












## Approvals Document - Class Divisions Rosemount™ 8700M Magnetic Flowmeter Platform



## Rosemount™ 8700M Magnetic Flowmeter Platform

Order Code	8732EM or 8712EM Transmitter Rating	8705M and 8711M/L Flowtube Rating	Region	Agency	Certification Number
-	Ordinary Location *	Ordinary Location *	USA, Canada, EU, CU***	CSA or EAC	70029398 or 80102916 (CSA)
K5**, KU**	Explosion-Proof Class I Div 1; DIP	Explosion-Proof with Intrinsically Safe Electrodes Class I Div 1; DIP	USA	CSA	80102916
N5, N6	Non-Incendive Class I Div 2; DIP	Non-Incendive with Intrinsically Safe Electrodes Class I Div 2; DIP	USA & Canada	CSA	80102916
K6**	Flameproof, Increased Safety, and Dust. Zone 1	Increased Safety with Intrinsically Safe Electrodes and Dust. Zone 1	USA & Canada	CSA	80102916
ND	ATEX Dust	ATEX Dust	EU	DEKRA	14ATEX0071 X
N1	ATEX Non-Sparking or Increased Safety ATEX Dust	ATEX Non-Sparking or Increased Safety with Intrinsically Safe Electrodes and ATEX Dust	EU	DEKRA	14ATEX0071 X
K1**	ATEX Flameproof with Increased Safety ATEX Dust	ATEX Increased Safety with Intrinsically Safe Electrodes and ATEX Dust	EU	DEKRA	14ATEX0071 X
NF	IECEX Dust	IECEX Dust	Global	DEKRA	IECEX DEK14.0031X
N7	IECEX Non-Sparking or Increased Safety IECEX Dust	IECEX Non-Sparking or Increased Safety with Intrinsically Safe Electrodes and IECEX Dust	Global	DEKRA	IECEX DEK14.0031X
K7**	IECEX Flameproof with Increased Safety IECEX Dust	IECEX Increased Safety with Intrinsically Safe Electrodes and IECEX Dust	Global	DEKRA	IECEX DEK14.0031X
N8	EAC Non-Sparking or Increased Safety EAC Dust	EAC Non-Sparking or Increased Safety with Intrinsically Safe Electrodes and EAC Dust	Russia ***	HAHIO ЦБЭ	HAHIO ЦБЭ EAЭC RU C-US.AA87.B.00543/20
K8**	EAC Flameproof with Increased Safety EAC Dust	EAC Increased Safety with Intrinsically Safe Electrodes EAC Dust	Russia ***	HAHIO ЦБЭ	HAHIO ЦБЭ EAЭC RU C-US.AA87.B.00543/20
N2	INMETRO Non-Sparking or Increased Safety INMETRO Dust	INMETRO Non-Sparking or Increased Safety with Intrinsically Safe Electrodes and INMETRO Dust	Brazil	DNV GL-INMETRO	DNV 18.0068 X
K2**	INMETRO Flameproof with Increased Safety INMETRO Dust	INMETRO Increased Safety with Intrinsically Safe Electrodes INMETRO Dust	Brazil	DNV GL - INMETRO	DNV 18.0068 X
N9**	KTL Non-Sparking KTL Dust	KTL Non-Sparking with Intrinsically Safe Electrodes and KTL Dust	Korea	KTL	****
K9**	KTL Flameproof with Increased Safety KTL Dust	KTL Increased Safety with Intrinsically Safe Electrodes and KTL Dust	Korea	KTL	Multiple KTL Certificate Numbers
N3	NEPSI Non-Sparking NEPSI Dust	NEPSI Non-Sparking with Intrinsically Safe Electrodes and NEPSI Dust	China	NEPSI	GYJ20.1130X
K3**	NEPSI Flameproof with Increased Safety NEPSI Dust	NEPSI Increased Safety with Intrinsically Safe Electrodes and NEPSI Dust	China	NEPSI	GYJ20.1130X
KW	PESO Flameproof with Increased Safety	PESO Increased Safety with Intrinsically Safe Electrodes	India	PESO	A/P/HQ/MH/104/6447 (P473913)
NW	PESO Non-Sparking or Increased Safety	PESO Non-Sparking or Increased Safety with Intrinsically Safe Electrodes	India	PESO	A/P/HQ/MH/104/6447 (P473913)
<p>* Complies with only the local country product safety, electromagnetic, pressure and other applicable regulations. Cannot be used in a classified or zoned hazardous location environment. No ordering code required.</p>					
<p>** Not applicable to 8712EM.   *** Customs Union (Russia, Belarus and Kazakhstan)   **** Planned submittal or in process with agency.</p>					

## Approval Markings and Logos

Symbol	Marking or Symbol Name	Region	Meaning of Marking or Symbol
	CE	European Union	Compliance with all applicable European Union Directives.
	ATEX	European Union	Compliance with Equipment and Protective systems intended for use in Potentially Explosive Atmospheres directive (ATEX) (2014/34/EU)
	C-tick	Australia	Compliance with Australian applicable electromagnetic compatibility standards
	CSA	US = United States C = Canada	Indicates that the product was tested and has met the applicable certification requirements for the noted countries.
	Eurasian Conformity (EAC)	Eurasian Customs Union (Russia, Belarus and Kazakhstan)	Compliance with all applicable technical regulations of the EAC Customs Union
	EAC Hazardous Location	Eurasian Customs Union (Russia, Belarus and Kazakhstan)	Compliance with Technical regulation, (TR CU 012/2011) – The safety of equipment for use in explosive environments.
	Russian Pattern Approval Certificate	Russia	Indicates compliance of measuring instruments with the approved metrological and technical characteristics.
	DNV GL - INMETRO	Brazil	Compliance with all applicable technical regulations of Brazil.
	NEPSI	China	Compliance with all applicable technical regulations of China.
	KTL	Korea	Compliance with all applicable technical regulations of Korea.
	NTEP	North America	National Conference on Weights and Measures – National Type Evaluation Program (NTEP).

Product designated for Ordinary Location may be marked with CE, C-tick, CSA and/or EAC logos.

### European Directive Information

The most recent revision of the EU Declaration of Conformity can be found at [www.emerson.com](http://www.emerson.com).

## Certifications

### Canadian Standards Association (CSA)

#### Ordinary Location Certification

The transmitter and flowtube have been examined and tested to determine that the design meets basic electrical, mechanical, and fire protection requirements by CSA, a nationally recognized testing laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

**CLASS 2258 02 - PROCESS CONTROL EQUIPMENT** - For Hazardous Locations – To Canadian Requirements.

<b>N6 &amp; N5</b>	<b>Class I, Groups A, B, C and D (Intrinsically Safe Output and Electrode circuit)</b>
<b>N6 &amp; N5</b>	<b>Class I, Division 2, Groups A, B, C and D (Non-Incendive)</b>
<b>N6 &amp; N5</b>	<b>Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)</b>
<b>K6</b>	<b>Class I, Zone 1 – Flame Proof, Increased Safety with Intrinsic safety</b>
<b>K6</b>	<b>Class II, Zone 21, - Protection by Enclosure</b>

**Magnetic Flow Meter** – Model 8732EM Transmitter with integral or remote mount or Model 8712EM Transmitter remote mount to Model 8705M or Model 8711M/L Magnetic Flow Tubes. Enclosure Type 4X and IP66 Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation). Equipment provides IS and NON-IS connections in accordance with drawing 08732-2061 or 08732-2066.

**CLASS 2258 82 - PROCESS CONTROL EQUIPMENT** - For Hazardous Locations –To US Requirements

<b>KU, K5</b>	<b>Class I, Division 1, Groups C and D (Explosion Proof)</b>
<b>N6, N5, KU, K5</b>	<b>Class I, Groups A, B, C and D (Intrinsically Safe Output and Electrode circuit)</b>
<b>N6, N5, KU, K5</b>	<b>Class I, Division 2, Groups A, B, C and D (Non-Incendive)</b>
<b>N6, N5, KU, K5</b>	<b>Class II, Division 1, Groups E, F and G; Class III (Dust Ignition Proof)</b>
<b>K6</b>	<b>Class I, Zone 1 – Flame Proof, Increased Safety with Intrinsic safety</b>
<b>K6</b>	<b>Class II, Zone 21, - Protection by Enclosure</b>

**Magnetic Flow Meter** – Model 8732EM Transmitter with integral or remote mount or Model 8712EM Transmitter remote mount to Model 8705M or Model 8711M/L Magnetic Flow Tubes. Enclosure Type 4X and IP66 Rated.

Temperature Class, Maximum Surface Temperatures, and Ambient temperature ranges are defined for Integral and Remote mount configurations on Rosemount Drawings 08732-2061 (Division Installation) or 08732-2066 (Zone Installation). Equipment provides IS and NON-IS connections in accordance with drawing 08732-2061 or 08732-2066.

#### Special Conditions of Safe Use for Class/Division: 8732EM

1. For use with the appropriate 8705M and 8711M/L Flow tubes only.
2. When the 8732EM transmitter is integrally mounted to 8705M or 8711M/L Flow Tubes, the ambient temperature ranges marked on each product need to be taken into consideration before installation. The Ambient temperature range for 8732EM transmitter is  $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$  and the ambient temperature range for 8705M or 8711M/L Flow Tubes is  $-29^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ . Therefore, the  $-29^{\circ}\text{C}$  rating of the flow tubes will limit the overall cold temperature range of the complete system unless other approved temperature control methods are employed.
3. When the 8732EM transmitter is integrally mounted to 8705W or 8711R/U flow tubes, the ambient temperature ranges marked on each product need to be taken into consideration before installation. The ambient temperature for 8732EM transmitter is  $-40^{\circ}\text{C}$  to  $60^{\circ}\text{C}$  and the ambient temperature range for 8705W or 8711R/U flowtube is  $-50^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ . Therefore, the  $-40^{\circ}\text{C}$  rating of the transmitter will limit the overall cold temperature range of the complete system unless other approved temperature control methods are employed.
4. The intrinsically safe 4-20 mA and pulse output cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.

#### Special Conditions for Safe Use (X) for Class Zone: 8732EM

1. Warning – Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
2. When “Special Paint Systems” are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
3. Terminals 1,2,3,4, for data communication, cannot withstand the 500 V isolation test between Signal and ground, due to integral transient protection. This must be taken into account upon Installation.

4. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
5. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
6. The flow tube and transmitter are not allowed to be thermally insulated.
7. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
8. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
9. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.

**Special Conditions of Safe Use for Class/Division: 8705M / 8711M/L**

1. The flow tube is IP68 only when mounted remotely from the transmitter.
2. Options V1, V2, or V3 are not Type 4X Corrosion Resistant.
3. Options F0234, V1, V2, or V3 may be subject to electrostatic discharge. To avoid electrostatic charge build-up, do not rub the flowmeter with a dry cloth or clean with solvents.

**Special Conditions for Safe Use (X) for Class Zone: 8705M / 8711M/L**

1. Warning – Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
2. When “Special Paint Systems” are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
3. Terminals 1,2,3,4, for data communication, cannot withstand the 500 V isolation test between Signal and ground, due to integral transient protection. This must be taken into account upon Installation.
4. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
5. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
6. The flow tube and transmitter are not allowed to be thermally insulated.
7. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
8. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
9. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.

**Special Conditions of Safe Use for Class/Division: 8712EM**

1. For use with the appropriate 8705 and 8711 Flow tubes only.
2. The intrinsically safe 4-20 mA and pulse output cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.

**Special Conditions for Safe Use (X) for Class Zone: 8712EM**

1. Warning – Ignition hazard, wetted parts may contain Titanium and Zirconium. For processes requiring EPL Ga and Gb rated equipment, suitability for use must be determined by the end user to eliminate ignition hazard due to impact or friction.
2. When “Special Paint Systems” are applied, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
3. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
4. In order to maintain the ingress protection level on the M3 and M4 electrode housing, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
5. The flow tube and transmitter are not allowed to be thermally insulated.
6. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
7. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
8. The Magnetic Flow Meter Tube contains nonconductive liners over the grounded tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.
9. When utilizing the keypad of Magnetic Flow Transmitter Model 8712EM, instruction for safe use regarding potential electrostatic charging hazard have to be followed.
10. Terminals for the output signals of the magnetic Flow Transmitters, cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection. This must be taken into account upon Installation.

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1. Equipment Markings – See section VI in the tables on the following pages
  - a. EU-Type Examination Certificate (ATEX): DEKRA 14ATEX0071\_X
  - b. Certificate of Conformity (IEC Ex): IECEX DEK 14.0031X
2. Required Documentation:
  - a. 08732-2060 Installation Drawing Model 8732EM, 8712EM, 8705M, 8711-M/L ATEX/IECEX Hazardous (Ex) Locations
3. Referenced Documentation:
  - a. 00825-0X00-4444.pdf, Transmitter Quick Installation Guide (Where X = Communications Protocol Code)
  - b. 00825-0100-4727.pdf, Sensor Quick Installation Guide
4. The Required and Referenced Documents listed above address the following items:
  - a. Instructions for safety i.e.
    - i. Putting into service
    - ii. Use
    - iii. Assembling and dismantling
    - iv. Maintenance, overhaul and repair
    - v. Installation
    - vi. Adjustment
  - b. Where necessary, training instructions
  - c. Details which allow a decision to be made as to whether the equipment can be used safely in the intended area under the expected operating conditions
  - d. Electrical parameters, maximum surface temperatures and other limit values
    - i. Electrical –
      1. See document 08732-2060

<b>Rosemount 8732EM and 8712EM Flow Transmitter</b>	
<i>Power input</i>	90 - 250VAC, 0.45A, 40VA 12 - 30VDC, 0.25A, 3W 12 - 42VDC, 1.2A, 15W
<i>Pulsed circuit</i>	<i>Internally powered (Active): Outputs up to 12VDC, 12.1mA, 73mW</i> <i>Externally powered (Passive): Input up to 28VDC, 100mA, 1W</i>
<i>4-20mA output circuit</i>	<i>Internally Powered (Active): Outputs up to 25mA, 24VDC, 600mW</i> <i>Externally Powered (Passive): Input up to 25mA, 30VDC, 750mW</i>
<i>MODBUS</i>	<i>Internally Powered (Active): Outputs up to 100mA, 3.3VDC, 100mW</i>
<i>Fieldbus</i>	<i>Externally Powered (Passive): 9-32VDC,</i>
<i>Profibus</i>	<i>Externally Powered (Passive): 9-32VDC,</i>
<i>Um</i>	250V
<i>Coil excitation output</i>	500mA, 40V max, 9W max
<b>Rosemount 8705-M and 8711-M/L Flowtube<sup>(1)</sup></b>	
<i>Coil excitation input</i>	500mA, 40V max, 20W max
<i>Electrode circuit</i>	5V, 200uA, 1mW

(1) Provided by the transmitter

- e. Special Conditions for Safe Use (X): 8732EM
  - i. Models marked with ESD warning label, do not rub surface with a dry cloth or clean with solvents to avoid electrostatic charge build-up.
  - ii. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
  - iii. Terminals for the output signals of the Magnetic Flow Transmitters, cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.
  - iv. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.

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- v. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
  
- f. Special Conditions for Safe Use (X): 8712EM
  - i. Models marked with ESD warning label, do not rub surface with a dry cloth or clean with solvents to avoid electrostatic charge build-up.
  - ii. Conduit entries must be installed to maintain the enclosure ingress rating of IP66 or IP69K.
  - iii. When utilizing the keypad of Magnetic Flow Transmitter Model 8712EM, instructions for safe use regarding potential electrostatic charging hazard have to be followed.
  - iv. Terminals for the output signals of the Magnetic Flow Transmitters, cannot withstand the 500 V isolation test between signal and ground, due to integral transient protection up to a voltage of 250 Vac. This must be taken into account upon installation.
  
- g. Special Conditions for Safe Use (X): 8705M and 8711M/L
  - i. The Magnetic Flow Tubes wetted parts may contain Titanium and Zirconium. It is the responsibility of the end user to eliminate ignition hazards due to impact or friction for processes that require EPL Ga or Gb.
  - ii. The Magnetic Flow Tube contains non conductive liners covering the grounded flow tube. For process requiring EPL Ga, precautions shall be taken to avoid the liner being charged by the flow of nonconductive media.
  - iii. In order to maintain the ingress protection level on the M3 and M4 electrode housing of the Magnetic Flow Tubes, the copper crush washer that seals the electrode access plug shall be replaced when the plug is reinstalled. The copper crush washer is one time use only.
  - iv. The property class of the special fasteners which attach the Magnetic Flow Tube or Transmitter Remote Junction Box to the Magnetic Transmitter is A2-70 or A4-70 SST.
  - v. Models marked with ESD warning label, do not rub surface with a dry cloth or clean with solvents to avoid electrostatic charge build-up.
  - vi. For information on the dimensions of the flameproof joints the manufacturer shall be contacted.
  - vii. Conduit entries must be installed to maintain the enclosure ingress rating of IP66.
  
- h. Where necessary, the essential characteristics of tools which may be fitted to the equipment.
  - i. No proprietary tools required.
  
- i. List of the standards, including the issue date, with which the equipment is declared to comply:
  - i. ATEX - EN IEC 60079-0: 2018, EN 60079-1: 2014, EN 60079-7: 2015+A1:2018 (Ed 5.1), EN 60079-11: 2012, EN 60079-15: 2010, EN 60079-26: 2015, EN 60079-31: 2014
  - ii. IECEx - IEC 60079-0: 2017, IEC 60079-1: 2014, IEC 60079-7: 2015+A1:2017 (Ed 5.1), IEC 60079-11: 2011, IEC 60079-15: 2017, IEC 60079-26: 2014, IEC 60079-31: 2013
  
- j. Supply wire requirements; Use 10 - 18 AWG wire rated for the proper temperature of the application. For wire 10 - 14 AWG use lugs or other appropriate connectors. For connections in ambient temperatures above 122°F (50 °C), use a wire rated for 194 °F (90 °C).
  
- k. Contact address; Emerson -Rosemount, Micro Motion Inc  
12001 Technology Drive  
Eden Prairie  
MN 55344, United States of America

# Rosemount 8700M Magnetic Flowmeter Platform IECEX & ATEX Approval Document

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## Nomenclature Magnetic Flow Transmitter Model 8732EM and electrical data

8732EM    R    1    B    2    K1    ...    M4    RT50    ...    SH    ...    V1    ...    F090...

I        II    III    IV    V    VI        VII    VIII            IX                    X

Designation	Explanation	Value	Explanation
I	Model	8732EM	Magnetic Flow Transmitter – Field Mount
II	Transmitter Mount	R T	Remote Mount Integral Mount
III	Transmitter Power Supply	1 2 3	AC (90 - 250 Vac, 50 / 60 Hz), not for Ex nA DC (12 - 42 Vdc) DC (12 – 30 Vdc)
IV	Outputs	A B F M P	Non-I.S.: 4 - 20 mA with digital HART Protocol & Scalable Pulse Output I.S.: 4 - 20 mA Intrinsically Safe Output with digital HART Protocol & Intrinsically Safe Scalable Pulse Output I.S.: Foundation Fieldbus / FISCO Intrinsically Safe & Intrinsically Safe Scalable Pulse Output Non-I.S.: Modbus RS-485 I.S.: Profibus & Intrinsically Safe Scalable Pulse Output
V	Conduit entries	1 or 4 2 or 5	½-14 NPT female CM20, M20 female
VI	Safety Approval Option	K1 ATEX  K7 IECEX  K9 IECEX  N1 ATEX  N7 IECEX	<p>⊗ II 2 (1) G    Ex db eb [ia Ga] IIC T6...T3 Gb ⊗ II 2 D        Ex tb IIIC T80 °C...T200 °C Db</p> <p>⊗ II 2 (1) G    Ex db eb [ia Ga] IIC T6...T3 Gb ⊗ II 2 (1) D    Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>⊗ II 2 (1) G    Ex db [ia Ga] IIC T6...T3 Gb * ⊗ II 2 D        Ex tb IIIC T80 °C...T200 °C Db</p> <p>⊗ II 2 (1) G    Ex db [ia Ga] IIC T6...T3 Gb * ⊗ II 2 (1) D    Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>Ex db eb [ia Ga] IIC T6...T3 Gb Ex tb IIIC T80 °C...T200 °C Db</p> <p>Ex db eb [ia Ga] IIC T6...T3 Gb Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>Ex db [ia Ga] IIC T6...T3 Gb * Ex tb IIIC T80 °C...T200 °C Db</p> <p>Ex db [ia Ga] IIC T6...T3 Gb * Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>Ex db eb [ia Ga] IIC T6...T3 Gb Ex tb IIIC T80 °C...T200 °C Db</p> <p>Ex db eb [ia Ga] IIC T6...T3 Gb Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>⊗ II 3 (1) G    Ex nA [ia Ga] IIC T4...T3 Gc *** ⊗ II 3 (1) G    Ex ec [ia Ga] IIC T4...T3 Gc *** ⊗ II 2 D        Ex tb IIIC T80 °C...T200 °C Db</p> <p>⊗ II 3 (1) G    Ex nA [ia Ga] IIC T4...T3 Gc *** ⊗ II 3 (1) G    Ex ec [ia Ga] IIC T4...T3 Gc *** ⊗ II 2 (1) D    Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>Ex nA [ia Ga] IIC T4...T3 Gc *** Ex ec [ia Ga] IIC T4...T3 Gc *** Ex tb IIIC T80 °C...T200 °C Db</p> <p>Ex nA [ia Ga] IIC T4...T3 Gc *** Ex ec [ia Ga] IIC T4...T3 Gc *** Ex tb [ia Da] IIIC T80 °C...T200 °C Db **</p> <p>NOTE:*    Integral Mount (see II) option only       **    Intrinsically Safe Output (see IV) options B, F, or P       ***    DC Transmitter Power Supply only (12 - 42 Vdc)</p>



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## Nomenclature Magnetic Flow Transmitter Model 8732EM and electrical data - continued

8732EM    R    1    B    2    K1    ...    M4    RT50    ...    SH    ...    V1    ...    F090...  
 I        II    III    IV    V    VI        VII    VIII            IX                            X

Designation	Explanation	Value	Explanation
VI continued	Safety Approval Option	ND ATEX	Ⓜ II 2 D      Ex tb IIIC T80 °C...T200 °C Db Ⓜ II 2 (1) D    Ex tb [ia Da] IIIC T80 °C...T200 °C Db **
		NF IECEx	Ex tb IIIC T80 °C...T200 °C Db Ex tb [ia Da] IIIC T80 °C...T200 °C Db**
			NOTE: * Integral Mount (see II) option only ** Intrinsically Safe Output (see IV) options B, F, or P *** DC Transmitter Power Supply only (12 - 42 Vdc)
VII	Display Option	M4 M5	LOI Display
VIII	Remote Cable Option	RTxx ****	Standard Temperature Component
		RHxx ****	Extended Temperature Component
			NOTE: **** Length = xx x 10 ft, max. 500 ft
IX	Options	--	Aluminum, standard paint
		SH	Stainless Steel Electronics Housing
		Vx	Special Paint Systems *****
X	Specials	F090x	Special Paint Systems *****
			NOTE: ***** Subject to special conditions for safe use.

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## Nomenclature Magnetic Flow Transmitter Model 8712EM and electrical data

8712EM   R   2   B   2   N7   ...   M4   RT50   ...   Vx   ...   F090...  
 I        II   III   IV   V   VI        VII   VIII        IX        X

Designation	Explanation	Value	Explanation
I	Model	8712EM	Magnetic Flow Transmitter – Field Mount
II	Transmitter Mount	R	Remote Mount
III	Transmitter Power Supply	1 2 3	AC (90 - 250 Vac, 50 / 60 Hz) DC (12 - 42 Vdc) DC (12 – 30 Vdc)
IV	Outputs	A B F M P	Non-I.S.: 4 - 20 mA with digital HART Protocol & Scalable Pulse Output I.S.: 4 - 20 mA Intrinsically Safe Output with digital HART Protocol & Intrinsically Safe Scalable Pulse Output I.S.: Foundation Fieldbus / FISCO Intrinsically Safe & Intrinsically Safe Scalable Pulse Output Non-I.S.: Modbus RS-485 I.S.: Profibus & Intrinsically Safe Scalable Pulse Output
V	Conduit entries	1 2	½-14 NPT female CM20, M20 female
VI	Safety Approval Option	N1 ATEX N7 IECEX N9 IECEX ND ATEX NF IECEX	Ⓢ II 3 (1) G Ex nA ic [ja Ga] IIC T4 Gc ** Ⓢ II 3 (1) G Ex ec ic [ja Ga] IIC T4 Gc ** Ⓢ II 2 D Ex tb IIIC T80 °C Db Ⓢ II 3 (1) G Ex nA ic [ja Ga] IIC T4 Gc ** Ⓢ II 3 (1) G Ex ec ic [ja Ga] IIC T4 Gc ** Ⓢ II 2 (1) D Ex tb [ja Da] IIIC T80 °C Db* Ex nA ic [ja Ga] IIC T4 Gc ** Ex ec ic [ja Ga] IIC T4 Gc ** Ex tb IIIC T80 °C Db Ex nA ic [ja Ga] IIC T4 Gc ** Ex ec ic [ja Ga] IIC T4 Gc ** Ex tb IIIC T80 °C Db Ex nA ic [ja Ga] IIC T4 Gc ** Ex ec ic [ja Ga] IIC T4 Gc ** Ex tb IIIC T80 °C Db Ⓢ II 2 D Ex tb IIIC T80 °C Db Ⓢ II 2 (1) D Ex tb [ja Da] IIIC T80 °C Db* Ex tb IIIC T80 °C Db Ex tb [ja Da] IIIC T80 °C Db* NOTE:* Intrinsically Safe Output (see IV) options B, F, or P ** DC Transmitter Power Supply only (12 - 42 Vdc)
VII	Display Option	-- M4 M5	Without LOI and keypad LOI + keypad Display
VIII	Remote Cable Option	Rxx	Standard Temperature Component NOTE: *** Length = xx x 10 ft, max. 500 ft
IX	Options	-- Vx	Aluminum, standard paint Special Paint Systems ****
X	Specials	F090x	Special Paint Systems ****
			NOTE: **** Subject to special conditions for safe use.

# Rosemount 8700M Magnetic Flowmeter Platform IECEX & ATEX Approval Document

8 September 2020  
08732-AP02, Rev AH

## Nomenclature Magnetic Flow Tube Model 8705-M and electrical data

8705 ... S A 005 ... M4 K1 ... G1 L1 B3 ... J1 SC ... V1 ... SH ... F090x  
 I II III IV V VI VII VIII IX X XI XII XIII XIV

Designation	Explanation	Value	Explanation
I	Model	8705	Magnetic Flow Tube
II	Electrode Material	Custom	See special conditions for safe use
III	Electrode Types	Custom	Seal of electrodes comply with IEC 61010-1.
IV	Line Size	005 to 360	1/2" NPS (15 mm) to 36" NPS (900 mm)
V	Electrode Housing *	M0 M1 M2 M3 M4	Category 2 G or 3 G, EPL Gb or Gc Category 2 G or 3 G, EPL Gb or Gc Category 1/2 G or 1/3 G, EPL Ga/Gb or Ga/Gc Category 1/2 G or 1/3 G, EPL Ga/Gb or Ga/Gc Category 1/2 G or 1/3 G, EPL Ga/Gb or Ga/Gc
VI	Safety Approvals	K1 ATEX	Ex eb ia IIC T5...T3 Ga/Gb *
			Ex tb IIIC T80 °C...T200 °C Db
			Ex eb ib IIC T5...T3 Gb **
			Ex tb IIIC T80 °C...T200 °C Db
		K7 IECEX	Ex eb ia IIC T5...T3 Ga/Gb *
			Ex eb ib IIC T5...T3 Gb **
			Ex tb IIIC T80 °C...T200 °C Db
		K9 IECEX	Ex eb ia IIC T5...T3 Ga/Gb *
			Ex eb ib IIC T5...T3 Gb **
			Ex tb IIIC T80 °C...T200 °C Db
N1 ATEX	Ex nA ia IIC T5...T3 Ga/Gc * line sizes 8"- 36"		
	Ex ec ia IIC T5...T3 Ga/Gc * line sizes 8"- 36"		
	Ex tb IIIC T80 °C...T200 °C Db		
	Ex nA ic IIC T5...T3 Gc * line sizes 0.5" - 6" / **		
	Ex ec ic IIC T5...T3 Gc * line sizes 0.5" - 6" / **		
	Ex tb IIIC T80 °C...T200 °C Db		
N7 IECEX	Ex nA ia IIC T5...T3 Ga/Gc * line sizes 8"- 36"		
	Ex ec ia IIC T5...T3 Ga/Gc * line sizes 8"- 36"		
	Ex tb IIIC T80 °C...T200 °C Db		
	Ex nA ic IIC T5...T3 Gc * line sizes 0.5" - 6" / **		
ND ATEX	Ex ec ic IIC T5...T3 Gc * line sizes 0.5" - 6" / **		
	Ex tb IIIC T80 °C...T200 °C Db		
NF IECEX	Ex tb IIIC T80 °C...T200 °C Db		
	NOTE:* Electrode Housing M2, M3 and M4 only ** Electrode Housing M0 and M1 only		
VII	Grounding rings material	Custom	See special conditions for safe use
VIII	Lining protector material	Custom	See special conditions for safe use
IX	Mounting Configuration	B3	Integral Mount with Model 8732EM
X	Optional conduit entries	J1	CM20, M20 female
XI	Remote Junction Box (RJB) material	-- SJ	Aluminum, standard paint 316 Stainless steel
XII	Special paint options	Vx	Special Paint Systems ***
XIII	Wrapper (housing) material	-- SH	Carbon Steel (w. Aluminum RJB), standard paint 316 Stainless Steel (w. Stainless Steel RJB)
XIV	Specials	F090x	Special Paint Systems *** NOTE: *** Subject to special conditions for safe use.

