EMERSON LCP200 Local Control Panel Instruction Manual

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EMERSON LCP200 Local Control Panel

Hazardous Area Classifications and Special Instructions for “Safe Use” and Installations in Hazardous Locations

Certain nameplates may carry more than one approval, and each approval may have unique installation/wiring requirements and/or conditions of “safe use”. These special instructions for “safe use” are in addition to, and may override, the standard installation procedures. Special instructions are listed by approval.

Note: This information supplements the nameplate markings affixed to the product and the LCP200 instruction manual (D104296X012), available from your Emerson sales office or **Fisher.com** Always refer to the nameplate itself to identify the appropriate certification. LCP200 instruments with an IIC rating may have different hardware than IIB-rated instruments; be sure to order the appropriately rated instrument based on your application and wiring practices.

WARNING: Failure to follow these conditions of “safe use” could result in personal injury or property damage from fire or explosion, or area re-classification.

Intrinsically Safe

Specific Conditions of Use

1. Install the unit in the area of low risk from mechanical hazards. To prevent the risk of electrostatic sparking, the non-metallic surface shall be cleaned with a damp cloth.

Notes

Ambient temperature rating: -40°C ≤ Ta ≤ +65°C

1. Install per drawing GG55194, shown in Figures 1, 2, 3, and 4, as indicated on the nameplate.
2. Substitution of components may impair intrinsic safety.
3. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface shall be cleaned with a damp cloth.
    1. Refer to table 1 for approval information.

Table 1. Approval Information, ATEX/IECEx

Certificate	Certification Obtained	Entity Rating	Temperature Code
ATEX IECEx	ATEX: FM17ATEX0071X II 1 GD IECEx: IECEx FMG 17.0028X Intrinsically Safe Gas Ex ia IIC Ga Dust Ex ia IIIC Da Install Per Drawing GG55194 (shown in figure 1, 2, 3, and 4)	Per Drawing GG55194 (shown in figure 1, 2, 3, and 4)	Gas: T6 Dust: T85 C

Figure 1. Intrinsically Safe, LOOP Power, ATEX/IECEx

- Wiring Configuration A (LOOP-Powered only) From Barrier to Digital Valve Controller and LCP200 See Notes in figure 3 and Notes 1, 2, 3, 4, and 5 in Figure 4.

