

TRA-RCS LEVEL CROSSING TRIAL SITE CIRCUIT DESIGN - DESIGN SUMMARY SHEET

The logo for RCS Australia features the letters 'RCS' in a large, bold, black sans-serif font. To the left of the 'R', there are three thick, dark grey curved lines that sweep from the bottom left towards the top center. Below the main text, the word 'AUSTRALIA' is written in a smaller, bold, red sans-serif font.

FRAUSCHER
SENSOR TECHNOLOGY

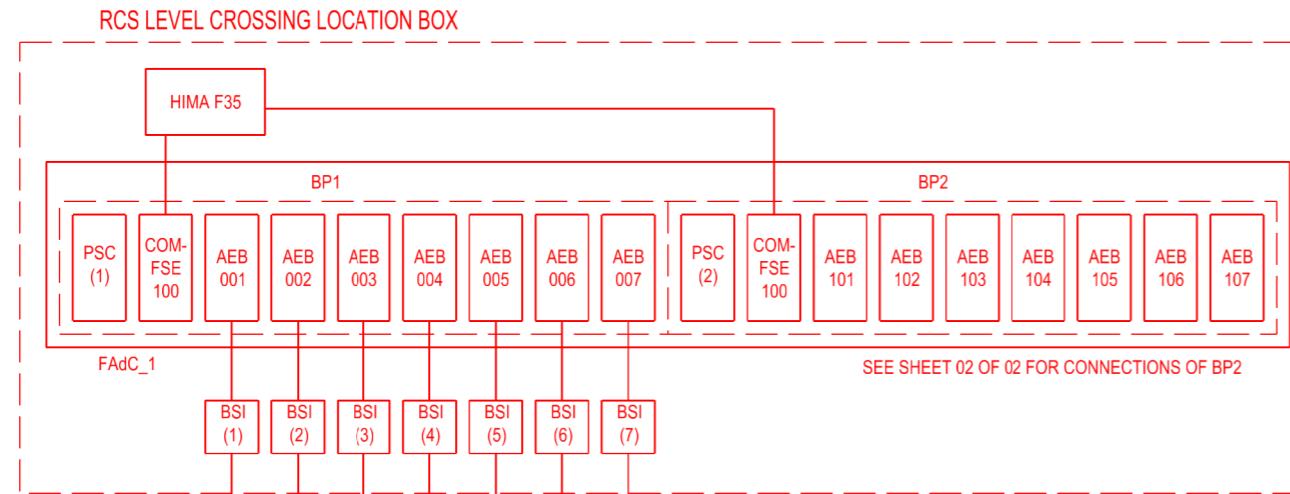
COMMERCIAL IN CONFIDENCE COPYRIGHT RAIL CONTROL SYSTEMS AUSTRALIA 2018

(DATE)

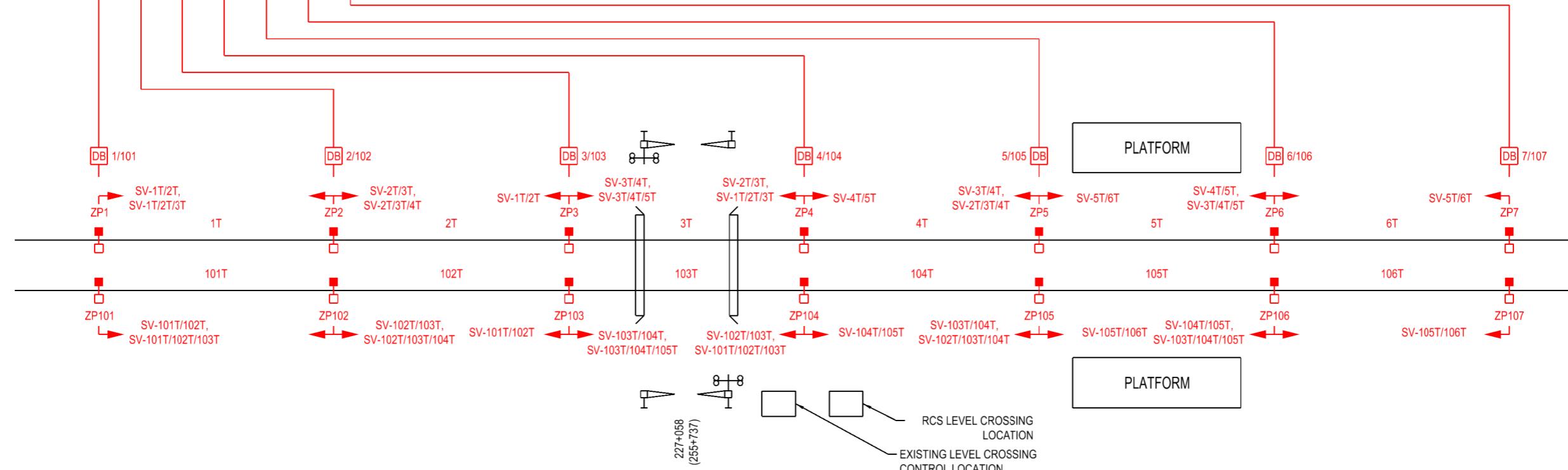
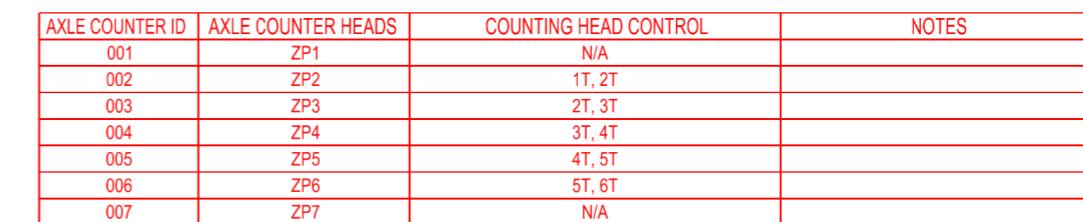
(SIGNATURE)

(BLOCK LETTERS)

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TRACK SECTION/ SUPERVISOR SECTION	HEAD IDs (& ERROR CODES)	AUTOMATICALLY RESET BY	EVALUATED ON AEB/FMA	NOTES
1T	001 (E1), 002 (E2)	SV-1T/2T OR SV-1T/2T/3T CLEAR	001/FMA1	
2T	002 (E1), 003 (E2)	SV-1T/2T OR SV-2T/3T CLEAR	002/FMA1	
3T	003 (E1), 004 (E2)	SV-2T/3T OR SV-3T/4T CLEAR	003/FMA1	
4T	004 (E1), 005 (E2)	SV-3T/4T OR SV-4T/5T CLEAR	004/FMA1	
5T	005 (E1), 006 (E2)	SV-4T/5T OR SV-5T/6T CLEAR	005/FMA1	
6T	006 (E1), 007 (E2)	SV-5T/6T CLEAR	007/FMA1	
SV-1T/2T	001 (E1), 003 (E2)	1T & 2T CLEAR	003/FMA2	
SV-2T/3T	002 (E1), 004 (E2)	2T & 3T CLEAR	002/FMA2	
SV-3T/4T	003 (E1), 005 (E2)	3T & 4T CLEAR	004/FMA2	
SV-4T/5T	004 (E1), 006 (E2)	4T & 5T CLEAR	006/FMA2	
SV-1T/2T/3T	001 (E1), 004 (E2)	SV-1T/2T & 3T CLEAR	001/FMA2	
SV-2T/3T/4T	002 (E1), 005 (E2)	SV-2T/3T & 4T CLEAR	005/FMA2	
SV-3T/4T/5T	003 (E1), 006 (E2)	3T & SV-4T/5T CLEAR	006/FMA1	
SV-5T/6T	005 (E1), 007 (E2)	5T & 6T CLEAR	007/FMA2	



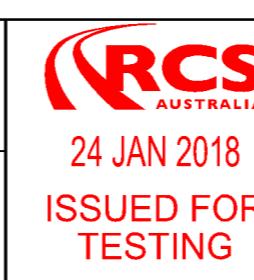
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25/01/2018

Site Log								
Project Details		Log Details			Comments			
Date	Description	Date	Time	Type	Design	Check	Review	Approve
25/01/2018								
	B	24/01/18	SITE COPY		D.N.H.	N.R.P.		N.R.P.
	A	16/01/18	Updated to TRA Cable Installation		D.N.H	N.R.P.		
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved



24 JAN 2018
ISSUED FOR
TESTING

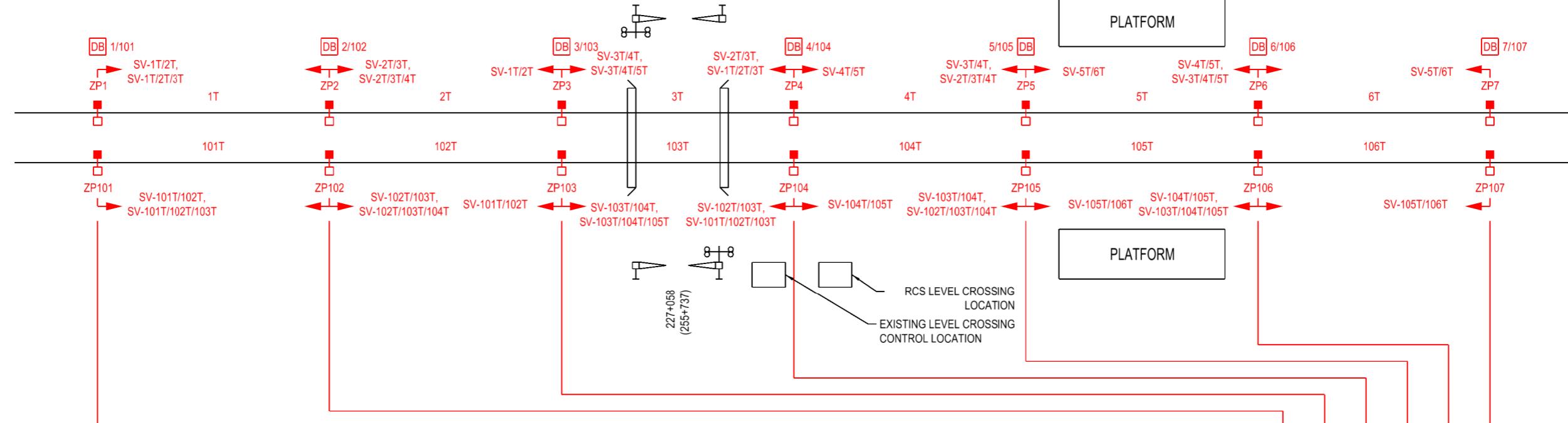
SIGNALS TAIWAN RCS LEVEL CROSSING TRIAL SITE AXLE COUNTER SYSTEM OVERVIEW			RED COPY	Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
			File Name TRA_G0002.DGN	Checked By N. POPPLEWELL	Ind. Review
			Sheet No. 01 of 02	Approved	Approval Date
Up Location East. North. ID#	Down Location East. North. ID#	Datum	In Serv.	Drawing Number TRA_G0002	Revision B
			Scale N.T.S.	Sheet Size A3	

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:



RCS LEVEL CROSSING LOCATION BOX

TRACK SECTION/ SUPERVISOR SECTION	HEAD IDs (& ERROR CODES)	AUTOMATICALLY RESET BY	EVALUATED ON AEB/FMA	NOTES
101T	101 (E1), 102 (E2)	SV-101T/102T OR SV-101T/102T/103T CLEAR	101/FMA1	
102T	102 (E1), 103 (E2)	SV-101T/102T OR SV-102T/103T CLEAR	102/FMA1	
103T	103 (E1), 104 (E2)	SV-102T/103T OR SV-103T/104T CLEAR	103/FMA1	
104T	104 (E1), 105 (E2)	SV-103T/104T OR SV-104T/105T CLEAR	104/FMA1	
105T	105 (E1), 106 (E2)	SV-104T/105T OR SV-105T/106T CLEAR	105/FMA1	
106T	106 (E1), 107 (E2)	SV-105T/106T CLEAR	107/FMA1	
SV-101T/102T	101 (E1), 103 (E2)	101T & 102T CLEAR	103/FMA2	
SV-102T/103T	102 (E1), 104 (E2)	102T & 103T CLEAR	102/FMA2	
SV-103T/104T	103 (E1), 105 (E2)	103T & 104T CLEAR	104/FMA2	
SV-104T/105T	104 (E1), 106 (E2)	104T & 105T CLEAR	106/FMA2	
SV-101T/102T/103T	101 (E1), 102 (E2)	SV-101T/102T & 103T CLEAR	101/FMA2	
SV-102T/103T/104T	102 (E1), 105 (E2)	SV-102T/103T & 104T CLEAR	105/FMA2	
SV-103T/104T/105T	103 (E1), 106 (E2)	103T & SV-104T/105T CLEAR	106/FMA1	
SV-105T/106T	105 (E1), 107 (E2)	105T & 106T CLEAR	107/FMA2	

AXLE COUNTER ID	AXLE COUNTER HEADS	COUNTING HEAD CONTROL	NOTES
101	ZP101	N/A	
102	ZP102	101T, 102T	
103	ZP103	102T, 103T	
104	ZP104	103T, 104T	
105	ZP105	104T, 105T	
106	ZP106	105T, 106T	
107	ZP107	N/A	

LEGEND:

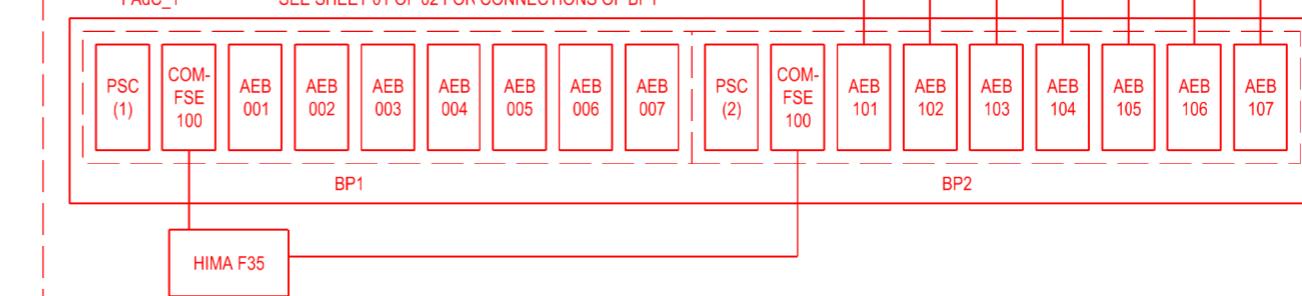
NAME = 201 AXLE COUNTING HEAD MOUNTED ON UP RAIL, SHOWING SYS1 AND SYS 2 POSITIONS

