FIRE

4100U Fire Indicator Panel

Australian Wiring Diagrams

Australian Wiring Diagrams

LT0432
Iss 1.04

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 Fire Alarm system.

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

IDNet	Individual Device Network – latest version of addressable device communication.
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
NAC	Notification Appliance Circuit – drives DC-powered sounders and visual warning devices.

Amendment Log

6 Oct. 2006	Issue 1.00	Original
20 Nov. 2006	Issue 1.01	Updated sheets 102, 203, 500
21 June 2007	Issue 1.02	Added sheet 205
10 July 2009	Issue 1.03	Updated sheet 413
13 Oct. 2009	Issue 1.04	Added sheets 701, 703, 704

Drawing Index

Sheet Number	Title	Rev.
Bases		
101	2W Detector Bases - Conventional Detectors	A
102	TrueAlarm Addressable Detector Bases	B
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)	B
204	VESDA High Level Interface	Nyp
205	4090-9101 ZAM & “Ex” Detectors	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
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400	IDNet 6 Point I/O Module (4090-9120)	A
401	MapNet2 Relay Module with Supervised Input (2190-9173)	A
402	IDNet Relay IAMs 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)	A
408	SPS NAC connection to T-GEN50 tone generator	nyp
409	SPS NAC connection to Mini-Gen tone generator	A
410	SPS NAC connection to Strobe Driver	A
411	SPS Brigade Relays (4100-6033)	A
412	IDNet Relay IAMs as Fan Controls	B
413	24 Point I/O Card (002-124+4100-0302)	B
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415	4 Point Relay Card (4100-3204)	nyp
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501	IDNet Addressable Power Isolator (4090-9117AU)	A
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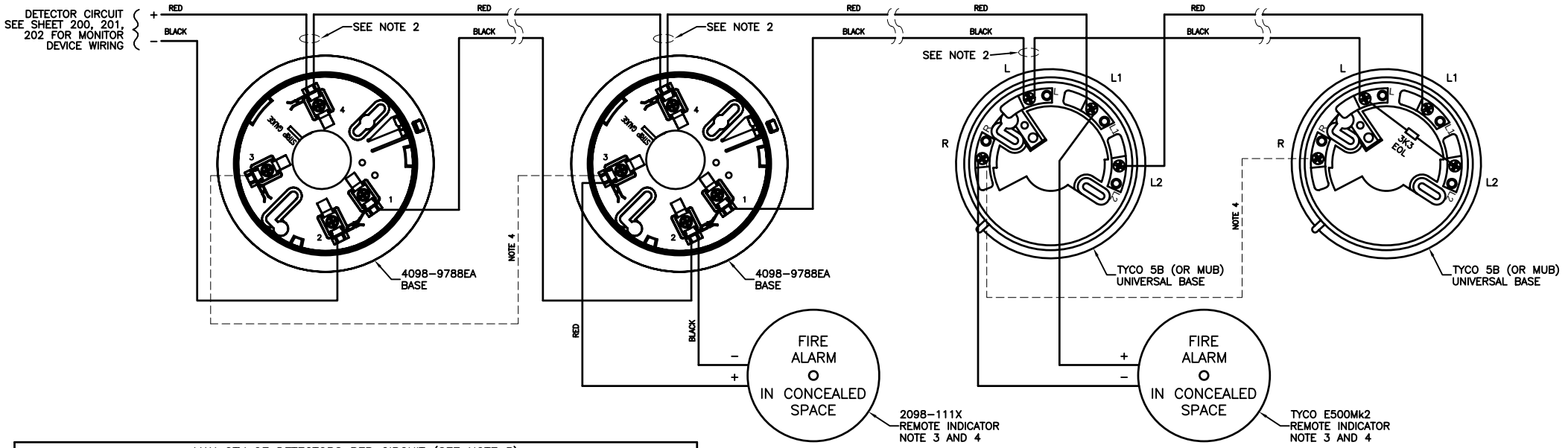
601	Network Interface Card (Wired Media) (4100-6014)	A
602	Network Interface Card (Fibreoptic) (4100-6014)	nyp
603	Fibreoptic Modem - RUI (4100-6063/6064)	nyp
604	Fibreoptic Modem - Network (4100-6063/6064)	nyp
605	Dual RS232 Card (4100-6038)	nyp
606	LCD Annunciator (4604-9201)	A
Power		
700	SPS Power Outputs	B
701	1948 2A PSU Outputs (ME0417)	A
703	Remote DC Powered RTU – Loop Power Feed	A
704	Remote DC Powered RTU – Linear Power Feed	A

Nyp = not yet published



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:
1. IF USED, REMOTE INDICATORS ARE POLARIZED; OBSERVE COLOUR–CODED WIRING.
2. BREAK WIRES BEFORE CONNECTING TO TERMINAL 4 OR L TO MAINTAIN SUPERVISION. DO NOT LOOP WIRE UNDERNEATH TERMINAL 4 OR L.
3. 2098–111X REMOTE INDICATOR CANNOT BE USED WITH TYCO BASES, AND E500 REMOTE INDICATOR CANNOT BE USED WITH 4098–9788EA BASES.
4. 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.
5. 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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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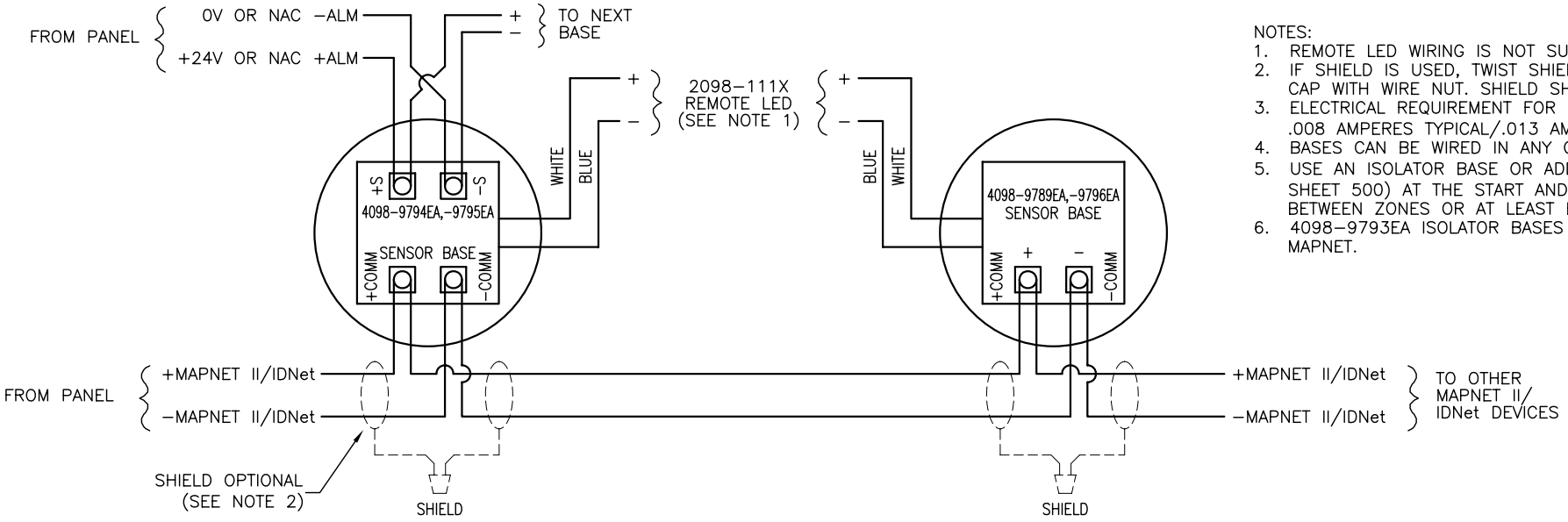
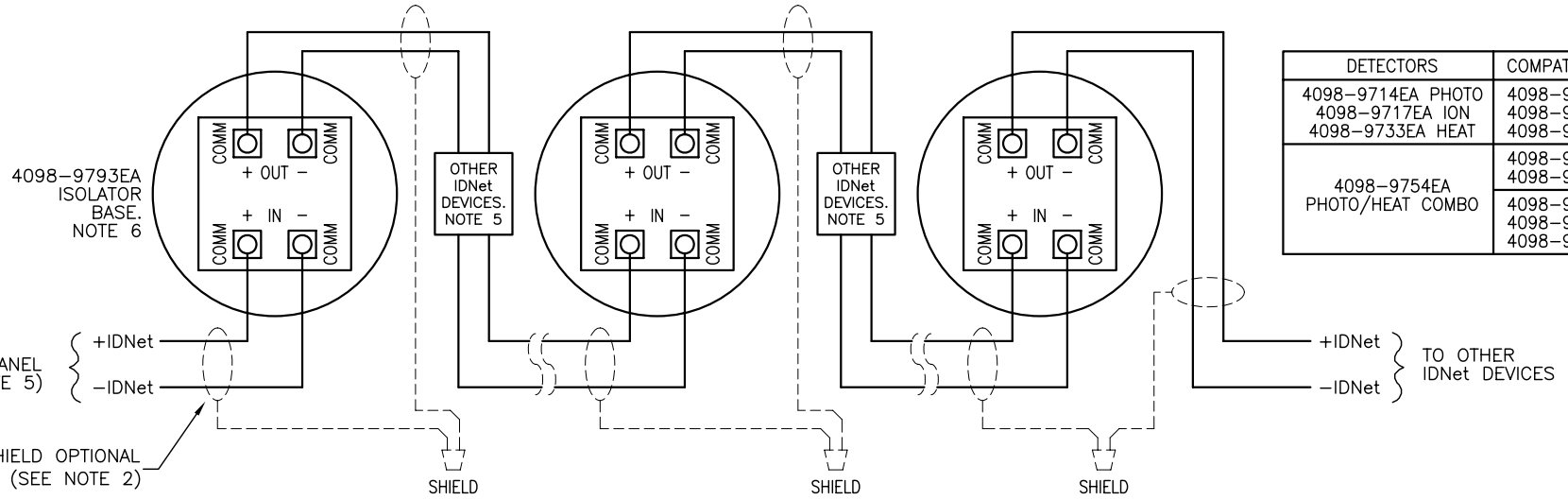
4100U
2 WIRE DETECTOR BASES - CONVENTIONAL DETECTORS
WIRING DIAGRAM

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

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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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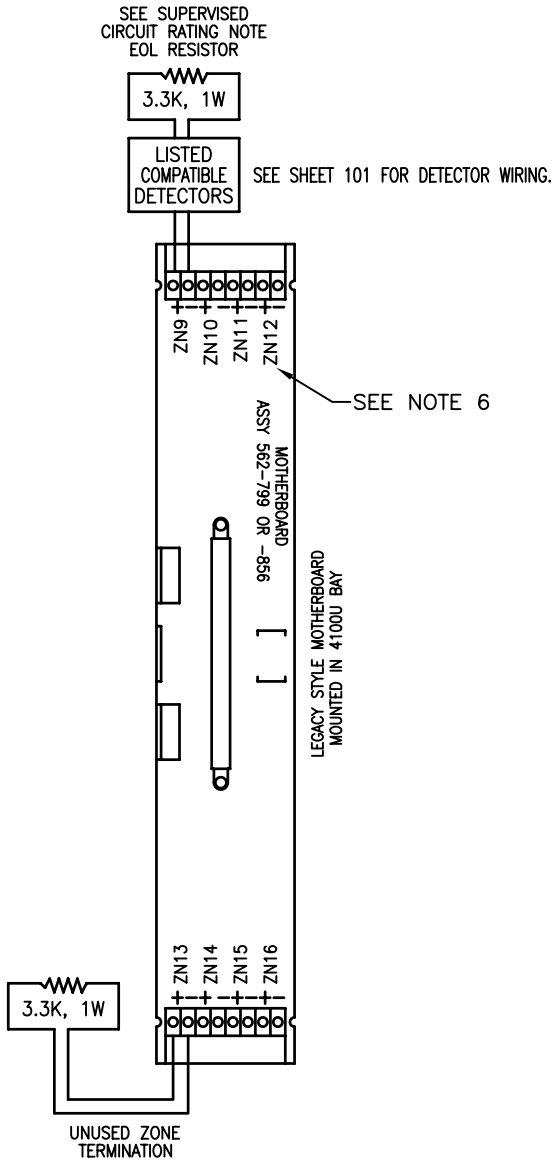
4100U
TRUEALARM ADDRESSABLE DETECTOR BASES WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 102 of N

A3 | ISS/REV B | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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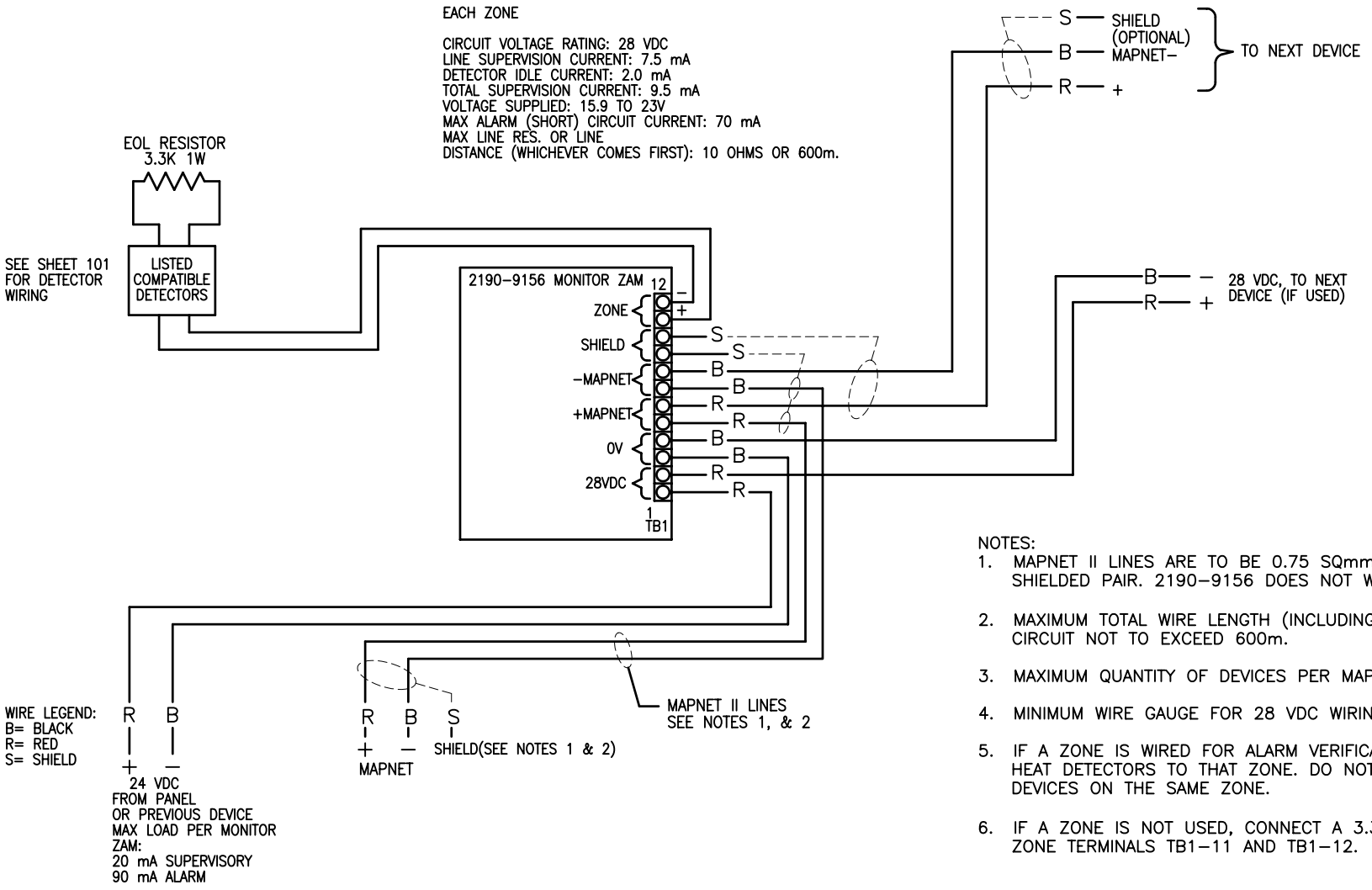
4100U
8 ZONE MODULE - CONVENTIONAL DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 200 of N

