



SureCross™ DX91 Wireless Devices for Hazardous Locations

The manufacturer does not take responsibility for the violation of any warning listed in this document.



CAUTION . . .

Make no modifications to this product.

Any modifications to this product not expressly approved by Banner Engineering could void the user's authority to operate the product. Contact the Factory for more information.

Always use lightning arrestors/surge protection with all remote antenna systems to avoid invalidating the Banner Engineering Corp. warranty. No surge protector can absorb all lightning strikes. Do not touch the SureCross device or any equipment connected to the SureCross device during a thunderstorm.

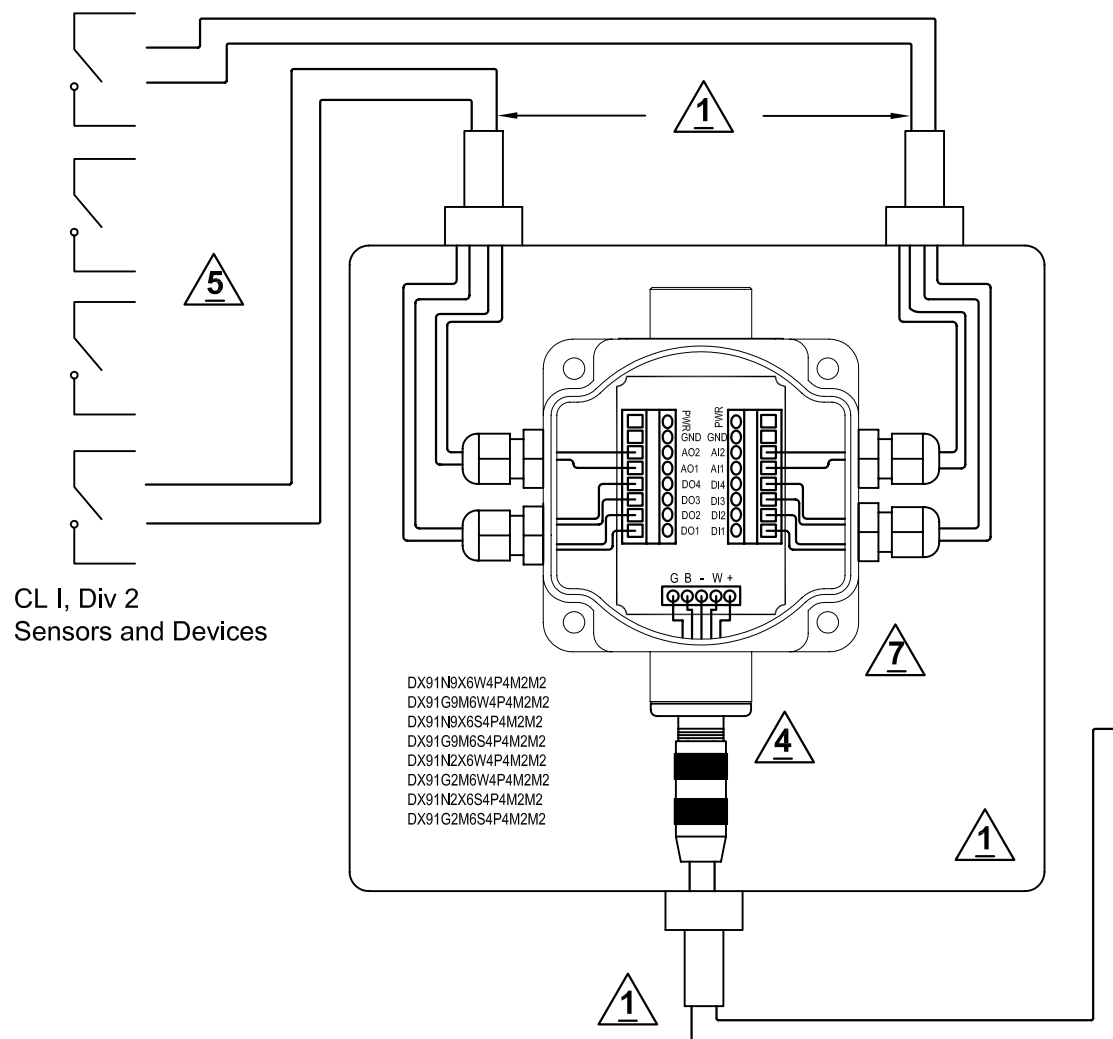
WARRANTY: Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.

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Line Powered DX91-4/4/2/2 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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Refer to Sheet 2 for Notes.

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P.O. BOX 9414
MINNEAPOLIS, MN 55440

TITLE		DX9X CL1 DIV2 CONTROL DRAWING	
CSA-C/US Certified RF Controlled Data Acquisition Module			
FILE NAME	134217	REV	R2
SCALE	NA	SHEET	1 OF 16

DWN.	DATE
S. Schnelbach	5-16-2007
ENG.	DATE
R. Marjamaa	5-30-2007

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Notes

- 1** DX9x control modules must be installed in a suitable enclosure acceptable to the local inspection authority having jurisdiction. The enclosure must have provision for Class I, Division 2 wiring method in accordance with the Canadian Electrical Code (CEC) for Canada and the National Electrical Code (NEC) for the United States.
- 2** This equipment is suitable for use in Class I, Division 2, groups (as applicable) or non-hazardous locations only.
- 3** Warning - Explosion hazard - Substitution of components may impair suitability for Class I, Division 2.
- 4** Warning - Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- 5** The field circuits are not limited energy. Field devices must therefore be certified for installation in Class I, Division 2 hazardous locations. Field circuits connected to Digital Inputs can draw a maximum of 5 mA from V+/V- per input and must have a maximum rated output $\leq 30V/V-$ DC. Field circuits connected to Digital Outputs must have a maximum rated voltage $\leq V+/V-$ and may consume a maximum current ≤ 100 mA per output. Field circuits connected to Analog Inputs can draw a maximum of 20 mA per input. Field circuits connected to Analog Outputs must have a maximum rated voltage $\leq V+/V-$ and may consume a maximum current ≤ 20 mA per outputs. Ta=80 C maximum.
- 6** The field circuits are not limited energy. Field devices must therefore be certified for installation in Class I, Division 2 hazardous locations. Field circuits connected to Digital Inputs can draw a maximum of 5 mA from V_{Pwr}/V_{Gnd} per input and must have a maximum rated output $\leq 30V/V_{Gnd}$ DC. Field circuits connected to Digital Outputs must have a maximum rated voltage $\leq V_{Pwr}/V_{Gnd}$ and may consume a maximum current ≤ 100 mA per output. Field circuits connected to Analog Inputs can draw a maximum of 20 mA per input. Field circuits connected to Analog Outputs must have a maximum rated voltage $\leq V_{Pwr}/V_{Gnd}$ and may consume a maximum current ≤ 20 mA per outputs. Ta=80 C maximum.
- 7** The antenna circuit is non-incendive. As such, the antenna may be installed on the outside of the enclosure. Alternatively, it may be installed remote from the enclosure without the need for Class I, Division 2 wiring methods.