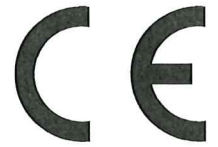
**Rosemount 8700M Magnetic Flowmeter Platform  
IECEX & ATEX Approval Document**

8 September 2020  
08732-AP02, Rev AH

**Nomenclature Magnetic Flow Tube Model 8711-M/L and electrical data**

8711 ... S A 15F L ... K1 ... G1 ... J1 SC ... V1 ... F090x  
I II III IV V VI VII VIII IX X XI

Designation	Explanation	Value	Explanation
I	Model	8711	Magnetic Flow Tube
II	Electrode Material	Custom	See special conditions for safe use
III	Electrode Types	Custom	Seal of electrodes comply with IEC 61010-1.
IV	Line Size	015 to 080	1½" NPS (40 mm) to 8" NPS (900 mm)
V	Mounting Configuration	L M	Remote Mount from Transmitter Integral Mount with Transmitter
VI	Safety Approvals	K1 ATEX	⊕ II 2 G Ex eb ib IIC T5...T3 Gb ⊕ II 2 D Ex tb IIIC T80 °C...T200 °C Db
		K7 IECEx	Ex eb ib IIC T5...T3 Gb Ex tb IIIC T80 °C...T200 °C Db
		K9 IECEx	Ex eb ib IIC T5...T3 Gb Ex tb IIIC T80 °C...T200 °C Db
		N1 ATEX	⊕ II 3 G Ex nA ic IIC T5...T3 Gc ⊕ II 3 G Ex ec ic IIC T5...T3 Gc ⊕ II 2 D Ex tb IIIC T80 °C...T200 °C Db
		N7 IECEx	Ex nA ic IIC T5...T3 Gc Ex ec ic IIC T5...T3 Gc Ex tb IIIC T80 °C...T200 °C Db
		ND ATEX	⊕ II 2 D Ex tb IIIC T80 °C...T200 °C Db
		NF IECEx	Ex tb IIIC T80 °C...T200 °C Db
VII	Grounding rings material	Custom	See special conditions for safe use
VIII	Optional conduit entries	J1	CM20, M20 female
IX	Remote Junction Box material	-- SJ	Aluminum, standard paint * 316 Stainless steel * NOTE: *Flow Tube with Carbon Steel wrapper (housing)
		Vx	Special Paint Systems **
XI	Specials	F090x	Special Paint Systems ** NOTE: ** Subject to special conditions for safe use.



**EU Declaration of Conformity No: RFD 1094 Rev. N**

We,

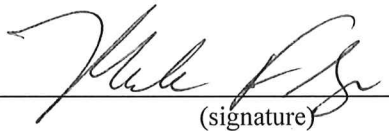
**Emerson – Rosemount, Micro Motion Inc.  
12001 Technology Drive  
Eden Prairie, MN 55344  
USA**

declare under our sole responsibility that the product(s),

**Rosemount 8700M  
Magnetic Flowmeter Platform  
Transmitters: 8732EM and 8712EM  
Flow Tubes (Sensors): 8705M, 8711M/L and 8721**

to which this declaration relates, is in conformity with the provisions of the European Union Legislation, including the latest amendments, as shown in the attached schedule.

Assumption of conformity is based on the application of harmonized or applicable technical standards and, when applicable or required, a European Union Legislation notified body certification, as shown in the attached schedule.

  
(signature)

**22 June 2022**

(date of issue)

**Mark Fleigle**

(name - printed)

**Vice President - Technology and Product Development**

(function name - printed)

**ROSEMOUNT™**





**Schedule**  
**EU Declaration of Conformity No. RFD 1094 Rev. N**

**EMC Directive 2014/30/EU**

**All Models: EN 61326-1: 2013**

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**LVD Directive 2014/35/EU**

**All Models: EN 61010-1: 2010**

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**PED Directive 2014/68/EU**

**Equipment without the 'PD' option is NOT PED compliant and cannot be used in the EU without further assessment unless the installation is exempt under Article 1, paragraph 2 of the PED Directive 2014/68/EU.**

**Model 8705-M Magnetic Flowmeter Sensor with Option "PD", in Line Sizes 1.5"- 36"**

QS Certificate of Assessment – 10000497900-PA-ACCREDIA-USA  
Module H Conformity Assessment - ASME B31.3

**Model 8705-M with Option "PD", in Line Sizes .5" – 1.0"**

Sound Engineering Practice  
ASME B31.3

**Model 8711-M/L Magnetic Flowmeter Sensor with Option "PD", in Line Sizes 1.5"- 8"**

QS Certificate of Assessment - 10000497900-PA-ACCREDIA-USA  
Module H Conformity Assessment - ASME B31.3

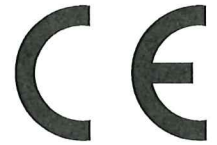
**Model 8721 Magnetic Flowmeter Sensor, all sizes:**

Sound Engineering Practice  
ASME B31.3

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**RoHS Directive 2011/65/EU**

**All Models: EN 50581: 2012**



**Schedule**  
**EU Declaration of Conformity No. RFD 1094 Rev. N**

**ATEX Directive 2014/34/EU:**

**Magnetic Flow Transmitters 8732EM, 8712EM and Sensors 8705-M, 8711-M/L**

**DEKRA 14ATEX0071 X – CERTIFICATE**

**Equipment Marking Summary:**



II 2 (1) G Ex db eb [ia Ga] IIC T6...T3 Gb	II 3 G Ex nA ic IIC T5...T3 Gc
II 2 (1) G Ex db [ia Ga] IIC T6...T3 Gb	II 3 G Ex ec ic IIC T5...T3 Gc
II 3 (1) G Ex nA [ia Ga] IIC T4...T3 Gc	II 3 (1) G Ex nA ic [ia Ga] IIC T4 Gc
II 3 (1) G Ex ec [ia Ga] IIC T4...T3 Gc	II 3 (1) G Ex ec ic [ia Ga] IIC T4 Gc
II 1/2 G Ex eb ia IIC T5...T3 Ga/Gb	II 2 D Ex tb IIIC T 80 °C...T 200 °C Db
II 2 G Ex eb ib IIC T5...T3 Gb	II 2 (1) D Ex tb [ia Da] IIIC T 80 °C...T 200 °C Db
II 1/3 G Ex nA ia IIC T5...T3 Ga/Gc	II 2 D Ex tb IIIC T 80 °C Db
II 1/3 G Ex ec ia IIC T5...T3 Ga/Gc	II 2 (1) D Ex tb [ia Da] IIIC T 80 °C Db

EN IEC 60079-0 : 2018

EN 60079-1 : 2014

EN 60079-7 : 2015 + A1 : 2018

EN 60079-11 : 2012

EN 60079-15 : 2010

EN 60079-26 : 2015

EN 60079-31 : 2014

**PED Notified Body**

**DNV GL Business Assurance S.r.l.** [Notified Body Number: 0496]

Via Energy Park 14  
Vimercate, 20871 Italy

**ATEX Notified Body**

**DEKRA Certification B.V.** [Notified Body Number: 0344]

Meander 1051, 6825 MJ Arnhem  
P.O. Box 5185, 6802 ED Arnhem  
The Netherlands

**ATEX Quality Assurance Notified Body**

**DNV Nemko Presafe AS** [Notified Body number: 2460]

P.O. Box 73, Blindern  
0314 Oslo, Norway

**Authorized Representative in Europe:**

Emerson S.R.L., company No. J12/88/2006, Emerson 4 street, Parcul Industrial  
Tetarom II, Cluj-Napoca 400638, Romania

Regulatory Compliance Shared Services Department

Email: [europaeproductcompliance@emerson.com](mailto:europaeproductcompliance@emerson.com)

Phone: +40 374 132 035

**ROSEMOUNT™**



**HAZARDOUS (Ex) LOCATION CONTROL AND INSTALLATION DRAWING  
MODEL 8732EM AND 8712EM MAGNETIC FLOWTUBE TRANSMITTERS  
MODEL 8705-M AND 8711-M/L MAGNETIC FLOWTUBES**

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17	GAS AND DUST ENVIRONMENT- US-NEC-ONLY - 8705-Wx AND 8711-R/U SENSORS WITH 8732EM AND 8712EM TRANSMITTERS

**⚠️ WARNING: EXPLOSION HAZARD - PRODUCT INSTALLATION SHALL COMPLY WITH INFORMATION AS STATED IN THIS DOCUMENT.**

1. WIRING METHOD SUITABLE FOR APPROPRIATE CLASS AND DIVISION AND PROTECTION TYPE.
2. TRANSMITTER MUST NOT BE CONNECTED TO EQUIPMENT GENERATING MORE THAN 250V.
3. COMPONENTS REQUIRED TO HAVE HAZARDOUS (Ex) LOCATION APPROVAL MUST BE APPROVED FOR THE GAS GROUP APPROPRIATE TO AREA CLASSIFICATION.
4. SEAL APPROVED FOR USE IN APPROPRIATE CLASS AND DIVISION AND GAS GROUP.
5. THE ELECTRODE CIRCUIT AND WIRING MUST BE INSTALLED AS INTRINSICALLY SAFE WHEN THE FLOWTUBE IS INSTALLED IN A CLASS I DIVISION 1 AREA WITH THE 'KU' OR 'K5' OPTION; OR WHEN THE 'K5', 'K5', 'N5', OR 'N6' IS USED WITH FLAMMABLE PROCESS FLUIDS.
6. THE INTRINSICALLY SAFE 4-20mA AND DIGITAL OUTPUTS MUST USE TWISTED PAIR WITH AN INDIVIDUAL SHIELD FOR THE PAIR. IT IS ALSO RECOMMENDED TO USE SHIELDED TWISTED PAIR FOR THE PULSE OUTPUT.
7. USA-INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NFPA-70, AND ANSI/ISA-RP1206-01. CANADA-INSTALLATION SHALL BE IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE (CEC) PART I (C22.1). "INSTALLATION OF INTRINSICALLY SAFE SYSTEMS FOR HAZARDOUS (CLASSIFIED) LOCATIONS".
8. CONTROL EQUIPMENT CONNECTED TO BARRIER MUST NOT USE OR GENERATE MORE THAN 250V.
9. ASSOCIATED APPARATUS MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT.

10. THE TRANSMITTER IS NOT CAPABLE OF PASSING THE 500V ISOLATION TEST ON TERMINALS DUE TO INTEGRAL TRANSIENT PROTECTION. THIS MUST BE TAKEN INTO ACCOUNT UPON INSTALLATION.

11. THE ROSEMOUNT CABLING KITS, FOR INTRINSICALLY SAFE ELECTRODES, INCLUDE A CERTIFICATE OF CONFORMITY (COC) FROM THE MANUFACTURER FOR CAPACITANCE PER FOOT & INDUCTANCE PER FOOT. THESE PARAMETERS ARE ONLY REQUIRED FOR THE ENTITY CONCEPT METHOD OF INSTALLATION.

12. FOR ALL INSTALLATIONS MAXIMUM TERMINAL TIGHTENING TORQUE IS 10.6 IN LBS.
13. - WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.  
- AVERTISSEMENT - RISQUE D'EXPLOSION. NE PAS DEBRANCHER TANT QUE LE CIRCUIT EST SOUS TENSION, A MOINS QU'IL NE S'AGISSE D'UN EMPLACEMENT NON DANGEREUX.  
- WARNING - AFTER DE-ENERGIZING, DELAY 10 MINUTES BEFORE OPENING.  
- AVERTISSEMENT - APRÈS MISE HORS TENSION, ATTENDRE 10 MINUTES AVANT L'OUVERTURE.  
- WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTIONS.  
- AVERTISSEMENT - DANGER POTENTIEL DE CHARGES ELECTROSTATIQUES - VOIR INSTRUCTIONS)

14. D/DO TERMINALS ARE NOT POPULATED. THE D/DO OPTION (AX) IS NOT AVAILABLE WITH INTRINSICALLY SAFE OUTPUTS.

15. NO REVISION TO THIS DRAWING WITHOUT PRIOR CSA APPROVAL.

16. WHEN THE 8732EM TRANSMITTER IS INTEGRALLY MOUNTED TO 8705-M OR 8711-M/L FLOW TUBES, THE AMBIENT TEMPERATURE RANGES MARKED ON EACH PRODUCT NEED TO BE TAKEN INTO CONSIDERATION BEFORE INSTALLATION. THE AMBIENT TEMPERATURE FOR 8732EM TRANSMITTER IS -40°C ≤ Ta ≤ 60°C AND THE AMBIENT TEMPERATURE RANGE FOR 8705-M OR 8711-M/L FLOWTUBES IS -29°C ≤ Ta ≤ 60°C. THEREFORE, THE -29°C RATING OF THE FLOWTUBES WILL LIMIT THE OVERALL COLD TEMPERATURE RANGE OF THE COMPLETE SYSTEM UNLESS OTHER APPROVED TEMPERATURE CONTROL METHODS ARE EMPLOYED.

17. WHEN THE 8732EM TRANSMITTER IS INTEGRALLY MOUNTED TO 8705-W OR 8711-R/U FLOW TUBES, THE AMBIENT TEMPERATURE RANGES MARKED ON EACH PRODUCT NEED TO BE TAKEN INTO CONSIDERATION BEFORE INSTALLATION. THE AMBIENT TEMPERATURE FOR 8732EM TRANSMITTER IS -40°C ≤ Ta ≤ 60°C AND THE AMBIENT TEMPERATURE RANGE FOR 8705-W OR 8711-R/U FLOWTUBES IS -50°C ≤ Ta ≤ 60°C. THEREFORE, THE -40°C RATING OF THE TRANSMITTER WILL LIMIT THE OVERALL COLD TEMPERATURE RANGE OF THE COMPLETE SYSTEM UNLESS OTHER APPROVED TEMPERATURE CONTROL METHODS ARE EMPLOYED.

18. TRANSMITTER OUTPUTS ARE CONSIDERED INTRINSICALLY SAFE WHEN INSTALLED IN ACCORDANCE TO INTRINSICALLY SAFE CONCEPTS AND INSTALLATION REQUIREMENTS WITHIN THIS DOCUMENT.

NOTES:

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

1) ADDED FIELDBUS, PROFIBUS AND FISCO CONCEPT INFORMATION

REVISION	ECO NO.	APP'D	DATE
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REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

REVISION	ECO NO.	APP'D	DATE
AG	1082138	P.M.K.	5/24/18

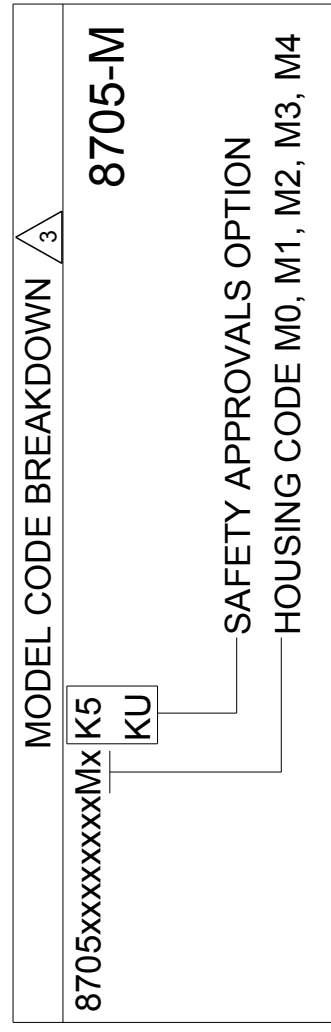
REVISION	ECO NO.	APP'D	DATE
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# GAS ENVIRONMENT - CLASS I DIVISION 1 - US-NEC-ONLY - SENSORS AND TRANSMITTERS

## EXPLOSION-PROOF INTEGRAL MOUNT CONFIGURATIONS

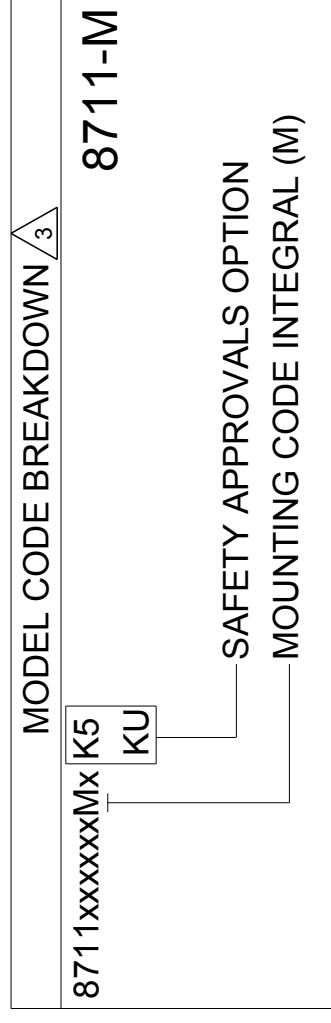
MODEL 8705-M INTEGRAL MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'K5' OR 'KU'



[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T3...T6 WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C) SEE TABLE 1 FOR PROCESS TEMPERATURE LIMITS AND ALLOWED MOUNTING CONFIGURATIONS



MODEL 8711-M INTEGRAL MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'K5' OR 'KU'

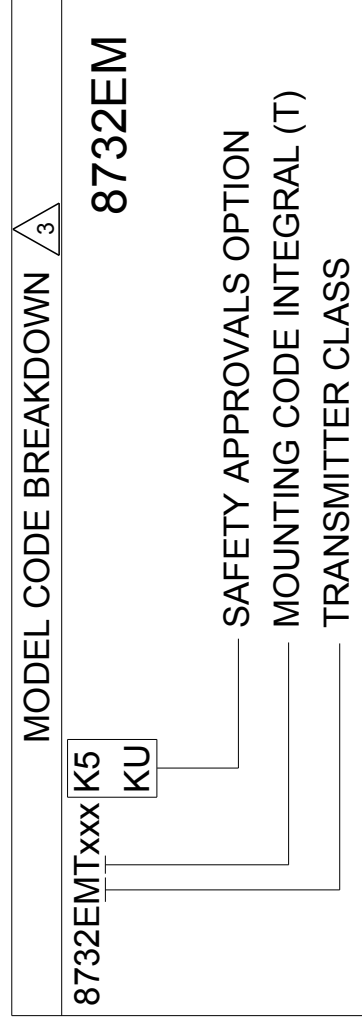


[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T3...T6 WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C) SEE TABLE 2 FOR PROCESS TEMPERATURE LIMITS AND ALLOWED MOUNTING CONFIGURATIONS

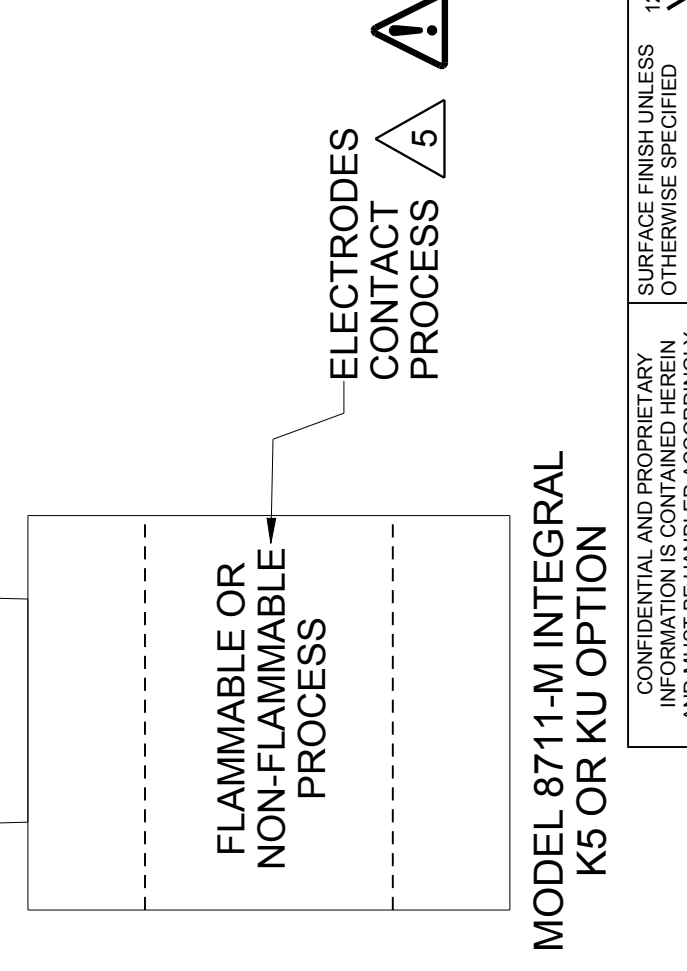
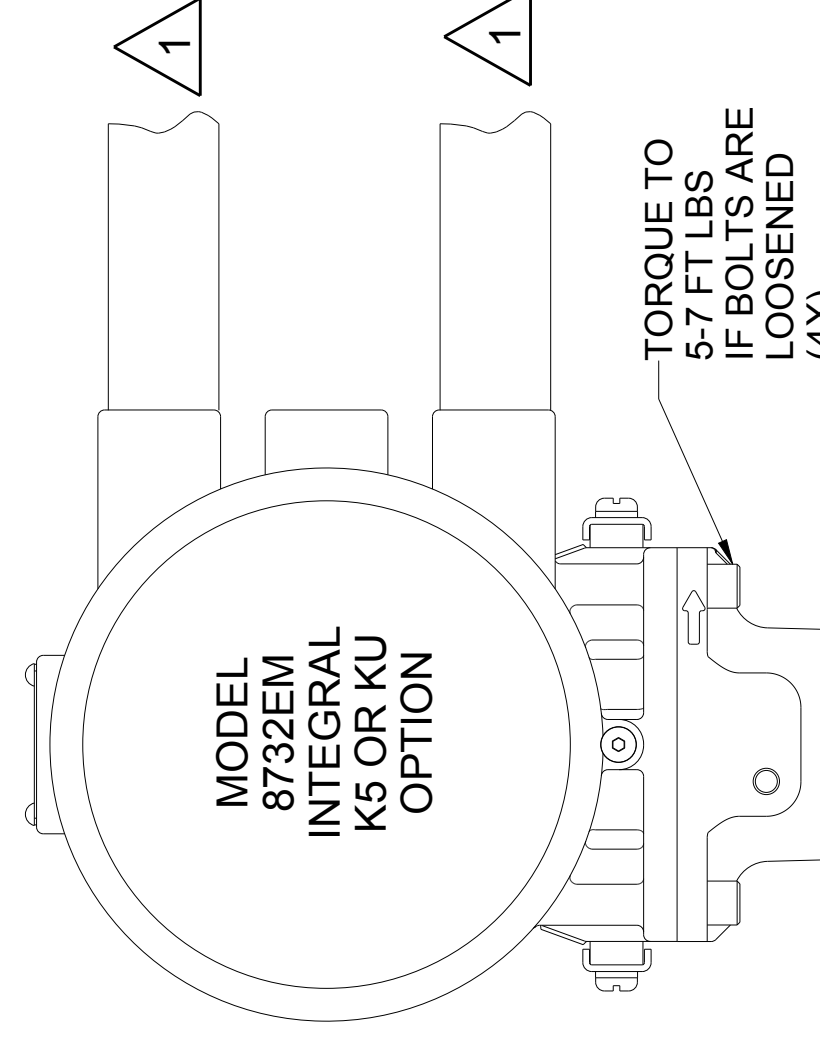
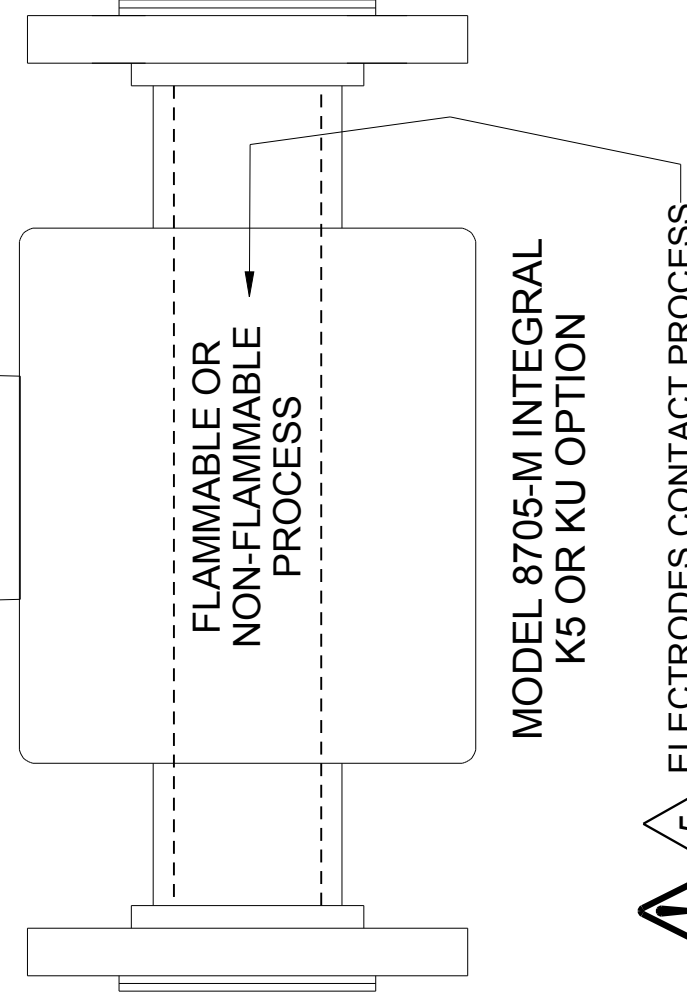
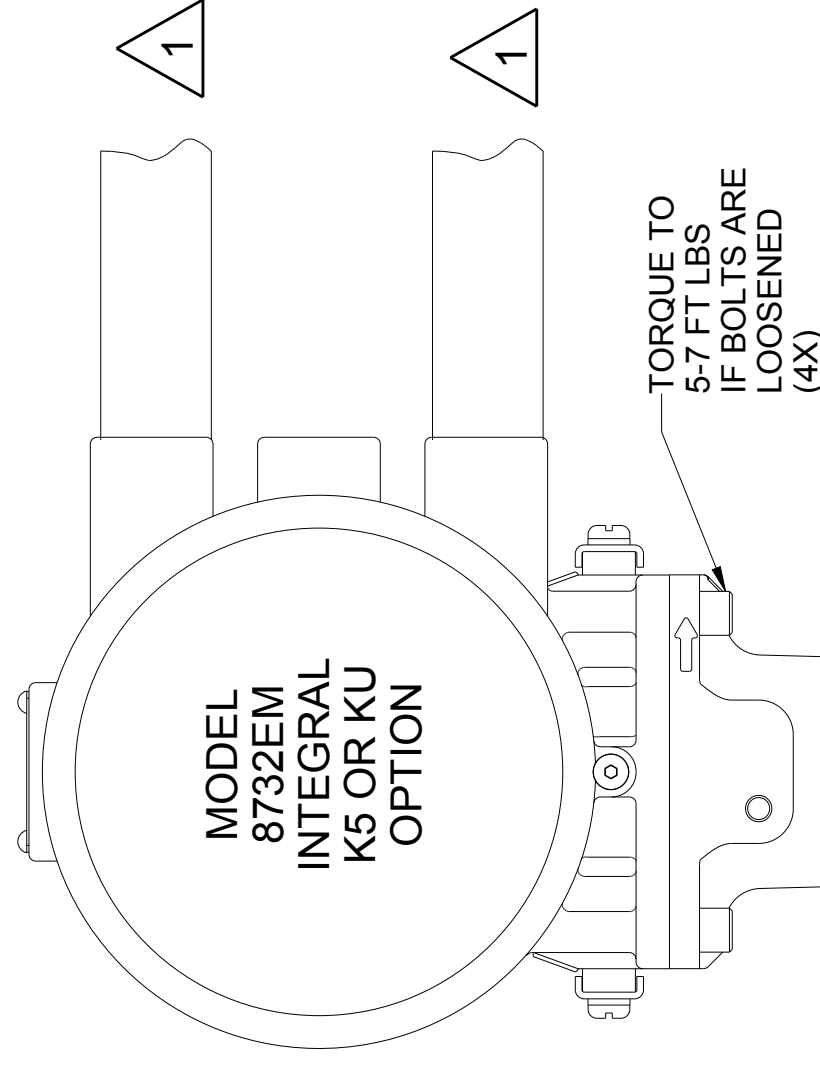