A3 | ISS/REV A | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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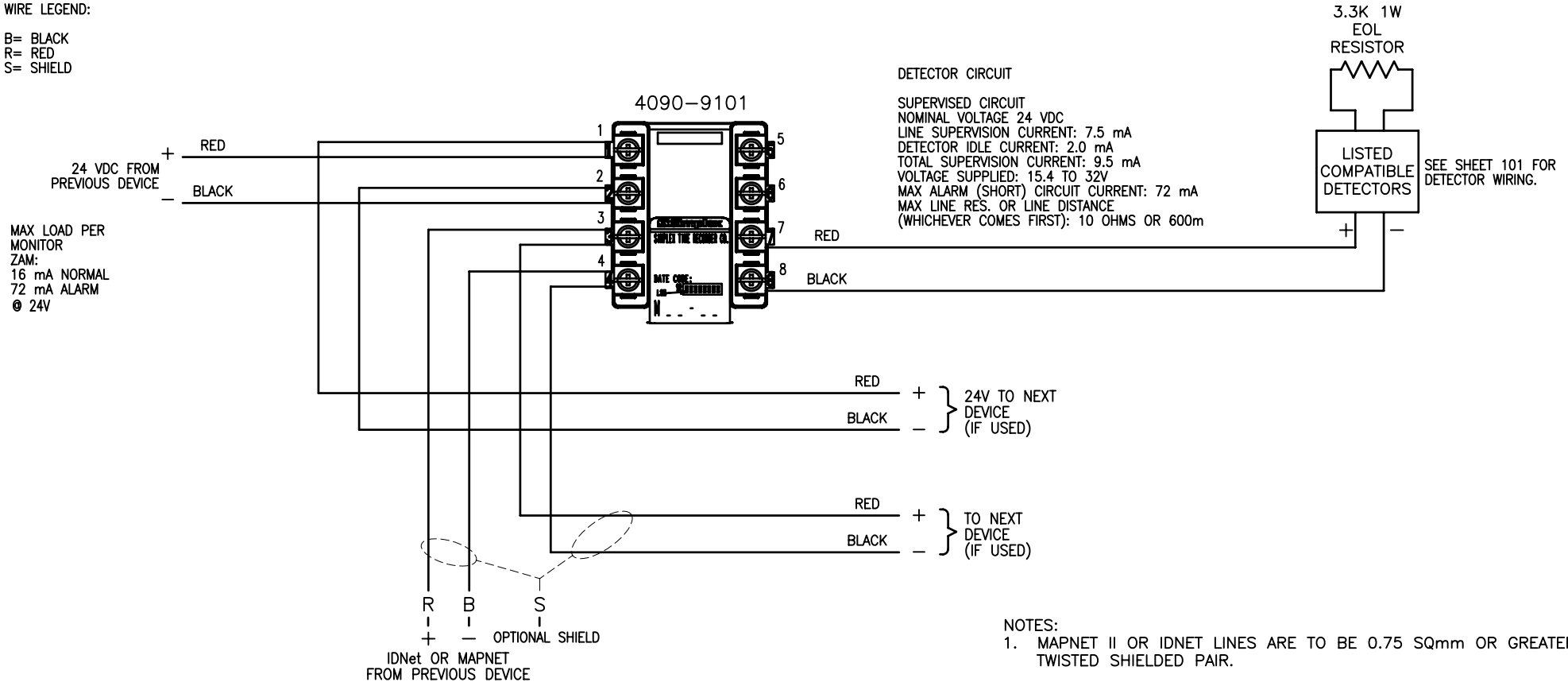
4100U
MAPNET MONITOR ZONE ADDRESSABLE MODULE (2190-9156) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 201 of N

A3 | ISS/REV A | PART No:

WIRE LEGEND:

B= BLACK
R= RED
S= SHIELD



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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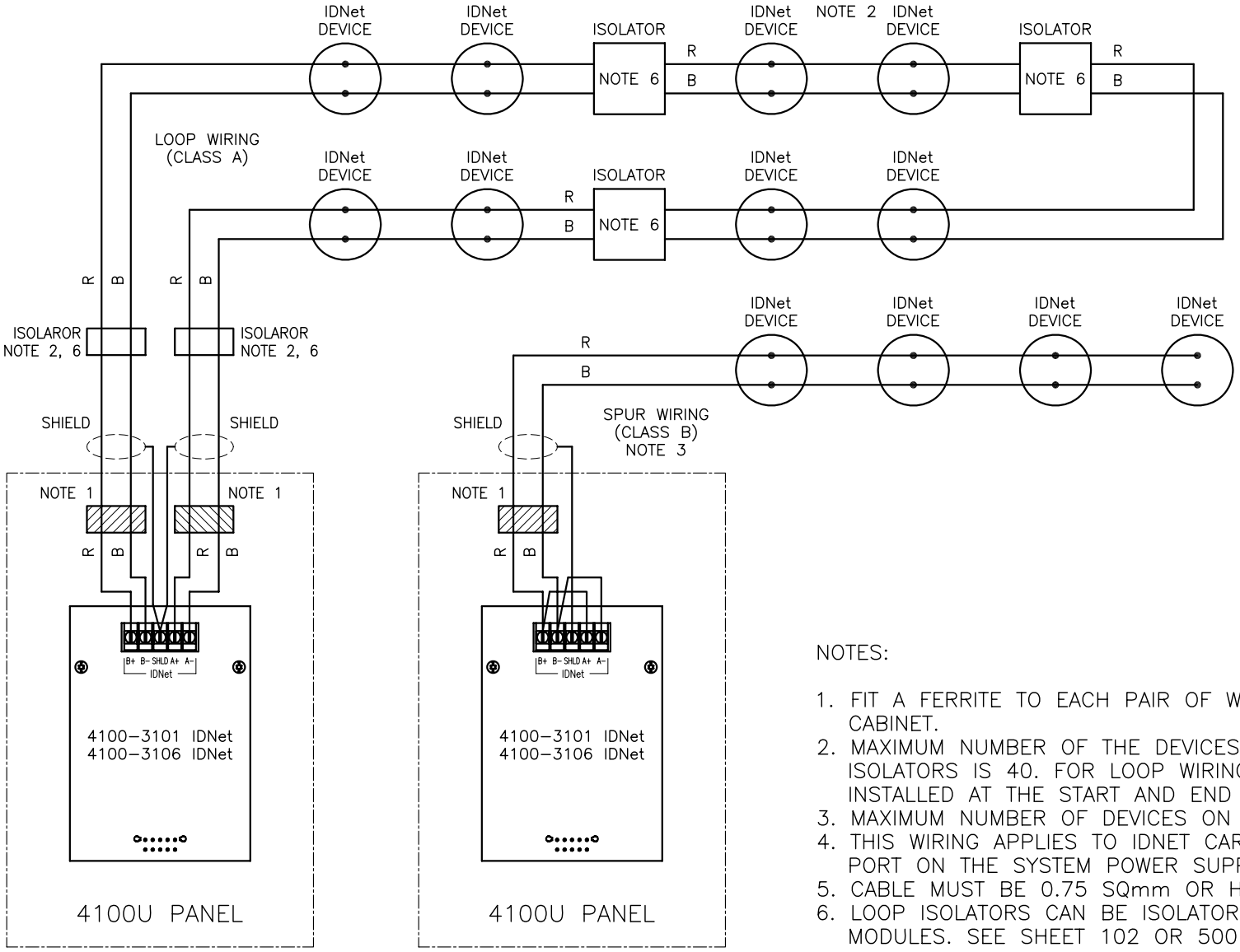
4100U
ZONE ADDRESSABLE MODULE (4090-9101) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 202 of N

A3 | ISS/REV A | PART No:



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. 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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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

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4100U
IDNET LOOP CARD WIRING
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 203 of N

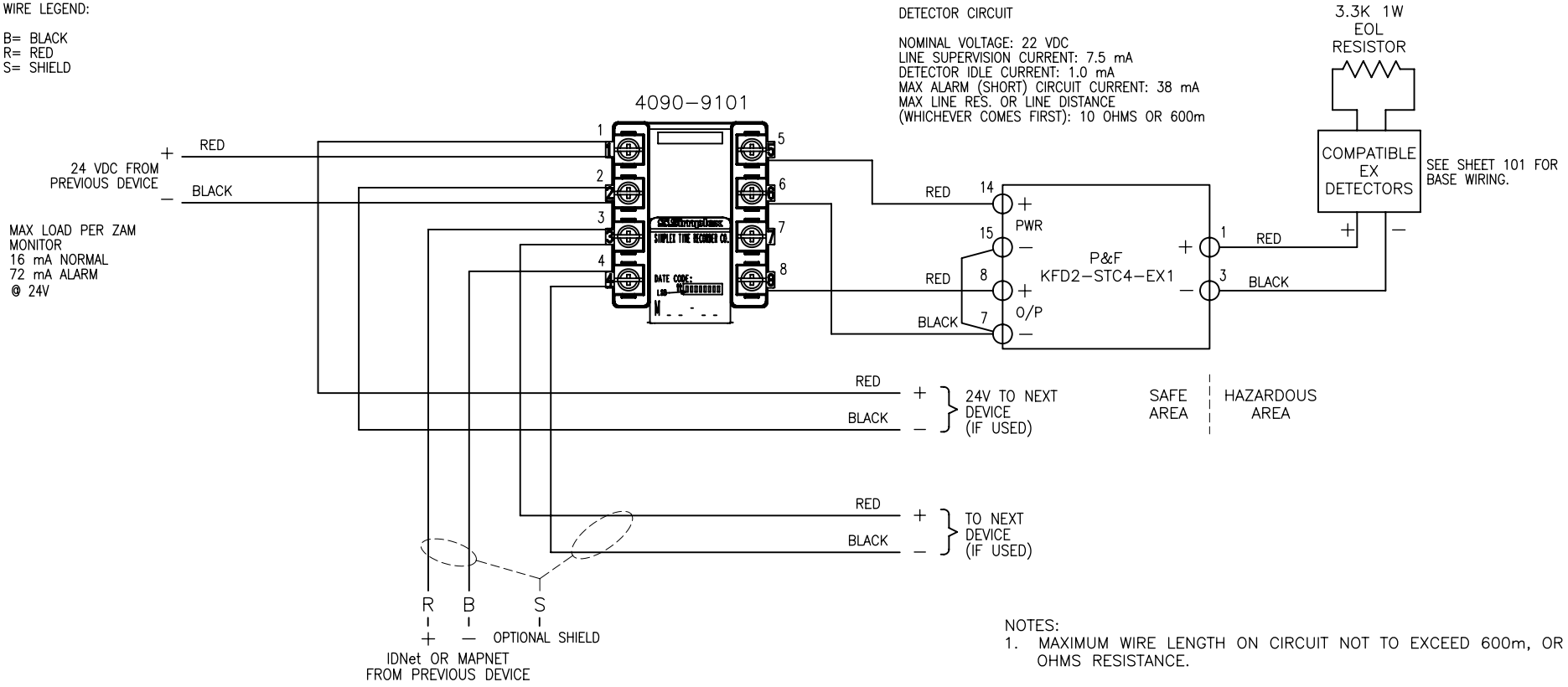
A3 | ISS/REV B | PART No:

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



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

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 SHEILDED 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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	PAA	RAC	RAC	DSCP	18–7–07

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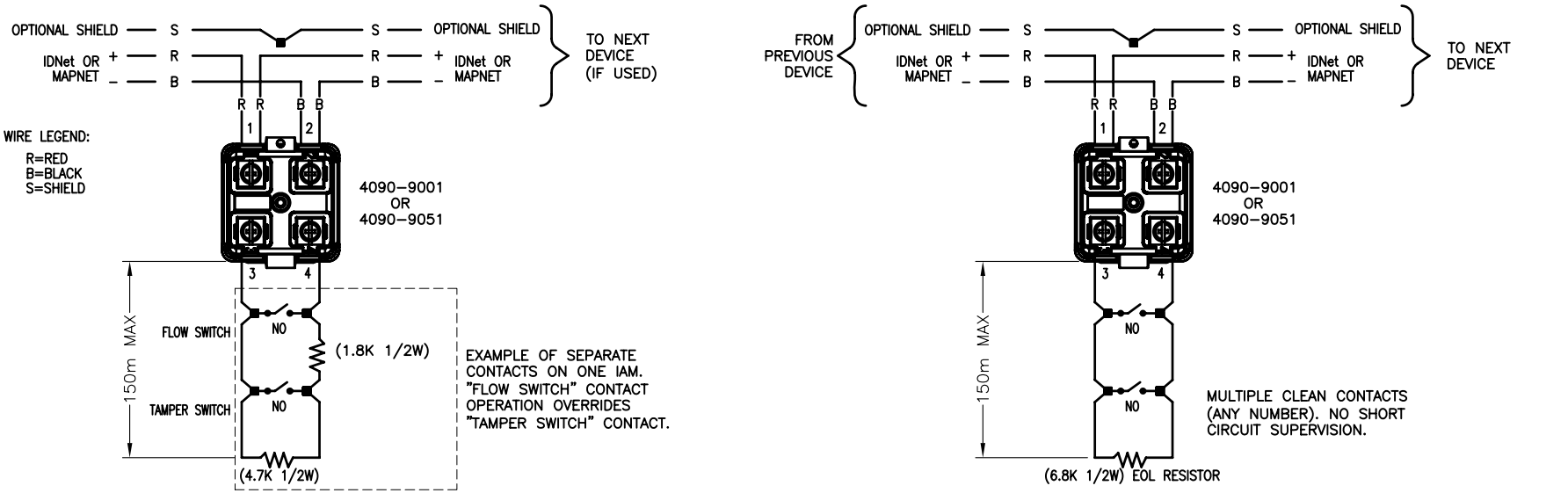
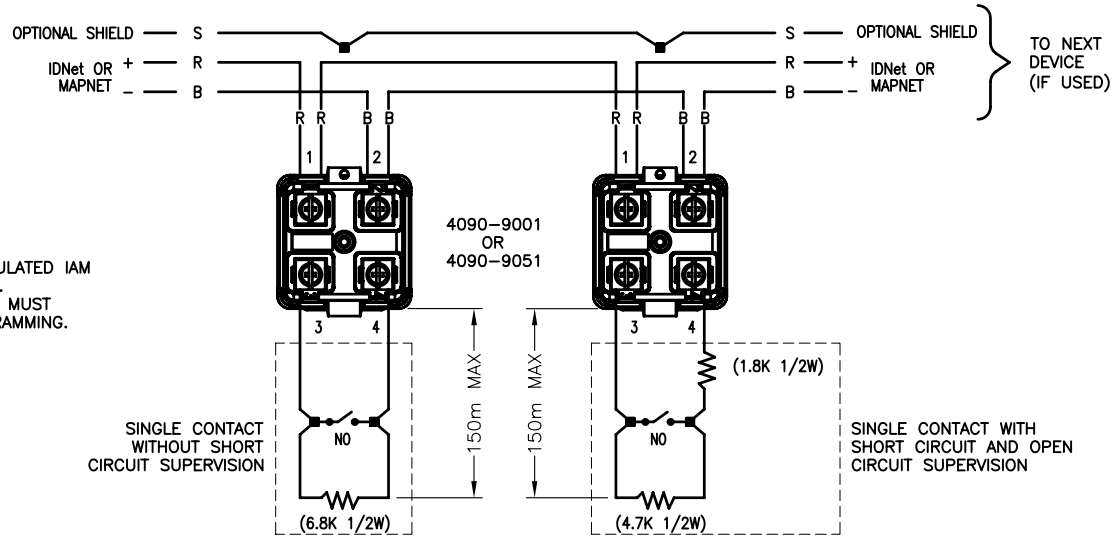
4100U
4090-9101 ZAM & "Ex" DETECTORS WIRING DIAGRAM

