

MAXSYS®

INTEGRATED SYSTEMS TECHNOLOGY

PC4020

16 TO 128 ZONE CONTROL PANEL



The PC4020 is a 16 zone panel which is expandable to 128 zones. Expansion can be accomplished over a 4-wire Combus using a variety of input/output and functional modules. The base panel includes two addressable loops which can accommodate up to 112 addressable input devices and the system can also be expanded with a 64 zone wireless receiver which connects to the system via the 4-wire Combus. Addressable, hardwired and wireless expansion can be used in any combination that suits the application.

The MAXSYS is software ready to implement all the security, access control, automation and residential fire functions by simply adding conventional or addressable devices, access control modules, and automation interface components.

PC4020 Panel Features

- **16 programmable zones...** zones can be NC with no EOLR, NO/NC with single EOLR or NC with double EOLR.
 - 30 programmable zone types & 8 zone options
- **2 PGM outputs...** each with 2 application choices :
 - as standard PGM output – 59 programmable options
 - as addressable loop – up to 112 addressable devices.
- **1 supervised bell circuit...** 59 programmable options
- **1 unswitched auxiliary power supply**
- **1 switched auxiliary power supply**
- **supervised digital alarm communicator with 4 formats :**
 - 20bps, 1400/2300Hz handshake
 - Contact ID - SIA with auto-reporting codes
- **3 telephone numbers...** 32 digits each
- **3 event initiated pager formats**
- **supervised battery charger**
- **PC-Link connector...** for local upload/download
- **8 system partitions...** 9 account codes
- **1,000 user/card codes...** 64 access levels
- **user/card codes assignable by partition**
- **3,000 event buffer...** 2,800 viewable on keypad
- **59 programmable output options for :**
 - bell zone, PGM outputs, relay outputs, transistor outputs
- **comprehensive scheduling :**
 - 99 date schedules - 50 arm/disarm schedules
 - 16 automation schedules - 4 two year holiday schedules
 - 99 open/close suppression schedules
 - 50 addressable smoke detector test schedules
- **multiple communication capabilities :**
 - built in digital dialer
 - optional module for DVAC - optional cellular communications
 - optional Long-range radio communication
- **upload/download capability...** full featured with separate upload/download phone number

System Expansion

The PC4020 is easily expanded by adding input/output and functional modules onto the 4-wire communications bus (Combus).

- **Combus...** up to four runs of 1,000 feet (305 m), can be t-tapped and is supervised for low voltage and module communication.
- **up to 16 LCD keypads...** 32 character display
 - complete system programming via keypads
 - keypads can be 'partition' or 'global' operation
 - Ready, Armed, and Trouble indicators – LCD4501
 - 5 programmable function keys – LCD-4501
 - 27 function key options
 - Trouble and Armed indicators – LCD4500
 - piezo buzzer for audible feedback and trouble
 - 4 keypad activated alarms – Panic, Emergency, Fire, Duress
- **up to 128 hardwired zones...** using PC4108A/PC4116 eight and sixteen zone expansion modules.
- **up to 64 wireless zones...** using the PC4164RS wireless receiver and DSC wireless sensors and control devices.
- **up to 112 addressable zones...** using the main panel PGM outputs as addressable loops and DSC addressable sensors.

Hardwired, Wireless and Addressable zones may be mixed on the system up to the total system capacity of 128 zones.

- **up to 144 low current outputs...** using PC4216 modules – 16 outputs per module – 9 modules per system.
- **up to 64 relay outputs...** using PC4204 quad relay/power supply modules – up to 16 modules/system – each PC4204 also provides up to 1 amp of auxiliary power and can be used to repower the Combus.
- **point/graphic annunciation...** using PC4632/PC4664 remote annunciators for system, partition and zone annunciation
- **up to 32 access controlled doors...** using up to 16 PC4820 two reader access control modules with stand alone capability.
- **X-10 automation...** using the Escort PC4580 module – controls up to thirty two X-10 devices and provides voice assisted system status and control from any touchtone telephone.
- **system printer or DVACS communicator...** using the PC4400 printer/DVACS interface module.
- **backup alarm communication using :**
 - Links1000™ cellular communicator
 - Links2150™ or Links2450™ long-range radio transmitters.

All of the features, functions, and expansion capabilities of the PC4020 control panel are included in the PC4020CF versions.