## ALLOWED INTEGRAL MOUNT TRANSMITTER CONFIGURATIONS

MODEL 8732EM INTEGRAL MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'K5' OR 'KU'



[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T6 FACTORY SEALED SEE TABLE 1 OR TABLE 2 FOR PROCESS TEMPERATURE LIMITS AND ALLOWED MOUNTING CONFIGURATIONS



ELECTRODES CONTACT PROCESS

MODEL 8711-M INTEGRAL K5 OR KU OPTION

CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-	
X ± .1	[2.5]
.XX ± .02	[0.5]
.XXX ± .010	[0.25]
FRACTIONS ± 1/32	ANGLES ± 2°



TITLE  
**EMERSON**  
INSTALLATION DRAWING

ROSEMOUNT  
ROSEMOUNT

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061

APPD. E. MESSENGER 6/13/14

DO NOT SCALE PRINT | CAD MAINTAINED. (PROJ) | PRODUCT CODE | SHEET2 OF 17

SURFACE FINISH UNLESS OTHERWISE SPECIFIED 125

3RD ANGLE

SIZE C

SCALE -

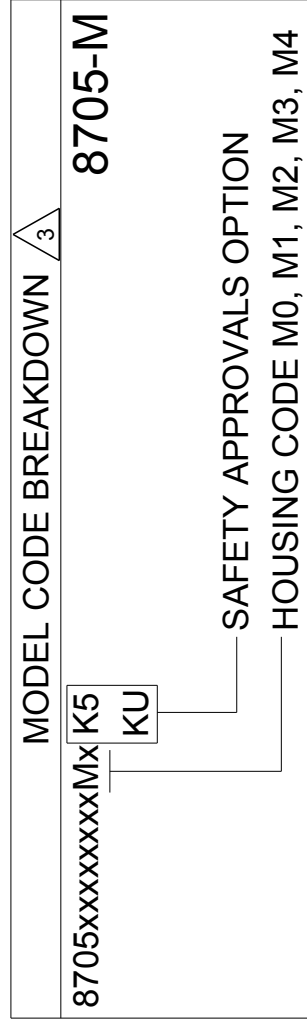
REV AG

DRAWING NO. 08732-2061

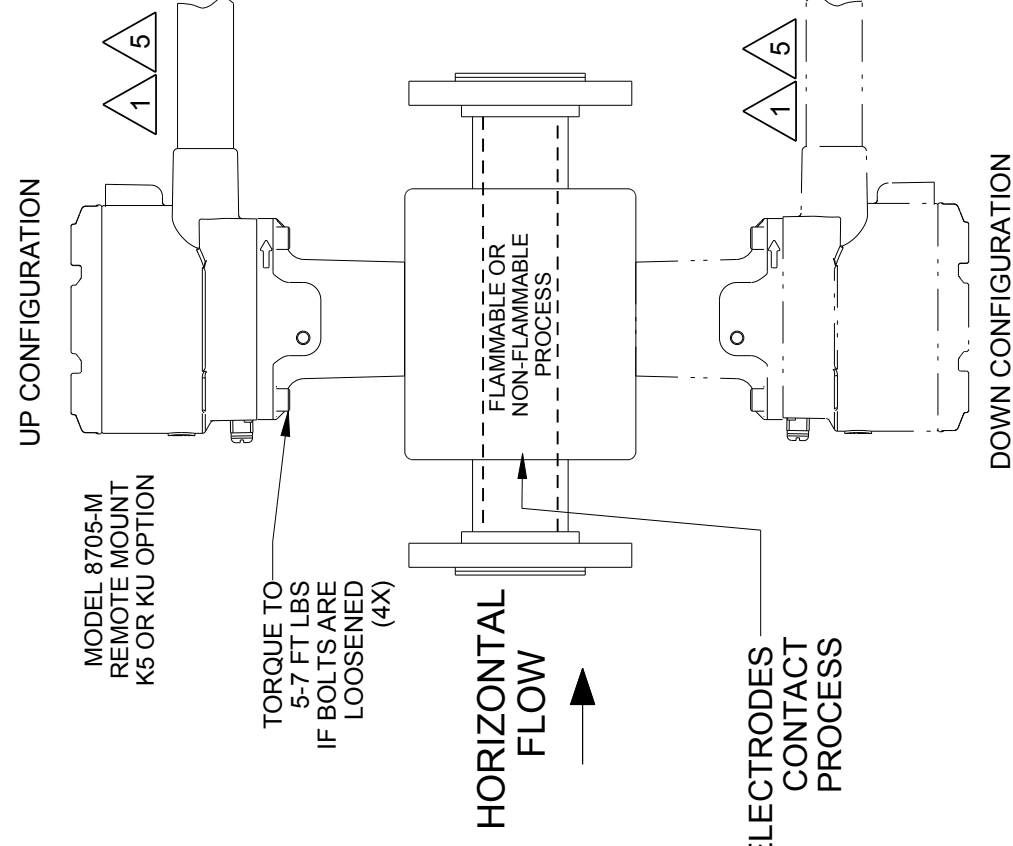
# GAS ENVIRONMENT - CLASS I DIVISION 1 - US-NEC-ONLY - SENSORS AND ALLOWED REMOTE MOUNT CLASS I DIVISION 1 OR CLASS I DIVISION 2 TRANSMITTERS

## EXPLOSION-PROOF SENSOR REMOTE MOUNT CONFIGURATIONS

MODEL 8705-M REMOTE CONFIGURATION  
WITH SAFETY APPROVALS OPTION 'K5' OR 'KU'

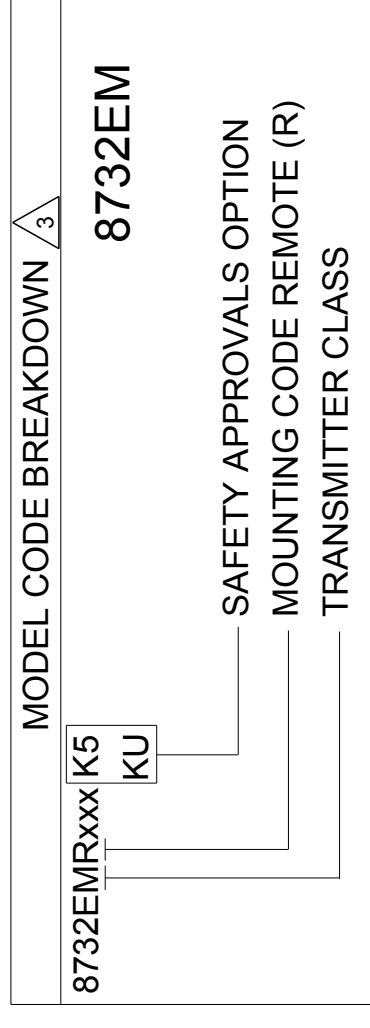


[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T3...T6  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 1 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS

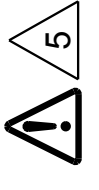
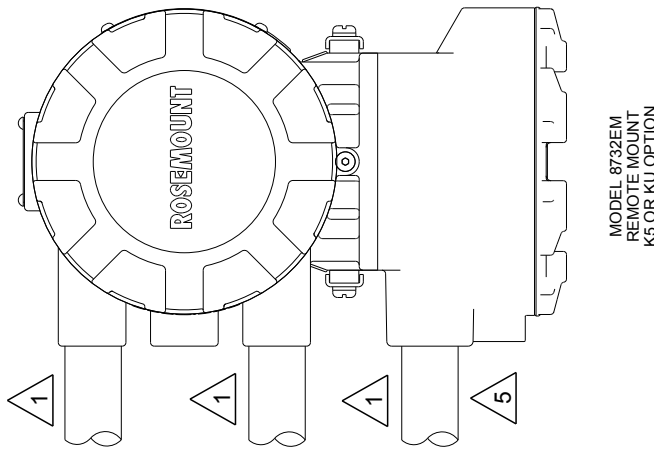


## ALLOWED REMOTE MOUNT TRANSMITTER CONFIGURATIONS

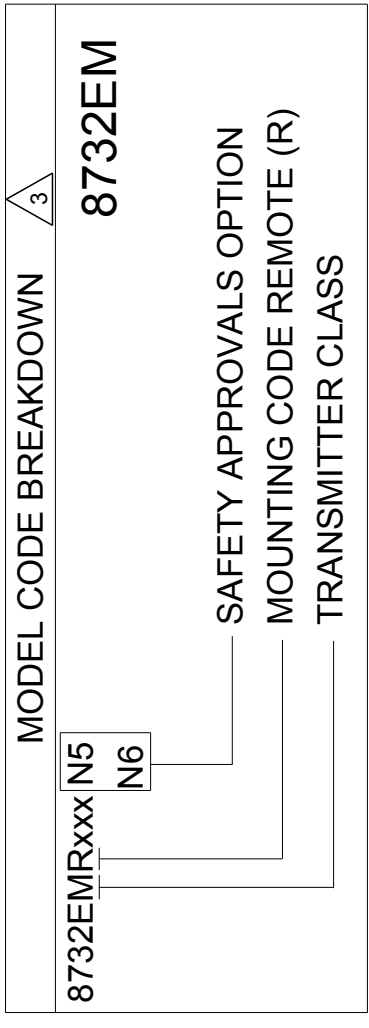
MODEL 8732EM REMOTE MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'K5' OR 'KU'



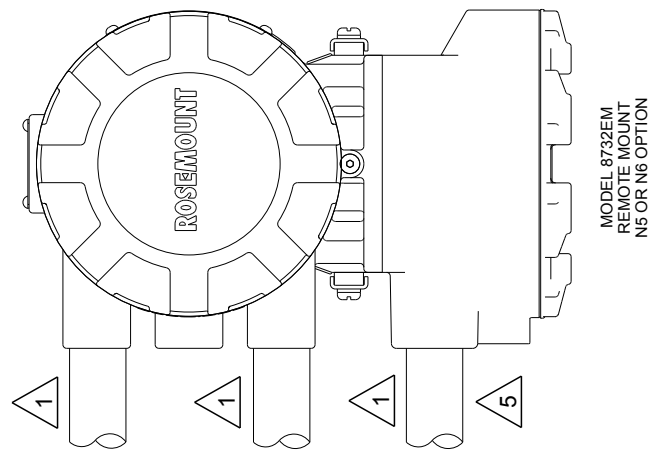
[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T6  
FACTORY SEALED  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



MODEL 8732EM REMOTE MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'N5' OR 'N6'



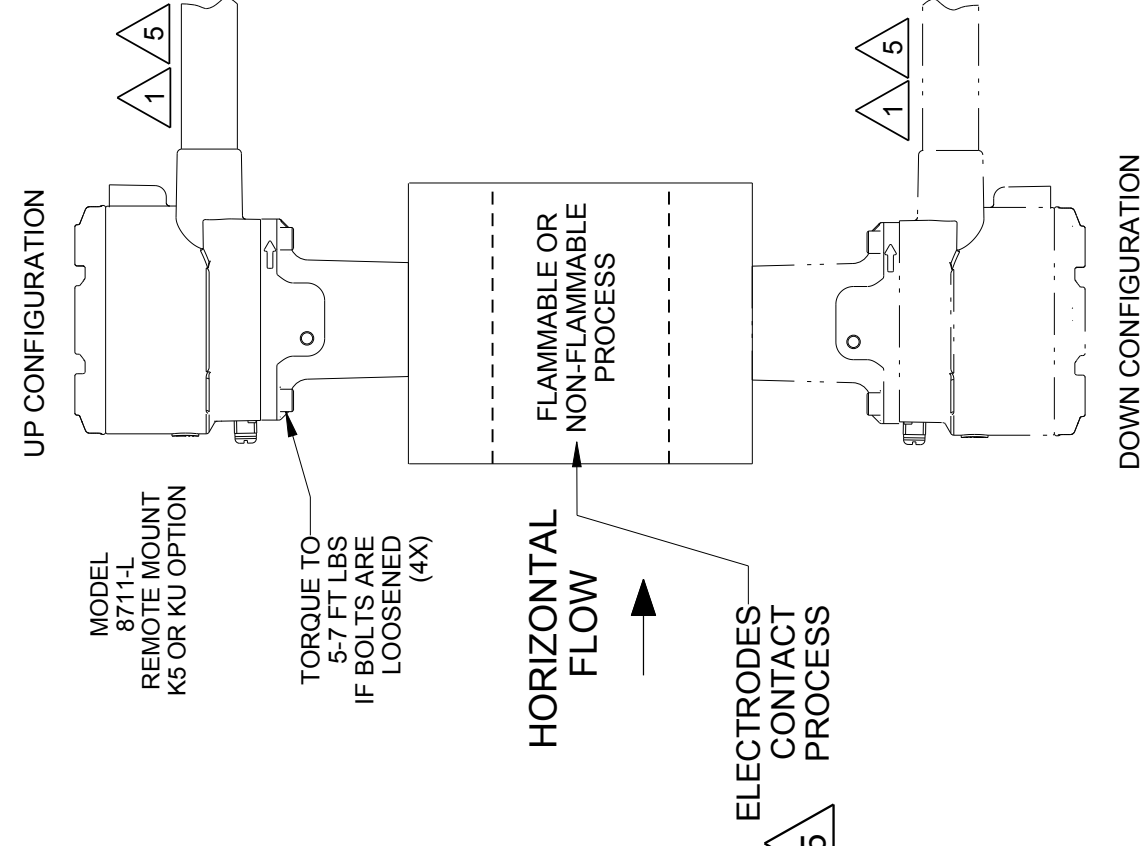
[US-NEC ONLY]  
NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD: T4  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



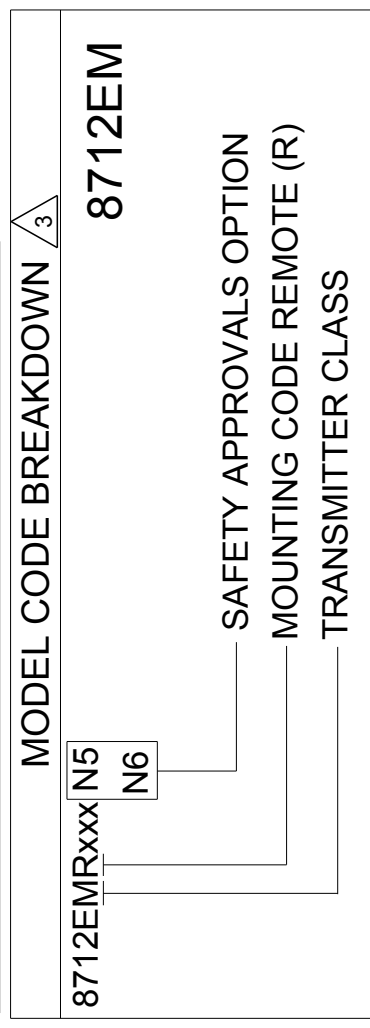
MODEL 8711-L REMOTE CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'K5' OR 'KU'



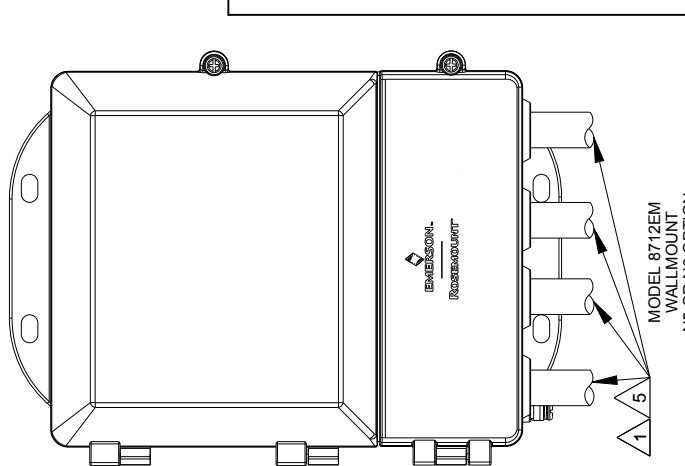
[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T3...T6  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 2 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS



MODEL 8712EM REMOTE MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'N5' OR 'N6'



[US-NEC ONLY]  
NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD: T4  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



**ROSEMOUNT**  
INSTALLATION DRAWING  
CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPD. E. MESSENGER 6/13/14

CONFIDENTIAL AND PROPRIETARY  
INFORMATION IS CONTAINED HEREIN  
AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES (mm). REMOVE  
ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-	
X ± .1 (2.5)	
.XX ± .02 (0.5)	
.XXX ± .010 (0.25)	
FRACTIONS ± .102	ANGLES ± .2°

DO NOT SCALE PRINT | CAD MAINTAINED, (PROE) | PRODUCT CODE | SHEET 3 OF 17

SURFACE FINISH UNLESS OTHERWISE SPECIFIED 125 ✓  
3RD ANGLE  
SIZE C  
SCALE -  
REV AG  
DRAWING NO. 08732-2061

# GAS ENVIRONMENT - CLASS I DIVISION 1 SENSOR TEMPERATURE CODE VS. PROCESS TEMPERATURE LIMITS

TABLE 1

8705-M: EXPLOSION-PROOF MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION			
Line Size	Maximum Allowable Process Temperature (°C)	Explosion-Proof Temperature Code	Transmitter Mounting Configuration
1/2"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	120	T4	Integral/Remote
	180	T3	Remote
1"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	120	T4	Integral/Remote
	180	T3	Remote
1.5"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	105	T4	Integral/Remote
	170	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
2"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	105	T4	Integral/Remote
	170	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
2.5"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	110	T4	Remote
	170	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
3"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	115	T4	Remote
	175	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
4"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	115	T4	Remote
	175	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
5"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	120	T4	Remote
	175	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
6"	60	T6	Integral/Remote
	90	T5	Integral/Remote
	120	T4	Remote
	180	T3	Remote
	60	T6	Integral/Remote
	90	T5	Integral/Remote
8-36"	60	T6	Integral/Remote
	90	T5	Remote
	120	T4	Remote
	180	T3	Remote**

\*\*LINE SIZES 8" AND GREATER WITH HORIZONTAL FLOW SHOULD BE MOUNTED WITH REMOTE JUNCTION BOX (RJB) DOWN OR TO THE SIDE

TABLE 2

8711-ML: EXPLOSION-PROOF MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION				
Line Size	Maximum Allowable Process Temperature (°C)	Explosion-Proof Temperature Code	Remote Junction Box Orientation	Transmitter Mounting Configuration
1.5"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	100	T4	Any	Remote
	160	T3	Down Or To The Side Only	Remote
2"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	100	T4	Any	Remote
	160	T3	Down Or To The Side Only	Remote
3"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	110	T4	Any	Remote
	170	T3	Down Or To The Side Only	Remote
4"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	115	T4	Any	Remote
	175	T3	Down Or To The Side Only	Remote
6"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	115	T4	Any	Remote
	180	T3	Down Or To The Side Only	Remote
8"	60	T6	Any	Integral/Remote
	80	T5	Any	Remote
	115	T4	Any	Remote
	180	T3	Down Or To The Side Only	Remote

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UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-  
X ± .1 [2.5]  
.XX ± .02 [0.5]  
.XXX ± .010 [0.25]  
FRACTIONS ± 1/32 ANGLES ± 2'

SURFACE FINISH UNLESS OTHERWISE SPECIFIED



3RD ANGLE



SIZE

SCALE

REV

AG



ROSEMOUNT

TITLE  
**INSTALLATION DRAWING**

**CSA CANADIAN AND USA CLASS DIVISION**

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPD. E. MESSENGER 6/13/14

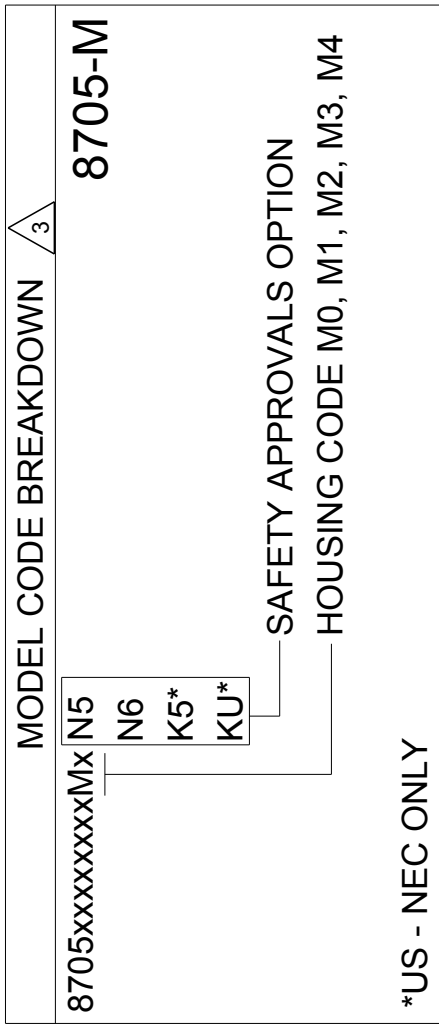
DO NOT SCALE PRINT CAD MAINTAINED (PROJ) PRODUCT CODE SHEET 4 OF 17

DRAWING NO. 08732-2061

# GAS ENVIRONMENT - CLASS I DIVISION 2 SENSORS AND ALLOWED INTEGRAL MOUNT CLASS I DIVISION 2 TRANSMITTERS

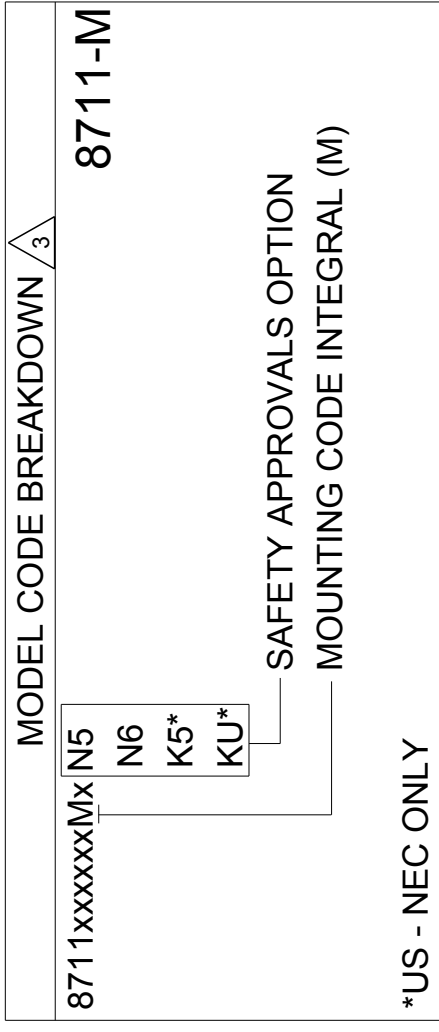
## NON-INCENDIVE SENSOR INTEGRAL MOUNT CONFIGURATIONS

MODEL 8705-M INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



NON-INCENDIVE FOR CLASS I, DIV. 2, GRPS A,B,C,D; T3...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 3 FOR PROCESS TEMPERATURE  
LIMITS AND ALLOWED MOUNTING CONFIGURATIONS

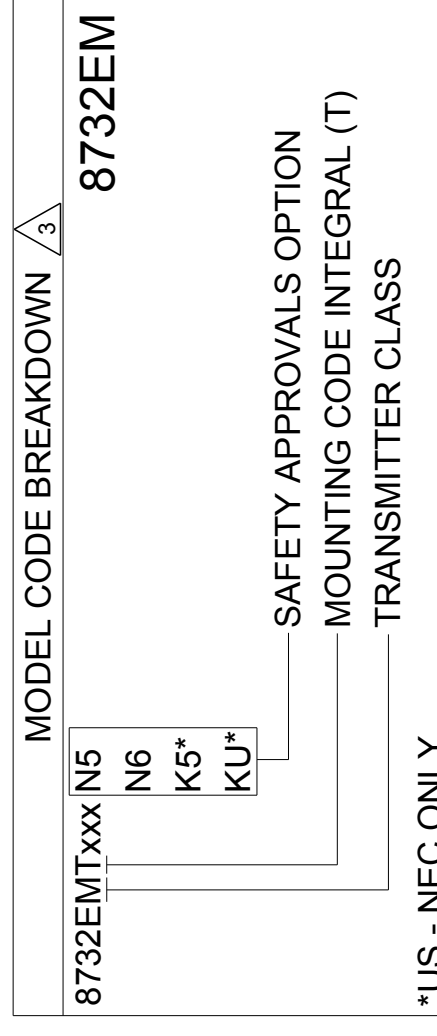
MODEL 8711-M INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



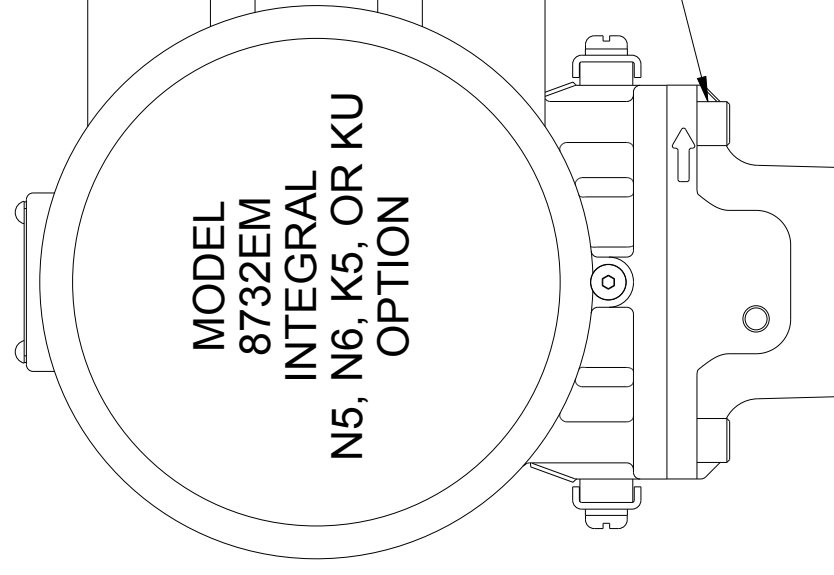
NON-INCENDIVE FOR CLASS I, DIV. 2, GRPS A,B,C,D; T3...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 4 FOR PROCESS TEMPERATURE  
LIMITS AND ALLOWED MOUNTING CONFIGURATIONS

## ALLOWED INTEGRAL MOUNT TRANSMITTER CONFIGURATIONS

MODEL 8732EM INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



NON-INCENDIVE FOR CLASS I, DIV. 2, GRPS A,B,C,D; T4  
SEE TABLE 3 OR TABLE 4 FOR PROCESS TEMPERATURE  
LIMITS AND ALLOWED MOUNTING CONFIGURATIONS

