Simplex

4100ESi

Australian Wiring Diagrams

LT0432
Issue 2.6

Copyright and trademarks

End user liability disclaimer

The wiring details described in this document are intended to allow compliance with the statutory requirements of Australian fire alarm systems. Some aspects of compliance require corresponding settings in the configuration of the fire alarm system. Because this configuration will be customized by the User to define in detail the operation of particular 4100ES or 4100ESi systems, changes may be made by the User that prevent this installation from meeting statutory requirements.

Therefore, Johnson Controls cannot accept any responsibility as to the suitability of the functions generated by the User in any particular configured system.

Revision history

2.0 12-07-2016	Extensively revised for 4100ESi
2.1 17-11-2016	Added sheets 608 and 708. Revised sheets 308, 309, 427, 603, 604, and 705. Withdrew sheet 212.
2.2 23-01-2017	Revised sheet 207.
2.3 09-11-2017	Added sheets 109, 429-432. Revised sheets 600, 601, 606,609
2.4 31-10-2018	Added sheets 433, 434 Revised sheets 429-432, 707.

2.5 22-10-2019	Added sheets 110, 209, 435, 436, 613. Revised sheets 101, 208, 307, 417, 418, 422, 427, 432, 600, 601, 602.
2.6 04-04-2023	Added sheet 437.

About this guide

These diagrams show the wiring for particular modules or cards or detector bases which can be used with the 4100ES (AS4428.1) or 4100ESi (AS7240.2) Simplex Fire Alarm systems.

Organization

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

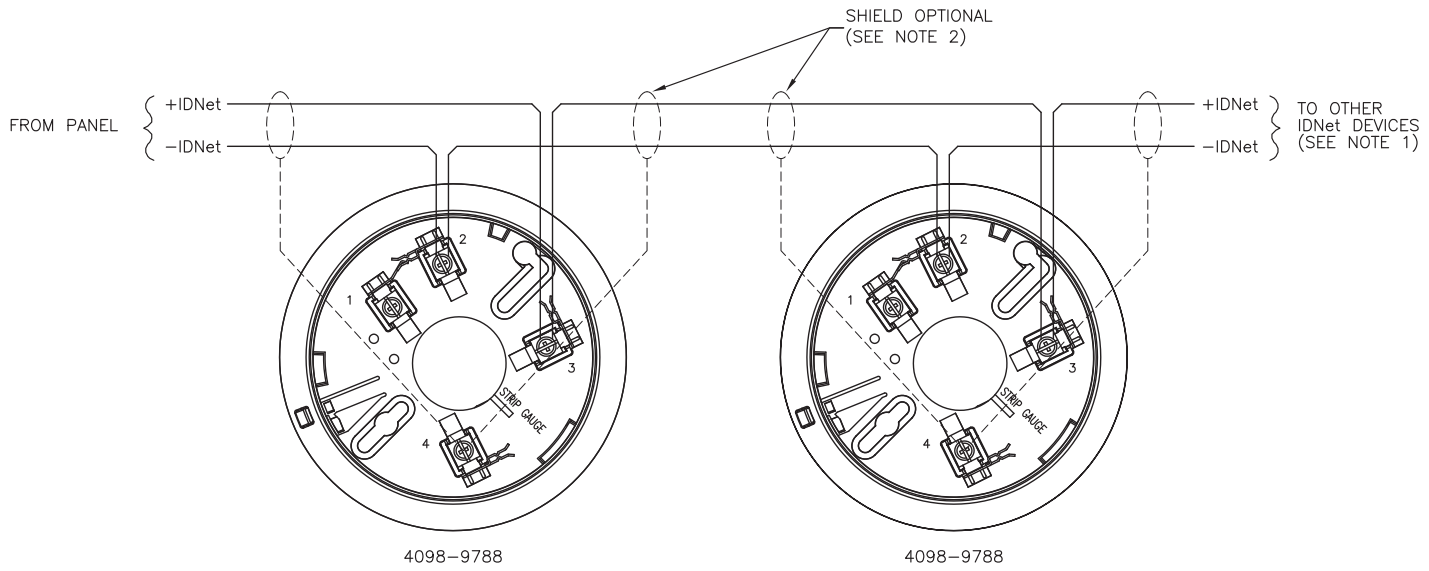
Sheet Number	Type of Devices Covered
100-199	Detectors & bases
200-299	Zone modules & cards providing detection circuits
300-399	Input devices
400-499	Output devices or mixed input/output devices
500-599	Fault isolators
600-699	Communications – networks, printers, etc.
700-799	Power Supply details

Abbreviations

Abbreviation	Description
MAPNET	Multi-Application Peripheral Network – early version of addressable device communication.
IDNet	Individual Device Network – later version of addressable device communication.
IAM	Individually Addressable Module.
ZAM	Zone Addressable Module – interfaces to conventional detectors.
RUI	Remote Unit Interface – connects 4100ES Master panel and Slave transponders.
RTU	Remote Transponder Unit – slave unit.
NAC	Notification Appliance Circuit – drives DC-powered sounders and visual warning devices, usually with supervision.
MX	Refers to detectors and devices using the MX DIGITAL communication protocol on an addressable loop. Not compatible with MAPNET/IDNet devices.
NC	Normally Closed Relay Contact.
NO	Normally Open Relay Contact.

Table of contents

Detectors and bases



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 MAPNET MODULE AND 250 FOR 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.

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	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

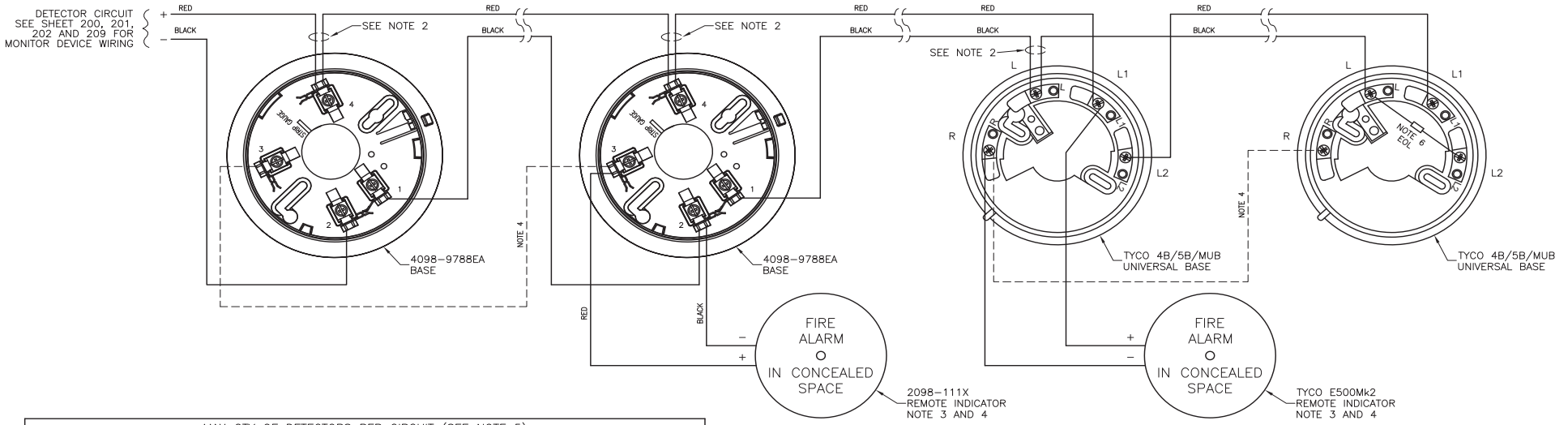
tyco
Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
2 WIRE DETECTOR BASES - QUICKCONNECT DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 100 of N

A3 | ISS/REV B | PART No:



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	4100–5013 8 ZONE/RELAY
614CH	CO AND HEAT	37	25	25	37
614I	IONISATION	40	29	29	40
614P	PHOTOELECTRIC	28	19	19	28
614T	HEAT	30	20	20	35
USED IN 4B/5B/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 4B/5B/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.
6. EOL = 3K3 EXCEPT 4100–5013, WHICH ALSO ACCEPTS 2K2 AND 2K0.

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

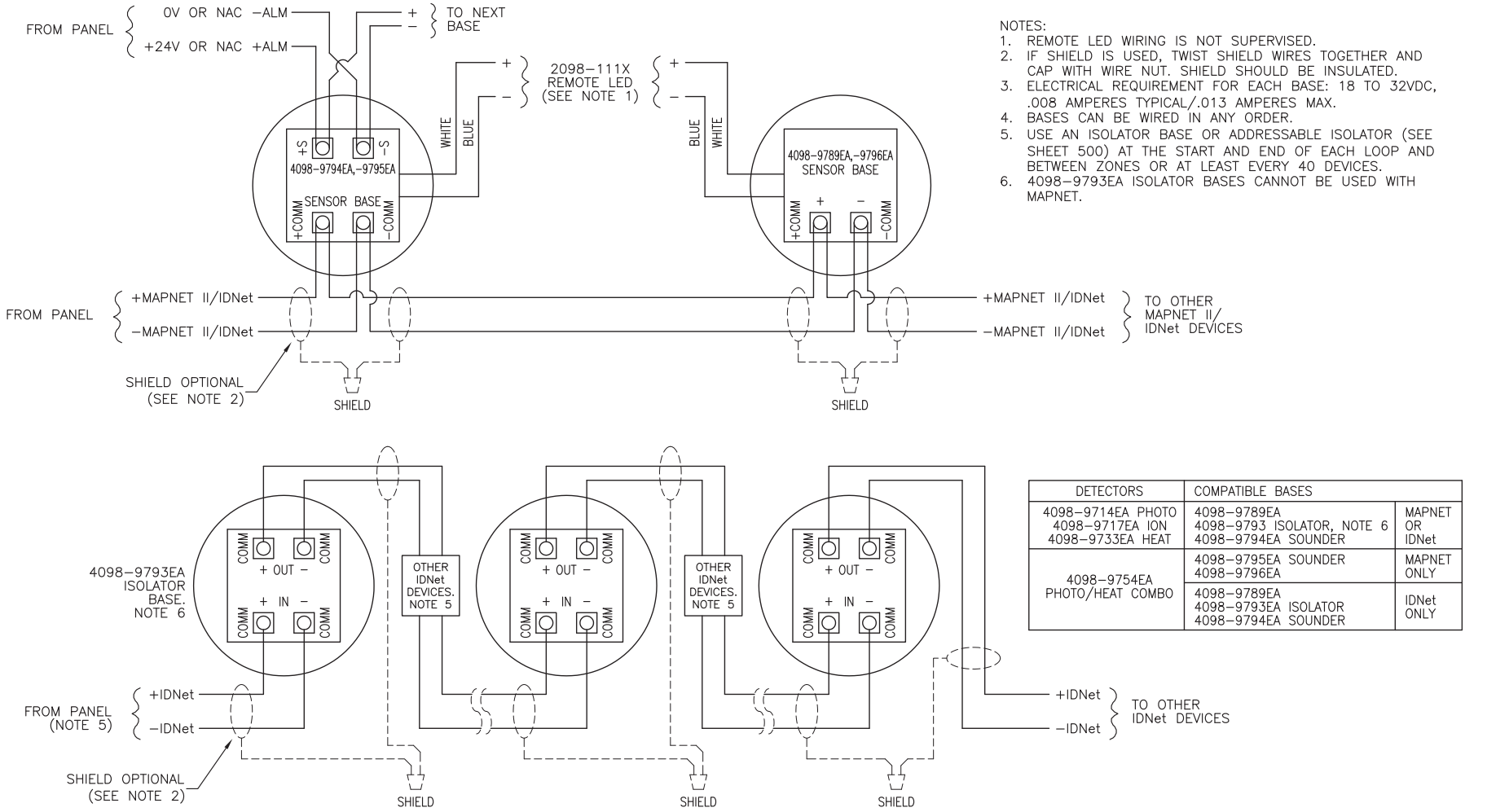
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15
C	NOTE 6 ADDED, 4100–5013 ADDED TO TABLE.	5222	KJS	RC	MH	DC	8–8–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
2 WIRE DETECTOR BASES - CONVENTIONAL DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 101 of N

A3 | ISS/REV C | 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
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

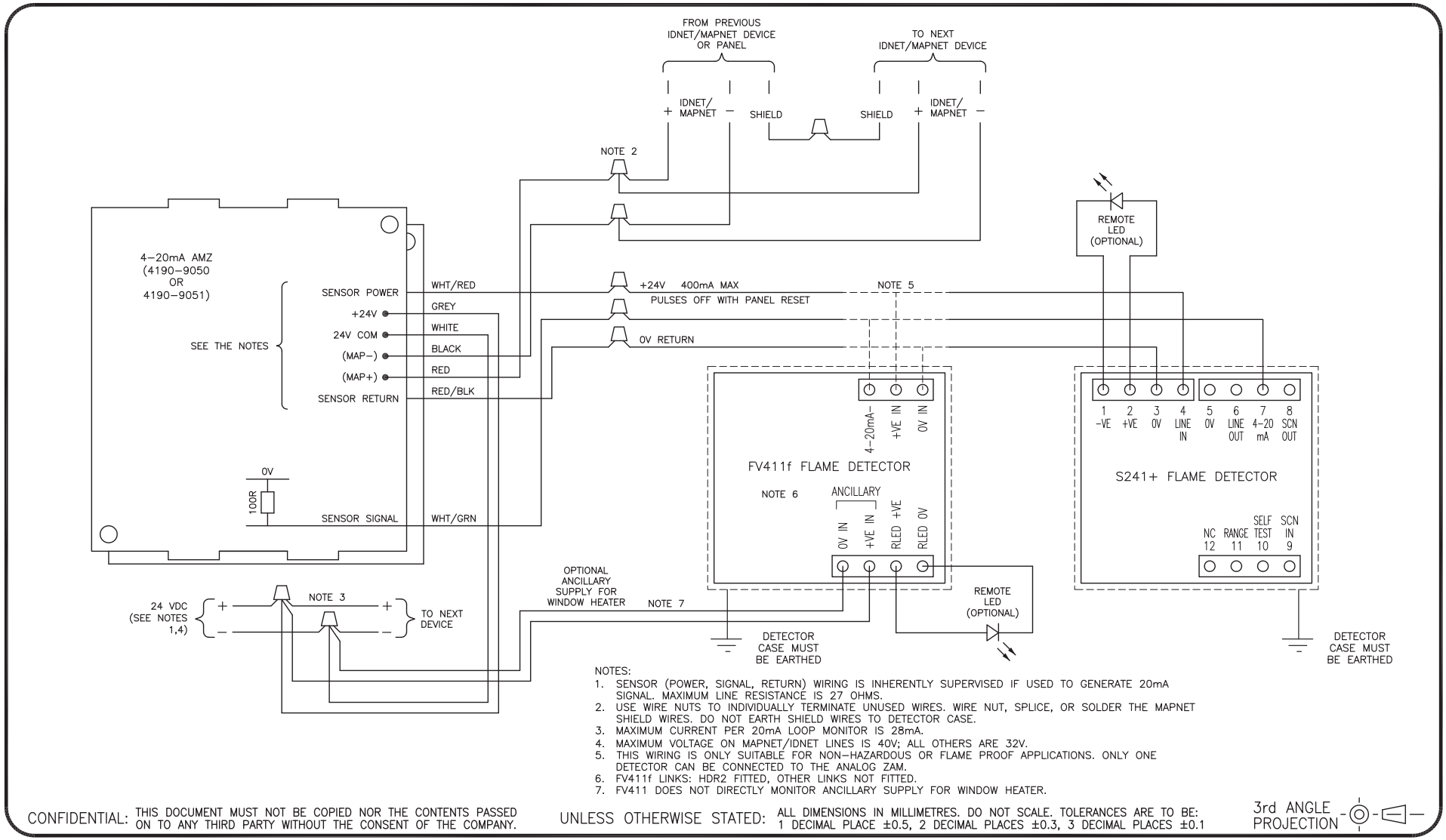
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
TRUEALARM ADDRESSABLE DETECTOR BASES
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 102 of N

A3 | ISS/REV C | PART No:

103: Flame Detector with Analog ZAM (4190-9050)



NOTES:
1. SENSOR (POWER, SIGNAL, RETURN) WIRING IS INHERENTLY SUPERVISED IF USED TO GENERATE 20mA SIGNAL. MAXIMUM LINE RESISTANCE IS 27 OHMS.
2. USE WIRE NUTS TO INDIVIDUALLY TERMINATE UNUSED WIRES. WIRE NUT, SPLICE, OR SOLDER THE MAPNET SHIELD WIRES. DO NOT EARTH SHIELD WIRES TO DETECTOR CASE.
3. MAXIMUM CURRENT PER 20mA LOOP MONITOR IS 28mA.
4. MAXIMUM VOLTAGE ON MAPNET/IDNET LINES IS 40V; ALL OTHERS ARE 32V.
5. THIS WIRING IS ONLY SUITABLE FOR NON–HAZARDOUS OR FLAME PROOF APPLICATIONS. ONLY ONE DETECTOR CAN BE CONNECTED TO THE ANALOG ZAM.
6. FV411f LINKS: HDR2 FITTED, OTHER LINKS NOT FITTED.
7. FV411 DOES NOT DIRECTLY MONITOR ANCILLARY SUPPLY FOR WINDOW HEATER.

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	4615	KS	LSC	RC	DP	02–09–14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

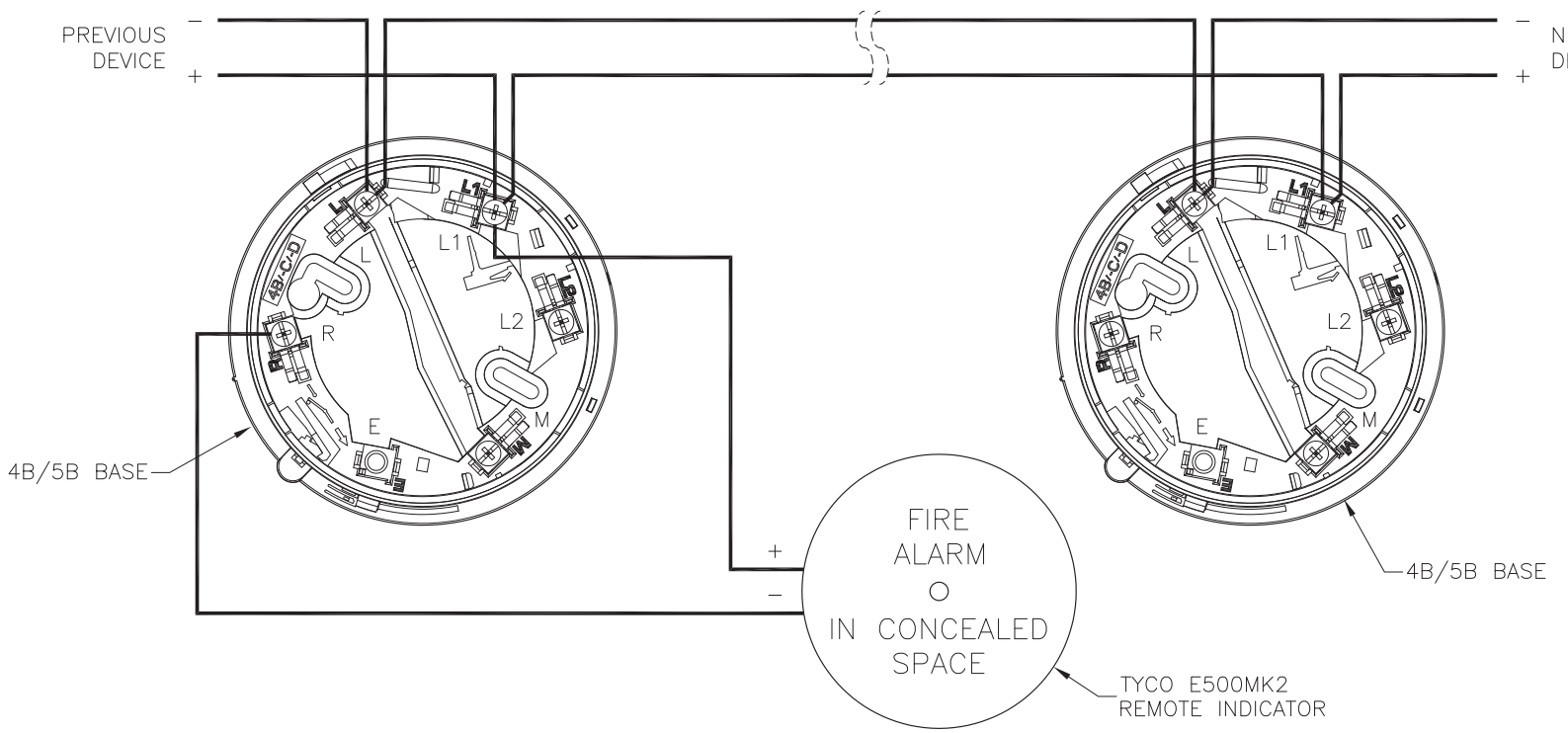
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
FLAME DETECTOR WITH ANALOG ZAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 103 of N

A3 | ISS/REV B | 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

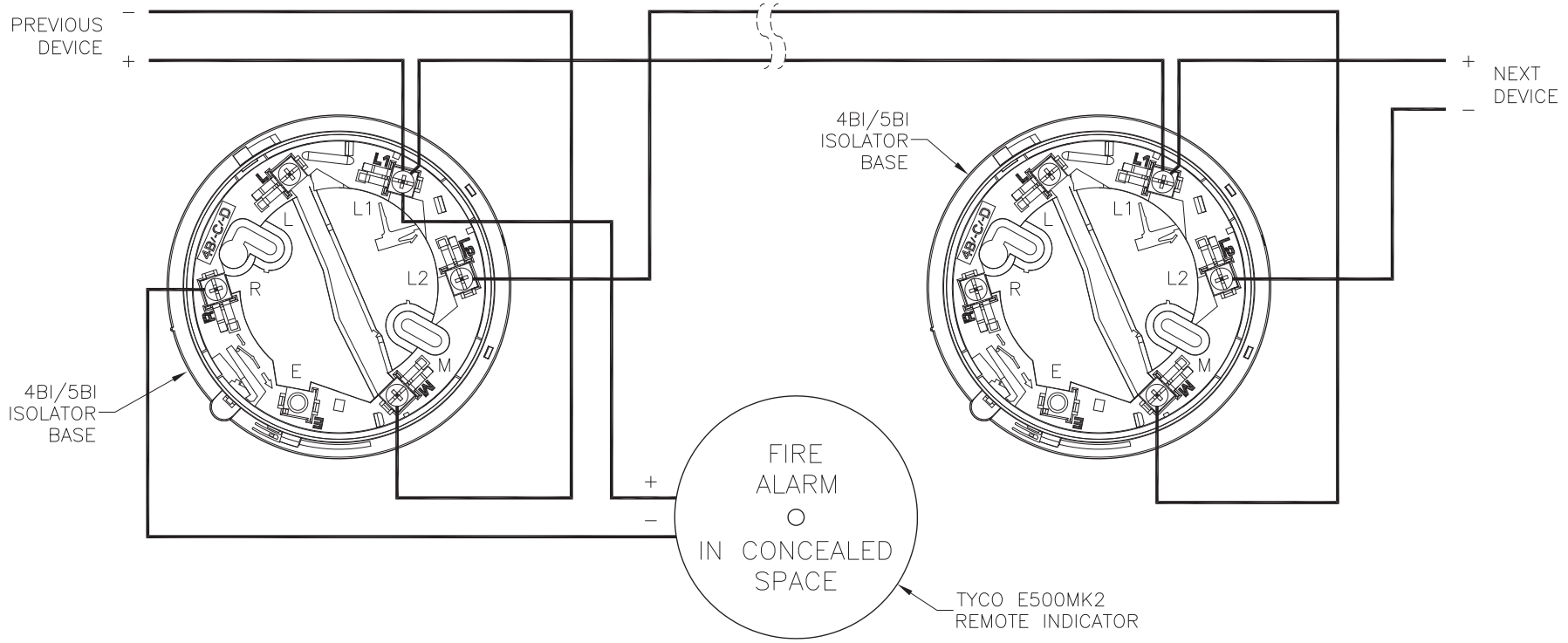
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4809	KJS	LSC	RC	DK	12-11-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
4B / 5B MX BASE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 104 of 1

A3 | ISS/REV A | PART No:



NOTES:
1. PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
2. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
3. FIT ISOLATORS BETWEEN ZONES AND BETWEEN DEVICES OF DIFFERENT FUNCTIONS, E.G., OUTPUTS FOR SECURITY AND PLANT.

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

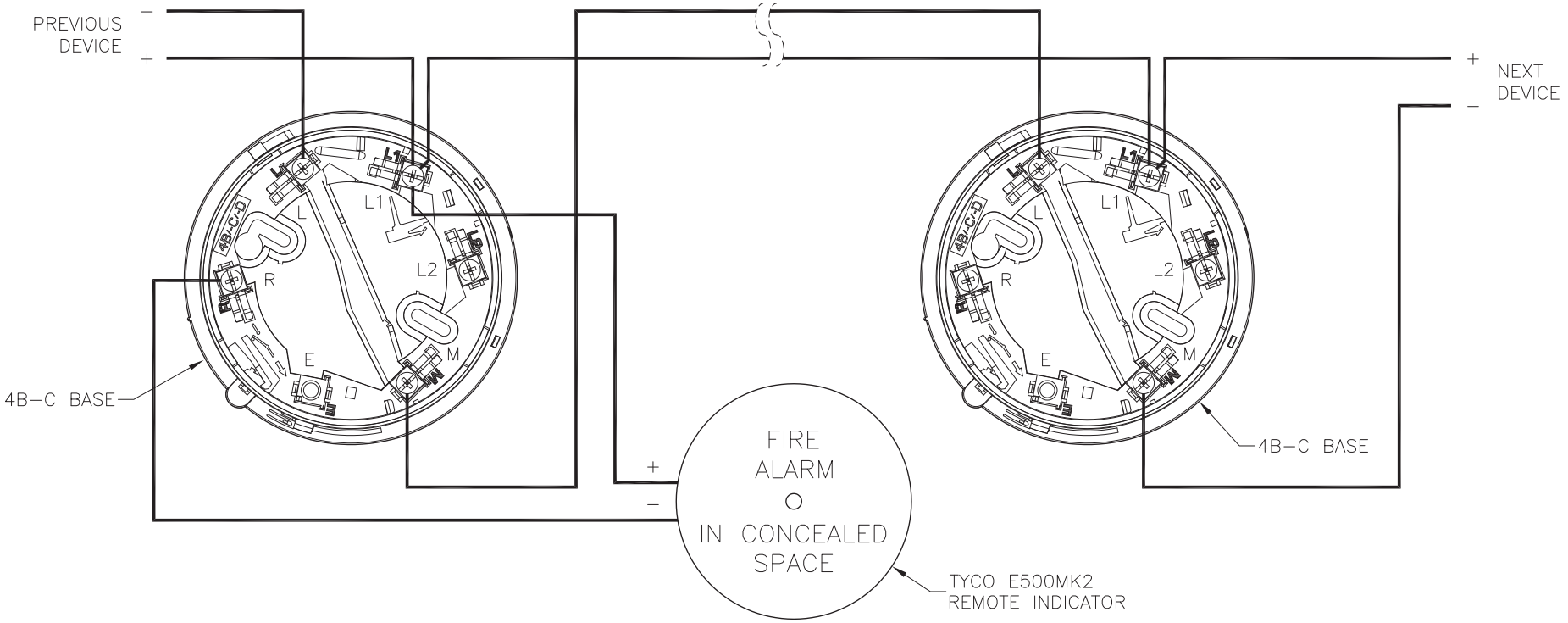
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–103.	4809	KJS	LSC	RC	DK	12–11–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
4BI / 5BI MX ISOLATOR BASE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 105 of N

A3 | ISS/REV A | PART No:



NOTES:
1. USE ONLY 850XX DETECTORS.
2. PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
3. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
4. FIT ISOLATORS BETWEEN ZONES AND BETWEEN DEVICES OF DIFFERENT FUNCTIONS, E.G. OUTPUTS FOR SECURITY AND PLANT.

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

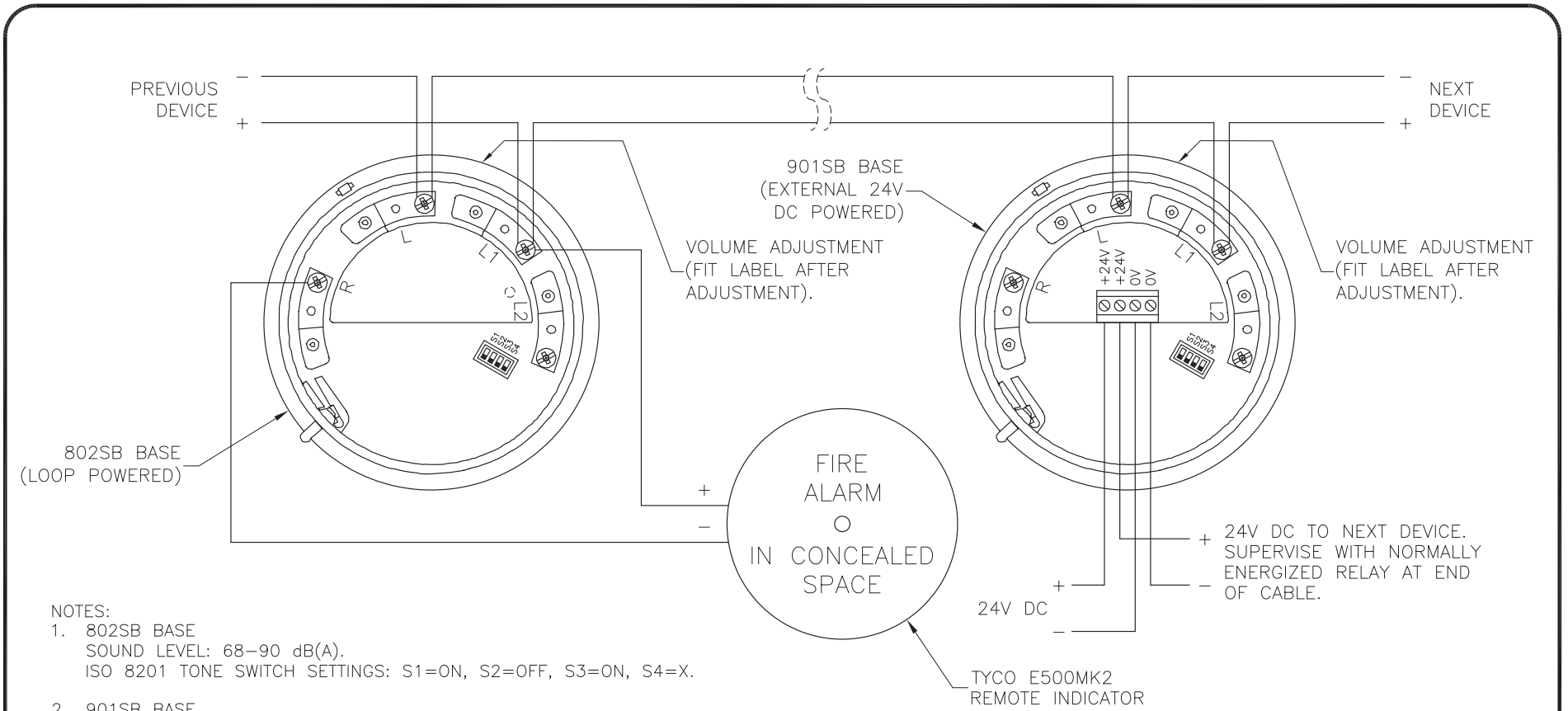
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–105.	4809	KJS	LSC	RC	DK	12–11–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
4B-C MX CONTINUITY BASE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 106 of N

A3 | ISS/REV A | PART No:



NOTES:

1. 802SB BASE
   SOUND LEVEL: 68–90 dB(A).
   ISO 8201 TONE SWITCH SETTINGS: S1=ON, S2=OFF, S3=ON, S4=X.

2. 901SB BASE
   SOUND LEVEL: 68–90 dB(A).
   ISO 8201 TONE SWITCH SETTINGS: S1=ON, S2=OFF, S3=ON, S4=X.
   24V DC: 1.2mA AT LOW VOLUME,
   6.8mA AT FULL VOLUME,
   22–28.5V DC.

3. ADJUST SOUND LEVEL WITH TRIMMER TOOL 517.050.015.

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

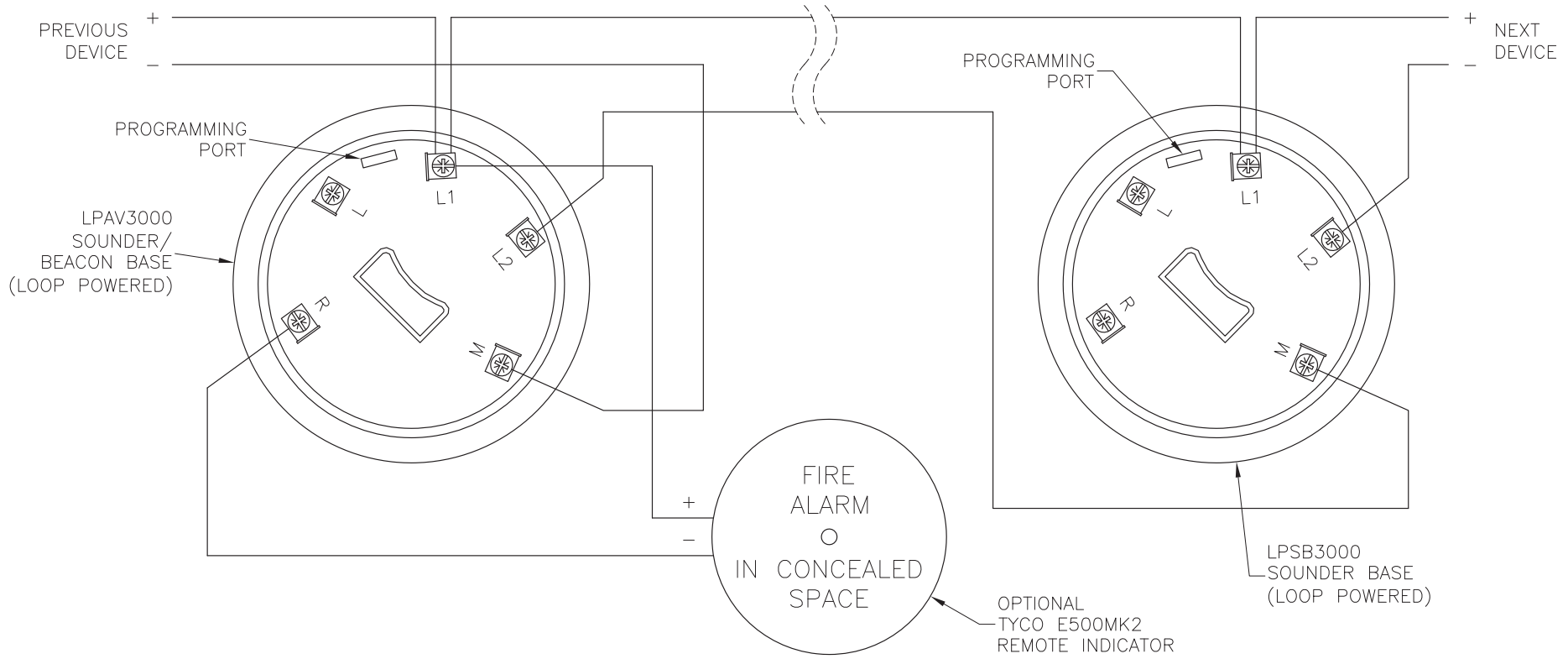
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–106	4809	KJS	LSC	RC	DK	12–11–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
802SB / 901SB MX SOUNDER BASE WIRING DIAGRAM

DRAWING No: 1976-181	SHEET 107 of N	
A3	ISS/REV A	PART No:

108: LPSB3000/LPAV3000 MX Addressable Sounder/Beacon Bases



NOTES:
1. BASES INCLUDE LOOP SHORT CIRCUIT ISOLATOR.
2. MX LOOP ADDRESS, SOUNDER LEVEL, TONE AND FLASH RATE FOR BEACONS ARE PROGRAMMED VIA 850EMT PROGRAMMING PORT INSIDE BASE.

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	4809	KJS	LSC	RC	DP	23-2-16
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11-7-16

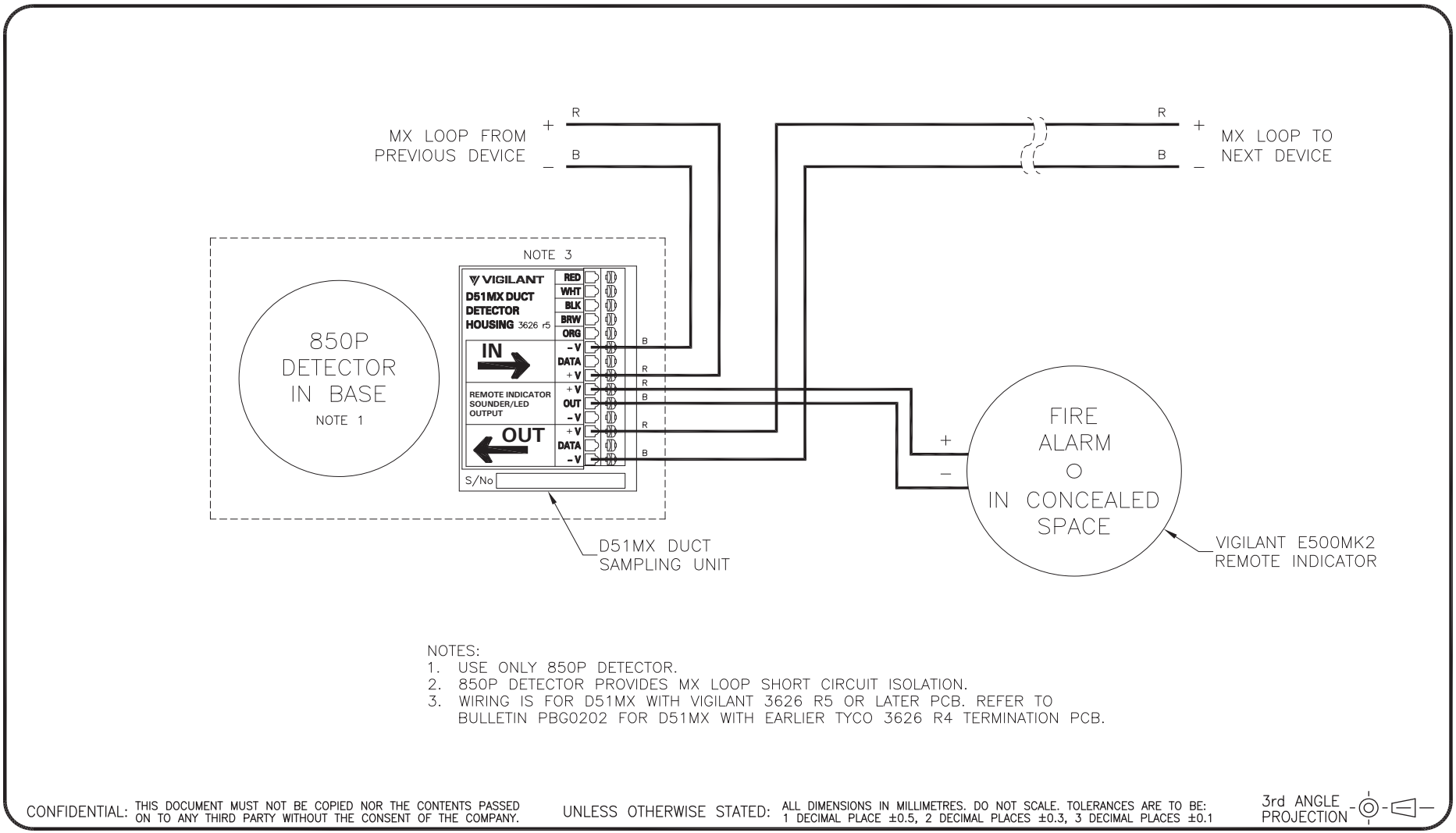
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
LPSB3000 / LPAV3000 SOUNDER / BEACON BASE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 108 of N

A3 | ISS/REV B | PART No:

109: D51MX Duct Sampling Unit Wiring



NOTES:
1. USE ONLY 850P DETECTOR.
2. 850P DETECTOR PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
3. WIRING IS FOR D51MX WITH VIGILANT 3626 R5 OR LATER PCB. REFER TO BULLETIN PBG0202 FOR D51MX WITH EARLIER TYCO 3626 R4 TERMINATION PCB.

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

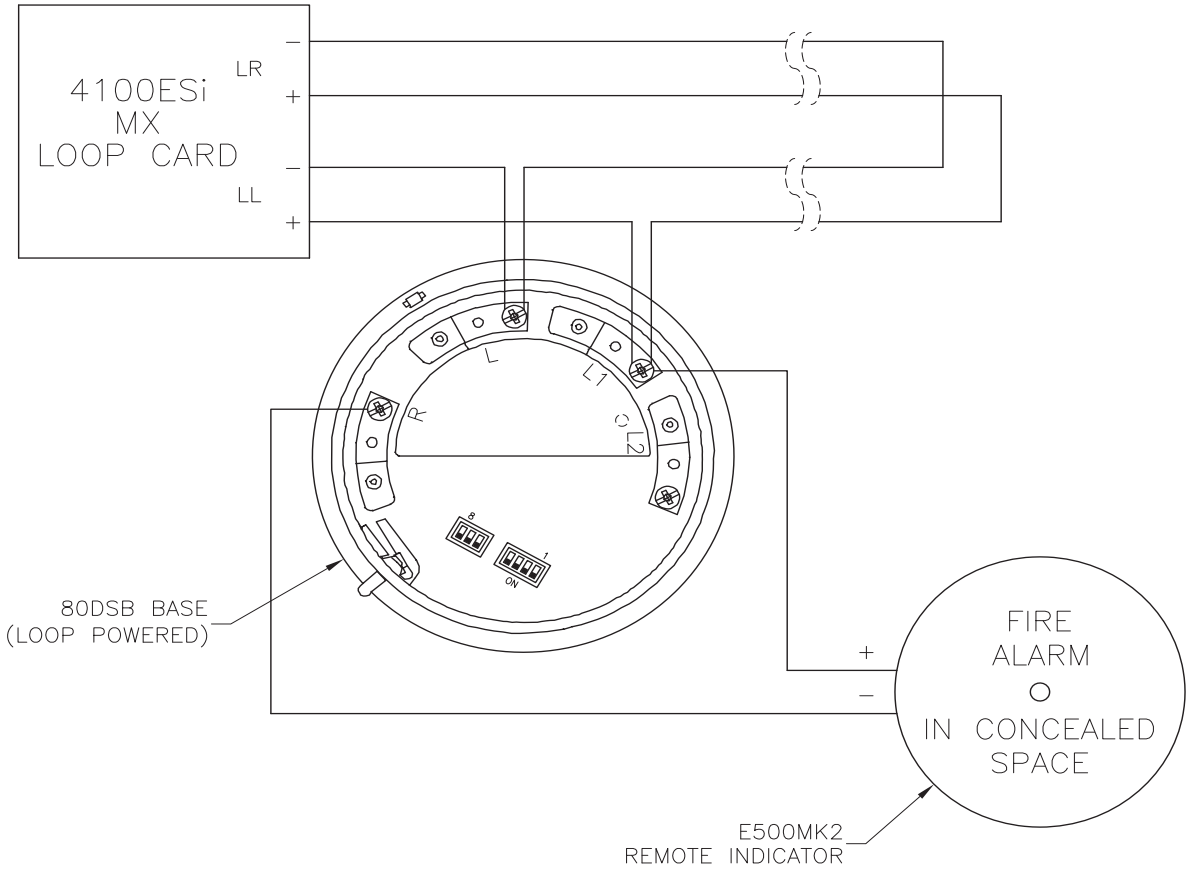
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5053	KJS	LSC	LSC	DC	10-8-17

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
D51MX DUCT SAMPLING UNIT
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 109 of N

A3 | ISS/REV A | PART No:



NOTES:
1. FOR ISO 8201 TONE SWITCH 1 = ON, 2 = OFF, 3 = ON, 4 = OFF.

DIL SWITCH SETTINGS POSITIONS 1–4	TONE
0001	DIN 1 Hz SWEEP
0000	DUTCH SLOW WHOOP
001X	TEMPORAL 4
010X	BS 1 Hz SWEEP
011X	MARCH TIME BEEP
100X	7 Hz FAST SWEEP
101X	TEMPORAL 3
110X	2 TONE
111X	CONTINUOUS 970

2. FOR HIGH VOLUME (90dBA) SWITCH 6 = OFF, 7 = ON, 8 = ON.

DIL SWITCH SETTINGS POSITIONS 6–8	VOLUME	SPL
000	LOW	60dBA
001	MID LOW	70dBA
010	MID HIGH	80dBA
011	HIGH	90dBA

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	5222	KJS	RC	MH	DC	15–10–19

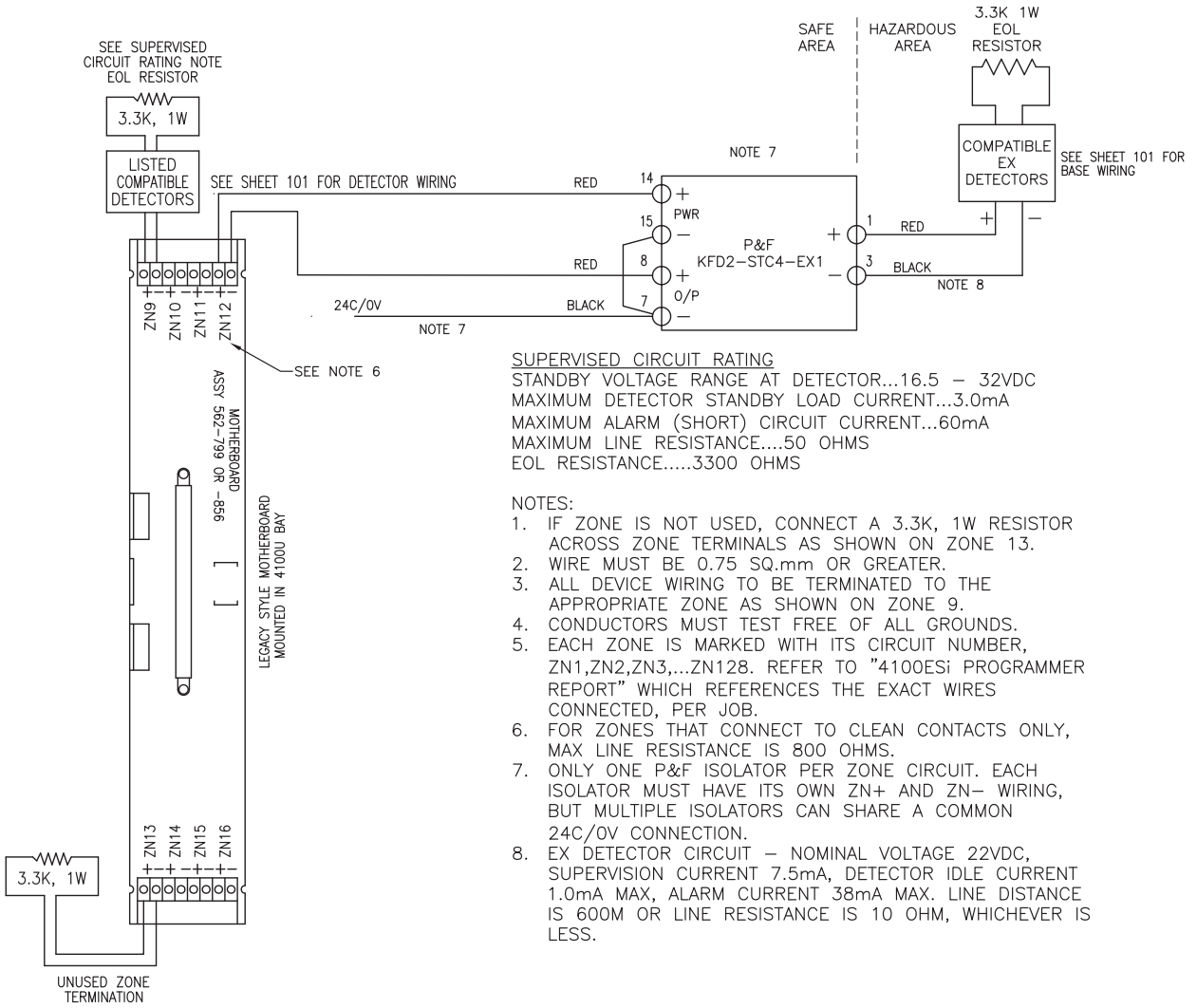
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi 80DSB SOUNDER BASE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 110 of N

A3 | ISS/REV A | PART No:

Zone module and detection cards



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 "4100ESi 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.
7. ONLY ONE P&F ISOLATOR PER ZONE CIRCUIT. EACH ISOLATOR MUST HAVE ITS OWN ZN+ AND ZN– WIRING, BUT MULTIPLE ISOLATORS CAN SHARE A COMMON 24C/0V CONNECTION.
8. EX DETECTOR CIRCUIT – NOMINAL VOLTAGE 22VDC, SUPERVISION CURRENT 7.5mA, DETECTOR IDLE CURRENT 1.0mA MAX, ALARM CURRENT 38mA MAX. LINE DISTANCE IS 600M OR LINE RESISTANCE IS 10 OHM, WHICHEVER IS LESS.

