

### 1. Introduction

The PC4216 is an output module with 16 programmable outputs.

### 2. Specifications

- 16 output low current module, 12V, 50mA max. each, power drawn from Combus
- Up to 9 modules on system
- 9 modules programmable as alarm or zone annunciators
- Each of the 9 modules programmable for all 16 outputs; available output options determined by the control panel software version
- Connects to control panel via 4-wire Combus
- Nominal current draw of 15mA
- Tamper contact input

#### Compatible Cabinets

- PC4032C/PC4064C
- PC4051C/CR
- pc4001C/4002C (international)

### 3. Installing the PC4216

#### 3.1 Unpacking

The PC4216 package should include the following parts:

- One PC4216 circuit board
- 4 plastic stand-offs

#### 3.2 Mounting

The PC4216 should be located inside a compatible cabinet, mounted in a dry, secure location. Preferably, it should be placed at a convenient distance from the connected devices.

Perform the following steps to mount the unit:

1. Press the four plastic stand-offs through the mounting holes at back of the cabinet.
2. Secure the cabinet to the wall in the desired location. Use appropriate wall anchors when securing the cabinet to drywall, plaster, concrete, brick or other surfaces.
3. Press the circuit board into the plastic stand-offs to secure the module to the cabinet.

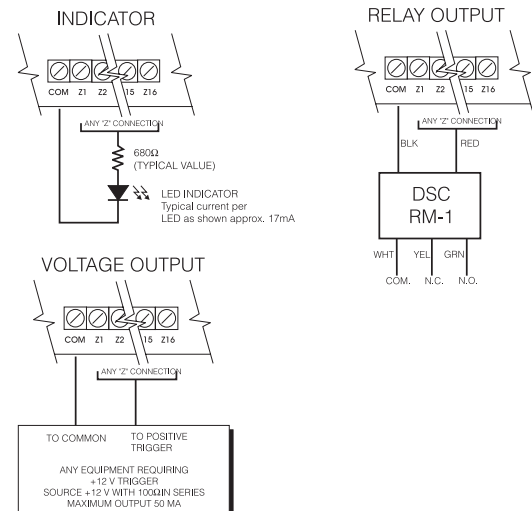
Once the unit is mounted, wiring may be completed.

### 3.3 Installation and Wiring

Before beginning to wire the unit, ensure that all power (AC transformer and battery) is disconnected from the control panel.

Perform the following steps to complete wiring:

1. Connect the four Combus wires to the PC4216. Connect the red, black, yellow and green Combus wires to the RED, BLK, YEL and GRN terminals, respectively.
2. Complete all output wiring as illustrated below:



3. Connect the external tamper switch, if used. Consult the wiring diagrams for further information.

#### 3.4 Applying Power

After all wiring is completed, apply power to the control panel. Connect the battery leads to the battery, then connect the AC transformer. For more information on control panel power specifications, see the control panel Installation Manual.

**NOTE:** Do not connect the power until all wiring is complete.

**Please refer to the System Installation Manual for information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.**

## 4. Enrolling and Programming the PC4216

Follow the instructions below for enrolling and programming your PC4216 module. If you are enrolling the module on a PC4010/4020 v3.0 or greater system, you can use the reference numbers (indicated by the square brackets, eg. [0200]) to jump to a programming section. Refer to your system's installation or programming manual for more information on programming.

### 4.1 Enrolling

You must enroll the PC4216 module with the panel before you can program it. After you enroll the module, the system will ask if you want to enable lamp testing on the module. See section 4.3 for a description of the lamp test feature.

Follow these steps to enroll the module(s):

- 1 At a PC4010/4020 system LCD keypad, enter Installer's Programming ([\*][8][Installer's code]).
- 2 Enter Ref #[0200][\*] OR scroll to **Module Hardware**, press [\*], then, scroll to **Enroll Module**, press [\*].
- 3 Scroll to **PC4216 16 O/P**, press [\*].
- 4 The LCD keypad displays **Create Tamper on Desired Unit**. Tamper and then restore the PC4216 module:
  - a) open and close the tamper switch, if one is installed on the module OR
  - b) momentarily disconnect the jumper wire between the TMP and COM terminals.