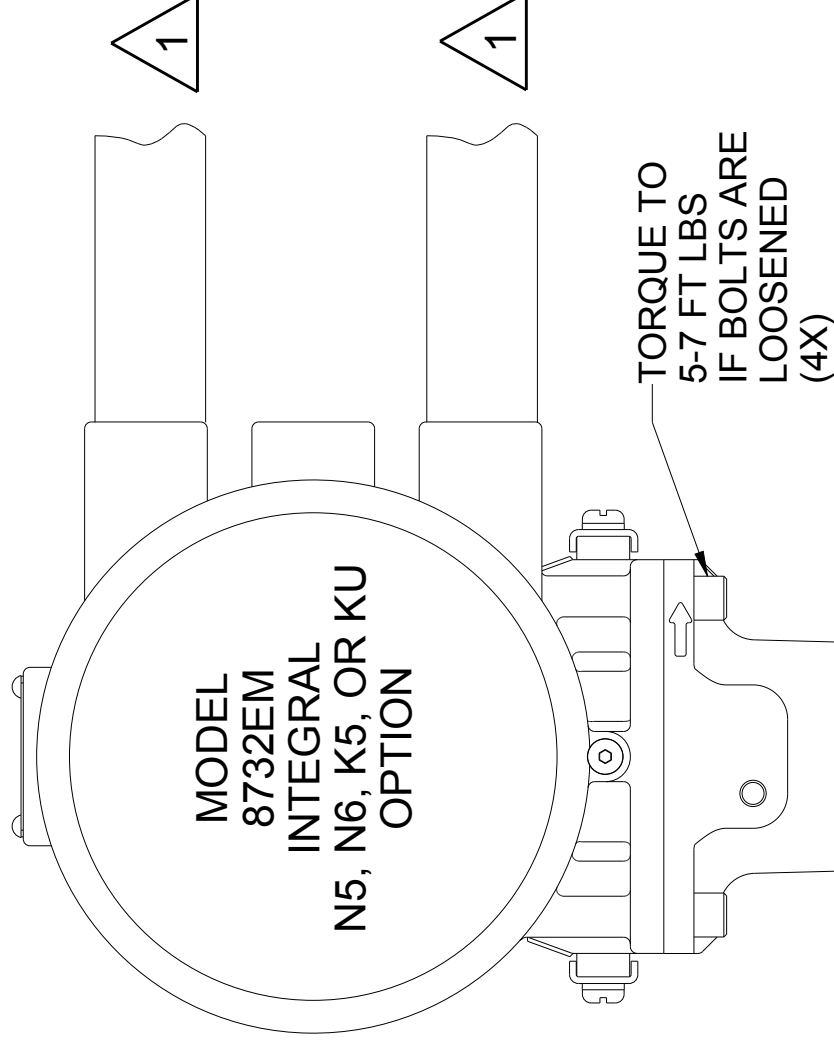


TORQUE TO  
5-7 FT LBS  
IF BOLTS ARE  
LOOSENEED  
(4X)

FLAMMABLE OR  
NON-FLAMMABLE  
PROCESS

MODEL 8705-M INTEGRAL  
N5, N6, K5, OR KU OPTION

ELECTRODES CONTACT PROCESS



TORQUE TO  
5-7 FT LBS  
IF BOLTS ARE  
LOOSENEED  
(4X)

FLAMMABLE OR  
NON-FLAMMABLE  
PROCESS

MODEL 8711-M INTEGRAL  
N5, N6, K5, OR KU OPTION

ELECTRODES CONTACT PROCESS

DRAWING NO. 08732-2061

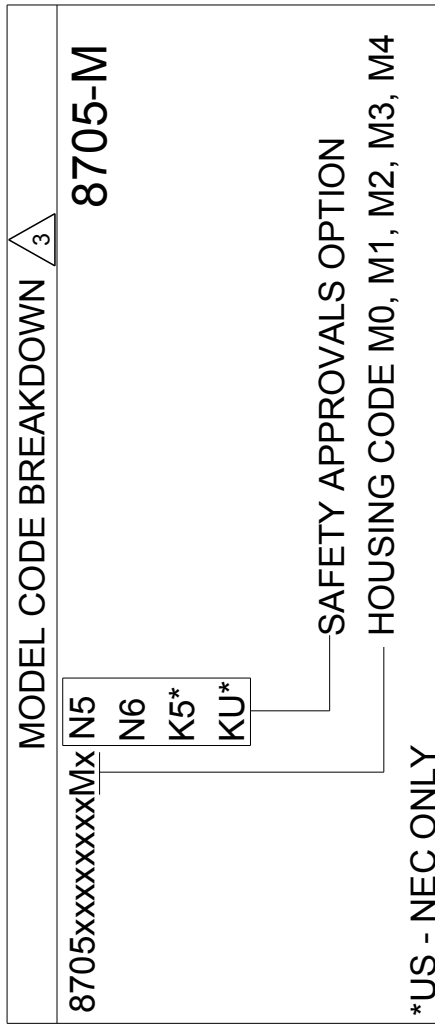
CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.	SURFACE FINISH UNLESS OTHERWISE SPECIFIED	3RD ANGLE	SIZE C	SCALE -	REV AG
<b>EMERSON</b> ROSEMOUNT					
TITLE <b>INSTALLATION DRAWING</b>					
CSA CANADIAN AND USA CLASS DIVISION					
DR. N. BOND	2/18/14	DRAWING NO.	08732-2061		
APPD. E. MESSENGER	6/13/14	PRODUCT CODE	DOC TYPE	SHEET 5	OF 17

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.	
X ± .1 [2.5]	-DEC TOLERANCES-
.XX ± .02 [0.5]	
.XXX ± .010 [0.25]	
FRACTIONS ± 1/32	ANGLES ± 2°

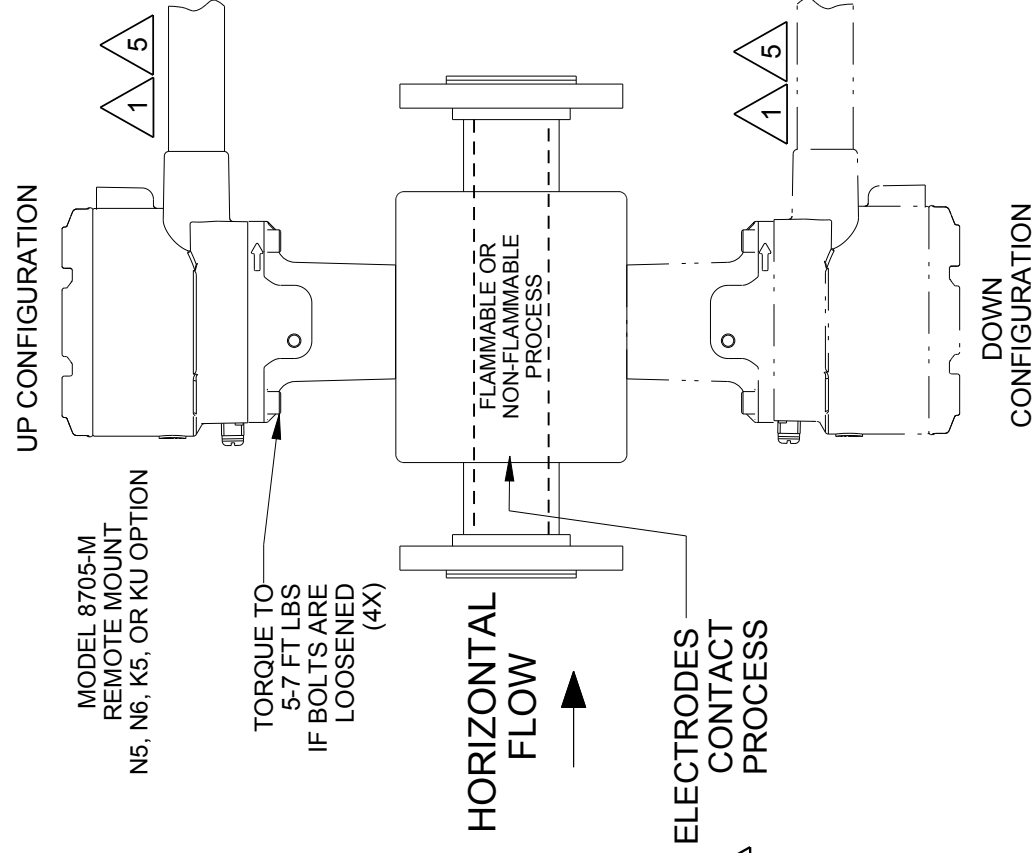
# GAS ENVIRONMENT - CLASS I DIVISION 2 SENSORS AND ALLOWED REMOTE MOUNT CLASS I DIVISION 1 OR CLASS 1 DIVISION 2 TRANSMITTERS

## NON-INCENDIVE SENSOR REMOTE MOUNT CONFIGURATIONS

MODEL 8705-M REMOTE CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'

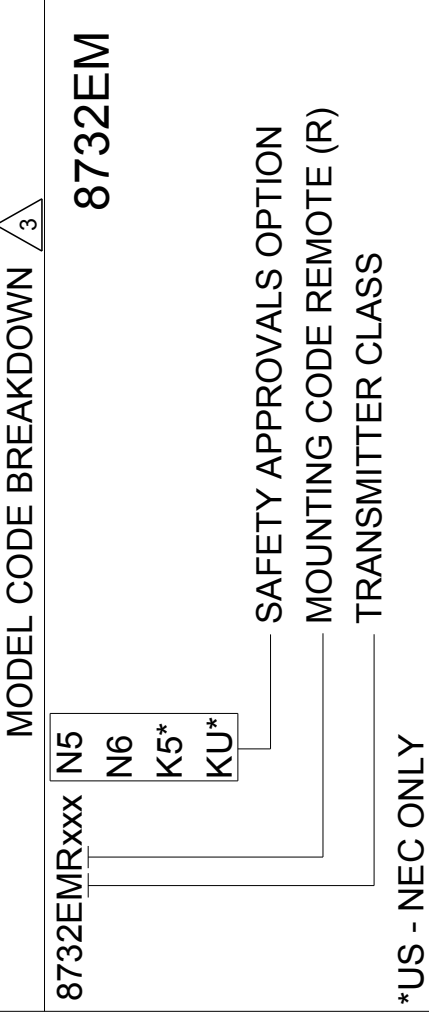


\*US - NEC ONLY  
NON-INCENDIVE FOR CLASS I, DIV. 2, GRPS A,B,C,D; T3...T5 WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 4 FOR PROCESS TEMPERATURE LIMITS AND ALLOWED MOUNTING CONFIGURATIONS

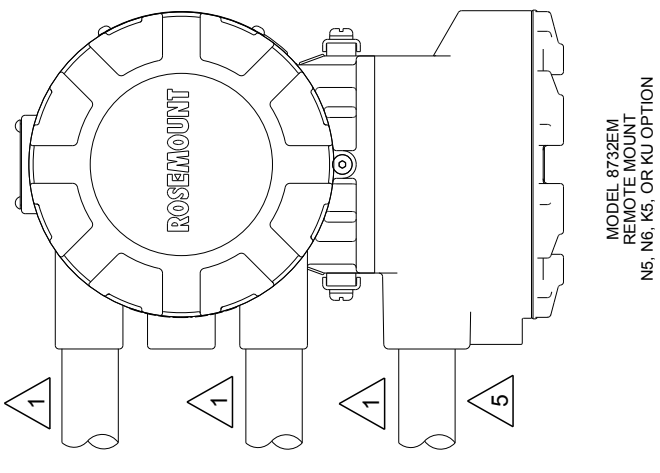


## ALLOWED REMOTE MOUNT TRANSMITTER CONFIGURATIONS

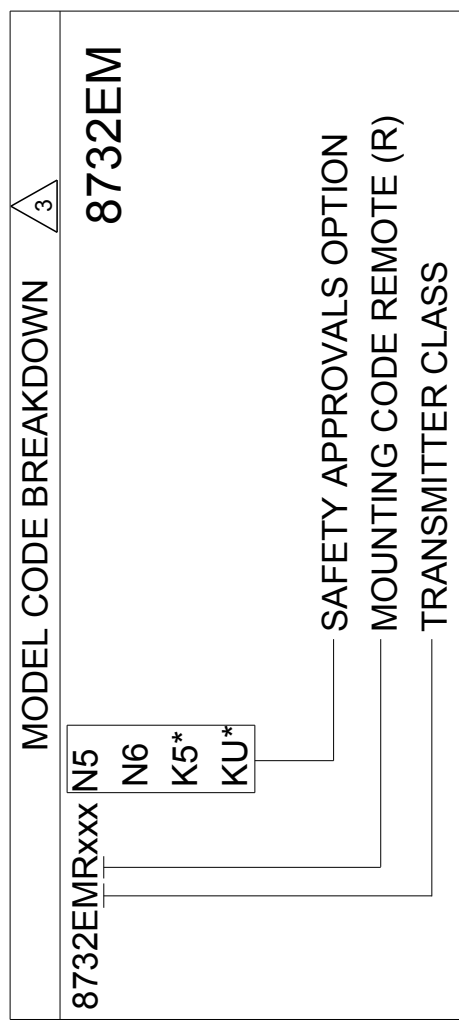
MODEL 8732EM REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



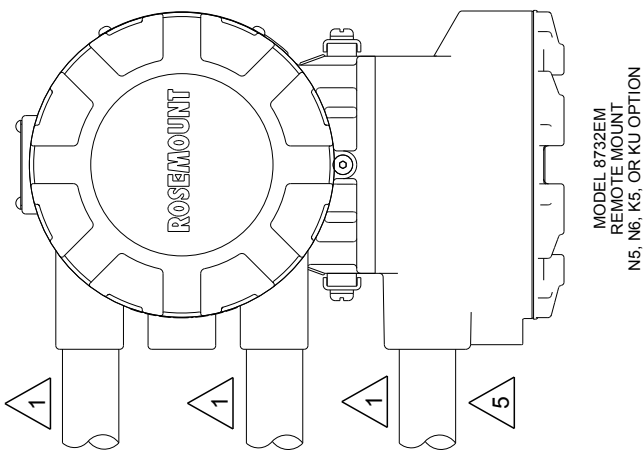
\*US - NEC ONLY  
[US-NEC ONLY]  
EXPLOSION-PROOF FOR CLASS I DIV 1 GRPS CD: T6  
FACTORY SEALED  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



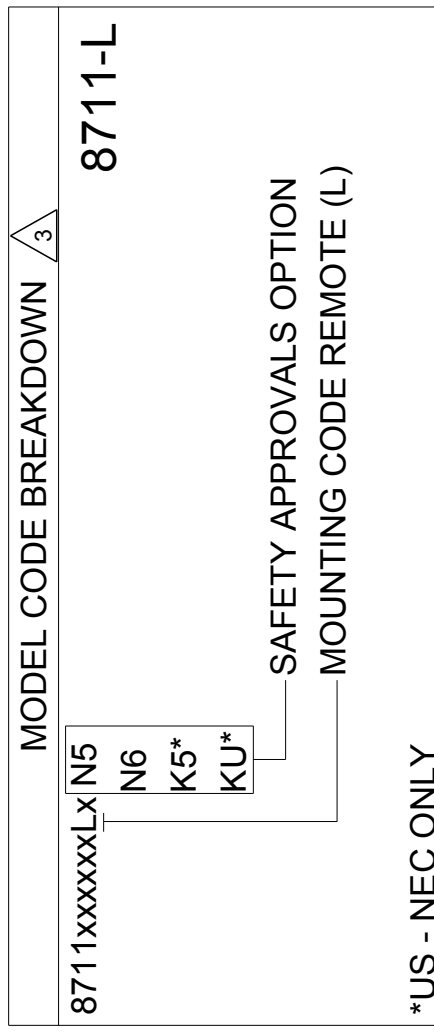
MODEL 8732EM REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



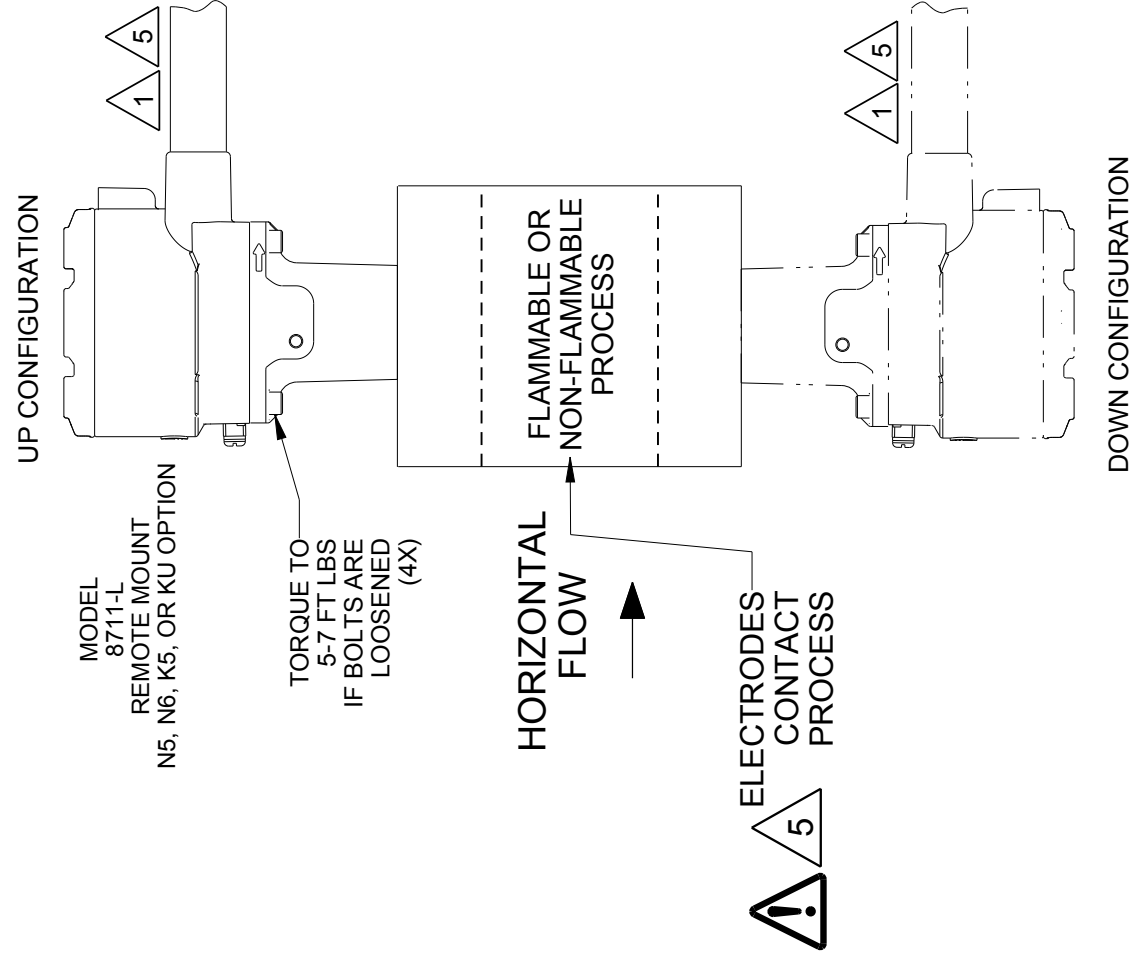
\*US - NEC ONLY  
NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD: T4  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



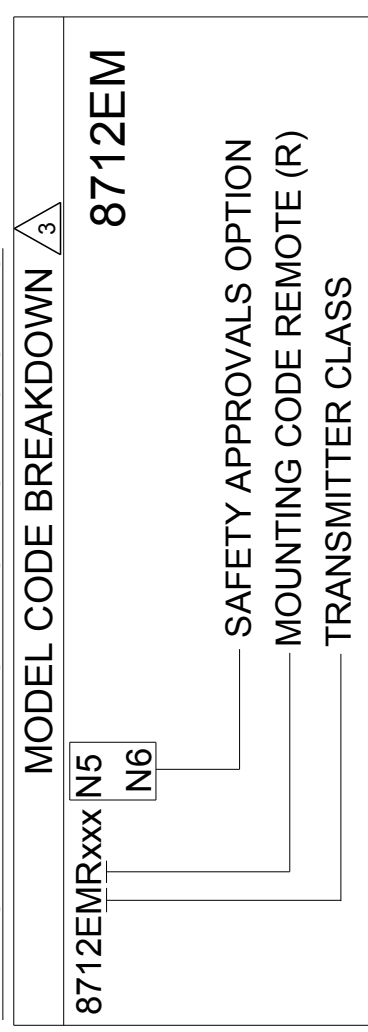
MODEL 8711-L REMOTE CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



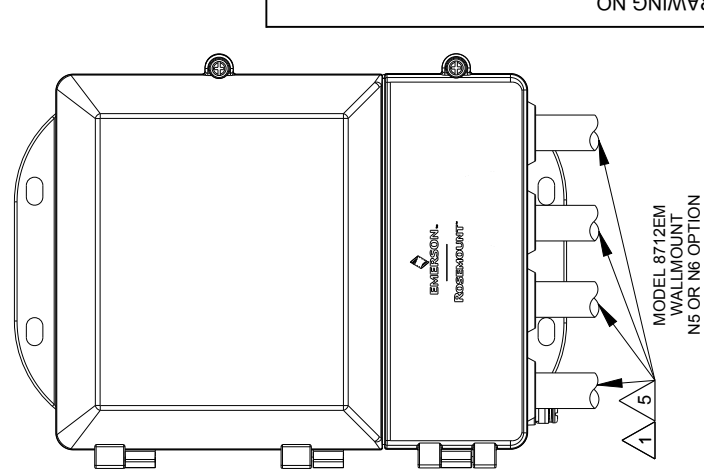
\*US - NEC ONLY  
NON-INCENDIVE FOR CLASS I, DIV. 2, GRPS A,B,C,D; T3...T5 WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 4 FOR PROCESS TEMPERATURE LIMITS AND ALLOWED MOUNTING CONFIGURATIONS



MODEL 8712EM REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5' OR 'N6'



\*US - NEC ONLY  
NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD: T4  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



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UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-	
X ± .1	[2.5]
.XX ± .02	[0.5]
.XXX ± .010	[0.25]
FRACTIONS ± 1/32	ANGLES ± 2°

SURFACE FINISH UNLESS OTHERWISE SPECIFIED

125° 3RD ANGLE

SIZE C

SCALE -

REV AG



ROSEMOUNT

INSTALLATION DRAWING

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPD. E. MESSENGER 6/13/14

DO NOT SCALE PRINT | CAD MAINTAINED, (PROE) | PRODUCT CODE | SHEET 6 OF 17

DRAWING NO. 08732-2061

# GAS ENVIRONMENT - CLASS I DIVISION 2 SENSOR TEMPERATURE CODE VS. PROCESS TEMPERATURE LIMITS

TABLE 3

8705-M: CLASS I DIVISION 2 MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION			
Line Size	Maximum Allowable Process Temperature (°C)	Temperature Code	Transmitter Mounting Configuration
1/2"	60	T5	Integral/Remote
	120	T4	Integral/Remote
	180	T3	Remote
1"	60	T5	Integral/Remote
	120	T4	Integral/Remote
	180	T3	Remote
1.5"	60	T5	Integral/Remote
	105	T4	Integral/Remote
	170	T3	Remote
2"	60	T5	Integral/Remote
	105	T4	Integral/Remote
	170	T3	Remote
2.5"	60	T5	Integral/Remote
	110	T4	Remote
	170	T3	Remote
3"	60	T5	Integral/Remote
	115	T4	Remote
	175	T3	Remote
4"	60	T5	Integral/Remote
	115	T4	Remote
	175	T3	Remote
5"	60	T5	Integral/Remote
	120	T4	Remote
	175	T3	Remote
6"	60	T5	Integral/Remote
	120	T4	Remote
	180	T3	Remote
8-36"	60	T5	Integral/Remote
	120	T4	Remote
	180	T3	Remote**

\*\*LINE SIZE 8" AND GREATER WITH HORIZONTAL FLOW SHOULD BE MOUNTED WITH REMOTE JUNCTION BOX (RJB) DOWN OR TO THE SIDE

TABLE 4

8711-M/L: CLASS I DIVISION 2 MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION				
Line Size	Maximum Allowable Process Temperature (°C)	Temperature Code	Remote Junction Box Orientation	Transmitter Mounting Configuration
1.5"	60	T5	Any	Integral/Remote
	100	T4	Any	Remote
	160	T3	Down Or To The Side Only	Remote
2"	60	T5	Any	Integral/Remote
	100	T4	Any	Remote
	160	T3	Down Or To The Side Only	Remote
3"	60	T5	Any	Integral/Remote
	110	T4	Any	Remote
	170	T3	Down Or To The Side Only	Remote
4"	60	T5	Any	Integral/Remote
	115	T4	Any	Remote
	175	T3	Down Or To The Side Only	Remote
6"	60	T5	Any	Integral/Remote
	115	T4	Any	Remote
	180	T3	Down Or To The Side Only	Remote
8"	60	T5	Any	Integral/Remote
	115	T4	Any	Remote
	180	T3	Down Or To The Side Only	Remote

DRAWING NO. 08732-2061

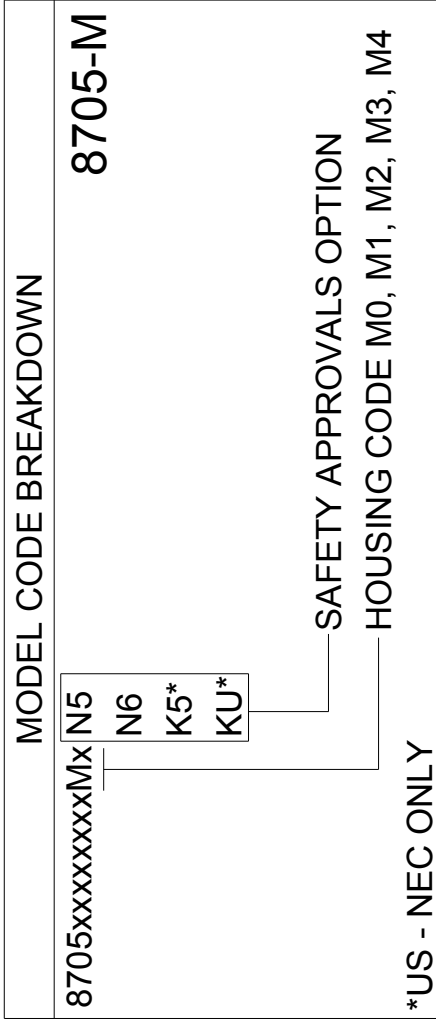
CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.	SURFACE FINISH UNLESS OTHERWISE SPECIFIED	125°	3RD ANGLE	SIZE C	SCALE -	REV AG
TITLE ROSEMOUNT						
INSTALLATION DRAWING						
CSA CANADIAN AND USA CLASS DIVISION						
DR.	N. BOND	2/18/14	DRAWING NO.	08732-2061		
APPD.	E. MESSENGER	6/13/14	PRODUCT CODE	DOC TYPE	SHEET 7	OF 17

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.  
 -DEC TOLERANCES-  
 X ± .1 [2.5]  
 .XX ± .02 [0.5]  
 .XXX ± .010 [0.25]  
 FRACTIONS ± 1/32 ANGLES ± 2'

# DUST ENVIRONMENT - CLASS II/III DIVISION 1 SENSORS AND ALLOWED INTEGRAL MOUNT CLASS II/III DIVISION 1 TRANSMITTERS

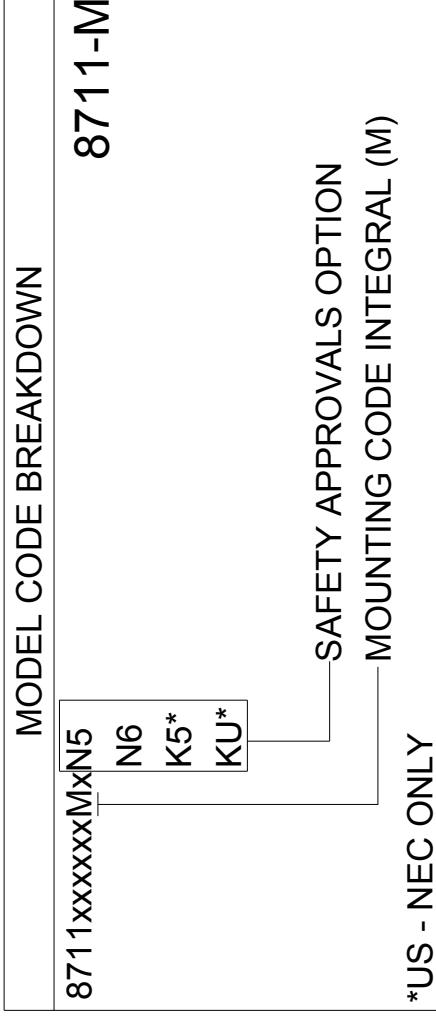
## DUST-IGNITION PROOF SENSOR INTEGRAL MOUNT CONFIGURATIONS

MODEL 8705-M INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



DUST-IGNITION PROOF FOR CLASS II/III DIV1 GRPS: EFG: T2...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 5 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS 16

