

8601 SERIES CONSOLES

NON-HAZARDOUS AREA

ASSOCIATED APPARATUS

AMBIENT TEMPERATURE RANGE

0°C ≤ T<sub>a</sub> ≤ 50°C

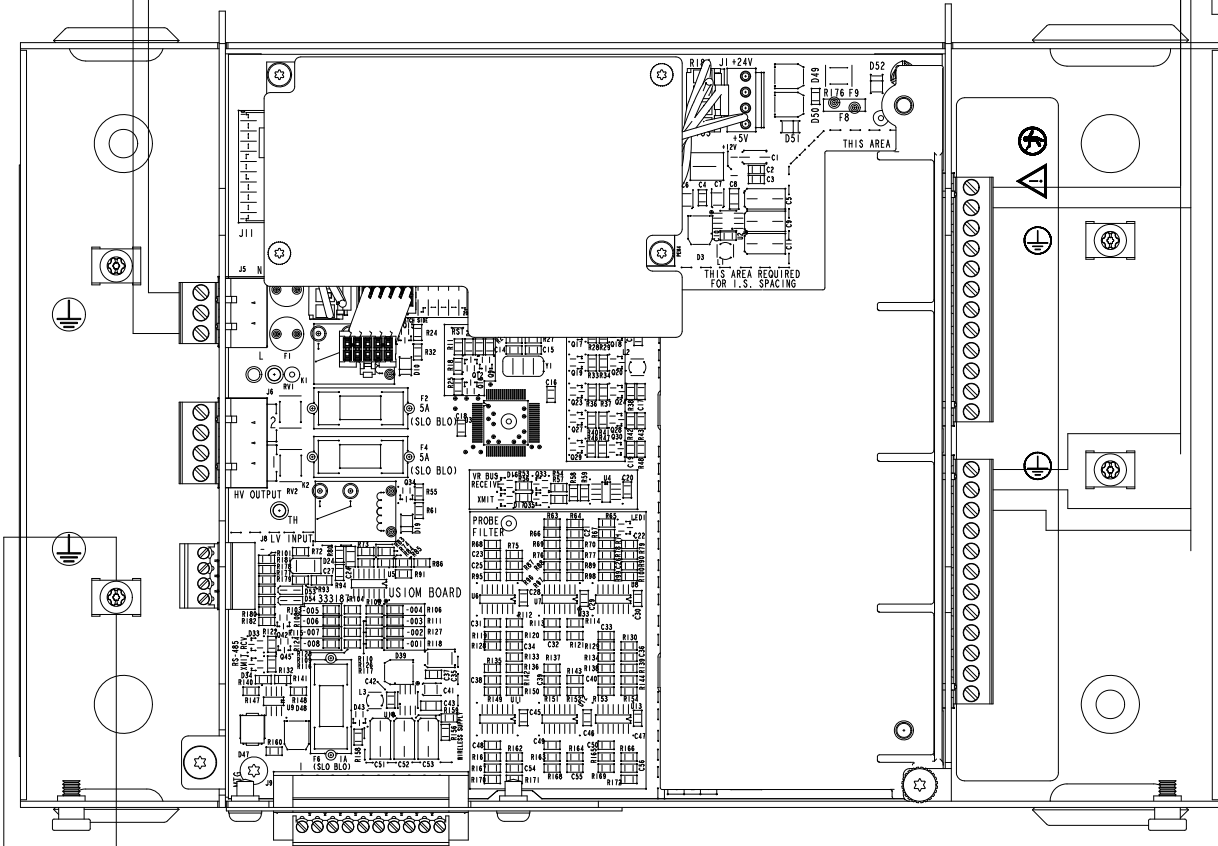
Ex II (1) [Ex ia] IIA

8601 CONSOLE  
CERTIFICATE NO.:  
DEMKO 11 ATEX 11659X

SEE NOTE 7

AC NEUTRAL  
(OR +5 VDC)

