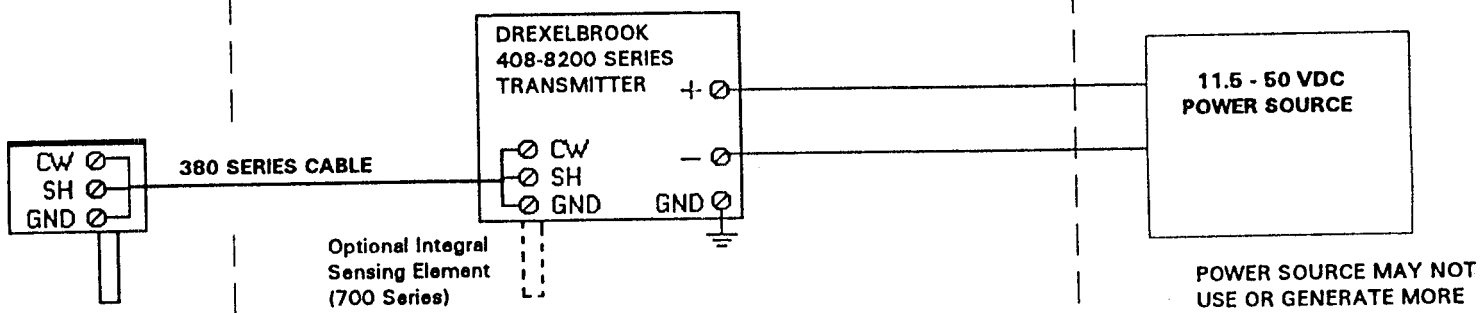
DIV. 2 LOOP, NO BARRIERS



POWER SOURCE MAY NOT USE OR GENERATE MORE THAN 145v AC.

SENSING ELEMENT AND CABLE ARE INTRINSICALLY SAFE FOR CLASS I GROUPS A,B,C,D AND CLASS II GROUPS E,F,G.

MODEL NUMBERS OF CERTIFIED TRANSMITTERS SHOWN ON PAGES 1 to 8:

408-82ab-0cd

a = phasing 0,3
b = time delay 0,2
c = operating frequency none,1
d = housing 1,4,6,8,9,C,D*

* FOR d = 1 (CHASSIS ONLY), REFERENCE APPROPRIATE SHEET FOR APPROVED HOUSING NOTE.

MODEL NUMBERS OF APPPROVED SENSING ELEMENTS SHOWN ON SHEETS 1 - 8 AS INTRINSICALLY SAFE:

70a-bcde-fgh

a = 0, 4	e = 0 - 9
b = 9, blank	f = 0 - 9, blank
c = 0 - 9, blank	g = 0 - 9, blank
d = 0 - 9, blank	h = 0 - 9

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

CLASS I,II,III, DIVISION 2, GROUPS A,B,C,D,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM,PA. 19044