NAME = 102 AXLE COUNTING HEAD MOUNTED ON DOWN RAIL, SHOWING SYS1 AND SYS 2 POSITIONS

DB AXLE COUNTING HEAD DISCONNECTION BOX

TRACKS TRACKS AXLE COUNTER TRACK SECTION DIRECTION INDICATOR

FAdC_1 SEE SHEET 01 OF 02 FOR CONNECTIONS OF BP1

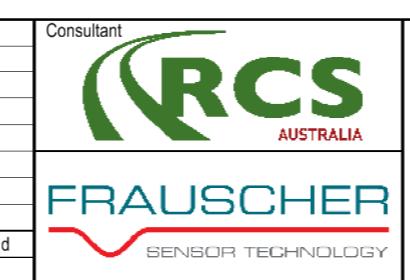


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25/01/2018

B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



SIGNALS
TAIWAN
RCS LEVEL CROSSING TRIAL SITE
AXLE COUNTER
SYSTEM OVERVIEW

Up Location
East.
North.
ID#

RED
COPY

File Name TRA_G0002.DGN
Sheet No. 02 of 02

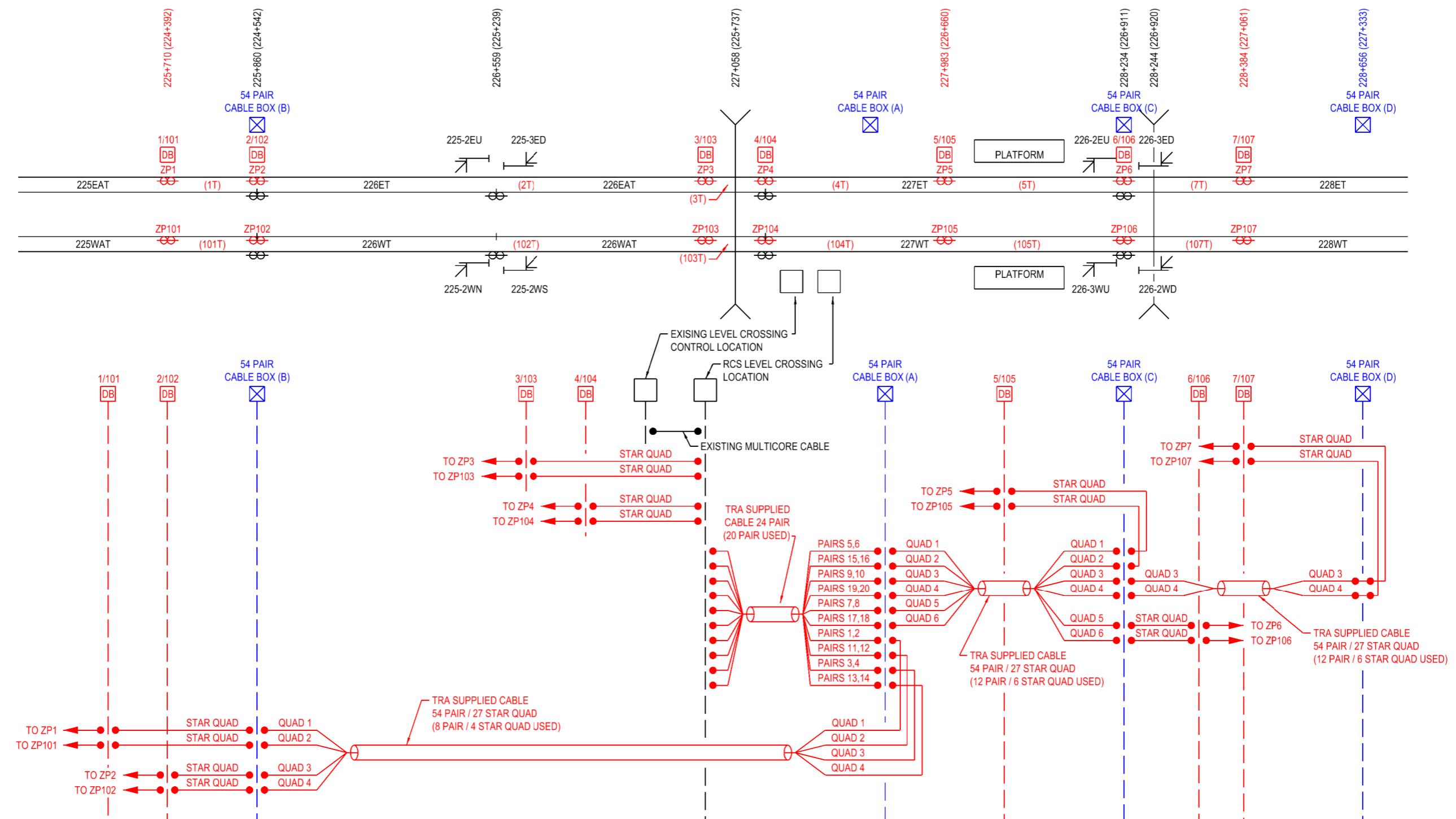
In Serv.
Scale N.T.S.
Drawing Number TRA_G0002
Revision B

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

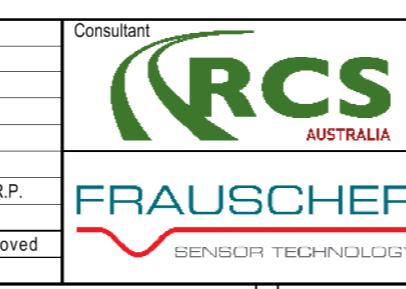


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25/01/2018

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A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.		
Revised By	In Serv	Rev.	Date	Description	Designed	Checked
					Ind. Review	Approved



24 JAN 2018
ISSUED FOR
TESTING

SIGNALS
TAIWAN
RCS LEVEL CROSSING TRIAL SITE
CABLE RUNNING
& SCHEME PLAN

Up Location
East.
North.
ID#

Down Location
East.
North.
ID#

Datum

RED COPY

File Name TRA_G0003.DGN

Sheet No. 01 of 01

In Serv.

Drawing Number TRA_G0003

Revision B

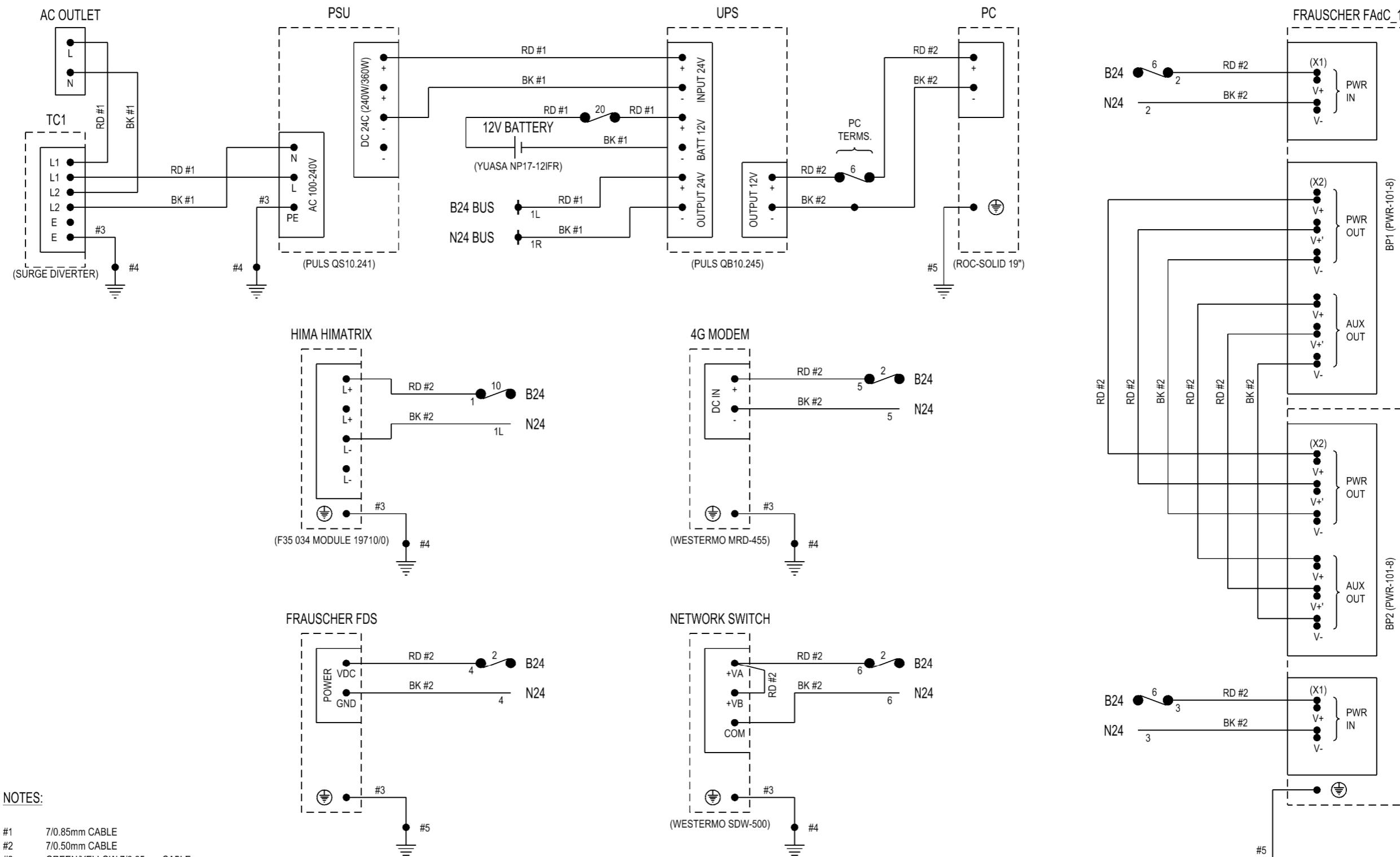
Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date

(Certified By)

(Signature)

(Block Letters)

(Date)

**NOTES:**

- #1 7/0.85mm CABLE
- #2 7/0.50mm CABLE
- #3 GREEN/YELLOW 7/0.85mm CABLE
- #4 EK4 TERMINAL CONNECT TO MAIN EARTH VIA DIN RAIL
- #5 CONNECT TO MAIN EARTH VIA EQUIPMENT CABINET FRAME

FOR EARTHING DETAILS SEE TRA_G0019

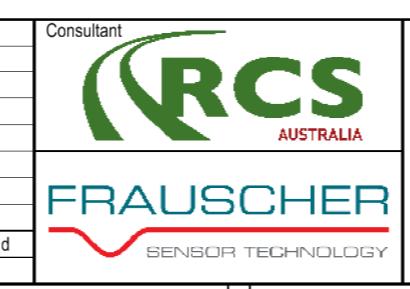
RD - RED
BK - BLACK

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25/01/2018

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A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



24 JAN 2018
ISSUED FOR TESTING

SIGNALS TAIWAN
RCS LEVEL CROSSING TRIAL SITE POWER CONNECTIONS

Up Location
East.
North.
ID#

Down Location
East.
North.
ID#

Datum

ALL CONTENTS NEW

File Name TRA_G0004.DGN

Sheet No. 01 of 01

In Serv.

