Vigilant MX1-Au
Fire Alarm System
Wiring Diagrams
Cautions & Warnings

100V a.c. audio line wiring is defined as LV Telecommunications circuits and is subject to the Australian Standard AS/ACIF S009:2006. Ensure that this wiring is appropriately separated and insulated from LV power wiring, ELV and other customer cabling such as detection and control circuits.

The internal circuit cards may be damaged by static electricity when handled. Ensure you are wearing an earthed ESD strap when installing the MX1 circuit cards.

Ensure all power is turned off when connecting/disconnecting internal and field wiring as damage may occur if wrong or partial connections are made with power applied.

| Document | 29 July 2009 | Issue 1.12 | Sheet 123 updated |
| History: | 10 Nov 2009 | Issue 1.13 | Sheet 147 updated |
|          | 1 Feb 2011 | Issue 1.20 | Multi-MX loop changes. Sheets 130, 148, 149 & 1982-88 added. Sheets 103, 116, 121, 124, 128, 140-144 revised. Sheet 146 deleted |
|          | 13 June 2011 | Issue 1.30 | Sheet 149 updated |
|          | 16 Nov 2011 | Issue 1.40 | Sheets 128, 143, 145, 148 amended |
|          | 30 May 2012 | Issue 1.50 | Sheet 147 and Drawing 1982-88 updated |
|          | 4 Oct 2013 | Issue 1.60 | Updated for networking and 8U cabinet. |
|          | 5 Nov 2013 | Issue 1.70 | Sheets 153 and 157 amended. |
|          | 11 April 2014 | Issue 1.80 | Sheets 150 amended. |
|          | 9 March 2015 | Issue 1.90 | Sheet 143 amended, Sheets 132, 161 to 165 added. |
|          | 11 Nov 2015 | Issue 1.91 | Sheet 1982-210 Sheet 2 added. |
|          | 30 March 2016 | Issue 1.92 | Sheet 1982-210 Sheet 2 updated. |
|          | 19 July 2017 | Issue 1.93 | Sht 166, 167, 168 added. |
|          | 8 February 2019 | Issue 1.96 | Sht 118 updated, 170 added. |
Each of these diagrams (most in the 1982-71 series) shows the wiring for a particular module, card or base which can be used with the MX1-Au fire alarm system.

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**Networking**

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**8U Gearplate Layouts**

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**Brigade Kits**

| 145 | MX1 WA ASE Wiring | B |
| 147 | MX1 Centaur & Centaur II ASE Mounting & FAS Wiring Details | C |
| 1982-210-2 | MX1 NTFAST Brigade I/F Wiring Details | B |

**Extra Information**

| 1982-88 | MX1 Zone LED Board Cabling | D |
| 1922-98 | Centaur Resistor Colour Code | A |
NOTES:

1. PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
2. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
3. FOR PA1011 MX1 CONTROLLER AND REV 1–2 MX1 LOOP CARDS FIT LIMIT800 OR MX DEVICE WITH INTEGRAL SCI AT MX1 AL+/AL- AND AR+/AR- TERMINALS INSIDE THE MX1 CABINET OR AN IMMEDIATELY ADJACENT BOX. NOT REQUIRED FOR PA1081 OR REV 3 ONWARDS LOOP CARDS.
4. NO MORE THAN 40 DEVICES (MX DETECTORS/MODULES + ACTUATING DEVICES ON CIM/DIM/MIM/MIO INPUTS AND EACH SEPARATE OUTPUT FUNCTION ON MIO AND EACH SNM AND RIM MODULE) BETWEEN ISOLATORS. 850 DETECTORS IN 4B–C AND MX DETECTORS IN ISOLATOR BASES ARE ISOLATORS.

FIRE ALARM
IN CONCEALED SPACE

TYCO E500MK2
REMOTE INDICATOR

TYCO FIRE PROTECTION PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895098
NEW ZEALAND. FAX:+64 3 3895938
NOTES:
1. USE ONLY 850XX DETECTORS.
2. PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
3. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
4. FOR PA1011 MX1 CONTROLLER AND REV 1-2 MX1 LOOP CARDS FIT LIM800 OR MX DEVICE WITH INTEGRAL SCI AT MX1 AL+/AL- AND AR+/AR- TERMINALS INSIDE THE MX1 CABINET OR AN IMMEDIATELY ADJACENT BOX. NOT REQUIRED FOR PA1081 OR REV 3 ONWARDS LOOP CARDS.
5. NO MORE Than 40 DEVICES (MX DETECTORS/MODULES + ACTUATING DEVICES ON CIM/DIM/MIM/MIO INPUTS AND EACH SEPARATE OUTPUT FUNCTION ON MIO AND EACH SNM AND RIM MODULE) BETWEEN ISOLATORS. 850 DETECTORS IN 4B-C AND MX DETECTORS IN ISOLATOR BASES ARE ISOLATORS.

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TYCO FIRE PROTECTION PRODUCTS
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MX1
4B-C CONTINUITY BASE
WIRING DIAGRAM
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.

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1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1.
MX LOOP FROM PREVIOUS DEVICE

EXTERNAL 24V DC PSU

SEE NOTES FOR REQUIREMENTS

COLLECTIVE DETECTOR CIRCUIT

RED
BLACK

SEE NOTE 2

DIM800 DETECTOR INTERFACE MODULE

MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 4)

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<th>DETECTOR MODEL</th>
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<td>614T</td>
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<td>23</td>
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<tr>
<td>S/C</td>
<td>HARD CONTACT</td>
<td>40</td>
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</tbody>
</table>

USED IN 58 OR MUB BASES

NOTES:
1. IF EXTERNAL PSU IS REMOTE, DO NOT CONNECT MORE THAN 40 COLLECTIVE DETECTORS PER CABLE.
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.
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 CIR A AND B CAN BE USED.

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3rd ANGLE PROJECTION

MX1
DIM800 DETECTOR INTERFACE MODULE
WIRING DIAGRAM

TYCO SAFETY PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH, PH: +64 3 3895086
NEW ZEALAND. FAX: +64 3 3895938

DRAWING No: 1982-71 SHEET 107of N

A3 ISS/REV A PART No:
MX LOOP FROM PREVIOUS DEVICE
MX LOOP TO NEXT DEVICE

MIM800 MINI MODULE
IN++ 0 - 0+

200 ohm EOL

LED

NORMALLY OPEN

NORMALLY OPEN WITH S/C FAULT

NOTES:
1. INPUT CONTACTS MUST BE VOLTAGE FREE.
2. CIRCUIT RESISTANCE: 10 OHM MAX.
3. CIRCUIT LENGTH: 10m MAX.
4. LED CURRENT: 2.5mA.
5. NORMALLY CLOSED MODES DO NOT SUPPORT INTERRUPT.

