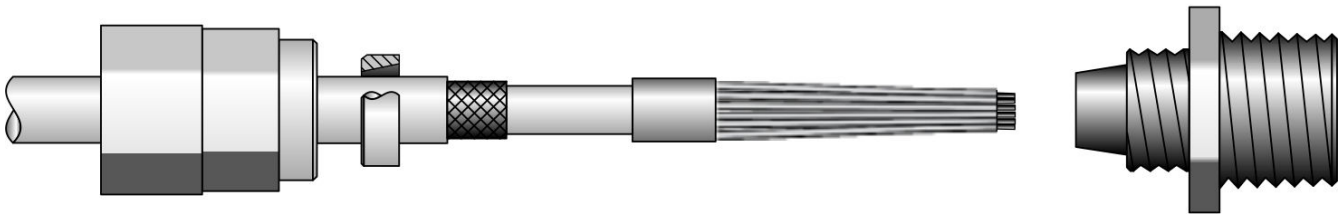
Installation Manual
MMI-20001968, Rev BB
October 2018

CSA-D-IS Installation Instructions, 9-Wire

Preparation



MICRO MOTION™

EMERSON™

Safety and approval information

This Micro Motion product complies with all applicable European directives when properly installed in accordance with the instructions in this manual. Refer to the EU declaration of conformity for directives that apply to this product. The EU declaration of conformity, with all applicable European directives, and the complete ATEX Installation Drawings and Instructions are available on the internet at www.emerson.com or through your local Micro Motion support center.

Information affixed to equipment that complies with the Pressure Equipment Directive, can be found on the internet at www.emerson.com.

For hazardous installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

Other information

Full product specifications can be found in the product data sheet. Troubleshooting information can be found in the configuration manual. Product data sheets and manuals are available from the Micro Motion web site at www.emerson.com.

Return policy

Follow Micro Motion procedures when returning equipment. These procedures ensure legal compliance with government transportation agencies and help provide a safe working environment for Micro Motion employees. Micro Motion will not accept your returned equipment if you fail to follow Micro Motion procedures.

Return procedures and forms are available on our web support site at www.emerson.com, or by phoning the Micro Motion Customer Service department.

Emerson Flow customer service

Email:

- Worldwide: flow.support@emerson.com
- Asia-Pacific: APflow.support@emerson.com

Telephone:

North and South America		Europe and Middle East		Asia Pacific	
United States	800-522-6277	U.K.	0870 240 1978	Australia	800 158 727
Canada	+1 303-527-5200	The Netherlands	+31 (0) 704 136 666	New Zealand	099 128 804
Mexico	+41 (0) 41 7686 111	France	0800 917 901	India	800 440 1468
Argentina	+54 11 4837 7000	Germany	0800 182 5347	Pakistan	888 550 2682
Brazil	+55 15 3413 8000	Italy	8008 77334	China	+86 21 2892 9000
		Central & Eastern	+41 (0) 41 7686 111	Japan	+81 3 5769 6803
		Russia/CIS	+7 495 981 9811	South Korea	+82 2 3438 4600
		Egypt	0800 000 0015	Singapore	+65 6 777 8211
		Oman	800 70101	Thailand	001 800 441 6426
		Qatar	431 0044	Malaysia	800 814 008
		Kuwait	663 299 01		
		South Africa	800 991 390		
		Saudi Arabia	800 844 9564		
		UAE	800 0444 0684		

Contents

1 Planning the installation

1.1 About this document

This manual should be used for any Micro Motion flowmeter installation that require Canadian Standards Association (CSA) approval.

The information in this document assumes that users understand:

- Basic transmitter and sensor installation concepts and procedures
- All corporate, local government, and national government safety standards and requirements that guard against injuries and death

This manual provides only information associated with installation of transmitters through CSA-D-IS instructions. For complete information on flowmeter installation, see the documentation provided with your sensor and transmitter.

1.2 Hazardous area installations

If your cable will be installed in a hazardous area, ensure that it meets the hazardous area requirements.

DANGER
Failure to maintain intrinsic safety in a hazardous area could result in an explosion.

To keep sensor wiring intrinsically safe:

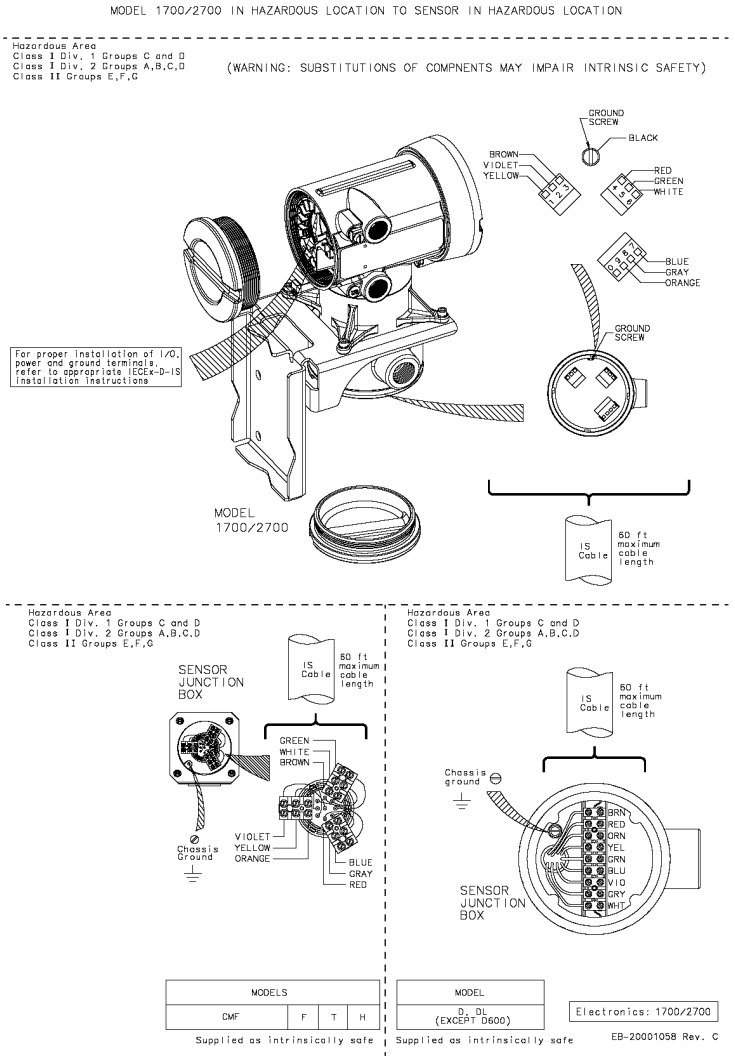
- Keep intrinsically safe (IS) sensor wiring separate from power supply wiring and output wiring.
- Do not install power cable in the same conduit or cable tray as flowmeter cable.
- Use this document with the appropriate approvals documentation. These manuals are shipped with the flowmeter or available on the Emerson web site: www.emerson.com.
- For hazardous area installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

2 Model 1700/2700 9-wire installations

Table 2-1: List of Drawings for Model 1700/2700 9-wire installations

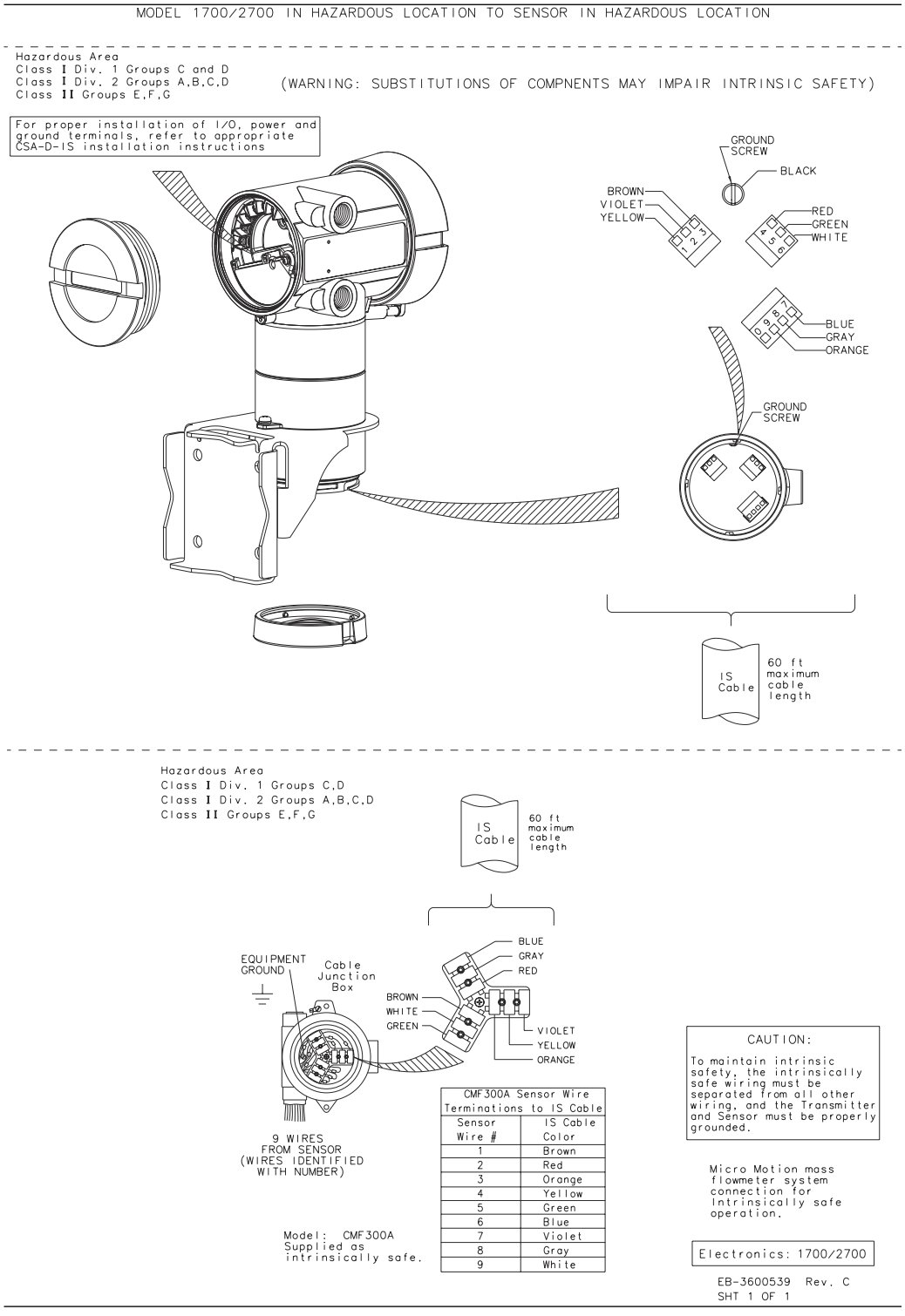
Drawing name	Location
EB-20001058, Revision, C	Model 1700/2700 transmitter with integrally-mounted processor to junction box on CMF, F, H, T, D, and DL sensors
EB-3600539, Revision C	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box for CMF300A sensor
EB-3006199, Revision C	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-10005117 Revision B	Model 1700/2700 transmitter with integrally-mounted core processor to junction box on D600 sensor
EB-3600538, Revision B	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on DT sensor
EB-20001060, Revision, BA	Model 1700/2700 transmitter installation to remote core processor to 9-wire junction box on CMF, F, T, D, and DL sensors
EB-3600675, Revision D	Model 1700/2700 transmitter to 9-wire remote core processor to CMF300A sensor
EB-3007061, Revision B	Model 1700/2700 transmitter to remote mount core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-1005119 Revision B	Model 1700/2700 transmitter to remote core processor to 9-wire junction box on D600 sensor
EB-3600674, Revision C	Model 1700/2700 transmitter to remote core processor to 9-wire junction box on DT sensor

2.1 Model 1700/2700 transmitter with integrally-mounted processor to junction box on CMF, F, H, T, D, and DL sensors

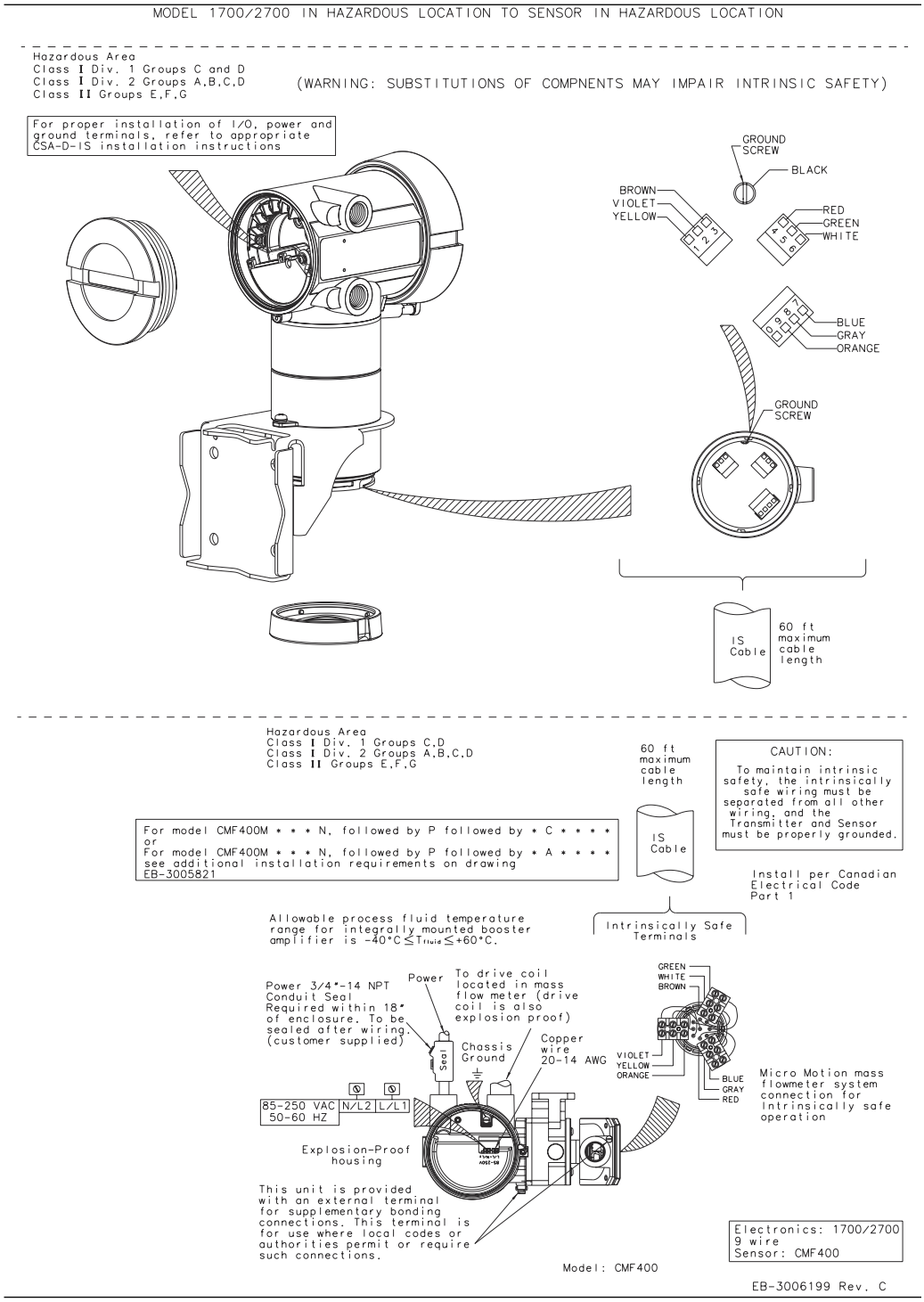


Note
This installation process does not apply to CMF400 sensors with a booster amplifier or to D600 sensors.

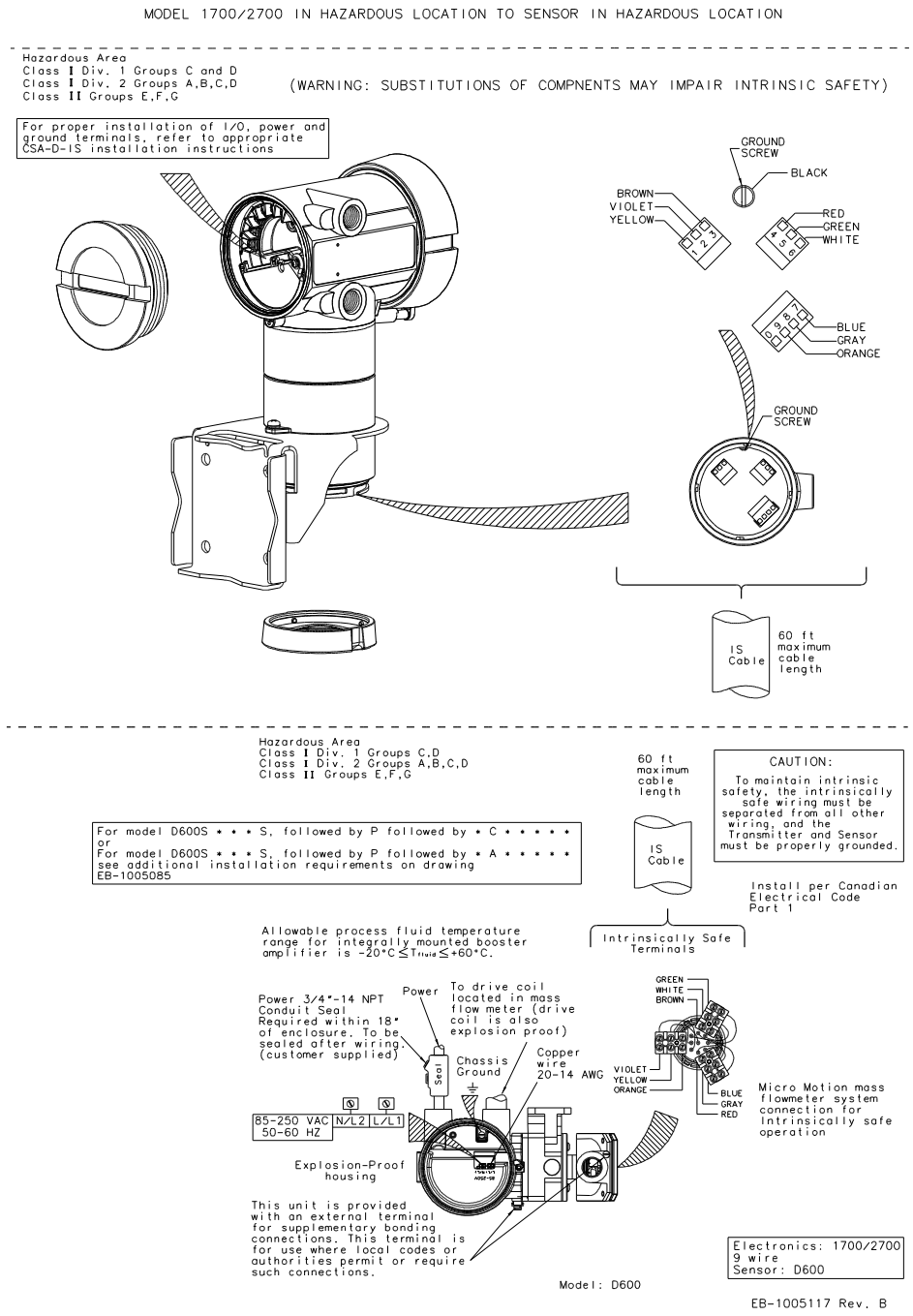
2.2 Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box for CMF300A sensor



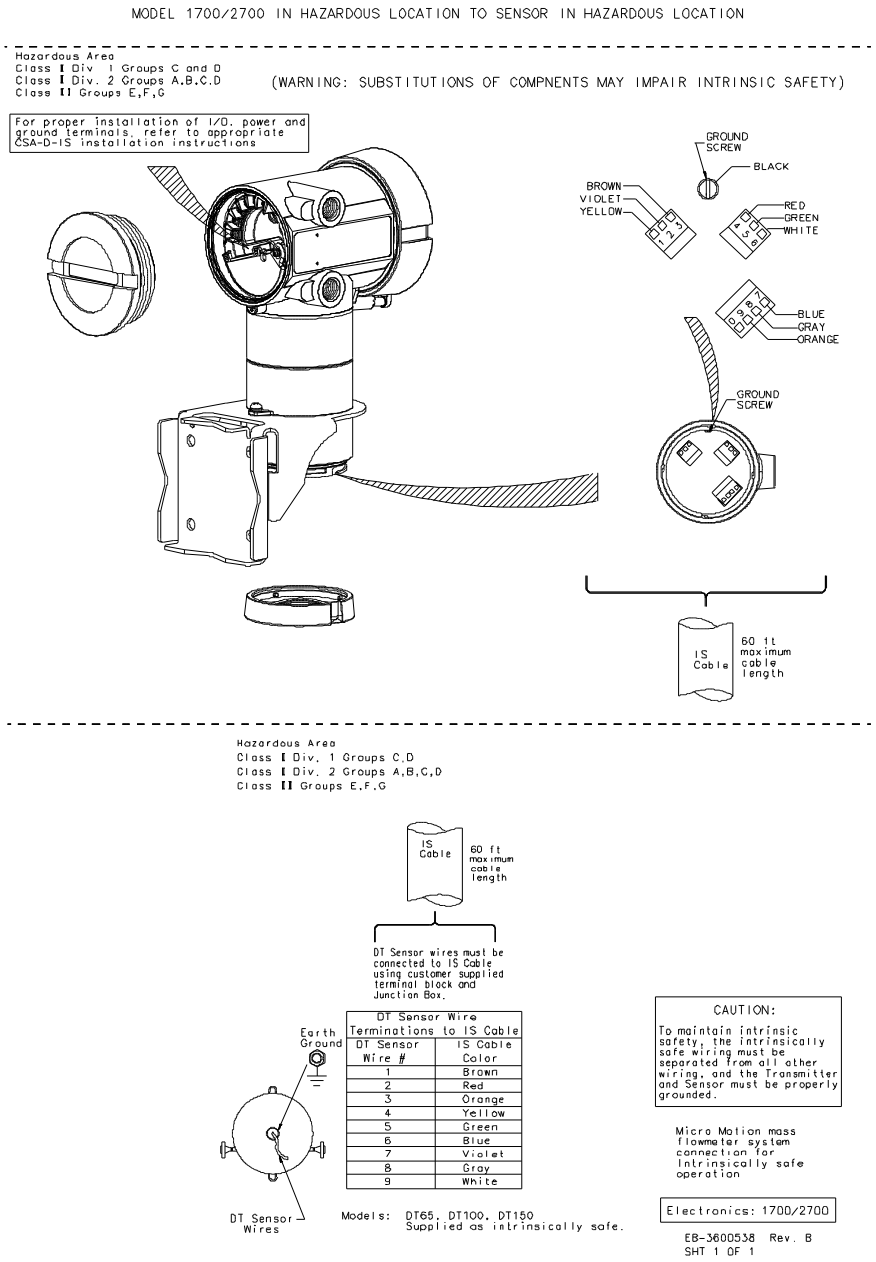
2.3 Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on CMF400 sensor with booster amplifier



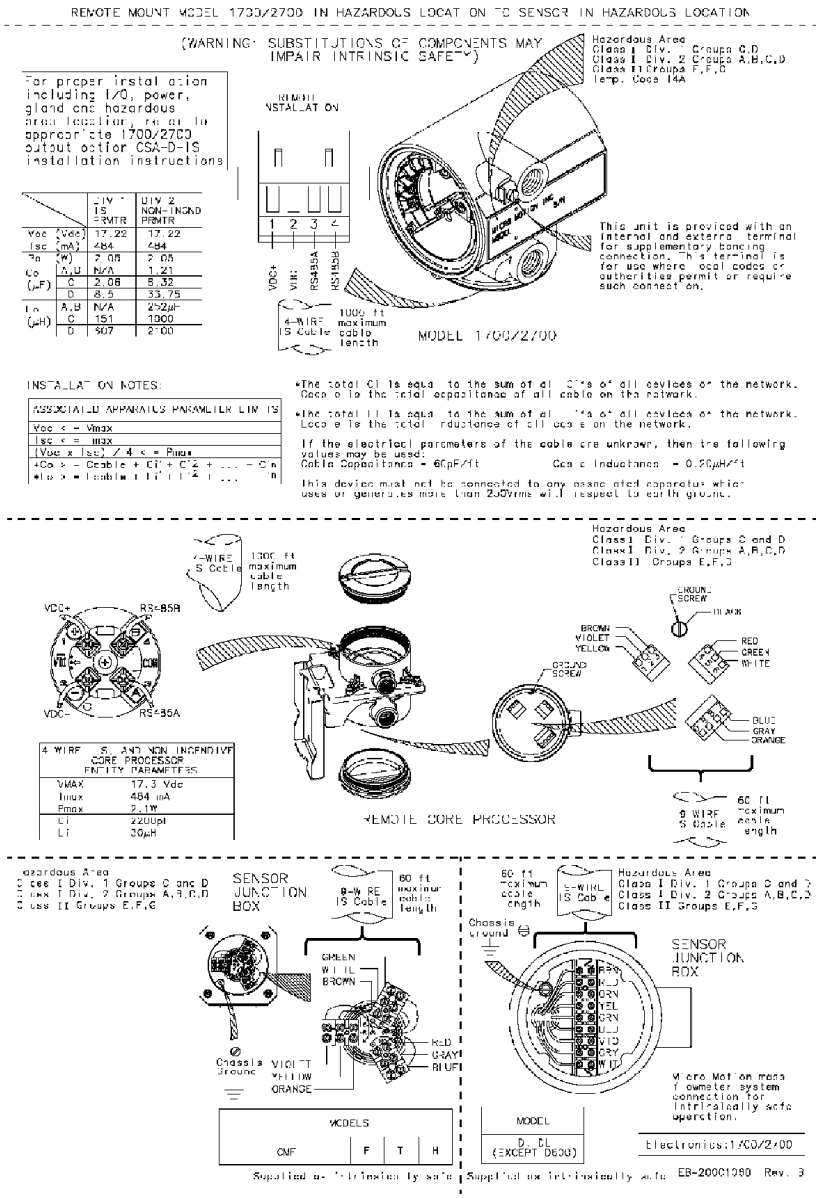
2.4 Model 1700/2700 transmitter with integrally-mounted core processor to junction box on D600 sensor



2.5 Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on DT sensor

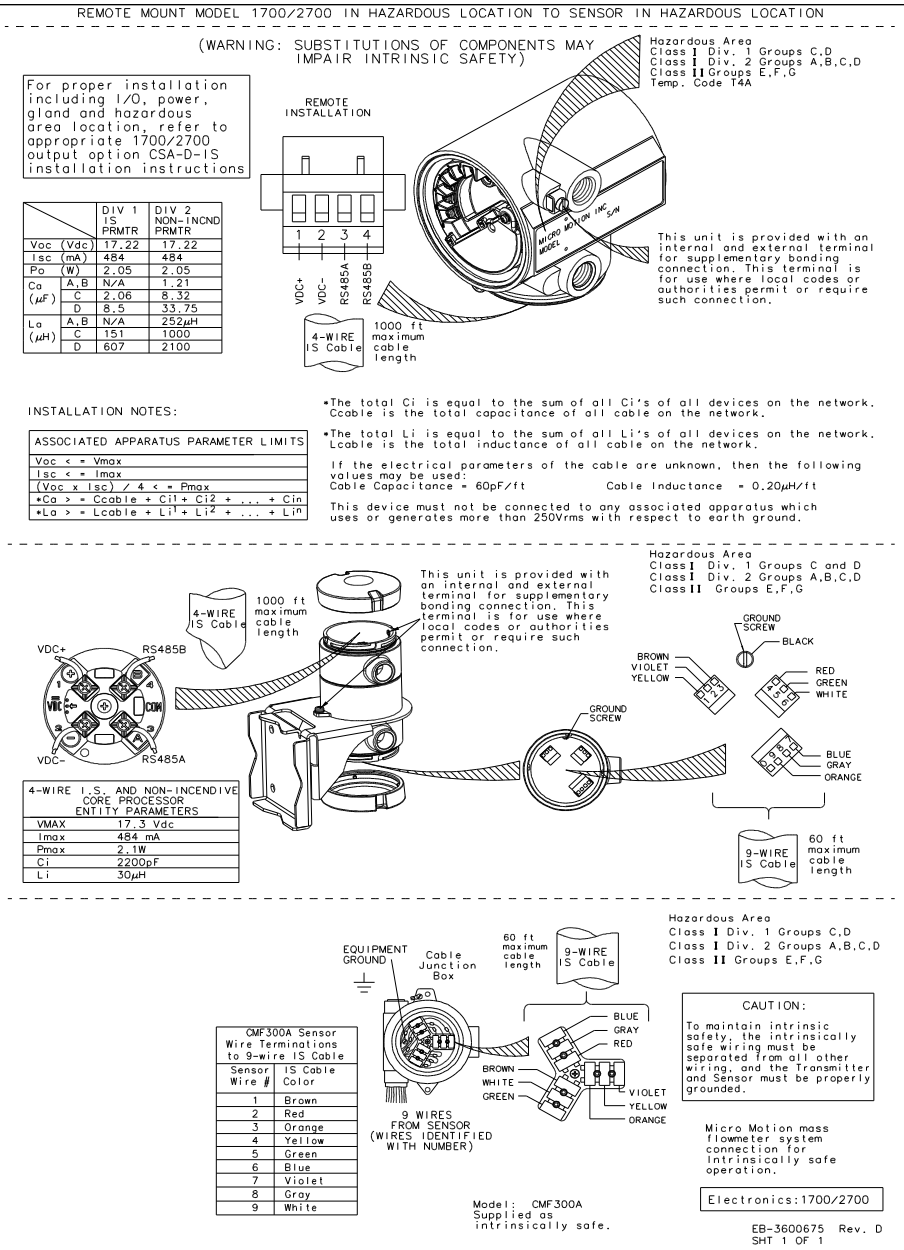


2.6 Model 1700/2700 transmitter installation to remote core processor to 9-wire junction box on CMF, F, T, D, and DL sensors



Note
This installation process does not apply to CMF400 sensors with a booster amplifier or to D600 sensors.

