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# ***Instructions for Varian Gauge Cable Connector Kits***

*FIELD INSTALLATION  
INSTRUCTIONS*

Part Number 699908080  
Rev. C  
July 2006

# Varian Field Instruction Sheet

## Instructions for Varian Gauge Cable Connector Kits

### Preface

#### Documentation Standards

This manual uses the following documentation standards:

#### NOTE



Notes contain important information.

#### CAUTION



Cautions appear before instructions, which if not followed, could cause damage to the equipment or data loss.

#### WARNING



Warnings appear for a particular procedure or practice which, if not followed correctly, could lead to serious injury or death.

#### Hazard and Safety Information

The common international symbols used in this manual and on the equipment are defined below.



OFF Supply (Power)



ON Supply (Power)



AC – Alternating Current



Warning, Risk of danger



Frame or chassis Terminal



Earth (Ground) Terminal



Caution, Hot Surface



Caution, Risk of Electrical Shock



Protective Conductor Terminal



This sheet provides instructions for terminating Varian supplied gauge cables for the UHV24, Glass BA, IMG-100, UHV-IMG, and Convectorr gauges in the field. Only the use of Varian supplied cable guarantees proper fit and performance. All connector kits consist of the connector housings, contacts, ferrite beads, as required, and the miscellaneous hardware required to make up Multigauge or Sentorr cables in the field.

**Instructions L6440ConnKit for UHV24 and UHV24P**

The connector kit consists of a connector housing molded of high temperature and radiation resistant material, contacts for crimping onto the cable wires, and miscellaneous hardware. This kit is only suitable for 18AWG wire and RG-187A coax. (Varian P/Ns: L6440BakCable50, L6440RadCable50, and L6455Cable100)

**NOTE**

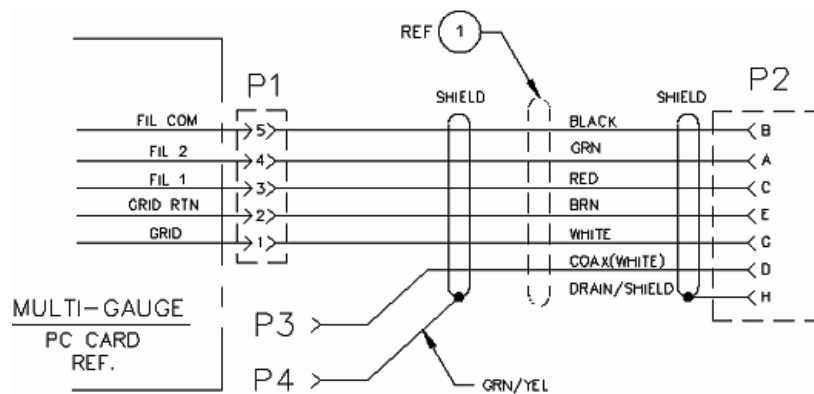


**18AWG cable is only suitable for use for lengths up to 50'. For lengths longer than 50', use cable P/N: L6456Cable100 with no more than 10' of L6455Cable100.**

The contacts used for each connector are packaged with the connector.

To install:

1. Wire the connectors as in Figure 1: UHV24 and UHV24P Wiring.



**Figure 1: UHV24 and UHV24P Wiring**

2. Install the ferrite beads.

**CAUTION**



**Failure to install the ferrite beads leads to erroneous readings and excessive EMI radiation.**

3. Assemble connectors P1, P3 and P4 as shown in Figure 2: P1, P3 and P4 Connectors.

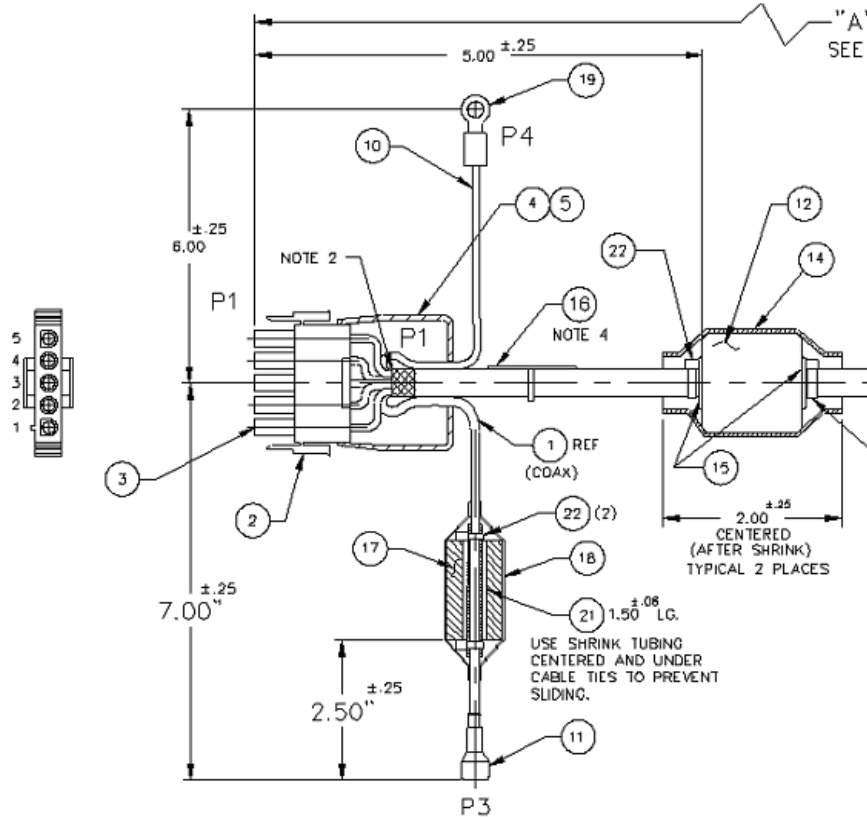


Figure 2: P1, P3 and P4 Connectors

**NOTE**

The Yel/Grn wire is soldered to the cable shield.



4. Assemble connector P2 is shown in Figure 3: P2 Connector - Preparation and "Figure 4: P2 Connector - Wiring" on page 4.

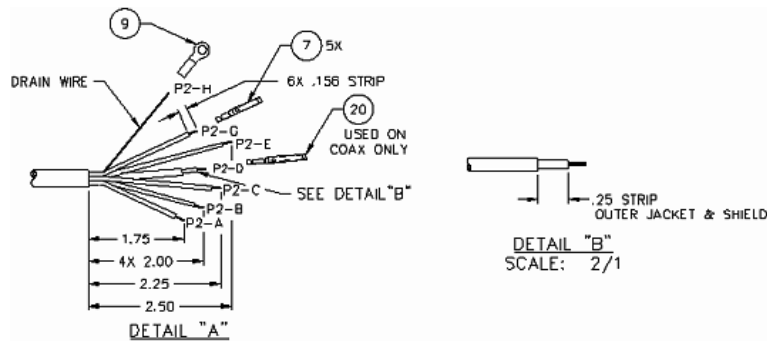
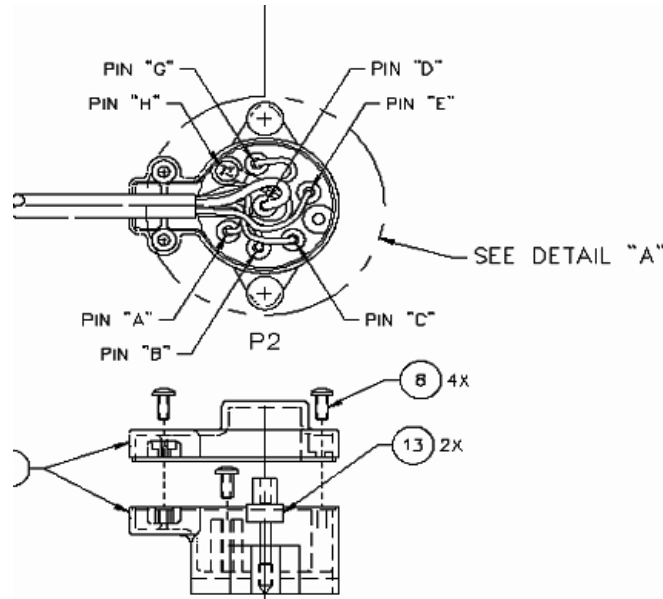