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

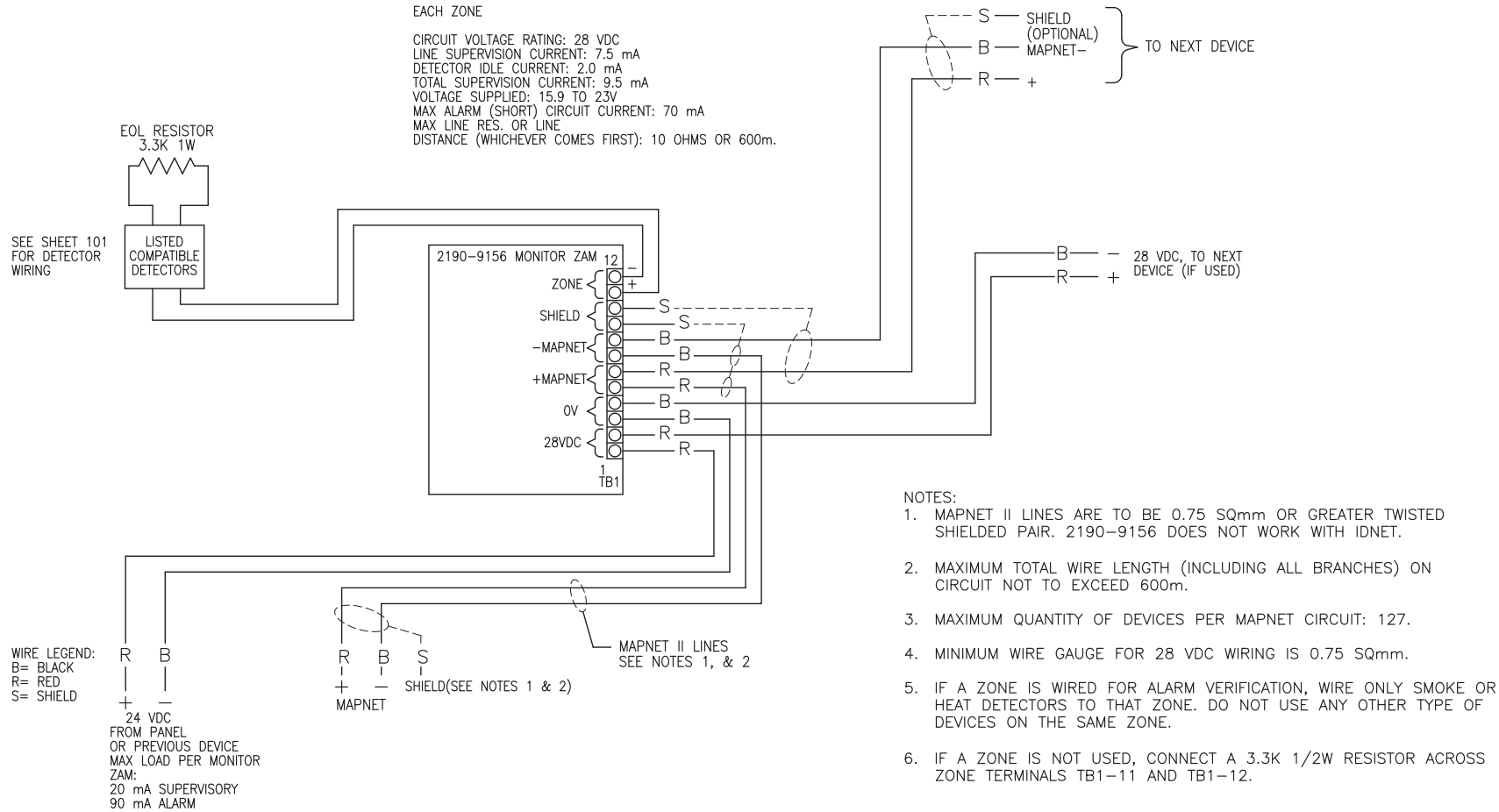
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21-07-06
B	ADDED P&F ISOLATOR AND EX DETECTOR CIRCUIT. UPDATED THE NOTES.	4615	SS	LSC	RC	DP	08-05-15
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
8 ZONE MODULE - CONVENTIONAL DETECTORS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 200 of N

A3 | ISS/REV C | 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
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

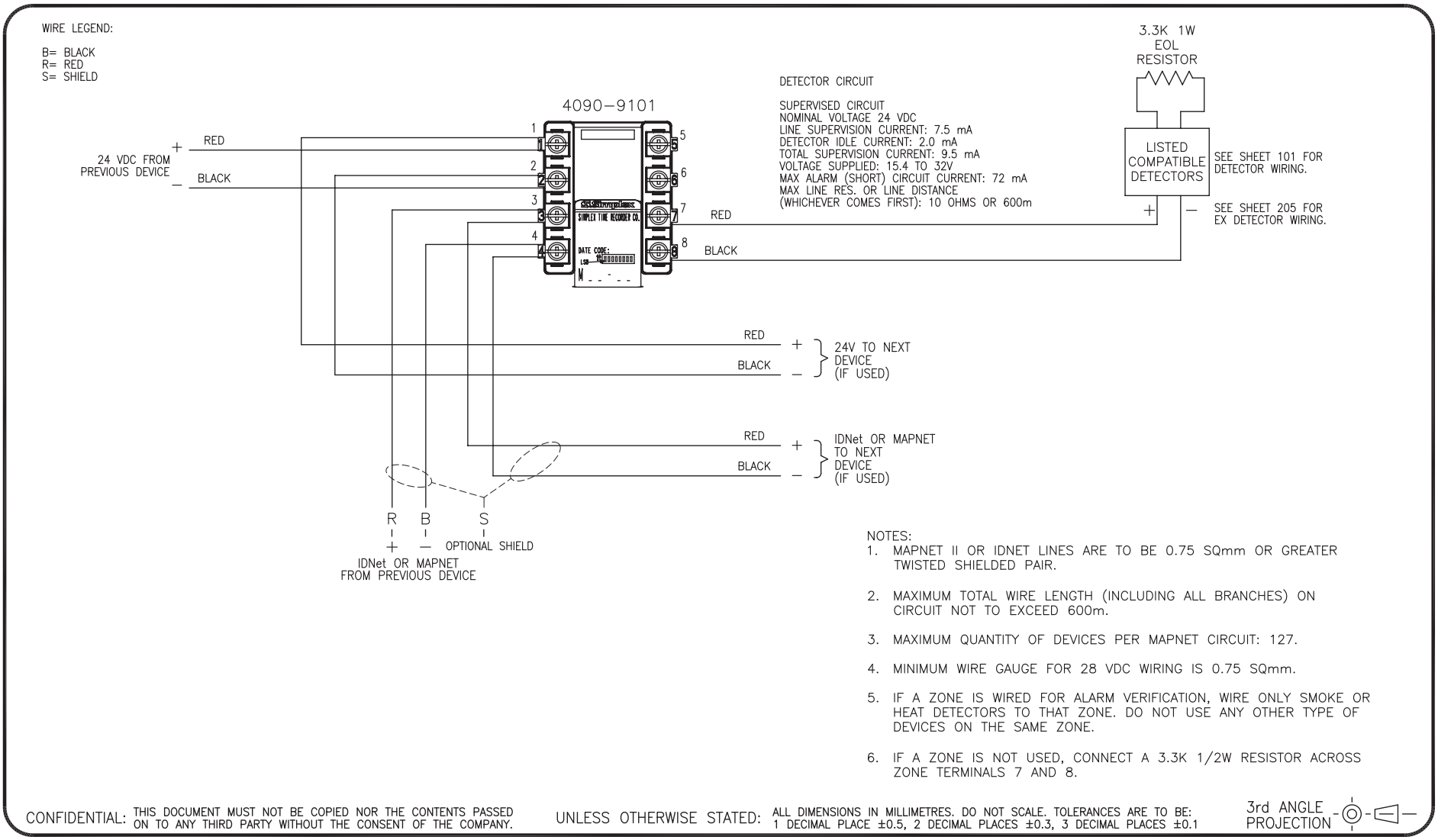
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 201 of 1

A3 | ISS/REV B | PART No:

202: IDNet Zone Addressable Module (ZAM) (4090-9101)



ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

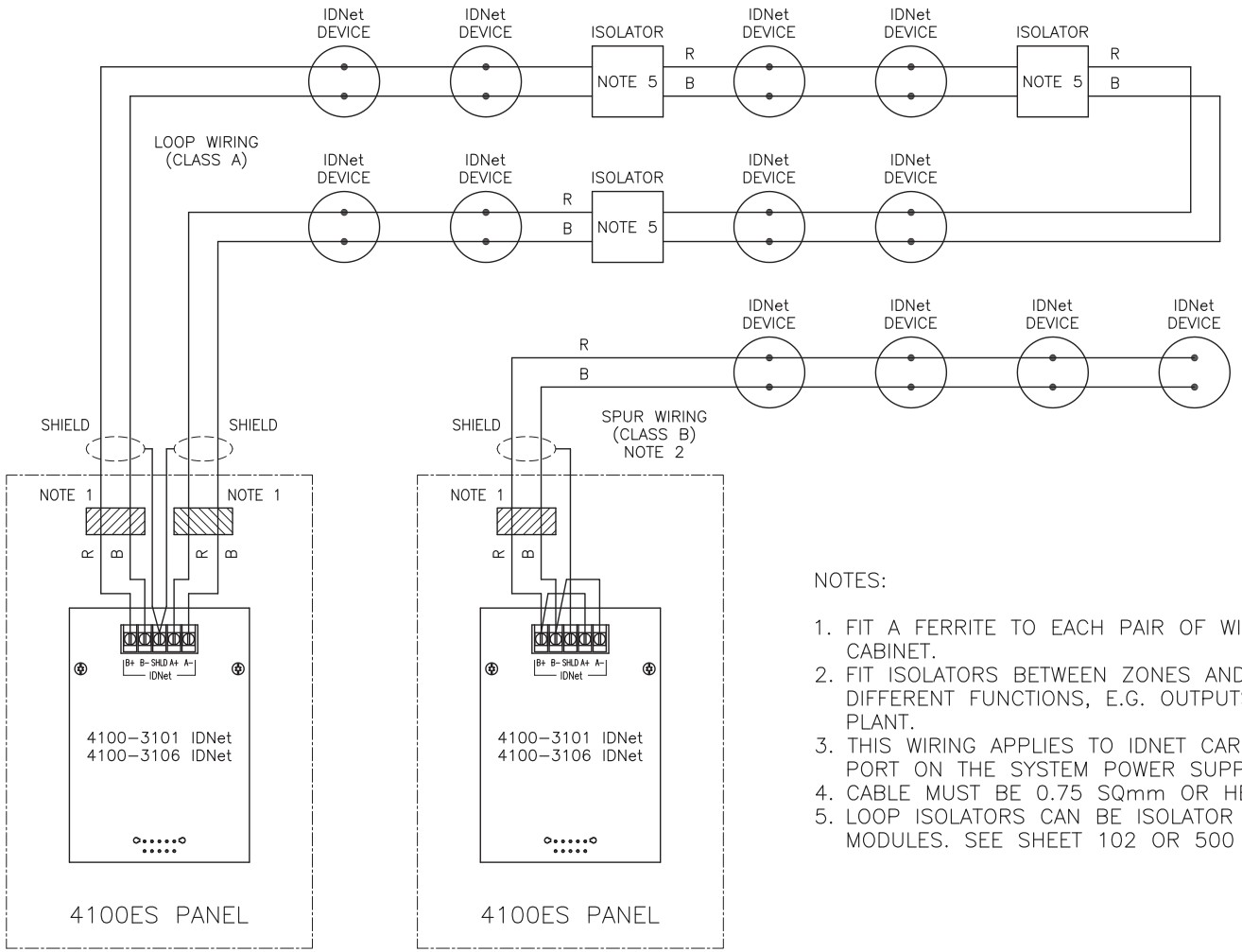
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 202 of N

A3 | ISS/REV B | PART No:



NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100ES CABINET.
2. FIT ISOLATORS BETWEEN ZONES AND BETWEEN DEVICES OF DIFFERENT FUNCTIONS, E.G. OUTPUTS TO SECURITY AND PLANT.
3. THIS WIRING APPLIES TO IDNET CARDS AND TO THE IDNET PORT ON THE SYSTEM POWER SUPPLY.
4. CABLE MUST BE 0.75 SQmm OR HEAVIER.
5. 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
C	FIXED TYPOS	4352	KJS				13-4-12
D	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12-1-16

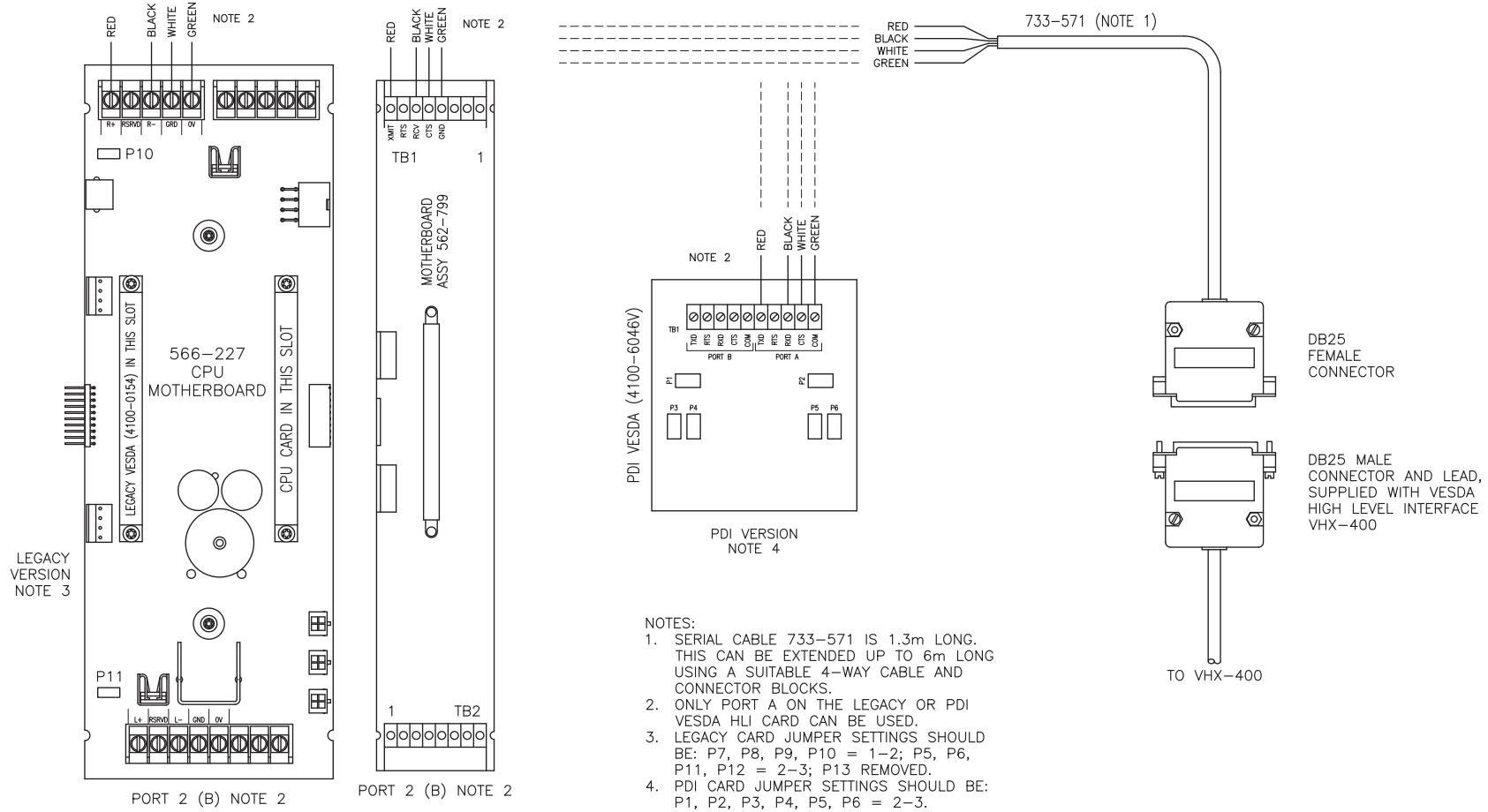
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
IDNET LOOP CARD WIRING
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 203 of N

A3 | ISS/REV D | PART No:



NOTES:
1. SERIAL CABLE 733-571 IS 1.3m LONG. THIS CAN BE EXTENDED UP TO 6m LONG USING A SUITABLE 4-WAY CABLE AND CONNECTOR BLOCKS.
2. ONLY PORT A ON THE LEGACY OR PDI VESDA HLI CARD CAN BE USED.
3. LEGACY CARD JUMPER SETTINGS SHOULD BE: P7, P8, P9, P10 = 1-2; P5, P6, P11, P12 = 2-3; P13 REMOVED.
4. PDI CARD JUMPER SETTINGS SHOULD BE: P1, P2, P3, P4, P5, P6 = 2-3.

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

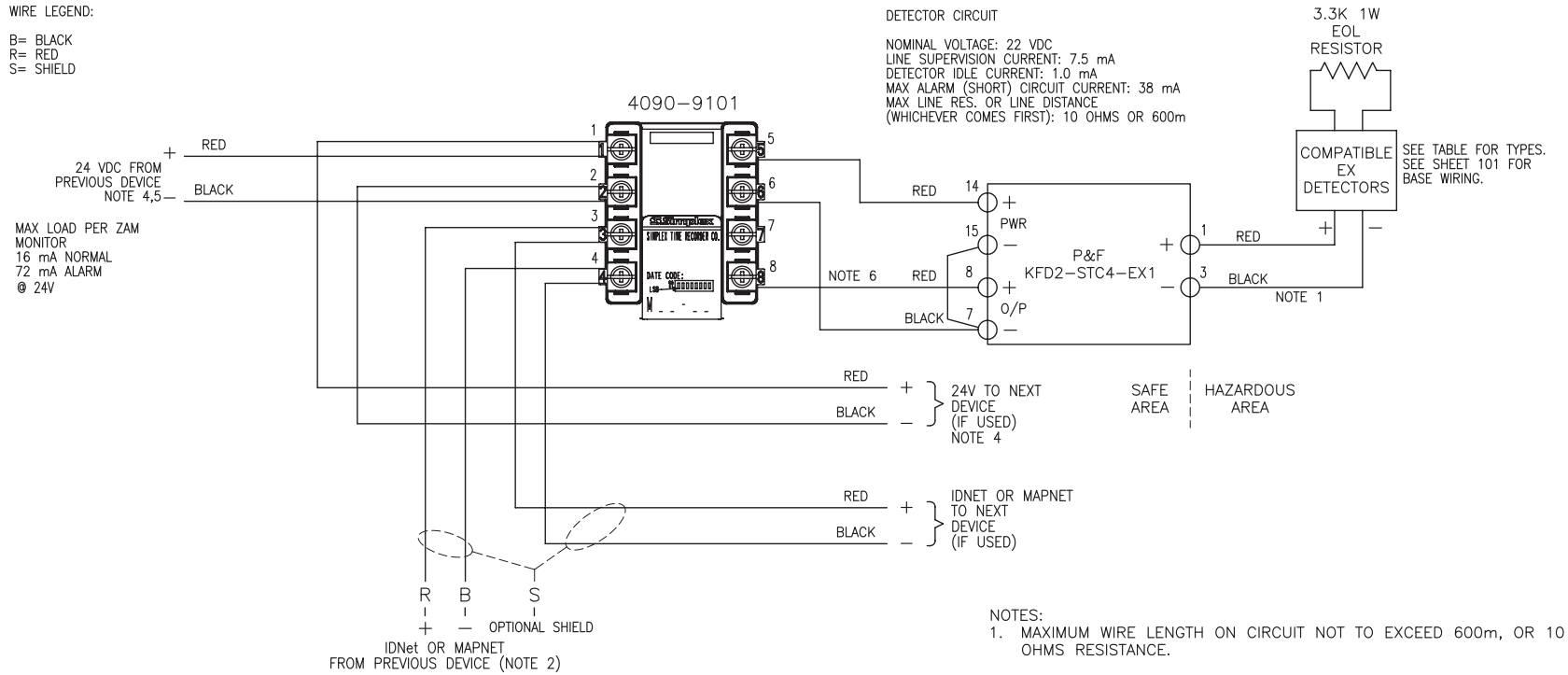
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4809	KJS	LSC	RC	DK	13-1-16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
VESDA HIGH LEVEL I/F
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 204 of N

A3 | ISS/REV A | PART No:



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,MCP,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 SHIELDED PAIR.
3. MAXIMUM QUANTITY OF ADDRESSABLE DEVICES PER MAPNET CIRCUIT: 127. MAXIMUM FOR IDNET IS 250.
4. MINIMUM WIRE GAUGE FOR 24 VDC WIRING IS 0.75 SQmm.
5. 24V SUPPLY AT ZAM MUST BE 20.0–33V DC.
6. IF A ZONE IS NOT USED, CONNECT A 3.3K 1/2W RESISTOR ACROSS ZONE TERMINALS 7 AND 8 OF THE 4100–9101.

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

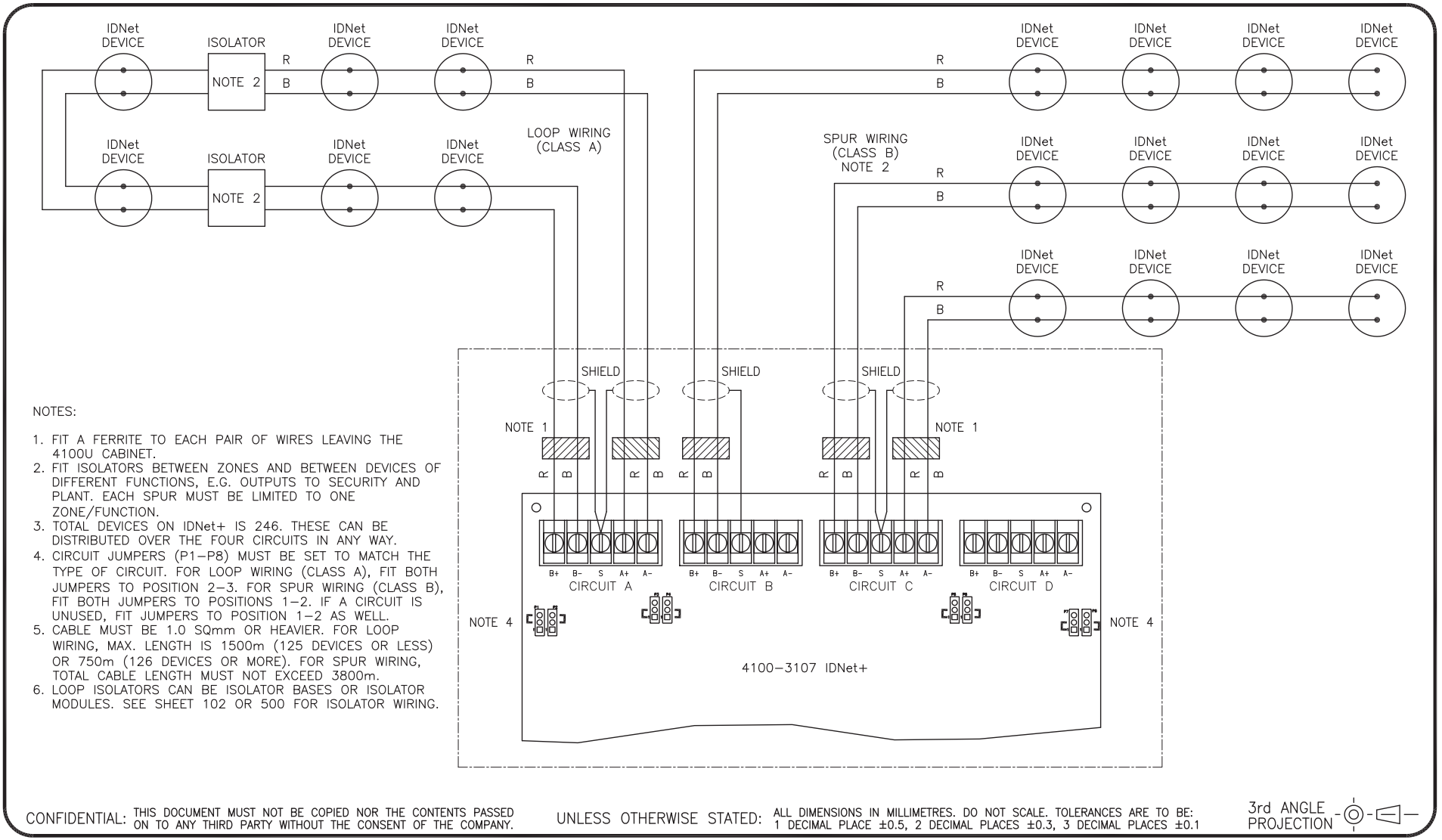
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	PAA	RAC	RAC	DSCP	18–7–07
B	FIXES TO NOTES AND TABLE	4615	SS	LSC	RC	DP	04–9–14
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 205 of N

A3 | ISS/REV C | PART No:



NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100U CABINET.
2. FIT ISOLATORS BETWEEN ZONES AND BETWEEN DEVICES OF DIFFERENT FUNCTIONS, E.G. OUTPUTS TO SECURITY AND PLANT. EACH SPUR MUST BE LIMITED TO ONE ZONE/FUNCTION.
3. TOTAL DEVICES ON IDNet+ IS 246. THESE CAN BE DISTRIBUTED OVER THE FOUR CIRCUITS IN ANY WAY.
4. CIRCUIT JUMPERS (P1–P8) MUST BE SET TO MATCH THE TYPE OF CIRCUIT. FOR LOOP WIRING (CLASS A), FIT BOTH JUMPERS TO POSITION 2–3. FOR SPUR WIRING (CLASS B), FIT BOTH JUMPERS TO POSITIONS 1–2. IF A CIRCUIT IS UNUSED, FIT JUMPERS TO POSITION 1–2 AS WELL.
5. CABLE MUST BE 1.0 SQmm OR HEAVIER. FOR LOOP WIRING, MAX. LENGTH IS 1500m (125 DEVICES OR LESS) OR 750m (126 DEVICES OR MORE). FOR SPUR WIRING, TOTAL CABLE LENGTH MUST NOT EXCEED 3800m.
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	LSC	RC	DP	13-4-12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

tyco Fire Protection Products

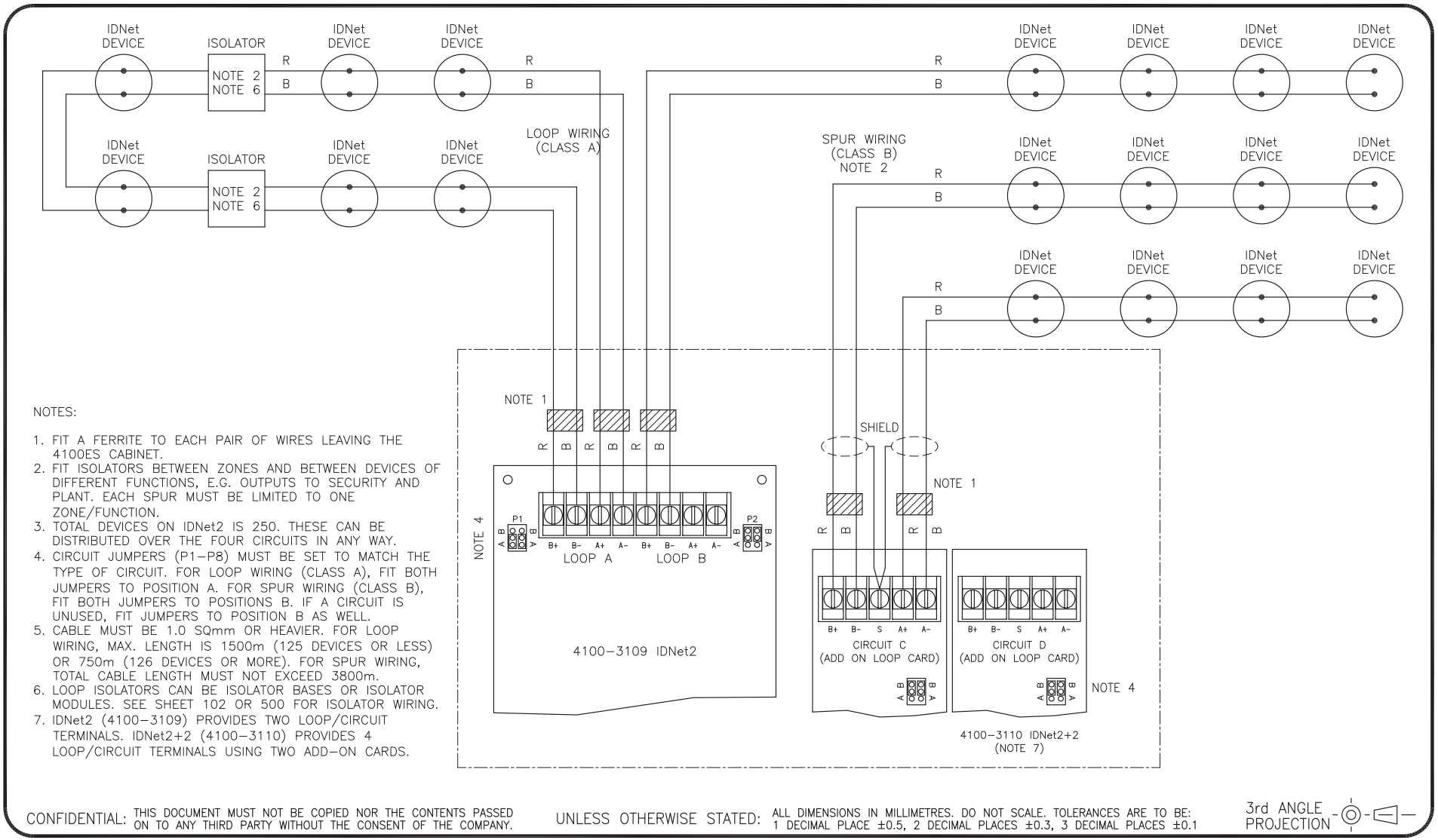
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES IDNET+ LOOP CARD WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 206 of N

A3 | ISS/REV B | PART No:

207: IDNet2/IDNet2+2 Loop Card (4100-3109/4100-3110)



NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100ES CABINET.
2. FIT ISOLATORS BETWEEN ZONES AND BETWEEN DEVICES OF DIFFERENT FUNCTIONS, E.G. OUTPUTS TO SECURITY AND PLANT. EACH SPUR MUST BE LIMITED TO ONE ZONE/FUNCTION.
3. TOTAL DEVICES ON IDNet2 IS 250. THESE CAN BE DISTRIBUTED OVER THE FOUR CIRCUITS IN ANY WAY.
4. CIRCUIT JUMPERS (P1–P8) MUST BE SET TO MATCH THE TYPE OF CIRCUIT. FOR LOOP WIRING (CLASS A), FIT BOTH JUMPERS TO POSITION A. FOR SPUR WIRING (CLASS B), FIT BOTH JUMPERS TO POSITIONS B. IF A CIRCUIT IS UNUSED, FIT JUMPERS TO POSITION B AS WELL.
5. CABLE MUST BE 1.0 SQmm OR HEAVIER. FOR LOOP WIRING, MAX. LENGTH IS 1500m (125 DEVICES OR LESS) OR 750m (126 DEVICES OR MORE). FOR SPUR WIRING, TOTAL CABLE LENGTH MUST NOT EXCEED 3800m.
6. LOOP ISOLATORS CAN BE ISOLATOR BASES OR ISOLATOR MODULES. SEE SHEET 102 OR 500 FOR ISOLATOR WIRING.
7. IDNet2 (4100–3109) PROVIDES TWO LOOP/CIRCUIT TERMINALS. IDNet2+2 (4100–3110) PROVIDES 4 LOOP/CIRCUIT TERMINALS USING TWO ADD–ON CARDS.

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	4809	KJS	LSC	RC	DP	16–3–16
B	UPDATED FOR IDNET2+2	4989	KJS	LSC	LSC	DP	8–12–16

tyco Fire Protection Products

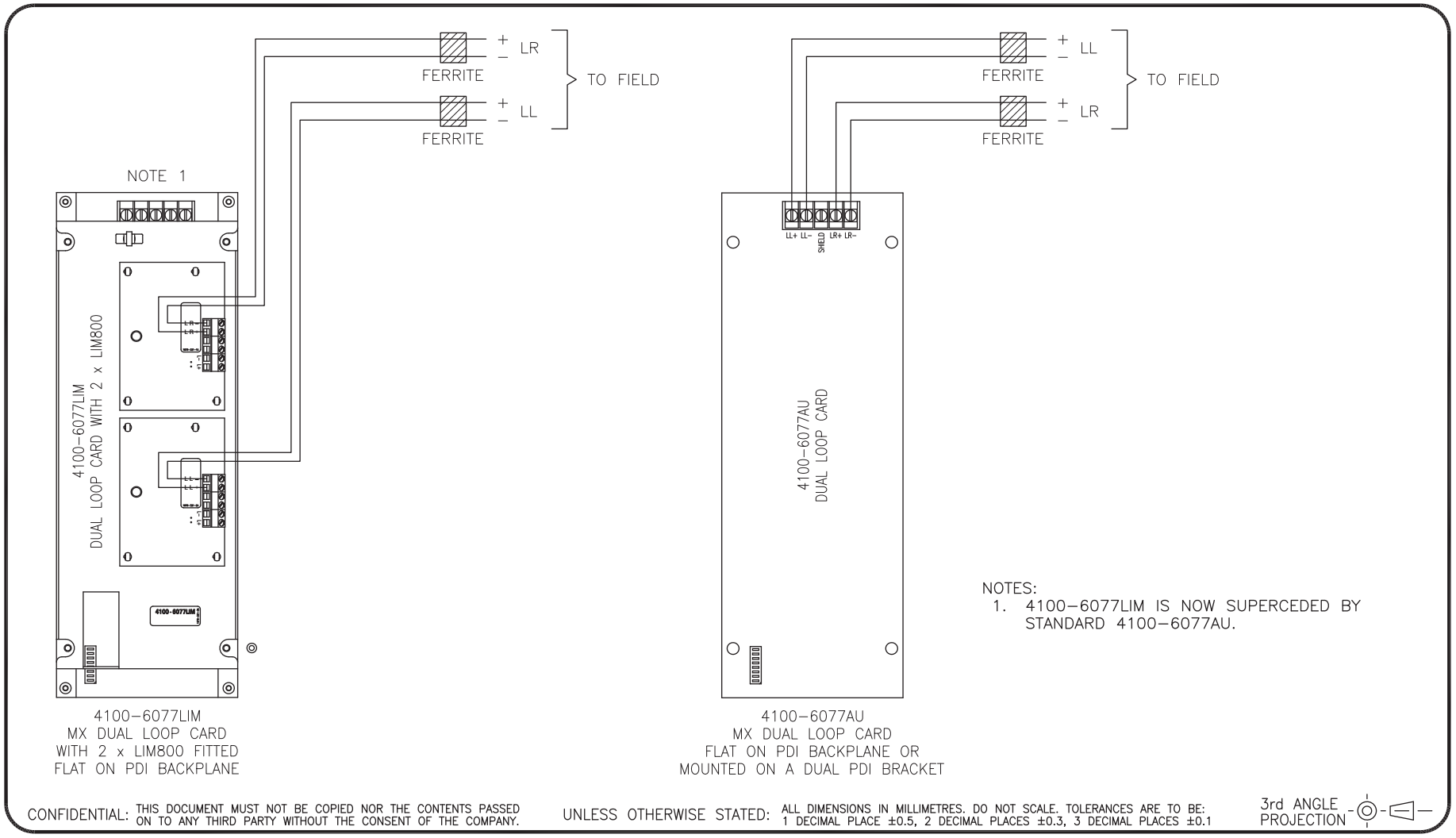
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
IDNET2+2 LOOP CARDS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 207 of N

A3 | ISS/REV B | PART No:

208: Dual Loop Card (MX) (4100-6077)



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	4809	KJS	MH	RC	DP	5-7-16
B	LIM800 REMOVED DRG, NOTE 1 ADDED.	5222	KJS	RC	MH	DC	8-8-19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

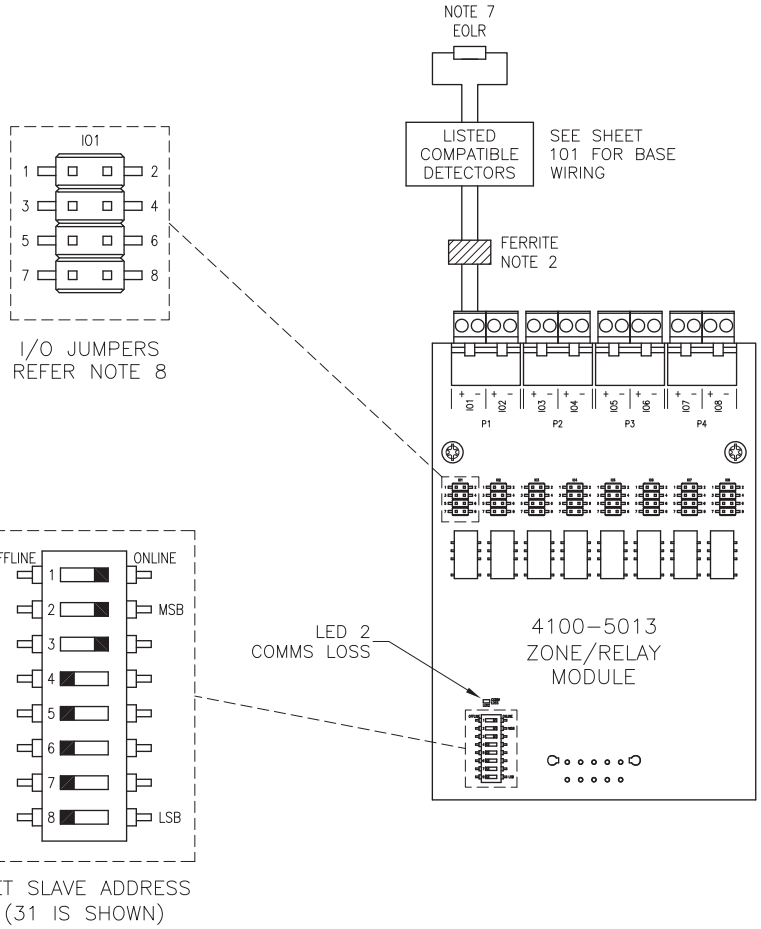
4100ESi
DUAL LOOP CARD
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 208 of N

A3 | ISS/REV B | PART No:

SUPERVISED CIRCUIT RATING
STANDBY VOLTAGE AT DETECTOR: 14.6 – 28Vdc
MAXIMUM DETECTOR STANDBY CURRENT: 3mA
MAXIMUM ALARM (S/C) CURRENT: 70mA
MAXIMUM LINE RESISTANCE: 50 OHMS (SEE NOTE 6)
EOL RESISTANCE: 3K3, 2K2, 2K0, 6K8 (SEE NOTE 7)

NOTES
1. IF INPUT IS NOT USED DO NOT ENABLE IN PROGRAMMER (NO EOL REQUIRED).
2. WIRE MUST BE 0.75 SQmm OR GREATER. FIT FERRITE BEAD TO DETECTOR CIRCUITS.
3. ALL CIRCUIT WIRING TO BE TERMINATED TO THE APPROPRIATE IOX TERMINALS.
4. ALL CONDUCTORS MUST TEST FREE OF GROUND.
5. REFER SHEET 435 FOR RELAY O/P WIRING.
6. IF ONLY CLEAN–CONTACT DEVICES ARE USED MAX LINE RESISTANCE IS:
   800 OHMS WITH 3K3 OR 6K8 EOL,
   600 OHMS WITH 2K2 OR 2K0 EOL.
7. SELECT EOL VALUE (3K3, 2K2, 2K0 OR 6K8) FOR EACH I/O CIRCUIT IN 4100ESi PROGRAMMER. 6K8 CAN BE USED WITH CLEAN–CONTACT DEVICES ONLY.
8. SET JUMPERS FOR EACH IOX TO MATCH USE: FOR CLASS B CONVENTIONAL DETECTORS LINK 5–7, LEAVE OTHER JUMPERS ON ONE PIN 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

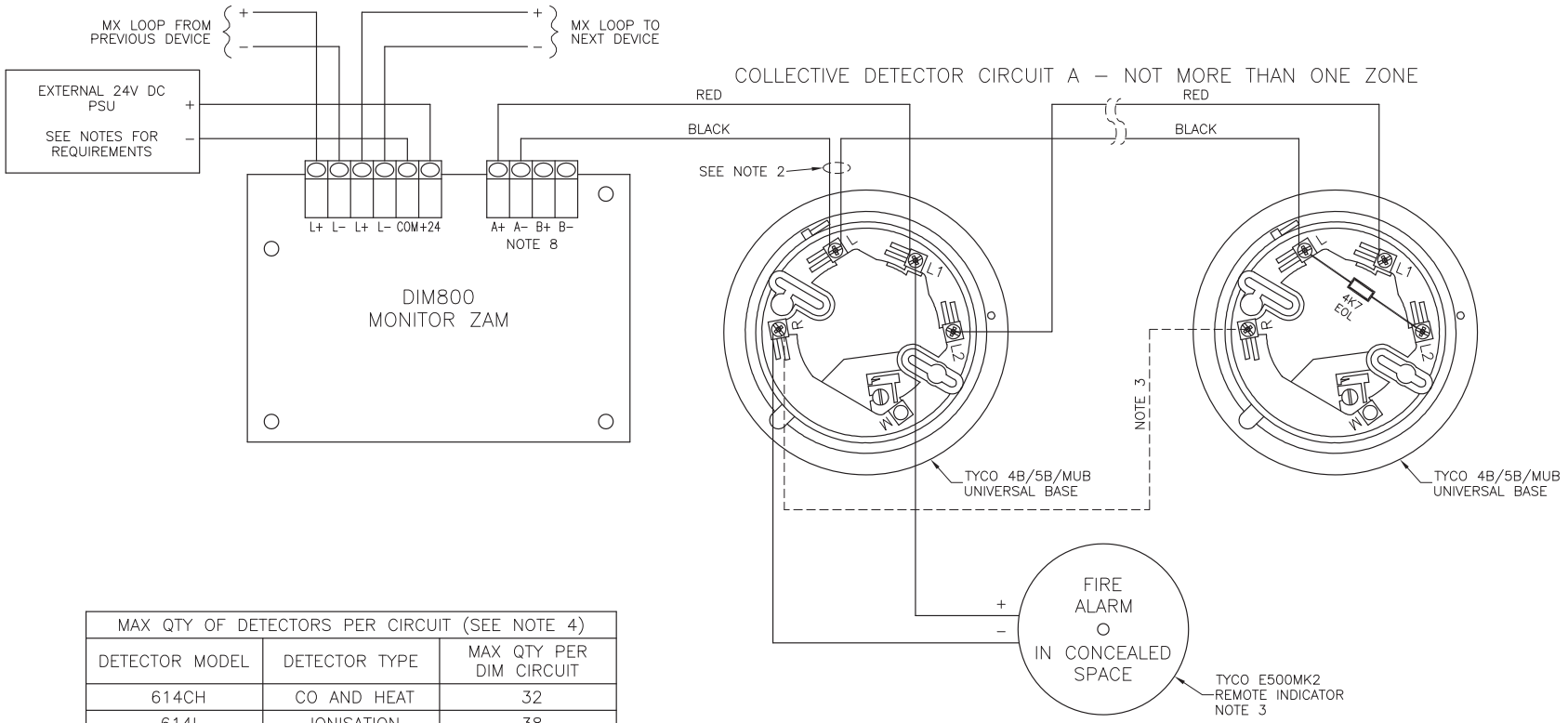
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5222	KJS	RC	MH	DC	8–8–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi ZONE / RELAY MODULE (4100-5013) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 209 of N

A3 | ISS/REV A | PART No:



MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 4)		
DETECTOR MODEL	DETECTOR TYPE	MAX QTY PER DIM CIRCUIT
614CH	CO AND HEAT	32
614I	IONISATION	38
614P	PHOTOELECTRIC	25
614T	HEAT	23
S/C	HARD CONTACT	40
USED IN TYCO 4B/5B/MUB BASES		

NOTES:
1. IF EXTERNAL PSU IS REMOTE. DIM CIRCUITS MUST NOT COVER MORE THAN ONE ZONE IN TOTAL.
2. CUT WIRES BEFORE CONNECTING TO TERMINAL L TO MAINTAIN SUPERVISION. DO NOT LOOP WIRE UNDERNEATH TERMINAL L.
3. MULTIPLE BASES CAN DRIVE A COMMON REMOTE INDICATOR BY LINKING BASES AS SHOWN.
4. 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 614T ARE NOT PERMITTED AS 22/38 + 16/23 IS GREATER THAN 1.
5. MAX DETECTOR CURRENT: 3.0mA PER CIRCUIT.
6. EXTERNAL SUPPLY: 20.7–28.7V DC.
   CURRENT: 7.5mA + DETECTORS EACH CIRCUIT USED.
   ALARM CURRENT: 30–50mA (DEPENDS ON VOLTAGE).
7. MAX COLLECTIVE CIRCUIT RESISTANCE: 50 OHMS.
8. BOTH Cct A AND B CAN BE USED. EACH CIRCUIT MUST NOT COVER MORE THAN ONE ZONE.

