

# MAXSYS<sup>®</sup>

INTEGRATED SYSTEMS TECHNOLOGY

## PC4020CF

16 TO 128 ZONE  
COMMERCIAL FIRE CONTROL PANEL



The PC4020CF is the UL listed commercial fire version of the PC4020 security control panel. As such, the PC4020CF has the same system expandability and features as the PC4020 plus added features and expandability for commercial fire applications as described herein.

### PC4020CF Panel - Fire Features

In addition to all of the features of the PC4020 (see separate spec sheet), the following are additional hardware and software features of the PC4020CF for use in commercial fire applications :

- **PC4020CF control panel is supplied in red system cabinet c/w :**
  - PC4701 fire module
  - 16VAC, 40VA transformer
- **PC4701 fire module includes :**
  - 1 Class 'B' /Style 'B' two-wire smoke detector zone accommodating 30 12VDC compatible detectors
  - 1 Class 'B' /Style 'B' waterflow zone
  - two supervised communicator outputs
  - terminal connection for house telephone
  - 1 fire alarm actuated relay... Form 'C', rated 2A, 30VDC
  - 1 fire trouble actuated relay... Form 'C', rated 2A, 30VDC
- **up to 112 DSC AMS-220 addressable smoke detectors can be added to the system spread over one or both of the addressable loops :**
  - addressable fire zones may be programmed as the following types
    - standard fire zones
    - auto-verify fire zones
    - delayed fire zones (*for residential only*)
- **all hardwired zones on the PC4020CF can be programmed as fire zones with the following zone types :**
  - standard fire zones
  - waterflow zones
  - auto-verify fire zones
  - delayed fire zones (*for residential only*)
  - fire supervisory zones
- **programmable fire alarm output patterns...** steady, temporal pattern, CA pattern, pulsed, or strobe fire.
- **programmable fire bell options...** bell cut-off time and fire silence inhibit time.
- **all PC4702BP bell outputs are supervised for :**
  - short circuit
  - open circuit
  - ground fault
- **alarm autoscroll...** displays fire alarms and selected trouble conditions at 2 second intervals on system LCD keypads. Items displayed include :
  - first fire alarm [zone label]
  - fire alarm [zone label]
  - fire supervisory [zone label]
  - fire bell has been silenced
  - bell zone trouble
  - failure to communicate

- **fire drill...** activates main bell output and PC4702BP fire bell outputs according to their programmed fire signalling modes without activating other functions and without sending reporting codes to the central station. Keypads display "Fire Drill in Progress" during test. If an actual alarm occurs during test, the test is automatically cancelled and the standard fire alarm functions occur.
- **fire inspector test...** ensures that all fire initiating devices are communicating and are supervised. All test results are logged to the system event buffer.
- **scheduled smoke detector tests...** 50 time/date smoke detector test schedules programmable by partition... for addressable detectors only
- **lamp test...** use keypad to activate annunciator lights for 2 seconds

### System Expansion

In addition to all of the modules available for the PC4020 (see separate spec sheet), the following are specially designed for use with the PC4020CF in commercial fire applications :

- **PC4702BP fire system bell panel...** provides 2 supervised Class 'B' /Style 'Y' bell outputs c/w battery charger, 28VAC 170VA transformer, and cabinet with space for two 12volt 4Ah sealed lead-acid rechargeable batteries.
- **PC4204CF fire system quad relay/power supply module...** similar to PC4204, but c/w battery charger, 16VAC 40VA transformer, and cabinet with space for two 12volt 7Ah sealed lead-acid rechargeable batteries.
- **PC4612 fire zone annunciator<sup>(1)</sup>...** 12 zone, surface mount, keypad style, plastic annunciator. Includes common fire zone trouble, fire bell zone trouble, common system trouble, and AC 'on' indicators.  
<sup>(1)</sup> system can also include PC4632 and PC4664 thirty two and sixty four zone point/graphic annunciators to annunciate fire zones, security zones, and common system indications.
- **PS4350R fire system external battery charger...** for longer standby time required by listed fire systems.
- **keypads with red bezels for fire application...** at least one LCD4521 or LCD4520 must be used with the PC4020CF
  - keypad piezo buzzer will sound continuously if communication is lost with control panel
  - **LCD4521...** same as LCD4501 but with red bezel. Five function keys have fire system specific assignments :
    - Silence Trouble
    - Silence Bells
    - Fire Reset
    - Fire Drill
    - Lamp Test
  - **LCD4520...** same as LCD4500 but with red bezel

## PC4020CF Panel Electrical Specifications

- **bell output...** 12VDC, 700mA max. continuous...use for burglary only
  - PTC over current protected – self-restoring.
- **AUX+ output...** 12VDC, 500mA max.
- **SAUX+ output...** 12VDC, 300mA max.
  - SAUX+ output is normally +12VDC and power is removed upon activation. Typically used to reset 4-wire smoke detectors.

