

ISSUE	CH. ORDER No	WEEK	ISSUE	CH. ORDER No	WEEK	ISSUE	CH. ORDER No	WEEK	ISSUE	CH. ORDER No	WEEK
1	SME-6096	1029	2	SME-6989	1113	3	SME-8259	1525	4	SME-8531	1629

FIELD BUS INTRINSICALLY SAFE CONCEPT (FISCO) APPROVAL

FISCO allows interconnection of intrinsically safe apparatus to associated apparatus not specially examined in such combination. The criteria for interconnection is that the voltage (Ui or Vmax), the current (Ii or Imax), and the power (Pi or Pmax) which an intrinsically safe apparatus can receive and remain intrinsically safe considering faults, must be equal or greater than voltage (Uo, Voc or Vt), the current (Io, Isc or It) and the power (Po or Pmax) levels which can be delivered by the associated apparatus, considering faults and applicable factors. In addition, the maximum unprotected capacitance (Ci) and the inductance (Li) of each apparatus (other than the termination) connected to the Fieldbus must be less than or equal to 5 nF and 10 uH respectively.

In each I.S. Fieldbus segment only one active device, normally the associated apparatus, is allowed to provide the necessary energy for the Fieldbus. The voltage (Uo, Voc or Vt) of the associated apparatus is limited to a range of 14 V to 17.5 V. In this instance Rosemount 2410 has voltage as given in table below. All other equipment connected to the bus cable has to be passive, meaning that they are not allowed to provide energy to the system, except a leakage current of 50 uA for each connected device. Separately powered equipment needs galvanic isolation to assure that the intrinsically safe Fieldbus circuit remains passive.

The cables used to interconnect devices need to have the parameters in the following range:

Loop Resistance Rc:	15.....150 ohm/km
Loop Inductance Lc:	0.4.....1 mH/km
Capacitance per unit length Cc:	45.....200 nF/km
	Cc=Cc line to line + 0.5 Cc line to screen, if both lines are floating or
	Cc=Cc line to line + Cc line to screen, if screen is connected to one line
Length of trunk cable:	Less than or equal to 1 km for IIC (5km for IIB)
Length of spur cable:	Less than or equal to 60 m

At each end of the trunk cable an approved infallible line terminator with the following parameters should be installed: R >=90 ohm, C <=2.2 uF (recommended parameters are: R=100+/-2 ohm, C=1.0 +/-0.2 uF) One of the allowed terminations might already be integrated in the associated apparatus. Rosemount 2410 is equipped with integrated termination, see note 7.

FISCO limits the number of passive devices connected to a single segment to 32 devices. If the above rules are respected, up to a total length of 1000 m (sum of trunk and spur cables) of cable is permitted. The inductance and capacitance of the cable will not impair the intrinsic safety of the installation.

ENTITY CONCEPT APPROVAL

The Entity concept allows interconnection of intrinsically safe apparatus to associated apparatus not specifically examined in combination as a system. The approved values of max. open circuit voltage (Uo, Voc or Vt), max. short circuit current (Io, Isc or It) and max. power (Po or Voc x Isc / 4 or Vt x It / 4), for the associated apparatus must be less than or equal to the maximum safe input voltage (Ui or Vmax), maximum safe input current (Ii or Imax) and maximum safe input power (Pi or Pmax) of the intrinsically safe apparatus. In addition, the approved max. allowable connected capacitance (Co or Ca) of the associated apparatus must be greater than the sum of the interconnecting cable capacitance and the unprotected internal capacitance (Ci) of the intrinsically safe apparatus, and the approved max. allowable connected inductance (Lo or La) of the associated apparatus must be greater than the sum of the interconnecting cable inductance and the unprotected internal inductance (Li) of the intrinsically safe apparatus.

WARNING - Substitution of components may impair Intrinsic Safety.
 WARNING - To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.
 AVERTISSEMENT - La substitution de composants peut compromettre la sécurité intrinsèque.
 AVERTISSEMENT - Ne pas ouvrir en cas de presence d'atmosphere explosive.

FM Approved Product
 No revision to this drawing without prior Factory Mutual Approval.


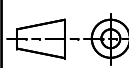
ROSEMOUNT 2410 ENTITY POWER SUPPLY	
US/Canada	IECEX
XP CL 1, DIV 1, GPS C, D & Associated Apparatus providing IS circuits to CL 1, DIV 1, GPS C & D	Ex db e [ib] IIB T4 Gb (-50°C<Ta<+70°C)
DIP CL II/III, DIV. 1, GP E, F & G	ATEX
CL I ZONE 1 AEx/Ex db e [ib] IIB	II 2(2)G Ex db e [ib] IIB T4 (-50°C to +70°C)

Installation Notes:

- FISCO allows the interconnection of Approved intrinsically safe devices with FISCO parameters not specifically examined in combination as a system when: Uo, Voc or Vt =< Ui or Vmax, Io, loc or It =< Ii or Imax, Po =< Pi or Pmax
- Control equipment connected to the Associates Apparatus must not use or generate more than 250 VRMS or VDC.
- Dust tight conduit seals must be used when installed in Class II and Class III environments.
- Earth connection. Minimum cable area 4 mm2
- Field Apparatus manufacturers installation drawing must be followed when installing this equipment.
- Installation in the USA should be in accordance with ANSI/ISA-RP12.6 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and the National Electrical Code (ANSI/NFPA 70).
- It is possible to disconnect the integrated termination by means of a jumper located inside Rosemount 2410.
-