Figure 3: P2 Connector - Preparation

**NOTE**



**Item 9 is not used. Cut the drain wire flush.**



**Figure 4: P2 Connector - Wiring**

**Instructions for L6455ConnKit for all Glass BA gauges**

The connector kit consists of a connector housing molded of high temperature and radiation resistant material, contacts for crimping onto the cable wires, and miscellaneous hardware. This kit is only suitable for 18AWG wire and RG-187A coax. (Varian P/N: L6455Cable100)

**NOTE**



**18AWG cable is only suitable for use for lengths up to 50'. For lengths longer than 50', use cable P/N: L6456Cable100 with no more than 10' of L6455Cable100.**

The contacts used for each connector are packaged with the connector.

To install:

1. Wire the connectors as in Figure 5: Glass BA Gauges Wiring.

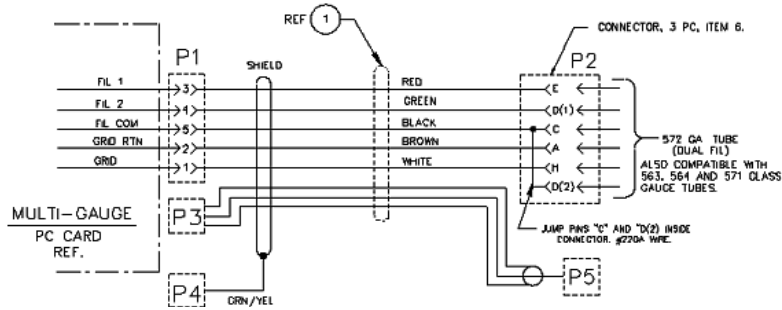


Figure 5: Glass BA Gauges Wiring

2. Install the ferrite beads.

**CAUTION**



Failure to install the ferrite beads leads to erroneous readings and excessive EMI radiation.

