Features

Convert an existing AUTOCALL TFX system to 4100ES operation while retaining TFX peripherals:

- **TFX Addressable Loop Interface Module 4100-6066** communicates to existing addressable TFX devices and allows system expansion to be accomplished from the 4100ES fire alarm control panel
- **Voltage Regulator Module 4100-5130** provides compatible regulated 24 VDC
- **TFX Audio Interface Module 4100-1340** provides an AMP-96 compatible analog audio riser to retain existing amplifiers and speaker circuits
- **TFX Master Firefighter Phone Assembly 4100-1298** and module 4100-1297 provide an interface to existing ATM-500 Addressable Phone Modules to control existing CommFone™ 500 firefighter telephones
- Modules are UL Listed to Standard 864

**WALKTEST™ system test:**

- 4100ES will perform 4100ES WALKTEST system test on the TFX addressable monitor devices
- WALKTEST system testing is not supported on the TFX signal/sounder devices

**General migration considerations:**

- Existing AUTOCALL equipment is housed separately from the 4100ES equipment; use existing cabinets or new, dedicated 4100ES style cabinets
- DirecTone audio head end equipment is not supported and requires replacement with 4100ES audio equipment
- For existing Automatic Extinguishing, and Deluge and Preaction Sprinkler System Releasing Control, existing TFX smoke detection and audible/visible notification appliances and controls can be retained; manual/abort controls and valve control is migrated to 4100ES operation as described in data sheet S4100-0040

**Firefighter phone system considerations:**

- Expand existing **CommFone** systems using 4100ES compatible, 2084 Series firefighter phones
- Expand existing **CommFone 500** systems using an expansion phone loop with cabinet mounted, 4100ES compatible, 2084 Series phones
- Existing **CommFone 500 plug-in** firefighter telephones are not compatible with 2084 Series plug-in phones; refer to page 2 for expansion options

**Description**

**4100-6066 TFX Addressable Loop Interface Module:** When AUTOCALL fire alarm systems are in need of updating and/or expansion, migration to Simplex®, 4100ES controls can be conveniently accomplished using 4100ES AUTOCALL TFX system interface modules.

*This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7165-0026:251 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. This product was not approved by MEA (NYC) as of document revision date. Additional listings may be applicable, contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.
4100-6066 TFX Addressable Loop Interface Module (Continued):

- TFX Loop circuitry is electrically isolated from the 4100ES; LED indicators detail communications status
- Mounting location requires a power supply in the same 4100ES bay to provide both card and signal power from the PDI connection

4100-5130 Voltage Regulator Module:

- Provides TFX compatible, regulated 24 VDC, from the 4100ES to replace TFX RPS-424 and PSM800 power supplies
- Module ratings: 25 VDC nominal (22.8 to 26.4), 2.5 A supervisory, 4 A alarm
- Input is from the signal power circuit of the 4100ES PDI bus, maximum of one per power supply if using full 4 A
- The output is isolated and resettable and includes earth detection circuit and trouble relay for status monitoring

4100-1340 TFX Audio Interface Module:

- Output is a transformer coupled audio riser compatible with Amp-96 amplifiers
- System requirements include use of the 4100-1210, 4100ES Analog Audio Controller
- The 10 V RMS signal on the PDI is converted to a 0.77 VRMS audio riser signal; signal is 0 dBm and is adjustable +/- 6 dB
- Module power is from the 24 V card power connection

Other Audio Migration Considerations:

- Existing control panel mounted AMP-96 amplifiers require replacement with 4100ES amplifiers that connects to the existing speaker circuits
- Remotely located AMP-96 audio amplifiers operate with control provided by 4100ES custom control and 4100ES LED/Switch modules; mounting is in cabinets separate from those used for 4100ES equipment

Firefighter Phone Operation

Two different system types are involved, CommFone and CommFone 500. CommFone 500 systems are controlled from ATM-500 addressable phone interface modules. Standard (non-ATM-500) CommFone systems are similar to, and compatible with, Simplex phone controls per the following information.