CERTIFIED by_____

_____ PO# _____
_____ ENG _____
_____ USER _____

DE# _____

TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

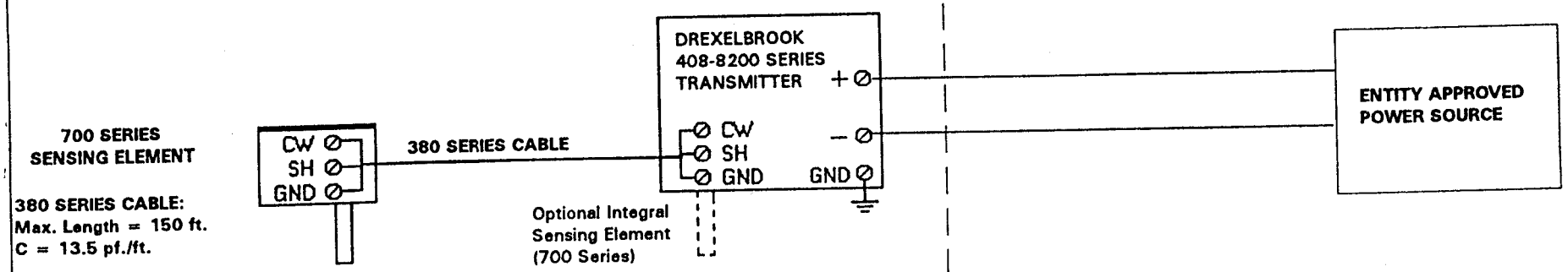
DR. —
CHK. AJK
APP'D RP

420-1-833	page 1 of 8	ISSUE B

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Cranch

NO CHANGE IN PART OR VENDOR OF PART ALLOWED WITHOUT PRIOR APPROVAL OF FM.

ENTITY APPROVAL



SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

MAX. ENTITY PARAMETERS:

TRANSMITTER

V max = 40 V
I max = 140 ma
Ci = .0022 uf
Li = 0 mh

USE OF MODEL 408-8200 FOR CLASS II AND III INSTALLATIONS:

USE ONLY FM APPROVED OR NRTL LISTED DUST IGNITIONPROOF HOUSINGS, WITH DUST TIGHT CABLE FITTINGS OR THREADED CONDUIT, FOR ENVIRONMENTAL PROTECTION IN CLASS II DIV. 1 AND 2 APPLICABLE GROUPS E, F, G AND CLASS III DIV. 1 AND 2.

-- Loops must be connected according to the barrier manufacturer's instructions.

-- Barrier parameters must meet the following requirements:

Voc OR Vt ≤ Vmax Isc OR It ≤ Imax Ca (uf) > .0022 La (mh) > 0

-- The Ca and La parameters must be greater than the sum of the connecting cable parameters and Ci and Li of the I.S. Apparatus.

-- Barrier must be approved by FMRC for use in this configuration.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM,PA. 19044

CERTIFIED by_____

_____ PO# _____
_____ ENG _____
_____ USER _____

DE# _____

TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

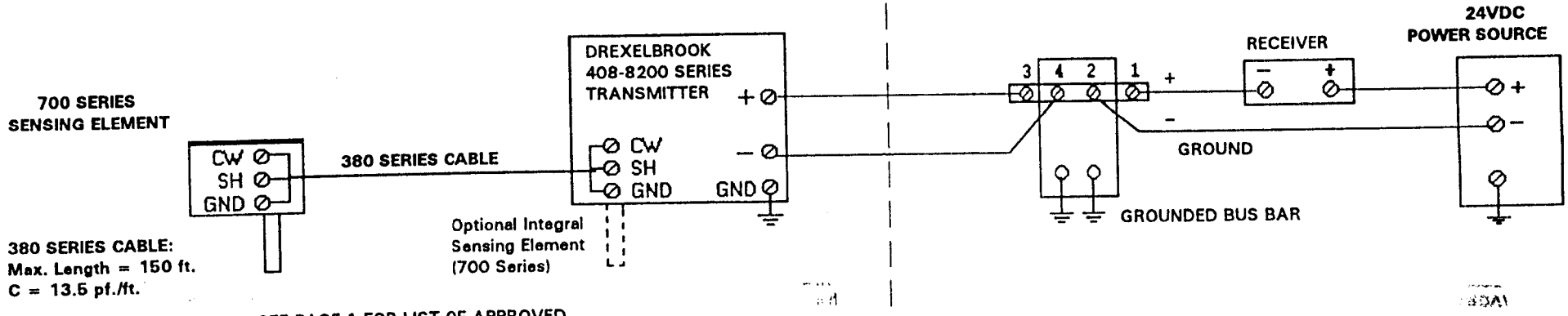
DR. —
CHK. AJK
APP'D RP

420-1-833 page 2 of 8

ISSUE B

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Cranch

ENTITY APPROVAL - SINGLE BARRIER, GROUNDED RETURN



380 SERIES CABLE:
Max. Length = 150 ft.
C = 13.5 pf./ft.

SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

-- See ANSI/ISA RP12.6 for guidance in installation.
-- Resistance between barrier ground and earth ground must be less than one ohm.
-- Normal operating conditions: 24 VDC, 20 mADC.
** SEE SHEET 2 FOR CLASS II AND III HOUSING NOTE.

