



# DO NOT SCALE DRAWING

**TOLERANCES (UNLESS NOTED)**

DECIMALS = ±inch/mm

.X = ±.1 / 2.54

.XX = ±.01 / 0.25

.XXX = ±.005 / 0.125

HOLES = ±.003 / 0.080

ANGLES = ±1/2°

DRAWN	C. Whan	2/12
CHECKED	V. Garcia	2/12
ENGINEER	R. Toledo	2/12
SCALE	NONE	

CATEGORY CONTROL DRAWING

DRAWING NUMBER 100-100-78 SHEET 1 of 3 REVISION C

TITLE **Field Installation Diagram: IPX2 Air (Standard) Intrinsically Safe System**

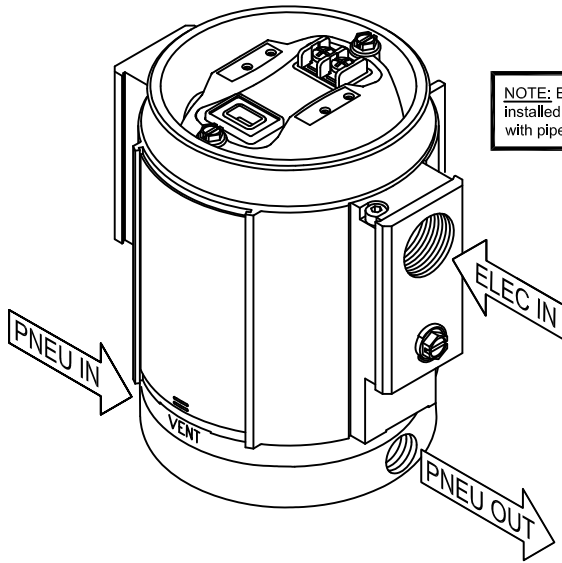
REVISED BY **ECO 17011** DATE 11/13 BY CW APPROVAL CB

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## Hazardous Area / Explosive Atmosphere

### Model IPX2 (Air - Standard)

Cover removed for clarity



NOTE: Electrical Connection may be installed in either IPX2 conduit port with pipe plug installed in opposite.

Must use +95°C suitable wiring  
North America installations only:  
Seal all conduits w/In 18"

Environmental Protection	
Air / Standard	IP56 & Type 4X

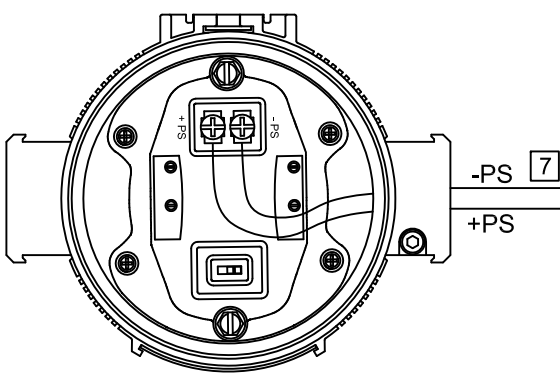
ATEX Directive Entity Parameters	
<b>Input supply with certified linear resistive barrier</b>	Vmax or Ui = 30 Vdc Imax or Ii = 110 mA Pmax or Pi = 0.825 W Ci = 720 pF Li = 5.12 µH

Entity Parameters	
cCSAus	ANZEx Scheme
Vmax or Ui = 30 Vdc Imax or Ii = 110 mA Pmax or Pi = 0.695 W Ci = 720 pF Li = 5.12 µH	Ui = 30 V } (ia & n) Ii = 110 mA } Ci = 5.7 µF @ 7.14 V Li = 0 mH

**-- WARNING --**  
Substitution of components may impair Intrinsic Safety.  
To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

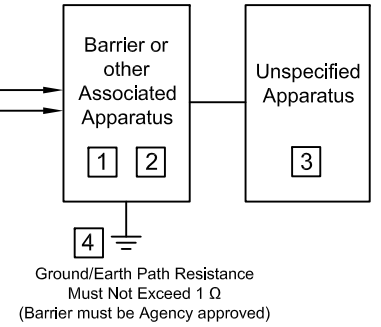
## Non-Hazardous Area

Cover removed for clarity



**-- NOTE --**  
**SEE SHEET 3 FOR INSTALLATION NOTES**  
Installation may only be carried out by suitably trained personnel and in accordance with national wiring regulations or codes of practice.

