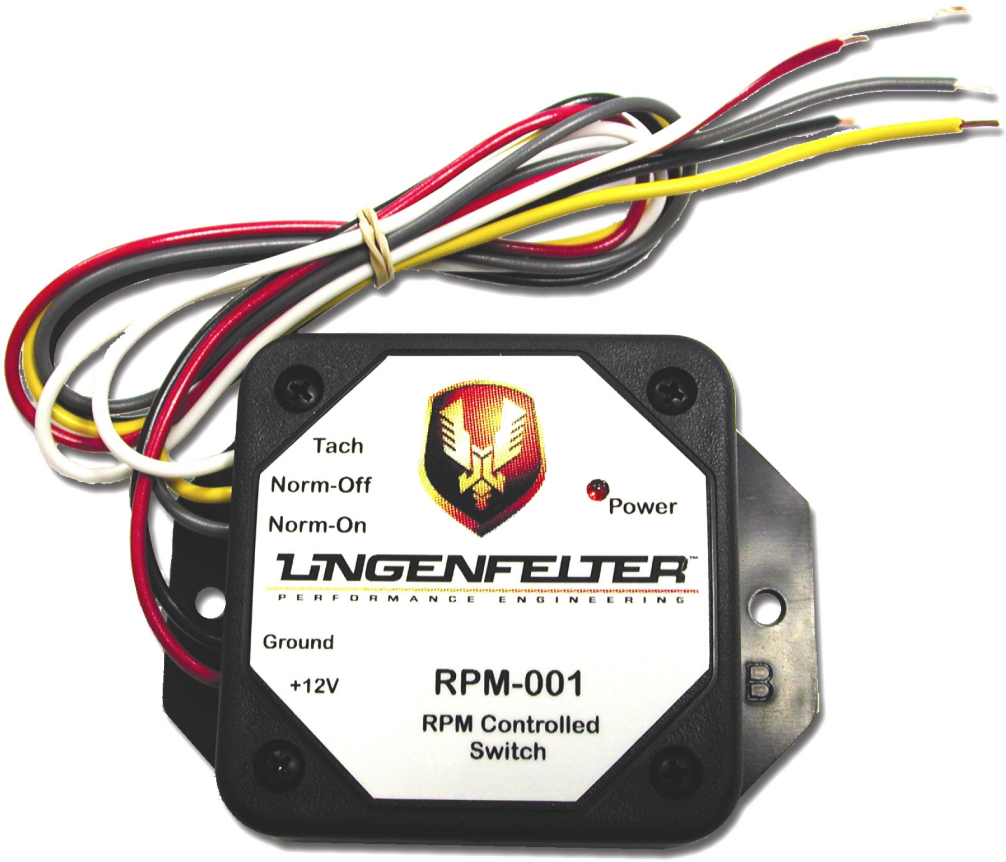
Lingenfelter RPM-001
Digital RPM Controlled Switch
Installation Instructions



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LINGENFELTER®
PERFORMANCE ENGINEERING

Parts List

#	Part number	Description
1	RPM-001	LPE Digital RPM Controlled Switch
1		hook & loop tape
2	AV16037	self-tapping screw
1	L920010000	LPE decal
1		instructions

Optional Items

- LED (for shift or indicator light)
  - LED-RED-12-30 (12 volt, 30 cm wire red LED)
  - LED-GREEN-12-30 (12 volt, 30 cm wire green LED)
- relay (for switching high current applications)
- MPH switch for triggering nitrous and other functions based on RPM & MPH

Specifications:

- The Lingenfelter Performance Engineering RPM-001 RPM Controlled Switch incorporates a precision 32-bit timer to realize microsecond precision over a very wide operating RPM range. Most common tachometer pulse frequencies are supported with no special wiring or options required.
- RPM switch settings in 100 rpm increments from 500 to 19900 rpm for most common engine applications.
- Fully encapsulated (potted) construction for increased durability.
- Rated for operation at up to 185 degrees F (85 degrees C).
- Outputs rated for up to 2.0 amps. For higher current levels, the switch should control a relay.
- Both the normally on and the normally off outputs can be used simultaneously.
- Can be used as an RPM activated switch or as a shift light controller. As a shift light controller, the RPM-001 should be able to trigger most common 12 volt shift lights.
- Outputs have a self protect feature and will turn OFF in case of a direct short or over current condition.
- Operating voltage range: 9.0 to 16.0 volts.
- Input signal type: +12 volt square wave or coil negative terminal. Not for use with 5 volt reference signals. For 5 volt reference signal applications (such as the GM coil signal, contact LPE for the low voltage version of the RPM-001).
- Input signal impedance: 10k ohms.
- Current draw: 0.1 amp plus current draw of device being controlled (when active).
- 90 day warranty (from date of purchase).

Wiring (also labeled on module):

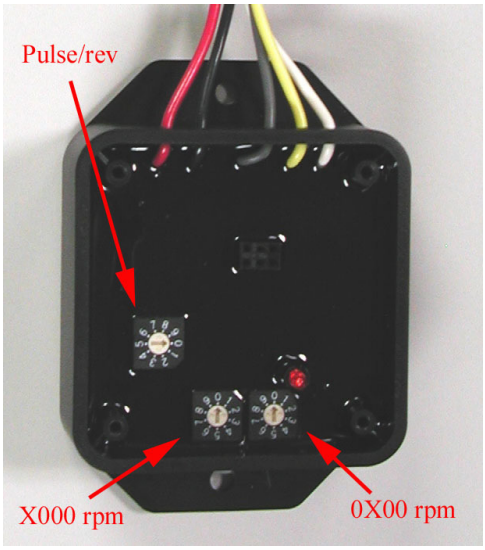
Wire Color	Label	Notes
White	Tach	This is the RPM input wire. This connects to your rpm signal wire.
Yellow	Normally Off	This is the normally open (off) activation wire. This wire connects to ground when switch is activated. This connects to the ground side of the device you plan to activate.
Gray	Normally On	This is the normally closed (on) activation wire. This wire will open the ground path when the switch is activated. This connects to the ground side of the device you plan to control.
Black	Ground	Connects to a vehicle ground.
Red	+ 12 V	Connects to a switched +12 volt source.