-- Loops must be connected according to the barrier manufacturer's instructions.
-- Barrier parameters must meet the following requirements:
Voc OR Vt ≤ Vmax Isc OR It ≤ Imax Ca (uf) > .0022 La (mh) > 0
-- The Ca and La parameters must be greater than the sum of the connecting cable parameters and Ci and Li of the I.S. Apparatus.
-- Barrier must be approved by FMRC for use in this configuration.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM, PA. 19044

CERTIFIED by_____
PO# _____
ENG _____
USER _____
DE# _____

TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

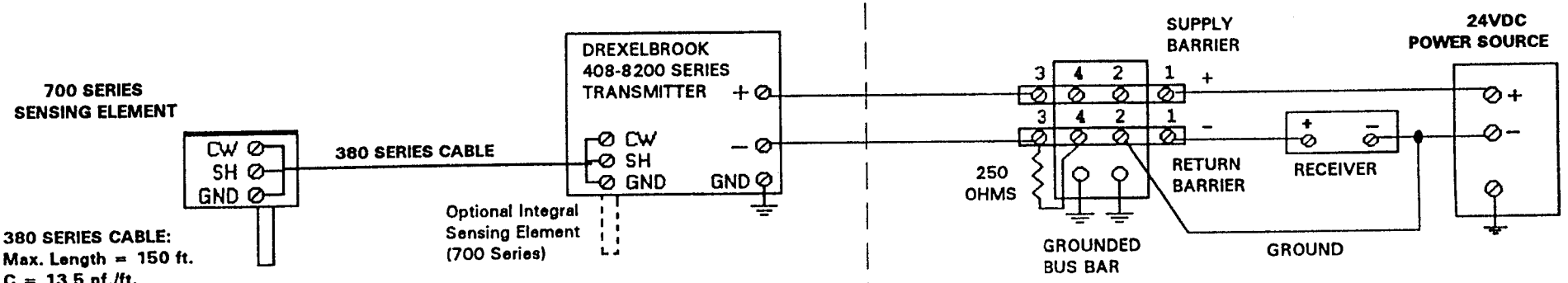
DR. —
CHK. AJK
APP'D RP

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Crouch

420-1-833 | page 3 of 8 | ISSUE B

NO CHANGE IN PART OR VENDOR OF PART ALLOWED WITHOUT PRIOR APPROVAL OF FM.

ENTITY APPROVAL - UNGROUNDED LOOP, HIGH IMPEDANCE 1-5 VOLT RECEIVER



380 SERIES CABLE:
Max. Length = 150 ft.
C = 13.5 pf./ft.

SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

-- See ANSI/ISA RP12.6 for guidance in installation.
-- Resistance between barrier ground and earth ground must be less than one ohm.
-- Normal operating conditions: 24 VDC, 20 mADC.

** SEE SHEET 2 FOR CLASS II AND III HOUSING NOTE.

-- Loops must be connected according to the barrier manufacturer's instructions.
-- Barrier parameters must meet the following requirements:
Voc OR Vt ≤ Vmax Isc OR It ≤ Imax Ca (uf) > .0022 La (mh) > 0
-- The Ca and La parameters must be greater than the sum of the connecting cable parameters and Ci and Li of the I.S. Apparatus.
-- Supply and Return barriers must be approved by FMRC for use in this configuration.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM,PA. 19044

