

FIRE

4100ES Fire Indicator Panel

Australian Wiring Diagrams



Australian
Wiring Diagrams

LT0432
Iss 1.09

Simplex

General

Each of these diagrams shows the wiring for a particular module or card or base which can be used with the AS4428.1 version of the Simplex 4100U and 4100ES Fire Alarm systems.

Organisation

Each diagram has a 3 digit sheet number from the drawing series 1976-181. This sheet numbering is divided into ranges, reflecting the type of device or module, as follows:

Sheet Number	Type of Devices Covered
100-199	Detectors & Bases
200-299	Zone Modules & Cards providing detection circuits
300-399	Input devices
400-499	Output devices or mixed inputs/outputs
500-599	Fault isolators
600-699	Communications – networks, printers, etc.
700-799	Power Supply details

The sheet index on the next page shows the current issue of each diagram. The index also refers to some diagrams which have not been released yet.

Abbreviations

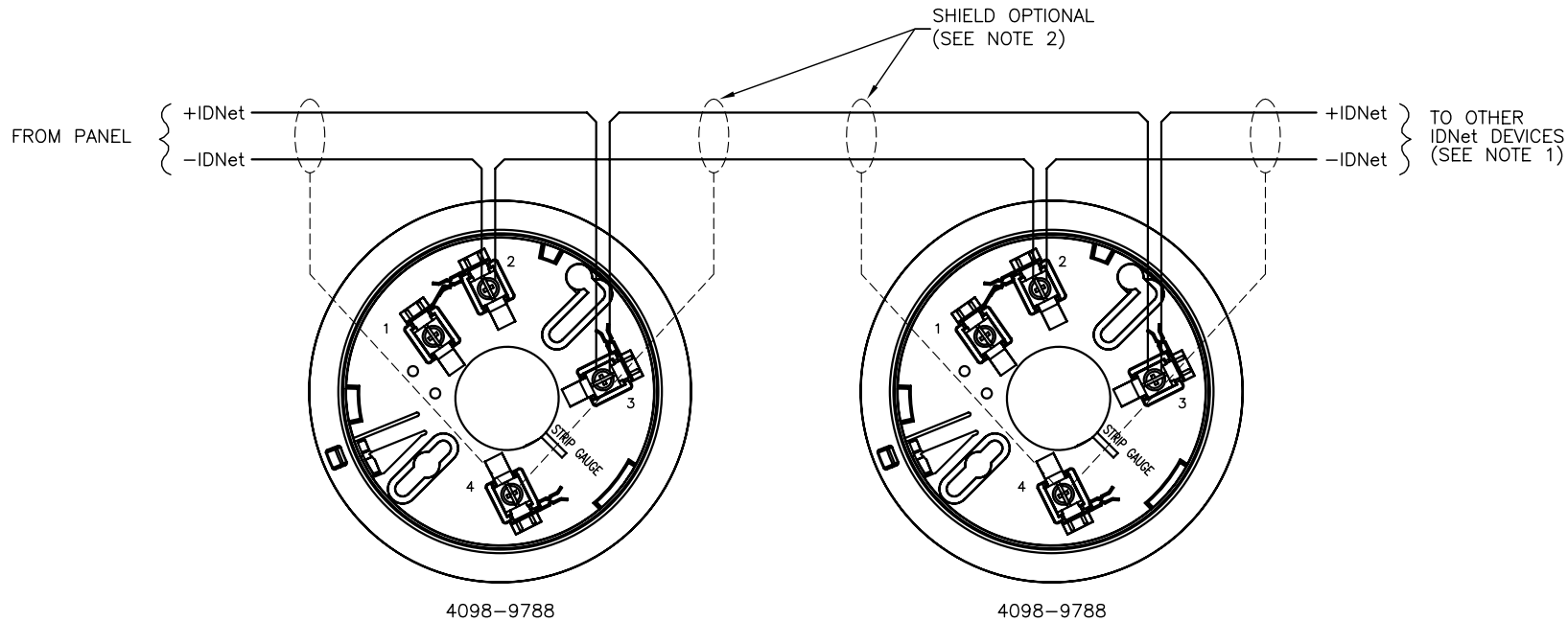
MAPNET	Multi-Application Peripheral Network – earlier version of addressable device communication
IAM	Individually Addressable Module
ZAM	Zone Addressable Module – interfaces to conventional detectors.
RUI	Remote Unit Interface – connects Master panel and Slave transponders
RTU	Remote Transponder Unit – slave panel
IDNet	Individual Device Network – latest version of addressable device communication.
NAC	Notification Appliance Circuit – drives DC-powered sounders and visual warning devices.

**Amendment
Log**

8 Mar 2013	Issue 1.08	Sheet 411 updated.
24 Feb 2015	Issue 1.09	Sheet 411 updated.

Drawing Index	Sheet Nbr Bases	Title	Rev.
	100	2W Detector Bases – Quick Connect Detectors	A
	101	2W Detector Bases - Conventional Detectors	A
	102	TrueAlarm Addressable Detector Bases	B
	103	XXX	A
	Zone Modules		
	200	8 Zone Module Motherboard (4100-5004)	A
	201	MapNet Monitor ZAM (2190-9156)	A
	202	IDNet Zone Addressable Module (ZAM) (4090-9101)	A
	203	IDNet Module (4100-3101)	C
	204	VESDA High Level Interface	nyp
	205	4090-9101 ZAM & “Ex” Detectors	A
	206	IDNet+ Module (4100-3107)	A
	Inputs		
	300	Addressable Call Point (4099-9032)	nyp
	301	Supervised IAM (4090-9001, 4090-9051)	A
	302	4-20mA Analog Monitor ZAM (4090-9050)	nyp
	Outputs		
	400	IDNet 6 Point I/O Module (4090-9120)	A
	401	MapNet2 Relay Module with Supervised Input (2190-9173)	A
	402	IDNet Relay IAM with Inputs (4090-9118, 4090-9119)	B
	403	MapNet2 Signal ZAM (2190-9162) and Control ZAM (2190-9164)	A
	404	IDNet Relay ZAM (4090-9002)	A
	405	8 Point Auxiliary Relay Card (4100-3003)	A
	406	6 Point Signal Card (4100-4321)	A
	407	SPS NAC Outputs (4100-9848AU)	B
	408	SPS NAC connection to T-GEN50 tone generator	nyp
	409	SPS NAC connection to Mini-Gen tone generator	B
	410	SPS NAC connection to Strobe Driver	B
	411	SPS Brigade Relays (4100-6033)	C
	412	IDNet Relay IAMs as Fan Controls	B
	413	24 Point I/O Card (002-124+4100-0302)	C
	414	PDI Relay Cards (4100-3204, 4100-3206)	A
	415	Signal ZAM (4090-9007)	A
	Isolators		
	500	IDNet Addressable Loop Isolator (4090-9116)	B
	501	IDNet Addressable Power Isolator (4090-9117AU)	A
	Communications		
	600	Transponder Interface Card (4100-0620)	B
	601	Network Interface Card (Wired Media) (4100-6014)	A
	602	Network Interface Card (Fibreoptic) (4100-6014)	nyp
	605	Dual RS232 Card (4100-6038)	nyp
	606	LCD Annunciator (4604-9201)	A
	Power		
	700	SPS Power Outputs	C
	701	1948 2A PSU Outputs (ME0417)	A
	702	5A PSU Outputs (ME0470)	B
	703	Remote DC Powered RTU – Loop Power Feed	A
	704	Remote DC Powered RTU – Linear Power Feed	A
	705	Vigilant PSU Interconnection	A
	706	5A PSU (ME0470) Wiring Details	A

Nyp = not yet published



CAUTION: DO NOT LOOP WIRE UNDER TERMINALS. BREAK WIRE RUNS TO PROVIDE SUPERVISION.

QUICKCONNECT SENSOR CONNECTIONS

NOTES:

1. MAXIMUM QUANTITY OF DEVICES IS 127 PER CIRCUIT FOR 4100U MAPNET MODULE AND 250 FOR THE 4100U WITH 4190-3106 IDNET MODULE.
2. IDNET CIRCUIT VOLTAGE IS 18 TO 32 VDC, .008 AMPERES TYPICAL/.013 AMPERES MAX.
3. 4098-9757 AND 4098-9717 QUICKCONNECT SENSORS USE THE 4098-9788 BASE.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

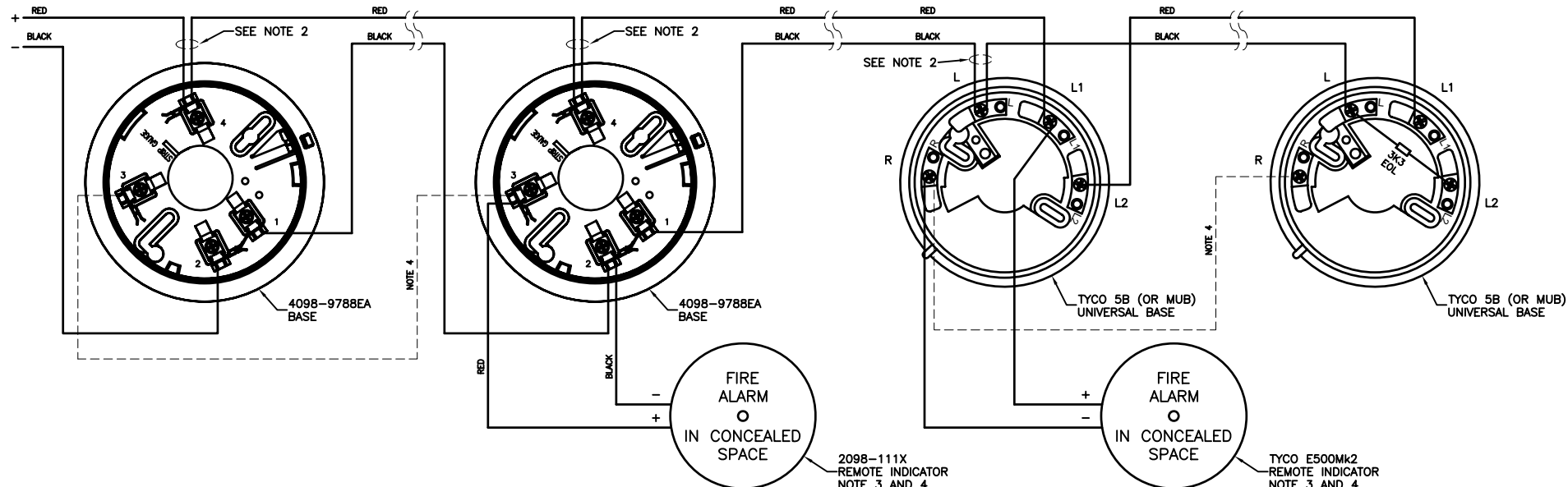
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4100U
2 WIRE DETECTOR BASES - QUICKCONNECT DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 100 of N

A3	ISS/REV A	PART No:	
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DETECTOR CIRCUIT
SEE SHEET 200, 201,
202 FOR MONITOR
DEVICE WIRING



MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 5)				
DETECTOR MODEL	DETECTOR TYPE	4100-5001/2/4 8 ZONE MODULE	2190-9156 MONITOR ZAM	4090-9101 MONITOR ZAM
4098-9601EA	PHOTOELECTRIC	30	20	20
4098-9603EA	IONISATION	30	20	20
4098-9618EA	HEAT TYPE A	30	20	20
4098-9619EA	HEAT TYPE B	30	20	20
4098-9621EA	HEAT TYPE D	30	20	20
USED IN 4098-9788EA BASES				

MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 5)				
DETECTOR MODEL	DETECTOR TYPE	4100-5001/2/4 8 ZONE MODULE	2190-9156 MONITOR ZAM	4090-9101 MONITOR ZAM
614CH	CO AND HEAT	37	25	25
614I	IONISATION	40	29	29
614P	PHOTOELECTRIC	28	19	19
614T	HEAT	30	20	20
USED IN 5B OR MUB BASES				

- NOTES:
- IF USED, REMOTE INDICATORS ARE POLARIZED; OBSERVE COLOUR-CODED WIRING.
 - BREAK WIRES BEFORE CONNECTING TO TERMINAL 4 OR L TO MAINTAIN SUPERVISION. DO NOT LOOP WIRE UNDERNEATH TERMINAL 4 OR L.
 - 2098-111X REMOTE INDICATOR CANNOT BE USED WITH TYCO BASES, AND E500 REMOTE INDICATOR CANNOT BE USED WITH 4098-9788EA BASES.
 - MULTIPLE BASES OF THE SAME TYPE CAN DRIVE A COMMON REMOTE INDICATOR BY LINKING BASES AS SHOWN. HOWEVER, DO NOT INTERCONNECT REMOTE INDICATOR OUTPUTS OF 4098-9788EA BASES WITH 5B (OR MUB) BASES, OR THE DETECTOR CIRCUIT WILL BE SHORT CIRCUITED.
 - WHEN USING MULTIPLE DETECTOR TYPES ON ONE CIRCUIT, THE SUM OF EACH TYPE'S QUANTITY AS A PROPORTION OF ITS MAXIMUM MUST NOT EXCEED 1, E.G. 22 X 614I AND 16 X 4098-9603EA ARE NOT PERMITTED ON 4100-5001 AS 22/40 + 16/30 IS GREATER THAN 1.

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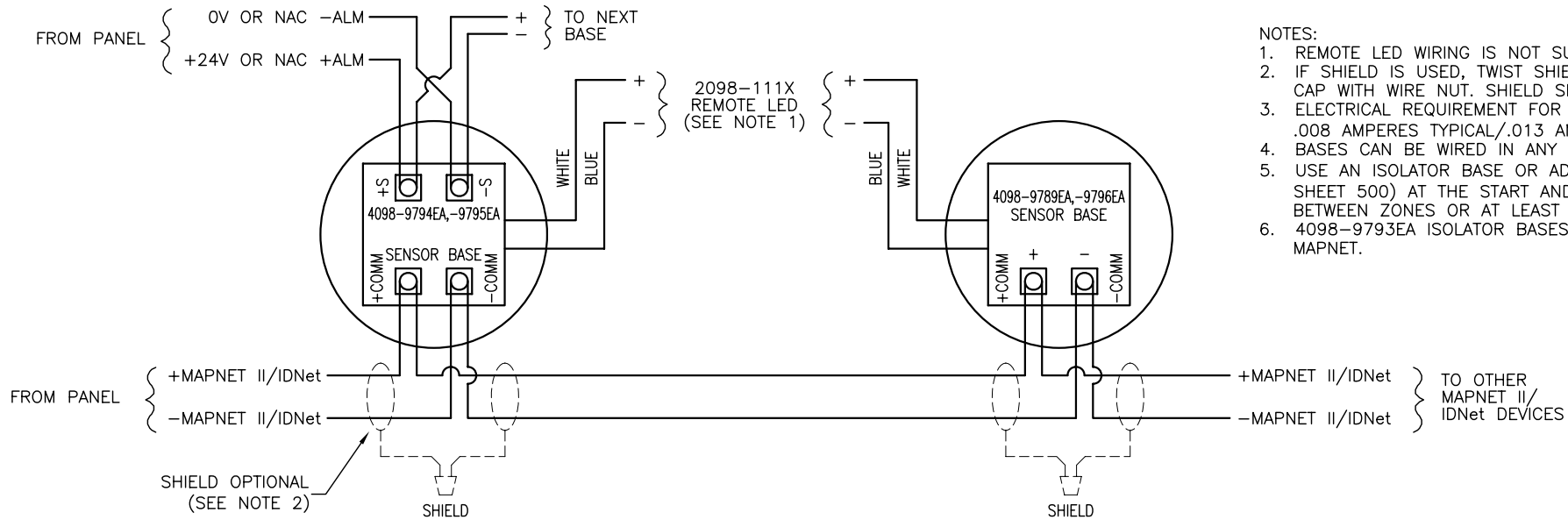
3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

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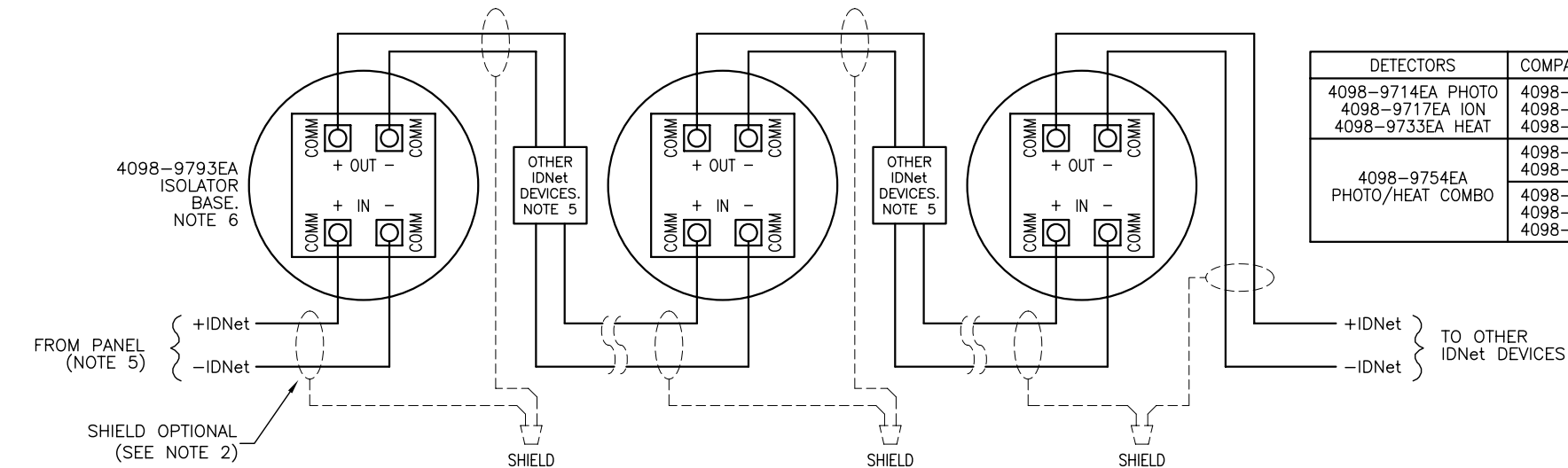
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4100U 2 WIRE DETECTOR BASES - CONVENTIONAL DETECTORS WIRING DIAGRAM			
DRAWING No: 1976-181 SHEET 101 of N			
A3	ISS/REV	A	PART No:



NOTES:

1. REMOTE LED WIRING IS NOT SUPERVISED.
2. IF SHIELD IS USED, TWIST SHIELD WIRES TOGETHER AND CAP WITH WIRE NUT. SHIELD SHOULD BE INSULATED.
3. ELECTRICAL REQUIREMENT FOR EACH BASE: 18 TO 32VDC, .008 AMPERES TYPICAL/.013 AMPERES MAX.
4. BASES CAN BE WIRED IN ANY ORDER.
5. USE AN ISOLATOR BASE OR ADDRESSABLE ISOLATOR (SEE SHEET 500) AT THE START AND END OF EACH LOOP AND BETWEEN ZONES OR AT LEAST EVERY 40 DEVICES.
6. 4098-9793EA ISOLATOR BASES CANNOT BE USED WITH MAPNET.



DETECTORS	COMPATIBLE BASES	
4098-9714EA PHOTO 4098-9717EA ION 4098-9733EA HEAT	4098-9789EA 4098-9793 ISOLATOR, NOTE 6 4098-9794EA SOUNDER	MAPNET OR IDNet
4098-9754EA PHOTO/HEAT COMBO	4098-9795EA SOUNDER 4098-9796EA	MAPNET ONLY
	4098-9789EA 4098-9793EA ISOLATOR 4098-9794EA SOUNDER	IDNet ONLY

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06
B	NOTE 5 - ISOLATOR AT START AND END ADDED.	3809	KJS	PA	LSC	DP	20-11-06

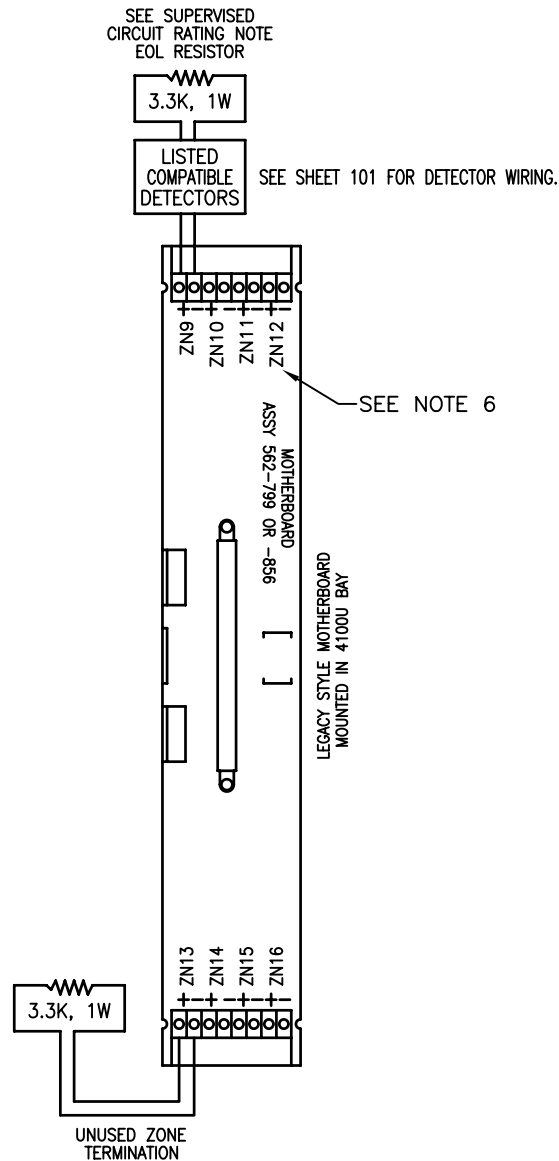
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4100U
TRUEALARM ADDRESSABLE DETECTOR BASES
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 102 of N

A3	ISS/REV B	PART No:	
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SUPERVISED CIRCUIT RATING

STANDBY VOLTAGE RANGE AT DETECTOR...16.5 – 32VDC
 MAXIMUM DETECTOR STANDBY LOAD CURRENT...3.0mA
 MAXIMUM ALARM (SHORT) CIRCUIT CURRENT...60mA
 MAXIMUM LINE RESISTANCE...50 OHMS
 EOL RESISTANCE.....3300 OHMS

NOTES:

1. IF ZONE IS NOT USED, CONNECT A 3.3K, 1W RESISTOR ACROSS ZONE TERMINALS AS SHOWN ON ZONE 13.
2. WIRE MUST BE 0.75 SQ.mm OR GREATER.
3. ALL DEVICE WIRING TO BE TERMINATED TO THE APPROPRIATE ZONE AS SHOWN ON ZONE 9.
4. CONDUCTORS MUST TEST FREE OF ALL GROUNDS.
5. EACH ZONE IS MARKED WITH ITS CIRCUIT NUMBER, ZN1,ZN2,ZN3,...ZN128. REFER TO "4100U PROGRAMMER REPORT" WHICH REFERENCES THE EXACT WIRES CONNECTED, PER JOB.
6. FOR ZONES THAT CONNECT TO CLEAN CONTACTS ONLY, MAX LINE RESISTANCE IS 800 OHMS.