To retain ATM-500 addressable phone interfaces and CommFone 500 phones:

- Select a 4100-1298 Master Firefighter phone control for the 4100ES control panel; includes 3 Class B phone NACS; (custom control will be required); use additional 4100-1297 Phone Control Modules as required
- Retained ATM-500 addressable phone modules also require connection to the TFX Loop Interface Module and are mounted separately from the 4100ES equipment
- System expansion can be accomplished using a separate expansion phone loop with cabinet mounted 2084 Series phones
- NOTE: CommFone 500 plug-in firefighter telephones are not compatible with 2084 Series plug-in phones; systems requiring additional plug-in phones and jacks will require upgrade to 2084 Series equipment

For conversion of existing CommFone systems or for conversion of CommFone 500 systems:

- CommFone Upgrade Kits convert existing CommFone cabinet mounted phones for 4100ES compatibility, refer to data sheet S2084-0002; existing plug-in phone jacks are compatible with Simplex 2084 Series plug-in phones
- If firefighter phone system expansion of ATM-500 controlled CommFone 500 plug-in phones is required, remove existing ATM-500 addressable phone modules and replace CommFone 500 phones (both cabinet mounted and phone jacks) with Simplex 2084 Series phones, rewired as necessary

Additional Migration Reference

<table>
<thead>
<tr>
<th>Subject</th>
<th>Document</th>
<th>Subject</th>
<th>Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFX to 4100ES Migration Guide</td>
<td>579-841</td>
<td>CommFone Firefighter telephone upgrade</td>
<td>S2084-0002</td>
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<tr>
<td>4100-6066 Installation Instructions</td>
<td>579-811</td>
<td>TFXnet Network Interface for 4100ES</td>
<td>S4100-0042</td>
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<tr>
<td>4100-5130 Installation Instructions</td>
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<td>XA Loop Interface for 4100ES</td>
<td>S4100-0041</td>
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<tr>
<td>4100-1340 Installation Instructions</td>
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<td>4100ES Basic System Reference</td>
<td>S4100-0031</td>
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<tr>
<td>4100-1298/-1297 Installation Instructions</td>
<td>579-862</td>
<td>4100ES Enclosure Reference</td>
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<tr>
<td>4100ES Releasing Systems Reference</td>
<td>S4100-0040</td>
<td>4100ES Audio and Firefighter telephone controls</td>
<td>S4100-0034</td>
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<tr>
<td>AUTOCALL to 4100ES Box Retrofit Kits</td>
<td>S4100-0047</td>
<td>4100ES LED/Switch modules</td>
<td>S4100-0032</td>
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</table>
NOTE: Refer to Migration Guide 579-841 and individual module Installation Instructions for detailed application information (refer to list on page 2).

System Migration Reference Diagram

24 VDC device power (where required)

Optional Class A return wiring

24 VDC device power (where required)

TFX Addressable loop, Class B or Class A

Typical new IDNet™ addressable devices

To existing AUTOCALL CommFone 500 phones

Audio NACs to existing speakers

TFX Addressable loop communications

Remote cabinet(s) with Amp-96 amplifiers and ATM-500 addressable phone controllers (existing or new 4100ES/4100U cabinet)

Phone riser

Audio riser

New 400ES audio and/or firefighter phone risers to new 400ES related equipment

400ES Fire Alarm Control Panel with Voice/Audio and Firefighter Phone Control

4100-1340 Audio Interface Module (behind audio controls)

4100-1298 Master Firefighter Phone Module (includes a 4100-1297 phone module)

4100-6066 TFX Loop Module

4100-5130 Voltage Regulator Module

4100-6066 TFX Loop Module

4100-1298 Master Firefighter Phone Module (includes a 4100-1297 phone module)

4100-1340 Audio Interface Module (behind audio controls)

Optical Class A return wiring

24 VDC device power (where required)
Specifications

**General Module Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Operating Temperature Range</td>
<td>32°F to 120°F (0°C to 49°C)</td>
</tr>
<tr>
<td>Humidity Range</td>
<td>Up to 93% RH, non-condensing @ 90°F (32°C)</td>
</tr>
<tr>
<td>Wire Sizes</td>
<td>18 to 12 AWG (0.82 mm² to 3.31 mm²)</td>
</tr>
</tbody>
</table>