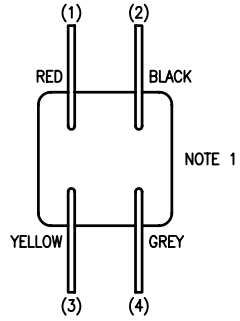
DRAWING No: 1976-181 SHEET 205 of N

A3 | ISS/REV A | PART No:





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



EQUIVALENT CONNECTION ON 4090–9051 ENCAPSULATED IAM FLYING LEADS

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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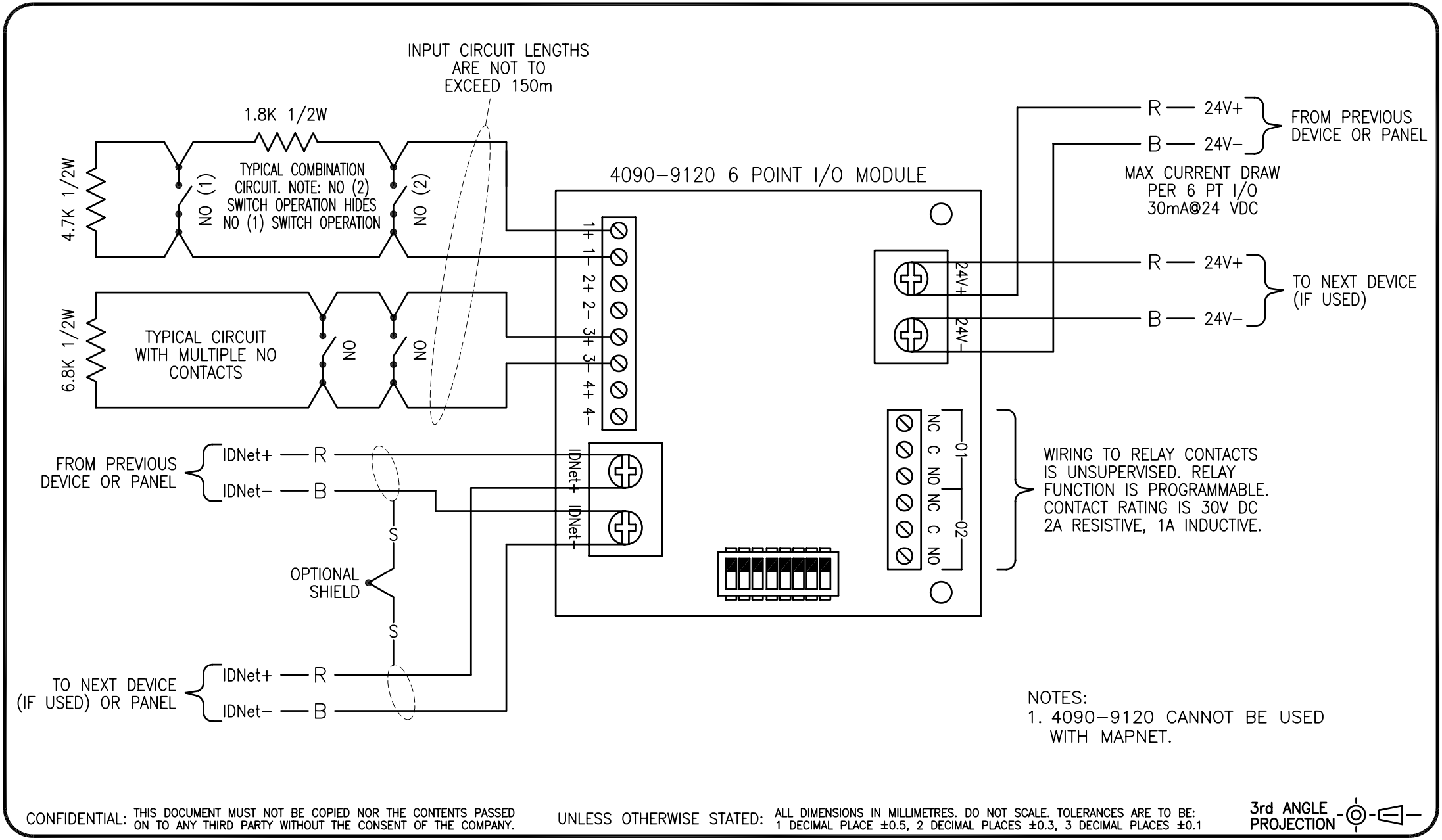
4100U
SUPERVISED IAM (4090-9001, 4090-9051) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 301 of N	
A3	ISS/REV A	PART No:



UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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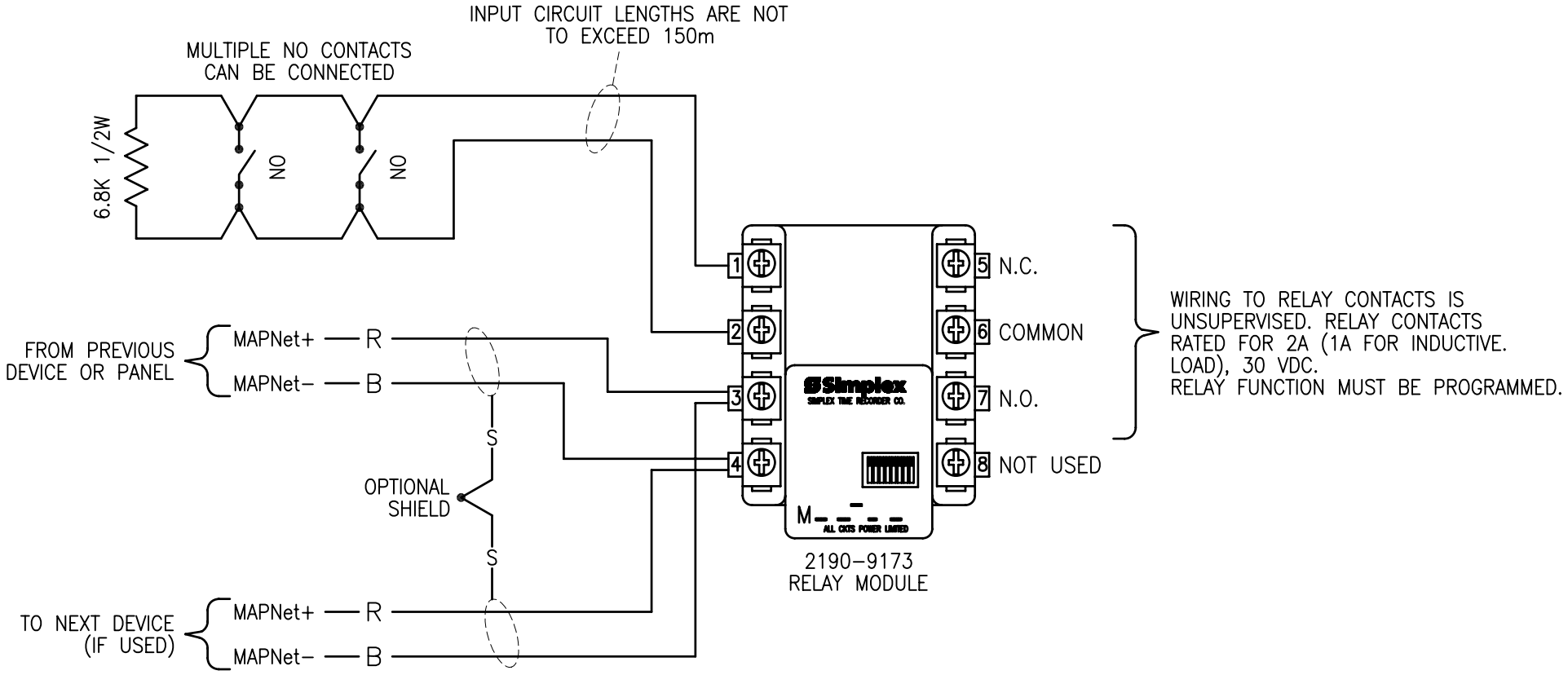
4100U
IDNET 6 POINT I/O MODULE (4090-9120)
WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 400 of N	
A3	ISS/REV A	PART No:



NOTES:
1. 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.
2. 2190–9173 CANNOT BE USED WITH IDNet.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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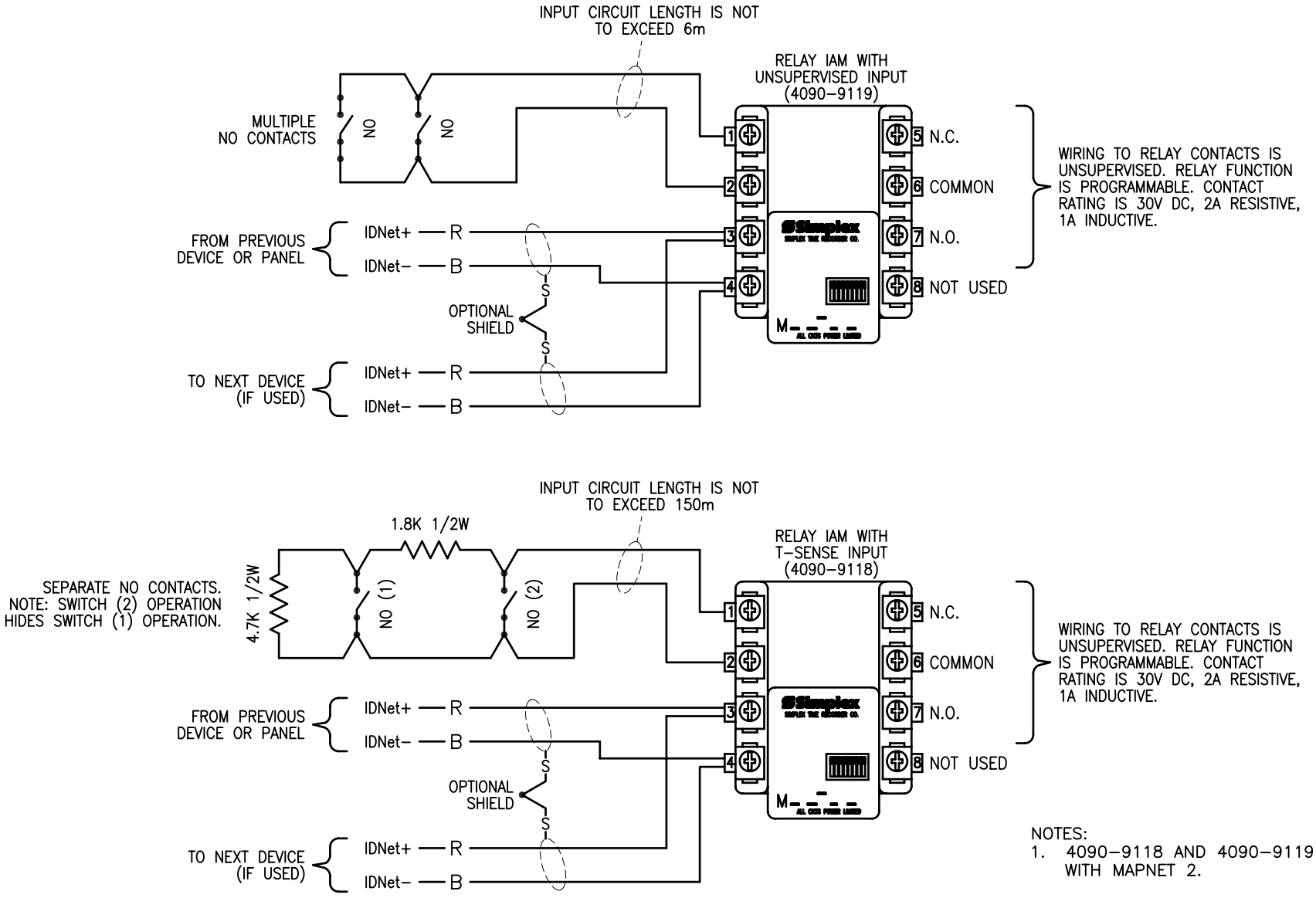
4100U
MAPNET RELAY MODULE WITH SUPERVISED INPUT (2190-9173) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 401 of N	
A3	ISS/REV A	PART No:



NOTES:
1. 4090-9118 AND 4090-9119 CANNOT BE USED WITH MAPNET 2.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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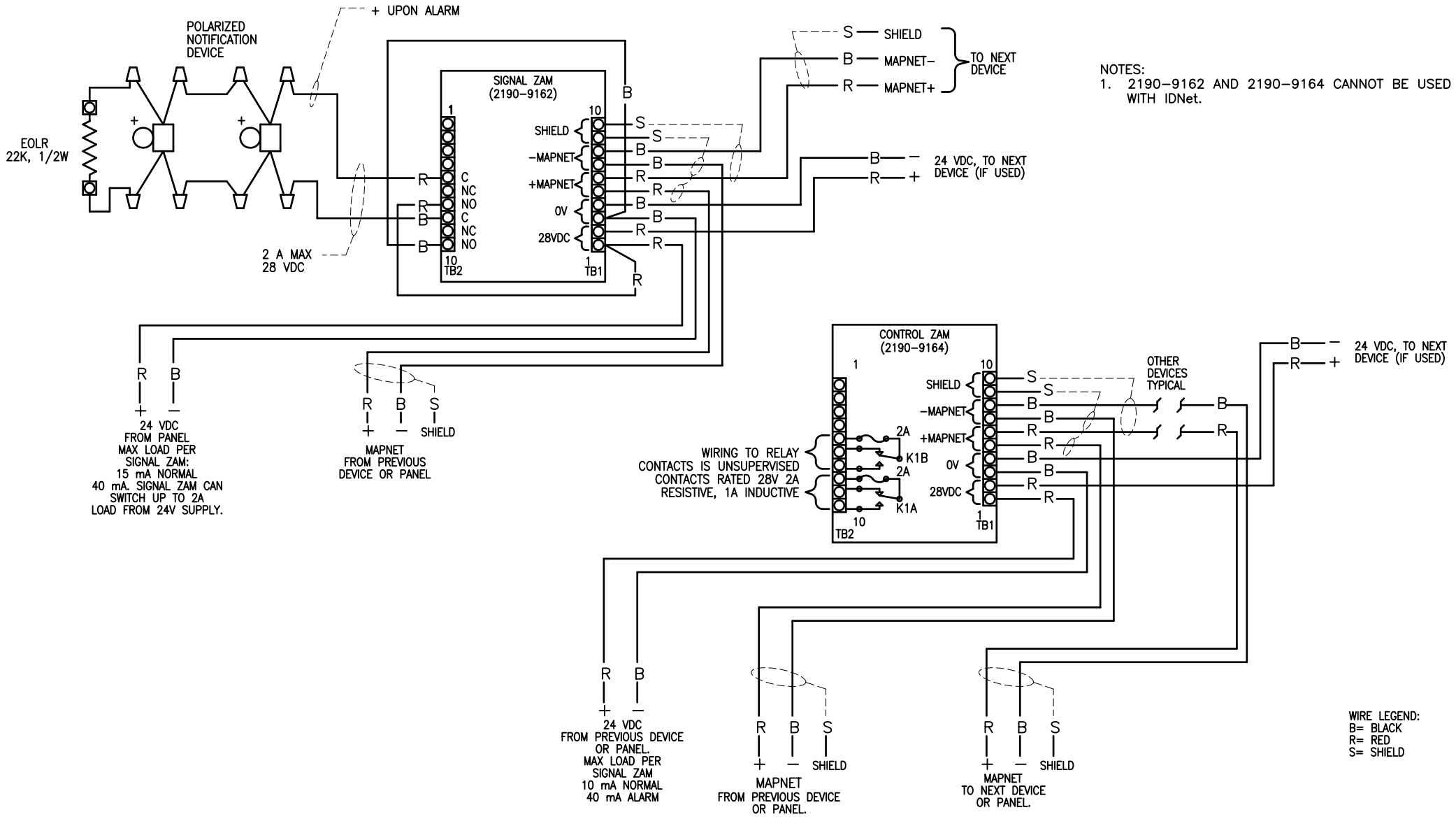
4100U
IDNET RELAY IAMS WITH INPUTS (4090-9118, 4090-9119) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 402 of N

A3 | ISS/REV B | PART No:



NOTES:
1. 2190-9162 AND 2190-9164 CANNOT BE USED WITH IDNet.

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

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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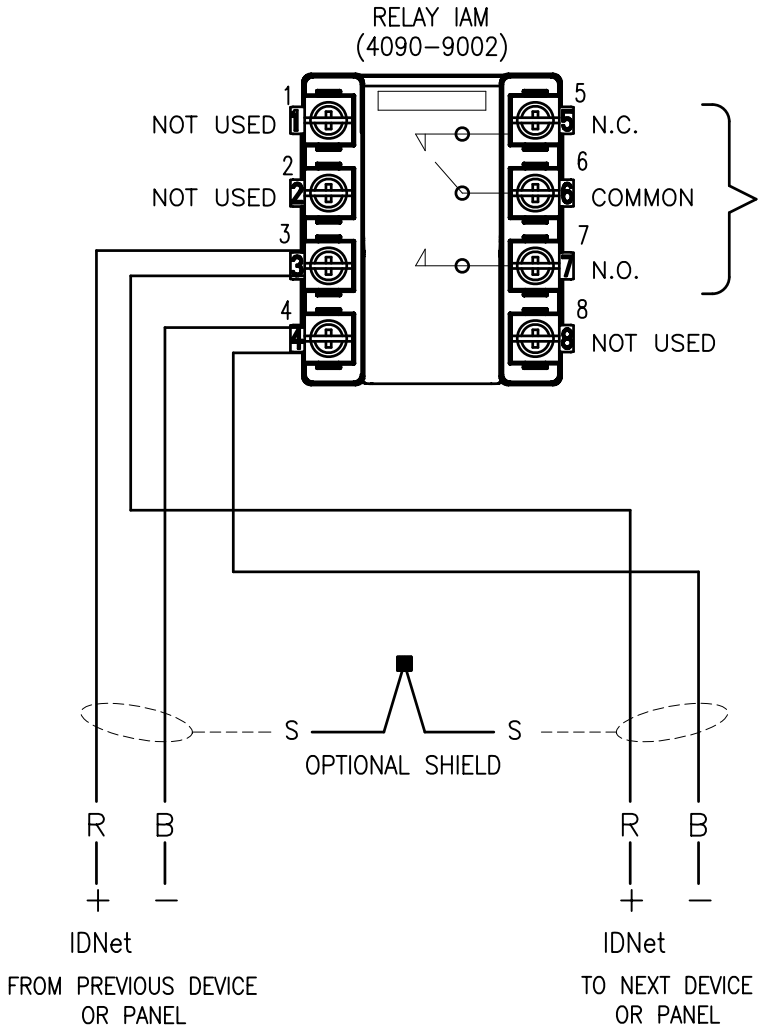
4100U
MAPNET 2 SIGNAL ZAM (2190-9162) AND CONTROL ZAM (2190-9164) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 403 of N

A3 | ISS/REV A | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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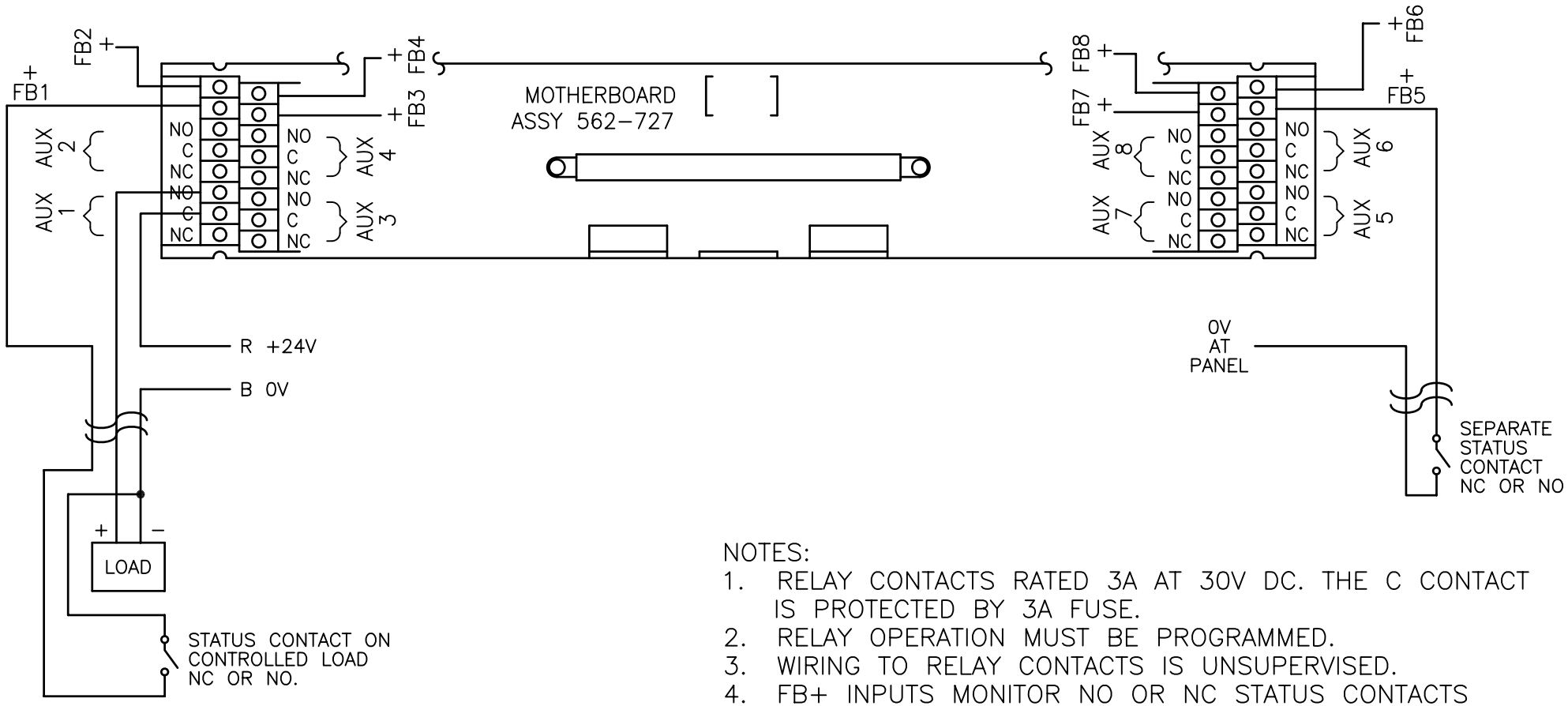
4100U
IDNET RELAY IAM (4090-9002) WIRING DIAGRAM

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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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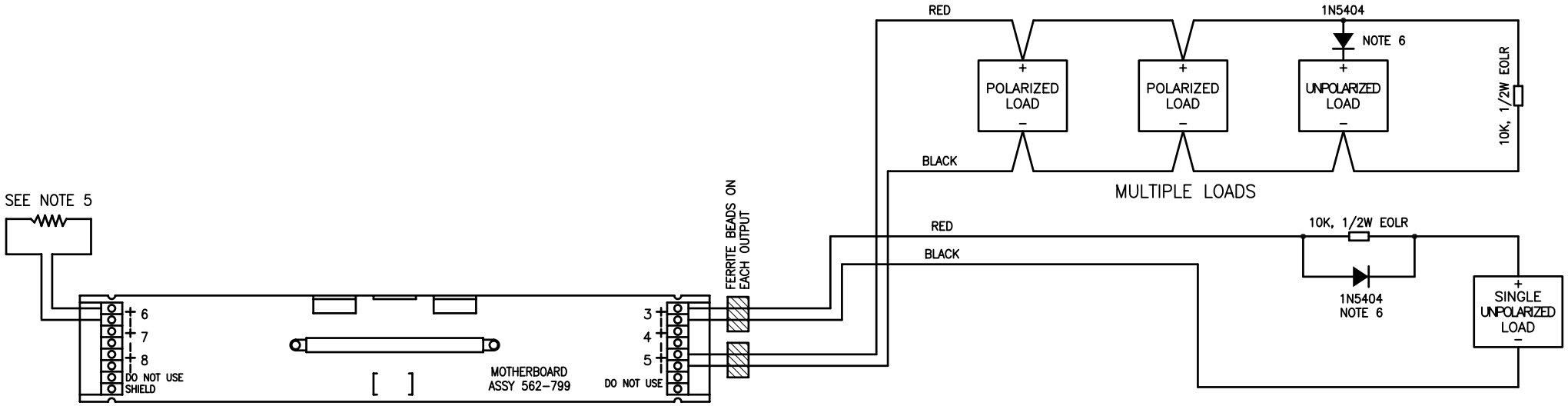
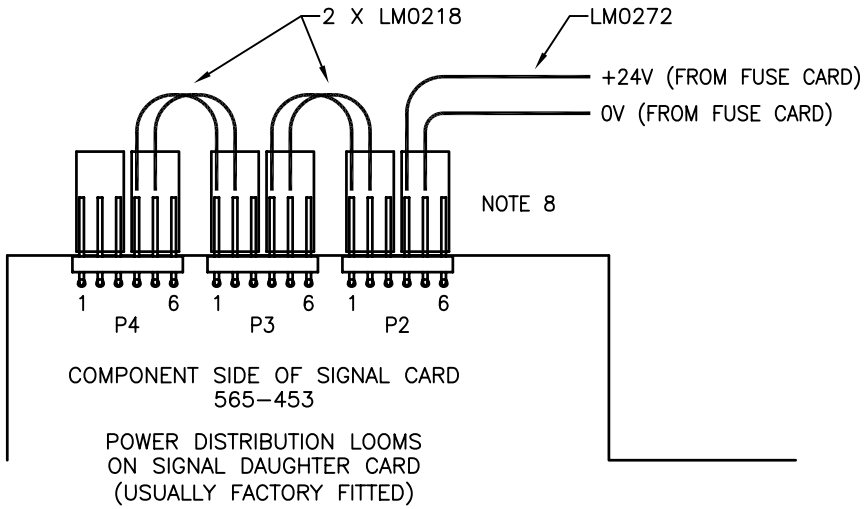
4100U
8 POINT AUXILARY RELAY CARD (4100-3003) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 405 of N	
A3	ISS/REV A	PART No:





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 – (IN5404, 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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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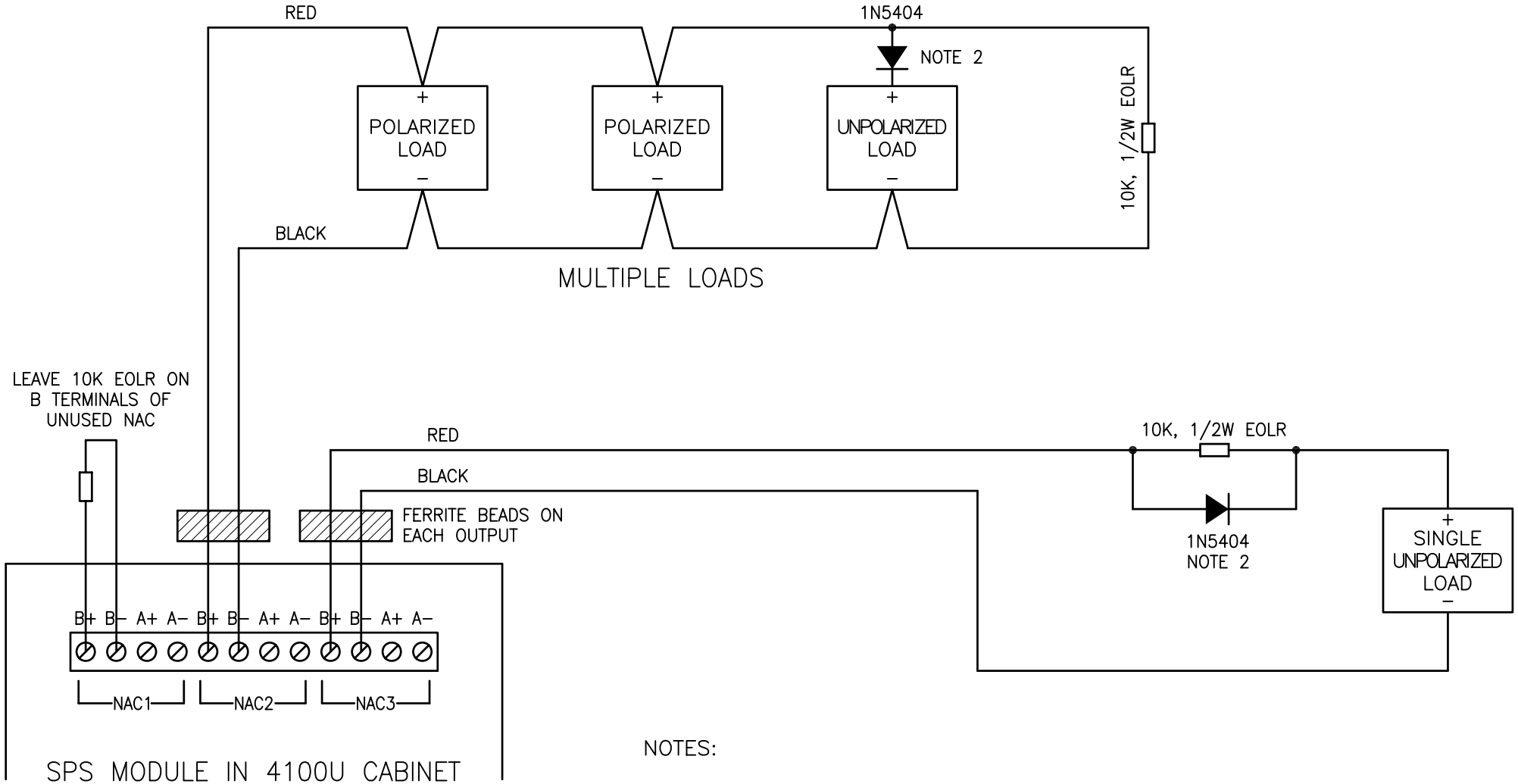
4100U
6 POINT SIGNAL CARD (4100-4321) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 406 of N	
A3	ISS/REV A	PART No:



NOTES:

1. EACH NAC CAN DRIVE UP TO 3A ALARM LOAD.
2. 1N5404 DIODES ARE SUITABLE FOR LOADS UP TO 3A.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				22–8–06

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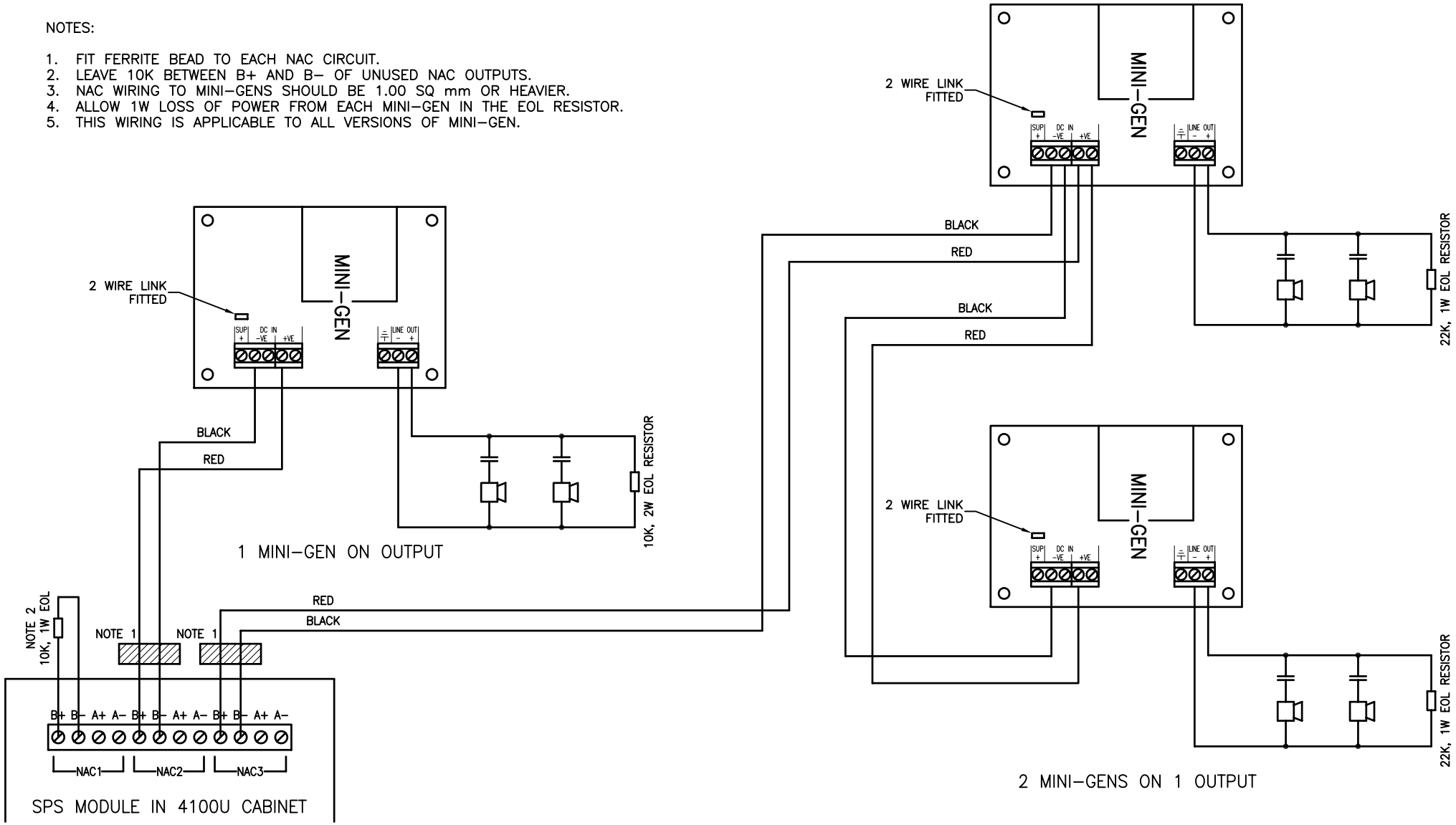
4100U SPS NAC LOADS WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 407 of N

A3 | ISS/REV A | PART No:

NOTES:

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



UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				22–8–06

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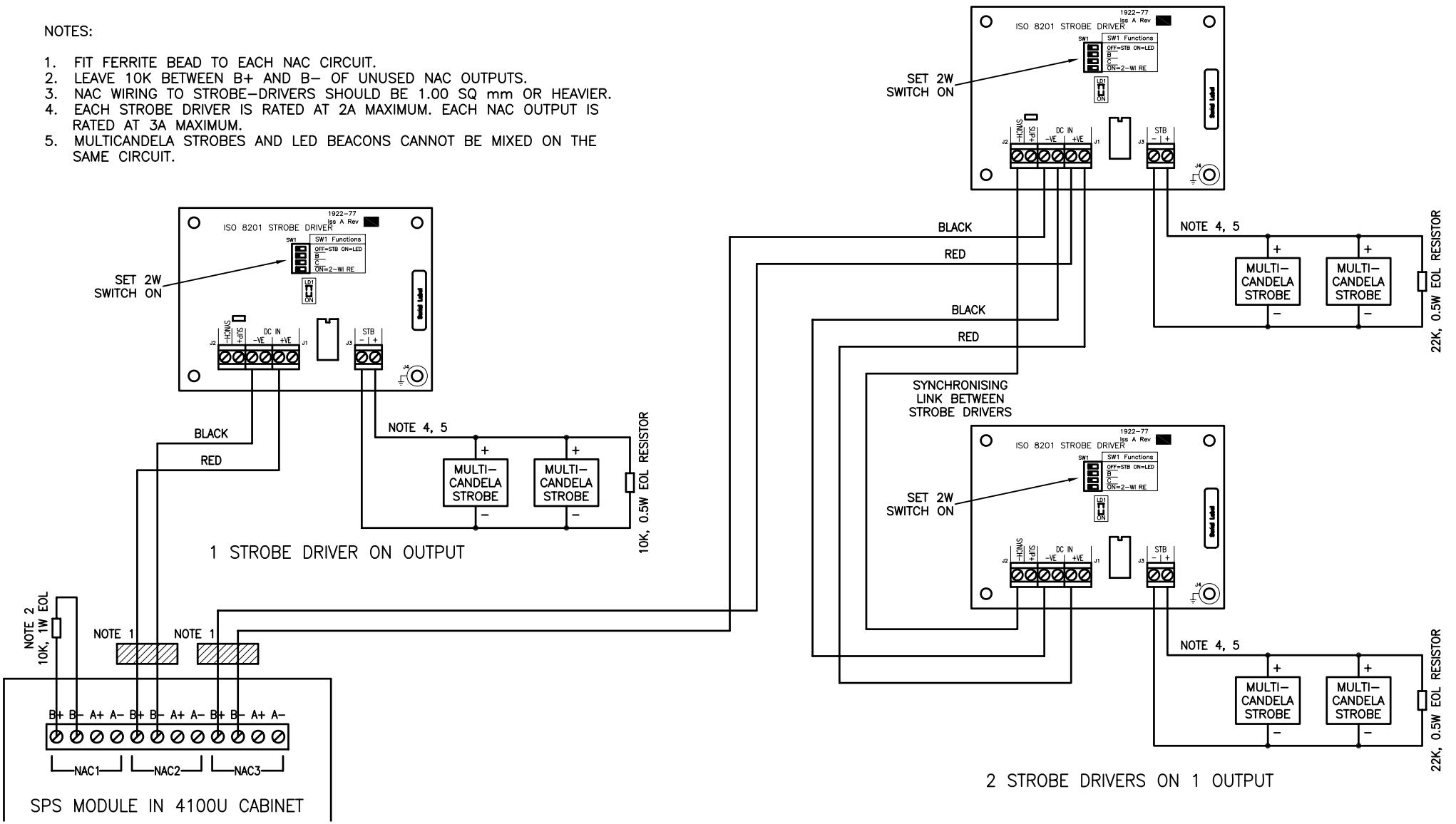
4100U
SPS NAC WIRING TO MINI-GEN TONE GENERATOR
WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 409 of N	
A3	ISS/REV A	PART No:

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.



UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				24–8–06

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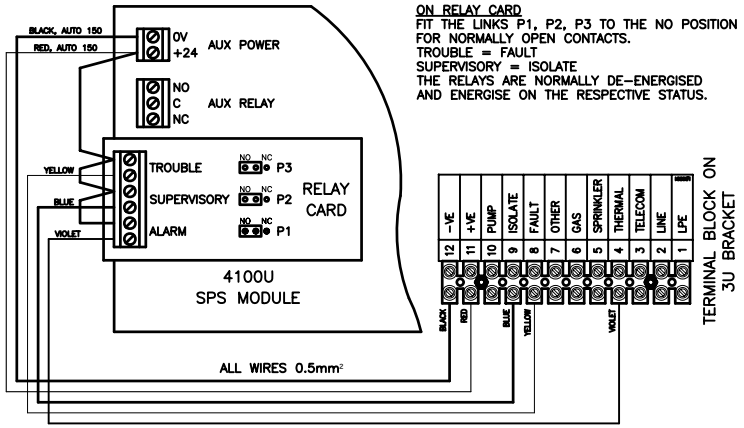
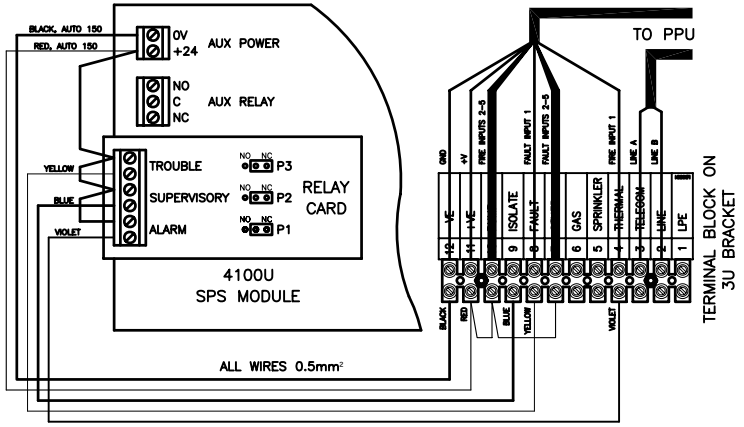
4100U
SPS NAC WIRING TO STROBE DRIVER
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 410 of N

A3 | ISS/REV A | PART No:

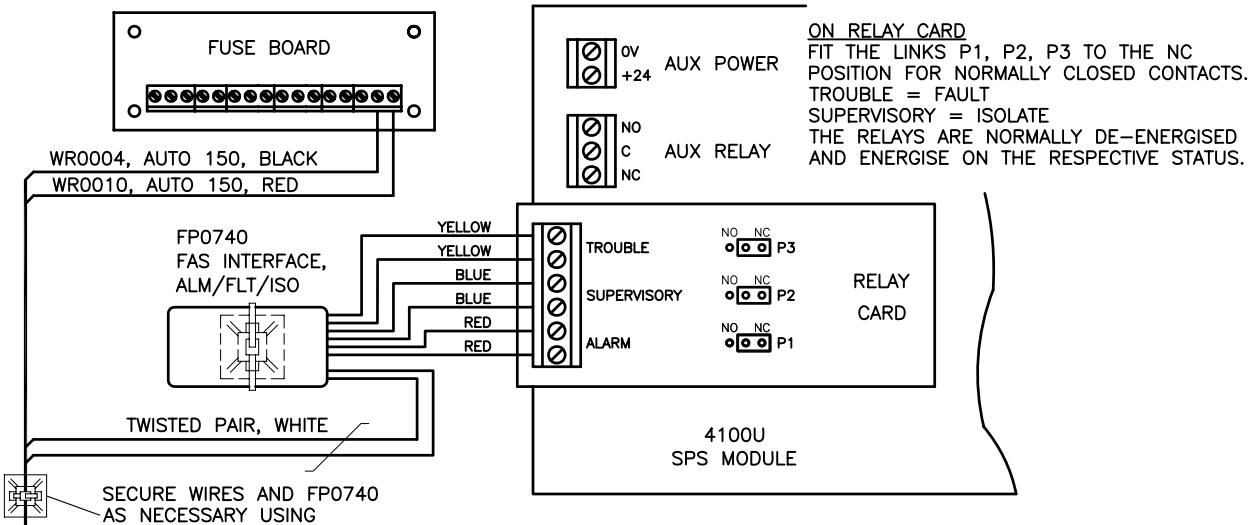


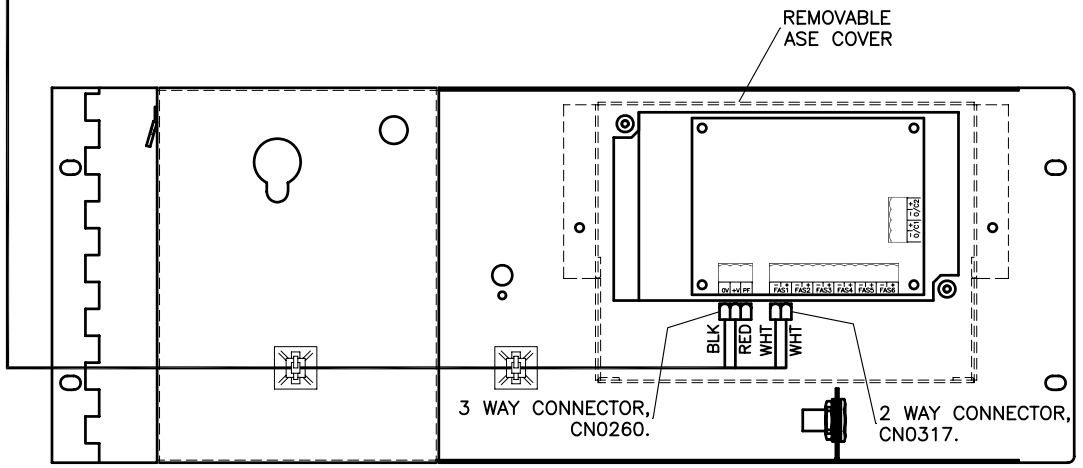
WESTERN AUSTRALIA AIU WIRING



QUEENSLAND PPU WIRING

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.