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3rd ANGLE PROJECTION

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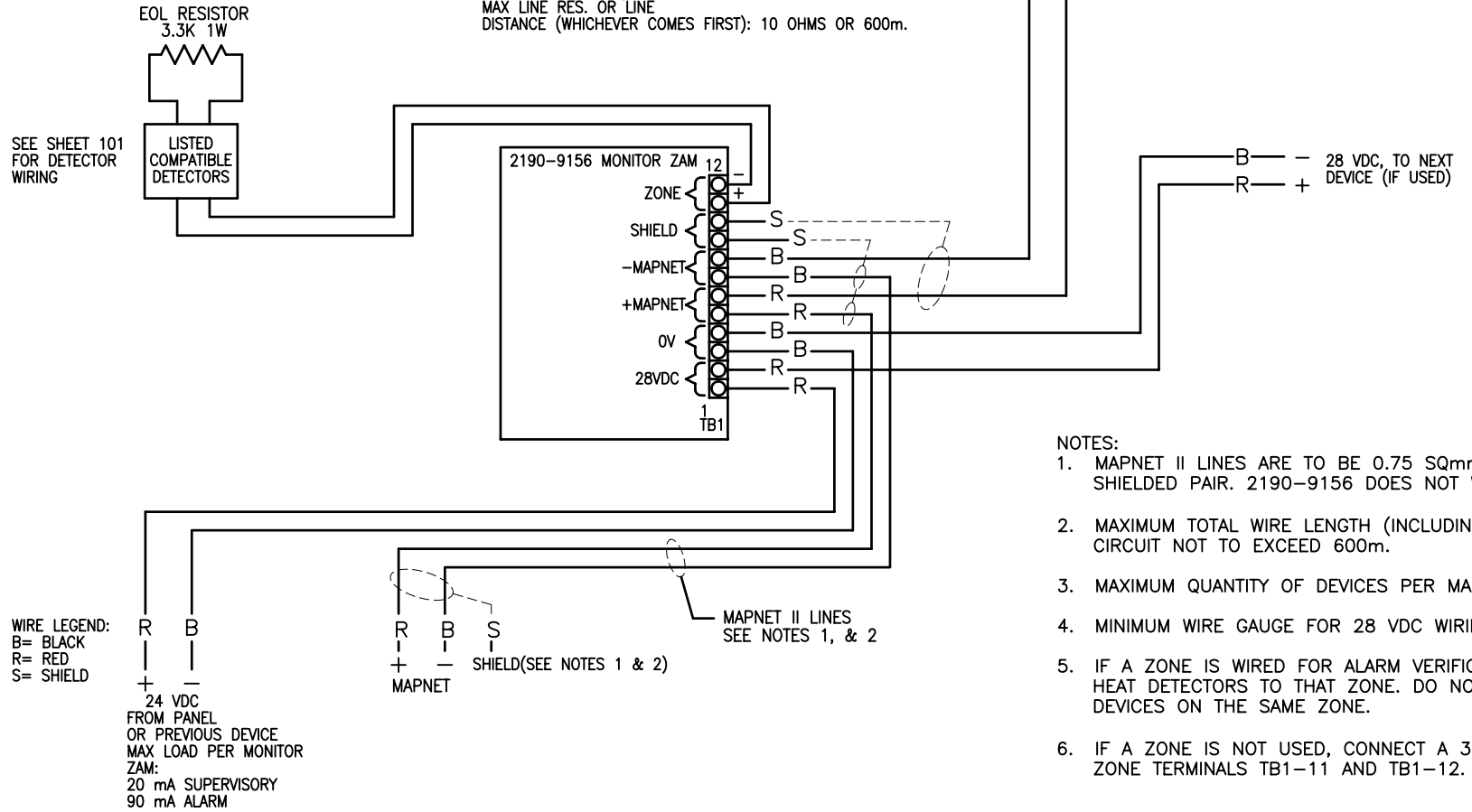
4100U
8 ZONE MODULE - CONVENTIONAL DETECTOR
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 200 of N

A3	ISS/REV A	PART No:
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EACH ZONE

CIRCUIT VOLTAGE RATING: 28 VDC
 LINE SUPERVISION CURRENT: 7.5 mA
 DETECTOR IDLE CURRENT: 2.0 mA
 TOTAL SUPERVISION CURRENT: 9.5 mA
 VOLTAGE SUPPLIED: 15.9 TO 23V
 MAX ALARM (SHORT) CIRCUIT CURRENT: 70 mA
 MAX LINE RES. OR LINE
 DISTANCE (WHICHEVER COMES FIRST): 10 OHMS OR 600m.



- NOTES:
1. MAPNET II LINES ARE TO BE 0.75 SQmm OR GREATER TWISTED SHIELDED PAIR. 2190-9156 DOES NOT WORK WITH IDNET.
 2. MAXIMUM TOTAL WIRE LENGTH (INCLUDING ALL BRANCHES) ON CIRCUIT NOT TO EXCEED 600m.
 3. MAXIMUM QUANTITY OF DEVICES PER MAPNET CIRCUIT: 127.
 4. MINIMUM WIRE GAUGE FOR 28 VDC WIRING IS 0.75 SQmm.
 5. IF A ZONE IS WIRED FOR ALARM VERIFICATION, WIRE ONLY SMOKE OR HEAT DETECTORS TO THAT ZONE. DO NOT USE ANY OTHER TYPE OF DEVICES ON THE SAME ZONE.
 6. IF A ZONE IS NOT USED, CONNECT A 3.3K 1/2W RESISTOR ACROSS ZONE TERMINALS TB1-11 AND TB1-12.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

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4100U
 MAPNET MONITOR ZONE ADDRESSABLE MODULE (2190-9156)
 WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 201 of N

A3 ISS/REV A PART No:

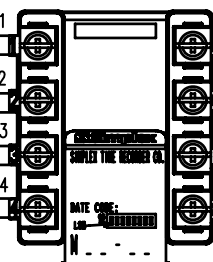
WIRE LEGEND:

B= BLACK
R= RED
S= SHIELD

MAX LOAD PER MONITOR
ZAM:
16 mA NORMAL
72 mA ALARM
@ 24V

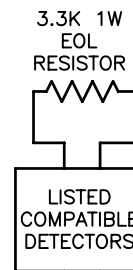
24 VDC FROM PREVIOUS DEVICE
+ RED
- BLACK

4090-9101



DETECTOR CIRCUIT

SUPERVISED CIRCUIT
NOMINAL VOLTAGE 24 VDC
LINE SUPERVISION CURRENT: 7.5 mA
DETECTOR IDLE CURRENT: 2.0 mA
TOTAL SUPERVISION CURRENT: 9.5 mA
VOLTAGE SUPPLIED: 15.4 TO 32V
MAX ALARM (SHORT) CIRCUIT CURRENT: 72 mA
MAX LINE RES. OR LINE DISTANCE (WHICHEVER COMES FIRST): 10 OHMS OR 600m



SEE SHEET 101 FOR DETECTOR WIRING.

RED + } 24V TO NEXT DEVICE (IF USED)
BLACK - }

RED + } TO NEXT DEVICE (IF USED)
BLACK - }

R B S
+ - OPTIONAL SHIELD
IDNet OR MAPNET FROM PREVIOUS DEVICE

NOTES:

1. MAPNET II OR IDNET LINES ARE TO BE 0.75 SQmm OR GREATER TWISTED SHIELDED PAIR.
2. MAXIMUM TOTAL WIRE LENGTH (INCLUDING ALL BRANCHES) ON CIRCUIT NOT TO EXCEED 600m.
3. MAXIMUM QUANTITY OF DEVICES PER MAPNET CIRCUIT: 127.
4. MINIMUM WIRE GAUGE FOR 28 VDC WIRING IS 0.75 SQmm.
5. IF A ZONE IS WIRED FOR ALARM VERIFICATION, WIRE ONLY SMOKE OR HEAT DETECTORS TO THAT ZONE. DO NOT USE ANY OTHER TYPE OF DEVICES ON THE SAME ZONE.
6. IF A ZONE IS NOT USED, CONNECT A 3.3K 1/2W RESISTOR ACROSS ZONE TERMINALS 7 AND 8.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

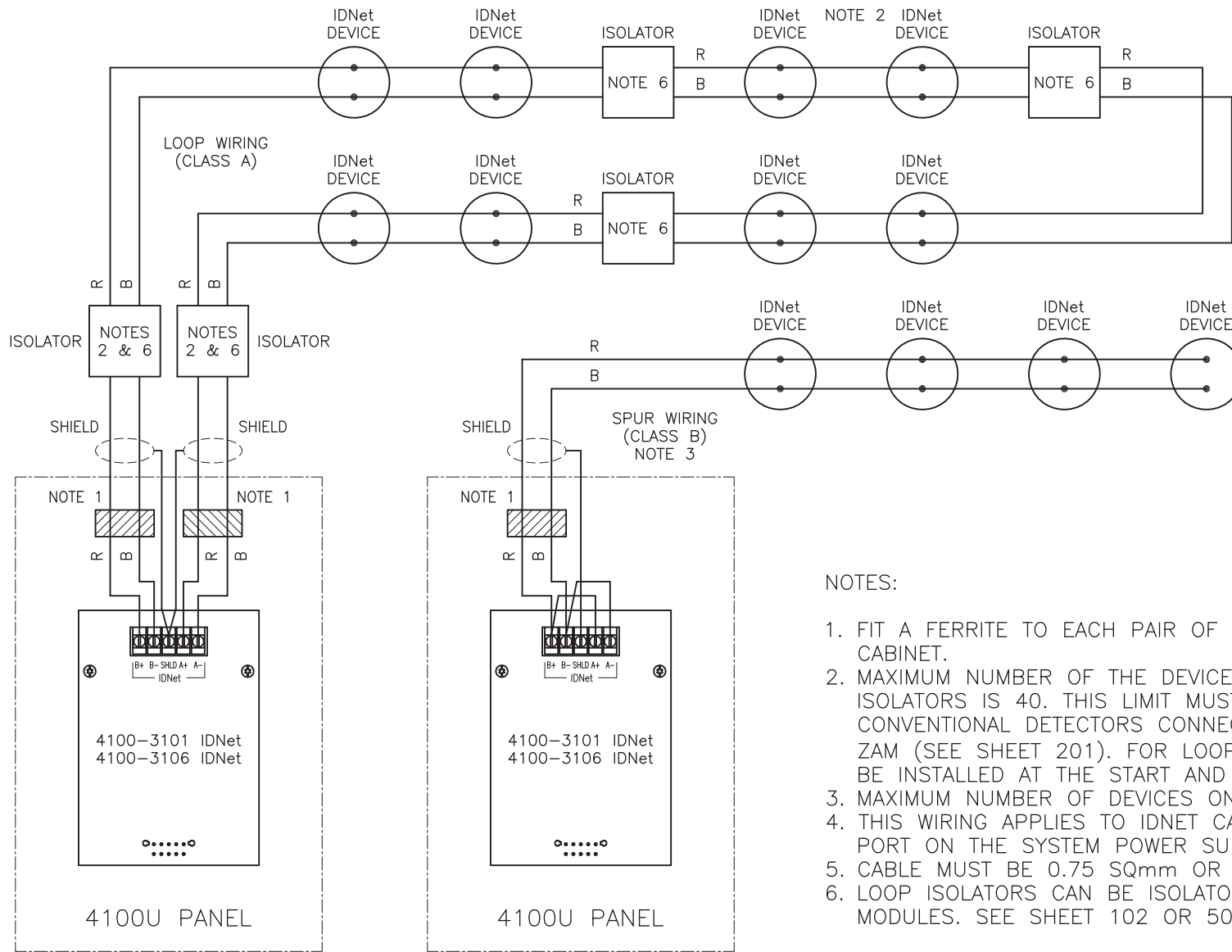
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4100U
ZONE ADDRESSABLE MODULE (4090-9101)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 202 of N

A3	ISS/REV A	PART No:
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NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100U CABINET.
2. MAXIMUM NUMBER OF THE DEVICES BETWEEN PAIRS OF ISOLATORS IS 40. THIS LIMIT MUST INCLUDE ANY CONVENTIONAL DETECTORS CONNECTED TO AN ADDRESSABLE ZAM (SEE SHEET 201). FOR LOOP WIRING, AN ISOLATOR MUST BE INSTALLED AT THE START AND END OF THE LOOP.
3. MAXIMUM NUMBER OF DEVICES ON A WIRING SPUR IS 40.
4. THIS WIRING APPLIES TO IDNET CARDS AND TO THE IDNET PORT ON THE SYSTEM POWER SUPPLY.
5. CABLE MUST BE 0.75 SQmm OR HEAVIER.
6. LOOP ISOLATORS CAN BE ISOLATOR BASES OR ISOLATOR MODULES. SEE SHEET 102 OR 500 FOR ISOLATOR WIRING.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				30-8-06
B	NOTE 2 UPDATED. ISOLATORS AT START AND END.	3809	KJS	PA	LSC	DP	10-11-06
C	FIXED TYPOS	4352	KJS	LSC	RC	DP	13-4-12

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4100U
IDNET LOOP CARD WIRING
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 203 of N

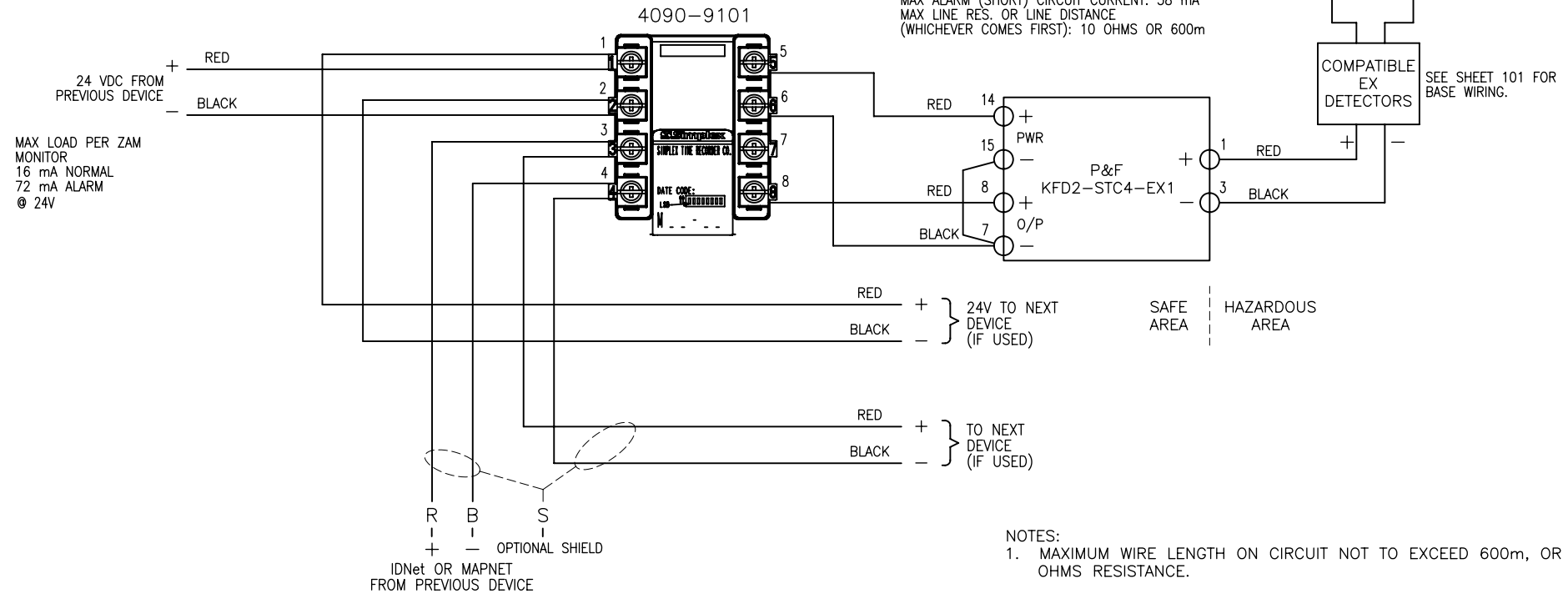
A3 ISS/REV C PART No:

WIRE LEGEND:

B= BLACK
R= RED
S= SHIELD

DETECTOR CIRCUIT

NOMINAL VOLTAGE: 22 VDC
LINE SUPERVISION CURRENT: 7.5 mA
DETECTOR IDLE CURRENT: 1.0 mA
MAX ALARM (SHORT) CIRCUIT CURRENT: 38 mA
MAX LINE RES. OR LINE DISTANCE
(WHICHEVER COMES FIRST): 10 OHMS OR 600m



MAX LOAD PER ZAM MONITOR
16 mA NORMAL
72 mA ALARM
@ 24V

3.3K 1W
EOL
RESISTOR

COMPATIBLE
EX
DETECTORS

SEE SHEET 101 FOR
BASE WIRING.

NOTES:

1. MAXIMUM WIRE LENGTH ON CIRCUIT NOT TO EXCEED 600m, OR 10 OHMS RESISTANCE.
2. MAPNET II OR IDNET LINES ARE TO BE 0.75 SQmm OR GREATER TWISTED SHIELDED PAIR.
3. MAXIMUM QUANTITY OF DEVICES PER MAPNET CIRCUIT: 127.
4. MINIMUM WIRE GAUGE FOR 24 VDC WIRING IS 0.75 SQmm.
5. 24V SUPPLY AT ZAM 20.0-33V DC.
6. IF A ZONE IS NOT USED, CONNECT A 3.3K 1/2W RESISTOR ACROSS ZONE TERMINALS 7 AND 8.

COMPATIBLE "Ex" DETECTORS		QTY/CCT
MD601Ex	(HEAT)	20
MDU601Ex	(HEAT & CO)	15
MF601Ex	(ION)	20
MR601TEx	(PHOTO)	9
MU601Ex	(CO)	15
601FEx	(FLAME)	1
SHORT CIRCUIT DEVICE	(T54 ETC)	40

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3rd ANGLE PROJECTION

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A	ORIGINAL	-	PAA	RAC	RAC	DSCP	18-7-07

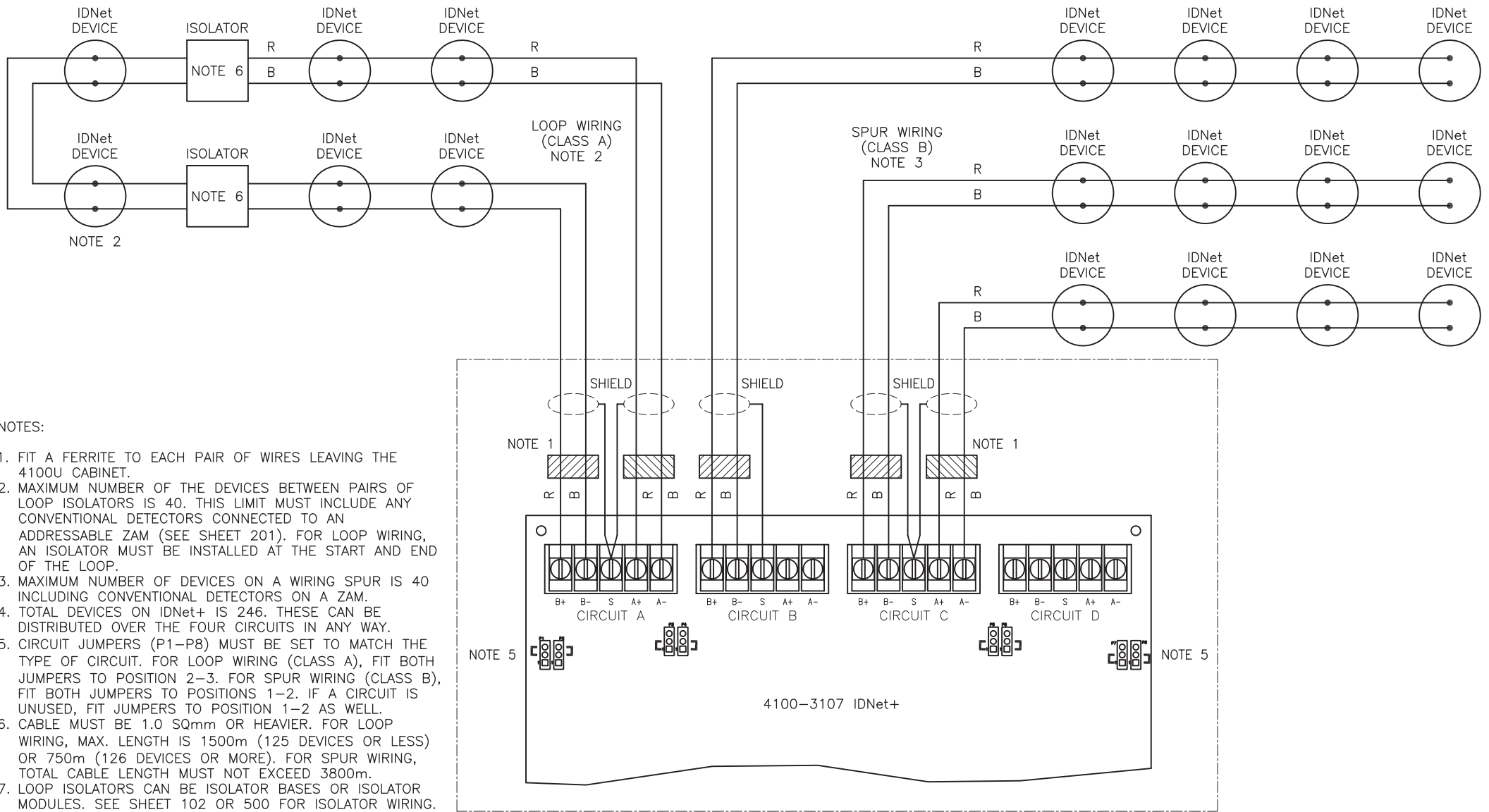
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4100U
4090-9101 ZAM & "Ex" DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 205 of N

A3	ISS/REV A	PART No:	
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3rd ANGLE PROJECTION

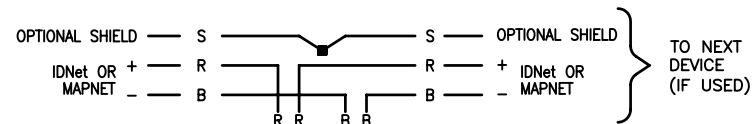
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS	LSC	RC	DP	13-4-12

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**4100U
 IDNET+ LOOP CARD
 WIRING DIAGRAM**

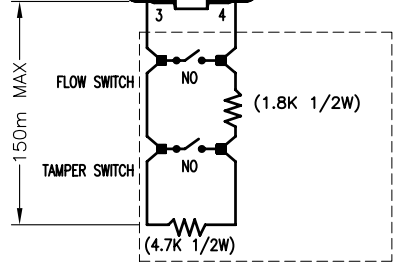
DRAWING No: 1976-181 SHEET 206 of N

A3	ISS/REV	A	PART No: LT0432
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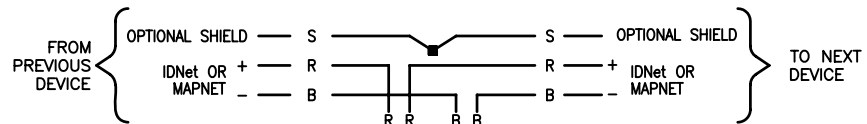


WIRE LEGEND:
R=RED
B=BLACK
S=SHIELD

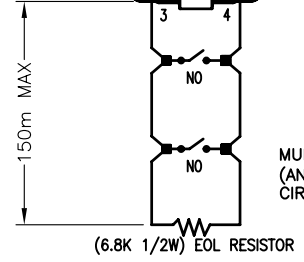
4090-9001
OR
4090-9051



EXAMPLE OF SEPARATE CONTACTS ON ONE IAM. "FLOW SWITCH" CONTACT OPERATION OVERRIDES "TAMPER SWITCH" CONTACT.