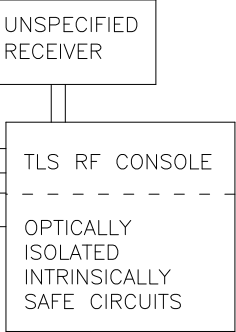
AC LINE  
(OR +24 VDC)



BARRIER GROUND (SEE NOTE 8)

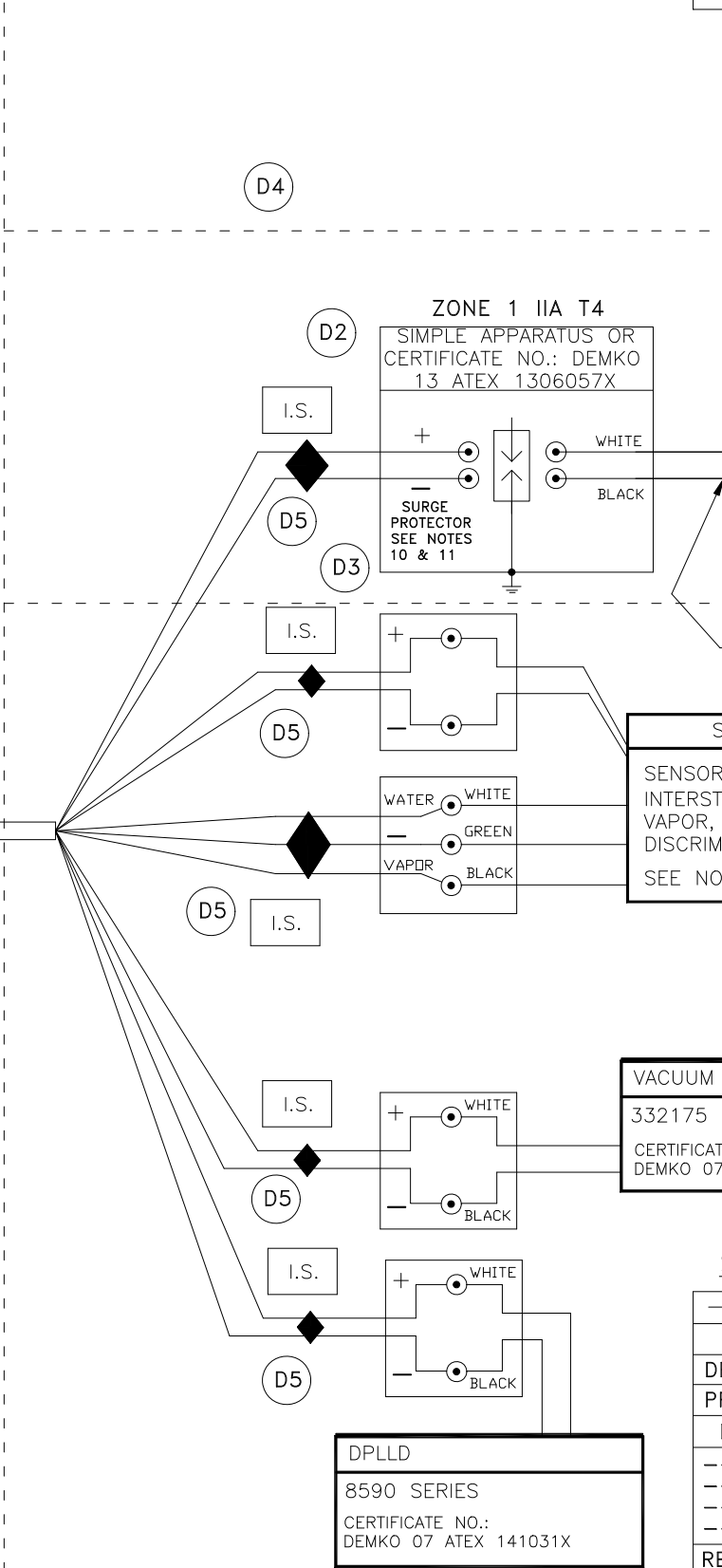
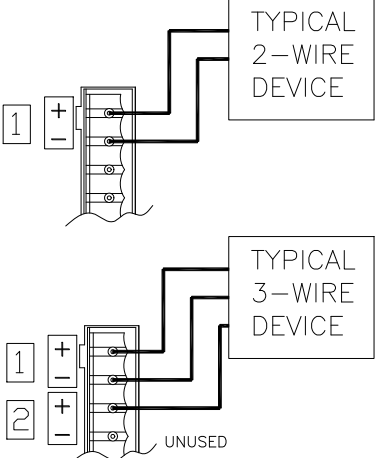
CHASSIS GROUND