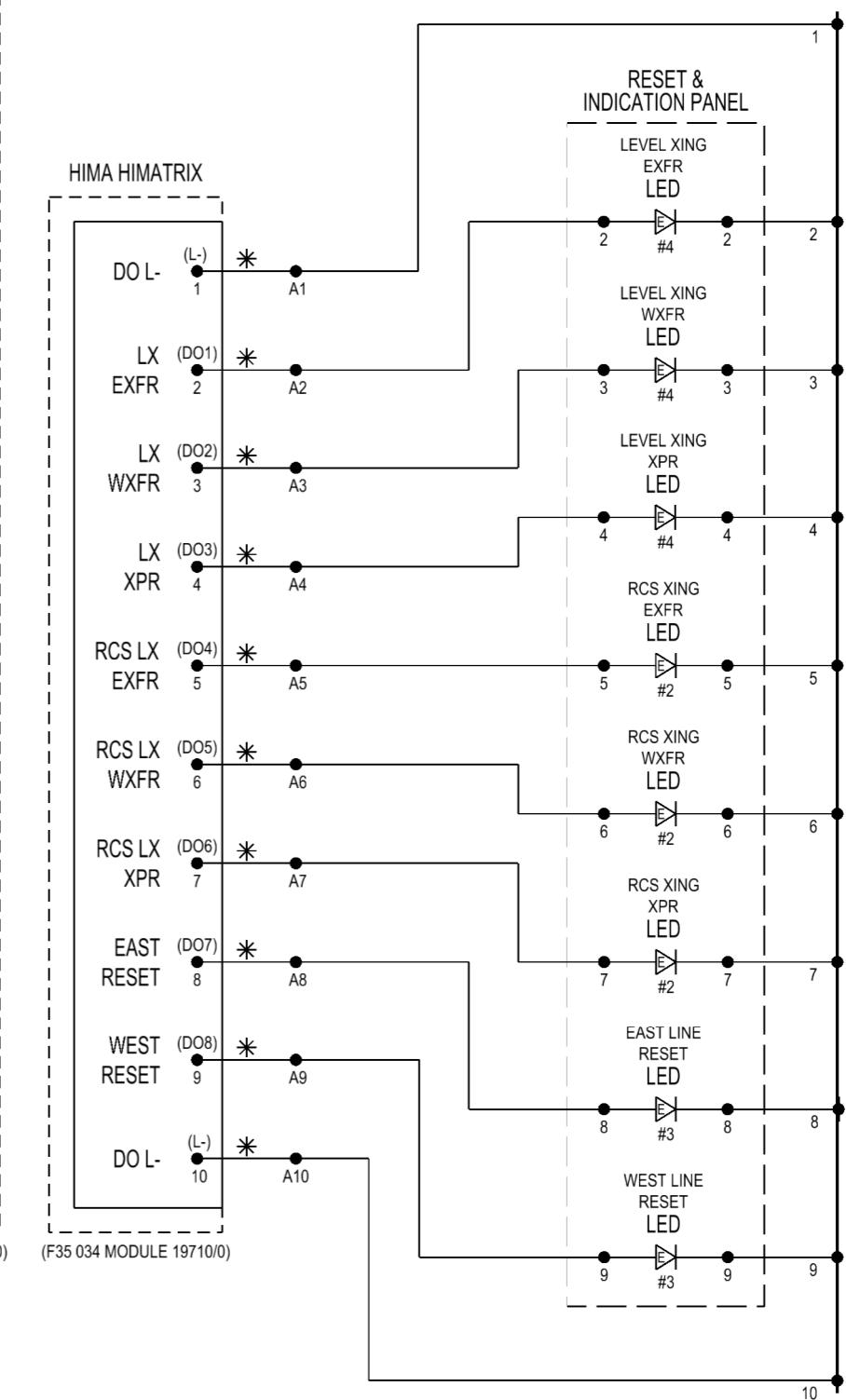
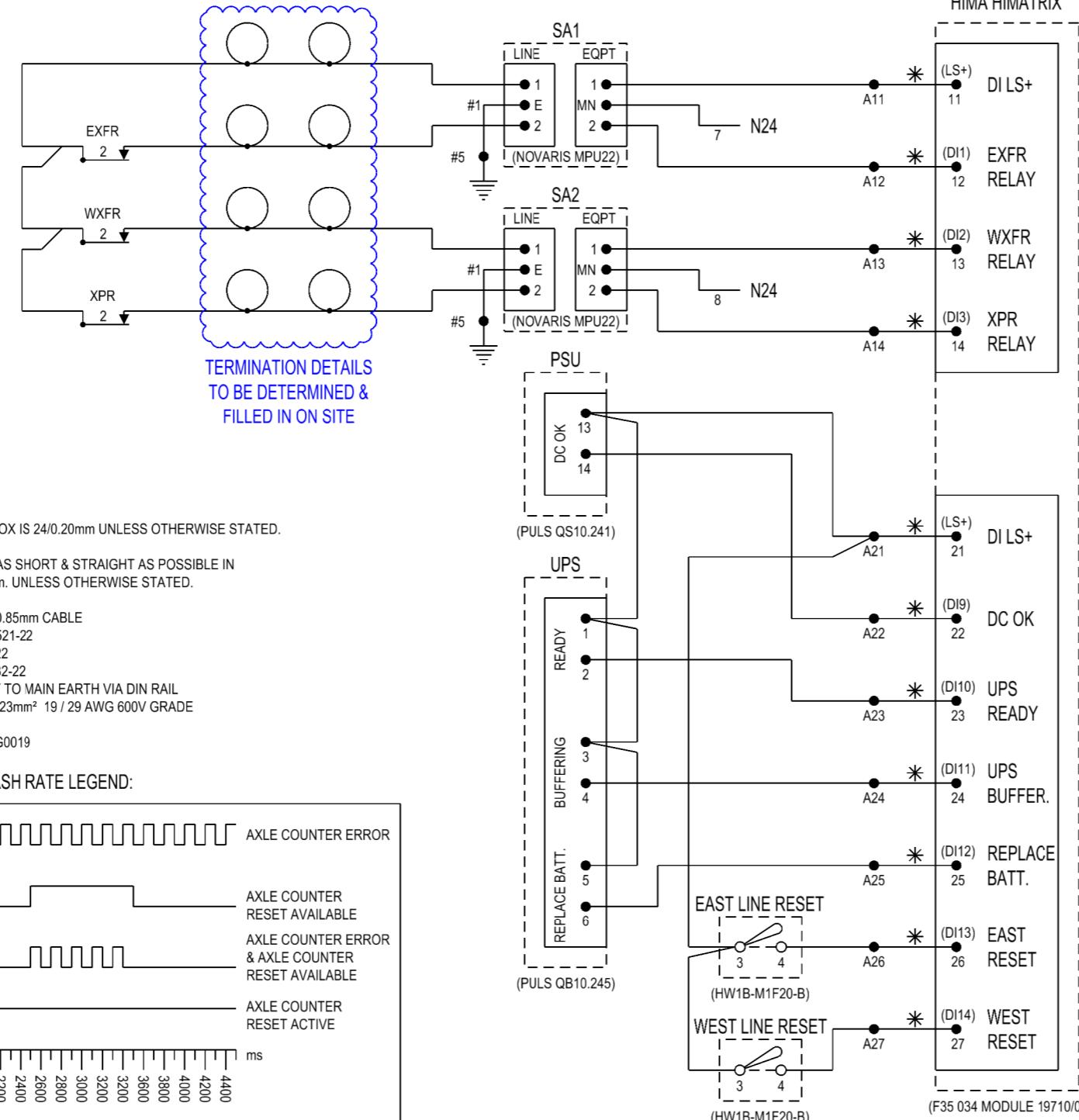
Scale N.T.S.

Sheet Size A3

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Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
Drawing Number TRA_G0004	Revision B

(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____

EXISTING LEVEL CROSSING LOCATION BOX



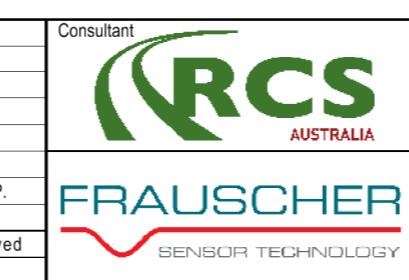
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A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



RCS
AUSTRALIA
24 JAN 2018
ISSUED FOR
TESTING

SIGNALS
TAIWAN
RCS LEVEL CROSSING TRIAL SITE
INTERFACE CIRCUITS

ALL CONTENTS
NEW

File Name TRA_G0005.DGN

Sheet No. 01 of 01

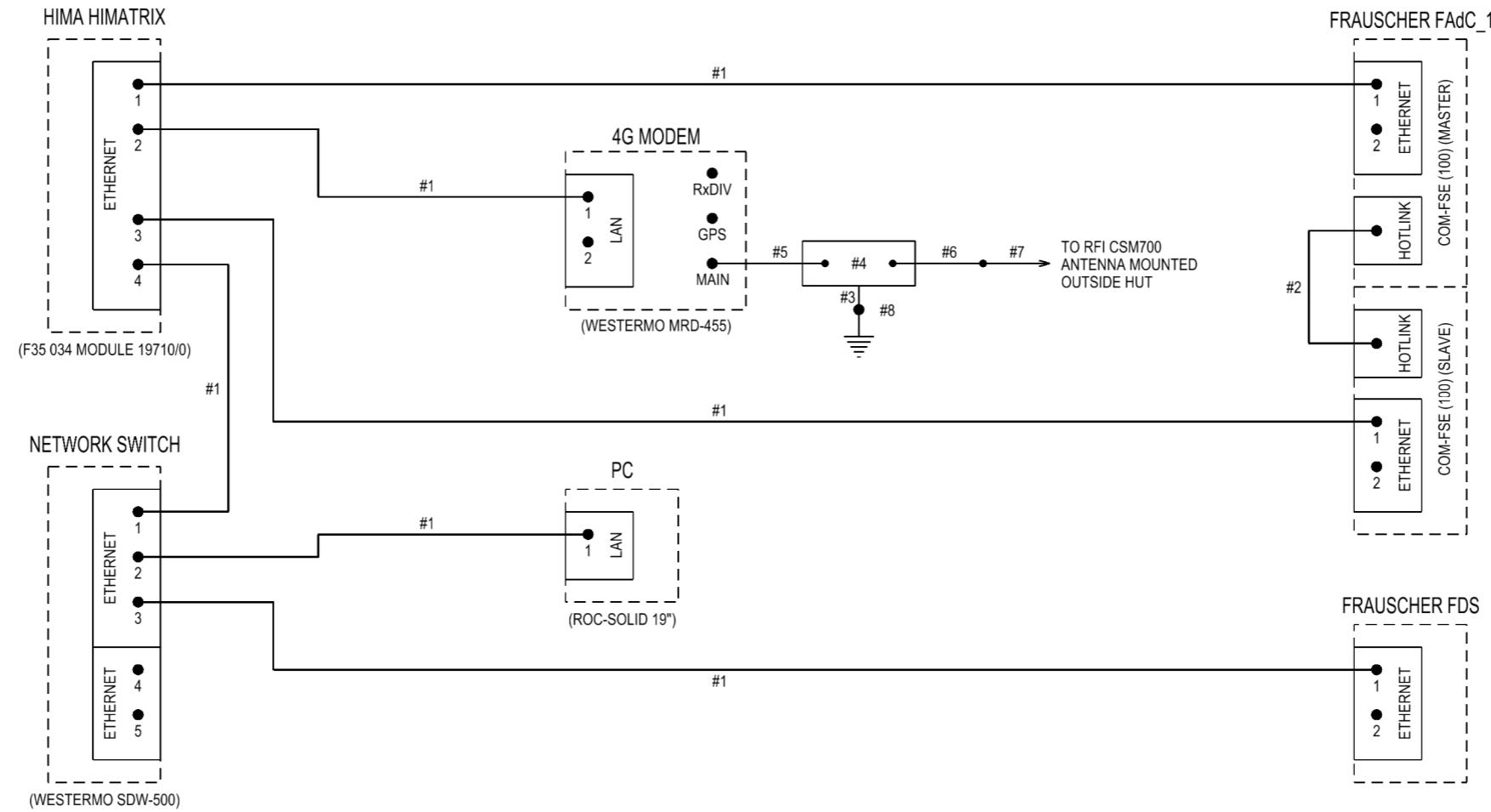
In Serv.

Scale N.T.S.

Sheet Size A3

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Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
Drawing Number TRA_G0005	Revision B

(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____



NOTES:

- #1 SHIELDED CAT-6 PATCH CABLE
- #2 SHIELDED CAT-6 CROSS-OVER CABLE
- #3 GREEN/YELLOW 7/0.85mm
- #4 ANTENNA SURGE ARRESTOR CN-FF-90-2 N-TYPE FEMALE/FEMALE CONNECTOR
- #5 RG-58 CABLE TERMINATED WITH SMA TYPE FEMALE CONNECTOR TO N-TYPE MALE CONNECTOR
- #6 RG-58 TAIL CABLE TERMINATED WITH N-TYPE MALE CONNECTOR TO SMA-TYPE MALE CONNECTOR
- #7 RG-174 ANTENNA TAIL CABLE TERMINATED WITH SMA-TYPE FEMALE CONNECTOR
- #8 EK4 TERMINAL CONNECT TO MAIN EARTH VIA DIN RAIL

FOR EARTHING DETAILS SEE TRA_G0019

4G ROUTER	
PORTS	DESTINATION
1	HIMA ETHERNET PORT 2
2	NOT USED

FRAUSCHER FDS	
PORTS	DESTINATION
1	SWITCH ETHERNET PORT 3
2	NOT USED

HIMA	
PORTS	DESTINATION
1	COM-FSE (MASTER) ETHERNET PORT 1
2	4G MODEM PORT 1
3	COM-FSE (SLAVE) ETHERNET PORT 1
4	SWITCH ETHERNET PORT 1