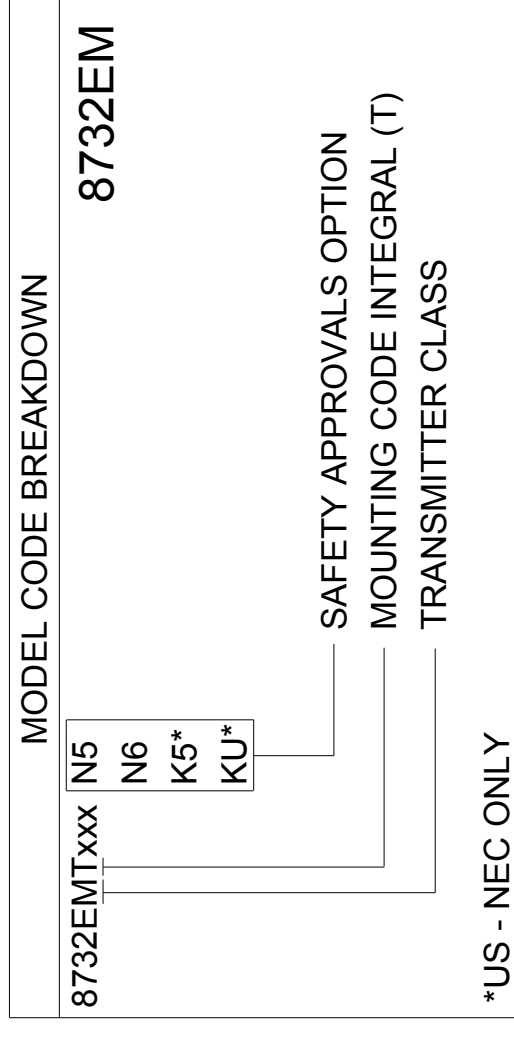
MODEL 8711-M INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



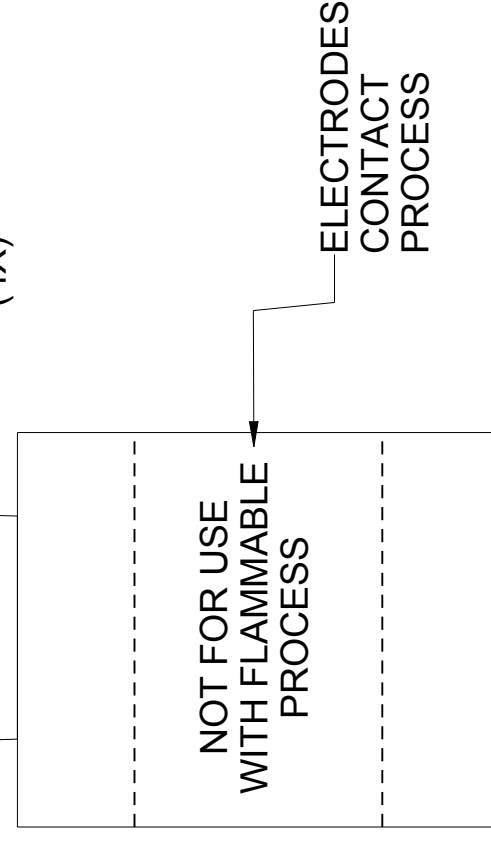
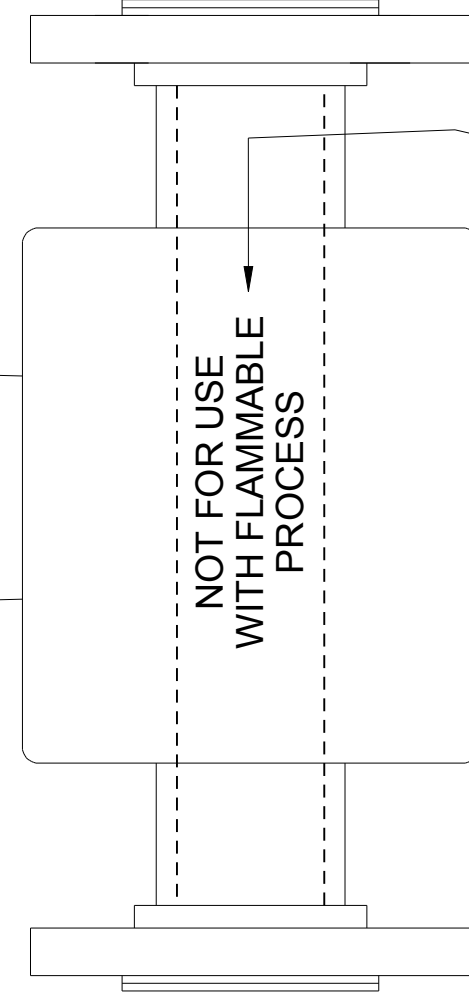
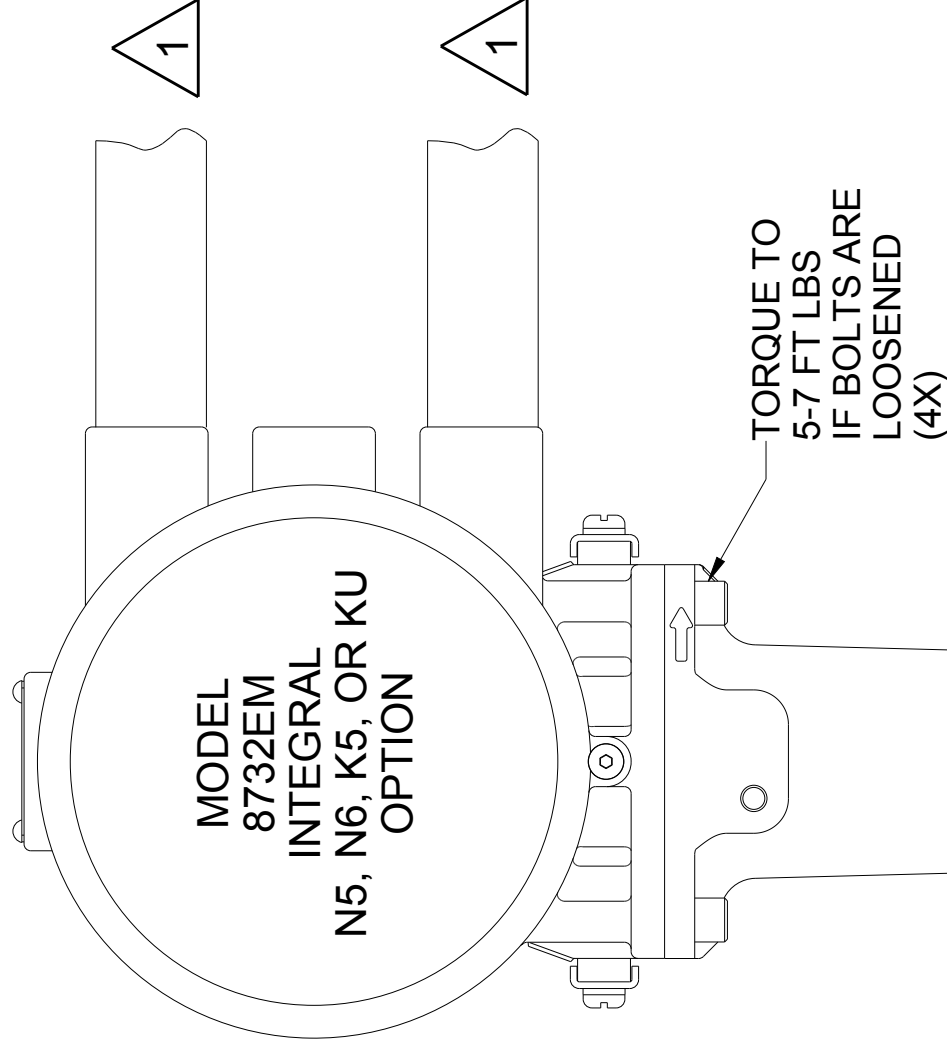
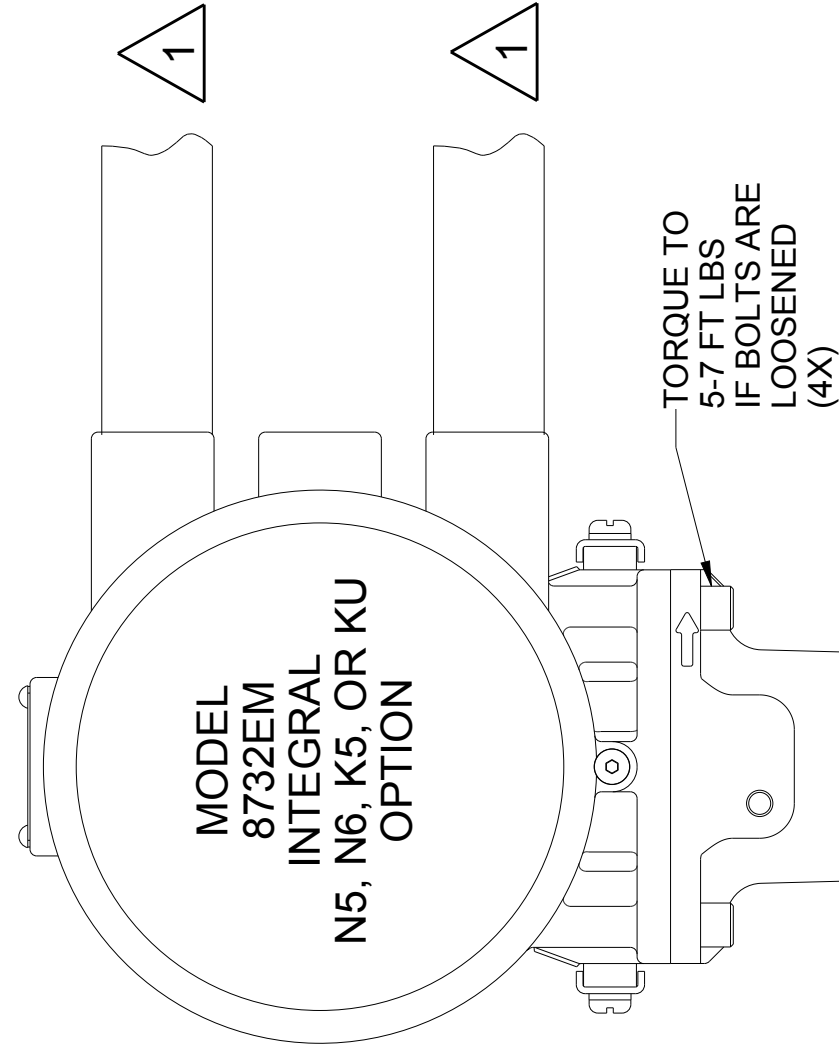
DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T2...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 6 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS 16

## ALLOWED INTEGRAL MOUNT TRANSMITTER CONFIGURATIONS

MODEL 8732EM INTEGRAL MOUNT CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T5  
SEE TABLE 6 FOR PROCESS TEMPERATURE  
LIMITS AND ALLOWED MOUNTING CONFIGURATIONS 16



MODEL 8711-M INTEGRAL  
N5, N6, K5, OR KU OPTION

MODEL 8705-M INTEGRAL  
N5, N6, K5, OR KU OPTION

ELECTRODES CONTACT PROCESS

ELECTRODES  
CONTACT  
PROCESS

CONFIDENTIAL AND PROPRIETARY  
INFORMATION IS CONTAINED HEREIN  
AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES (mm). REMOVE  
ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-	
X ± .1	[2.5]
.XX ± .02	[0.5]
.XXX ± .010	[0.25]
FRACTIONS ± 1/32	ANGLES ± 2°

SURFACE FINISH UNLESS  
OTHERWISE SPECIFIED

125°

3RD ANGLE

SIZE C

SCALE -

REV AG



ROSEMOUNT

TITLE  
**INSTALLATION DRAWING**

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPD. E. MESSENGER 6/13/14

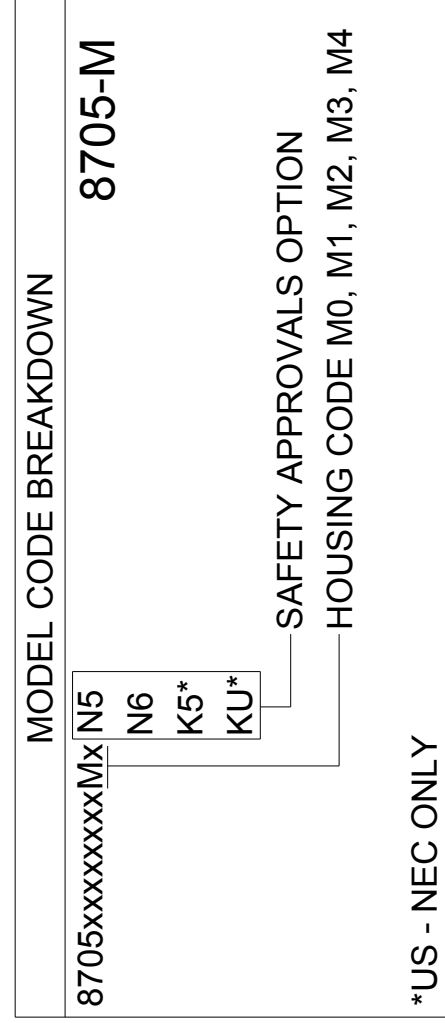
DO NOT SCALE PRINT CAD MAINTAINED (PROE) PRODUCT CODE SHEET8 OF 17

DRAWING NO. 08732-2061

# DUST ENVIRONMENT - CLASS II/III DIVISION 1 SENSORS AND ALLOWED REMOTE MOUNT CLASS II/III DIVISION 1 TRANSMITTERS

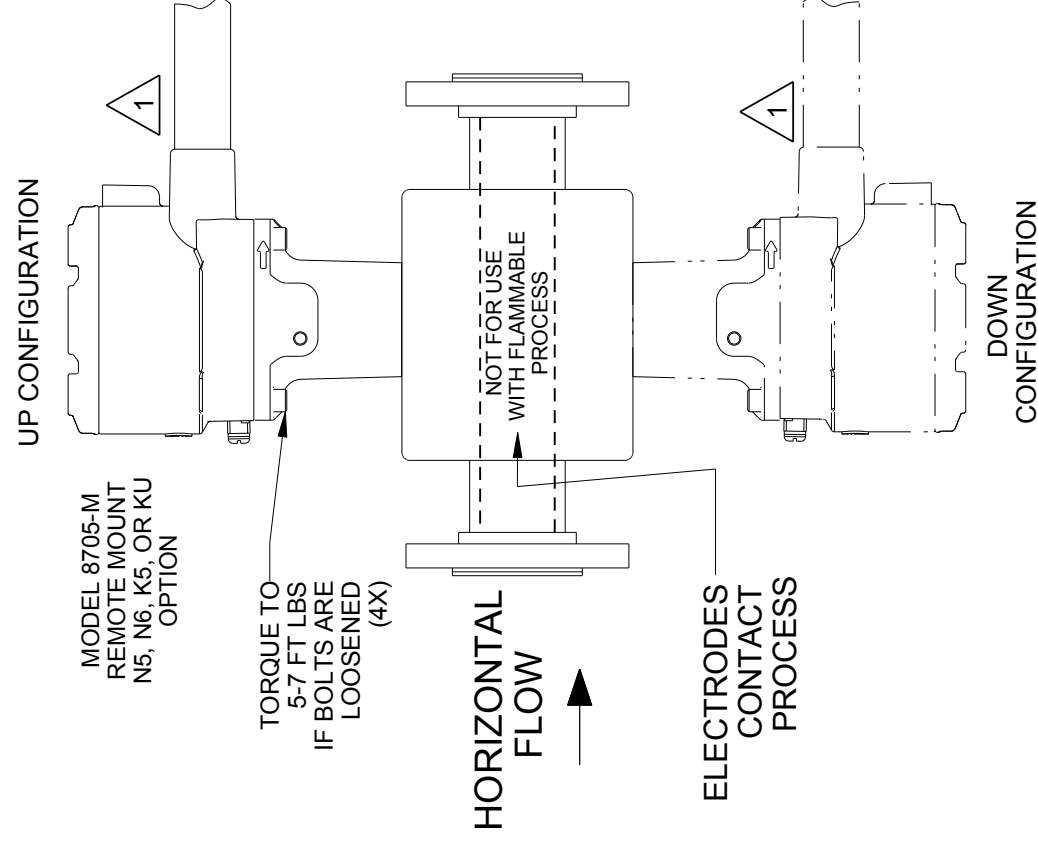
## DUST-IGNITION PROOF SENSOR REMOTE MOUNT CONFIGURATIONS

MODEL 8705-M REMOTE CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



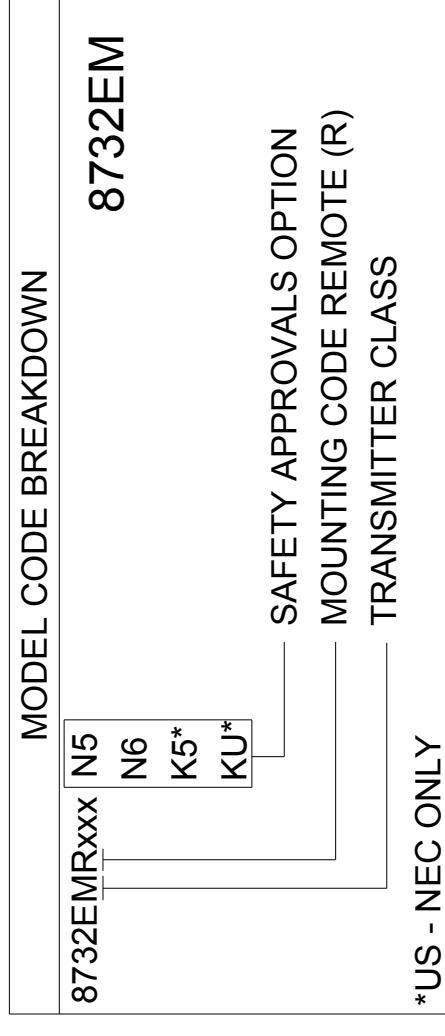
\*US - NEC ONLY

DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T2...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 5 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS



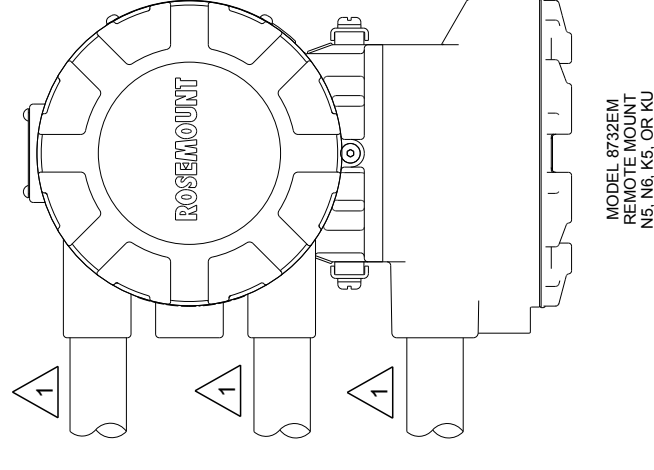
## ALLOWED REMOTE MOUNT TRANSMITTER CONFIGURATIONS

MODEL 8732EM REMOTE MOUNT CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



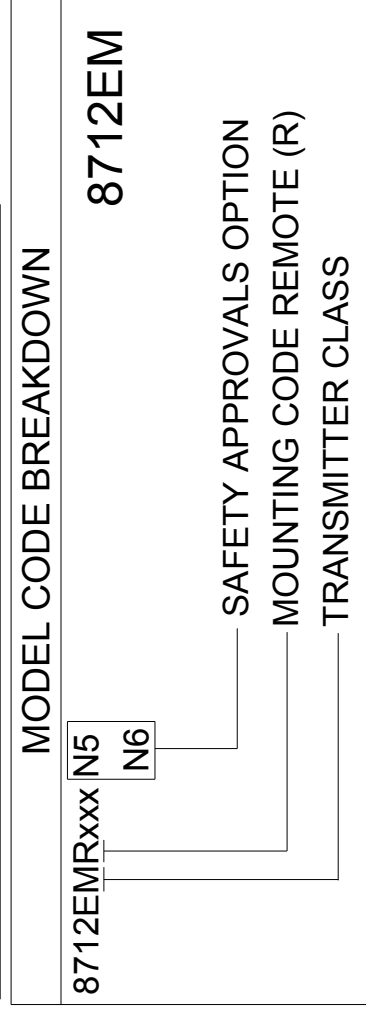
\*US - NEC ONLY

DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T5  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)

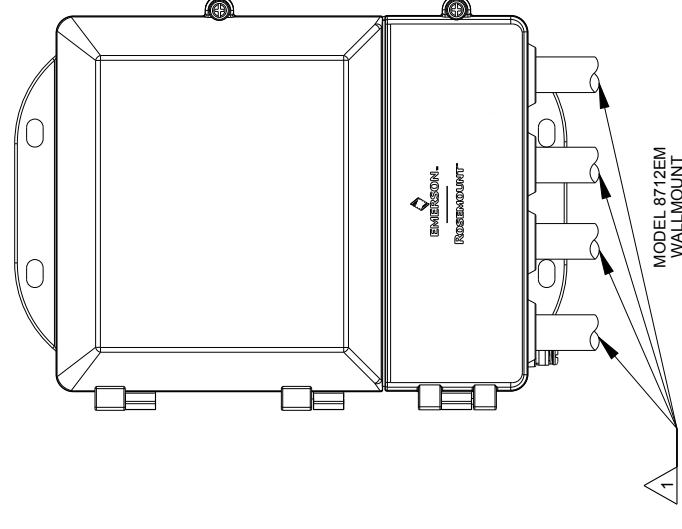


MODEL 8732EM  
REMOTE MOUNT  
N5, N6, K5, OR KU

MODEL 8712EM REMOTE MOUNT CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5' OR 'N6'

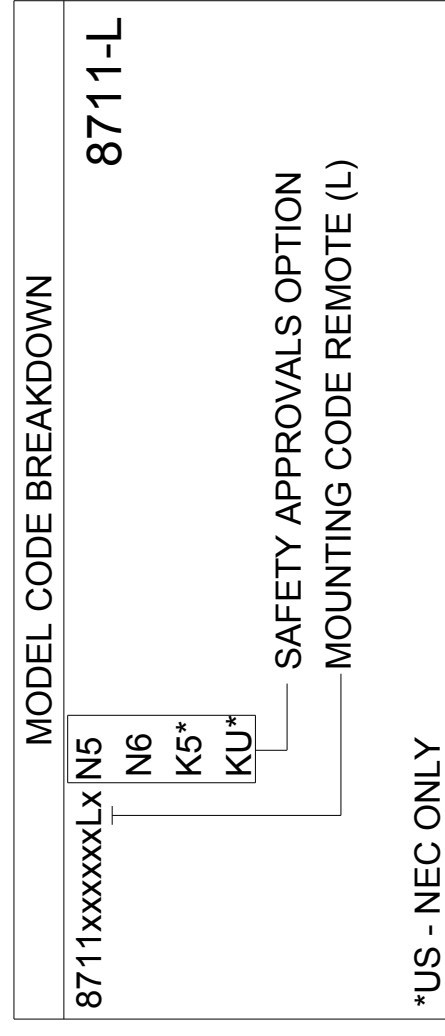


DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T5  
AMBIENT TEMPERATURE (-40°C ≤ Ta ≤ 60°C)



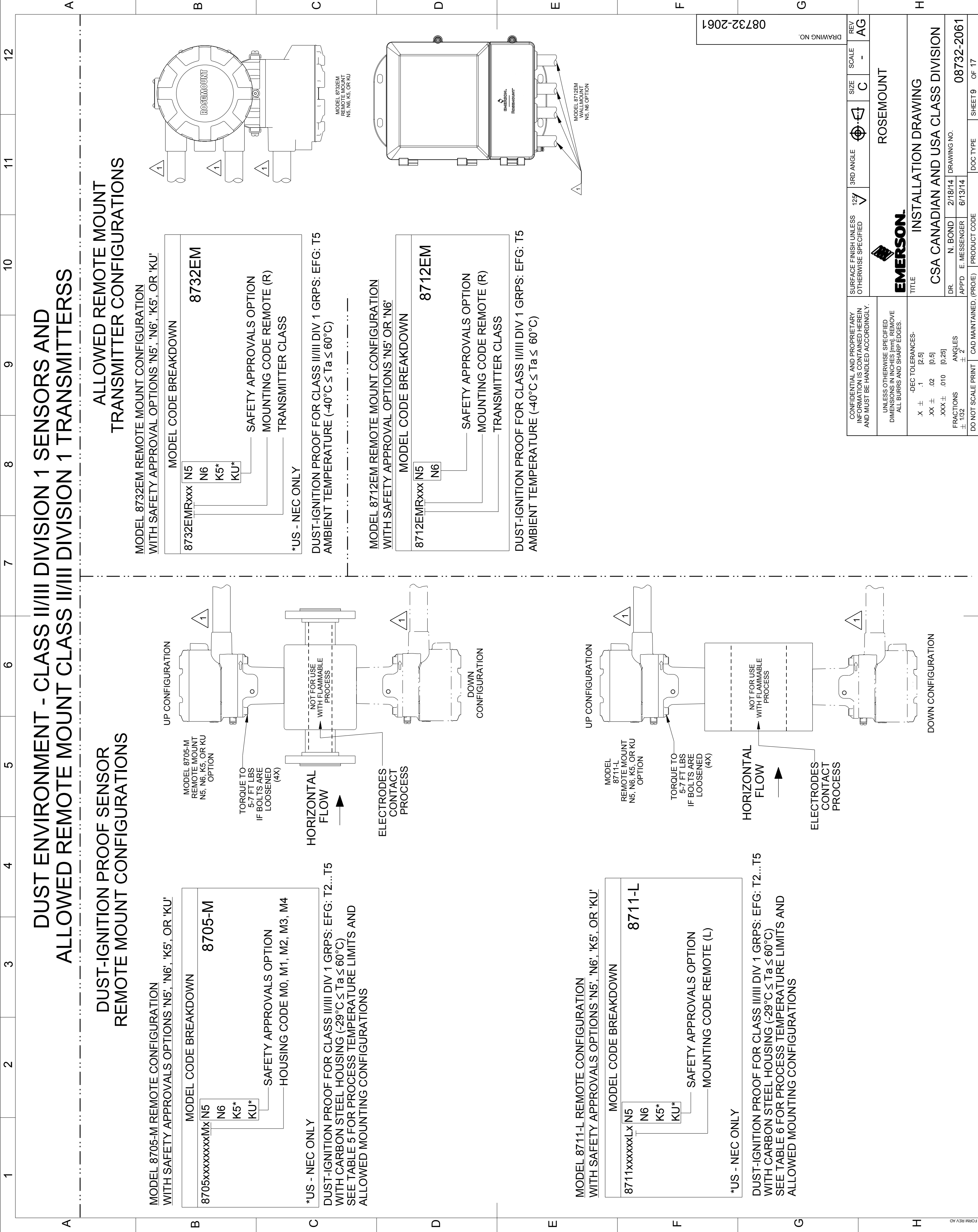
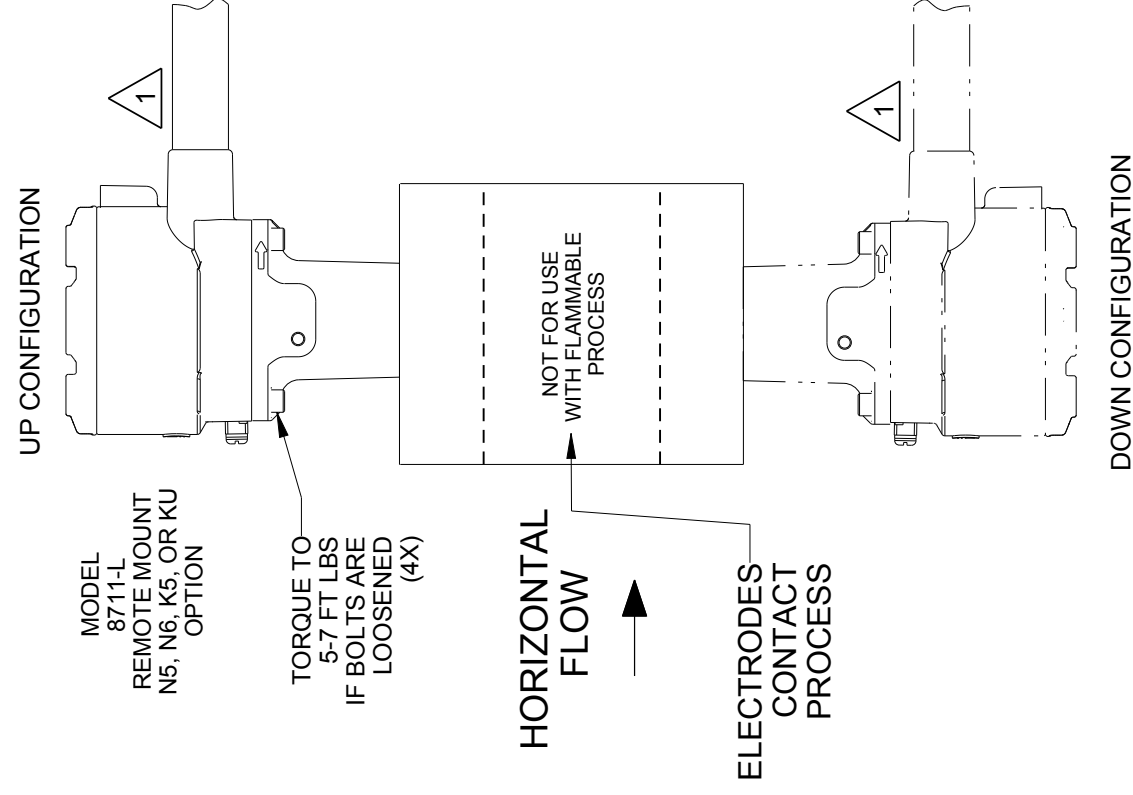
MODEL 8712EM  
WALL MOUNT  
REMOTE MOUNT  
N5, N6 OPTION