4090-9001
OR
4090-9051



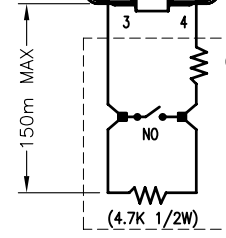
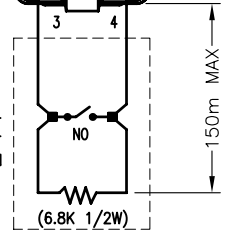
MULTIPLE CLEAN CONTACTS (ANY NUMBER). NO SHORT CIRCUIT SUPERVISION.



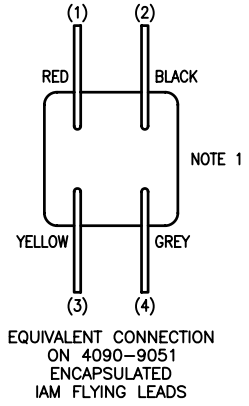
4090-9001
OR
4090-9051

NOTES:
1. 4090-9051 ENCAPSULATED IAM DOES NOT HAVE LED.
2. IAM CONTACT WIRING MUST MATCH PANEL PROGRAMMING.

SINGLE CONTACT WITHOUT SHORT CIRCUIT SUPERVISION



SINGLE CONTACT WITH SHORT CIRCUIT AND OPEN CIRCUIT SUPERVISION



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

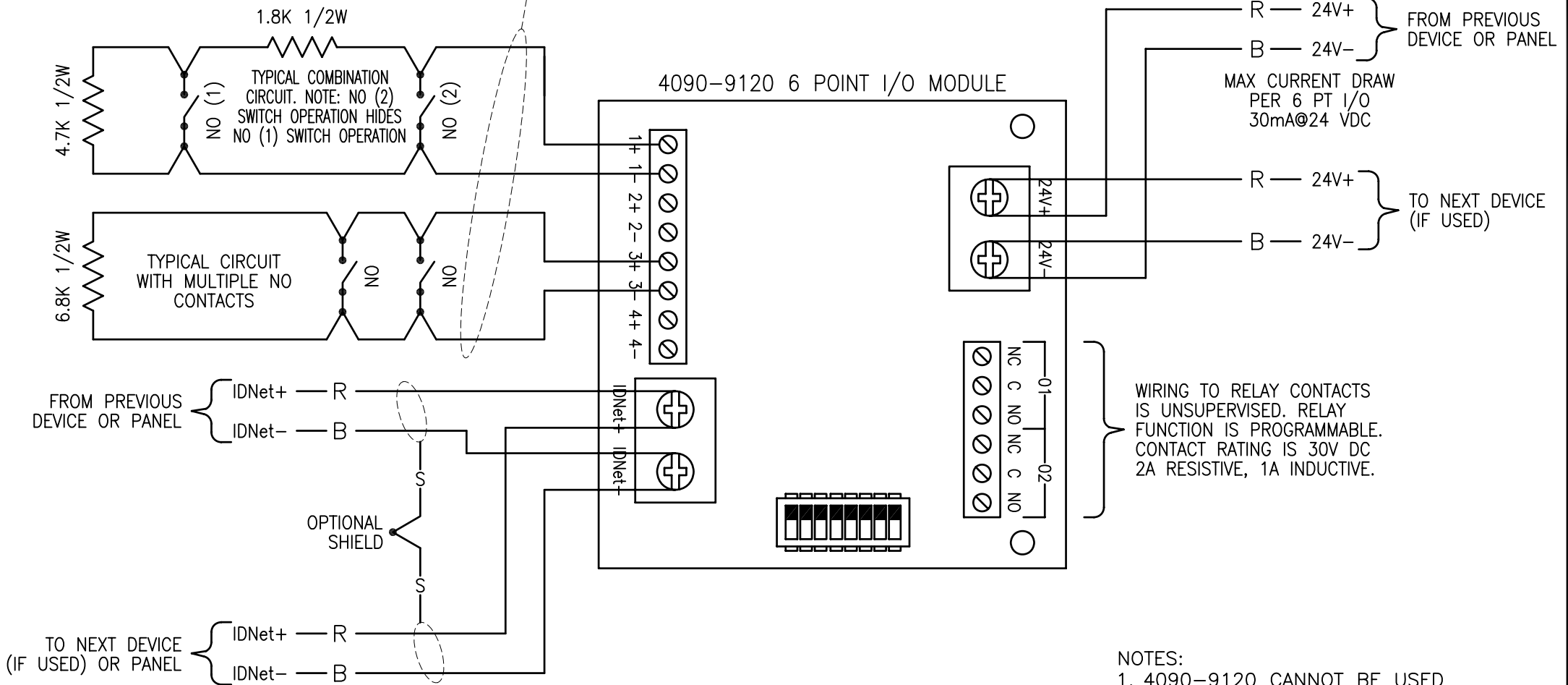
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NEW ZEALAND. FAX: +64 3 3895938

4100U
SUPERVISED IAM (4090-9001, 4090-9051)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 301 of N

A3	ISS/REV A	PART No:
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INPUT CIRCUIT LENGTHS
ARE NOT TO
EXCEED 150m



NOTES:
1. 4090-9120 CANNOT BE USED WITH MAPNET.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

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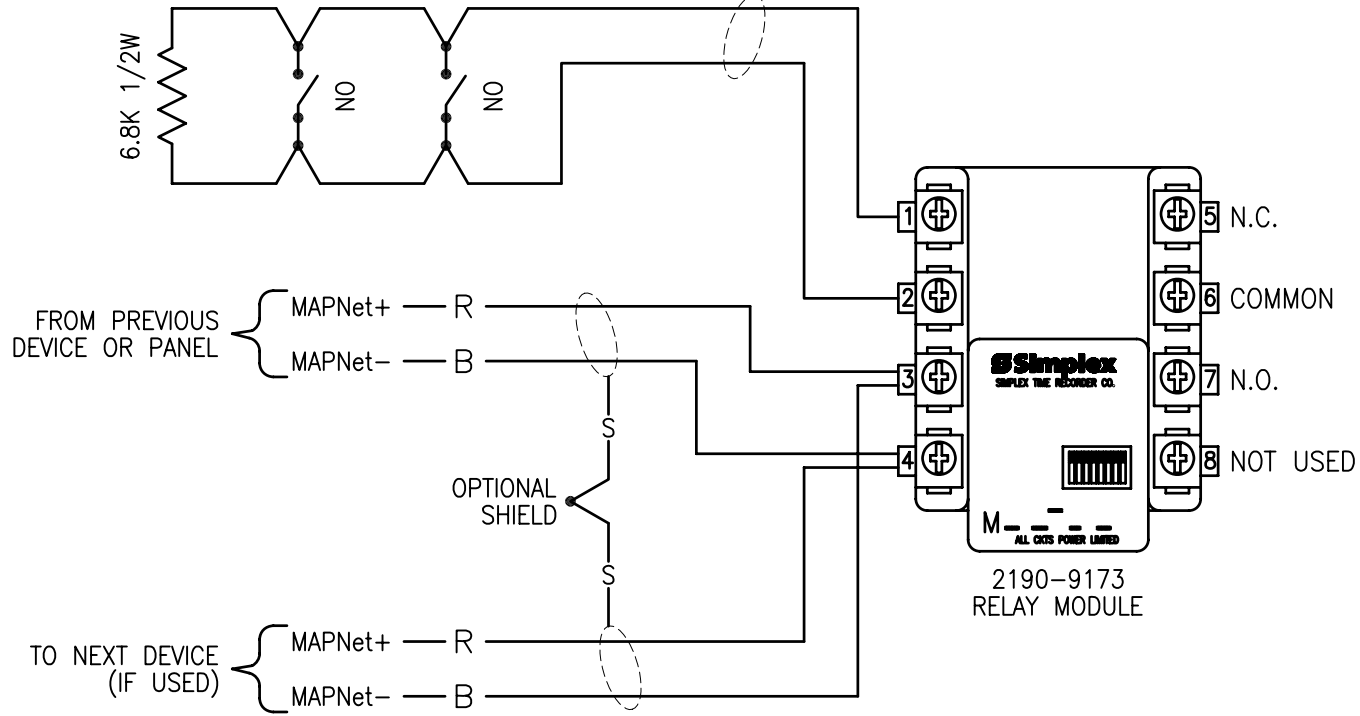
4100U
IDNET 6 POINT I/O MODULE (4090-9120)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 400 of N

A3	ISS/REV A	PART No:	
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INPUT CIRCUIT LENGTHS ARE NOT TO EXCEED 150m

MULTIPLE NO CONTACTS CAN BE CONNECTED



WIRING TO RELAY CONTACTS IS UNSUPERVISED. RELAY CONTACTS RATED FOR 2A (1A FOR INDUCTIVE LOAD), 30 VDC. RELAY FUNCTION MUST BE PROGRAMMED.

NOTES:

- DO NOT MOUNT DEVICE WHERE IT WILL EXPERIENCE SHOCKS GREATER THAN 60G, VIBRATION GREATER THAN 2.5mm (10 TO 55 Hz DOUBLE AMPLITUDE), OR MAGNETIC FIELD GREATER THAN 7000A/m.
- 2190-9173 CANNOT BE USED WITH IDNet.

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3rd ANGLE PROJECTION

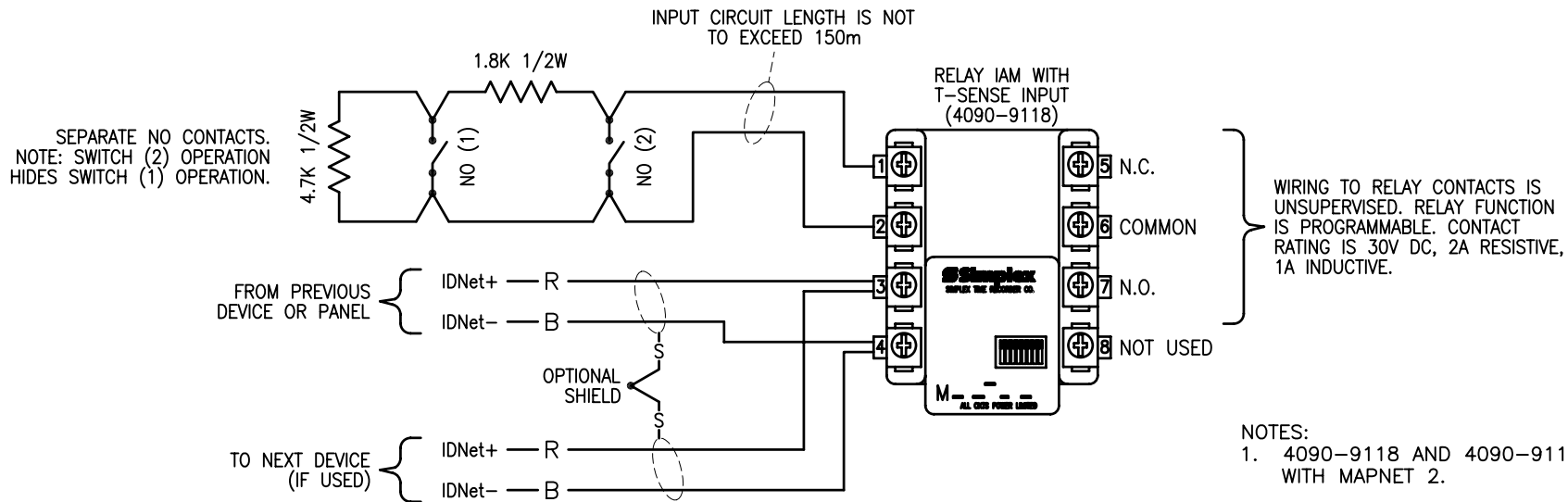
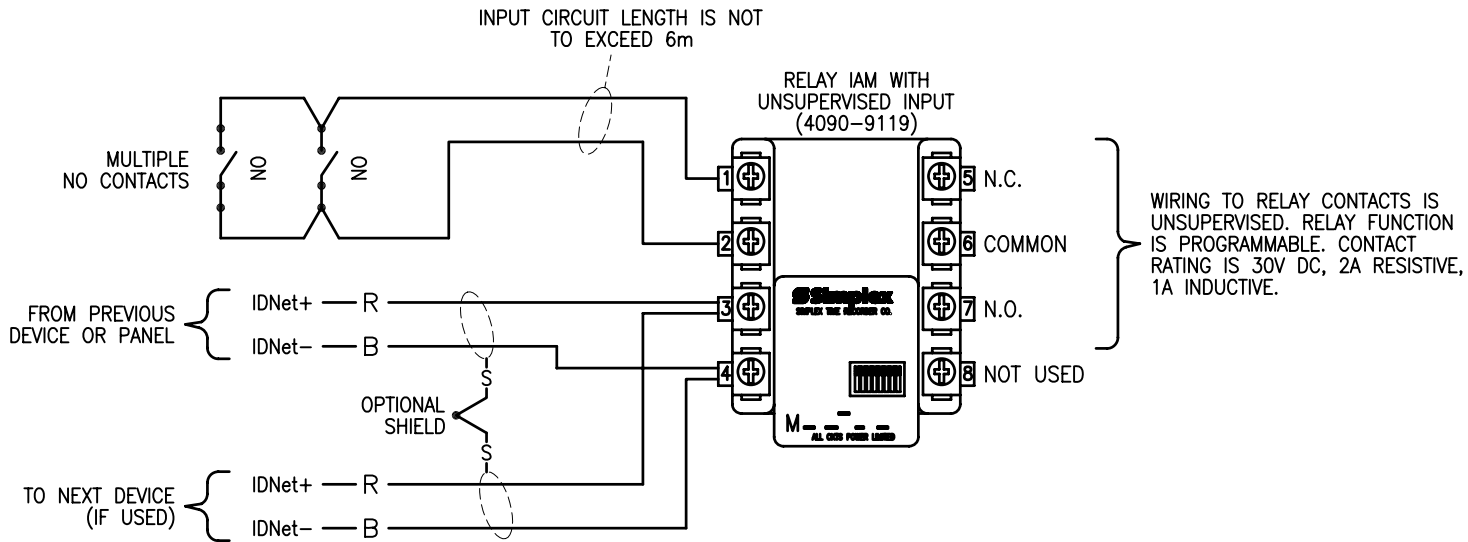
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

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4100U
 MAPNET RELAY MODULE WITH SUPERVISED INPUT
 (2190-9173) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 401 of N

A3	ISS/REV A	PART No:
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NOTES:
1. 4090-9118 AND 4090-9119 CANNOT BE USED WITH MAPNET 2.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06
B	IAM PART NUMBERS CORRECTED.	-	KJS				6-10-06

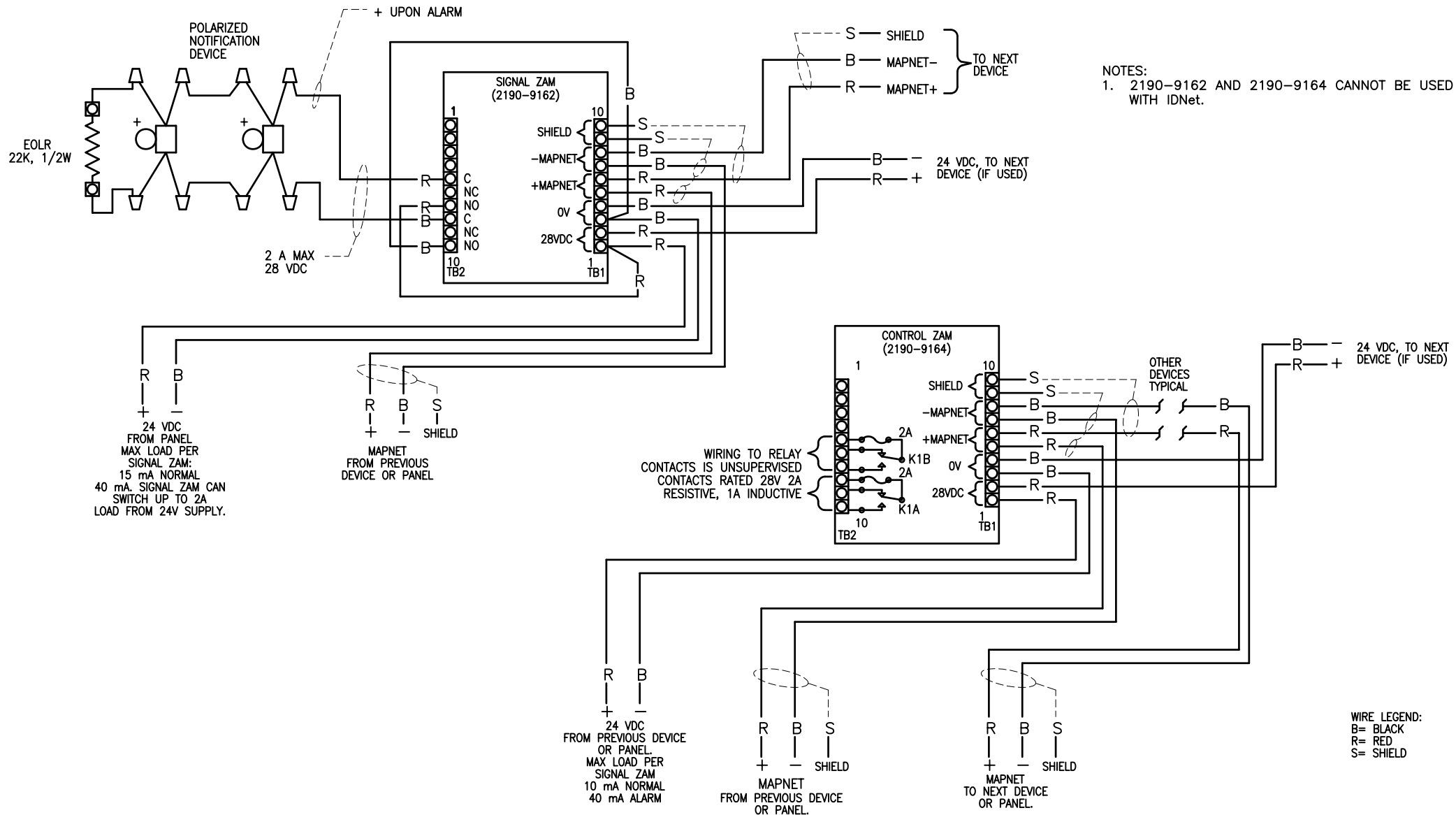
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4100U
IDNET RELAY IAMs WITH INPUTS (4090-9118, 4090-9119)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 402 of N

A3	ISS/REV B	PART No:	
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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

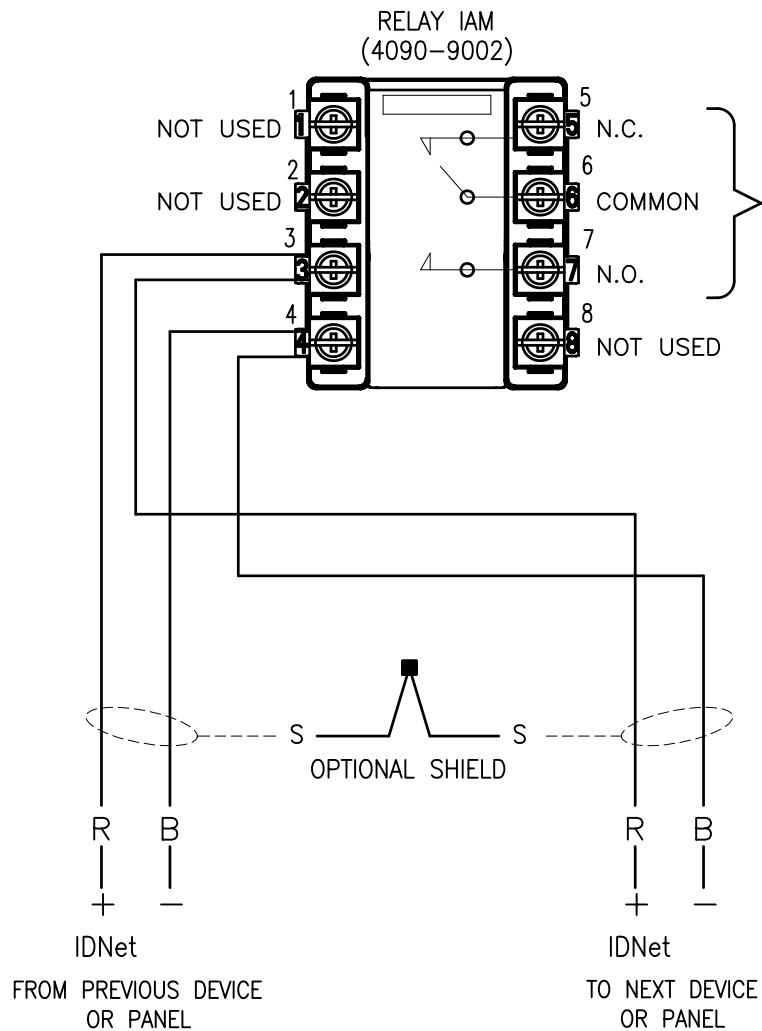
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4100U
MAPNET 2 SIGNAL ZAM (2190-9162) AND CONTROL ZAM (2190-9164) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 403 of N

A3	ISS/REV A	PART No:
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WIRING TO RELAY CONTACTS IS UNSUPERVISED.
RELAY CONTACTS RATED AT 2A, 30 VDC.
(1A FOR INDUCTIVE LOAD).
THE OPERATION OF THE RELAY IS PROGRAMMABLE.