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

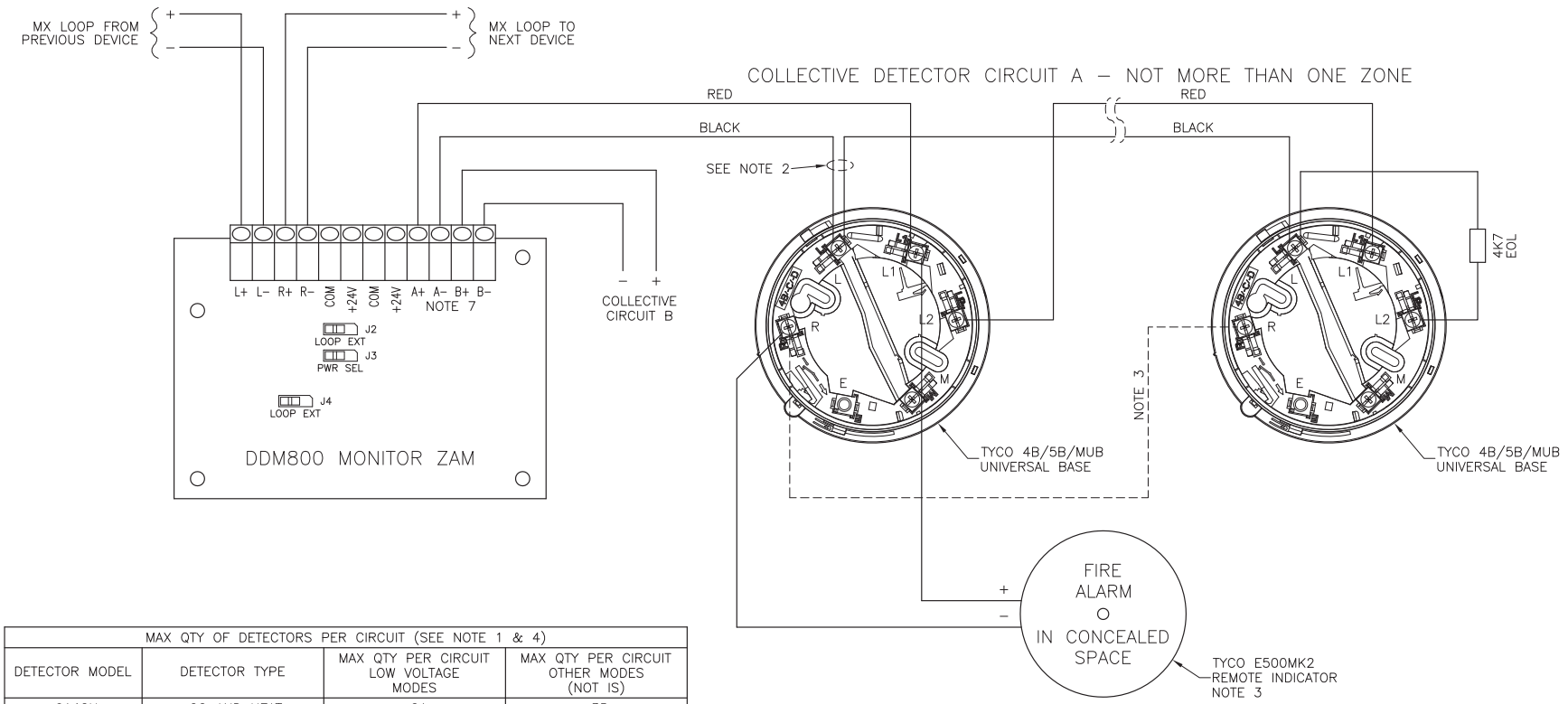
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982-71-107.	4809	KJS	LSC	RC	DK	12-11-15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11-7-16

tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
DIM800 MX MONITOR ZAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 210 of N

A3 | ISS/REV B | PART No:



MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 1 & 4)			
DETECTOR MODEL	DETECTOR TYPE	MAX QTY PER CIRCUIT LOW VOLTAGE MODES	MAX QTY PER CIRCUIT OTHER MODES (NOT IS)
614CH	CO AND HEAT	21	35
614I	IONISATION	25	40
614P	PHOTOELECTRIC	25	40
614T	HEAT	17	29
S/C	HARD CONTACT	40	40
USED IN 4B/5B/MUB BASES			

NOTES:
1. REFER LT0618 4100ESi INSTALL MANUAL FOR OTHER DETECTOR COMPATIBILITY.
2. CUT WIRES BEFORE CONNECTING TO TERMINAL L TO MAINTAIN SUPERVISION. DO NOT LOOP WIRE UNDERNEATH TERMINAL L.
3. MULTIPLE BASES CAN DRIVE A COMMON REMOTE INDICATOR BY LINKING BASES AS SHOWN.
4. 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 614T ARE NOT PERMITTED AS 22/40 + 16/29 IS GREATER THAN 1.
5. MAX DETECTOR CURRENT:
   1.5mA PER CIRCUIT – LOW VOLTAGE MODE.
   2.5mA PER CIRCUIT – OTHER MODES.
   1.0mA PER CIRCUIT – IS MODE.
6. MAX COLLECTIVE CIRCUIT RESISTANCE: 50 OHMS.
7. BOTH Cct A AND B CAN BE USED. EACH CIRCUIT MUST NOT COVER MORE THAN ONE ZONE.

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 FROM 1982-71-164.	4809	KJS	LSC	RC	DK	12-11-15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11-7-16

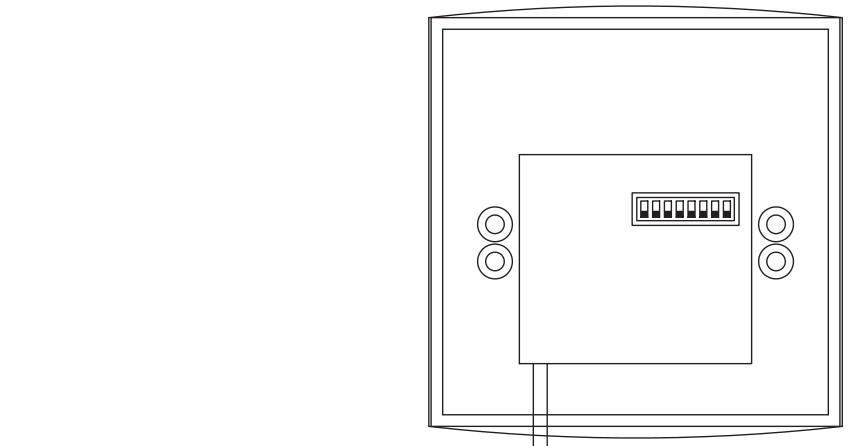
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ESi
DDM800 MX MONITOR ZAM LOOP POWERED WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 211 of N

A3 | ISS/REV B | PART No:

Input devices



MCP
4099–9701
4099–9702
4099–9032
4099–9032NL (MAPNET ONLY)

RED
BLACK

IDNET OR MAPNET FROM PREVIOUS DEVICE OR PANEL
+ R
– B

+ R
– B
IDNET OR MAPNET TO NEXT DEVICE OR PANEL

JOIN MCP WIRES TO LOOP WITH WIRE NUTS OR SIMILAR

NOTES:
1. MAPNET OR IDNET LINES ARE TO BE 0.75 SQmm OR GREATER TWISTED SHIELDED PAIR.
2. MAXIMUM CABLE LENGTH 4100m (4 SQmm).
3. MAXIMUM NUMBER OF DEVICES PER LOOP IS 127 FOR MAPNET, 250 FOR 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	4615	KJS	LSC	RC	DP	19–8–15
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

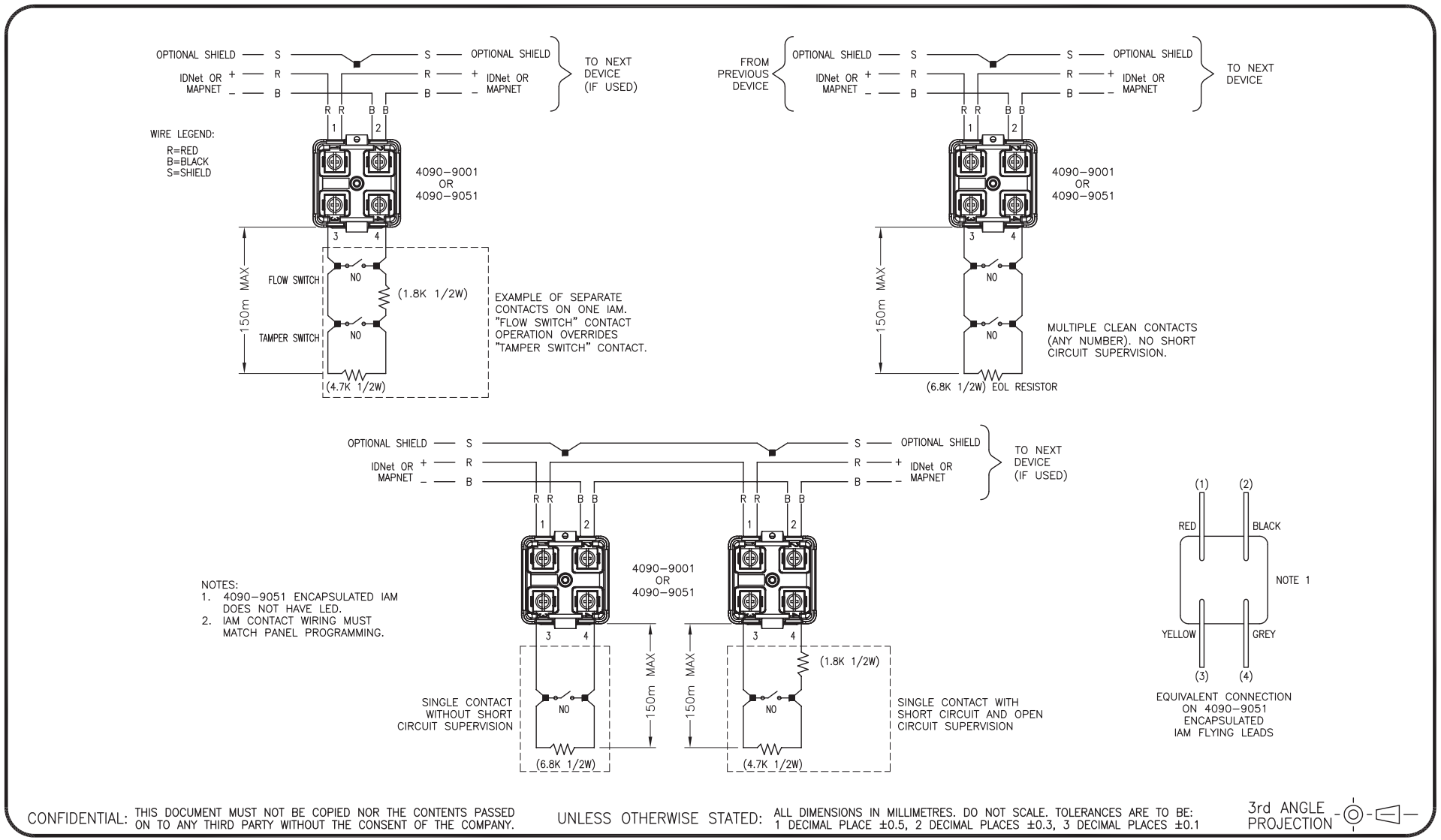
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ES
MAPNET / IDNET ADDRESSABLE MCP WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 300 of N

A3 | ISS/REV B | PART No:

301: IDNet Supervised IAM (4090-9001, 4090-9051)



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

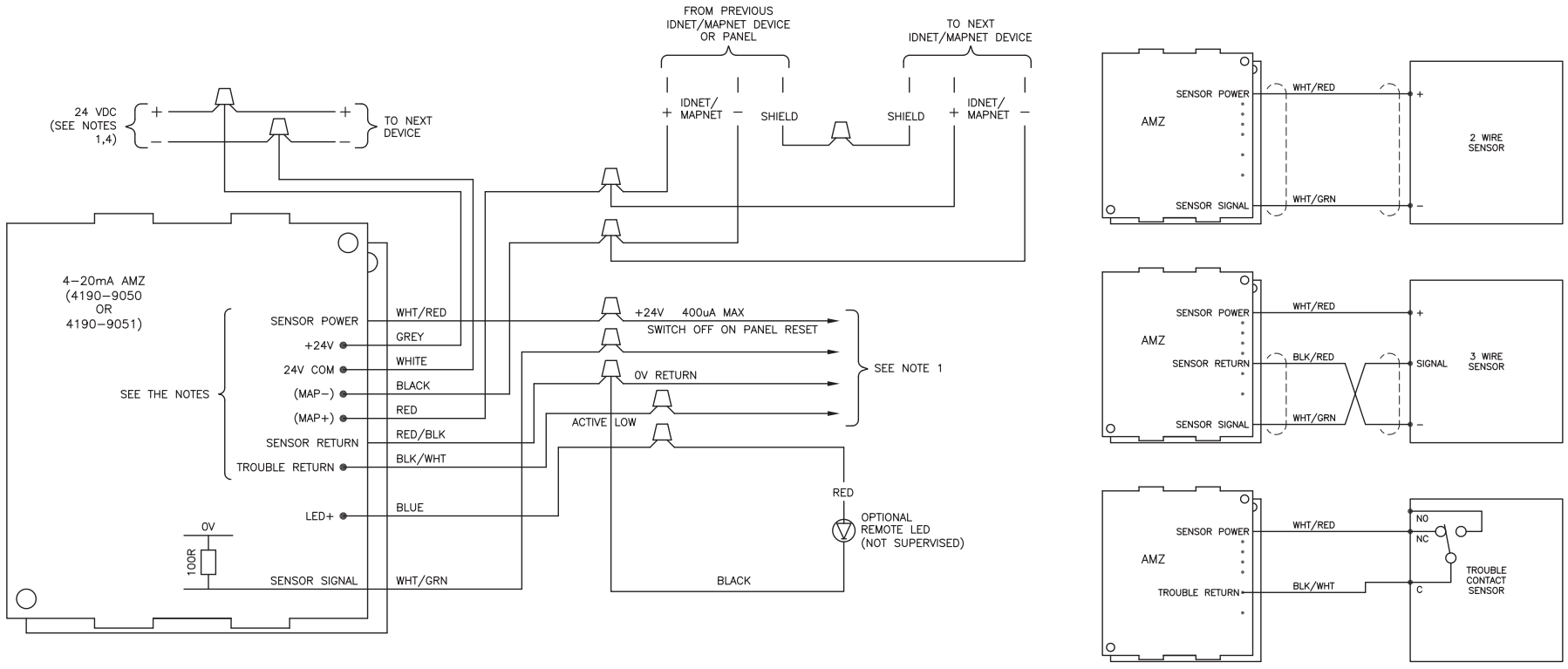
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

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

DRAWING No: 1976-181 SHEET 301 of N

A3 | ISS/REV B | PART No:



WIRING EXAMPLES

NOTES:
1. SENSOR (POWER, SIGNAL, RETURN) WIRING IS INHERENTLY SUPERVISED IF USED TO GENERATE 20mA SIGNAL. MAXIMUM LINE RESISTANCE IS 27 OHMS.
2. USE WIRE NUTS TO INDIVIDUALLY TERMINATE UNUSED WIRES. WIRE NUT, SPLICE, OR SOLDER THE MAPNET SHIELD WIRES.
3. MAXIMUM CURRENT PER 20mA LOOP MONITOR IS 28mA; ADD AN ADDITIONAL 3mA IN ALARM IF REMOTE LED IS USED.
4. MAXIMUM VOLTAGE ON MAPNET/IDNET LINES IS 40V; ALL OTHERS ARE 32V.

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	4615	SS/KS	LSC	RC	DP	02-09-14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

tyco Fire Protection Products

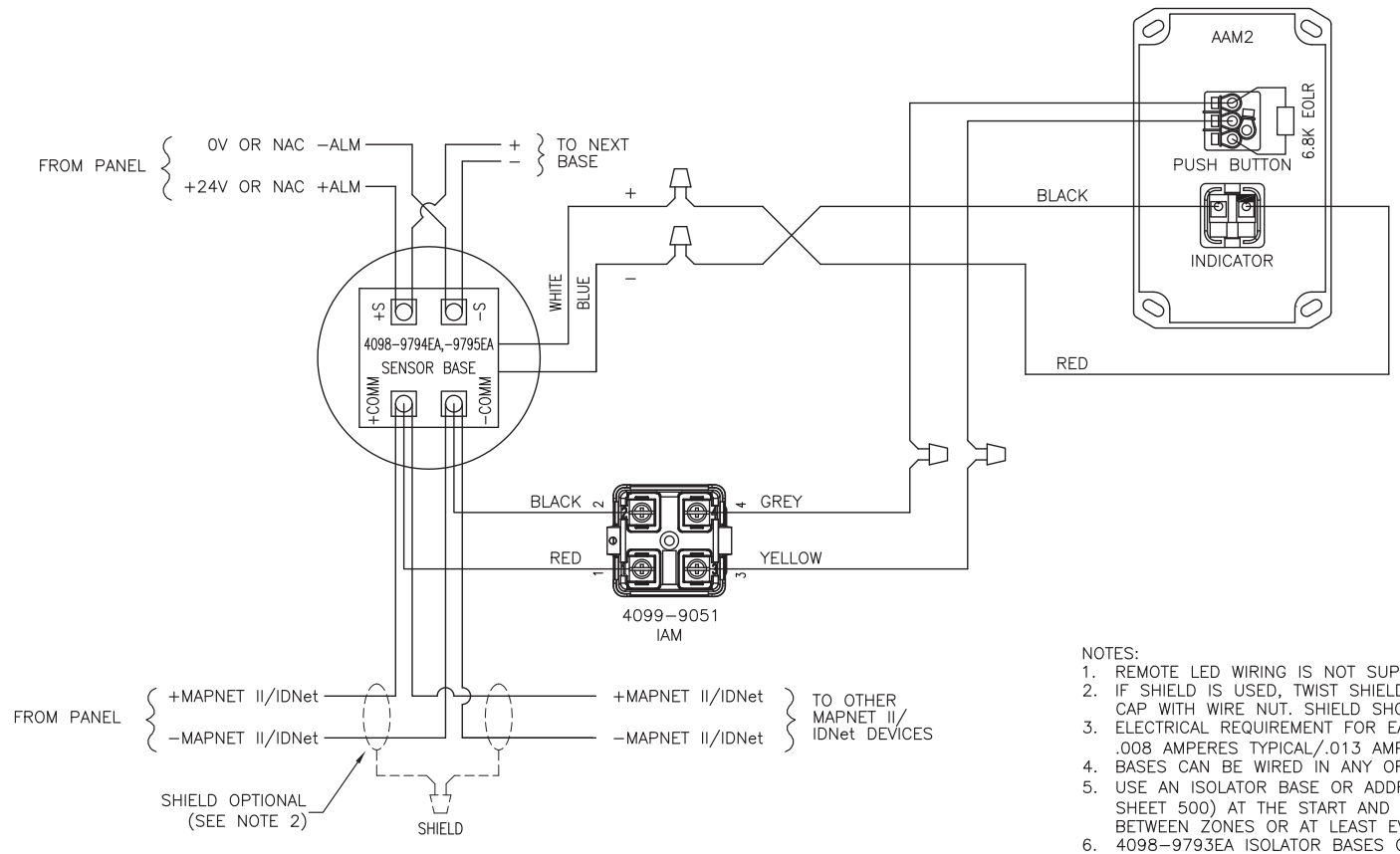
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
4-20mA ANALOG MONITOR ZAM (4190-9050)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 302 of N

A3 | ISS/REV B | PART No:

303: Alarm Acknowledgment - IDNet AAM2 Wiring



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.

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	4615	SS	LSC	RC	DP	28-8-14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

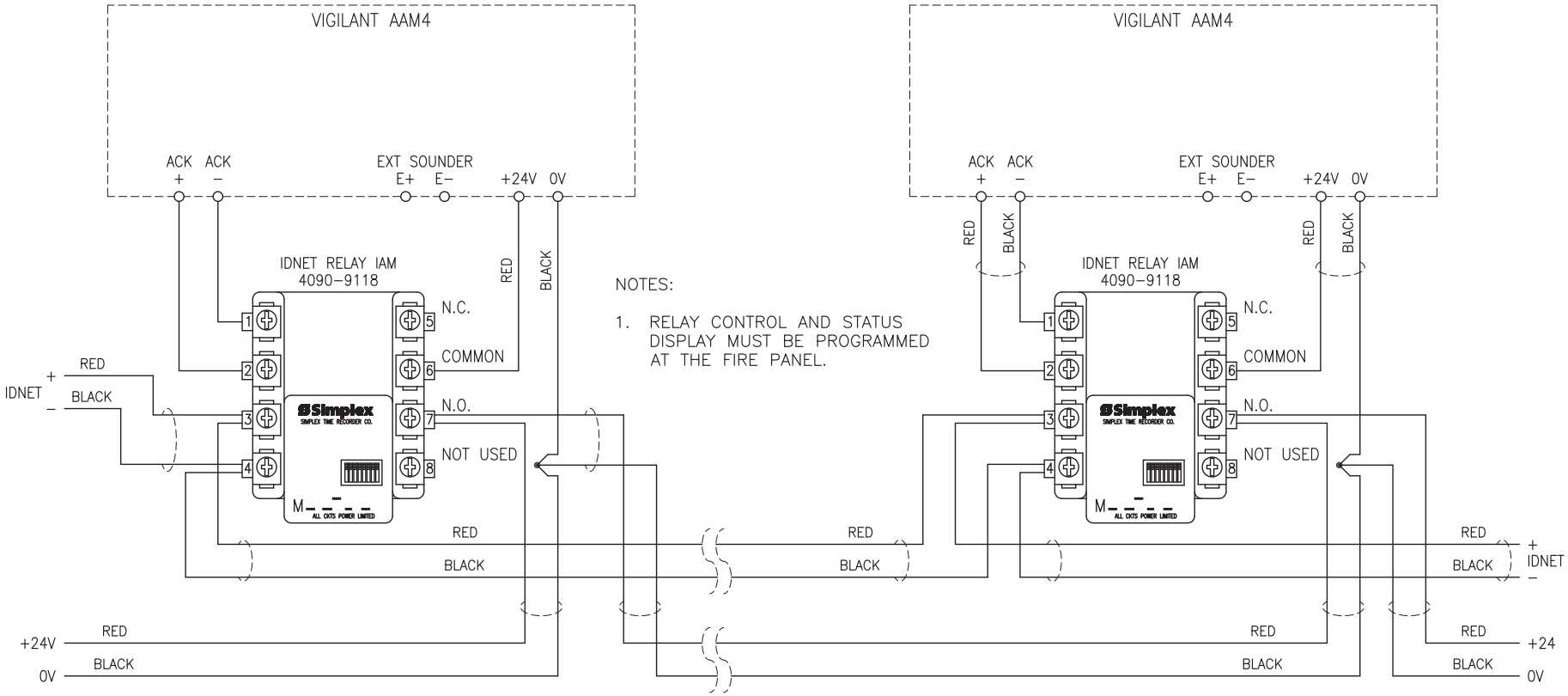
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
ALARM ACKNOWLEDGEMENT - AAM2
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 303 of N

A3 | ISS/REV B | 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	4615	SS	LSC	RC	DP	29–8–14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

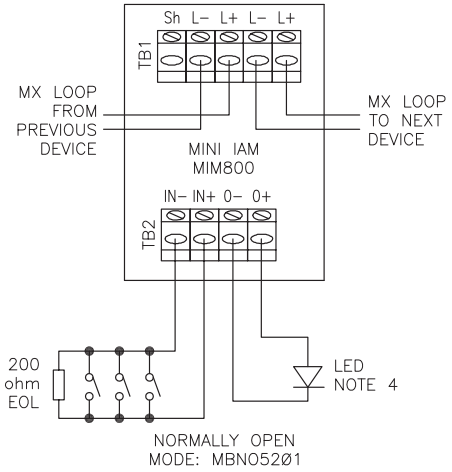
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

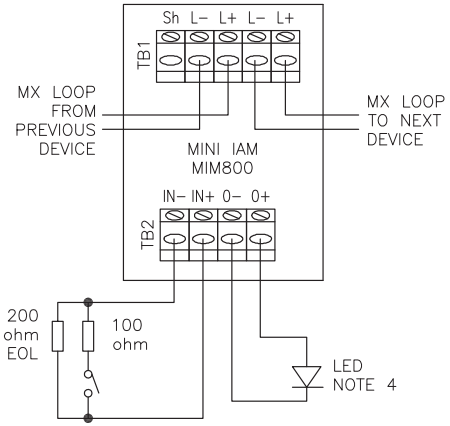
4100ES
ALARM ACKNOWLEDGEMENT - AAM4 WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 304 of N

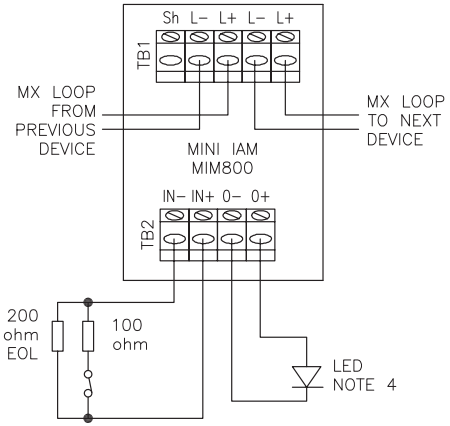
A3	ISS/REV B	PART No:



NORMALLY OPEN
MODE: MBNO52Ø1



NORMALLY OPEN WITH S/C FAULT
MODE: MCNO52Ø1



NORMALLY CLOSED WITH O/C FAULT
MODE: MCNC52Ø1

NOTES:
1. INPUT CONTACTS MUST BE VOLTAGE FREE.
2. CIRCUIT RESISTANCE: 10 OHM MAX.
3. CIRCUIT LENGTH: 10m MAX.
4. LED IS OPTIONAL. LED CURRENT: 2.5mA.
5. MODES REFER TO CONFIGURATION IN ES PROGRAMMER.

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 FROM 1982-71-108.	4809	KJS	LSC	RC	DP	12-11-15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11-7-16

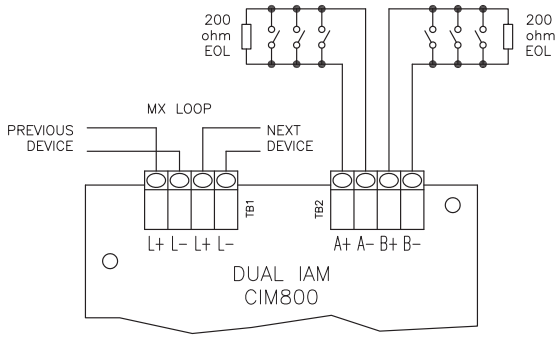
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

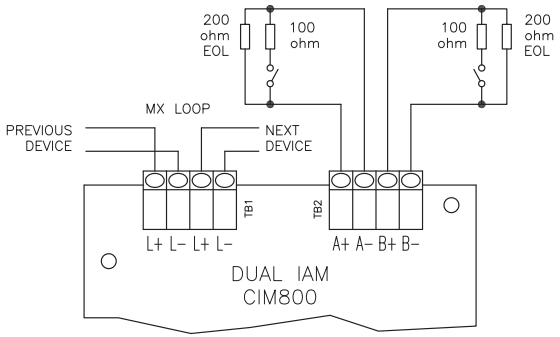
4100ESi
MIM800 MINI IAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 305 of N

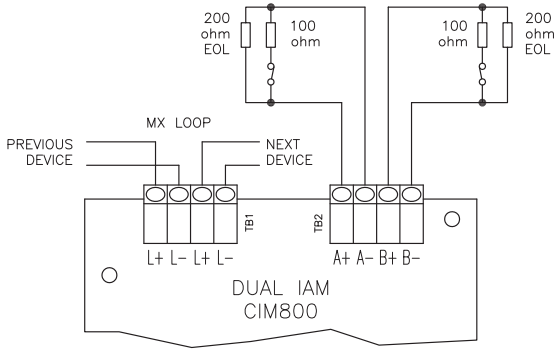
A3 | ISS/REV B | PART No:



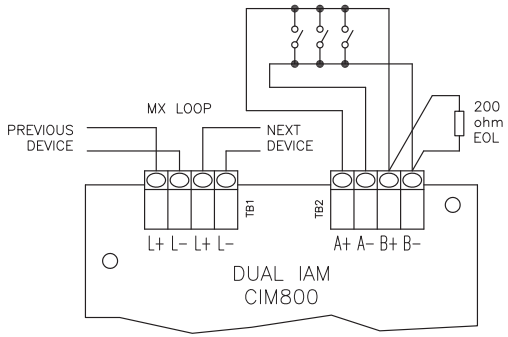
SPUR – NORMALLY OPEN,
S/C = ACTIVE
MODE: MBNO OR MBNOI



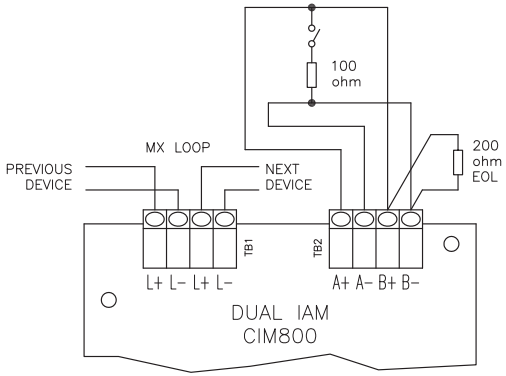
SPUR – NORMALLY OPEN,
S/C OR O/C = FAULT
MODE: MCNO



SPUR – NORMALLY CLOSED,
S/C OR O/C = FAULT
MODE: MCNC



LOOP – NORMALLY OPEN,
S/C = ALARM
MODE: MADNO OR MADNOI



LOOP – NORMALLY OPEN,
S/C OR O/C = FAULT
MODE: MAENO OR MAENOI

NOTES:
1. INPUT CONTACTS MUST BE VOLTAGE FREE.
2. CIRCUIT RESISTANCE: 10 OHM MAX.
3. CIRCUITS MUST NOT BE JOINED TOGETHER OR TO ANY OTHER WIRING.
4. MODES REFER TO CONFIGURATION IN ES PROGRAMMER.

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

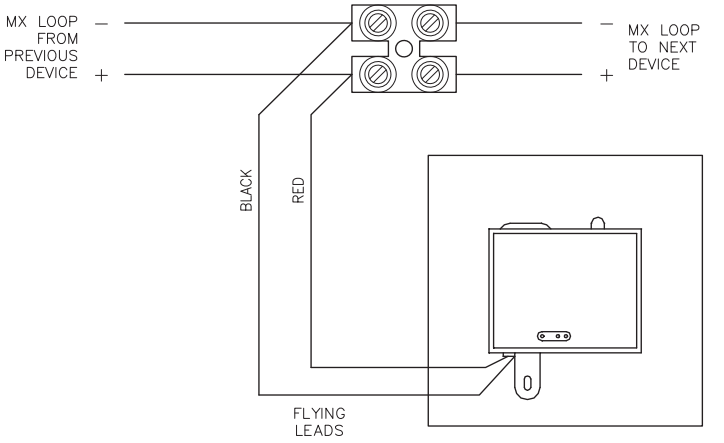
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982-71-109.	4809	KJS	LSC	RC	DP	12-11-15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11-7-16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

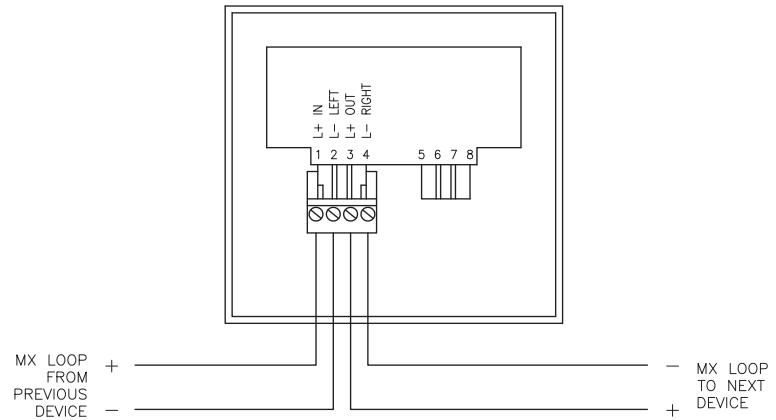
4100ESi
CIM800 DUAL INPUT IAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 306 of N

A3 | ISS/REV B | PART No:



REAR OF CP820 CALL POINT



REAR OF CP830/MCP820/MCP830 CALL POINT

CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

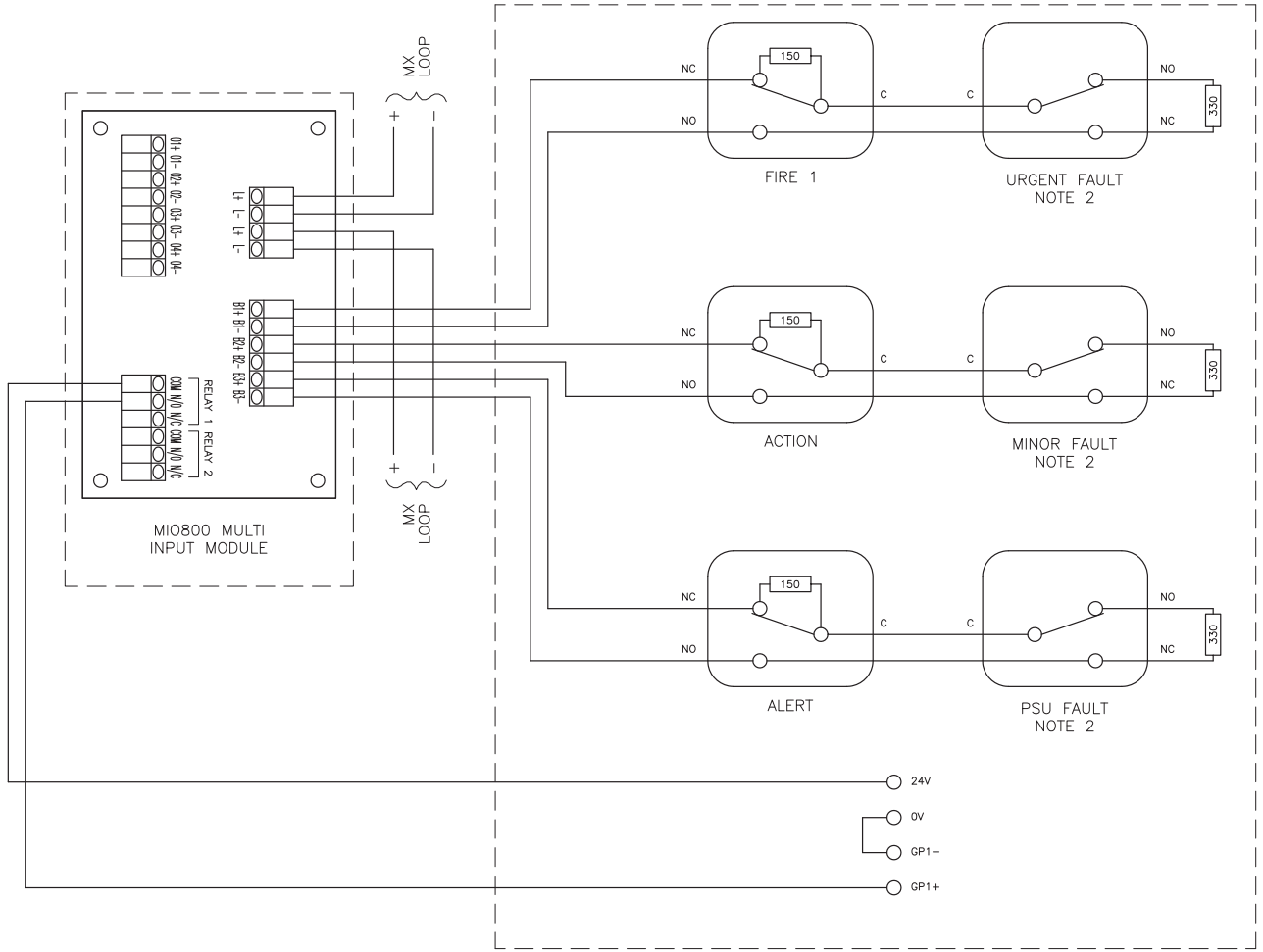
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL, FROM 1982–71–115.	4809	KJS	LSC	RC	DK	12–11–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16
C	MCP820/MCP830 ADDED.	5222	KJS	RC	MH	DC	8–8–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
CP820 / CP830 / MCP820 / MCP830 CALL POINT
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 307 of N

A3 | ISS/REV C | PART No:



MIO800	VESDA STATES
I/P 1	FIRE 1 AND URGENT FAULT
I/P 2	ACTION AND MINOR FAULT
I/P 3	ALERT AND PSU FAULT
O/P 3	RESET (OPTIONAL)

NOTES:
1. IT IS RECOMMENDED THE VESDA UNIT BE PROGRAMMED SO THAT RELAY 3 DROPS OUT ON URGENT FAULT OR ISOLATE. ISOLATING THE VESDA WILL CREATE A FAULT ON THE 4100ESi.
2. FAULT RELAYS ARE SHOWN IN A NORMALLY ENERGIZED STATE.
3. MULTI-I/O MODULE MUST BE CONFIGURED IN 4100ESi FOR CLASS C NO OPERATION MCNO – REFER PROGRAMMING MANUAL.

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

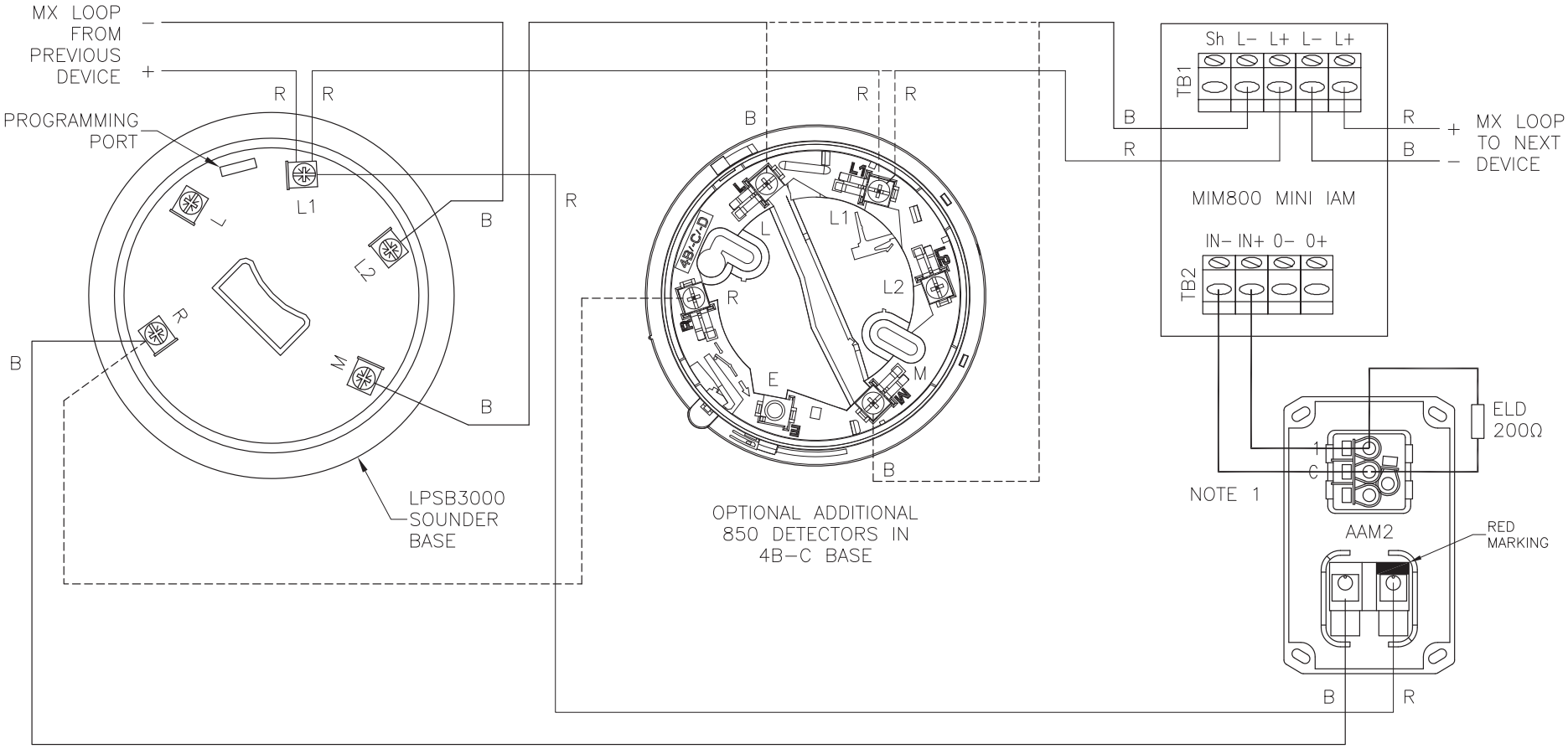
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982-71-119.	4809	KJS	LSC	RC	DK	12-11-15
B	USE VIO800 INSTEAD OF 4090-5208.	4943	KJS	MH	RC	DP	1-8-16
C	NOTE 3 UPDATED.	4977	KJS	LSC	RC	DP	2-11-16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
VIO800 MULTI-I/O WITH LASER/SCANNER WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 308 of N

A3 | ISS/REV C | PART No:



NOTES:
1. MIM800 IS LOCATED IN CAVITY BEHIND AAM2 FACEPLATE. CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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 FROM 1982–71–120.	4809	KJS	LSC	RC	DK	17–12–15
B	SOUNDER BASE WAS 8023B, SECOND DETECTOR ADDED, NOTES UPDATED.	4977	KJS	LSC	RC	DP	2–11–16

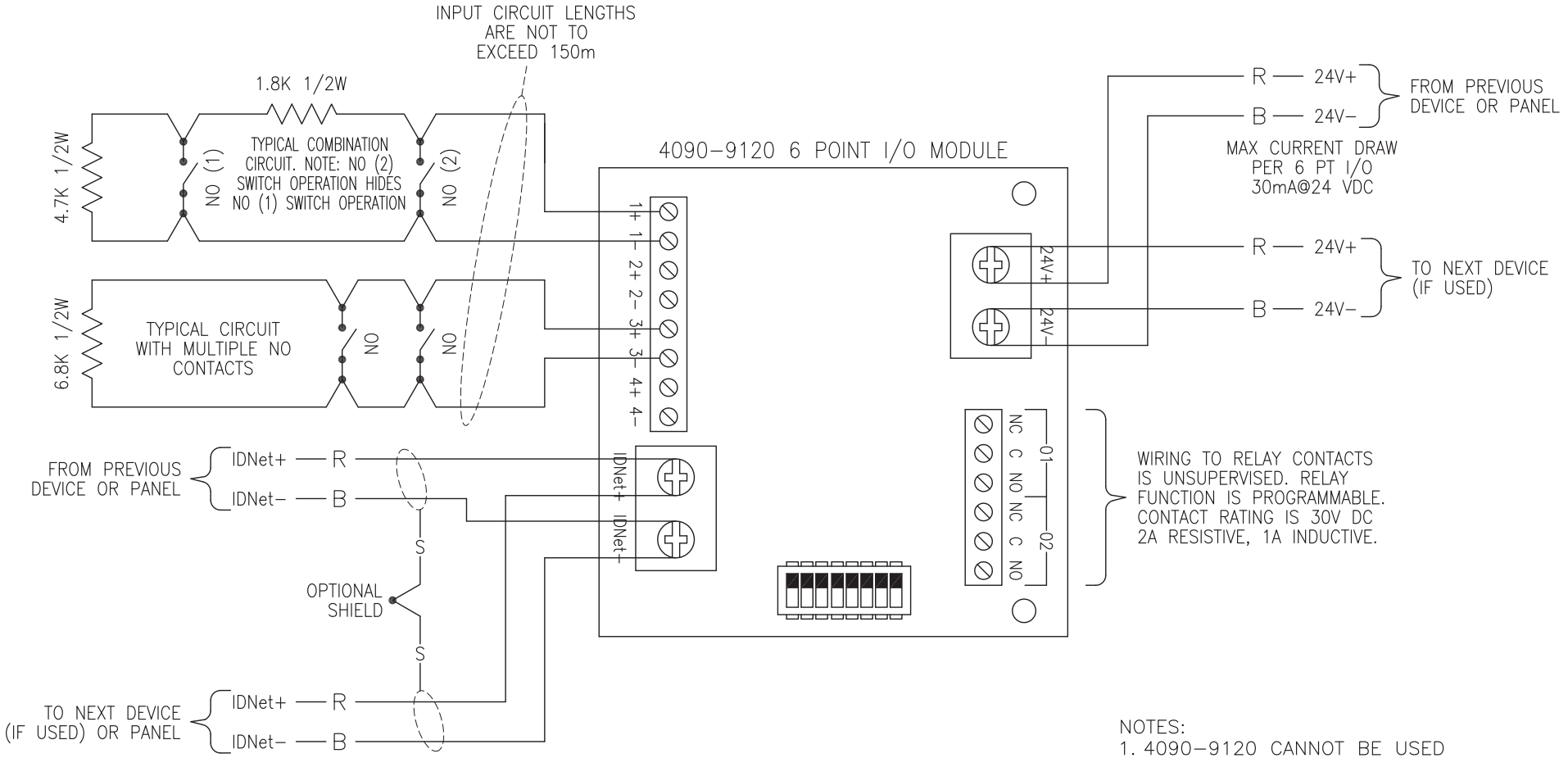
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
AAM2 WITH MX DEVICES
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 309 of N

A3 | ISS/REV B | PART No:

Output devices and mixed I/O devices



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	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

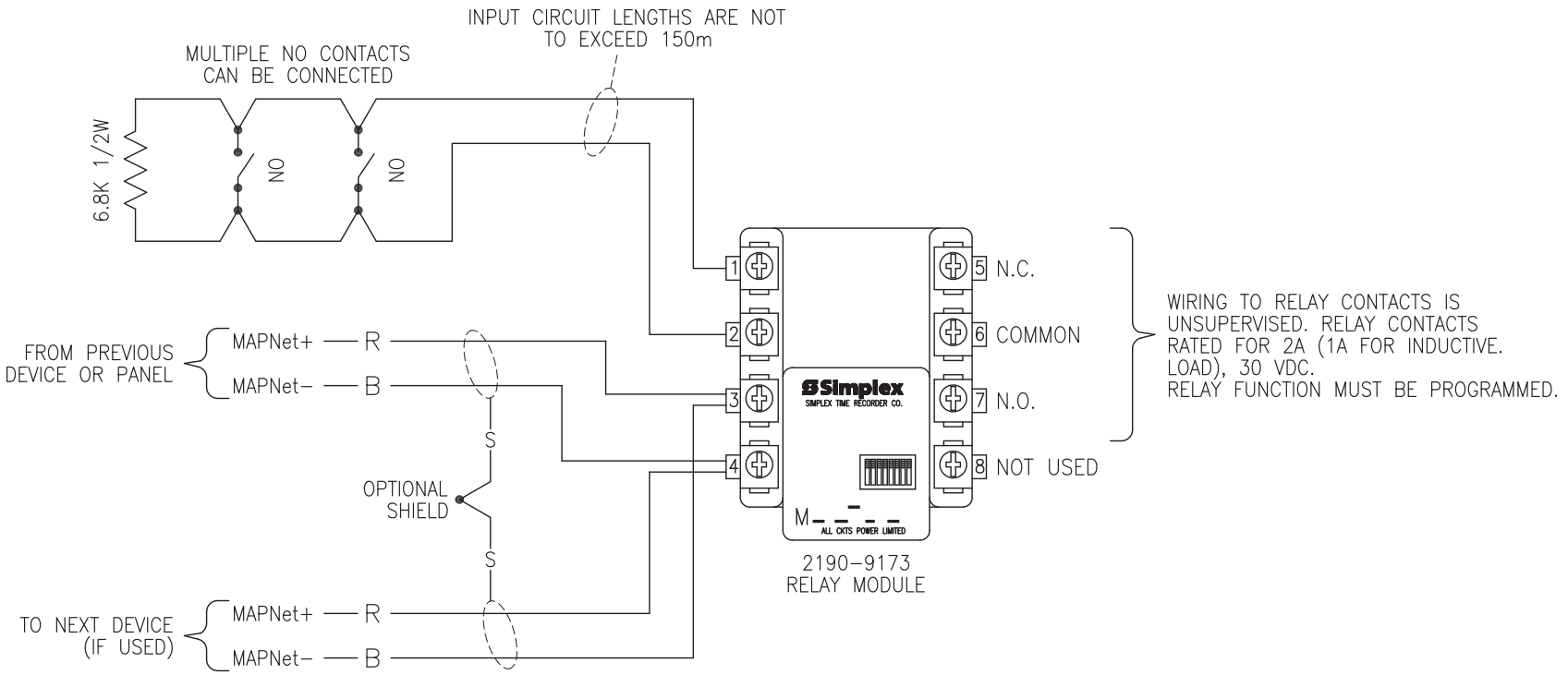
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 400 of N

A3 | ISS/REV B | PART No:

401: MapNet2 Relay Module with Supervised Input (2190-9173)



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

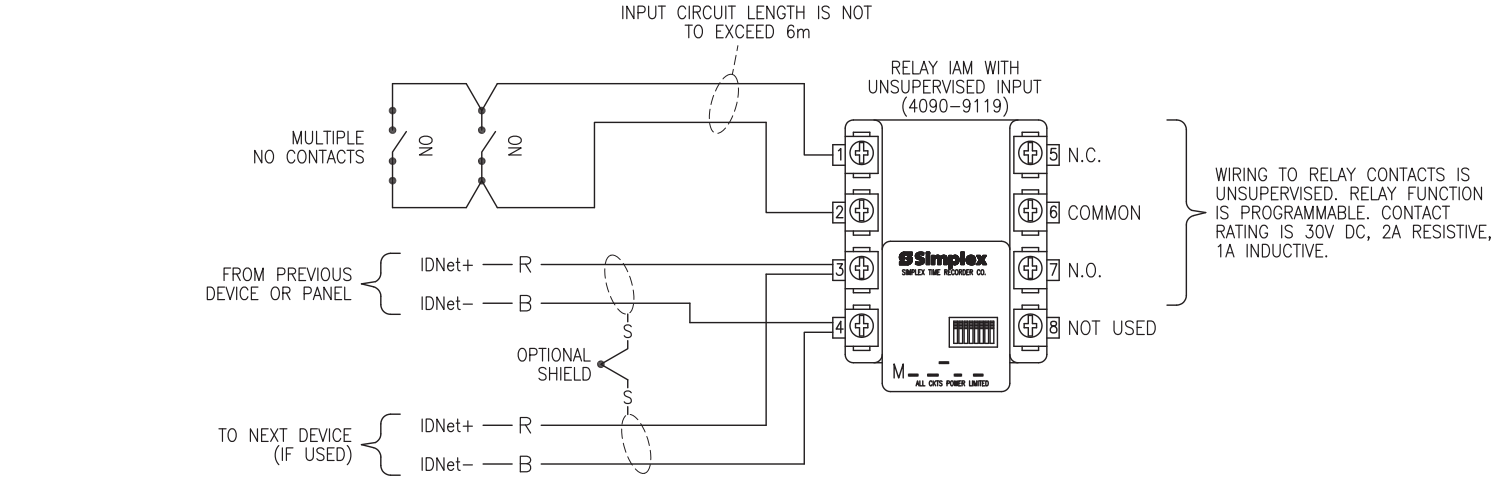
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