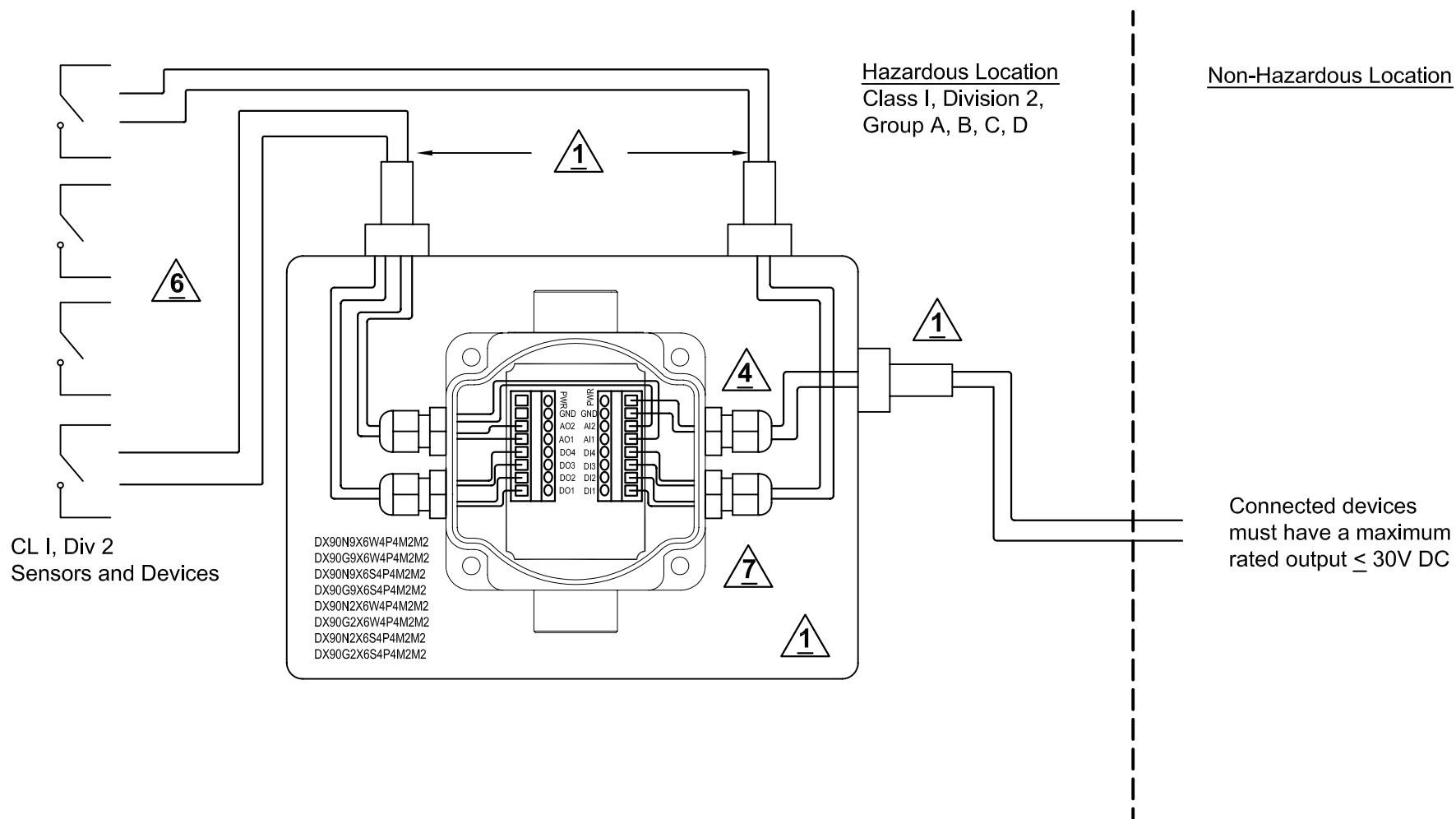
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DWN. S. Schnelbach	DATE 5-16-2007	FILE NAME 134217	
ENG. R. Marjamaa	DATE 5-30-2007	REV R2	
		SCALE NA	SHEET 2 OF 16

Line Powered DX90-4/4/2/2 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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MINNEAPOLIS, MN 55440

TITLE

DX9X CL1 DIV2 CONTROL DRAWING

CSA-C/US Certified RF Controlled Data Acquisition Module

DWN.
S. Schnelbach

DATE
5-16-2007

ENG.
R.Marjamaa

DATE
5-30-2007

FILE NAME
134217

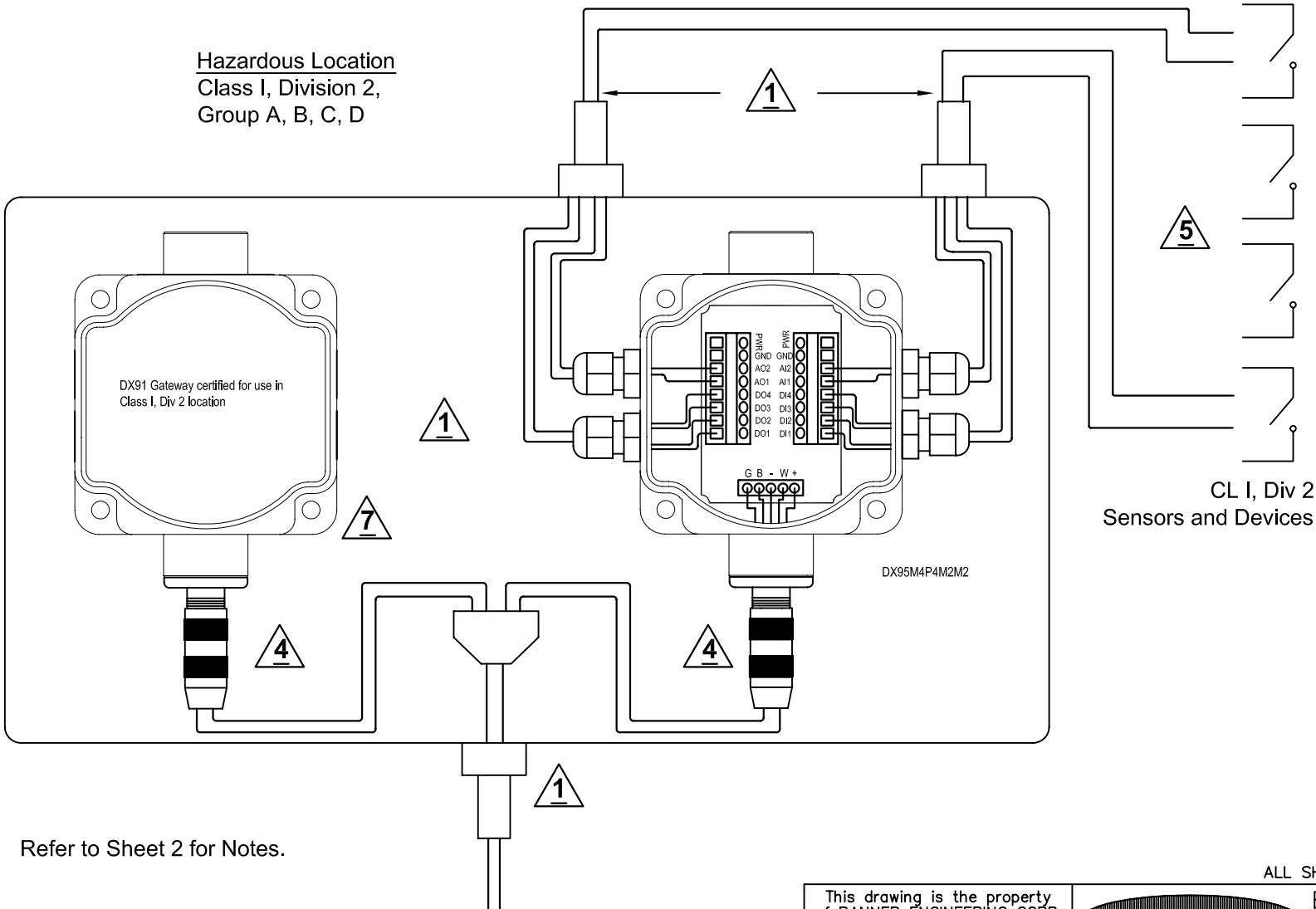
REV
R2

SCALE
NA

SHEET 3 OF 16

Line Powered DX95-4/4/2/2 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED



Refer to Sheet 2 for Notes.

Non-Hazardous Location
Brown and Blue POWER line connected devices must have a maximum
rated output $\leq 30V$ DC.

Black, White, and Grey communication line connected devices must have a
maximum rated output $\leq 5V$ DC.