Air (Standard) Area Classification	"T" Rating
Intrinsically Safe Class I, II, III Div. 1&2 Grps. A-G T4/T5/T6 Zone 0, AEx ia IIC / Ex ia IIC T4/T5/T6 Ex ia IIC T4/T5 (ANZEx Scheme) ⊕ II 1 G Ex ia IIC T4 Ga	T4 @ 85°C T5 @ 70°C T6 @ 55°C
Non-Incendive Type n Class I, Div. 2, Grps. A-D T4/T5/T6 Zone 2, AEx nA IIC / Ex nA IIC T4/T5/T6 ⊕ II 3 G Ex nA IIC T6 Ex n IIC T6 (ANZEx Scheme)	T4 @ 85°C T5 @ 70°C T6 @ 55°C
Explosion-Proof Flame-Proof Class I Div. 1, Grps. A-D T4/T4A/T5 Class II Div. 1&2, Grps. E-G T4/T4A/T5 Class III Div. 1&2 T4/T4A/T5 Zone 1, AEx d IIC / Ex d IIC T4/T4/T5 ⊕ II 2 G Ex d IIC T4 Gb ⊕ II 2 D Ex tb IIC T127°C Db	T4 @ 85°C T4A @ 70°C T4 @ 70°C T5 @ 55°C
Operating Temperature Range: -40°C ≤ Tamb. ≤ +85°C	



Entity Parameters	
Associated Apparatus	Ca or Co ≥ Ci + Ccable La or Lo ≥ Li + Lcable Ui or Vmax ≥ Voc or Vt Ii or Imax ≥ Isc or It Pi ≥ Po

NOTE: If Ca of the Associated Apparatus is greater than 3µF, then the total cable capacitance shall be limited to 3µF.

**Certified Product**  
This is a controlled 'Related' or 'Schedule' drawing. No modifications are permitted without the notification and final approval of the Certification Engineer (related dwgs.) or the Certifying Agency (schedule dwgs.)



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 .XX = ±.01 / 0.25  
 .XXX = ±.005 / 0.125  
 HOLES = ±.003 / 0.080  
 ANGLES = ±1/2°

DRAWN	C. Whan	2/12
CHECKED	See Sht. 1	
ENGINEER	See Sht. 1	
SCALE	NONE	

CATEGORY CONTROL DRAWING

DRAWING NUMBER 100-100-78 SHEET 2 of 3 REVISION C

TITLE **Field Installation Diagram: IPX2 -NG Option Intrinsically Safe System**

REVISED BY **SEE SHEET 1**

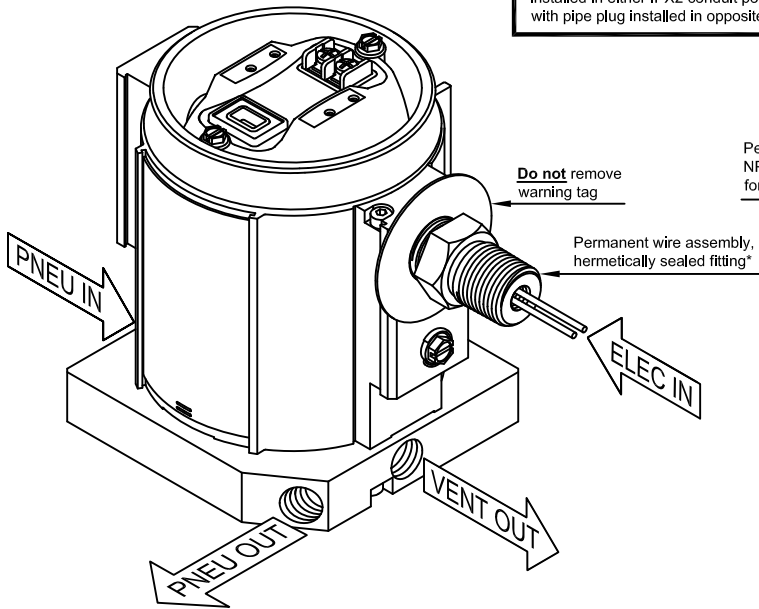
DATE	BY	APPROVAL

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Hazardous Area / Explosive Atmosphere

**Model IPX2-NG Option (Natural Gas)**

Cover removed for clarity

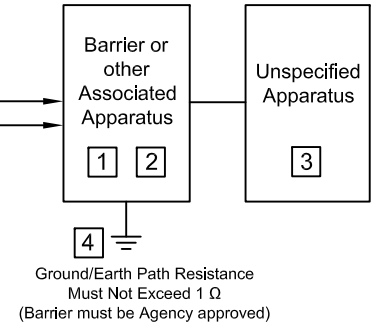
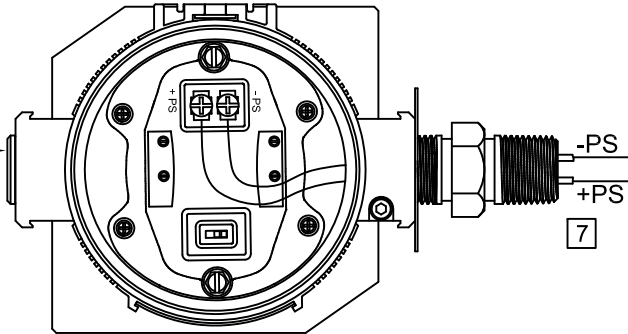


\*NOTE: The -NG seal fitting may be installed in either IPX2 conduit port with pipe plug installed in opposite.

