

**HAZARDOUS  
(CLASSIFIED)  
LOCATION**

**UNCLASSIFIED  
LOCATION**

3DLevelScanner (S/MM/V)

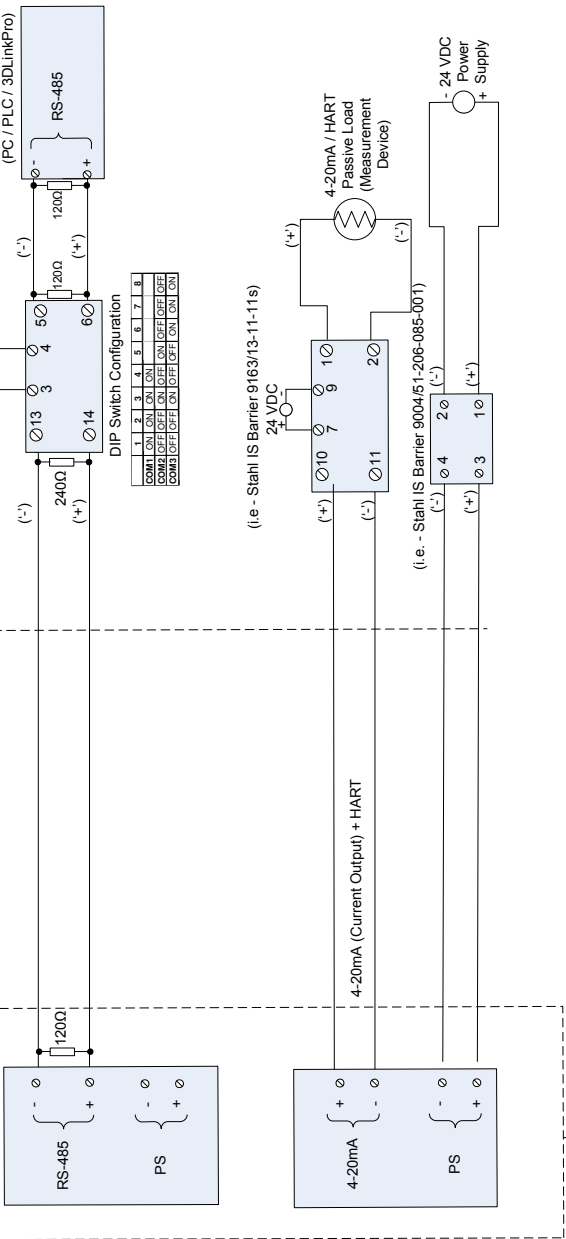
I.S. For CL I, II, DIV. 1, GP CDEFG Ta=-40°C...+85°C (-40°F...+185°F)

**Entities:**

**RS485**  
 $V_{max}(U_i)=5V$   
 $I_{max}(I_i)=500mA$   
 $P_{max}(P_i)=625mW$   
 $C_i=0F$ ;  $L_i=0H$

**4...20mA / HART**  
 $V_{max}(U_i)=10.5V$   
 $I_{max}(I_i)=106mA$   
 $P_{max}(P_i)=1.1W$   
 $C_i=8nF$ ;  $L_i=0H$

**Power Supply**  
 $V_{max}(U_i)=24V$   
 $I_{max}(I_i)=125mA$   
 $P_{max}(P_i)=3W$   
 $C_i=4nF$ ;  $L_i=250uH$



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES LIMITS ON FRACTIONS 2/64"	SCALE: NONE	TITLE: Wiring Drawing for Intrinsically Safe 3DLevelScanner (S/MM/V/LV)	REV. PAGE 1/2 5
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CHECKED: Yossi Zlotnik	A.P.M. Automation  Solutions Ltd.		
DATE: 11/4/2010			
FINISH:			

**Notes:**

1. **IMPORTANT:**

- a. Only a single Power Supply Barrier should be connected to a single 3DLevelScanner (e.g. – a single barrier can NOT be connected to more than one 3DLevelScanner).
  - b. For this use, only firmware version 2.9.824 and above must be used.
  - c. Only a single analog 4-20mA barrier should be connected to a single 3DLevelScanner
  - d. A single RS485 barrier could be used for multiple scanners in the same daisy chained bus.
  - e. The RS485 cable type must have resistance of 120ohm and after the connection, verify that both sides of the RS485 barrier have 60-70 ohm resistance.
2. Control equipment connected to Associated Apparatus must not use or generate more than 250V.
3. The Entity Concept allows interconnection of intrinsically safe apparatus with associated apparatus when the following is true:

$V_{max} \text{ or } U_i \geq V_{oc}, V_t \text{ or } U_o;$

$I_{max} \text{ or } I_i \geq I_{sc}, I_t \text{ or } I_o;$

$P_{max} \text{ or } P_i \geq P_o;$


$C_a \geq C_i + C_{cable};$

$L_a \geq L_i + L_{cable}.$

- 3. Resistance between Intrinsically Safe Ground and earth ground must be less than 1.0 Ohm.
- 4. Dust-Tight conduit seal must be used when installed in Class II and Class III environments.
- 5. Installation should be in accordance with ANSI/ISA RP12.06.01 “Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations” and the National Electrical Code (ANSI/NFPA 70).
- 6. The associated apparatus must be a resistively limited single or multiple channel FM Approved barrier having parameters less than those quoted, and for which the output and the combinations of outputs is non-ignition capable for the Class, Division and Group of use.
- 7. The output of the associated apparatus is non-linear.
- 8. Connect the barriers individually using different cables.

**WARNINGS:**

- 1. Substitution of components may impair Intrinsic Safety.
- 2. To prevent ignition of flammable or combustible atmospheres, read, understand and adhere to the manufacturer’s live maintenance procedures.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES <small>LIMITS ON FRACTIONS 2/16" DEC. 2008</small>	SCALE- <b>NONE</b>	TITLE- <b>Wiring Drawing for Intrinsically Safe 3DLevelScanner (S/M/MV/MVL)</b>			
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	DATE- <b>1/4/2010</b>		PM2000-010	2/2	5
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