FISCO Parameters:
 Uo (Voc) = 15.0 V; Io (Isc) = 354 mA; Po (Pout) = 5.32 W

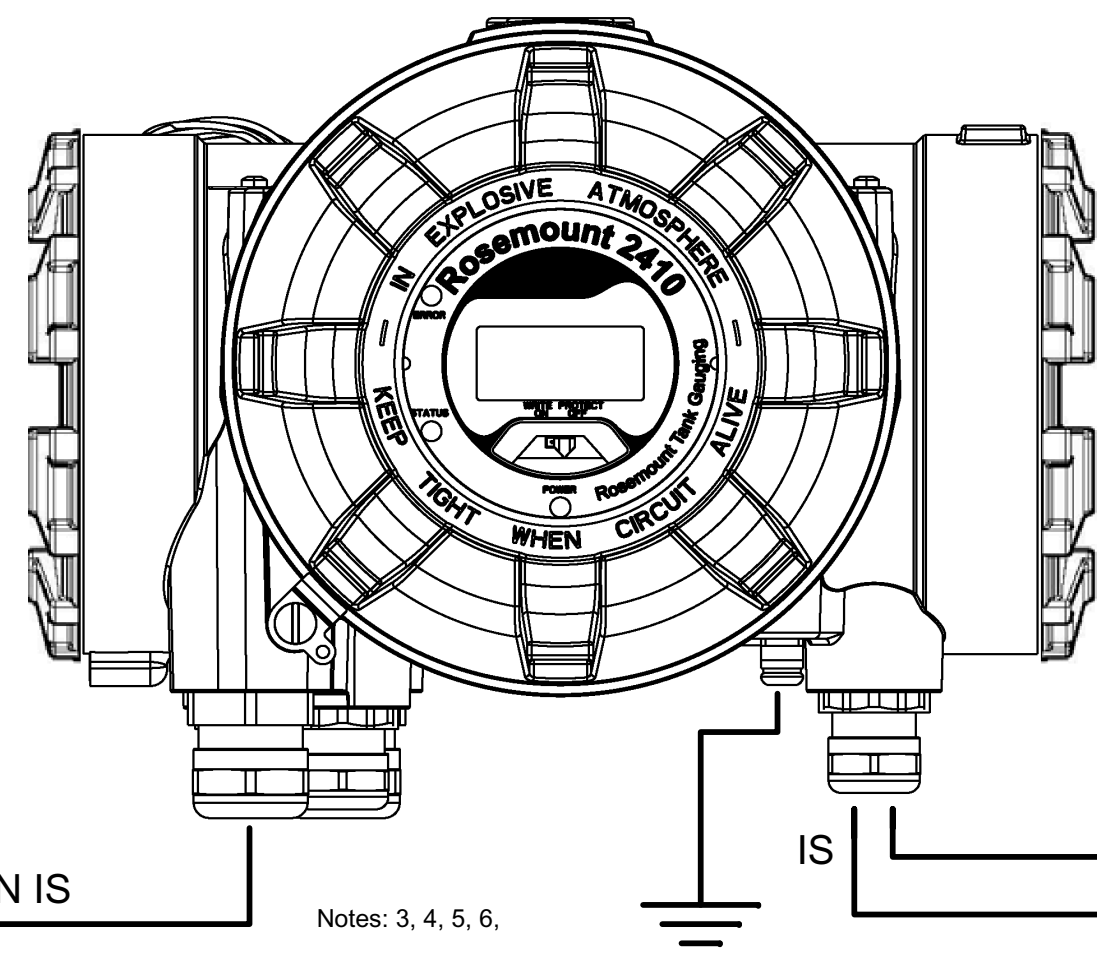
The ENTITY CONCEPT allows the interconnection of Approved intrinsically safe devices with ENTITY parameters not specifically examined in combination as a system when: Uo, Voc or Vt =< Ui or Vmax, Io, loc or It =< Ii or Imax, Po =< Pi or Pmax.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG. ROSEMOUNT 2410	
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD		
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:		DWG NO. D9240040-901
				1 ST ANGLE	SCALE	ISSUE 4
				SHEET 1 / 8		
The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden						

NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA



UNSPECIFIED CONTROL EQUIPMENT (Note 2)

NON IS

Notes: 3, 4, 5, 6,

IS

OPTIONAL INTRINSICALLY SAFE I/O

ANY APPROVED FISCO FIELD DEVICE

APPROVED FISCO TERMINATOR

FM Approved Product
No revision to this drawing without prior Factory Mutual Approval.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG. ROSEMOUNT 2410
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	(INSTALLATION OVERVIEW)
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:	
	DWG NO. D9240040-901		ISSUE 4	SHEET 2 / 8	
ROSEMOUNT		1 ST ANGLE	SCALE		The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden

