



DO NOT SCALE DRAWING		
TOLERANCES (UNLESS NOTED)	DRAWN	H. ELSAYED 4/06
DECIMALS = ±.1 / 2.54	CHECKED	C. MATHEWS 4/06
.X = ±.01 / 0.25	ENGINEER	G. ELIAS 4/06
.XX = ±.005 / 0.125	SCALE	N/A
.XXX = ±.003 / 0.080		
HOLES = ±.003 / 0.080		
ANGLES = ±1/2°		

CATEGORY	SPEC. CONTROL
TITLE	ROUTE MASTER: RM100 & RMA100 SERIES cFMus INTRINSICALLY SAFE FIELDBUS SYSTEM

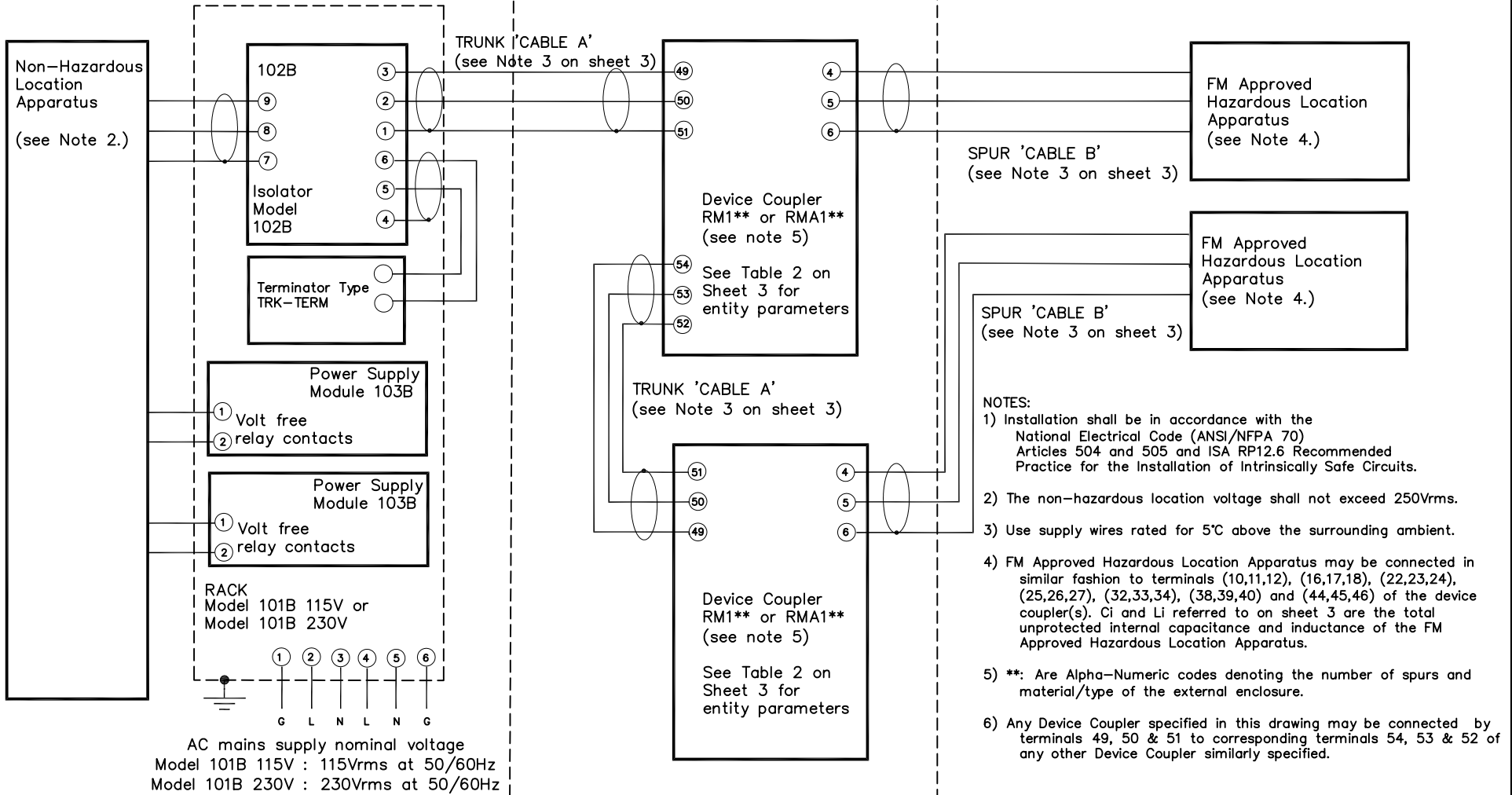
DRAWING NUMBER	HCGFB-902 SHEET 1 OF 3			REVISION	B
REVISED BY	ECO 14527	DATE	6/06	BY	GE
				APPROVAL	CP
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NON-HAZARDOUS LOCATION