**4100-6066 TFX Loop Interface Module Specifications**

| Input Voltage                          | System supplied 24 VDC                                                  |
| Input Current, Supervisory or Alarm    | No Load: 72 mA; Card Power = 30 mA, Signal Power = 42 mA               |
|                                       | Full Load, US: 125 mA maximum; Card Power = 30 mA; Signal Power = 95 mA |
|                                       | Full Load, UK: 306 mA maximum; Card Power = 26 mA; Signal Power = 280 mA|

**TFX Loop Wiring Specifications**

- 99 devices maximum; allowable TFX addresses, 1 to 126; Style 4 or Style 6
- Capable of limited Style 7 if used with CAA-500LI Isolators, limited to 12 maximum
- 6900 ft (1981 m) twisted, shielded pair (TSP) maximum for one continuous run;
  terminate shield only at TFX Loop Interface Module wiring terminals
- 75 Ω maximum loop resistance; inclusive of any CAA 500LI Isolators which add 2 Ω each
- 0.5 µF line-to-line capacitance maximum; 1.5 mH maximum inductance per loop
- 26.5 V maximum; 500 mA peak maximum current

**4100ES Allocation Requirements**

Up to ten 4100-6066 modules per 4100ES

**Point Mapping Reference Information**

Device types map to equivalent 4100ES point types

**Mounting Requirements**

4 x 5 single block module; requires mounting in same bay as connected power supply

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**4100-5130 Voltage Regulator Module**

| Input Voltage                          | System supplied 24 VDC                                                  |
| Input Current                          | Supervisory = 3 A max. with 2.5 A output load; Alarm = 4.9 A max. with 4 A output load |
| Output Voltage                         | 22.8 to 26.4 VDC (25 VDC nominal); output is resettable, will track state of RESET input |
| Output Current                         | 2.5 A maximum supervisory; 4 A maximum alarm                            |
| Ripple                                 | 600 mV pk-pk maximum                                                    |
| Trouble Relay                          | 1 Form C dry contact for monitoring; rated 400 mA @ 30 VDC; changes state for Earth or output voltage trouble; normally held energized |

**Mounting Requirements**

4 x 5 single block module; requires mounting in same bay as connected power supply

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**4100-1340 TFX Audio Interface Module**

| Input Voltage                          | System supplied 24 VDC                                                  |
| Input Current, Supervisory and Alarm   | 29 mA                                                                   |
| Audio Input                            | 10 VRMS from 4100ES analog audio control module                         |
| Audio Output                           | 0 dBm adjustable +/- 6 dB (0.77 VRMS nominal, 0.84 VRMS max.); transformer isolated |
| Audio Riser Wiring                     | Twisted, shielded pair (TSP); 75 Ω maximum loop resistance             |

**Mounting Requirements**

4 x 5 single block module

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**4100-1298/4100-1297 TFX Master Firefighters Phone Module**

(One 4100-1297 is included with 4100-1298)

| Input Voltage                          | System supplied 24 VDC                                                  |
| Input Current                          | Supervisory = 95 mA; Alarm = 145 mA with master phone in use and network energized |
| ATM-500 Addressable Module             | Supervisory = 2 mA; Alarm = 12 mA                                      |
| TFX CommFone Remote (zonal) phone      | Supervisory = 0 mA; Alarm/In Use = 14 mA for each phone                |

**4100-1297 Output**

- 3 Class B NAC phone risers for connection to ATM-500 Addressable Phone Modules per details below
- 4100-1297, ATM 500 Loading Limit
  - 30 maximum per 4100-1297 phone module; can be all on one phone NAC/riser, or distributed over the three NAC/riser outputs

**ATM 500 Addressable Firefighter Phone Control Module, Loading per Riser**

<table>
<thead>
<tr>
<th>Maximum Riser Resistance</th>
<th>Maximum Quantity of ATM-500s</th>
<th>Maximum Riser Resistance</th>
<th>Maximum Quantity of ATM-500s</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Ω</td>
<td>15</td>
<td>20 Ω</td>
<td>25</td>
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<tr>
<td>40 Ω</td>
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</tr>
<tr>
<td>30 Ω</td>
<td>20</td>
<td></td>
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</tbody>
</table>

**Mounting Requirements**

4100-1297 is a 4 x 5 single block module; the 4100-1298 has a 2 slot wide front mounted master phone assembly with space behind for 4100ES flat modules only

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