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ISS/REV AMENDMENTS ECO DRN CHKD AUTH APVD DATE
A ORIGINAL

TYCO SAFETY PRODUCTS
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P.O. BOX 19545
CHRISTCHURCH. PH: +64 3 3895098
NEW ZEALAND. FAX: +64 3 3895938

MX1
MIM800 MINI INPUT MODULE
WIRING DIAGRAM

DRAWING No: 1982-71 SHEET 108of N
A3 ISS/REV A PART No:
CIM800 CONTACT INPUT MODULE

NORMALLY OPEN

200 ohm EOL

MX LOOP

PREVIOUS

DEVICE

NEXT

DEVICE

Lt L Lt L

At A Bt B

CIM800 CONTACT INPUT MODULE

NORMALLY OPEN, S/C = FAULT

200 ohm EOL

MX LOOP

PREVIOUS

DEVICE

NEXT

DEVICE

Lt L Lt L

At A Bt B

CIM800 CONTACT INPUT MODULE

NORMALLY CLOSED

200 ohm EOL

MX LOOP

PREVIOUS

DEVICE

NEXT

DEVICE

Lt L Lt L

At A Bt B

CIM800 CONTACT INPUT MODULE

NORMALLY CLOSED, O/C = FAULT

200 ohm EOL

MX LOOP

PREVIOUS

DEVICE

NEXT

DEVICE

Lt L Lt L

At A Bt B

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.

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1 DEcimal PLACE ±0.5, 2 DEcimal PLACES ±0.3, 3 DEcimal PLACES ±0.1

MX1
CIM800 CONTACT INPUT MODULE
WIRING DIAGRAM

TYCO SAFETY PRODUCTS
17 MARY MULLER DRIVE
P.O. BOX 19545
CHRISTCHURCH. PH: +64 3 3895096
NEW ZEALAND. FAX: +64 3 38959938

DRAWING No: 1982-71 SHEET 109of N
A3 ISS/REV A PART No:
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. ONLY INPUTS 1 AND 2 SUPPORT INTERRUPT.
6. DO NOT USE 01 TO 04 OUTPUTS.
7. CIRCUITS MUST NOT BE JOINED TOGETHER OR TO ANY OTHER WIRING.
8. FOR VIO800 WIRING REFER TO SHEET 119.
SNM800 SOUNDER NOTIFICATION MODULE

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.
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
WIRING DIAGRAM

LPS800 LOOP POWERED SOUNDER MODULE

MX LOOP FROM PREVIOUS DEVICE
MX LOOP TO NEXT DEVICE

L+ L- L+ L- S+ S- R+ R-

SPUR WIRING (CLASS B)

LPS800 LOOP POWERED SOUNDER MODULE

MX LOOP FROM PREVIOUS DEVICE
MX LOOP TO NEXT DEVICE

L+ L- L+ L- S+ S- R+ R-

LOOP WIRING (CLASS A)

NOTES:
1. S+ S- OUTPUT: 75mA @ 24V DC MAX.
2. OUTPUT VOLTAGE = MX LOOP –2V, WHEN MX LOOP <26V.
3. LOAD DEVICES MUST HAVE SERIES DIODE AND BE VOLTAGE FREE.
4. INDUCTIVE LOADS MUST HAVE BACK-EMF DIODE OR SUPPRESSION.

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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

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MX1
LPS800 LOOP POWERED SOUNDER MODULE
WIRING DIAGRAM

DRAWING No: 1982-71 SHEET 113 of N
A3 ISS/REV A PART No:
MX1

LIM800 LOOP ISOLATOR MODULE

NOTES:
1. LIM800 PROVIDES MX LOOP SHORT CIRCUIT ISOLATION.
2. PROVIDES SEPARATELY ISOLATED SPUR OUTPUT TO NO MORE THAN 40 DEVICES.
3. MAX IB UNITS BETWEEN ISOLATORS = 100 IB UNITS.
4. FOR PA1011 MX1 CONTROLLER AND REV 1–2 MX1 LOOP CARDS FIT LIM800 OR MX DEVICE WITH INTEGRAL SCI AT MX1 AL+/AL– AND AR+/AR– TERMINALS INSIDE THE MX1 CABINET OR IMMEDIATELY ADJACENT BOX. NOT REQUIRED FOR PA1081 OR REV 3 ONWARDS LOOP CARDS.
5. FIT NO MORE THAN 40 DEVICES (MX DETECTORS/MODULES + ACTUATING DEVICES ON CIM/DIM/MIM/MIO INPUTS AND EACH SEPARATE OUTPUT FUNCTION ON MIO AND EACH SNM AND RIM MODULE) BETWEEN ISOLATORS. MX DETECTORS IN ISOLATOR BASES NEED NOT BE COUNTED.

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UNLESS OTHERWISE STATED: ALL DIMENSIONS IN MILLI METRES. DO NOT SCALE. TOLERANCES ARE TO BE:
1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1
MX LOOP FROM PREVIOUS DEVICE {+} + MX LOOP TO NEXT DEVICE {−}

S271f+ DETECTOR

NOTES:
1. USE APPROPRIATE CABLE PROTECTION FOR FLAMEPROOF INSTALLATIONS.
2. REFER TO S271f+ INFORMATION FOR RANGE AND SELF TEST WIRING.
3. REFER TO S271f+ USER MANUAL FOR CABLING AND EARTHING REQUIREMENTS.

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ISS/REV | AMENDMENTS | ECO | DRN | CHKID | AUTH | APVD | DATE
--- | --- | --- | --- | --- | --- | --- | ---
A | ORIGINAL | − | − | − | − | − | −

MX1 S271f+ FLAMEPROOF DETECTOR WIRING DIAGRAM

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

DRAWING No: 1982-71 SHEET 117 of N
A3 ISS/REV A PART No:
**MX1**

**MIO800 LASERPLUS / SCANNER WIRING DIAGRAM**

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<th>MIO800</th>
<th>VESDA STATES</th>
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<td>I/P 1</td>
<td>FIRE 1 AND URGENT FAULT</td>
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</tr>
<tr>
<td>O/P 3</td>
<td>RESET (OPTIONAL)</td>
</tr>
</tbody>
</table>

**NOTES:**
1. IT IS RECOMMENDED THE VESDA UNIT BE PROGRAMMED SO THAT RELAY 3 DROPS OUT ON URGENT FAULT OR ISOLATE. THUS ISOLATING THE VESDA WILL CREATE A FAULT ON THE MX1.

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MX1
QIO850 QUAD I/O MODULE
WIRING DIAGRAM

NOTES:
1. MAX INPUT CABLE RESISTANCE 50Ω.
2. AUX SUPPLY 24V DC NOMINAL TO SUIT LOADS.
3. AUX SUPPLY FAULT 18V DC ± 1V.

OUTPUT OPTIONS:
1. CLEAN CONTACT - REMOVE OUT X JUMPER - USE C, NO, NC RELAY AS REQUIRED.
2. SWITCHED AUX O/P - FIT OUT X JUMPER TO AUX POSITION (PIN 2–3). USE NO FOR SWITCHED AUX+ OUTPUT. WIRE TO LOAD AND BACK TO 0V (AUX-).