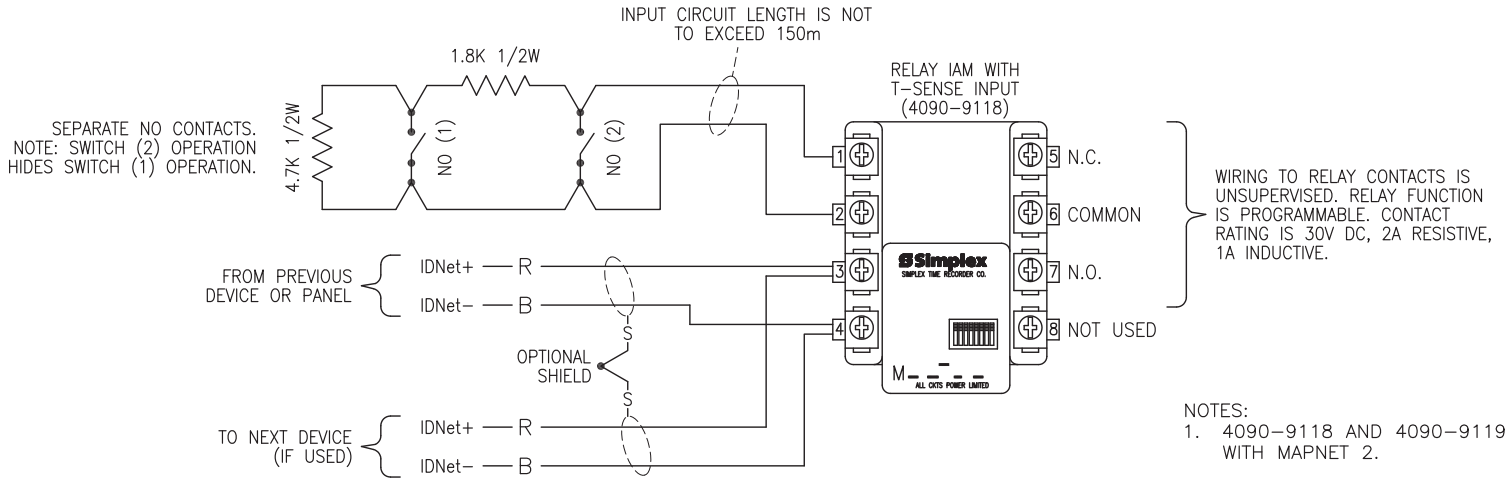
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 401 of N

A3 | ISS/REV B | 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
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

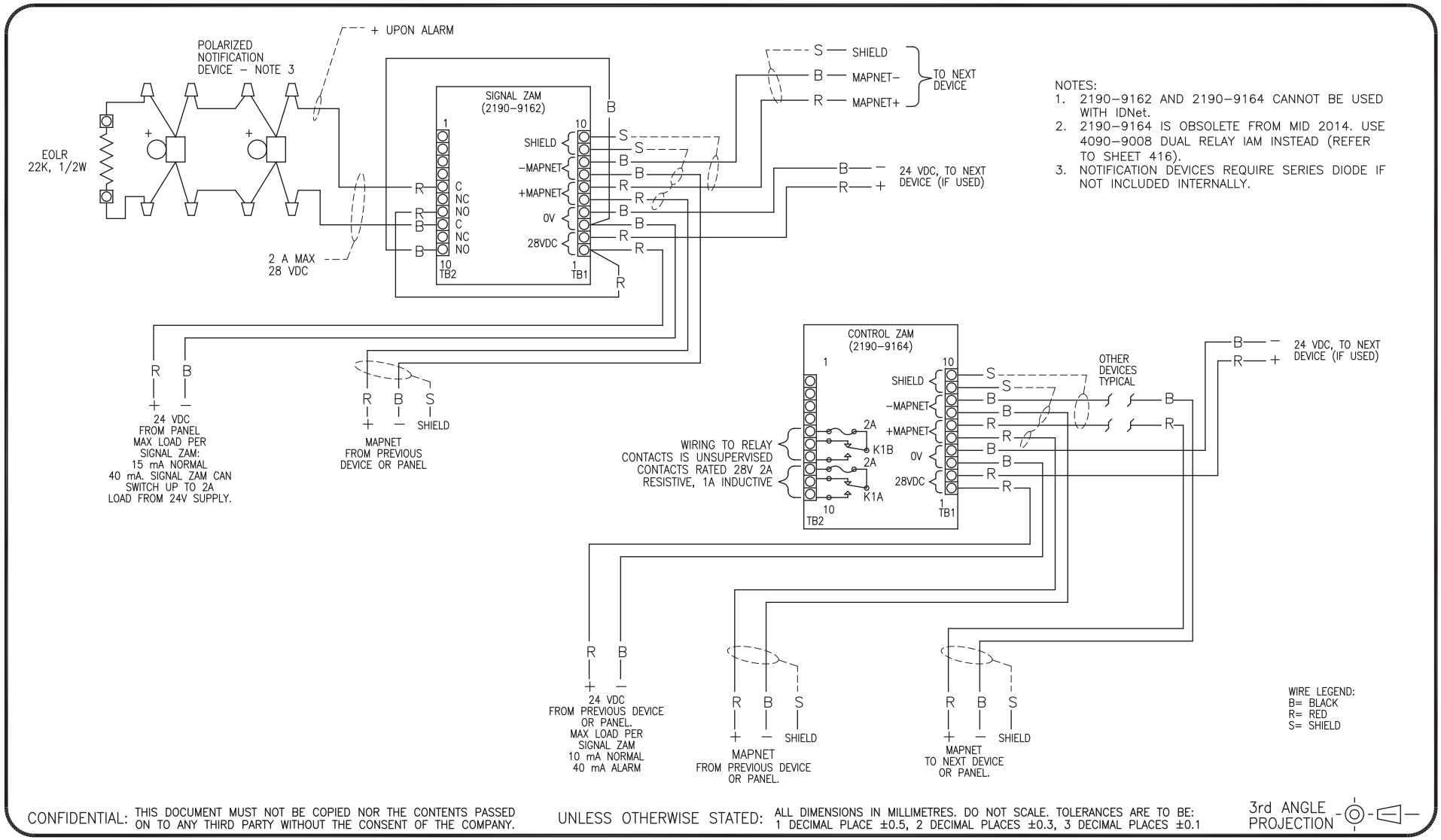
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 402 of N

A3 | ISS/REV C | PART No:

403: MapNet2 Signal ZAM (2190-9162) and Control ZAM (2190-9164)



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

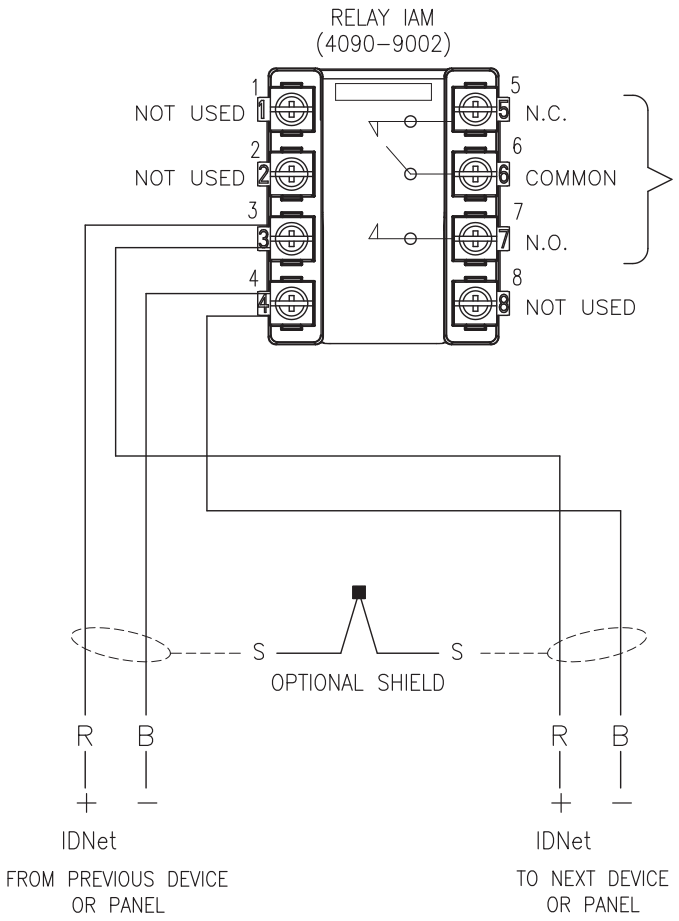
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	OBSOLETE NOTE 2 ADDED	4615	KJS	LSC	RC	DP	04–9–14
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 403 of N

A3 | ISS/REV C | 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

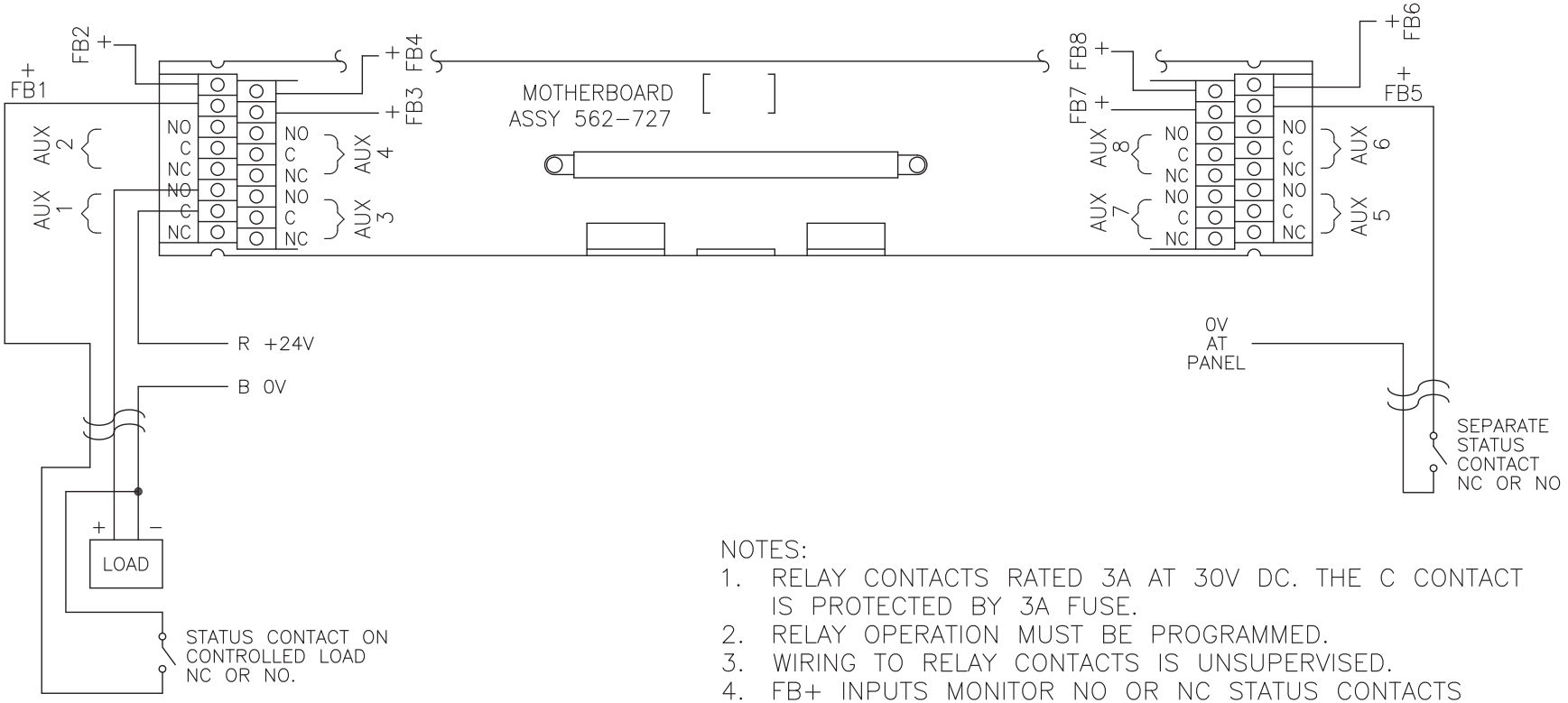
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 404 of N

A3 | ISS/REV B | 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

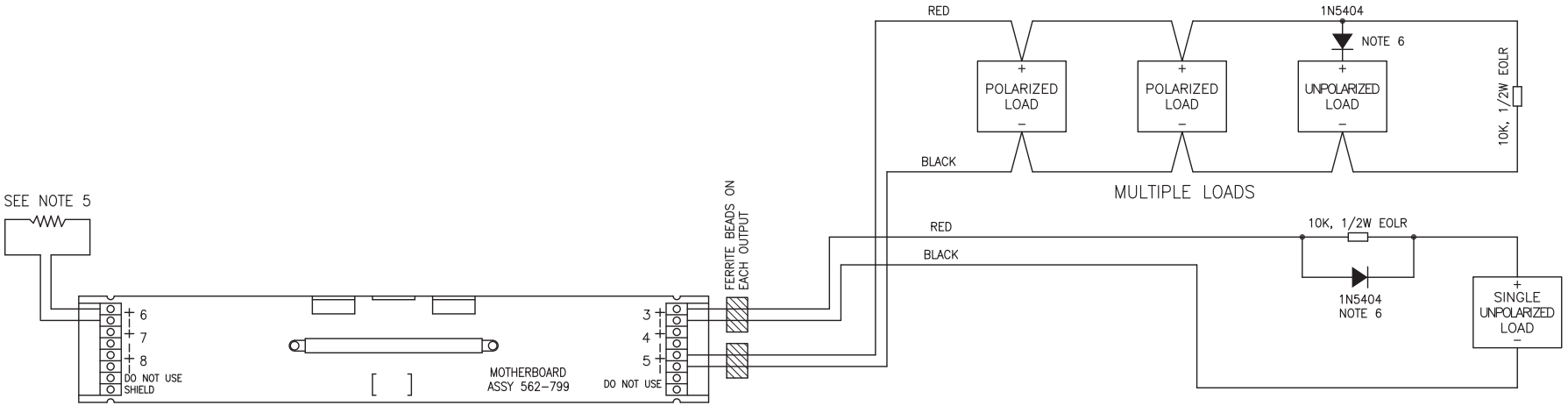
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				21–7–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

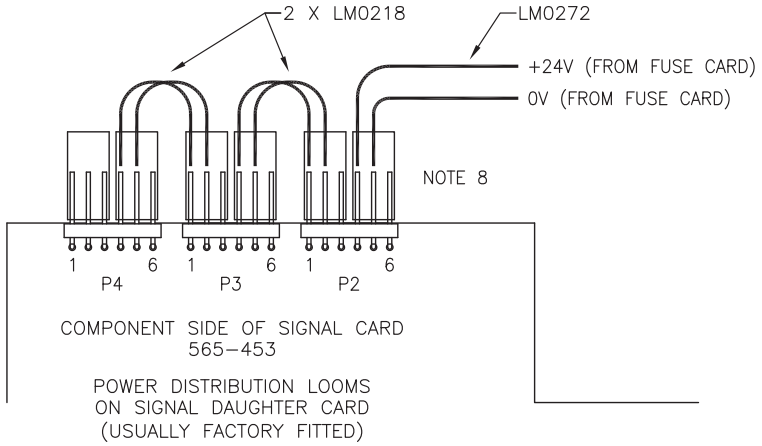
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 405 of N

A3 | ISS/REV B | 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 NEXT 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
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

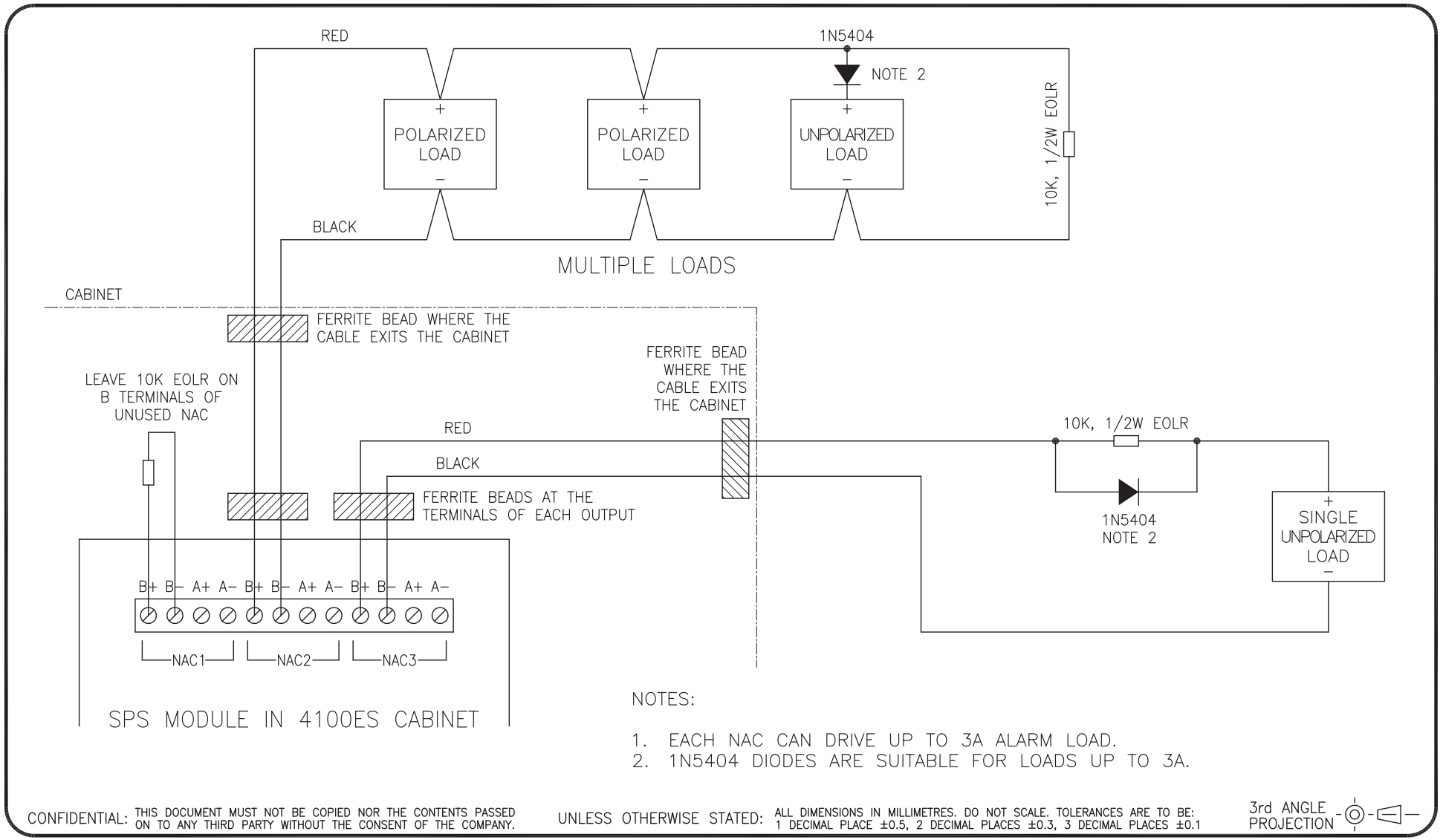
tyco
Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 406 of N

A3 | ISS/REV B | 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				22-8-06
B	ADDED FERRITE AT CABINET EXIT	4352	KJS	LSC	RC	DP	13-4-12
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12-1-16

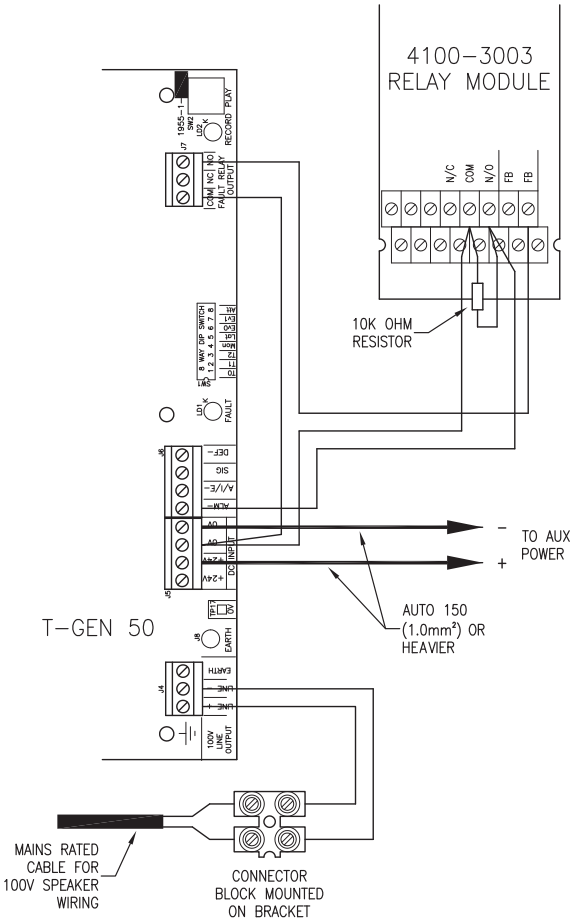
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

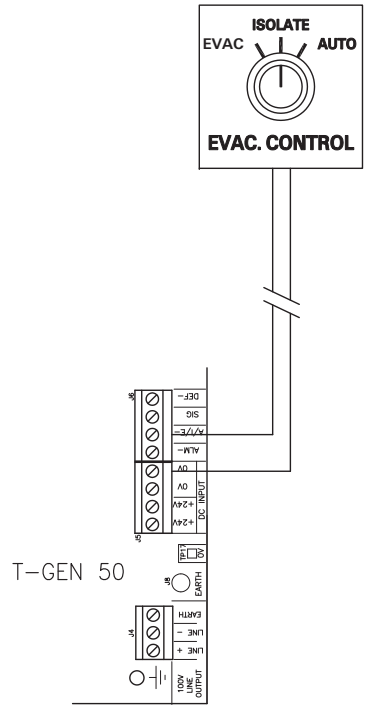
4100ES
SPS NAC LOADS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 407 of N

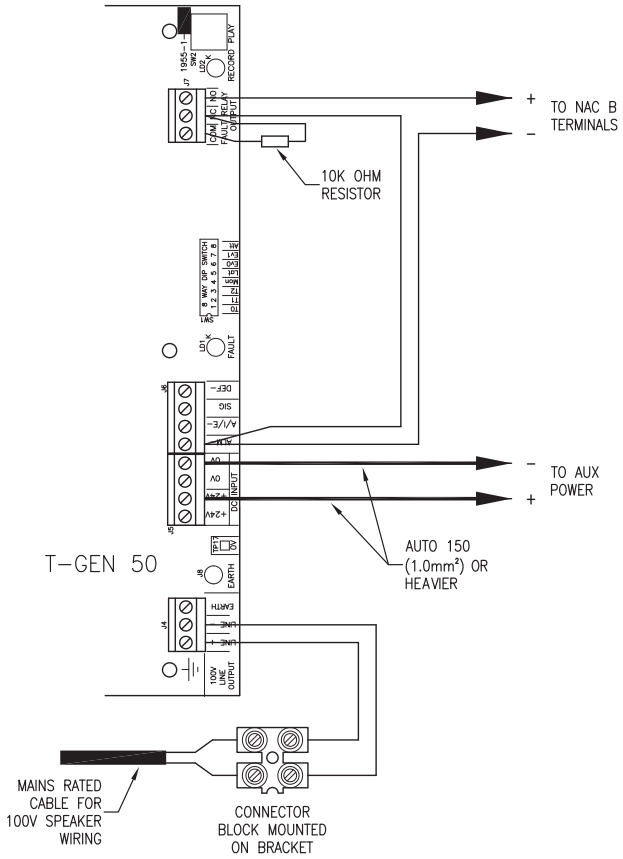
A3 | ISS/REV C | PART No:



RELAY MODULE CONNECTION TO A T–GEN 50



EVAC CONTROL CONNECTION TO A T–GEN 50



NAC CONNECTION TO A T–GEN 50

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	4615	KJS				21–7–15
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ES
SPS NAC CONNECTION TO T-GEN50
WIRING DIAGRAM

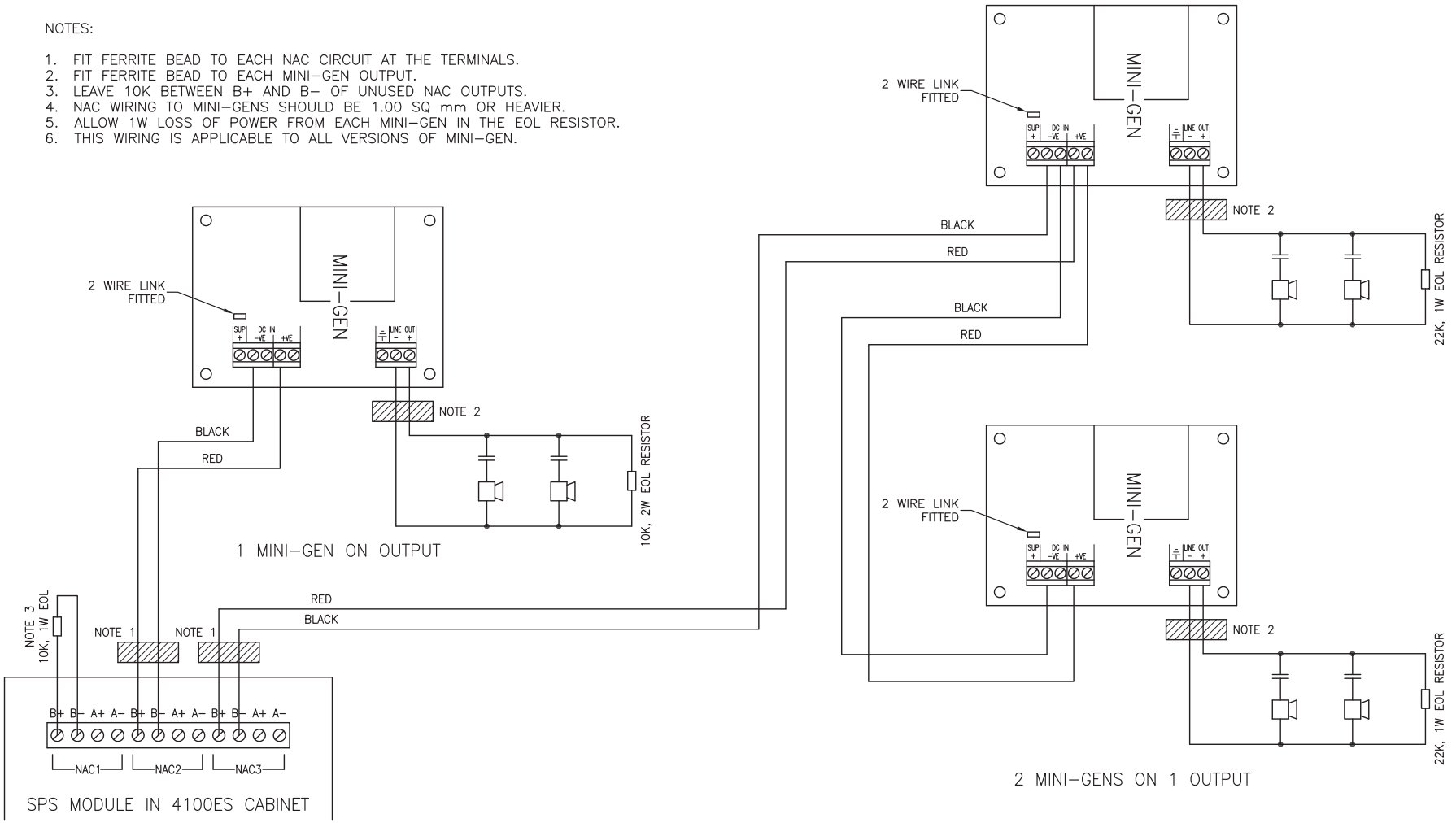
DRAWING No: 1976-181 SHEET 408 of N

A3 | ISS/REV B | PART No:

409: SPS NAC Connection to Multi-Gen Tone Generator

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.



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	4809	KJS				22-8-06
B	ADDED FERRITE ON MINI-GEN OUTPUTS	4352	KJS	LSC	RC	DP	13-4-12
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12-1-16

tyco
Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

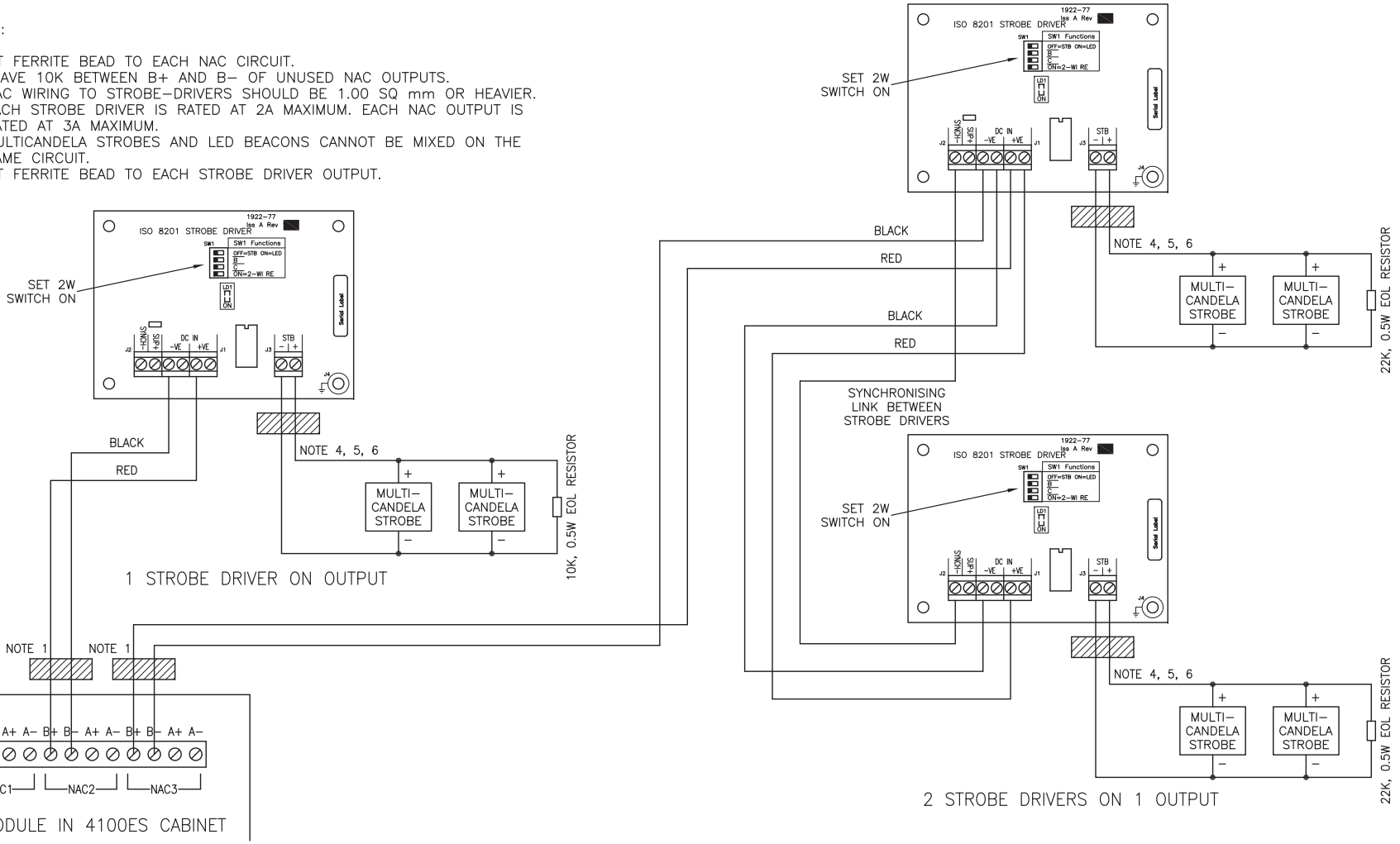
DRAWING No: 1976-181 SHEET 409 of N

A3	ISS/REV C	PART No:

410: SPS NAC Connection to Strobe Driver:

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.



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 FERRITE ON STROBE DRIVER OUTPUTS	4352	KJS	LSC	RC	DP	13–4–12
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

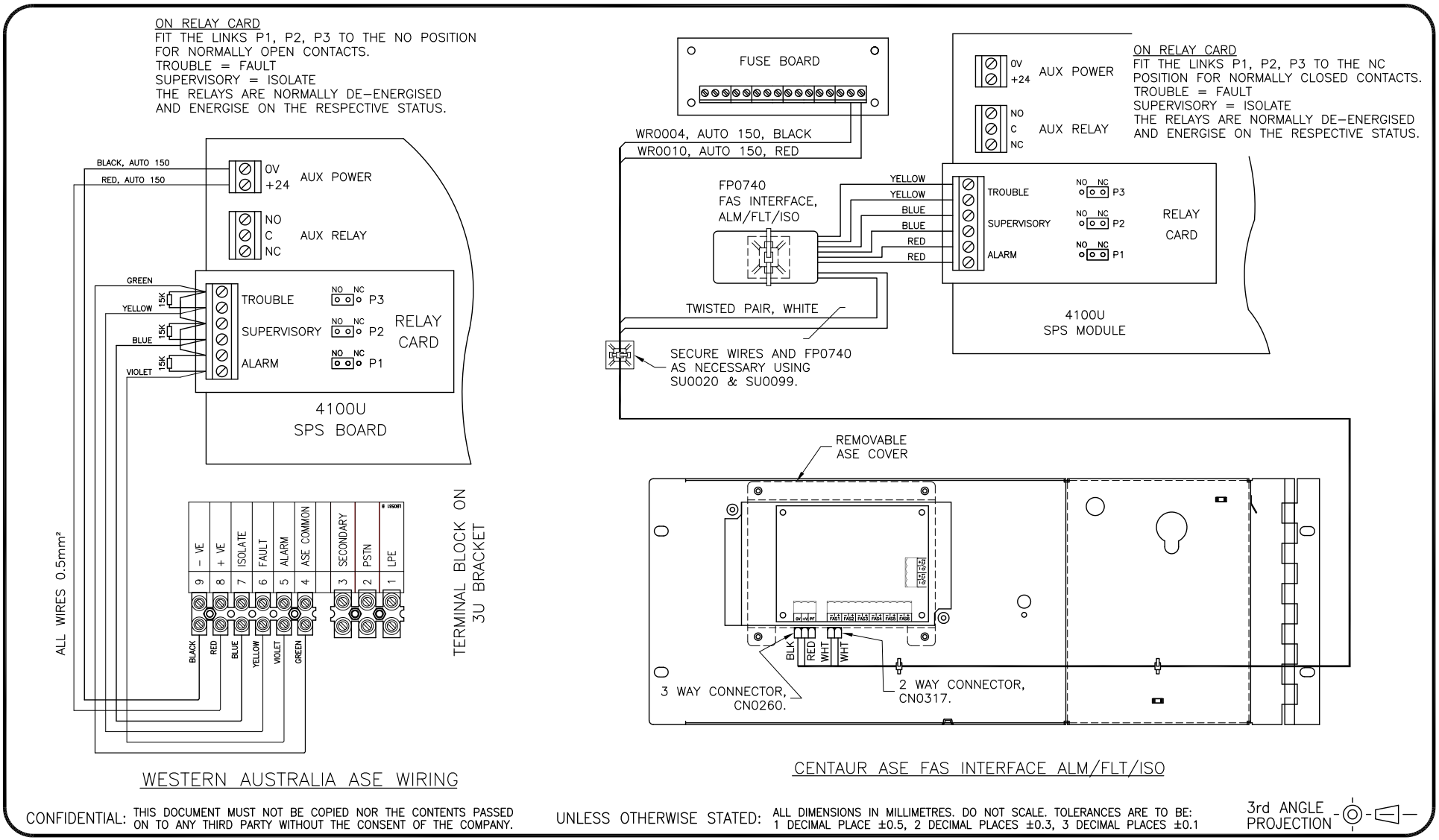
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
SPS NAC WIRING TO STROBE DRIVER
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 410 of N

A3 | ISS/REV C | 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

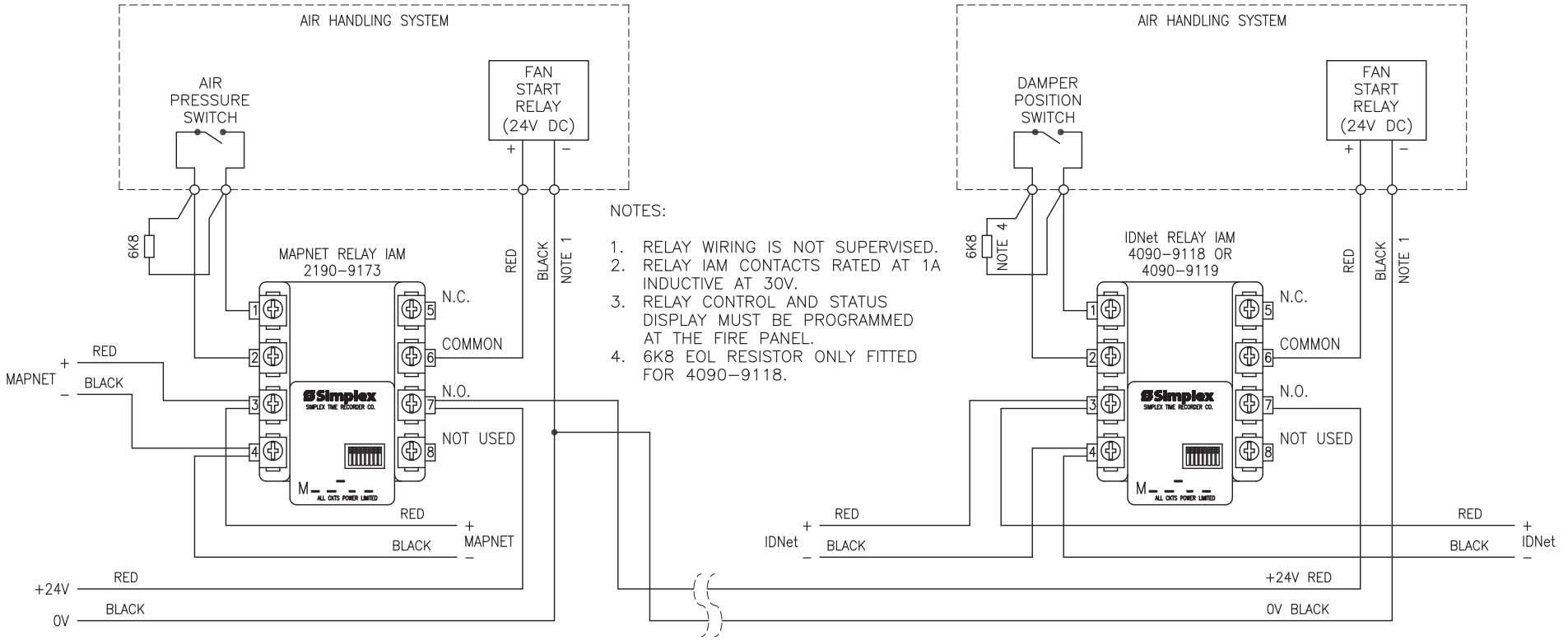
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				29-8-06
B	UPDATED FOR NEW WA ASE.	4333	KJS	YZH	RC	DP	8-3-13
C	3U ASE DOOR HINGING CHANGED.	4704	KJS	LSC	LSC	DP	24-2-15
D	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12-1-16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES SPS TO CENTAUR / WA ASE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 411 of N

A3 | ISS/REV D | PART No:



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

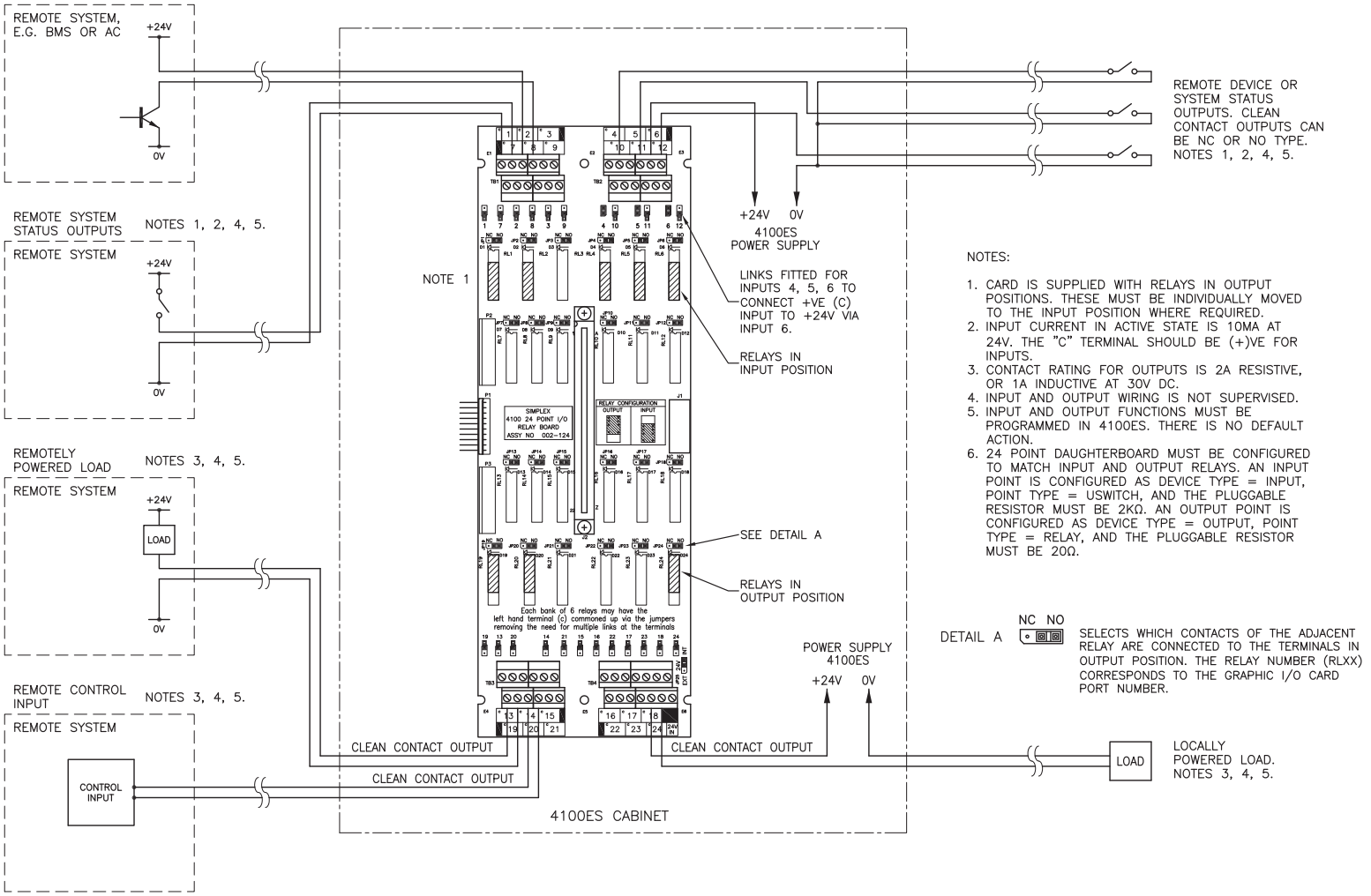
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
FAN CONTROLS WITH RELAY IAMS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 412 of N

A3 | ISS/REV C | 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				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
D	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

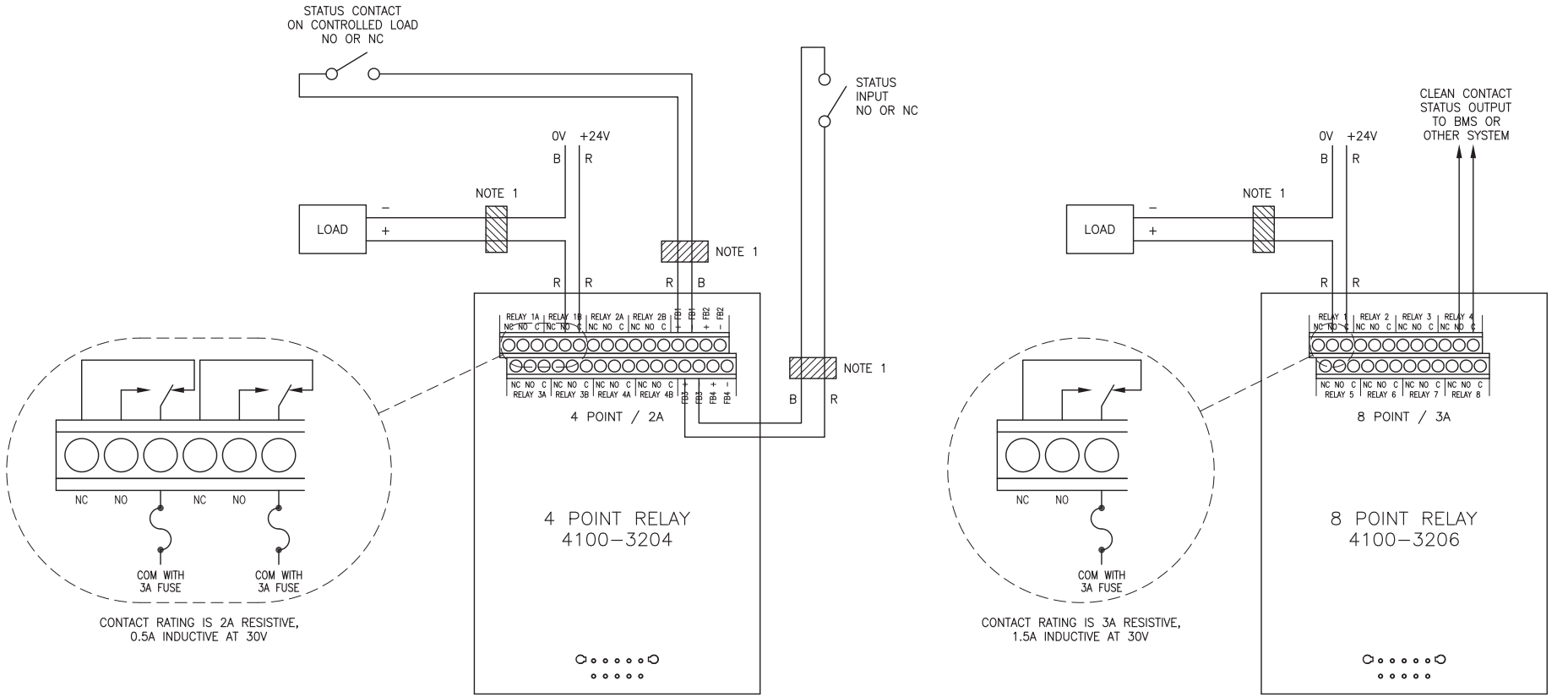
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 413 of N

A3 | ISS/REV D | PART No:



NOTES:

1. FIT A FERRITE TO EACH PAIR OF WIRES LEAVING THE 4100ESi 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.

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

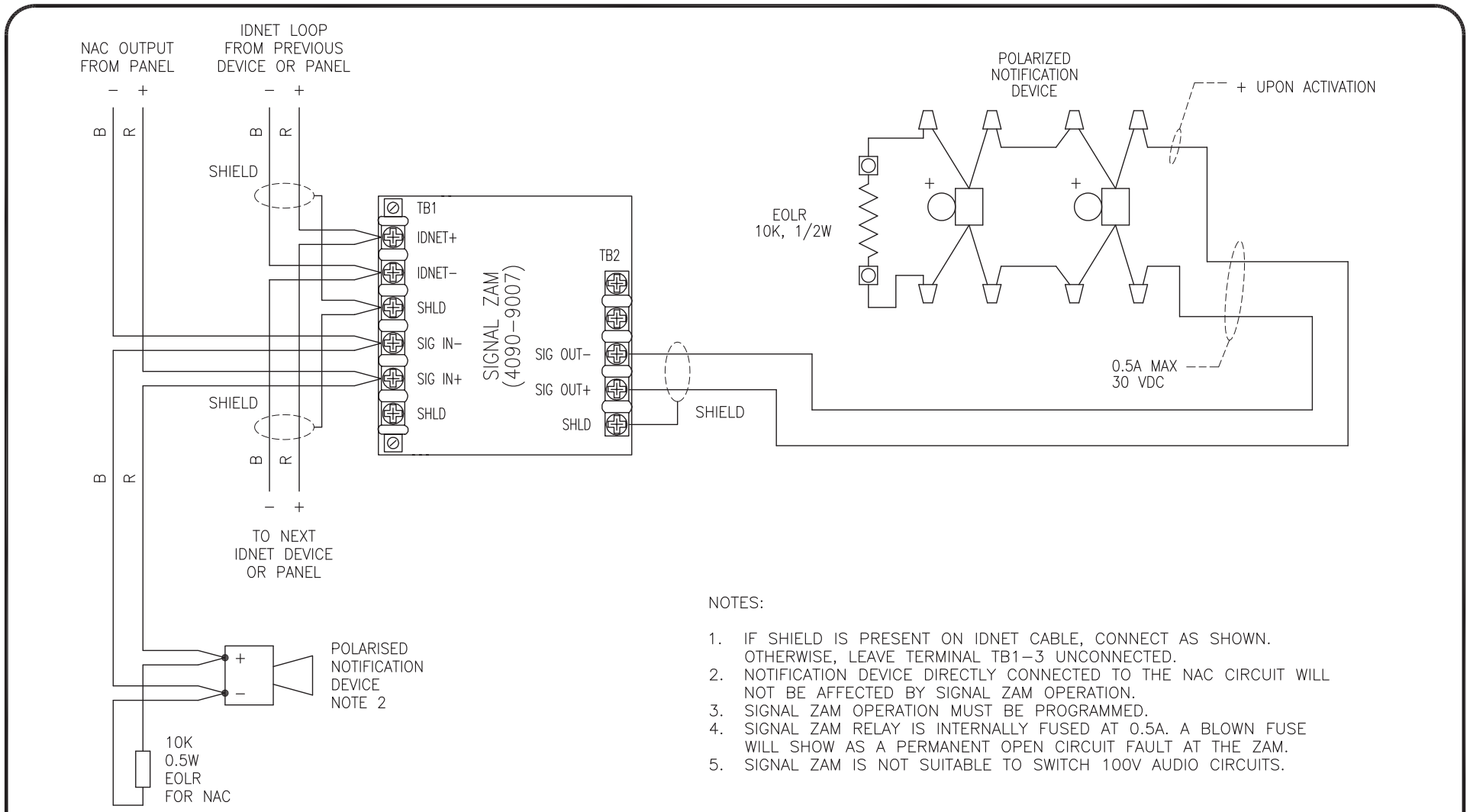
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS	LSC	RC	DP	13-4-12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
4100-3204 / 3206 PDI RELAY MODULES
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 414 of N

A3 | ISS/REV B | 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	4352	KJS	LSC	RC	DP	16–4–12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	KS	8–12–15

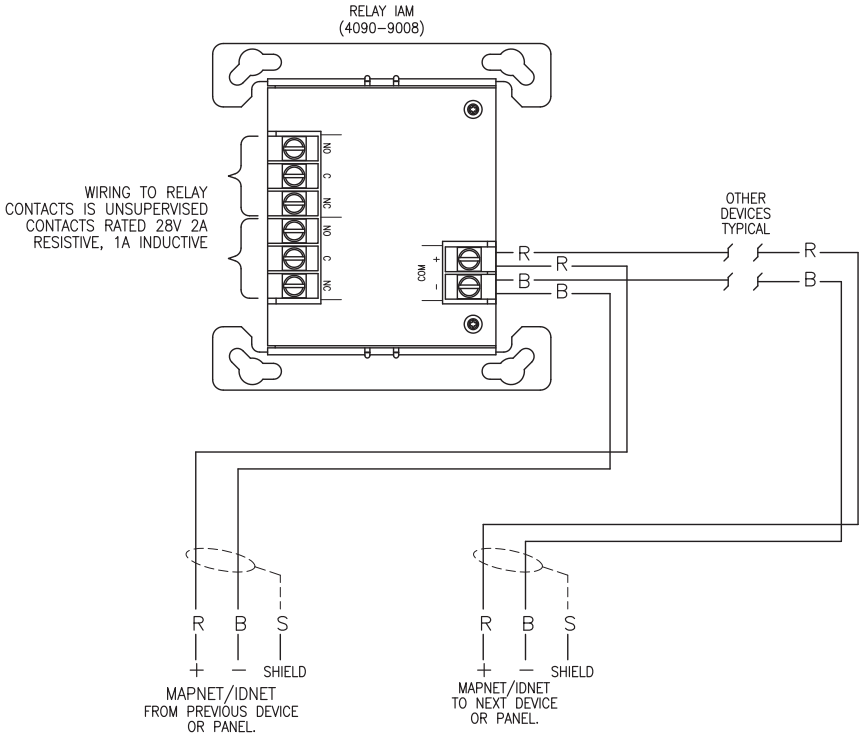
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 415 of N

A3 | ISS/REV B | PART No:



NOTES:
1. 4090–9008 CAN BE USED WITH MAPNET OR IDNET.
2. IF 4090–9008 IS USED TO REPLACE 2190–9164, THE 24V SUPPLY WILL NOT BE REQUIRED. ENSURE CONTINUITY IS MAINTAINED TO OTHER DEVICES.