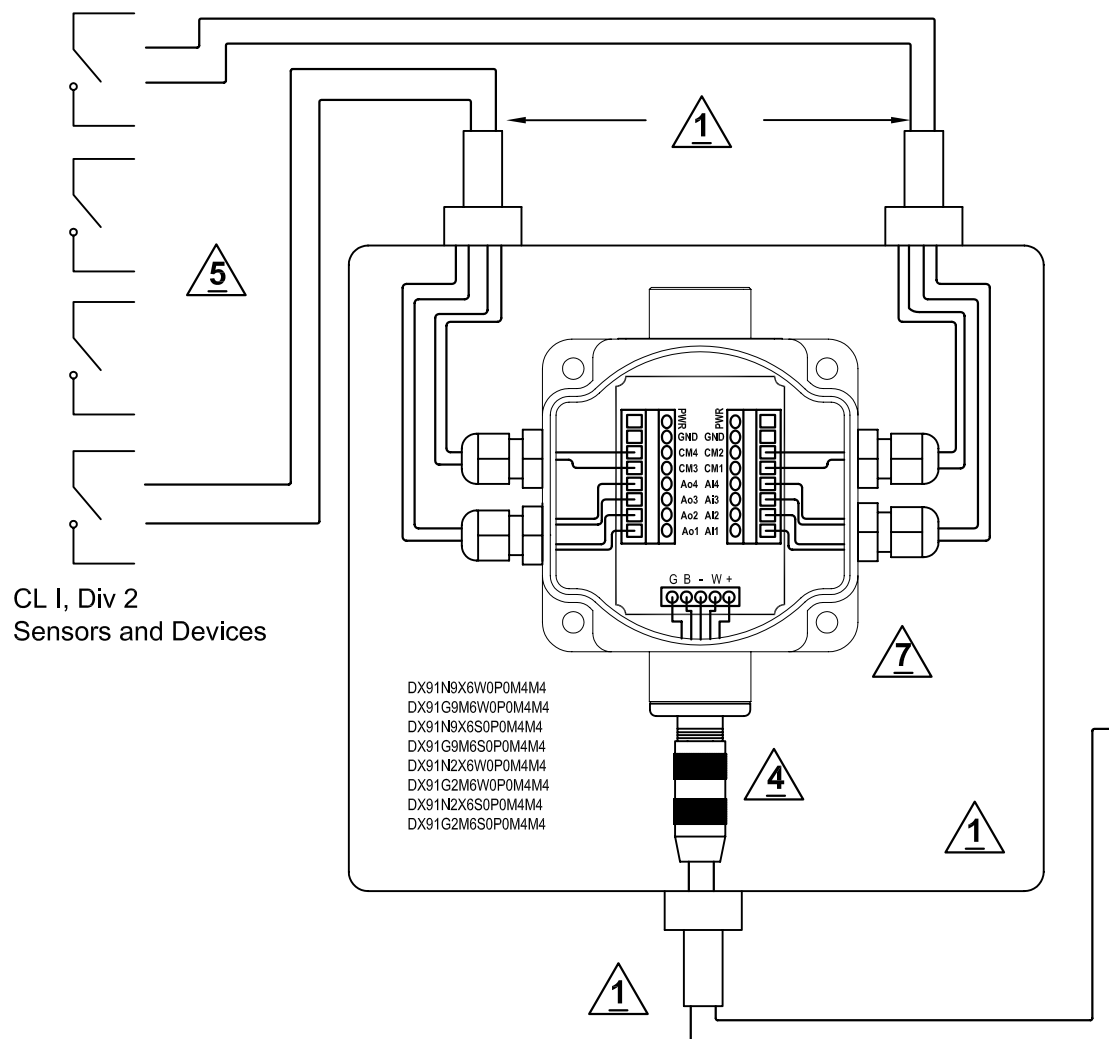
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DWN. S. Schnelbach	DATE 5-16-2007
ENG. R.Marjamaa	DATE 5-30-2007

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TITLE DX9X CL1 DIV2 CONTROL DRAWING CSA-C/US Certified RF Controlled Data Acquisition Module	
FILE NAME 134217	REV R2
SCALE NA	SHEET 4 OF 16

Line Powered DX91-0/0/4/4 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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Hazardous Location
Class I, Division 2,
Group A, B, C, D

Non-Hazardous Location

Brown and Blue POWER line
connected devices must have a
maximum rated output $\leq 30V$ DC.

Black, White, and Grey
communication line connected
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rated output $\leq 5V$ DC.

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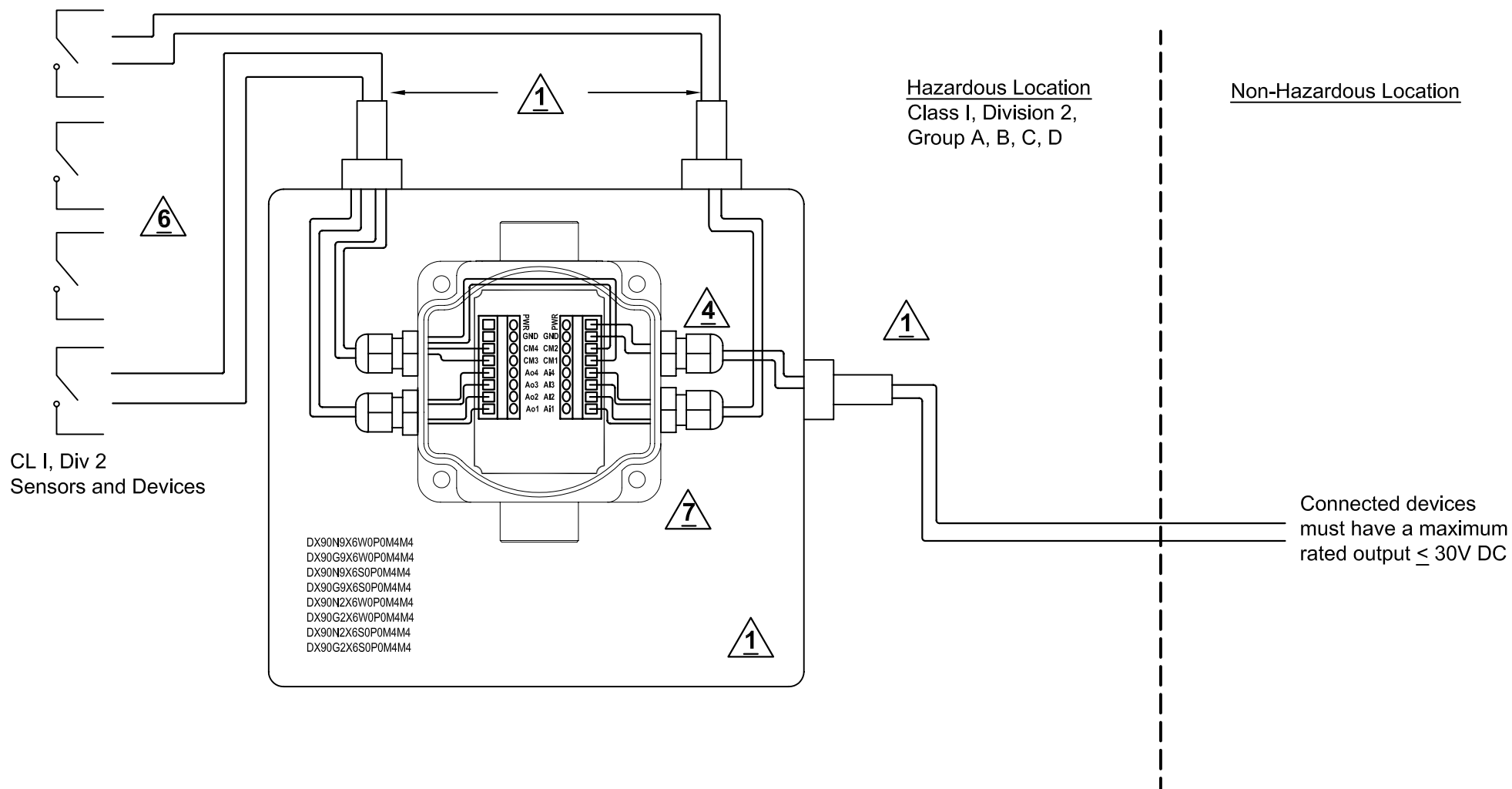
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CSA-C/US Certified RF Controlled Data Acquisition Module			
FILE NAME	134217	REV	R2
SCALE	NA	SHEET	5 OF 16

DWN.	DATE
S. Schnelbach	5-16-2007
ENG.	DATE
R.Marjamaa	5-30-2007

Line Powered DX90-0/0/4/4 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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TITLE