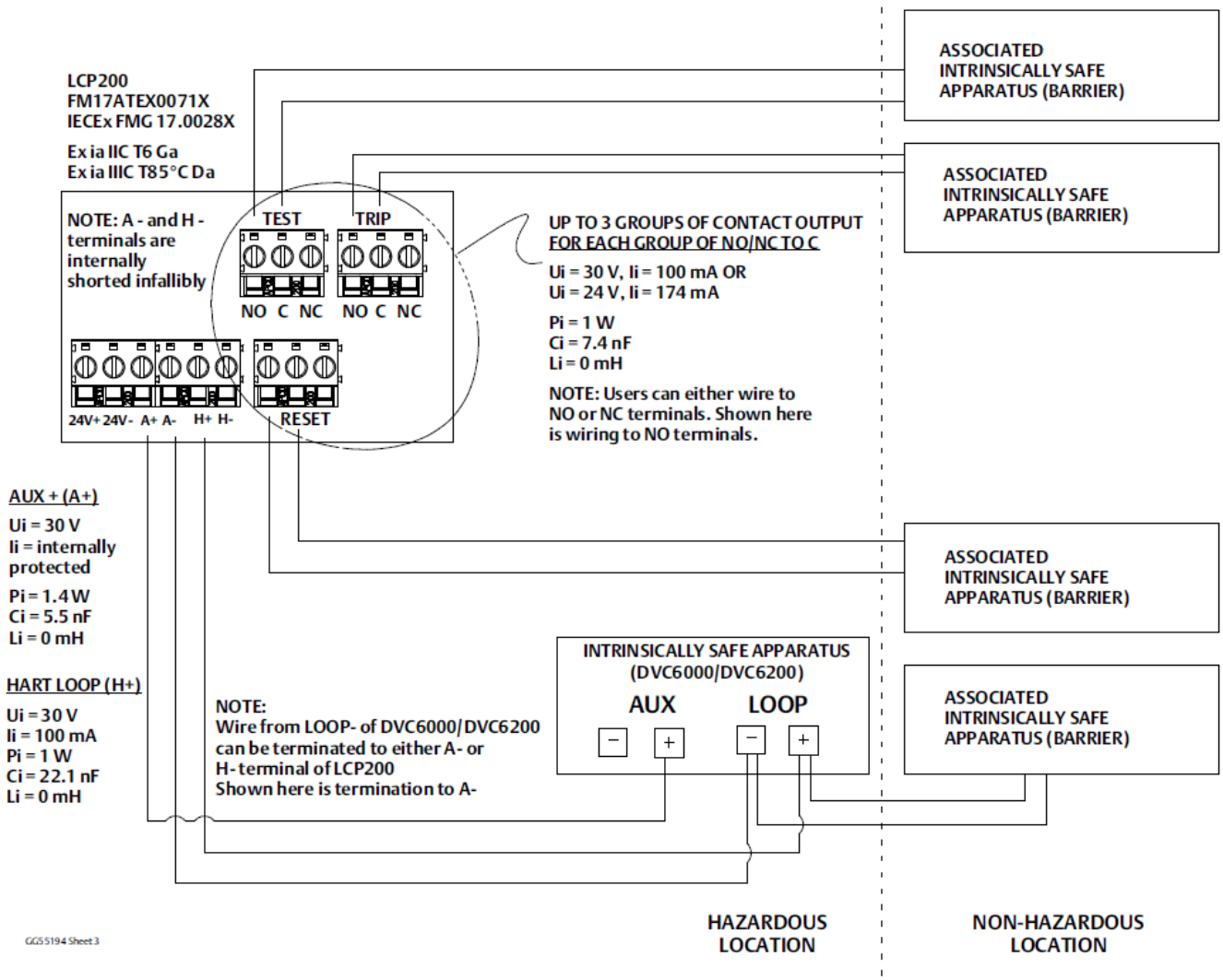

Figure 2. Intrinsically Safe, External Power 24V, ATEX/IECEx

- Wiring Configuration B (External 24V Only) From Barrier to Digital Valve Controller and LCP200 See Notes in figure 3 and Notes 1, 2, 4, and 5 in Figure 4.