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

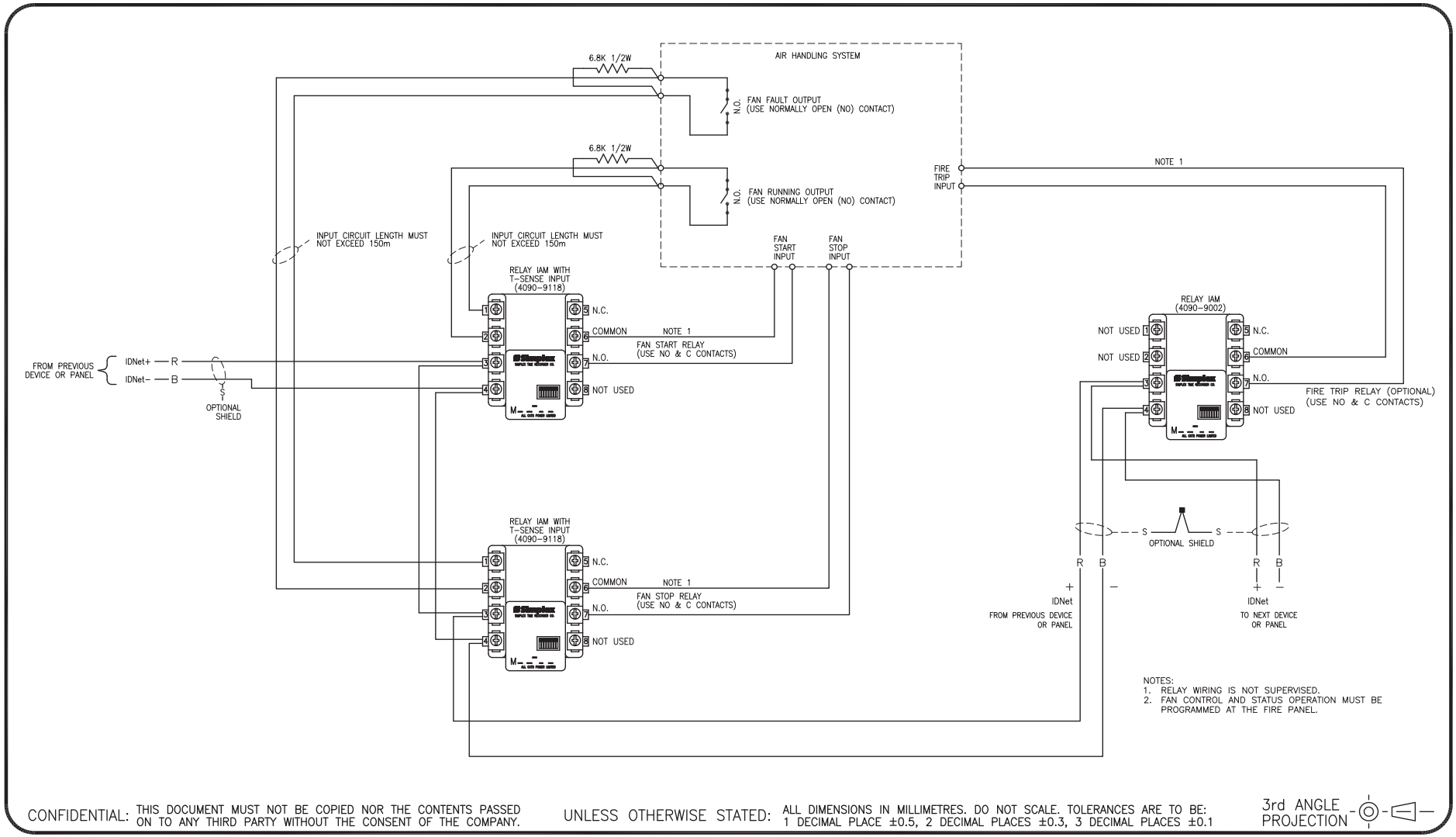
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4615	SS	LSC	LSC	RC	03–9–14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
MAPNET / IDNET RELAY IAM (4090-9008)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 416 of N

A3 | ISS/REV B | 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

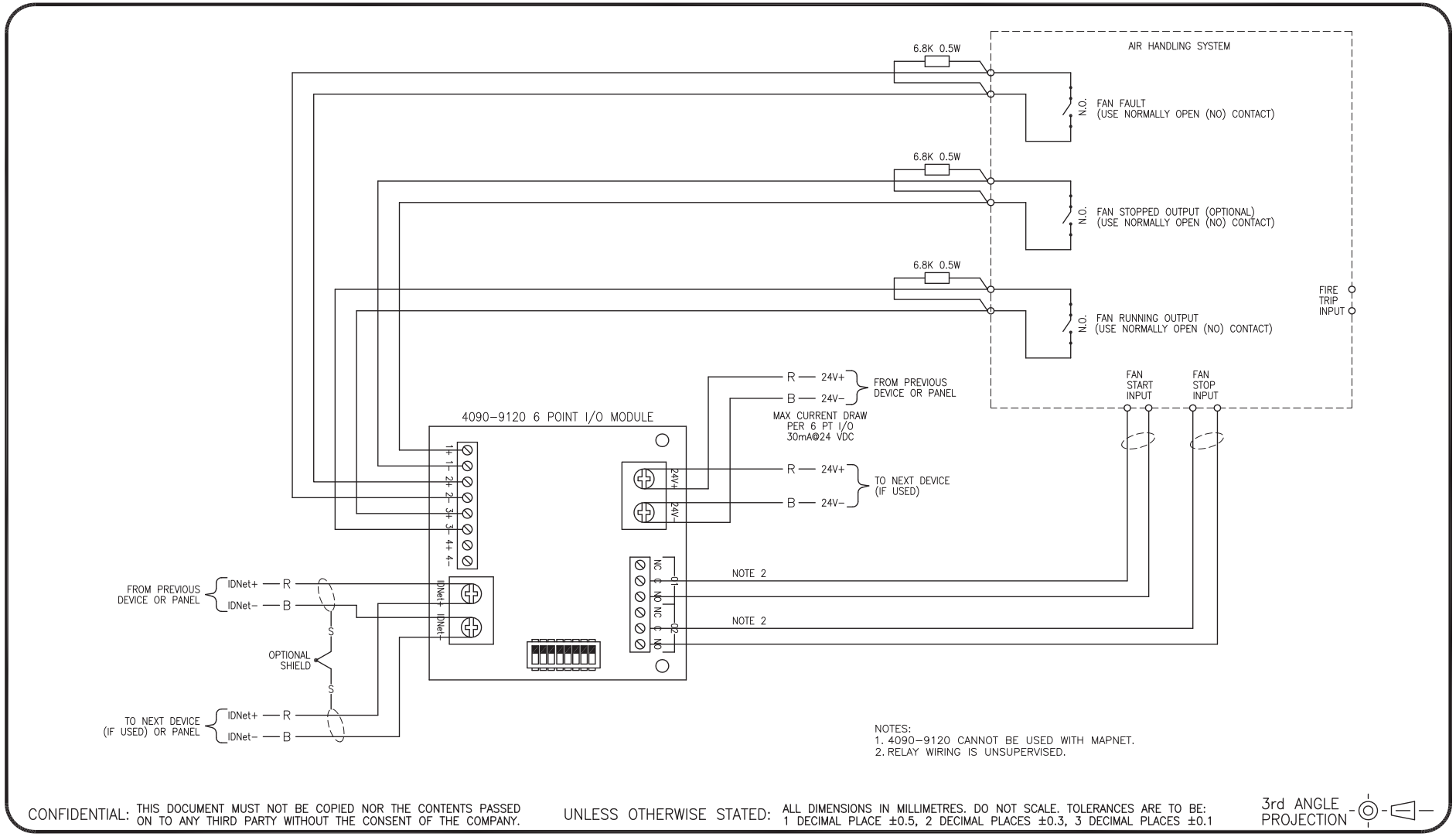
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4615	SS	RC	RC	DP	04-9-14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
C	NOTES UPDATED.	5222	KJS	RC	MH	DC	8-8-19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
FAN INTERFACE - LOOP POWERED WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 417 of N

A3 | ISS/REV C | PART No:



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	4615	KJS	RC	RC	DP	04-9-14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
C	TEXT UPDATED.	5222	KJS	RC	MH	DC	8-8-19

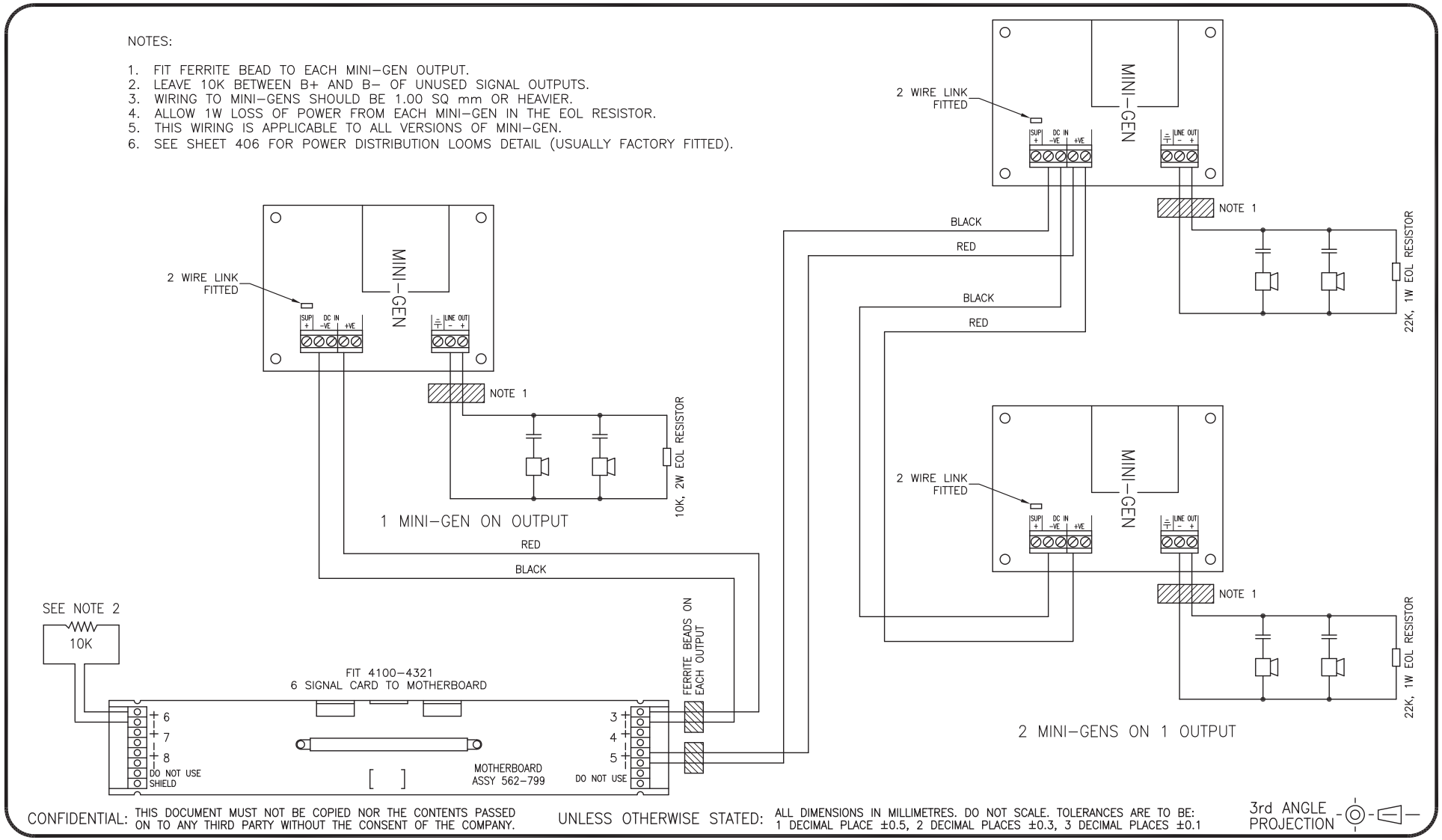
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
FAN INTERFACE - 24V POWERED
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 418 of N

A3 | ISS/REV C | PART No:

419: 6 Signal Card Connection to Mini-Gen Tone Generator



ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS	LSC	RC	DP	14-6-12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
SIGNAL CARD WIRING TO MINI-GEN TONE GEN
WIRING DIAGRAM

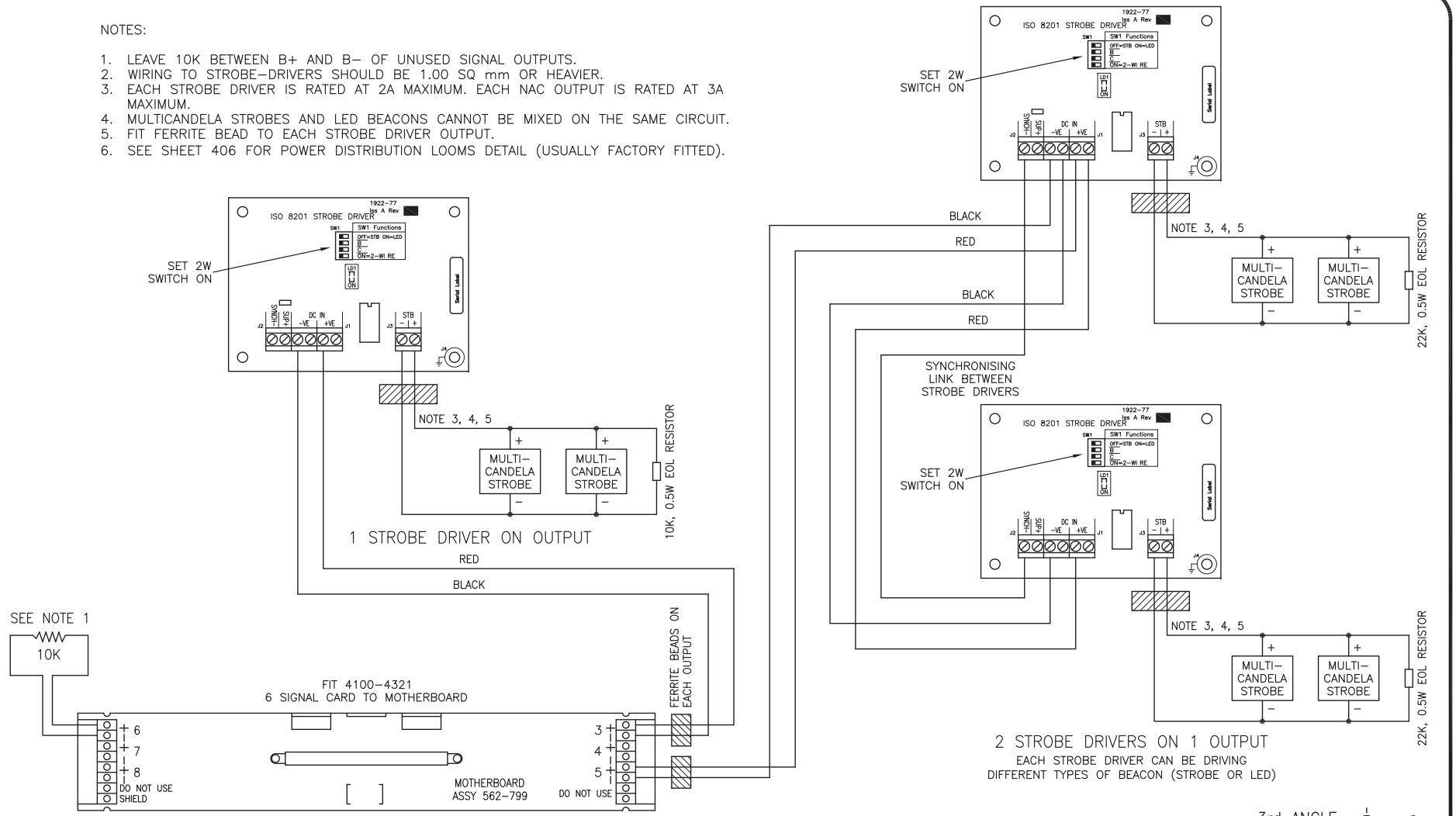
DRAWING No: 1976-181 SHEET 419 of N

A3 | ISS/REV B | PART No:

420: 6 Signal Card Connection to Strobe Driver

NOTES:

1. LEAVE 10K BETWEEN B+ AND B– OF UNUSED SIGNAL OUTPUTS.
2. WIRING TO STROBE–DRIVERS SHOULD BE 1.00 SQ mm OR HEAVIER.
3. EACH STROBE DRIVER IS RATED AT 2A MAXIMUM. EACH NAC OUTPUT IS RATED AT 3A MAXIMUM.
4. MULTICANDELA STROBES AND LED BEACONS CANNOT BE MIXED ON THE SAME CIRCUIT.
5. FIT FERRITE BEAD TO EACH STROBE DRIVER OUTPUT.
6. SEE SHEET 406 FOR POWER DISTRIBUTION LOOMS DETAIL (USUALLY FACTORY FITTED).



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	LSC	RC	DP	15–6–12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

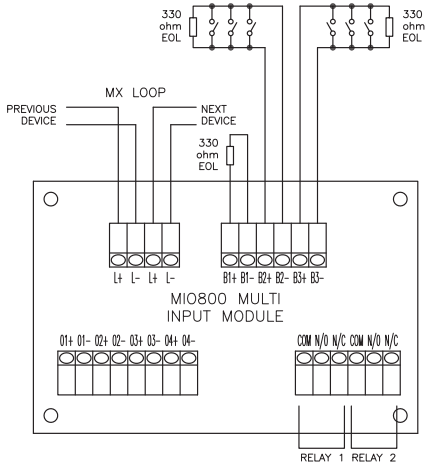
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

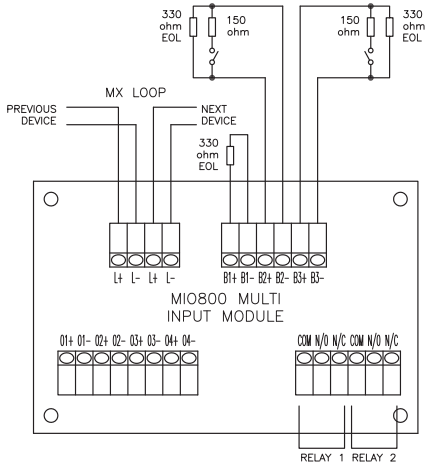
4100ESi
SIGNAL CARD WIRING TO STROBE DRIVER
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 420 of N

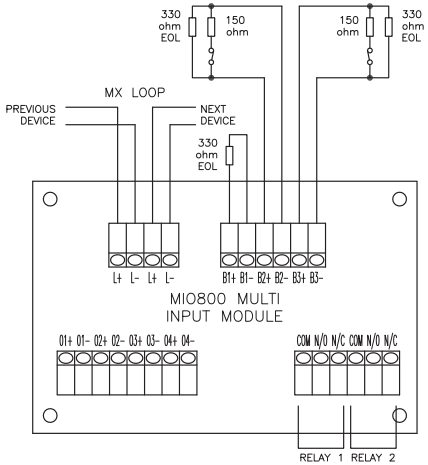
A3	ISS/REV B	PART No:



NORMALLY OPEN S/C = ALARM, O/C = FAULT
MODES: MBNO OR MBNOI



NORMALLY OPEN S/C = FAULT, O/C = FAULT
MODES: MCNO OR MCNOI



NORMALLY CLOSED O/C = FAULT, S/C = FAULT
MODES: MCNC

NOTES:
1. INPUT CONTACTS MUST BE VOLTAGE FREE.
2. CIRCUIT RESISTANCE: 40 OHM MAX.
3. RELAYS ARE SINGLE POLE, UNSUPERVISED, VOLTAGE FREE CHANGE–OVER. CONTACT RATING: 2A @ 24V DC (RESISTIVE).
4. INPUT 1 CAN BE WIRED AS PER INPUTS 2 OR 3 AS SHOWN.
5. DO NOT USE 01 TO 04 OUTPUT TERMINALS.
6. INPUT CIRCUITS MUST NOT BE JOINED TOGETHER OR TO ANY OTHER WIRING.
7. FOR VIO800 WIRING REFER TO SHEET 308.
8. MODES REFER TO CONFIGURATION IN ES PROGRAMMER.

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

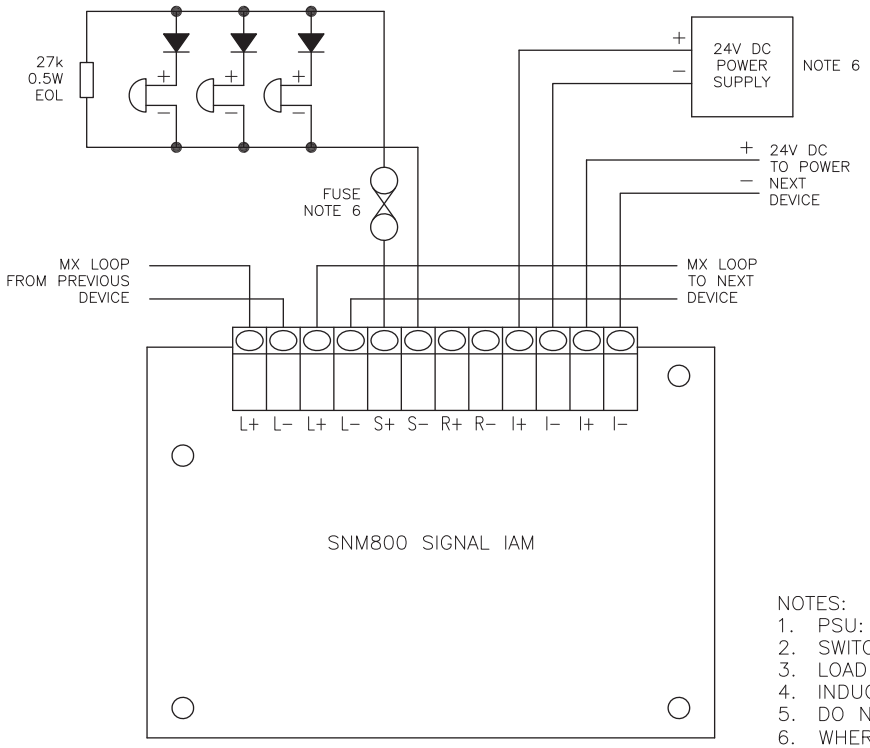
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–110.	4809	KJS	LSC	RC	DP	12–11–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16

tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
MIO800 MULTI I/O MODULE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 421 of N

A3 | ISS/REV B | PART No:



NOTES:
1. PSU: 20–30V DC.
2. SWITCHED OUTPUT: PSU VOLTAGE; 2A MAX. ELD: 27k.
3. LOAD DEVICES MUST HAVE SERIES DIODE AND BE VOLTAGE FREE.
4. INDUCTIVE LOADS MUST HAVE BACK–EMF DIODE OR SUPPRESSION.
5. DO NOT USE R+, R– TERMINAL.
6. WHERE A COMMON SUPPLY IS USED FOR MULTIPLE OUTPUTS (E.G. FLOOR/AREAS OF ALARM DEVICES) EACH OUTPUT NEEDS TO BE FUSED, WITH A RATING JUST GREATER THAN THE MAXIMUM LOAD CURRENT. FIT FUSE TO SNM800.

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

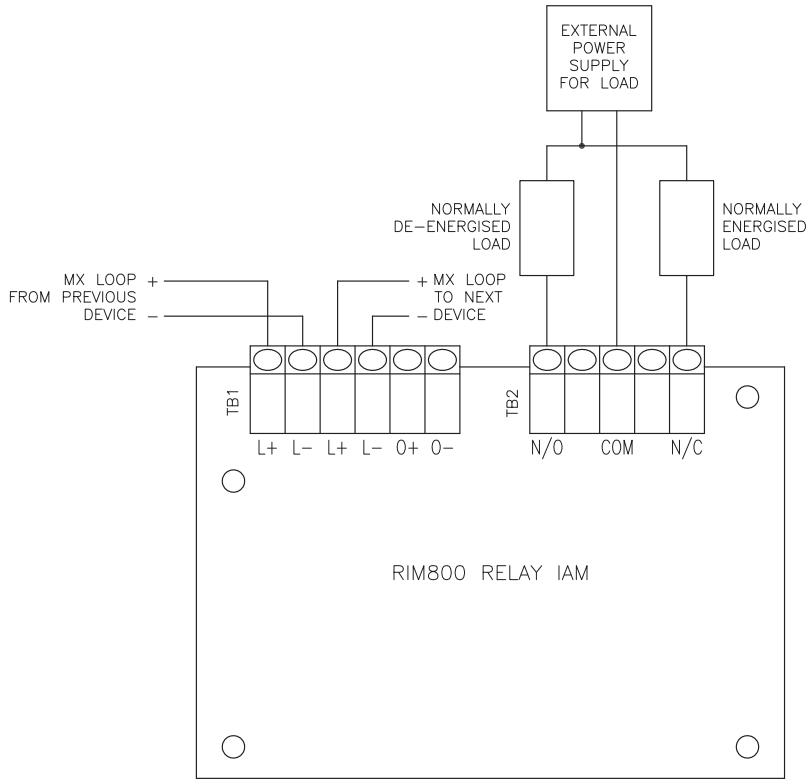
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–111.	4809	KJS	LSC	RC	DK	12–11–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16
C	NOTE 6 & FUSE ADDED.	5222	KJS	RC	MH	DC	16–10–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
SNM800 SIGNAL IAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 422 of N

A3 | ISS/REV C | PART No:



NOTES:
1. RELAY IS SINGLE POLE CHANGEOVER, UNSUPERVISED, VOLTAGE–FREE OUTPUT.
2. CONTACT RATING: 2A @ 30V DC (RESISTIVE).
3. LEAVE 0+ AND 0– TERMINALS UNCONNECTED

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

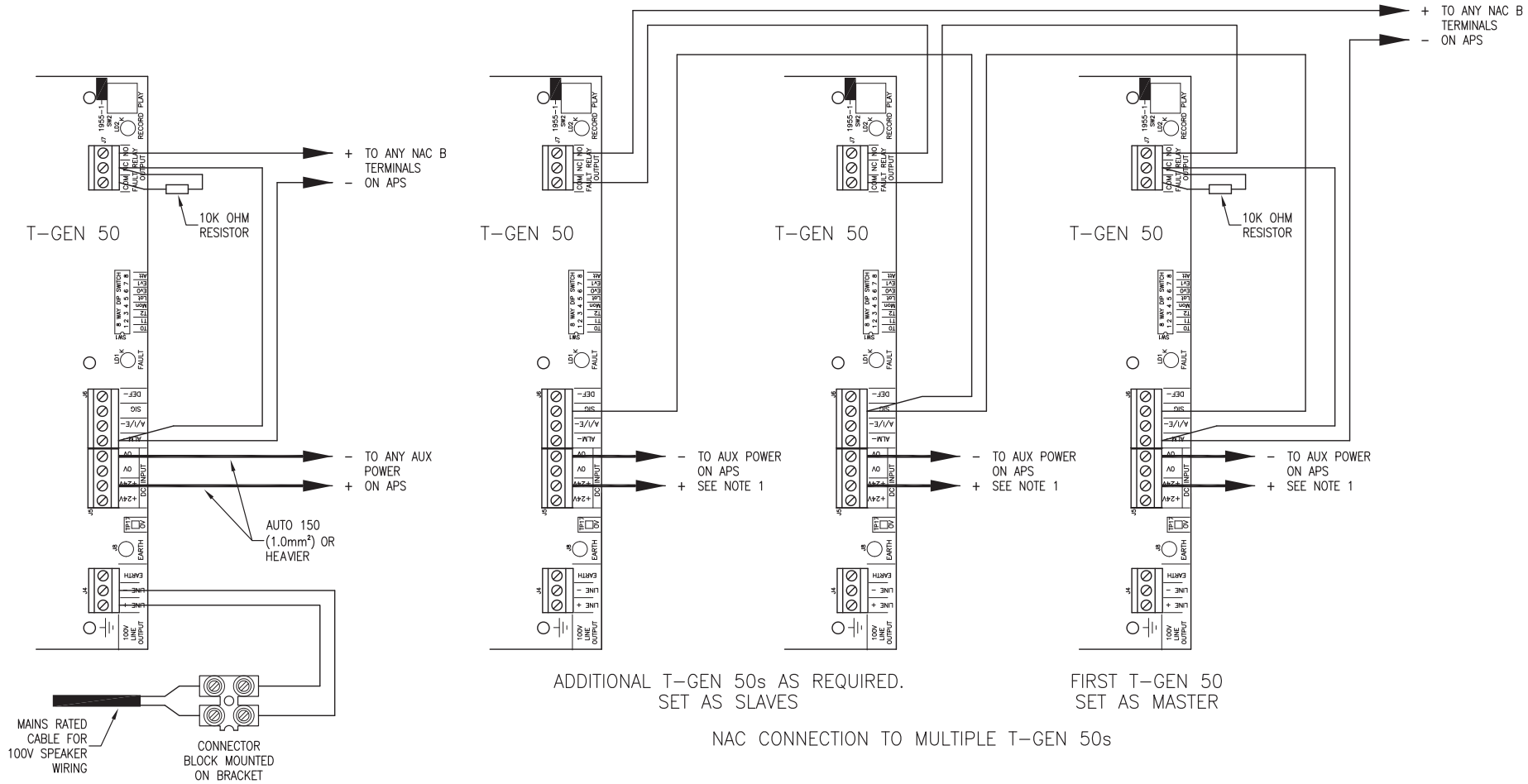
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM 1982–71–112.	4809	KJS	LSC	RC	DK	12–11–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
RIM800 MX RELAY IAM
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 423 of N

A3 | ISS/REV B | PART No:



NOTES:

1. EACH APS/LPS AUX POWER OUTPUT CAN POWER ONLY ONE T-GEN 50. USE A SEPARATE AUX POWER OUTPUT FOR EACH T-GEN 50. MULTIPLE POWER SUPPLIES CAN BE USED.

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	4809	KJS	LSC	RC	DK	16-11-15

tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
APS/LPS NAC CONNECTION TO T-GEN50
WIRING DIAGRAM

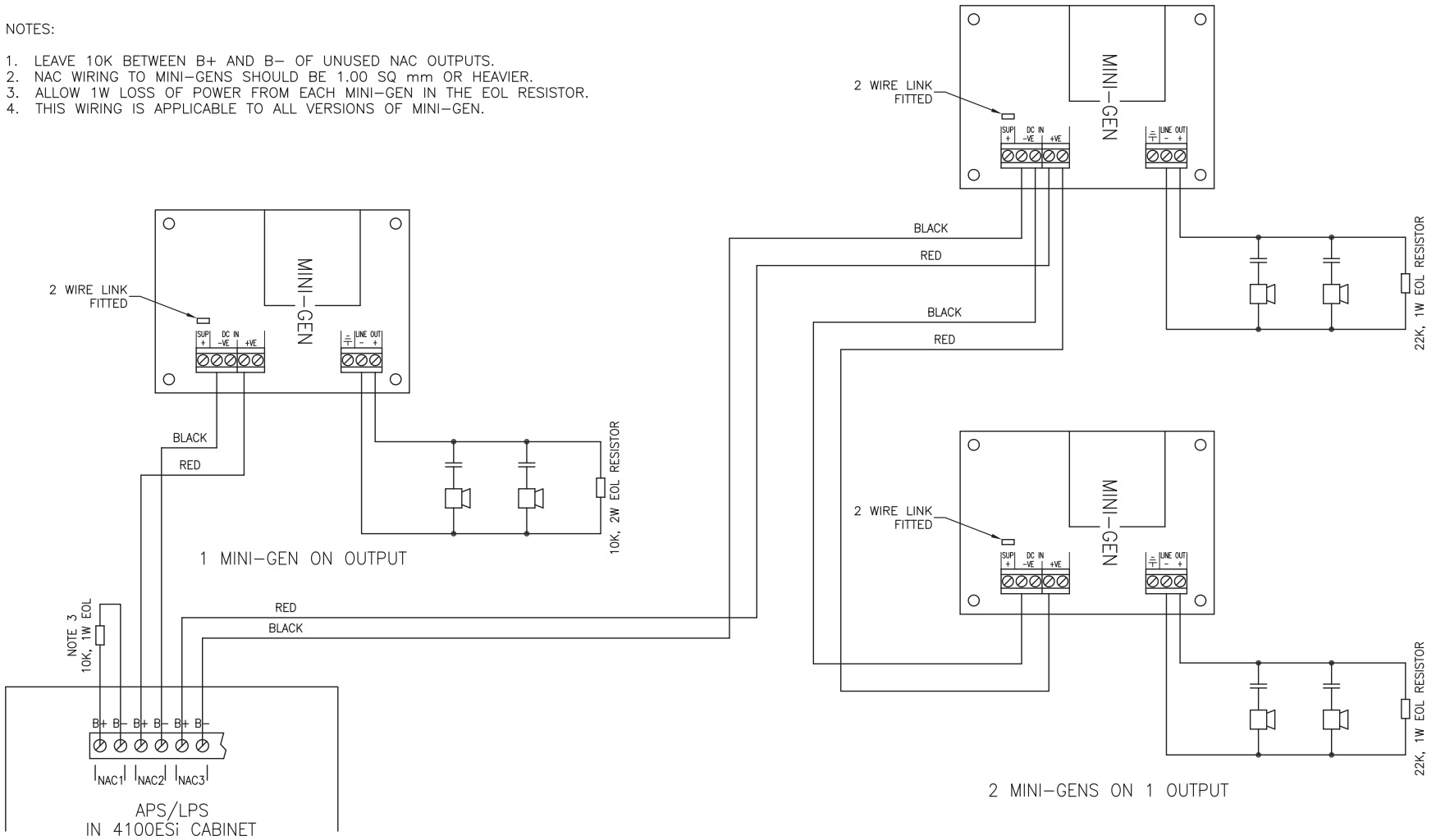
DRAWING No: 1976-181 SHEET 424 of N

A3 | ISS/REV A | PART No:

425: APS/LPS NAC Connection to Mini-Gen Generator

NOTES:

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



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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 FROM SHEET 409.	4809	KJS	LSC	RC	DK	16–11–15

tyco Fire Protection Products

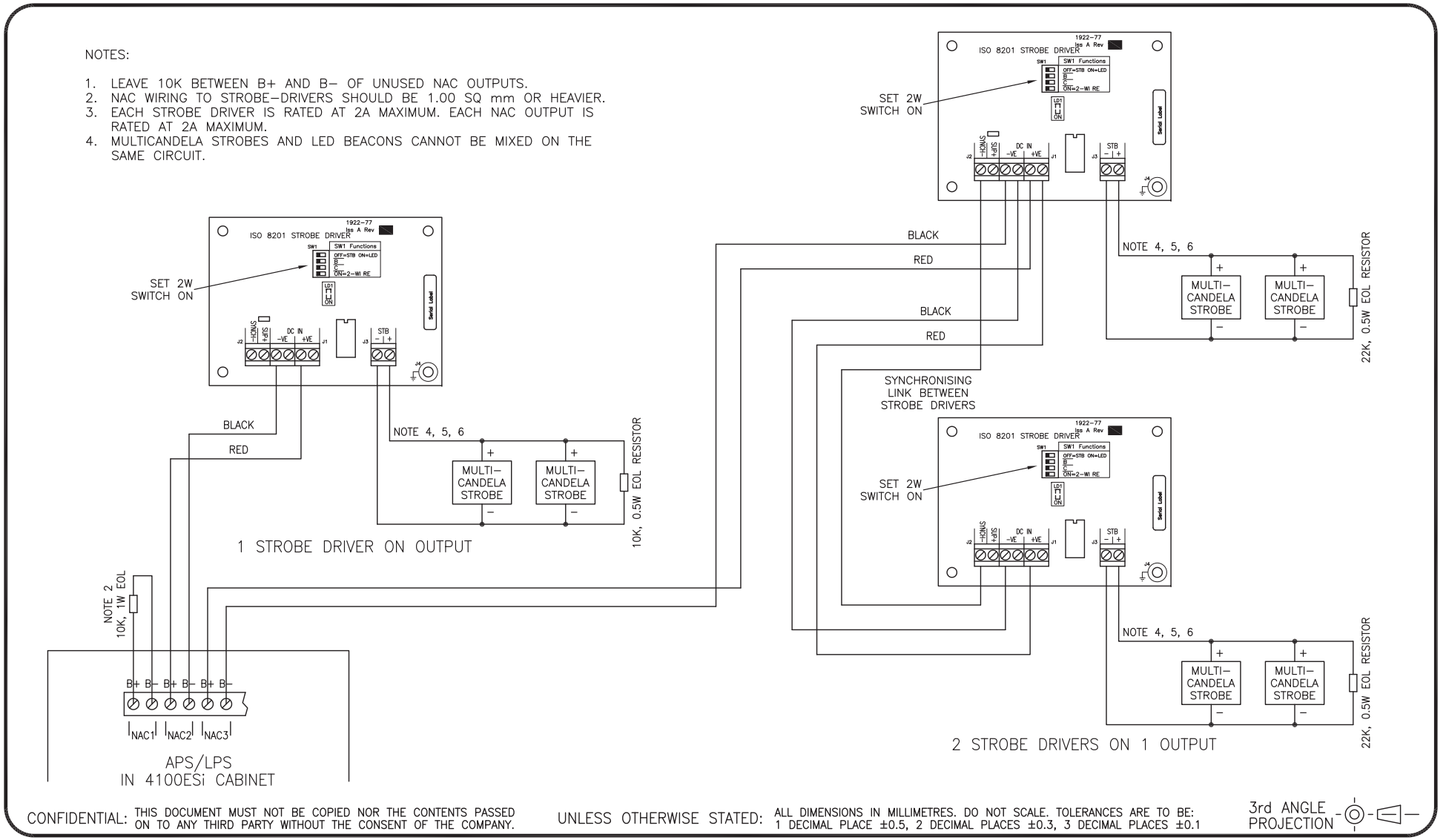
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ESi
APS/LPS NAC WIRING TO MINI-GEN TONE GENERATOR
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 425 of N

A3 | ISS/REV A | PART No:

426: APS/LPS NAC Connection to Strobe Driver:



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

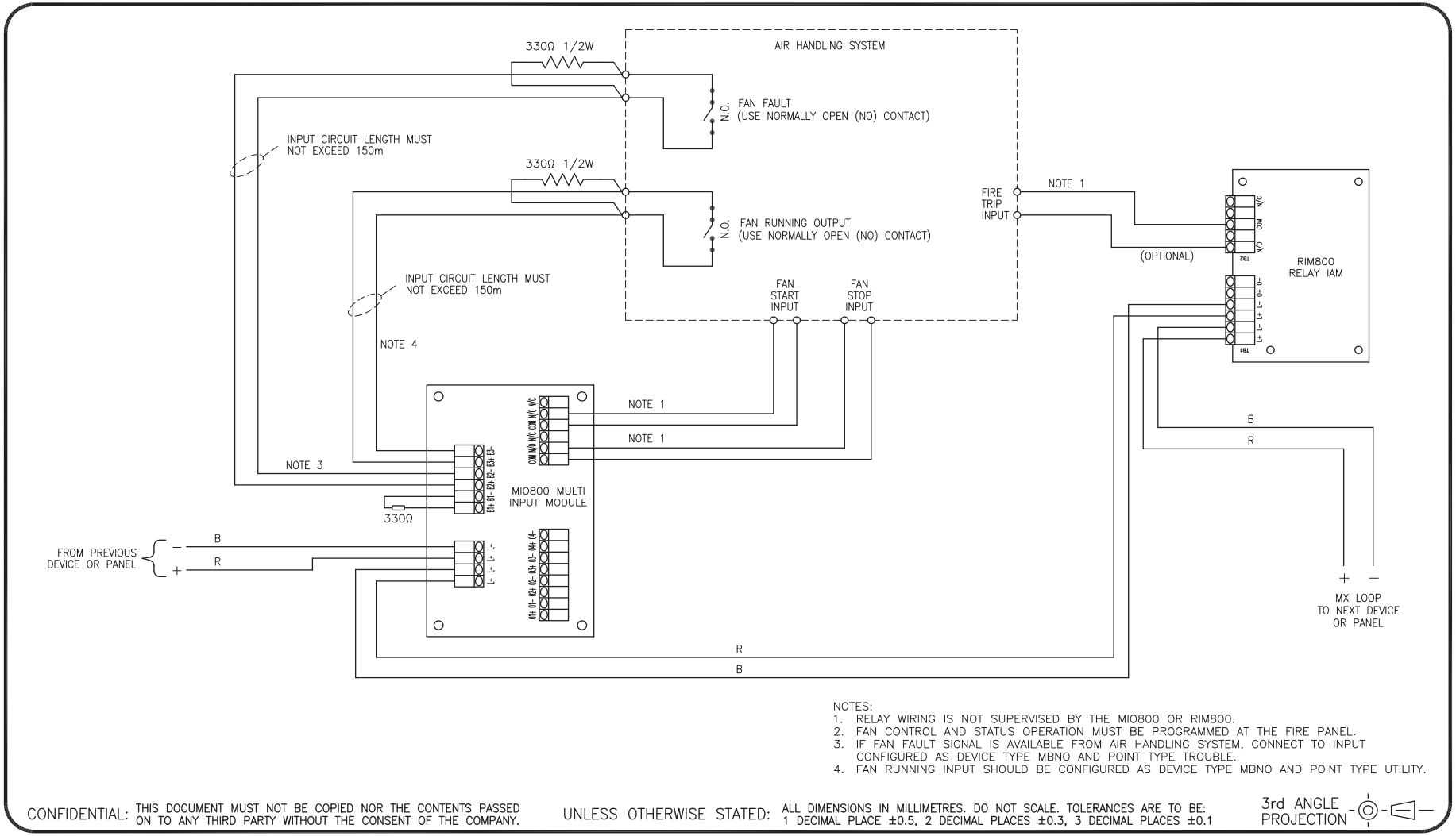
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL FROM SHEET 410.	4809	KJS	LSC	RC	DK	12−11−15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
APS / LPS NAC WIRING TO STROBE DRIVER
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 426 of N

A3 | ISS/REV A | PART No:



NOTES:
1. RELAY WIRING IS NOT SUPERVISED BY THE MIO800 OR RIM800.
2. FAN CONTROL AND STATUS OPERATION MUST BE PROGRAMMED AT THE FIRE PANEL.
3. IF FAN FAULT SIGNAL IS AVAILABLE FROM AIR HANDLING SYSTEM, CONNECT TO INPUT CONFIGURED AS DEVICE TYPE MBNO AND POINT TYPE TROUBLE.
4. FAN RUNNING INPUT SHOULD BE CONFIGURED AS DEVICE TYPE MBNO AND POINT TYPE UTILITY.