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3rd ANGLE PROJECTION

ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				29-8-06

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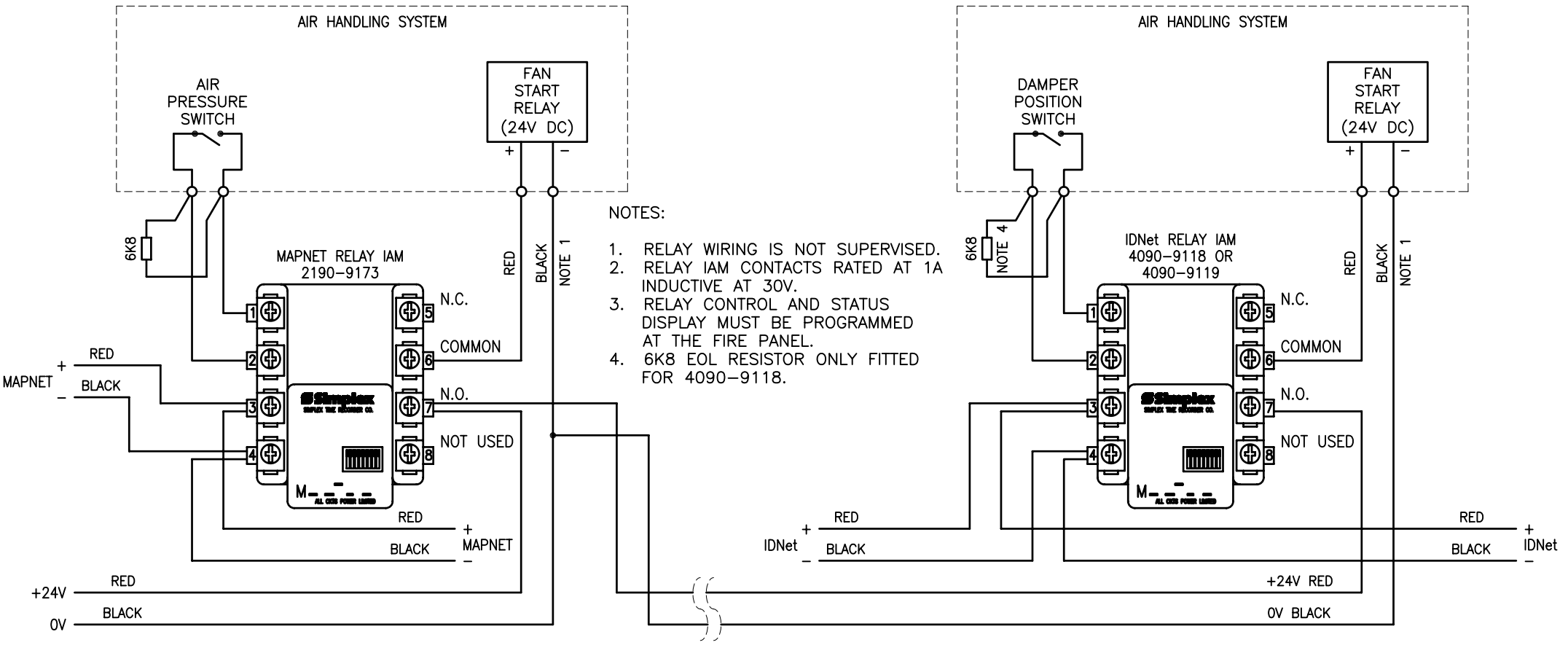
4100U SPS BRIGADE RELAY (4100-6033) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 411 of N	
A3	ISS/REV A	PART No:



UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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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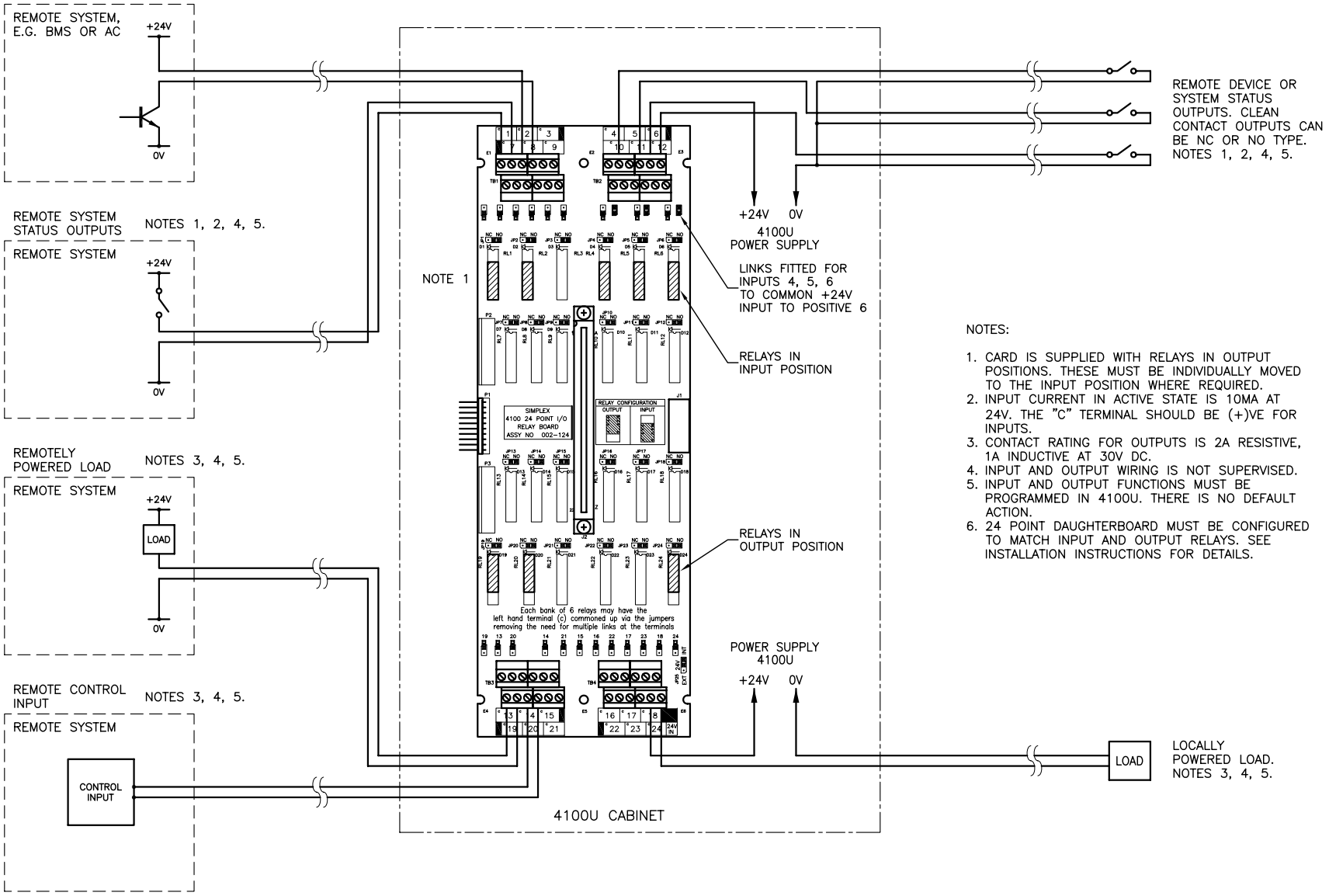
4100U
EXAMPLES - FAN CONTROLS WITH RELAY IAMS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 412 of N

A3 | ISS/REV B | PART No:



NOTES:

1. CARD IS SUPPLIED WITH RELAYS IN OUTPUT POSITIONS. THESE MUST BE INDIVIDUALLY MOVED TO THE INPUT POSITION WHERE REQUIRED.
2. INPUT CURRENT IN ACTIVE STATE IS 10MA AT 24V. THE "C" TERMINAL SHOULD BE (+)VE FOR INPUTS.
3. CONTACT RATING FOR OUTPUTS IS 2A RESISTIVE, 1A INDUCTIVE AT 30V DC.
4. INPUT AND OUTPUT WIRING IS NOT SUPERVISED.
5. INPUT AND OUTPUT FUNCTIONS MUST BE PROGRAMMED IN 4100U. THERE IS NO DEFAULT ACTION.
6. 24 POINT DAUGHTERBOARD MUST BE CONFIGURED TO MATCH INPUT AND OUTPUT RELAYS. SEE INSTALLATION INSTRUCTIONS FOR DETAILS.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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

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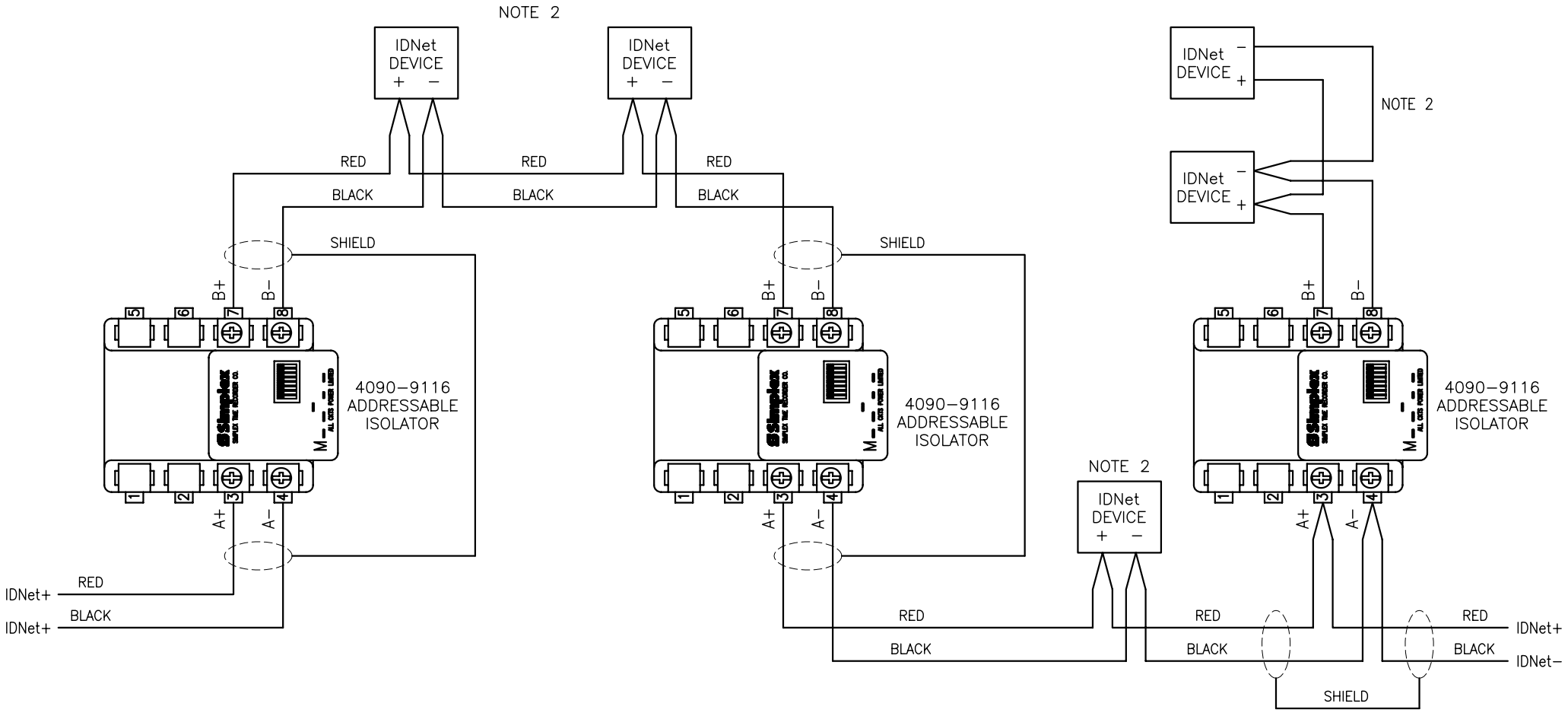
4100U
24 POINT I/O CARD (002-124) WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 413 of N	
A3	ISS/REV B	PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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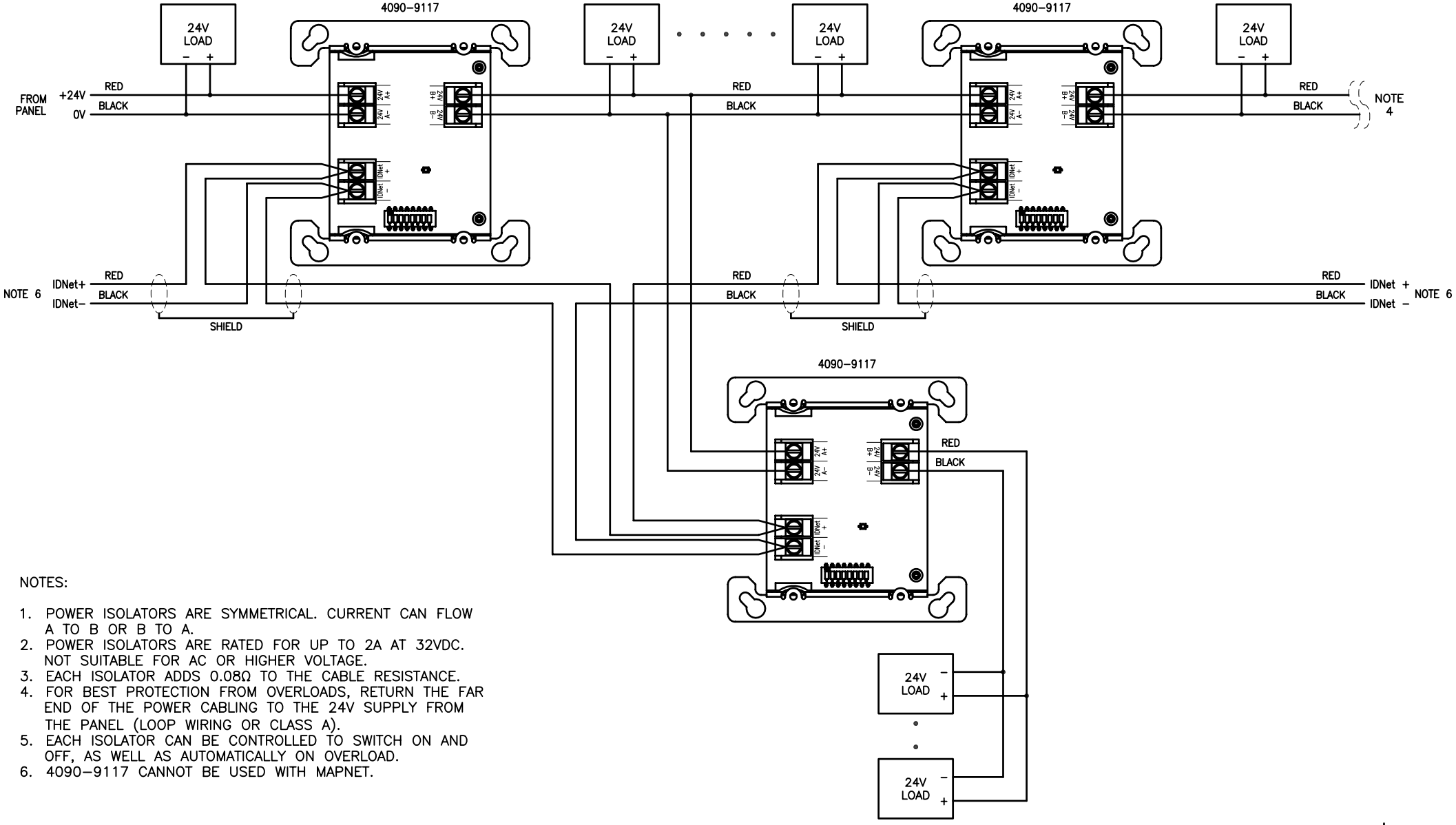
4100U
ADDRESSABLE IDNET ISOLATOR (4090-9116) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 500 of N

A3 | ISS/REV B | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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:

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).