DX9X CL1 DIV2 CONTROL DRAWING

CSA-C/US Certified RF Controlled Data Acquisition Module

DWN.
S. Schnelbach

DATE
5-18-2007

ENG.
R.Marjamaa

DATE
5-30-2007

FILE NAME
134217

REV
R2

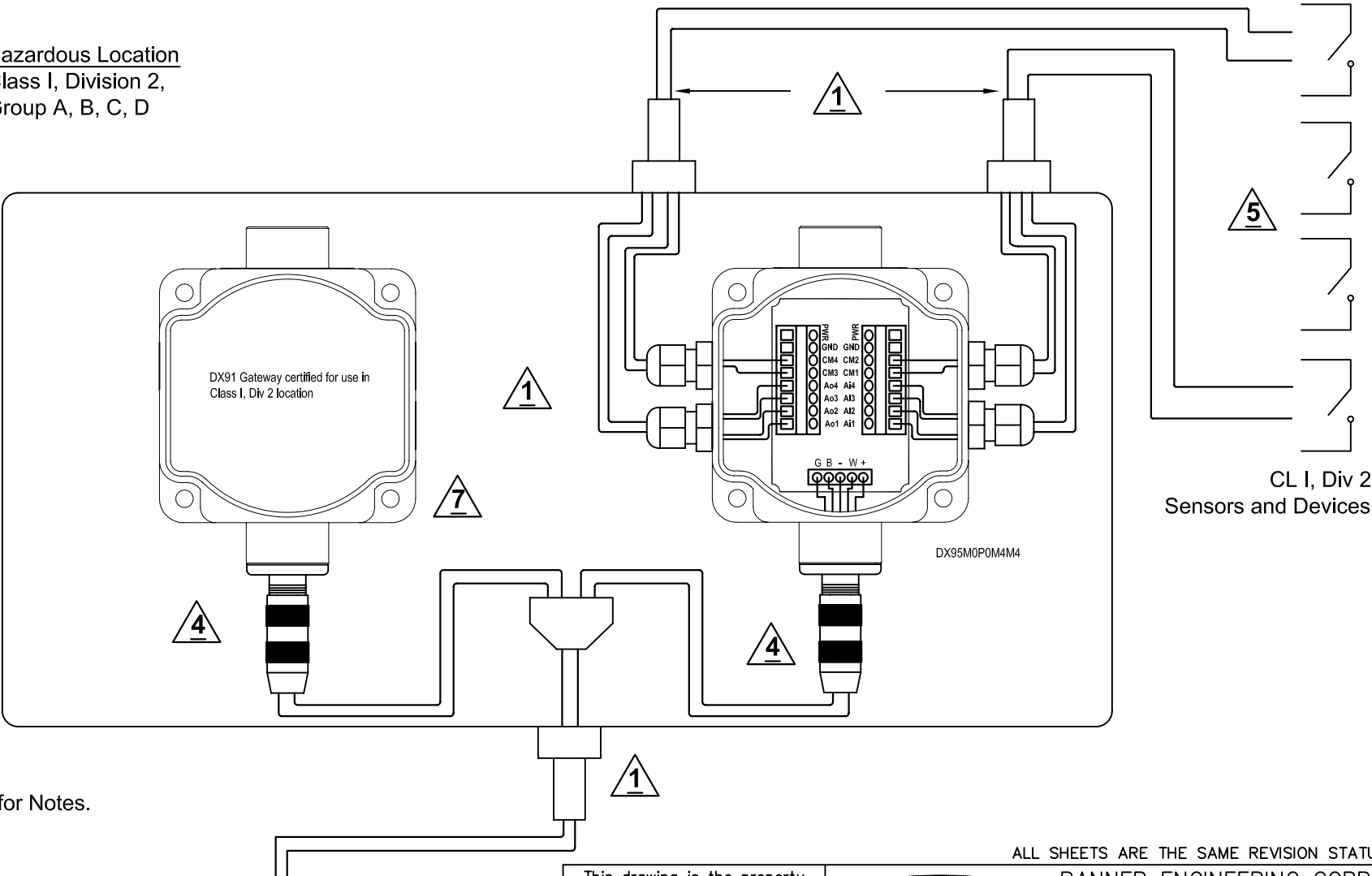
SCALE
NA

SHEET 6 OF 16

Line Powered DX95-0/0/4/4 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Hazardous Location
Class I, Division 2,
Group A, B, C, D



Refer to Sheet 2 for Notes.

Non-Hazardous Location

Brown and Blue POWER line connected devices must have a maximum
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DWN.	DATE
S. Schnelbach	5-18-2007
ENG.	DATE
R.Marjamaa	5-30-2007

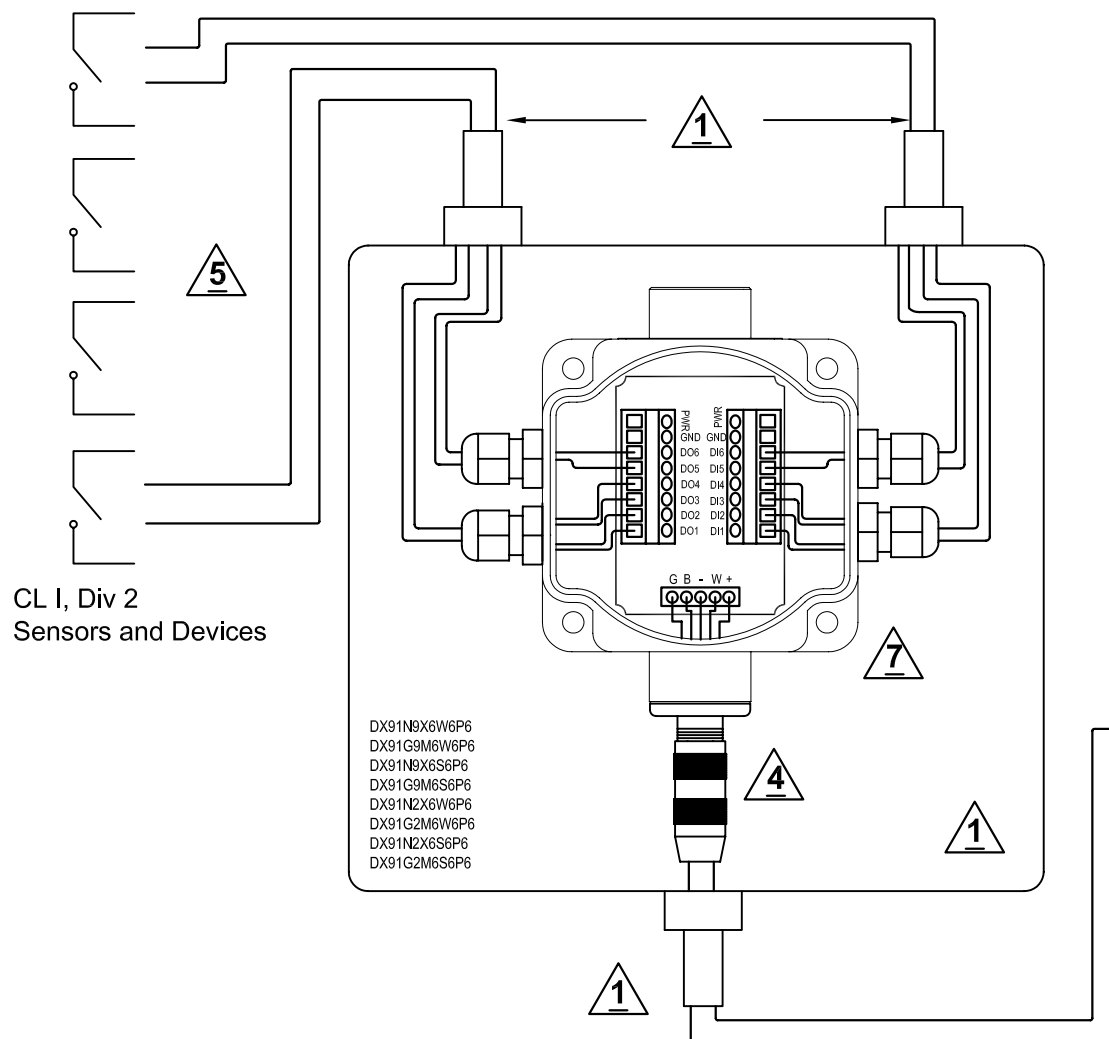
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DX9X CL1 DIV2 CONTROL DRAWING	
CSA-C/US Certified RF Controlled Data Acquisition Module	
FILE NAME	REV
134217	R2
SCALE	SHEET
NA	7 OF 16

ALL SHEETS ARE THE SAME REVISION STATUS

Line Powered DX91-6/6/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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TITLE		DX9X CL1 DIV2 CONTROL DRAWING	
CSA-C/US Certified RF Controlled Data Acquisition Module		FILE NAME 134217	
SCALE NA		SHEET 8 OF 16	

