-9 602199-001	J200-NN (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
33	J103-8 602199-001	J201-B (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5A, NC
34	J103-7 602199-001	J201-F (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5A, NO
35	J103-6 602199-001	J201-A (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5A, COM
36	J103-5 602199-001	J201-H (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5B, NC
37	J103-4 602199-001	J201-M (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5B, NO
38	J103-3 602199-001	J201-C (601855-034)	24 AWG WHT	524999	40"	CHANNEL 5B, COM
39	J103-2 602199-001	J201-R (601955-034)	24 AWG WHT	524999	40"	CHANNEL 6A, NC
40	J103-1 602199-001	J201-V (601855-034)	24 AWG WHT	524999	40"	CHANNEL 6A, NO
41	J104-1 602199-001	J201-L (601855-034)	24 AWG WHT	524999	40"	CHANNEL 6A, COM
42	J104-2 602199-001	J201-W (601855-034)	24 AWG WHT	524999	40"	CHANNEL 6B, NC
43	J104-3 602199-001	J201-AA (601855-034)	24 AWG WHT	524999	40"	CHANNEL 6B, NO
44	J104-4 602199-001	J201-S (601855-034)	24 AWG WHT	524999	40"	CHANNEL 6B, COM
45	J104-5 602199-001	J201-K (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7A, NC
46	J104-6 602199-001	J201-P (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7A, NO
47	J104-7 602199-001	J201-E (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7A, COM
48	J104-8 602199-001	J201-J (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7B, NC
49	J104-9 602199-001	J201-N (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7B, NO

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
50	J104-10 602199-001	J201-D (601855-034)	24 AWG WHT	524999	40"	CHANNEL 7B, COM
51	J105-10 602199-001	J201-Y (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8A, NC
52	J105-9 602199-001	J201-CC (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8A, NO
53	J105-8 602199-001	J201-U (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8A, COM
54	J105-7 602199-001	J201-X (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8B, NC
55	J105-6 602199-001	J201-BB (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8B, NO
56	J105-5 602199-001	J201-T (601855-034)	24 AWG WHT	524999	40"	CHANNEL 8B, COM
57	J105-4 602199-001	J201-EE (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9A, NC
58	J105-3 602199-001	J201-Z (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9A, NO
59	J105-2 602199-001	J201-KK (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9A, COM
60	J105-1 602199-001	J201-FF (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9B, NC
61	J106-1 602199-001	J201-HH (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9B, NO
62	J106-2 602199-001	J201-LL (601855-034)	24 AWG WHT	524999	40"	CHANNEL 9B, COM
63	J106-3 602199-001	J20 I-MM (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
64	J106-4 602199-001	J201-NN (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
65	J106-5 602199-001	J202-B (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10A, NC
66	J106-6 602199-001	J202-F (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10A, NO
67	J106-7 602199-001	J202-A (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10A, COM
68	J106-8 602199-001	J202-H (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10B, NC
69	J106-9 602199-001	J202-M (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10B, NO
70	J106-10 602199-001	J202-C (601855-034)	24 AWG WHT	524999	40"	CHANNEL 10B, COM
71	J107-10 602199-001	J202-R (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11A, NC
72	J107-9 602199-001	J202-V (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11A, NO
73	J107-8 602199-001	J202-L (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11A, COM

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
74	J107-7 602199-001	J202-W (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11B, NC
75	J107-6 602199-001	J202-AA (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11B, NO
76	J107-5 602199-001	J202-S (601855-034)	24 AWG WHT	524999	40"	CHANNEL 11B, COM
77	J107-4 602199-001	J202-K (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12A, NC
78	J107-3 602199-001	J202-P (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12A, NO
79	J107-2 602199-001	J202-E (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12A, COM
80	J107-1 602199-001	J202-J (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12B, NC
81	J108-1 602199-001	J202-N (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12B, NO
82	J108-2 602199-001	J202-D (601855-034)	24 AWG WHT	524999	40"	CHANNEL 12B, COM
83	J108-3 602199-001	J202-Y (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13A, NC
84	J108-4 602199-001	J202-CC (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13A, NO
85	J108-5 602199-001	J202-U (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13A, COM
86	J108-6 602199-001	J202-X (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13B, NC
87	J108-7 602199-001	J202-BB (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13B, NO
88	J108-8 602199-001	J202-T (601855-034)	24 AWG WHT	524999	40"	CHANNEL 13B, COM
89	J108-9 602199-001	J202-EE (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14A, NC
90	J108-10 602199-001	J202-Z (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14A, NO
91	J109-10 602199-001	J202-KK (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14A, COM
92	J109-9 602199-001	J202-FF (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14B, NC
93	J109-8 602199-001	J202-HH (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14B, NO
94	J109-7 602199-001	J202-LL (601855-034)	24 AWG WHT	524999	40"	CHANNEL 14B, COM
95	J109-6 602199-001	J202-MM (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
96	J109-5 602199-001	J202-NN (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
97	J109-4 602199-001	J203-B (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15A, NC