HAZARDOUS 'CLASSIFIED' LOCATIONS

CLASS I DIVISION 1 GROUPS C & D

CLASS I DIVISION 1 GROUPS A, B, C, D





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

DRAWN SEE SHEET 1
CHECKED SEE SHEET 1
ENGINEER SEE SHEET 1
SCALE N/A

CATEGORY

SPEC. CONTROL

TITLE

ROUTE MASTER:
RM100 & RMA100 SERIES
cFMus INTRINSICALLY
SAFE FIELD BUS SYSTEM

DRAWING NUMBER

HCGFB-902 SHEET 2 OF 3

REVISION

B

REVISED BY

SEE SHEET 1

DATE

BY

APPROVAL

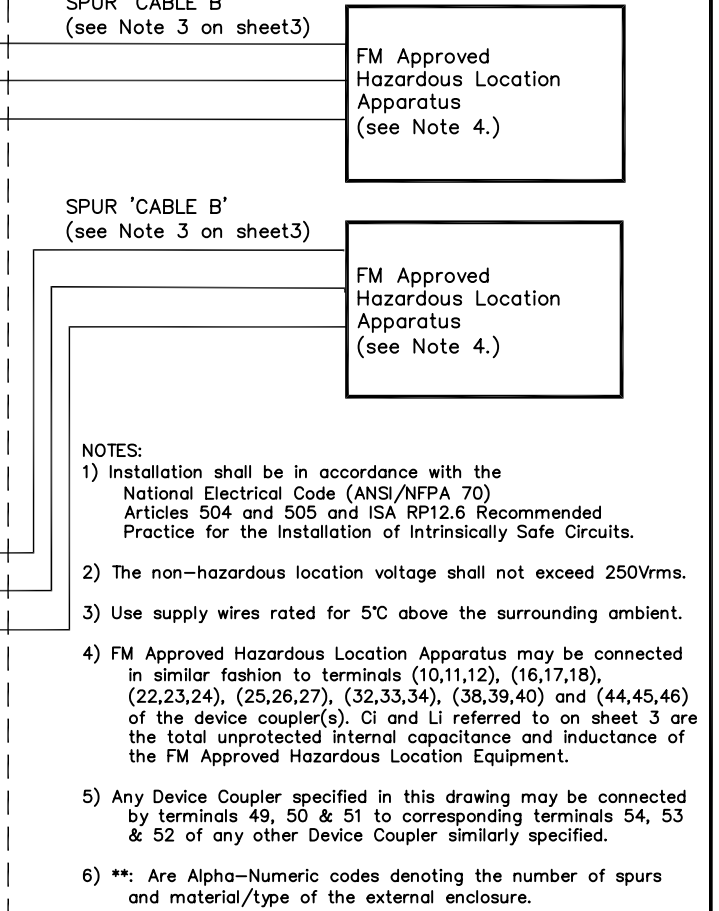
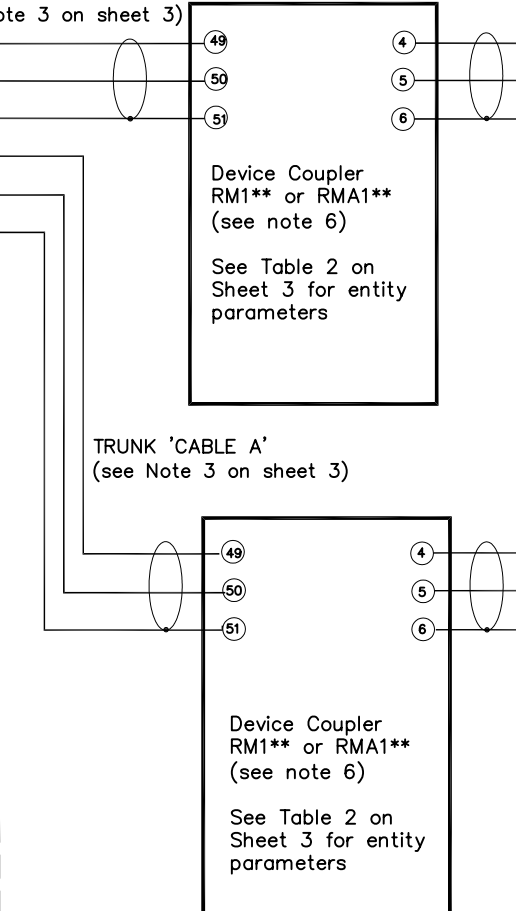
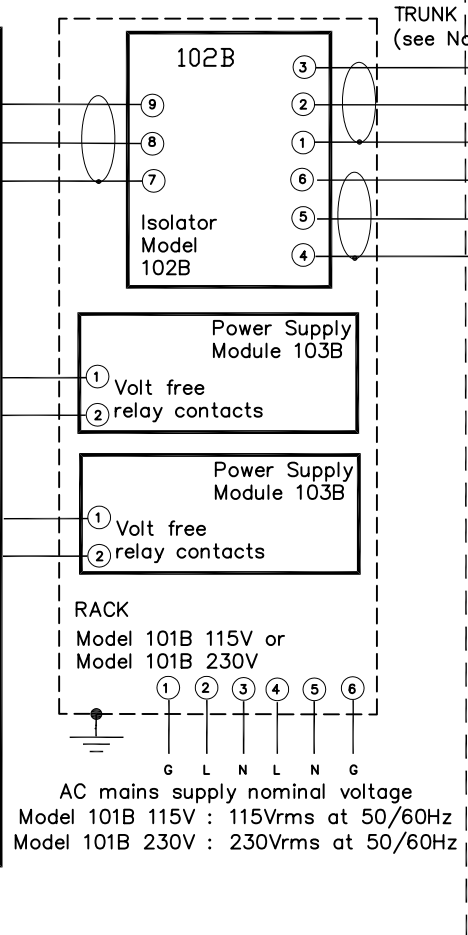
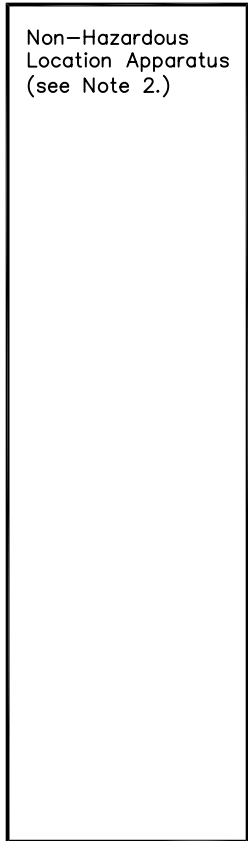
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DRAWN SEE SHEET 1
 CHECKED SEE SHEET 1
 ENGINEER SEE SHEET 1
 SCALE