CERTIFIED by_____
PO# _____
ENG _____
USER _____
DE# _____

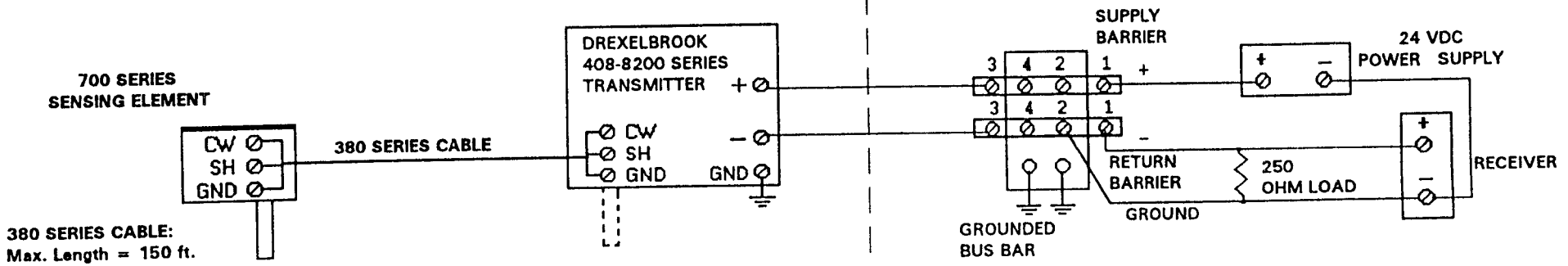
TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

DR. —
CHK. AJK
APP'D RP

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Cranch

420-1-833 | page 4 of 8 | ISSUE B

ENTITY APPROVAL - UNGROUNDED LOOP, 1-5 VOLT RECEIVER



380 SERIES CABLE:
Max. Length = 150 ft.
C = 13.5 pf./ft.

SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

-- See ANSI/ISA RP12.6 for guidance in installation.
-- Resistance between barrier ground and earth ground must be less than one ohm.
-- Normal operating conditions: 24 VDC, 20 mADC.

** SEE SHEET 2 FOR CLASS II AND III HOUSING NOTE.

-- Loops must be connected according to the barrier manufacturer's instructions.
-- Barrier parameters must meet the following requirements:
Voc OR Vt ≤ Vmax Isc OR It ≤ Imax Ca (uf) > .0022 La (mh) > 0
-- The Ca and La parameters must be greater than the sum of the connecting cable parameters and Ci and Li of the I.S. Apparatus.
-- Supply and Return barriers must be approved by FMRC for use in this configuration.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM,PA. 19044

CERTIFIED by_____
PO# _____
ENG _____
USER _____
DE# _____

TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

DR. —
CHK. AJK
APP'D KP

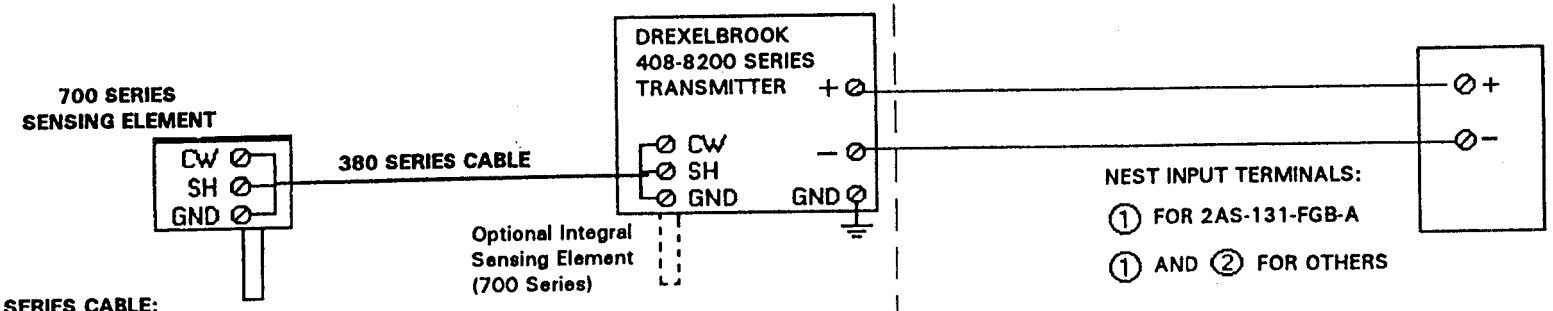
ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Cranch

420-1-833 | page 5 of 8 | ISSUE B

NO CHANGE IN PART OR VENDOR OF PART ALLOWED WITHOUT PRIOR APPROVAL OF FM.