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

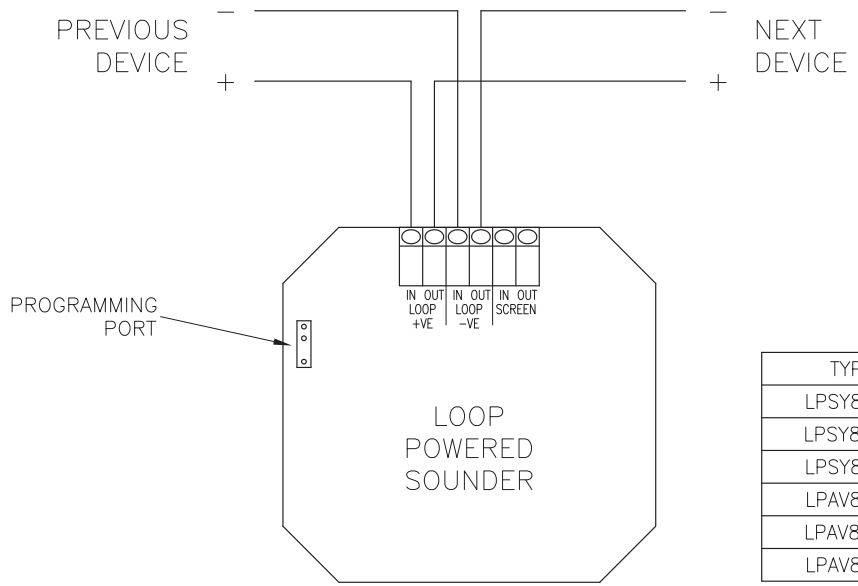
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL, FROM SHEET 417.	4809	KJS	LSC	RC	DK	23–12–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16
C	NOTES UPDATED, NOTE 4 ADDED.	4977	KJS	LSC	RC	DP	2–11–16
D	NOTES 3 & 4 UPDATED, TEXT UPDATED.	5222	KJS	RC	MH	DC	8–8–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
FAN INTERFACE - MX LOOP POWERED
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 427 of N

A3 | ISS/REV D | PART No:



REAR INTERNAL VIEW OF SOUNDER/BEACON

TYPE	DESCRIPTION
LPSY800R	LOOP POWERED SOUNDER, INDOOR, RED
LPSY800W	LOOP POWERED SOUNDER, INDOOR, WHITE
LPSY865R	LOOP POWERED SOUNDER, OUTDOOR, RED
LPAV800R	LOOP POWERED SOUNDER/BEACON, INDOOR, RED
LPAV800W	LOOP POWERED SOUNDER/BEACON, INDOOR, WHITE
LPAV865R	LOOP POWERED SOUNDER/BEACON, OUTDOOR, RED

NOTES:
1. ALL UNITS INCLUDE LOOP SHORT CIRCUIT ISOLATOR.
2. MX LOOP ADDRESS, SOUNDER LEVEL, TONE AND FLASH RATE FOR BEACONS ARE PROGRAMMED USING 850EMT AND PROGRAMMING PORT INSIDE BASE.
3. TO OPEN UNIT, INSERT TWO–PINNED TOOL INTO 2 SMALL HOLES IN SIDE OF BASE AND CAREFULLY PUSH, WHILE OPENING UNIT.

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	4809	KJS	LSC	RC	DP	24–2–16
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16

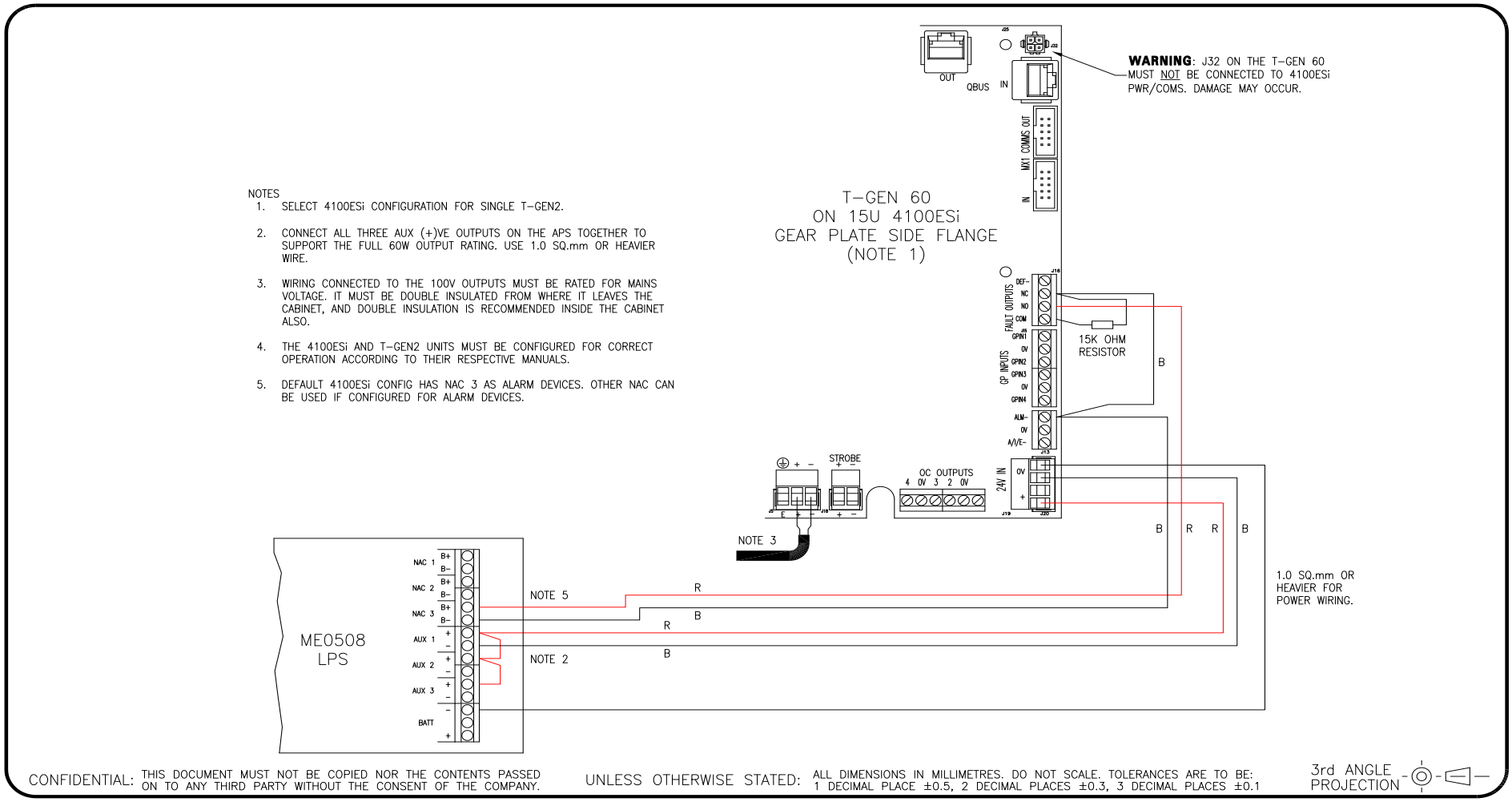
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
LPSX800X LOOP POWERED SOUNDERS WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 428 of N

A3 | ISS/REV B | PART No:



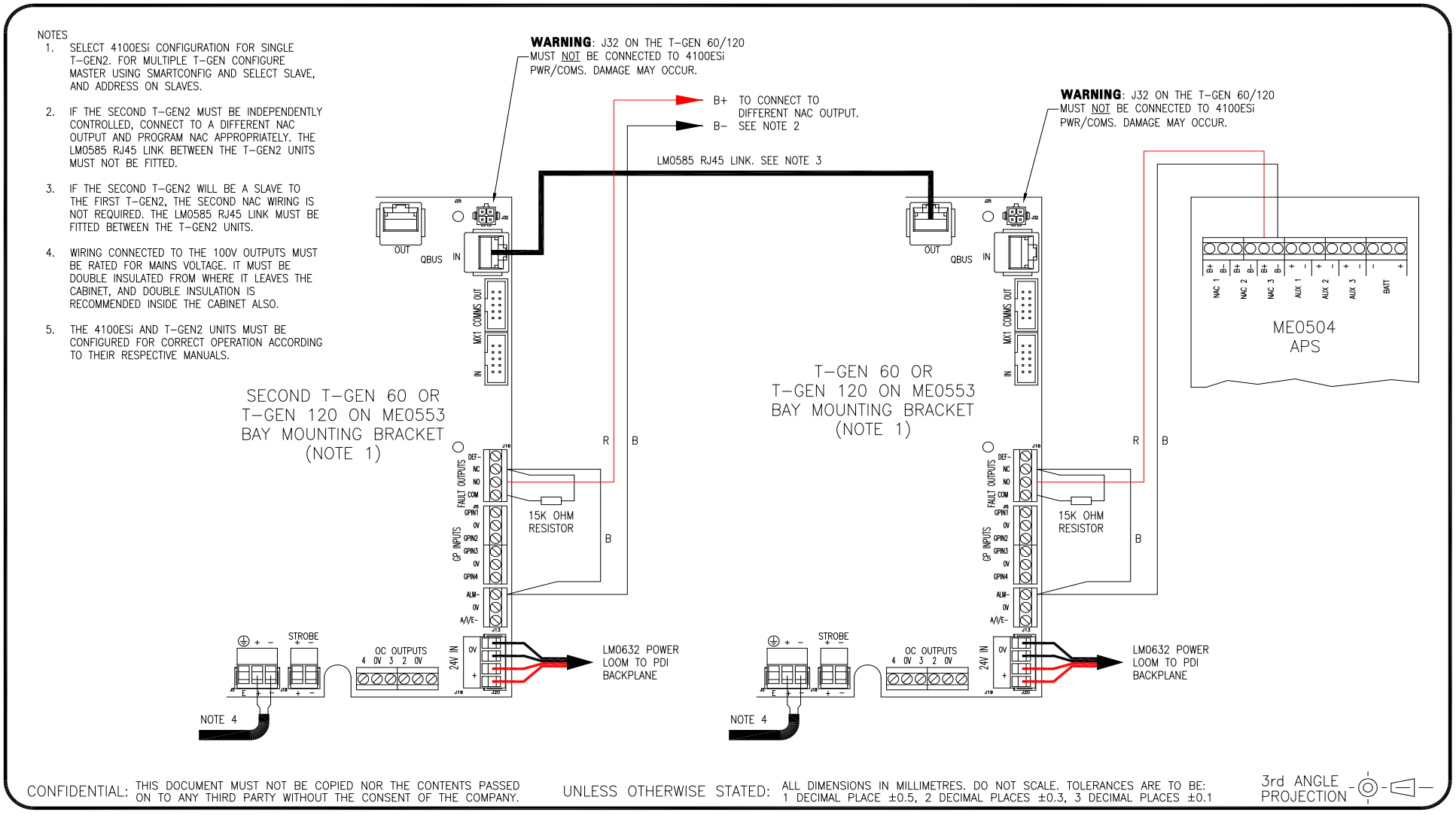
SS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5053	KJS	LSC	RC	DC	9-8-17
B	UPDATED FOR T-GEN2 GRADE 2.	5142	KJS	PV	RC	DC	15-10-18

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
T-GEN 60 IN 15U PANEL
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 429 of N

A3 | ISS/REV B | PART No:



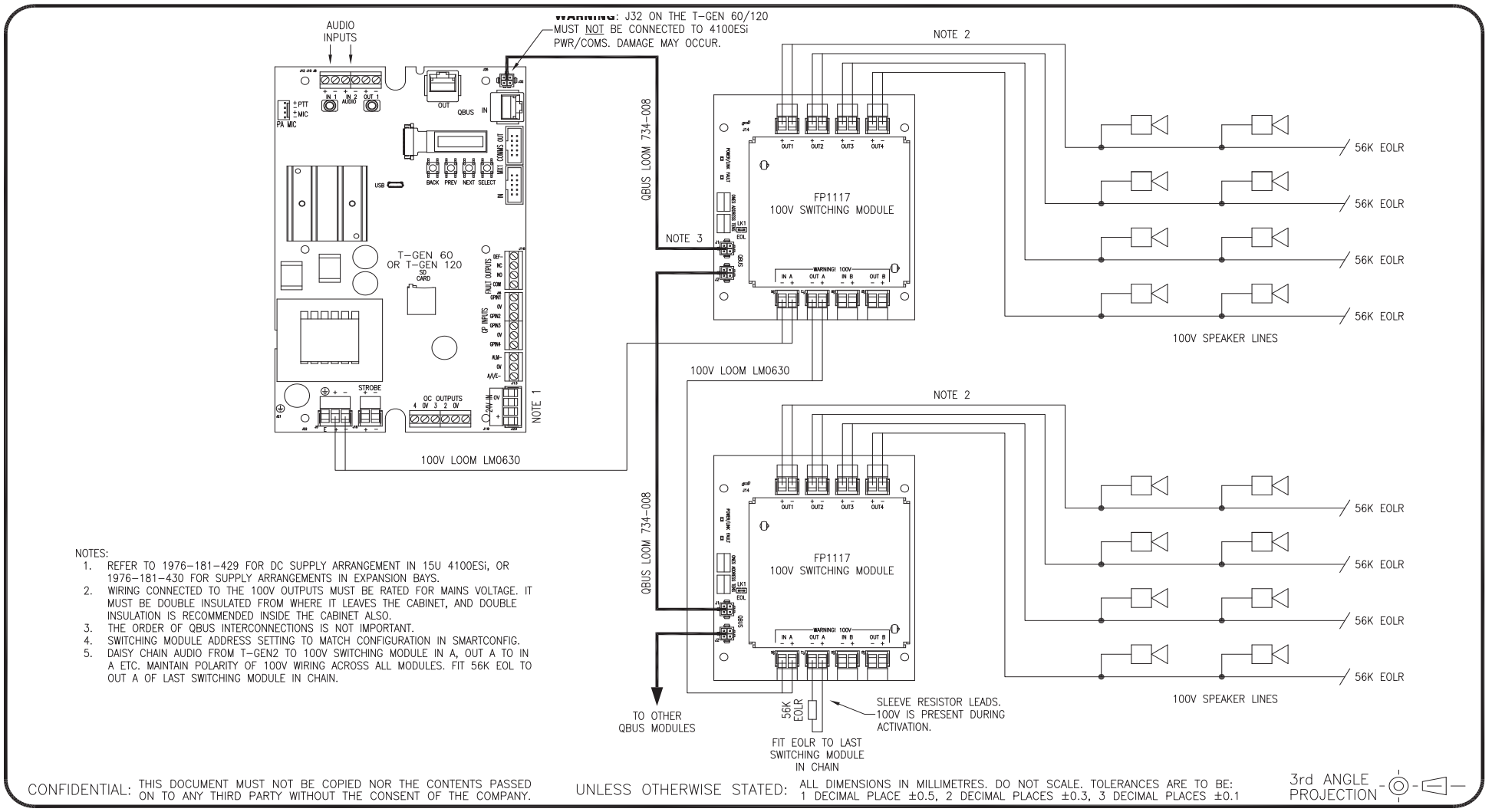
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5053	KJS	LSC	RC	DC	9-8-17
B	UPDATED FOR T-GEN2 GRADE 2.	5142	KJS	PV	RC	DC	15-10-18

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
T-GEN 60/120 IN APS BAY
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 430 of N

A3 | ISS/REV B | PART No:



NOTES:
1. REFER TO 1976-181-429 FOR DC SUPPLY ARRANGEMENT IN 15U 4100ESi, OR 1976-181-430 FOR SUPPLY ARRANGEMENTS IN EXPANSION BAYS.
2. WIRING CONNECTED TO THE 100V OUTPUTS MUST BE RATED FOR MAINS VOLTAGE. IT MUST BE DOUBLE INSULATED FROM WHERE IT LEAVES THE CABINET, AND DOUBLE INSULATION IS RECOMMENDED INSIDE THE CABINET ALSO.
3. THE ORDER OF QBUS INTERCONNECTIONS IS NOT IMPORTANT.
4. SWITCHING MODULE ADDRESS SETTING TO MATCH CONFIGURATION IN SMARTCONFIG.
5. DAISY CHAIN AUDIO FROM T-GEN2 TO 100V SWITCHING MODULE IN A, OUT A TO IN A ETC. MAINTAIN POLARITY OF 100V WIRING ACROSS ALL MODULES. FIT 56K EOL TO OUT A OF LAST SWITCHING MODULE IN CHAIN.

CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

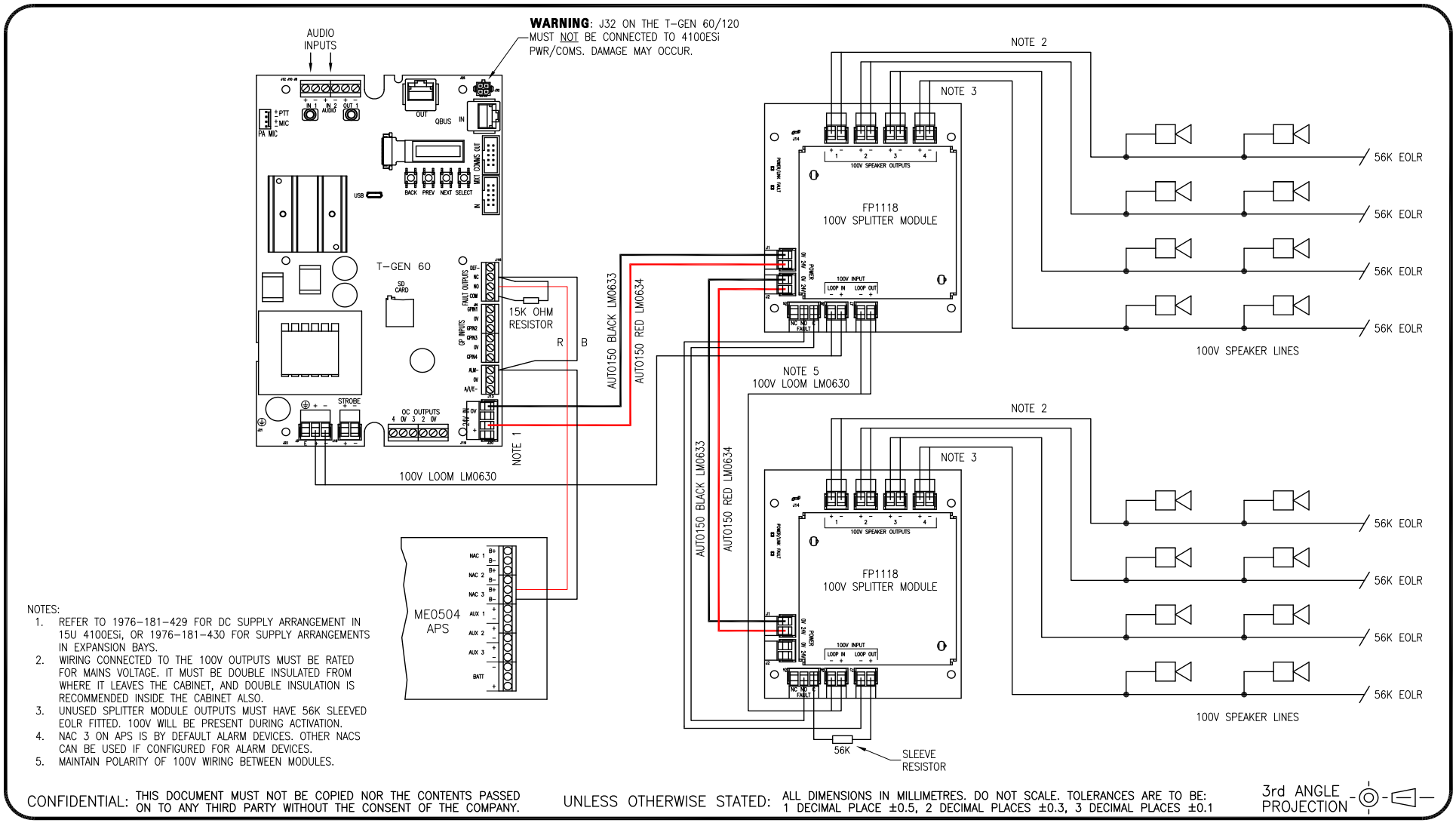
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5053	KJS	LSC	RC	DC	3-11-17
B	UPDATED FOR T-GEN2 GRADE 2.	5142	KJS	PV	RC	DC	15-10-18

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi SINGLE 100V SWITCHING MODULE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 431 of N

A3 | ISS/REV B | PART No:



NOTES:
1. REFER TO 1976-181-429 FOR DC SUPPLY ARRANGEMENT IN 15U 4100ESi, OR 1976-181-430 FOR SUPPLY ARRANGEMENTS IN EXPANSION BAYS.
2. WIRING CONNECTED TO THE 100V OUTPUTS MUST BE RATED FOR MAINS VOLTAGE. IT MUST BE DOUBLE INSULATED FROM WHERE IT LEAVES THE CABINET, AND DOUBLE INSULATION IS RECOMMENDED INSIDE THE CABINET ALSO.
3. UNUSED SPLITTER MODULE OUTPUTS MUST HAVE 56K SLEEVED EOLR FITTED. 100V WILL BE PRESENT DURING ACTIVATION.
4. NAC 3 ON APS IS BY DEFAULT ALARM DEVICES. OTHER NACS CAN BE USED IF CONFIGURED FOR ALARM DEVICES.
5. MAINTAIN POLARITY OF 100V WIRING BETWEEN MODULES.

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

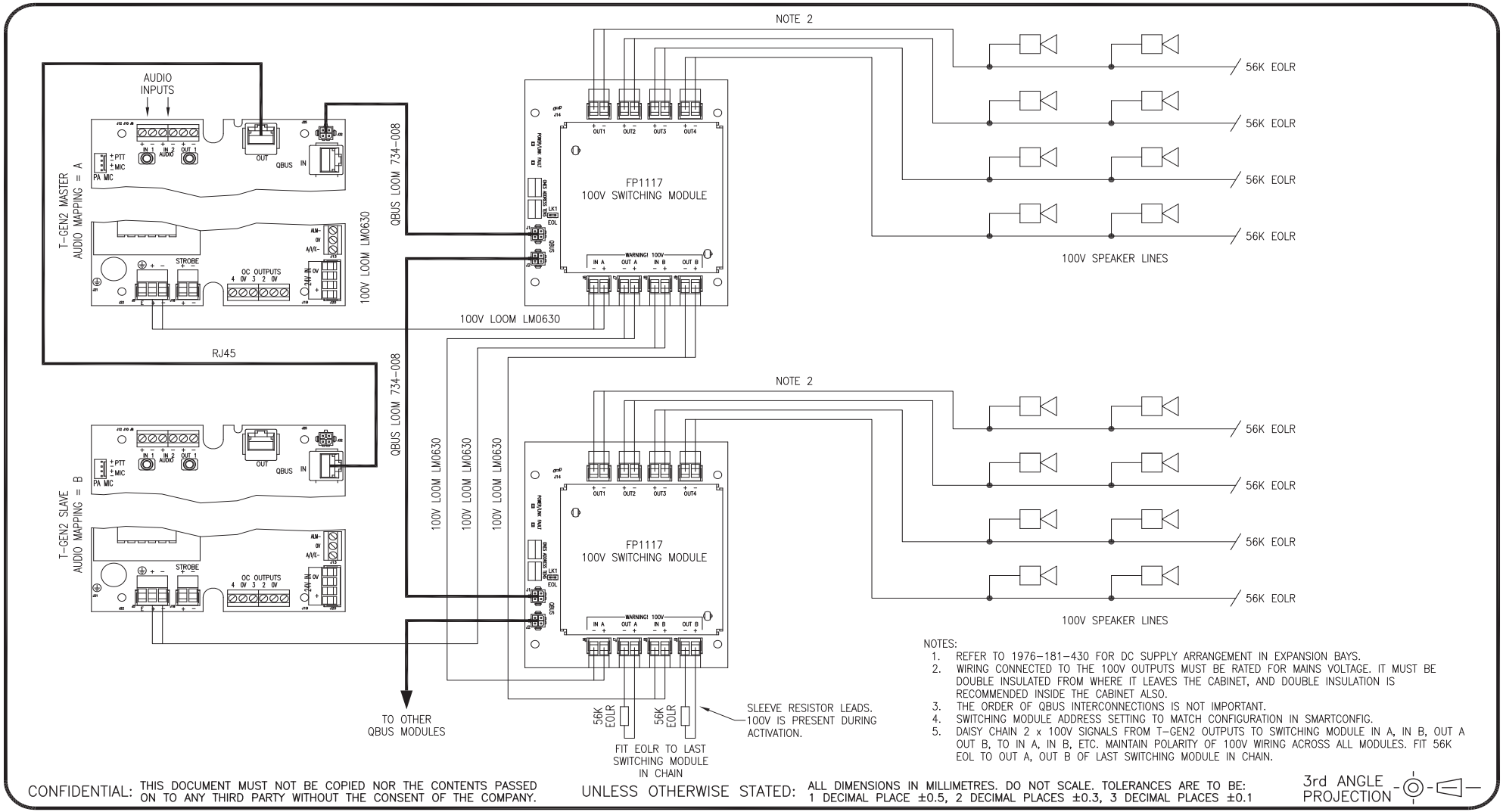
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5053	KJS	LSC	RC	DC	3-11-17
B	ME0504 CONNECTION UPDATED, NOTE 4 ADDED.	5155	KJS	RC	RC	DC	9-7-18
C	UPDATED FOR T-GEN2 GRADE 2.	5142	KJS	PV	RC	DC	15-10-18
D	CONTENTS UPDATED TO MATCH DRG 1982-71-135.	5222	KJS	RC	MH	DC	15-10-19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, NEW ZEALAND.
PH: +64 3 3895096
FAX:+64 3 3895938

4100ESi 100V SPLITTER MODULE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 432 of N

A3 | ISS/REV D | PART No:



NOTES:
1. REFER TO 1976-181-430 FOR DC SUPPLY ARRANGEMENT IN EXPANSION BAYS.
2. WIRING CONNECTED TO THE 100V OUTPUTS MUST BE RATED FOR MAINS VOLTAGE. IT MUST BE DOUBLE INSULATED FROM WHERE IT LEAVES THE CABINET, AND DOUBLE INSULATION IS RECOMMENDED INSIDE THE CABINET ALSO.
3. THE ORDER OF QBUS INTERCONNECTIONS IS NOT IMPORTANT.
4. SWITCHING MODULE ADDRESS SETTING TO MATCH CONFIGURATION IN SMARTCONFIG.
5. DAISY CHAIN 2 x 100V SIGNALS FROM T-GEN2 OUTPUTS TO SWITCHING MODULE IN A, IN B, OUT A OUT B, TO IN A, IN B, ETC. MAINTAIN POLARITY OF 100V WIRING ACROSS ALL MODULES. FIT 56K EOL TO OUT A, OUT B OF LAST SWITCHING MODULE IN CHAIN.

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	5142	KJS	PV	RC	DC	15-10-18

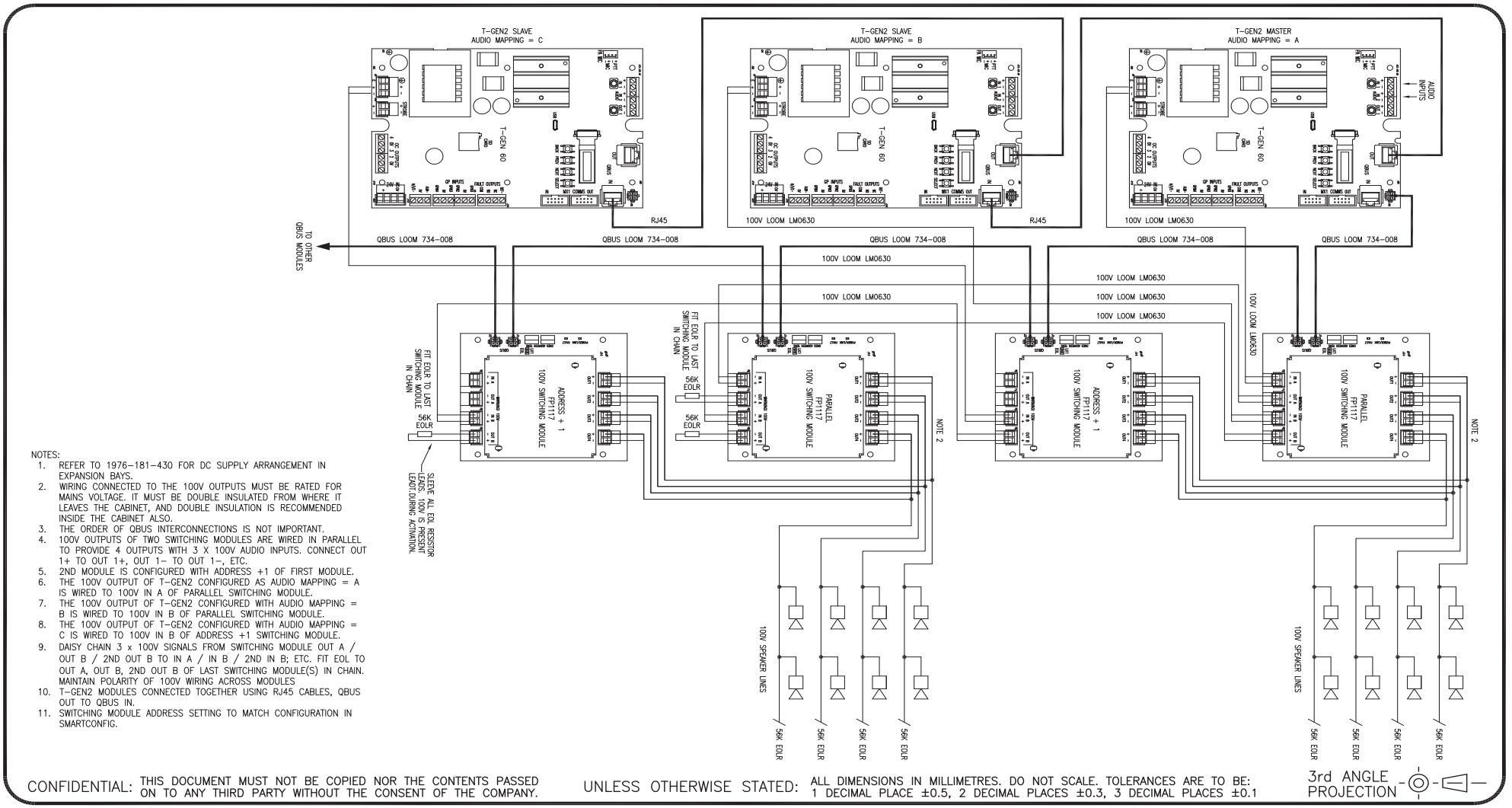
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
DUAL 100V SWITCHING MODULE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 433 of N

A3 | ISS/REV A | PART No:

434: Triple 100V Switching Module



NOTES:

1. REFER TO 1976-181-430 FOR DC SUPPLY ARRANGEMENT IN EXPANSION BAYS.
2. WIRING CONNECTED TO THE 100V OUTPUTS MUST BE RATED FOR MAINS VOLTAGE. IT MUST BE DOUBLE INSULATED FROM WHERE IT LEAVES THE CABINET, AND DOUBLE INSULATION IS RECOMMENDED INSIDE THE CABINET ALSO.
3. THE ORDER OF QBUS INTERCONNECTIONS IS NOT IMPORTANT.
4. 100V OUTPUTS OF TWO SWITCHING MODULES ARE WIRED IN PARALLEL TO PROVIDE 4 OUTPUTS WITH 3 X 100V AUDIO INPUTS. CONNECT OUT 1+ TO OUT 1+, OUT 1- TO OUT 1-, ETC.
5. 2ND MODULE IS CONFIGURED WITH ADDRESS +1 OF FIRST MODULE.
6. THE 100V OUTPUT OF T-GEN2 CONFIGURED AS AUDIO MAPPING = A IS WIRED TO 100V IN A OF PARALLEL SWITCHING MODULE.
7. THE 100V OUTPUT OF T-GEN2 CONFIGURED WITH AUDIO MAPPING = B IS WIRED TO 100V IN B OF PARALLEL SWITCHING MODULE.
8. THE 100V OUTPUT OF T-GEN2 CONFIGURED WITH AUDIO MAPPING = C IS WIRED TO 100V IN B OF ADDRESS +1 SWITCHING MODULE.
9. DAISY CHAIN 3 x 100V SIGNALS FROM SWITCHING MODULE OUT A / OUT B / 2ND OUT B TO IN A / IN B / 2ND IN B; ETC. FIT EOL TO OUT A, OUT B, 2ND OUT B OF LAST SWITCHING MODULE(S) IN CHAIN. MAINTAIN POLARITY OF 100V WIRING ACROSS MODULES
10. T-GEN2 MODULES CONNECTED TOGETHER USING RJ45 CABLES, QBUS OUT TO QBUS IN.
11. SWITCHING MODULE ADDRESS SETTING TO MATCH CONFIGURATION IN SMARTCONFIG.

CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

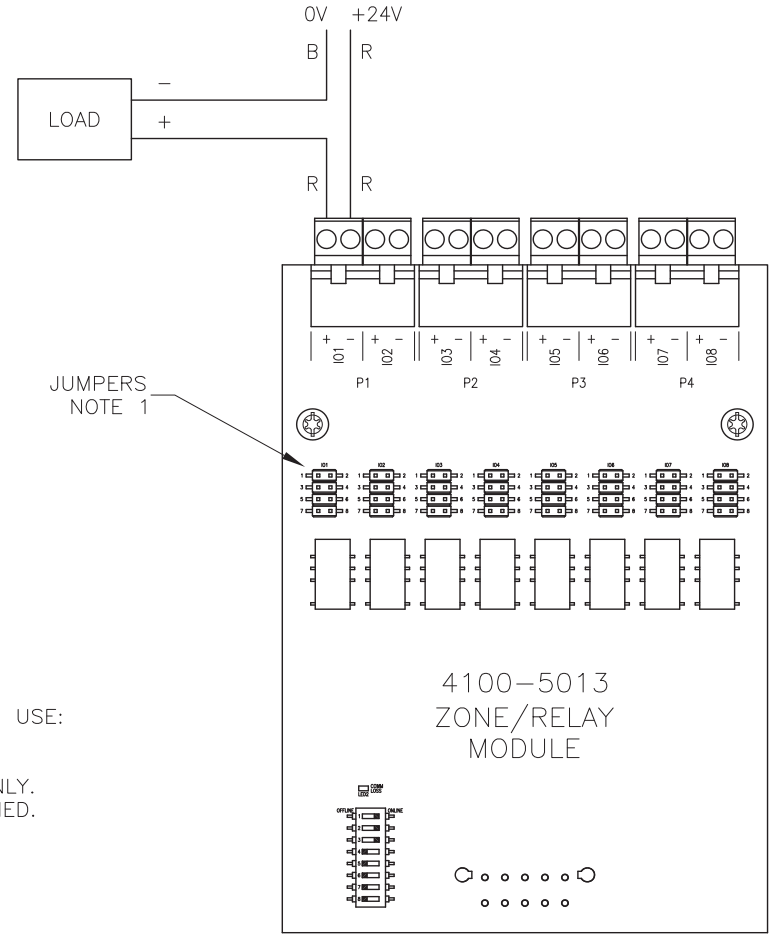
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	5142	KJS	PV	RC	DC	15-10-18

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ESi
TRIPLE 100V SWITCHING MODULE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 434 of N

A3 | ISS/REV A | PART No:



NOTES:

1. SET JUMPERS ON EACH IOX TO MATCH USE:
   NO RELAY – LINK 3–5
   NC RELAY – LINK 1–3
   SPARE JUMPERS FIT TO ONE PIN ONLY.
2. RELAY OPERATION MUST BE PROGRAMMED.
3. FIELD WIRING IS UNSUPERVISED.
4. RELAY RATINGS – 2A @ 30Vdc.

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	5222	KJS	RC	MH	DC	8–8–19

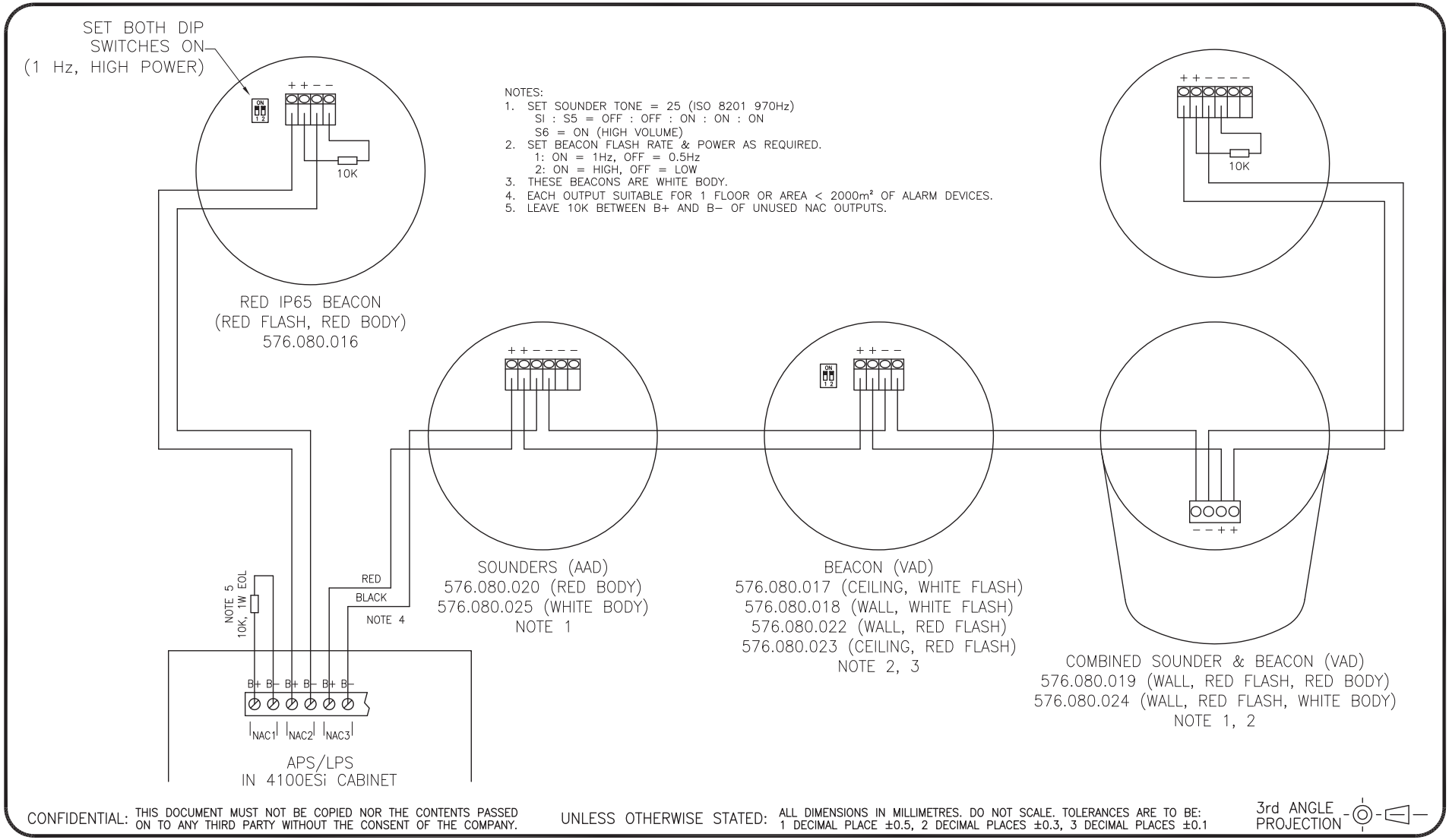
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
8 ZONE / RELAY - RELAY OUTPUTS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 435 of N

A3 | ISS/REV A | PART No:

436: APS/LPS NAC to Conventional Sounders/Beacons



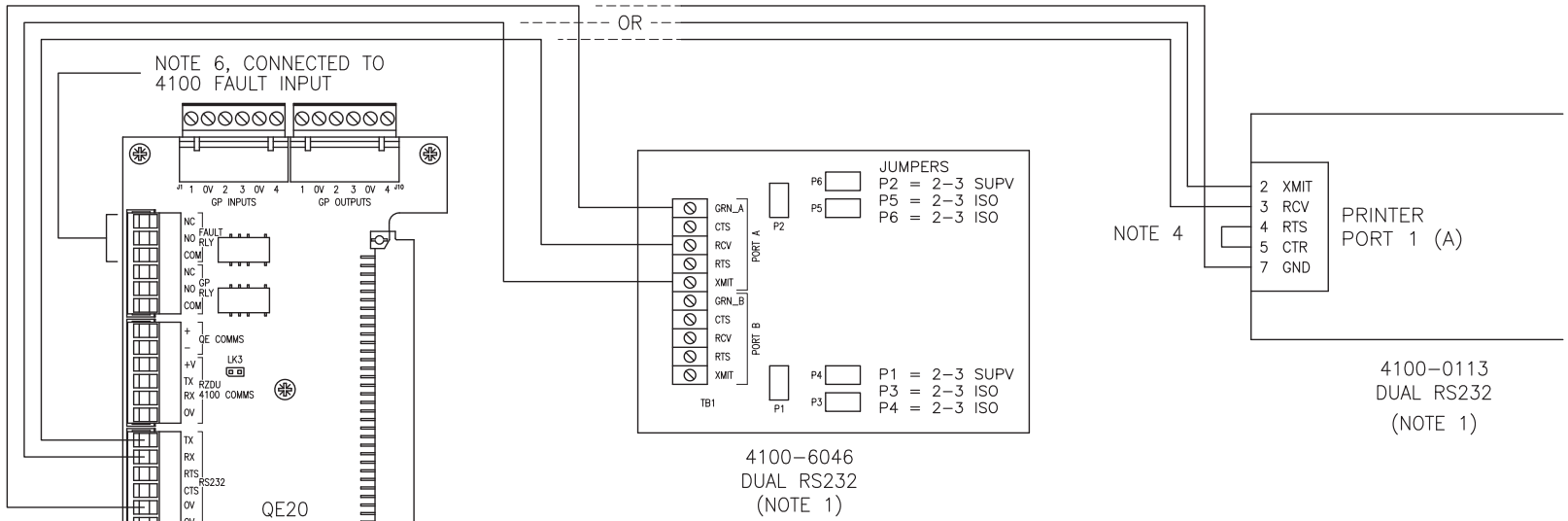
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL.	5222	KJS	RC	MH	DC	16–10–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
APS / LPS NAC WIRING TO SOUNDER / BEACONS WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 436 of N

A3 | ISS/REV A | PART No:



NOTES:

1. MUST ELECTRICALLY ISOLATE 4100 DUAL RS232 MODULE FROM EARTH. REFER TO LT0696 CONTROLLER INSTALL INSTRUCTIONS.
2. FIRE PANEL AND QE20 MUST BE COMBO OR ADJACENT PANELS.
3. ON 4100–6046 DUAL RS232 MODULE FIT LINKS: PORT A – P2 = 2–3 "SUPV", P5, P6 = 2–3 "ISO"; PORT B – P1 = 2–3 "SUPV", P3, P4 = 2–3 "ISO";
4. FOR 4100–0113 WIRE TO EITHER A DB–25 PLUG (PIN NUMBERS SHOWN) OR TO SCREW TERMINALS ON THE MOTHERBOARD USING PORT CONFIGURED IN 4100ESi PANEL.
5. ON 4100 CONFIGURE RS232 PORT AS FOLLOWS: PORT TYPE = RS232, COMMUNICATIONS SETTINGS TO 9600, EVEN PARITY, 8 DATA BITS, 1 STOP BIT.
   ON PORT DATA WINDOW, GEN INFO TAB, SET DEVICE TYPE AS COMPUTER AND PORT ID AS QE20.
   ON PORT OPTIONS TAB SET ALL OPTIONS OFF EXCEPT PROTOCOL, STATUS, BPREFIX, SUPV, POLL, ATTRIB, LF.
   IN PORT VECTORING WINDOW SELECT QE20 PORT, DISABLE ALL EVENT REPORTING EXCEPT PSEUDO EVENTS.
6. WIRE QE20 FAULT RELAY TO SUITABLE INPUT ON 4100 TO CAUSE FAULT.