3. Assemble connectors P1, P3 and P4 as shown in Figure 6: P1, P3 and P4 Connectors.

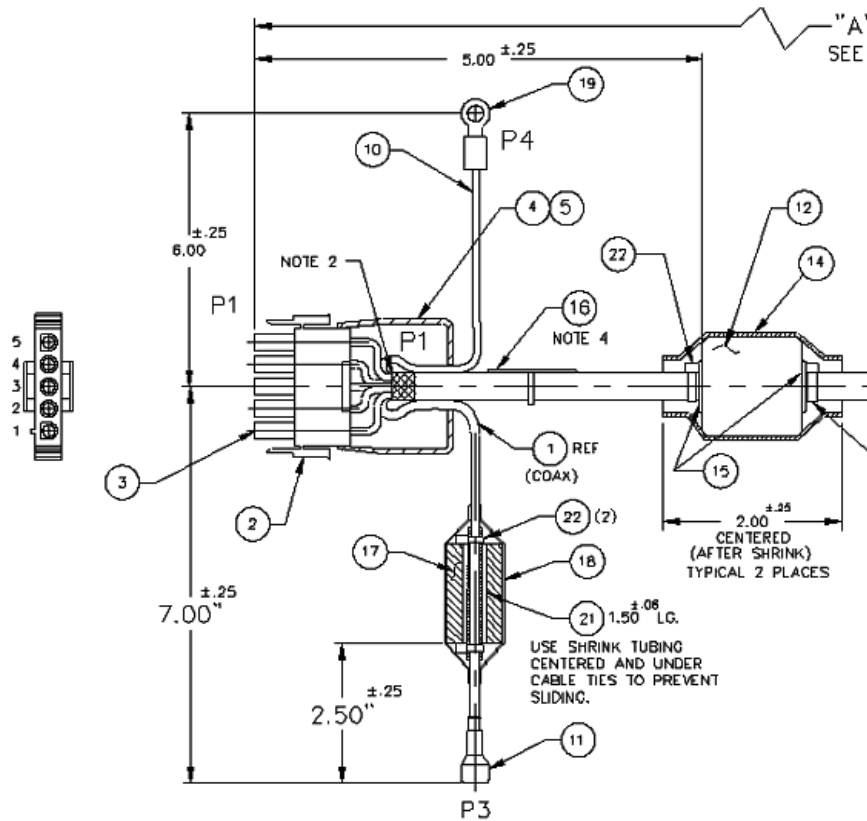


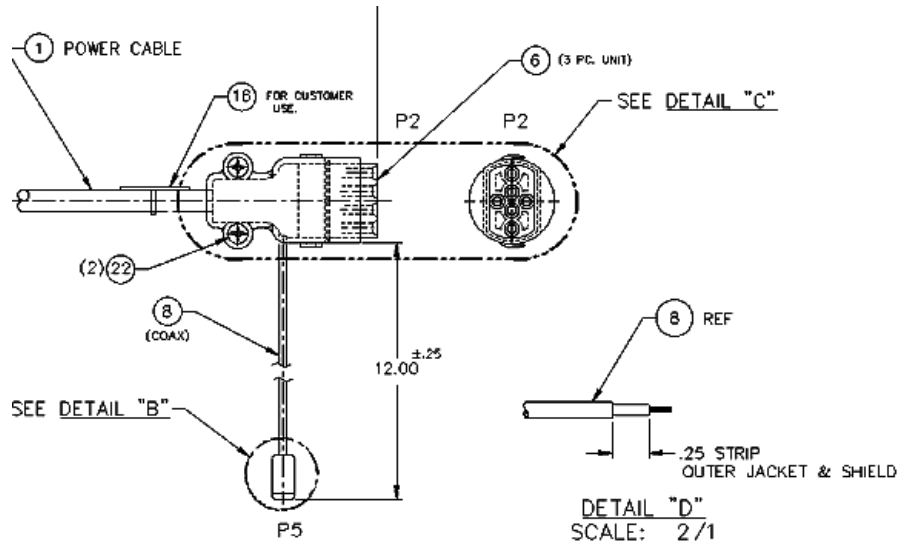
Figure 6: P1, P3 and P4 Connectors

**NOTE**

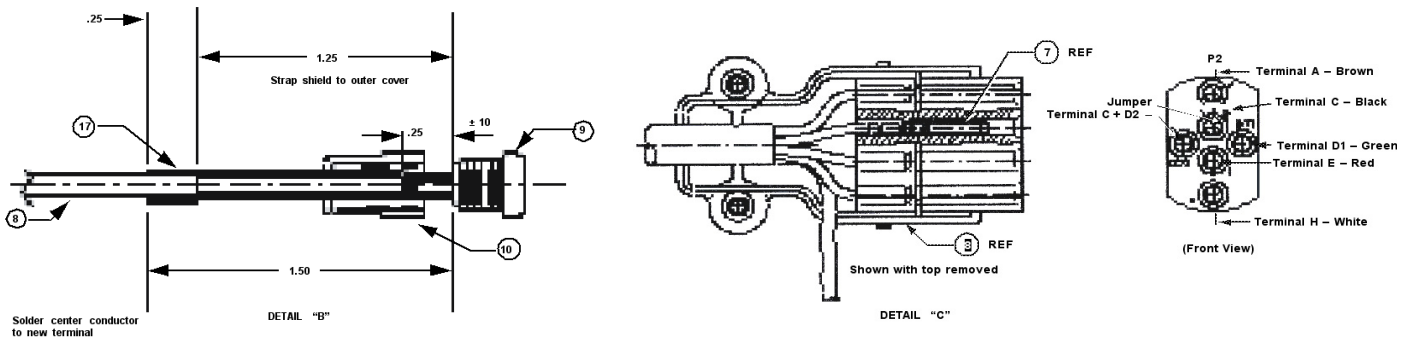
The Yel/Grn wire is soldered to the cable shield.