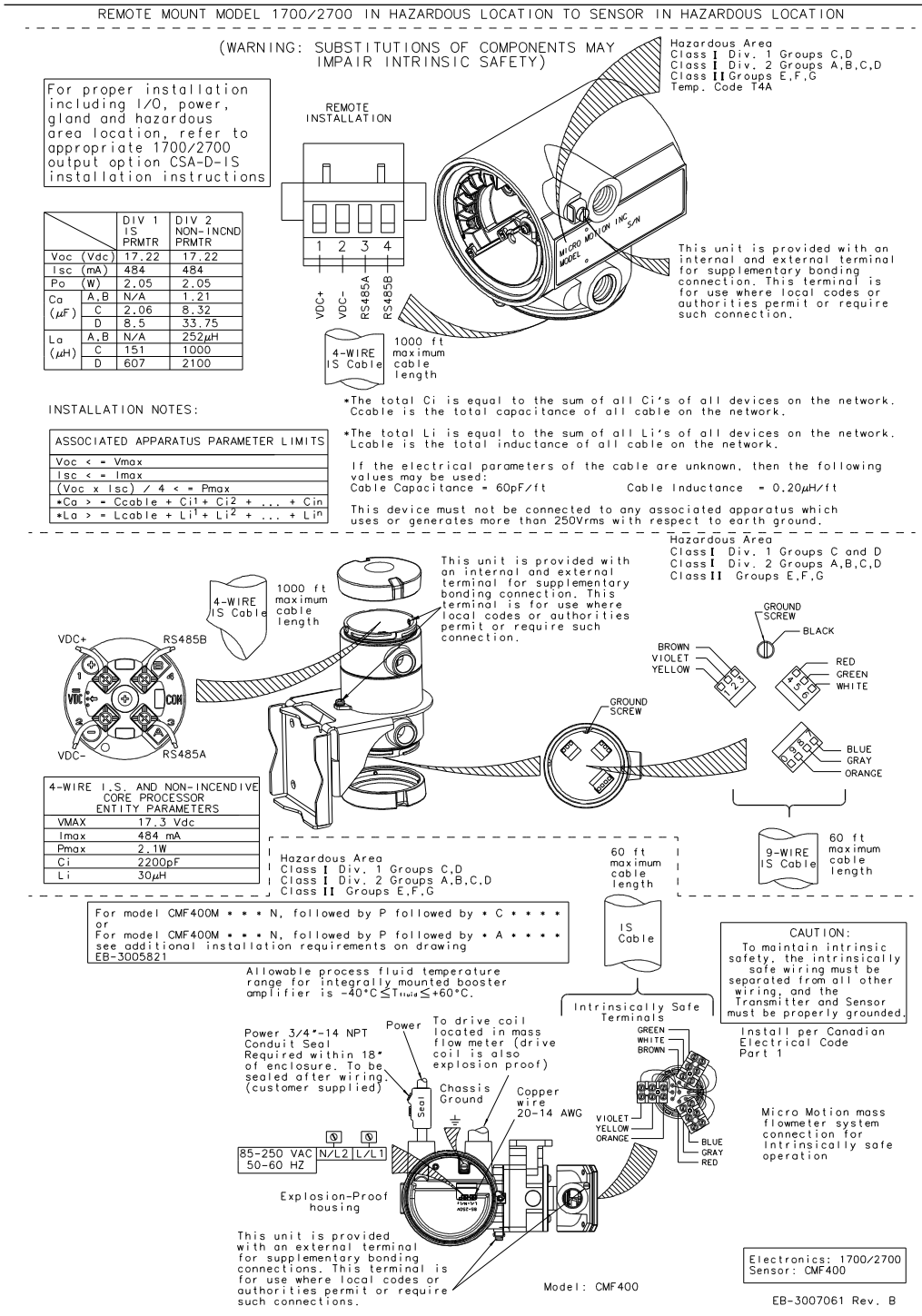
2.7 Model 1700/2700 transmitter to 9-wire remote core processor to CMF300A sensor



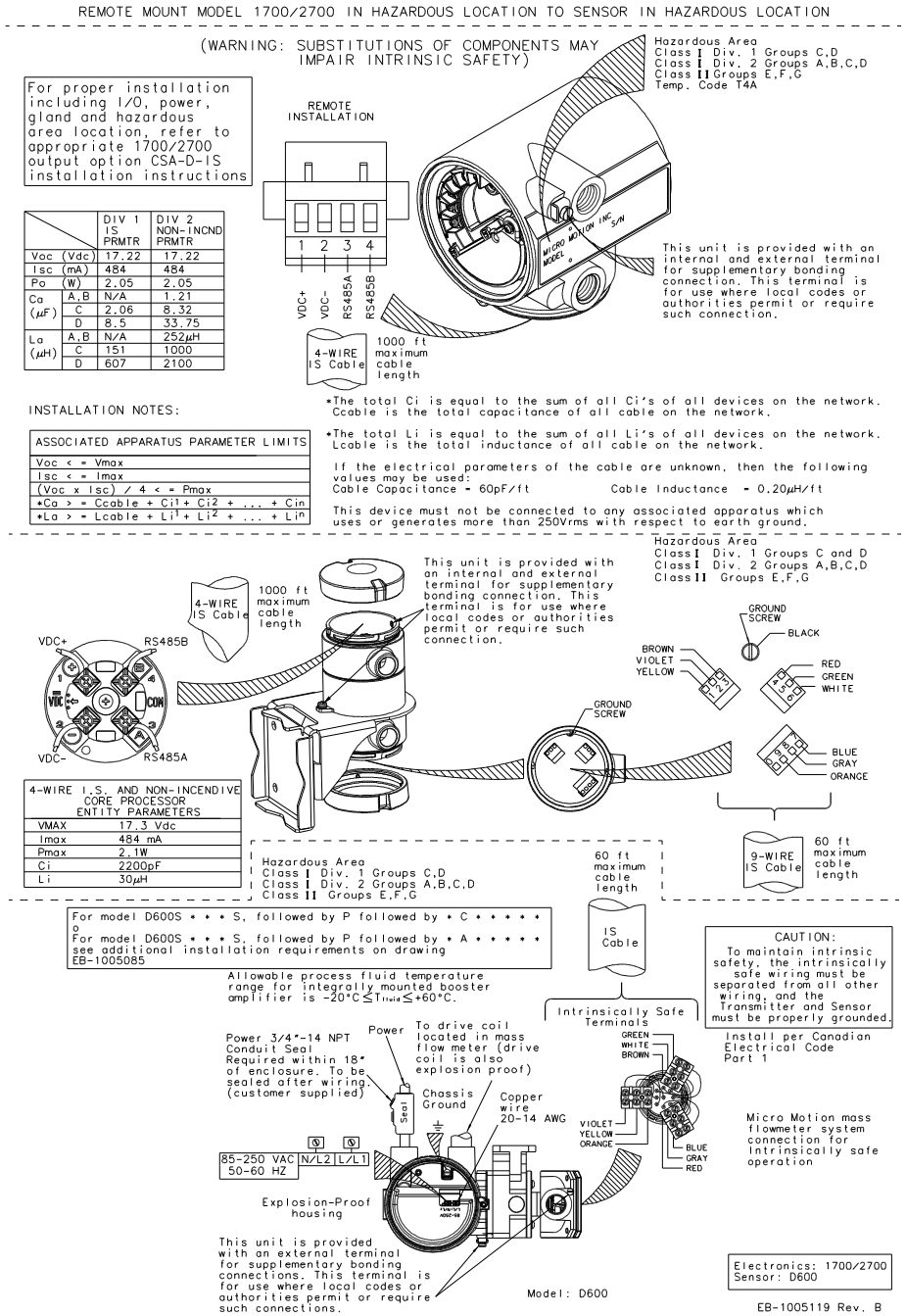
Note

This installation process does not apply to CMF400 sensors with a booster amplifier or to D600 sensors.

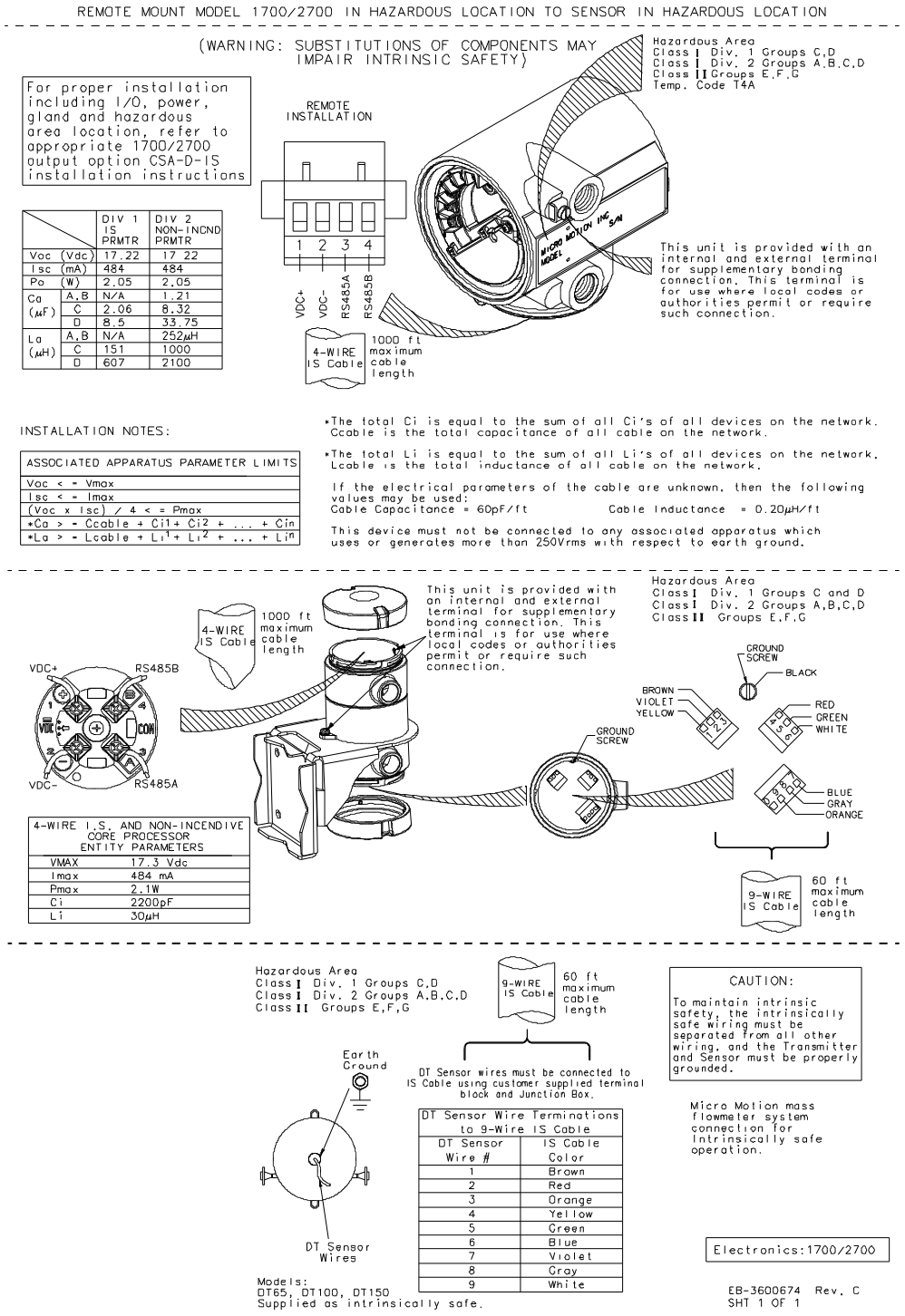
2.8 Model 1700/2700 transmitter to remote mount core processor to 9-wire junction box on CMF400 sensor with booster amplifier



2.9 Model 1700/2700 transmitter to remote core processor to 9-wire junction box on D600 sensor



2.10 Model 1700/2700 transmitter to remote core processor to 9-wire junction box on DT sensor



3 Transmitter output installation

Table 3-1: List of Drawings for Transmitter output installations

Drawing name	Location
EB-3600479, Revision CA	Transmitter output installation: Analog outputs for Model 1700/2700 transmitters
EB-3600629, Revision D	Transmitter output installation Model 1700/2700 with Intrinsically Safe installation
EB-3600667, Revision B	Transmitter output installation: Model 2700 with configurable inputs and outputs
EB-3600476, Revision DA	Transmitter output installation Model 1700/2700 with Fieldbus
EB-3600473, Revision DA	Transmitter output installation: Profibus-PA outputs for Model 1700/2700 Transmitters

3.1 Transmitter output installation: Analog outputs for Model 1700/2700 transmitters

MODEL 1700/2700
WITH ANALOG OUTPUTS

Installation Instructions
Type CSA-D-IS

MODEL 1700/2700 WITH ANALOG OUTPUTS IN HAZARDOUS LOCATION

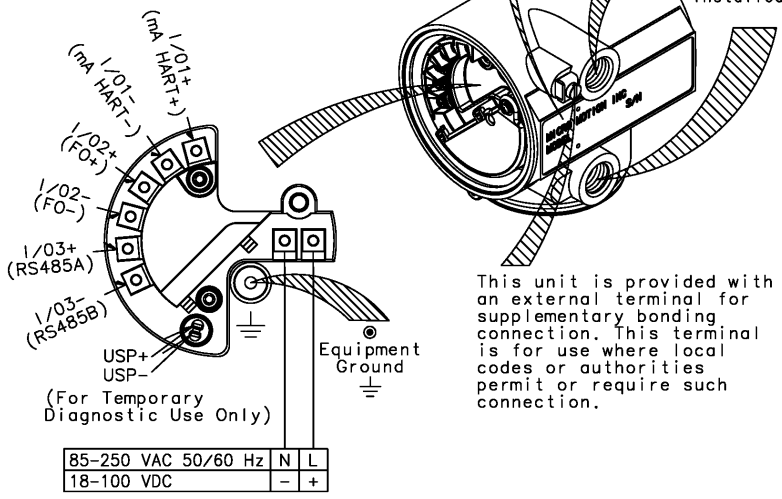
(WARNING: SUBSTITUTIONS OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY)

DIV 2 NON-INCENDIVE PARAMETERS		mA HART	FO	RS485
Voc (Vdc)		24	24	3.1
Isc (mA)		25	11	1.0
Po (W)		–	–	–
Ca (μF)	A,B	0.345	0.345	–
	C	2.06	2.06	–
	D	8.25	8.25	–
La (H)	A,B	0.128	0.661	–
	C	0.384	1	–
	D	1	1	–
Vmax (Vdc)		–	30	12
Imax (mA)		–	500	250
Ci (μF)		–	0.0	0.0005
Li (μH)		–	0.0	0.0

Hazardous Area
ClassI Div. 1 Groups C,D
ClassI Div. 2 Groups A,B,C,D
ClassII Groups E,F,G
Div 1 Temp. Code T4A
Div 2 Temp. Code T5

Note:
Hazardous area classification on an integrally mounted 1700/2700 transmitter can be limited by hazardous area classification of the sensor. Refer to sensor tag.

Warning:
This compartment contains non-intrinsically safe circuits. Use of conduit seals are required within 18 inches of the conduit openings when installed in Division 1.



This unit is provided with an external terminal for supplementary bonding connection. This terminal is for use where local codes or authorities permit or require such connection.

	N	L
85-250 VAC 50/60 Hz	N	L
18-100 VDC	–	+

Electronics: 1700/2700 ANALOG

EB-3600479 Rev. CA
SHT 1 OF 1

3.2 Transmitter output installation Model 1700/2700 with Intrinsically Safe installation

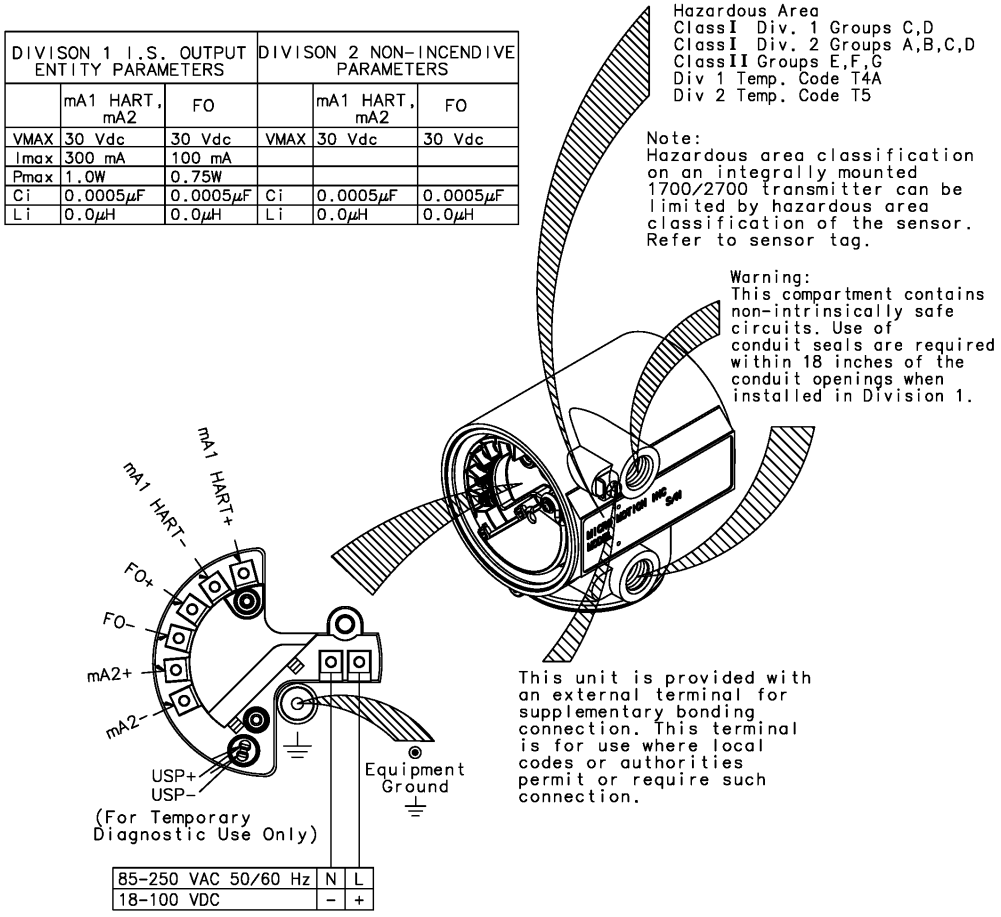
MODEL 1700/2700
WITH I.S. OUTPUTS

Installation Instructions
Type CSA-D-IS

MODEL 1700/2700 WITH I.S. OUTPUTS IN HAZARDOUS LOCATION

(WARNING: SUBSTITUTIONS OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY)

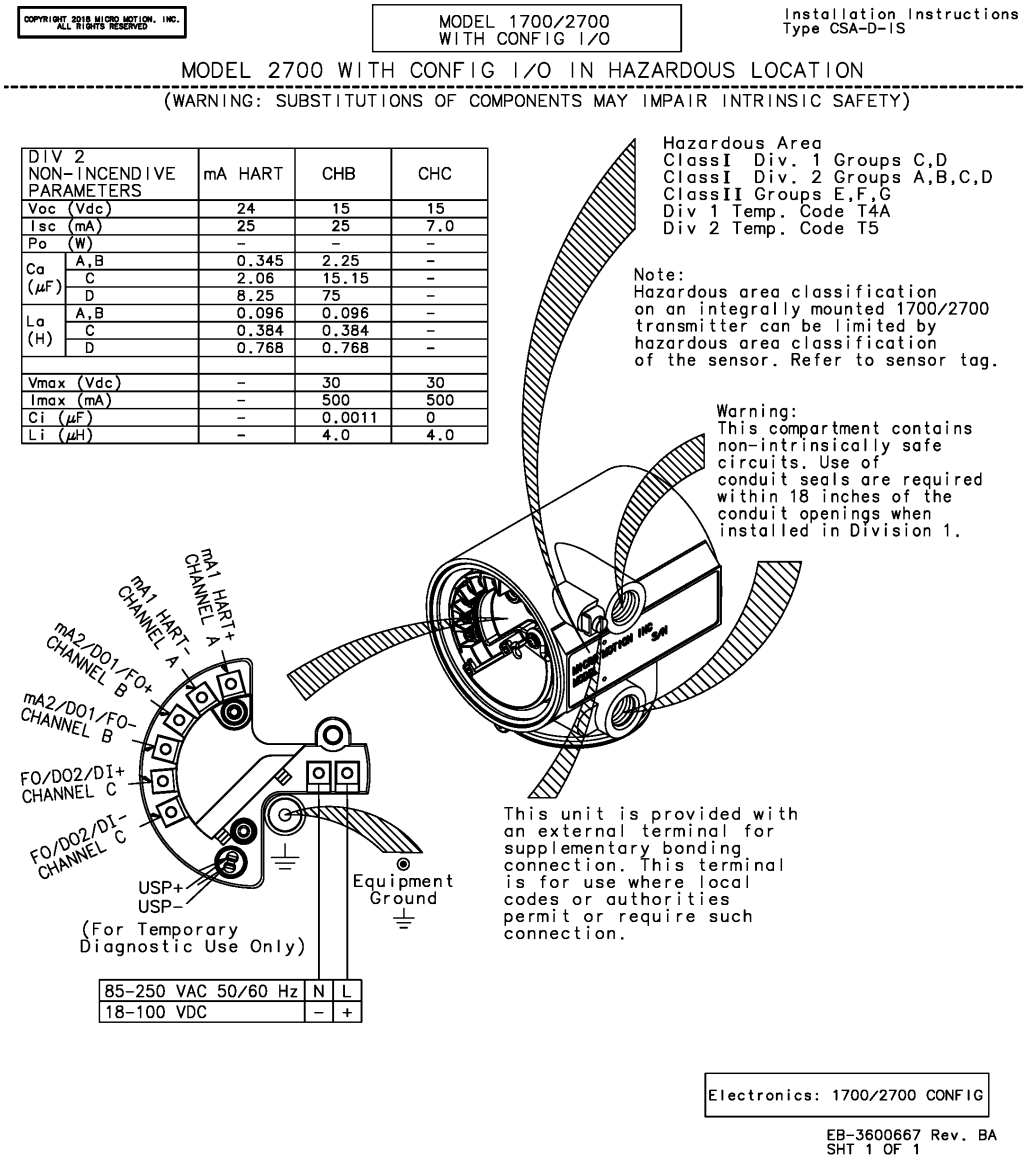
DIVISON 1 I.S. OUTPUT ENTITY PARAMETERS			DIVISON 2 NON-INCENDIVE PARAMETERS		
	mA1 HART, mA2	FO		mA1 HART, mA2	FO
VMAX	30 Vdc	30 Vdc	VMAX	30 Vdc	30 Vdc
Imax	300 mA	100 mA			
Pmax	1.0W	0.75W			
Ci	0.0005μF	0.0005μF	Ci	0.0005μF	0.0005μF
Li	0.0μH	0.0μH	Li	0.0μH	0.0μH



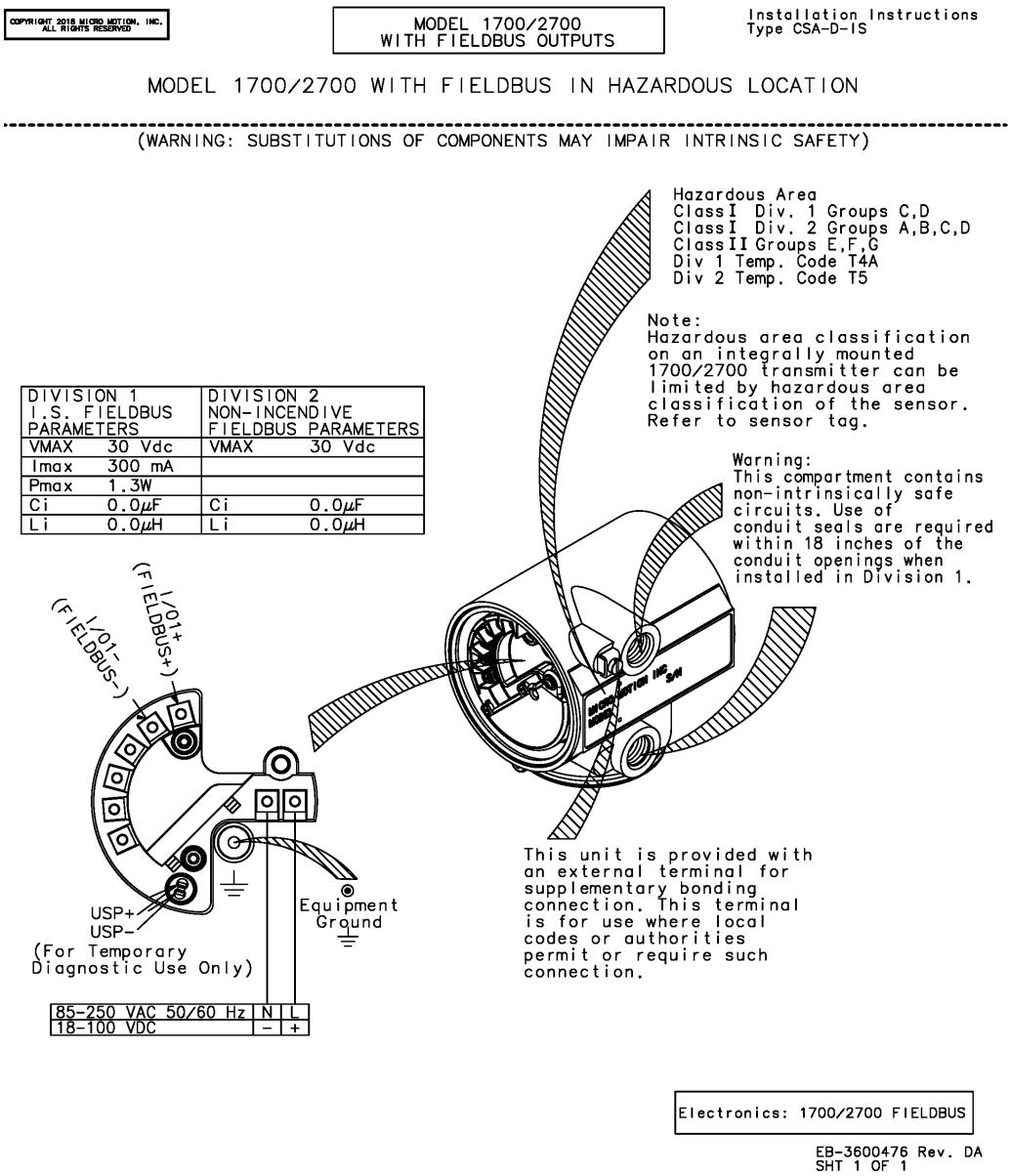
Electronics: 1700/2700 I.S. OUTPUT

EB-3600629 Rev. DA
SHT 1 OF 1

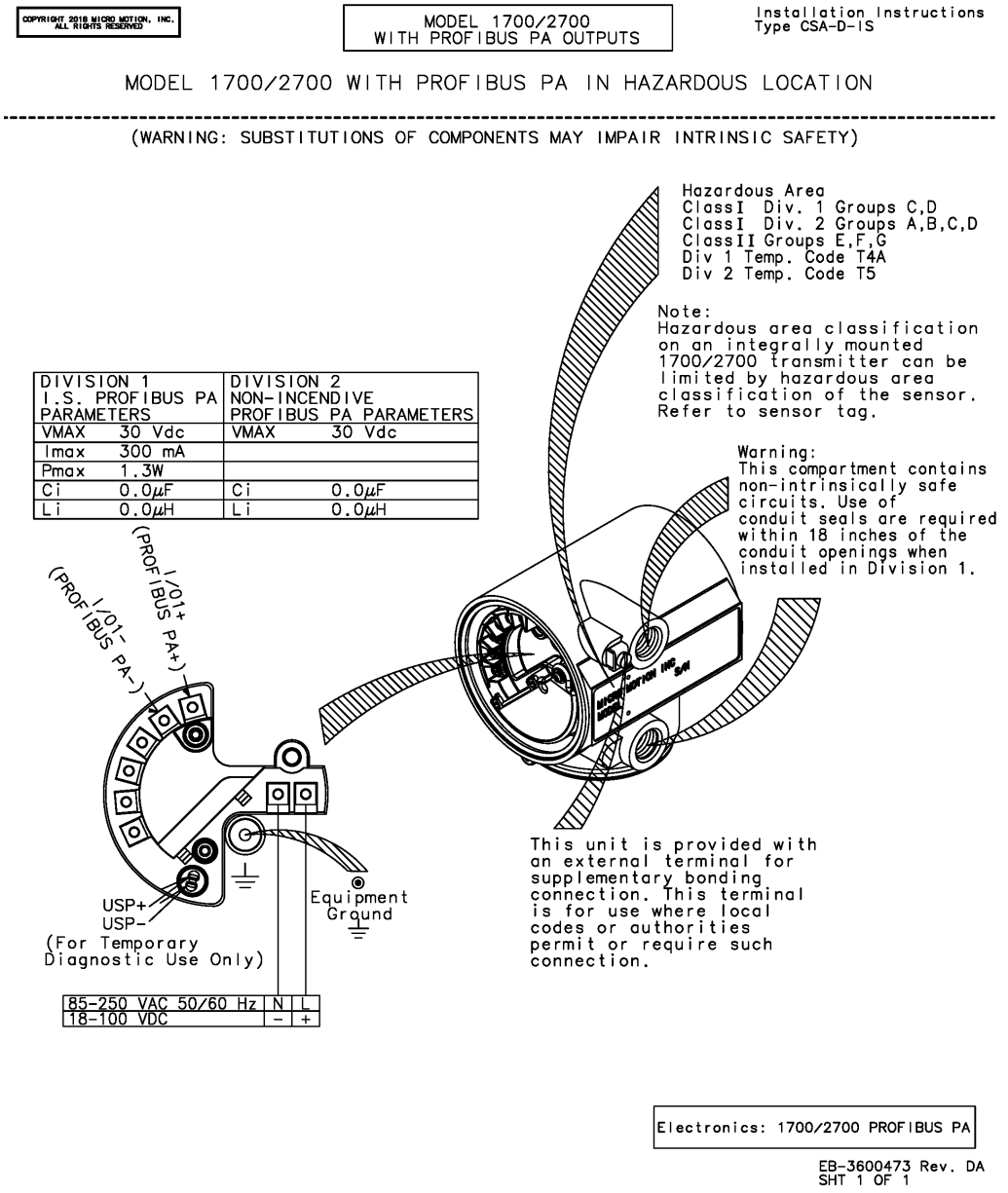
3.3 Transmitter output installation: Model 2700 with configurable inputs and outputs



3.4 Transmitter output installation Model 1700/2700 with Fieldbus



3.5 Transmitter output installation: Profibus-PA outputs for Model 1700/2700 Transmitters

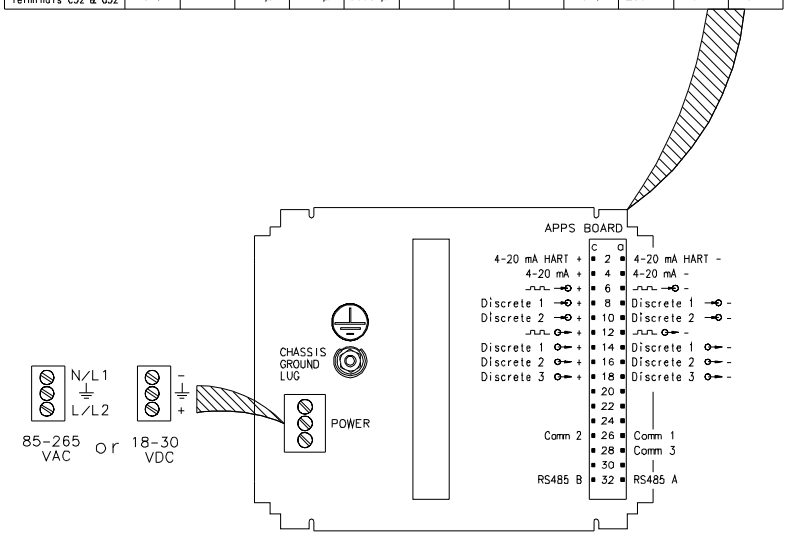


4 Model 3300 nonincendive parameters

Hazardous Area
Class I Div. 2 Groups A,B,C,D

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal number	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals c2 & a2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals c4 & a4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals c6 & a6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals c8 & a8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals c10 & a10	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals c12 & a12	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals c14 & a14	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals c16 & a16	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals c18 & a18	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals c32 & a32	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



