Intellitec

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PMC and Multipoint Switching System
00-00844-120/500/510 Lamp Dimmer Control Output Modules

The PMC Output Modules 00-00844 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.

The modules provide power fusing, switching, and distribution. Switching is accomplished via long life, field effect transistors instead of relays. Each output will handle 10 Amps. The total module current is limited by the *"I squared rule"* on the following page.

The approximate module dimensions are 7.0" X 6.250" X 1.875" (16.2mm X 15.9mm X 4.8mm). *It should be installed in a protected environment, inside the vehicle.*

The 844 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 844 modules provide the ability to dim lights from any Intellitec multiplex keypad.   With the PMC system, a momentary push button can be used if it is connected to a PMC input. These modules come in two versions. The 00-00844-120 works with the 160 Channel Multipoint Switching System. The 00-00844-500 and 00-00844-510 work with the PMC system.

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.

By adjusting the dip switch, it is possible to select the channels that will operate to dim lights. *See the chart on the next page for dip switch settings.*

PMC VERSION 00-00844-500 AND 510

When set as a non-dimmable output, the outputs will operate as any other PMC output. To keep the output on, it's channel must be on. If the output is set to be a dimmable output, the output will latch on at the output module. To turn the output on, all that is required is that it's channel be turned on momentarily. When the channel comes on, the output turns on and latches. When the channel turns off, the output remains latched until the channel turns on again, at which time the output turns off.

OPERATING EXAMPLE FOR A PMC DIMMABLE OUTPUT

If the lighting output channel is B3 and a momentary push button is placed at D5 you could write a boolean such as B3=D5.   When momentary button D5 is pressed and released output B3 will turn on at 100% intensity and remain on even though switch channel D5 is off.   When D5 is pressed and released a second time, output B3 will turn off.
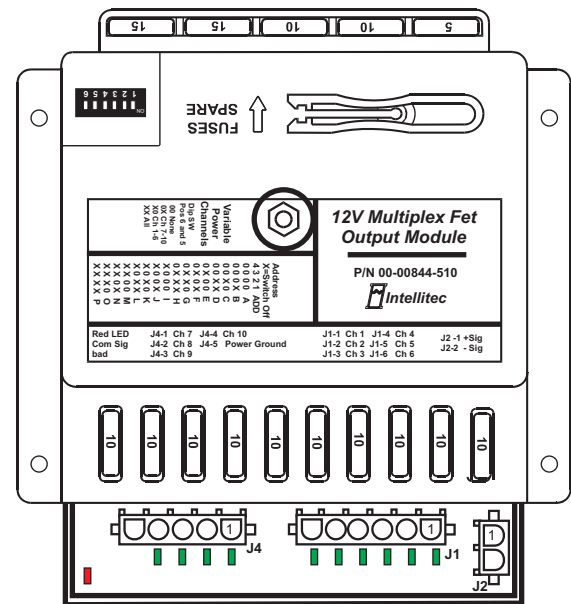
This happens because we latch the output on and off at the module. When button D5 is pressed and held, the output will begin to ramp up, increasing the lamp intensity. When the button is let go, the lamp will remain at that intensity. Pressing and holding the button a second time will cause the intensity to begin ramping down. When the button is released, the lamp will remain at that intensity. Pressing and releasing the button quickly will cause the output to toggle off. If power has been maintained at the module, the output will remember it's last intensity setting.

MULTIPOINT SWITCHING VERSION 00-00844-120

This module works with the non-programmable Multipoint Master. This module works in a similar fashion to the 844-500 and 510, except that when it's outputs are not set for dimming they will latch on and off just as the dimmer outputs do. With the Multipoint Master and Intellitec programmable momentary push button switches 00-00841-XXX, a switch is set for the same 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 GUI and setting a switch for BL/MR (back light/Master Reset), instructs the switch to turn all 10 outputs off when the switch is held for 3 seconds.

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	00-00844-120	00-00844-500	00-00844-510
Nominal Vehicle Voltage	12V	24V	12V

NOTES:

00-00844-120: Output latches On/Off When channel turns on momentarily

00-00844-500/510: For use with PMC ONLY. Outputs set for dimming latch; others do not latch. Use PMC Channel P10 to unlatch all dimmer module outputs or turn channel on momentarily to unlatch.

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	J1-1	FET Output	10 Amp Max **
2	J1-2	FET Output	10 Amp Max **
3	J1-3	FET Output	10 Amp Max **
4	J1-4	FET Output	10 Amp Max **
5	J1-5	FET Output	10 Amp Max **
6	J1-6	FET Output	10 Amp Max **
7	J4-1	FET Output	10 Amp Max **
8	J4-2	FET Output	10 Amp Max **
9	J4-3	FET Output	10 Amp Max **
10	J4-4	FET Output	10 Amp Max **
	J4-5	Power Ground	

"I SQUARED RULE"

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

$$I1^2+I2^2+I3^2+I4^2+I5^2+I6^2+I7^2+I8^2+I9^2+I10^2<350$$

Failure to follow this rule may cause module failure.

MATING CONNECTIONS

Designator	Function	Connector	Mating Part #	Contact,Typical	
				for 14-18 AWG	*for 10-12 AWG*
	Battery	#10/32 Ring Term			
J2	Communication	2 Pin Amp Mate-N-Lok	1-480698-0	350919-3	640310-3
J1	Outputs	6 Pin Amp Mate-N-Lok	640585-1	350919-3	640310-3
J4	Outputs	5 Pin Amp Mate-N-Lok	1-480763-0	350919-3	640310-3

MODULE SETTINGS

Module can be set for 1 of 16 address, A-P. Outputs can be set as dimmer or ON/OFF. Set six dip switches per table on right.

X = Switch is OFF

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

0 0 No Dimmers
0 X 1 thru 6 are Dimmers
X 0 7 thru 10 are Dimmers
X X All are Dimmers