SWITCH	
PORTS	DESTINATION
1	HIMA ETHERNET PORT 4
2	PC LAN 1
3	FDS ETHERNET PORT 1
4	SPARE
5	SPARE



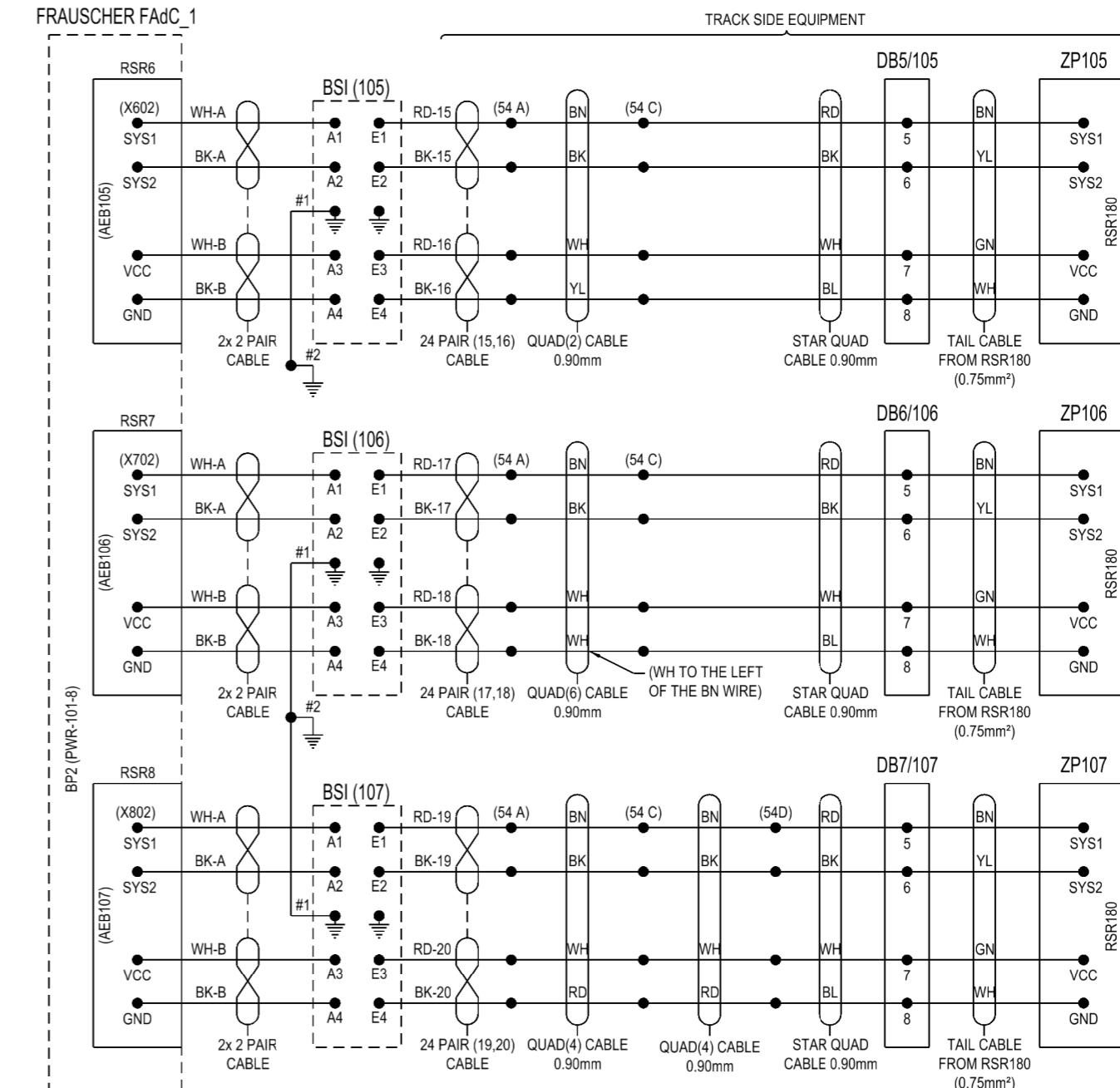
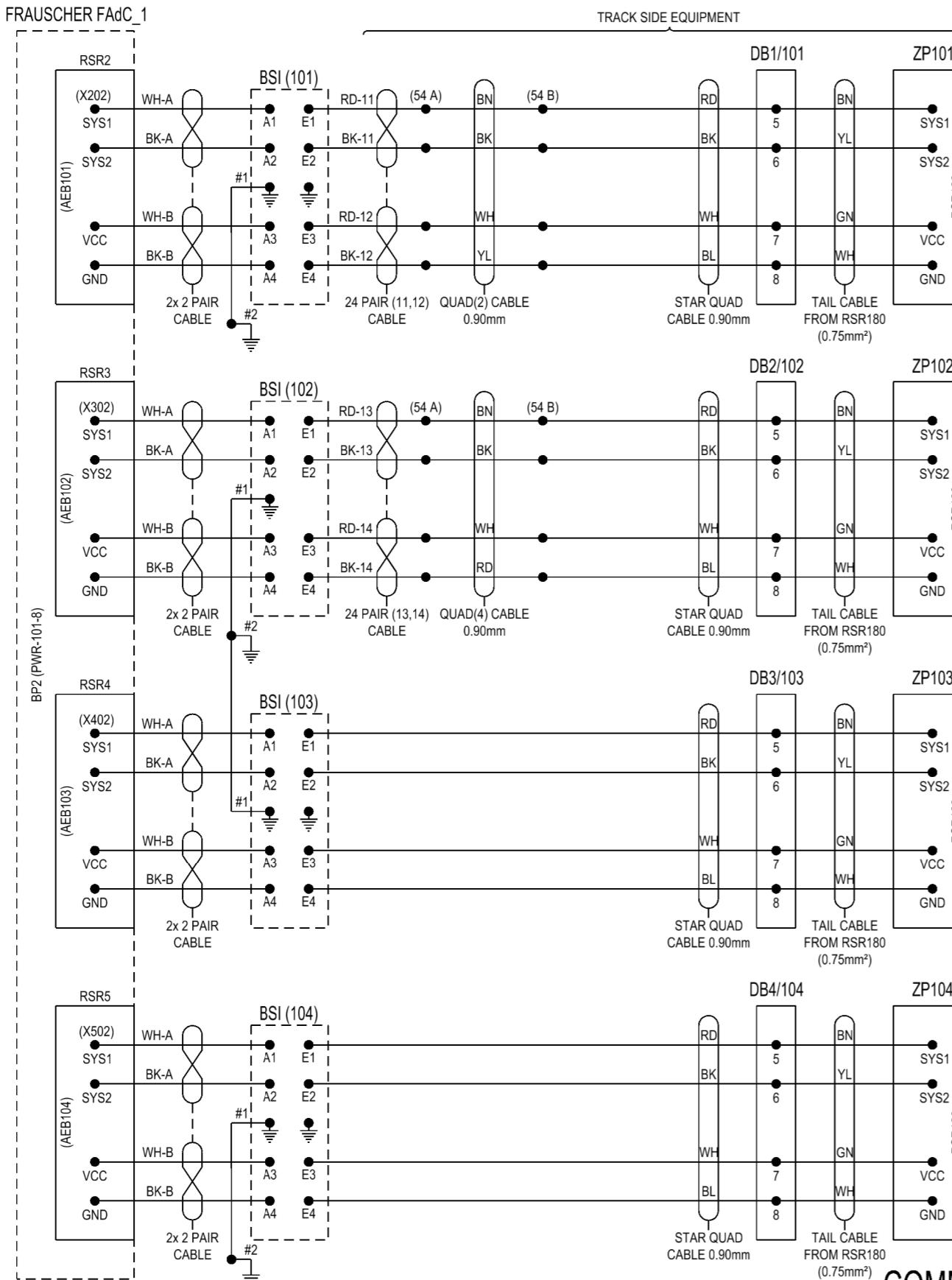
SIGNALS
 TAIWAN
 RCS LEVEL CROSSING TRIAL SITE
 NETWORK CONNECTIONS

ALL CONTENTS
 NEW

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
File Name TRA_G0006.DGN	
Sheet No. 01 of 01	
Drawing Number TRA_G0006	Revision B

B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved

Defined By: _____ (BLOCK LETTERS) _____ (SIGNATURE) _____ (DATE)



COLOR KEY
BK - BLACK
BL - BLUE
BN - BROWN
GN - GREEN

NOTES:
#1 GN/YL 7/0.85mm CABLE TO EK4 TERMINAL TERMINATED ON LINE SIDE
#2 EK4 TERMINAL CONNECT TO MAIN EARTH VIA DIN RAIL

FOR EARTHING DETAILS SEE TRA_G0019
DB - AXLE COUNTING HEAD DISCONNECTION BOX

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The logo for RCS Australia, featuring the letters 'RCS' in a large, bold, red font with a black outline, and the word 'AUSTRALIA' in a smaller, red, sans-serif font below it.

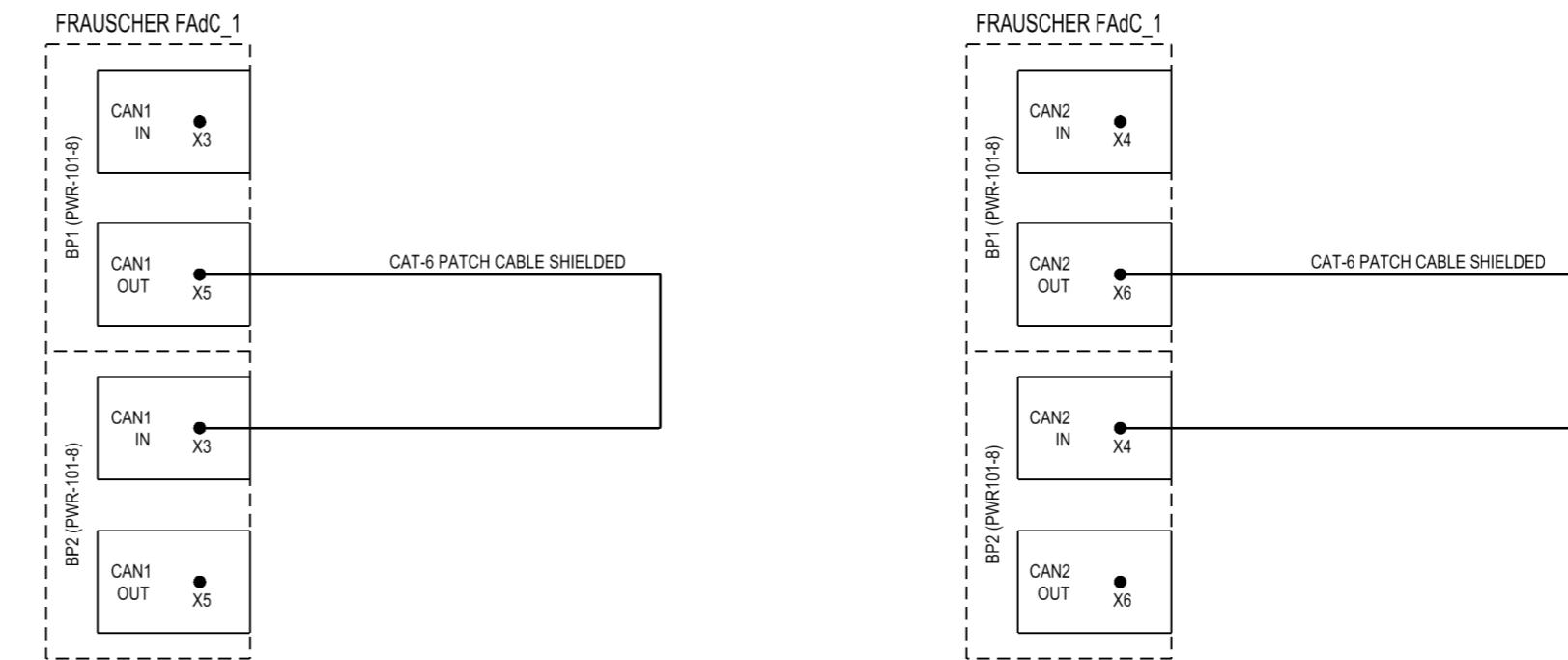
Consultant  AUSTRALIA	 24 JAN 2018 ISSUED FOR CONSTRUCTION	SIGNALS TAIWAN RCS LEVEL CROSSING TRIAL SITE AXLE COUNTER HEAD CONNECTIONS Nos. 101-107	ALL CONTENTS NEW File Name TRA_G0008.DGN Sheet No. 01 of 01 In Serv. Scale N.T.S. Sheet Size A3	Drawn By D. HEFFERNAN Checked By N. POPPLEWELL Approved	Designed By D. HEFFERNAN Ind. Review Approval Date
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(DATE) _____

(SIGNATURE) _____

(BLOCK LETTERS) _____

Certified By: _____



NOTE:

REFER TO SHEET TRA_G0010 FOR CAN DIP SWITCH SETTINGS. THIS SHOWS:

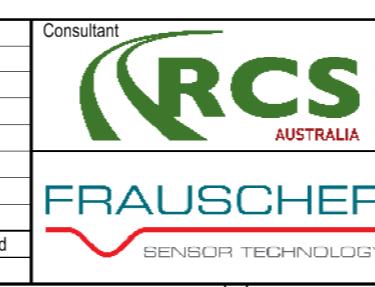
1. BP1 CAN IN TERMINATION DIP SWITCHES SET TO ON
2. BP2 CAN OUT TERMINATION DIP SWITCHES SET TO ON
3. ALL OTHER CAN IN/OUT DIP SWITCHES SET TO OFF

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25/01/2018

B	24/01/18	SITE COPY	D.N.H.	N.R.P.		N.R.P.		
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.				
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved



24 JAN 2018
ISSUED FOR CONSTRUCTION

SIGNALS TAIWAN
RCS LEVEL CROSSING TRIAL SITE
AXLE COUNTER CAN BUS CONNECTIONS

Up Location
East.
North.
ID#

Down Location
East.
North.
ID#

Datum

ALL CONTENTS NEW

File Name TRA_G0009.DGN

Sheet No. 01 of 01

In Serv.

Scale N.T.S. Sheet Size A3

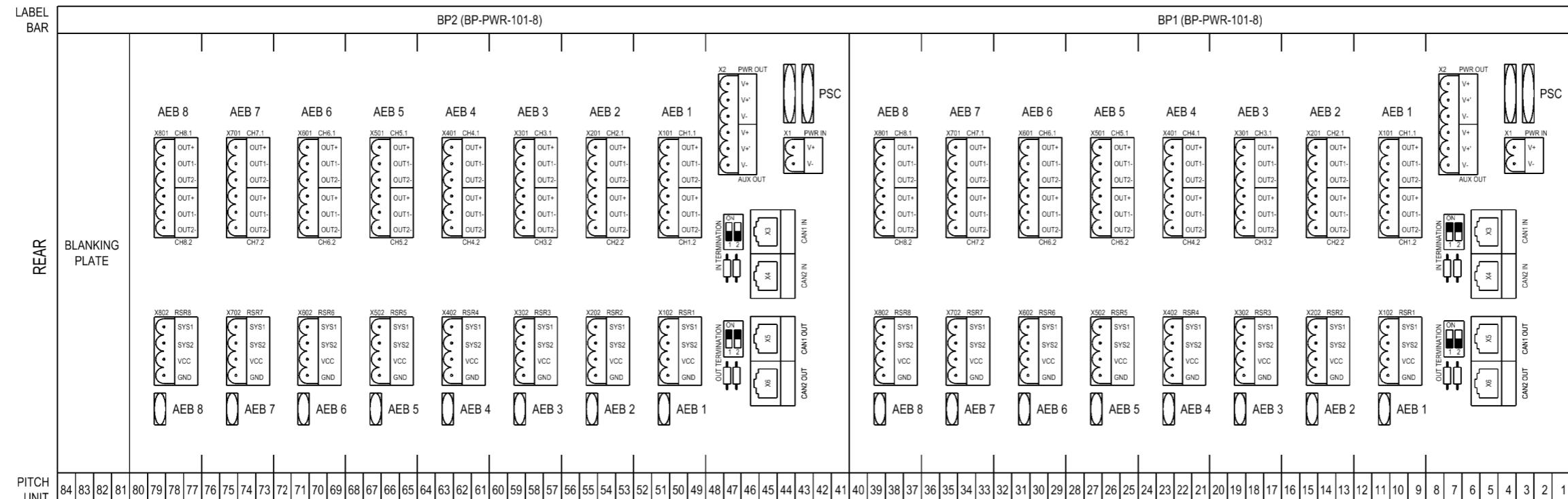
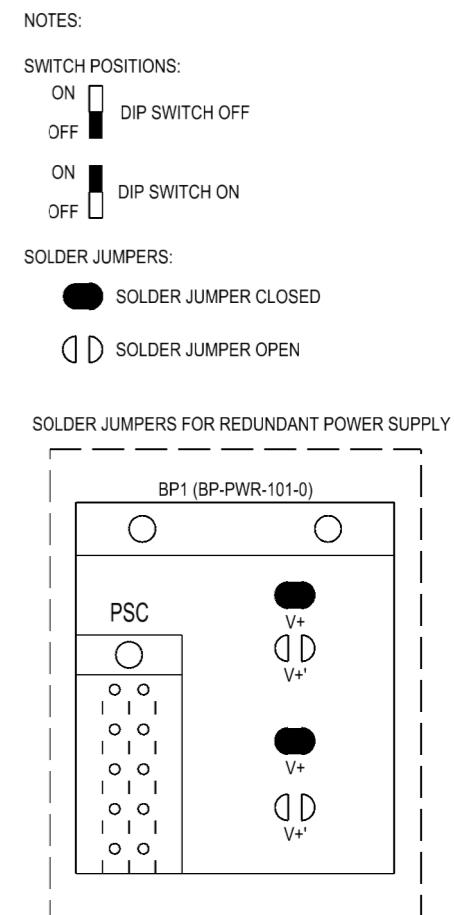
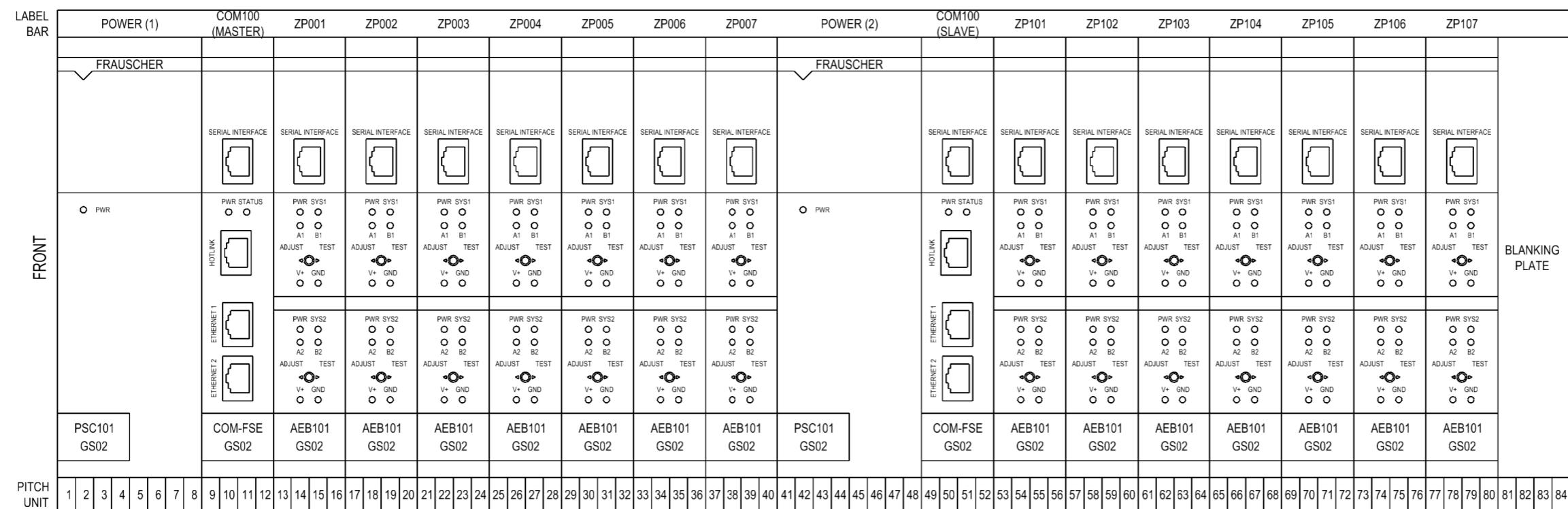
Drawn By D. HEFFERNAN
Designed By D. HEFFERNAN
Checked By N. POPPLEWELL
Ind. Review
Approved
Approval Date
Drawing Number TRA_G0009
Revision B