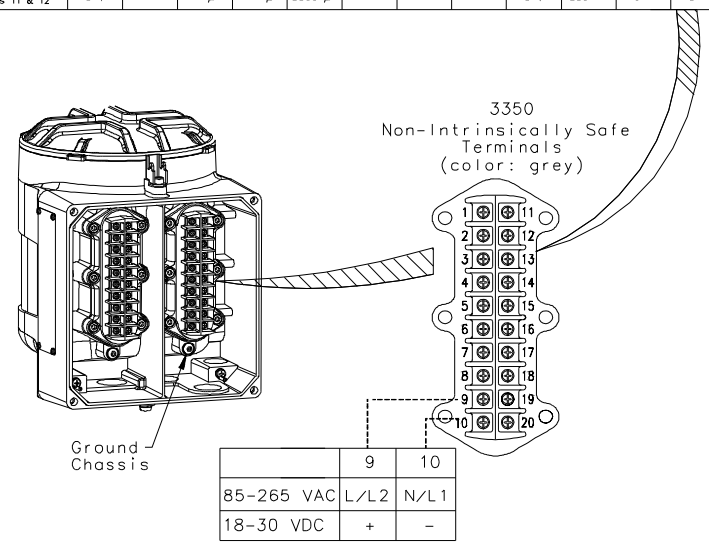
EB-3300193 Rev. E

5 Model 3350 nonincendive parameters

Hazardous Area
Class I Div. 2 Groups A,B,C,D
Class II Groups F,G

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



	9	10
85-265 VAC	L/L2	N/L1
18-30 VDC	+	–

EB-3300818 Rev. B

6 Model 3500 transmitter 9-wire installation instructions

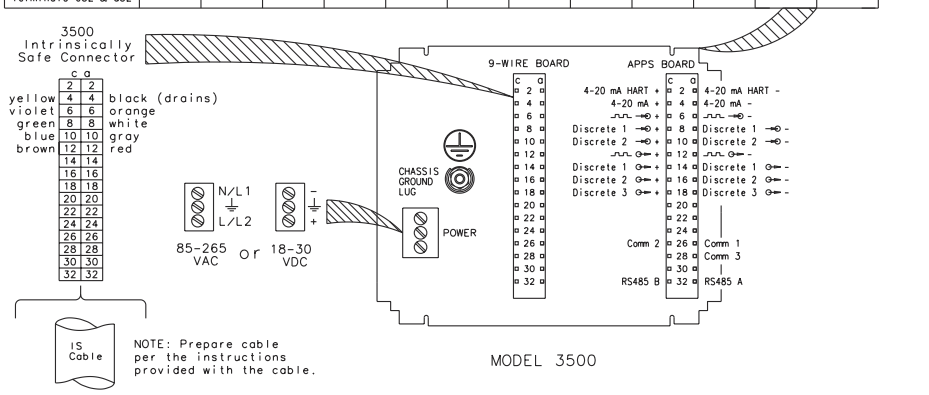
Table 6-1: List of Drawings for Transmitter Models 3500 9-wire installations

Drawing name	Location
EB-20001052, Revision B	Model 3500 transmitter to 9-wire sensor junction box for CMF, F, H, and T sensors
EB-3002934, Revision F	Model 3500 transmitter to 9-wire sensor junction box for CMF300A sensor
EB-3005816, RevisionC	Model 3500 transmitter to sensor junction box for CMF400 sensor with booster amplifier
EB-330555, RevisionD	Model 3500 transmiter to sensor junction box for D and DL sensors
EB-1005081, Revision A	Model 3500 transmitter to 9-wire sensor junction box for D600 sensor
EB-3300556, Revision C	Model 3500 transmitter to 9-wire sensor junction box for DT sensor

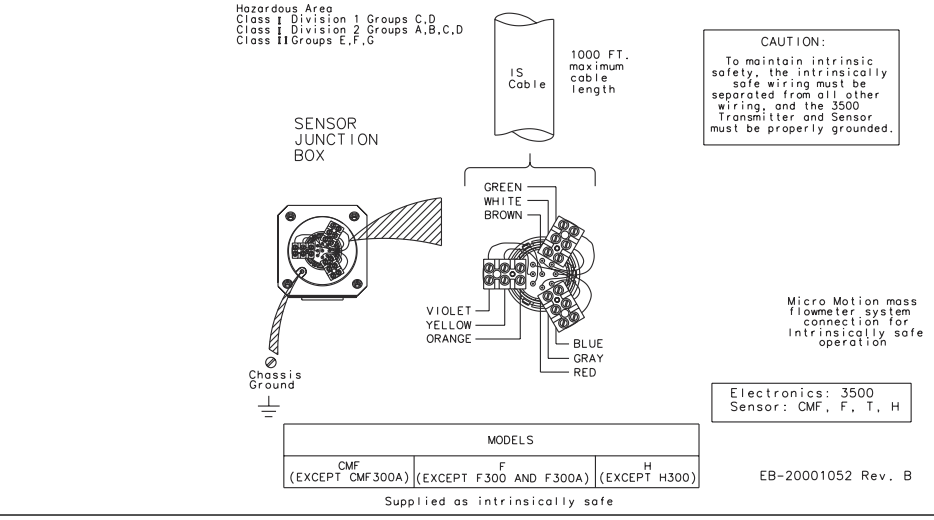
6.1 Model 3500 transmitter to 9-wire sensor junction box for CMF, F, H, and T sensors

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_o			L_o			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals c2 & a2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals c4 & a4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals c6 & a6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals c8 & a8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals c10 & a10	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals c12 & a12	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals c14 & a14	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals c16 & a16	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals c18 & a18	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals c32 & a32	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D



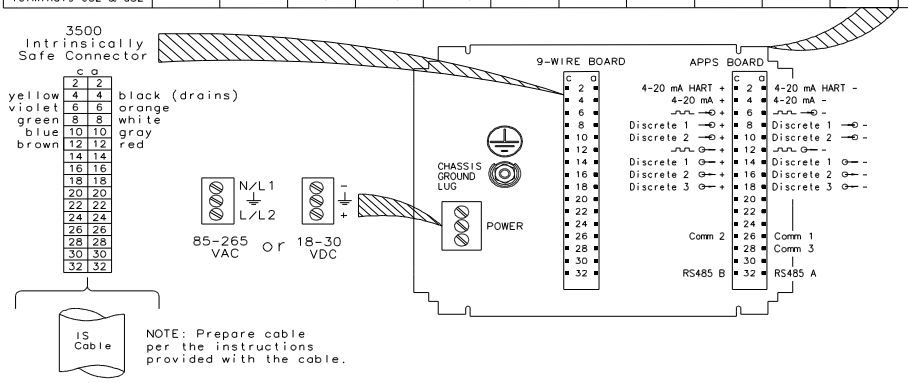
Note

This installation is not supported for the CMF300A sensor or the CMF400 sensor with booster amplifier.

6.2 Model 3500 transmitter to 9-wire sensor junction box for CMF300A sensor

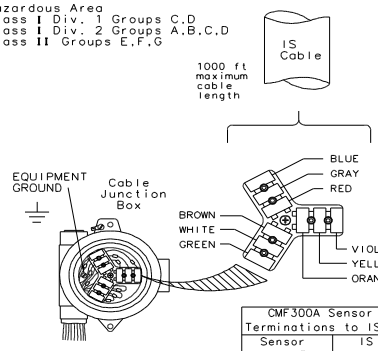
Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals c2 & a2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals c4 & a4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals c6 & a6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals c8 & a8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals c10 & a10	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals c12 & a12	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals c14 & a14	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals c16 & a16	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals c18 & a18	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals c32 & a32	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D

Hazardous Area
Class I Div. 1 Groups C,D
Class I Div. 2 Groups A,B,C,D
Class II Groups E,F,G



CMF300A Sensor Wire Terminations to IS Cable	
Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

Model: CMF300A
Supplied as intrinsically safe.

CAUTION:
To maintain intrinsic safety, the intrinsically safe wiring must be separated from all other wiring, and the 3500 Transmitter and Sensor must be properly grounded.

Micro Motion mass flowmeter system connection for Intrinsically safe operation

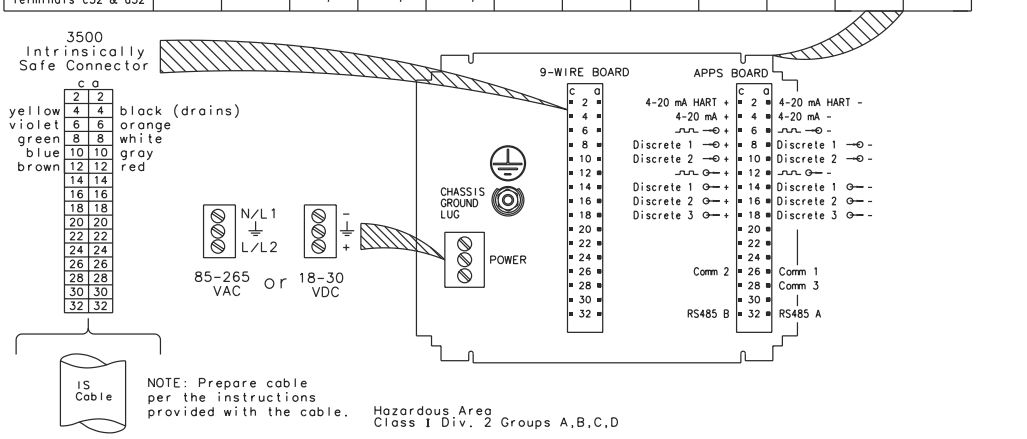
Electronics: 3500
Sensor: CMF300A

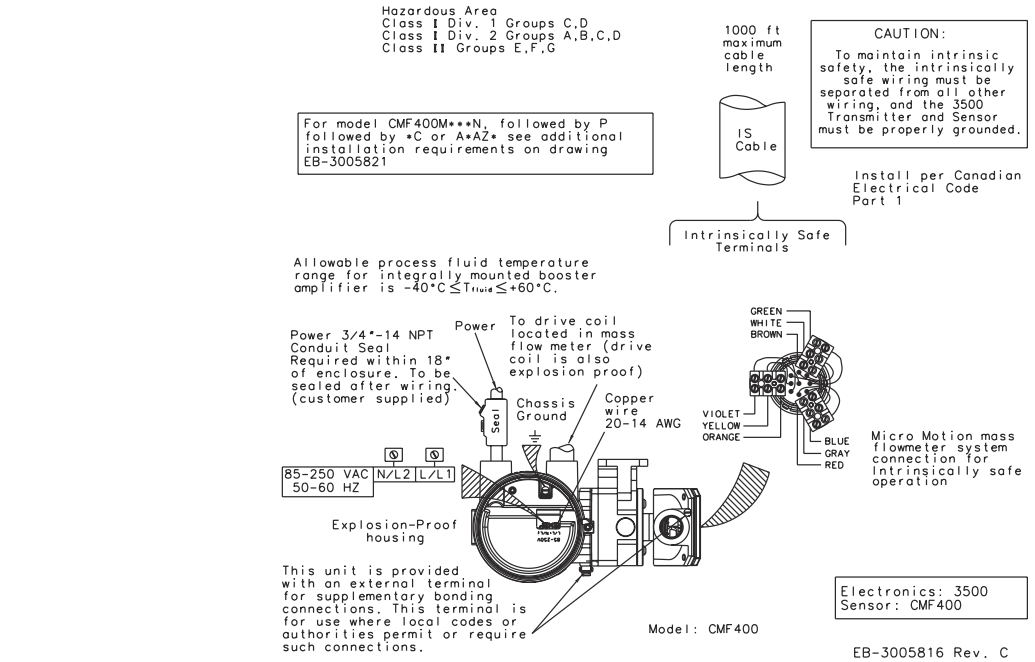
EB-3002934 Rev. F

6.3 Model 3500 transmitter to sensor junction box for CMF400 sensor with booster amplifier

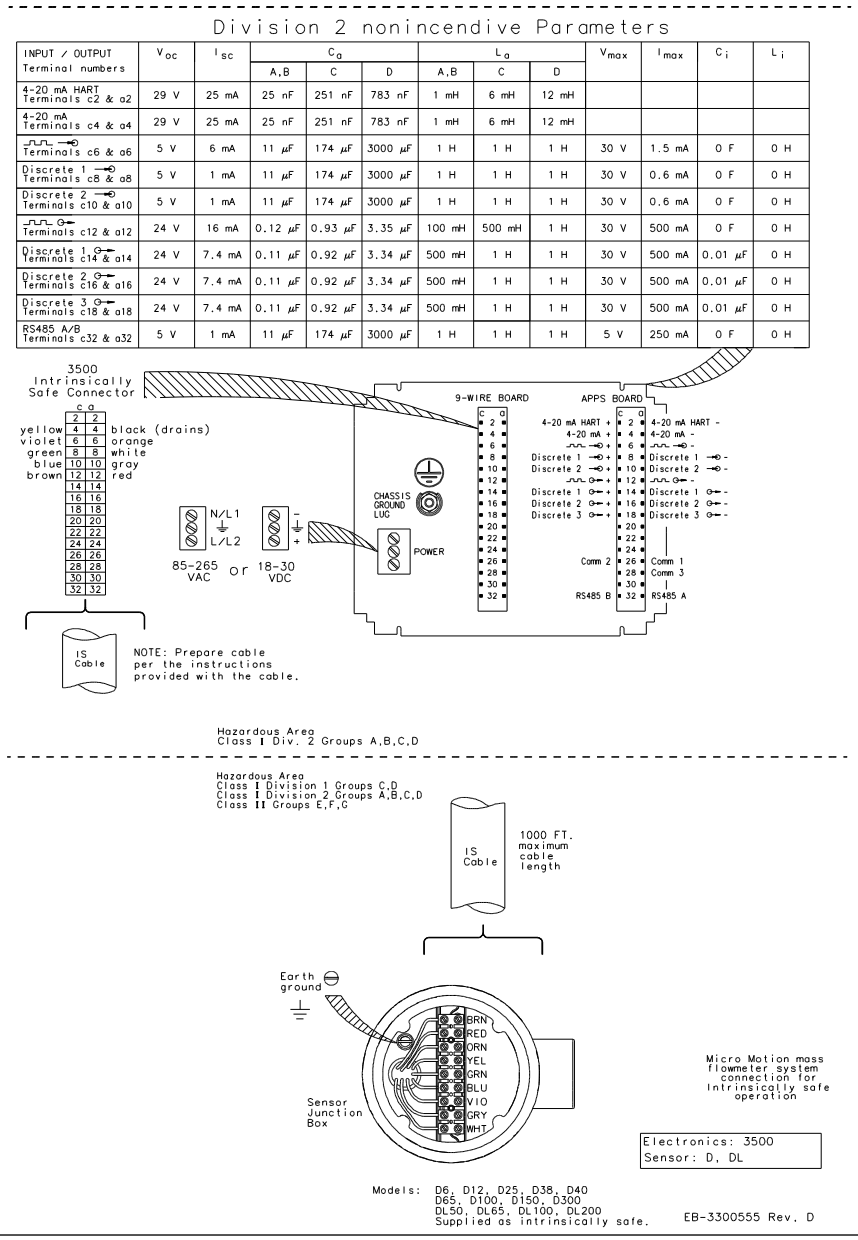
Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals c2 & a2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals c4 & a4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals c6 & a6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals c8 & a8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals c10 & a10	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals c12 & a12	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals c14 & a14	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals c16 & a16	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals c18 & a18	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals c32 & a32	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H





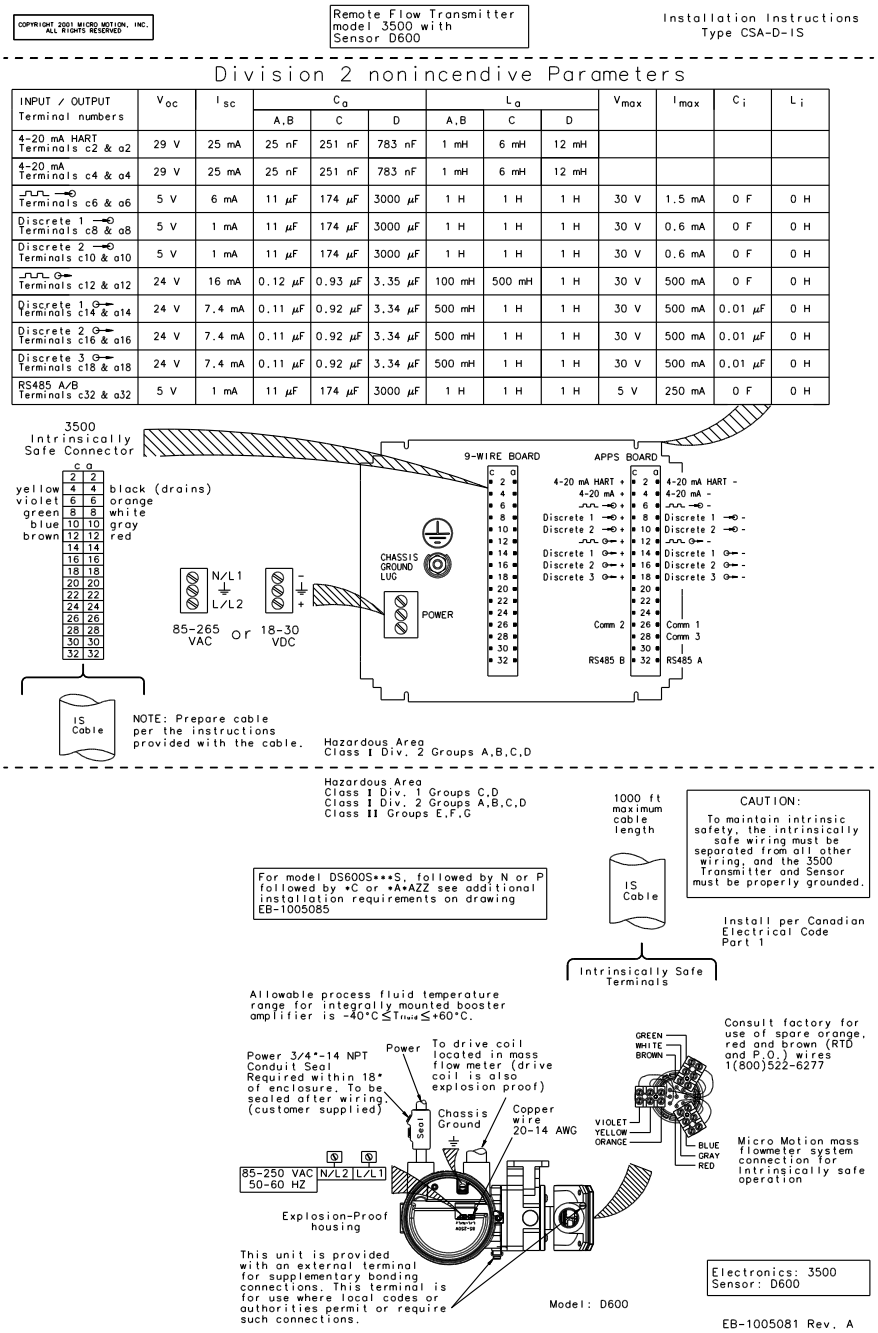
6.4 Model 3500 transmiter to sensor junction box for D and DL sensors



Note

This installation is not supported for either the D600 sensor or the DT sensor.

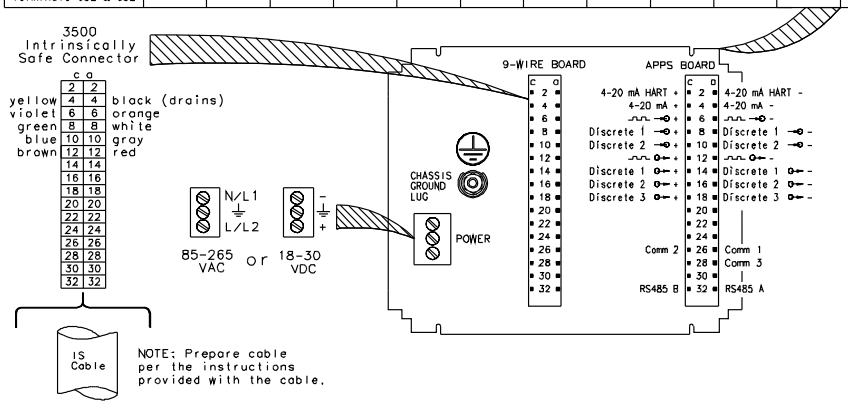
6.5 Model 3500 transmitter to 9-wire sensor junction box for D600 sensor



6.6 Model 3500 transmitter to 9-wire sensor junction box for DT sensor

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals c2 & a2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals c4 & a4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals c6 & a6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals c8 & a8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals c10 & a10	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals c12 & a12	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals c14 & a14	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals c16 & a16	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals c18 & a18	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals c32 & a32	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D

Hazardous Area
Class I Div. 1 Groups C,D
Class I Div. 2 Groups A,B,C,D
Class II Groups E,F,G

IS Cable — 1000 FT. maximum cable length

DT Sensor wires must be connected to IS Cable using customer supplied terminal block and Junction Box.

Earth Ground

DT Sensor Wires

DT Sensor Wire Terminations to IS Cable	
DT Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

CAUTION:
To maintain intrinsic safety, the intrinsically safe wiring must be separated from all other wiring, and the RFT9739 Transmitter and Sensor must be properly grounded.

Micro Motion mass flowmeter system connection for intrinsically safe operation

Electronics: 3500
Sensor: DT

Models: DT65, DT100, DT150
Supplied as Intrinsically safe.

EB-3300556 Rev. C

7 Model 3700 9-wire installation instructions

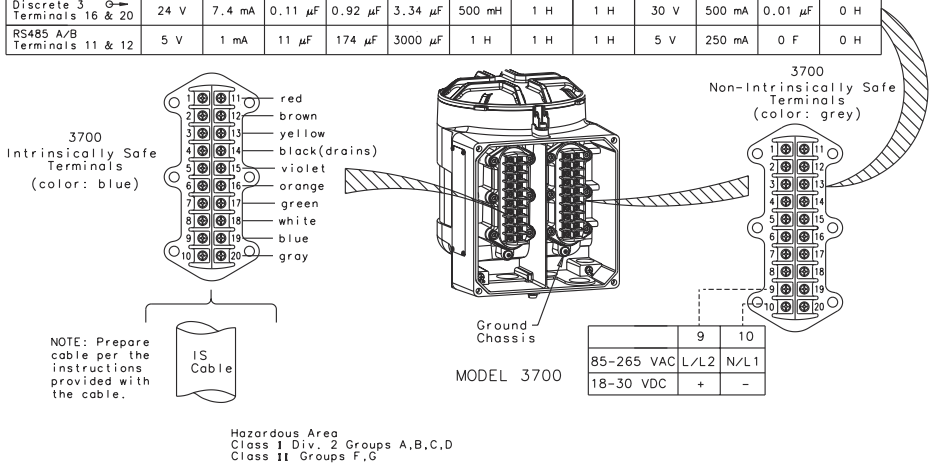
Table 7-1: List of Drawings for Transmitter Models 3700 9-wire installations

Drawing name	Location
EB-20001054, Revision B	Model 3700 transmitter to sensor junction box for CMF, F, H, and T sensors
EB-3002936, Revision F	Model 3700 transmitter to sensor junction box for CMF300A sensor
EB-3005817, Revision BA	Model 3700 transmitter to 9-wire sensor junction box for CMF400 sensor with booster amplifier
EB-3300573, Revision D	Model 3700 transmitter to 9-wire sensor junction box for D and DL sensors
EB-1005082, Revision A	Model 3700 transmitter to 9-wire sensor junction box for D600 sensor
EB-3300575, Revision C	Model 3700 transmitter to 9-wire sensor junction box for DT sensors

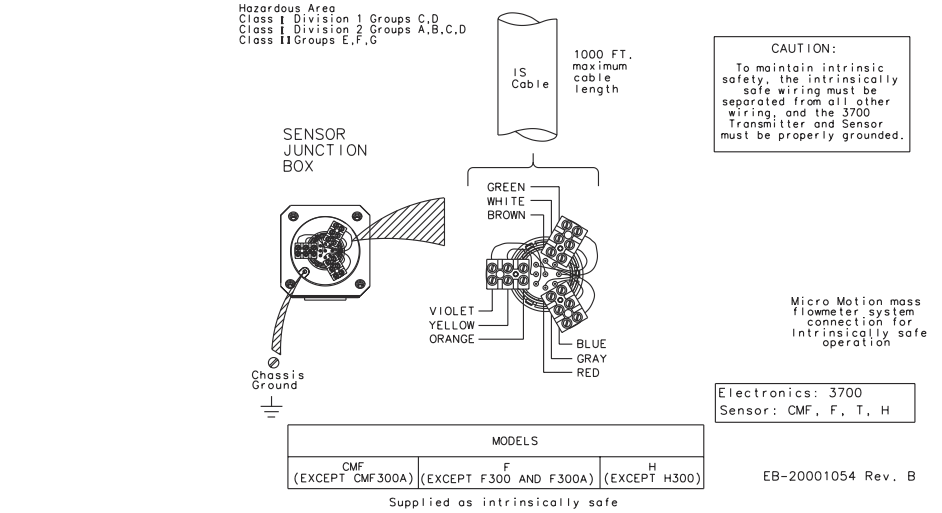
7.1 Model 3700 transmitter to sensor junction box for CMF, F, H, and T sensors

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_o			L_o			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D
Class II Groups F,G



Supplied as intrinsically safe

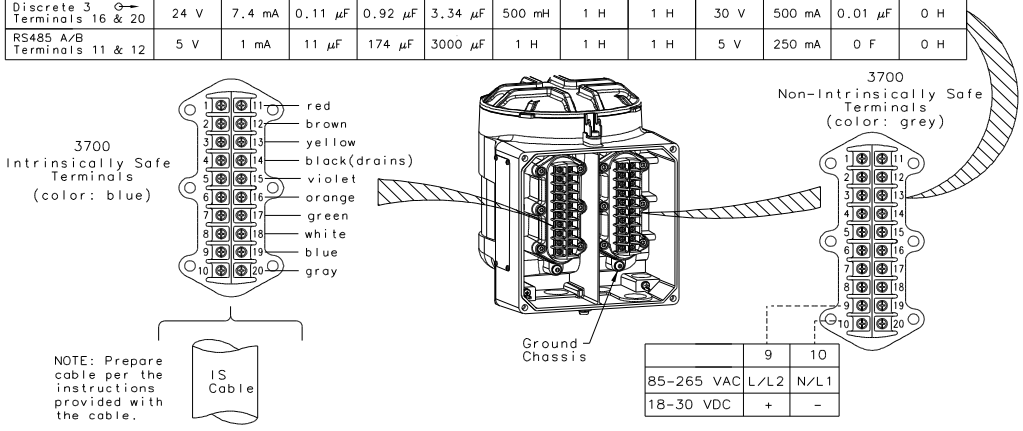
Note

These installation instructions do not apply to either the CMF300A sensor or the CMF400 sensor with booster amplifier.

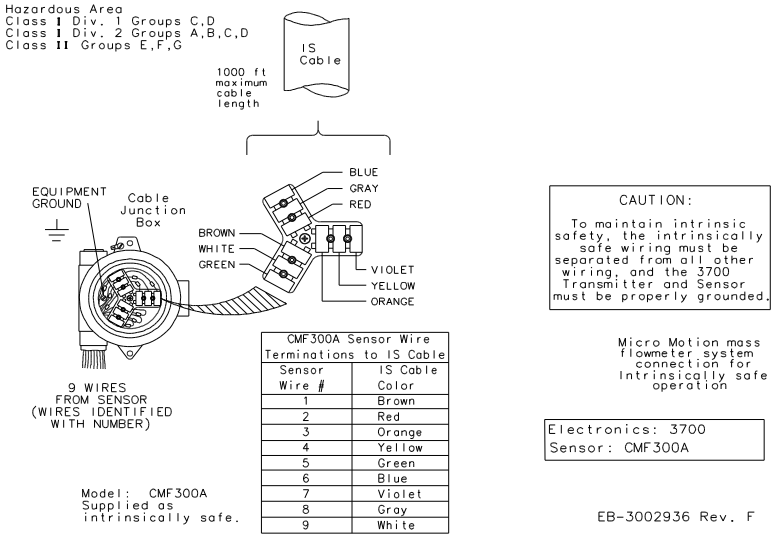
7.2 Model 3700 transmitter to sensor junction box for CMF300A sensor

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D
Class II Groups F,G

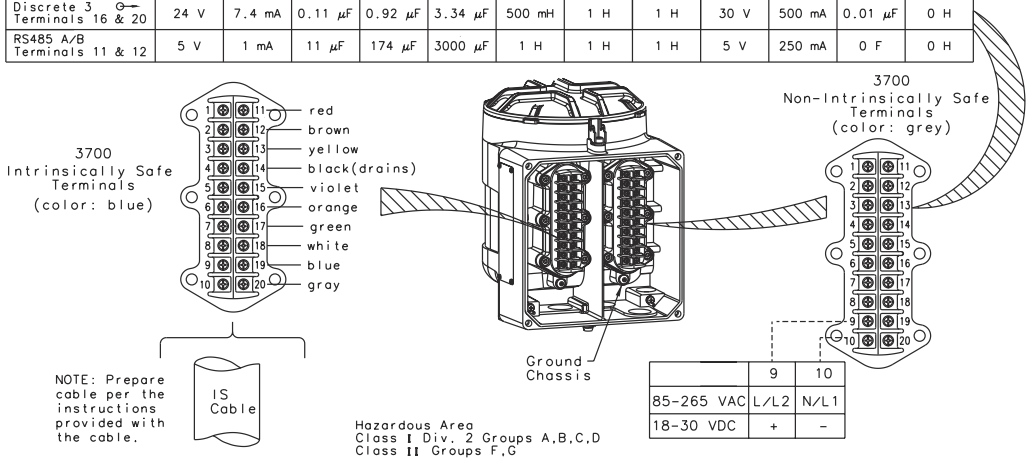


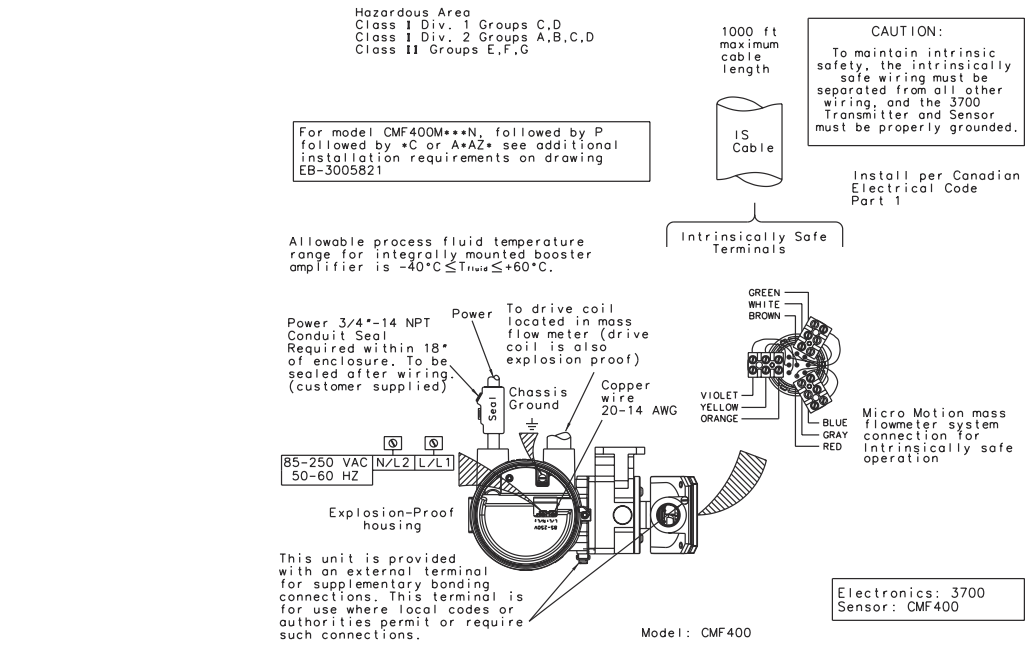
CMF300A Sensor Wire Terminations to IS Cable	
Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