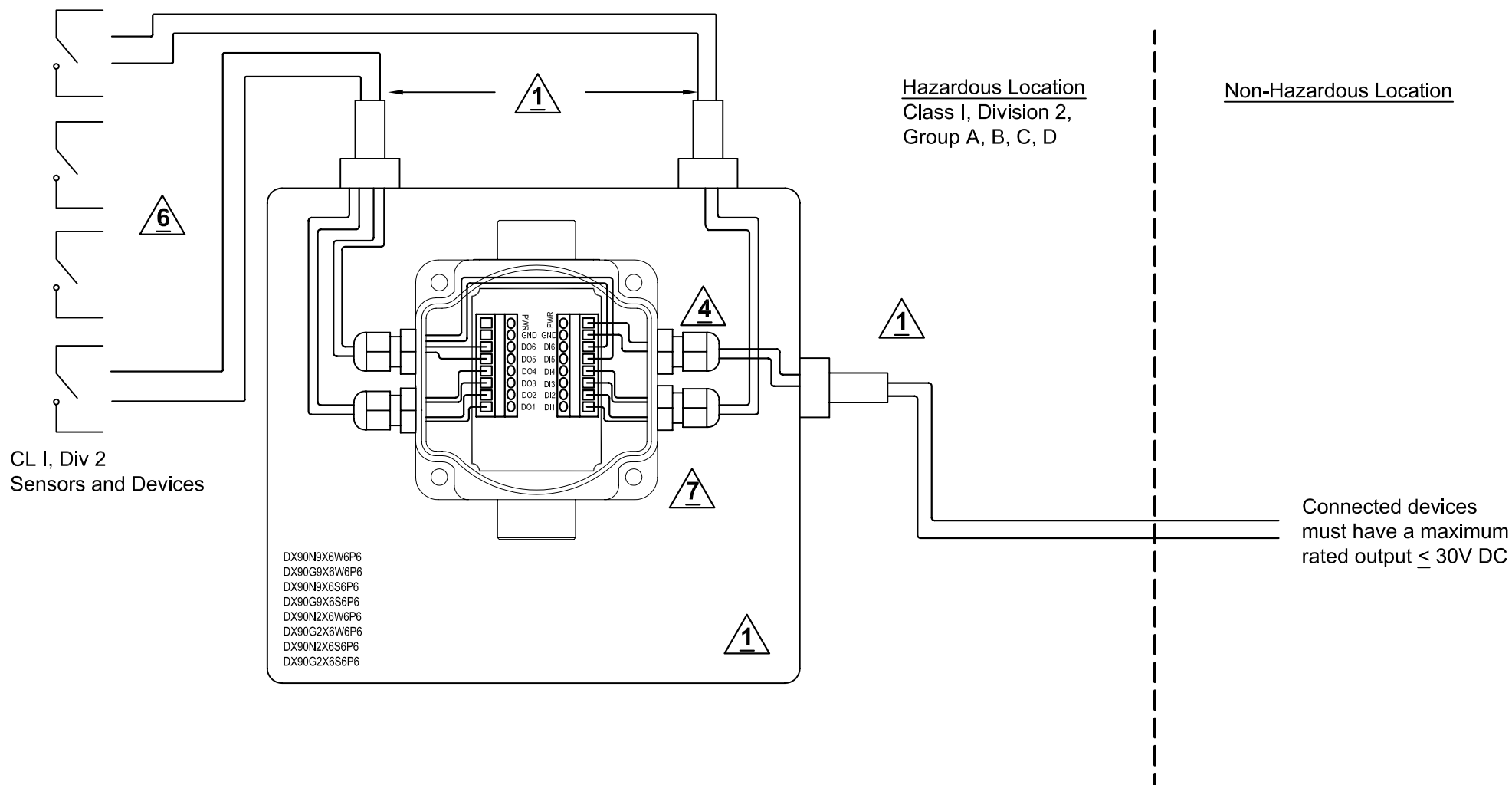
DWN. S. Schnelbach	DATE 5-16-2007
ENG. R.Marjamaa	DATE 5-30-2007

REV
R2

Line Powered DX90-6/6/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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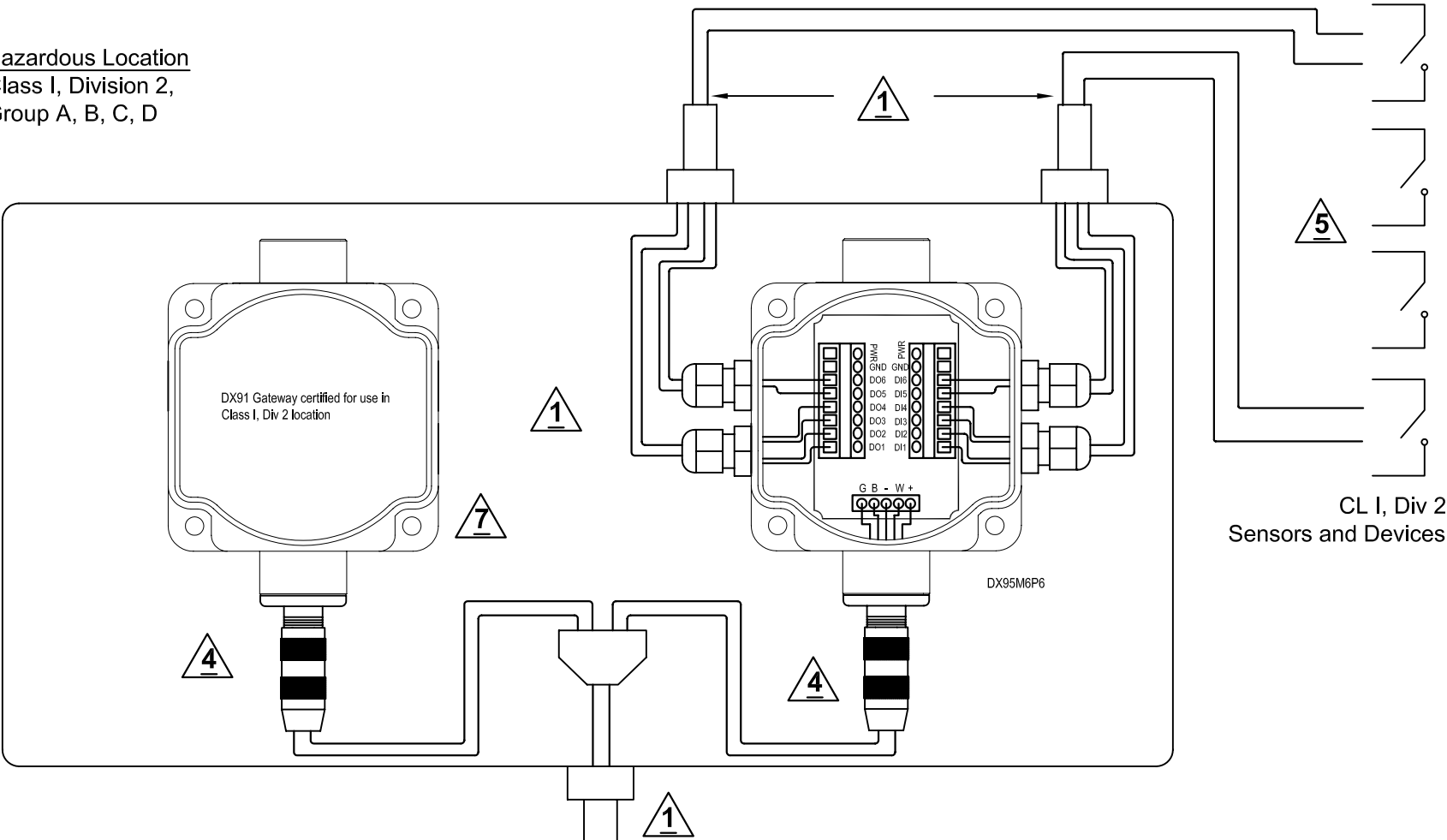
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CSA-C/US Certified RF Controlled Data Acquisition Module			
FILE NAME	134217	REV	R2
SCALE	NA	SHEET	9 OF 16

DWN.	DATE
S. Schnelbach	5-18-2007
ENG.	DATE
R.Marjamaa	5-30-2007

Line Powered DX95-6/6/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Hazardous Location
Class I, Division 2,
Group A, B, C, D



Refer to Sheet 2 for Notes.

Non-Hazardous Location
Brown and Blue POWER line connected devices must have a maximum rated output $\leq 30V$ DC.