AC NEUTRAL  
CHASSIS GROUND  
AC LINE  
BARRIER GROUND  
SEE NOTE 8



I.S.  
I.S.  
I.S.

SEE NOTE 5



DPLD  
8590 SERIES  
CERTIFICATE NO.:  
DEMKO 07 ATEX 141031X

HAZARDOUS AREA

INTRINSICALLY SAFE (I.S.) APPARATUS

AMBIENT TEMPERATURE RANGE

(UNLESS NOTED)

-40°C ≤ T<sub>a</sub> ≤ 60°C

Ex II 1 G Ex ia IIA T4  
II 2 G Ex ia IIA T4  
II 1/2 G Ex ia IIA T4

ZONE 0 IIA T4  
MAGNETOSTRICTIVE PROBES  
MAG PLUS PROBE  
8462 SERIES, 8463 SERIES  
8563 SERIES, 8570 SERIES  
CERTIFICATE NO.:  
DEMKO 06 ATEX 0508841X  
MAG PLUS1 SERIES PROBE  
CERTIFICATE NO.:  
TUV 12 ATEX 105828  
AMBIENT TEMPERATURE  
RANGE -20°C ≤ T<sub>a</sub> ≤ +60°C

SEE NOTE 12


SIMPLE APPARATUS  
SENSOR TYPES:  
INTERSTITIAL, SUMP, GROUNDWATER,  
VAPOR, HYDROSTATIC AND  
DISCRIMINATING, POSITION.  
SEE NOTE 11

Certified Product  
No changes permitted  
without reference to the  
"Notified Body (NB)"

VACUUM SENSOR  
332175 SERIES  
CERTIFICATE NO.:  
DEMKO 07 ATEX 29144X

SIMPLE APPARATUS  
FLOAT SWITCH

SEE SHEET 2 FOR NOTES

DO NOT SCALE DRAWING				
	NAME	DATE	NEXT GRP.	-----
DESIGNER	T. BREEN	2011/07/15	ASSEMBLY	-----
PROJECT	B. ANDREW	2011/07/15	FORM NO	8601
MATERIAL	 <b>VEEDER-ROOT</b> SIMSBURY, CONNECTICUT 06070 U.S.A.			
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NOTICE - THIS DOCUMENT IS THE PROPERTY OF THE VEEDER-ROOT COMPANY AND IS NOT TO BE DISCLOSED, REPRODUCED IN WHOLE OR IN PART, OR USED FOR MANUFACTURE BY ANYONE WITHOUT VEEDER-ROOT'S WRITTEN CONSENT.				
REFERENCE MFG. SPEC. VRS 81005 WHERE IT IS APPLICABLE	DESCRIPTIVE SYS DOCUMENT ATEX TLS4/8601			
UNSPECIFIED TOLERANCES +/- 0.005	SIZE D	DRAWING NUMBER 331940-017	REV. D	STATUS REL
SCALE		NONE	SHEET	1 OF 2

NOTES:

1. THE TOTAL ALLOWABLE CABLE LENGTH USED TO CONNECT ALL OF THE I.S. DEVICES TO THE ASSOCIATED APPARATUS IS 7,315 METERS OR 24,000 FEET.
2. EACH CABLE (OR WIRING) USED TO CONNECT I.S. DEVICES TO THE CONSOLE MUST NOT EXCEED A CAPACITANCE OF 328 pf/METER OR 100 pf/FOOT.
3. THE TOTAL CABLE CAPACITANCE, COMBINING ALL OF THE CABLE USED TO CONNECT THE INTRINSICALLY SAFE DEVICES TO THE ASSOCIATED APPARATUS, MUST NOT EXCEED 5,0μF.
4. EACH CABLE MUST NOT EXCEED AN INDUCTANCE OF 0,656 μH/METER OR 0,2 μH/FOOT.
5. THE L/R RATIO OF THE CABLE MUST NOT EXCEED 200 μH/OHM.
6. FOR EACH 8601 CONSOLE INSTALLED THE MAXIMUM NUMBER OF I.S. DEVICES CONNECTED TO THE ASSOCIATED APPARATUS IS 12.
7. NON–HAZARDOUS ASSOCIATED APPARATUS IS AS SHOWN AND MUST NOT BE SUPPLIED FROM OR CONTAIN, UNDER NORMAL OR ABNORMAL CONDITIONS, A SOURCE OF POTENTIAL WITH RESPECT TO EARTH IN EXCESS OF 250V RMS OR 250V dc, Um = 250V.
8. CONNECT THE BARRIER GROUND TO THE EARTH GROUND BUS AT THE POWER DISTRIBUTION PANEL WITH A 4 sq. mm (10 AWG) (OR LARGER) CONDUCTOR. GROUNDING MUST COMPLY WITH EN 60079–14, CLAUSE TITLED "EARTHING OF INTRINSICALLY SAFE CIRCUITS".
9. THIS SYMBOL, ⊙ , DENOTES A FIELD WIRING CONNECTION INSIDE A WEATHERPROOF JUNCTION BOX.
10. A RISK ANALYSIS MUST BE PERFORMED TO DETERMINE IF THE INSTALLATION LOCATION IS SUSCEPTIBLE TO LIGHTNING OR OTHER SURGES. IF NECESSARY, ADD PROTECTION AGAINST LIGHTNING AND OTHER ELECTRICAL SURGES IN ACCORDANCE WITH EN 60079–25, SECTION TITLED "PROTECTION AGAINST LIGHTNING AND OTHER ELECTRICAL SURGES". IF REQUIRED, INSTALL A SURGE PROTECTOR IN ZONE 1 AS CLOSE AS POSSIBLE TO THE BOUNDARY WITH ZONE 0. THE SITE PREPARATION GUIDE, MANUAL NO. 577013–578, PROVIDES ADDITIONAL DETAILS ABOUT RISK ASSESSMENT.
11. IT IS THE RESPONSIBILITY OF THE INSTALLER TO DETERMINE COMPLIANCE OF SIMPLE APPARATUS. SIMPLE APPARATUS USED WITH THIS SYSTEM MUST CONFORM TO THE FOLLOWING REQUIREMENTS:

A) CONSTRUCTED OF PASSIVE COMPONENTS ONLY, FOR EXAMPLE, SWITCHES, JUNCTION BOXES AND RESISTORS.

B) CONSTRUCTED WITHOUT ANY SOURCES OF STORED ENERGY SUCH AS BATTERIES, CAPACITORS AND INDUCTORS.

C) CONSTRUCTED WITHOUT SOURCES OF GENERATED ENERGY THAT PRODUCE MORE THAN 1.5V, AND 25mW OR SOURCES THAT CONTAIN A MEANS OF INCREASING THE VOLTAGE.

D) IF CONSTRUCTED WITH A METALLIC HOUSING THE SIMPLE APPARATUS SHALL BE CAPABLE OF WITHSTANDING THE TEST VOLTAGE TO EARTH IN ACCORDANCE WITH EN 60079–11, CLAUSE TITLED "DIELECTRIC STRENGTH REQUIREMENT" AND ITS TERMINALS MUST CONFORM TO EN 60079–11, CLAUSE 6.2.