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3rd ANGLE PROJECTION

ISS/REV AMENDMENTS ECO DRN CHKID AUTH APRVD DATE
A ORIGINAL - KJS JC RC DP 17=12=14
B NOTES UPDATED, LINKS SHOWN. E031778 KJS PV RC DC 16=10=19

DRAWING No: 1982-71 SHEET 161 of N

A3 ISS/REV B PART No:
MX LOOP TO NEXT DEVICE

MX LOOP FROM PREVIOUS DEVICE

NOTES:
1. LOAD REQUIRES SERIES DIODE IF NOT FITTED INTERNALLY.
2. FIT WIRING MONITOR JUMPER TO ENABLED (1–2) TO ENABLE SUPERVISION OF WIRING RESISTANCE TO AUX SUPPLY. FIT TO DISABLED (2–3) TO DISABLE.
3. AUX SUPPLY 24V DC NOMINAL.
4. AUX SUPPLY FAULT 18V ± 1V.
NOTES:
1. AUX SUPPLY 24V DC NOMINAL TO SUIT LOADS.
2. AUX SUPPLY FAULT 18V DC ± 1V.

OUTPUT OPTIONS:
1. CLEAN CONTACT - REMOVE OUT X JUMPER - USE C, NO, NC RELAY A5 REQUIRED.
2. SWITCHED AUX O/P - FIT OUT X JUMPER TO AUX POSITION (PIN 2-3). USE NO FOR SWITCHED AUX+ OUTPUT. WIRE TO LOAD AND BACK TO 0V (AUX-).
### Fire Protection Products

**MX1, LOOP POWERED**

**DDM800 DUAL DETECTOR MODULE**

**WIRING DIAGRAM**

---

### MAX QTY OF DETECTORS PER CIRCUIT (SEE NOTE 1 & 4)

<table>
<thead>
<tr>
<th>DETECTOR MODEL</th>
<th>DETECTOR TYPE</th>
<th>MAX QTY PER CIRCUIT LOW VOLTAGE MODES</th>
<th>MAX QTY PER CIRCUIT OTHER MODES (NOT IS)</th>
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<tr>
<td>614CH</td>
<td>CO AND HEAT</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>614I</td>
<td>IONISATION</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>614P</td>
<td>PHOTOELECTRIC</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>614T</td>
<td>HEAT</td>
<td>17</td>
<td>29</td>
</tr>
<tr>
<td>S/C</td>
<td>HARD CONTACT</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

Used in 4B/5B/MUB BASES

---

**NOTES:**

1. REFER LTD441 MX1 DESIGN 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.
5. MAX DETECTOR CURRENT:
   - 1.5mA PER CIRCUIT - LOW VOLTAGE MODE.
   - 2.5mA PER CIRCUIT - OTHER MODES.
6. MAX COLLECTIVE CIRCUIT RESISTANCE: 50 OHMS.
7. BOTH CIR C AND B CAN BE USED.

---

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3rd ANGLE PROJECTION

---

**ISS/REV** A

**AMENDMENTS**

**ECO**

**DRN**

**CHK**

**AUTH**

**APVD**

**DATE**

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**TYCO FIRE PROTECTION PRODUCTS**

**DRAWING No: 1982-71 SHEET 164 of N**

---

**A3 ISS/REV A PART No:**
NOTES:
1. INPUT CONTACTS MUST BE VOLTAGE-FREE.
2. MAX INPUT CABLE RESISTANCE 500.
3. RELAY IS UNSUPERVISED, SINGLE POLE, CHANGE-OVER, VOLTAGE-FREE, RATED 2A @ 24V DC RESISTIVE.
NOTES:
1. USE APPROPRIATE CABLE PROTECTION FOR FLAMEPROOF INSTALLATIONS.

2. REFER TO FV400 SERIES DETECTOR FIXING INSTRUCTIONS 120.515.124_FV-D-400-F FOR WALK TEST WIRING.

3. REFER TO FV400 INSTRUCTIONS FOR CABLING AND EARTHING REQUIREMENTS.

4. SEE TABLE FOR DIP SWITCH SETTINGS.

<table>
<thead>
<tr>
<th>SWITCH</th>
<th>FUNCTION</th>
<th>DIP SWITCH SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW1-1</td>
<td>CONFIGURATION</td>
<td>ON</td>
</tr>
<tr>
<td>SW1-2</td>
<td>ALARM DELAY</td>
<td>OFF/OFF = SHORT (3s), OFF/ON = MED (6s), ON/OFF = LONG (12s), ON/ON = SHORT (3s)</td>
</tr>
<tr>
<td>SW1-3</td>
<td>RANGE</td>
<td>OFF/OFF = NORMAL (33m), OFF/ON = HALF (15m), ON/OFF = CLOSE (&lt;3m), ON/ON = EXTENDED (65m)</td>
</tr>
<tr>
<td>SW1-4</td>
<td>AUXILIARY POWER</td>
<td>ON IF AUXILIARY SUPPLY IS USED (DO NOT FIT HDR3 OR HDR4)</td>
</tr>
<tr>
<td>SW1-5</td>
<td>FAULT LATCH</td>
<td>OFF FOR NON-LATCHING FAULT</td>
</tr>
<tr>
<td>SW1-6</td>
<td>ALARM LATCH</td>
<td>ON FOR NON-LATCHING ALARM</td>
</tr>
<tr>
<td>SW1-7</td>
<td>FALT LATCH</td>
<td>OFF FOR NON-LATCHING FAULT</td>
</tr>
<tr>
<td>SW1-8</td>
<td>WINDOW HEATER</td>
<td>OFF = NO HEATER, ON = HEATER</td>
</tr>
<tr>
<td>SW2-1</td>
<td>OPM</td>
<td>OFF = AUTO OPTICAL PATH MONITORING (WINDOW CLEANLINESS)</td>
</tr>
<tr>
<td>SW2-2</td>
<td>INTERFACE</td>
<td>ON</td>
</tr>
<tr>
<td>SW2-3</td>
<td>INTERFACE</td>
<td>ON</td>
</tr>
<tr>
<td>SW2-4</td>
<td>INTERFACE</td>
<td>ON</td>
</tr>
<tr>
<td>SW2-5</td>
<td>MIX MODE</td>
<td>ON</td>
</tr>
<tr>
<td>SW2-6</td>
<td>MIX MODE</td>
<td>OFF</td>
</tr>
<tr>
<td>SW2-7</td>
<td>MIX MODE</td>
<td>SET ON TO PROGRAM MX LOOP ADDRESS, THEN SET OFF</td>
</tr>
<tr>
<td>SW2-8</td>
<td>&lt;FUTURE&gt;</td>
<td>OFF</td>
</tr>
</tbody>
</table>

MX1
FV4XX FLAMEPROOF DETECTOR
WIRING DIAGRAM

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ISS/REV AMENDMENTS ECO DRN CHKD AUTH APVD DATE
A ORIGINAL

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1. Use appropriate cable protection for intrinsically safe installations.
2. Refer to FV421i series detector fixing instructions 120.515.204 for walk test wiring, cabling and earthing requirements.
3. See table for dip switch settings.