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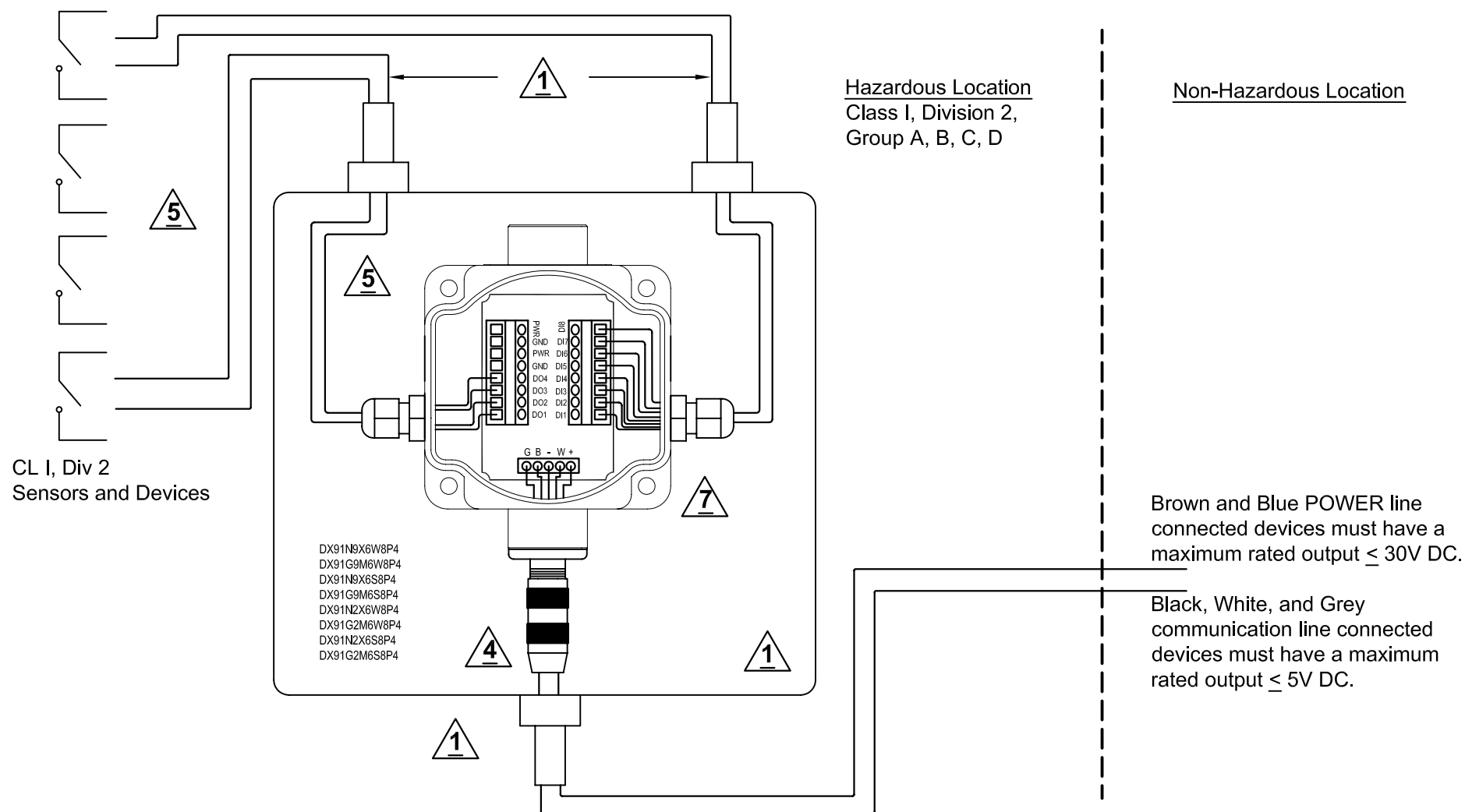
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ENG. R.Marjamaa	DATE 5-30-2007	FILE NAME 134217	REV R2
SCALE NA		SHEET 10 OF 16	

Line Powered DX91-8/4/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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TITLE

DX9X CL1 DIV2 CONTROL DRAWING

CSA-C/US Certified RF Controlled Data Acquisition Module

FILE NAME
134217

REV
R2

SCALE
NA

SHEET 11 OF 16

DWN.
S. Schnelbach

DATE
5-18-2007

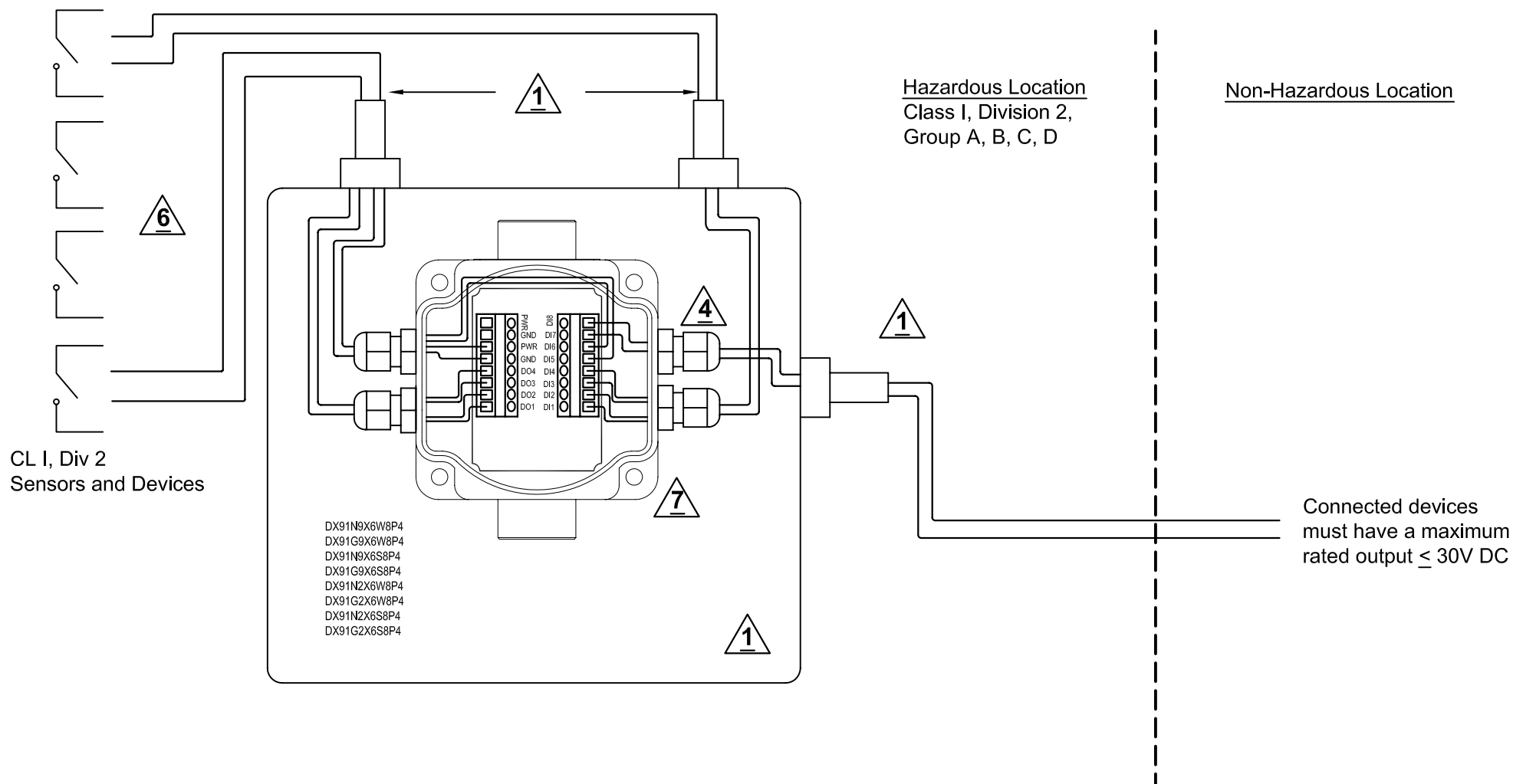
ENG.
R.Marjamaa

DATE
5-30-2007

Line Powered DX90-8/4/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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DWN.
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R.Marjamaa