7.3 Model 3700 transmitter to 9-wire sensor junction box for CMF400 sensor with booster amplifier

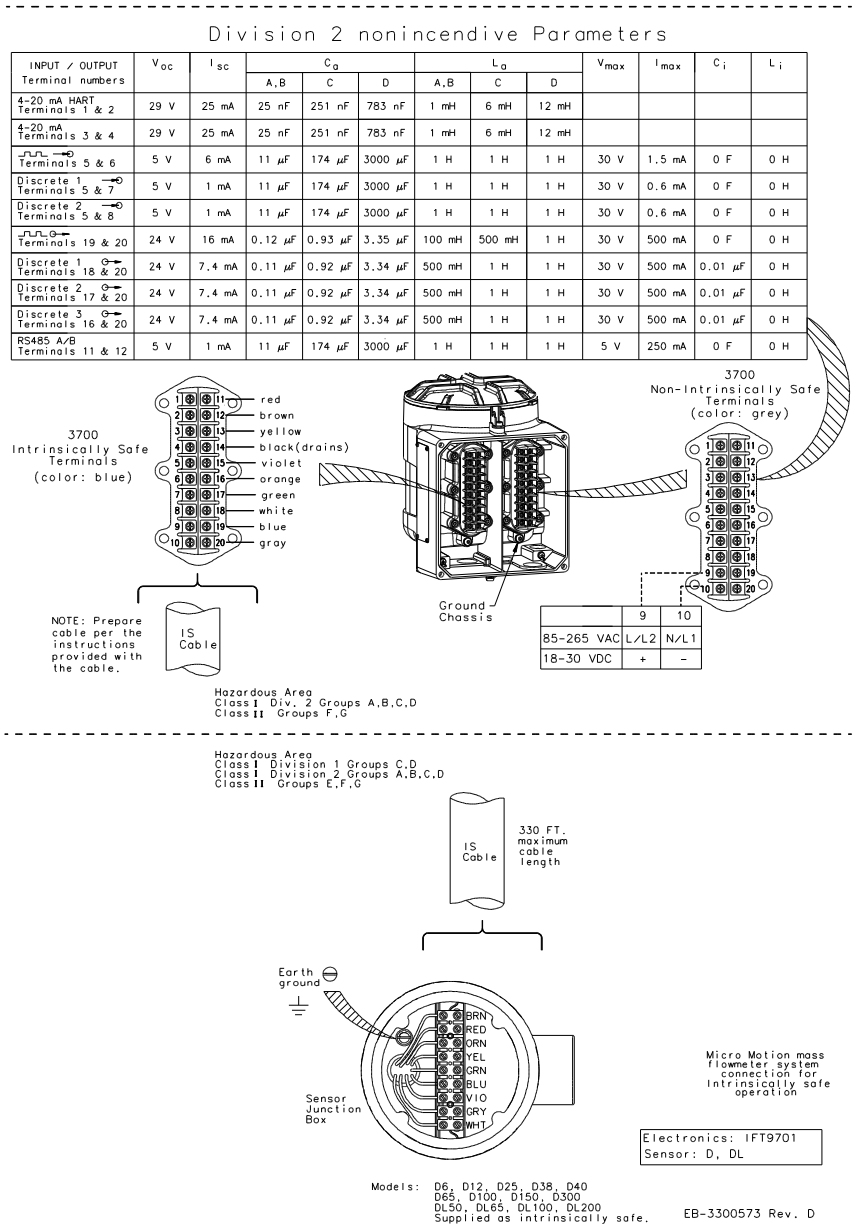
Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H





7.4 Model 3700 transmitter to 9-wire sensor junction box for D and DL sensors



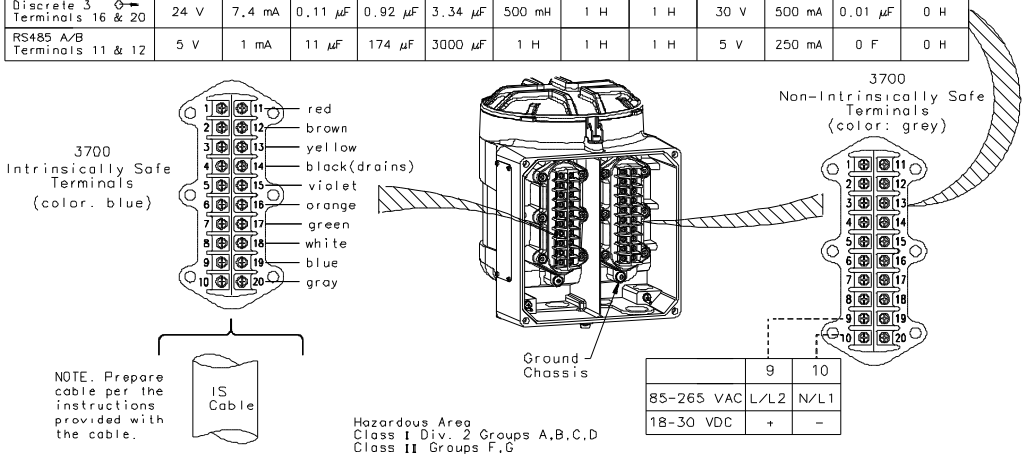
Note

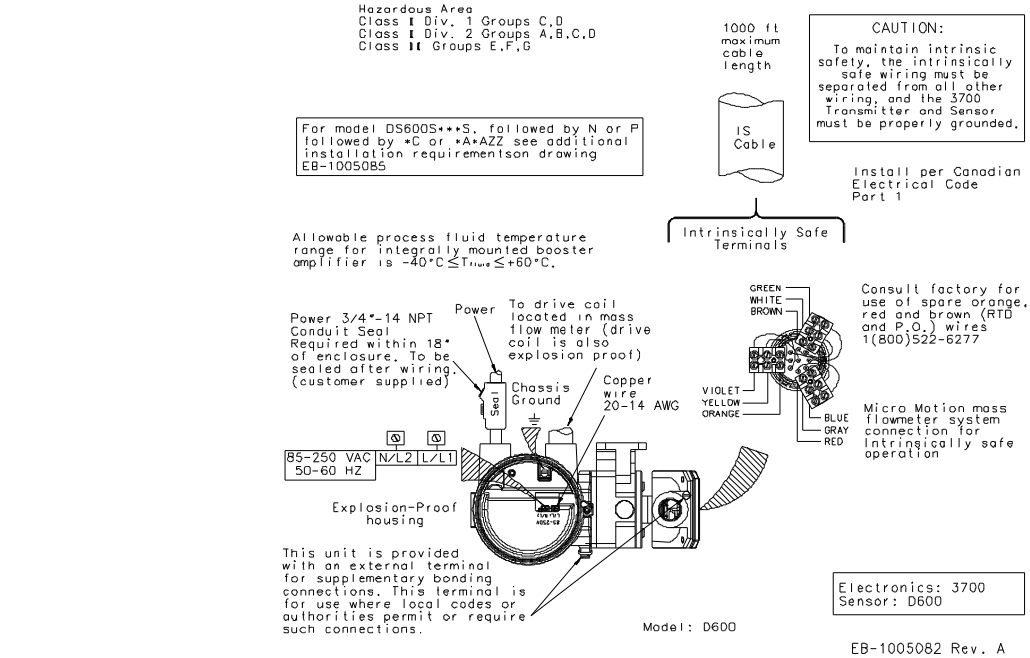
These instructions do not apply to either the D600 sensor or the DT sensor.

7.5 Model 3700 transmitter to 9-wire sensor junction box for D600 sensor

Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H

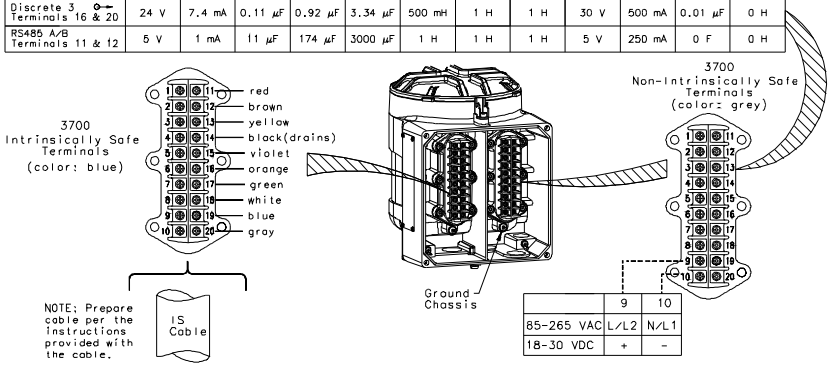




7.6 Model 3700 transmitter to 9-wire sensor junction box for DT sensors

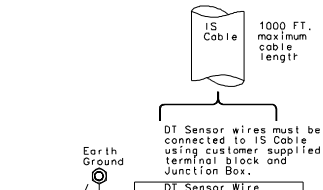
Division 2 nonincendive Parameters

INPUT / OUTPUT Terminal numbers	V_{oc}	I_{sc}	C_a			L_a			V_{max}	I_{max}	C_i	L_i
			A,B	C	D	A,B	C	D				
4-20 mA HART Terminals 1 & 2	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
4-20 mA Terminals 3 & 4	29 V	25 mA	25 nF	251 nF	783 nF	1 mH	6 mH	12 mH				
Terminals 5 & 6	5 V	6 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	1.5 mA	0 F	0 H
Discrete 1 Terminals 5 & 7	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Discrete 2 Terminals 5 & 8	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	30 V	0.6 mA	0 F	0 H
Terminals 19 & 20	24 V	16 mA	0.12 µF	0.93 µF	3.35 µF	100 mH	500 mH	1 H	30 V	500 mA	0 F	0 H
Discrete 1 Terminals 18 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 2 Terminals 17 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
Discrete 3 Terminals 16 & 20	24 V	7.4 mA	0.11 µF	0.92 µF	3.34 µF	500 mH	1 H	1 H	30 V	500 mA	0.01 µF	0 H
RS485 A/B Terminals 11 & 12	5 V	1 mA	11 µF	174 µF	3000 µF	1 H	1 H	1 H	5 V	250 mA	0 F	0 H



Hazardous Area
Class I Div. 2 Groups A,B,C,D
Class II Groups F,G

Hazardous Area
Class I Div. 1 Groups C,D
Class I Div. 2 Groups A,B,C,D
Class II Groups E,F,G



DT Sensor Wire Terminations to IS Cable	
DT Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

CAUTION:
To maintain intrinsic safety, the intrinsically safe wiring must be separated from all other wiring, and the 3700 Transmitter and Sensor must be properly grounded.

Micro Motion mass flowmeter system connection for intrinsically safe operation

Electronics: 3700
Sensor: DT

Models: DT65, DT100, DT150
Supplied as intrinsically safe.

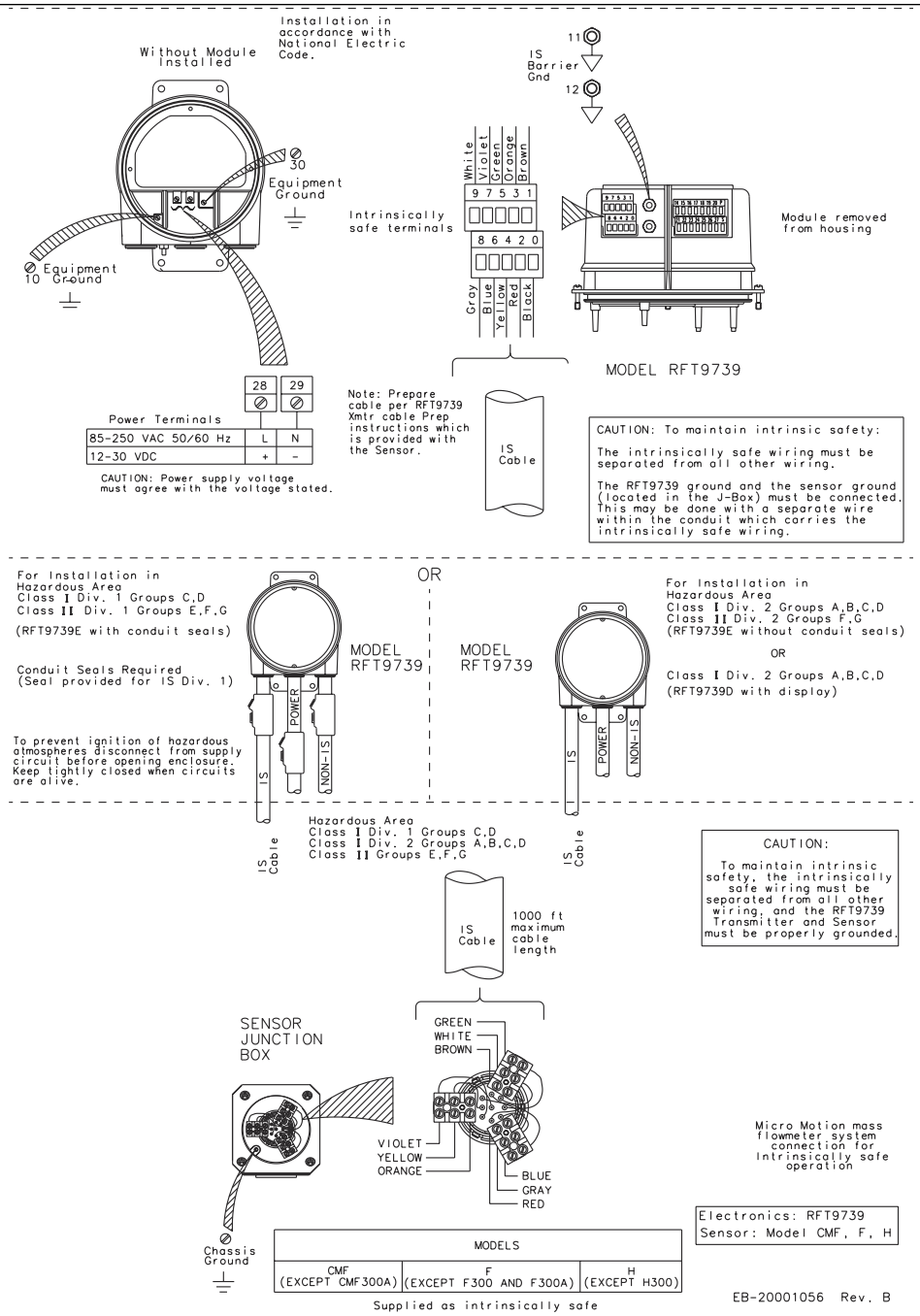
EB-3300575 Rev. C

8 RFT9739 field mount 9-wire installation instructions

Table 8-1: List of Drawings for Transmitter RFT9739 9-wire installation instructions

Drawing name	Location
EB-20001056, Revision B	RFT9739 transmitter field mounted to sensor junction box for CMF, F, and H sensors
EB-3002930, Revision F	RFT9739 transmitter field-mounted to 9-wire sensor junction box for CMF300A sensor
EB-3005812, Revision C	RFT9739 transmitter field-mounted to sensor junction box for CMF400 sensor with booster amplifier
EB-3002202, Revision E	RFT9739 transmitter field-mounted to sensor junction box for D and DL sensors
EB-1005078, Revision A	RFT9739 transmitter field-mounted to sensor junction box for D600 sensor
EB-3002521, Revision B	RFT9739 transmitter field-mounted to sensor junction box for DT sensors

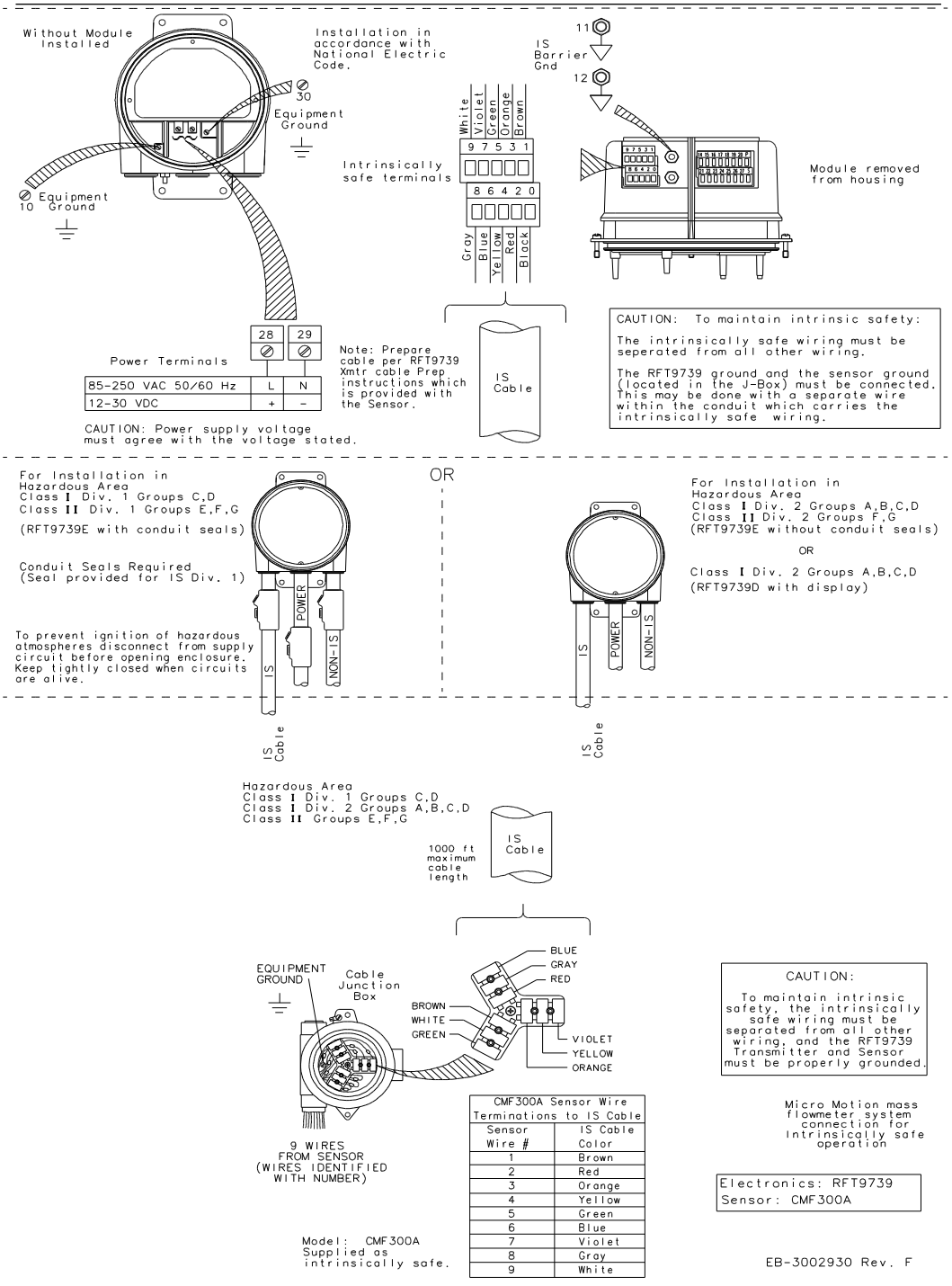
8.1 RFT9739 transmitter field mounted to sensor junction box for CMF, F, and H sensors



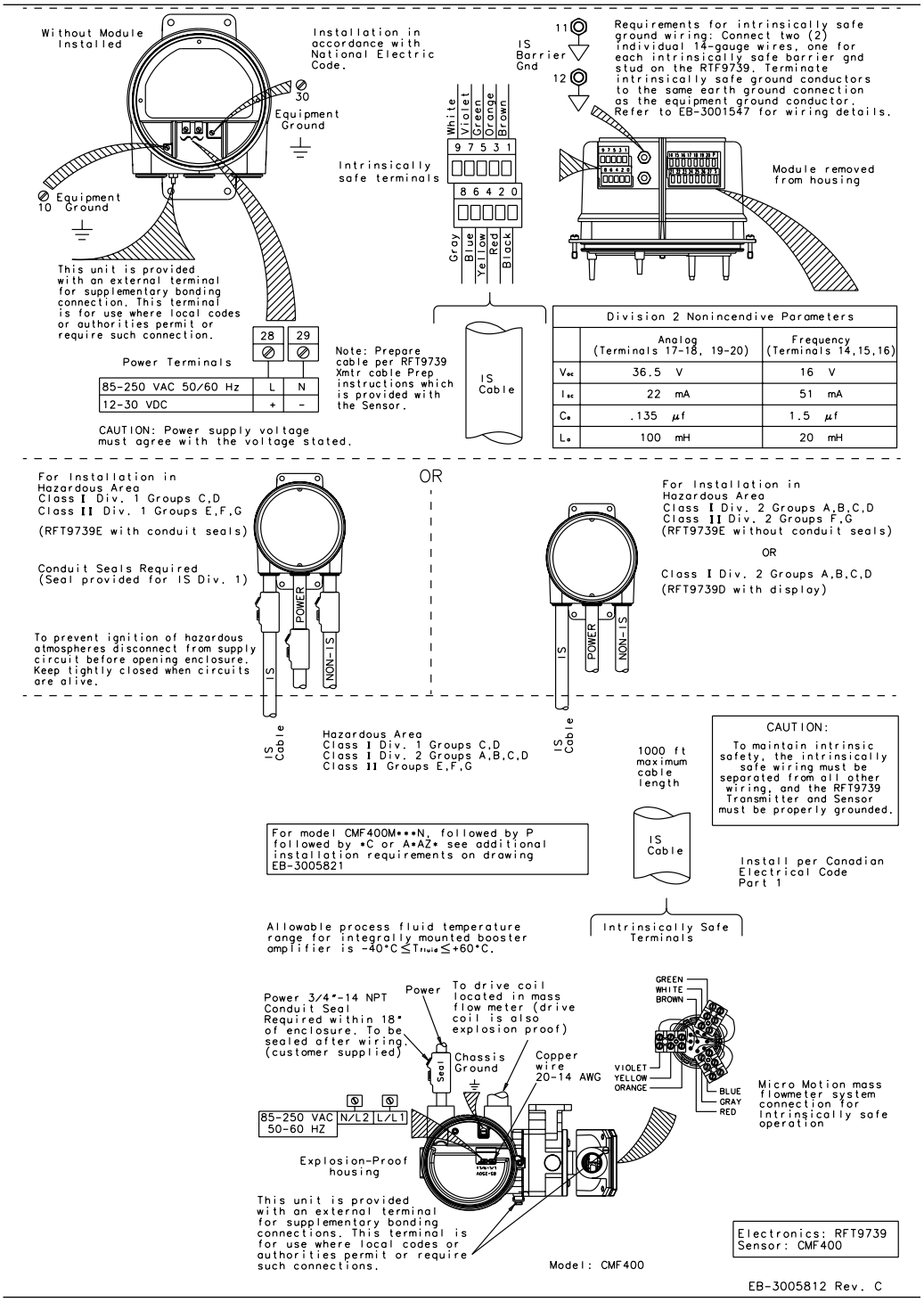
Note

These installation instructions do not apply to either the CMF300A sensor or the CMF400 sensor with booster amplifier.

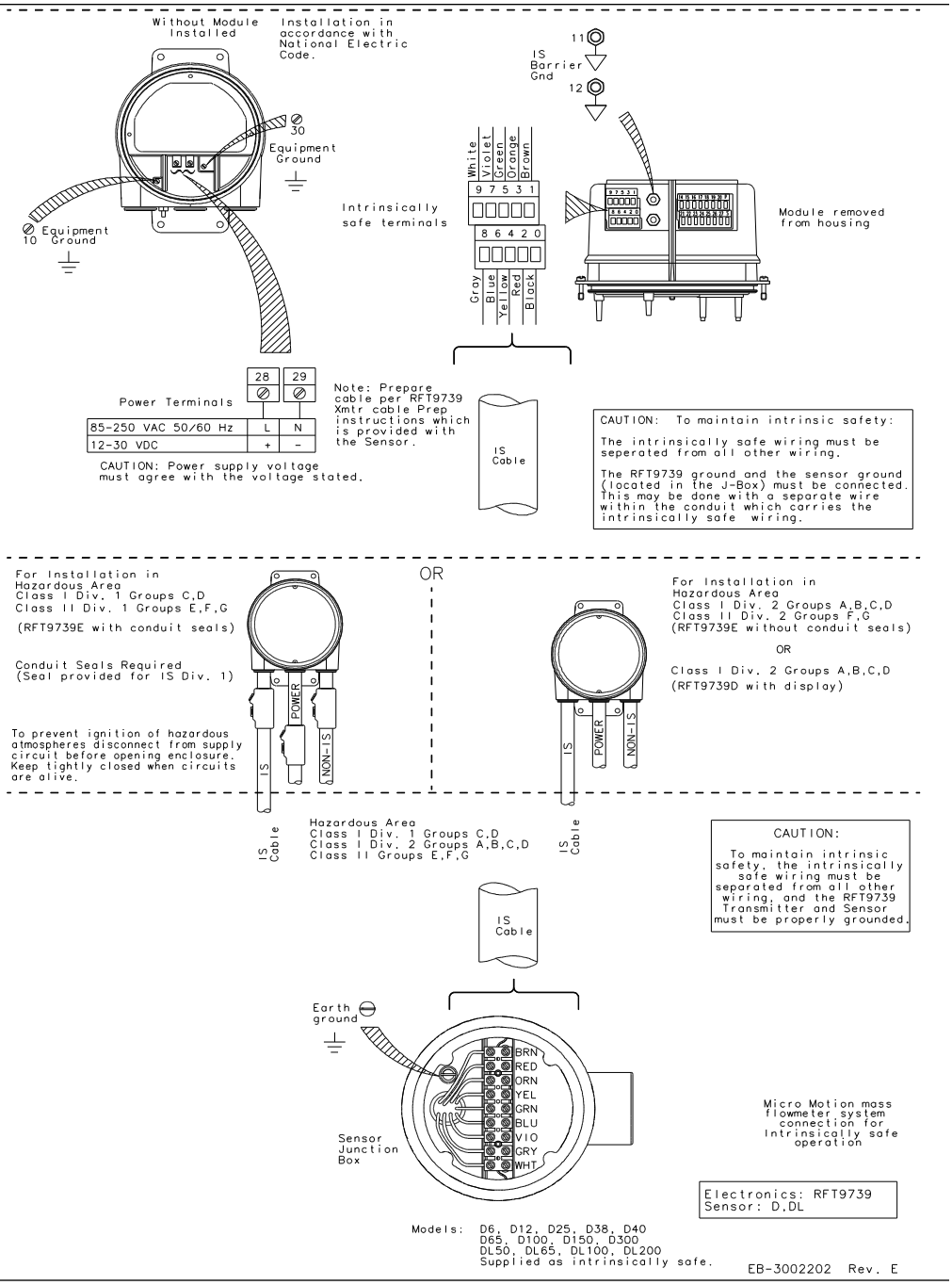
8.2 RFT9739 transmitter field-mounted to 9-wire sensor junction box for CMF300A sensor



8.3 RFT9739 transmitter field-mounted to sensor junction box for CMF400 sensor with booster amplifier

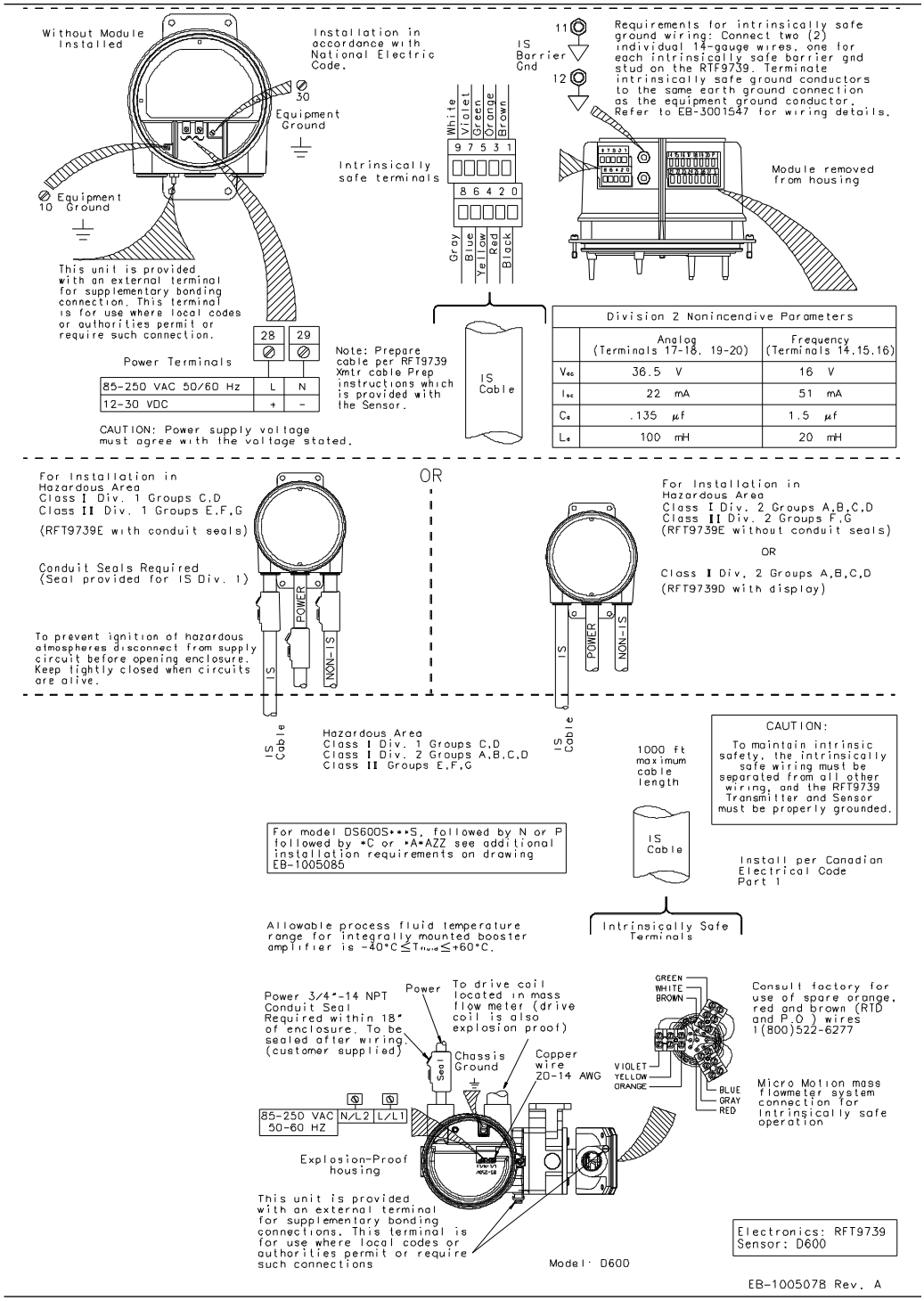


8.4 RFT9739 transmitter field-mounted to sensor junction box for D and DL sensors

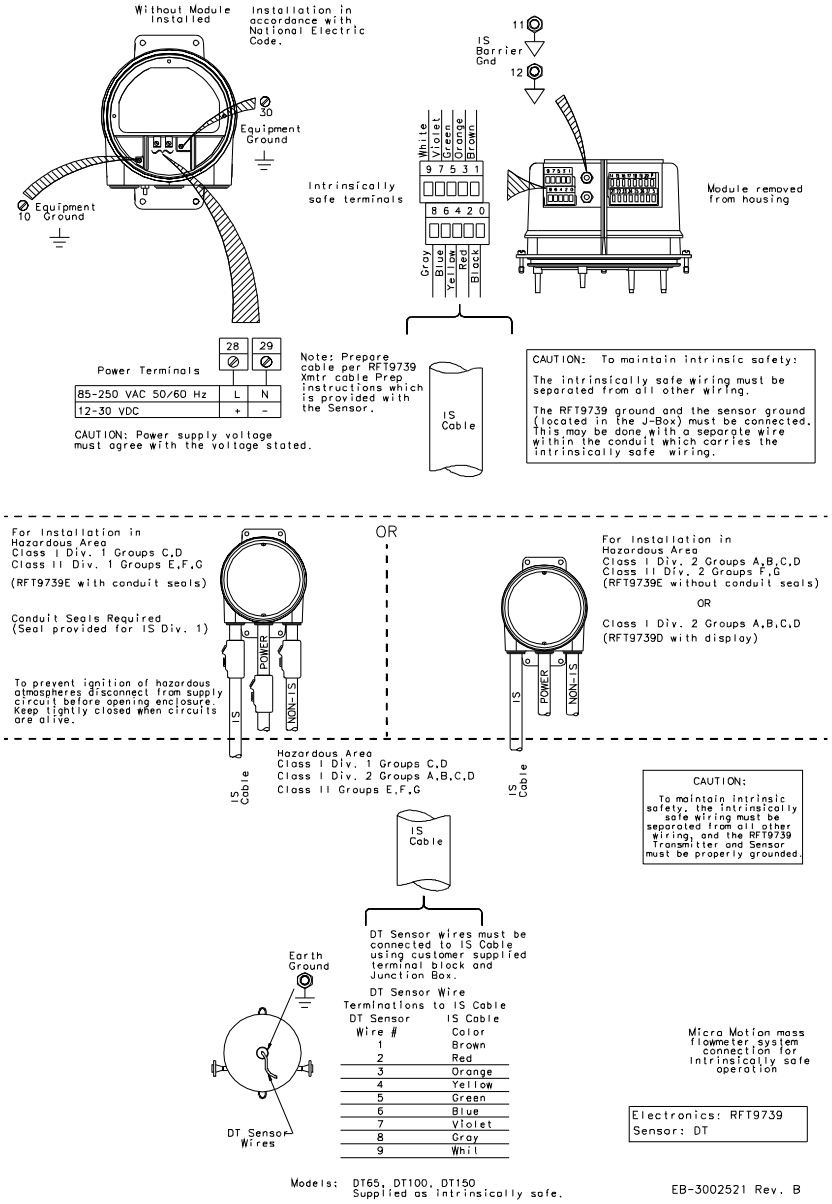


Note
These instructions do not apply to either D600 or DT sensors.