(Certified By)

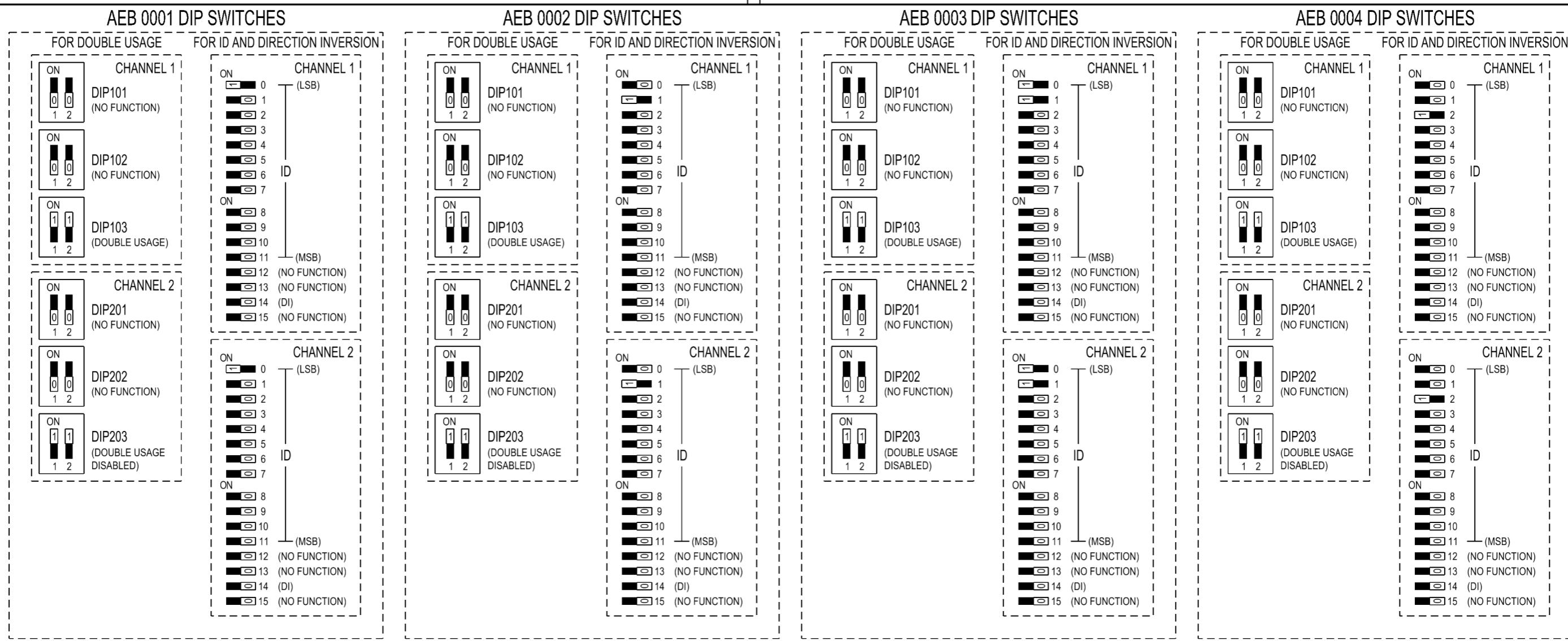
(Signature)

(Block Letters)

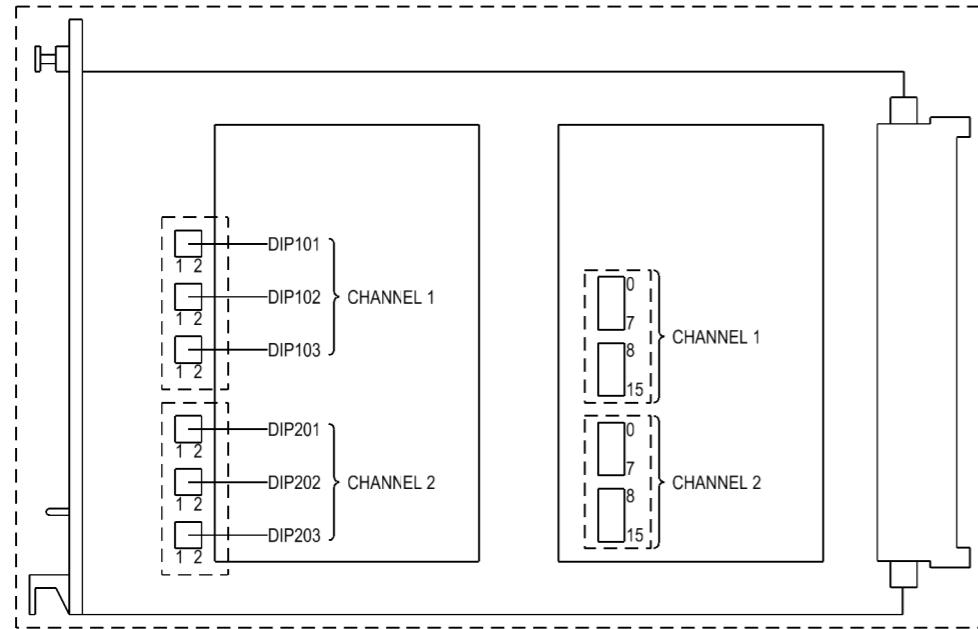
(Date)



(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____



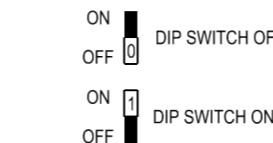
GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

DIP SWITCH SETTINGS:
 1 = ON
 0 = OFF

SWITCH POSITIONS:



AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

ABBREVIATIONS:
 LSB - LEAST SIGNIFICANT BIT
 MSB - MOST SIGNIFICANT BIT
 DI - DIRECTION INVERSION
 (ON = DIRECTION INVERSION)
 (OFF = NO DIRECTION INVERSION)

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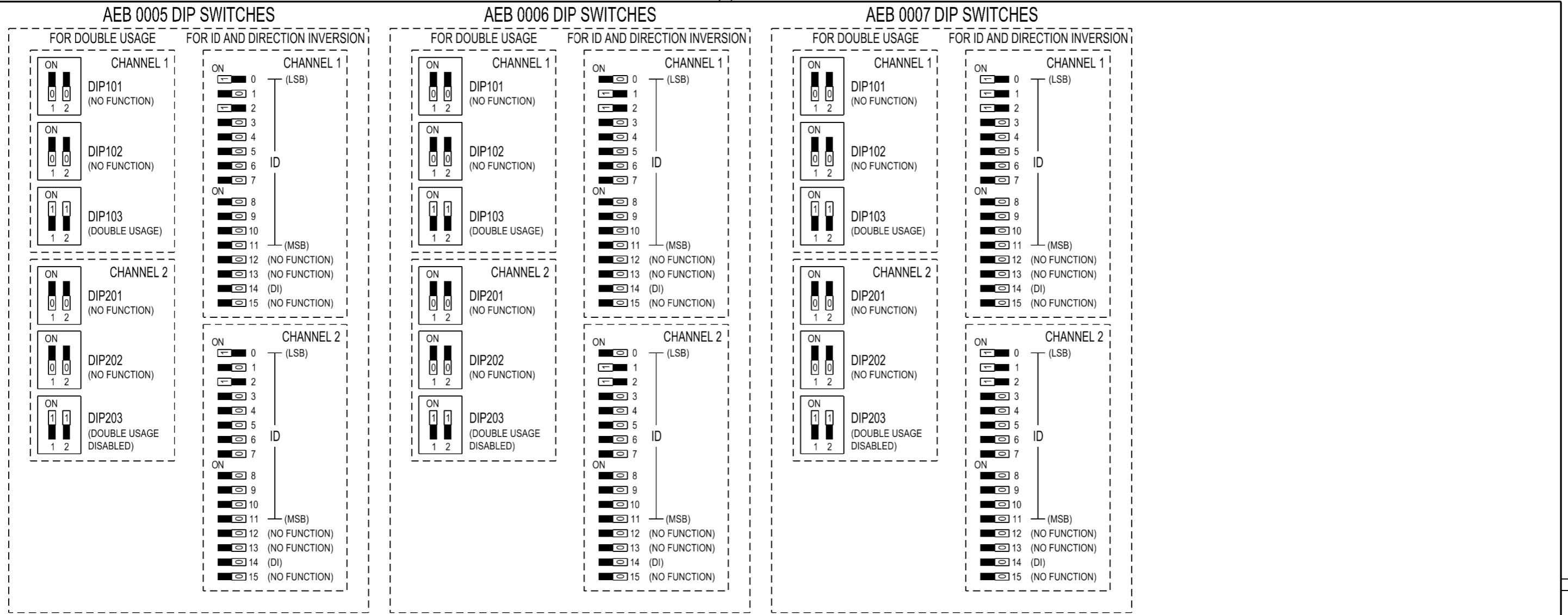
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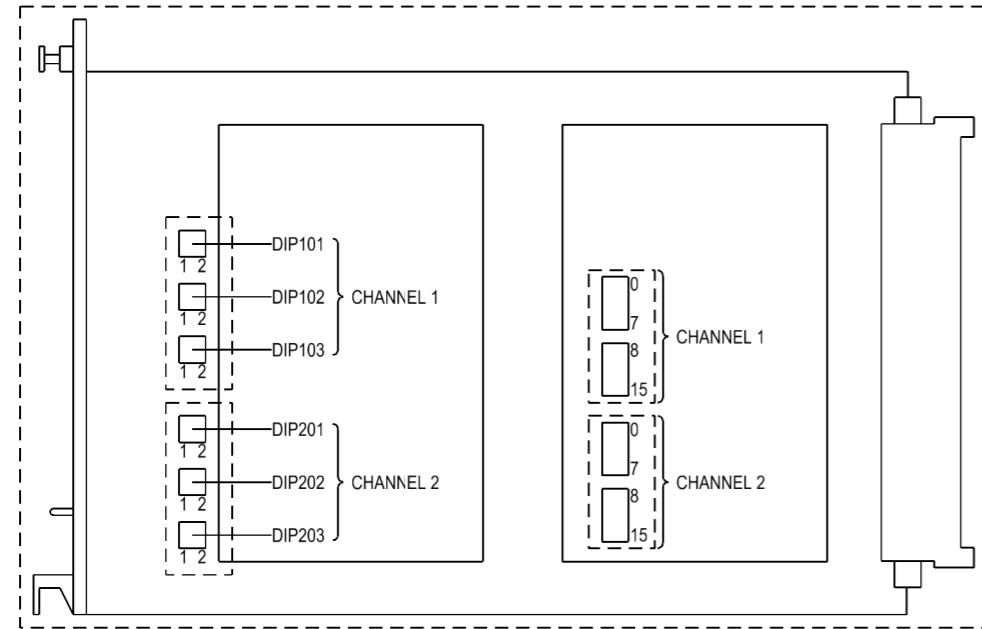
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	A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed	Checked
					Ind. Review	Approved

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
Drawing Number TRA_G0011	Revision B

(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____



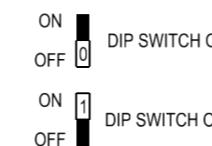
GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

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 1 = ON
 0 = OFF

SWITCH POSITIONS:



AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

ABBREVIATIONS:
 LSB - LEAST SIGNIFICANT BIT
 MSB - MOST SIGNIFICANT BIT
 DI - DIRECTION INVERSION
 (ON = DIRECTION INVERSION)
 (OFF = NO DIRECTION INVERSION)

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B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