MODEL 8711-L REMOTE CONFIGURATION  
WITH SAFETY APPROVALS OPTIONS 'N5', 'N6', 'K5', OR 'KU'



\*US - NEC ONLY

DUST-IGNITION PROOF FOR CLASS II/III DIV 1 GRPS: EFG: T2...T5  
WITH CARBON STEEL HOUSING (-29°C ≤ Ta ≤ 60°C)  
SEE TABLE 6 FOR PROCESS TEMPERATURE LIMITS AND  
ALLOWED MOUNTING CONFIGURATIONS



CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.	SURFACE FINISH UNLESS OTHERWISE SPECIFIED	125	3RD ANGLE	SIZE	C	SCALE	-	REV	AG
	DRAWING NO. 08732-2061								
<b>EMERSON</b>									
TITLE <b>ROSEMOUNT</b>									
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.									
-DEC TOLERANCES-									
X ± .1 [2.5]									
.XX ± .02 [0.5]									
.XXX ± .010 [0.25]									
FRACTIONS ± 1/32 ANGLES ± 2'									
DO NOT SCALE PRINT	CAD MAINTAINED (PROE)	PRODUCT CODE	2/18/14	6/13/14	DR. N. BOND	APPD. E. MESSENGER	DRAWING NO. 08732-2061	SHEET9 OF 17	
INSTALLATION DRAWING CSA CANADIAN AND USA CLASS DIVISION									



# DUST ENVIRONMENT - CLASS II/III DIVISION 1 - SENSOR TEMPERATURE CODE VS. PROCESS TEMPERATURE LIMITS

TABLE 5

8705-M: DUST IGNITION-PROOF MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION				
Line Size	Maximum Allowable Process Temperature (°C)	Dust Temperature Code	Transmitter Mounting Configuration	
1/2"	60	T5	Integral/Remote	
	90	T4	Integral/Remote	
	120	T3	Integral/Remote	
	180	T2	Remote	
1"	60	T5	Integral/Remote	
	90	T4	Integral/Remote	
	120	T3	Integral/Remote	
	180	T2	Remote	
1.5"	60	T5	Integral/Remote	
	90	T4	Integral/Remote	
	105	T3	Integral/Remote	
	170	T2	Remote	
2"	60	T5	Integral/Remote	
	90	T4	Integral/Remote	
	105	T3	Integral/Remote	
	170	T2	Remote	
2.5"	60	T5	Integral/Remote	
	90	T4	Integral/Remote	
	105	T3	Integral/Remote	
	170	T2	Remote	
3"	60	T5	Integral/Remote	
	90	T4	Remote	
	115	T3	Remote	
	175	T2	Remote	
4"	60	T5	Integral/Remote	
	90	T4	Remote	
	115	T3	Remote	
	175	T2	Remote	
5"	60	T5	Integral/Remote	
	90	T4	Remote	
	115	T3	Remote	
	175	T2	Remote	
6"	60	T5	Integral/Remote	
	90	T4	Remote	
	120	T3	Remote	
	175	T2	Remote	
8-36"	60	T5	Integral/Remote	
	90	T4	Remote	
	120	T3	Remote	
	180	T2	Remote**	

\*\*LINE SIZES 8" AND GREATER WITH HORIZONTAL FLOW SHOULD BE MOUNTED WITH REMOTE JUNCTION BOX (RJB) DOWN OR TO THE SIDE

TABLE 6

8711-M/L: DUST IGNITION-PROOF MAXIMUM ALLOWABLE PROCESS TEMPERATURE VS. TEMPERATURE CODE AND TRANSMITTER MOUNTING CONFIGURATION				
Line Size	Maximum Allowable Process Temperature (°C)	Dust Temperature Code	Remote Junction Box Orientation	Transmitter Mounting Configuration
1.5"	60	T5	Any	Integral/Remote
	80	T4	Any	Remote
	100	T3	Any	Remote
	160	T2	Down Or To The Side Only	Remote
2"	60	T5	Any	Integral/Remote
	80	T4	Any	Remote
	100	T3	Any	Remote
	160	T2	Down Or To The Side Only	Remote
3"	60	T5	Any	Integral/Remote
	80	T4	Any	Remote
	110	T3	Any	Remote
	170	T2	Down Or To The Side Only	Remote
4"	60	T5	Any	Integral/Remote
	80	T6	Any	Remote
	115	T3	Any	Remote
	175	T2	Down Or To The Side Only	Remote
6"	60	T5	Any	Integral/Remote
	80	T4	Any	Remote
	115	T3	Any	Remote
	180	T2	Down Or To The Side Only	Remote
8"	60	T5	Any	Integral/Remote
	80	T4	Any	Remote
	115	T3	Any	Remote
	180	T2	Down Or To The Side Only	Remote

08732-2061

DRAWING NO.

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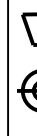
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-  
X ± .1 [2.5]  
.XX ± .02 [0.5]  
.XXX ± .010 [0.25]  
FRACTIONS ± 1/32 ANGLES ± 2'

SURFACE FINISH UNLESS OTHERWISE SPECIFIED



3RD ANGLE



SIZE

SCALE

REV



ROSEMOUNT

TITLE

INSTALLATION DRAWING

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061

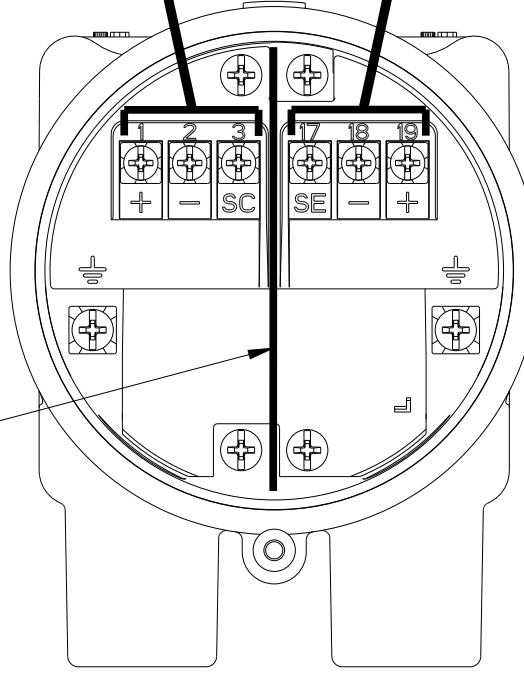
APPD. E. MESSENGER 6/13/14

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# GAS ENVIRONMENT-COIL AND ELECTRODE CIRCUIT WIRING

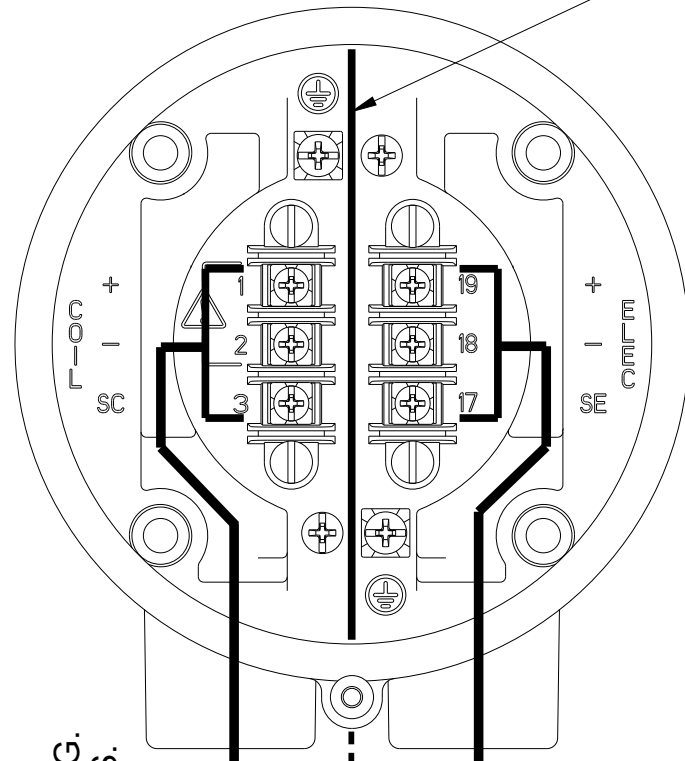
MODEL 8732EM WITH INTRINSICALLY SAFE ELECTRODE CIRCUIT FOR USE WITH 8705-M OR 8711-L WITH SAFETY APPROVAL OPTIONS N5, N6, K5, OR KU

COMPONENT CABLES ONLY. SEE TABLE BELOW FOR COMPATIBLE WIRING. SEE INSTALLATION WIRING DRAWING 08732-1504 FOR CABLING DETAILS. (FOR PROCESS TEMPERATURE LIMITS SEE TABLES 1-4)



DIVIDER REQUIRED FOR INTRINSIC SAFETY (Ex i)

8705-M OR 8711-L FLOWTUBE REMOTE JUNCTION BOX

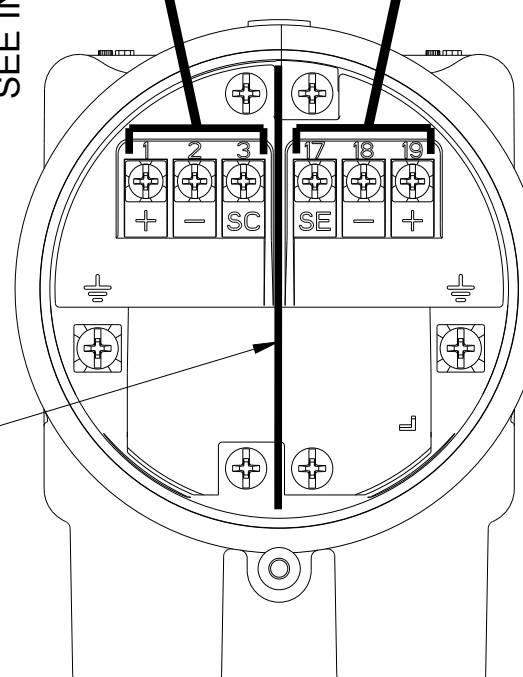


DIVIDER REQUIRED FOR INTRINSIC SAFETY

8732EM TRANSMITTER REMOTE JUNCTION BOX

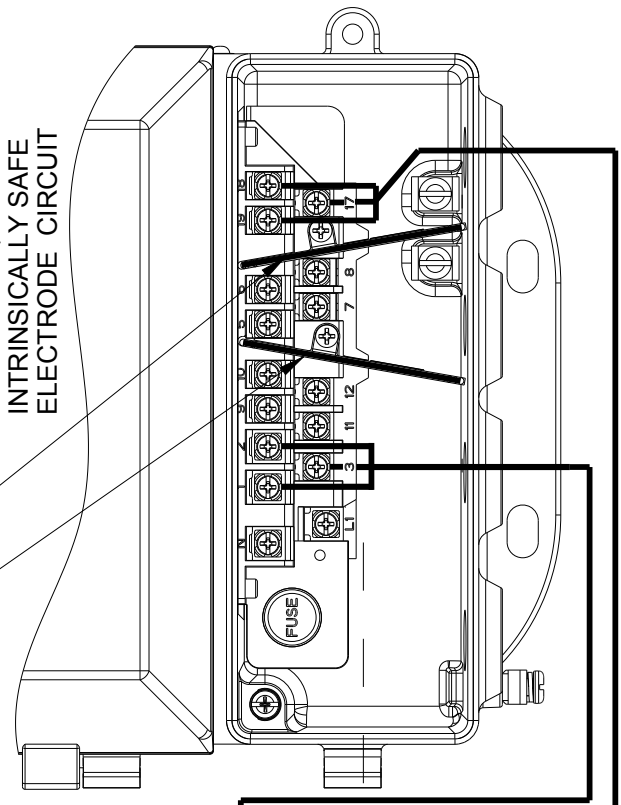
MODEL 8712EM WITH INTRINSICALLY SAFE ELECTRODE CIRCUIT FOR USE WITH 8705-M OR 8711-L WITH SAFETY APPROVAL OPTIONS N5, N6, K5, OR KU

COMPONENT CABLES ONLY. SEE TABLE BELOW FOR COMPATIBLE WIRING. SEE INSTALLATION WIRING DRAWING 08712-1504 FOR CABLING DETAILS. (FOR PROCESS TEMPERATURE LIMITS SEE TABLES 1-4)



DIVIDER REQUIRED FOR INTRINSIC SAFETY (Ex i)

8705-M OR 8711-L FLOWTUBE REMOTE JUNCTION BOX



8712EM TRANSMITTER (LOWER COVER AND SAFETY COVER ARE NOT SHOWN)

## SYSTEM APPROVAL FOR INTRINSICALLY SAFE ELECTRODE INSTALLATION

THE MODEL 8732EM, 8712EM, AND MODEL 8705-M OR MODEL 8711-L MAGNETIC FLOWMETER REFERENCING CONTROL DRAWING 08732-2061 MAY USE UP TO 500 FEET (150 METERS) OF ROSEMOUNT SUPPLIED ELECTRODE CABLING FOR INTERCONNECTION OF THE DEVICES. THE CORRECT CABLING IS SUPPLIED AS PART OF THE FOLLOWING ROSEMOUNT CABLING KITS:

ROSEMOUNT PART NO.	UNIT OF MEASURE	TEMPERATURE RANGE	SEE NOTE
08732-0065-0003	FEET	-20° C TO 75° C	11
08732-0065-0004	METERS	-20° C TO 75° C	
08732-0065-1003	FEET	-50° C TO 125° C	
08732-0065-1004	METERS	-50° C TO 125° C	

INDIVIDUAL OR REPLACEMENT INTRINSICALLY SAFE ELECTRODE COMPONENT CABLES:

ROSEMOUNT PART NO.	UNIT OF MEASURE	TEMPERATURE RANGE	SEE NOTE
08732-0061-0003	FEET	-20° C TO 75° C	11
08732-0061-0004	METERS	-20° C TO 75° C	
08732-0061-1003	FEET	-50° C TO 125° C	
08732-0061-1004	METERS	-50° C TO 125° C	

TERMINALS 19, 18, AND 17 CONTAIN TWO CHANNELS OF AN INTRINSICALLY SAFE CIRCUIT WITH A COMMON RETURN. ENTITY PARAMETERS SHOWN BELOW ARE THE SUMMATION OF BOTH CHANNELS.

TRANSMITTER ENTITY PARAMETERS  
MODEL 8732EM AND 8712EM  
INTRINSICALLY SAFE ELECTRODE CIRCUIT  
REMOTE JUNCTION BOX TERMINALS 19, 18, 17  
 $U_o = 28.56V$   
 $I_o = 5.77mA$   
 $P_o = 165mW$   
 $C_o = 61.7nF$   
 $L_o = 1.0H$

FLOW TUBE ENTITY PARAMETERS  
MODEL 8705-M, 8711-L  
INTRINSICALLY SAFE ELECTRODE CIRCUIT  
REMOTE JUNCTION BOX TERMINALS 19, 18, 17  
 $U_i = 30V$   
 $I_i = 50mA$   
 $P_i = 1.0W$   
 $C_i = 1.9nF$   
 $L_i = 630\mu H$

THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF ASSOCIATED APPARATUS AND INTRINSICALLY SAFE APPARATUS WHEN THE FOLLOWING IS TRUE:  
 $U_o \leq U_i$ ;  $I_o \leq I_i$ ;  $P_o \leq P_i$ ;  $C_o \geq C_i + C_{cable}$ ;  $L_o \geq L_i + L_{cable}$

THE ALLOWED CAPACITANCE,  $C_o$  IS SHARED BETWEEN THE CIRCUITS OF TERMINALS 19, 18, AND 17. CABLE CAPACITANCE MUST BE ASSESSED AS TWICE THE MEASURED VALUE PER LENGTH OF CABLE.

EXAMPLE 1: THE HIGHEST MEASURED CAPACITANCE OF A 3 CONDUCTOR, SHIELDED CABLE IS .58pF/ft WHEN MEASURED CONDUCTOR TO CONDUCTOR TIED TO SHIELD.

$C_{cable} = 2 \times .58pF/ft \times \text{FEET OF CABLE}$   
 $C_i + C_{cable} < C_o$   
CABLE LENGTH MUST BE UNDER 515 FEET

ENTITY CONCEPT FOR INTRINSICALLY SAFE ELECTRODE INSTALLATION

TERMINAL	LABEL
19	ELECTRODE +
18	ELECTRODE -
17	ELECTRODE REFERENCE (SE)
1	NON-INTRINSICALLY SAFE COIL CIRCUIT
2	COIL +
3	COIL SHIELD (SC)

TERMINAL	LABEL
19	ELECTRODE +
18	ELECTRODE -
17	ELECTRODE REFERENCE (SE)
1	NON-INTRINSICALLY SAFE COIL CIRCUIT
2	COIL +
3	COIL SHIELD (SC)

EMERSON  
TITLE: INSTALLATION DRAWING  
ROSEMOUNT  
CSA CANADIAN AND USA CLASS DIVISION  
08732-2061

08732-2061  
DRAWING NO.

AG  
SCALE: -  
SIZE: C  
3RD ANGLE

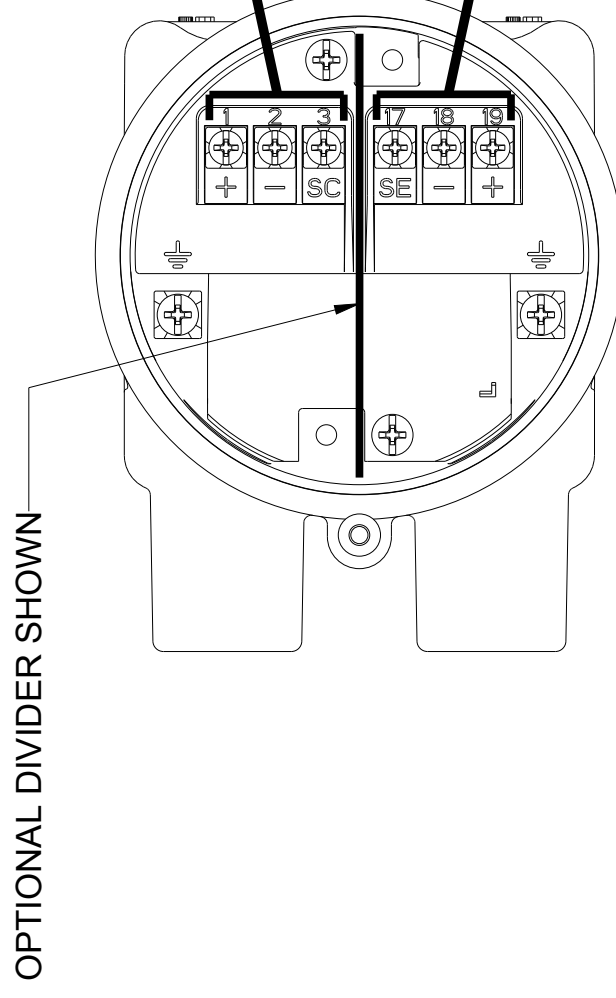
CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.  
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.  
-DEC TOLERANCES-  
X ± .1 (2.5)  
.XX ± .02 (0.5)  
.XXX ± .010 (0.25)  
FRACTIONS ± 1/32 ANGLES ± 2'

DO NOT SCALE PRINT | CAD MAINTAINED. (PROJ) | PRODUCT CODE | DOC TYPE | SHEET 11 OF 17

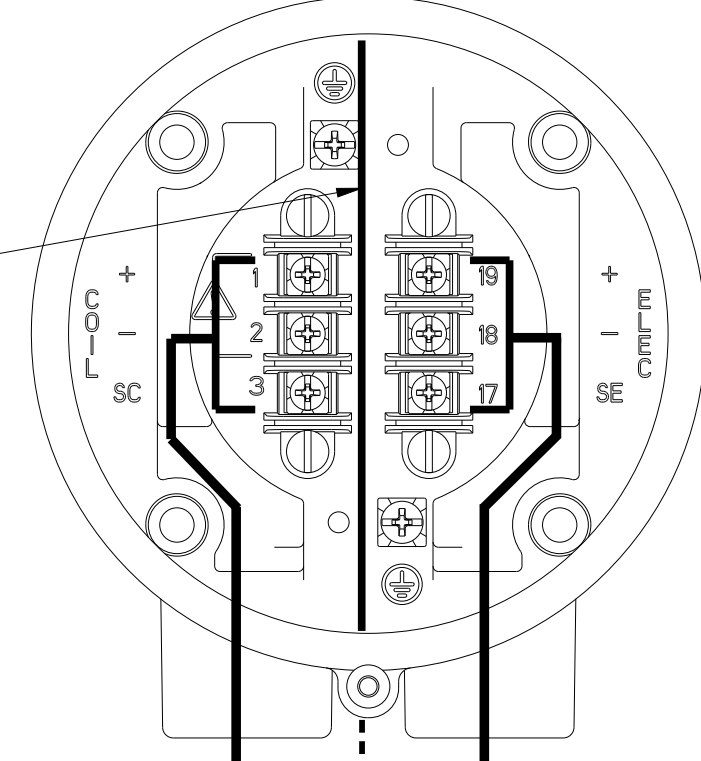
# DUST ENVIRONMENT- COIL AND ELECTRODE CIRCUIT WIRING

MODEL 8732EM WITH NON-INTRINSICALLY SAFE ELECTRODE CIRCUIT FOR USE WITH MODEL 8705-M OR 8711-L WITH SAFETY APPROVAL OPTIOND 'N5', 'N6', 'K5', OR 'KU'

COMPONENT OR COMBINATION COIL/ELECTRODE CABLE ALLOWED.  
SEE INSTALLATION WIRING DRAWING 08732-1504 FOR NON-INTRINSICALLY SAFE CABLING  
(FOR PROCESS TEMPERATURE LIMITS SEE TABLES 5 AND 6)



8705-M OR 8711-L FLOWTUBE  
REMOTE JUNCTION BOX



8732EM TRANSMITTER  
REMOTE JUNCTION BOX

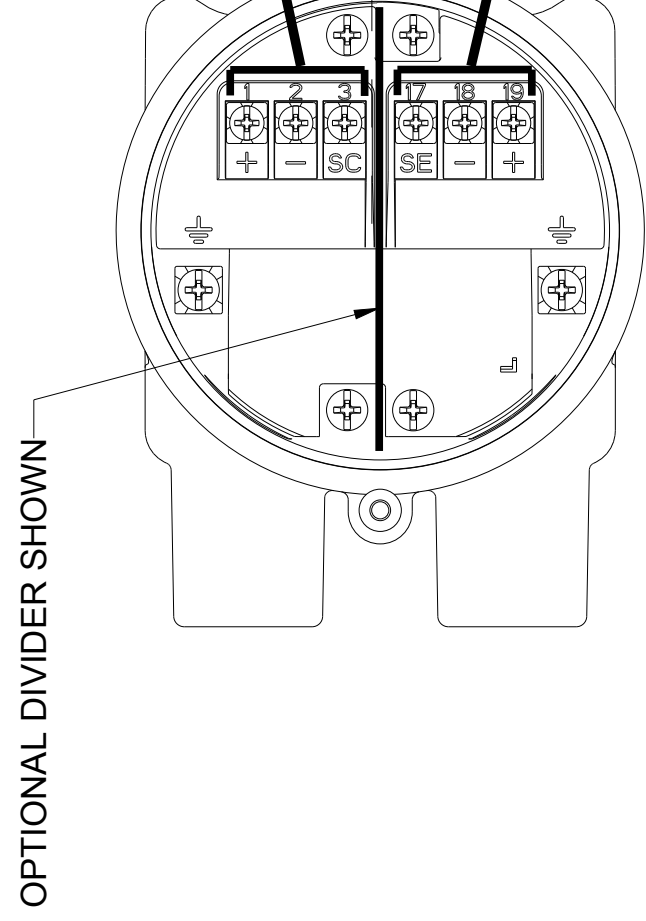
NON-INTRINSICALLY SAFE COIL CIRCUIT  
INSTALL USING CLASS II/III WIRING  
METHODS APPROPRIATE TO THE AREA DEVICE  
IS INSTALLED IN

FOR USE WITH NON-FLAMMABLE PROCESS ONLY.  
INSTALL ELECTRODE CIRCUIT AS NON-INTRINSICALLY SAFE  
USING CLASS II/III WIRING METHODS APPROPRIATE  
TO THE AREA DEVICE IS INSTALLED IN.

TERMINAL	LABEL
NON-INTRINSICALLY SAFE ELECTRODE CIRCUIT	
19	ELECTRODE +
18	ELECTRODE -
17	ELECTRODE REFERENCE (SE)
NON-INTRINSICALLY SAFE COIL CIRCUIT	
1	COIL +
2	COIL -
3	COIL SHIELD (SC)

MODEL 8712EM WITH NON-INTRINSICALLY SAFE ELECTRODE CIRCUIT FOR USE WITH MODEL 8705-M OR 8711-L WITH SAFETY APPROVAL OPTIONS 'N5', 'N6', 'K5', OR 'KU'

COMPONENT OR COMBINATION COIL/ELECTRODE CABLE ALLOWED.  
SEE INSTALLATION WIRING DRAWING 08712-1504 FOR NON-INTRINSICALLY SAFE CABLING  
(FOR PROCESS TEMPERATURE LIMITS SEE TABLES 5 AND 6)



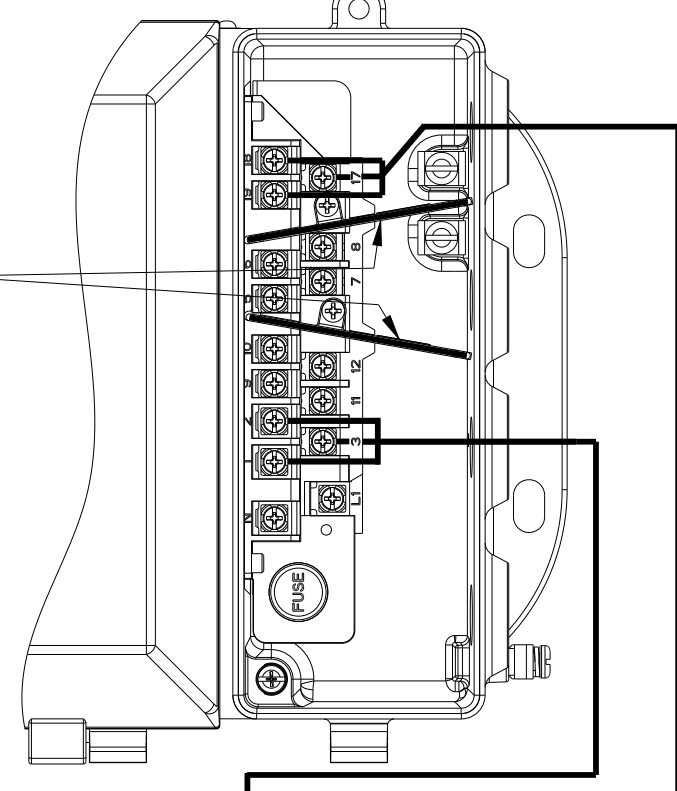
8705-M OR 8711-L FLOWTUBE  
REMOTE JUNCTION BOX

NON-INTRINSICALLY SAFE COIL CIRCUIT  
INSTALL USING CLASS II/III WIRING  
METHODS APPROPRIATE TO THE AREA DEVICE  
IS INSTALLED IN

FOR USE WITH NON-FLAMMABLE PROCESS ONLY.  
INSTALL ELECTRODE CIRCUIT AS NON-INTRINSICALLY SAFE  
USING CLASS II/III WIRING METHODS APPROPRIATE  
TO THE AREA DEVICE IS INSTALLED IN.