FOXBORO BARRIERS

UNGROUNDED LOOP USING 4-20ma/0-10V CONVERTER AND 4-20ma/DIGITAL CONVERTER



380 SERIES CABLE:
Max. Length = 150 ft.
C = 13.5 pf./ft.

SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

-- Loops must be connected according to the barrier manufacturer's instructions.

USED WITH THE FOLLOWING BARRIERS:		TRANSMITTER INTRINSICALLY SAFE FOR CLASS & GROUP
FOXBORO	2A1-12V-FGB	I A-D, II E-G, III
	2A1-13V-FGB	I A-D, II E-G, III
	2AS-131-FGB-A	I A-D, II E-G, III
	3A2-12D CS-E/FGB-A	I A-D, II E-G, III
	3AS-13D CD-E/FGB-A	I A-D, II E-G, III

-- See ANSI/ISA RP12.6 for guidance in installation.
-- Resistance between barrier ground and earth ground must be less than one ohm.
-- Normal operating conditions: 24 VDC, 20 mADC.

** SEE SHEET 2 FOR CLASS II AND III HOUSING NOTE.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM,PA. 19044

CERTIFIED by_____
PO# _____
ENG _____
USER _____
DE# _____

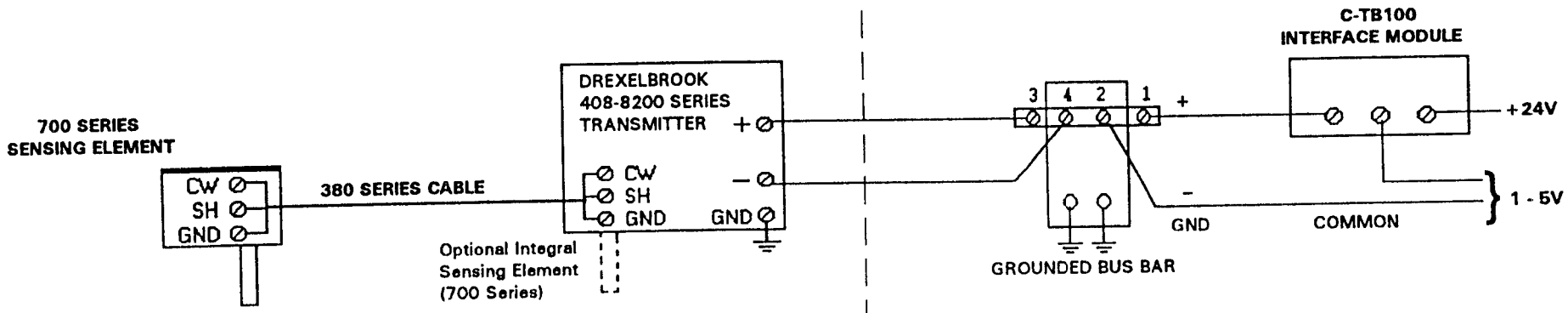
TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

DR. —
CHK. AJK
APP'D RP

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94 RP	6-30-94	Cranch

420-1-833 | page 6 of 8 | ISSUE B

HONEYWELL BARRIER, GROUNDED RETURN, 1-5 VOLT GROUNDED RECEIVER



380 SERIES CABLE:
Max. Length = 150 ft.
C = 13.5 pf./ft.

SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

-- Loops must be connected according to the barrier manufacturer's instructions.

