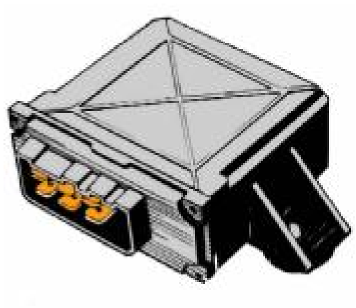
MULTIPURPOSE SIGNAL INTERFACE

P/no. 411.100 - Installation Instructions for 12/24vdc module



GENERAL

The 411.100 Signal Interface is designed to provide a variety of output signals from the standard tachometer and speed signals available in most automotive applications. The options are…

- Convert an AC signal (eg: inductive, generator, alternator, or ignition) to a square wave signal.
- Divide an input signal frequency down by a factor of 2, 4, 8, or 16.
- Provide 2 output signals (180° out of phase) to operate a tachograph (eg: VDO Kienzle 1318, 1319).
- Vary the mark to space ratio (duty cycle) of a square wave signal depending on the input frequency variation.
- Amplify a weak signal and convert it to a square wave to operate two or more devices off the two outputs.
- Supply a regulated 10vdc output for Hall Effect or Proximity Switch Sender.
- Standard output is a square wave with ~ 50% duty cycle and 0–10v p-p signal.

NOTE: This module is designed as a universal unit to suit as many automotive type applications as possible. However there may be some systems where the input or output signals are not compatible with this unit. The manufacturer is not responsible for incorrect fitting or damage caused by or during the fitting of this module.

FITTING INSTRUCTIONS

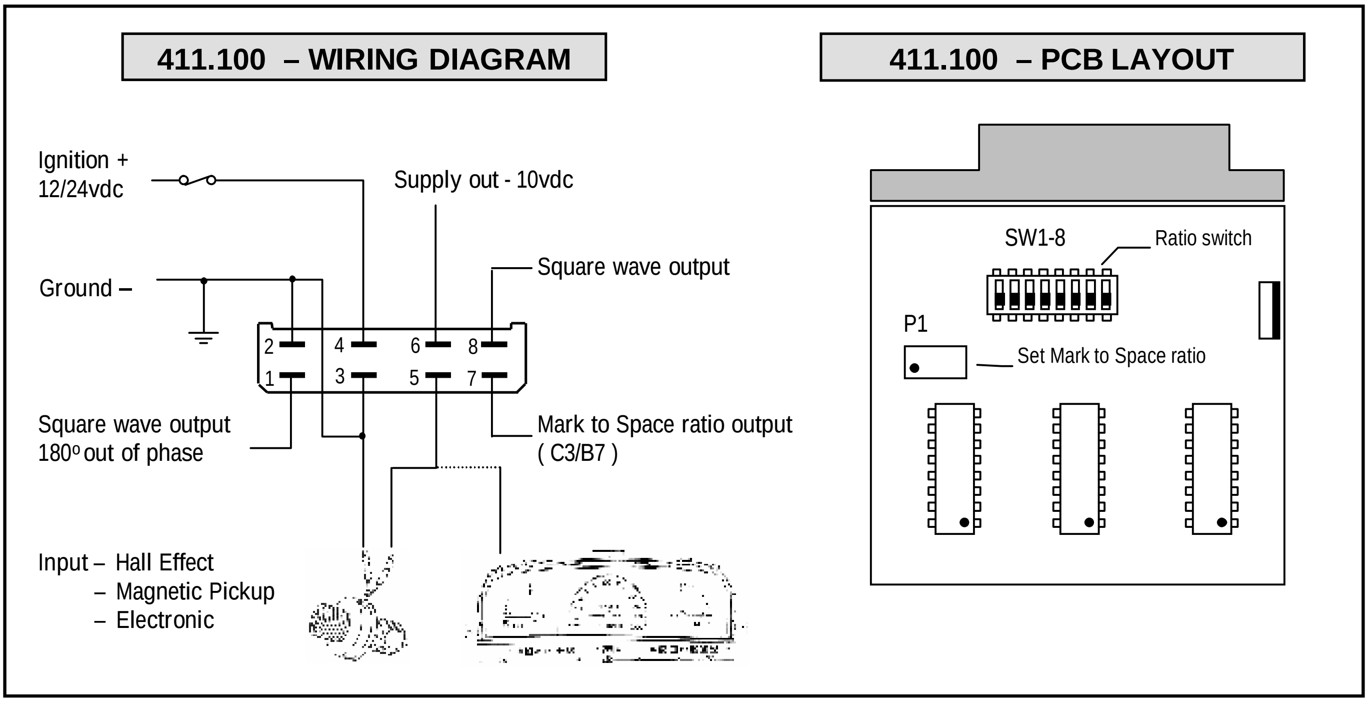
1. Locate a convenient mounting place in the instrument panel or under the dash near the fuse panel and mount the 411.100 Signal Interface. Screws (3/16" or 5mm), double sided tape, or Silastic are all acceptable. Orientation is not critical.
2. Connect the "+" terminal (Term. No. 4) on the control module to your positive source or ignition switch via a 3 amp fuse.
3. Connect the " – " terminal (Term's. No. 2 & 3) to a good earth or ground connection.
4. Connect terminal no. 5 to your input signal.
5. Connect the output terminals (Term's No. 1, 7, 8) as required (usually to a speedo or tacho input). Maximum output is set for 0-10volts p-p. Refer to the Connections and Wiring Diagram sections.
6. Adjust the ratio setting as required. Refer to Setting section.
7. Adjust the mark to space ratio if required. Refer to Setting section.