4. Assemble connector P2 is shown in Figure 7: P2 Connector - Preparation and Figure 8: P2 Connector - Wiring.



**Figure 7: P2 Connector - Preparation**



**Figure 8: P2 Connector - Wiring**

## Instructions for L6456ConnKit for BA/UHV Extension Cable

This kit includes the connectors and contacts required to terminate glass and UHV type BA gauge extension cable for lengths over 50' and is used with standard cable of no more than 10'. This kit is only suitable for 12AWG wire and RG-187A coax. (Varian P/N: L6456Cable100).

### NOTE



**18AWG cable is only suitable for use for lengths up to 50'. For lengths longer than 50', use cable P/N: L6456Cable100 with no more than 10' of L6456Cable100.**

The contacts used for each connector are packaged with the connector.

To install:

1. Wire the connectors as in Figure 9: B/A and UHV Extension Wiring.

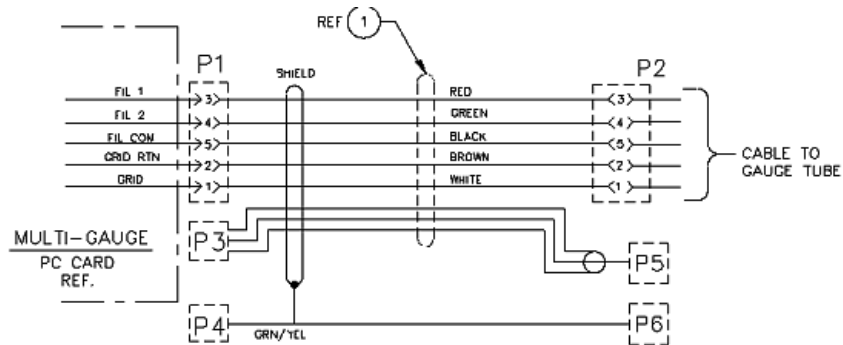


Figure 9: B/A and UHV Extension Wiring

2. Install the ferrite beads.

### CAUTION



**Failure to install the ferrite beads leads to erroneous readings and excessive EMI radiation.**



3. Assemble connectors P1, P3 and P4 as shown in Figure 10: P1, P3 and P4 Connectors.

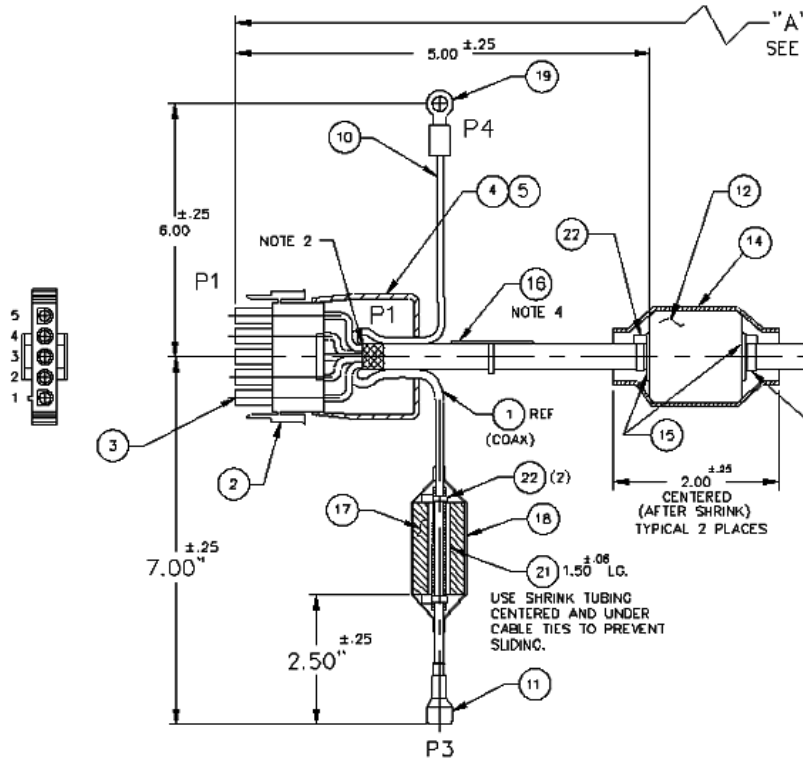


Figure 10: P1, P3 and P4 Connectors

NOTE

The Yel/Grn wire is soldered to the cable shield.



4. Assemble connector P2 is shown in Figure 11: P2, P5 and P6 Connectors.

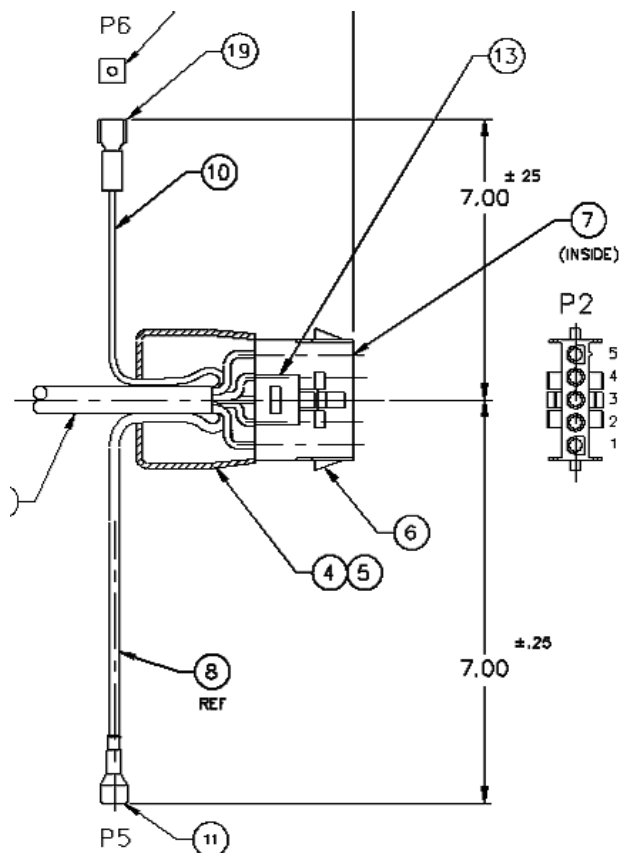


Figure 11: P2, P5 and P6 Connectors

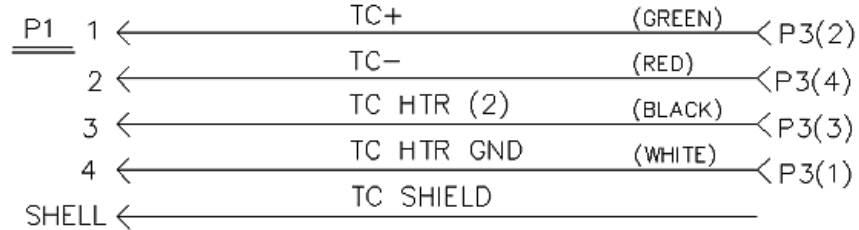
## Instructions for L9122ConnKit for Convectorr Gauge

This kit includes the connectors and contacts required to terminate Convectorr gauge cables. This kit is only suitable for 20AWG wire shielded wire. (Varian P/N: L9122Cable100, L9122Cable250).