Electrical Specifications

- **bell output...** 12VDC, 700 mA max. continuous
 - up to 2A for 4 minutes using battery assist.
 - PTC over current protected – self-restoring.
- **AUX+ output...** 12VDC, 500 mA max.
- **SAUX+ output...** 12VDC, 300 mA 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 500 mA max. e.g. If the SAUX+ output is loaded to 200 mA then only 300 mA 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, 50 mA max. each. PGM outputs are normally unpowered and switch to +12VDC upon activation.
 - as addressable outputs... 12VDC, 170 mA max. each

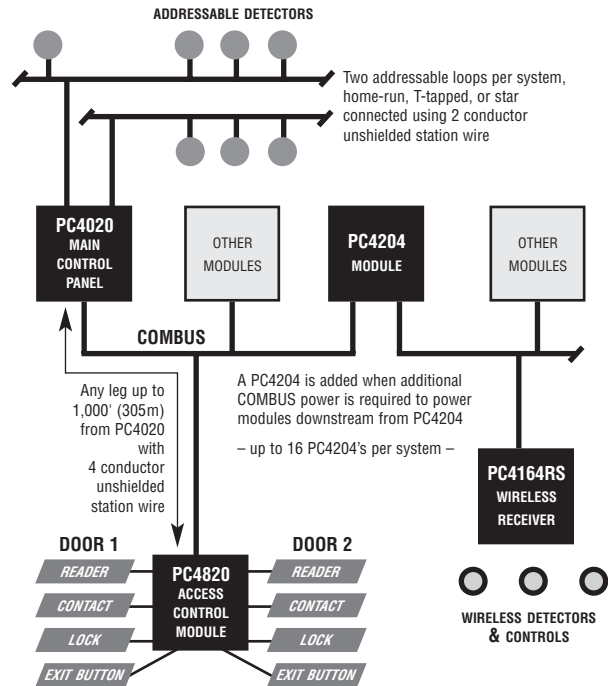
Note... PGM outputs are individually programmable as addressable loops or as general purpose PGM outputs.
- **Combus...** 500 mA max. from the PC4020 main panel
 - additional power is provided by PC4204 modules. Maximum Combus capacitance is 80 nF which is typically 4,000 feet (1,219 m) of 22 AWG wire. Consult wire manufacturer for specifications of wire to be used.

Note... total loading for the Bell output, AUX+, SAUX+, PGM1, PGM2 and the Combus must not exceed 900 mA. This limit may be exceeded by bell output if extra current required is drawn from the battery.
- **battery charger...** up to 350 mA to charge 12 volt lead-acid batteries up to 14 Ah capacity. Battery charger is supervised for opens and is protected by PTC over current device which is self-restoring.
- **input power...** 16 VAC, 40 VA
- **ground fault detection...** built-in and enabled by connecting earth ground to EGND terminal on PC4020 main panel. (use for 'CF' version panels only)

Mechanical Specifications

- **operating environment**
 - 32 to 122°F (0 to 50°C)
 - 90% RH non-condensing
- **PC4050C beige cabinet :**
 - surface mount
 - hinged door with screw closure.
 - provision for door keylock
 - provision for door and wall tamper switches.
 - space for two 12 volt 7Ah lead-acid rechargeable batteries.
 - 14.8" H x 12.0" W x 4.9" D (37.6 x 30.5 x 12.5 cm)

Typical System Arrangement



Ordering Information

- PC4020...** security control panel which includes :
- PC4020... main control module
 - PC4050C... beige cabinet
 - installation manual, user manual, and programming worksheets
 - module mounting hardware and 32 EOL resistors
- PC4020CAR...** as PC4020 but with PC4050CAR attack resistant cabinet
- Keypads are not supplied with the main panel – at least one keypad is required per system. Select from the following keypad types :
- LCD4500...** alphanumeric keypad without function keys
- LCD4500T...** as LCD4500 but with wall tamper switch
- LCD4501...** alphanumeric keypad with 5 function keys
- LCD4501T...** as LCD4501 but with wall tamper switch
- LCD4520/20T, LCD4500R/TR, LCD4521/21T, LCD4501R/TR...** identical to the above but have red bezels for use with PC4020CF fire panels.

Listings

- | USA ^{(1) (2)} | CANADA |
|---|--|
| UL1610 Central Station Burglar Alarm | ULC-S527 Central Station Fire Alarm |
| UL609 Local Burglar Alarm | ULC-S302 Central & Monitoring Station Burglar Alarm |
| UL365 Police Station Burglar Alarm | ULC-S303 Local Alarm (Commercial Burglary) |
| UL985 Household Fire Warning | ULC-S310 Household Burglar Alarm |
| UL1023 Household Burglar Alarm | ULC-S545 Household Fire Warning |
| | UL294 Access Control |
- ⁽¹⁾ At least one fire version keypad must be used with Maxsys UL listed 'CF' commercial fire panels
- ⁽²⁾ The Links 1000™ Cellular Communicator has not been investigated by UL



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