TERMINAL	LABEL
NON-INTRINSICALLY SAFE ELECTRODE CIRCUIT	
19	ELECTRODE +
18	ELECTRODE -
17	ELECTRODE REFERENCE (SE)
NON-INTRINSICALLY SAFE COIL CIRCUIT	
1	COIL +
2	COIL -
3	COIL SHIELD (SC)

OPTIONAL  
DIVIDERS SHOWN



8712EM TRANSMITTER  
(LOWER COVER AND SAFETY COVER ARE NOT SHOWN)

CONFIDENTIAL AND PROPRIETARY  
INFORMATION IS CONTAINED HEREIN  
AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS IN INCHES (mm). REMOVE  
ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-  
X ± .1 [2.5]  
.XX ± .02 [0.5]  
.XXX ± .010 [0.25]  
FRACTIONS ± 1/32 ANGLES ± 2°

SURFACE FINISH UNLESS OTHERWISE SPECIFIED 125 ✓ 3RD ANGLE 125 ✓ SIZE C SCALE - REV AG

**EMERSON**

ROSEMOUNT

TITLE  
INSTALLATION DRAWING  
CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPD. E. MESSENGER 6/13/14

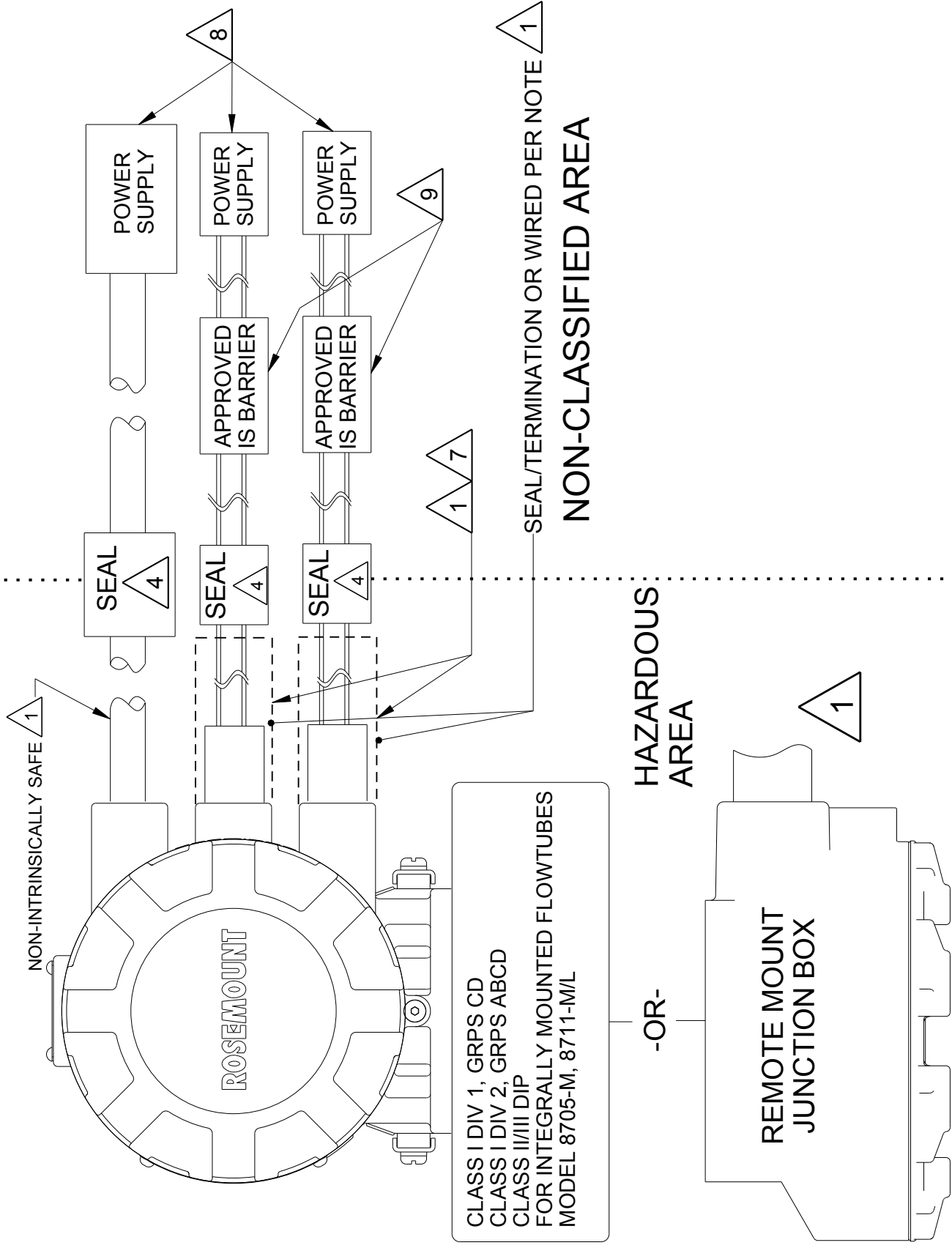
DO NOT SCALE PRINT CAD MAINTAINED (PROE) PRODUCT CODE SHEET 12 OF 17

08732-2061  
DRAWING NO.

# GAS ENVIRONMENT - OUTPUT WIRING

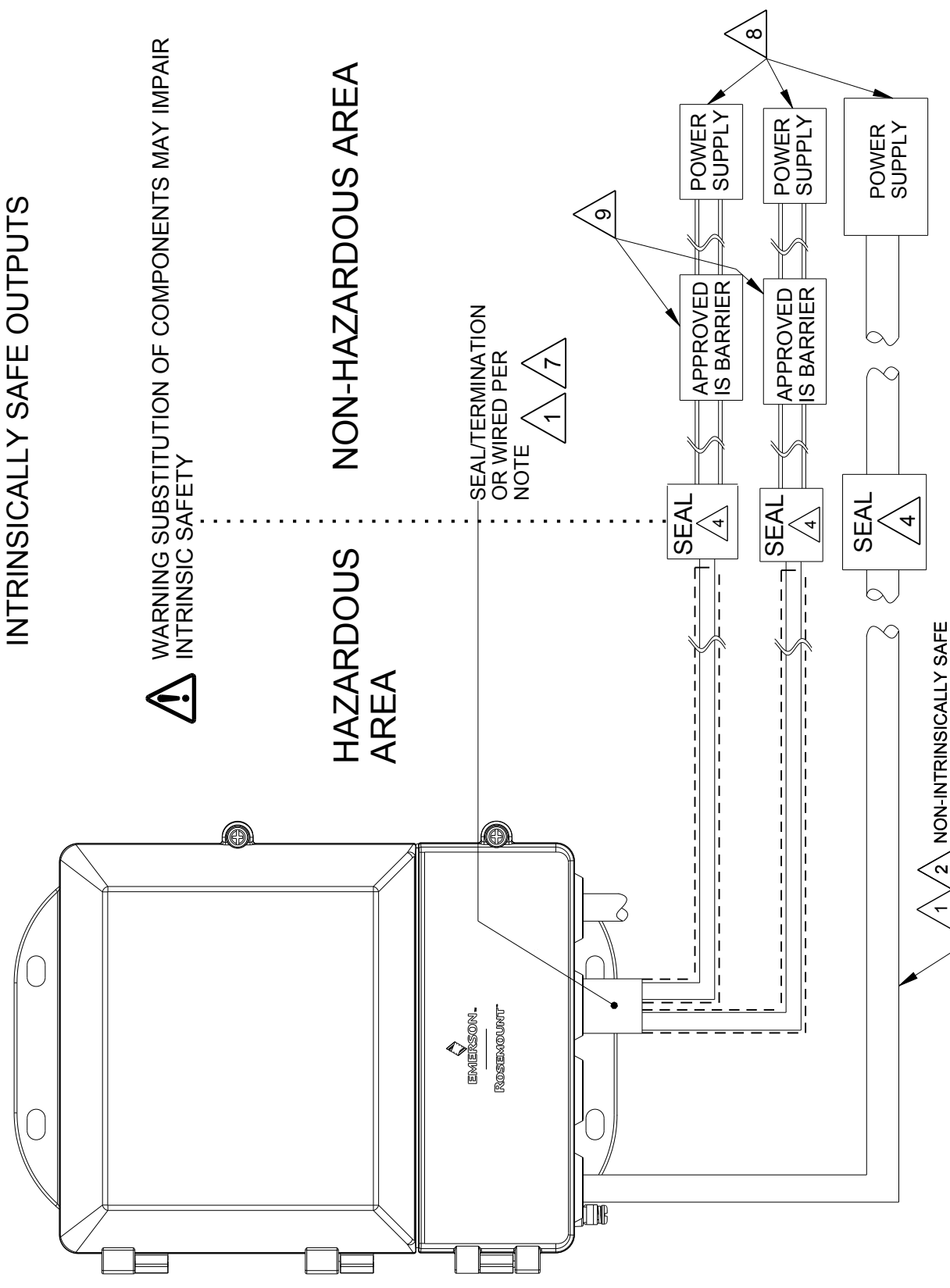
**HAZARDOUS (CLASSIFIED) LOCATION CONFIGURATION  
INTRINSICALLY SAFE OUTPUTS**

**WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY**



**HAZARDOUS LOCATION CONFIGURATION  
INTRINSICALLY SAFE OUTPUTS**

**WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR  
INTRINSIC SAFETY**



8732EMxxxX N5  
B N6  
F K5\*  
M KU\*P

SAFETY APPROVALS

- A NON-INTRINSICALLY SAFE 4-20 mA
- B INTRINSICALLY SAFE 4-20mA AND PULSE OUTPUT
- F INTRINSICALLY SAFE FOUNDATION FIELDBUS AND PULSE OUTPUT
- M NON-INTRINSICALLY SAFE MODBUS AND PULSE OUTPUT
- P INTRINSICALLY SAFE PROFIBUS AND PULSE OUTPUT

TRANSMITTER CLASS

\*US - NEC ONLY

8712EMxxxX N5  
B N6  
F M  
P

SAFETY APPROVALS

- A NON-INTRINSICALLY SAFE 4-20 mA
- B INTRINSICALLY SAFE 4-20mA AND PULSE OUTPUT
- F INTRINSICALLY SAFE FOUNDATION FIELDBUS AND PULSE OUTPUT
- M NON-INTRINSICALLY SAFE MODBUS AND PULSE OUTPUT
- P INTRINSICALLY SAFE PROFIBUS AND PULSE OUTPUT

TRANSMITTER CLASS

WHEN CONNECTED IN ACCORDANCE WITH THIS DOCUMENT, THE ROSEMOUNT MODEL 8712EM OR 8732EM WITH INTEGRAL MOUNT FLOWTUBE OR REMOTE-MOUNT JUNCTION BOX IS CSA APPROVED AS:

8732EM SAFETY APPROVAL OPTIONS CODE	RATINGS
K5 & KU [US-NEC ONLY]	EXPLOSION-PROOF FOR USE IN CLASS I, DIVISION 1, GROUPS CD; T6
K5 & KU WITH OUTPUT CODE 'B' OR 'F' OR 'P' [US-NEC ONLY]	EXPLOSION-PROOF FOR USE IN CLASS I, DIVISION 1, GROUPS CD; T6 WITH INTRINSICALLY SAFE CONNECTIONS FOR CLASS I, II, III, DIVISION 1, GROUPS ABCDEFG HAZARDOUS LOCATIONS
N5 & N6	NON-INCENDIVE FOR USE IN CLASS 1, DIVISION 2, GROUPS ABCD; T4
N5 & N6 WITH OUTPUT CODE 'B' OR 'F' OR 'P'	NON-INCENDIVE FOR USE IN CLASS 1, DIVISION 2, GROUPS ABCD; T4 WITH INTRINSICALLY SAFE CONNECTIONS FOR CLASS I, II, III, DIVISION 1, GROUPS ABCDEFG HAZARDOUS LOCATIONS
N5, N6, K5*, OR KU* *US - NEC ONLY	DUST-IGNITION PROOF FOR CLASS II/III DIV1 GRPS: EFG; T5
N5, N6, K5*, OR KU* WITH OUTPUT CODE 'B' OR 'F' OR 'P' *US - NEC ONLY	DUST-IGNITION PROOF FOR CLASS II/III DIV1 GRPS: EFG; T5 WITH INTRINSICALLY SAFE OUTPUTS

CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-  
X ± .1 [2.5]  
.XX ± .02 [0.5]  
.XXX ± .010 [0.25]  
FRACTIONS ± 1/32 ANGLES ± 2°

SURFACE FINISH UNLESS OTHERWISE SPECIFIED

125° 3RD ANGLE

SIZE C

SCALE -

REV AG



ROSEMOUNT

TITLE  
**INSTALLATION DRAWING**

**CSA CANADIAN AND USA CLASS DIVISION**

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061

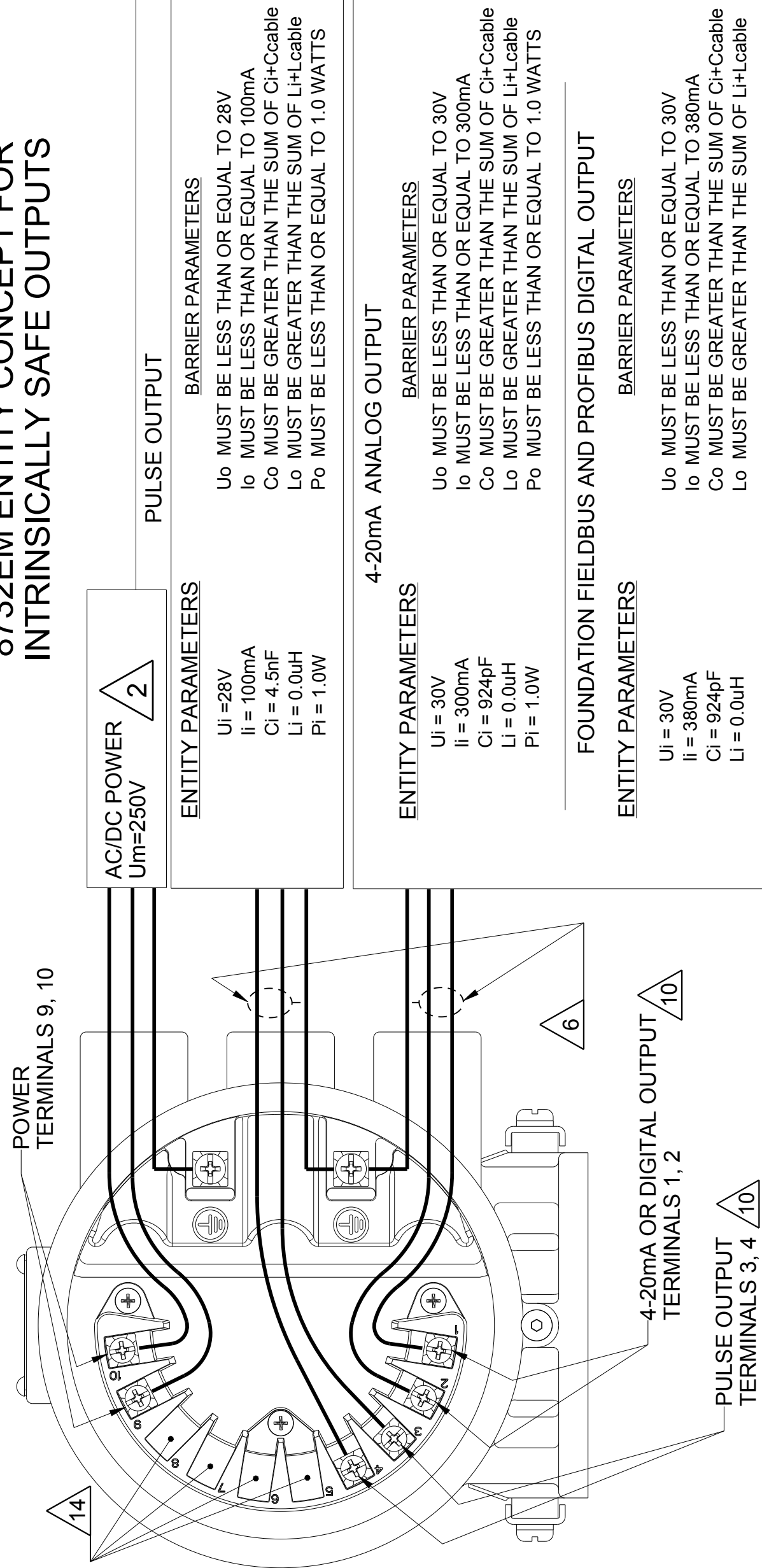
APPD. E. MESSENGER 6/13/14

DO NOT SCALE PRINT CAD MAINTAINED (PROJ) PRODUCT CODE SHEET 13 OF 17

DRAWING NO. 08732-2061

# GAS ENVIRONMENT - INTRINSICALLY SAFE ENTITY CONCEPTS

## 8732EM ENTITY CONCEPT FOR INTRINSICALLY SAFE OUTPUTS



**DEFINITIONS:**

- U<sub>i</sub> = MAXIMUM INPUT VOLTAGE
- I<sub>i</sub> = MAXIMUM INPUT CURRENT
- C<sub>i</sub> = MAXIMUM INTERNAL CAPACITANCE
- L<sub>i</sub> = MAXIMUM INTERNAL INDUCTANCE
- P<sub>i</sub> = MAXIMUM INPUT POWER
- U<sub>o</sub> = OPEN CIRCUIT VOLTAGE OF THE BARRIER
- I<sub>o</sub> = SHORT CIRCUIT CURRENT OF THE BARRIER
- C<sub>o</sub> = MAXIMUM ALLOWED CAPACITANCE
- L<sub>o</sub> = MAXIMUM ALLOWED INDUCTANCE
- P<sub>o</sub> = MAXIMUM OUTPUT POWER

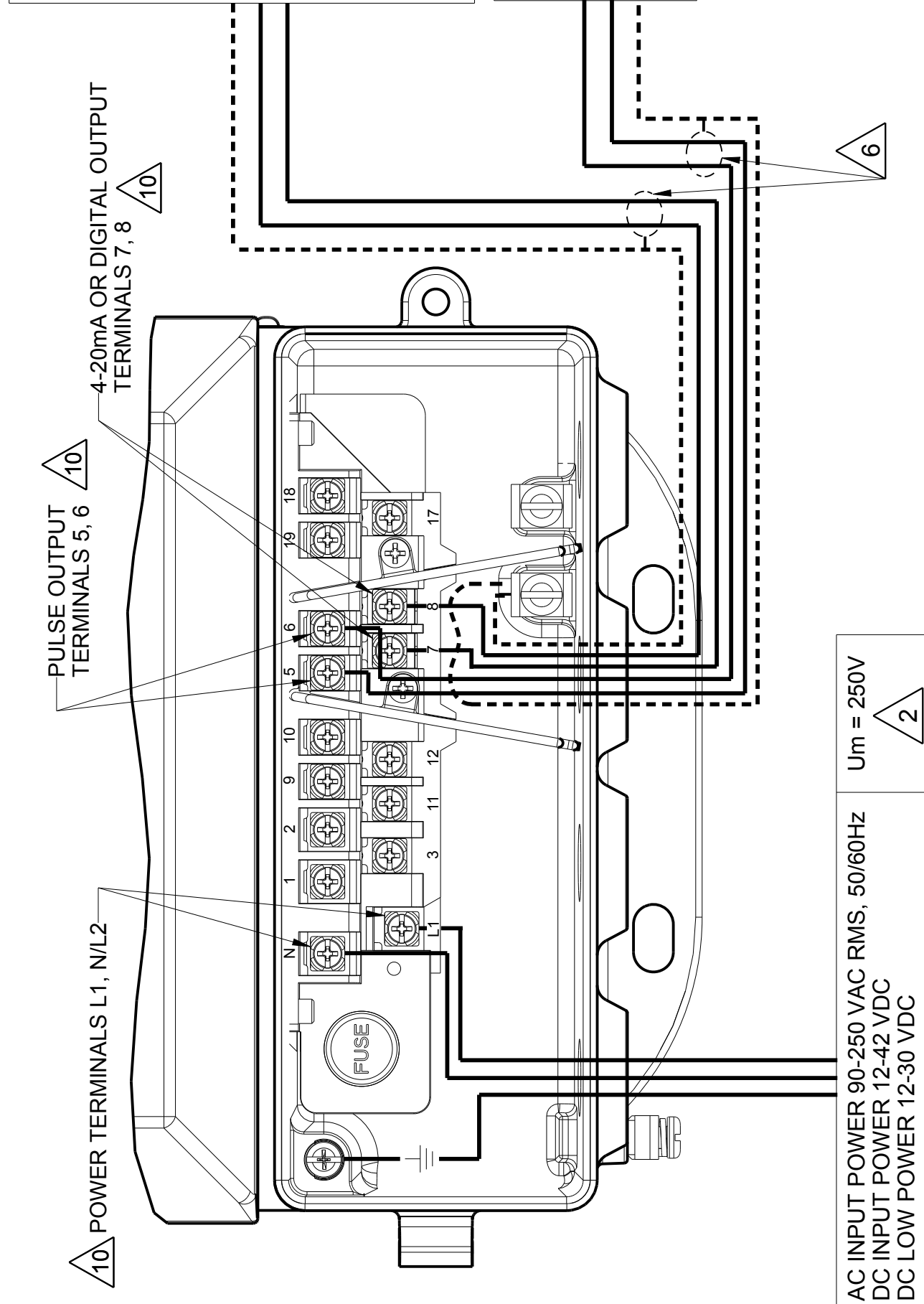
THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF ASSOCIATED APPARATUS AND INTRINSICALLY SAFE APPARATUS WHEN THE FOLLOWING IS TRUE:

$$U_o \leq U_i, I_o \leq I_i, P_o \leq P_i, C_o \geq C_i + C_{cable}, L_o \geq L_i + L_{cable}$$

ASSOCIATED APPARATUS MUST BE CSA APPROVED, AND FOLLOW MANUFACTURER'S INSTALLATION DRAWINGS. TO MAINTAIN THE INTRINSICALLY SAFE OUTPUT THE MODEL 8732EM MUST BE CONNECTED TO AN CSA APPROVED BARRIER THAT SATISFIES THE FOLLOWING CONDITIONS.

APPROVED WITH INTRINSICALLY SAFE CONNECTIONS FOR CLASS I, DIVISION 1, GROUPS ABCD; CLASS II AND III, DIVISION 1, GROUPS EFG.

## 8712EM ENTITY CONCEPT FOR INTRINSICALLY SAFE OUTPUTS



### 4-20mA ANALOG OUTPUT

**ENTITY PARAMETERS**

- U<sub>i</sub> = 30V
- I<sub>i</sub> = 300mA
- C<sub>i</sub> = 924pF
- L<sub>i</sub> = 0.0uH
- P<sub>i</sub> = 1.0W

**FOUNDATION FIELDBUS AND PROFIBUS DIGITAL OUTPUT**

**ENTITY PARAMETERS**

- U<sub>i</sub> = 30V
- I<sub>i</sub> = 380mA
- C<sub>i</sub> = 924pF
- L<sub>i</sub> = 0.0uH

### PULSE OUTPUT

**ENTITY PARAMETERS**

- U<sub>i</sub> = 28V
- I<sub>i</sub> = 100mA
- C<sub>i</sub> = 4.5nF
- L<sub>i</sub> = 0.0uH
- P<sub>i</sub> = 1.0W

**BARRIER PARAMETERS**

- U<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 30V
- I<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 300mA
- C<sub>o</sub> MUST BE GREATER THAN THE SUM OF C<sub>i</sub>+C<sub>cable</sub>
- L<sub>o</sub> MUST BE GREATER THAN THE SUM OF L<sub>i</sub>+L<sub>cable</sub>
- P<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 1.0 WATTS

**BARRIER PARAMETERS**

- U<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 30V
- I<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 380mA
- C<sub>o</sub> MUST BE GREATER THAN THE SUM OF C<sub>i</sub>+C<sub>cable</sub>
- L<sub>o</sub> MUST BE GREATER THAN THE SUM OF L<sub>i</sub>+L<sub>cable</sub>

**BARRIER PARAMETERS**

- U<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 28V
- I<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 100mA
- C<sub>o</sub> MUST BE GREATER THAN THE SUM OF C<sub>i</sub>+C<sub>cable</sub>
- L<sub>o</sub> MUST BE GREATER THAN THE SUM OF L<sub>i</sub>+L<sub>cable</sub>
- P<sub>o</sub> MUST BE LESS THAN OR EQUAL TO 1.0 WATTS

AC INPUT POWER 90-250 VAC RMS, 50/60HZ  
 DC INPUT POWER 12-42 VDC  
 DC LOW POWER 12-30 VDC

Um = 250V

CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.		SURFACE FINISH UNLESS OTHERWISE SPECIFIED		125	3RD ANGLE	SIZE	SCALE	REV	
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.		X ± .1 [2.5]		.XX ± .02 [0.5]	.XXX ± .010 [0.25]	FRACTIONS ± 1/32	ANGLES ± 2'	AG	
EMERSON		ROSEMOUNT		TITLE		INSTALLATION DRAWING		08732-2061	
EMERSON		ROSEMOUNT		TITLE		INSTALLATION DRAWING		08732-2061	
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.		X ± .1 [2.5]		.XX ± .02 [0.5]		.XXX ± .010 [0.25]		FRACTIONS ± 1/32	
DO NOT SCALE PRINT		CAD MAINTAINED (PROE)		PRODUCT CODE		DRAWING NO.		SHEET 14 OF 17	
DO NOT SCALE PRINT		CAD MAINTAINED (PROE)		PRODUCT CODE		DRAWING NO.		SHEET 14 OF 17	
DO NOT SCALE PRINT		CAD MAINTAINED (PROE)		PRODUCT CODE		DRAWING NO.		SHEET 14 OF 17	

# GAS ENVIRONMENT - FISCO CONCEPT

## FISCO CONCEPT

THE FISCO CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS NOT SPECIALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE ( $V_{max}$ ), THE CURRENT ( $I_{max}$ ), AND THE POWER ( $P_{max}$ ) WHICH AN INTRINSICALLY SAFE APPARATUS CAN RECEIVE AND REMAIN INTRINSICALLY SAFE CONSIDERING FAULTS, MUST BE EQUAL OR GREATER THAN VOLTAGE ( $V_{oc}$ ), AND CURRENT ( $I_{sc}$ ) WHICH CAN BE DELIVERED BY THE ASSOCIATED APPARATUS, CONSIDERING FAULTS AND APPLICABLE FACTORS. IN ADDITION, THE MAXIMUM UNPROTECTED CAPACITANCE ( $C_i$ ) AND THE INDUCTANCE ( $L_i$ ) OF EACH APPARATUS (OTHER THAN THE TERMINATION) CONNECTED TO THE FIELDBUS MUST BE LESS THAN OR EQUAL TO 5 nF AND 10  $\mu$ H RESPECTIVELY.

IN EACH SEGMENT ONLY ONE ACTIVE DEVICE, NORMALLY THE ASSOCIATED APPARATUS, IS ALLOWED TO PROVIDE THE NECESSARY ENERGY FOR THE FIELDBUS SYSTEM. THE VOLTAGE ( $V_{oc}$ ) OF THE ASSOCIATED APPARATUS IS LIMITED TO A RANGE OF 14 TO 17.5 VDC. ALL OTHER EQUIPMENT CONNECTED TO THE BUS CABLE HAS TO BE PASSIVE, MEANING THAT THEY ARE NOT ALLOWED TO PROVIDE ENERGY TO THE SYSTEM, EXCEPT A LEAKAGE CURRENT OF 50  $\mu$ A FOR EACH CONNECTED DEVICE. SEPARATELY POWERED EQUIPMENT NEEDS GALVANIC ISOLATION TO ASSURE THAT THE INTRINSICALLY SAFE FIELDBUS CIRCUIT REMAINS PASSIVE.

