

DESCRIPTIVE SYSTEM DOCUMENT FOR CERTIFICATE NUMBER DEMKO 06 ATEX 137480X

REV	DESCRIPTION	BY	DATE	ECO
A	INITIAL RELEASE	CAR	04/23/03	T357-006
B	UPDATED TO REFLECT TLS RF ADDED SHEET 2 FOR NOTES	CAR	02/21/06	P043-003

TLS-50/TLS2/TLS-IB CONSOLES

NON-HAZARDOUS AREA

AMBIENT TEMPERATURE RANGE
0°C ≤ Ta ≤ 40°C

Ⓔ II (1) G [EEx ia] IIA

TLS RF CONSOLE
CERTIFICATE NO.:
DEMKO 06 ATEX 137478X

AC NEUTRAL
CHASSIS GROUND
AC LINE

UNSPECIFIED
RECEIVER

TLS RF CONSOLE

OPTICALLY ISOLATED
INTRINSICALLY SAFE
CIRCUITS

TLS2 CONSOLE
TLS-50 CONSOLE
TLS-IB CONSOLE
CERTIFICATE NO.:
DEMKO 06 ATEX 137485X

HAZARDOUS AREA

INTRINSICALLY SAFE (I.S.) APPARATUS

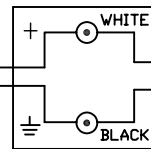
AMBIENT TEMPERATURE RANGE
-40°C ≤ Ta ≤ 60°C

Ⓔ II 1 G EEx ia IIA T4

WHERE APPLICABLE, INTRINSICALLY SAFE
EQUIPMENT MUST BE GROUNDED IN
ACCORDANCE WITH LOCAL CODES.

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

SEE NOTE 9



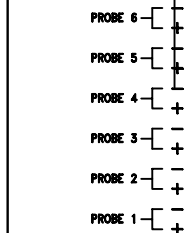
MAGNETOSTRICTIVE PROBES
MAG PLUS PROBE
8462 SERIES, 8463 SERIES
8563 SERIES, 8570 SERIES
CERTIFICATE NO.:
DEMKO 06 ATEX 0508841X

SEE NOTES 1 THRU 5

SEE NOTE 7

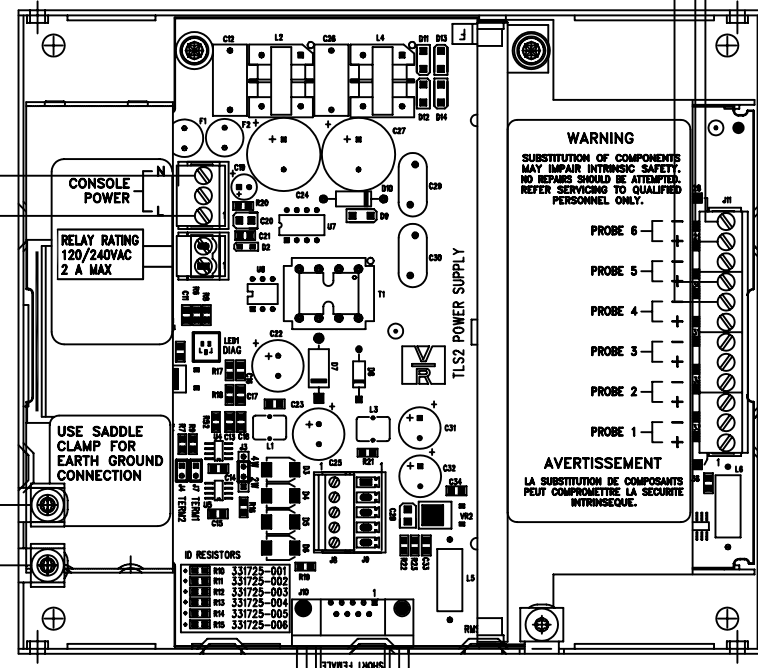
AC NEUTRAL
AC LINE

WARNING
SUBSTITUTION OF COMPONENTS
MAY IMPAIR INTRINSIC SAFETY.
NO REPAIRS SHOULD BE ATTEMPTED.
REFER SERVICING TO QUALIFIED
PERSONNEL ONLY.



AVERTISSEMENT
LA SUBSTITUTION DE COMPOSANTS
PEUT COMPROMETTRE LA SECURITE
INTRINSEQUE.