NOTES:

1. IF SHIELD IS PRESENT, IT SHOULD BE CONNECTED TO THE OUTGOING IDNet SHIELD TO PROVIDE A CONTINUOUS SHIELD OVER THE LENGTH OF THE IDNet CIRCUIT. DO NOT CONNECT THE SHIELD TO ANY METALWORK AT THE ZAM.
2. 4090-9002 CANNOT BE USED WITH MAPNET.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

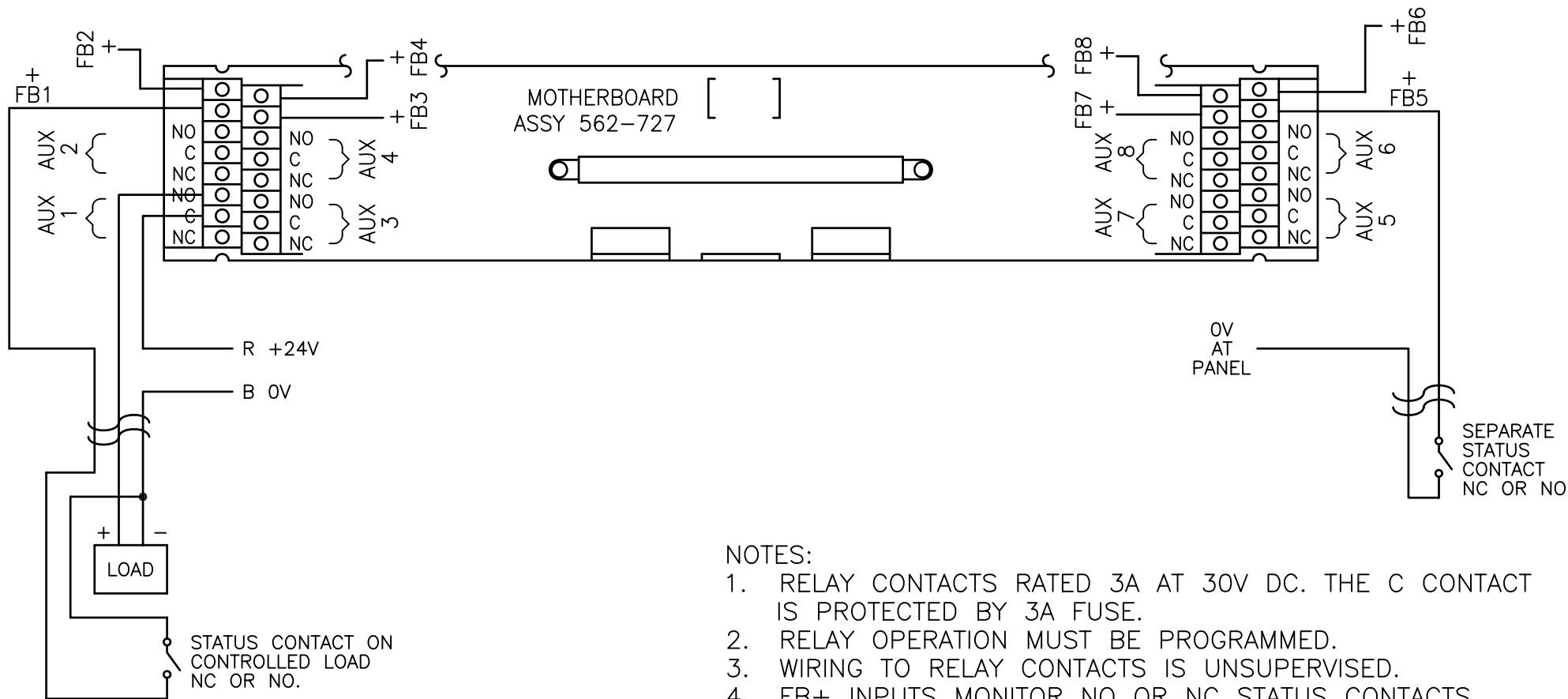
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4100U
IDNET RELAY IAM (4090-9002)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 404 of N

A3 | ISS/REV A | PART No:



NOTES:

1. RELAY CONTACTS RATED 3A AT 30V DC. THE C CONTACT IS PROTECTED BY 3A FUSE.
2. RELAY OPERATION MUST BE PROGRAMMED.
3. WIRING TO RELAY CONTACTS IS UNSUPERVISED.
4. FB+ INPUTS MONITOR NO OR NC STATUS CONTACTS FROM CONTROLLED DEVICES WITHOUT SUPERVISION. STATUS CONTACT CIRCUIT MUST RETURN TO PANEL 0V AS IN THE EXAMPLES. FB1 EXAMPLE USES THE LOAD 0V WIRING TO RETURN.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				21-7-06

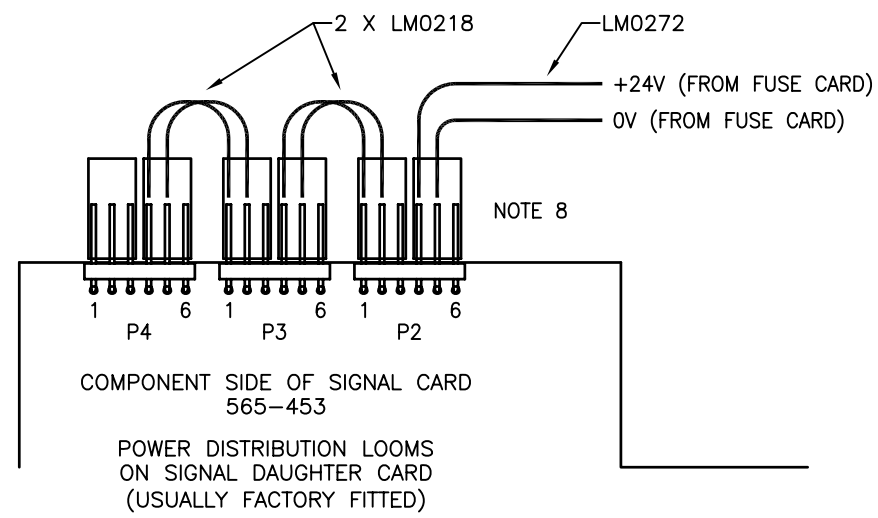
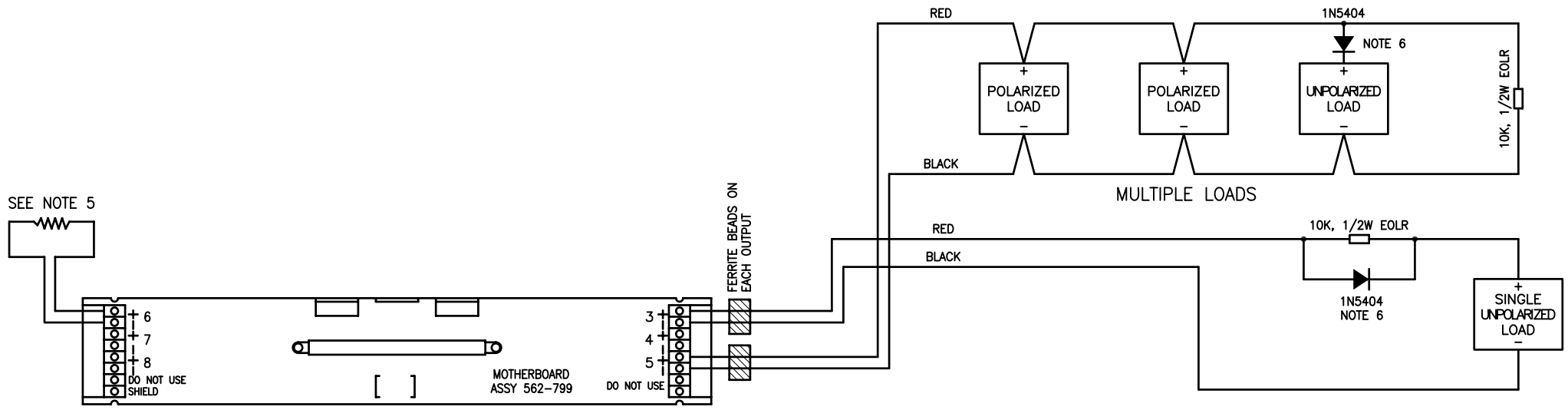
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4100U
8 POINT AUXILIARY RELAY CARD (4100-3003)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 405 of N

A3	ISS/REV A	PART No:	
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NOTES:

1. ALL WIRING MUST BE 1.5 SQ.mm SHIELDED PAIR OR TO LOCAL CODE.
2. CONDUCTORS MUST BE FREE OF ALL GROUNDS.
3. ALL WIRING IS SUPERVISED UNLESS OTHERWISE NOTED. SUPERVISORY POWER: 2.4 mA @ 24V DC.
4. ALL SIGNAL PORTS HAVE IDENTICAL CHARACTERISTICS: CAPACITY IS AT 30V DC.
5. IF A CIRCUIT IS NOT USED, CONNECT 10K, 1/2W EOLR FROM SIG+ TO SIG- TERMINALS.
6. BLOCKING DIODE - (1N5404, 3A) - REQUIRED WHEN SWITCHING NON-POLARIZED LOADS.
7. OUTPUT OPERATION MUST BE PROGRAMMED. THERE IS NO DEFAULT BEHAVIOUR.
8. DISTRIBUTION LOOMS AND CONNECTORS:
 - P2 CONNECTS TO THE FIRST TWO POINTS (SIGNAL 3 AND 4)
 - P3 CONNECTS TO THE NEXT TWO POINTS (SIGNAL 5 AND 6)
 - P4 CONNECTS TO THE FIRST TWO POINTS (SIGNAL 7 AND 8)
 - PINS 1 AND 4 CONNECT TO +24V.
 - PINS 2 AND 5 CONNECT TO 0V.
 - PINS 3 AND 6 ARE TO LOOP SHIELD THROUGH (IF USED).
 - JUMPERS P5 TO P10 ON SIGNAL CARD ARE IN "S" POSITION.

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3rd ANGLE PROJECTION

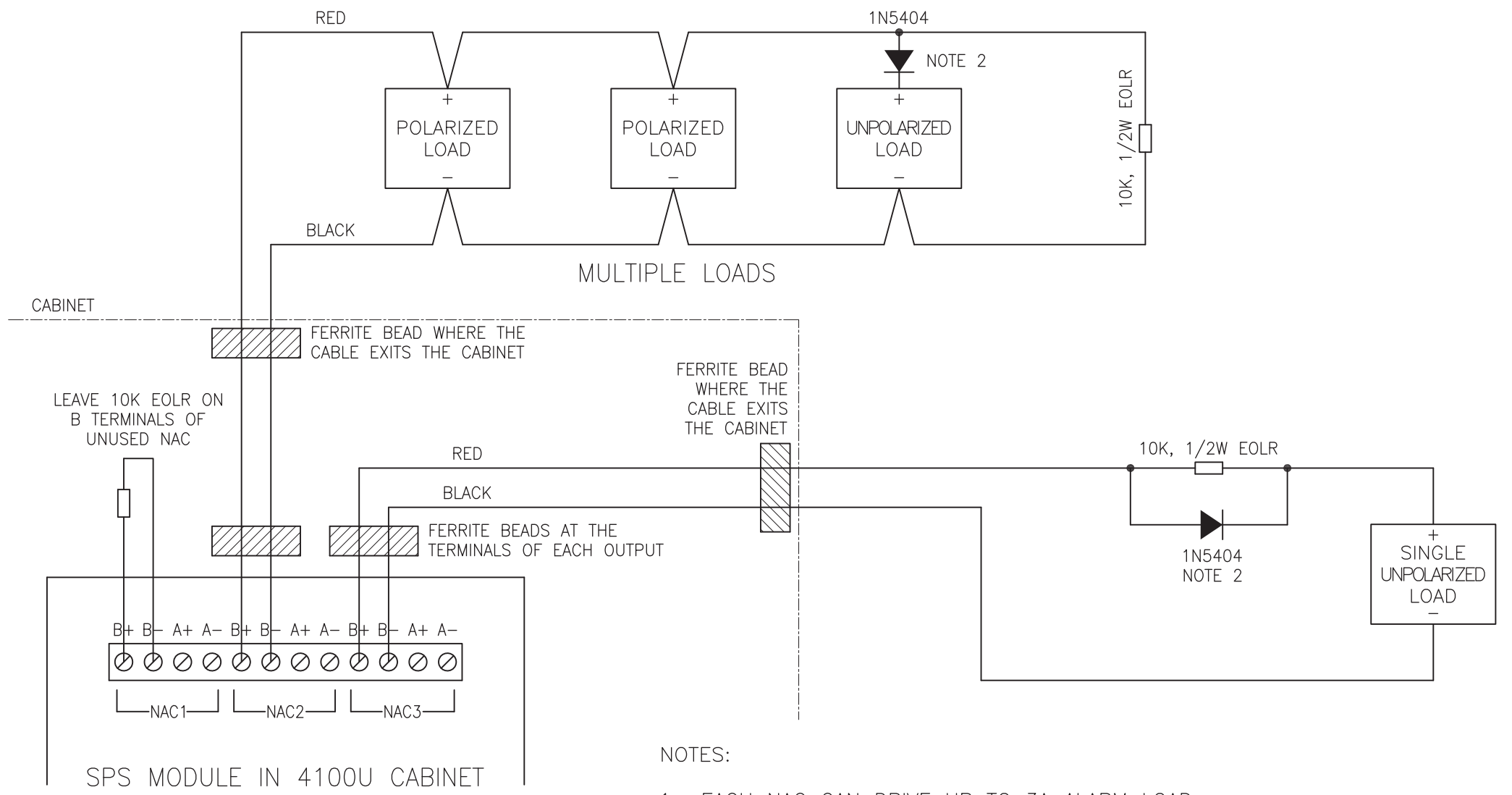
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				20-9-06

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4100U
6 POINT SIGNAL CARD (4100-4321)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 406 of N

A3	ISS/REV	A	PART No:
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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				22-8-06
B	ADDED FERRITE AT CABINET EXIT	4352	KJS	LSC	RC	DP	13-4-12

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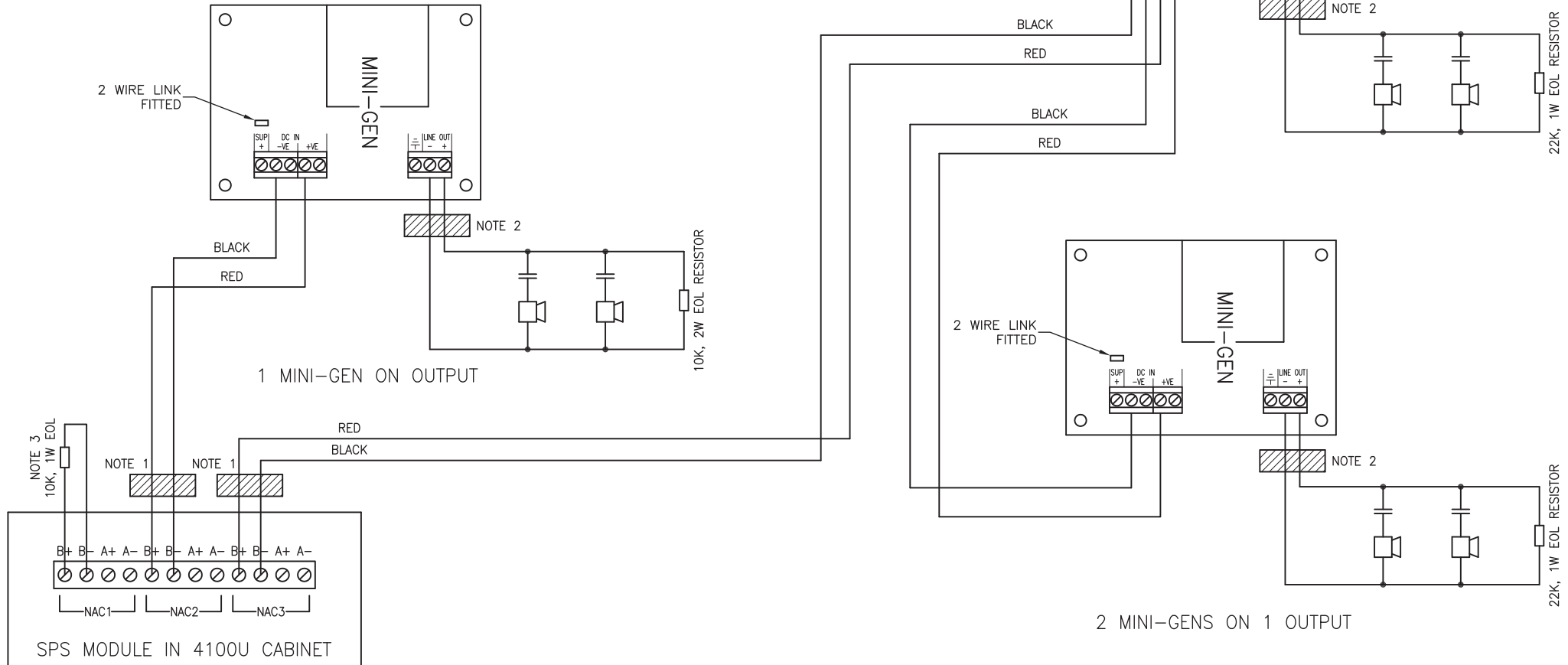
**4100U
 SPS NAC LOADS
 WIRING DIAGRAM**

DRAWING No: 1976-181 SHEET 407 of N

A3	ISS/REV	B	PART No:
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NOTES:

1. FIT FERRITE BEAD TO EACH NAC CIRCUIT AT THE TERMINALS.
2. FIT FERRITE BEAD TO EACH MINI-GEN OUTPUT.
3. LEAVE 10K BETWEEN B+ AND B- OF UNUSED NAC OUTPUTS.
4. NAC WIRING TO MINI-GENS SHOULD BE 1.00 SQ mm OR HEAVIER.
5. ALLOW 1W LOSS OF POWER FROM EACH MINI-GEN IN THE EOL RESISTOR.
6. THIS WIRING IS APPLICABLE TO ALL VERSIONS OF MINI-GEN.



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				22-8-06
B	ADDED FERRITE ON MINI-GEN OUTPUTS	4352	KJS	LSC	RC	DP	13-4-12

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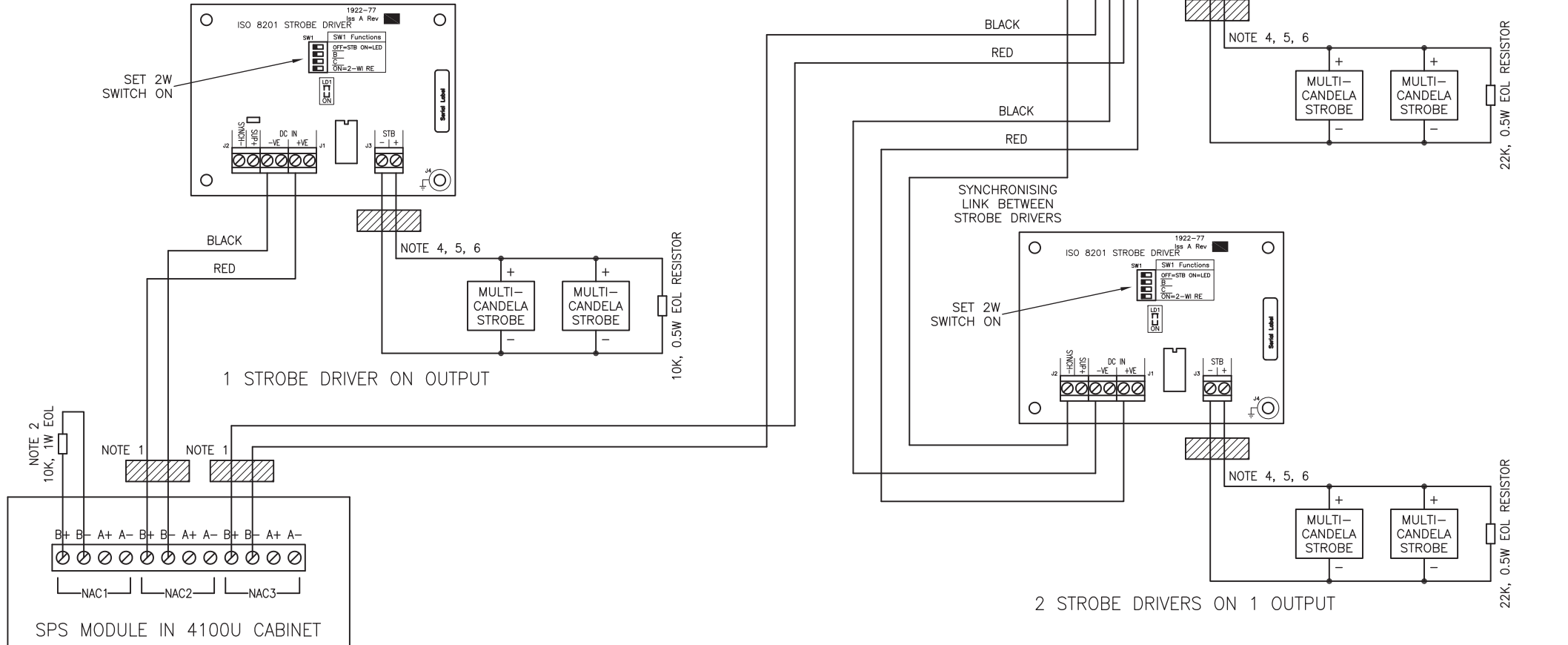
4100U
SPS NAC WIRING TO MINI-GEN TONE GENERATOR
WIRING DIAGRAM

DRAWING No: **1976-181** SHEET **409** of **N**

A3	ISS/REV B	PART No:
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NOTES:

1. FIT FERRITE BEAD TO EACH NAC CIRCUIT.
2. LEAVE 10K BETWEEN B+ AND B- OF UNUSED NAC OUTPUTS.
3. NAC WIRING TO STROBE-DRIVERS SHOULD BE 1.00 SQ mm OR HEAVIER.
4. EACH STROBE DRIVER IS RATED AT 2A MAXIMUM. EACH NAC OUTPUT IS RATED AT 3A MAXIMUM.
5. MULTICANDELA STROBES AND LED BEACONS CANNOT BE MIXED ON THE SAME CIRCUIT.
6. FIT FERRITE BEAD TO EACH STROBE DRIVER OUTPUT.