CONNECTIONS

Terminal connections are as follows…

Term no. 1	= Output signal, square wave, 0 - 10v p-p, 180^{o} out of phase
Term no. 2, 3	= Negative or Ground
Term no. 4	= +12vdc or +24vdc, ign. controlled
Term no. 5	= Input Signal, = Hall Effect or Magnetic Pickup
Term no. 6	= +10vdc output for Hall Effect Sender
Term no. 7	= Output Signal, with adjustable mark to space ratio, C3/B7
Term no. 8	= Output Signal, square wave, 0 - 10v p-p

WIRING DIAGRAM



Note: If fitted to supply dual phase signals to a 1318 Tachograph, connect Pin 4 to Battery + instead of Ignition + to ensure correct function of Tachograph when key is off. (Current draw of the 411.100 module should be less than 40mA at 24vdc in this instance.)

SETTING

1. Set SW3 to correct position, ON for inductive, OFF for a hall effect sender.
2. Set desired "divide by" ratio, SW4= 1, SW5= 2, SW6= 4, SW7= 8, SW8= 16. **Leave all other switches off**.
3. Calculate the frequency where the RSL will actuate to limit the speed.
   Eg: To calculate the frequency for a vehicle to be set at 100km/h, the following data is required…
   3.1. Roll test the vehicle for the correct number of Turns or Impulses/Km
   3.2. Vehicle number of Turns per Km **T/Km** **= 741**
   3.3. Vehicle number of Impulses per Km **Imp/Km** **= 5800**
   3.4. Number of Impulses per sender's Revolution **Imp/Rev** **= 8**
   3.5. Speed in Km/h to limit vehicle **Spd Lmt** **= 110**
   3.6. 3600 seconds in an hour **= 3600**
   3.7. Encode RSL Module to maximum speed possible…

   (T/Km x Imp/Rev x Spd Lmt) / 3600 = Hz **(741 x 8 x 110) / 3600 = 181 Hz**

   A similar calculation is carried out if the number of Imp/Km is known…

   (Imp/Km x Spd Lmt) / 3600 = Hz **(5928 x 110) / 3600 = 181 Hz**

4. With the RSL set-up on the test bench or on the vehicle, after the installation has been completed, adjust pot P1 clockwise until the actuator arm has moved through approximately 45 of its 90 degrees (electrical movement).

SPECIFICATIONS

Dimensions:	68 x 30 x 73mm deep, overall box dimensions.
Mounting:	Hole centres…83mm, mounted height…35mm, box with plug & wiring allow min 110mm.
Voltage:	12/24 vdc negative ground.
Current:	Approx. … 42mA at 14Vdc no load, 50mA at 28Vdc no load
Adjustment:	Frequency adjustable from - divide by 1, 2, 4, 8, or 16. Frequency adjustable mark/space ratio.
Output rating:	0–10vp-p square wave at ~50% duty cycle, same but 180° out of phase, adjustable m/s ratio.

For any queries, application data or technical information call your supplier or Continental Pty Ltd on 03 9468 1151