Red LED:

- Comes on solid on start-up
- When active RPM is reached, LED will blink at 18 Hz (fast)
- Blinks at 2 Hz rate (slow) if RPM set below 500 rpm at start-up with outputs disabled

Settings:

- Controlled by three (3) switches
  - Two (2) switches for selecting rpm (switches side by side)
  - Third switch for selecting pulse/rev. count
    - NOTE - see settings table on page 4
  - View module with wires exiting top, and 0 at 12 o'clock on RPM selector switches
- **Changes to the rpm switch point settings must be done with the ignition off**
  - The switch positions are only read on start up
  - The RPM Controlled Switch will not work at RPM levels below 500 rpm



Example settings:

GM LS1/LS6/LS2 V8 engines (connect to PCM TACH output)

- 1800 rpm switch point example
  - Upper switch set to 2 (for 2 pulses per revolution, LOW mode)
  - Left (X000) rpm switch on position 1
  - Right (0X00) rpm switch on position 8

Most GM V8 engine applications including L98, LT1 and LT4 engines (connect to PCM TACH output)

- 7200 rpm switch point example
  - Upper switch set to 4 (for 4 pulses per revolution, LOW mode)
  - Left (X000) rpm switch on position 7
  - Right (0X00) rpm switch on position 2

Installation:

- Remove negative battery terminal.
- Connect black wire of RPM switch to a suitable vehicle ground.
- Connect the red wire to a **switched and fused** +12 volt DC source.
- Connect the white wire to the tachometer output lead of the vehicle or the switched side of the ignition coil (negative side).
- If you will be using the normally off output, such as to control a shift light, connect the yellow wire to the ground side of the device you plan to activate.
- If you will be using the normally on output, connect the gray wire to the ground side of the device you plan to activate.
- If the device you will be controlling draws more than 2 amps, make sure to control the device through a relay.
- Set the desired RPM switch activation point using the two ten position rotary switches for the 1000 rpm increment (X000) and the 100 rpm increment (0X00), as labeled on page 2.
- Set the pulse per revolution (PPR) setting to the correct setting for your vehicle application.
- Reconnect the negative battery terminal.

RPM Setting Switch Positions:

Left side switch selects rpm in thousands (X000)		
0 to 9 equal to 0 to 9000 rpm (in LOW) & 10000 to 19000 (in HIGH)		
	RPM	
Setting	**LOW mode**	**HIGH mode**
0	0	10000
1	1000	11000
2	2000	12000
3	3000	13000
4	4000	14000
5	5000	15000
6	6000	16000
7	7000	17000
8	8000	18000
9	9000	19000

Right side switch selects rpm in hundreds (0X00)	
0 to 9 equal to 0 to 900 rpm (in LOW and in HIGH)	
Setting	**RPM**
0	0
1	100
2	200
3	300
4	400
5	500
6	600
7	700
8	800
9	900

RPM-001 modules stamped with no letter code, A or B (and having a 10 position switch):

Third switch for selecting pulse/rev. count		
Setting	**Pulse/rev**	
LOW mode		**Common Applications**
0	0.5	1 cylinder engines & '99+ V8 Mustang
1	1	2 cylinder engines & Viper/SRT10 coil
2	2	4 cylinder engines & LS1, LS2 GM V8
3	3	6 cylinder engines
4	4	8 cylinder engines
HIGH mode		
5	0.5	1 cylinder engines
6	1	2 cylinder engines
7	2	4 cylinder engines
8	3	6 cylinder engines
9	4	8 cylinder engines

RPM-001 modules stamped with letter code C (and having a 16 position switch):

	Switch setting	**Pulse/rev**	**Common Application(s)**
LOW RPM range mode	0	**0.5**	Typical 1 cylinder engines & individual coil ignitions such as '99+ V8 Mustang
	1	**1**	Typical 2 cylinder engines & wasted spark coil packs such Viper/SRT10 coil
	2	1.5	3 cylinder engines
	3	**2**	Typical 4 cylinder engines + LS1, LS2 etc.TACH signal
	4	2.5	5 cylinder engines
	5	**3**	6 cylinder engines
	6	**4**	8 cylinder engines
	7	5	10 cylinder engines
HIGH RPM range mode	**Switch setting**	**Pulse/rev**	**Common Application(s)**
	8	**0.5**	Typical 1 cylinder engines & individual coil ignitions such as '99+ V8 Mustang
	9	**1**	Typical 2 cylinder engines & wasted spark coil packs such Viper/SRT10 coil
	A	1.5	3 cylinder engines
	B	**2**	Typical 4 cylinder engines + LS1, LS2 etc.TACH signal
	C	2.5	5 cylinder engines
	D	**3**	6 cylinder engines
	E	**4**	8 cylinder engines
	F	5	10 cylinder engines

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