The LCD keypad displays **PC4216 (nn) Enrolled** where (nn) is the number of the PC4216 module.

- 5 Record the number of the PC4216 module in the programming worksheets.
- 6 Press any key. The keypad displays **Lamp Test Y/N**. Press [\*] to toggle between yes and no. To exit, press [#].
- 7 To exit module enrollment, press [#].

*NOTE: If you need to change the Lamp Test option on a PC4216 module after it has been enrolled, you must delete and then re-enroll the module.*

### 4.2 Programming

Program the 16 outputs on each PC4216 module in one of three ways:

- Alarm annunciation for a group of 16 zones: an LED connected to the output turns on when an alarm occurs in the corresponding armed zone. The LED remains on until the next time the system/partition the zone is in is armed. Each PC4216 module can be assigned to a pre-set group of 16 zones (alarms 1-16, alarms 17-32, alarms 33-48, etc.)
- Zone follower annunciation for a group of 16 zones: an LED connected to an output turns on when the corresponding zone opens and turns off when the zone restores. Each PC4216 module can be assigned to a pre-set group of 16 zones (follow 1-16, follow 17-32, follow 33-48, etc.).

- Custom group of programmable output option choices: a set of 16 programming choices that correspond to the 16 programmable outputs on each PC4216 module. Example: a PC4216 is assigned to custom group (01), in which output (05) is programmed as output option (22), zone follow, for zone (020), which is a fire zone. LED 5 turns on when zone (020) is in alarm and turns off when zone (020) is restored and a fire reset is performed. If you assign a PC4216 module to a custom group, you must also assign an output option to each programmable output in the group. More than one module may follow the same custom group.

Choose one of the three options listed above for the PC4216 module, as described below.

#### Assign a Zone Group or Custom Group

1. Enter ref # [000703] OR scroll to System Area, press [\*], PGM Outputs, press [\*], then 4216 Options, press [\*].
2. Scroll through the list of PC4216 modules to choose the one you want to program (01-09). Press [\*].
3. Scroll through the available options to choose a) a custom group, b) alarm annunciation for a group of zones, or c) zone follower annunciation for a group of zones. Press [\*] to select.
4. To exit, press [#].

#### Program a Custom Group

If you have assigned a PC4216 module to a custom group, you need to program the 16 outputs in the group.

1. Enter ref # [000704] OR scroll to System Area, press [\*], PGM Outputs, press [\*], then 4216 Custom, press [\*].
2. Scroll to the custom group you want to program (01-09). Press [\*].
3. Enter the number of the output to be programmed (01-16).
4. Enter the number of the output option to be used for that output. Refer to your system's Programming or Installation manual for descriptions of the available programmable output options.
5. To exit, press [#].

### 4.3 Testing the PC4216

If you have enabled the lamp test option on the PC4216 module, you can conduct a lamp test.

1. Enter [\*][6][access code][8]
2. The LEDs on the PC4216 modules with the lamp test option enabled turn on for 2 seconds.
3. To exit the lamp test, press [#].

If the user will be conducting lamp tests, explain to them how to do this.