8.5 RFT9739 transmitter field-mounted to sensor junction box for D600 sensor



8.6 RFT9739 transmitter field-mounted to sensor junction box for DT sensors

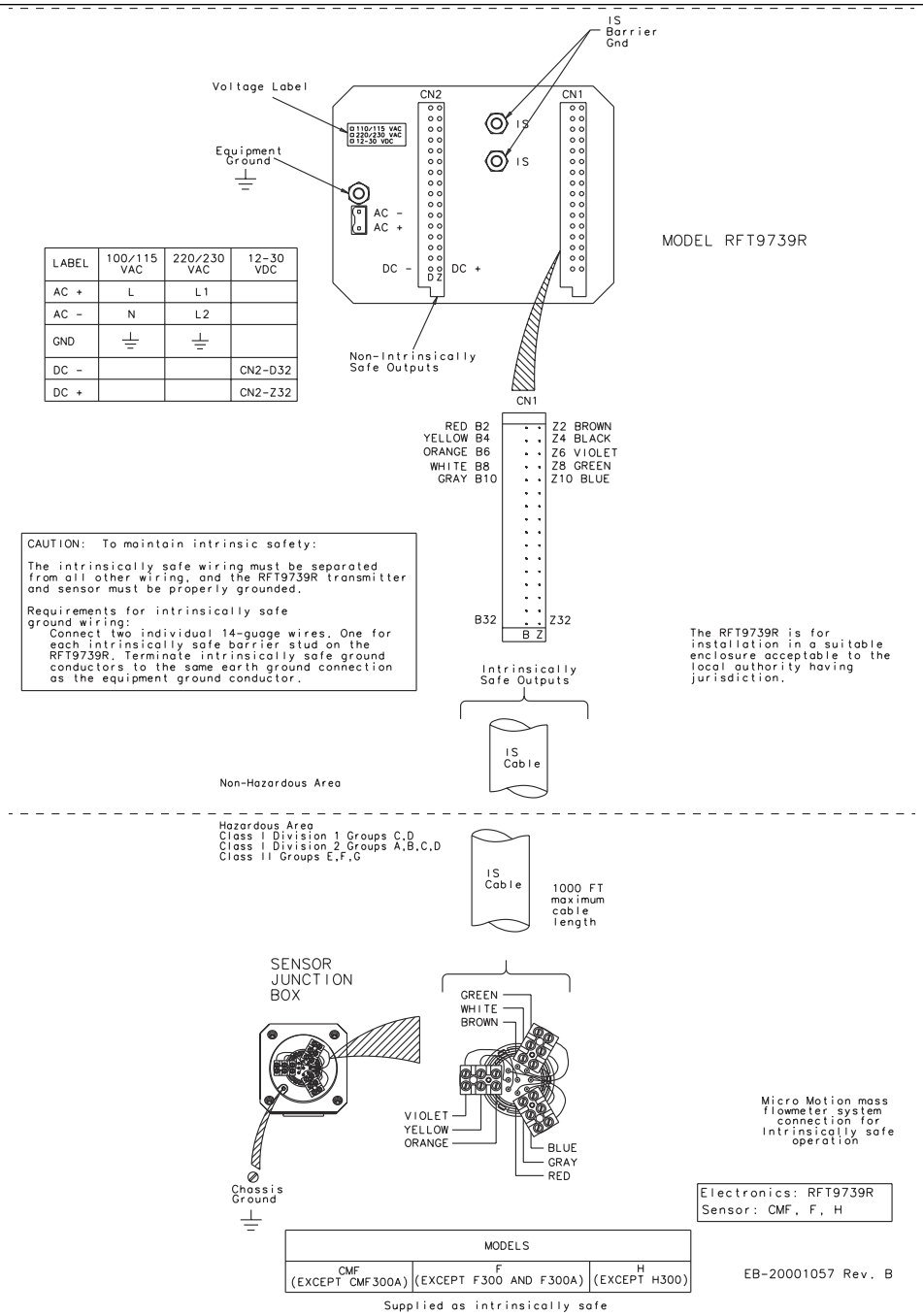


9 RFT9739 rack mount 9-wire installation instructions

Table 9-1: List of Drawings for Transmitter RFT9739 9-wire rack mount installation instructions

Drawing name	Location
EB-20001057, Revision B	RFT9739 rack mounted transmitter to sensor junction box for CMF, F, and H sensors
EB-3002932, Revision F	RFT9739 rack mounted transmitter to sensor junction box for CMF300A sensor
EB-3005813, Revision C	RFT9739 rack mounted transmitter to sensor junction box for CMF400A sensor with booster amplifier
EB-3002523, Revision E	RFT9739 rack mounted transmitter to sensor junction box for D and DL sensors
EB-1005079, Revision A	RFT9739 rack mounted transmitter to sensor junction box for D600 sensor
EB-3002524, Revision B	RFT9739 rack mounted transmitter to sensor junction box for DT sensors

9.1 RFT9739 rack mounted transmitter to sensor junction box for CMF, F, and H sensors

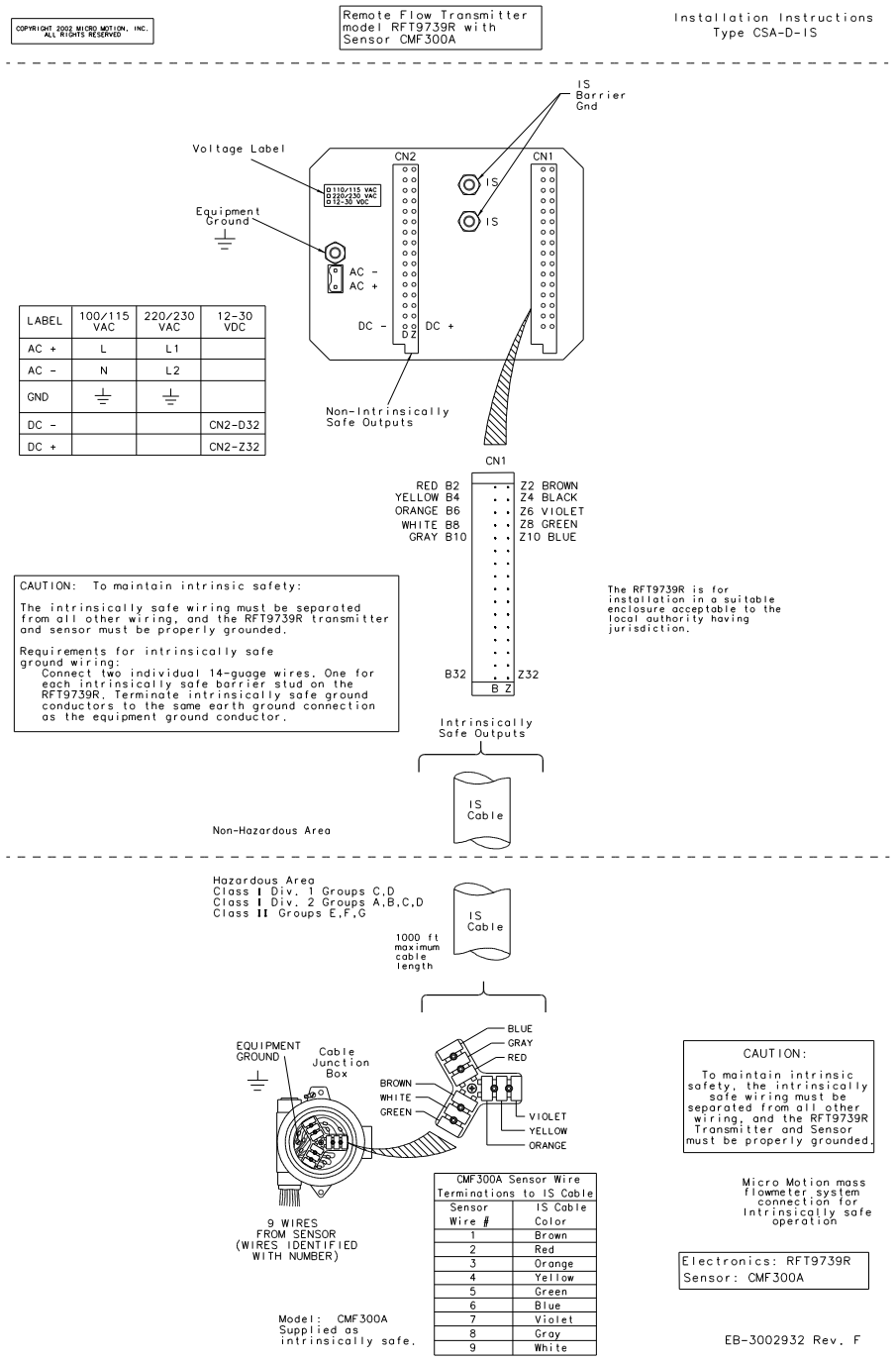


LABEL	100/115 VAC	220/230 VAC	12-30 VDC
AC +	L	L1	
AC -	N	L2	
GND	⏚	⏚	
DC -			CN2-D32
DC +			CN2-Z32

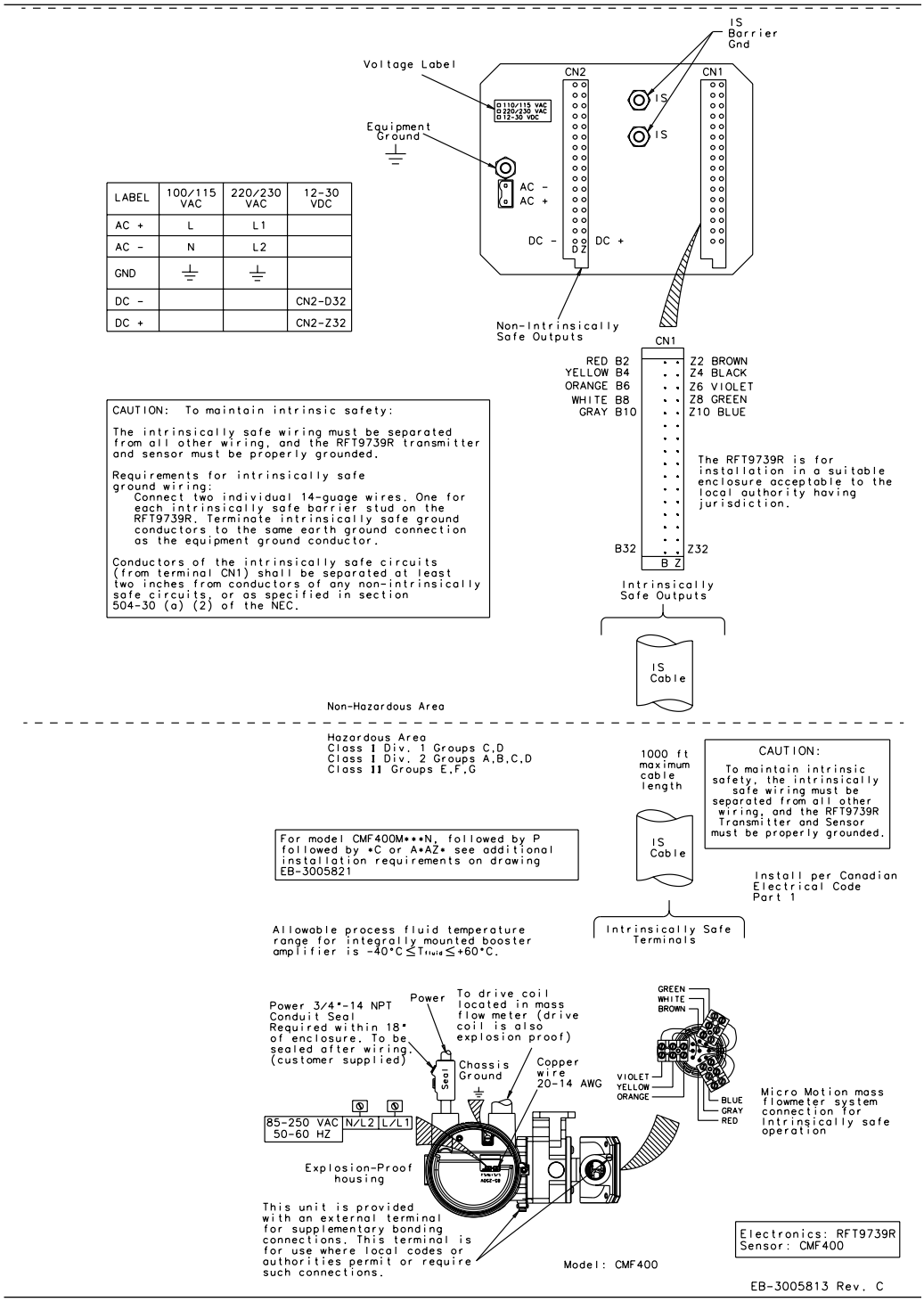
Note

These installation instructions do not apply to either the CMF300A sensor or the CMF400 sensor with booster amplifier.

9.2 RFT9739 rack mounted transmitter to sensor junction box for CMF300A sensor



9.3 RFT9739 rack mounted transmitter to sensor junction box for CMF400A sensor with booster amplifier



LABEL	100/115 VAC	220/230 VAC	12-30 VDC
AC +	L	L1	
AC -	N	L2	
GND	⏚	⏚	
DC -			CN2-D32
DC +			CN2-Z32

CAUTION: To maintain intrinsic safety:

The intrinsically safe wiring must be separated from all other wiring, and the RFT9739R transmitter and sensor must be properly grounded.

Requirements for intrinsically safe ground wiring:
Connect two individual 14-guage wires. One for each intrinsically safe barrier stud on the RFT9739R. Terminate intrinsically safe ground conductors to the same earth ground connection as the equipment ground conductor.

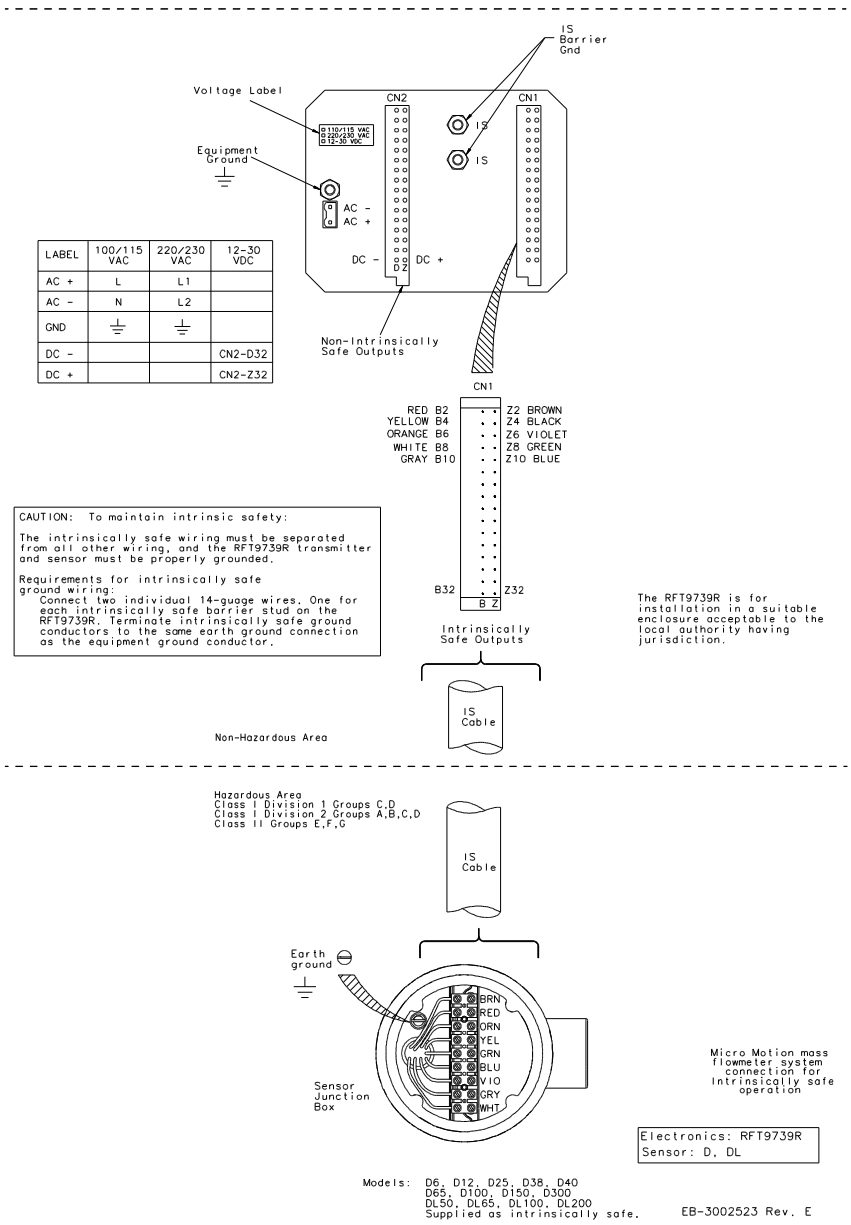
Conductors of the intrinsically safe circuits (from terminal CN1) shall be separated at least two inches from conductors of any non-intrinsically safe circuits, or as specified in section 504-30 (a) (2) of the NEC.

The RFT9739R is for installation in a suitable enclosure acceptable to the local authority having jurisdiction.

For model CMF400M***N, followed by P followed by *C or A*AŽ* see additional installation requirements on drawing EB-3005821

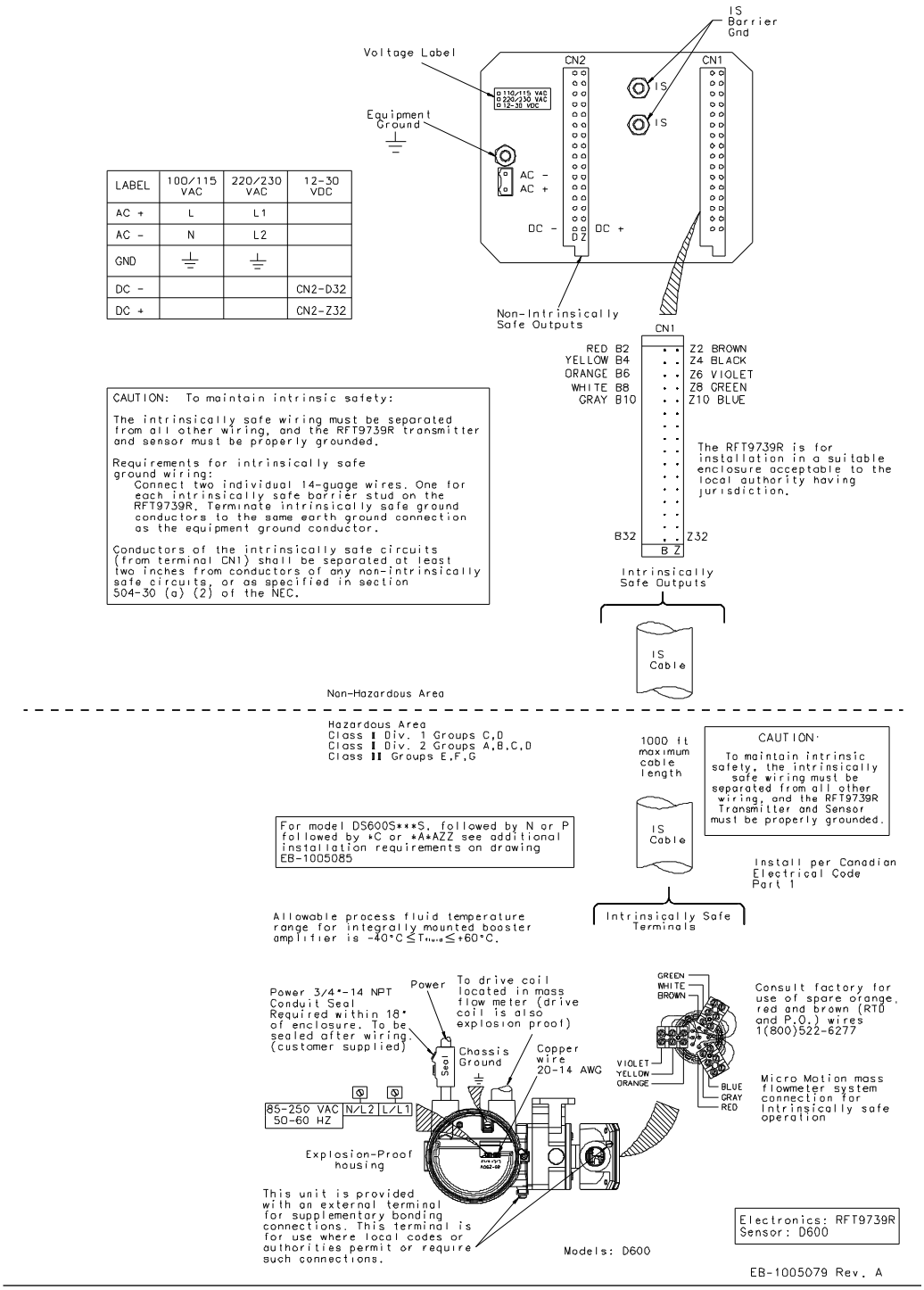
CAUTION:
To maintain intrinsic safety, the intrinsically safe wiring must be separated from all other wiring, and the RFT9739R Transmitter and Sensor must be properly grounded.

9.4 RFT9739 rack mounted transmitter to sensor junction box for D and DL sensors



Note
These instructions do not apply to either D600 or DT sensors.

9.5 RFT9739 rack mounted transmitter to sensor junction box for D600 sensor



LABEL	100/115 VAC	220/230 VAC	12-30 VDC
AC +	L	L1	
AC -	N	L2	
GND	⏚	⏚	
DC -			CN2-D32
DC +			CN2-Z32

CAUTION: To maintain intrinsic safety:

The intrinsically safe wiring must be separated from all other wiring, and the RFT9739R transmitter and sensor must be properly grounded.

Requirements for intrinsically safe ground wiring:
Connect two individual 14-guage wires. One for each intrinsically safe barrier stud on the RFT9739R. Terminate intrinsically safe ground conductors to the same earth ground connection as the equipment ground conductor.

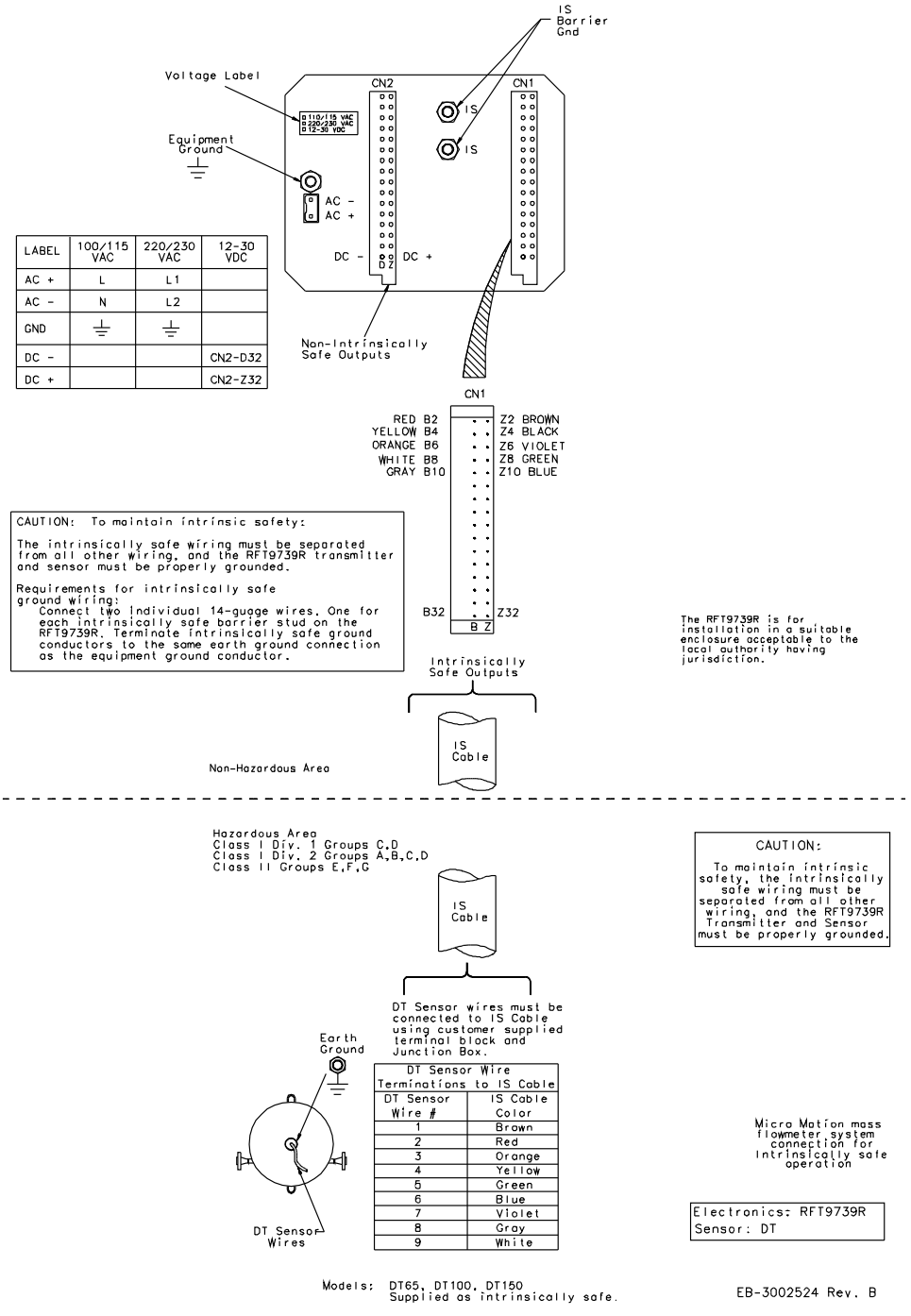
Conductors of the intrinsically safe circuits (from terminal CN1) shall be separated at least two inches from conductors of any non-intrinsically safe circuits, or as specified in section 504-30 (a) (2) of the NEC.

The RFT9739R is for installation in a suitable enclosure acceptable to the local authority having jurisdiction.

CAUTION: To maintain intrinsic safety, the intrinsically safe wiring must be separated from all other wiring, and the RFT9739R Transmitter and Sensor must be properly grounded.