SWITCH FUNCTION | DIP SWITCH SETTING
--- | ---
SW1-1 Configuration | ON
SW1-2 Alarm Delay | OFF/OFF = SHORT (3s), OFF/ON = MEDIUM (6s),
SW1-3 Alarm Delay | ON/OFF = LONG (12s), ON/ON = SHORT (3s),
SW1-4 Range | OFF/OFF = NORMAL (33m), OFF/ON = HALF (15m),
SW1-5 Range | ON/OFF = CLOSE (<6m), ON/ON = EXTENDED (65m),
SW1-6 OPM Mode | REFER TO FIXING INSTRUCTIONS
SW1-7 Alarm Latch | ON FOR NON-LATCHING ALARM
SW1-8 Fault Latch | OFF FOR NON-LATCHING FAULT
SW2-1 Interface | ON = MX
SW2-2 Interface | ON = MX
SW2-3 Mode | ON = DIP SWITCH
SW2-4 Mode | OFF

Notes:
- IS MX LOOP FROM PREVIOUS DEVICE
- IS MX LOOP TO NEXT DEVICE
- REFER TO 1982-71 SHEET 118 FOR INTERFACING TO MX LOOP

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Drawing No: 1982-71 SHEET 170 of N

ISS/REV A PART No:
NOTES:
1. REFER SHEET 106 FOR SOUNDER BASE WIRING AND SHEET 108 FOR MIM800 DETAILS.
2. MIM800 LED O/P SHOULD BE MAPPED TO THE DETECTOR ZONE AND CONFIGURED FOR OUTPUT CONTROL = ZONE SECONDARY CONTROL.
40020 STROBE

FIRE

5E6

BLACK

RED

MX1 CONTROLLER

NOTES:
1. CONFIGURE ANC 2 FOR 40020 STROBE SUPERVISION.
2. ANC 1 RELAY COULD BE USED IF AVAILABLE.
3. FIT 5E6 RESISTOR (INCLUDED WITH MX1) INSIDE 40020.
OPTIONALLY LINK SYNCH-TERMINALS IF TONES MUST BE SYNCHRONISED. SEE NOTE 2.

27k ELD ON SPARE DC TERMINALS. SEE NOTE 1.

USE DOUBLE-SHEATHED CABLE

27k ELD ON 100V LINE

EARTH SECOND MINI-GEN TO FIRST MINI-GEN.

USE DOUBLE-SHEATHED CABLE

27k ELD ON 100V LINE

OPTIONAL CONTROL OF ALERT. SEE NOTE 3.

NOTES:
1. IF ONLY 1 MINI-GEN, FIT 2 X 27K ELD RESISTORS ACROSS SPARE +VE/-VE TERMINALS.
2. CONNECT SYNCH-TERMINALS OF MINI-GENS TOGETHER TO SYNCHRONISE TONE/VOICE MESSAGES.
3. USE GP OUT (1 OR 2) WITH SUITABLE PROGRAMMING TO CONTROL ALERT/EVAC TONE. OUTPUT ON = ALERT TONE.
4. FIT 2W LINK ON MINI-GENS.
5. MUST USE ANC 3 OUTPUT.
6. THIRD MINI-GEN CAN BE WIRED AS PER 2ND.

MOUNT MINI-GEN AT THIS POINT WITH M3 SCREW TO EARTH TO GEAR PLATE. ALL OTHER MOUNTINGS USE PLASTIC STAND-OFFS.

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3rd ANGLE PROJECTION

MX1
MINI-GEN
WIRING DIAGRAM

TYCO SAFETY PRODUCTS
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DRAWING No: 1982-71 SHEET 122 of N

A3 ISS/REV A PART No:
NOTES:
1. USE LM0319 CABLE INCLUDED WITH MX1 FOR WIRING TO 
    T-GEN MOUNTED ON THE GEAR PLATE. USE THE PREFITTED 
    LOOM WHEN FITTING A F06926 3U T-GEN DOOR.
2. FIT OPTIONAL WIRING FROM GP OUT (1 OR 2) TO 
    CONTROL ALERT/EVAC TONE. OUTPUT ON IS EVAC, WITH 
    T-GEN SET FOR ALERT ONLY TONE (SW1–3 ON). 
    SUPERVISE GP OUTPUT WITH SUITABLE PROFILE, E.G. 
    "TGEN-50 EVAC ACTIVATE"
3. SET T-GEN FOR: 
    SW1–3 DELAY AS REQUIRED. 
    SW4 ON 
    SW5 OFF 
    SW6–7 TONE AS REQUIRED 
    SW8 OFF 
    LK7 IN RELAY POSITION.
4. ANC 2 COULD BE USED WITH T-GEN WITH SAME WIRING 
    (ANC 3 IS NOT DIRECTLY COMPATIBLE WITH T-GEN).

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3rd ANGLE PROJECTION
OPTIONALLY LINK SYNCH- TERMINALS.
IF STROBES MUST BE SYNCHRONISED.
SEE NOTE 2.

27k ELD ON SPARE DC TERMINALS.
SEE NOTE 1.

STROBES
USE ONLY SIMPLEX 4906–9103 OR
4906–9104 MULTI-CANDIDA STROBES.
THESE CONTAIN AN INTERNAL DIODE SO
NO EXTERNAL ONE IS REQUIRED.
MAX STROBE LOAD PER DRIVER IS 2A.

NOTES:
1. IF ONLY 1 STROBE DRIVER, FIT 2 X 27k ELD
   RESISTORS ACROSS SPARE +VE/-VE TERMINALS.
2. CONNECT SYNCH- TERMINALS OF STROBE DRIVERS
   TOGETHER TO SYNCHRONISE FLASHING.
3. TURN ON 2 WIRE SWITCH ON STROBE DRIVER.
4. MUST USE ANC 3 OUTPUT.
NOTES:
1. 16 RELAY OUTPUTS:
   RELAY = SINGLE POLE CHANGE-OVER
   2A 30VDC. USE PA0470.
2. ALTERNATIVELY 16 OPEN COLLECTOR OUTPUTS:
   OPEN COLLECTOR = 50mA OPEN COLLECTOR
   PULL DOWN TO <1V. MX1 +VB VOLTAGE MAX.
   WIRING MUST NOT EXIT CABINET. USE PA0483
   UNPROTECTED TERMINATION BOARD OR PA0480
   16 WAY PROTECTED OUTPUT BOARD.
MX1 CONTROLLER

NOTES:
1. REFER TO LT0088 QE90 INSTALLATION MANUAL FOR QE90 WIRING.
2. USE GP1 OR 2 INPUT.

EWIS FAULT RELAY ON FIP, STROBE ETC.
(NORMALLY ENERGISED)

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MX LOOP WIRING

NOTE 3

NOTES:
1. SEE DRAWINGS 1982-71 SHEET 140, 142 OR 143 FOR AVAILABLE
   POSITIONS ON GEARPLATE.
2. SET DIP SWITCH FOR LOOP #.

<table>
<thead>
<tr>
<th>LOOP #</th>
<th>OFFLINE /9600</th>
<th>64</th>
<th>32</th>
<th>16</th>
<th>8</th>
<th>4</th>
<th>2</th>
<th>1</th>
<th>SW9</th>
<th>SW10</th>
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<tbody>
<tr>
<td>2</td>
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<td>ON</td>
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<td>ON</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

3. MX LOOP CARD MUST BE EARTHED VIA MOUNTING OR J7 TO
   GEARPLATE.
MX1 PANEL

10 WAY FRC LM0172*

MX1 CONTROLLER BRD

FIT 10W FRC TO SERIAL PORT 0, 2, 3 OR 4 TO MATCH CONFIGURATION.

