

Liquid Helium Transfer Line with Built-in Level Sensor

I. INTRODUCTION

The American Magnetics, Inc. (AMI) high-efficiency, superinsulated, and vacuum-jacketed transfer line is designed for helium transfer between standard helium storage dewars and magnet system dewars. The transfer line is manufactured with a 60-inch flexible section and 60-inch dewar legs. An AMI liquid helium level sensor is contained in the lower 22" of the end of the transfer line which inserts into the liquid helium storage dewar.

As the level in the storage dewar decreases to 22" or less from the end of the transfer line, an instrument connected to the integral sensor will give an accurate indication of the helium liquid level for the remainder of the transfer.

The sensor is compatible with all AMI liquid helium level instruments. Construction is such that the sensor is field replaceable should it ever need service. Each transfer line comes standard with 25 feet of interfacing cable, transfer line with integral sensor, and a vacuum evacuation valve. Please specify which AMI instrument will be used in conjunction with the transfer line to ensure the correct mating connector is furnished.

II. SPECIFICATIONS

Active sensor length:	22 inches
Approximate weight:	25 lbs.
Evacuation valve:	Detachable
Interfacing cable length:	25 ft. standard
Mating connector:	AMI Model 150A, 110A, 134, 135, 136, or 137 (please specify)

III. INSTALLATION

Remove the Transfer Line from the shipping carton and remove all the packing material. Inspect the equipment for any physical damage that may have occurred during shipment.

***NOTE:** If there is any shipping damage save all packing material and contact the shipping representative to file a damage claim. Do not return the item to AMI unless prior authorization has been received. (Refer to Section VI)*

IV. TROUBLESHOOTING

A. ERRONEOUS LEVEL READINGS

1. Verify the cable between the instrument and sensor is installed properly.
2. Disconnect the sensor cable from the transfer line and refer to AMI Drawing No. 95-3034-2114, sheet 1 of 2 for pin locations. Verify the following **room temperature** resistance readings:

PINS	RESISTANCE IN OHMS
A-B	~ 254.8
A-C	~ 259.8 – ~261.8
A-D	Short
B-C	5 – 7
B-D	~ 254.8
C-D	~ 259.8 – ~261.8

B. EXCESSIVE HELIUM LOSS

If the cause of the problem cannot be located, please call an AMI Technical Support representative at (865) 482-1056. Our standard business hours are Monday through Friday, 8:00 a.m. to 4:30 p.m. Eastern time. Technical Support may also be reached via email: support@americanmagnetics.com

V. WARRANTY

All products manufactured by AMI are warranted to be free of defects in materials and workmanship and to perform as specified for a period of one year from date of shipment. In the event of failure occurring during normal use, AMI, at its option, will repair or replace all products or components that fail under warranty, and such repair or replacement shall constitute a fulfillment of all AMI liabilities with respect to its products. Since, however, AMI does not have control over the installation conditions or the use to which its products are put, no warranty can be made of fitness for a particular purpose, and AMI cannot be liable for special or consequential damages. All warranty repairs are F.O.B. Oak Ridge, Tennessee, USA.

VI. RETURN AUTHORIZATION

Items to be returned to AMI for repair (warranty or otherwise) require a return authorization number to ensure your order will receive proper attention. Please call an AMI representative at (423) 482-1056 for a return authorization before shipping any item back to us