For model D600S***S, followed by N or P followed by *C or *A*AZZ see additional installation requirements on drawing EB-1005085

9.6 RFT9739 rack mounted transmitter to sensor junction box for DT sensors

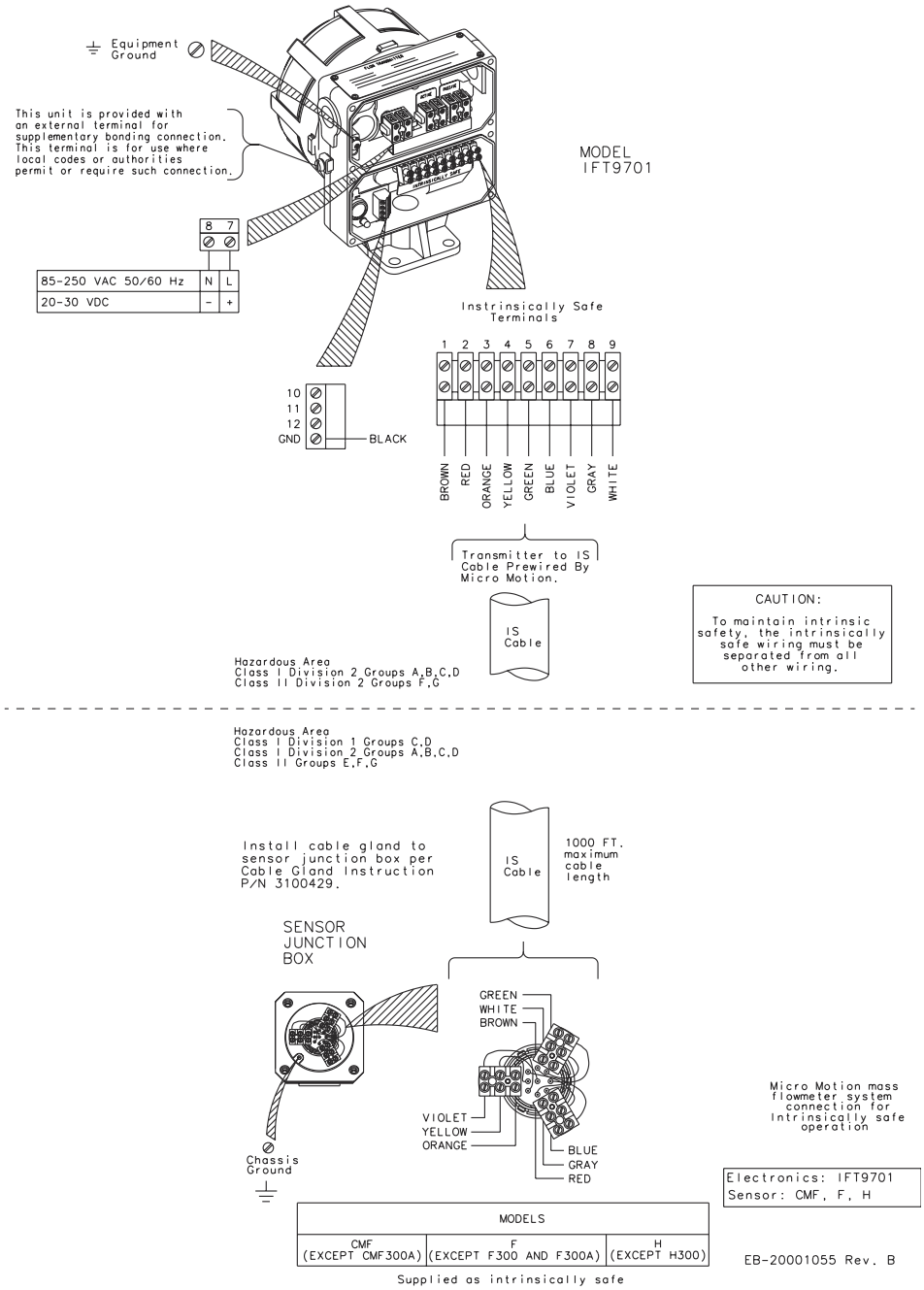


10 IFT9701 transmitter 9-wire installation instructions

Table 10-1: List of Drawings for Transmitter IFT9701 9-wire installation instructions

Drawing name	Location
EB-20001055, Revision B	IFT9701 transmitter to sensor junction box for CMF, F, and H sensors
EB-3003298, Revision B	IFT9739 transmitter to sensor junction box for CMF300A sensor
EB-3005815, Revision C	IFT9701 transmitter to sensor junction box for CMF400 sensor with booster amplifier
EB-3100716, Revision F	IFT9701 transmitter to sensor junction box for D and DL sensors

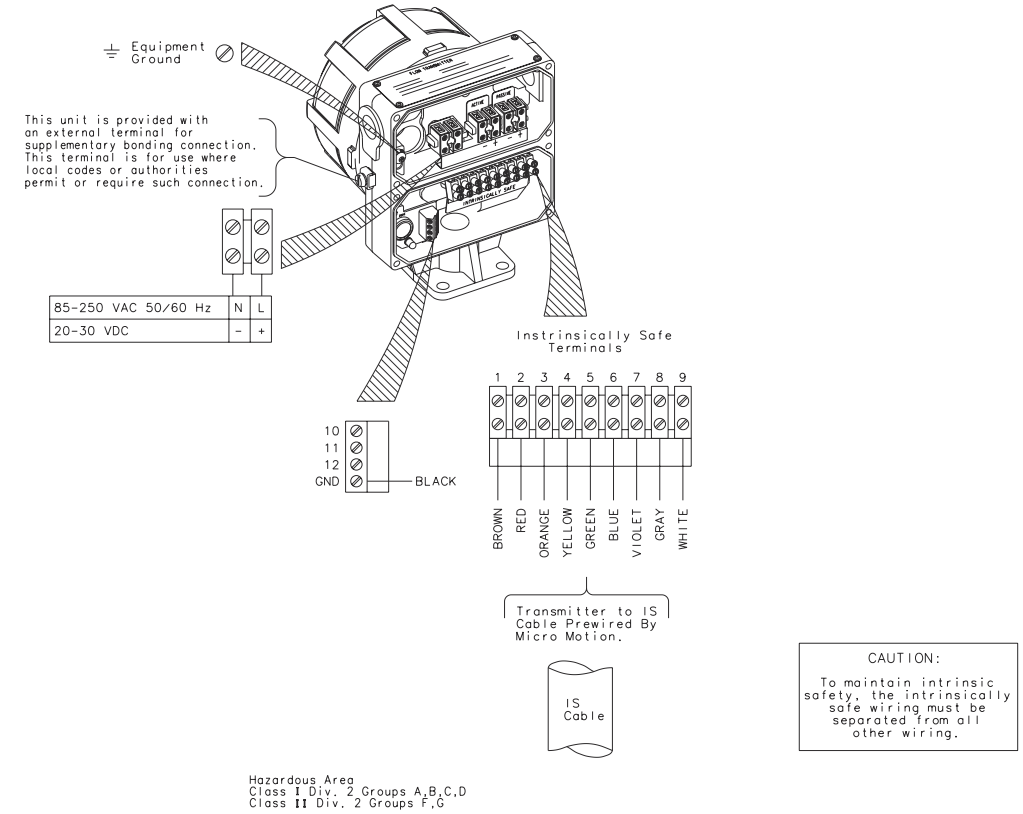
10.1 IFT9701 transmitter to sensor junction box for CMF, F, and H sensors

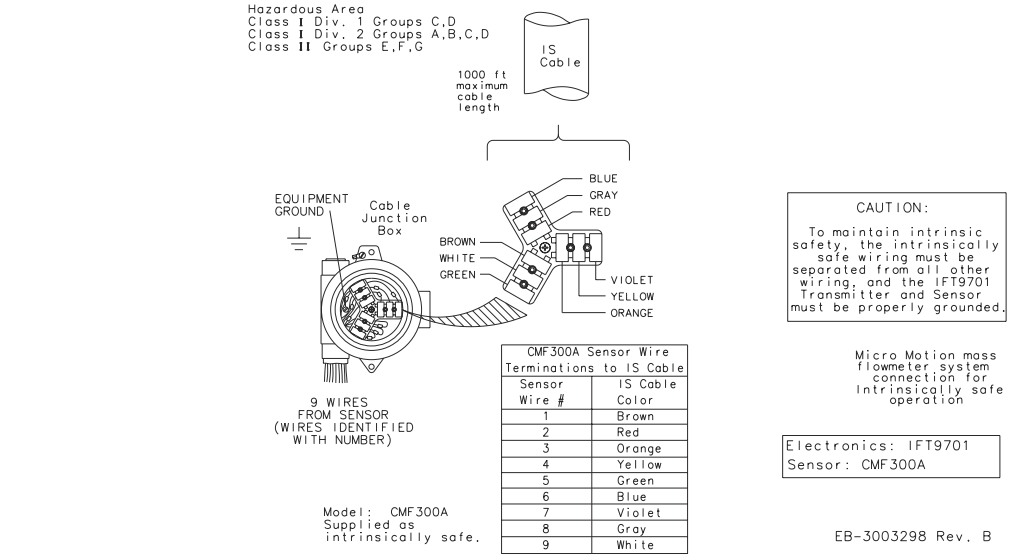


Note

These installation instructions do not apply to either the CMF300A sensor or the CMF400 sensor with booster amplifier.

10.2 IFT9739 transmitter to sensor junction box for CMF300A sensor

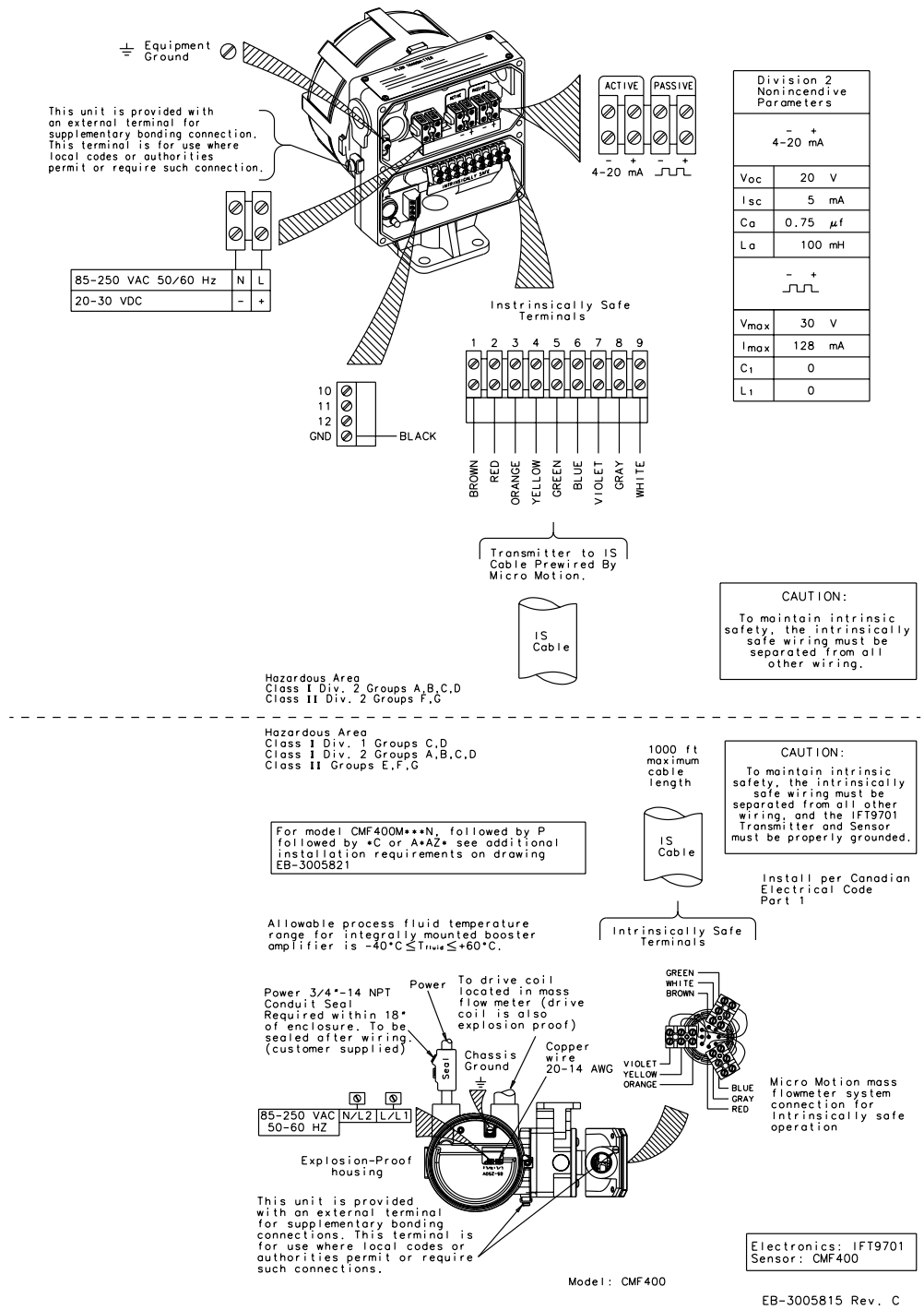




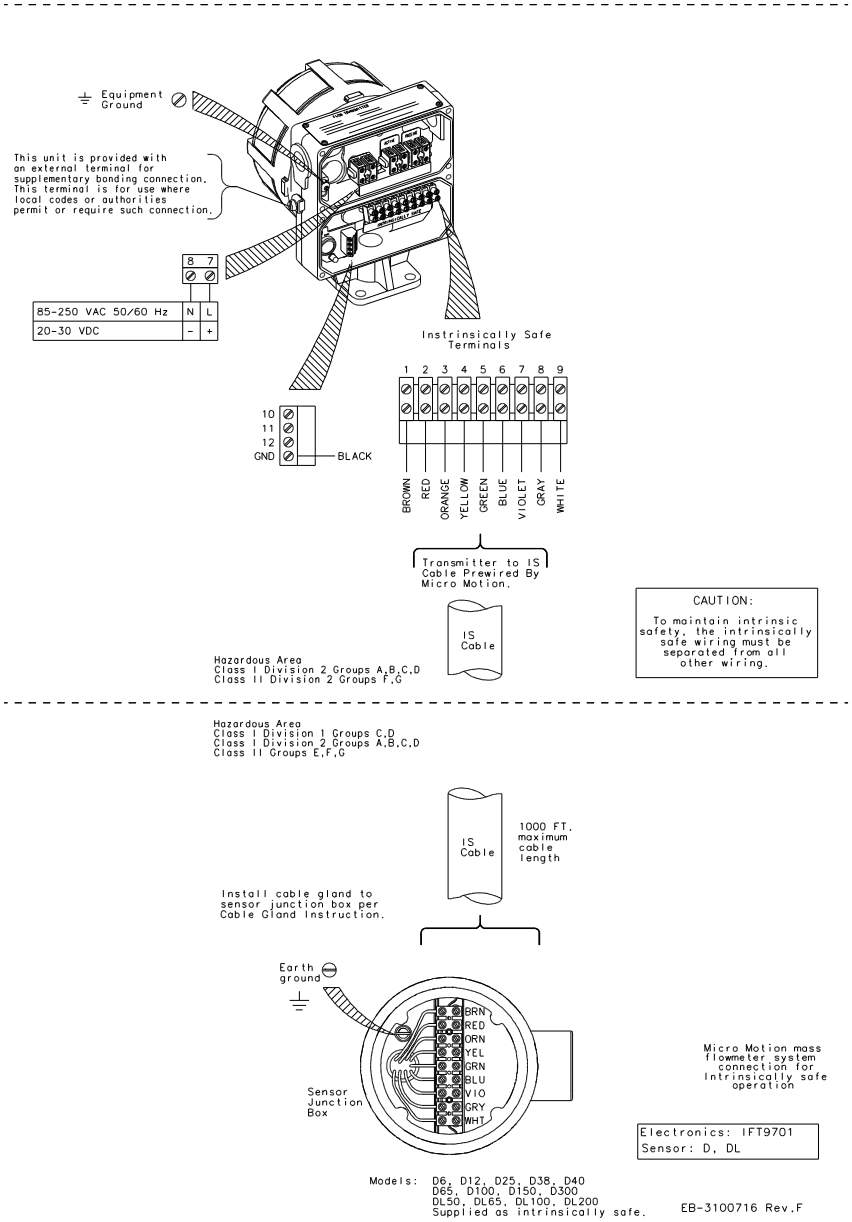
CMF300A Sensor Wire Terminations to IS Cable

Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

10.3 IFT9701 transmitter to sensor junction box for CMF400 sensor with booster amplifier



10.4 IFT9701 transmitter to sensor junction box for D and DL sensors



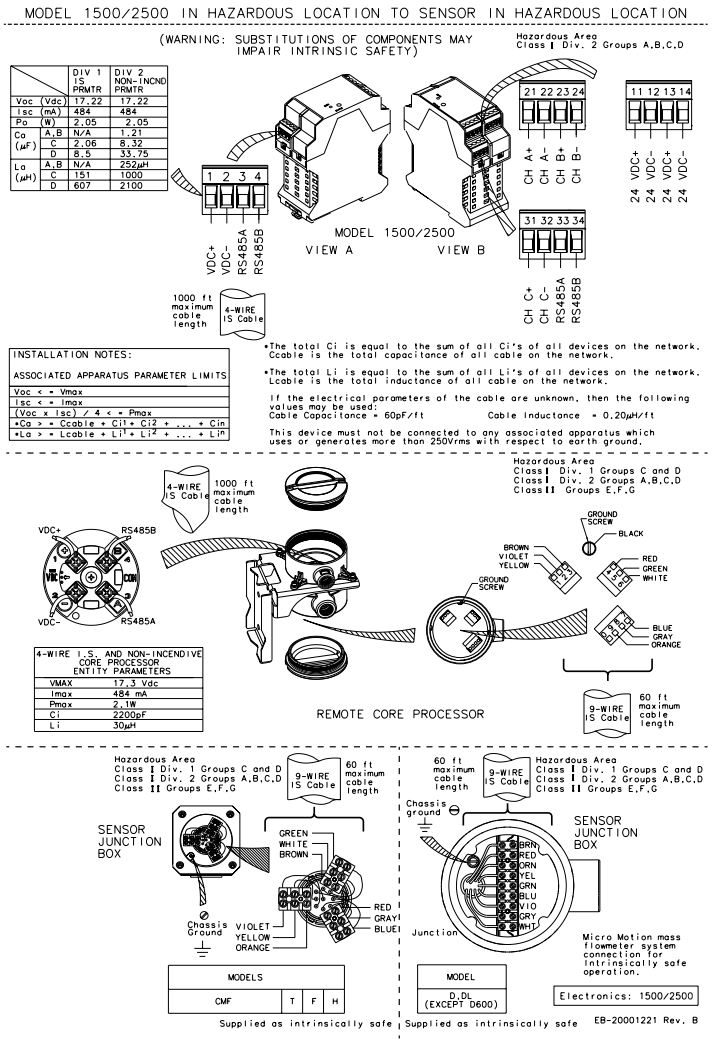
Note
These instructions do not apply to either D600 or DT sensors.

11 Model 1500/2500 9-wire installation instructions

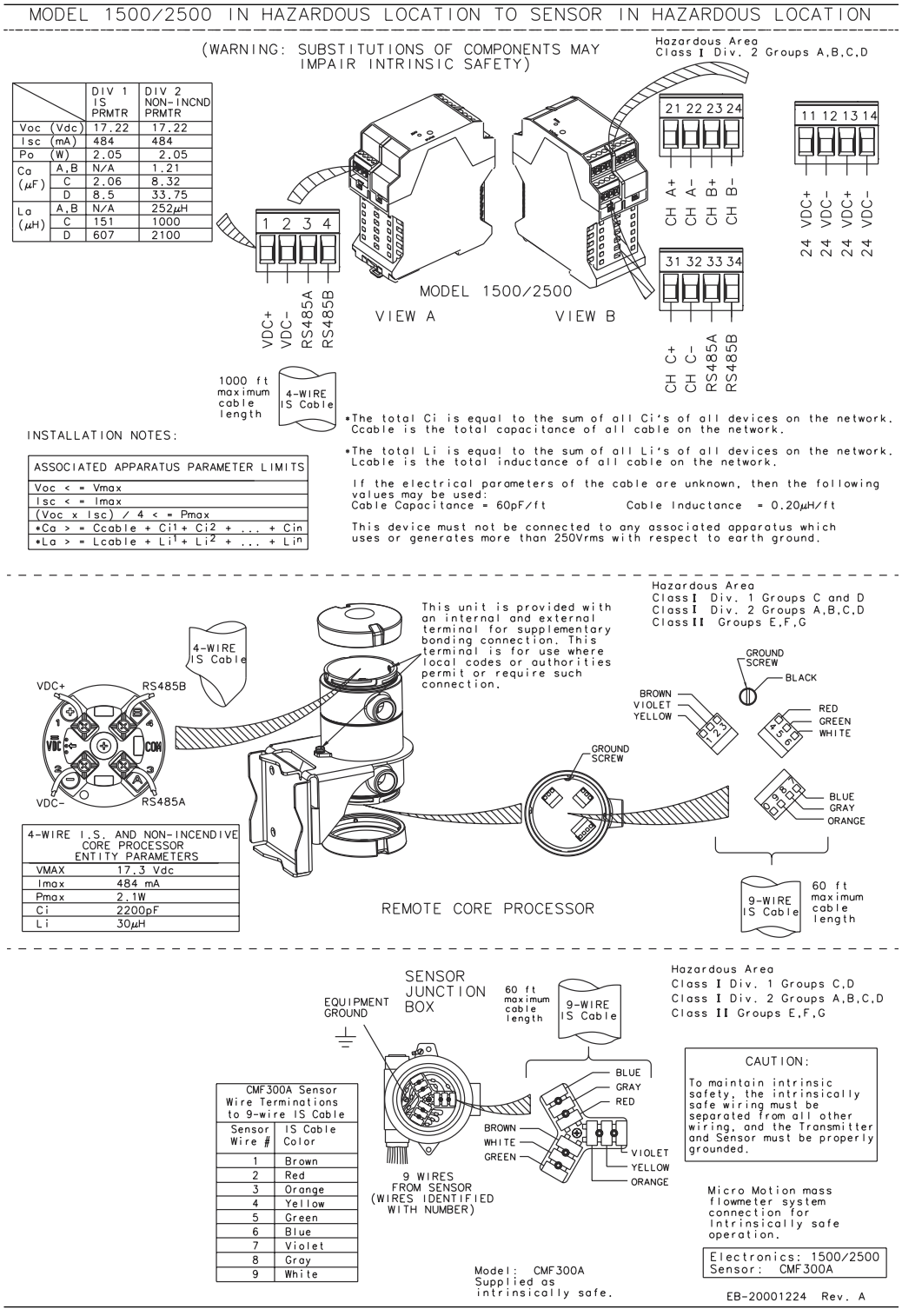
Table 11-1: List of Drawings for Transmitter Models 1500/2500 9-wire installations

Drawing name	Location
EB-20001221 Revision BA	Model 1500/2500 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors
EB-20001224 Revision A	Model 1500/2500 transmitter to remote core processor to 9-wire junction box for CMF300A sensor
EB-20001223, Revision A	Model 1500/2500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-20001222, Revision A	Model 1500/2500 transmitter to core processor to 9-wire junction box on D600 sensor
EB-20001225, Revision A	Model 1500/2500 transmitter to core processor to 9-wire junction box on DT sensor

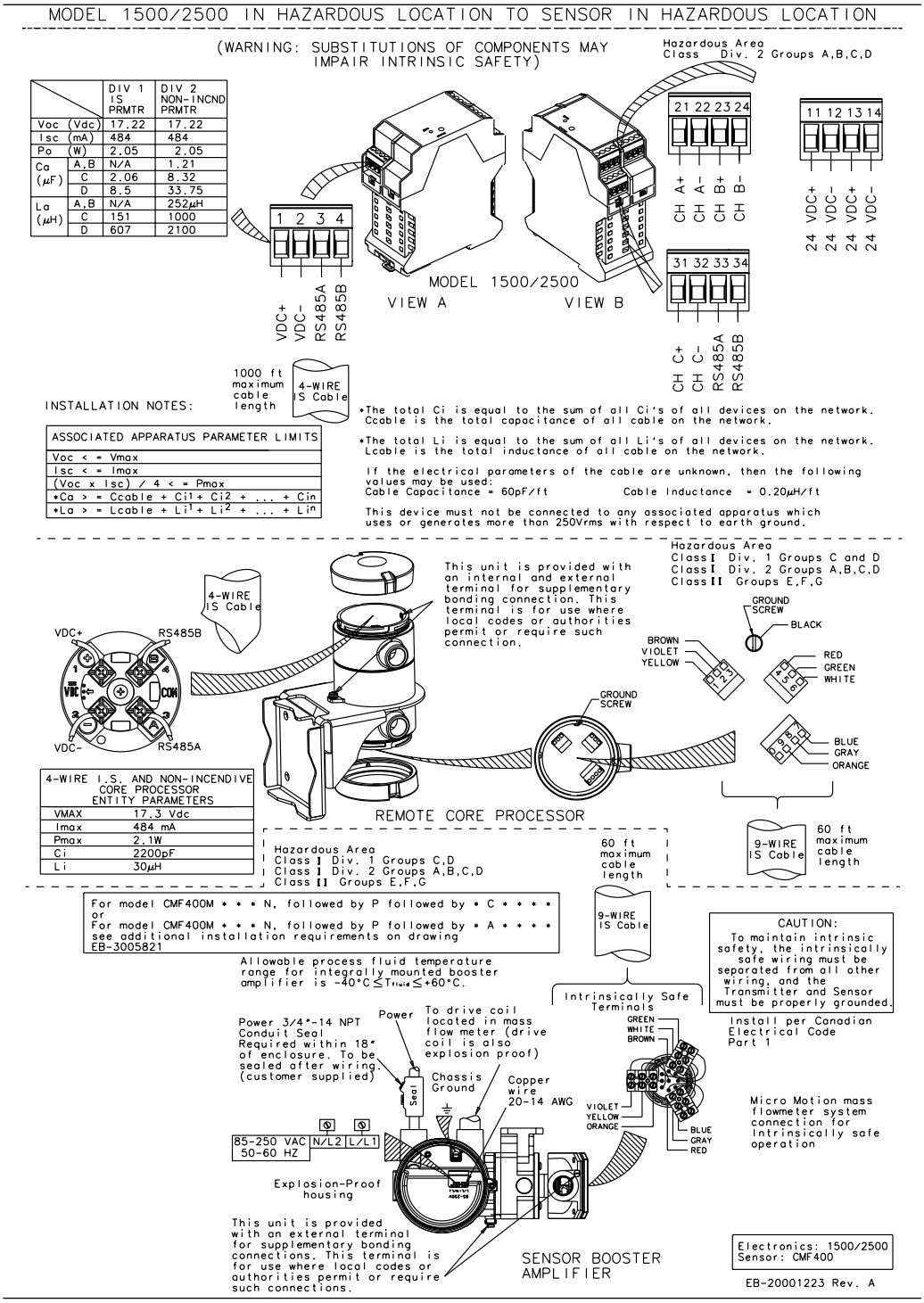
11.1 Model 1500/2500 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors



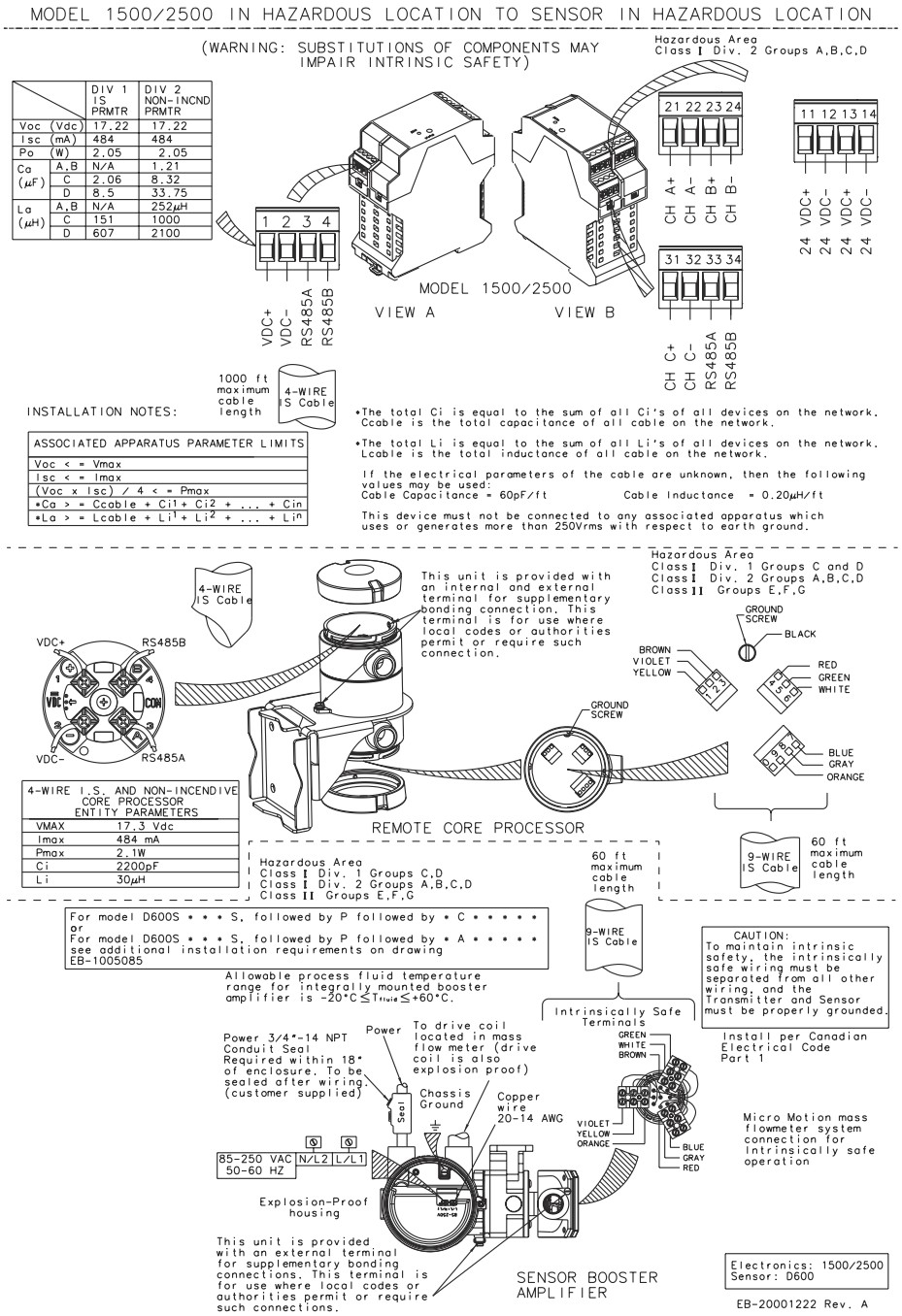
11.2 Model 1500/2500 transmitter to remote core processor to 9-wire junction box for CMF300A sensor



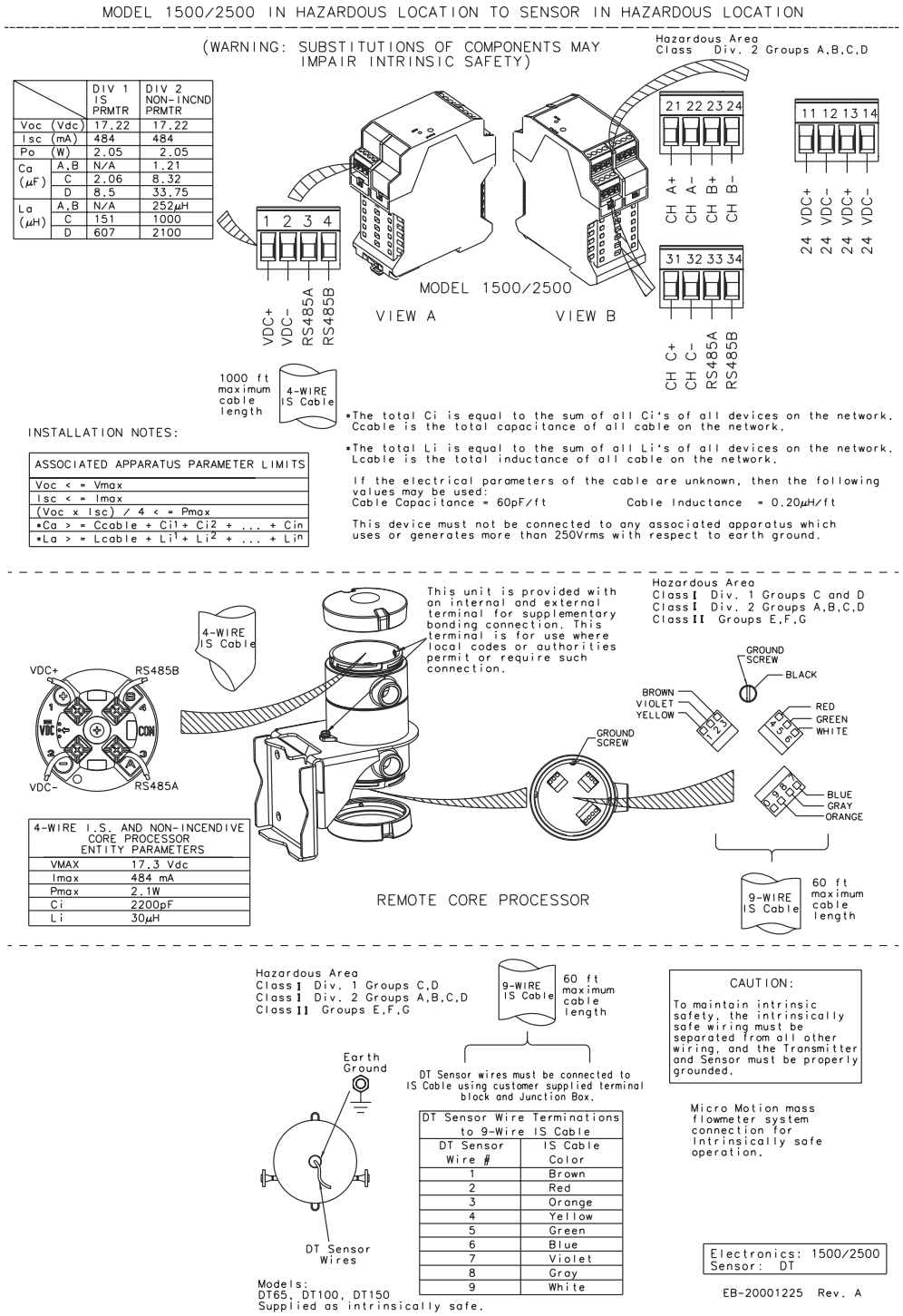
11.3 Model 1500/2500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier



