REVISIONS		DWG No. 011600000113		
ZONE	REV	DESCRIPTION	DATE	APPROVED
		INITIAL RELEASE	19 oct 11	

NOTES:

1. Installation must be in accordance with Ansi/ISA RP 12.6 "Installation of Intrinsically Safe Systems for Hazardous Locations" and the National Electrical Code (ANSI/NFPA 70).
2. Installation of UL Approved Associated Apparatus shall be in accordance with manufacturers installation drawings and article 504 of the National Electrical Code (ANSI/NFPA 70) for installation in the United States or section 18 of the Canadian Electrical Code for installations in Canada.
3. No revisions may be made to this drawing without prior UL approval.
4. Associated output current must be limited by a resistor such that the output voltage- current plot is a straight line drawn between open circuit voltage and short circuit current.
5. Associated apparatus may be in a Division 2 or Zone 2 location if so approved.
6. Selected associated apparatus must be third party listed as providing intrinsically safe circuits for the application, and have Voc or Vt not exceeding Vmax (or Uo not ecedding Ui), Isc or It not eceeding Imax (or Io not exceeding Ii) and the Po of the associated apparatus must be less than or equal to the Pmax or Pi of the intrinsically safe equipment as shown in table 1.
7. Capacitance and inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1. Cable capacitance, Ccable plus intinsically safe equipment capacitance, Ci, must be less than the marked capacitance, Ca (or Co) shown on any associated apparatus used. The same applies to inductance (Lcable, Li, and La or Lo, repectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used: Ccable = 60pF/ft., Lcable = 0.2 uH/ft.

TABLE 1:

I.S. Equipment		Associated Apparatus
V max (or Ui)	> or =	Voc or Vt (or Uo)
I max (or Ii)	> or =	Isc or It (or Io)
P max (or Pi)	> or =	Po
Ci + Ccable	< or =	Ca (or Co)
Li + Lcable	< or =	La (or Lo)

If Po of the associated apparatus is not known, it may be calculated using the formula Po = (Voc * Isc)/4 = (Uo * Io)/4.

8. When required by the manufacturer's control drawing, the associated apparatus must be connected to a suitable ground electrode per the National Electrical Code (ANSI/NFPA 70), the Canadian Electrical Code, or other local installation codes, as applicable. The resistance of the ground path must be less than 1 ohm.
9. Control equipment must not use or generate more than 250 V rms or dc with respect to earth.
10. The HLR 750 Series of LVDT is provided with a permanently connected cable having the following characteristics:
    Type UL 1180
    Rated Voltage 300V
    Maximum Rated Temperature : 200C
    Conductor size 22 AWG
    Insulation type PTFE
    Insulation thickness .015"
    Certifications VW-1 Flammability

Suitability for installation in particular applications is at the discretion of the Authority Having Jurisdiction (AHJ).

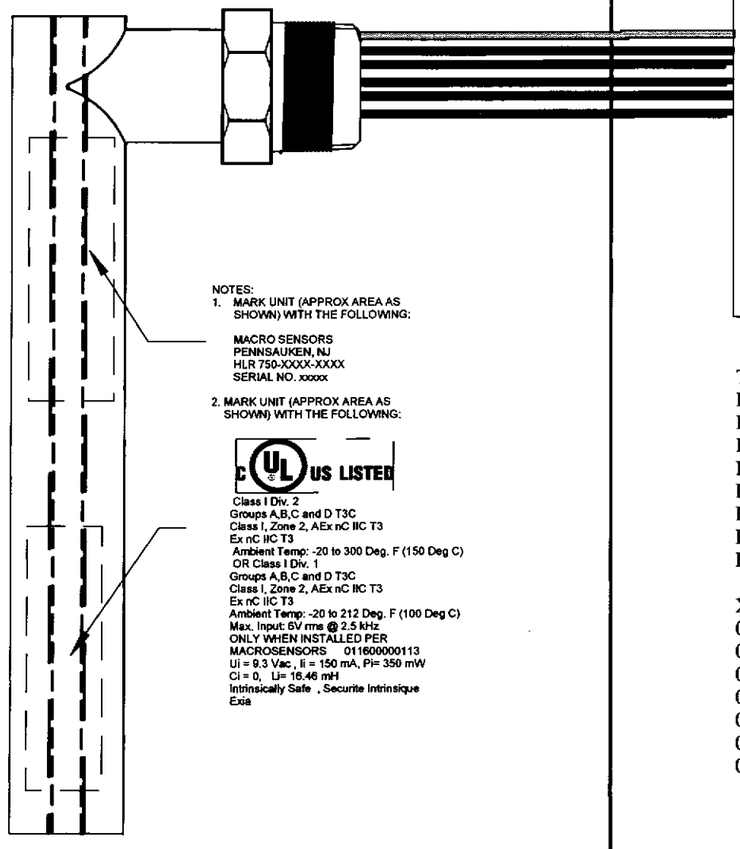
HAZARDOUS LOCATIONS

Class I Div. 1
Groups A,B,C and D T3C
Temperature: -20 to 212 Deg. F (100 Deg C)
LVDT for use in Hazardous Locations

Intrinsically Safe Device
Entity Parameters
Ui = 9.3 Vac, Ii= 150 mA
Pi= 350 mW, Ci=0
Li= 16.46mH

NONHAZARDOUS LOCATION

Associated Apparatus



This drawing pertains to the following intrinsically safe LVDT models:
HLR-750-1000-XXX
HLR-750-2000-XXX
HLR-750-3000-XXX
HLR-750-4000-XXX
HLR-750-5000-XXX
HLR-750-6000-XXX
HLR-750-7500-XXX
HLR-750-10000-XXX

XXX may refer to:
006- Unit is calibrated in metric units
010- A teflon sleeve is in the bore
016- A teflon sleeve and metric calibration
080- Unit has polyalkene leads for mild radiation
0728, 0525, 0820, 0821, 0738, 0822- core is brazed to metal rod
0741- lead length is 15 feet
0860- core brazed to metal rod and unit has external sliding cover

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLE: ±0.5 DEG. FRACTION: ± 1/2 DEG. DECIMEL: .XX = ± 0.01 INCH, .XXX = ± 0.005 INCH	DRAWN LHP	DATE 19 MAY 2011	MACRO SENSORS — A DIVISION OF HOWARD A. SCHAEVITZ TECHNOLOGIES, INC
	CHECKED		TITLE INSTALLATION DRAWING HLR SERIES LVDT
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FINISH :	APPROVED		SCALE SHEET