SEE SHEET 2 FOR NOTES



BARRIER GROUND
SEE NOTE 8

CHASSIS GROUND
SEE NOTE 7

DO NOT SCALE DRAWING				
	NAME	DATE	NEXT GRP.	
DESIGNER	C. ROUTHIER	4/23/03	ASSEMBLY	
PROJECT	B. ANDREW	4/23/03	FORM NO	
MATERIAL	SIMSBURY, CONNECTICUT 06070 U.S.A. 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				
UNSPECIFIED TOLERANCES +/- 0.005	SIZE D	DRAWING NUMBER 331940-003	REV. B	STATUS NFP



WARNING: IN INSTALLATION AND USE OF THIS PRODUCT, COMPLY WITH ALL ELECTRICAL CODES. IN ADDITION, TURN OFF POWER AND TAKE OTHER NECESSARY PRECAUTIONS DURING INSTALLATION, SERVICE AND REPAIR TO PREVENT PERSONAL INJURY, PROPERTY LOSS AND EQUIPMENT DAMAGE.




WARNING: DISCONNECT ALL POWER BEFORE MAKING ANY CONNECTIONS TO PREVENT DEATH, SERIOUS INJURY, EXPLOSION, OR ELECTRICAL SHOCK. CONSOLE MUST NEVER BE OPERATED UNLESS THE FRONT COVER IS CLOSED OVER THE BARRIER TERMINALS IN THE INTRINSICALLY SAFE AREA.

DESCRIPTIVE SYS DOCUMENT				
ATEX TLS-50, TLS2 & TLS-IB				
SCALE	NONE	SHEET	1	OF 2

NOTES:

1. A MAXIMUM CABLE LENGTH OF 305 METERS OR 1,000 FEET IS ALLOWED TO CONNECT ANY SINGLE I.S. DEVICE TO THE ASSOCIATED APPARATUS. THE TOTAL ALLOWABLE CABLE LENGTH USED TO CONNECT ALL OF THE I.S. DEVICES TO THE ASSOCIATED APPARATUS IS 2,438 METERS OR 8,000 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 0,8 μ F.
4. EACH CABLE MUST NOT EXCEED AN INDUCTANCE OF 0,656 μ H/METER OR 0,2 μ H/FOOT.
5. THE L/R RATIO OF THE CABLE MUST NOT EXCEED 200 μ H/OHM.
6. FOR EACH TLS-50, TLS2, TLS-IB CONSOLE INSTALLED THE MAXIMUM NUMBER OF I.S. DEVICES CONNECTED TO THE ASSOCIATED APPARATUS IS 8. A MAXIMUM OF TWO TLS RF CONSOLES CAN BE CONNECTED TO THE CONSOLE, WHERE EACH CONNECTED TLS RF CHANNEL EQUALS ONE I.S. DEVICE.
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, $U_m = 250V$.
8. CONNECT THE BARRIER GROUND TO THE EARTH GROUND BUS AT THE POWER DISTRIBUTION PANEL WITH A 4mm² (10 AWG) (OR LARGER) CONDUCTOR. GROUNDING MUST COMPLY WITH EN 60079-14, CLAUSE 6.3.
9. THIS SYMBOL, \odot , DENOTES A FIELD WIRING CONNECTION INSIDE A WEATHERPROOF JUNCTION BOX.
10. A RISK ANALYSIS MUST BE PREFORMED 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 10.
11. IT IS THE RESPONSIBILITY OF THE END USER 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 50020, CLAUSE 6.4.12 AND ITS TERMINALS MUST CONFORM TO EN 50020, CLAUSE 6.3.1.
 - E) NONMETALIC ENCLOSURES AND ENCLOSURES OF LIGHT METALS MUST COMPLY WITH EN 50014 SECTIONS 7 & 8 AND EN 50284 CLAUSE 4.4.
 - F) BASED ON THE AVAILABLE POWER WITHIN THE SYSTEM, SIMPLE APPARATUS THAT HAVE ELECTRICAL COMPONENTS THAT EXCEED 20mm² IN TOTAL SURFACE AREA, MAY BE ASSESSED AS HAVING A T4 TEMPERATURE CODE, AT THE SPECIFIED AMBIENT TEMPERATURE RANGE OF $-40^{\circ}C \leq T_a \leq +60^{\circ}C$. OTHER TYPES OF SIMPLE APPARATUS MUST BE ASSESSED IN ACCORDANCE WITH EN 50020, SECTION 6.2.
12. SPECIAL CONDITIONS, SAFE USE, AS APPLICABLE AND AS DEFINED IN THE CERTIFICATE OF CONFORMITY AND INSTALLATION INSTRUCTIONS MUST BE TAKEN INTO ACCOUNT.

		SIMSBURY, CONNECTICUT 06070 U.S.A.	
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DESCRIPTIVE SYS DOCUMENT ATEX TLS-50, TLS2 & TLS-IB			
SIZE	DRAWING NUMBER	REV.	STATUS
D	331940-003	B	NFP
SCALE	NONE	SHEET	2 OF 2