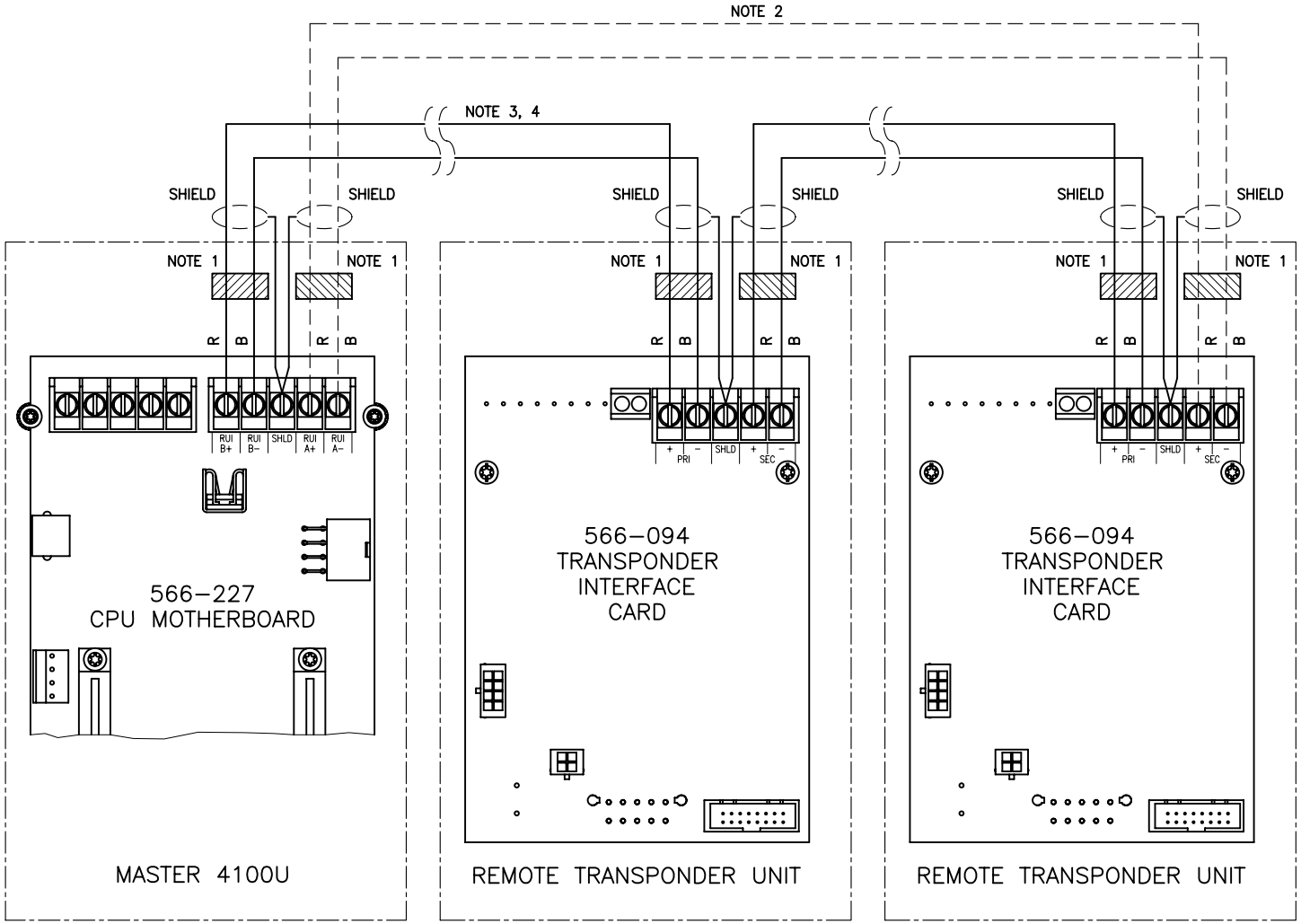
B. THE TOTAL CABLE CAPACITANCE AND RESISTANCE MUST BE NO MORE THAN 0.58µF AND 36Ω RESPECTIVELY. IF VOLTAGE TRANSIENT SUPPRESSORS ARE USED, THE ADDED CAPACITANCE AND RESISTANCE FROM THESE DEVICES MUST BE CONSIDERED.

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.



UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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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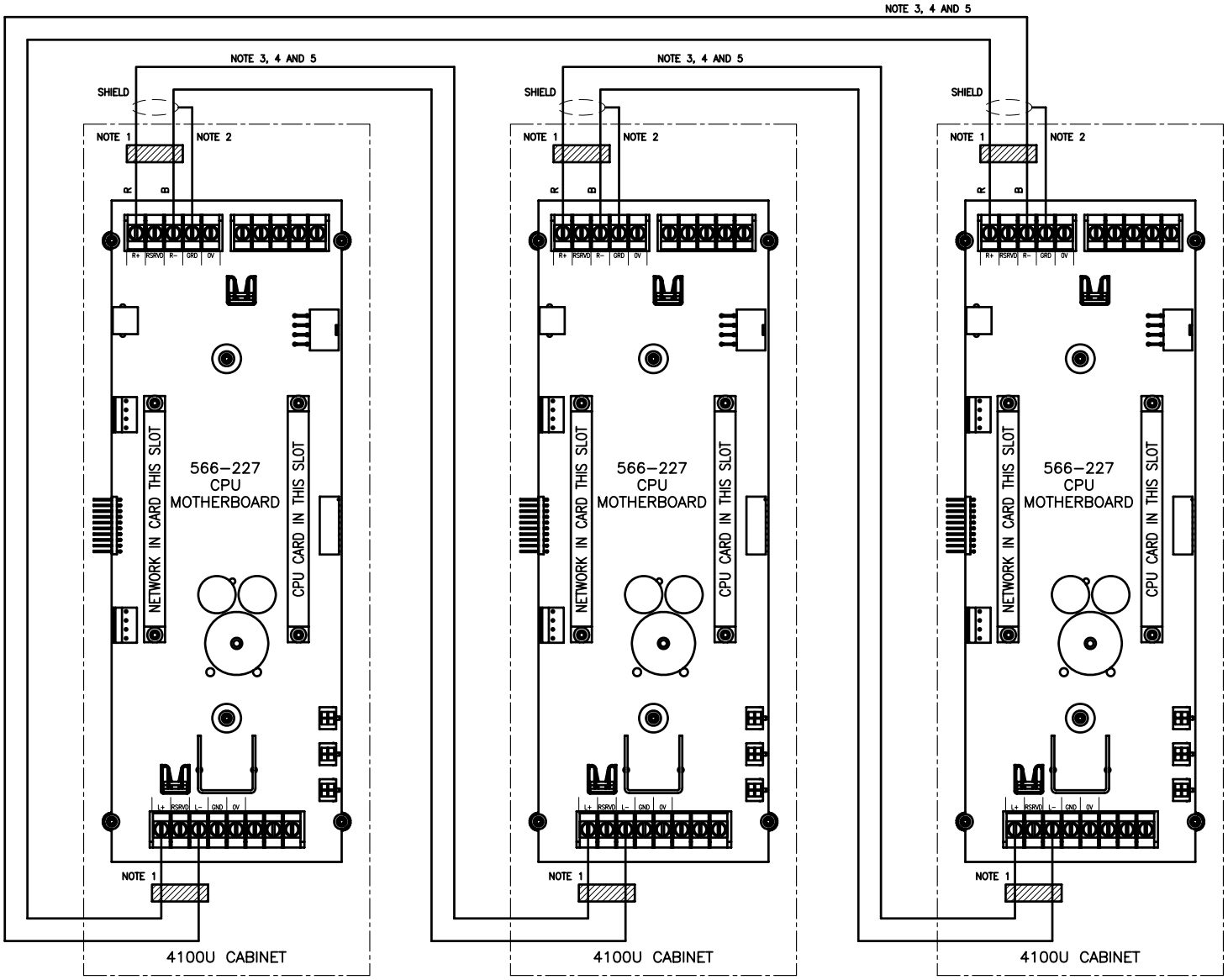
4100U
TRANSPONDER INTERFACE (4100-0620) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 600 of N

A3 | ISS/REV B | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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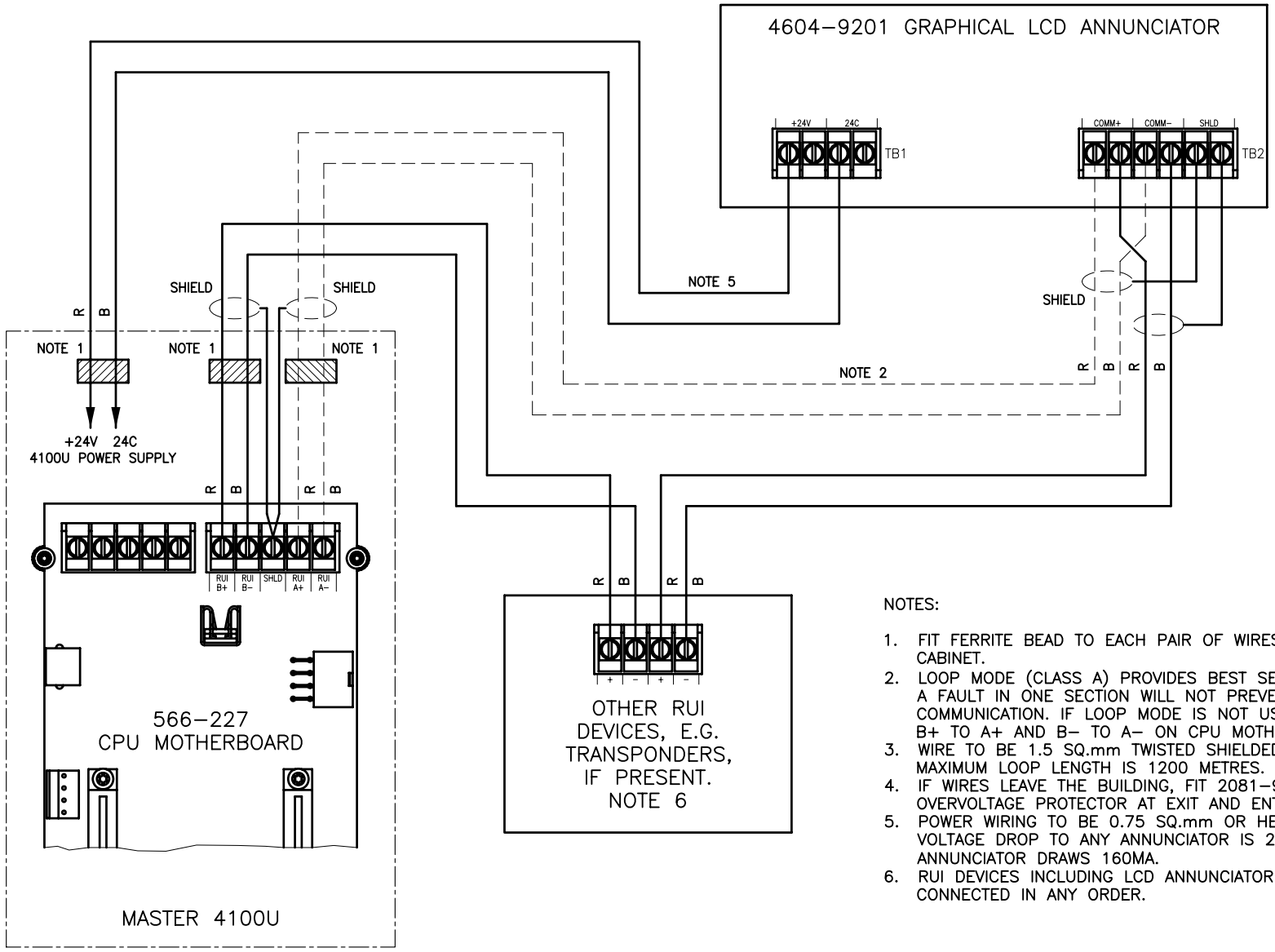
4100U
NETWORK INTERFACE (WIRED MEDIA) (4100-6014) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 601 of N

A3 | ISS/REV A | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

3rd ANGLE PROJECTION

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

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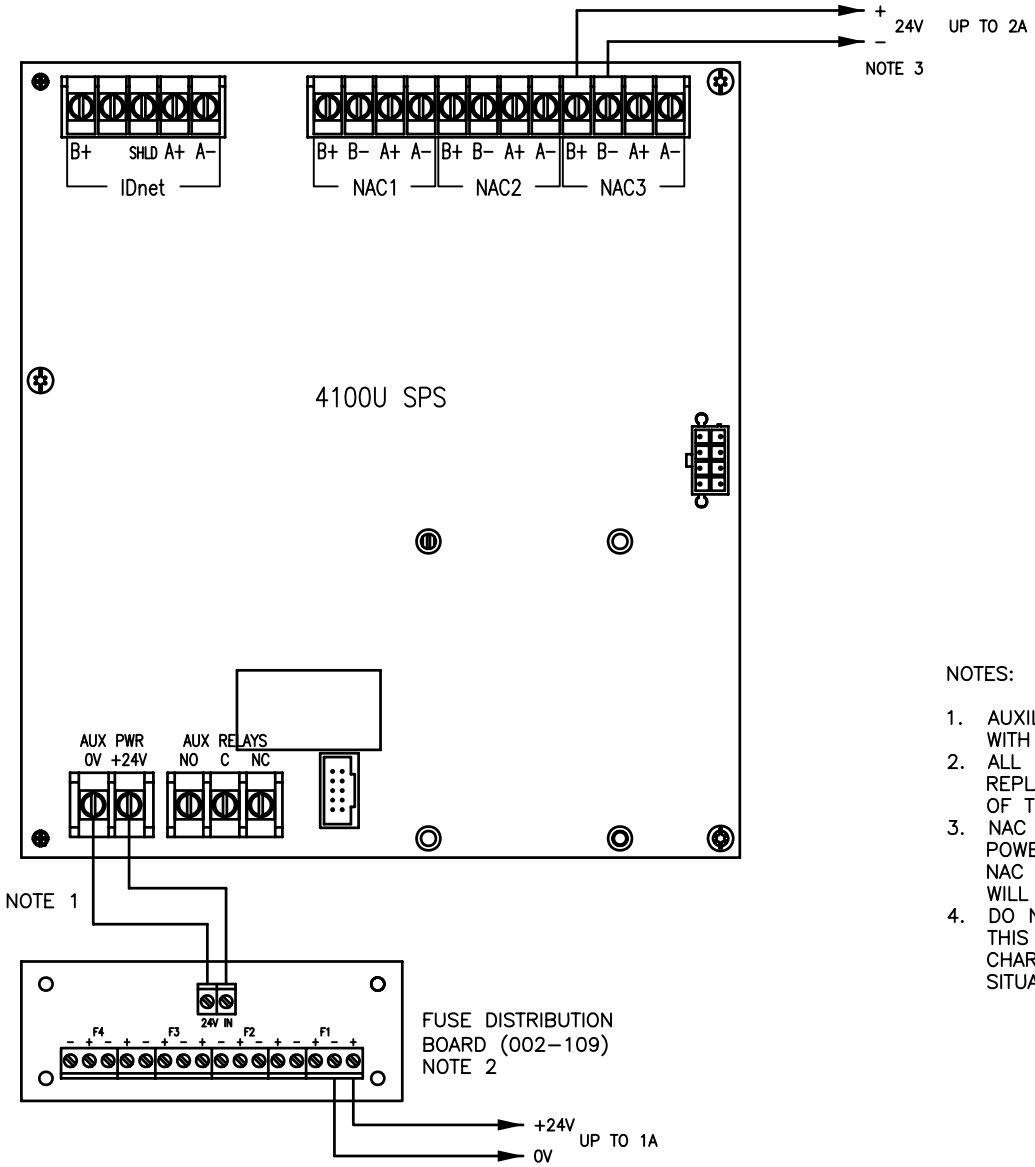
4100U LCD ANNUNCIATOR (4604-9201) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 606 of N

A3 | ISS/REV A | PART No:



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.

UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLIMETRES. DO NOT SCALE. TOLERANCES ARE TO BE: 1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

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

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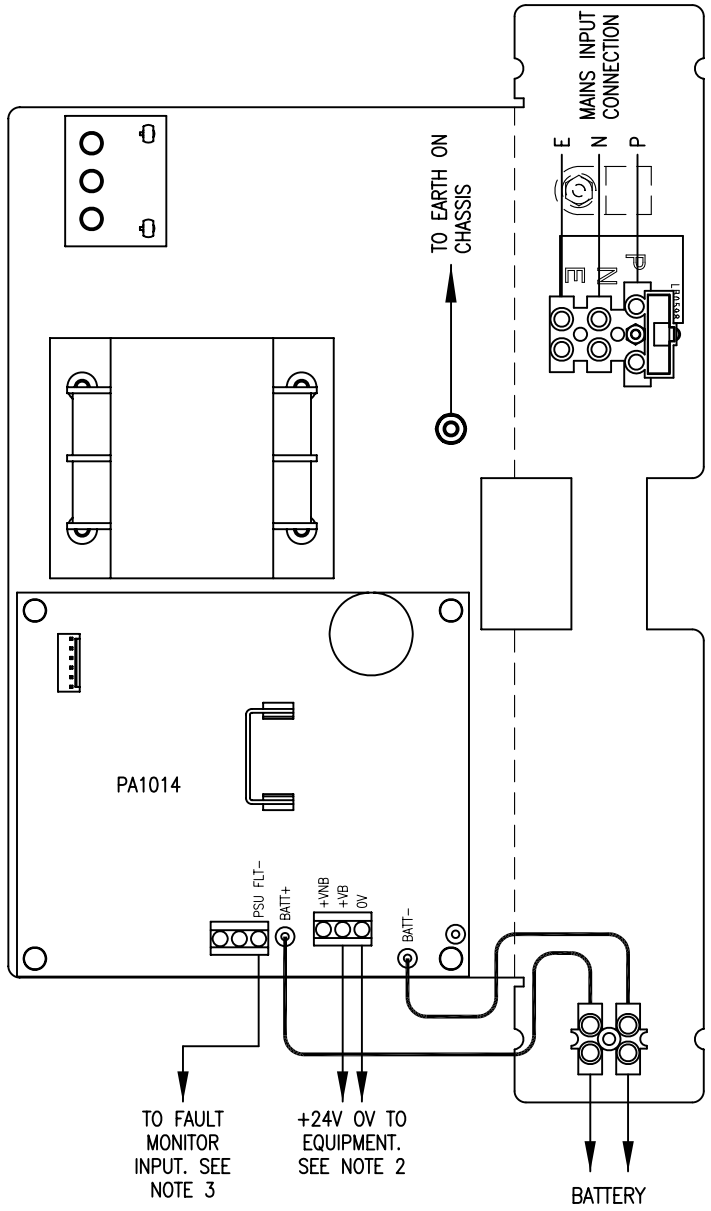
4100U SPS POWER OUTPUTS WIRING DIAGRAM

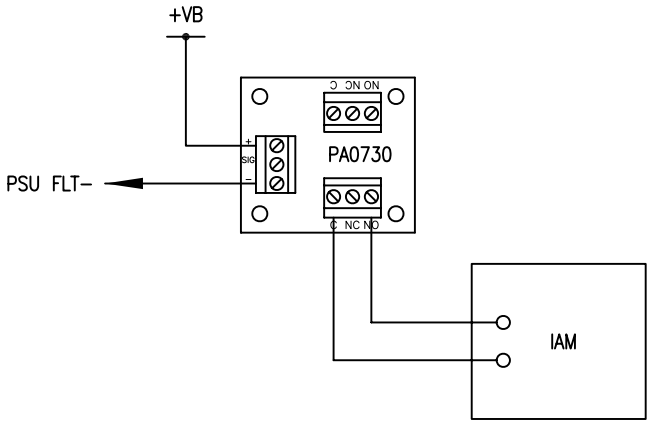
DRAWING No: 1976-181 SHEET 700 of N

A3 | ISS/REV B | 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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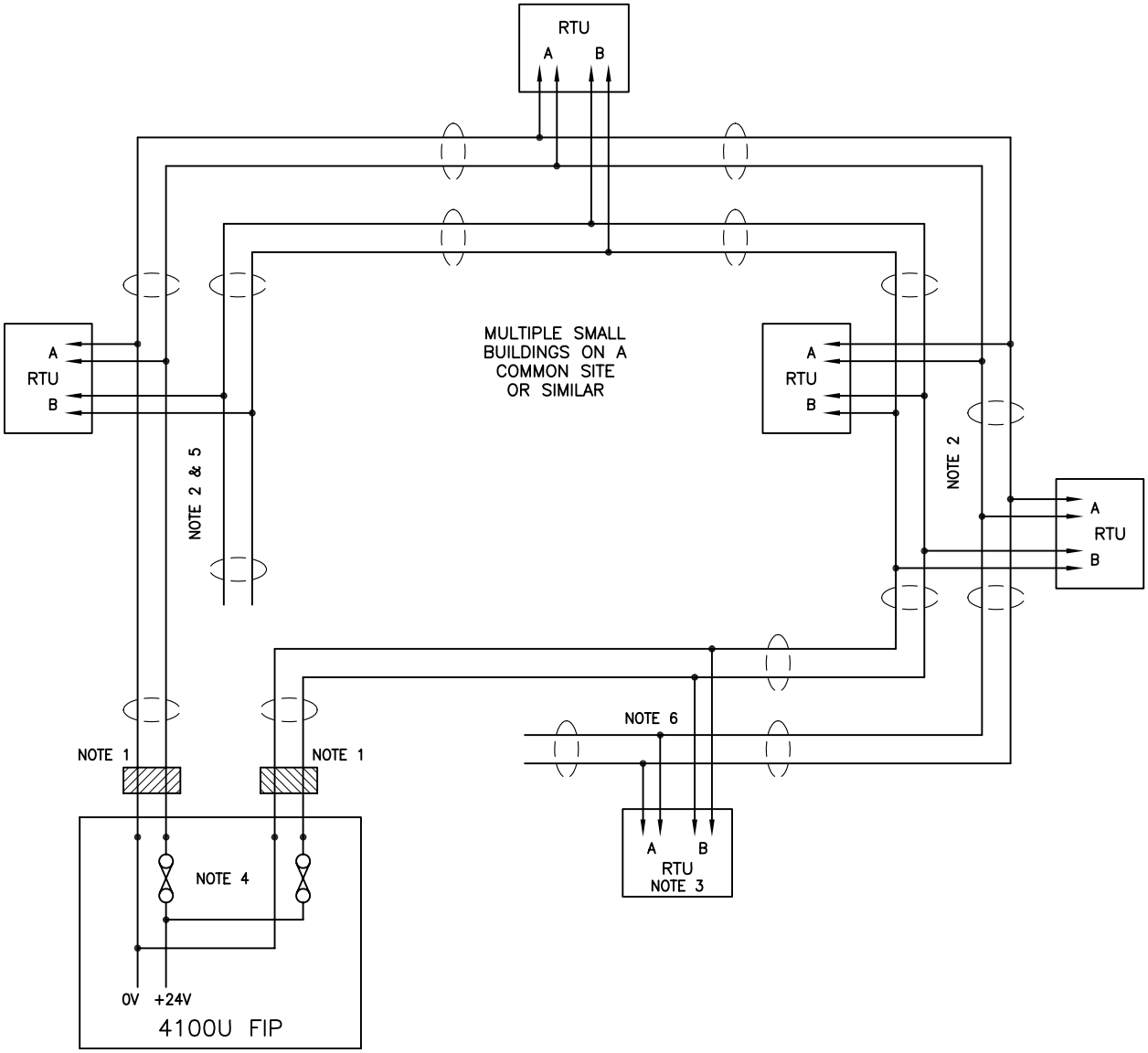
4100U
1948 2A PSU POWER OUTPUTS WIRING DIAGRAM

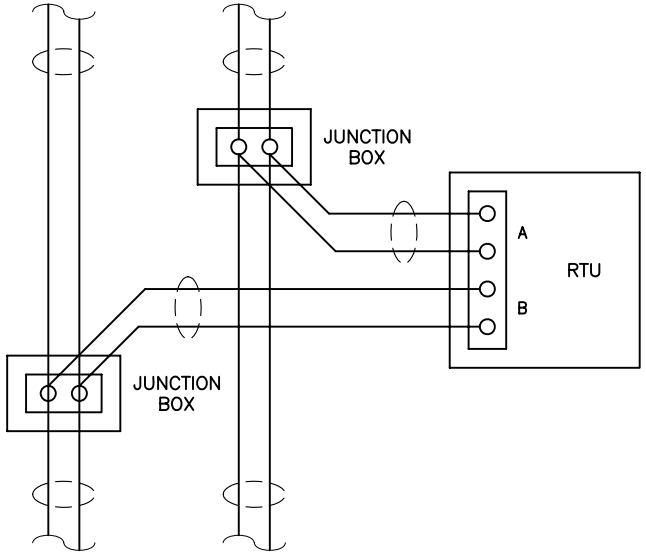
DRAWING No: 1976-181 SHEET 701 of N

A3 | ISS/REV A | PART No: LT0432



NOTES:

1. 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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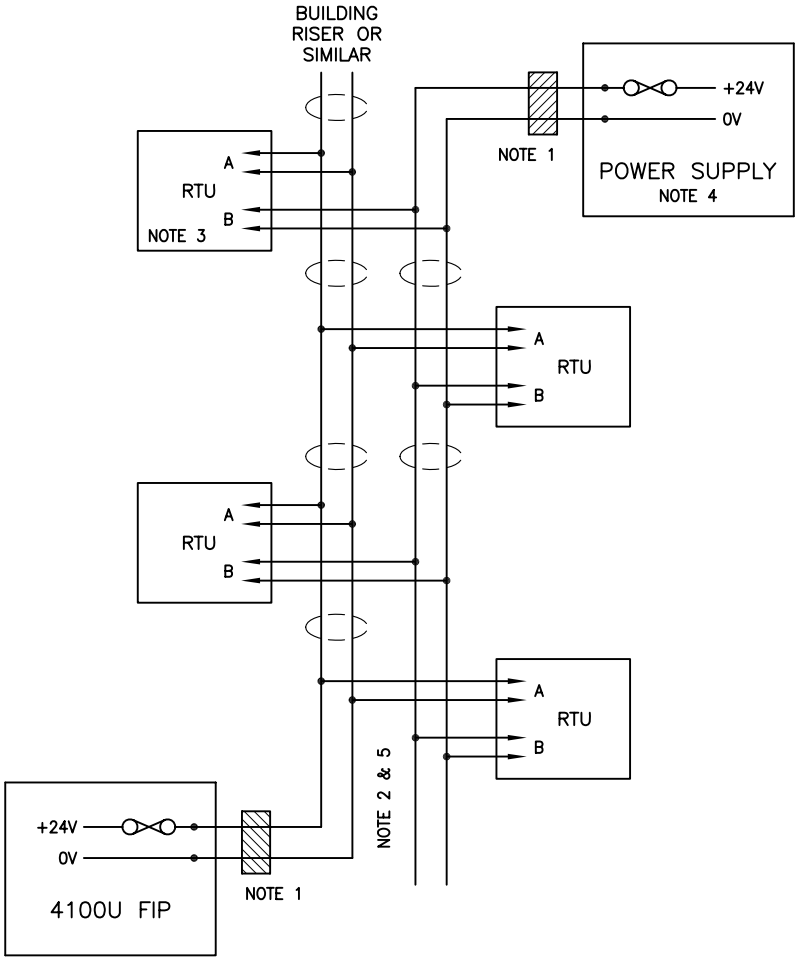
4100U
RTU - RING FEED DC POWER WIRING DIAGRAM

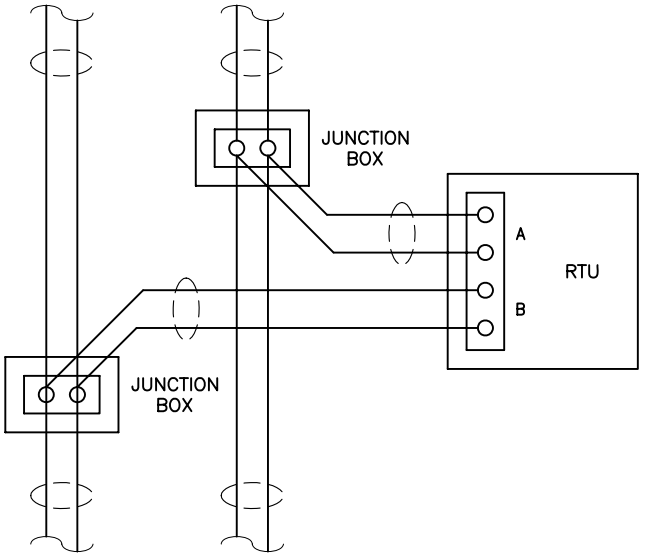
DRAWING No: 1976-181 SHEET 703 of N

A3 | ISS/REV A | PART No:



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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