The contacts used for each connector are packaged with the connector.

To install:

1. Wire the connectors as per Figure 12: Convectorr Gauge Wiring.



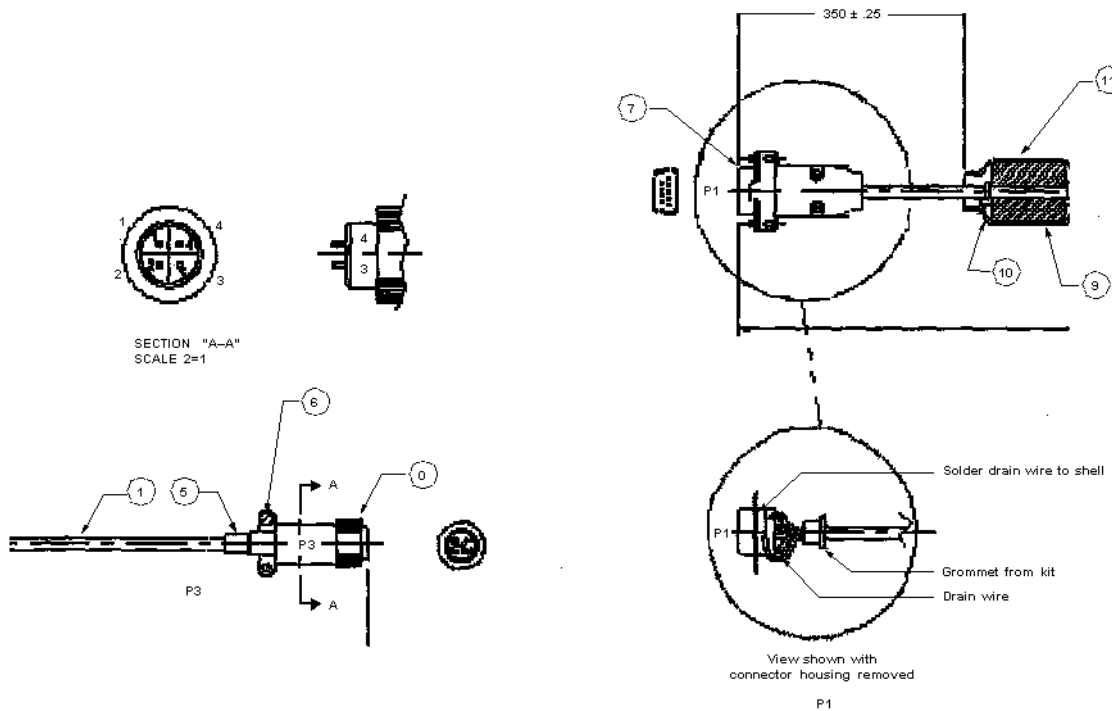
**Figure 12: Convectorr Gauge Wiring**

### CAUTION



**Failure to install the ferrite beads leads to erroneous readings and excessive EMI radiation.**

2. Assemble connectors P1 and P3 as per Figure 13: P1 and P3 Connectors - Wiring. Ensure that the drain wire is soldered to the P1 housing.



**Figure 13: P1 and P3 Connectors - Wiring**

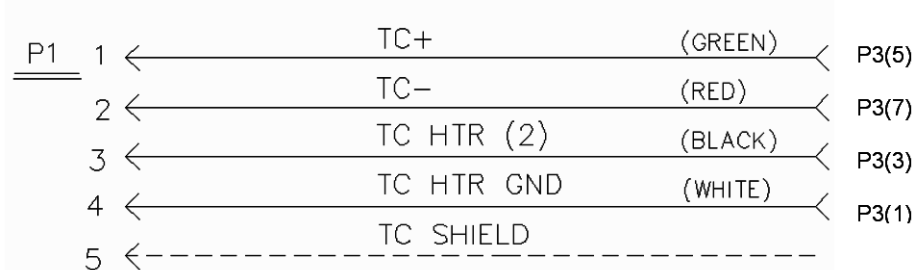
## Instructions for L9131ConnKit for Thermocouple Gauge