FITTED TO MX1 PANEL

10 WAY FRC LM0441#

REMOTE FBP

003 KEYED KEY SWITCH# (AUST REMOTE FBP ONLY)

DOOR SWITCH# (NZ REMOTE FBP ONLY)

MX1 LCD/KEYBRD PA1057

LINK 7 FITTED

LINK 8 NOT FITTED

RS485 COMMS BRD, PAA773

RS485 DATA

COMMS WIRING

PREFERABLY TWISTED AND SCREENED PAIRS

EARTH*

DENOTES WIRING INCLUDED WITH REMOTE FBP THAT MUST BE FITTED TO MX1 PANEL.

DENOTES FACTORY FITTED WIRING SUPPLIED WITH REMOTE FBP.

* DENOTES WIRING INCLUDED WITH REMOTE FBP THAT MUST BE FITTED TO MX1 PANEL.

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3rd ANGLE PROJECTION

ISS/REV

AMENDMENTS

ECO

DRN

GMD

AUTH

APND

DATE

A

ORIGINAL

KJS

Y2H

RC

DP

18-6-10

B

KEY SWITCH Wiring UPDATED.

4222

KJS

Y2H

RC

DP

9-12-10

C

NZ DOOR SWITCH Wiring ADDED FOR FP1009.

4532

KJS

RC

RC

DP

18-7-11

tyco

Fire Protection Products

TYCO FIRE PROTECTION PRODUCTS

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MX1

REMOTE FBP

WIRING DIAGRAM

DRAWING No:

1982-71

SHEET 130of N

A3

ISS/REV

C

PART No:
MX1 CONTROLLER

NOTES:

1. MOUNT FUSE BOARD USING 4 PLASTIC DOUBLE BARB PCB
   STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.
2. FUSE 1A WIRING AS STANDARD. CAN BE REPLACED UP TO 3A.
3. MAX COMBINED LOAD DETERMINED BY PSU/BATTERY RATING.
Notes:

1. Diagrams show connections and suggested looms for three example arrangements of MX1 3U AS1668 fan control doors and boards.

2. Use these diagrams as a guide for other quantities and arrangements of AS1668 fan control doors and control boards.

3. Each control board needs unique odd number set on Dip Switch to assign top fan control number to match configuration.

4. Use 10 way FRC loom LM0583 to connect adjacent boards on the same door, or RJ45 lead LM0585 to connect non-adjacent boards.

5. If using one or more additional AS1668 fan control doors: RJ45 patch loom LM0583 connects J4/J5 on a board on one door to J4/J5 on a board on the next door.

6. 10W FRC loom LM0584 connects the top most control board, closest to the door hinge, to J25, J26, J27 or J28 on the MX1 controller, or J2, J3 on an MX loop card to match MX1 programming. This board has Dip Switch configured as master (all others configured as slave).

7. To power the control boards, use LM0590 to connect J33 on the MX1 controller to J3 on one fan control board.

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MX1 CONTROLLER

NOTES:

1. USE LM0319 CABLE INCLUDED WITH MX1 FOR WIRING TO T-GEN 60/120 MOUNTED ON THE GEAR PLATE. IF THE LM0319 INCLUDES RED AND BLACK WIRES (+24V, 0V) REMOVE THEM AS T-GEN2 MUST BE POWERED AS SHOWN. USE THE PREFITTED LOOM WHEN FITTING A FP1121 3U DOOR WITH T-GEN 60.

2. USE FUSED CONNECTION (LM0459) FROM J33 LOOP INTERFACE SUPPLY ON MX1 CONTROLLER TO POWER T-GEN2. FIT 10A FUSE (FU0042 INCLUDED).

3. FIT OPTIONAL WIRING FROM GP OUT (1 OR 2) TO CONTROL ALERT/EVAC TONE.

4. ANC 2 COULD BE USED WITH T-GEN WITH SAME WIRING (ANC 3 IS NOT DIRECTLY COMPATIBLE WITH T-GEN 60).

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1 DECIMAL PLACE ±0.5, 2 DECIMAL PLACES ±0.3, 3 DECIMAL PLACES ±0.1

ISS/REV | AMENDMENTS | ECO | DRN | CHK | AUTH | APVD | DATE
--- | --- | --- | --- | --- | --- | ---
A | ORIGINAL | S053 | R15 | L05 | RC | DC | 8-9-17

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A3 ISS/REV A PART No:

DRAWING No: 1982-71 SHEET 133 of N

USE DOUBLE-SHEATHED CABLE FOR 100V WIRING

1 mm² OR THICKER

NOTE 2

10A FUSE

NOTE 2
NOTES:
1. 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.
2. The order of GUS interconnections is not important.
3. Switching module address setting to match configuration in smartconfig.

TO OTHER GUS MODULES

SLEEVE RESISTOR LEADS. 100V is present during activation.

FIT EDGE TO LAST SWITCHING MODULE IN CHAIN.

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

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NEW ZEALAND. FAX: +64 3 3895938

ISS/REV | AMENDMENTS |
---|---|
A | ORIGINAL |
B | UPDATED FOR T-GEN2 DRIVE 2. |

ECO | DRN | CHKID | AUTH | APVD | DATE |
---|---|---|---|---|---|
5022 | KJS | LSC | RC | DC | 29-1-17 |
5142 | KJS | PV | RC | DC | 15-10-18 |

DRAWING No: 1982-71 SHEET 134 of N

A3 | ISS/REV | B | PART No:
---|---|---|---
T-GEN2
100V SPLITTER MODULE / UI
WIRING DIAGRAM

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3rd ANGLE PROJECTION

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ISS/REV: A
AMENDMENTS: ORIGINAL
ECO DRN CHKO AUTH APVD DATE
S022 IJS RC RC DC 4-3-17

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1. 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 isolation is recommended inside the cabinet. 
2. The order of GUS interconnections is not important. 
3. 100V outputs of two switching modules are wired in parallel to provide 4 outputs with 3 x 100V audio inputs connected out 1 to out 2, out 3 to out 4, etc. 
4. Each module is configured with addresses 1 to 4 of first module. 
5. The 100V output of T-GEN2 configured as audio mapping A to 100V in A of parallel switching module. 
6. The 100V output of T-GEN2 configured with audio mapping B to 100V in B of parallel switching module. 
7. The 100V output of T-GEN2 configured with audio mapping C to 100V in C of address 41 switching module. 
8. Each channel 3 x 100V output from 1 to 3 out 1 to out 3, out 2 to out B to in A / N B / 2nd out B to in B / 3rd out C to in C / 4th out D to in D. 
9. 100V inputs connected together using link for D0 in A, B0 in B, C0 in C, D0 in D. 
10. Switching module address setting to match configuration in switchware.