SIGNALS
 TAIWAN
 RCS LEVEL CROSSING TRIAL SITE
 AEB CARD DIP SWITCH
 SETTINGS Nos. 5-7

Up Location
 East.
 North.
 ID#

Down Location
 East.
 North.
 ID#

Datum

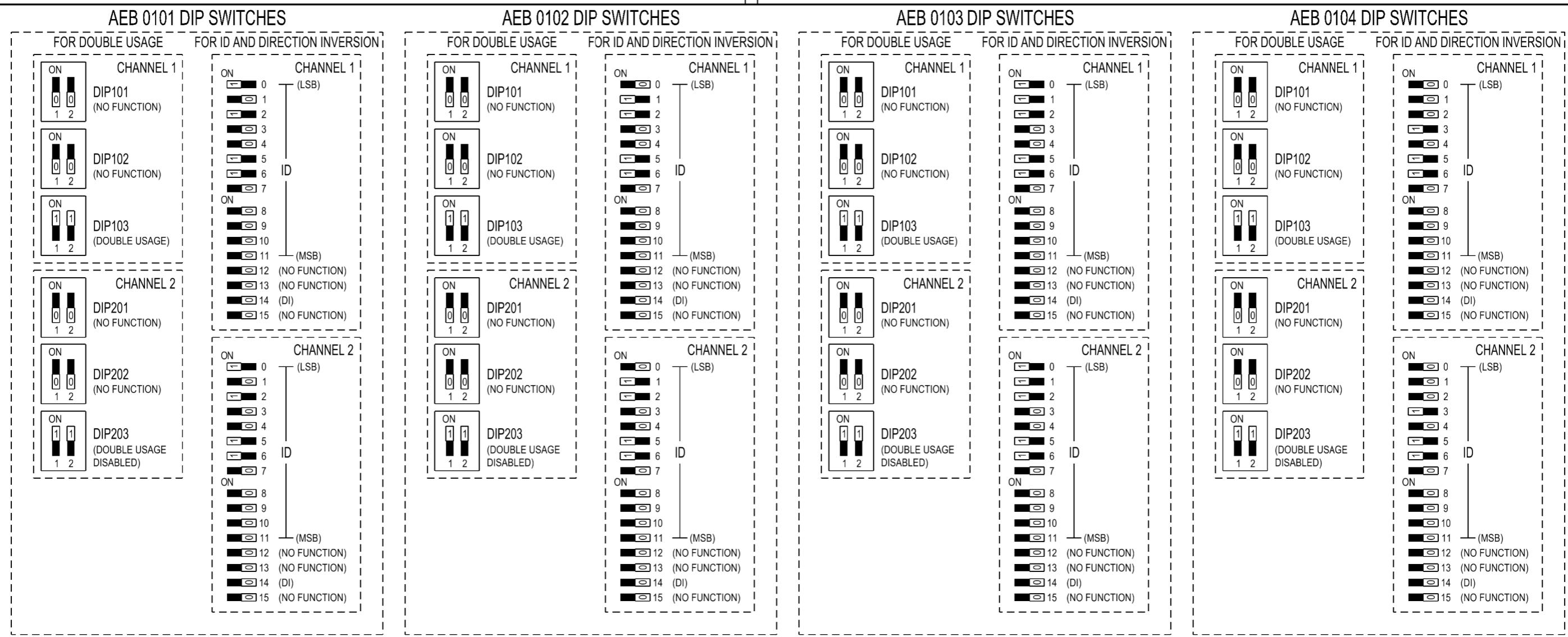
**ALL CONTENTS
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File Name TRA_G0012.DGN
 Sheet No. 01 of 01

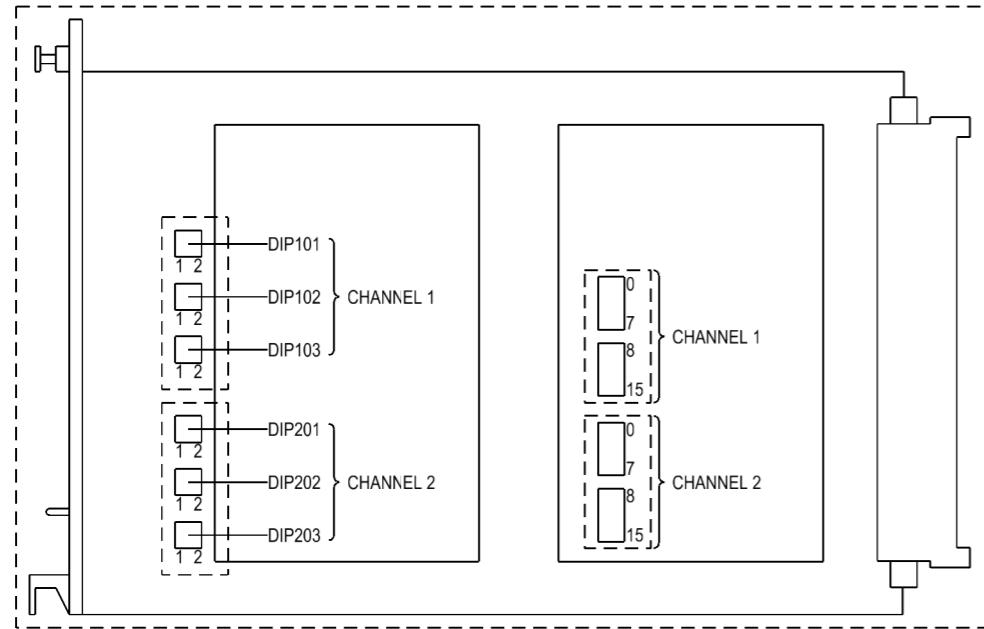
In Serv.
 Drawing Number TRA_G0012
 Revision B

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
File Name TRA_G0012.DGN	
Sheet No. 01 of 01	
In Serv.	
Drawing Number TRA_G0012	Revision B
Scale N.T.S.	Sheet Size A3

(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____



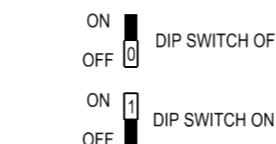
GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

DIP SWITCH SETTINGS:
 1 = ON
 0 = OFF

SWITCH POSITIONS:



AEB DIP SWITCH ID SET TO CORRESPONDING BINARY NUMBER OF AXC ID

ABBREVIATIONS:
 LSB - LEAST SIGNIFICANT BIT
 MSB - MOST SIGNIFICANT BIT
 DI - DIRECTION INVERSION
 (ON = DIRECTION INVERSION)
 (OFF = NO DIRECTION INVERSION)

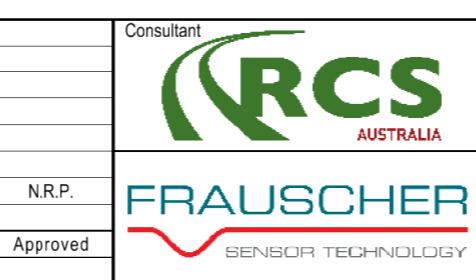
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 25/01/2018

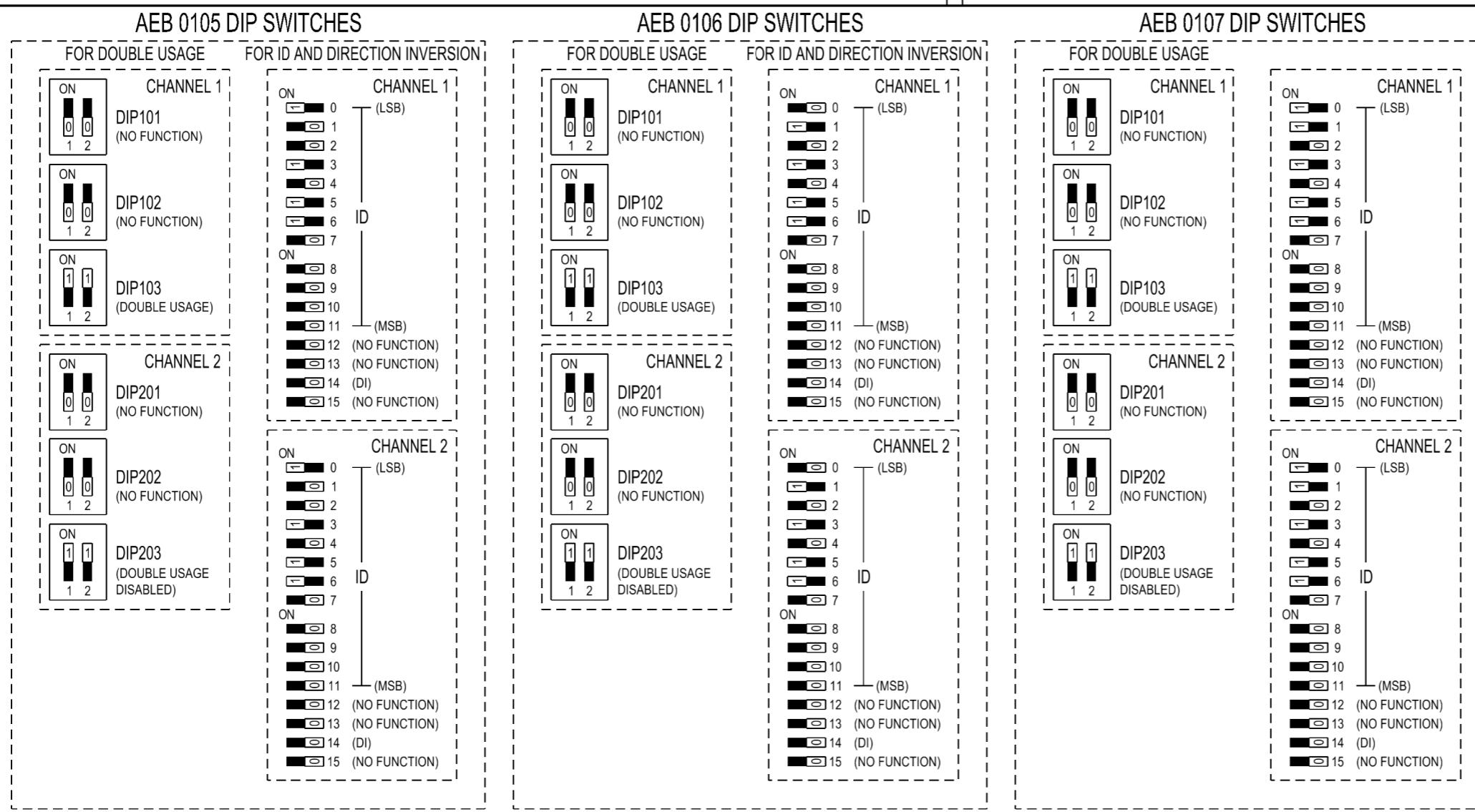
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	B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
	A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed	Checked
					Ind. Review	Approved

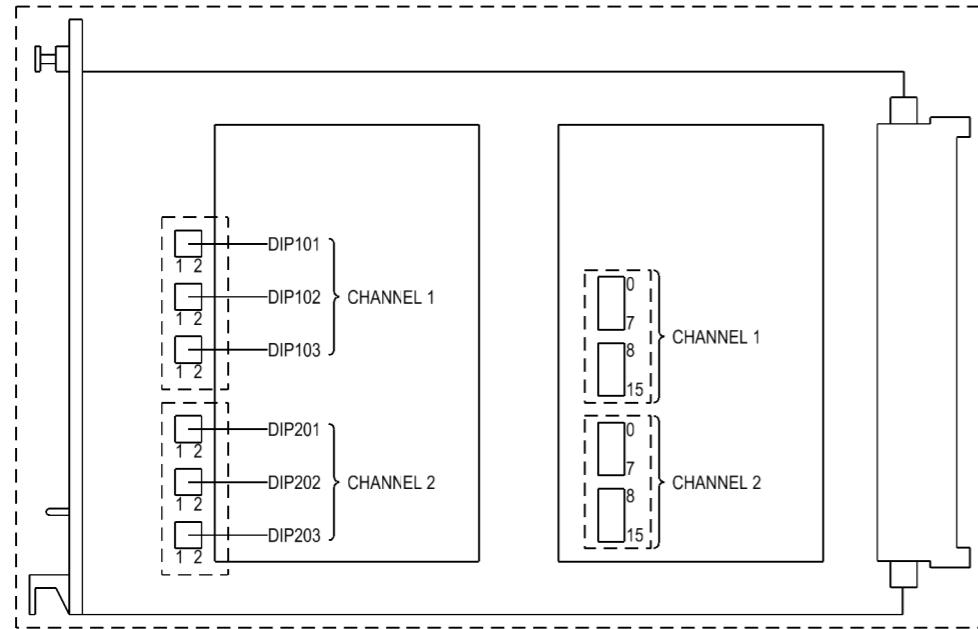


Consultant	Signals	All Contents New	Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
RCS AUSTRALIA	TAIWAN		Checked By N. POPPLEWELL	Ind. Review
FRAUSCHER SENSOR TECHNOLOGY	LEVEL CROSSING TRIAL SITE		Approved	Approval Date
	AEB CARD DIP SWITCH SETTINGS Nos. 101-104		File Name TRA_G0013.DGN	
			Sheet No. 01 of 01	
			In Serv.	
			Drawing Number TRA_G0013	Revision B
			Scale N.T.S.	Sheet Size A3

(DATE) _____
 (SIGNATURE) _____
 (BLOCK LETTERS) _____
 Certified By: _____



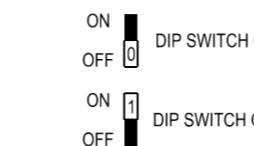
GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

DIP SWITCH SETTINGS:
 1 = ON
 0 = OFF

SWITCH POSITIONS:



AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

ABBREVIATIONS:
 LSB - LEAST SIGNIFICANT BIT
 MSB - MOST SIGNIFICANT BIT
 DI - DIRECTION INVERSION
 (ON = DIRECTION INVERSION)
 (OFF = NO DIRECTION INVERSION)

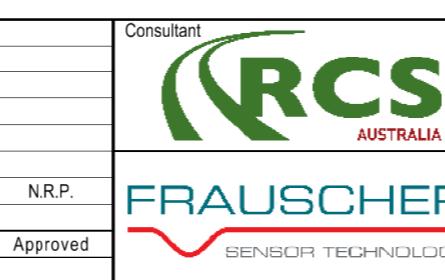
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B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



ALL CONTENTS NEW		
File Name		TRA_G0014.DGN
Sheet No.		01 of 01
Up Location	Down Location	Datum
East. North. ID#	East. North. ID#	
In Serv.		
Scale N.T.S.	Sheet Size	A3

