SPLIT SECOND

TA2-100
Tach Adapter

Description:

The TA2-100 can be used to generate a true tach signal on virtually any gasoline engine. It has a frequency multiplication function that allows it to produce a true tach signal based on a one-cylinder rate input. A true tach signal has one pulse for each engine ignition event. The output can be used to drive a conventional tachometer, shift light, fire upstream additional injectors or as an input to other modules that require a true tach signal.

The signal input can be from a coil primary, coil trigger logic signal or injector. Many new engines do not have a conventional tach signal making it difficult to fit a tachometer, shift light or other modules that require a tach signal. The versatile inputs on the TA2-100 make it very easy to install and use.

The output from the TA2-100 is square wave logic signal. It is user selectable for 0-5V or 0-12V output range. The frequency of the output is determined by DIP switch selection. The available multiply-by factors are 1,2,3,4,6,8,10 and 12. The wide range of multiply-by options make it possible to work with either true sequential or wasted spark ignitions. The universal TA2-100 is the only tach adapter you will ever need.

Features:

- Fit a conventional tach to any gasoline engine
- DIP switch selection for multiply by 1,2,3,4,6,8,10 or 12
- Works on wasted spark ignitions
- Generate a true tach signal for other systems
- Trigger a shift light
- Selectable for 5V or 12V output
- Can be triggered by an injector signal

Operation:

The different functions that the TA2-100 can perform are selected by a combination of wiring options and DIP switch settings. The DIP switches are accessed by removing the bottom cover.

Wire Assignments:

TYPE	LABEL	CONNECT TO	WIRE COLOR
Input	B-	Ground	Black
Input	B+	Switched battery positive	Red
Input	Coil In	Coil primary negative (optional)	Yellow
Input	Logic In	Logic signal (optional)	Tan
Output	Tach Out	Tach or other system	Grey

Internal Settings:

The 4 internal DIP switches control the operation of the unit. Switches 1 through 3 set the frequency multiply factor according to the table below. Switch 4 selects the output high logic voltage. When switch 4 is off, the logic high voltage is 12V. When switch 4 is on, the logic high voltage is 5V.

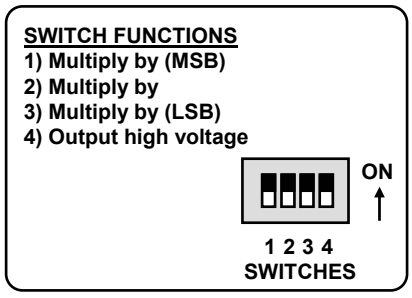
Switch Functions

Multiply by				Logic High
S1	S2	S3		S4
○	○	○	1	○ 12V
○	○	●	2	● 5V
○	●	○	3	
○	●	●	4	
●	○	○	6	
●	○	●	8	
●	●	○	10	
●	●	●	12	

○ = OFF

● = ON

Internal View

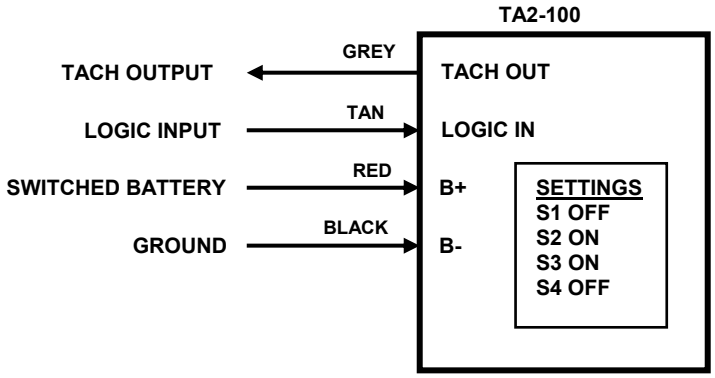


Typical Connections:

This diagram shows the typical connections for a tach adapter on a 4-cylinder engine. This connection will work with 0-5V or 0-12V logic pulse inputs. This is the type of signal used to trigger buffered coils on applications with a coil per cylinder. The tan wire is connected as a T-tap to the coil trigger wire on any one of the ignition coils.

DIP switches 2 and 3 are on to set the unit to multiply-by-4. Use other switch settings from the table above for engines with between 1 and 12 cylinders.

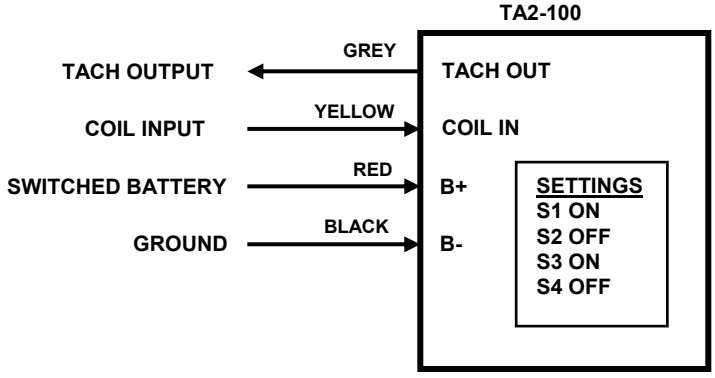
Multiply-by-4 Tach Adapter with Logic Pulse Input



The configuration shown above will generate 0-12V output pulses. To make the output swing to +5V, turn on DIP switch 4.

If the input is from the primary of an ignition coil, use the yellow coil input wire connection. This connection would be used for unbuffered coils. A T-tap style connection is made to the coil primary wire. A special circuit in the TA2-100 turns the electrically noisy coil primary signal into a square wave.

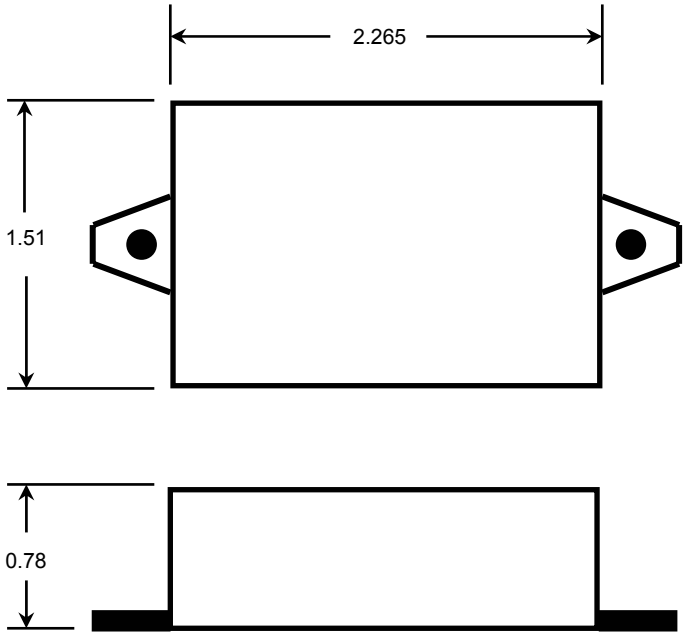
Multiply-by-8 Tach Adapter with Coil Primary Input



Electrical Characteristics:

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Supply Voltage	B+ to B-	10	13.5	15	V
Input Voltage Coil In	Signal Input to B-	0		15	V
Input Voltage Logic in	Signal Input to B-	0		15	V
Input Frequency				250	Hz
Output Current		0		100	mA
Supply Current	B+ to B-		26		mA

Dimensions:



(dimensions in

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