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T-GEN2 TRIPLE 100V SWITCHING MODULE WIRING DIAGRAM

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ISS/REV: A
PART No:

DRAWING No: 1982-71 SHEET 138 of N

AMENDMENTS
ISS/REV
ECO
DRN
CHKG
AUTH
APVD
DATE

A
C942
KJS
PV
RC
DC
15-10-18

3rd ANGLE PROJECTION

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NOTES:

1. MOUNT T-GEN 50 USING 5 PLASTIC STAND-OFFS (HW0130) AND 1 OFF M3X12 SCREW (SCG1771). CENTRE LEFT PLASTIC STAND-OFF WILL NEED ITS RETAINING CLIP REMOVED. STAND-OFFS FACTORY FITTED FROM GEAR PLATE REAR.

2. MOUNT MX LOOP CARD USING 4 PLASTIC DOUBLE BARB STAND-OFFS (HW0052) SUPPLIED IN KIT. STAND-OFFS FITTED FROM GEAR PLATE FRONT.

3. MOUNT MX MODULES USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.
NOTES:

1. MOUNT MINI-GEN OR STROBE DRIVER USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.

2. MOUNT GENERAL PURPOSE RELAY BOARDS USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) PER BOARD, FITTED FROM FRONT OF GEAR PLATE.

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MINI-GEN/STROBE DRIVER

SECTION A-A

MX1 CONTROLLER
NOTES:

1. MOUNT 16 WAY INPUT AND 16 WAY OUTPUT BOARDS USING 4 PLASTIC PCB STAND-OFFS (HW0130) FITTED FROM REAR OF GEAR PLATE SIDE FOLD.

2. MOUNT MXI LOOP CARD USING 4 PLASTIC DOUBLE BAR PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.

1. MOUNT 16 WAY INPUT AND 16 WAY OUTPUT BOARDS USING 4 PLASTIC PCB STAND-OFFS (HW0130) FITTED FROM REAR OF GEAR PLATE SIDE FOLD.

2. MOUNT MXI LOOP CARD USING 4 PLASTIC DOUBLE BAR PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.
1. Mount 16-way relay board on gear plate using 5 plastic stand-offs (HW0130) fitted from rear of gear plate side fold.

2. Mount each bracket mounted MX loop card with 2 off M4 x 10 screws (SC0176), screws fitted from gear plate front.

3. Mount each MX module mounting bracket (FP1027, FP1062, FP1063) with 2 off M4 x 10 screws (SC0176), screws fitted from gear plate front.

4. Mount MX modules on FP1027 bracket using 4 plastic PCB stand-offs (HW0131) provided with bracket.

5. Mount MX modules on FP1062 bracket using 4 plastic PCB stand-offs (HW0209) provided with bracket.
1. Mount PIB in Position 1 or 2 using 2 off M3 M/F barrel nuts (FA2352) and 2 off M3 x 6 screws (SC0172) fitted to J17 and J18.
4 plastic double Barb PCB stand-offs (MN0052) are fitted to the 4 remaining holes. Barrel nuts and plastic double Barb PCB stand-offs are fitted from gear plate front.

2. Mounting the PIB in the same position as the FP1012 bracket is a compromise. Only the Moxa switch or 1 Ethernet Extender may be on the FP1012 bracket. The PIB LEDs are not visible.

3. The Moxa switch and Ethernet Extender clip onto the DIN rail on the FP1012 bracket. Leave a 10mm gap each side of ETH Extender for cooling. Connect the Moxa earth screw to the gear plate.

4. Refer to installation instructions for full mounting and earthing details.

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ISS/REV AMENDMENTS
B UPDATED FOR NEW REV GEAR PLATE
C NOTES UPDATED, IP NETWORK EQUIP ADDED

ECO DRN CHKD AUTH APVD DATE
4167 KJS LSC RC DP 26-08-10
KJS HW RC DP 12-10-10

MX1
PIB/IP NETWORK EQUIP
GEARPLATE POSITIONS

DRAWING No: 1982-71 SHEET 144 of N

A3 ISS/REV C PART No:

SECTION A-A
NOTES:


2. Mount a general purpose SGD (PA0862) using 4 plastic double barb PCB stand-offs (HW0053) fitted from gear plate front.

3. Mount fuse board using 4 plastic double barb PCB stand-offs (HW0052) fitted from front of gear plate.

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3rd ANGLE PROJECTION

ALL DIMENSIONS IN MILLIMETRES, DO NOT SCALE. TOLERANCES ARE TO BE:
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ISS/REV C PART No:

A3

MX1

RS485 BRD, SGD, FUSE BRD
GEARPATE POSITIONS

SHEET 148 of N

DRAWING No: 1982-71

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tyco
Fire Protection Products
1. Mount the 1-HUB on the mounting plate (FA2083) with 8 off M3 x 6 screws (SC0172). Mount the ECM mounting plate on the gear plate side fold using 4 off M4 x 10 screws (SC0176). M4 screws fitted from rear of gear plate side fold.


3. Mount the dual OS139 fibre optic modem mounting bracket (FP1032) in 6 LH positions with 2 off M4 x 10 screws (SC0176) supplied with bracket. Alternatively an FP1032 can be mounted in the RH position with 2 off PK 6 x 3/8" screws (SC0090) using 2 off Ø3.00 holes provided in gear plate.

NOTES:
- Mount the I-HUB on the mounting plate (FA2083) with 8 off M3 x 6 screws (SC0172). Mount the ECM mounting plate on the gear plate side fold using 4 off M4 x 10 screws (SC0176). M4 screws fitted from rear of gear plate side fold.
- Mount RS485 board using 4 plastic double barb PCB stand-offs (HW0303) fitted from gear plate front. Earth to M4 screw in bottom RH corner.
- Mount the dual OS139 fibre optic modem mounting bracket (FP1032) in 6 LH positions with 2 off M4 x 10 screws (SC0176) supplied with bracket. Alternatively an FP1032 can be mounted in the RH position with 2 off PK 6 x 3/8" screws (SC0090) using 2 off Ø3.00 holes provided in gear plate.

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MX1
I-HUB / FIBRE OPTIC MODEMS GEARPLATE POSITIONS

AMENDMENTS

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MX1 CONTROLLER

DUAL FIBRE OPTIC MODULE BRACKET POSITIONS

ALTERNATIVE DUAL FIBRE OPTIC MODULE BRACKET AND RS405 BRACKET POSITION

SECTION A-A

ISOMETRIC VIEW

SCALE 0.200

3rd ANGLE PROJECTION

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A. MOUNT T-GEN 60 USING 5 PLASTIC STAND-OFFS (HW0130) AND 1 OFF M3 X 12 SCREW (SC0177). STAND-OFFS FACTORY FITTED FROM GEAR PLATE REAR.

B. MOUNT T-GEN 60 ON SIDE FLANGE USING 2 OFF M3 M/F BARREL NUTS (FA2552) AND 2 OFF M3 X 6 SCREWS (SC0172) FITTED TO J19 AND J26. 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0032) ARE FITTED TO THE 4 REMAINING HOLES. BARREL NUTS AND PLASTIC DOUBLE BARB PCB STAND-OFFS ARE FITTED FROM SIDE FLANGE FRONT.

