Intellitec
131 Eisenhower Lane N., Lombard, IL 60148
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www.intellitec.com

# PMC and Multipoint Switching System

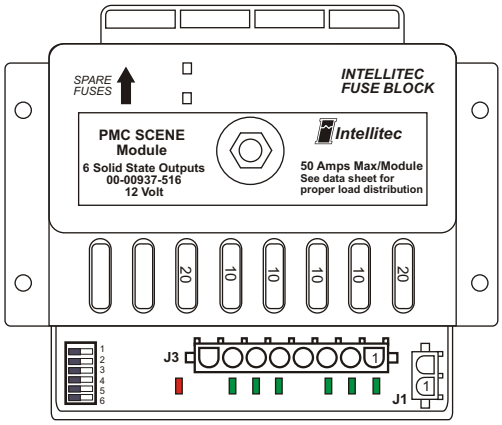
## 00-00937-506/516 Lamp Dimmer Control Output Modules with Preset Scenes

The PMC Output Modules 00-00937 are members of Intellitec's Programmable Multiplex Control family as well as the 160 Channel Multipoint Switching System. They work in combination with the PMC CPU or the 160 channel IPX master and other standard, semi-custom, or custom I/O modules. These modules provide solid-state outputs with the capability of dimming lights and allow the vehicle user to preset 4 different scenes.

The modules provide power fusing, switching, and distribution. Switching is accomplished via long life, field effect transistors instead of relays. Four outputs are rated at a maximum of 10 Amps and two outputs are rated at a maximum of 20 Amps . The total module current is limited by the *"I squared rule"* on the following page.

The approximate module dimensions are *3.80*" X *5.03*" X 1.*80*" . *It should be installed in a protected environment, inside the vehicle.*

The 937 module can be set for module addresses, A-P. *Using the chart on the next page, set the dip switches 1-4 to address the module.*




### PWM PROVIDES VARIABLE POWER (PULSE WIDTH MODULATION)

The 937 modules provide the ability to dim lights from any Intellitec multiplex keypad or momentary switch. This module dims the lights using pulse width modulation or PWM. Variable power is applied to the load by quickly turning the power on and off. By varying the duty cycle we can vary the intensity of the lamp.

Pressing and releasing the button quickly will cause the output to toggle on or off. Pressing and holding the button a second time will cause the intensity to begin ramping down. When the button is released, the lamp will remain at that intensity. The output will remember it's last intensity setting.

When using Intellitec programmable momentary push button switches, a switch is set for the same multiplex channel as the output. When the switch turns the channel on, the output latches on. When the switch turns the channel on again, the output latches off. Using the switch programming GUI and setting a switch for BL/MR (back light/Master Reset), instructs the module to turn all 6 outputs off when the switch is held for 3 seconds.

### PRESETS

The module includes the ability to store up to four preset levels of brightness for all six channels. To store a given set of brightness levels (including off), the vehicle owner sets the desired brightness of the six channels. Then pressing and holding one of the programmed buttons on a keypad for three seconds, the lights will blink to indicate those levels are stored. Scene buttons on the keypads are programmed to be channels 7, 8, 9 or 10. These channels can also be activated via PMC Booleans. To return to this set of brightness levels, the owner can momentarily press that scene button again.

By adjusting dip switches on the module, two, four, or all six channels can be included in the group.

When using a PMC System, Booleans can be written providing scene signals to multiple modules allowing nearly unlimited number of lights to be included in the scene group.

### LED DIAGNOSTIC INDICATORS

Next to each Mate-N-Lok connection you will find green LEDs. If the output is on, the LED will be on. There is also one red LED. This will illuminate if multiplex communications fail. In this case check the connections at J2.

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### SPECIFICATIONS

| | |
|---|---|
| **Modules** | **00-00937-506, 00-00937-516** |
| Nominal Vehicle Voltage | 24V (00-00937-506), 12V (00-00937-516) |
| **NOTES:** | *Output latches On/Off when channel turns on momentarily* |

**General Connections**

| | | |
|---|---|---|
| J1-1 | Communications Signal (from Master or CPU) | 16 Awg Min. |
| J1-2 | Communications Ground (from Master or CPU) | 14 Awg Min. |

### CHANNEL DESIGNATIONS

| Channel | Connection | Type | Rating |
|---|---|---|---|
| 1 | J3-1 | FET Output | 20 Amp Max ** |
| 2 | J3-2 | FET Output | 10 Amp Max ** |
| 3 | J3-3 | FET Output | 10 Amp Max ** |
| | J3-4 | Power Ground | |
| 4 | J3-5 | FET Output | 10 Amp Max ** |
| 5 | J3-6 | FET Output | 10 Amp Max ** |
| 6 | J3-7 | FET Output | 20 Amp Max ** |
| | J3-8 | No Connect | |
| 7 | Ch 7,8,9,10 | Scene 1 input | |
| 8 | is sent from keypads | Scene 2 input | |
| 9 | | Scene 3 input | |
| 10 | | Scene 4 input | |

***"I SQUARED RULE"***

** Total module current is limited by the following. The sum of the current squared for each output may not exceed 350.

$$\frac{I1^2}{2}+I2^2+I3^2+I4^2+I5^2+\frac{I6^2}{2}<350$$

***Failure to follow this rule may cause module failure.***

### MATING CONNECTIONS

| Designator | Function | Connector | Mating Part # | Contact,Typical | |
|---|---|---|---|---|---|
| | Battery | 1/4" or 1/4-20 Ring Term | | *for 14-18 AWG* | *for 10-12 AWG* |
| J1 | Communication | 2 Pin Amp Mate-N-Lok | 1-480698-0 | 350919-3 | 640310-3 |
| J3 | Outputs | 8 Pin Amp Mate-N-Lok | 640586-1 | 350919-3 | 640310-3 |

### MODULE SETTINGS

Module can be set for 1 of 16 address, A-P. Set six dip switches per table on right.

X = Switch is OFF

**SWITCH**
**6 5**

0 0 Channels 1 & 2 in scene group
0 X Channels 1 - 4 in scene group
X 0 7 Channels 1,2,5, 6 in scene group
X X All channels in scene group

| SWITCH 6 5 4 3 2 1 | MODULE Address | SWITCH 6 5 4 3 2 1 | MODULE Address |
|---|---|---|---|
| 0 0 0 0 | A | X 0 0 0 | I |
| 0 0 0 X | B | X 0 0 X | J |
| 0 0 X 0 | C | X 0 X 0 | K |
| 0 0 X X | D | X 0 X X | L |
| 0 X 0 0 | E | X X 0 0 | M |
| 0 X 0 X | F | X X 0 X | N |
| 0 X X 0 | G | X X X 0 | O |
| 0 X X X | H | X X X X | P |