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
Drawing Number TRA_G0014	Revision B

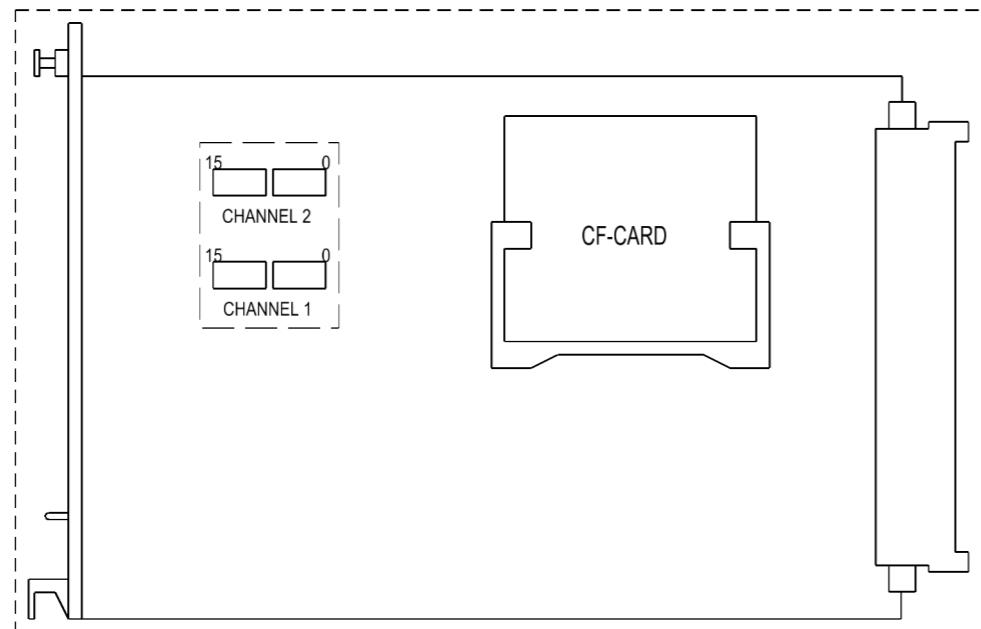
(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

GENERAL COM-FSE101 CARD DIP SWITCH LAYOUT

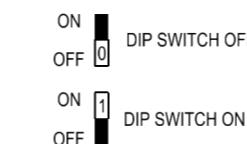


NOTES:

MSB - MOST SIGNIFICANT BIT
 LSB - LEAST SIGNIFICANT BIT
 CS - CONFIGURATION SERVER BIT
 (ON = CS, OFF = NO CS)
 MS - MASTER/SLAVE COM BIT
 (ON = SLAVE, OFF = MASTER)
 RO - REDUNDANCY OPERATION BIT
 (ON = RO, OFF = NO RO)

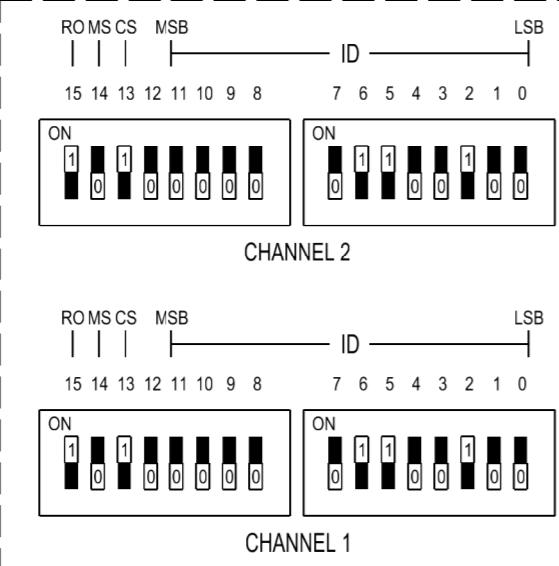
DIP SWITCH SETTINGS:
 1 = ON
 0 = OFF

SWITCH POSITIONS:

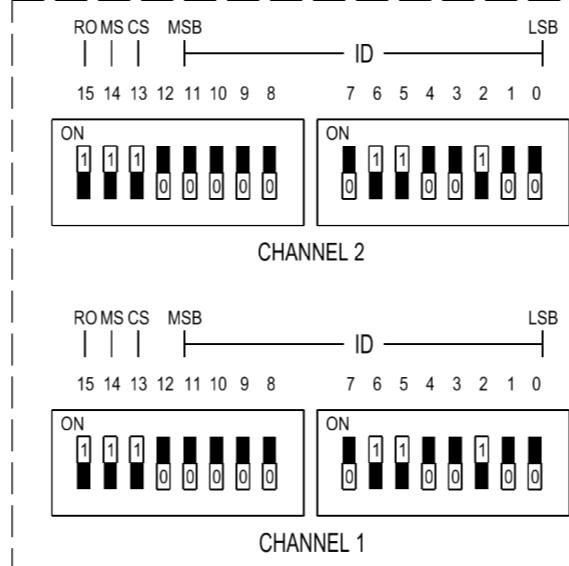


COM DIP SWITCH ID SET TO CORRESPONDING BINARY NUMBER OF COM ID.

FADC_1 COM-AdC (0100) (MASTER)



FADC_2 COM-AdC (0100) (SLAVE)



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25/01/2018

B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



24 JAN 2018
ISSUED FOR CONSTRUCTION

SIGNALS TAIWAN
 RCS LEVEL CROSSING TRIAL SITE
 COM CARD DIP SWITCH SETTINGS

Up Location
 East.
 North.
 ID#

Down Location
 East.
 North.
 ID#

Datum

ALL CONTENTS NEW

File Name TRA_G0015.DGN
 Sheet No. 01 of 01

In Serv.
 Scale N.T.S.
 Sheet Size A3

Drawn By D. HEFFERNAN
 Designed By D. HEFFERNAN
 Checked By N. POPPLEWELL
 Ind. Review
 Approved
 Approval Date
 Drawing Number TRA_G0015
 Revision B

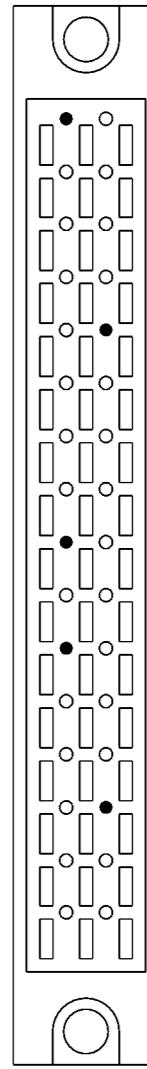
(DATE)

(SIGNATURE)

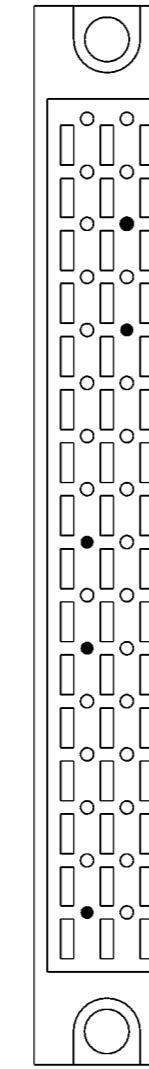
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Certified By:

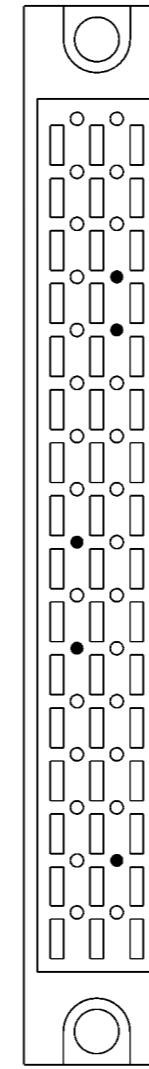
PSC101



COM-FSE



AEB101



NOTES:

PIN CODING ON 48 PIN ON (FEMALE) BACKPLANE CONNECTOR
 ● INDICATES CODING PIN INSERTED

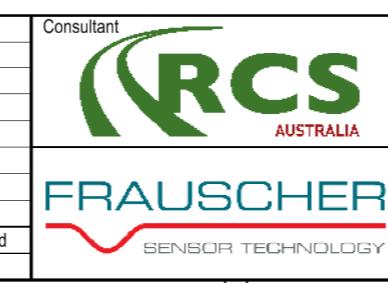
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	B	24/01/18	SITE COPY	D.N.H.	N.R.P.		N.R.P.
	A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.		
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review
					Approved		



24 JAN 2018
ISSUED FOR CONSTRUCTION

SIGNALS TAIWAN
 RCS LEVEL CROSSING TRIAL SITE
 AXLE COUNTER
 CODING PINS

Up Location
 East.
 North.
 ID#

Down Location
 East.
 North.
 ID#

Datum

ALL CONTENTS NEW

File Name TRA_G0016.DGN

Sheet No. 01 of 01

Scale N.T.S. Sheet Size A3

Drawn By D. HEFFERNAN Designed By D. HEFFERNAN

Checked By N. POPPLEWELL Ind. Review

Approved Approval Date

Drawing Number TRA_G0016 Revision B

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

12:53:38 PM

25/01/2018

HIMA HIMATRIX
F35 034

	1	2	3	4	5	6	7	8	9	10
MALE	■					■				
FEMALE		■	■	■	■	■	■	■	■	■

	41	42	43	44	45	46
MALE		■		■	■	■
FEMALE	■	■	■	■	■	■

	11	12	13	14	15	16	17	18	19	20
MALE		■				■				
FEMALE	■		■	■	■	■	■	■	■	■

	47	48	49	50	51	52
MALE	■		■	■	■	■
FEMALE		■	■	■	■	■

	21	22	23	24	25	26	27	28	29	30
MALE			■				■			
FEMALE	■		■	■	■	■	■	■	■	■

	53	54	55	56	57	58
MALE	■	■		■	■	■
FEMALE			■	■	■	■

	31	32	33	34	35	36	37	38	39	40
MALE				■				■		
FEMALE	■	■		■	■	■	■	■	■	■

	59	60	61	62	63	64
MALE	■	■	■	■	■	■
FEMALE				■	■	■

	65	66	67	68	69	70	71	72
MALE	■	■		■	■	■	■	
FEMALE			■	■	■	■	■	■

NOTES:

CODING PIN TO BE INSERTED WHERE BOX IS FILLED WITH
PART NO. WEIDMULLER 16934300 BL SL 3.5 KO OR

SIGNALS
TAIWAN
RCS LEVEL CROSSING TRIAL SITE
HIMA
CODING PINS

ALL CONTENTS
NEW

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
File Name TRA_G0017.DGN	
Sheet No. 01 of 01	
In Serv.	
Drawing Number TRA_G0017	Revision B
Scale N.T.S.	Sheet Size A3

HIMA HIMATRIX F35 034									
CIRCUITS WORKING					TRA G0017				
B 24/01/18 SITE COPY					D.N.H. N.R.P. N.R.P.				
A 16/01/18 Updated to TRA Cable Installation					D.N.H. N.R.P.				
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved	

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

FAdC_1 CONFIG. FOLDER		
FILE NAME	CRC	DATE VERIFIED
C0001_00.ADC		
C0002_00.ADC		
C0003_00.ADC		
C0004_00.ADC		
C0005_00.ADC		
C0006_00.ADC		
C0007_00.ADC		
C0100_00.ADC		
C0101_00.ADC		
C0102_00.ADC		
C0103_00.ADC		
C0104_00.ADC		
C0105_00.ADC		
C0106_00.ADC		
C0107_00.ADC		

TO BE CONFIRMED ON SITE

HIMA DATA		
FILE NAME	CRC	DATE VERIFIED
MODULE 19710/0		

TO BE CONFIRMED ON SITE

12:53:46 PM
25/01/2018

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A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



24 JAN 2018
ISSUED FOR
CONSTRUCTION

SIGNALS
TAIWAN
RCS LEVEL CROSSING TRIAL SITE
DATA CRCs

Up Location
East.
North.
ID#

Down Location
East.
North.
ID#

Datum

ALL CONTENTS
NEW

File Name TRA_G0018.DGN

Sheet No. 01 of 01

In Serv.

Scale N.T.S.

Sheet Size A3

Drawn By D. HEFFERNAN
Designed By D. HEFFERNAN

Checked By N. POPPLEWELL
Ind. Review

Approved
Approval Date

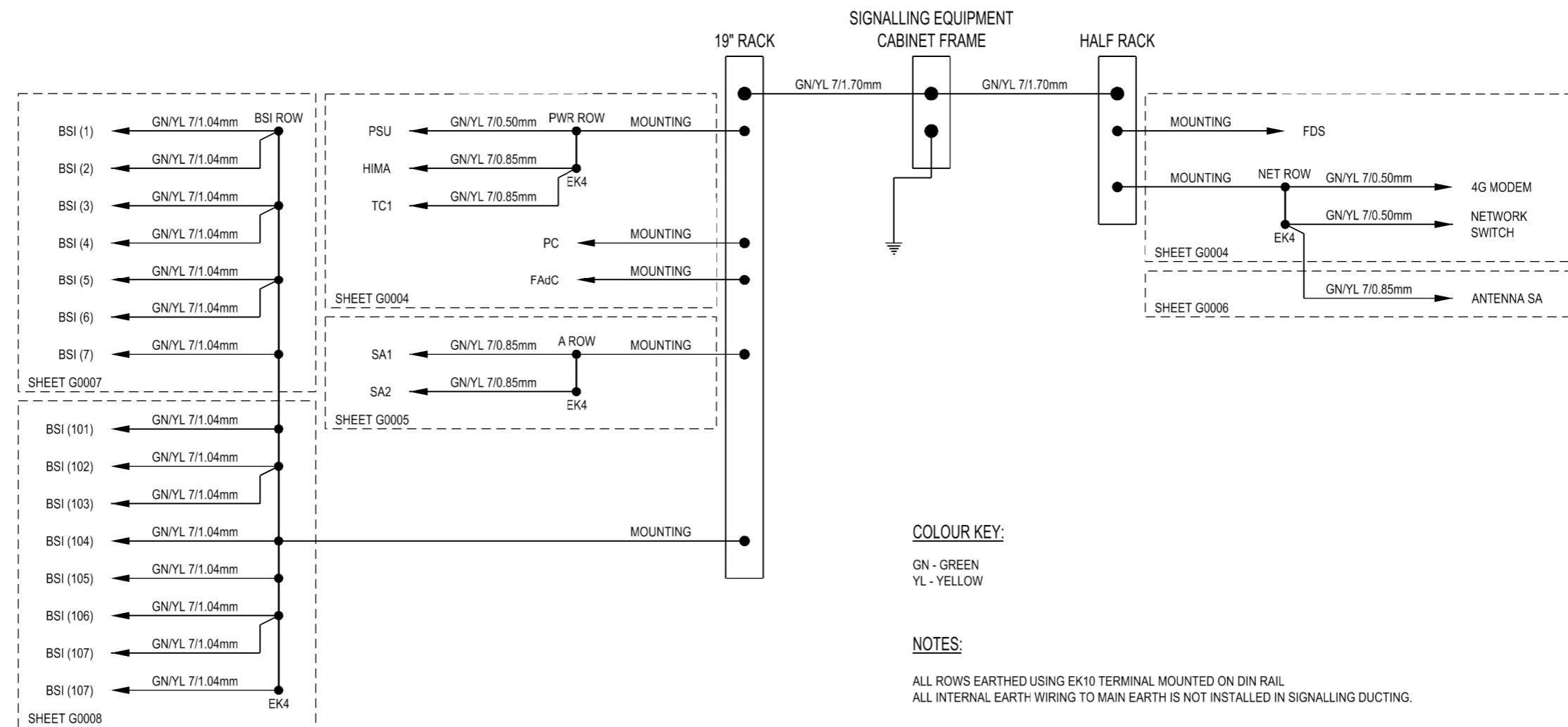
Drawing Number TRA_G0018
Revision B

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:



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25/01/2018

B	24/01/18	SITE COPY	D.N.H.	N.R.P.	N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.	
Revised By	In Serv	Rev.	Date	Description	Designed Checked Ind. Review Approved



SIGNALS TAIWAN		
RCS LEVEL CROSSING TRIAL SITE EARTH DETAILS		
Up Location East. North. ID#	Down Location East. North. ID#	Datum
In Serv.		