C. MOUNT T-GEN 120 WITH 4 OFF M4 X 10 SCREWS (SC0176) USING M4 LOOP CARD BRACKET MOUNTING HOLES IN GEAR PLATE.

D. MOUNT EACH 100V SWITCHING OR SPLITTER MODULE WITH 2 OFF M4 X 10 SCREWS (SC0176) USING M4 LOOP CARD BRACKET MOUNTING HOLES IN GEAR PLATE.

NOTES:

1. MOUNT T-GEN 60 USING 5 PLASTIC STAND-OFFS (HW0130) AND 1 OFF M3 X 12 SCREW (SC0177). STAND-OFFS FACTORY FITTED FROM GEAR PLATE REAR.

2. MOUNT T-GEN 60 ON SIDE FLANGE USING 2 OFF M3 M/F BARREL NUTS (FA2552) AND 2 OFF M3 X 6 SCREWS (SC0172) FITTED TO J19 AND J26. 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0032) ARE FITTED TO THE 4 REMAINING HOLES. BARREL NUTS AND PLASTIC DOUBLE BARB PCB STAND-OFFS ARE FITTED FROM SIDE FLANGE FRONT.

3. MOUNT T-GEN 120 WITH 4 OFF M4 X 10 SCREWS (SC0176) USING M4 LOOP CARD BRACKET MOUNTING HOLES IN GEAR PLATE.

4. MOUNT EACH 100V SWITCHING OR SPLITTER MODULE WITH 2 OFF M4 X 10 SCREWS (SC0176) USING M4 LOOP CARD BRACKET MOUNTING HOLES IN GEAR PLATE.
NOTE:
1. +48V SOURCE ON MX1 SHOULD BE FOR INTERNAL EQUIPMENT ONLY.
2. WIRING WILL DEPEND ON MEDIA USED ON EACH RING PORT.
   - RS485 Twisted Pair Ring
     - PORT 1: FIT LINKS UX1 and UX3, WIRE RXA+ to TXB+, TXB- ON PREVIOUS I-HUB.
     - PORT 2: FIT LINKS UX12 and UX13, WIRE TXB+ to RXA+, RXA- ON NEXT I-HUB.
   - Fibre Optic Ring
     - CUT THE 10 WAY CONNECTOR OFF THE END OF EACH LM0572.
     - PORT 1: REMOVE LINKS UX11 AND UX13, WIRE LM0572 0V-SHIELD TO I-HUB SHIELD,
       WIRE LM0572 RXD TO I-HUB RXA-,
       WIRE LM0572 TXD TO I-HUB TXA-,
       WIRE I-HUB SHIELD TO I-HUB RXA+.
     - PORT 2: REMOVE LINKS UX12 AND UX14, WIRE LM0572 0V-SHIELD TO I-HUB SHIELD,
       WIRE LM0572 RXD TO I-HUB RXB-,
       WIRE LM0572 TXD TO I-HUB TXB-,
       WIRE I-HUB SHIELD TO I-HUB RXB+.
3. SERIAL PORT 0, 2, 3 OR 4 USE MUST MATCH MX1 CONFIGURATION.

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- 2 DECIMAL PLACES ±0.3
- 3 DECIMAL PLACES ±0.1
NOTES:

1. Mount T-GEN 60 using 5 plastic stand-offs (HW0130) and 1 off M3 X12 screw (SC0177). Stand-offs factory fitted from gear plate rear.

2. Mount MX modules using 4 plastic double barb PCB stand-offs (HW0052) fitted from front of gear plate.
NOTES:

1. MOUNT MINI-GEN OR STROBE DRIVERS USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.

2. EARTH MINI-GEN OR STROBE DRIVER TO GEAR PLATE EARTH POINT USING EARTH LEAD, (E.G. LM0231 INCLUDED IN MX1).

3. MOUNT A GENERAL PURPOSE SGD (PA0862) USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0053) FITTED FROM GEAR PLATE FRONT.

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NOTES:

1. MOUNT MX MIO800 MODULE USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.

2. HOLES PROVIDED FOR MOUNTING THE FUTURE GAS CARD USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.
NOTES:

1. MOUNT GENERAL PURPOSE RELAY BOARDS (PA0730) USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) PER BOARD, FITTED FROM FRONT OF GEAR PLATE.
NOTES:
1. MOUNT MXI LOOP CARD USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0052) FITTED FROM FRONT OF GEAR PLATE.
NOTES:

1. MOUNT EACH BRACKET (FP1044, FP0950, FP1027) WITH 2 OFF M4 x 10 SCREWS (SC0176): SCREWS FITTED FROM GEAR PLATE FRONT.

2. MOUNT MX MODULES ON FP1027 BRACKET USING 4 PLASTIC PCB STAND-OFFS (HW01311) PROVIDED WITH BRACKET.

3. MOUNT MINI-GEN OR STROBE DRIVER USING 4 PLASTIC DOUBLE BARB PCB STAND-OFFS (HW0532) FITTED FROM FRONT OF GEAR PLATE.

4. EARTH EACH MINI-GEN OR STROBE DRIVER TO A GEAR PLATE EARTH POINT USING EARTH LEAD, (E.G. LM9231 INCLUDED IN MX1).

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NOTES:

1. MOUNT THE FP1012 BRACKET TO THE GEAR PLATE WITH 4 OFF M4 X 10 SCREWS (SC0176). SCREWS FITTED FROM GEAR PLATE FRONT.

2. THE MOXA SWITCH AND ETHERNET EXTENDER CLIP ONTO THE DIN RAIL ON THE FP1012 BRACKET. MOUNT MOXA CLOSEST TO GEAR PLATE. LEAVE A 10mm GAP EACH SIDE OF ETH EXTENDER FOR COOLING. CONNECT THE MOXA EARTH SCREW TO THE BRACKET.

3. MOUNT THE 4 WAY TERMINAL BLOCKS CN0020 WITH 2 X 1/8" POP RIVETS HW0211.
1. MOUNT THE IP NETWORKING BRACKET (FP1013) ON THE 8U CABINET RHS WALL 4 OFF M3 X 12 STUDS USING 4 OFF M3 X 10 BARREL NUTS (IFA2016), M3 FLAT WASHERS (WA0005) AND M3 SHAKEPROOF WASHERS (WA0010).

2. ONLY A MOXA SWITCH CAN CLIP ONTO THE DIN RAIL ON THE FP1013 BRACKET. THERE IS INADEQUATE ROOM TO MOUNT AN ETHERNET EXTENDER. CONNECT THE MOXA EARTH SCREW TO THE BRACKET.

3. MOUNT THE PIB ON THE FP1013 BRACKET USING 6 OFF M3 X 6 SCREWS (SC0172).

4. ALL FASTENING HARDWARE IS SUPPLIED WITH FP1013.
NOTES:

1. MOUNT THE ECM MOUNTING PLATE (FA2083) ON THE 8U CABINET RHS WALL 4 OFF M3 X 12 STUDS USING 4 OFF M3 X 10 BARREL NUTS (FA2016), M3 FLAT WASHERS (WA0005) AND M3 SKEWPROOF WASHERS (WA0010). REMOUNT THE I-HUB ON THE MOUNTING PLATE (FA2083) WITH 8 OFF M3 X 6 SCREWS (SC0172).