*Note... total for AUX+ output and SAUX+ output is 500mA max. e.g. If the SAUX+ output is loaded to 200mA then only 300mA remains for the AUX+ output.*

- **AUX+ and SAUX+ outputs protected by a common PTC over current device which is self-restoring.**
  - **PGM outputs :**
    - as standard PGM outputs... 12VDC, 50mA max. each. PGM outputs are normally unpowered and switch to +12VDC upon activation.
    - as addressable outputs... 12VDC, 170mA max. each
- Note... PGM outputs are individually programmable as addressable loops or as general purpose PGM outputs.*
- **Combus...** 500mA max. from the PC4020CF main panel
    - additional power is provided by PC4204CF modules. Maximum Combus capacitance is 80nF which is typically 4,000 feet of 22AWG wire. Consult wire Mfg. specifications.

**Note... total loading for the Bell output, AUX+, SAUX+, PGM1, PGM2 and the Combus must not exceed 900mA.**

- **battery charger...** up to 350mA to charge 12 volt lead-acid batteries up to 14Ah capacity. Battery charger is supervised for opens and is protected by PTC over current device which is self-restoring.
- **input power...** 16VAC, 40VA
- **ground fault detection...** built-in and enabled by connecting earth ground to EGNDR terminal on PC4020CF main panel.

**Note... maximum power from the PC4020CF panel power supply may be limited by its ability to maintain the required standby time. The PS4350R external battery charger can be used to assure maximum panel loading capability and provide the required standby. See the PC4020 Installation Manual for panel loading and standby calculations.**

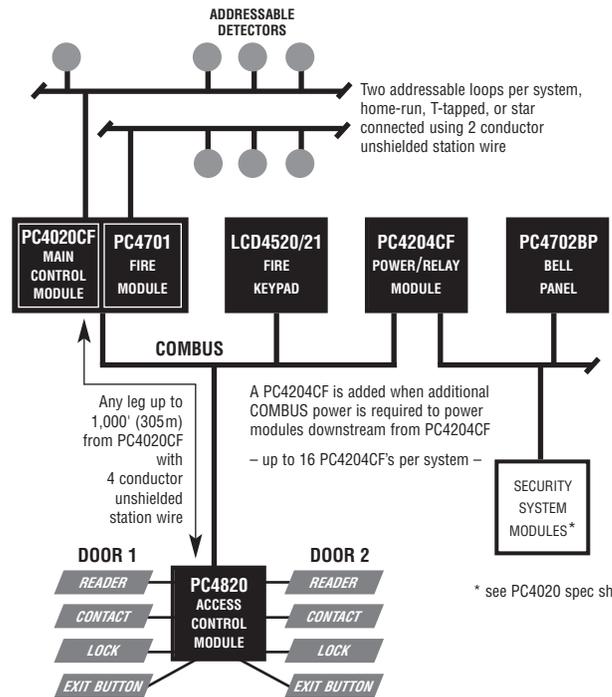
## Mechanical Specifications

- **operating environment**
  - 32 to 122°F (0 to 50°C)
  - 90% RH non-condensing
- **PC4050CR red cabinet :**
  - surface mount
  - hinged door with screw closure
  - provision for door and wall tamper switches.
  - space for one 12 volt, 7Ah lead-acid rechargeable battery.
  - 14.8" H x 12.0" W x 4.9" D (37.6 x 30.5 x 12.5 cm)

## Compatible Smoke Detectors

- **2-wire smoke detectors :**
  - DSC... MN220/220T
  - DSC... AMS-220/220T addressable

## Typical System Arrangement



\* see PC4020 spec sheet

## Ordering Information

**PC4020CF...** control panel with fire option c/w :

- PC4020CF... main control module
- PC4701... fire module
- PT1016... transformer
- PC4050CR... red cabinet
- installation manual, user manual, and programming worksheets
- module mounting hardware and 32 EOL resistors

**PC4020CFAR...** as PC4020CF but with attack resistant cabinet

Keypads are not supplied with the main panel – at least one fire keypad with red bezel is required per system. Select from the following keypads :

- LCD4520...** alphanumeric keypad with red bezel without function keys
- LCD4520T...** as LCD4520 but with wall tamper switch
- LCD4521...** alphanumeric keypad with red bezel and 5 function keys
- LCD4521T...** as LCD4521 but with wall tamper switch
- LCD4500/T, LCD4501/T...** are identical to the above but *do not* have red bezels.

## Listings

### USA

- UL864 ..... Control Units System (L, CS, -A, M, SS, WF)
- UL1610 .... Central Station Burglar Alarm
- UL609 ..... Local Burglar Alarm
- UL365 ..... Police Station Burglar Alarm
- UL985 ..... Household Fire Warning
- UL1023 .... Household Burglar Alarm

### CANADA

- ULC-S527 .... Central Station Fire Alarm
- ULC-S302 .... Central & Monitoring Station Burglar Alarm
- ULC-S303 .... Local Alarm (Commercial Burglary)
- ULC-S310 .... Household Burglar Alarm
- ULC-S545 .... Household Fire Warning
- UL294 ..... Access Control

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