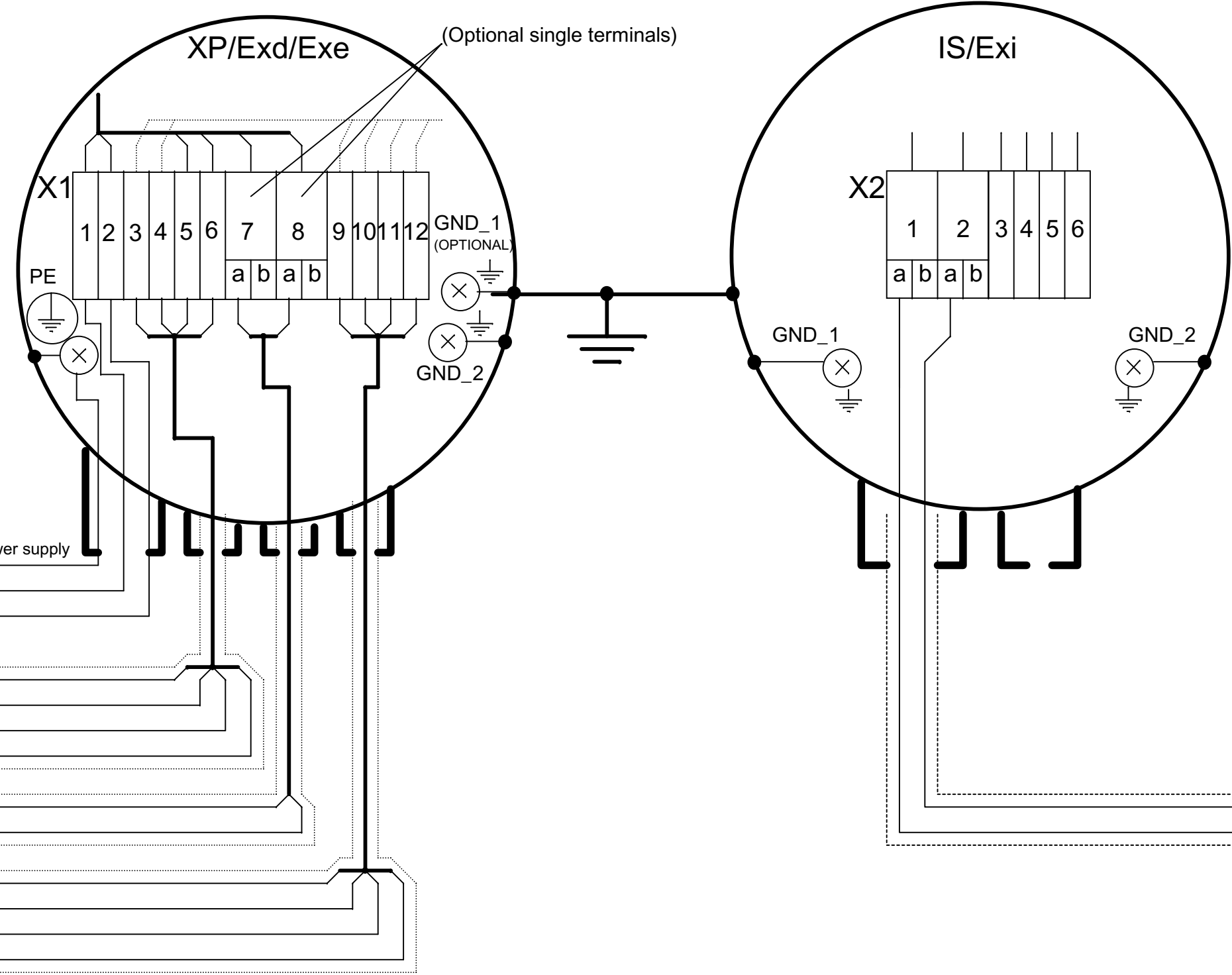
NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
S PWR -	9	Secondary Power - (optional)
S PWR +	10	Secondary Power + (optional)
S BUS B	11	Secondary comm. Bus (optional)
S BUS A	12	Secondary comm. Bus (optional)

Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
	3	Future option
	4	Future option
	5	Future option
	6	Future option



POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

PE
N / -
L / +

Relay output (Option)
K1 A
K1 COM
K2 A
K2 COM

Primary Communication Bus
P BUS B
P BUS A

Secondary Communication Bus (Option)
S PWR -
S PWR +
S BUS B
S BUS A

ATEX / IECEx: Zone 1
US / Canada: Division 1 or Zone 1,
GAS GROUP C & D or IIB

FB- Tank Bus
FB+ FISCO POWER SUPPLY
Note 1, see sheet 1

FM Approved Product
No revision to this drawing without prior Factory Mutual Approval.

Shielded cable
Optionally shielded cable

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG.	
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	ROSEMOUNT 2410	
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:		(BASIC)
					1 ST ANGLE	SCALE
					ISSUE	SHEET
					4	3 / 8
The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden						

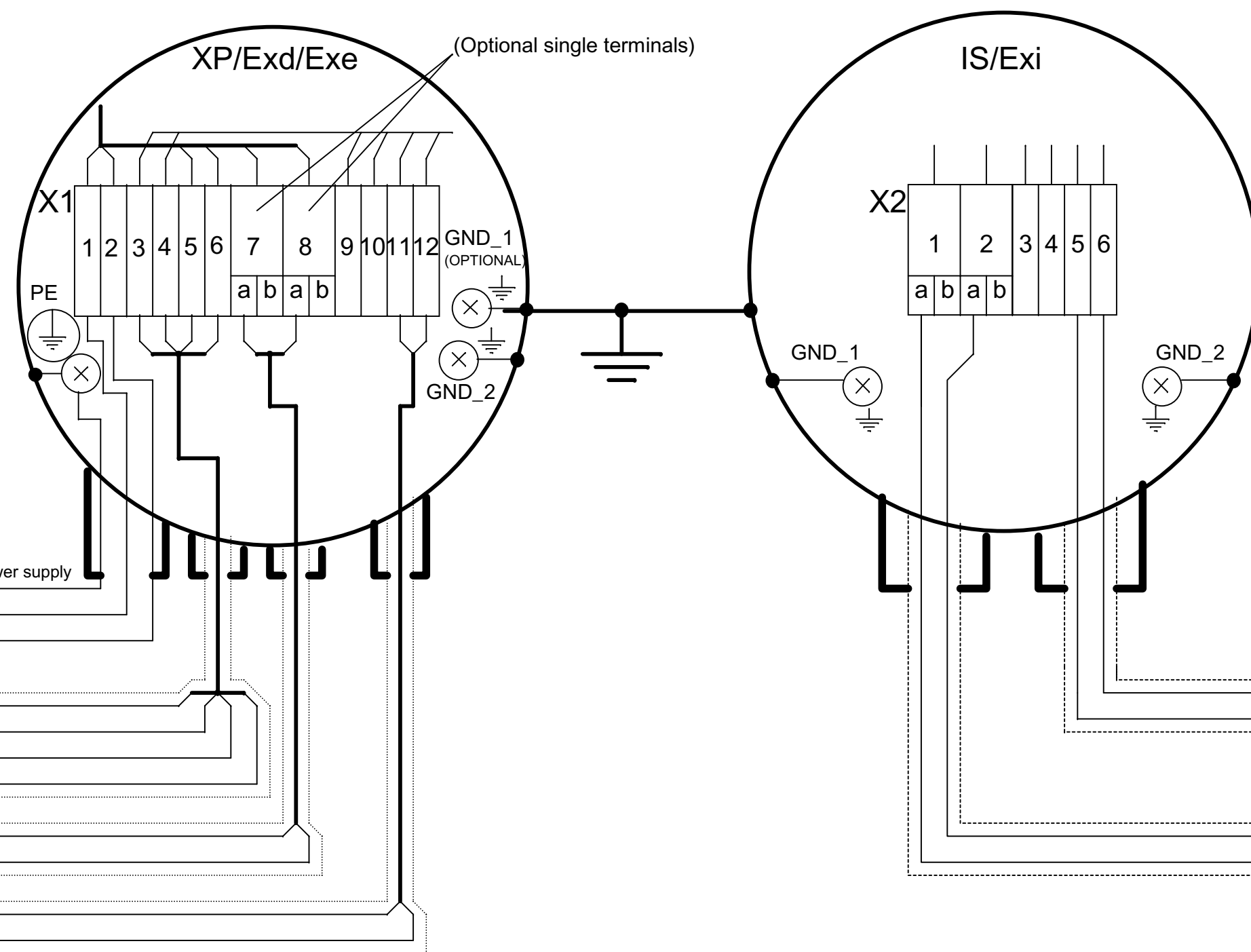
NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
	9	Not used
	10	Not used
ALARM B	11	SIL relay common
ALARM A	12	SIL relay output NO

Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
	3	Future option
	4	Future option
Alarm -	5	SIL alarm -
Alarm +	6	SIL alarm +



POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

Relay output (Option)

Primary Communication Bus

SIL Alarm Relay

PE
N / -
L / +

K1 A
K1 COM
K2 A
K2 COM

P BUS B
P BUS A

ALARM B
ALARM A

ATEX / IECEx: Zone 1
US / Canada: Division 1 or Zone 1,
GAS GROUP C & D or IIB

Alarm + SIL Alarm input
Alarm - Note 1, see sheet 1

FB- Tank Bus
FB+ FISCO POWER SUPPLY
Note 1, see sheet 1

Shielded cable
Optionally shielded cable

FM Approved Product
No revision to this drawing without prior Factory Mutual Approval.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG.	
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	ROSEMOUNT 2410	
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:		(SIL OPTION)
	1 ST ANGLE		SCALE		DWG NO. D9240040-901	ISSUE 4
ROSEMOUNT				The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden		

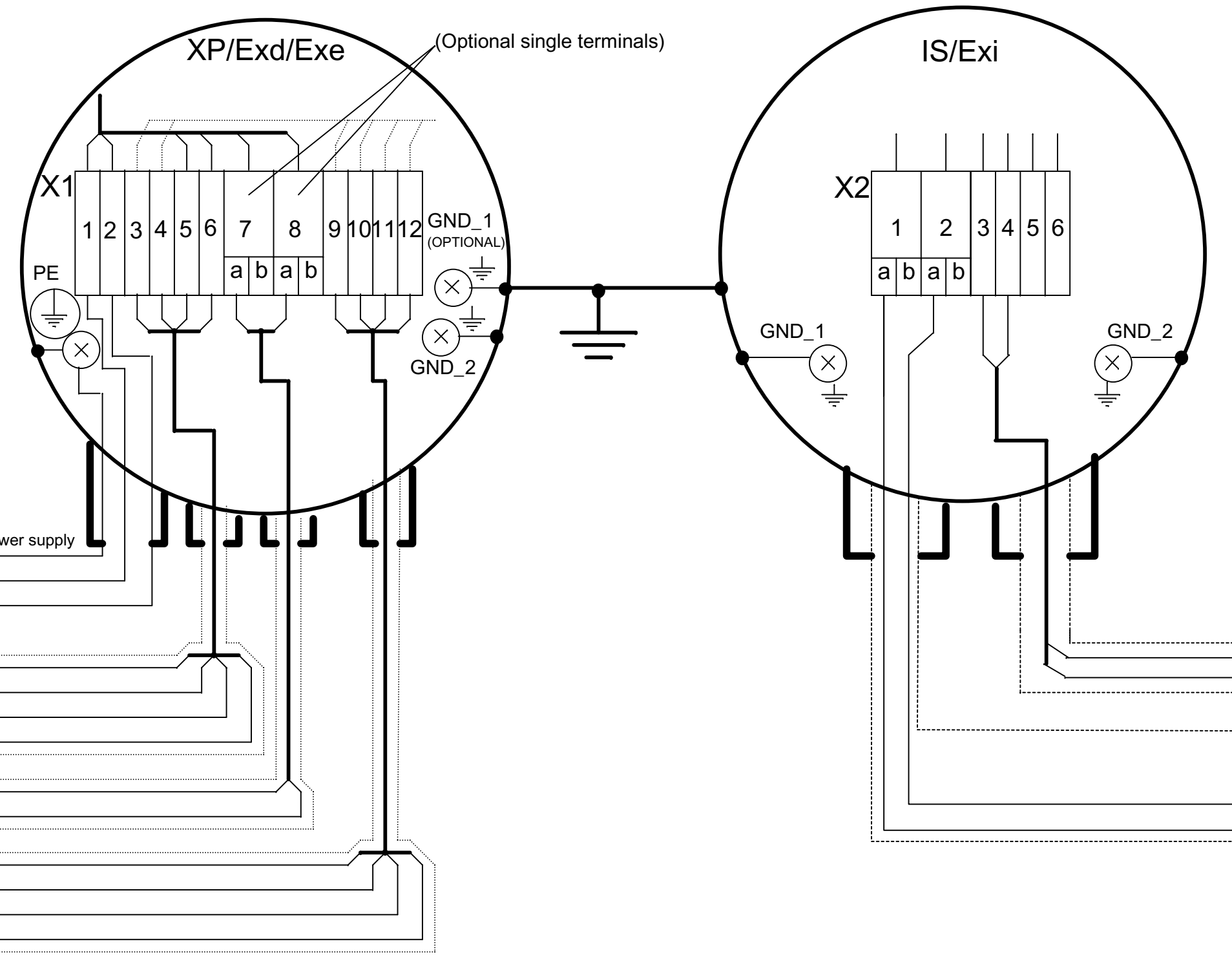
NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
S PWR -	9	Secondary Power - (optional)
S PWR +	10	Secondary Power + (optional)
S BUS B	11	Secondary comm. Bus (optional)
S BUS A	12	Secondary comm. Bus (optional)

Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
IS I/O +	3	IS I/O + HART/4-20 mA
IS I/O -	4	IS I/O - HART/4-20 mA
Alarm -	5	Optional SIL alarm -
Alarm +	6	Optional SIL alarm +



POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

Relay output (Option)

Primary Communication Bus

Secondary Communication Bus (Option)

PE

N / -

L / +

K1 A

K1 COM

K2 A

K2 COM

P BUS B

P BUS A

S PWR -

S PWR +

S BUS B

S BUS A

ATEX/IECEX: Zone 0
US/Canada: Division 1 or Zone 0, GAS GROUP A & B or IIC

IECEX: Ex db e [Ia IIC Ga] IIB T4 Gb (-50°C<Ta<+70°C)

ATEX: ⓂII 2(1)G Ex db e [Ia IIC] IIB T4 (-50°C<Ta<+70°C)

US/Canada: XP CL 1, DIV 1, GPS C, D & Associated Apparatus providing IS circuits to CL 1, DIV 1, GPS C & D AEx/Ex db e [Ia IIC] IIB

ENTITY PARAMETERS:
Uo (Voc) = 23.1; Io (Isc) = 95.3 mA; Po (Pout) = 550 mW
Group IIC: Co (Ca) ≤ 0.14 µF Lo (La) ≤ 3.9 mH
Group C, IIB: Co (Ca) ≤ 1.0 µF Lo (La) ≤ 15 mH
Group D, IIA: Co (Ca) ≤ 3.67 µF Lo (La) ≤ 33 mH

IS I/O - HART/4-20mA ACTIVE
IS I/O + ENTITY IS I/O
Note 8, see sheet 1
Note 9

ATEX/IECEX: Zone 1
US/Canada: Division 1 or Zone 1, GAS GROUP C & D or IIB

FB - Tank Bus
FB + ENTITY POWER SUPPLY
Note 1, see sheet 1
Note 9

Shielded cable

Optionally shielded cable

FM Approved Product
No revision to this drawing without prior Factory Mutual Approval.

Installation Notes (cont.):

9. The IS I/O cable and the FB cable shall be treated as separate intrinsically safe circuits.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG.
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	ROSEMOUNT 2410
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:	(HART/4-20mA ACTIVE ENTITY IS I/O OPTION)
					DWG NO. D9240040-901
				ISSUE 4	SHEET 5 / 8
				The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden	

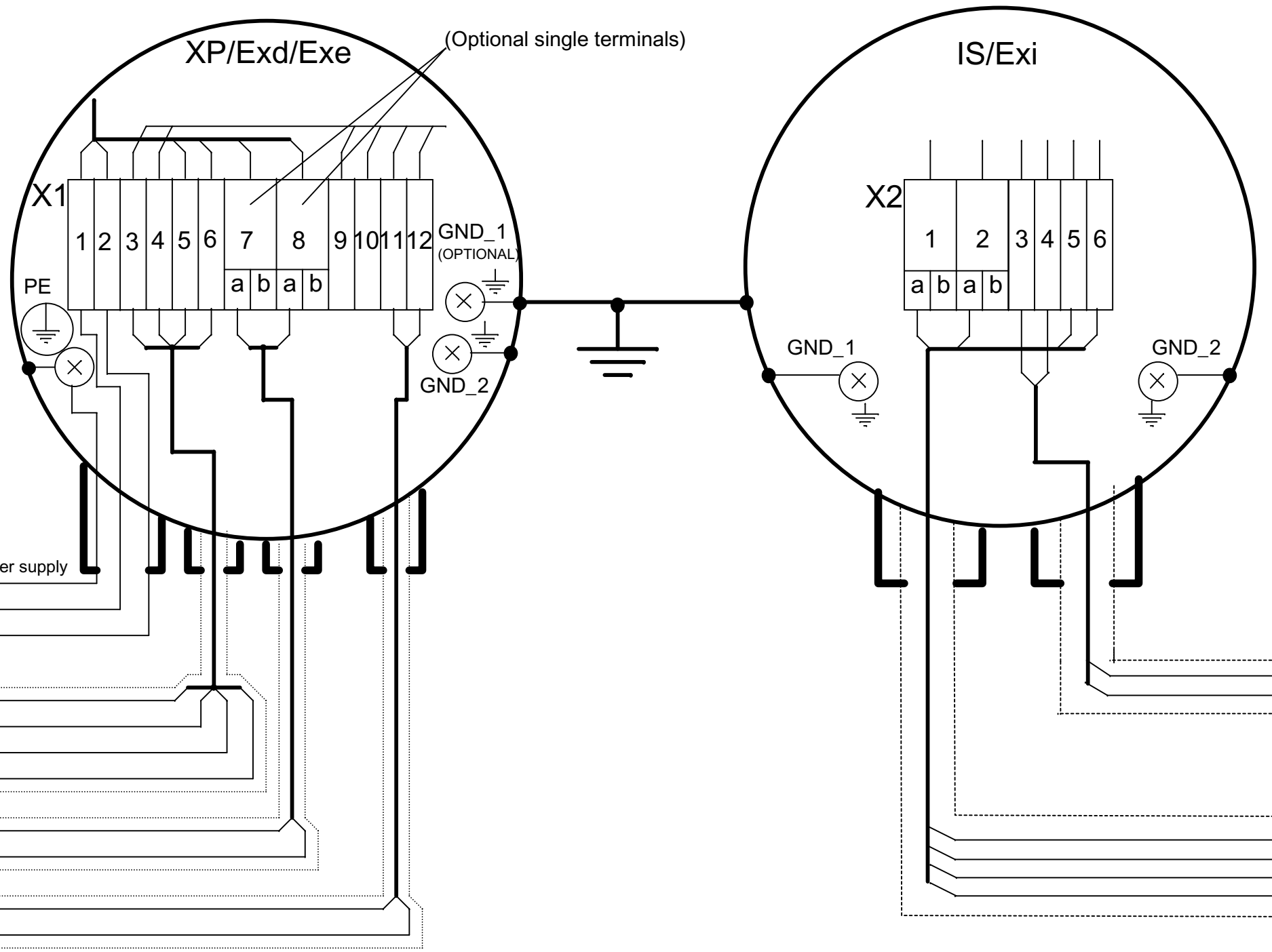
NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D OR IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
	9	Not used
	10	Not used
ALARM B	11	SIL relay common
ALARM A	12	SIL relay output NO

Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
IS I/O +	3	IS I/O + HART/4-20 mA
IS I/O -	4	IS I/O - HART/4-20 mA
Alarm -	5	Optional SIL alarm -
Alarm +	6	Optional SIL alarm +



POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

PE

N / -

L / +

Relay output (Option)

K1 A

K1 COM

K2 A

K2 COM

Primary Communication Bus

P BUS B

P BUS A

SIL Alarm Relay

ALARM B

ALARM A

ATEX/IECEX: Zone 0

US/Canada: Division 1 or Zone 0, GAS GROUP IIC

IECEX: Ex db e [Ia IIC Ga] IIB T4 Gb (-50°C < Ta < +70°C)

ATEX: Ⓜ II 2(1)G Ex db e [Ia IIC] IIB T4 (-50°C < Ta < +70°C)

US/Canada: XP CL 1, DIV 1, GPs C, D & Associated Apparatus providing IS circuits to CL 1, DIV 1, GPs C & D AEx/Ex db e [Ia IIC] IIB

ENTITY PARAMETERS:
 Uo (Voc) = 23.1; Io (Isc) = 95.3 mA; Po (Pout) = 550 mW
 Group IIC: Co (Ca) ≤ 0.14 μF Lo (La) ≤ 3.9 mH
 Group C, IIB: Co (Ca) ≤ 1.0 μF Lo (La) ≤ 15 mH
 Group D, IIA: Co (Ca) ≤ 3.67 μF Lo (La) ≤ 33 mH

IS I/O - HART/4-20mA ACTIVE

IS I/O + ENTITY IS I/O

Note 8, see sheet 1

Note 10

ATEX/IECEX: Zone 1

US/Canada: Division 1 or Zone 1, GAS GROUP IIB

Alarm + SIL Alarm Input

Alarm -

FB - Tank Bus

FB + ENTITY POWER SUPPLY

Note 1, see sheet 1

Note 10

Shielded cable

Optionally shielded cable

FM Approved Product
 No revision to this drawing without prior Factory Mutual Approval.

Installation Notes (cont.):

10. The IS I/O cable and the FB/Alarm cable shall be treated as separate intrinsically safe circuits.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG.		
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	ROSEMOUNT 2410		
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:	(SIL OPTION AND HART/4-20mA ACTIVE ENTITY IS I/O OPTION)		
	1 ST ANGLE			SCALE	DWG NO. D9240040-901		
ROSEMOUNT						ISSUE 4	SHEET 6 / 8
						The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden	