2. MOUNT THE DUAL OSD139 FIBRE OPTIC MODEM MOUNTING BRACKET (FP1032) IN 3 LH POSITIONS WITH 2 OFF M4 X 10 SCREWS (SC0076) SUPPLIED WITH BRACKET.

ALTERNATIVELY AN FP1032 CAN BE MOUNTED IN THE RH POSITION WITH 2 OFF PK 6 X 3/8" SCREWS (SC0090) USING 2 OFF Ø3.00 HOLES PROVIDED IN THE GEAR PLATE.
FAULT/DEF RELAY IS
NORMALLY ENERGISED

MX1
CONTROLLER

15K
15K
15K
VIOLET
GREEN
BLUE
YELLOW

ALL WIRES 0.5mm²

TERMINAL BLOCK ON BRACKET

BLACK 12 –VE
RED 11 +VE
BLUE 10 OTHER
YELLOW 9 ISOLATE
VIOLET 8 FAULT
GREEN 7 ALARM
ASR 6 ASE COMMON
OTHER 5 OTHER
OTHER 4 OTHER
SECONDARY 3 SECONDARY
PSTN 2 PSTN
LPE 1 LPE

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3rd ANGLE PROJECTION

ISS/REV AMENDMENTS ECO DRN CHKD AUTH APVD DATE
A ORIGINA 4011 KUS SEL LUC SP 21-4-06
B WIRING UPDATED FOR WA ASE. 031604 KUS MC MC SP 22-11-11

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MX1
WA ASE
WIRING DETAILS

DRAWING No: 1982-71 SHEET 145of N
A3 ISS/REV B PART No:
MX1 CONTROLLERS REV B AND LATER

FP0740
FAS EOL
(MX1 CONTROLLERS BEFORE REV B)

WHITE
WHITE

YELLOW
YELLOW

BLUE
BLUE

BLACK

MX1 CONTROLLER

IF AT ALL POSSIBLE, USE ONE +VBF TERMINAL SOLELY FOR POWERING THE ASE, TO AVOID OTHER LOAD WIRING FAULTS FROM BLOWING THE FUSE AND DEPOWERING THE ASE.

NOTES:
1. MX1 CONTACTS ARE CLOSED FOR NORMAL (FAULT NORMALLY ENERGISED).

FP0927 MX1 AUSTRALIA – ASE MOUNTING DETAILS

1. REMOVE THE ASE FRONT PANEL FROM THE BACK BOX AND DISCONNECT THE AERIAL LEAD FROM THE ASE RADIO MODEM.
2. UNSCREW THE AERIAL CONNECTOR FROM THE BACK BOX, RETAINING THE BACK NUT.
4. MOUNT THE ASE FRONT PANEL ONTO THE FRONT OF THE 3U PANEL USING THE 2 OFF M4 X 16 SCREWS SUPPLIED WITH THE 3U DOOR.
5. RECONNECT THE AERIAL LEAD TO THE RADIO MODEM.
6. AFTER FIELD WIRING, MOUNT THE NEW BACK COVER ONTO THE 3U PANEL M4 STUDS USING THE 2 OFF M4 BARREL NUTS AND SHAKE PROOF WASHERS SUPPLIED WITH THE 3U DOOR.

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MX1
CENTAUR AND CENTAUR II ASE MOUNTING & FAS WIRING DETAILS

DRAWING No: 1982-71 SHEET 147of N

A3 ISS/REV C PART No:
MX1 WITH 2 LED DISPLAY BOARDS FITTED
MX1 WITH 1 LED DISPLAY BOARD FITTED
MX1 WITH 12 LED DISPLAY BOARDS FITTED
MX1 WITH 5 LED DISPLAY BOARDS FITTED

NOTES:
1. DIAGRAMS SHOW CONNECTIONS AND SUGGESTED LOOMS FOR SELECTED QUANTITIES OF MX1 16 ZONE DISPLAY BOARDS.
2. USE THESE DIAGRAMS AS A GUIDE FOR OTHER QUANTITIES OF DISPLAYS/EXTENDERS AND USE OF OTHER COMPATIBLE/ EQUIVALENT LOOMS.
3. ALL DISPLAY BOARDS ARE NUMBERED AS SHOWN, WITH ZONE 1 SHOWING ON THE LOWEST NUMBERED BOARD.
4. IF USING ONLY THE KEYBOARD DOOR: LM0339 CONNECTS J2 (ZONE DISPLAY BOARDS) ON THE LCD/KEYBOARD PCB TO J1 (FROM PREVIOUS) ON THE HIGHEST NUMBERED BOARD.
5. USE LM039 TO CONNECT BETWEEN BOARDS ON THE SAME DOOR. CONNECT J1 (FROM PREVIOUS) FROM A LOWER NUMBERED BOARD TO J2 (TO NEXT) ON THE HIGHER NUMBERED BOARD.
6. IF USING ONE OR TWO ADDITIONAL 80 ZONE EXTENDER DOORS: LM056 CONNECTS THE BOARDS ON TWO DOORS TOGETHER. J1 (FROM PREVIOUS) FROM A LOWER NUMBERED BOARD TO J2 (TO NEXT) ON THE HIGHER NUMBERED BOARD; LM092 CONNECTS J2 (ZONE DISPLAY BOARDS) ON THE LCD/KEYBOARD PCB TO J1 (FROM PREVIOUS) ON THE HIGHEST NUMBERED BOARD.

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MX1
KEYBRD TO LED DISPLAY BRD
LOOM ROUTING DETAILS

DRAWING No: 1982-88 SHEET 1 of 1

ISS/REV D PART No:
<table>
<thead>
<tr>
<th>COLOUR</th>
<th>FIRST DIGIT</th>
<th>SECOND DIGIT</th>
<th>THIRD DIGIT (OPTIONAL)</th>
<th>MULTIPLIER</th>
<th>TOLERANCE</th>
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<tr>
<td>BLACK</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>BROWN</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>1%</td>
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<tr>
<td>RED</td>
<td>2</td>
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<td>2</td>
<td>100</td>
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<tr>
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<td>5</td>
<td>100,000</td>
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<tr>
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<td>6</td>
<td>6</td>
<td>6</td>
<td>1,000,000</td>
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</tr>
<tr>
<td>VIOLET</td>
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<td>7</td>
<td>7</td>
<td></td>
<td></td>
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<tr>
<td>GREY</td>
<td>8</td>
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<td>8</td>
<td>0.1 GOLD</td>
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<tr>
<td>WHITE</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>0.01 SILVER</td>
<td>10% SILVER</td>
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Example: RED, VIOLET, BLACK, RED = 27,000 = 27k

<table>
<thead>
<tr>
<th>COMMON EL0s</th>
<th>BAND 1</th>
<th>BAND 2</th>
<th>BAND 3</th>
<th>BAND 4</th>
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<tbody>
<tr>
<td>2.7k</td>
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<td>BROWN</td>
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<tr>
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<tr>
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<td>VIOLET</td>
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<td>RED</td>
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Note: 1% and 2% tolerances used.