11.4 Model 1500/2500 transmitter to core processor to 9-wire junction box on D600 sensor



11.5 Model 1500/2500 transmitter to core processor to 9-wire junction box on DT sensor

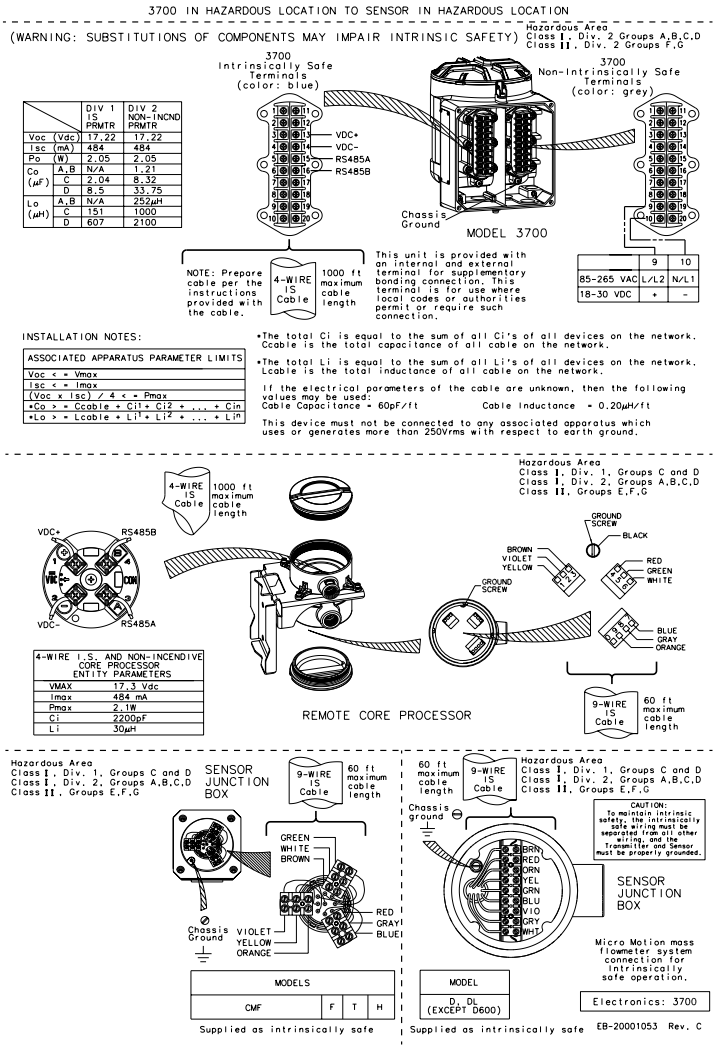


12 Model 3700 9-wire installation instructions

Table 12-1: List of Drawings for Transmitter Models 3700 9-wire installations

Drawing name	Location
EB-20001053, Revision CA	Model 3700 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors
EB-20000212, Revision C	Model 3700 transmitter to remote core processor to 9-wire junction box for CMF300A sensor
EB-20000203, Revision B	Model 3700 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-20000206, Revision B	Model 3700 transmitter to remote core processor to 9-wire junction box on D600
EB-20000215, Revision B	Model 3700 transmitter to remote mount core processor to 9-wire junction box on DT sensor

12.1 Model 3700 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors

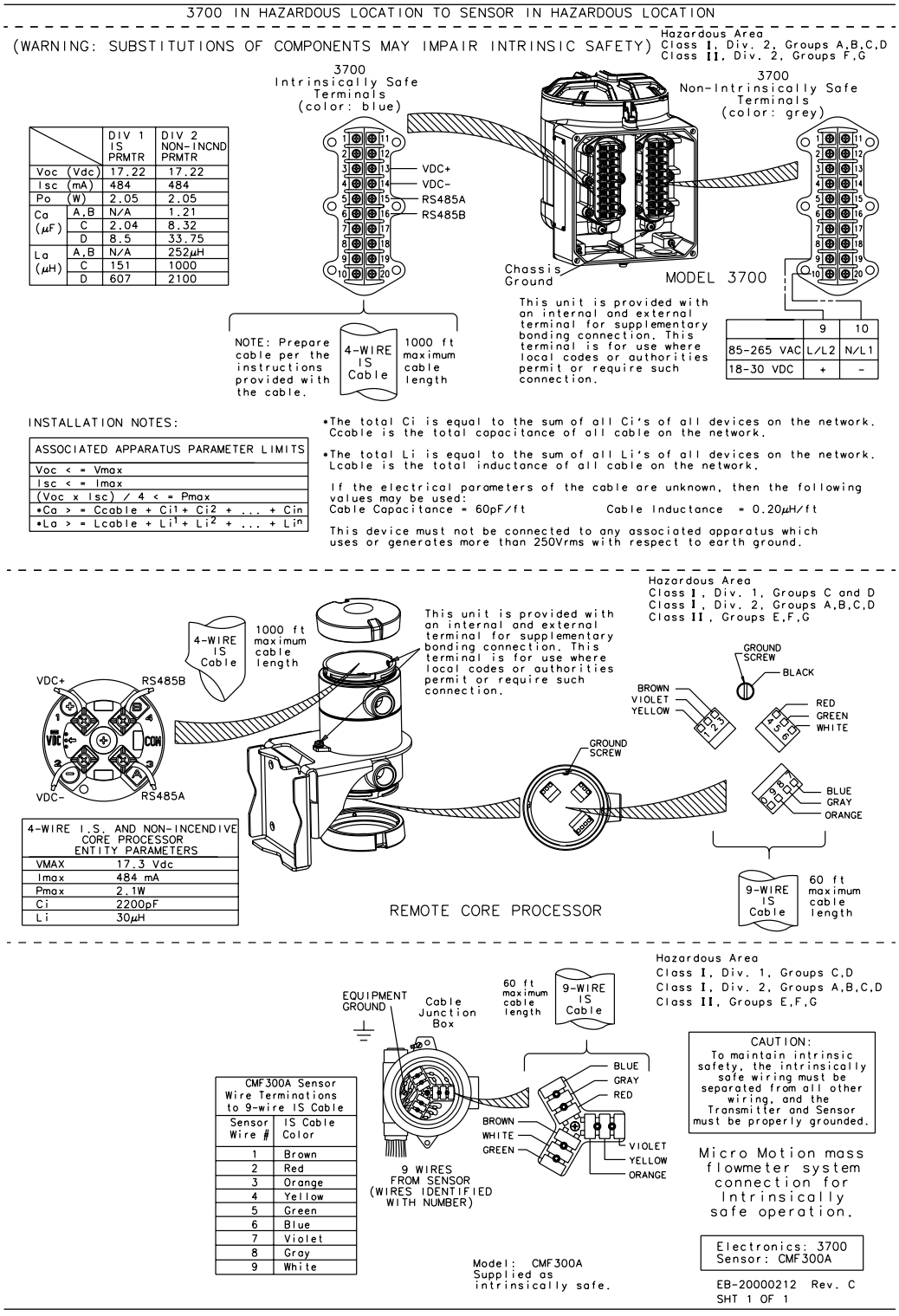


		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Co (μF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
Lo (μH)	A,B	N/A	252μH
	C	151	1000
	D	607	2100

ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
•Co > = Ccable + Ci1 + Ci2 + ... + Cin
•Lo > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30μH

12.2 Model 3700 transmitter to remote core processor to 9-wire junction box for CMF300A sensor



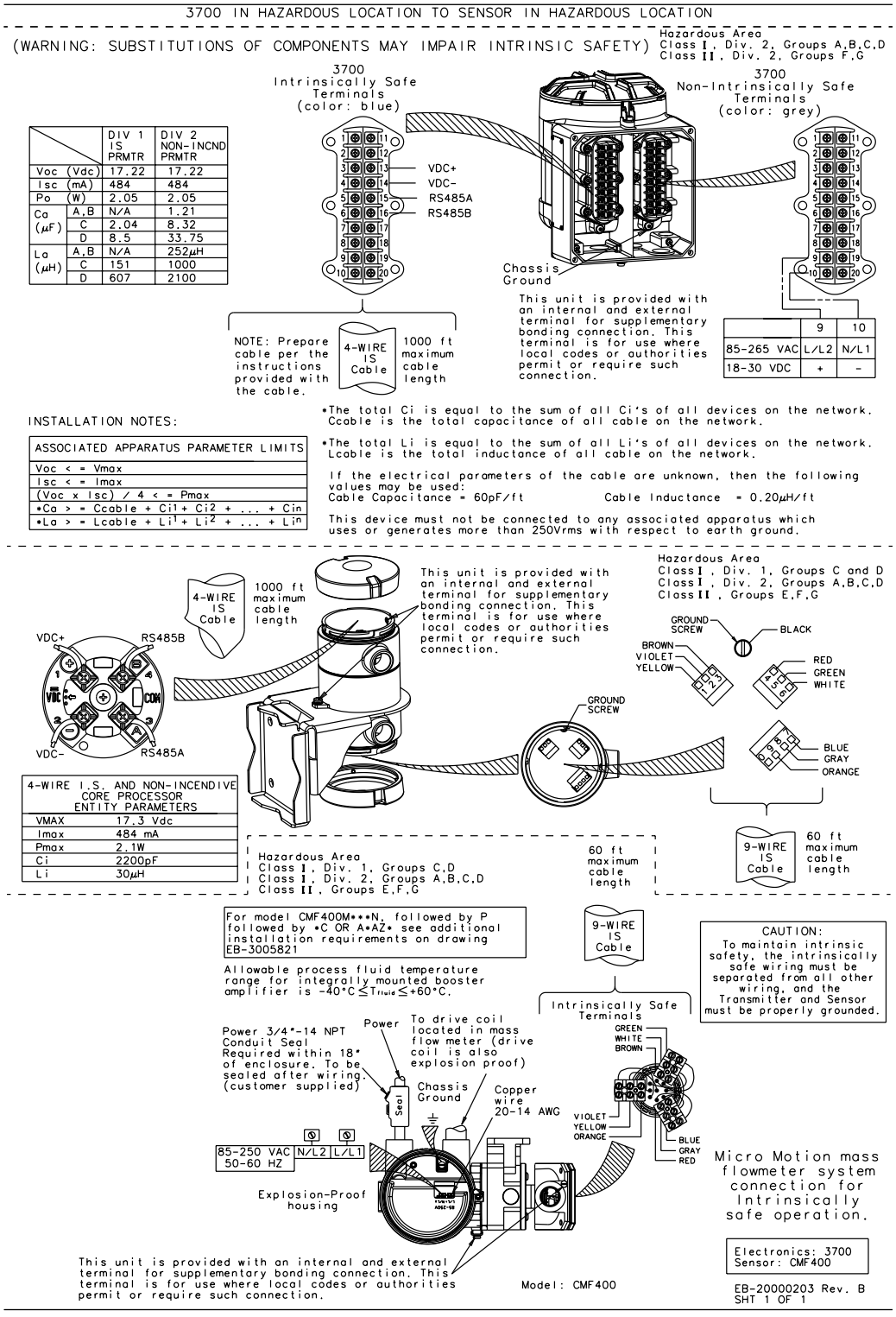
		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (µF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (µH)	A,B	N/A	252µH
	C	151	1000
	D	607	2100

ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
•Ca > = Ccable + Ci1 + Ci2 + ... + Cin
•La > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30µH

CMF300A Sensor Wire Terminations to 9-wire IS Cable	
Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

12.3 Model 3700 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier

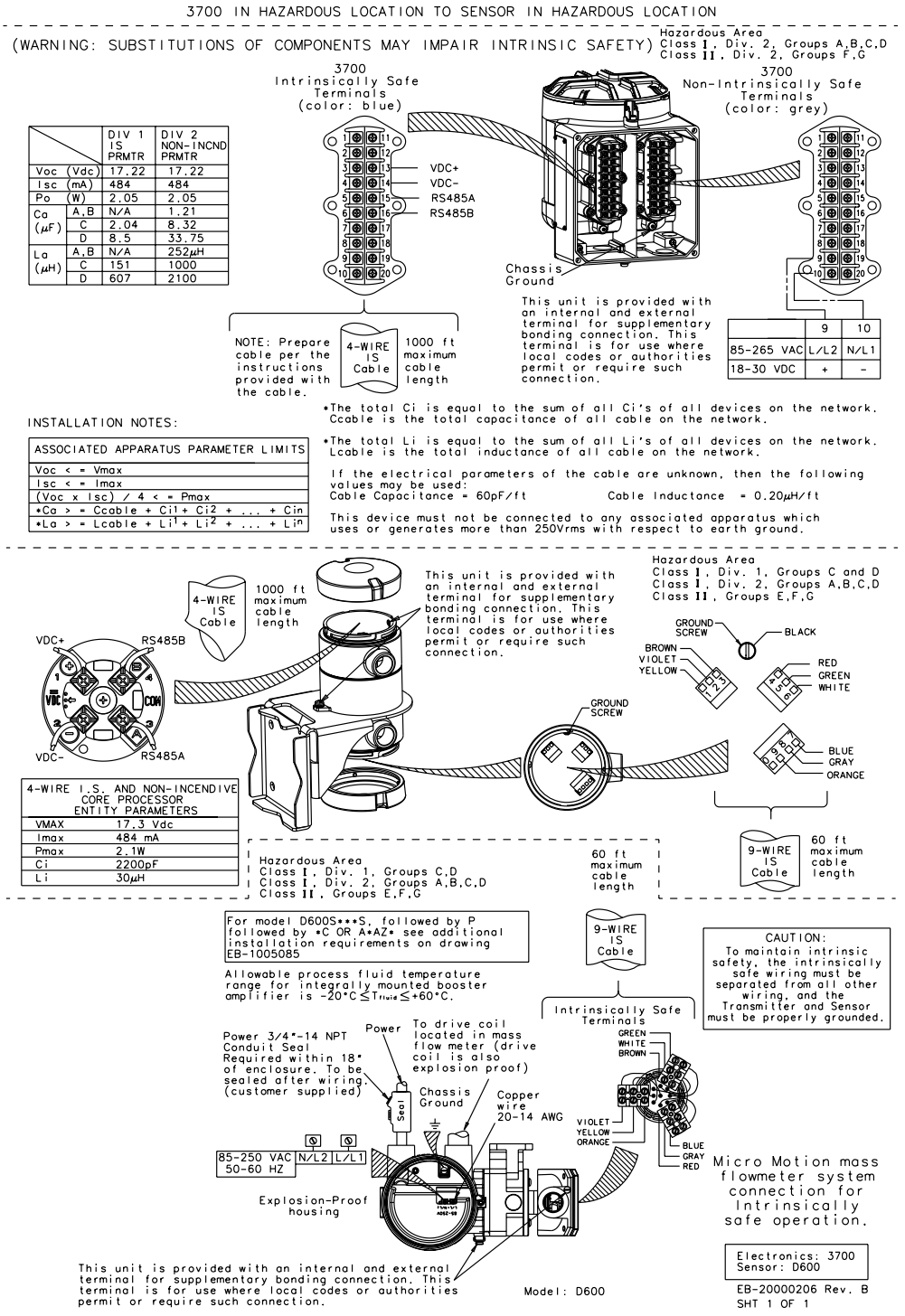


		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (µF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (µH)	A,B	N/A	252µH
	C	151	1000
	D	607	2100

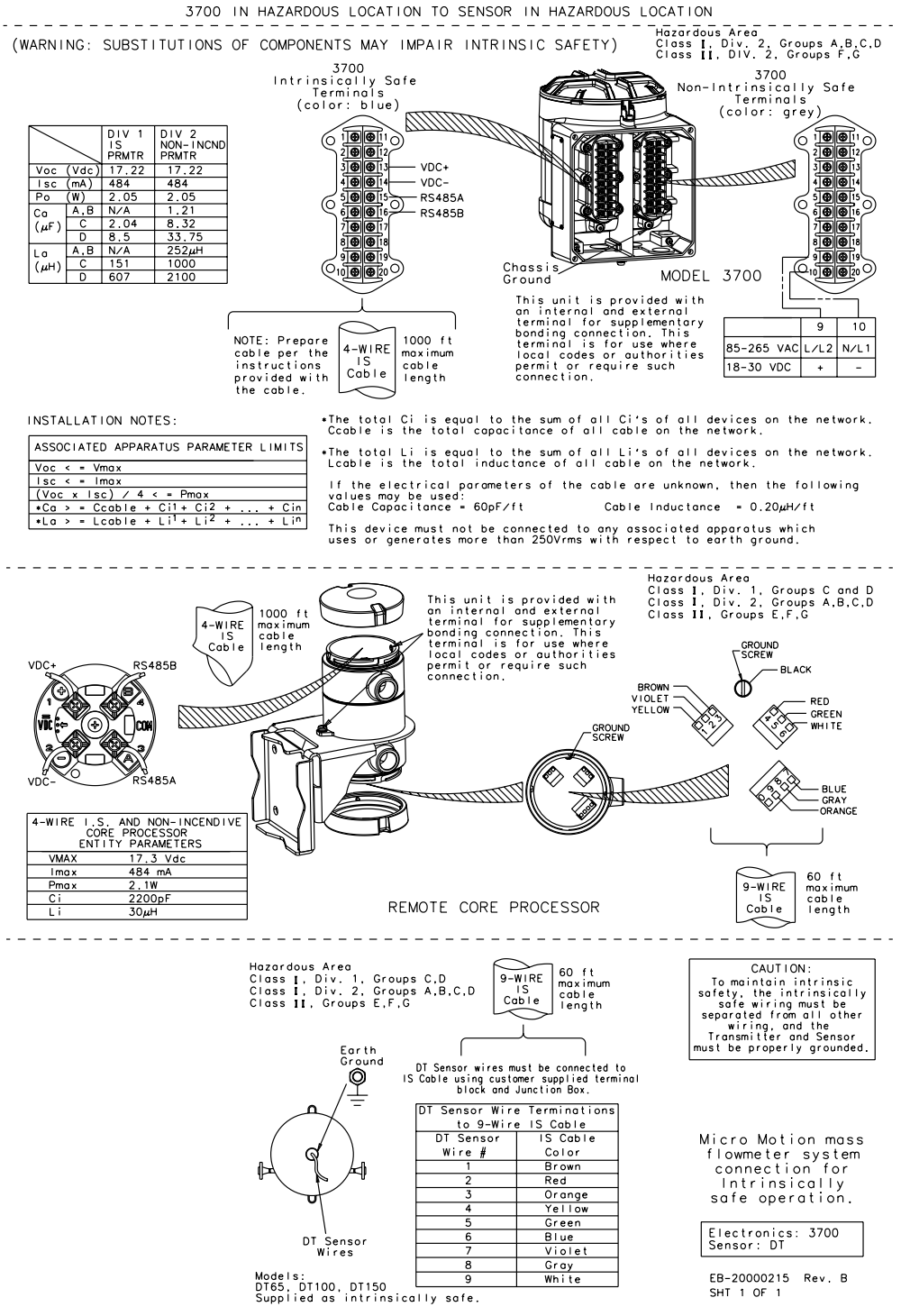
ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
•Ca > = Ccable + Ci1 + Ci2 + ... + Cin
•La > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30µH

12.4 Model 3700 transmitter to remote core processor to 9-wire junction box on D600



12.5 Model 3700 transmitter to remote mount core processor to 9-wire junction box on DT sensor



		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (µF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (µH)	A,B	N/A	252µH
	C	151	1000
	D	607	2100

	9	10
85-265 VAC	L/L2	N/L1
18-30 VDC	+	-

ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
*Ca > = Ccable + Ci1 + Ci2 + ... + Cin
*La > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30µH

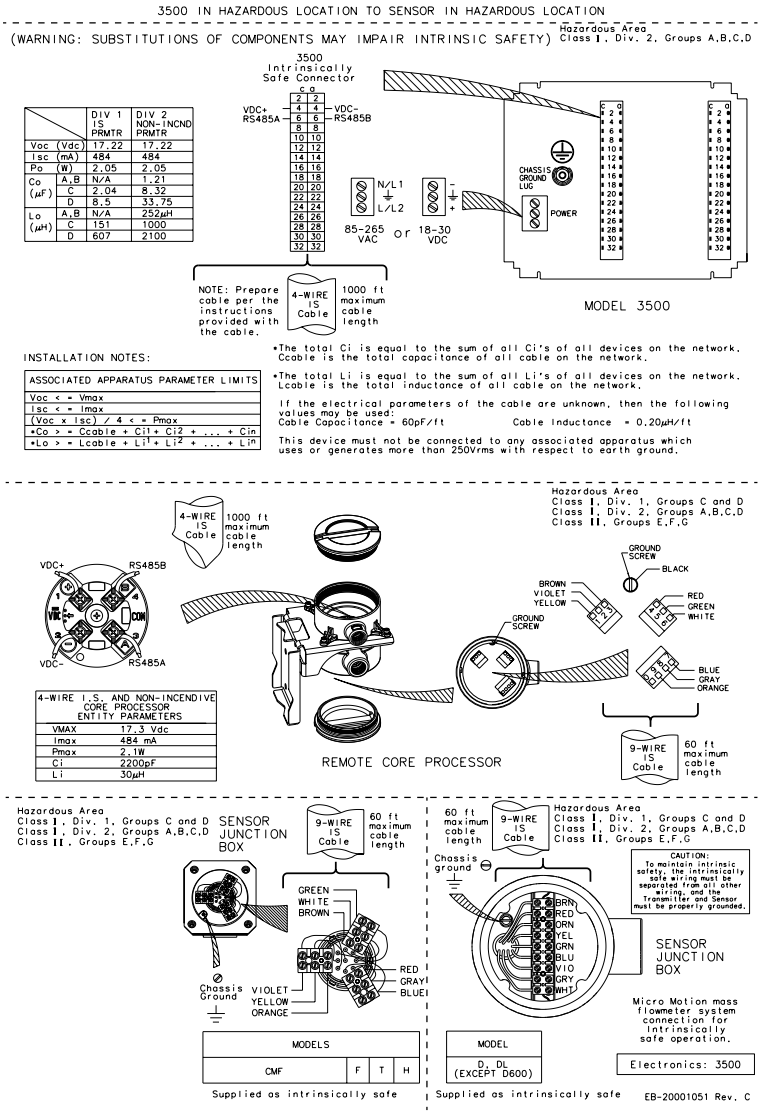
DT Sensor Wire Terminations to 9-Wire IS Cable	
DT Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

13 Model 3500 9-wire installation instructions

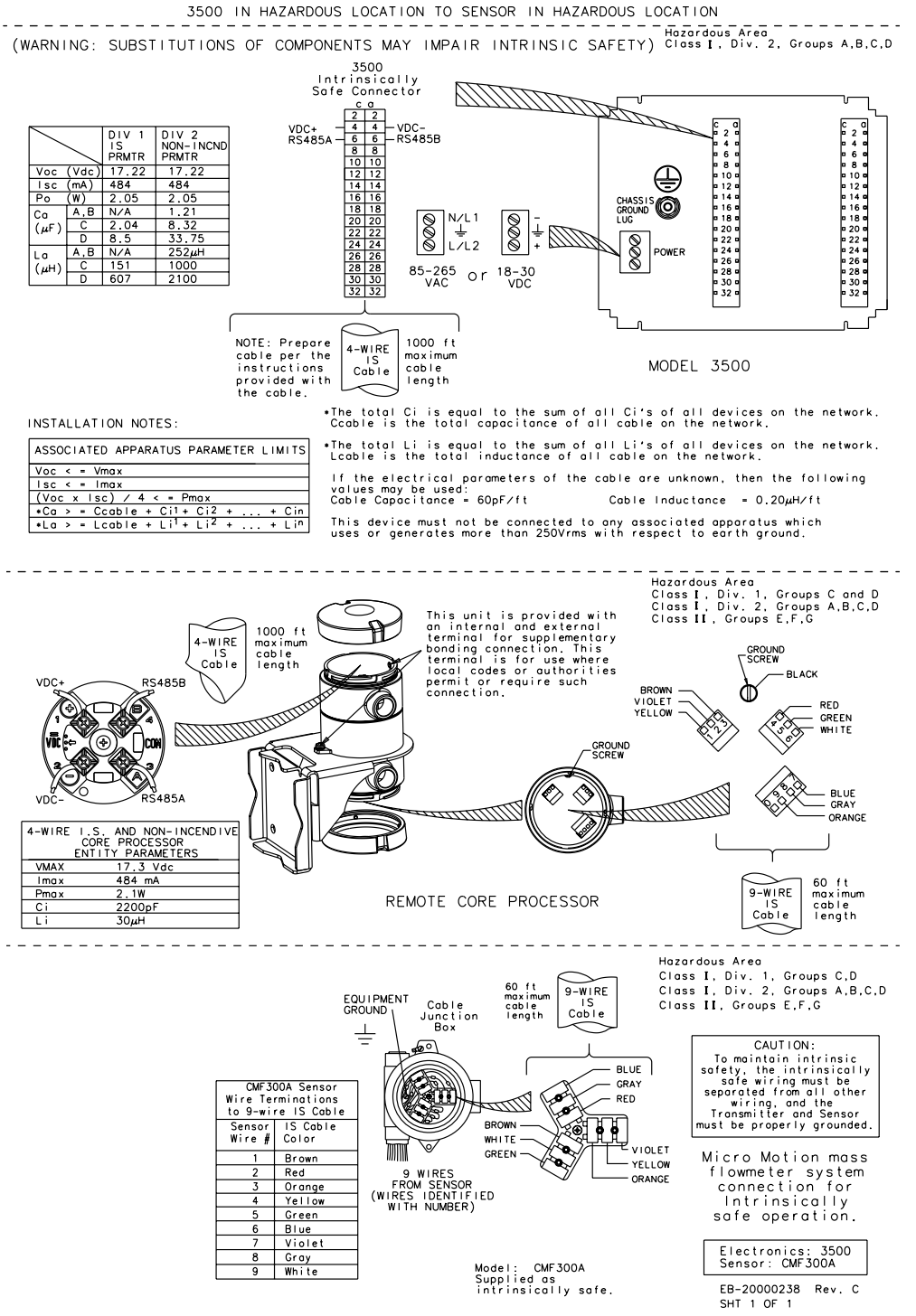
Table 13-1: List of Drawings for Transmitter Models 3500 9-wire installations

Drawing name	Location
EB-20001051, Revision CA	Model 3500 transmitter to remote core processor to 9-wire junction box on CMF, D (except D600), DL, H, and T sensors
EB-20000238, Revision C	Model 3500 transmitter to 9-wire junction box for CMF3000A sensor
EB-20000229, Revision BA	Model 3500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with boost amplifier
EB-20000232, Revision B	Model 3500 transmitter to remote mount core processor to 9-wire junction box on D600 sensor
EB-20000241, Revision B	Model 3500 transmitter to remote mount core processor to 9-wire junction box on DT sensor

13.1 Model 3500 transmitter to remote core processor to 9-wire junction box on CMF, D (except D600), DL, H, and T sensors



13.2 Model 3500 transmitter to 9-wire junction box for CMF3000A sensor



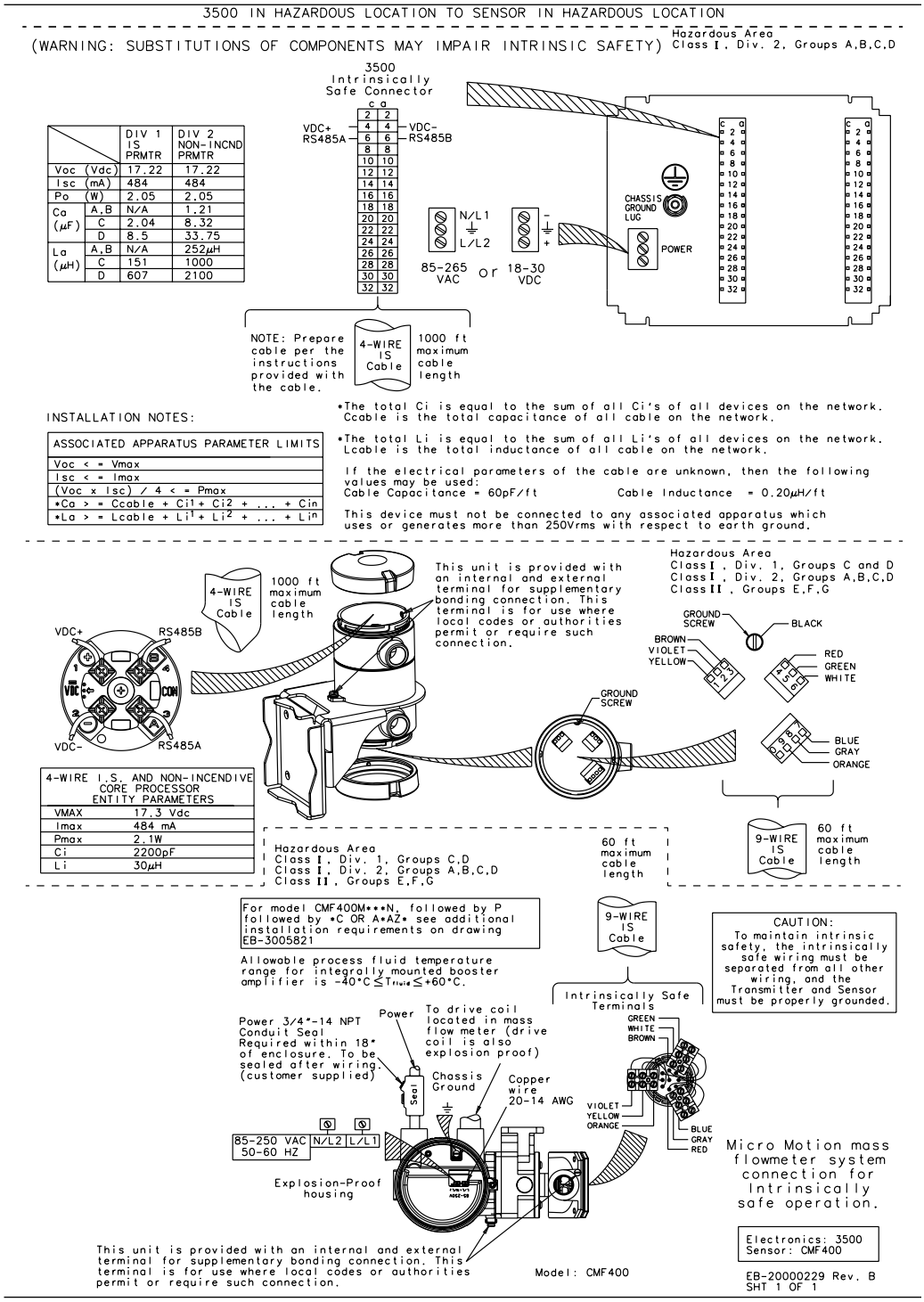
		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (µF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (µH)	A,B	N/A	252µH
	C	151	1000
	D	607	2100

ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
•Ca > = Ccable + Ci^1 + Ci^2 + ... + Cin
•La > = Lcable + Li^1 + Li^2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30µH