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				24-8-06
B	ADDED FERRITE ON STROBE DRIVER OUTPUTS	4352	KJS	LSC	RC	DP	13-4-12

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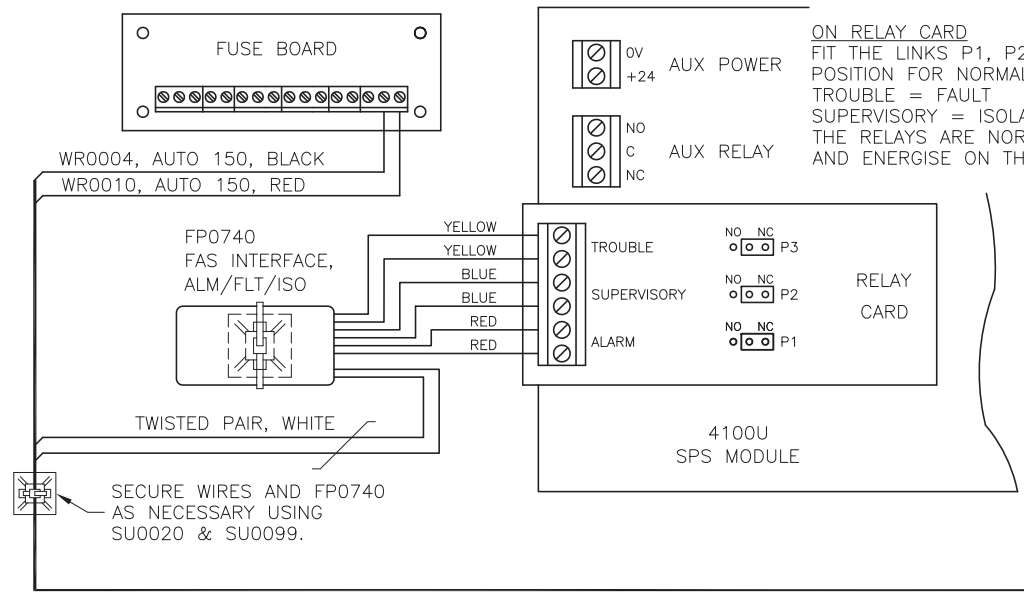
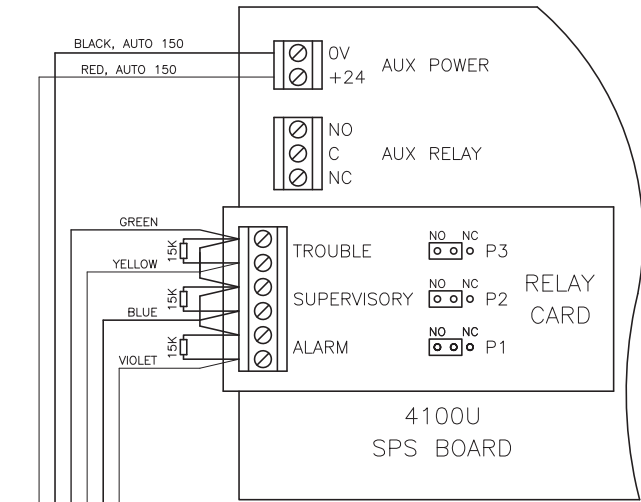
4100U
SPS NAC WIRING TO STROBE DRIVER
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 410 of N

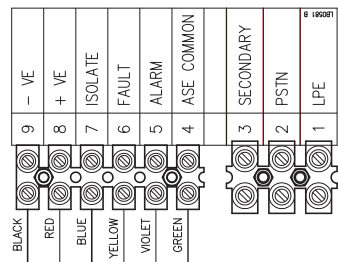
A3 ISS/REV B PART No:

ON RELAY CARD
 FIT THE LINKS P1, P2, P3 TO THE NO POSITION FOR NORMALLY OPEN CONTACTS.
 TROUBLE = FAULT
 SUPERVISORY = ISOLATE
 THE RELAYS ARE NORMALLY DE-ENERGISED AND ENERGISE ON THE RESPECTIVE STATUS.

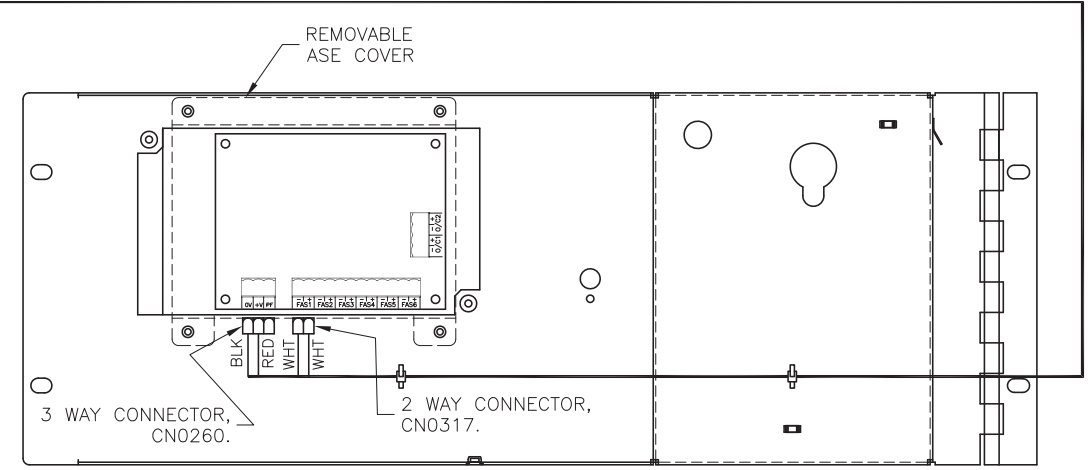
ON RELAY CARD
 FIT THE LINKS P1, P2, P3 TO THE NC POSITION FOR NORMALLY CLOSED CONTACTS.
 TROUBLE = FAULT
 SUPERVISORY = ISOLATE
 THE RELAYS ARE NORMALLY DE-ENERGISED AND ENERGISE ON THE RESPECTIVE STATUS.



ALL WIRES 0.5mm²



TERMINAL BLOCK ON 3U BRACKET



WESTERN AUSTRALIA ASE WIRING

ASE FAS INTERFACE ALM/FLT/ISO

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3rd ANGLE PROJECTION

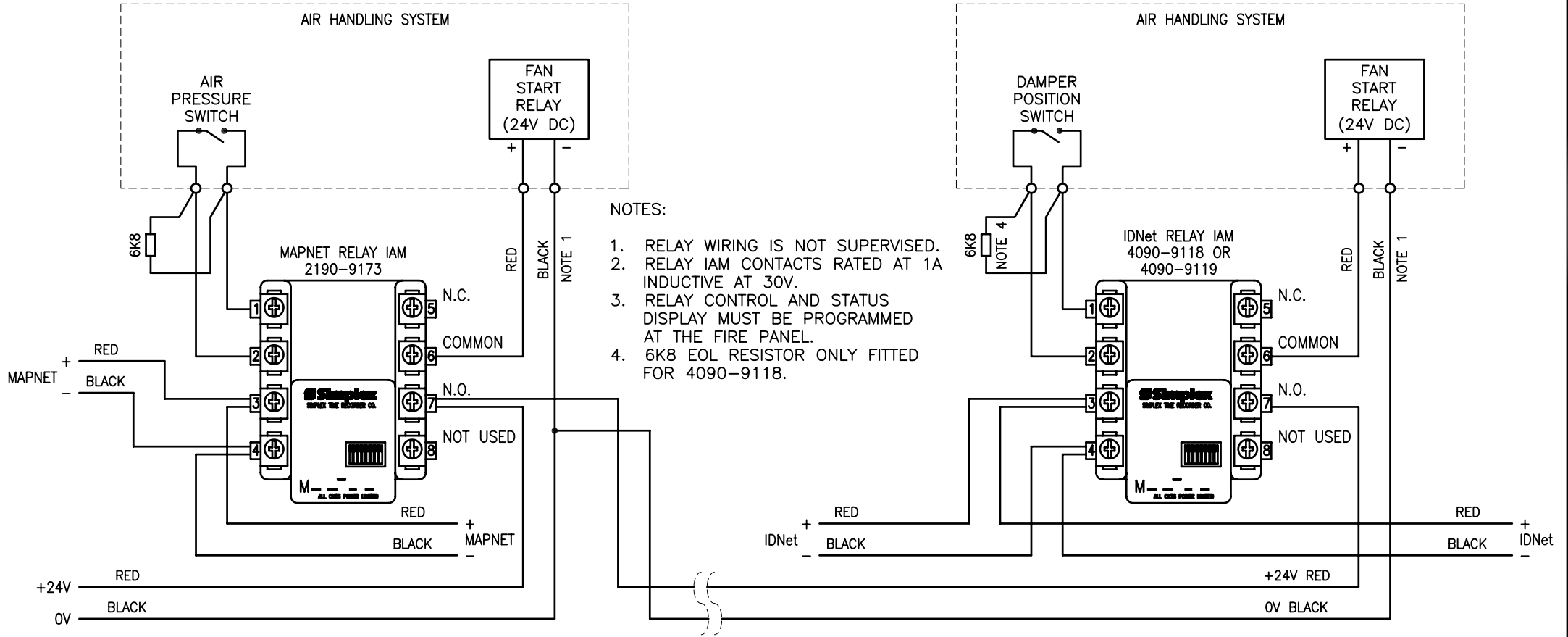
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				29-8-06
B	UPDATED FOR NEW WA ASE.	4333	KJS	YZH	RC	DP	8-3-13
C	3U ASE DOOR HINGING CHANGED.	4704	KJS	LSC	LSC	DP	24-2-15

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**4100U
 SPS BRIGADE RELAY (4100-6033)
 WIRING DIAGRAM**

DRAWING No: **1976-181** SHEET **411** of **N**

A3	ISS/REV C	PART No:
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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS	SC			22-8-06
B	NOTE 4 ADDED	-	KJS				5-10-06

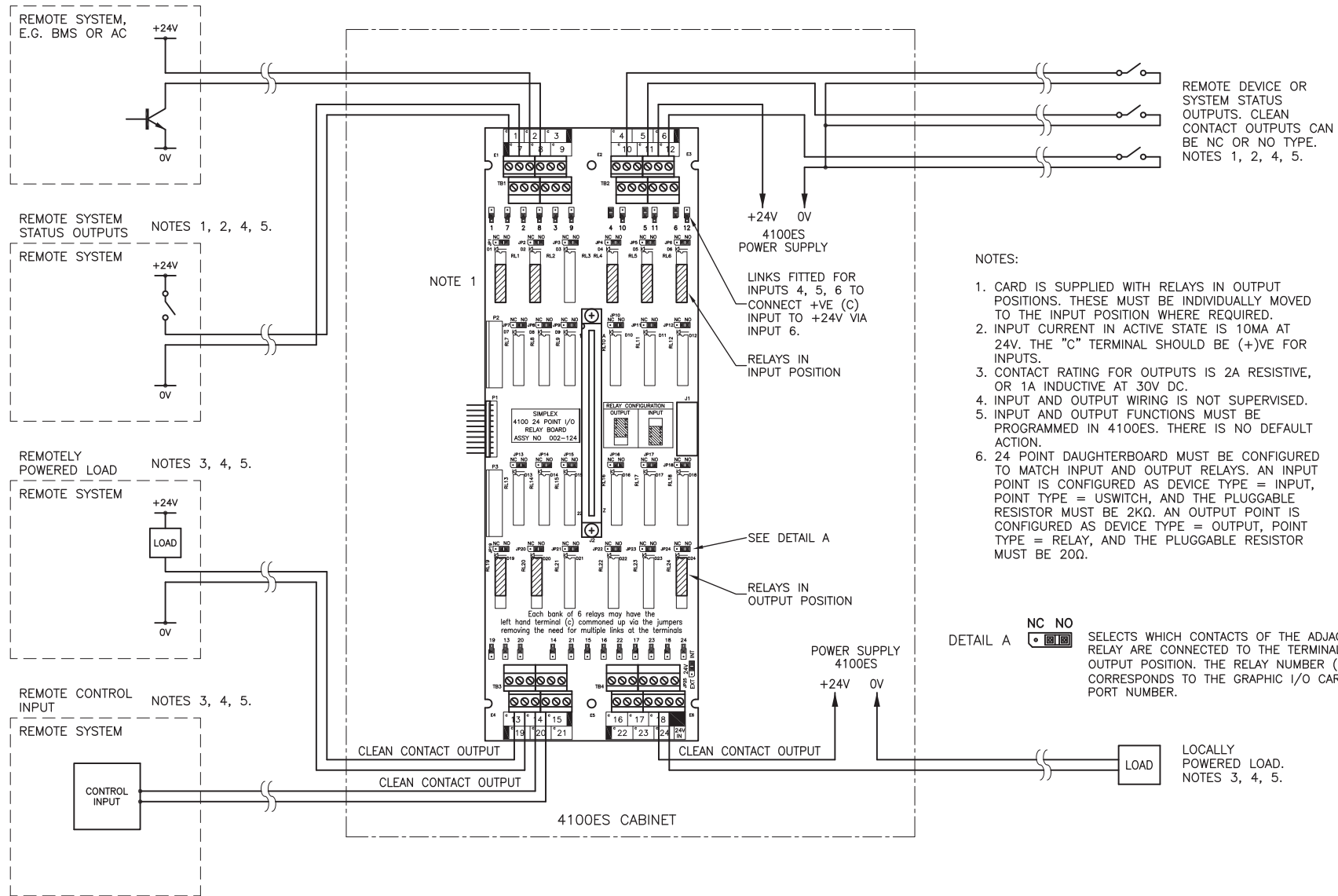
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4100U
EXAMPLES - FAN CONTROLS WITH RELAY IAMS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 412 of N

A3	ISS/REV B	PART No:	
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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				7-9-06
B	"0V" 2 PLACES WAS "+24C"	ECS1371	KJS				10-7-09
C	UPDATES FOR 4100ES	4409	KJS	GEL	LSC	DP	10-9-12

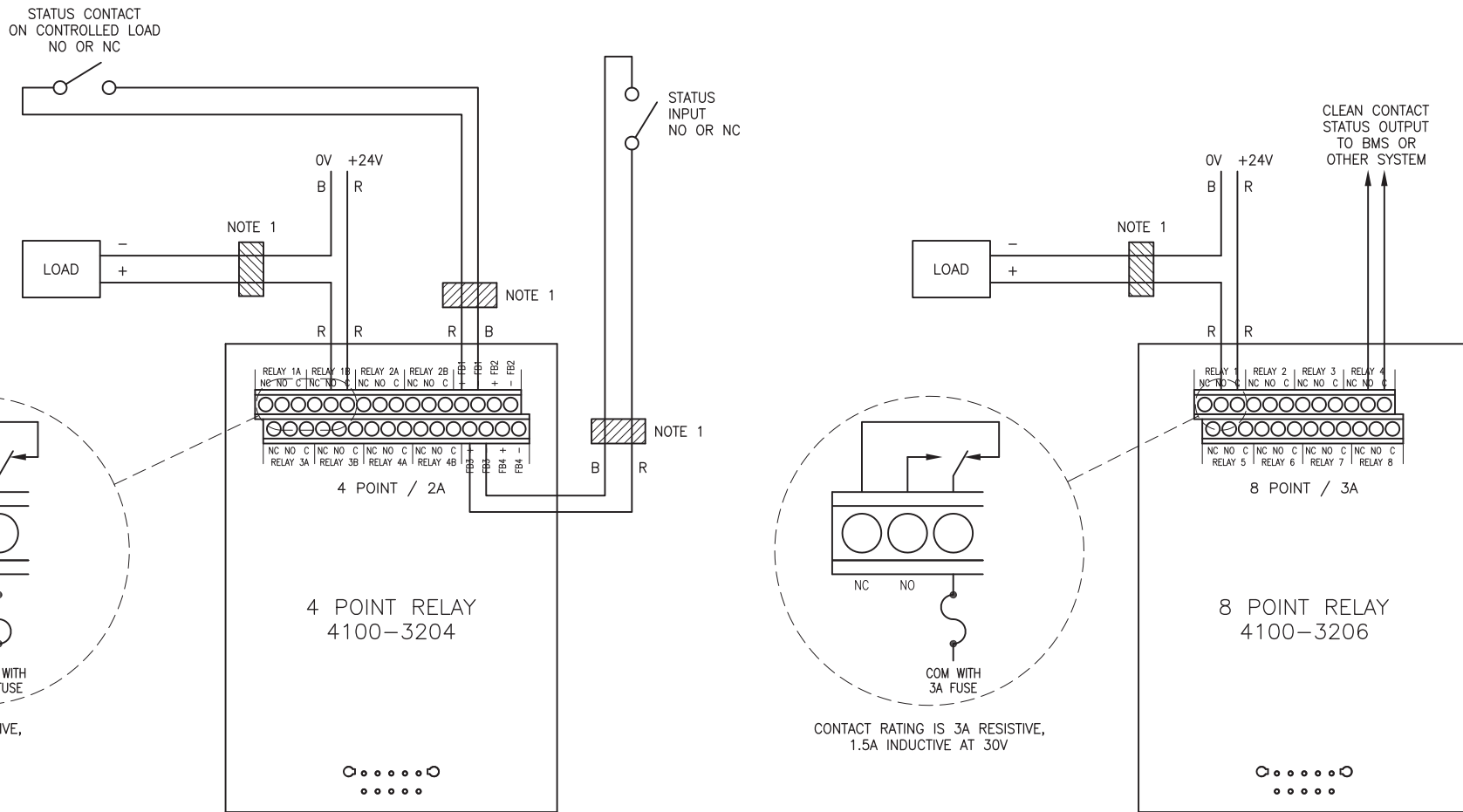
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4100ES
24 POINT I/O CARD (002-124)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 413 of N

A3 ISS/REV C PART No:



NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100U CABINET.
2. RELAY OPERATION MUST BE PROGRAMMED.
3. FIELD WIRING IS UNSUPERVISED.
4. FB+ INPUTS MONITOR NO OR NC STATUS CONTACTS FROM CONTROLLED DEVICES WITHOUT SUPERVISION.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS	LSC	RC	DP	13-4-12

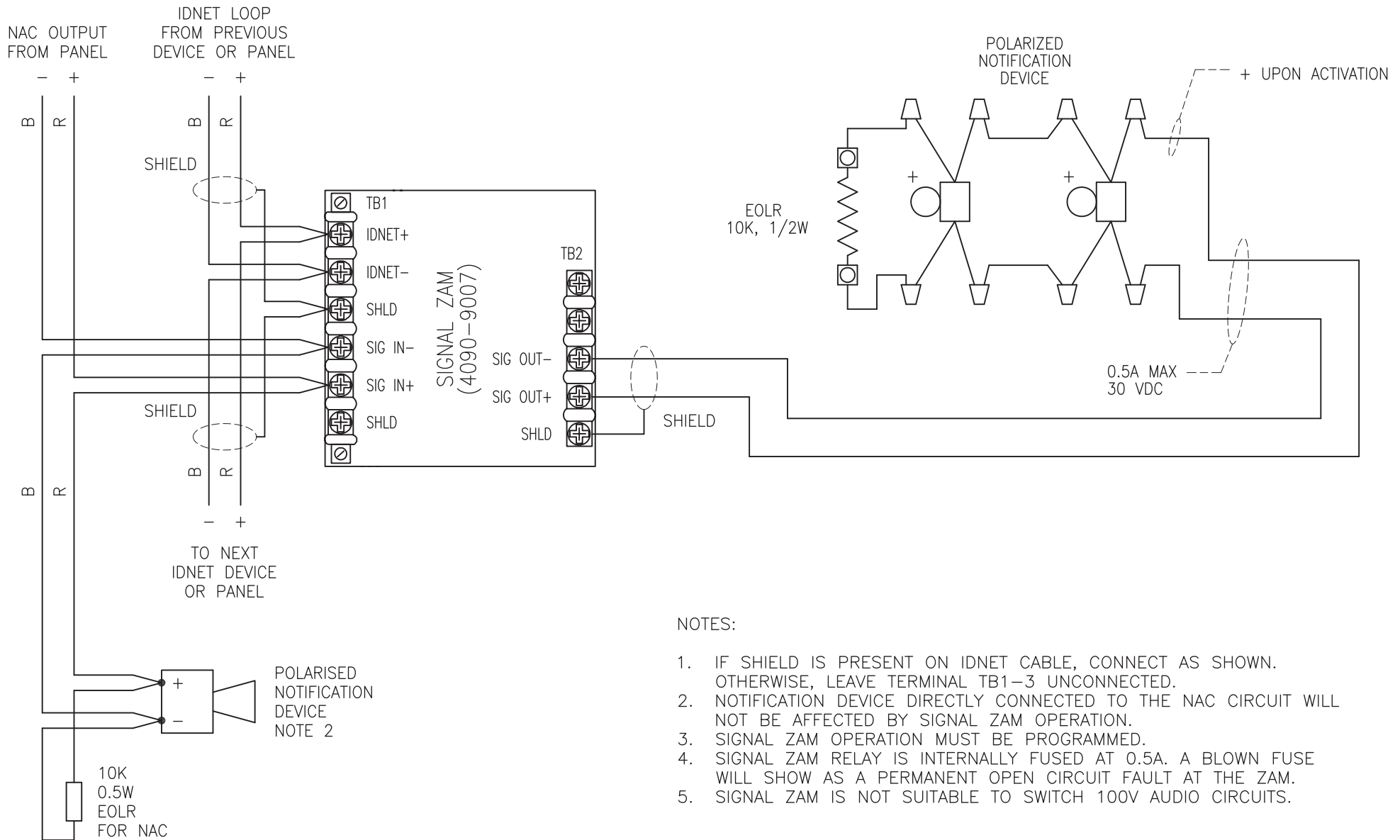
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4100U
PDI RELAY MODULE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 414 of N