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.	5378	KJS	RC	MH	DC	1–12–20

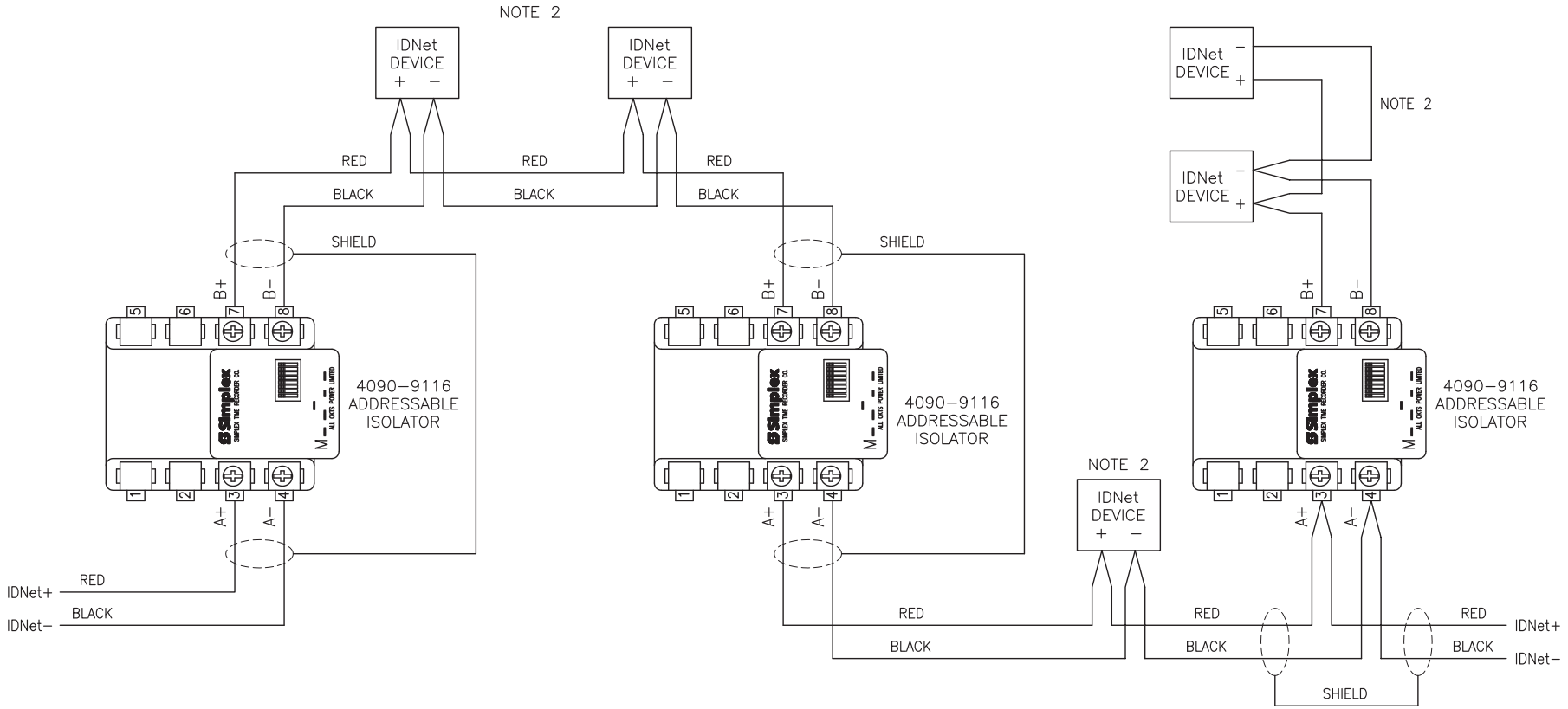
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ESi
HLI INTERFACE TO QE20
FIELD WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 437 of N

A3 | ISS/REV A | PART No:

Isolators



NOTES:
1. ISOLATORS ARE SYMMETRICAL A–B, BUT OBSERVE POLARITY.
2. DEVICES BETWEEN ISOLATORS OR ON A WIRING SPUR MUST BE RESTRICTED TO A SINGLE ZONE. 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
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

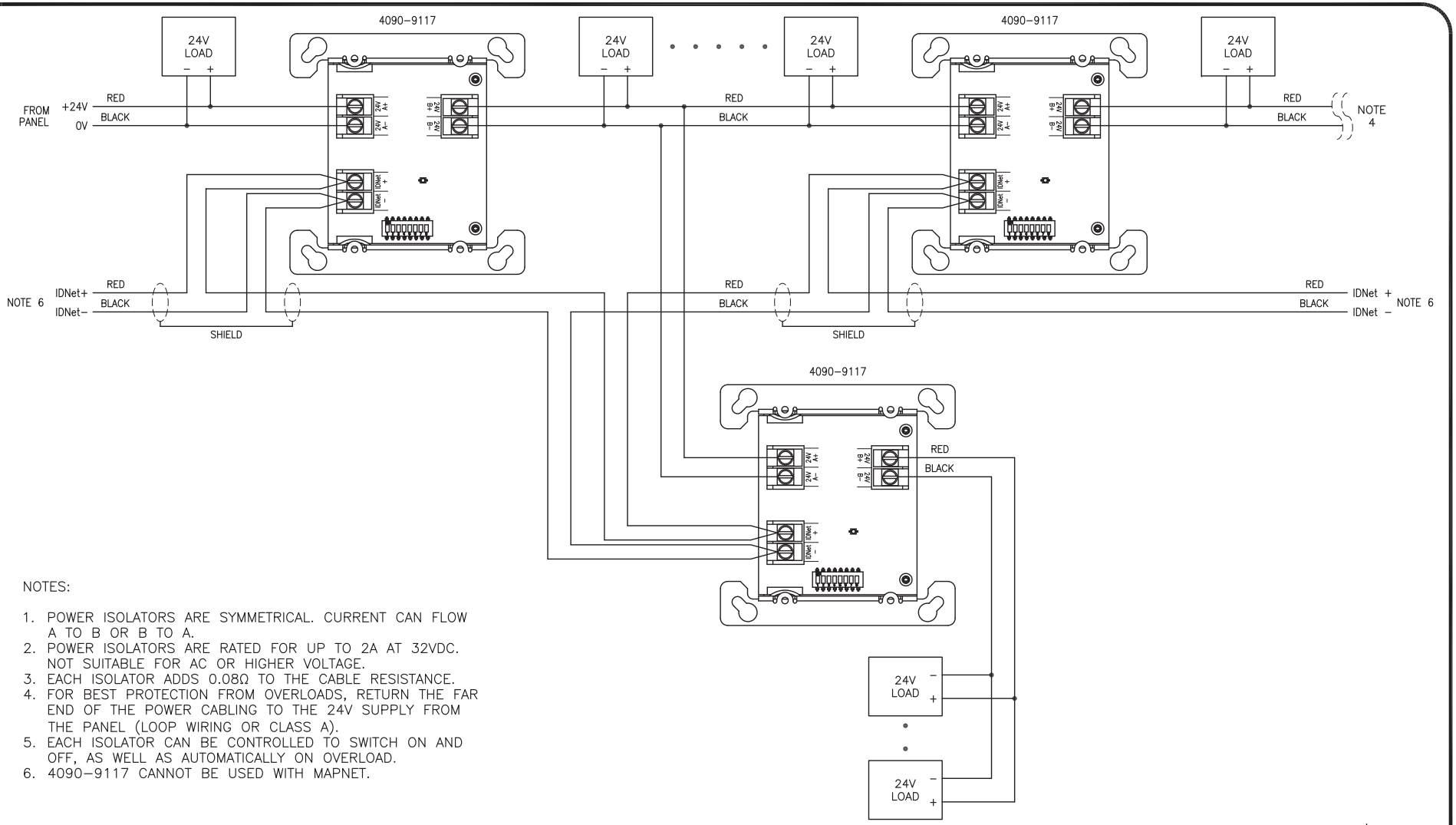
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 500 of N

A3 | ISS/REV C | PART No:

501: IDNet Addressable Power Isolator (4090-9117AU)



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
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

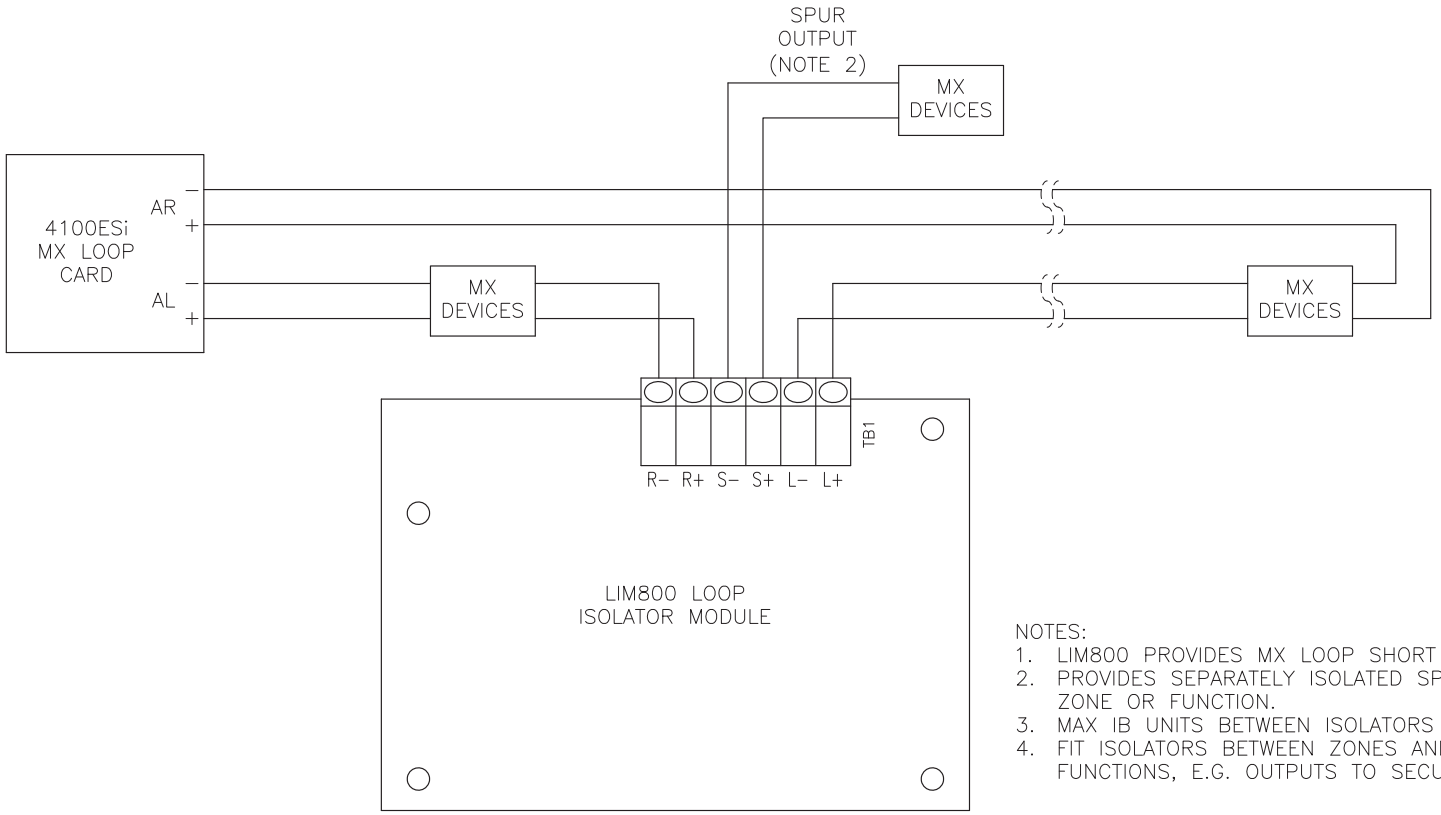
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

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

DRAWING No: 1976-181 SHEET 501 of N

A3 | ISS/REV B | PART No:



NOTES:
1. LIM800 PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
2. PROVIDES SEPARATELY ISOLATED SPUR OUTPUT TO A SINGLE ZONE OR FUNCTION.
3. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
4. FIT ISOLATORS BETWEEN ZONES AND DEVICES OF DIFFERENT FUNCTIONS, E.G. OUTPUTS TO SECURITY AND PLANT.

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, FROM 1982–71–116.	4809	KJS	LSC	RC	DK	12–11–15
B	PART NUMBERS CHANGED TO USE MX PART NUMBERS.	4936	KJS	MH	RC	DP	11–7–16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
LIM800 LOOP ISOLATOR MODULE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 502 of N

A3 | ISS/REV B | PART No:

Communication devices

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. THE CONSTRAINTS ON RUI CIRCUIT CABLING ARE:

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

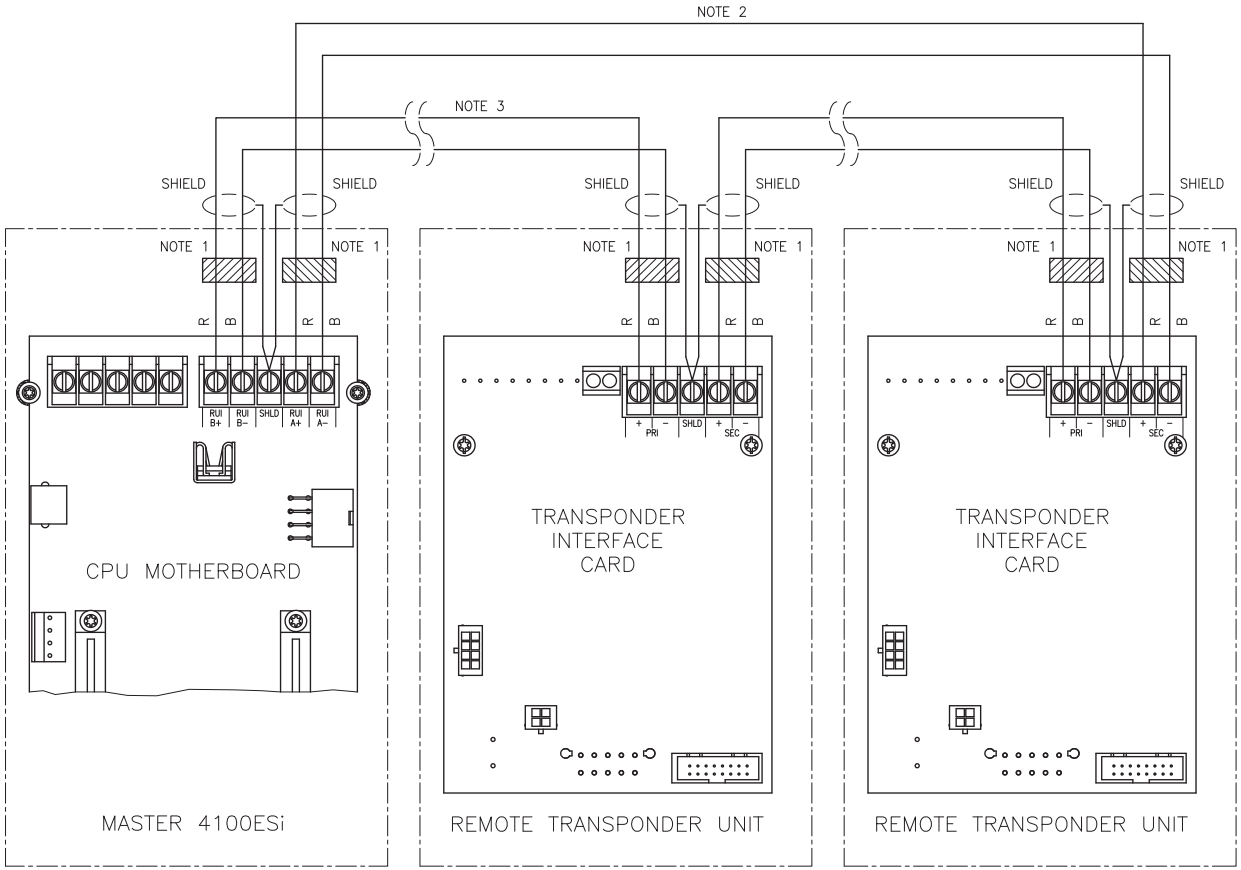
B. THE TOTAL CABLE CAPACITANCE AND RESISTANCE MUST BE NO MORE THAN 0.58µF AND 36Ω RESPECTIVELY. IF VOLTAGE TRANSIENT SUPPRESSORS ARE USED, THE ADDED CAPACITANCE AND RESISTANCE FROM THESE DEVICES MUST BE CONSIDERED.

C. FOR CLASS B/SPUR WIRING,
   i. THE CABLE DISTANCE FROM THE MASTER 4100ESi 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. ALL INPUTS AND OUTPUTS MUST BE ON THE SAME ZONE (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 A SINGLE ZONE OR FUNCTION (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/ACIF 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.



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

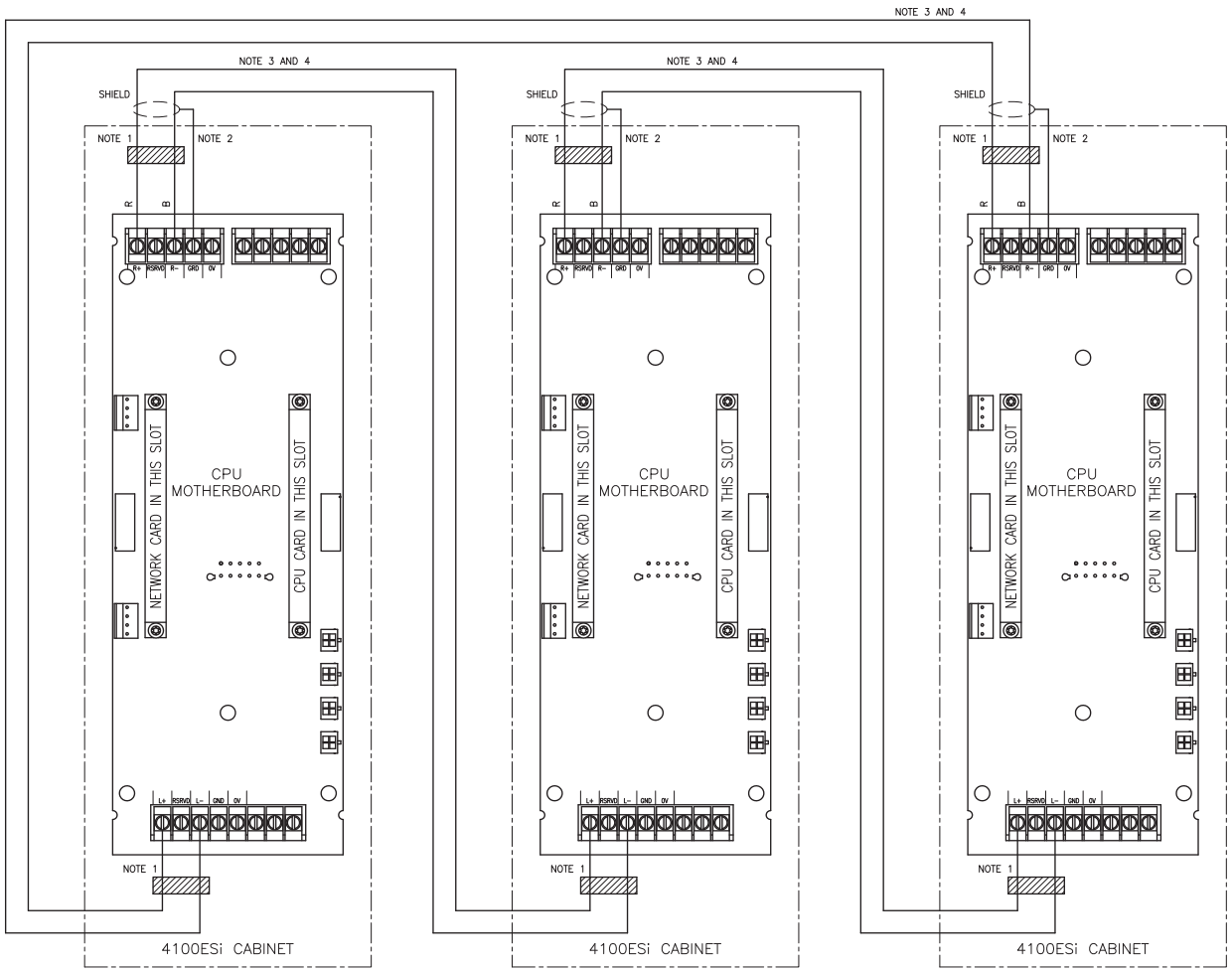
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				24–8–06
B	ADDED RUI CABLE REQUIREMENTS (FROM PBS0027).	4070	KJS	LSC	RC	DP	15–10–09
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15
D	DRG BORDER UPDATED TO JCI, NOTES UPDATED.	5053	KJS	SC	SC	DC	11–9–17
E	NOTE D UPDATED, BOARD P/NS REMOVED.	5222	KJS	RC	MH	DC	8–8–19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
TRANSPONDER INTERFACE (4100-0620)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 600 of N

A3 | ISS/REV E | 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 FOR EACH SPAN).
5. FIT 2 x 4100-6056 WIRED MEDIA CARDS TO 4100-6078 NETWORK CARD.
6. IF USING OPTICAL FIBRE, REFER TO SHEET 602 FOR 4100-6057 WITH DUAL MULTIMODE FIBRES OR SHEET 613 FOR 4100-630X WITH SINGLE FIBRE CABLE.

CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

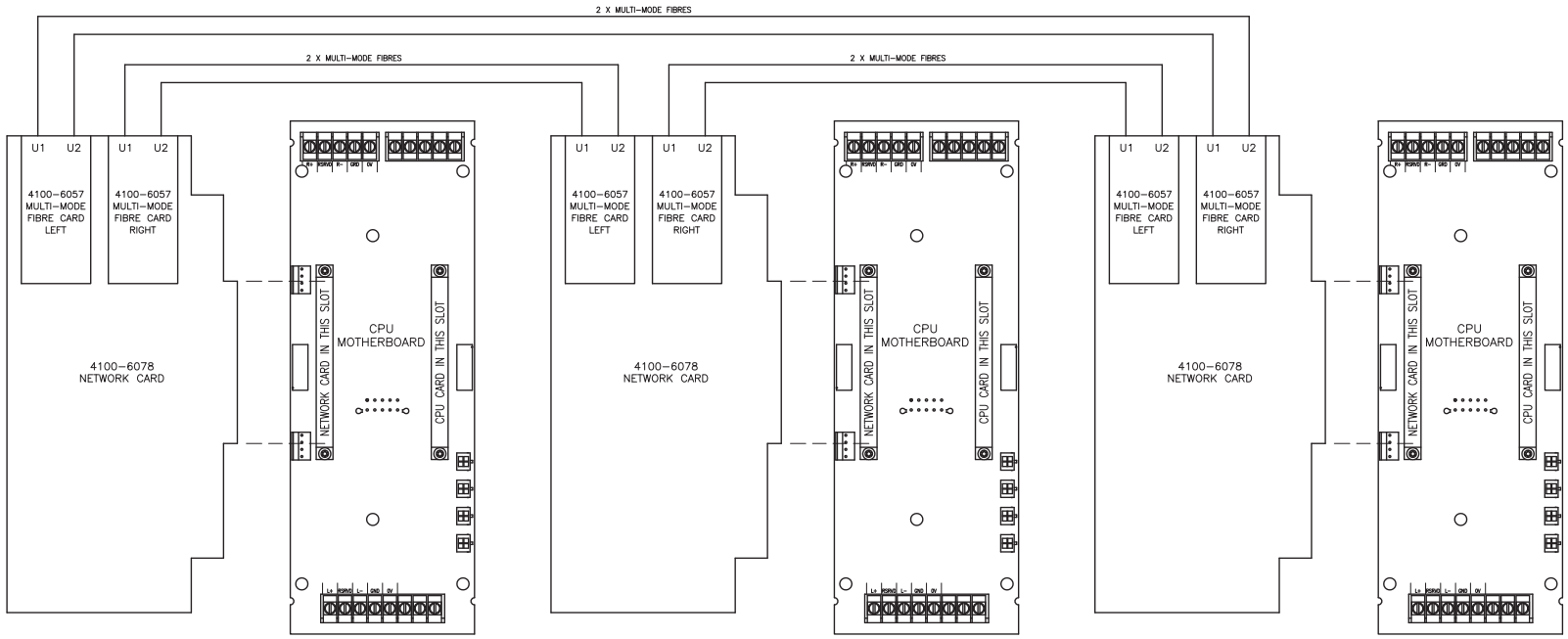
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				7-9-06
B	PART NUMBER WAS 4100-6014, WAS 4100U.	4615	KJS	LSC	RC	DP	28-9-15
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
D	DRG BORDER UPDATED TO JCI, NOTES UPDATED.	5053	KJS	SC	SC	DC	11-9-17
E	NOTE 6 UPDATED, BOARD P/NS REMOVED.	522	KJS	RC	MH	DC	8-8-19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
NETWORK INTERFACE (WIRED MEDIA) (4100-6078)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 601 of N

A3 | ISS/REV E | PART No:



NOTES:

1. REFER TO SHEET 613 FOR 4100-630X SINGLE FIBRE MEDIA CARDS.
2. FIT 4100-6057 MULTI-MODE FIBRE MEDIA CARD TO 4100-6078 NETWORK INTERFACE CARD.
3. RUN MULTI-MODE FIBRE PAIR FROM U1 (TX) AND U2 (RX) OF THE RIGHT FIBRE CARD TO U2 AND U1 OF THE LEFT FIBRE CARD.
4. USE ST CONNECTORS WITH LONG STRAIN RELIEF BOOTS ON FIBRE LEADS.
5. USE 50u/125u OR 62.5u/125u MULTI-MODE FIBRE AND REFER TO LT0618 4100ESi INSTALLATION MANUALS FOR FIBRE LOSS CALCULATIONS AND TYPICAL MAXIMUM DISTANCES.
6. NETWORK LOOP CAN BE MIXED WIRED COPPER PAIR AND FIBRE. REFER TO SHEET 601 FOR WIRED CONNECTION DETAILS. RIGHT PORT MUST CONNECT TO LEFT PORT AROUND LOOP, REGARDLESS OF MEDIA TYPE.

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	LSC	LSC	DP	2-10-15
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
C	NOTE 1 INSERTED, NOTES UPDATED, MOTHER BOARD P/N REMOVED.	5222	KJS	RC	MH	DC	8-8-19

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
NETWORK INTERFACE (FIBRE OPTIC) (4100-6057)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 602 of N

A3 | ISS/REV C | PART No:

603: Fiber-optic Modem (4100-6072/6073) - Style 7 (Ring)

NOTES:
1. DIP SWITCH SETTINGS ON ALL FIBREOPTIC MODEM CARDS AS FOLLOWS:
   a) SW1–6 ON FOR 8 BIT, OR OFF FOR 9 BIT OPERATION.
   b) SW1–7 ON FOR 9600 BPS, OR OFF FOR 57.6 KBPS OPERATION.
   c) ALL OTHER DIP SWITCHES ON THE MODEMS ARE OFF.
2. OPTIC CONNECTORS ARE ST TYPE.
3. SEE PRODUCT BULLETIN PBS0038 FOR DETAILED SPECIFICATIONS.

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	4615	SS	LSC	RC	DP	08-09-14
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
C	NOTE 1b UPDATED. BPS WAS KBPS.	4977	KJS	LSC	RC	DP	2-11-16

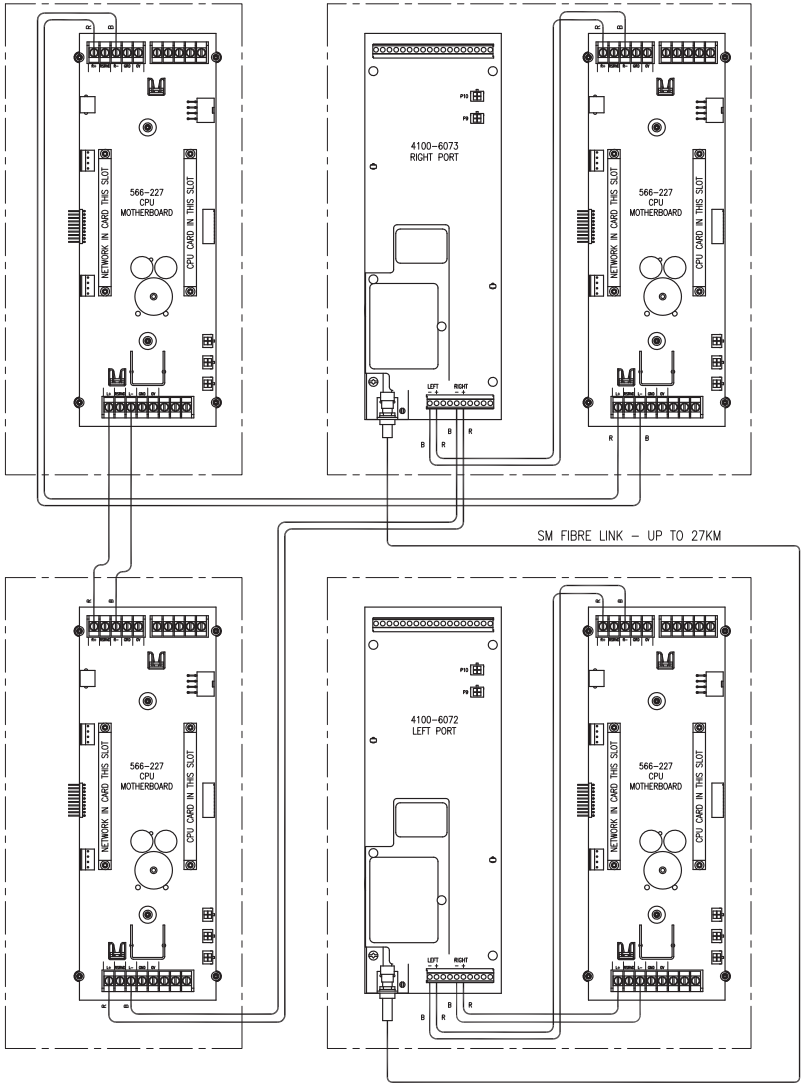
tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
FIBREOPTIC MODEM (4100-6072/6073)
STYLE 7 (RING) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 603 of N

A2 | ISS/REV C | PART No:

604: Fiber-optic Modem (4100-6072/6073) - Style 4 (Spur)



NOTES:
1. DIP SWITCH SETTINGS ON ALL FIBREOPTIC MODEM CARDS AS FOLLOWS:
   a) SW1–6 ON FOR 8 BIT, OR OFF FOR 9 BIT OPERATION.
   b) SW1–7 ON FOR 9600 BPS, OR OFF FOR 57.6 KBPS OPERATION.
   c) ALL OTHER DIP SWITCHES ON THE MODEMS ARE OFF.
2. OPTIC CONNECTORS ARE ST TYPE.
3. SEE PRODUCT BULLETIN PBS0038 FOR DETAILED SPECIFICATIONS.

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

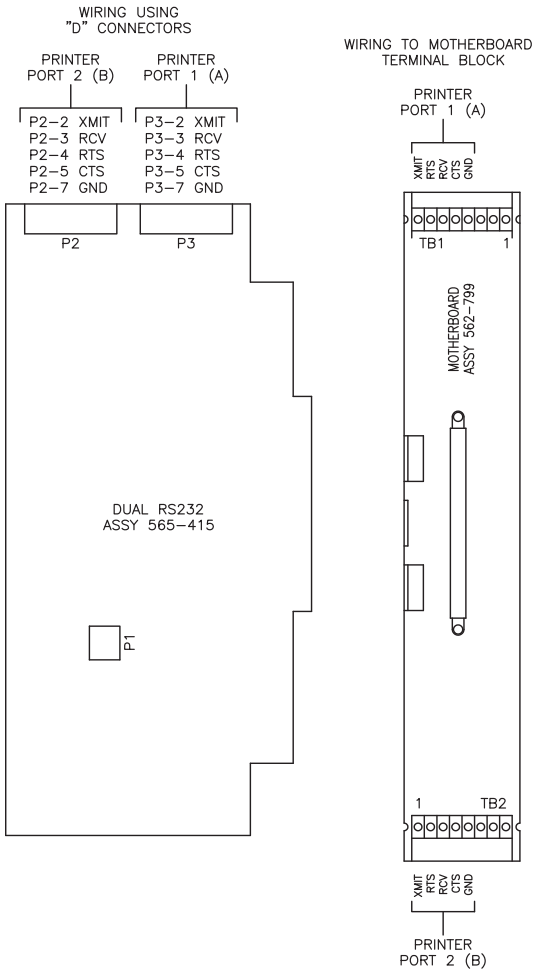
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4615	KJS	LSC	RC	DP	24-7-15
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15
C	NOTE 1b UPDATED. BPS WAS KBPS.	4977	KJS	LSC	RC	DP	2-11-16

tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
FIBREOPTIC MODEM (4100-6072/6073)
STYLE 4 (SPUR) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 604 of N

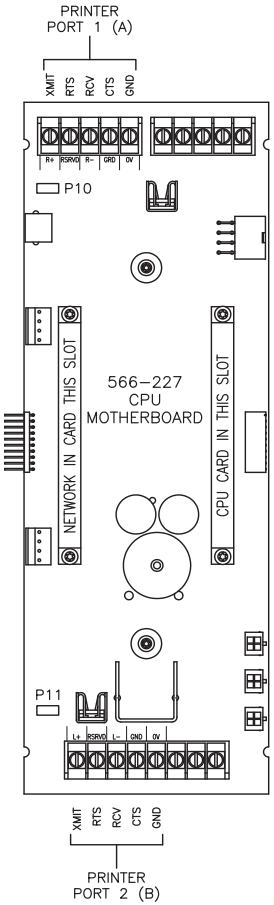
A2 | ISS/REV C | PART No:



NOTES:
1. DUAL RS232 BRD 565–415 CAN BE FITTED TO 562–799 OR 566–227 MOTHERBOARD.
2. WIRING FOR RS232 SERIAL PORT CAN BE TO SCREW TERMINALS ON MOTHERBOARD OR TO D25 MALE/FEMALE CONNECTOR (P3 OR P2) ON DUAL RS232 ASSY (565–415).
3. CTS INPUT NEEDS TO BE ASSERTED (>2V) FOR TRANSMIT.
4. SERIAL DEFINITIONS:

SIGNAL	NAME	INPUT/OUTPUT
XMIT	TRANSMIT DATA	OUTPUT FROM 4100
RCV	RECEIVE DATA	INPUT TO 4100
RTS	REQUEST TO SEND	OUTPUT FROM 4100
CTS	CLEAR TO SEND	INPUT TO 4100
GND	GROUND (0V)	REFERENCE (0V)

5. FIT JUMPERS TO RS232 POSITION OF P7, P8, P9, P10 ON RS232 CARD.
6. CPU MOTHERBOARD P10 AND P11, FIT LINKS TO 2–3 FOR RS232.
7. PORTS ARE ELECTRICALLY ISOLATED FROM EACH OTHER AND FROM THE 4100 SYSTEM.



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

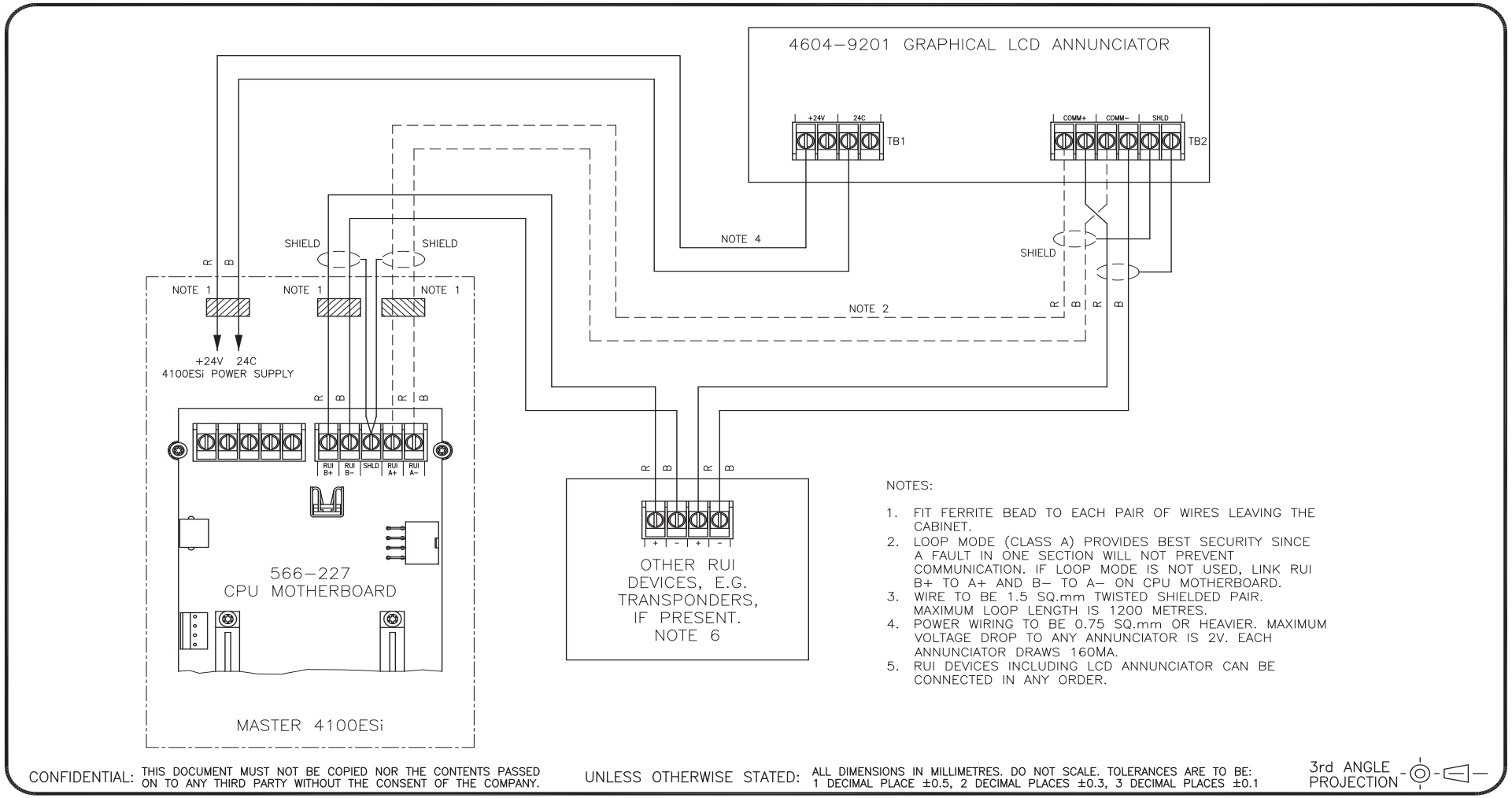
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4615	KJS	LSC	RC	DP	9–7–15
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
DUAL RS232 CARD (4100-0113K)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 605 of N

A3 | ISS/REV B | 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

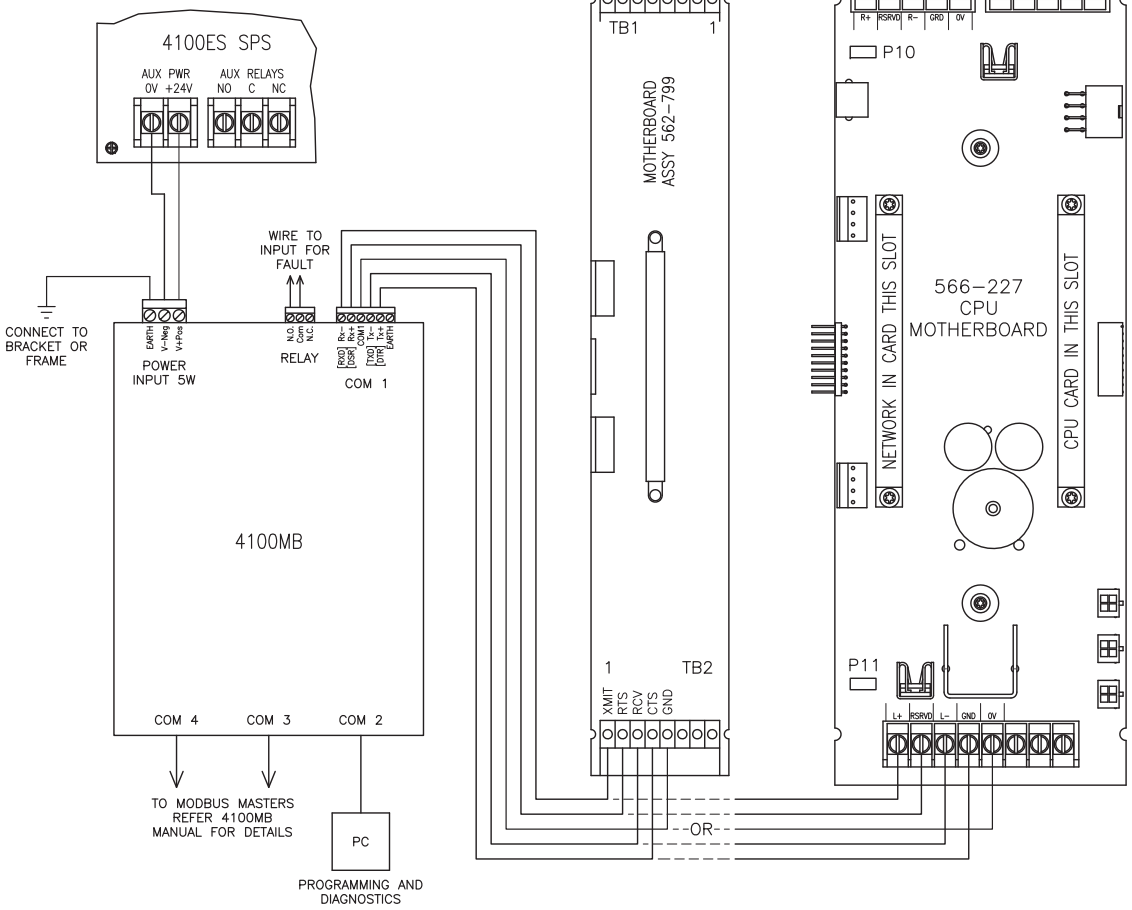
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	–	KJS				8–9–06
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15
C	DRG BORDER UPDATED TO JCI, NOTES UPDATED.	5053	KJS	SC	SC	DC	11–9–17

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
LCD ANNUNCIATOR (4604-9201)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 606 of N

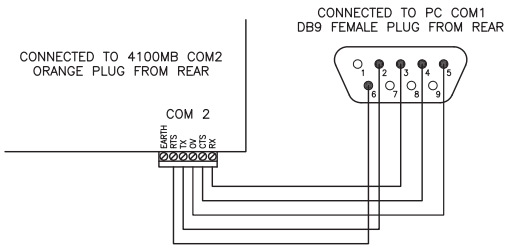
A3 | ISS/REV C | PART No:



NOTES:
1. 4100MB IS MOUNTED ON LEGACY BRACKET IN 4100ES PANEL.
2. CONNECT SPS AUX 24V OUTPUT (OR SIMILAR) TO 4100MB V+ POS, V− NEG TERMINALS.
3. CONNECT 4100MB COM1 TO 4100 PANEL RS232 PORT. WIRING SHOWS USING PRINTER PORT B, TB2 ON MOTHERBOARD. COULD USE PORT A (TB1) OR WIRE TO DB25 MALE CONNECTOR TO PLUG INTO P3 OR P2 ON DUAL RS232 ASSY 565−415.

4100				4100MB COM1		
4100			SIGNAL	SIGNAL	COM1 PIN	COLOUR
PORT A TB1	PORT B TB2	DB25 PIN				
8	1	2	XMIT	RXD	6	BLACK (BLUE PAIR)
6	3	3	RCV	TXD	3	BLUE
7	2	4	RTS	CTS	5	BLACK (RED PAIR)
5	4	5	CTS	RTS	2	RED
4	5	7	GND	GND	4	GREEN

4. EARTH 4100MB AS SHOWN.
5. CONNECT 4100MB COM2 TO PC DB9 FOR PROGRAMMING/DIAGNOSTICS USING SUPPLIED LEAD.



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

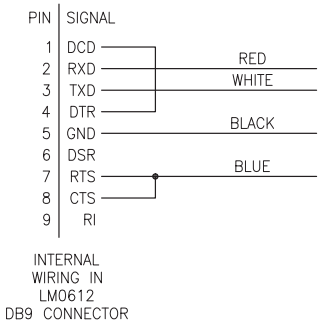
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4615	KJS	LSC	RC	DP	9−7−15

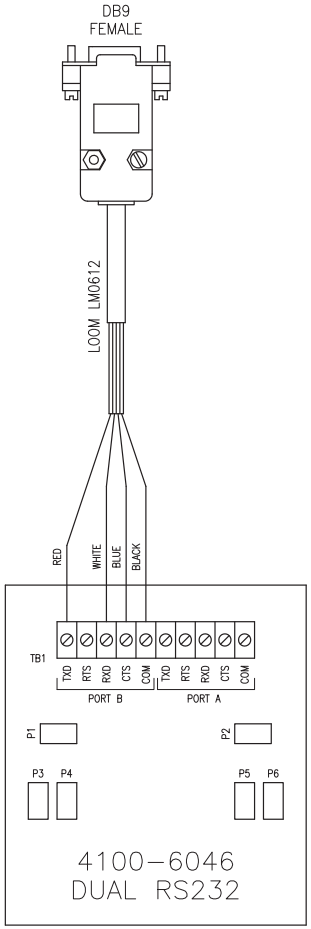
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES 4100MB MODBUS INTERFACE WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 607 of N

A3 | ISS/REV A | PART No:





4100-6046 SIGNAL	LM0612 COLOUR	DESCRIPTION
TXD	RED	DATA OUTPUT FROM 4100ESi
RXD	WHITE	DATA INPUT TO 4100ESi
RTS		
CTS	BLUE	STATUS SIGNAL TO 4100ESi
COM	BLACK	COMMON REFERENCE

NOTES:
1. LM0612 ALLOWS THE 4100-6046 PORT TO BE CONNECTED DIRECTLY TO A DTE (PC, PRINTER, ETC) WITH DB9 MALE CONNECTOR.
2. LM0612 CAN BE USED WITH EITHER PORT A OR B.

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

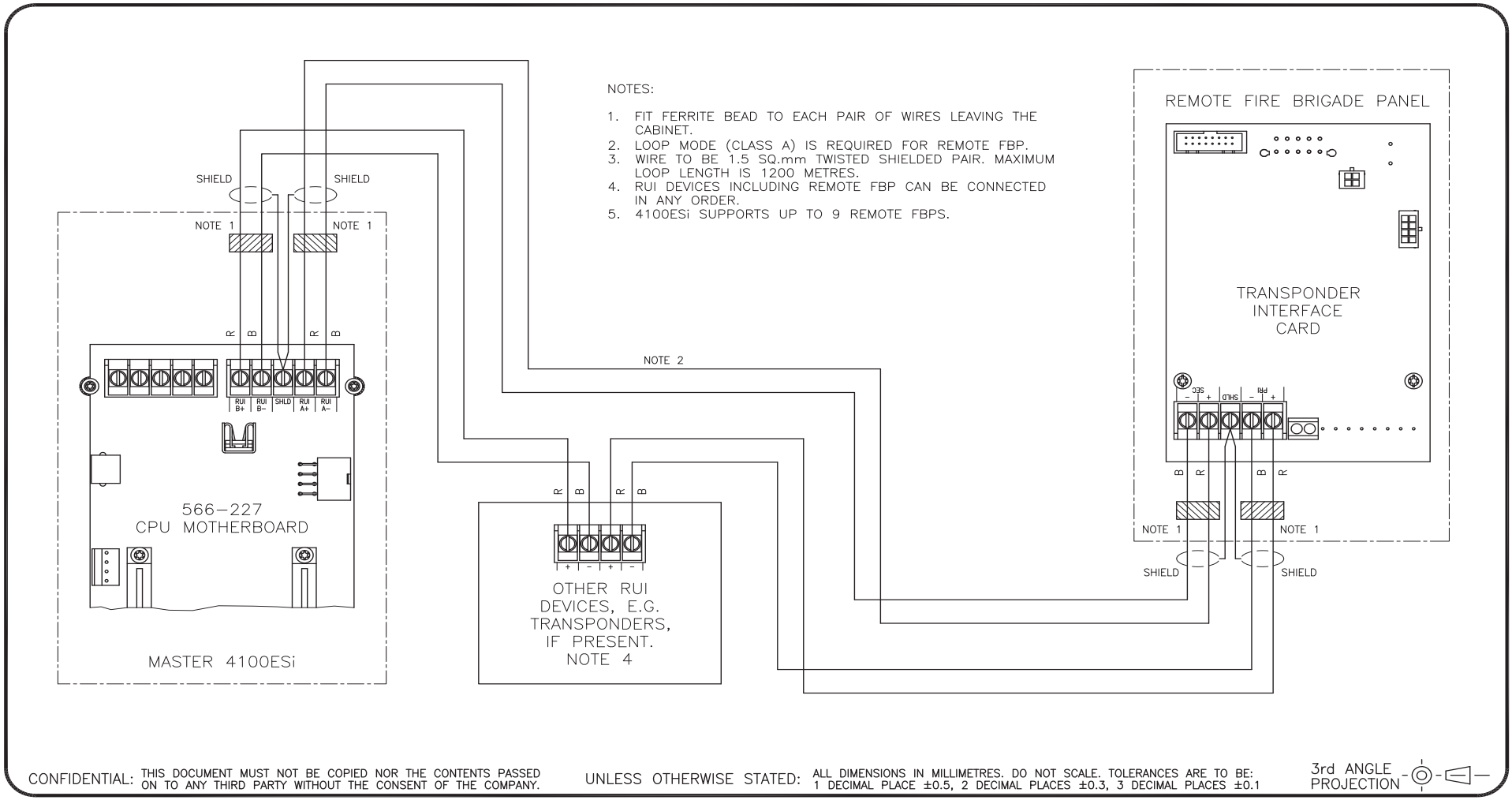
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4977	KJS	LSC	RC	DP	2-11-16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi DUAL RS232 PDI CARD (4100-6046) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 608 of N

A3 | ISS/REV A | PART No:



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	4809	KJS	LSC	RC	DK	23-12-15
B	DRG BORDER UPDATED TO JCI, NOTES UPDATED.	5053	KJS	SC	SC	DC	11-9-17

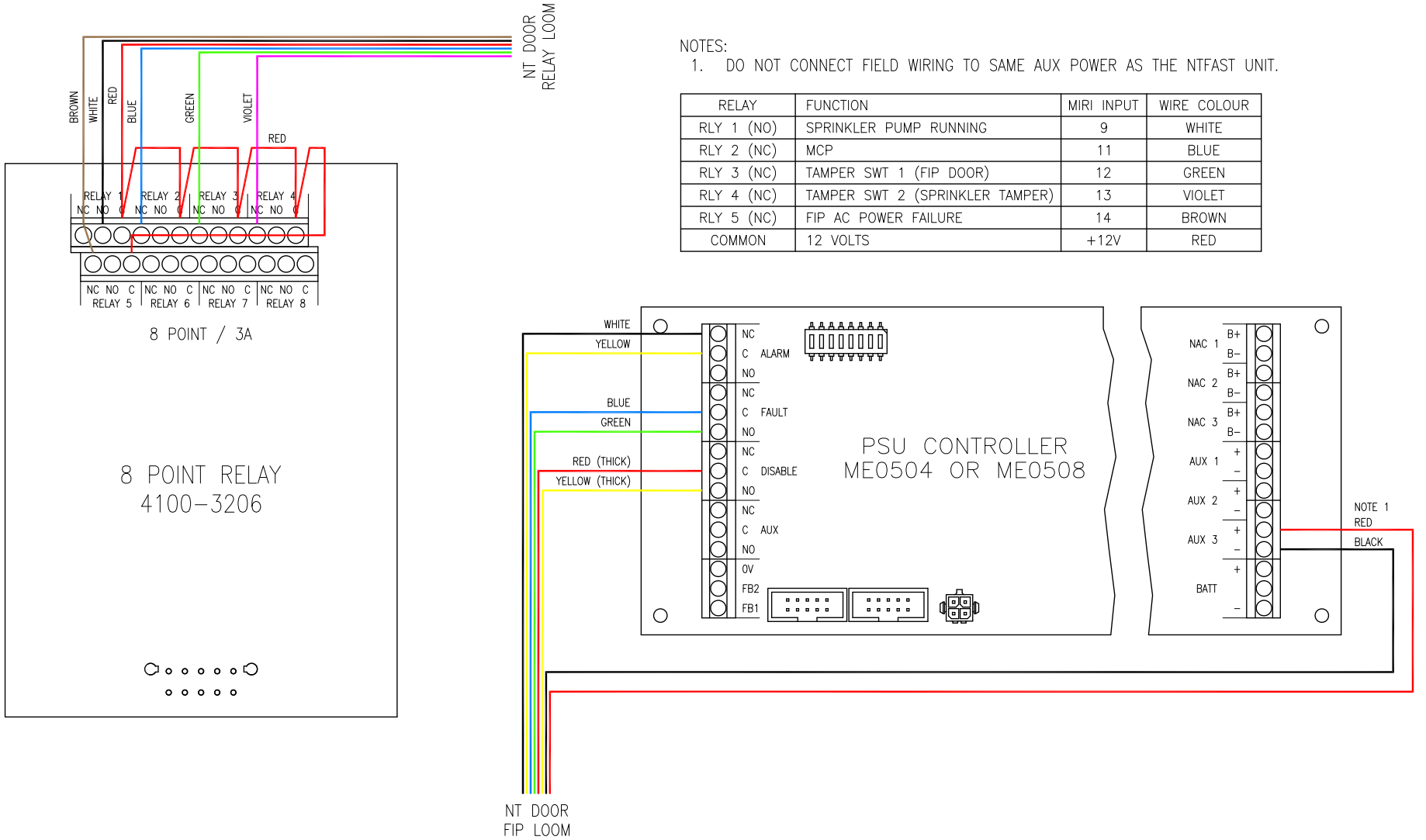
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
REMOTE FIRE BRIGADE PANEL (FP1048)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 609 of N