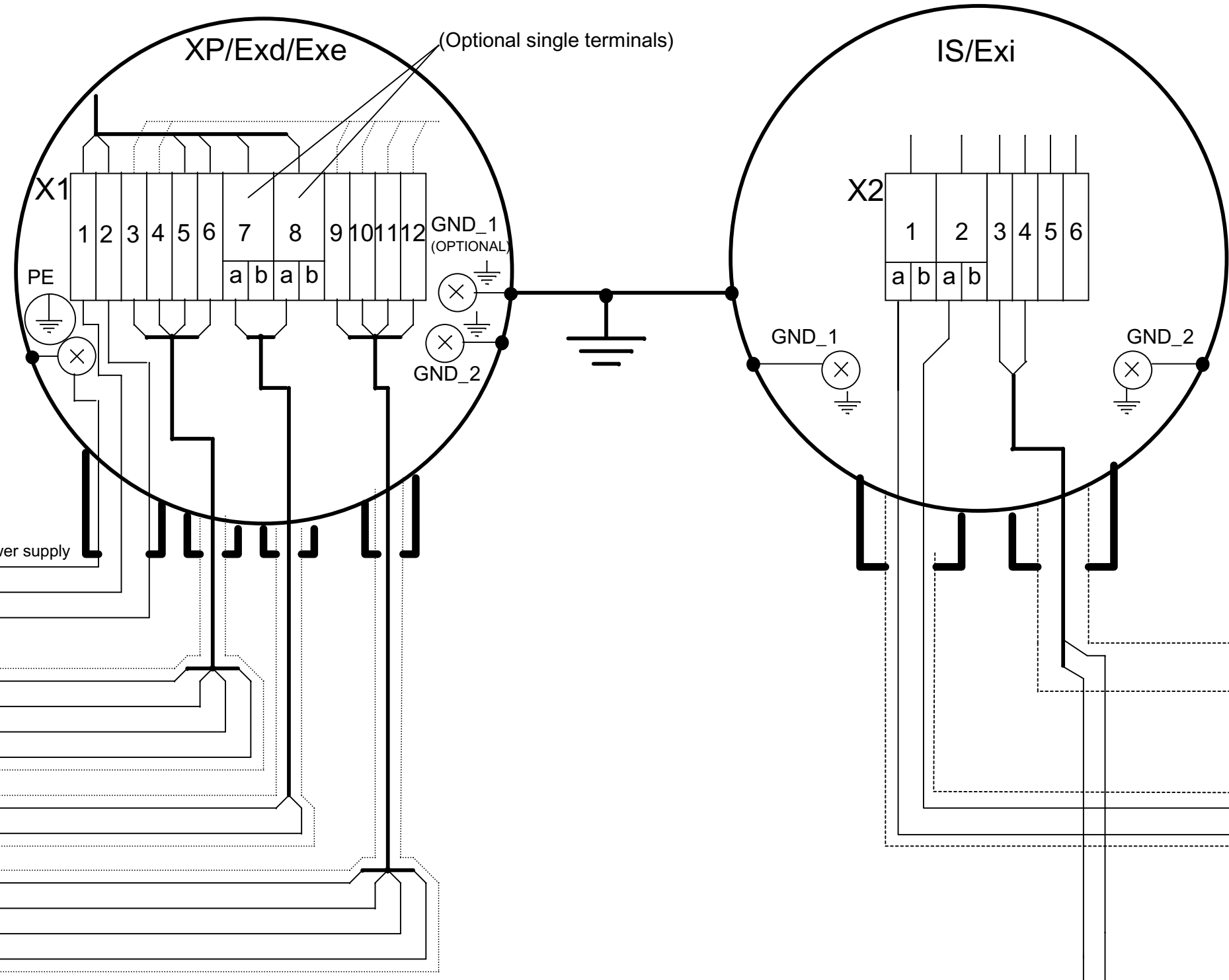
NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
S PWR -	9	Secondary Power - (optional)
S PWR +	10	Secondary Power + (optional)
S BUS B	11	Secondary comm. Bus (optional)
S BUS A	12	Secondary comm. Bus (optional)

Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
IS I/O +	3	IS I/O + HART/4-20 mA
IS I/O -	4	IS I/O - HART/4-20 mA
Alarm -	5	Optional SIL alarm -
Alarm +	6	Optional SIL alarm +



POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

Relay output (Option)

Primary Communication Bus

Secondary Communication Bus (Option)

PE
N / -
L / +

K1 A
K1 COM
K2 A
K2 COM

P BUS B
P BUS A

S PWR -
S PWR +
S BUS B
S BUS A

ATEX/IECEX: Zone 1
US/Canada: Zone 1, GAS GROUP C & D or IIB

IECEX: Ex db e ib IIB T4 Gb (-50°C<Ta<+70°C)
ATEX: Ⓜ II 2G Ex db e ib IIB T4 (-50°C<Ta<+70°C)
US/Canada: AEx/Ex db e ib IIB

ENTITY PARAMETERS:
U_i (V_{max}) = 30.0 V; I_i (I_{max}) = 300 mA;
C_i = 0 µF; L_i = 0 mH

IS I/O - HART/4-20mA PASSIVE
IS I/O + ENTITY IS I/O
Note 8, see sheet 1
Note 9, see sheet 5

ATEX/IECEX: Zone 1
US/Canada: Division 1 or Zone 1, GAS GROUP C & D or IIB

FB - Tank Bus
FB + ENTITY POWER SUPPLY
Note 1, see sheet 1
Note 9, see sheet 5

Associated Apparatus (Note 2, 5, 6, and 8, See sheet 1)

Shielded cable
Optionally shielded cable

FM Approved Product
No revision to this drawing without prior Factory Mutual Approval.