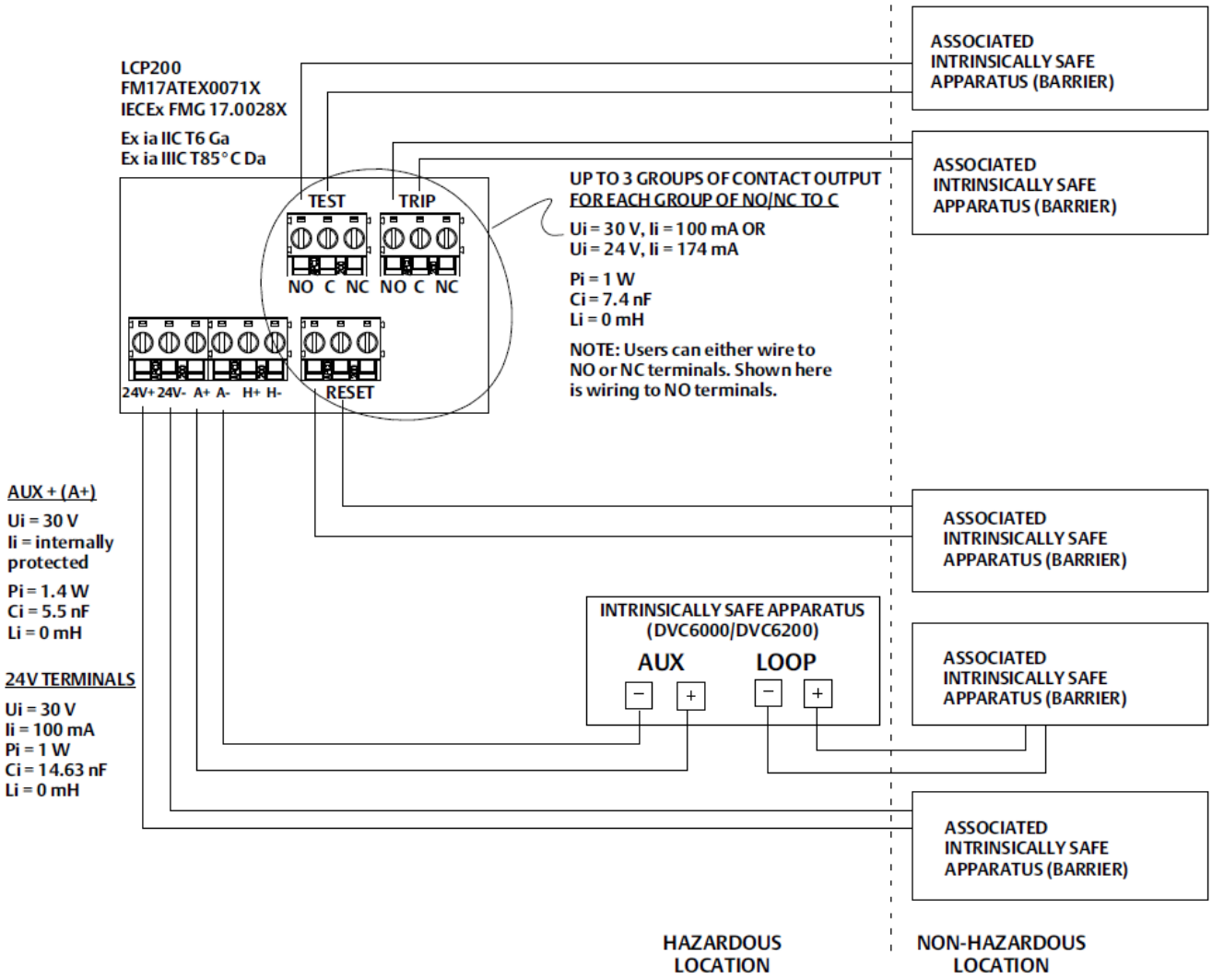

Figure 3. Notes

THE INTRINSIC SAFETY ENTITY CONCEPT ALLOWS THE INTERCONNECTION OF TWO APPROVED INTRINSICALLY SAFE DEVICES, WITH ENTITY PARAMETERS NOT SPECIFICALLY EXAMINED IN COMBINATION AS A SYSTEM WHEN: Uo $\leq$ Ui, Io $\leq$ Ii, Co $\geq$ Ci + Cable, Lo $\geq$ Li + Liable, Po $\leq$ Pi. DUST-TIGHT SEAL MUST BE USED WHEN INSTALLED IN DUST-PROTECTED ENVIRONMENTS. EACH CONNECTION BETWEEN THE LCP200 AND THE ASSOCIATED INTRINSICALLY SAFE APPARATUS SHALL BE SEPARATELY SHIELDED FROM THE OTHER CONNECTIONS. WHEN CALCULATING THE ENTITY COMBINATIONS THAT INCLUDE THE DVC6000/DVC6200, THE SUMMATION OF THE Ci + Cable AS WELL AS THE Li + Lcable FOR THE DVC6000/DVC6200 AND THE LCP200 SHALL BE USED. ASSOCIATED APPARATUS MANUFACTURERS' INSTALLATION DRAWINGS MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT.

Figure 4. Notes

Refer to Notes 1, 2, 3, 4, and 5 for Figure 1. Intrinsically Safe, LOOP Power, ATEX/IECEx Wiring Configuration A (LOOP-Powered only) From Barrier to Digital Valve Controller and LCP200 Refer to Notes 1, 2, 4, and 5 for Figure 2. Intrinsically Safe, External Power 24V, ATEX/IECEx Wiring Configuration B (External 24V Only) From Barrier to Digital Valve Controller and LCP200.

NOTES

1. FOR Ex ia APPLICATIONS THE FOLLOWING INFORMATION SHALL BE OBSERVED:
   - THE OVERALL GAS GROUP RATING OF THE INTRINSICALLY SAFE CIRCUIT WILL BE THE LOWEST GAS GROUPING OF ALL APPARATUS FORMING) THE CIRCUIT. FOR EXAMPLE, A CIRCUIT WITH BOTH IIB AND IIC APPARATUS WILL HAVE AN OVERALL CIRCUIT GAS GROUP RATING OF IIB.
   - THE LEVEL OF PROTECTION OF THE INTRINSICALLY SAFE CIRCUIT WILL BE THE LOWEST LEVEL OF ALL APPARATUS FORMING THE CIRCUIT. FOR EXAMPLE, A CIRCUIT WITH BOTH "ia" AND "ib" WILL HAVE AN OVERALL PROTECTION LEVEL OF "ib".
2. THE LOWEST PERMISSIBLE INPUT VOLTAGE (Ui), INPUT CURRENT (Ii), AND INPUT POWER (Pi) OF EACH APPARATUS SHALL BE GREATER THAN OR EQUAL TO THE OUTPUT VOLTAGE (Uo), OUTPUT CURRENT (Io), AND