A3 | ISS/REV B | PART No:

610: NT Brigade Door (FP1093) wiring to APS/LPS



NOTES:

1. DO NOT CONNECT FIELD WIRING TO SAME AUX POWER AS THE NTFAST UNIT.

RELAY	FUNCTION	MIRI INPUT	WIRE COLOUR
RLY 1 (NO)	SPRINKLER PUMP RUNNING	9	WHITE
RLY 2 (NC)	MCP	11	BLUE
RLY 3 (NC)	TAMPER SWT 1 (FIP DOOR)	12	GREEN
RLY 4 (NC)	TAMPER SWT 2 (SPRINKLER TAMPER)	13	VIOLET
RLY 5 (NC)	FIP AC POWER FAILURE	14	BROWN
COMMON	12 VOLTS	+12V	RED

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

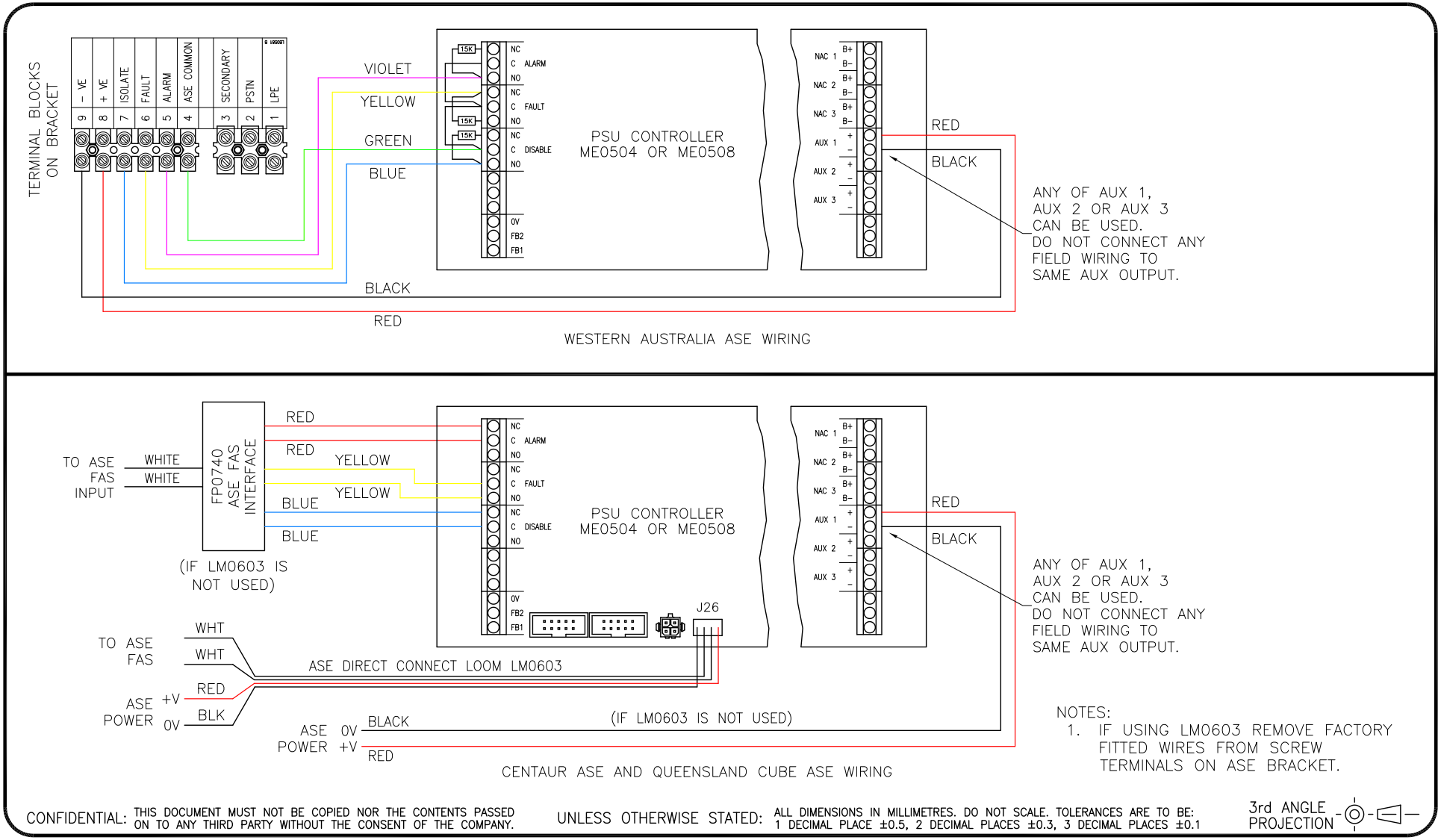
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4856	KJS	RC	RC	DP	14-12-15

tyco Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 3895938

4100ESi
NT BRIGADE DOOR TO APS
WIRING DETAILS

DRAWING No: 1976-181 SHEET 610 of N

A2 | ISS/REV A | PART No: FP1093



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

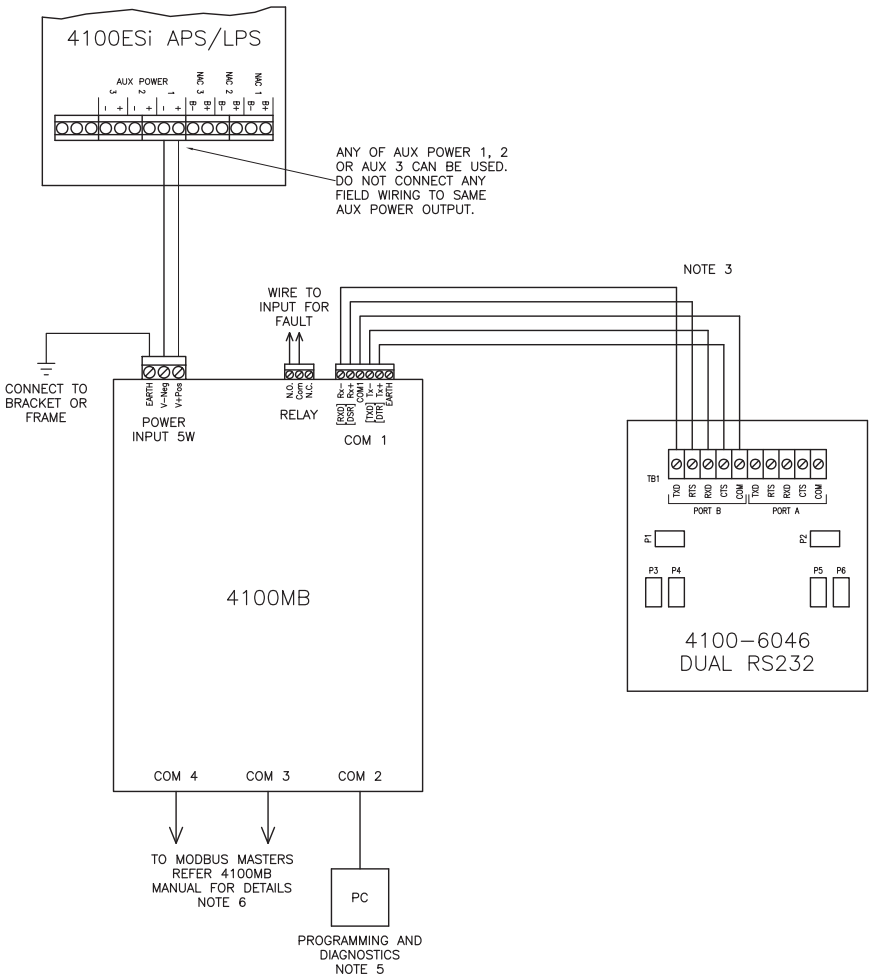
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL, FROM 1976-286 SHT 3.	4809	KJS	LSC	RC	DK	18-12-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, NEW ZEALAND.
PH: +64 3 3895096
FAX:+64 3 3895938

4100ESi
CENTAUR / WA / CUBE ASE TO APS / LPS WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 611 of N

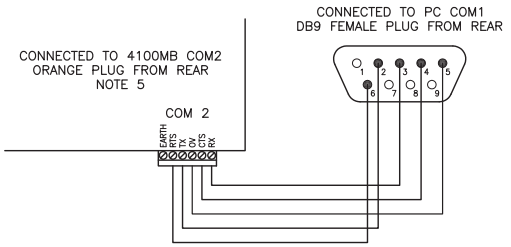
A3 | ISS/REV A | PART No:



NOTES:
1. 4100MB IS MOUNTED ON LEGACY BRACKET IN 4100ES AND 4100ESi PANEL.
2. CONNECT APS/LPS AUX 24V OUTPUT (ANY) TO 4100MB V+ POS, V- NEG TERMINALS. DO NOT CONNECT ANY OTHER FIELD WIRING TO THIS 24V OUTPUT.
3. CONNECT 4100MB COM1 PORT TO 4100-6046 RS232 PORT. WIRING FOR PORT B IS SHOWN, BUT PORT A CAN BE USED INSTEAD. SET P1 OR P2 TO SUPV, AND P3/P4 OR P5/P6 TO ISO, DEPENDING ON WHICH PORT IS USED.

4100-6046	4100MB COM1		
SIGNAL	SIGNAL	COM1 PIN	COLOUR
XMIT	RXD	6	BLACK (BLUE PAIR)
RCV	TXD	3	BLUE
RTS	DSR	5	BLACK (RED PAIR)
CTS	DTR	2	RED
GND	GND	4	GREEN

4. EARTH 4100MB AS SHOWN.
5. CONNECT 4100MB COM2 TO PC DB9 FOR PROGRAMMING/DIAGNOSTICS USING SUPPLIED LEAD.
6. REFER TO 4100MB INSTALLATION AND CONFIGURATION MANUAL FOR 4100MB AND 4100ESi SETUP.



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

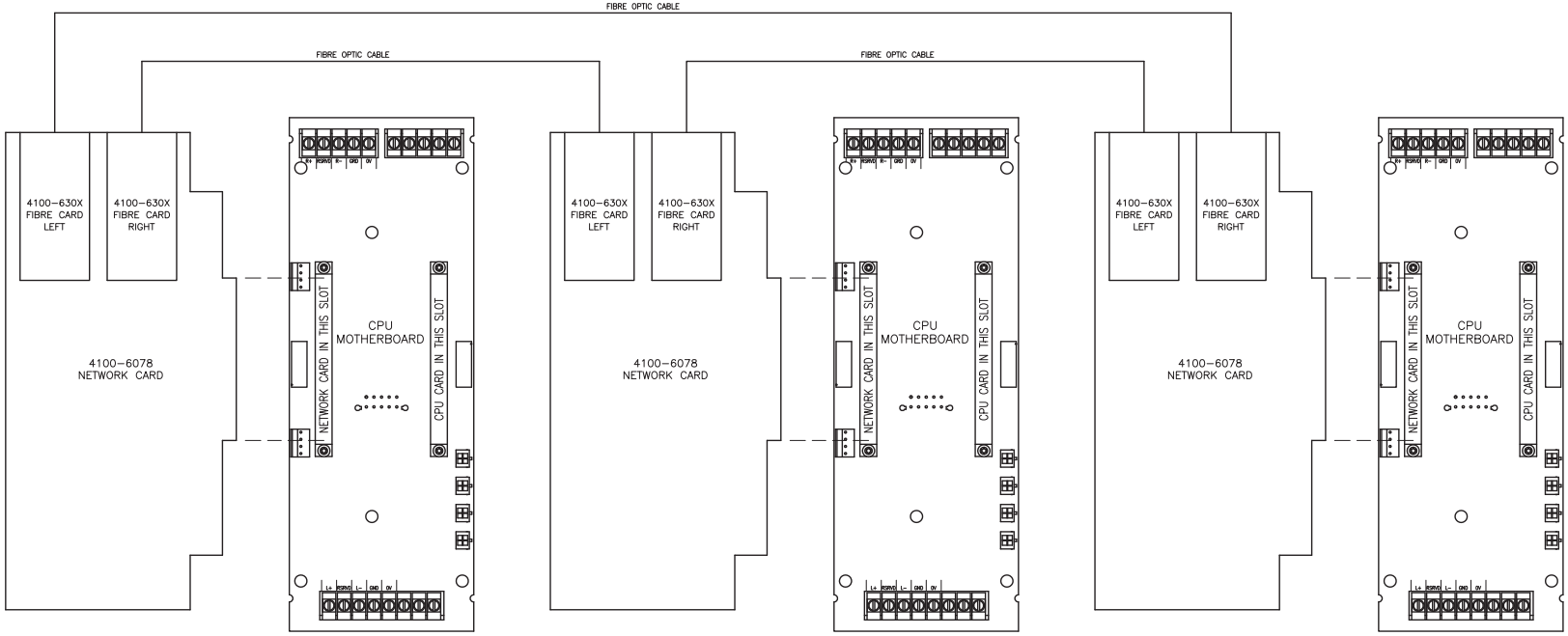
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4809	KJS	LSC	RC	DK	23-12-15

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
4100MB MODBUS INTERFACE (PDI) WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 612 of N

A3 | ISS/REV A | PART No:



FIBRE MEDIA CARDS	
MODEL	DESCRIPTION
4100-6301	SINGLE MODE LEFT MEDIA CARD
4100-6302	SINGLE MODE RIGHT MEDIA CARD
4100-6303	MULTI MODE LEFT MEDIA CARD
4100-6304	MULTI MODE RIGHT MEDIA CARD

NOTES:

1. NETWORK LOOP CAN BE MIXED WIRED COPPER PAIR AND FIBRE. REFER TO SHEET 601 FOR WIRED CONNECTION DETAILS. RIGHT PORT MUST CONNECT TO LEFT PORT AROUND LOOP, REGARDLESS OF MEDIA TYPE.
2. FIT MATCHING (SINGLE/MULTI MODE) MEDIA CARDS TO EACH END OF CONNECTION – LEFT MEDIA CARD TO LEFT PORT, RIGHT MEDIA CARD TO RIGHT PORT OF NETWORK CARDS.
3. RUN FIBRE FROM THE RIGHT FIBRE CARD TO THE LEFT FIBRE CARD.
4. USE SC CONNECTORS ON FIBRE.
5. USE 50u/125u OR 62.5u/125u MULTI-MODE FIBRE OR 9/125um SINGLE MODE FIBRE.

CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	5222	KJS	RC	MH	DC	9-8-19

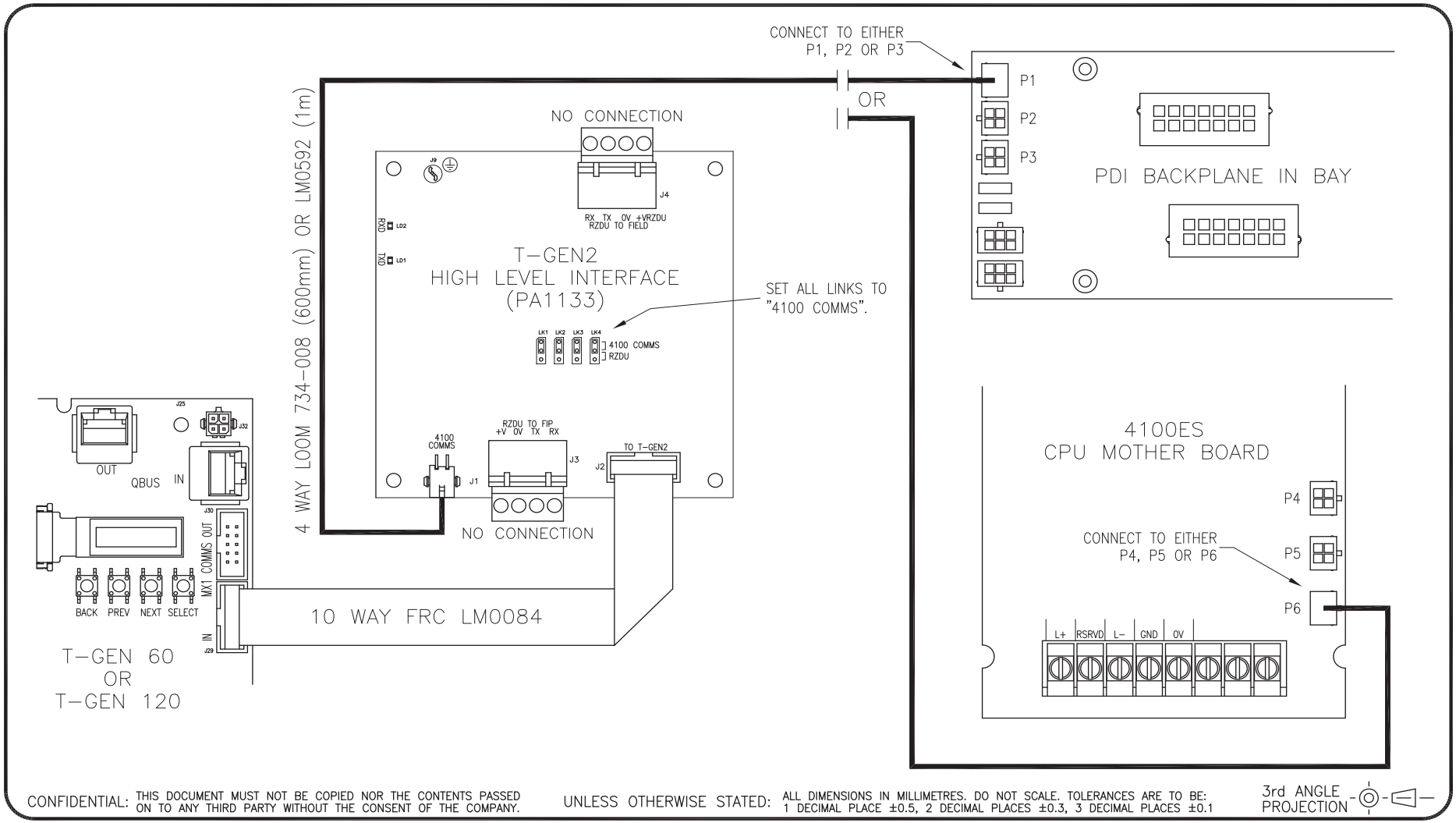
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
NETWORK INTERFACE (FIBRE OPTIC) (4100-630X)
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 613 of N

A3 | ISS/REV A | PART No:

614: T-GEN2 High Level Interface



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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	5140	KJS	RC	RC	DC	30-4-18

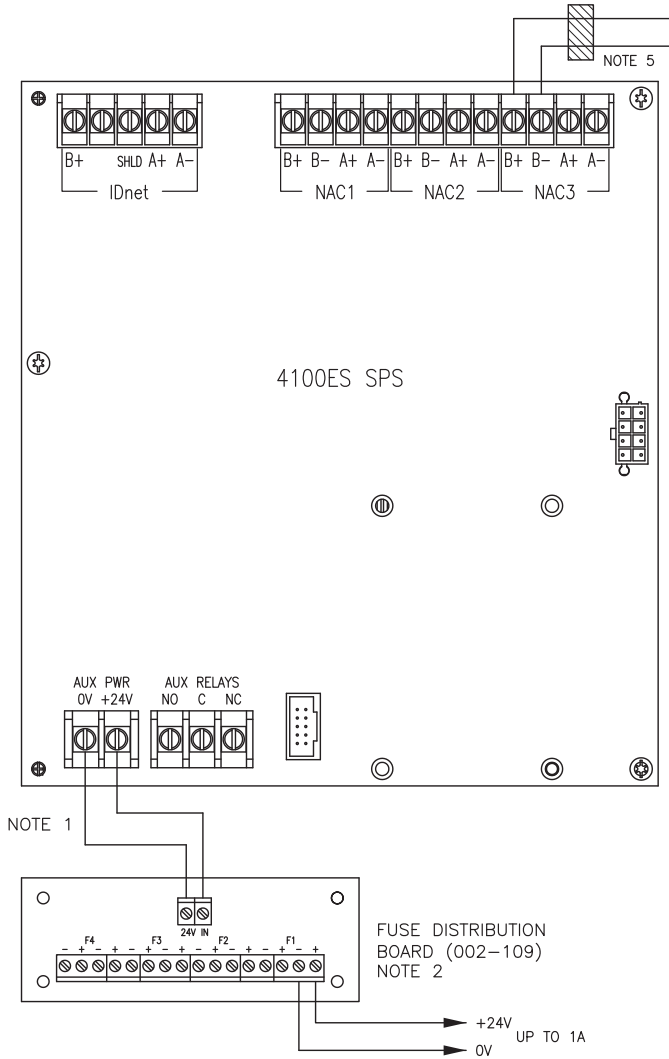
JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
T-GEN2 HLI MODULE
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 614 of N

A3 | ISS/REV A | PART No:

Power supplies



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 4100ES 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.

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
C	FERRITE ADDED TO NAC OUTPUT	4352	KJS	LSC	RC	DP	16–4–12
D	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

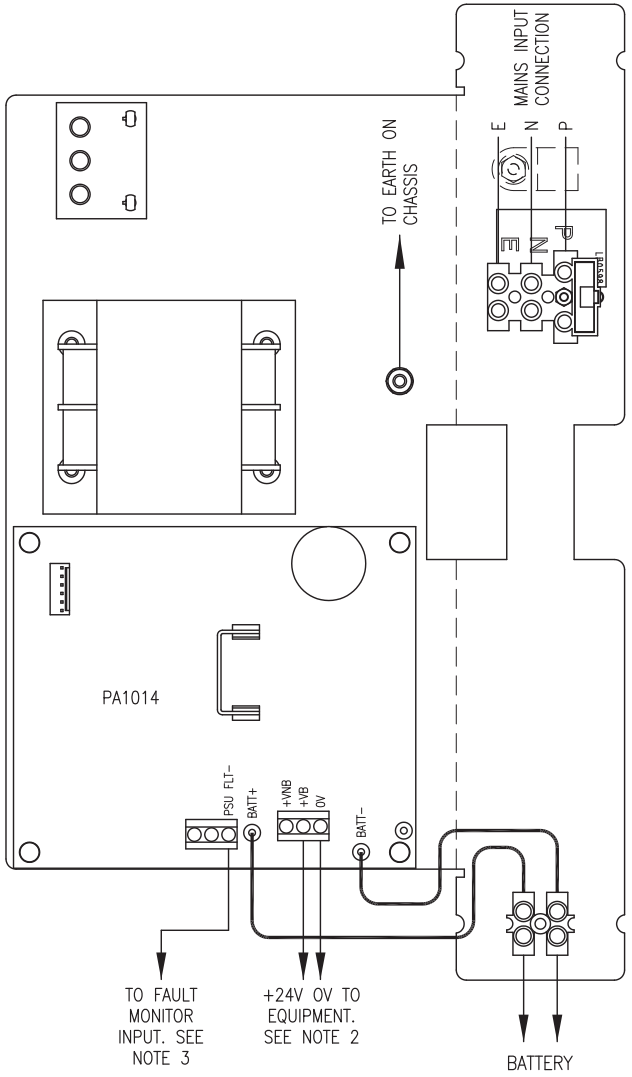
tyco
Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES SPS POWER OUTPUTS WIRING DIAGRAM

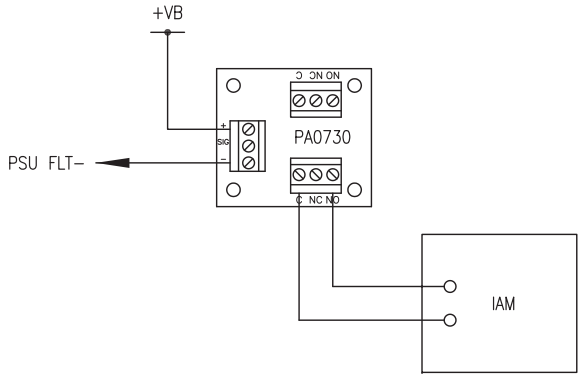
DRAWING No: 1976-181 SHEET 700 of N

A3 | ISS/REV D | 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.



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	4070	KJS	LSC	RC	DP	15–10–09
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	12–1–16

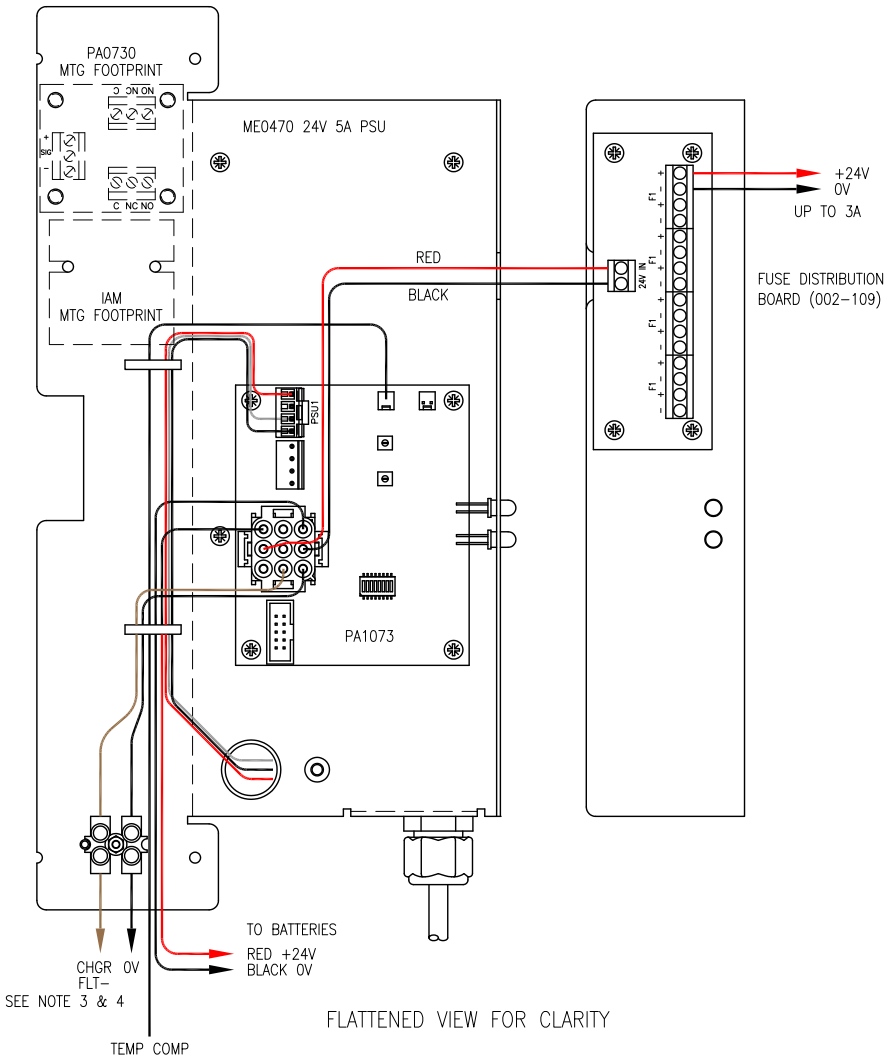
tyco Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES
1948 2A PSU POWER OUTPUTS WIRING DIAGRAM

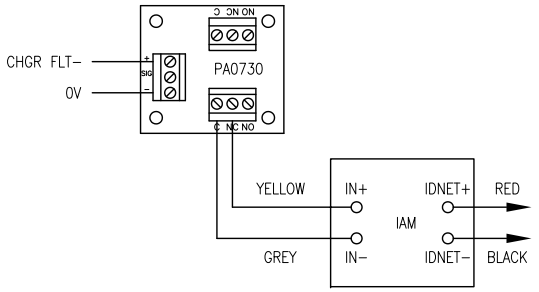
DRAWING No: 1976-181 SHEET 701 of N

A3 | ISS/REV B | PART No:



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. SEE SHEET 706. 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 7mm PLASTIC PCB STAND-OFFS (HW0052). 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

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

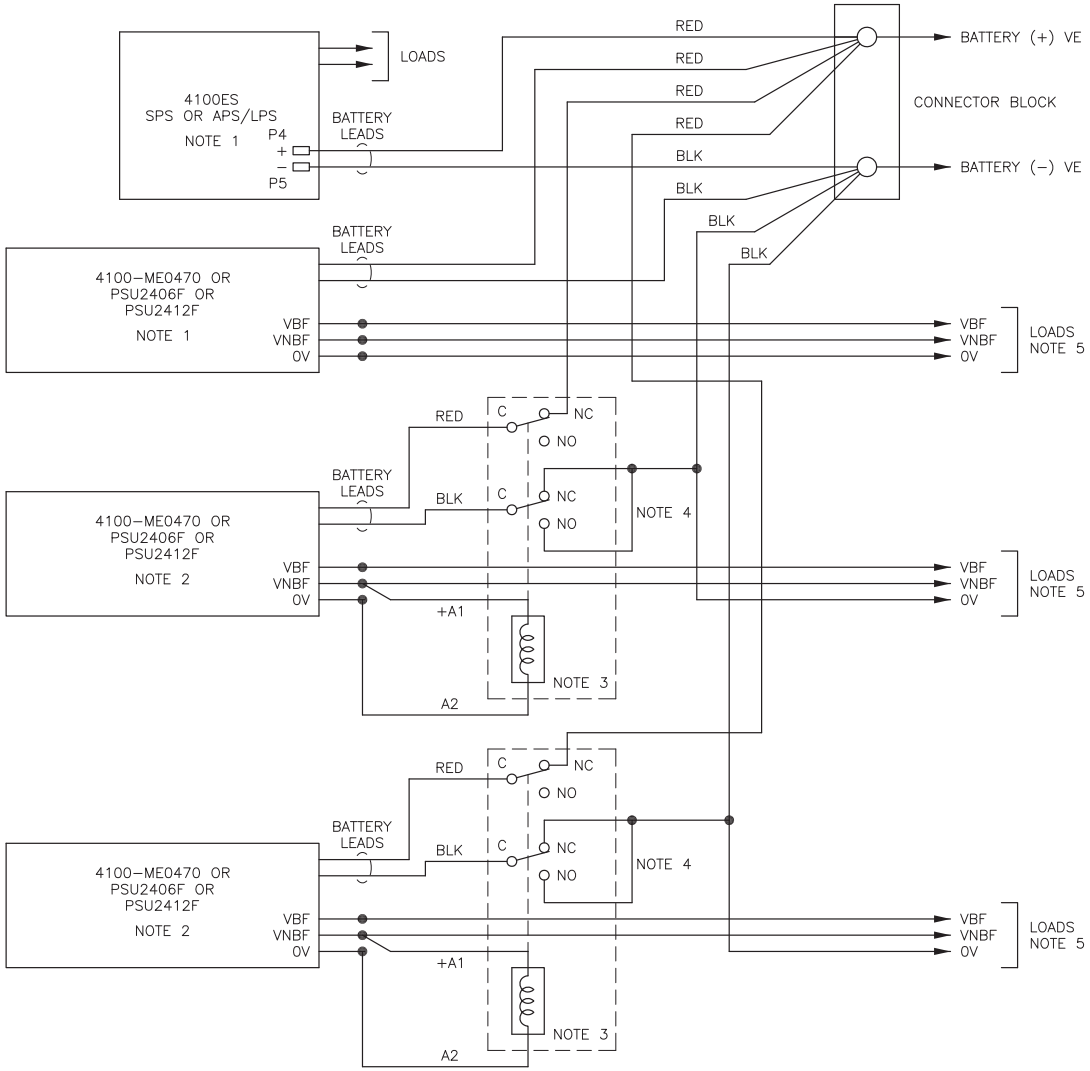
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4391	KJS	GEL	LSC	DP	20-8-12
B	NOTE 4 UPDATED. IAM AND PA0730 LOCATION CHANGED.	4420	KJS	GEL	LSC	DP	20-12-12
C	NOTE 4 UPDATED. HW0052 WAS HW0131.	4651	KJS	LSC	RC	DP	24-7-15
D	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8-12-15

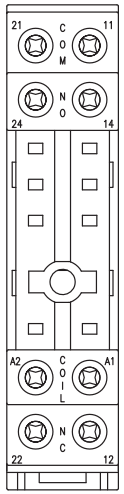
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
ME0470 24V 5A PSU
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 702 of N

A3 | ISS/REV D | PART No:





FINDER RELAY BASE 95.65
SOCKET TERMINALS (NOTE 3)

NOTES

1. 4100U SPS OR 4100ESi APS/LPS 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. 4100–ME0470 DOES NOT HAVE A VNBF OUTPUT.

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	4352	KJS	LSC	RC	SP	16–06–11
B	ADDED ME0470	4615	SS	LSC	RC	DP	08–05–15
C	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15
D	NOTES 1 AND 5 UPDATED.	4977	KJS	LSC	RC	DP	2–11–16

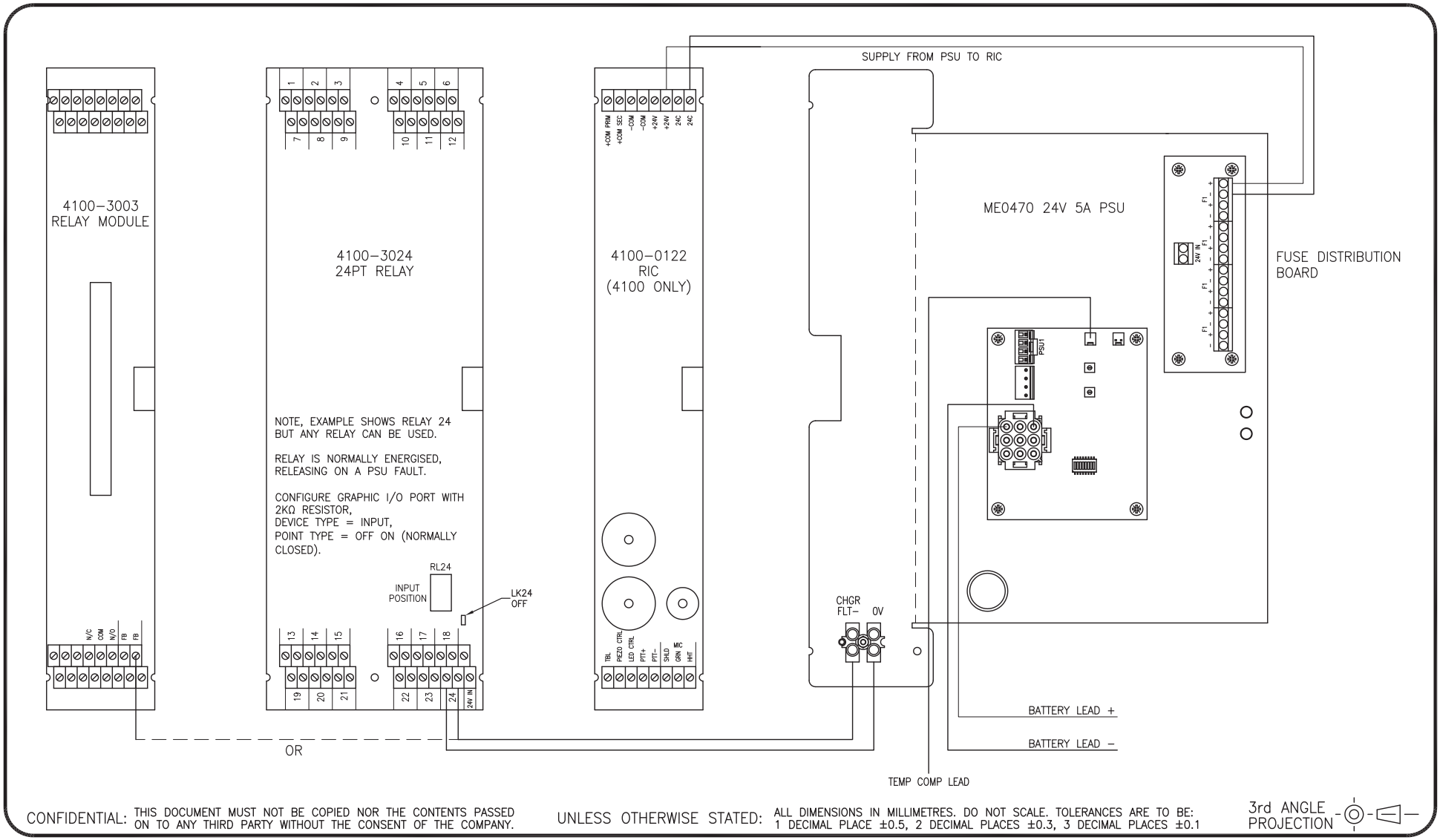
tyco
Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ES VIGILANT PSUS INTERCONNECTION WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 705 of N

A3 | ISS/REV D | PART No:



CONFIDENTIAL: THIS DOCUMENT MUST NOT BE COPIED NOR THE CONTENTS PASSED ON TO ANY THIRD PARTY WITHOUT THE CONSENT OF THE COMPANY.

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

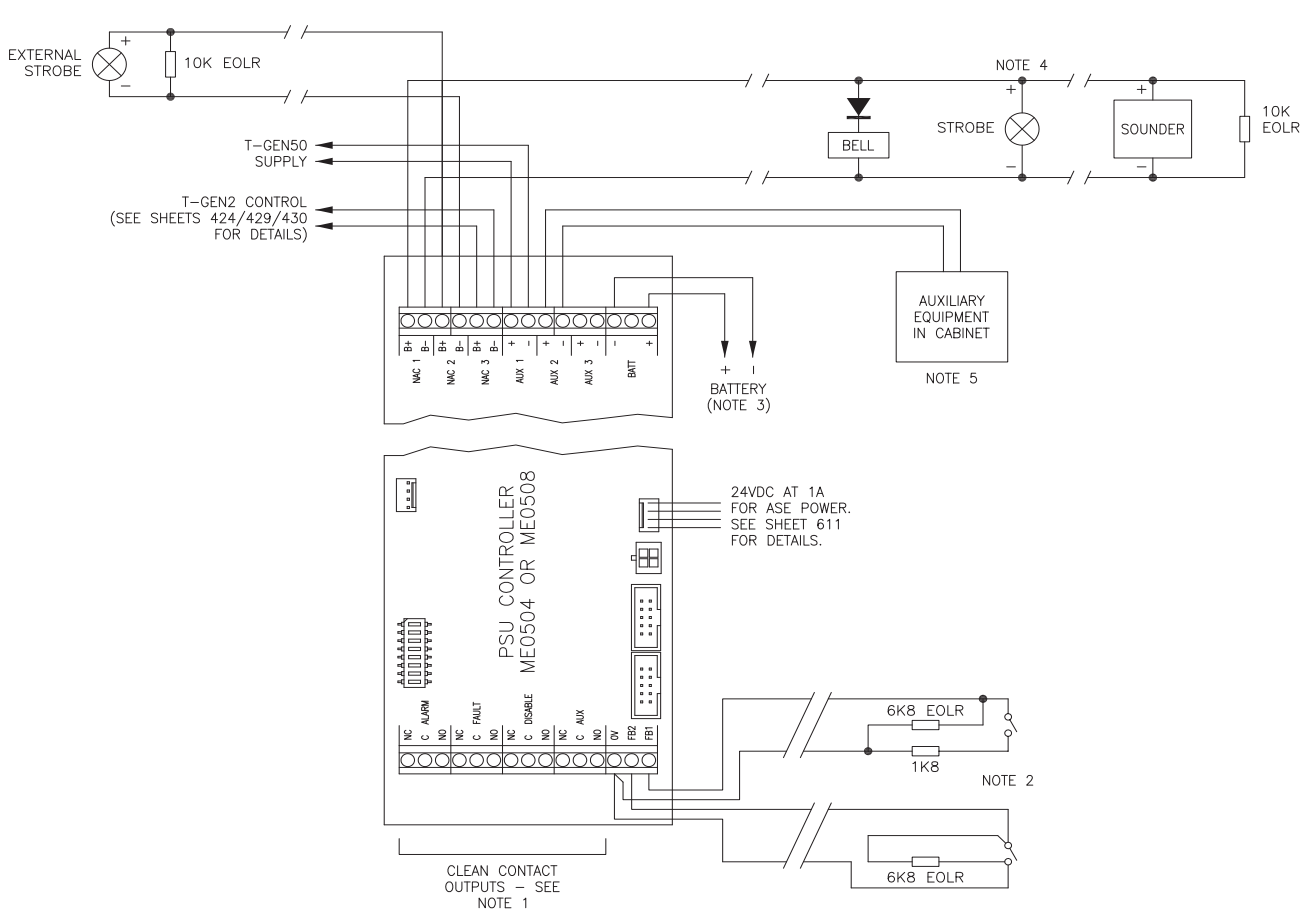
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4409	KJS	GEL	LSC	DP	21–8–12
B	DRAWING BORDER UPDATED WITH NEW LAYERING.	4809	KJS	LSC	RC	DK	8–12–15

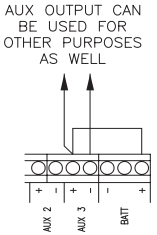
tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
ME0470 CONNECTION
WIRING DETAILS

DRAWING No: 1976-181 SHEET 706 of N

A3 | ISS/REV B | PART No:





DETAIL OF BATTERY OUTPUT CONNECTION WHEN BATTERY BACKUP IS NOT REQUIRED. SEE NOTE 3.

DETAIL A

NOTES:

1. EACH RELAY IS RATED AT 28V, 2A RESISTIVE, 1A INDUCTIVE. DEFAULT PANEL CONFIGURATION DEFINES RELAY FUNCTIONS, BUT THESE CAN BE ALTERED. THE FAULT RELAY OUTPUT IS NORMALLY ENERGISED. FOR BRIGADE CONNECTION SEE SHEETS 610 OR 611.
2. FB1, FB2 INPUTS ARE SUITABLE FOR EXTERNAL CONNECTION. INPUTS CAN BE CONFIGURED FOR CLASS B (S/C ACTIVE) OR CLASS C (S/C FAULT) OPERATION. O/C IS ALWAYS FAULT.
3. MULTIPLE POWER SUPPLIES CAN SHARE A BATTERY. IF BATTERY BACKUP IS NOT REQUIRED, DETAIL A SHOWS HOW TO SUPPRESS BATTERY CONNECTION FAULT.
4. NAC OUTPUTS ARE IDENTICAL. DEFAULT PANEL CONFIGURATION:
   NAC1 = GENERAL ALARM
   NAC2 = EXTERNAL STROBE
   NAC3 = ALARM DEVICES
   BUT THESE CAN BE ALTERED. DIODE ISOLATED LOADS ARE NECESSARY. 10K EOLR ARE REQUIRED ON UNUSED NAC OUTPUTS.
5. AUX PWR OUTPUTS ARE IDENTICAL. DEFAULT CONFIGURATION IS FOR ALWAYS ON (EXCEPT DURING PANEL RESTART), BUT THIS CAN BE ALTERED. OUTPUTS ARE NOT SUPERVISED. NOT RECOMMENDED FOR DOOR HOLDER POWER.
6. NAC AND AUX PWR OUTPUTS WILL SWITCH CAPACITIVE LOADS OF UP TO 7000uF WITHOUT FAULT.

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

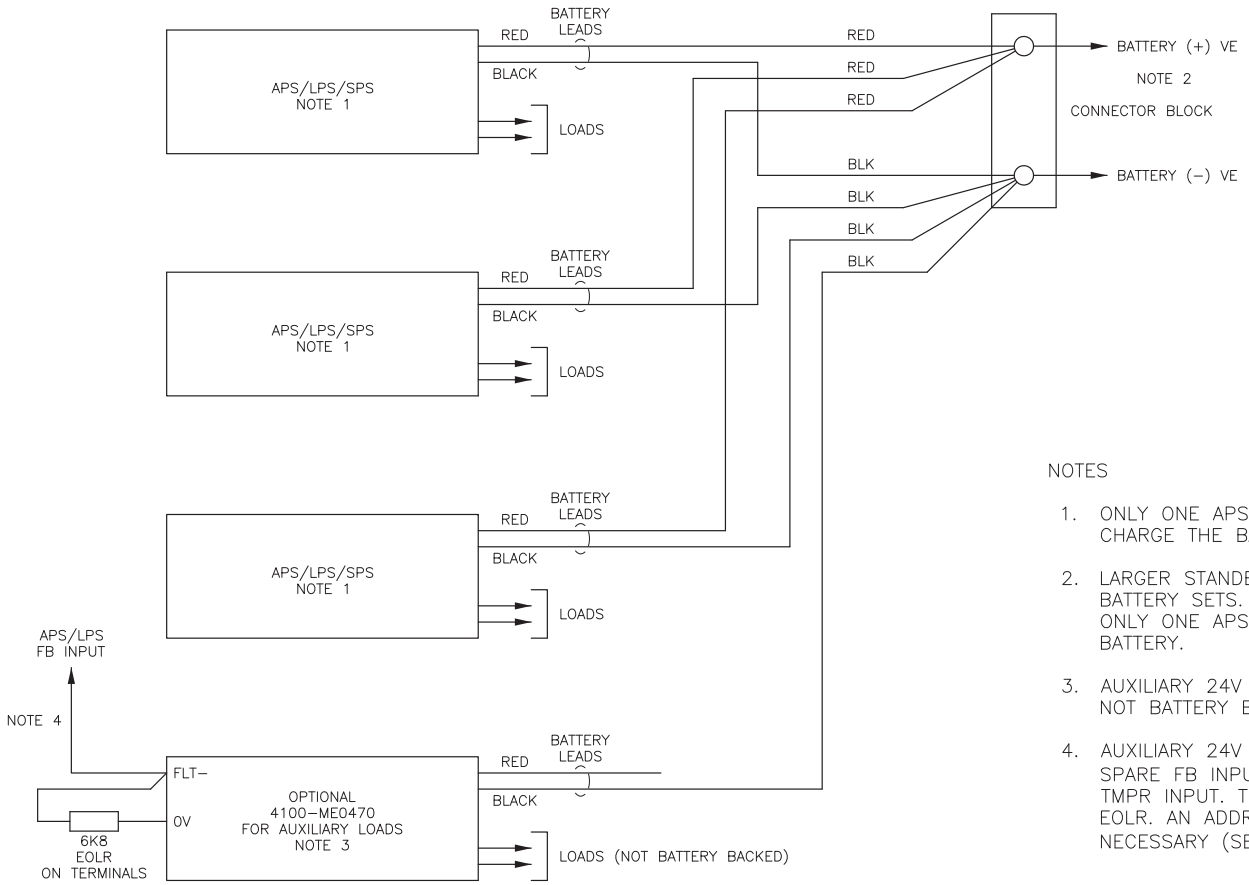
ISS/REV	AMENDMENTS	ECO	DRN	CHKD	AUTH	APVD	DATE
A	ORIGINAL	4809	KJS	LSC	RC	DP	4-4-16
B	UPDATED FOR T-GEN2 GRADE 2.	5142	KJS	PV	RC	DC	15-10-18

JOHNSON CONTROLS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
APS / LPS OUTPUTS
WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 707 of N

A3 | ISS/REV B | PART No:



NOTES

1. ONLY ONE APS, LPS OR SPS SHOULD BE CONFIGURED TO CHARGE THE BATTERY. BATTERY CAN BE UP TO 80AHR.
2. LARGER STANDBY CAPACITY REQUIRES MULTIPLE SYSTEM BATTERY SETS. CONNECT TO SEPARATE APS, LPS OR SPS. ONLY ONE APS, LPS OR SPS SHOULD CHARGE EACH BATTERY.
3. AUXILIARY 24V PSU DOES NOT SHARE THE BATTERY, AND IS NOT BATTERY BACKED.
4. AUXILIARY 24V PSU FAULT OUTPUT IS MONITORED BY A SPARE FB INPUT ON APS/LPS OR RELAY CARD, OR TIC TMPR INPUT. TIC TMPR INPUT DOES NOT REQUIRE THE 6K8 EOLR. AN ADDRESSABLE DEVICE CAN BE USED IF NECESSARY (SEE SHEET 702).

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	4977	KJS	LSC	RC	DP	2–11–16

tyco
Fire Protection Products
TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895096
NEW ZEALAND. FAX:+64 3 3895938

4100ESi
APS / LPS / SPS BATTERY SHARING WIRING DIAGRAM

DRAWING No: 1976-181 SHEET 708 of N

A3 | ISS/REV A | PART No:

Simplex

LT0432
Issue 2.6