E) NONMETALIC ENCLOSURES AND ENCLOSURES OF LIGHT METALS MUST COMPLY WITH EN 60079–0 SECTIONS 7 & 8 AND EN 60079–26 CLAUSE 4.3.3.

F) BASED ON THE AVAILABLE POWER WITHIN THE SYSTEM, SIMPLE APPARATUS THAT HAVE ELECTRICAL COMPONENTS THAT EXCEED 20 sq. mm IN TOTAL SURFACE AREA, MAY BE ASSESSED AS HAVING A T4 TEMPERATURE CODE, AT THE SPECIFIED AMBIENT TEMPERATURE RANGE OF −40°C ≤ Ta ≤ +60°C. OTHER TYPES OF SIMPLE APPARATUS MUST BE ASSESSED IN ACCORDANCE WITH EN 60079–11, CLAUSE TITLED "SIMPLE APPARATUS".
12. CABLE GLAND MUST BE A SUITABLE PROCESS CONNECTION IN ACCORDANCE WITH EN60079–26.
13. SPECIAL CONDITIONS FOR SAFE USE, AS APPLICABLE AND AS DEFINED IN THE CERTIFICATE OF CONFORMITY AND THE SITE PREPARATION GUIDE, MANUAL NO. 577013–578, MUST BE TAKEN INTO ACCOUNT.
14. THIS SYSTEM DESCRIPTIVE DOCUMENT DESCRIBES THE INTRINSICALLY SAFE EQUIPMENT AND ASSOCIATED APPARATUS THAT TOGETHER FORM AN INTRINSICALLY SAFE SYSTEM.
- D6


15. TLS4/8601 CONSOLES MUST BE INSTALLED IN AN INDOOR, NON–HAZARDOUS AREA IN ACCORDANCE WITH THE DESCRIPTIVE SYSTEM DOCUMENT AND THE INSTALLATION INSTRUCTIONS. ONLY ONE TLS4/8601 CONSOLE CAN BE CONNECTED TO ANY SINGLE INTRINSICALLY SAFE APPARATUS AS DESCRIBED ON SHEET ONE OF THIS DOCUMENT. MULTIPLE SOURCES OF POWER, ADDITIONAL TLS CONSOLES OR OTHER ASSOCIATED APPARATUS, CANNOT BE CONNECTED TO THE SAME INTRINSICALLY SAFE APPARATUS.
- D7

16. THE MAG PLUS1 SERIES PROBES MARKED Ex ia IIB T4 OR Ex ia IIC T4, WHEN USED WITHIN THIS SYSTEM THE DEVICE IS LIMITED TO GROUP IIA.
17. REFERENCE THE DEVICE CERTIFICATION FOR APPLICABLE STANDARD EDITIONS.

STANDARDS:

[Ex ia] IIA

EN 60079–0	ELECTRICAL APPARATUS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES–PART 0: GENERAL REQUIREMENTS
EN 60079–11	ELECTRICAL APPARATUS FOR POTENTIALLY EXPLOSIVE ATMOSPHERES–PART 11: INTRINSIC SAFETY "I"
EN 60079–25	ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES–PART 25: INTRINSICALLY SAFE SYSTEMS
EN 60079–26	ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES – PART 26: CONSTRUCTION, TEST AND MARKING OF GROUP II ZONE 0 ELECTRICAL APPARATUS

 <b>VEEDER-ROOT</b> <sup>TM</sup>		SIMSBURY, CONNECTICUT 06070 U.S.A.	
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DESCRIPTIVE SYS DOCUMENT ATEX TLS4 / 8601			
SIZE D	DRAWING NUMBER 331940–017	REV. D	STATUS REL
SCALE	NONE	SHEET 2	OF 2