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REV
R2

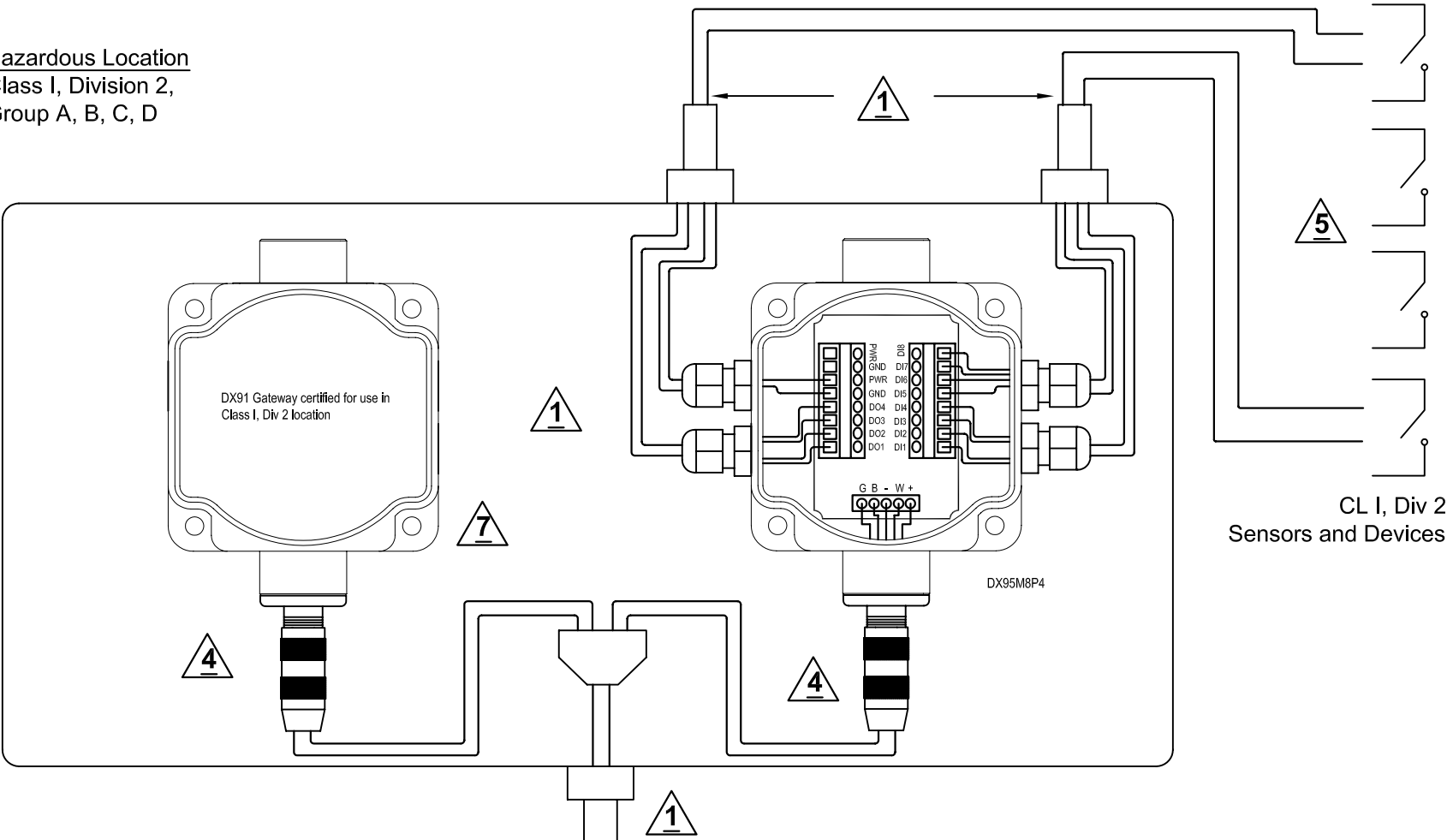
SCALE
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SHEET 12 OF 16

Line Powered DX95-8/4/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Hazardous Location
Class I, Division 2,
Group A, B, C, D



Refer to Sheet 2 for Notes.

Non-Hazardous Location
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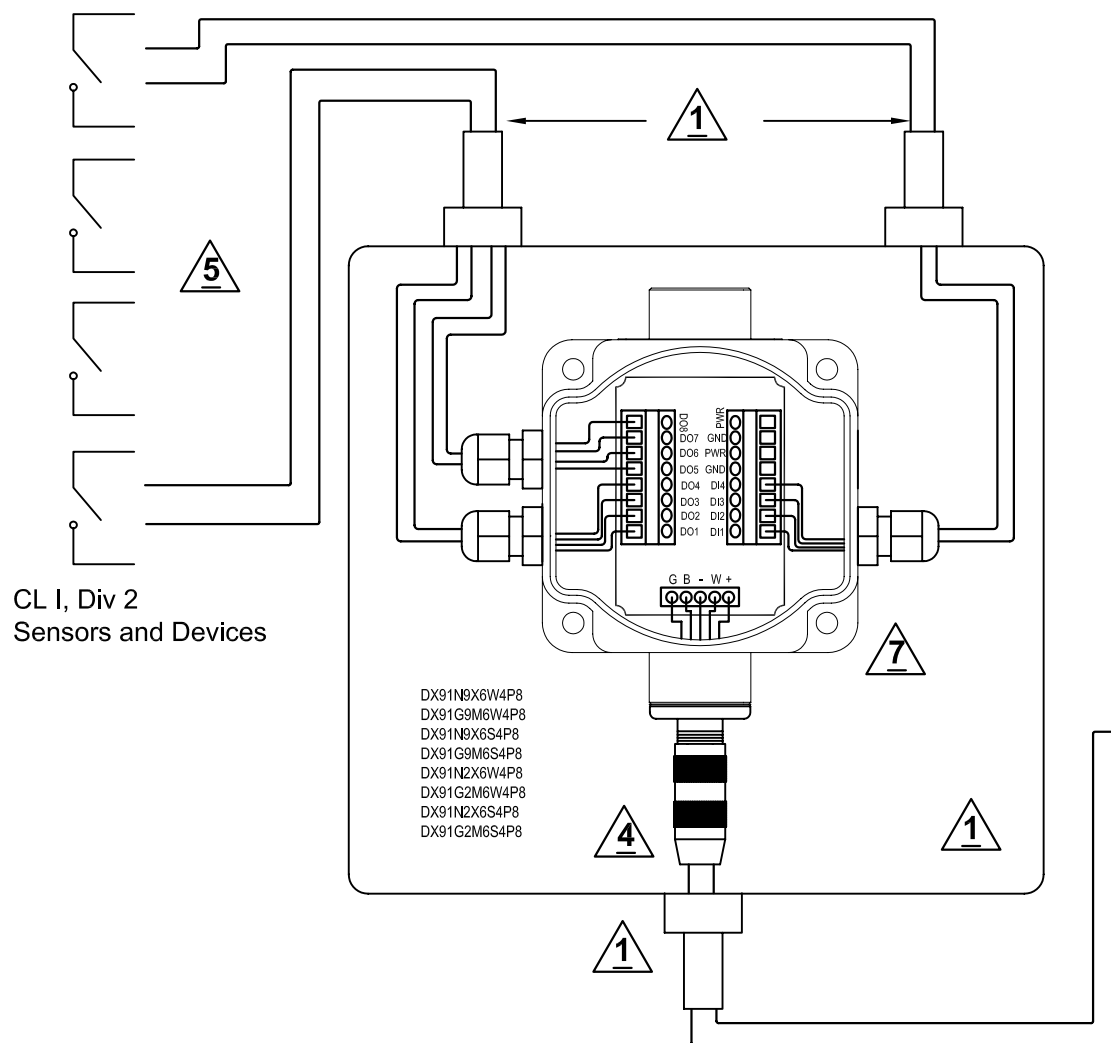
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MINNEAPOLIS, MN 55440

DWN. S. Schnelbach	DATE 5-18-2007	TITLE DX9X CL1 DIV2 CONTROL DRAWING CSA-C/US Certified RF Controlled Data Acquisition Module	
ENG. R.Marjamaa	DATE 5-30-2007	FILE NAME 134217	REV R2
SCALE NA		SHEET 13 OF 16	

Line Powered DX91-4/8/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY

REV	DESCRIPTION	DATE	APPROVED
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Hazardous Location
Class I, Division 2,
Group A, B, C, D