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
98	J109-3 602199-001	J203-F (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15A, NO
99	J109-2 602199-001	J203-A (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15A, COM
100	J109-1 602199-001	J203-H (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15B, NC
101	J110-1 602199-001	J203-M (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15B, NO
102	J110-2 602199-001	J203-C (601855-034)	24 AWG WHT	524999	40"	CHANNEL 15B, COM
103	J110-3 602199-001	J203-R (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16A, NC
104	J110-4 602199-001	J203-V (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16A, NO
105	J110-5 602199-001	J203-L (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16A, COM
106	J110-6 602199-001	J203-W (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16B, NC
107	J110-7 602199-001	J203-AA (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16B, NO
108	J110-8 602199-001	J203-S (601855-034)	24 AWG WHT	524999	40"	CHANNEL 16B, COM
109	J110-9 602199-001	J203-K (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17A, NC
110	J110-10 602199-001	J203-P (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17A, NO
111	J111-10 602199-001	J203-E (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17A, COM
112	J111-9 602199-001	J203-J (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17B, NC
113	J111-8 602199-001	J203-N (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17B, NO
114	J111-7 602199-001	J203-D (601855-034)	24 AWG WHT	524999	40"	CHANNEL 17B, COM
115	J111-6 602199-001	J203-Y (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18A, NC
116	J111-5 602199-001	J203-CC (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18A, NO
117	J111-4 602199-001	J203-U (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18A, COM
118	J111-3 602199-001	J203-X (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18B, NC
119	J111-2 602199-001	J203-BB (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18B, NO
120	J111-1 602199-001	J203-T (601855-034)	24 AWG WHT	524999	40"	CHANNEL 18B, COM
121	J112-1 602199-001	J203-EE (601855-034)	24 AWG WHT	524999	40"	CHANNEL 19A, NC
122	J112-2 602199-001	J203-Z (601855-034)	24 AWG WHT	524999	40"	CHANNEL 19A, NO

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ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
123	J112-3 602199-001	J203-KK (601855-034)	24 AWG WHT	524999	40"	CHANNEL 19A, COM
124	J112-4 602199-001	J203-FF (601855-034)	24 AWG WHT	524999	40"	CHANNEL 19B, NC
125	J112-5 602199-001	J203-HH (601855-034)	24 AWG WHT	524999	40"	CHANNEL 19B, NO
126	J112-6 602199-001	J203-LL (601955-034)	24 AWG WHT	524999	40"	CHANNEL 19B, COM
127	J112-7 602199-001	J203-MM (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
128	J112-8 602199-001	J203-NN (601855-034)	24 AWG WHT	524999	40"	CHASSIS GROUND
129	J112-9 602199-001	NO CONNECT				
130	J112-10 602199-001	NO CONNECT				

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Chapter 5

PRODUCT SUPPORT

Product Support

EADS North America Defense Test and Services, Inc. has a complete Service and Parts Department. If you need technical assistance or should it be necessary to return your product for repair or calibration, call 1-800-722-3262. If parts are required to repair the product at your facility, call 1-949-859-8999 and ask for the Parts Department.

When sending your instrument in for repair, complete the form in the back of this manual.

For worldwide support and the office closest to your facility, refer to the website for the most complete information <http://www.eads-nadefense.com>.

Warranty

Use the original packing material when returning the 1260-12 to EADS North America Defense Test and Services, Inc. for calibration or servicing. The original shipping container and associated packaging material will provide the necessary protection for safe reshipment.

If the original packing material is unavailable, contact EADS North America Defense Test and Services, Inc. Customer Service at 1-800-722-3262 for information.

REPAIR AND CALIBRATION REQUEST FORM

To allow us to better understand your repair requests, we suggest you use the following outline when calling and include a copy with your instrument to be sent to the EADS North America Defense Test and Service, Inc. Repair Facility.

Model _____ Serial No. _____ Date _____

Company Name _____ Purchase Order # _____

Billing Address _____

City

State/Province

Zip/Postal Code

Country

Shipping Address _____

City

State/Province

Zip/Postal Code

Country

Technical Contact _____ Phone Number () _____

Purchasing Contact _____ Phone Number () _____

1. Describe, in detail, the problem and symptoms you are having. Please include all set up details, such as input/output levels, frequencies, waveform details, etc.

2. If problem is occurring when unit is in remote, please list the program strings used and the controller type.

3. Please give any additional information you feel would be beneficial in facilitating a faster repair time (i.e., modifications, etc.)

4. Is calibration data required? Yes No (please circle one)

Call before shipping Ship instruments to nearest support office.

Note: We do not accept
 "collect" shipments.