This kit includes the connectors and contacts required to terminate the thermocouple gauge cables use with the Sentorr and Multigauge Convectorr cards. This kit is only suitable for 20AWG wire shielded wire. (Varian P/N: L9122Cable100, L9122Cable250).

The contacts used for each connector are packaged with the connector.

To install:

1. Wire the connectors as per Figure 14: Sentorr and Multigauge Convectorr Thermocouple Gauge Wiring.



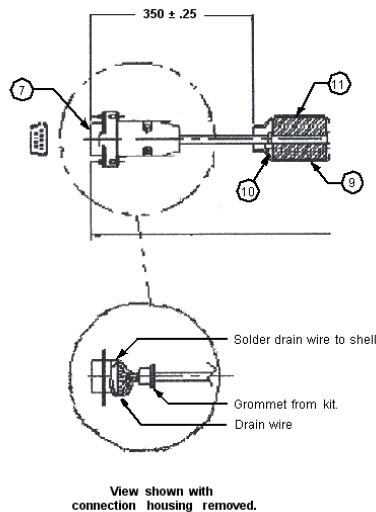
**Figure 14: Sentorr and Multigauge Convectorr Thermocouple Gauge Wiring**

### CAUTION

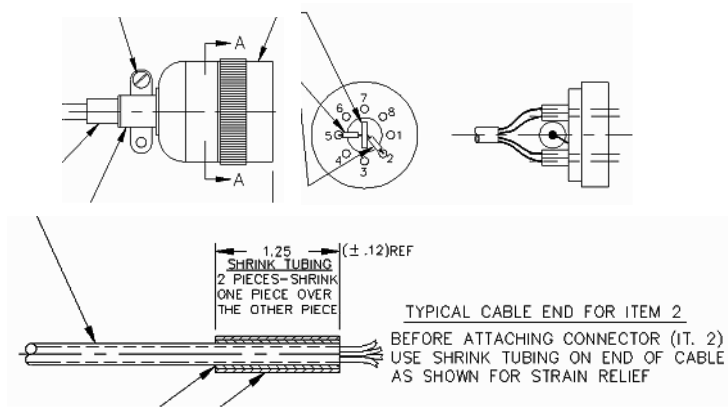


**Failure to install the ferrite beads leads to erroneous readings and excessive EMI radiation.**

2. Assemble connectors P1 and P3 as per Figure 15: P1 Connector - Wiring and "Figure 16: P3 Connector - Wiring" on page 12. Ensure that the drain wire is soldered to the P1 housing.



**Figure 15: P1 Connector - Wiring**



**Figure 16: P3 Connector - Wiring**

### Instructions for R0341ConnKit for IMG Gauge Cable

This kit includes the connectors and contacts required to terminate both bake-able and non-bake-able IMG gauge cables. This kit is only suitable for RG/U-59U (Teflon bake-able) and RG/U-58A (PVC non-bake-able) coax cable.

The contacts used for each connector are packaged with the connector.

To install:

- Wire the connectors as per Figure 17: IMG Cable Wiring. Use the Tyco-Amp Certi-Crimp tool # 220022-1 to assemble these connectors to the cable. Instructions can be found at:

<http://ecommas.tycoelectronics.com/commerce/DocumentDelivery/DDEController>

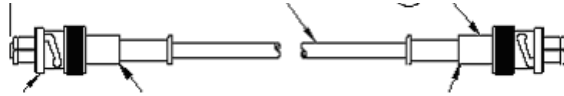


Figure 17: IMG Cable Wiring

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