OUTPUT POWER (Po) OF THE ASSOCIATED APPARATUS (BARRIER). THE SUM OF THE MAX UNPROTECTED CAPACITANCE (Ci) AND MAX UNPROTECTED INDUCTANCE (Li), INCLUDING THE INTERCONNECTED CABLING CAPACITANCE (Cable) AND CABLING INDUCTANCE (Liable), MUST BE LESS THAN THE ALLOWABLE CAPACITANCE (Ca) AND INDUCTANCE (La) DEFINED BY THE ASSOCIATED APPARATUS. IF THE ABOVE CRITERIA ARE MET THAN THE COMBINATION MAY BE CONNECTED.

3. INSTALLATION OF THE LCP200 IS SUCH THAT ITS LOOP TERMINALS WILL BE CONNECTED IN PARALLEL WITH OTHER INTRINSICALLY SAFE APPARATUS LOOP TERMINALS. THE WIRING COMING FROM THE BARRIER INTO THE HAZARDOUS LOCATION MAY BE TERMINATED AT EITHER THE INTRINSICALLY SAFE APPARATUS, OR AT THE LCP200.
4. MAXIMUM SAFE AREA VOLTAGE MUST NOT EXCEED 250 VRMS
5. THE ENCLOSURE CONTAINS NON-METALLIC ENCLOSURE PARTS. TO PREVENT THE RISK OF ELECTROSTATIC SPARKING, THE NON-METALLIC SURFACE SHALL BE CLEANED WITH A DAMP CLOTH.

Figure 5. LCP200 ATEX/IECEx Nameplate, Intrinsically Safe

Explosion-proof

Specific Conditions of Use

1. The enclosure contains non-metallic enclosure parts. To prevent the risk of electrostatic sparking, the non-metallic surface shall be cleaned with a damp cloth.
2. The flameproof joints of the equipment are not intended to be repaired. Consult the manufacturer if repair of the joints is necessary.
3. The electronics compartment rear cover is assembled and torqued at the factory and is not to be removed by the end user.
4. Consult the manufacturer for genuine replacement terminal cover fasteners. The fasteners are 316 stainless steel, bolt class A4-70, sized M6 x 1 mm x 15 mm.

Notes

Ambient temperature rating: -40°C ≤ Ta ≤ +65°C

1. Install unit in the area of low risk from mechanical hazards.
2. Install per drawing GG55194, shown in Figures 6, 7, and 8, as indicated on the nameplate.
3. Substitution of components may impair intrinsic safety.
    1. Refer to table 2 for approval information.

Table 2. Approval Information, ATEX/IECEx

Certificate	Certification Obtained	Loop Schematic	Temperature Code
ATEX IECEx	ATEX: FM21ATEX0024X IECEx: IECEx FMG 21.0016X Ex eb ia mb IIC T6 Gb Ex ta IIIC T85°C Da Ex db ia IIB T6 Gb Ex db ia IIC T6 Gb Install Per Drawing GG55194 (shown in figure 6, 7, and 8)	Per Drawing GG55194 (shown in figure 6, 7, and 8)	Gas: T6 Dust: T85 C