A3	ISS/REV A	PART No:
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NOTES:

1. IF SHIELD IS PRESENT ON IDNET CABLE, CONNECT AS SHOWN. OTHERWISE, LEAVE TERMINAL TB1-3 UNCONNECTED.
2. NOTIFICATION DEVICE DIRECTLY CONNECTED TO THE NAC CIRCUIT WILL NOT BE AFFECTED BY SIGNAL ZAM OPERATION.
3. SIGNAL ZAM OPERATION MUST BE PROGRAMMED.
4. SIGNAL ZAM RELAY IS INTERNALLY FUSED AT 0.5A. A BLOWN FUSE WILL SHOW AS A PERMANENT OPEN CIRCUIT FAULT AT THE ZAM.
5. SIGNAL ZAM IS NOT SUITABLE TO SWITCH 100V AUDIO CIRCUITS.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4352	KJS	LSC	RC	DP	16-4-12

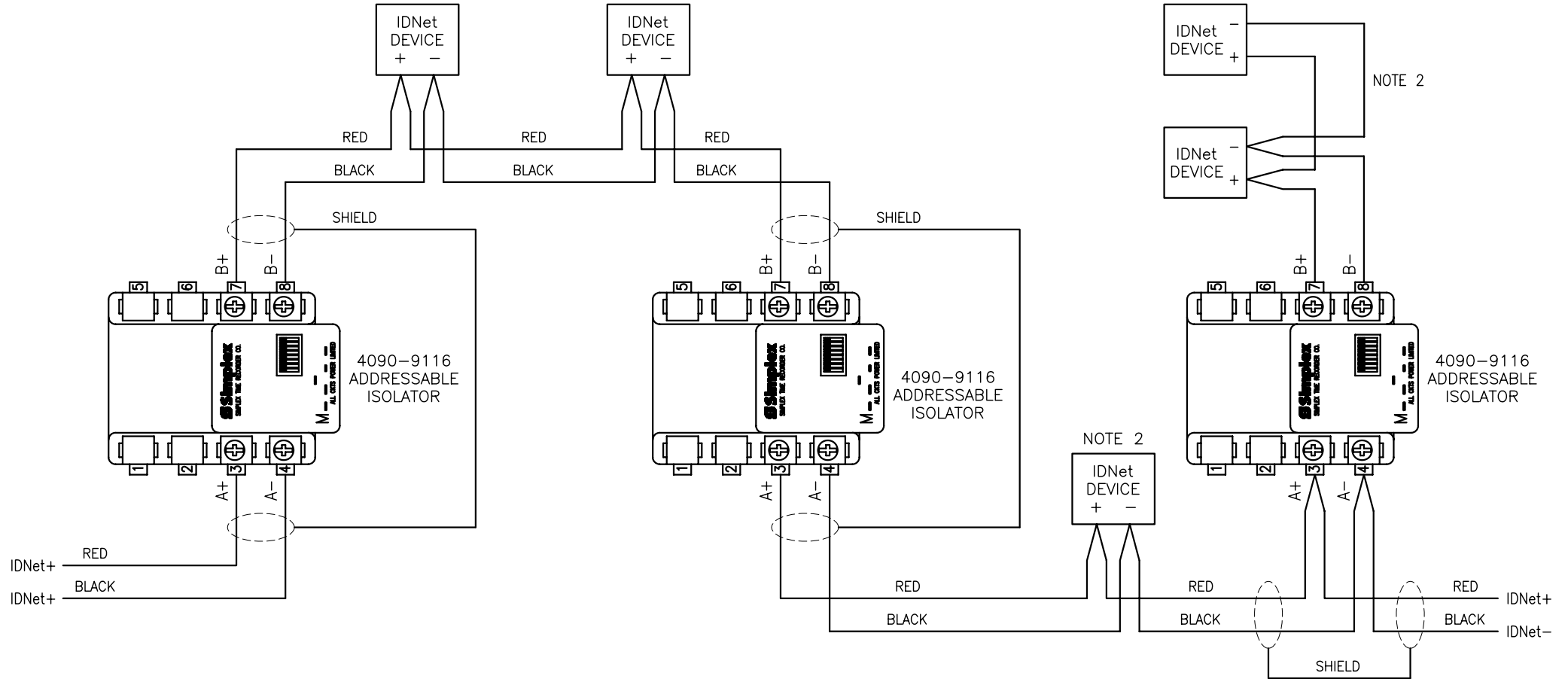
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4100U
SIGNAL ZAM (4090-9007) WIRING
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 415 of N

A3	ISS/REV	A	PART No: LT0432
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NOTE 2



NOTES:

1. ISOLATORS ARE SYMMETRICAL A-B, BUT OBSERVE POLARITY.
2. NUMBER OF DEVICES BETWEEN ISOLATORS OR ON A WIRING SPUR IS RESTRICTED TO 40. ISOLATOR BASES ALSO COUNT AS ISOLATORS. SEE SHEET 102 FOR BASE WIRING.
3. 4090-9116 CANNOT BE USED WITH MAPNET.
4. AN ADDRESSABLE ISOLATOR OR ISOLATOR BASE (SEE SHEET 102) MUST BE INSTALLED AT THE START AND END OF EACH LOOP.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				30-8-06
B	NOTE 4 ADDED.	3809	KJS	PA	LSC	DP	20-11-06

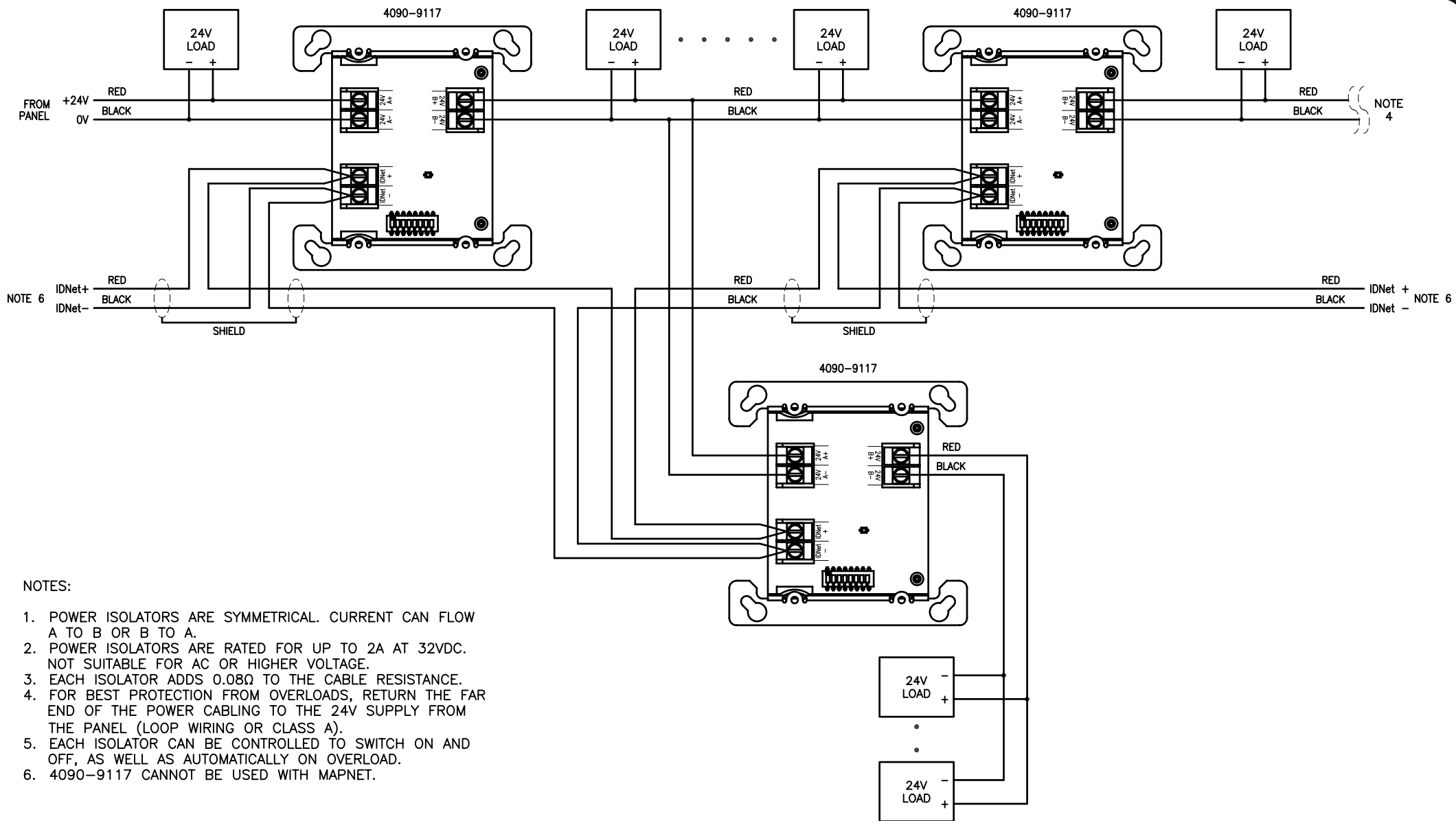
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4100U
ADDRESSABLE IDNET ISOLATOR (4090-9116)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 500 of N

A3	ISS/REV	B	PART No:
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NOTES:

1. POWER ISOLATORS ARE SYMMETRICAL. CURRENT CAN FLOW A TO B OR B TO A.
2. POWER ISOLATORS ARE RATED FOR UP TO 2A AT 32VDC. NOT SUITABLE FOR AC OR HIGHER VOLTAGE.
3. EACH ISOLATOR ADDS 0.08Ω TO THE CABLE RESISTANCE.
4. FOR BEST PROTECTION FROM OVERLOADS, RETURN THE FAR END OF THE POWER CABLING TO THE 24V SUPPLY FROM THE PANEL (LOOP WIRING OR CLASS A).
5. EACH ISOLATOR CAN BE CONTROLLED TO SWITCH ON AND OFF, AS WELL AS AUTOMATICALLY ON OVERLOAD.
6. 4090-9117 CANNOT BE USED WITH MAPNET.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				29-7-06

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4100U
ADDRESSABLE POWER ISOLATOR (4090-9117)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 501 of N

A3	ISS/REV A	PART No:
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NOTES:

1. FIT FERRITE BEAD TO EACH PAIR OF WIRES LEAVING THE CABINET.
2. LOOP MODE (CLASS A) PROVIDES BEST SECURITY SINCE A FAULT IN ONE SECTION WILL NOT PREVENT COMMUNICATION. IF LOOP MODE IS NOT USED, LINK B+ TO A+ AND B- TO A- ON CPU MOTHERBOARD.
3. IF WIRES LEAVE THE BUILDING, FIT 2081-9044 OVERVOLTAGE PROTECTOR AT EXIT AND ENTRY POINTS.

4. THE CONSTRAINTS ON RUI CIRCUIT CABLING ARE:

A. CABLE USED MUST BE 0.75 SQmm OR HEAVIER (AS 1670.1 REQUIREMENT).

B. THE TOTAL CABLE CAPACITANCE AND RESISTANCE MUST BE NO MORE THAN 0.58µF AND 36Ω RESPECTIVELY. IF VOLTAGE TRANSIENT SUPPRESSORS ARE USED, THE ADDED CAPACITANCE AND RESISTANCE FROM THESE DEVICES MUST BE CONSIDERED.

C. FOR CLASS B/SPUR WIRING,

i. THE CABLE DISTANCE FROM THE MASTER 4100U TO ANY SLAVE RTU IS NO MORE THAN 760M, AND THE COLLECTIVE DISTANCE OF ALL SPURS ON THE RUI CIRCUIT IS NO MORE THAN 3000M.

ii. THE TOTAL NUMBER OF DETECTION DEVICES SERVED BY THE RUI WIRING IS LIMITED TO 40 (AS 1670.1 REQUIREMENT).

D. FOR CLASS A/LOOP WIRING,

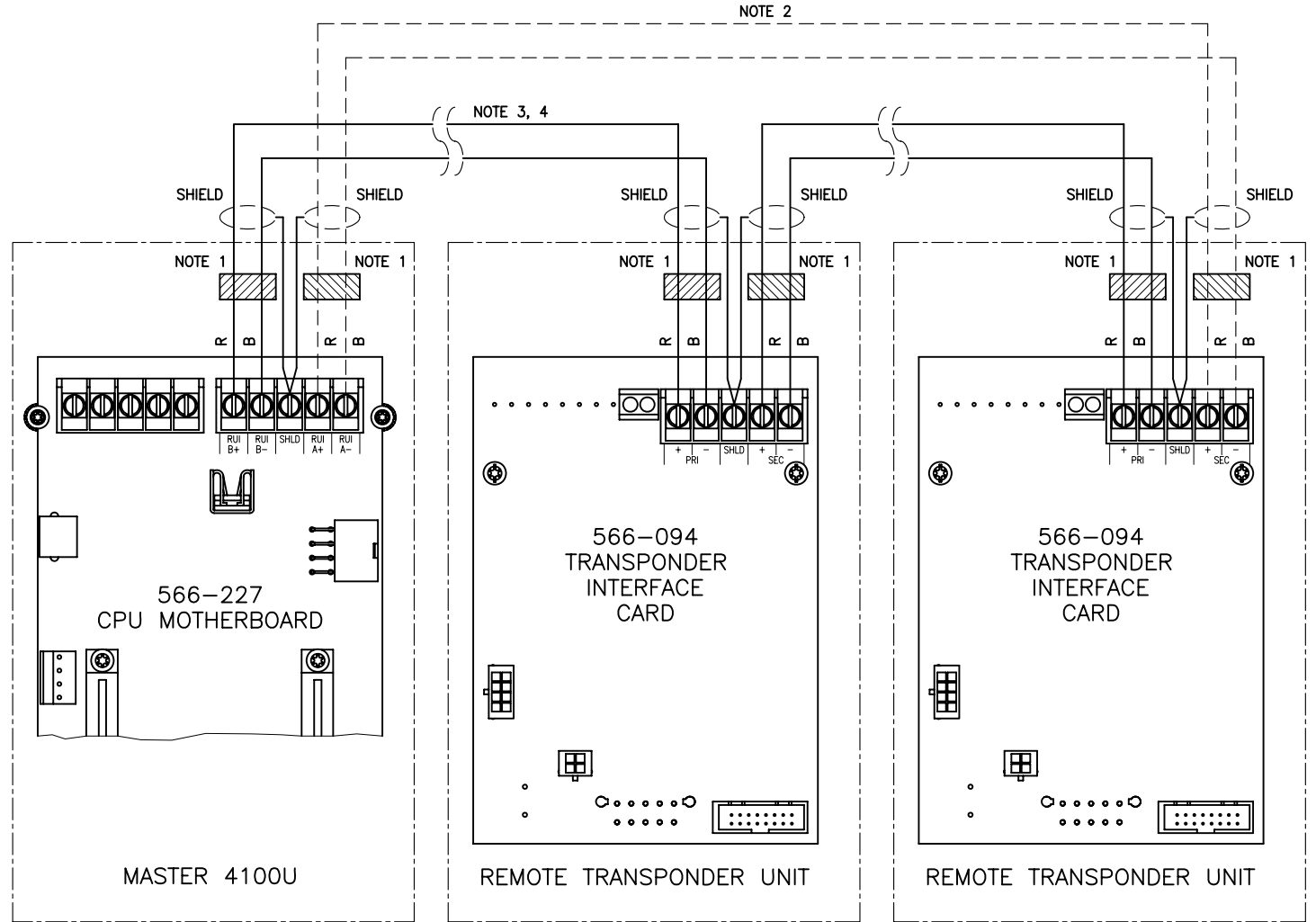
i. THE TOTAL CABLE DISTANCE AROUND THE LOOP IS NO MORE THAN 760M.

ii. THERE IS NO SPECIFIC LIMIT FOR DETECTION DEVICES CONNECTED TO RTUS FORMING PART OF THE LOOP.

iii. RTUS SERVED BY A SPUR FROM THE LOOP ARE LIMITED TO 40 DETECTION DEVICES (AS 1670.1 REQUIREMENT).

E. RUI CABLING MUST NOT BE RUN CLOSER THAN 50MM TO 240V MAINS CABLING, OR CLOSER THAN 150MM TO HIGHER MAINS VOLTAGES (AS S009 REQUIREMENT).

F. IF RUI CABLING AND MAPNET/IDNET CABLING ARE RUN IN CLOSE PARALLEL, E.G., IN CONDUIT, EITHER THE RUI OR THE MAPNET/IDNET CABLING MUST BE SCREENED.



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				24-8-06
B	ADDED RUI CABLE REQUIREMENTS (FROM PBS0027).	4070	KJS	LSC	RC	DP	15-10-09

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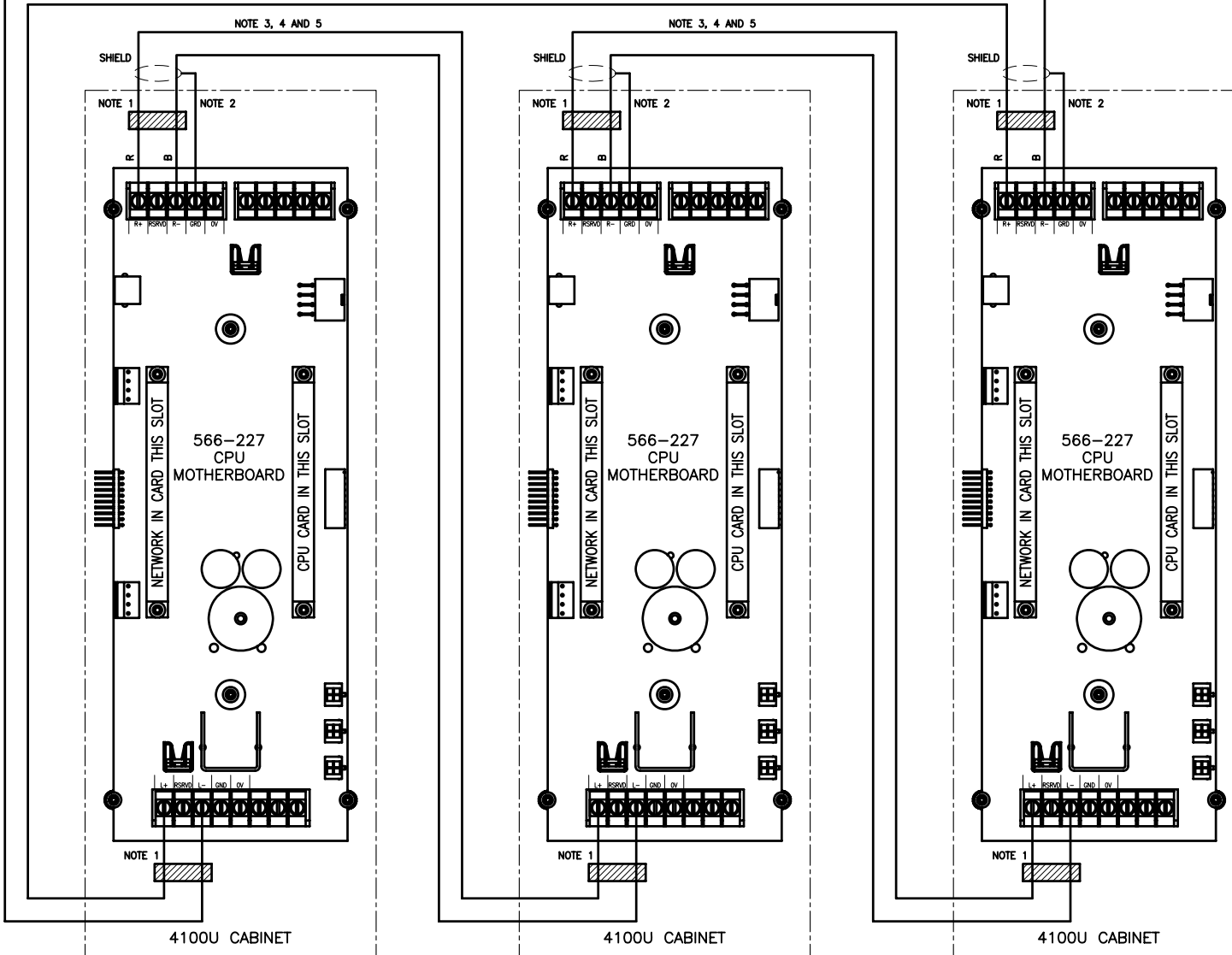
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**4100U
 TRANSPONDER INTERFACE (4100-0620)
 WIRING DIAGRAM**

DRAWING No: 1976-181 SHEET 600 of N

A3	ISS/REV B	PART No:	
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NOTE 3, 4 AND 5



NOTES:

1. FIT FERRITE BEAD TO EACH PAIR OF WIRES LEAVING THE CABINET.
2. ONLY CONNECT SHIELDS TO GROUND AT "RIGHT" PORTS.
3. THE "RIGHT" PORT OF ONE PANEL IS ALWAYS CONNECTED TO THE "LEFT" PORT OF THE NEXT PANEL. THE LAST PANEL MUST BE CONNECTED BACK TO THE FIRST PANEL TO FORM A CLOSED LOOP.
4. WIRE TO BE 0.75 SQ.mm SHIELDED TWISTED PAIR (3000m MAX) OR 0.2 SQ.mm SHIELDED OR UNSHIELDED TWISTED PAIR (2000m MAX).
5. IF WIRES LEAVE THE BUILDING, FIT 2081-9044 OVERVOLTAGE PROTECTORS AT EXIT AND ENTRY POINTS.