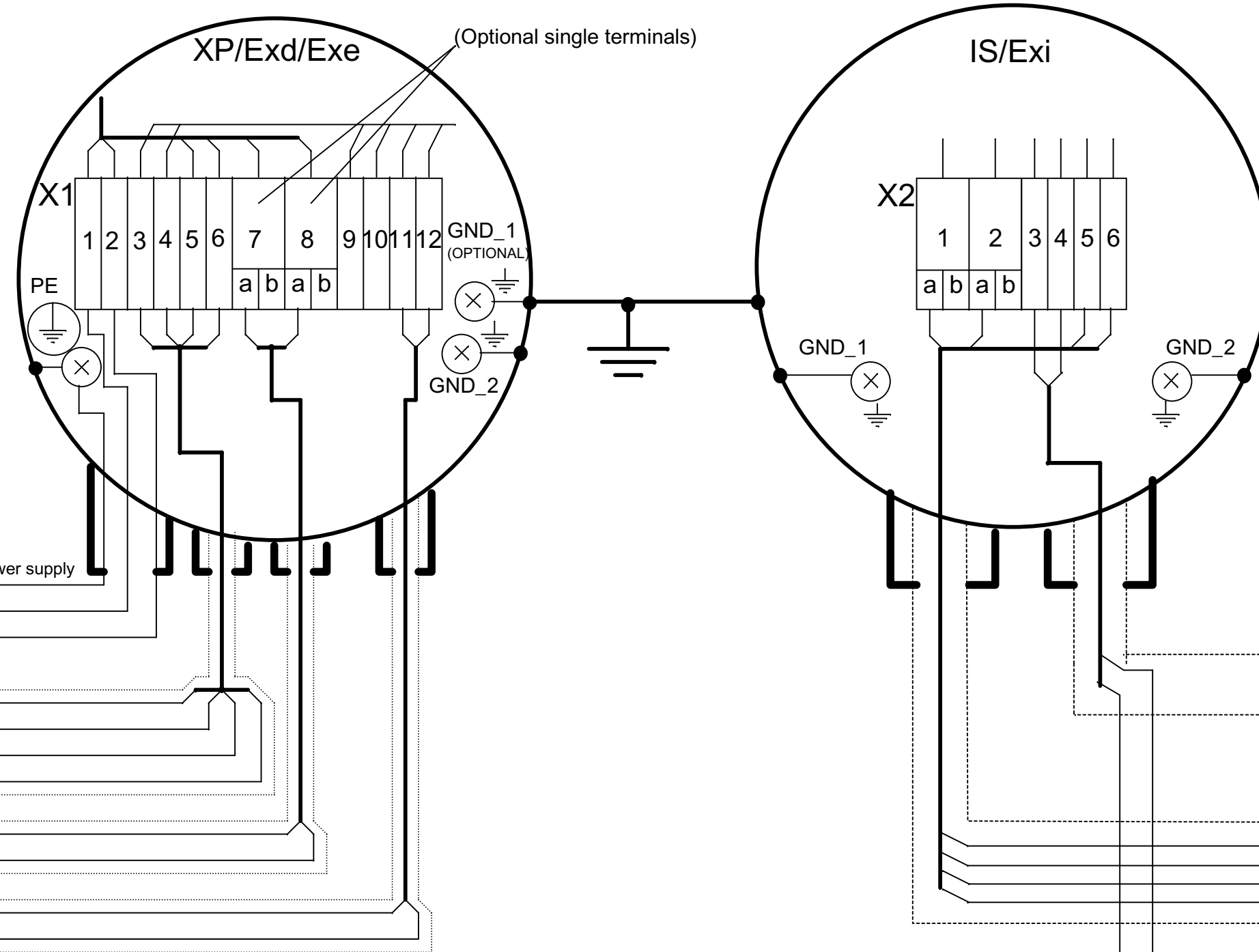
D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG.
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	ROSEMOUNT 2410 (HART/4-20mA PASSIVE ENTITY IS I/O OPTION)
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:	DWG NO. D9240040-901
	1 ST ANGLE		SCALE	The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden	

NON-HAZARDOUS AREA

NON-HAZARDOUS OR ZONE 1 / DIVISION 1, GAS GROUP C & D / IIB HAZARDOUS AREA

HAZARDOUS AREA

Signal	X1 Terminal	Data
N / -	1	Power, Neutral / DC -
L / +	2	Power, Line / DC +
K1 A	3	Relay 1 output (optional)
K1 COM	4	Relay 1 common
K2 A	5	Relay 2 output (optional)
K2 COM	6	Relay 2 common
P BUS B	7a	Primary comm. Bus
P BUS B	7b	Primary comm. Bus
P BUS A	8a	Primary comm. Bus
P BUS A	8b	Primary comm. Bus
	9	Not used
	10	Not used
ALARM B	11	SIL relay common
ALARM A	12	SIL relay output NO



Signal	X2 Terminal	Data
FB +	1a	TankBus +
FB +	1b	TankBus +
FB -	2a	TankBus -
FB -	2b	TankBus -
IS I/O +	3	IS I/O + HART/4-20 mA
IS I/O -	4	IS I/O - HART/4-20 mA
Alarm -	5	Optional SIL alarm -
Alarm +	6	Optional SIL alarm +

POWER SUPPLY (24/48 VDC, 48, 65 and 100-240 VAC, 50/60Hz)

Relay output (Option)

Primary Communication Bus

SIL Alarm Relay

ATEX/IECEX: Zone 1
 US/Canada: Zone 1, GAS GROUP C & D or IIB
 IECEX: Ex db e ib IIB T4 Gb (-50°C<Ta<+70°C)
 ATEX: II 2G Ex db e ib IIB T4 (-50°C<Ta<+70°C)
 US/Canada AEx/Ex db e ib IIB

ENTITY PARAMETERS:
 Ui (Vmax) = 30.0 V; Ii (Imax) = 300 mA;
 Ci = 0 µF; Li = 0 mH

IS I/O - HART/4-20mA PASSIVE
 IS I/O + ENTITY IS I/O
 Note 8, see sheet 1
 Note 10, see sheet 6

ATEX/IECEX: Zone 1
 US/Canada: Division 1 or Zone 1 | GAS GROUP C & D or IIB

Alarm + SIL Alarm Input
 Alarm -
 FB - Tank Bus
 FB + ENTITY POWER SUPPLY
 Note 1, see sheet 1
 Note 10, see sheet 6

Associated Apparatus (Note 2, 5, 6 and 8, See sheet 1)

FM Approved Product
 No revision to this drawing without prior Factory Mutual Approval.

D9240040-901	ISSUED BY EE-VN	WEEK 0844	PRODUCT CODE 2410		TITLE SYSTEM CONTROL DWG. ROSEMOUNT 2410
	APPROVED BY EAp	WEEK 1029	DOC. TYPE 6	FILE OrCAD	(SIL OPTION AND HART/4-20mA PASSIVE ENTITY IS I/O OPTION)
	ALL DIMENSIONS ARE IN MILLIMETRES. TOLERANCES, UNLESS OTHERWISE STATED:			FINISH, UNLESS OTHERWISE STATED:	
	1 ST ANGLE			SCALE	
ROSEMOUNT				DWG NO. D9240040-901	
				ISSUE SHEET 4 8 / 8	
The copyright/ownership of this document is and will remain ours. The document must not be used without our authorization or brought to the knowledge of a third party. Contravention will be prosecuted. Rosemount Tank Radar AB, Sweden					