ALL CONTENTS NEW	
File Name	TRA_G0019.DGN
Sheet No.	01 of 02
Drawing Number	TRA_G0019
Revision	B

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
In Serv.	
Scale N.T.S.	Sheet Size A3

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

POWER			
NAME	FUNCTION	SHEET	PIN No.
L-	HIMA N24	G0004	N/A
L-	SPARE		N/A
L+	HIMA B24	G0004	N/A
L+	SPARE		N/A

DIGITAL OUTPUTS			
NAME	FUNCTION	SHEET	PIN No.
L-	DO L-	G0005	1
1	LX EXFR	G0005	2
2	LX WXFR	G0005	3
3	LX XPR	G0005	4
4	RCS LX EXFR	G0005	5
5	RCS LX WXFR	G0005	6
6	RCS LX XPR	G0005	7
7	EAST RESET	G0005	8
8	WEST RESET	G0005	9
L-	DO L-	G0005	10

DIGITAL INPUTS			
NAME	FUNCTION	SHEET	PIN No.
LS+	DI LS+	G0005	11
1	EXFR RELAY	G0005	12
2	WXFR RELAY	G0005	13
3	XPR RELAY	G0005	14
4	SPARE		15
5	SPARE		16
6	SPARE		17
7	SPARE		18
8	SPARE		19
L-	SPARE		20
LS+	DI LS+	G0005	21
9	DC OK	G0005	22
10	UPS READY	G0005	23
11	UPS BUFFER.	G0005	24
12	BATT. REPLACE	G0005	25
13	EAST LINE RESET PB	G0005	26
14	WEST LINE RESET PB	G0005	27
15	SPARE		28
16	SPARE		29
L-	SPARE		30
LS+	SPARE		31
17	SPARE		32
18	SPARE		33
19	SPARE		34
20	SPARE		35
21	SPARE		36
22	SPARE		37
23	SPARE		38
24	SPARE		39
L-	SPARE		40

ANALOG INPUTS			
NAME	FUNCTION	SHEET	PIN No.
S1	SPARE		41
I1	JUMPER TO I1-	●	42
I1-	JUMPER TO I1	●	43
S2	SPARE		44
I2	JUMPER TO I2-	●	45
I2-	JUMPER TO I2	●	46
S3	SPARE		47
I3	JUMPER TO I3-	●	48
I3-	JUMPER TO I3	●	49
S4	SPARE		50
I4	JUMPER TO I4-	●	51
I4-	JUMPER TO I4	●	52
S5	SPARE		53
I5	JUMPER TO I5-	●	54
I5-	JUMPER TO I5	●	55
S6	SPARE		56
I6	JUMPER TO I6-	●	57
I6-	JUMPER TO I6	●	58
S7	SPARE		59
I7	JUMPER TO I7-	●	60
I7-	JUMPER TO I7	●	61
S8	SPARE		62
I8	JUMPER TO I8-	●	63
I8-	JUMPER TO I8	●	64

COUNTER			
NAME	FUNCTION	SHEET	PIN No.
A1	SPARE		65
B1	SPARE		66
Z1	SPARE		67
L-	SPARE		68
A2	SPARE		69
B2	SPARE		70
Z2	SPARE		71
L-	SPARE		72



SIGNALS
 TAIWAN
 RCS LEVEL CROSSING TRIAL SITE
 HIMA F35 034 PLUG
 ANALYSIS

ALL CONTENTS
 NEW

Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Checked By N. POPPLEWELL	Ind. Review
Approved	Approval Date
File Name TRA_G0020.DGN	
Sheet No. 01 of 01	
In Serv.	
Drawing Number TRA_G0020	Revision B
Scale N.T.S.	Sheet Size A3

B	24/01/18	SITE COPY	D.N.H.	N.R.P.		N.R.P.
A	16/01/18	Updated to TRA Cable Installation	D.N.H.	N.R.P.		
Revised By	In Serv	Rev.	Date	Description	Designed	Checked
					Ind. Review	Approved

(BLOCK LETTERS)

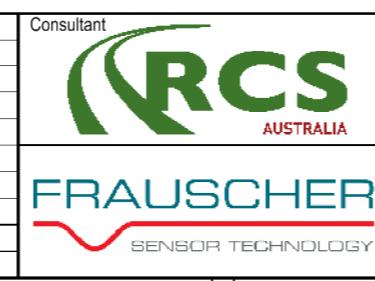
SHEET	WIRE	B24		WIRE	SHEET
1	G0004	2	B24	HIMA	10
2		1	B24	FAdC - BP1	6
3				FAdC - BP2	6
4				FDS	6
5				4G MODEM	6
6				NET. SWITCH	6
7					
8					
				N24	
1	G0004	1		HIMA	N24
2				FAdC - BP1	1
3				FAdC - BP2	1
4				FDS	1
5				4G MODEM	1
6				NET. SWITCH	1
7				SA1	1
8				SA2	1
9					

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
25/01/2018		B	24/01/18	SITE COPY	D.N.H.	N.R.P.		N.R.P.
		A	16/01/18	Updated to TRA Cable Installation	D.N.H	N.R.P.		



The logo for RCS Australia, featuring a stylized red 'R' and 'C' intertwined, followed by the letters 'S' and 'AUSTRALIA' in a bold, red, sans-serif font.

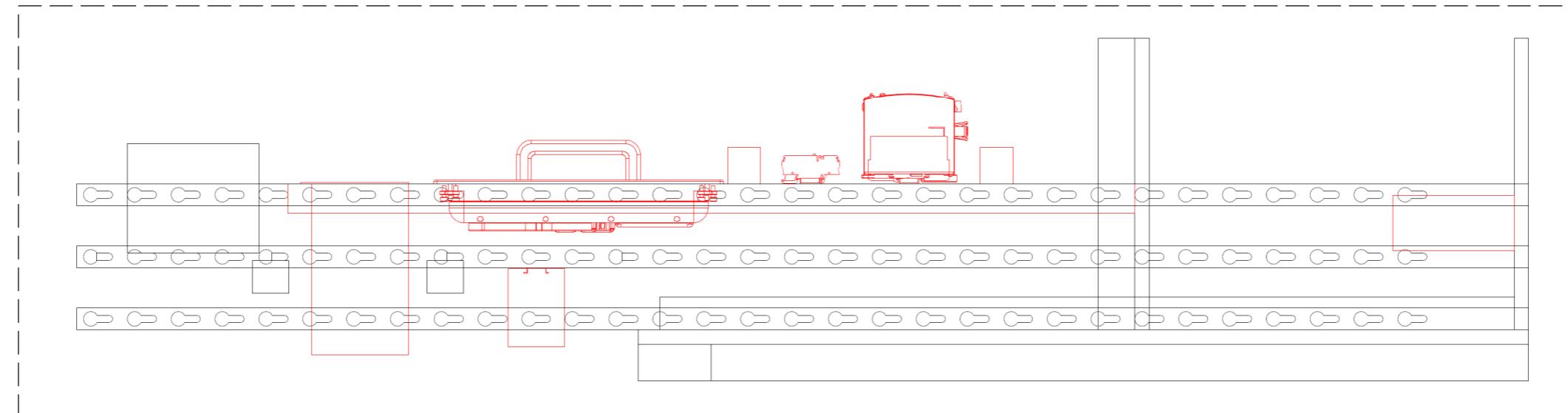
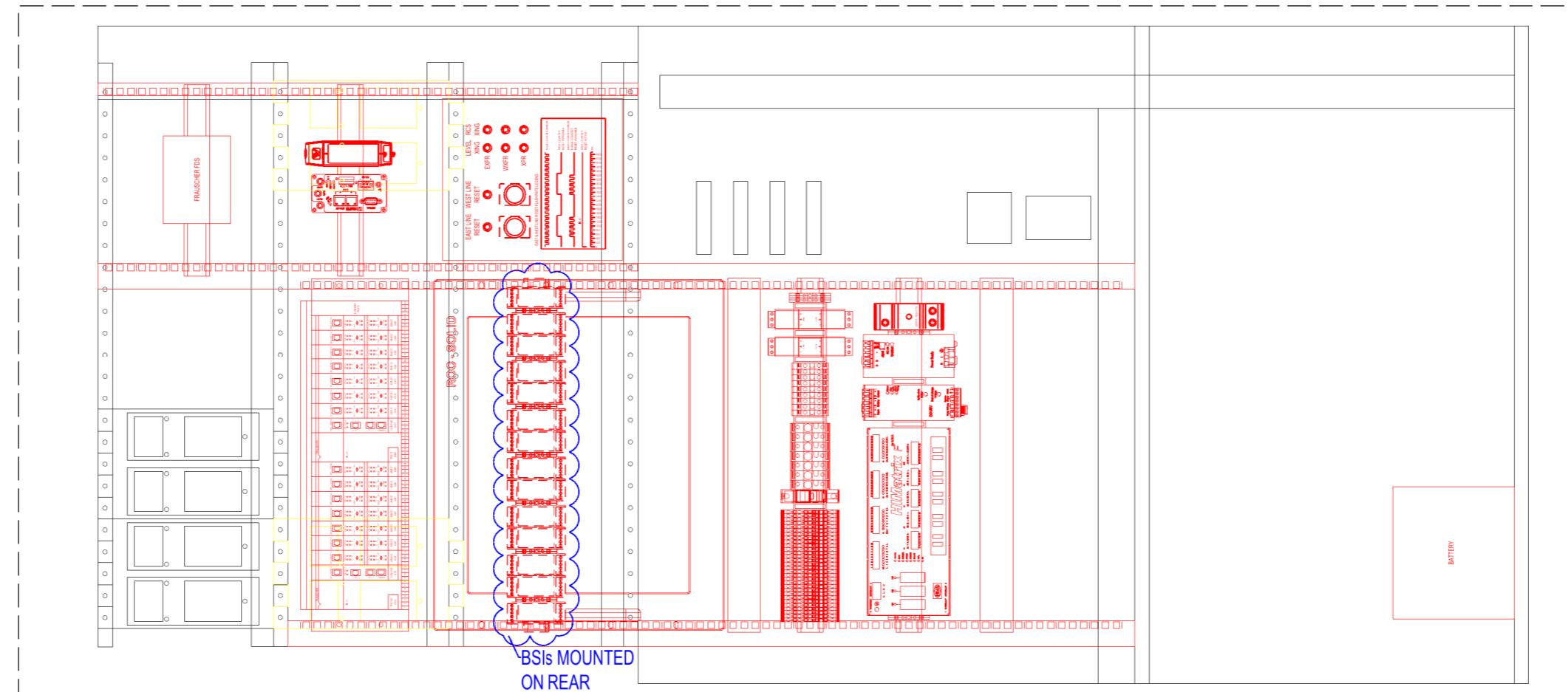
SIGNALS TAIWAN RCS LEVEL CROSSING TRIAL SITE TERMINATION ANALYSIS			ALL CONTENTS NEW		Drawn By D. HEFFERNAN	Designed By D. HEFFERNAN
Up Location East. North. ID#	Down Location East. North. ID#	Datum			File Name TRA_G0021.DGN	Checked By N. POPPLEWELL
			Sheet No. 01 of 01	Approved	Approval Date	
			In Serv.	Drawing Number TRA_G0021		Revision B
			Scale N.T.S.	Sheet Size A3		

(DATE) _____

(SIGNATURE) _____

(BLOCK LETTERS) _____

Certified By: _____

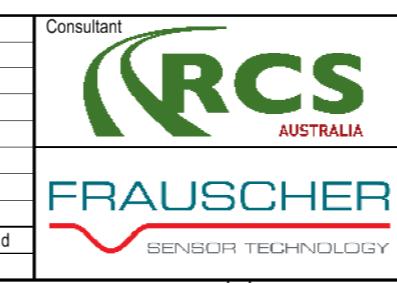


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25/01/2018

I:\Developer\TRA\Design\Circuits Working\TRA_G0022 (Box Layout).dgn



RCS
AUSTRALIA

24 JAN 2018

ISSUED FOR
CONSTRUCTION

SIGNALS
TAIWAN

RCS LEVEL CROSSING TRIAL SITE
BOX EQUIPMENT
LAYOUT

Up Location
East.
North.
ID#

Down Location
East.
North.
ID#

Datum

RED
COPY

File Name

TRA_G0022.DGN

Sheet No.

01 of 01

In Serv.

Scale

N.T.S.

Drawn By
D. HEFFERNAN

Designed By
D. HEFFERNAN

Checked By
N. POPPLEWELL

Ind. Review

Approved

Approval Date

Drawing Number
TRA_G0022

Revision
B