Figure 6. Explosion-proof, LOOP Power, ATEX/IECEx

- Wiring Configuration A (LOOP-Powered only) See Figure 8 Notes

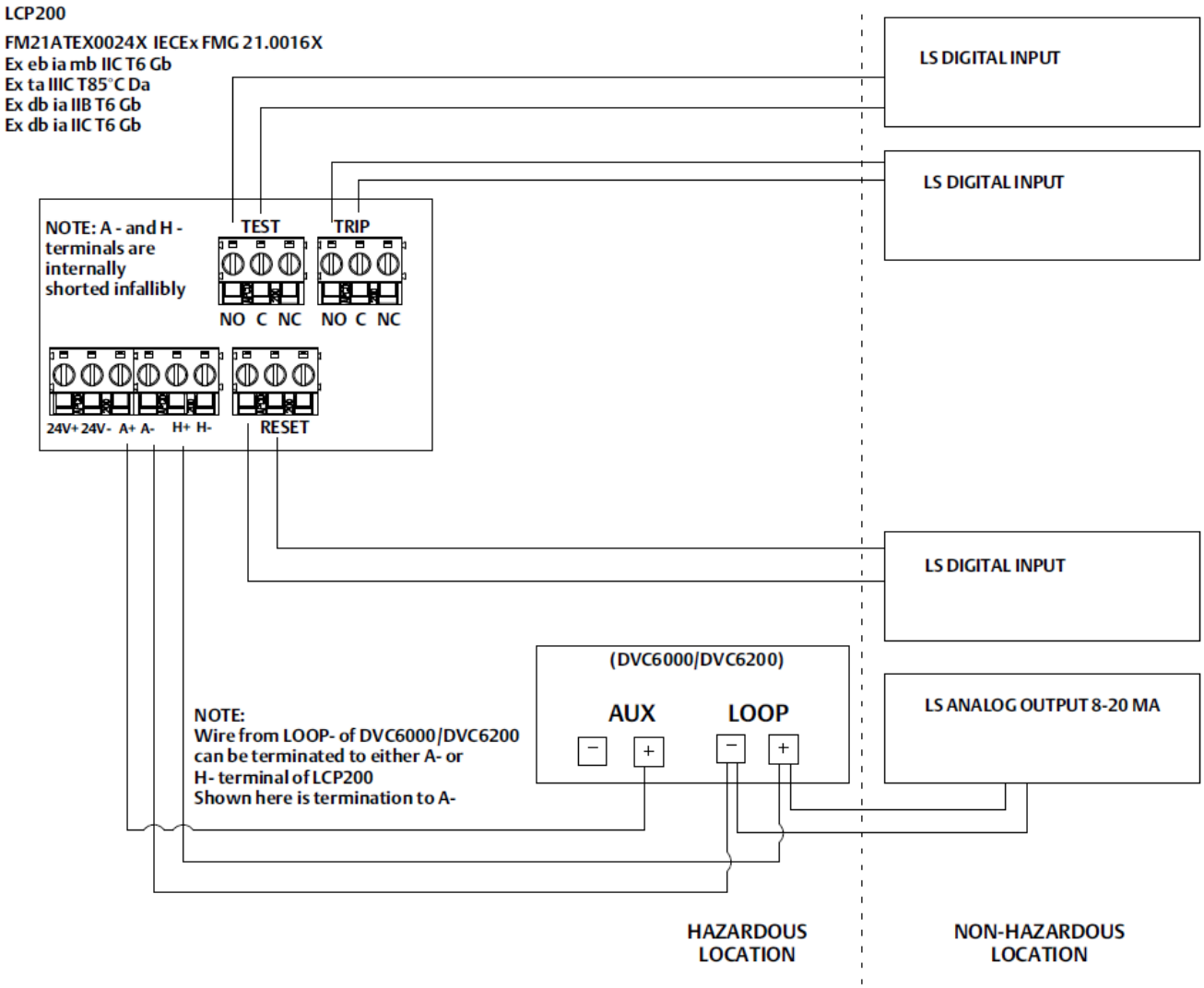

Figure 7. Explosion-proof, External Power 24V, ATEX/IECEx

- Wiring Configuration B (External 24V Only) See Figure 8 Notes

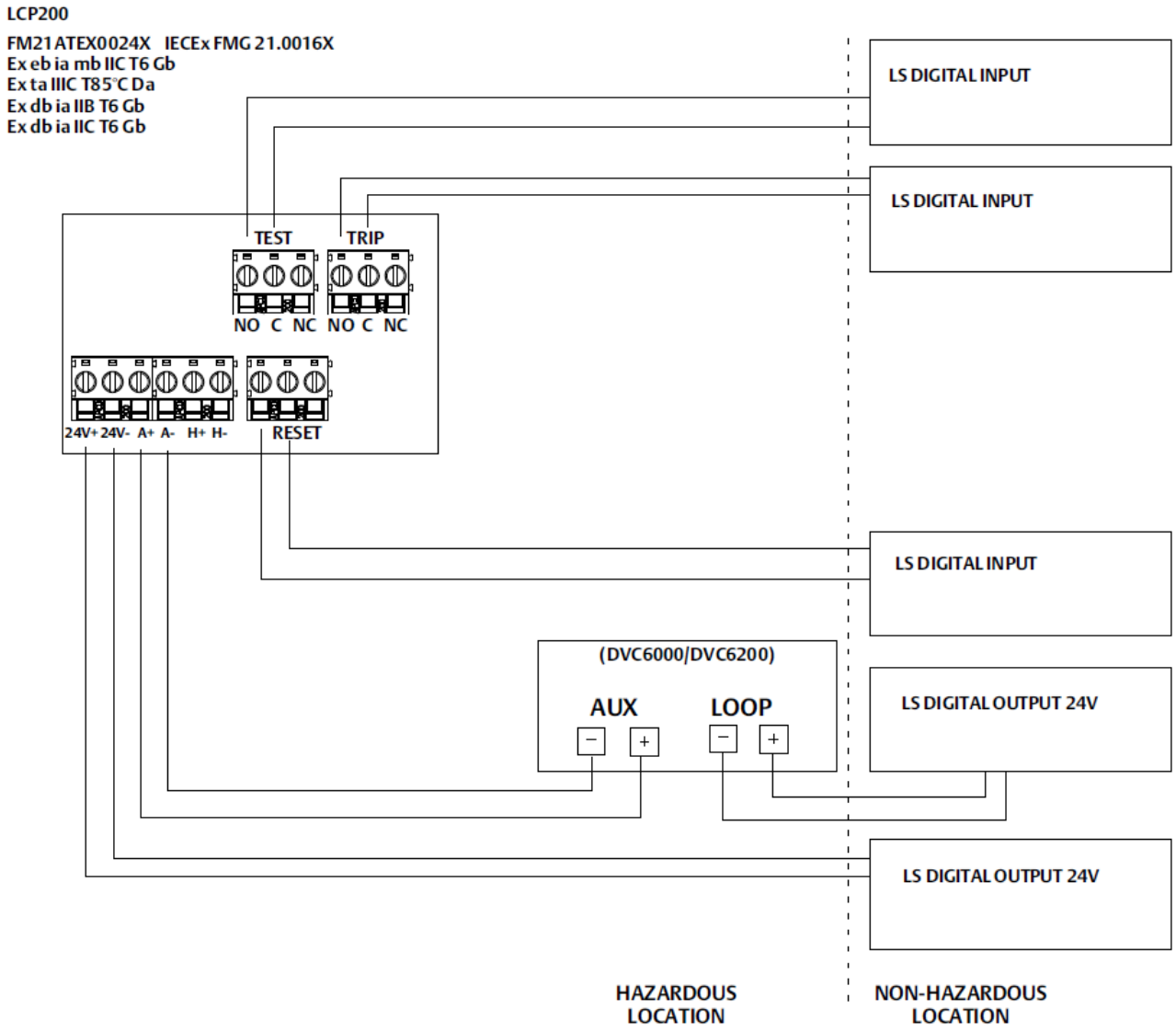

Figure 8. Notes

NOTES: ASSOCIATED APPARATUS MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT.

1. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRIC CODE, PART 1 OR NEC NFPA AND ANSI/ISA RP12.06.01.
2. THE ENCLOSURE CONTAINS NON-METALLIC ENCLOSURE PARTS TO PREVENT THE RISK OF ELECTROSTATIC SPARKING. THE NON-METALLIC SURFACE SHALL BE CLEANED WITH A DAMP CLOTH.
3. DUST-TIGHT CONDUIT SEAL MUST BE INSTALLED WITHIN 18" WHEN INSTALLED IN CLASS II AND CLASS III ENVIRONMENTS.
4. THE NAMEPLATE IS PROVIDED WITH BOXES THAT THE END USER/INSTALLER MUST CHECK OR ETCH FOR THE PROTECTION METHOD USED ACCORDING TO THE INSTALLATION.
5. **CAUTION:** USE FASTENERS WITH YIELD STRESS $\geq$ 450 MPa.
6. THE END USER SHALL CLOSE ANY UNUSED ENTRIES WITH SUITABLY CERTIFIED BLANKING ELEMENTS.
7. FOR ZONES APPLICATIONS, CONNECTION OF THE INTERNAL GROUND IS REQUIRED AS CONNECTION OF THE EXTERNAL GROUP IS OPTIONAL.

Figure 9. LCP200 ATEX/IECEx Nameplate, Explosion-proof, Group IIC

Figure 10. LCP200 ATEX/IECEx Nameplate, Explosion-proof, Group IIB

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Emerson Automation Solutions

- **Address:** Marshalltown, Iowa 50158 USA Sorocaba, 18087 Brazil Cernay, 68700 France Dubai, United Arab Emirates Singapore 128461 Singapore
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References

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Panel Meter

SOLIGHT WD220 LED Panel Instruction Manual

WD220 LED Panel Instruction Manual Instruction manual for LED light panel WD220 - WD222 Dear customer, thank you…

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KAYOBA 009541 Solar Panel SAFETY INSTRUCTIONS Do not use the product if it, or the power cord is…

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