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3rd ANGLE PROJECTION

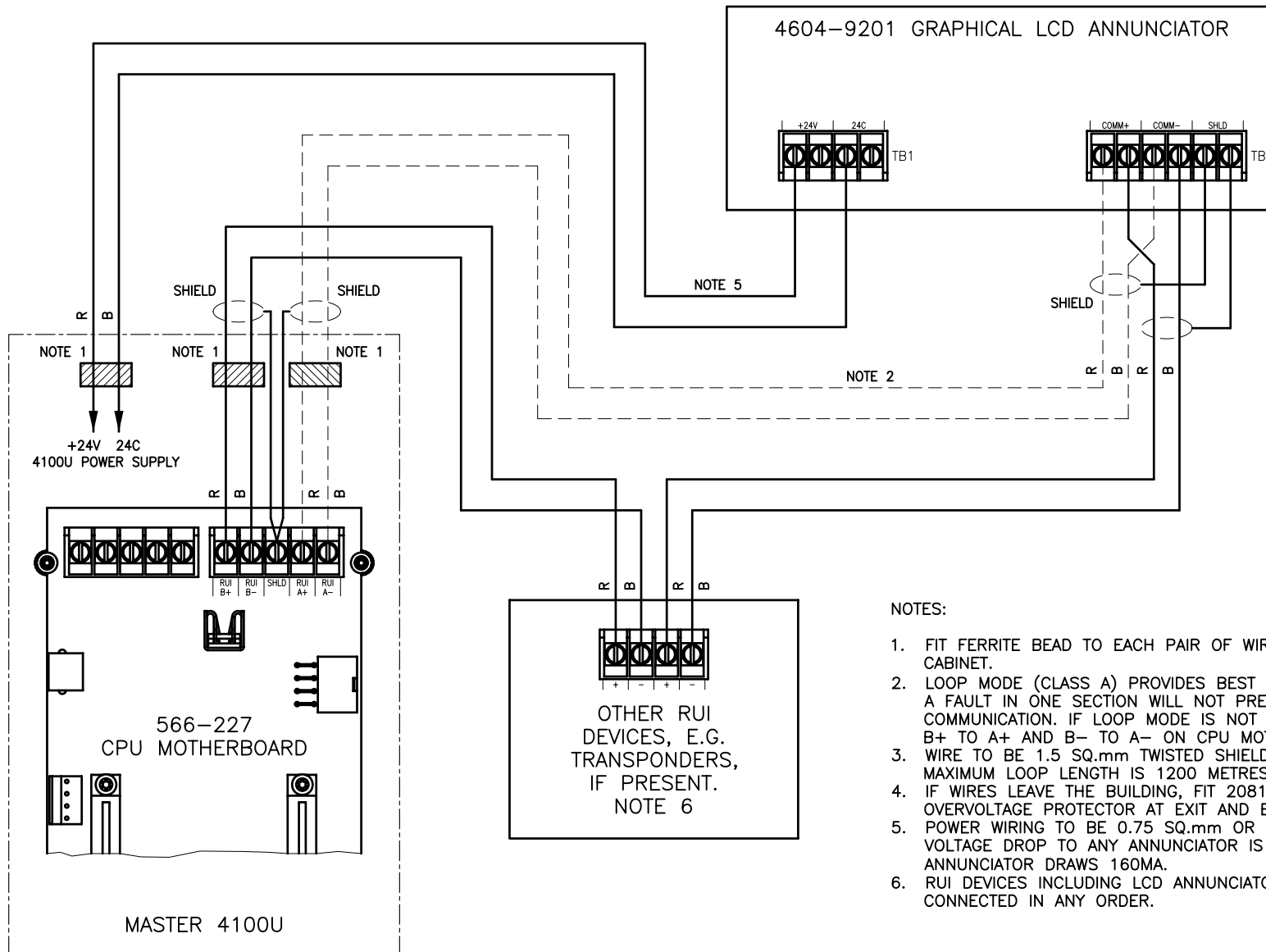
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				7-9-06

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4100U
NETWORK INTERFACE (WIRED MEDIA) (4100-6014)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 601 of N

A3	ISS/REV A	PART No:	
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NOTES:

1. FIT FERRITE BEAD TO EACH PAIR OF WIRES LEAVING THE CABINET.
2. LOOP MODE (CLASS A) PROVIDES BEST SECURITY SINCE A FAULT IN ONE SECTION WILL NOT PREVENT COMMUNICATION. IF LOOP MODE IS NOT USED, LINK RUI B+ TO A+ AND B- TO A- ON CPU MOTHERBOARD.
3. WIRE TO BE 1.5 SQ.mm TWISTED SHIELDED PAIR. MAXIMUM LOOP LENGTH IS 1200 METRES.
4. IF WIRES LEAVE THE BUILDING, FIT 2081-9044 OVERVOLTAGE PROTECTOR AT EXIT AND ENTRY POINTS.
5. POWER WIRING TO BE 0.75 SQ.mm OR HEAVIER. MAXIMUM VOLTAGE DROP TO ANY ANNUNCIATOR IS 2V. EACH ANNUNCIATOR DRAWS 160MA.
6. RUI DEVICES INCLUDING LCD ANNUNCIATOR CAN BE CONNECTED IN ANY ORDER.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS				8-9-06

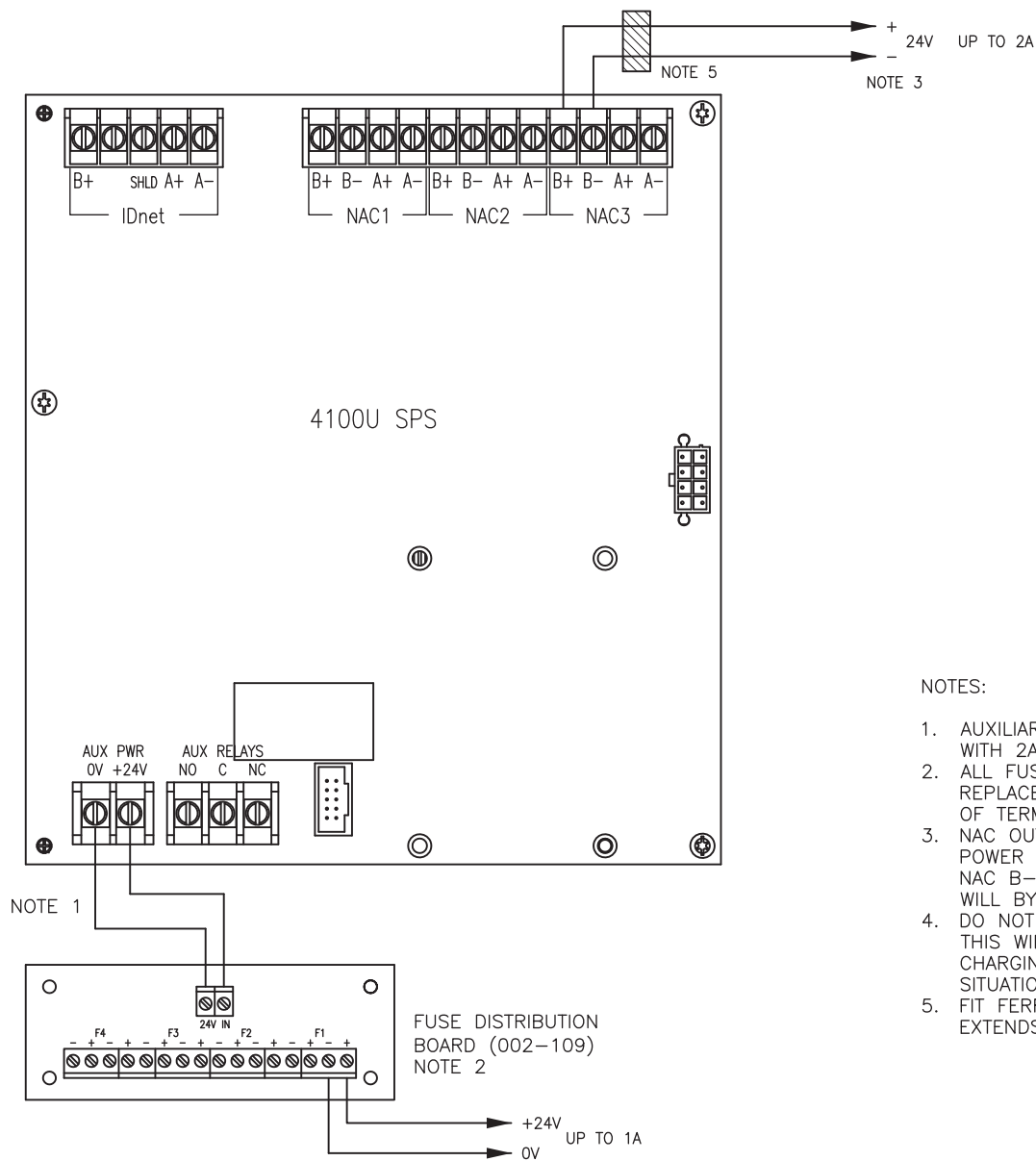
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4100U
 LCD ANNUNCIATOR (4604-9201)
 WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 606 of N

A3	ISS/REV A	PART No:
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NOTES:

1. AUXILIARY POWER OUTPUT FROM SPS IS PROTECTED BY A PTC WITH 2A RATING.
2. ALL FUSES ON THIS BOARD ARE 1A 20 X 5mm TYPE. DO NOT REPLACE WITH HIGHER RATINGS. EACH FUSE FEEDS TWO SETS OF TERMINALS.
3. NAC OUTPUTS CAN BE INDIVIDUALLY PROGRAMMED AS AUXILIARY POWER OUTPUTS. EACH NAC OUTPUT IS RATED AT 2A MAXIMUM. NAC B- TERMINAL MUST NOT BE LINKED TO 0V SINCE THIS WILL BYPASS CURRENT LIMITING CIRCUITRY IN THE SPS.
4. DO NOT CONNECT LOADS DIRECTLY TO THE STANDBY BATTERIES. THIS WILL CONFUSE 4100U SYSTEM MANAGEMENT OF BATTERY CHARGING AND MAY LEAD TO BATTERY DISCHARGE IN SOME SITUATIONS.
5. FIT FERRITE BEAD TO NAC OUTPUT AT TERMINALS IF WIRING EXTENDS OUTSIDE THE CABINET.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	-	KJS	SC			20-9-06
B	NOTE 2 CHANGED.	-	KJS				5-10-06
C	FERRITE ADDED TO NAC OUTPUT	4352	KJS	LSC	RC	DP	16-4-12

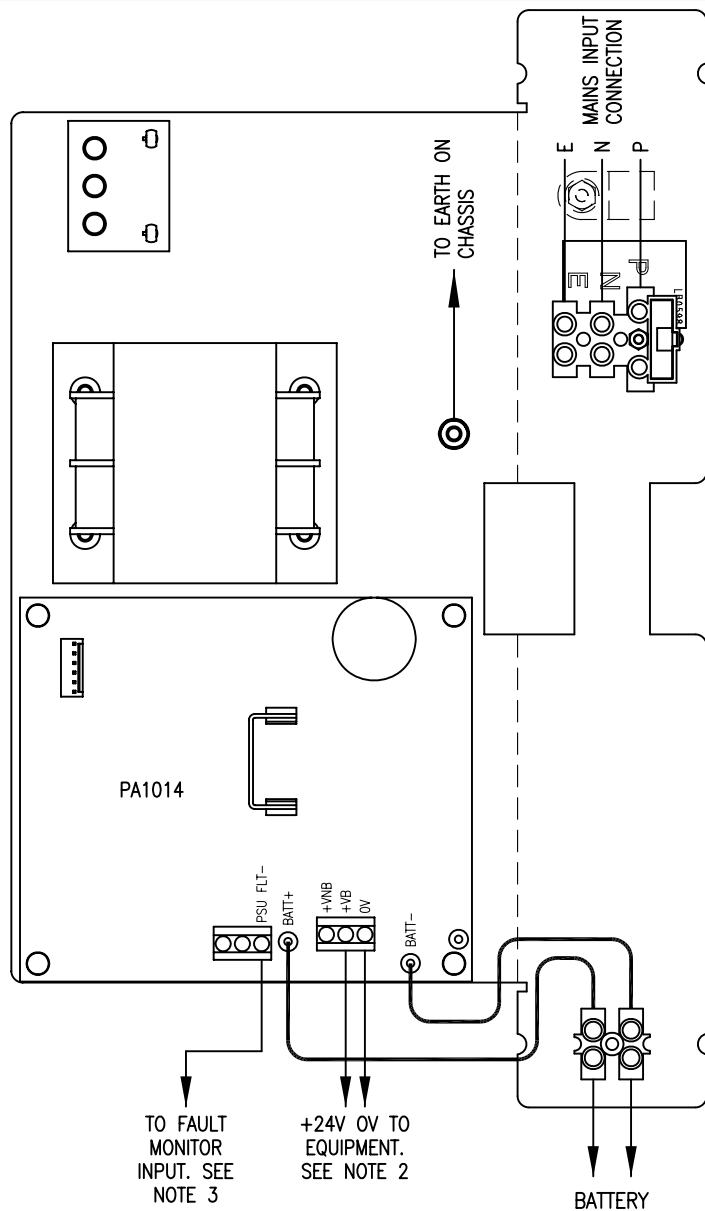
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4100U
SPS POWER OUTPUTS
WIRING DIAGRAM

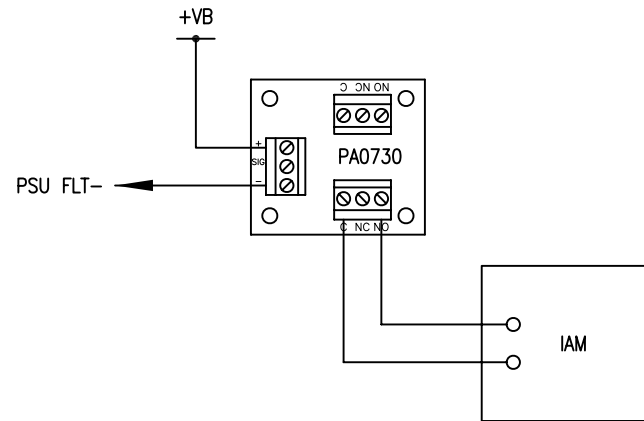
DRAWING No: 1976-181 SHEET 700 of N

A3 ISS/REV C PART No:



NOTES:

1. PSU IS MOUNTED ON 4 X 202-090 SUPPORT POSTS SUPPLIED WITH THE KIT.
2. THE +VB OUTPUT FROM THE PSU IS BATTERY BACKED. THE +VNB OUTPUT MUST ONLY BE USED FOR EQUIPMENT NOT REQUIRING BATTERY BACK UP. REFER TO LT0232 FOR PSU CONFIGURATION DETAILS.
3. THE PSU FLT- OUTPUT MUST BE MONITORED BY THE FIRE PANEL, USING A FEEDBACK INPUT OR SIMILAR. IF AN IAM IS USED, AN ISOLATING RELAY, SUCH AS PA0730, MUST BE WIRED BETWEEN THE PSU FLT- OUT AND IAM INPUT. THE RELAY OPERATES ON A FAULT.



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4070	KJS	LSC	RC	DP	15-10-09

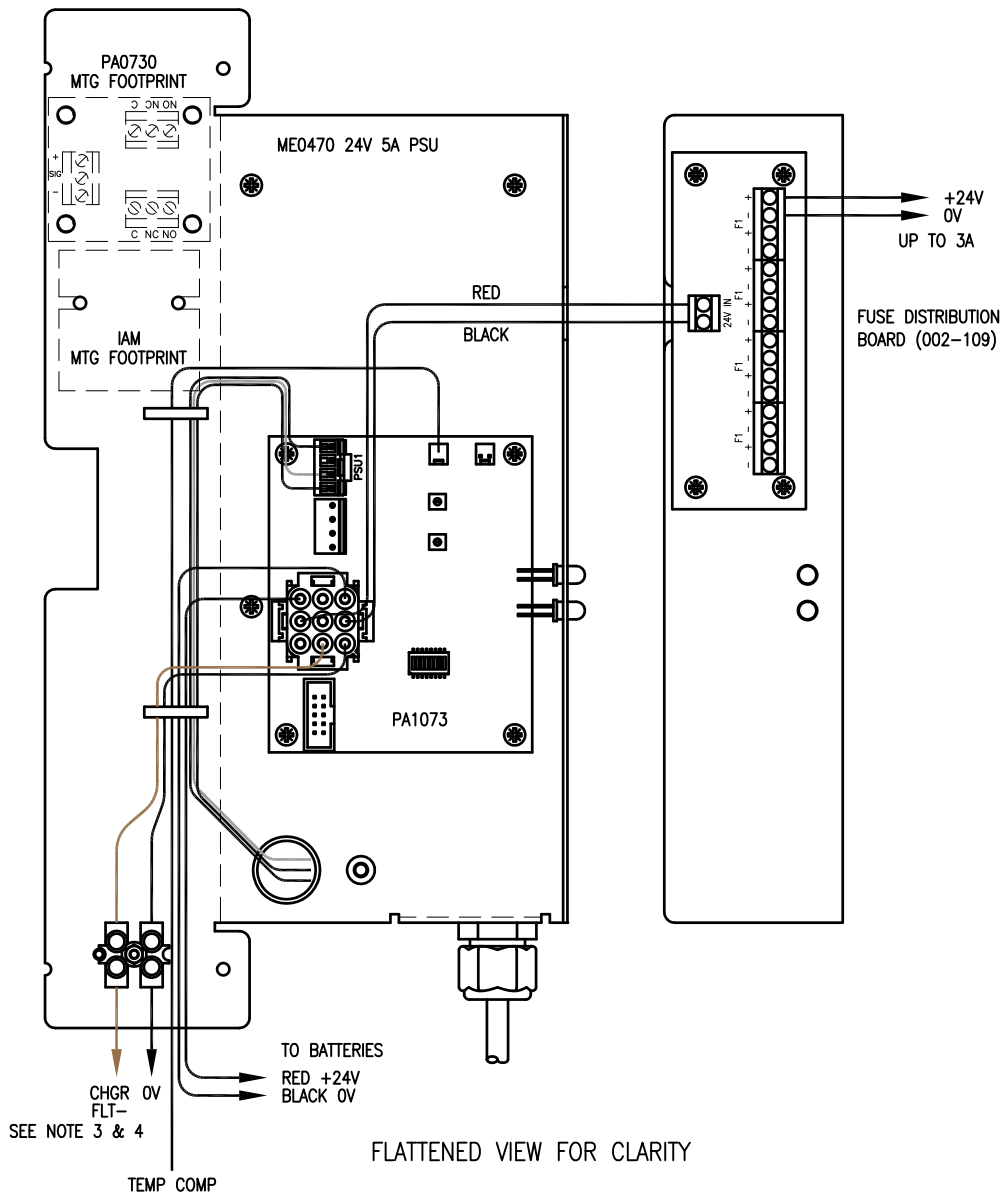
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4100U
1948 2A PSU POWER OUTPUTS
WIRING DIAGRAM

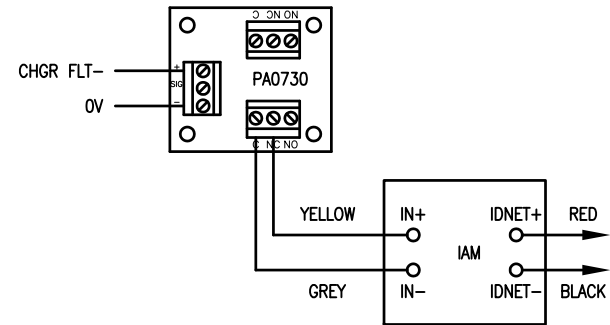
DRAWING No: 1976-181 SHEET 701 of N

A3 ISS/REV A PART No: LT0432



NOTES:

1. PSU IS MOUNTED ON 4 X 202-090 SUPPORT POSTS SUPPLIED WITH THE UNIT.
2. THE OUTPUT FROM THE PSU IS BATTERY BACKED (IF BATTERIES ARE CONNECTED TO THE BATTERY TERMINALS).
3. CHARGER FAULT MONITORING OPTION 1: CONNECT CHGR FLT- TO AN FB INPUT OR ZONE INPUT OR TIC TMPR INPUT. ON THE PSU, SET SW1-6 OFF AND SW1-7 ON. CHGR FLT- OUTPUT SWITCHES TO 0V ON FAULT.
4. CHARGER FAULT MONITORING OPTION 2: USE AN ISOLATING PA0730 RELAY AND 4090-9051 IAM BETWEEN THE CHGR FLT- OUTPUT AND AN IDNET OR MAPNET LOOP. ON THE PSU, SET SW1-6 ON AND SW1-7 OFF. THE RELAY IS NORMALLY ENERGISED, RELEASING ON ANY FAULT. RELAY MOUNTING REQUIRES 4 OFF 13mm PLASTIC PCB STAND-OFFS (HW0131). IAM MOUNTING REQUIRES 2 OFF M3 X 12 SCREWS, M3 WASHERS AND NUTS.
5. FUSE DISTRIBUTION BOARD FUSES ARE NOT DIRECTLY SUPERVISED. POWERED EQUIPMENT MUST PROVIDE FAULT SIGNAL ON POWER FAIL. FUSES ARE 3A 20 X 5mm SLOW BLOW.