Non-Hazardous Location

Brown and Blue POWER line
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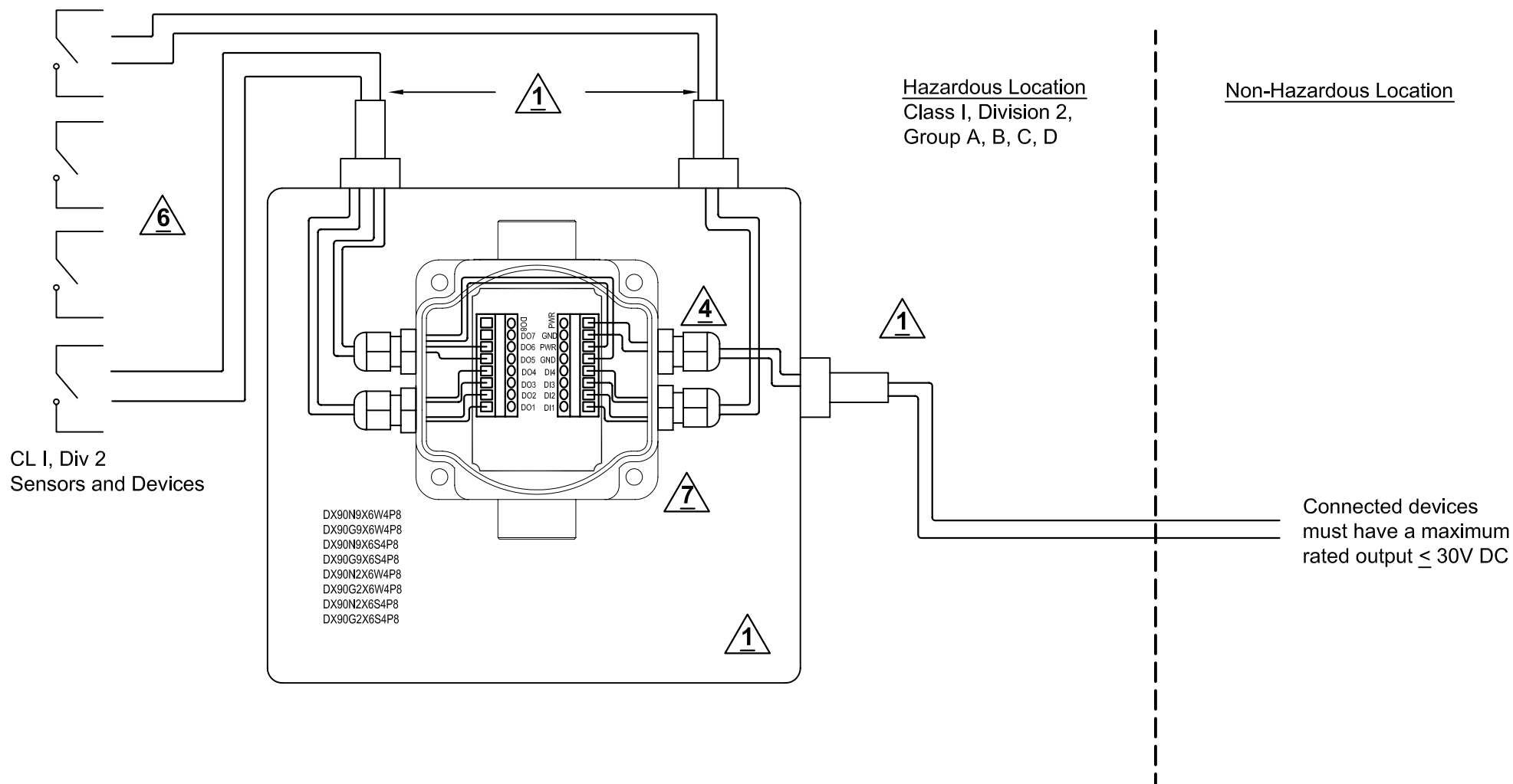
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CSA-C/US Certified RF Controlled Data Acquisition Module			
FILE NAME	134217	REV	R2
SCALE	NA	SHEET	14 OF 16

DWN.	DATE
S. Schnelbach	5-18-2007
ENG.	DATE
R.Marjamaa	5-30-2007

Line Powered DX90-4/8/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

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DWN.
S. Schnelbach

DATE
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R.Marjamaa

DATE
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FILE NAME
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R2

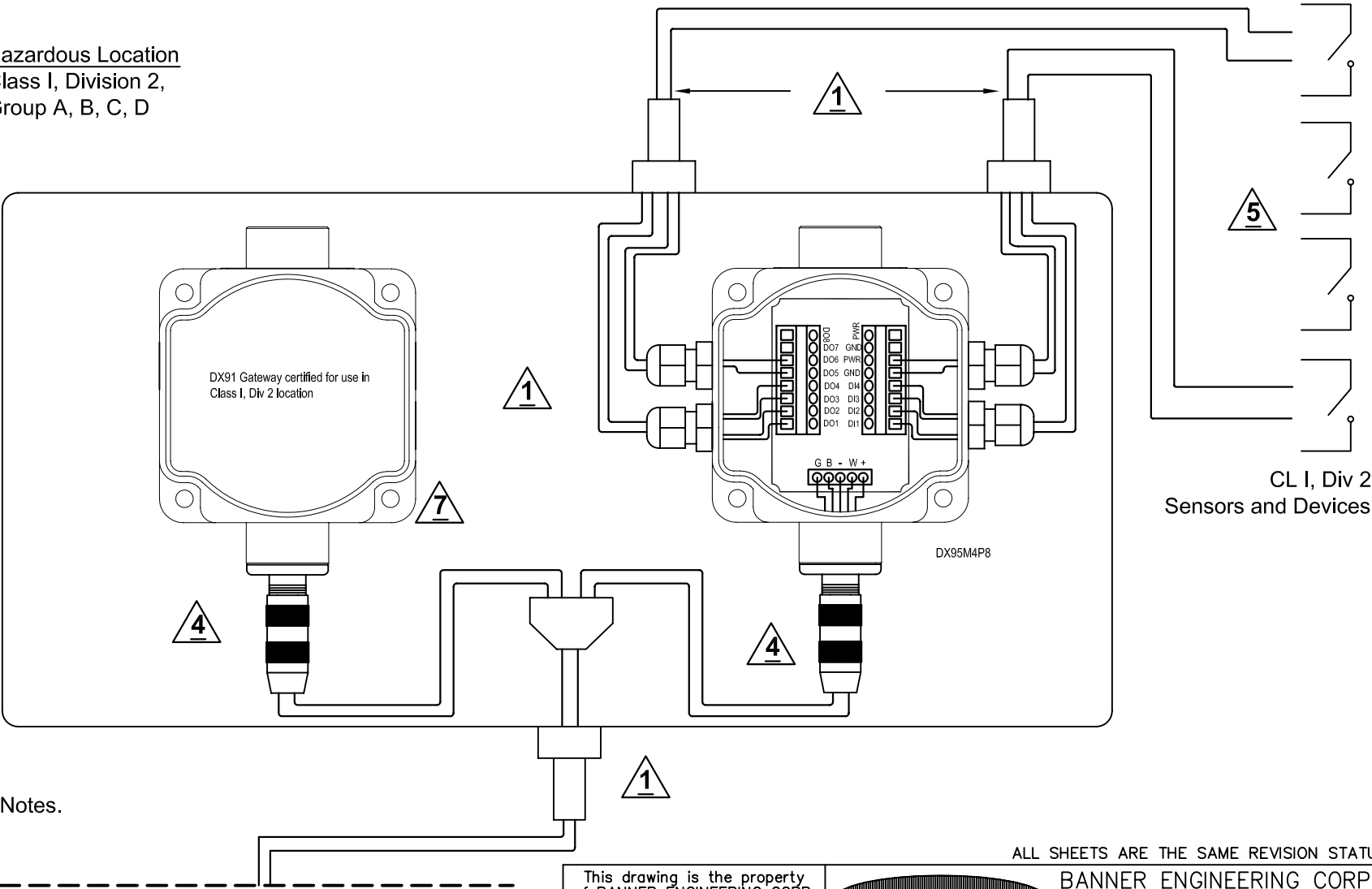
SCALE
NA

SHEET 15 OF 16

Line Powered DX95-4/8/0/0 Data Acquisition Module for use in
Class I, Division 2 Hazardous Locations

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED

Hazardous Location
Class I, Division 2,
Group A, B, C, D



Refer to Sheet 2 for Notes.

Non-Hazardous Location

Brown and Blue POWER line connected devices must have a maximum rated output $\leq 30V$ DC.

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ENG. R.Marjamaa	DATE 5-30-2007	FILE NAME 134217	REV R2
SCALE NA		SHEET 16 OF 16	