THE CABLE USED TO INTERCONNECT DEVICES NEEDS TO HAVE THE PARAMETERS IN THE FOLLOWING RANGE:

Loop Resistance $R_c$ :	15.....150 Ohm/km
Inductance per unit length $L_c$ :	0.4.....1 mH/km
Capacitance per unit length $C_c$ :	45.....200 nF
Length of trunk cable:	less than or equal to 1000m
Length of spur cable:	less than or equal to 60m

AT EACH END OF THE TRUNK CABLE AN APPROVED INFALLIBLE LINE TERMINATION WITH THE FOLLOWING PARAMETERS IS SUITABLE.

$$R = 90 \dots 102 \text{ Ohm} \quad C = 0 \dots 2.2 \text{ } \mu\text{f}$$

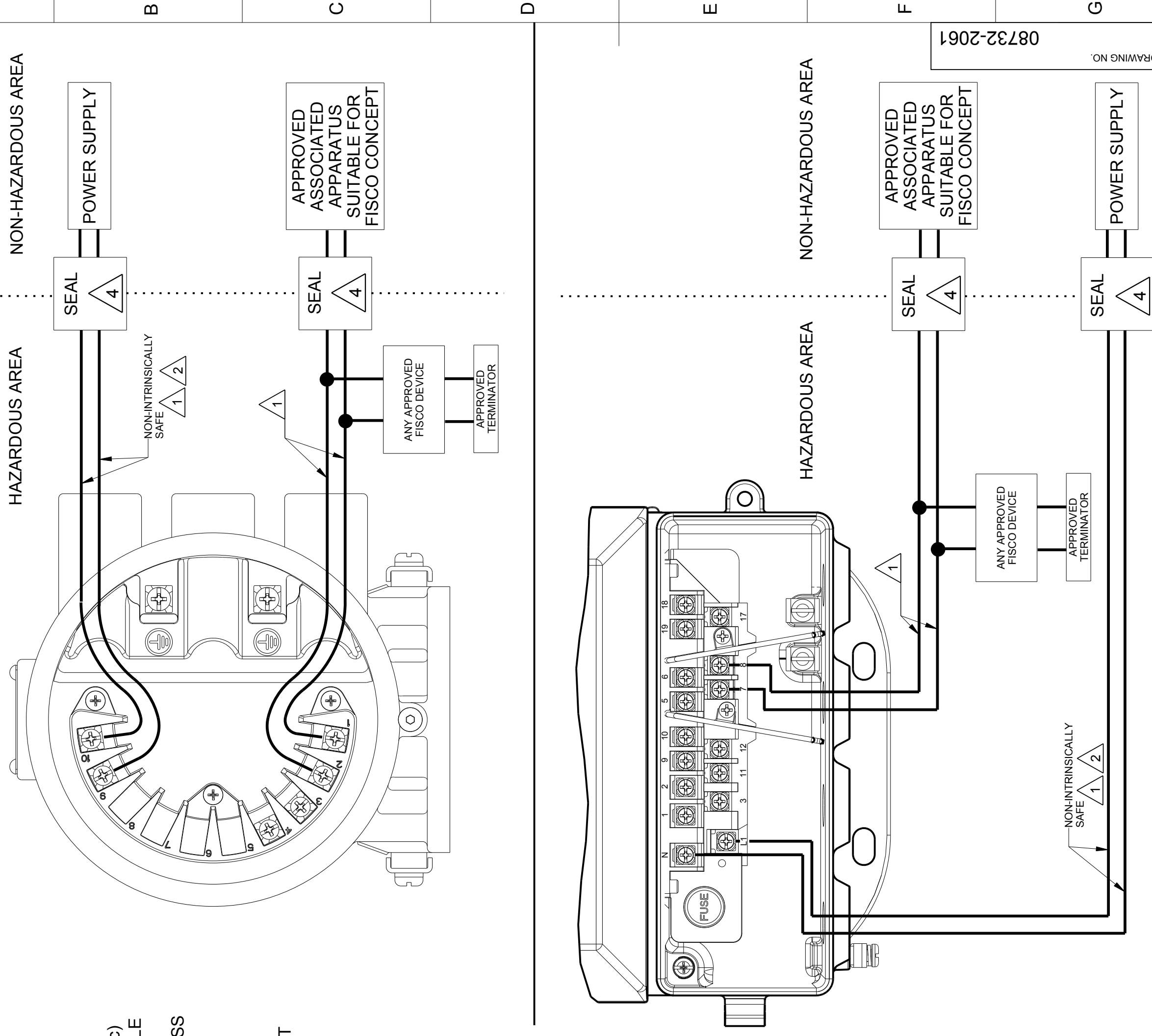
ONE OF THE ALLOWED TERMINATIONS MIGHT ALREADY BE INTEGRATED IN THE ASSOCIATED APPARATUS. THE NUMBER OF PASSIVE APPARATUS CONNECTED TO THE BUS SEGMENT IS NOT LIMITED TO I.S. REASONS. IF THE ABOVE RULES ARE RESPECTED, UP TO A TOTAL LENGTH OF 1000 m (SUM OF TRUNK AND ALL SPUR CABLES) OF CABLE IS PERMITTED. THE INDUCTANCE AND THE CAPACITANCE OF THE CABLE WILL NOT IMPAIR THE INTRINSIC SAFETY OF THE INSTALLATION.

### ENTITY PARAMETER

$U_i = 30V$   
 $I_i = 380 \text{ mA}$   
 $C_i = 924 \text{ pF}$   
 $L_i = 0.0 \text{ } \mu\text{H}$   
 $P_i = 5.32 \text{ W}$

### BARRIER PARAMETERS

$U_o$  MUST BE LESS THAN OR EQUAL TO 30V  
 $I_o$  MUST BE LESS THAN OR EQUAL TO 380 mA  
 $C_o$  MUST BE GREATER THAN THE SUM OF  $C_i + C_{cable}$   
 $L_o$  MUST BE GREATER THAN THE SUM OF  $L_i + L_{cable}$



CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-	
X ± .1	[2.5]
.XX ± .02	[0.5]
.XXX ± .010	[0.25]
FRACTIONS ± 1/32	ANGLES ± 2°



TITLE  
**INSTALLATION DRAWING**

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
 APPE. MESSENGER 6/13/14

SURFACE FINISH UNLESS OTHERWISE SPECIFIED 125° 3RD ANGLE  
 SCALE C -  
 REV AG

ROSEMOUNT

# GAS AND DUST ENVIRONMENT - FM TO CSA COMPATIBILITY

## REPLACEMENT OF FM MARKED 8732EM TRANSMITTERS WITH EQUIVALENT CSA MODEL CODE

ORIGINAL MODEL		CSA REPLACEMENT EQUIVALENCY	
APPROVAL CODE	OUTPUT CODE	FM RATING	CSA-US RATING
N5	A	DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)	DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)
K5	A	EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)	EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)
N5	B	DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT AND 4-20mA/PULSE OUTPUT)	DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT AND 4-20mA/PULSE OUTPUT)
K5	B	EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT AND 4-20mA/PULSE OUTPUT)	EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T4 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT AND 4-20mA/PULSE OUTPUT)
Blank		Ordinary Locations - FM	Ordinary Locations - CSA

## REPLACEMENT OF FM MARKED 8705M AND 8711M/L FLOW TUBES WITH EQUIVALENT CSA MODEL CODE

ORIGINAL MODEL		CSA REPLACEMENT EQUIVALENCY	
APPROVAL CODE	OUTPUT CODE	FM RATING	CSA-US RATING
N5		DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T2... T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T3...T5 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)	DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T2... T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T3...T5 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)
K5		EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T3...T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T2... T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T3...T5 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)	EXPLOSION PROOF FOR CLASS I, DIV 1, GROUPS C, D: T3...T6 DUST-IGNITION PROOF FOR Class II, III, Div 1, GROUPS E,F, G; T2... T5 NONINCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D: T3...T5 INTRINSICALLY SAFE FOR CLASS I, II, III DIVISION 1 GROUPS A,B,C,D,E,F,G. (ELECTRODE CIRCUIT)
Blank		Ordinary Locations - FM	Ordinary Locations - CSA

DRAWING NO. 08732-2061

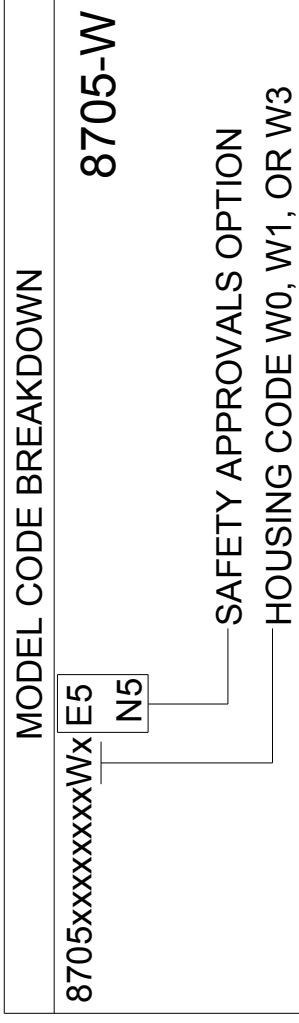
CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.	SURFACE FINISH UNLESS OTHERWISE SPECIFIED	125°	3RD ANGLE	SIZE C	SCALE -	REV AG
ROSEMOUNT						
TITLE <b>INSTALLATION DRAWING</b>						
CSA CANADIAN AND USA CLASS DIVISION						
DR. N. BOND	2/18/14	DRAWING NO.		08732-2061		
APPE. MESSENGER	6/13/14	PRODUCT CODE		SHEET 16 OF 17		
DO NOT SCALE PRINT   CAD MAINTAINED, (PROJ)						

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-  
 X ± .1 [2.5]  
 .XX ± .02 [0.5]  
 .XXX ± .010 [0.25]  
 FRACTIONS ± 1/32 ANGLES ± 2°

# GAS AND DUST ENVIRONMENT- US-NEC-ONLY - 8705-Wx AND 8711-R/U SENSORS WITH 8732EM AND 8712EM TRANSMITTERS

MODEL 8705-W INTEGRAL OR REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'E5' OR 'N5'



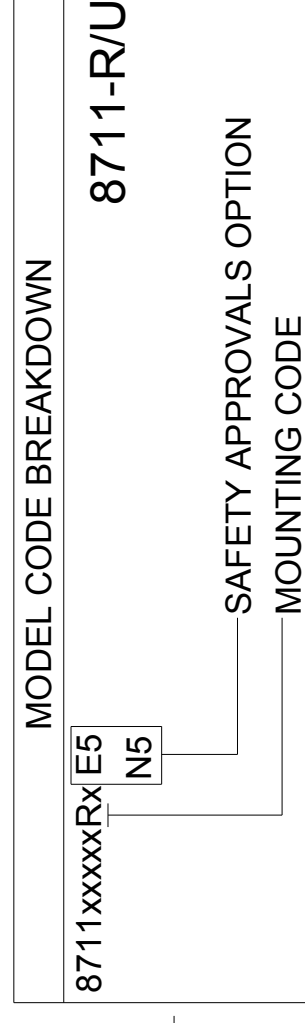
MODEL 8705 WITH 'E5' [US-NEC ONLY] EXPLOSION PROOF FOR CLASS I, DIVISION 1, GROUPS C,D; T6 NON-INCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D; T4 DUST IGNITION PROOF FOR CLASS II/III, DIVISION 1, GROUPS E,F,G; T6 AMBIENT TEMP. LIMITS:  $-50^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ . 17

ENCLOSURE TYPE 4X

MODEL 8705 WITH 'N5' [US-NEC ONLY] NON-INCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D; T4 DUST IGNITION PROOF FOR CLASS II/III, DIVISION 1, GROUPS E,F,G; T6 AMBIENT TEMP. LIMITS:  $-50^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ . 17

ENCLOSURE TYPE 4X

MODEL 8711-R/U INTEGRAL OR REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'E5' OR 'N5'



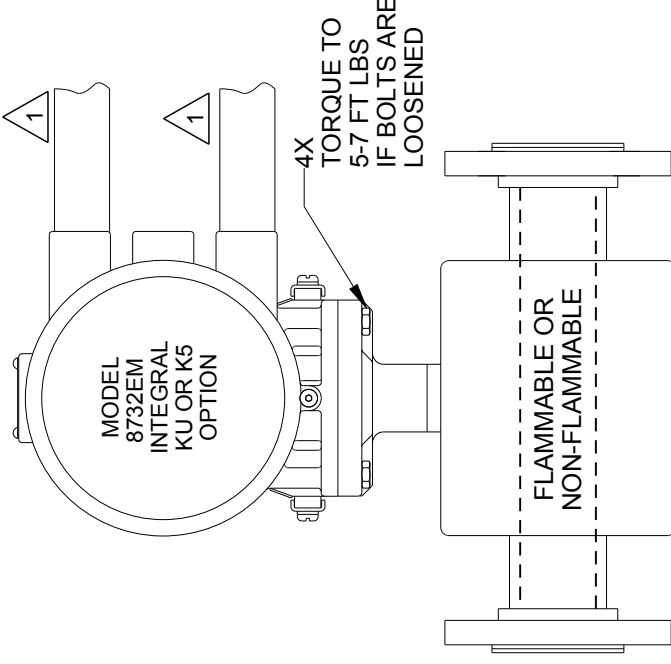
MODEL 8711 WITH 'E5' [US-NEC ONLY] EXPLOSION PROOF FOR CLASS I, DIVISION 1, GROUPS C,D; T6 NON-INCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D; T4 DUST IGNITION PROOF FOR CLASS II/III, DIVISION 1, GROUPS E,F,G; T6 AMBIENT TEMP. LIMITS:  $-50^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ . 17

ENCLOSURE TYPE 4X

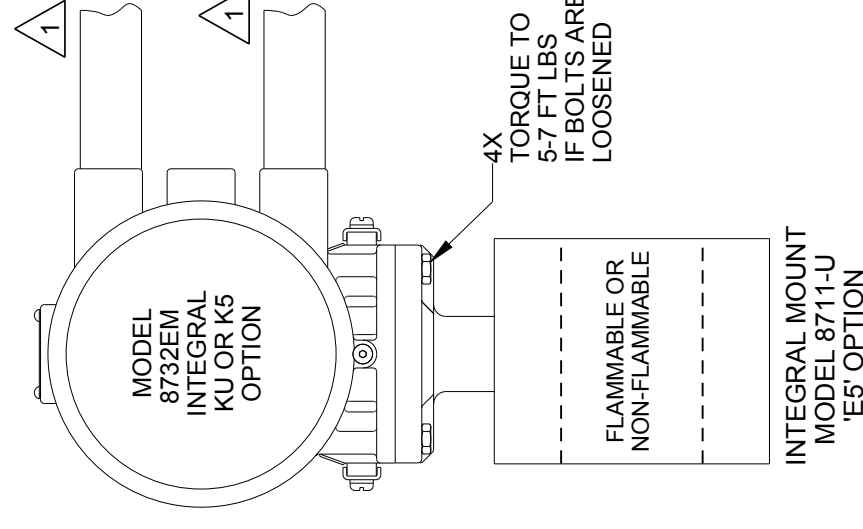
FACTORY SEALED

MODEL 8711 WITH 'N5' [US-NEC ONLY] NON-INCENDIVE FOR CLASS I, DIVISION 2, GROUPS A,B,C,D; T4 DUST IGNITION PROOF FOR CLASS II/III, DIVISION 1, GROUPS E,F,G; T6 AMBIENT TEMP. LIMITS:  $-50^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ . 17

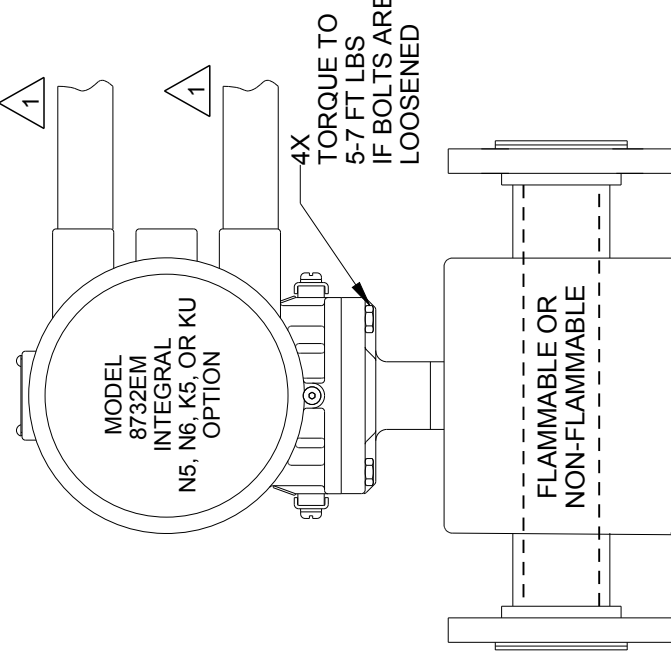
ENCLOSURE TYPE 4X



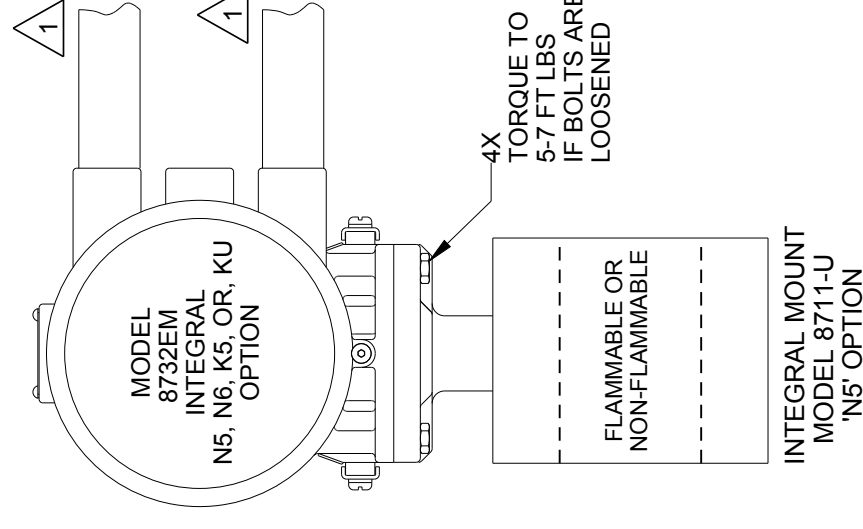
INTEGRAL MOUNT MODEL 8705-W 'E5' OPTION



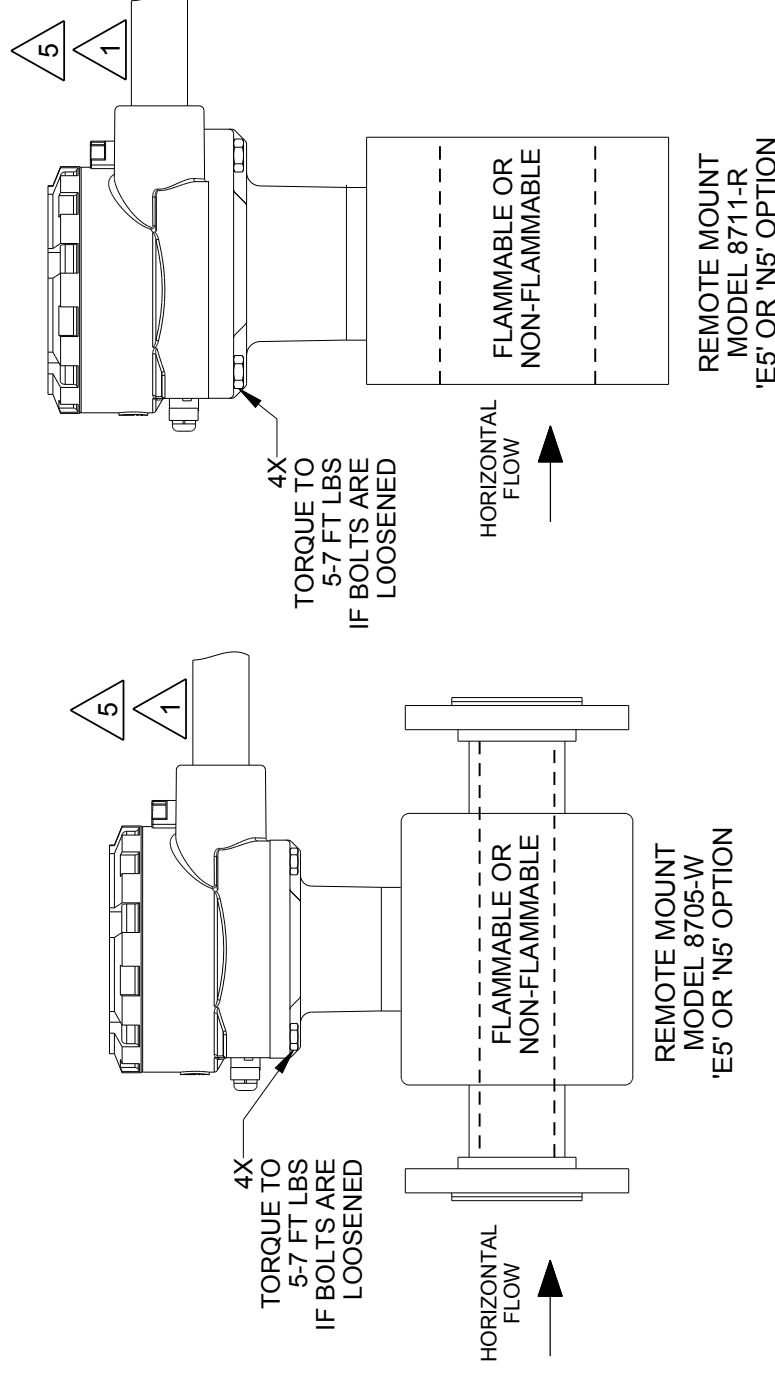
INTEGRAL MOUNT MODEL 8711-U 'E5' OPTION



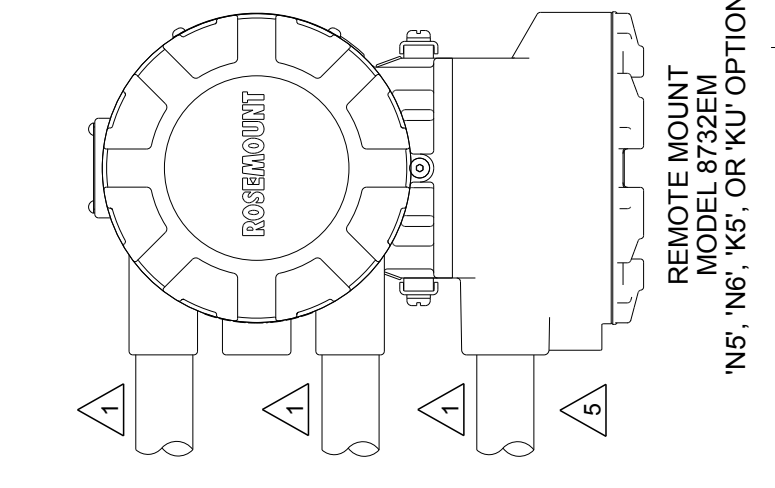
INTEGRAL MOUNT MODEL 8705-W 'N5' OPTION



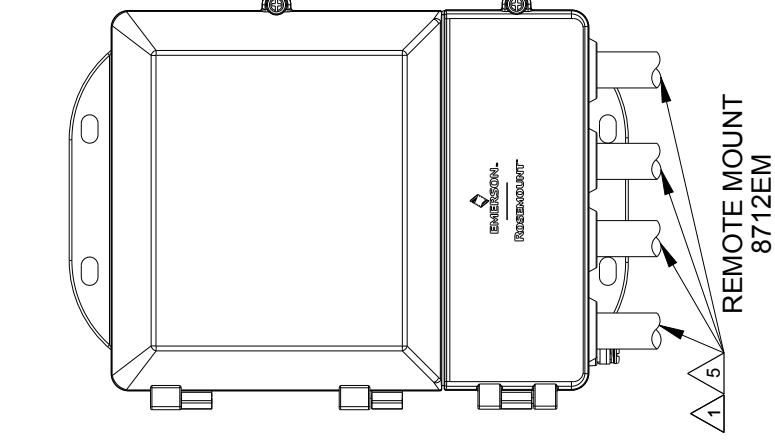
INTEGRAL MOUNT MODEL 8711-U 'N5' OPTION



REMOTE MOUNT MODEL 8705-W 'E5' OR 'N5' OPTION

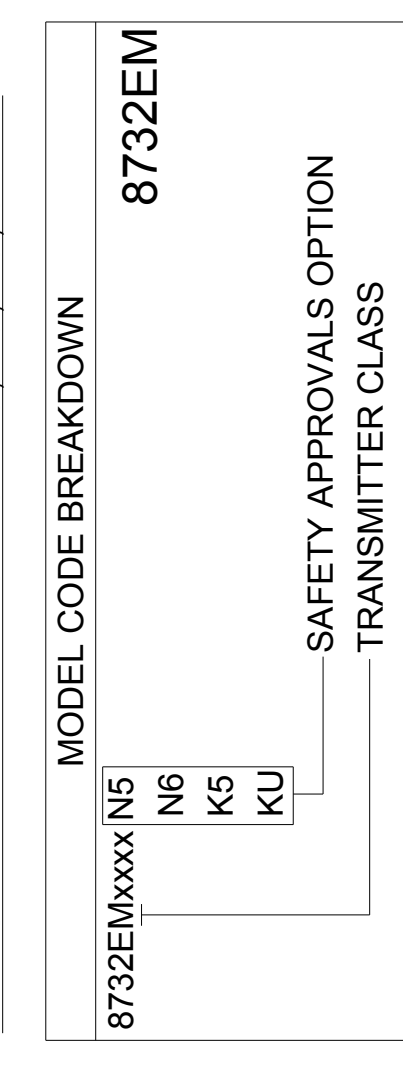


REMOTE MOUNT MODEL 8732EM 'N5', 'N6', 'K5', OR 'KU' OPTIONS



REMOTE MOUNT MODEL 8712EM 'N5' OR 'N6' OPTION

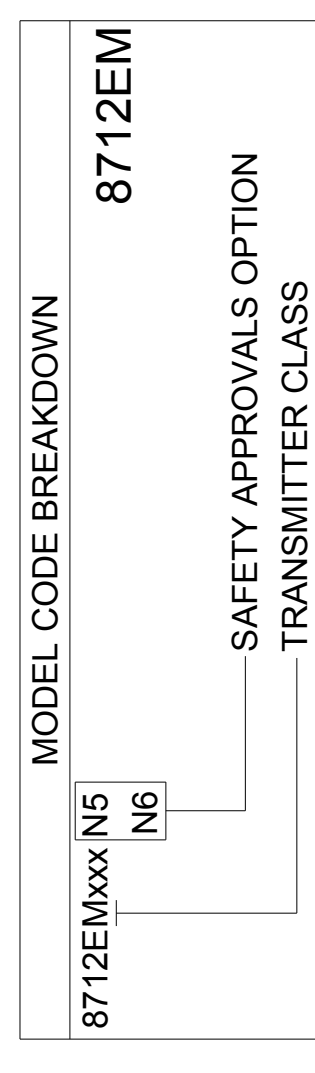
MODEL 8732EM INTEGRAL OR REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5', 'N6', 'K5', OR 'KU'



MODEL 8732EM WITH 'K5' OR 'KU' [US-NEC ONLY] EXPLOSION-PROOF FOR CLASS I DIVISION 1 GRPS CD; T6 NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD; T4 DUST-IGNITION PROOF FOR CLASS II/III DIVISION 1 GRPS; EFG; T5 AMBIENT TEMPERATURE ( $-40^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ )

MODEL 8732EM WITH 'N5' OR 'N6' [US-NEC ONLY] NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD; T4 DUST-IGNITION PROOF FOR CLASS II/III DIVISION 1 GRPS; EFG; T5 AMBIENT TEMPERATURE ( $-40^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ )

MODEL 8712EM REMOTE MOUNT CONFIGURATION WITH SAFETY APPROVAL OPTION 'N5' OR 'N6'



MODEL 8712EM WITH 'N5' OR 'N6' [US-NEC ONLY] NON-INCENDIVE FOR CLASS I DIVISION 2 GRPS ABCD; T4 DUST-IGNITION PROOF FOR CLASS II/III DIVISION 1 GRPS; EFG; T5 AMBIENT TEMPERATURE ( $-40^{\circ}\text{C}$  TO  $\leq 60^{\circ}\text{C}$ )

CONFIDENTIAL AND PROPRIETARY INFORMATION IS CONTAINED HEREIN AND MUST BE HANDLED ACCORDINGLY.

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES (mm). REMOVE ALL BURRS AND SHARP EDGES.

-DEC TOLERANCES-

X ± .1	(2.5)
.XX ± .02	(0.5)
.XXX ± .010	(0.25)
FRACTIONS ± 1/32	ANGLES ± 2'

SURFACE FINISH UNLESS OTHERWISE SPECIFIED 125 3RD ANGLE SIZE C SCALE - REV AG



ROSEMOUNT

INSTALLATION DRAWING

CSA CANADIAN AND USA CLASS DIVISION

DR. N. BOND 2/18/14 DRAWING NO. 08732-2061  
APPR. MESSENGER 6/13/14

DOC TYPE SHEET 17 OF 17

08732-2061  
DRAWING NO.





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