-- See ANSI/ISA RP12.6 for guidance in installation.
-- Resistance between barrier ground and earth ground must be less than one ohm.
-- Normal operating conditions: 24 VDC, 20 mADC.

** SEE SHEET 2 FOR CLASS II AND III HOUSING NOTE.

USED WITH THE FOLLOWING BARRIER:

HONEYWELL 38545-0000-0110-113-5D5 BARRIER

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM, PA. 19044

CERTIFIED by_____
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TITLE
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DR. —
CHK. AJK
APP'D RC

420-1-833	page 7 of 8	ISSUE B

ISS.	EDO\DSR	DATE	APP'D
B	6-9-94RP	6-30-94	Crunch

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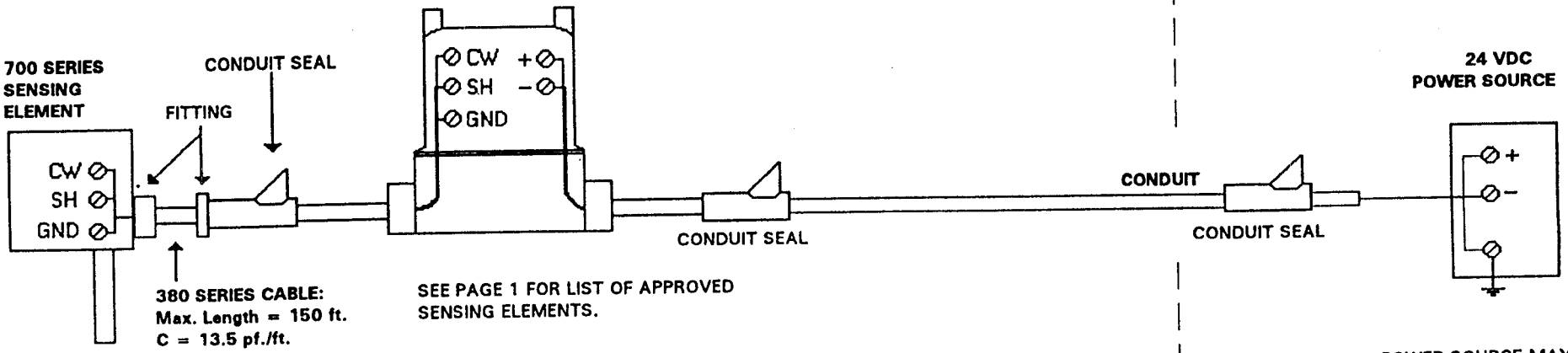
EXPLOSIONPROOF INSTALLATION



SEE PAGE 1 FOR LIST OF APPROVED SENSING ELEMENTS.

POWER SOURCE MAY NOT USE OR GENERATE MORE THAN 145v AC.

SENSING ELEMENT AND CABLE ARE INTRINSICALLY SAFE FOR CLASS I GROUPS A,B,C,D; CLASS II GROUPS E,F,G AND CLASS III.

NOTES: 1. FOR EXPLOSIONPROOF INSTALLATIONS:
ONLY TRANSMITTER HOUSING OPTION b = 4 OR 6 MAY BE USED.

2. CONDUIT SEALS MUST BE WITHIN 2 INCHES OF TRANSMITTER HOUSING.

CLASS I,II,III, DIVISION 1, GROUPS A,B,C,D,E,F,G.

NON-HAZARDOUS AREA

DREXELBROOK ENGINEERING CO. HORSHAM, PA. 19044

CERTIFIED by_____
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USER _____
DE# _____

TITLE
INSTALLATION OF 408-8200 SERIES TRANSMITTERS.

DR. —
CHK. AJK
APP'D JC

ISS.	EDO\DSR	DATE	APP'D
A	6-9-94 RP	6-30-94	Crouch

420-1-833 page 8 of 8

ISSUE B