WIRING PSU FAULT TO AN IAM
SEE NOTE 3 & 4

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4391	KJS	GEL	LSC	DP	20-8-12
B	NOTE 4 UPDATED. IAM AND PA0730 LOCATION CHANGED.	4420	KJS	GEL	LSC	DP	20-12-12

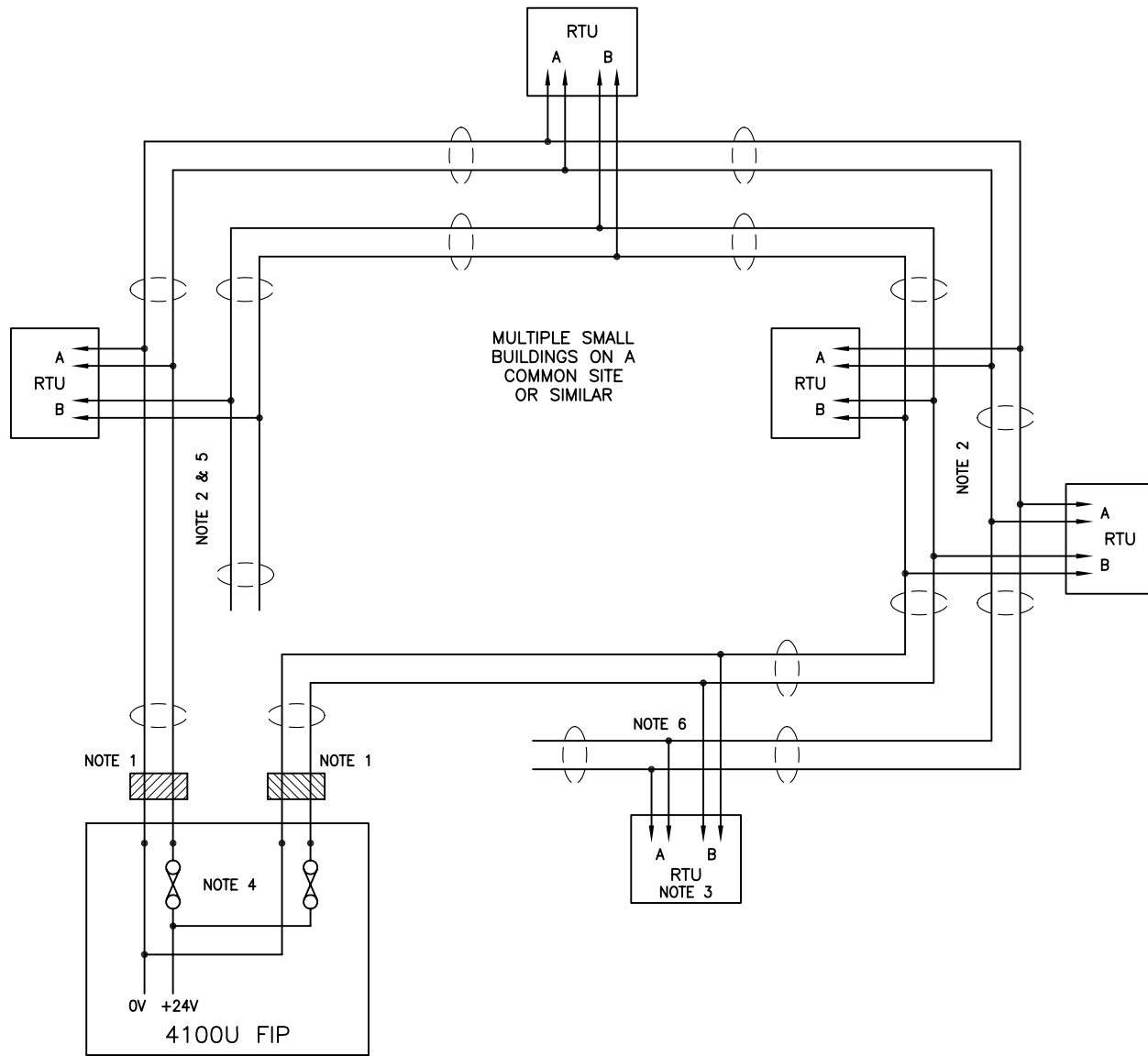
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4100ES
ME0470 24V 5A PSU
WIRING DIAGRAM

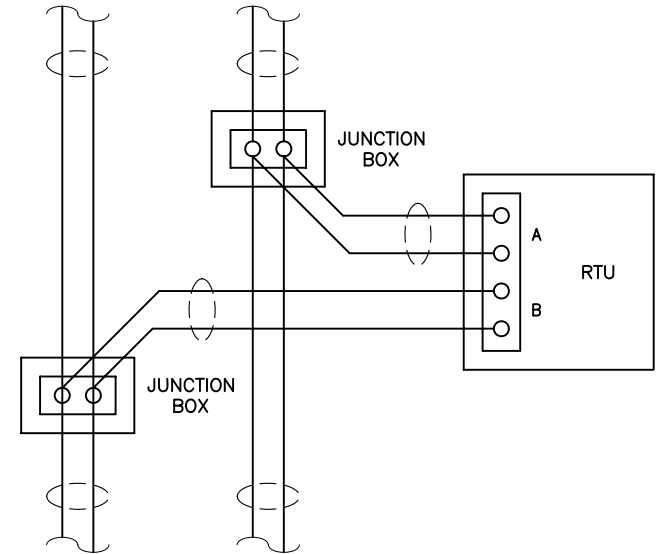
DRAWING No: 1976-181 SHEET 702 of N

A3	ISS/REV B	PART No: LT0432
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NOTES:

1. FIT FERRITE BEAD TO EACH PAIR OF WIRES LEAVING THE FIP CABINET.
2. THE CLOCKWISE AND ANTI CLOCKWISE POWER FEED CIRCUITS MUST BE PHYSICALLY SEPARATED FOR REDUNDANCY, UNLESS RUN UNDERGROUND, OR PROTECTED TO LEVEL WSX3 (AS/NZS 3013). (AS1670.1 REQUIREMENT).
3. EACH RTU HAS A COMBINING CIRCUIT AND SUPERVISION FOR THE DUAL DC FEED. SUPPLY FAULTS ARE MONITORED BY THE TRANSPONDER INTERFACE CARD (TIC).
4. THE DC FEEDS FROM THE FIP MUST BE SEPARATELY FUSED OR PROTECTED AGAINST OVERLOAD.
5. MINIMUM CABLE SIZE MUST BE DETERMINED BASED ON TOTAL RTU LOAD. REFER TO SHEET 600 FOR REQUIREMENTS ON THE RTU COMMUNICATIONS WIRING.
6. SUGGESTED WIRING AT THE TAP-OFF TO EACH RTU IS SHOWN HERE.



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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4070	KJS	LSC	RC	DP	16-10-09

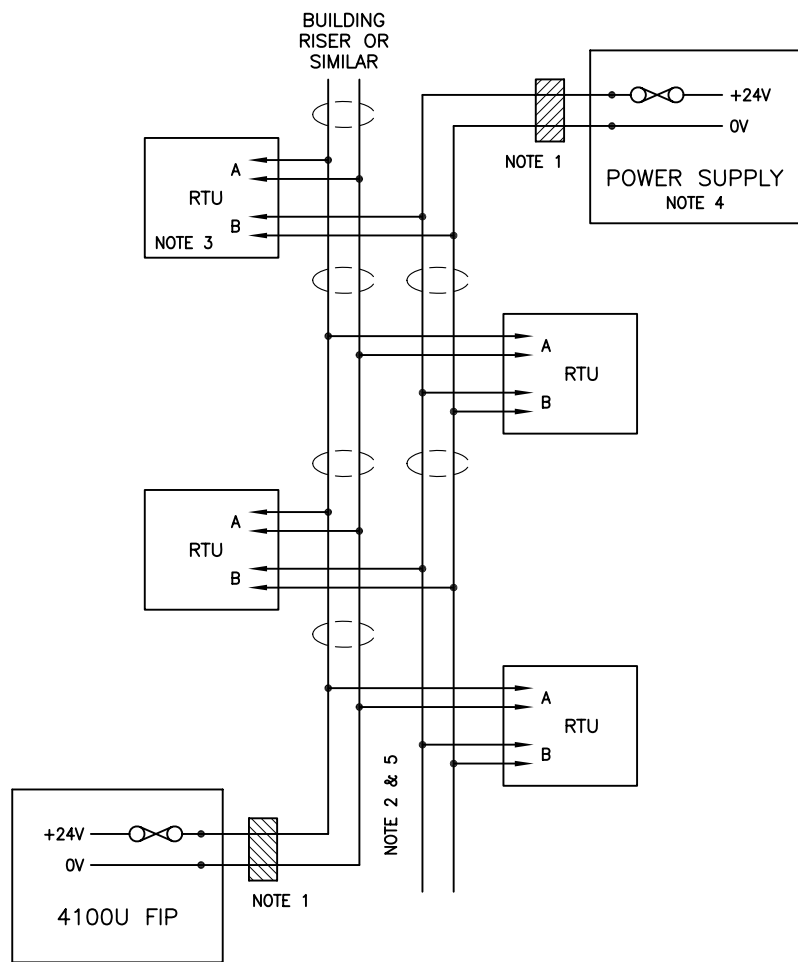
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**4100U
 RTU - RING FEED DC POWER
 WIRING DIAGRAM**

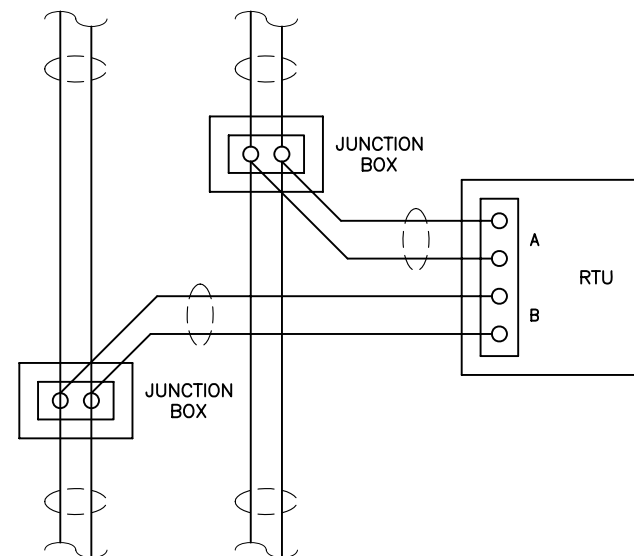
DRAWING No: 1976-181 SHEET 703 of N

A3	ISS/REV A	PART No:	
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NOTES:

1. FIT FERRITE BEAD TO EACH PAIR OF WIRES LEAVING THE FIP AND PSU CABINET.
2. THE UP AND DOWN POWER FEED CIRCUITS MUST BE PHYSICALLY SEPARATED FOR REDUNDANCY, UNLESS RUN UNDERGROUND, OR PROTECTED TO LEVEL WSX3 (AS/NZS 3013). (AS1670.1 REQUIREMENT).
3. EACH RTU HAS A COMBINING CIRCUIT AND SUPERVISION FOR THE DUAL DC FEED. SUPPLY FAULTS ARE MONITORED BY THE TRANSPONDER INTERFACE CARD (TIC).
4. THE TOP POWER MAY BE FROM A MAINS POWERED RTU OR STANDALONE POWER SUPPLY. A STANDALONE SUPPLY MUST BE MONITORED FOR FAULTS.
5. NECESSARY WIRING MINIMUM CABLE SIZE MUST BE DETERMINED BASED ON TOTAL RTU LOAD. REFER TO SHEET 600 FOR REQUIREMENTS ON THE RTU COMMUNICATIONS WIRING.
6. SUGGESTED WIRING AT THE TAP-OFF TO EACH RTU IS SHOWN HERE.



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3rd ANGLE PROJECTION

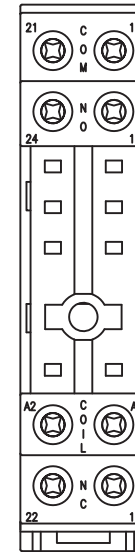
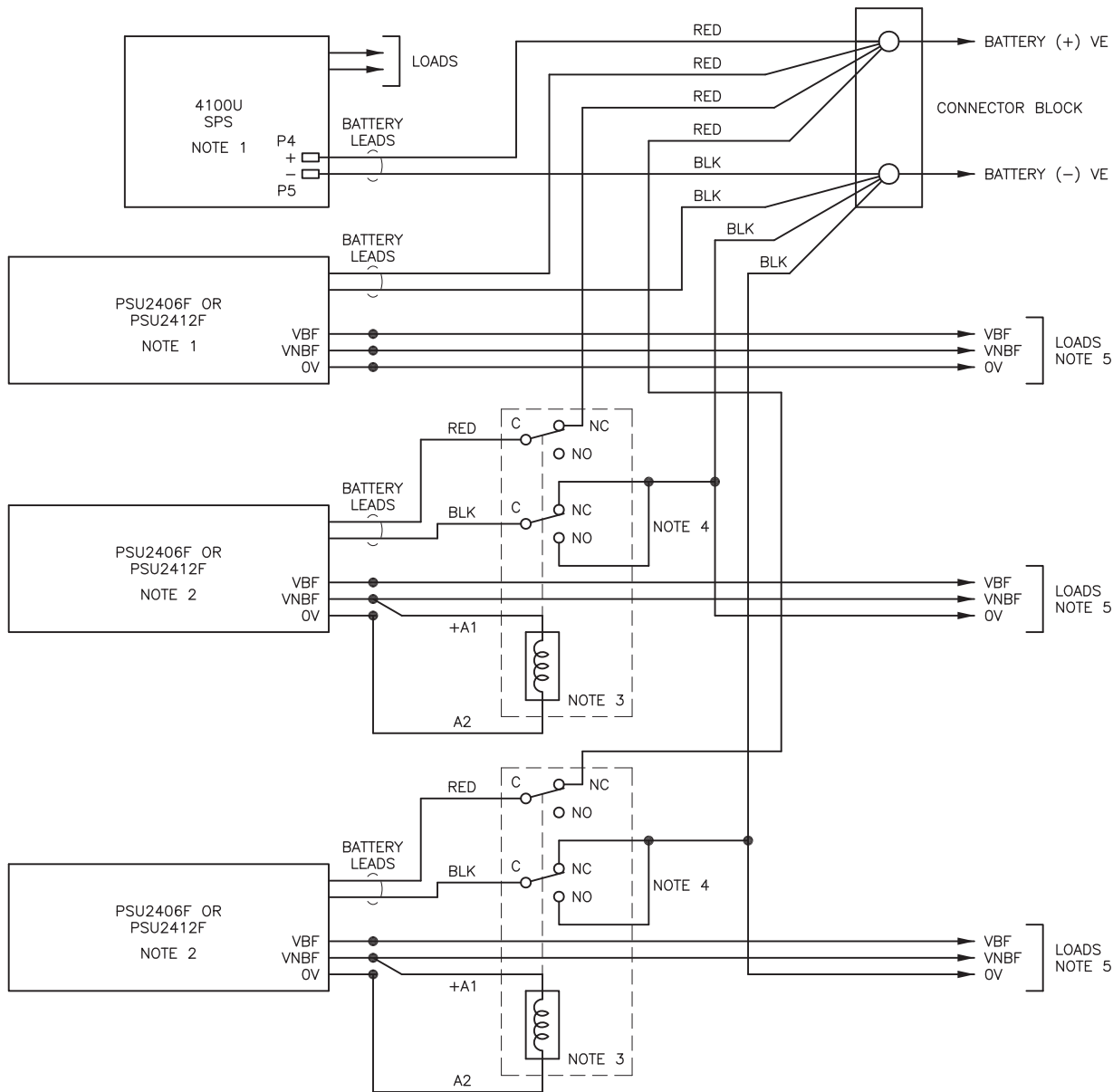
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4070	KJS	LSC	RC	DP	16-10-09

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**4100U
 RTU - LINEAR FEED DC POWER
 WIRING DIAGRAM**

DRAWING No: 1976-181 SHEET 704 of N

A3	ISS/REV A	PART No:	
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NOTES

1. 4100U SPS MUST BE CONFIGURED TO DISABLE BATTERY CHARGING. THE FIRST VIGILANT PSU DOES ALL THE BATTERY CHARGING.
2. THE SECOND AND SUBSEQUENT VIGILANT PSUS CANNOT CONTRIBUTE TO THE BATTERY CHARGING. IF MAINS FAILS THE VBF LOADS ARE SWITCHED OVER TO THE SYSTEM BATTERY.
3. RELAY IS 24V DC DPDT TYPE WITH CONTACT RATING AT LEAST 10A. A SUITABLE TYPE IS FINDER 44.62.7.024.4000 IN A 95.65 OR 95.75 DIN RAIL SOCKET (SEE ABOVE).
4. CONNECTING THE 0V SUPPLY THROUGH A CONTACT IS A CHECK THAT THE RELAY IS ACTUALLY FITTED IN THE SOCKET. IF RELAY IS NOT PLUGGED IN, THE PSU OUTPUT IS INTERRUPTED.
5. FROM EACH PSU, VNBF LOAD MUST NOT EXCEED 5A, AND TOTAL OF VBF AND VNBF LOAD MUST NOT EXCEED 5A FOR PSU2406F OR 10A FOR PSU 2412F.

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4352	KJS	LSC	RC	SP	16-6-11

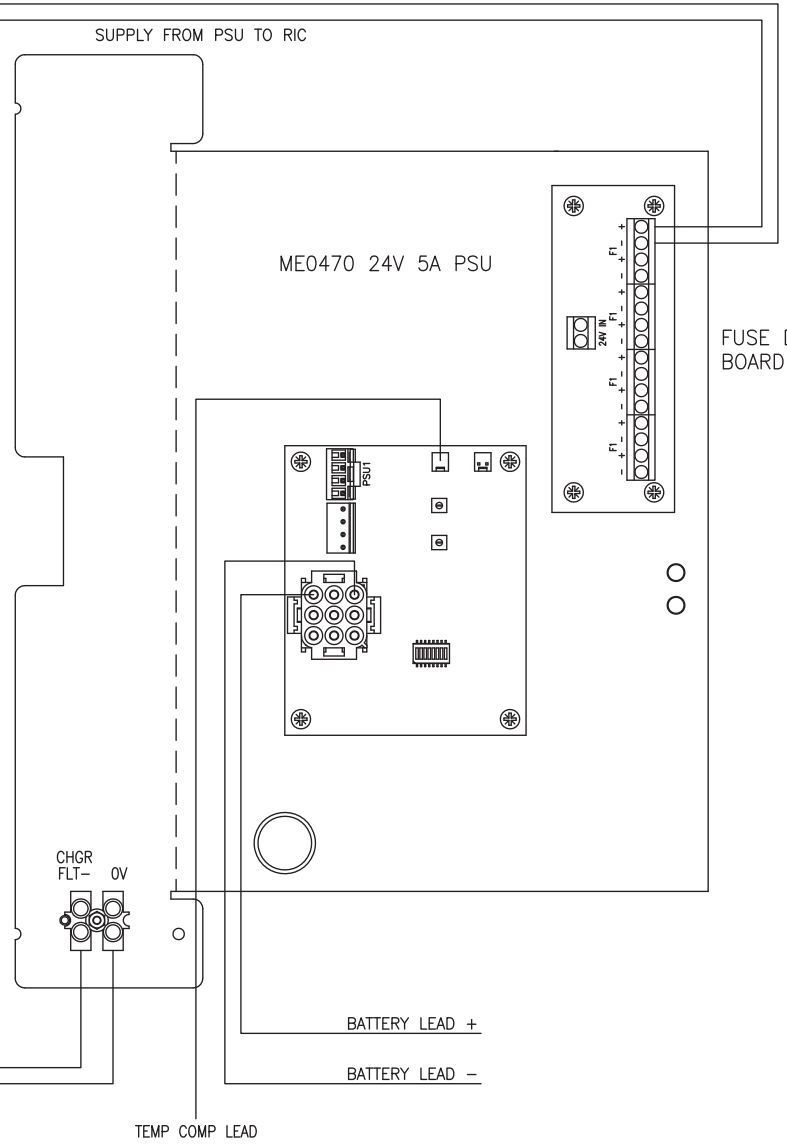
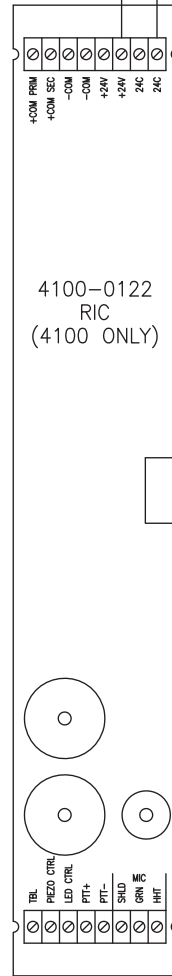
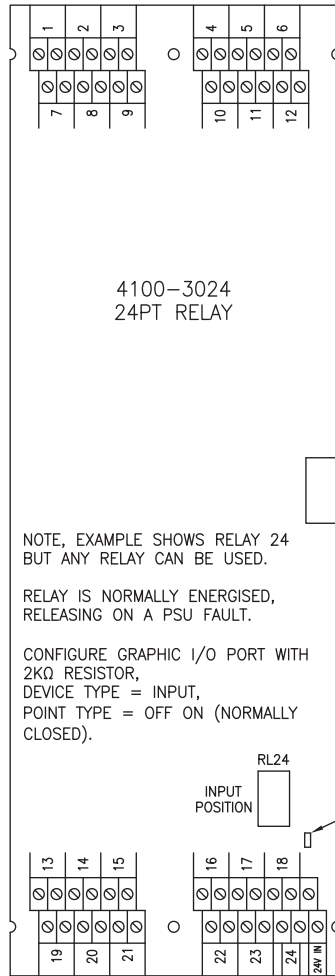
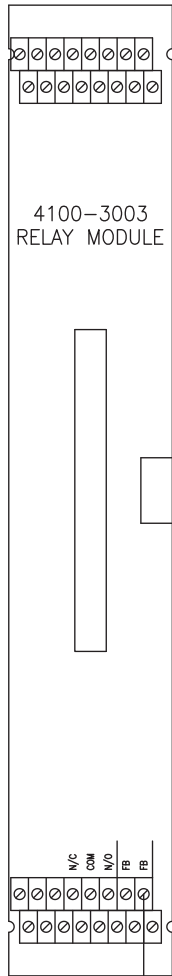
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4100U
VIGILANT PSUS INTERCONNECTION
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 705 of N

A3 ISS/REV A PART No: LT0432



OR

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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4409	KJS	GEL	LSC	DP	21-8-12

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**SIMPLEX 4100
 ME0470 CONNECTION
 WIRING DETAILS**

DRAWING No: **1976-181** SHEET **706** of **N**

A3	ISS/REV A	PART No:	
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