CMF300A Sensor Wire Terminations to 9-wire IS Cable	
Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

13.3 Model 3500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with boost amplifier

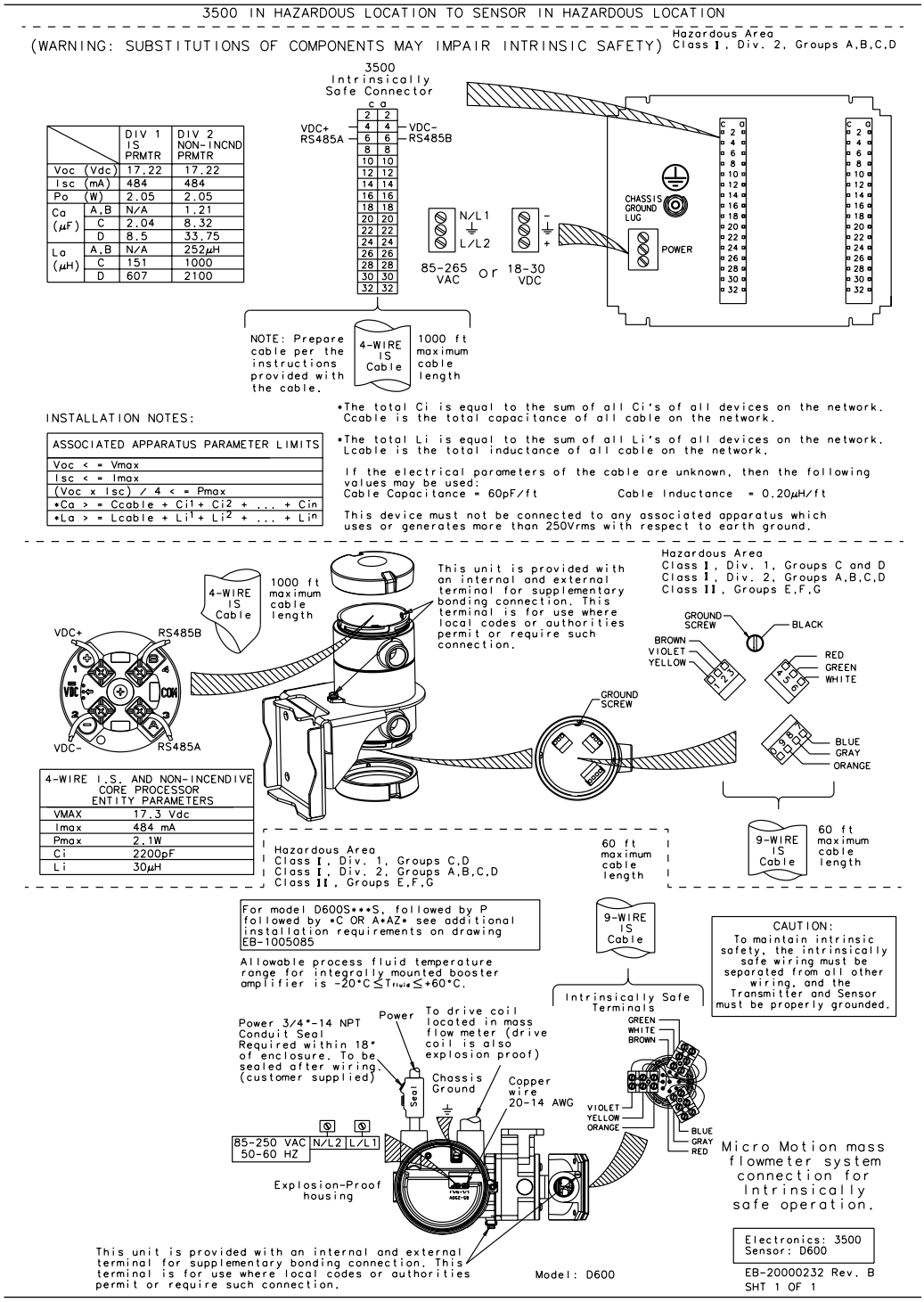


		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (μF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (μH)	A,B	N/A	252μH
	C	151	1000
	D	607	2100

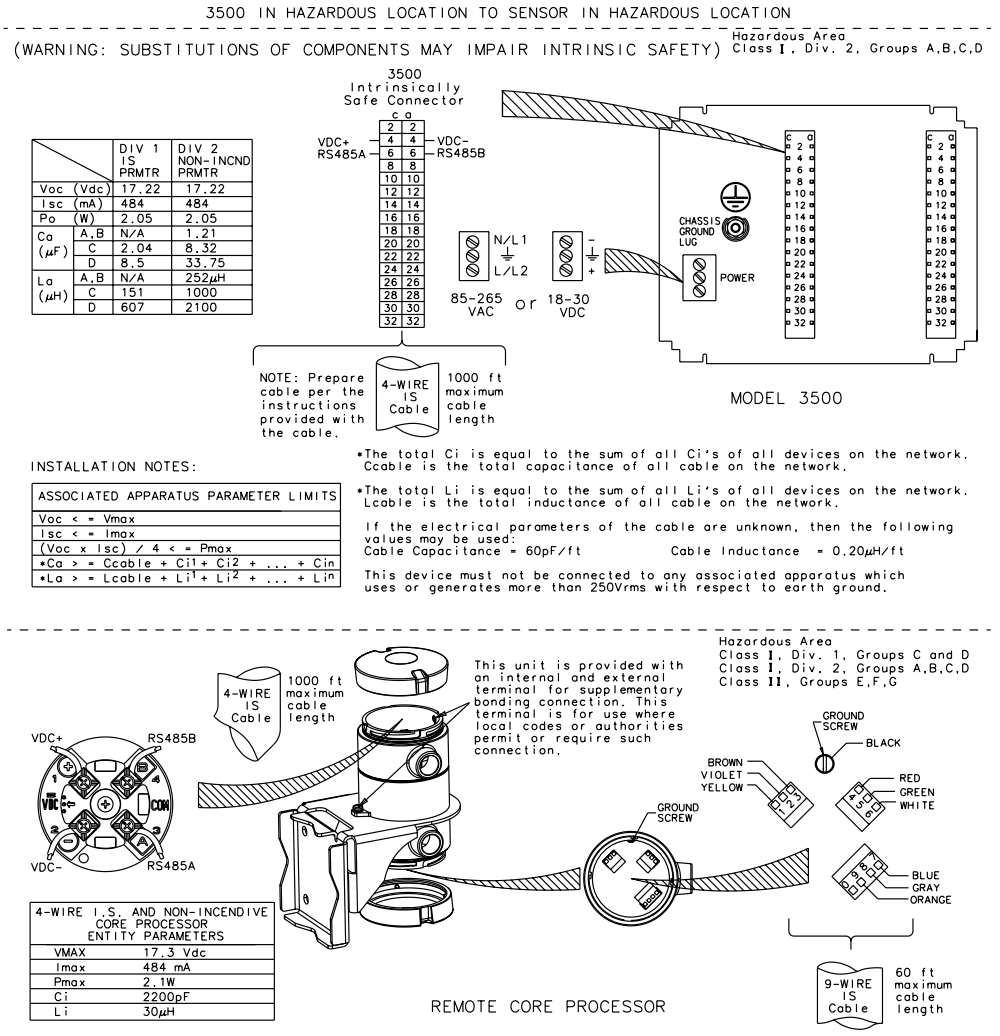
ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
*Ca > = Ccable + Ci1 + Ci2 + ... + Cin
*La > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30μH

13.4 Model 3500 transmitter to remote mount core processor to 9-wire junction box on D600 sensor



13.5 Model 3500 transmitter to remote mount core processor to 9-wire junction box on DT sensor



		DIV 1 IS PRMTR	DIV 2 NON-INCND PRMTR
Voc (Vdc)		17.22	17.22
Isc (mA)		484	484
Po (W)		2.05	2.05
Ca (µF)	A,B	N/A	1.21
	C	2.04	8.32
	D	8.5	33.75
La (µH)	A,B	N/A	252µH
	C	151	1000
	D	607	2100

ASSOCIATED APPARATUS PARAMETER LIMITS
Voc < = Vmax
Isc < = Imax
(Voc x Isc) / 4 < = Pmax
*Ca > = Ccable + Ci1 + Ci2 + ... + Cin
*La > = Lcable + Li1 + Li2 + ... + Lin

4-WIRE I.S. AND NON-INCENDIVE CORE PROCESSOR ENTITY PARAMETERS	
VMAX	17.3 Vdc
Imax	484 mA
Pmax	2.1W
Ci	2200pF
Li	30µH

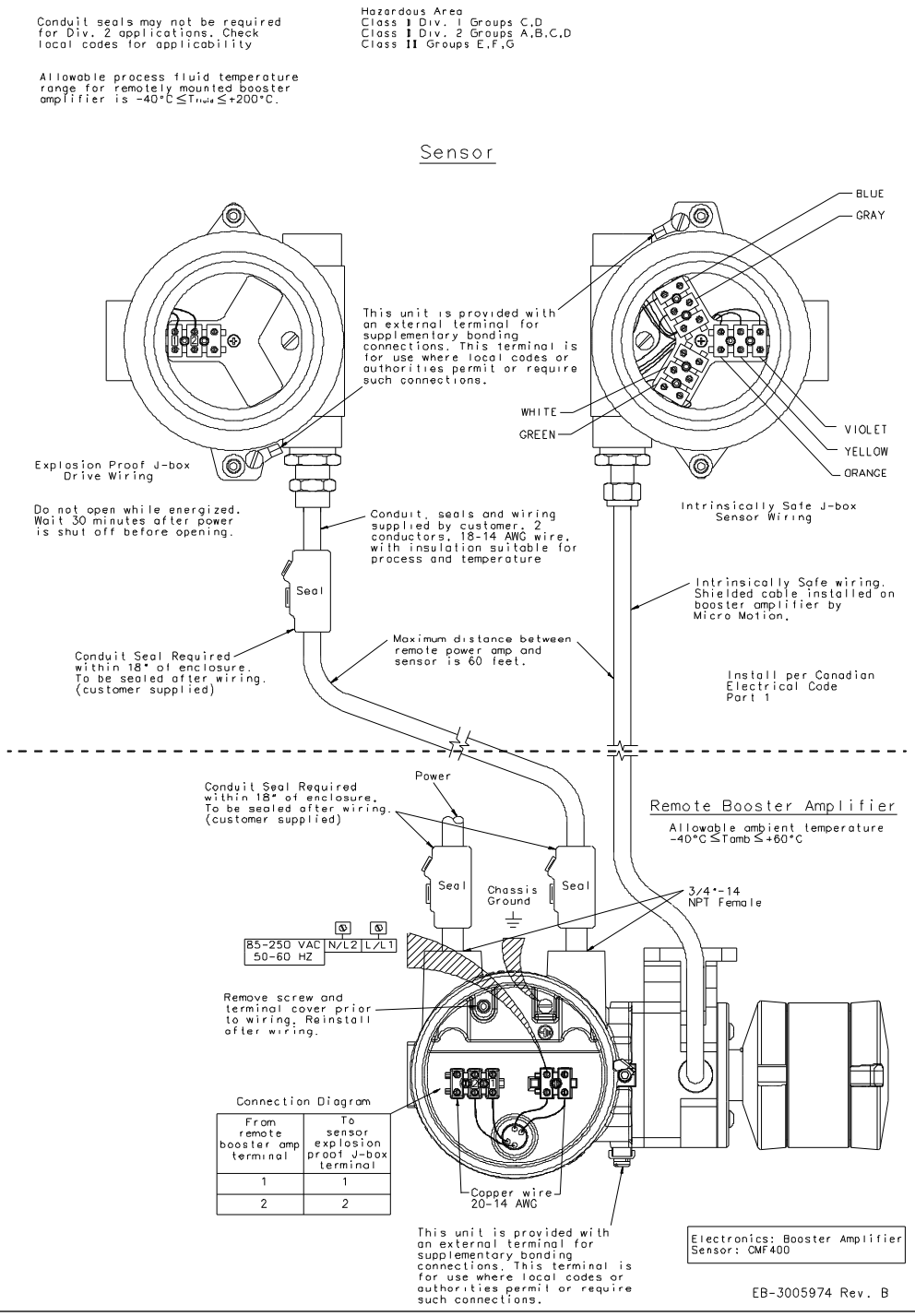
DT Sensor Wire Terminations to 9-Wire IS Cable	
DT Sensor Wire #	IS Cable Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Gray
9	White

14 CMF400 booster amplifier installation instructions

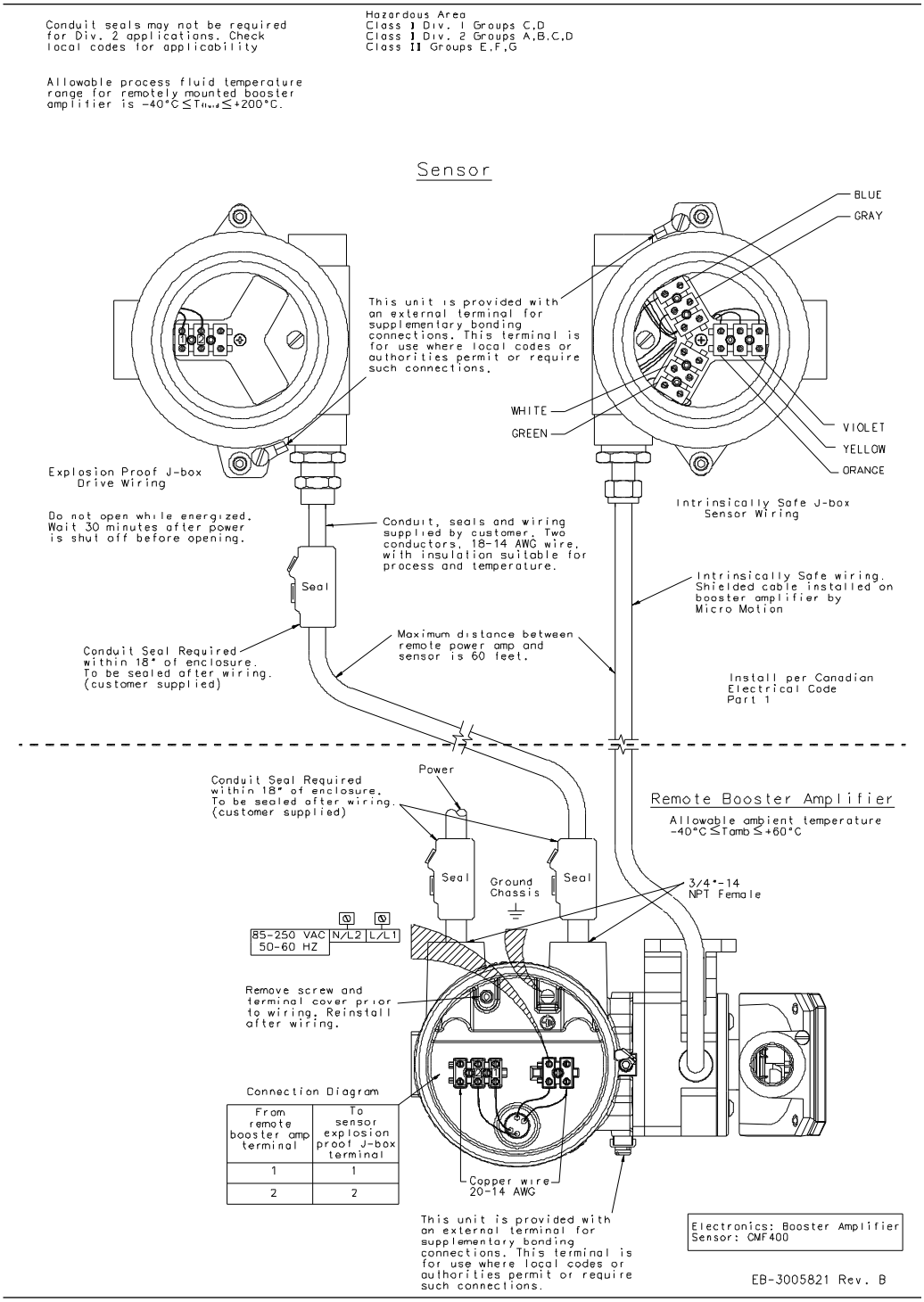
Table 14-1: List of Drawings for CMF400 booster amplifier installation instructions

Drawing name	Location
EB-3005974, Revision B	Booster amplifier with core processor remotely mounted from sensor and transmitter
EB-3005821, Revision B	Booster amplifier with junction box remotely mounted from sensor and transmitter

14.1 Booster amplifier with core processor remotely mounted from sensor and transmitter



14.2 Booster amplifier with junction box remotely mounted from sensor and transmitter

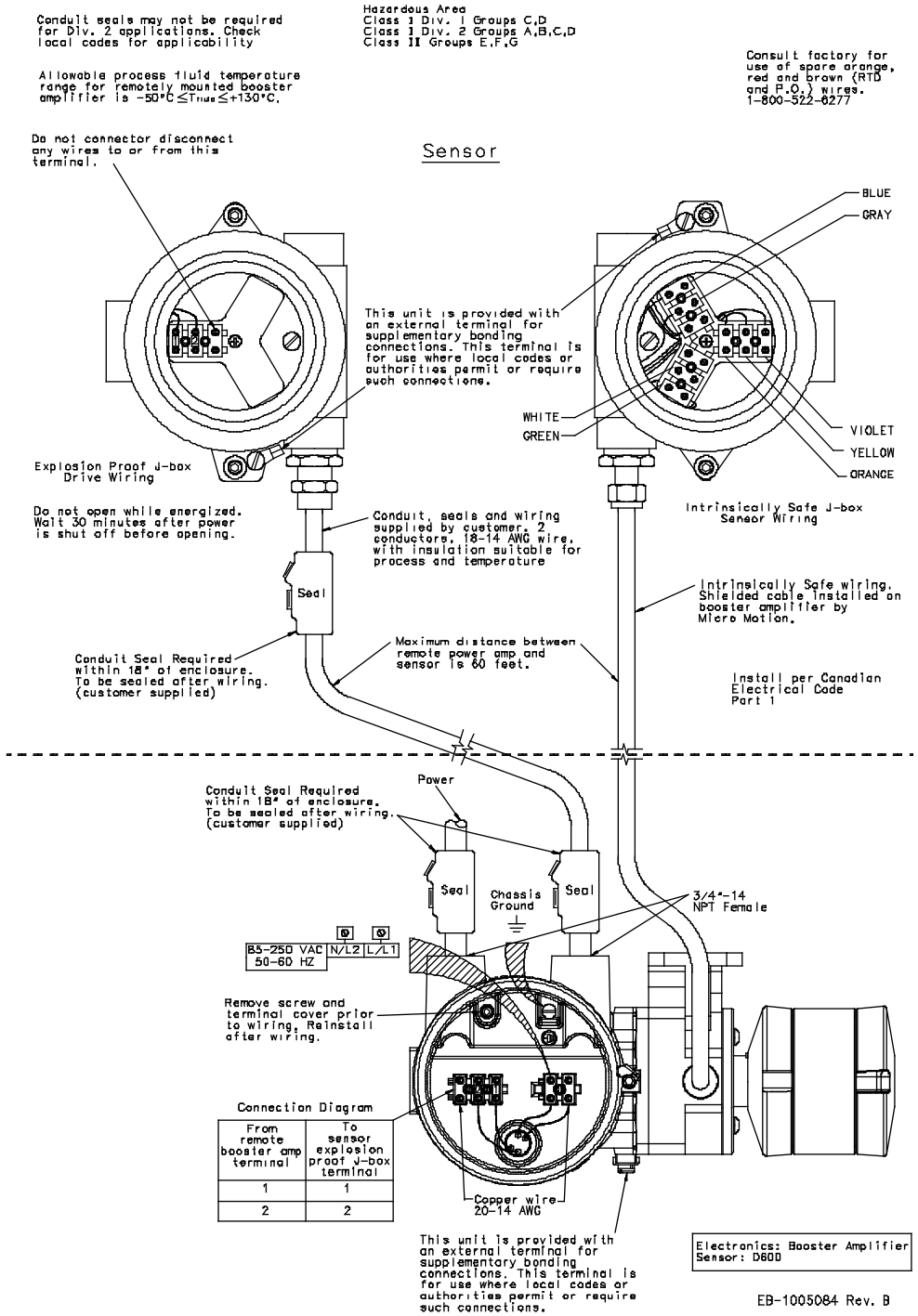


15 D600 remote booster amplifier installation

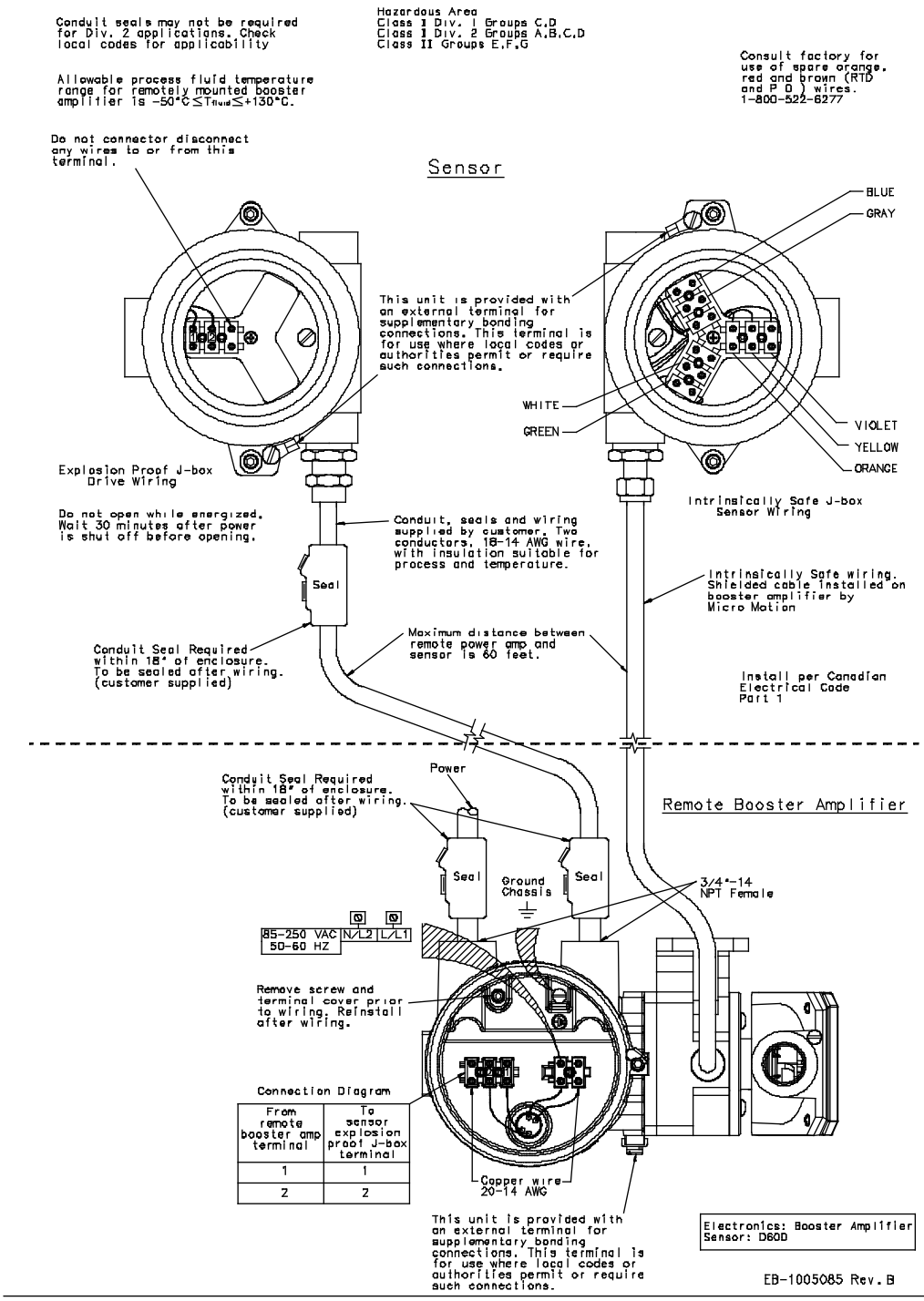
Table 15-1: List of Drawings for D600 remote booster amplifier installation

Drawing name	Location
EB-1005084, Revision B	D600 remote booster amplifier installation with core processor remotely mounted from sensor and transmitter
EB-1005085, Revision B	D600 remote booster amplifier with junction box remotely mounted from sensor and transmitter

15.1 D600 remote booster amplifier installation with core processor remotely mounted from sensor and transmitter



15.2 D600 remote booster amplifier with junction box remotely mounted from sensor and transmitter



A List of drawings

Table A-1: List of Drawings

Drawing name	Location
EB-1005078 Revision A	RFT9739 transmitter field-mounted to sensor junction box for D600 sensor
EB-1005079 Revision A	RFT9739 rack mounted transmitter to sensor junction box for D600 sensor
EB-1005081 Revision A	Model 3500 transmitter to 9-wire sensor junction box for D600 sensor
EB-1005082 Revision A	Model 3700 transmitter to 9-wire sensor junction box for D600 sensor
EB-1005084 Revision B	D600 remote booster amplifier installation with core processor remotely mounted from sensor and transmitter
EB-1005085 Revision B	D600 remote booster amplifier with junction box remotely mounted from sensor and transmitter
EB-10005117 Revision B	Model 1700/2700 transmitter with integrally-mounted core processor to junction box on D600 sensor
EB-1005119 Revision B	Model 1700/2700 transmitter to remote core processor to 9-wire junction box on D600 sensor
EB-2000203 Revision B	Model 3700 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-20000206 Revision B	Model 3700 transmitter to remote core processor to 9-wire junction box on D600
EB-20000212 Revision C	Model 3700 transmitter to remote core processor to 9-wire junction box for CMF300A sensor
EB-20000215 Revision B	Model 3700 transmitter to remote mount core processor to 9-wire junction box on DT sensor
EB-2000229 Revision B	Model 3500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with boost amplifier
EB-20000232, Revision B	Model 3500 transmitter to remote mount core processor to 9-wire junction box on D600 sensor
EB-20000238, Revision C	Model 3500 transmitter to 9-wire junction box for CMF3000A sensor
EB-20000241, Revision B	Model 3500 transmitter to remote mount core processor to 9-wire junction box on DT sensor
EB-20001051, Revision CA	Model 3500 transmitter to remote core processor to 9-wire junction box on CMF, D (except D600), DL, H, and T sensors
EB-20001052, Revision B	Model 3500 transmitter to 9-wire sensor junction box for CMF, F, H, and T sensors
EB-20001053, Revision C	Model 3700 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors

Table A-1: List of Drawings *(continued)*

Drawing name	Location
EB-20001054, Revision B	Model 3700 transmitter to sensor junction box for CMF, F, H, and T sensors
EB-20001055, Revision B	IFT9701 transmitter to sensor junction box for CMF, F, and H sensors
EB-20001056, Revision B	RFT9739 transmitter field mounted to sensor junction box for CMF, F, and H sensors
EB-20001057, Revision B	RFT9739 rack mounted transmitter to sensor junction box for CMF, F, and H sensors
EB-20001058, Revision, C	Model 1700/2700 transmitter with integrally-mounted processor to junction box on CMF, F, H, T, D, and DL sensors
EB-20001060, Revision, BA	Model 1700/2700 transmitter installation to remote core processor to 9-wire junction box on CMF, F, T, D, and DL sensors
EB-20001221 Revision BA	Model 1500/2500 transmitter to remote mount core processor to 9-wire junction box on CMF, D (except D600), DL, F, H, and T sensors
EB-20001222, Revision A	Model 1500/2500 transmitter to core processor to 9-wire junction box on D600 sensor
EB-20001223, Revision A	Model 1500/2500 transmitter to remote core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-20001224 Revision A	Model 1500/2500 transmitter to remote core processor to 9-wire junction box for CMF300A sensor
EB-20001225, Revision A	Model 1500/2500 transmitter to core processor to 9-wire junction box on DT sensor
EB-3002202, Revision E	RFT9739 transmitter field-mounted to sensor junction box for D and DL sensors
EB-3002521, Revision B	RFT9739 transmitter field-mounted to sensor junction box for DT sensors
EB-3002523, Revision E	RFT9739 rack mounted transmitter to sensor junction box for D and DL sensors
EB-3002524, Revision B	RFT9739 rack mounted transmitter to sensor junction box for DT sensors
EB-3002930, Revision F	RFT9739 transmitter field-mounted to 9-wire sensor junction box for CMF300A sensor
EB-3002932, Revision F	RFT9739 rack mounted transmitter to sensor junction box for CMF300A sensor
EB-3002934, Revision F	Model 3500 transmitter to 9-wire sensor junction box for CMF300A sensor
EB-3002936, Revision F	Model 3700 transmitter to sensor junction box for CMF300A sensor
EB-3003298, Revision B	IFT9739 transmitter to sensor junction box for CMF300A sensor
EB-3005812, Revision C	RFT9739 transmitter field-mounted to sensor junction box for CMF400 sensor with booster amplifier

Table A-1: List of Drawings *(continued)*

Drawing name	Location
EB-3005813, Revision C	RFT9739 rack mounted transmitter to sensor junction box for CMF400A sensor with booster amplifier
EB-3005815, Revision C	IFT9701 transmitter to sensor junction box for CMF400 sensor with booster amplifier
EB-3005816, RevisionC	Model 3500 transmitter to sensor junction box for CMF400 sensor with booster amplifier
EB-3005817, Revision BA	Model 3700 transmitter to 9-wire sensor junction box for CMF400 sensor with booster amplifier
EB-3005821, Revision B	Booster amplifier with junction box remotely mounted from sensor and transmitter
EB-3005974, Revision B	Booster amplifier with core processor remotely mounted from sensor and transmitter
EB-3006199, Revision C	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on CMF400 sensor with booster amplifier
EB-3100716, Revision F	IFT9701 transmitter to sensor junction box for D and DL sensors
EB-3300193, Revision E	Model 3300 nonincendive parameters
EB-330555, Revision D	Model 3500 transmiter to sensor junction box for D and DL sensors
EB-3300556, Revision C	Model 3500 transmitter to 9-wire sensor junction box for DT sensor
EB-3300573, Revision D	Model 3700 transmitter to 9-wire sensor junction box for D and DL sensors
EB-3300575, Revision C	Model 3700 transmitter to 9-wire sensor junction box for DT sensors
EB-3300818, Revision B	Model 3350 nonincendive parameters
EB-3600473, Revision DA	Transmitter output installation: Profibus-PA outputs for Model 1700/2700 Transmitters
EB-3600476, Revision DA	Transmitter output installation Model 1700/2700 with Fieldbus
EB-3600479, Revision CA	Transmitter output installation: Analog outputs for Model 1700/2700 transmitters
EB-3600538, Revision B	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box on DT sensor
EB-3600539, Revision C	Model 1700/2700 transmitter with integrally-mounted core processor to 9-wire junction box for CMF300A sensor
EB-3600629, Revision D	Transmitter output installation Model 1700/2700 with Intrinsically Safe installation
EB-3600667, Revision B	Transmitter output installation: Model 2700 with configurable inputs and outputs
EB-3600674, Revision C	Model 1700/2700 transmitter to remote core processor to 9-wire junction box on DT sensor

Table A-1: List of Drawings *(continued)*

Drawing name	Location
EB-3600675, Revision D	Model 1700/2700 transmitter to 9-wire remote core processor to CMF300A sensor
EB-3600675, Revision D	Model 1700/2700 transmitter to 9-wire remote core processor to CMF300A sensor

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