**-- WARNING --**  
 Substitution of components may impair Intrinsic Safety. To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.

Non-Hazardous Area

Cover removed for clarity



**-- NOTE --**  
**SEE SHEET 3 FOR INSTALLATION NOTES**  
 Installation may only be carried out by suitably trained personnel and in accordance with national wiring regulations or codes of practice.

Entity Parameters	
Associated Apparatus	Ca or Co ≥ Ci + Ccable La or Lo ≥ Li + Lcable Ui or Vmax ≥ Voc or Vt Ii or Imax ≥ Isc or It Pi ≥ Po

NOTE: If Ca of the Associated Apparatus is greater than 3μF, then the total cable capacitance shall be limited to 3μF.

Must use +95°C suitable wiring  
 North America Installations only:  
 Seal all conduits within 18"

Environmental Protection	
-NG Option Natural Gas	IP66 & Type 4X

Entity Parameters	
cCSAus	ANZEx Scheme
Vmax or Ui = 30 Vdc Imax or Ii = 110 mA Pmax or Pi = 0.695 W Ci = 720 pF Li = 5.12 μH	Ui = 30 V } (ia & n) Ii = 110 mA } Ci = 5.7 μF @ 7.14 V Li = 0 mH

ATEX Directive Entity Parameters	
<b>Input supply with certified linear resistive barrier</b>	Vmax or Ui = 30 Vdc Imax or Ii = 110 mA Pmax or Pi = 0.825 W Ci = 720 pF Li = 5.12 μH

-NG Option (Natural Gas) Area Classification		"T" Rating
Intrinsically Safe	Class I, II, III Div. 1&2 Grps. A-G T4/T5/T6 Zone 0, AEx ia IIC / Ex ia IIC T4/T5/T6 Ex ia IIC T4/T5 (ANZEx Scheme) Ⓢ II 1 G Ex ia IIC T4 Ga	T4 @ 85°C T5 @ 70°C T6 @ 55°C
Explosion-Proof	Class I Div. 1, Grps. A-D T4/T4A/T5 Class II Div. 1&2, Grps. E-G T4/T4A/T5 Class III Div. 1&2 T4/T4A/T5 Zone 1, AEx d IIC / Ex d IIC T4/T4/T5	T4 @ 85°C T4A @ 70°C T5 @ 55°C
Operating Temperature Range: -40°C ≤ Tamb. ≤ +85°C		

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DRAWN	C. Whan	2/12
CHECKED	See Sht. 1	
ENGINEER	See Sht. 1	
SCALE	NONE	

CATEGORY CONTROL DRAWING

TITLE  
**Field Installation Diagram:  
 IPX2 (Air & -NG Option)  
 Intrinsically Safe System**

DRAWING NUMBER 100-100-78 SHEET 3 of 3 REVISION C

REVISED BY SEE SHEET 1	DATE	BY	APPROVAL

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### Installation Notes:

1. The Associated Apparatus must be Agency Approved for installations in the U.S.; Canadian Approved for installations in Canada and ATEX Certified for installations in Europe.
2. Associated apparatus manufacturer's installation drawing must be followed when installing this equipment.
3. The control room equipment (unspecified apparatus) connected to the Associated Apparatus must not generate more than 250 Vrms or Vdc, or the marked Um on the associated apparatus, whichever is less.
4. Installations in the U.S. shall be in accordance with ANSI/ISA RP12.06.01 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the latest edition of the National Electrical Code (ANSI/NFPA 70). Resistance between Intrinsically Safe Ground and earth ground must be less than 1.0 Ohm.
5. Installation in Canada shall be in accordance with the latest edition of the C22.1 Canadian Electrical Code, Part I.
6. Installation in Europe shall be in accordance with the latest editions of the wiring practices for the country of origin and EN 60079-14.
7. The Entity Concept allows interconnection of associated apparatus and intrinsically safe apparatus when the following is true:  $U_o \leq U_i$  ,  $I_o \leq I_i$  ,  $P_o \leq P_i$  ,  $C_o = C_i + C_{cable}$ ;  $L_o = L_i + L_{cable}$ .
8. No revision is allowed to this drawing without prior SIRA Approval.

Where English is not a language of the Country in which the equipment is being used, please apply to Moore Industries International, Inc. (MII) for a suitable translation.

Installation may only be carried out by suitably trained personnel and in accordance with national wiring regulations or codes of practice.

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