CATEGORY **SPEC. CONTROL**

TITLE **ROUTE MASTER:
 RM100 & RMA100 SERIES
 cFMus INTRINSICALLY
 SAFE FIELDBUS SYSTEM**

DRAWING NUMBER **HCGFB-902 SHEET 3 OF 3**

REVISION **B**

REVISED BY **SEE SHEET 1**

DATE BY APPROVAL

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Entity Parameters

Table 1

LINEAR POWER SUPPLY MODULE 103B CN3 CONNECTIONS 1 AND 2	
PARAMETER	RATING
Um	250 V rms

Table 2

DEVICE COUPLER RM114, RM118, RM118DIN, RM124 AND RM128 OUTPUT PARAMETERS: TERMINALS 4, 5 AND 6 AND ALL OTHERS MARKED 'DEVICE'

PARAMETER	VALUE
Voc	18.9 V
Isc	249.3 mA
Pmax	1.15 W
Ca	See Table 5
La	See Table 3 or 4

DEVICE COUPLER RMA100 OUTPUT PARAMETERS

PARAMETER	VALUE
Voc	18.9 V
Isc	249.81 mA
Pmax	1.18 W
Ca	See Table 5
La	See Table 3 or 4

Table 3

Total maximum allowable Inductance 'La'		
Cable A Group	Cable B Group	La (mH)
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP A, B, C, D	0.15
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP C, D	0.206
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP D	0.206
CL I DIV 1 GROUP D	CL I DIV 1 GROUP A, B, C, D	0.15
CL I DIV 1 GROUP D	CL I DIV 1 GROUP C, D	0.412
CL I DIV 1 GROUP D	CL I DIV 1 GROUP D	0.412

Table 4

Maximum Inductance to Resistance Ratio 'Lo/Ro'		
Cable A Group	Cable B Group	Lo/Ro (μH/ohms)
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP A, B, C, D	30
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP C, D	36
CL I DIV 1 GROUP C, D	CL I DIV 1 GROUP D	36
CL I DIV 1 GROUP D	CL I DIV 1 GROUP A, B, C, D	30
CL I DIV 1 GROUP D	CL I DIV 1 GROUP C, D	72
CL I DIV 1 GROUP D	CL I DIV 1 GROUP D	72

NOTES:

- For interconnection of apparatus using the Entity Concept, use the appropriate parameters to ensure the following:
 $Voc \leq Vmax$ $Isc \leq Imax$ $Pmax \leq Pi$
 $C_i + C_{CableB} \leq C_a$ & either $[L_i + L_{Cable(A+B)} \leq L_a]$ or $[L/R_{Cable} \leq L_o/R_{oCable}]$
- Note 1 applies to each connected device via terminals 4, 5 & 6, 10, 11 & 12, 16, 17 & 18, 22, 23 & 24, 25, 26 & 27, 32, 33 & 34, 38, 39 & 40, 44, 45 & 46
- The cable from Isolator to Device Coupler is "Cable A". The Cable from Device Coupler to Device is "Cable B". See Sheets 1 and 2 for cables A and B.
- The maximum capacitance of cable A shall not exceed the value in Table 5. The maximum capacitance of Cable B plus the Ci of the FM Approved Apparatus shall not exceed the value Ca in Table 5. The sum of the inductances of cable A and cable B plus the Li of FM Approved apparatus shall not exceed the La value in Table 3. The maximum inductance to resistance ratio Lo/Ro in Table 4 applies to each cable.

Table 5

Maximum Allowable Capacitance		
Group	Capacitance of Cable A	Ca (see sheets 1 & 2 note 4)
CL I DIV 1 GROUP A, B, C, D	N/A	262 nF
CL I DIV 1 GROUP C, D	1.6 μF	1.6 μF
CL I DIV 1 GROUP D	6.39 μF	6.39 μF

WARNING:

Substitution of components is not allowed as it may impair the system's Intrinsically Safe and/or Non-Incendive circuit.

To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing. Also, read, understand and adhere to the manufacturer's live maintenance procedures.

Certified Product

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