# Programming Worksheet

**[0200]                    Enroll Module**

Record the module number of the PC4216 module here:  
 Module Number:        

**[000703]                    PC4216 Options** (see section 4.2)

**Record your programming choice for each PC4216 module here. See module options below.**

Module Number	Option	Module Number	Option	Module Number	Option
01	<u>    </u>	04	<u>    </u>	07	<u>    </u>
02	<u>    </u>	05	<u>    </u>	08	<u>    </u>
03	<u>    </u>	06	<u>    </u>	09	<u>    </u>

**PC4216 Module Options**

- |                     |                     |                    |                      |                     |
|---------------------|---------------------|--------------------|----------------------|---------------------|
| [01] Custom Group 1 | [06] Custom Group 6 | [11] Alarms 17-32  | [16]* Alarms 97-112  | [21] Follow 49-64   |
| [02] Custom Group 2 | [07] Custom Group 7 | [12] Alarms 33-48  | [17]* Alarms 113-128 | [22]*Follow 65-80   |
| [03] Custom Group 3 | [08] Custom Group 8 | [13] Alarms 49-64  | [18] Follow 1-16     | [23]*Follow 81-96   |
| [04] Custom Group 4 | [09] Custom Group 9 | [14]* Alarms 65-80 | [19] Follow 17-32    | [24]*Follow 97-112  |
| [05] Custom Group 5 | [10] Alarms 1-16    | [15]* Alarms 81-96 | [20] Follow 33-48    | [25]*Follow 113-128 |

\* These options only available on the PC4020.

**[000704XXYY]                    PC4216 Custom                    NOTE:** XX = custom group # (Enter 01 - 09); YY = output # (Enter 01-16)

***If you will use a Custom Group to program the PC4216 module, you need to program the Custom Group that will be used. Record your programming choices for the relevant group below. See your system's Installation or Programming Manual for a list of valid output options.***

Custom Group     

No. Output	Partition								Zone	Schedule #	Pulse Timer
	1	2	3	4	5	6	7	8			
01	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
02	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
03	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
04	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
05	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
06	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
07	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
08	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	

No. Output	Partition								Zone	Schedule #	Pulse Timer
	1	2	3	4	5	6	7	8			
09	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
10	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
11	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
12	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
13	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
14	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
15	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	
16	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	

**List of Output Options**

- |                     |                       |                       |                       |
|---------------------|-----------------------|-----------------------|-----------------------|
| [00] Fire and Burg  | [15] Failure to Comm  | [30] Zn. Tamp. Follow | [45] Command Output 8 |
| [01] Inv Fire/Burg  | [16] Comms Active     | [31] Zn. Fault Follow | [46] Police Output    |
| [02] Burg Only      | [17] Ground Start     | [32] Armed Stay Mode  | [47] Holdup Output    |
| [03] Inv Burg Only  | [18] Kissoff Output   | [33] Armed Away Mode  | [48] Fire Zone Tbl.   |
| [04] Fire Only      | [19] Combust Power    | [34] 2W Smoke Alarm   | [49] Steady Fire      |
| [05] Inv Fire Only  | [20] Ready Status     | [35] 2W Smoke Trouble | [50] Temporal Fire    |
| [06] Arm Status     | [21] Zone Alarm       | [36] Waterflow Alarm  | [51] CSFM Fire        |
| [07] Inv Arm Status | [22] Zone Follow      | [37] Waterflow Tbl.   | [52] Pulsed Fire      |
| [08] Date Schedule  | [23] Duress Output    | [38] Command Output 1 | [53] Fire Strobe      |
| [09] Latched Strobe | [24] Buzzer Follow    | [39] Command Output 2 | [54] Ground Fault     |
| [10] Trouble Output | [25] Remote Operation | [40] Command Output 3 | [55] Common Fire Tbl. |
| [11] Courtesy Pulse | [26] Exit Follow      | [41] Command Output 4 | [56] Bell Trouble     |
| [12] Chime Follower | [27] Entry Follow     | [42] Command Output 5 | [57] AC Status        |
| [13] TLM only       | [28] Zone Tamper      | [43] Command Output 6 | [58] Par Stat Alm Mem |
| [14] TLM and Alarm  | [29] Zone Fault       | [44] Command Output 7 |                       |

**NOTE:** The output options listed are for PC4010/4020 v3.0. For zone programming for previous software versions, see the corresponding programming manual.

#### **FCC COMPLIANCE STATEMENT**

**CAUTION:** Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.