The Mx Tel Fire Fighters telephone system comprises of 6 current regulated and fuse protected Class B telephone riser circuits each circuit protected from short circuit conditions by 140mA rated polyfuses. The riser circuits are monitored for Open / Short circuit “Trouble” conditions and each circuit has a monitoring resistor located at the last (EOL) telephone.

Each riser circuit can accommodate up to 35 telephones each connected to the riser supply via Remote Phone Jacks, product code Mx-Jack, and up to 210 telephones can be accommodated per telephone system. Up to 5 telephones per riser circuit can communicate at any one time and up to 30 telephones can be operational at any one time on the telephone system.

The master telephone located in the command centre can communicate with any or all of the telephones connected to the riser supply/ supplies and telephones located on separate riser supplies can be routed through to one another via the command centre.

Power supply requirements for the telephone system can be from any stable low noise DC power supply rated at 24V +/- 4.0V with a 400mA current rating.

### Features
- Riser circuits are monitored for Open / Short circuit “Trouble” conditions
- 6 current regulated and fuse protected Class B telephone riser circuits
- Each riser can accommodate up to 35 telephones
- Up to 210 telephones can be accommodated per telephone system.
- Up to 5 telephones per riser circuit can communicate at any one time.
- Up to 30 telephones can be operational at any one time on the telephone system.

### Specification
- **Supply Input**: 24V +/- 4V
- **Maximum Riser Current**: 70mA
- **Quiescent supply current**: 4mA
- **End Of Line Resistor value**: 4K7 0.5Watt

### Controls & Indicators
- Power On (Green)
- System Trouble (Yellow)
- Riser Telephone connected (Green) Indicated for riser supplies 1 through to 6
- Buzzer “Mute Trouble” pushbutton
- 60dB minimum audio indicator to indicate “Call Waiting” and “System Trouble”
- Six Riser select telephone pushbuttons
- “Trouble” Relay with volt free contacts rated 30V DC 1A

Indication that the Telephone system is supplied with power is via the Green Power On indicator. If the voltage to the system fails the Power On indicator will be extinguished and the “Trouble” Relay will de-energise.
If any Riser has a Short or Open circuit the “System Trouble” LED will illuminate and the “Trouble” relay will de-energise. On board LED indication indicates which riser has the “Trouble” condition. In addition to the LED “Trouble” indication the audio indicator will pulse ON for a period of 0.5 seconds every 5 seconds until cancelled by the “Mute Trouble” push button.

When a telephone is connected to a Riser the front panel “Riser Telephone” Green LED flashes to indicate which Riser has a Telephone connected and the audio indicator sounds, pressing the associated pushbutton to accept the call causes the LED to go steady, silences the audio indicator and connects the Riser telephone to the Command Centre Telephone.

**Remote Telephone Jack: part no. Mx-Jack:**

The telephone Jack connects the Telephone to the Riser and switches the Riser supply to the Local LED Green “Telephone Connected” indicator. The Nominal operating current with the telephone connected to the riser supply is 10mA.

**Riser Cabling:**

The recommended cabling to counter effects of low-frequency power supply interference is a twisted pair cable. Recommended wire gauge is 12 AWG to 20 AWG maximum circuit impedance 80 Ω.

NB: For maximum protection against EMI a shielded twisted pair cable is recommended in this instance the shield must be continuous throughout the wiring run and connected to Earth at the Command Centre.

**Standards & Codes of Practice:**

The Fire Fighters Telephone System is designed to comply with the requirements of indication & control in the following:

- UL864 9th. Edition
- BS5839 Part 9 code of practice
- EN 50130-4 EMC Immunity
- EN55022 Radiated & Conducted Emissions to Class B
- EN60950 Low Voltage Directive