

Analog To PWM PWM157

DESCRIPTION

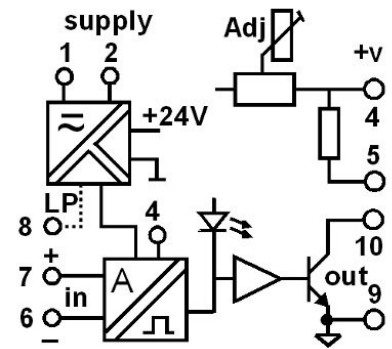
The PWM157 is an analogue to pulse width modulator that is factory configured for a wide range of voltage (100mV to 100Vdc) current (1mA to 1Adc) signals. The output frequency is factory set between 10Hz and 3kHz. As the input signal rises the output pulse width will change from the minimum specified to the maximum on time total period. The unit can be factory set for reverse action if required. Final calibration is trimmed using the front accessible ZERO and SPAN 15-turn trim adjustments. The output pulse amplitude is adjustable via the 15-turn reference front potentiometer, which allows exact pulse voltage levels to be set. Output is indicated by an LED which provides clear indication of module function and PWM percentage. Power supply variations from 240Vac down to 8Vdc all providing isolation of 2kVrms/2.5kVdc. RF and power transient protection is standard as it is with all APCS modules.



General Specifications

- Size: 52 W x 70 H x 110 D (mm).
- Mounting: DIN-Rail, gear plate.
- Termination: Top mounted screw terminals.
- Protection class: IP40.
- Weight: 0.300 kg.
- Housing material: ABS.
- Calibration accuracy: $\pm 0.2\%$ of SPAN.
- Front 'SPAN' adjust: $\pm 10\%$ typical.
- Front 'ZERO' adjust: 40% typical.
- Repeatability: $\pm 0.2\%$ of SPAN.
- Combined linearity/drift error: $\pm 0.50\%$ of SPAN.
- Temperature effect: Typically 0.02% of span per °C.
- Operating temperature: 0...+50°C.
- Output period range: 10Hz to 3kHz.
- Period temperature effect: Typically 0.05% of frequency per °C.
- Pulse voltage level: 2.5 to 18Vdc (adjustable).
- Output transistor rating: 30V, 100mA.
- Input/output isolation: 1000Vrms/1500Vdc.
- Power requirements: 3W.
- Electromagnetic compatibility: Complies with AS/NZS 4251.1 (EN 50081.1)

Block Diagram



For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

TYPE NO. DESIGNATION

Power Supply:

- 1 = 90-280Vac 50/60Hz (65-280Vdc). *) 5 = 8 - 60Vdc.
 *) 3 = 16-48Vac 50/60Hz (10-60Vdc) *) 9 = Other specify.

Input:

- 1 = 0 - 5V (200kΩ).
 # 2 = 4 - 20mA (100Ω). 9 = Other signal specify.
 3 = 0.5-4.5V (200kΩ).
 4 = 0 - 10V

Example calibration

Input: 0-5Vdc
 PWM: 5-95%

Calibration must be specified.

Output Frequency:

- 0 = 10Hz. 5 = 500Hz.
 1 = 100Hz. 6 = 600Hz.
 2 = 200Hz. 7 = 700Hz.
 3 = 300Hz. 8 = 800Hz.
 4 = 400Hz. 9 = Specify between 10Hz and 3kHz.
 *) A = Specify between 3kHz and 11kHz (reduced linearity)

Action:

- 1 = Direct. 2 = Reverse.

Options:

- 0 = None.

*) = Price Extra.

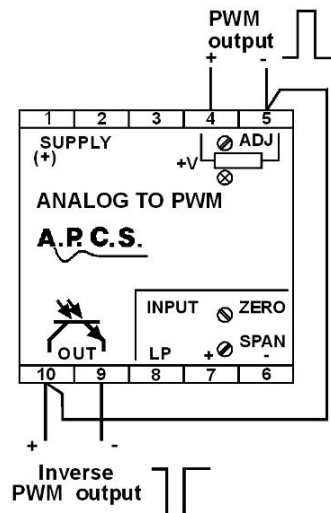
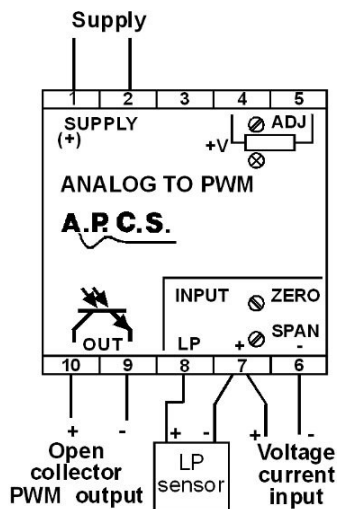
#) = When ordering 4-20mA input terminal 8 is connected to +20Vdc. This voltage should only be used to loop power transmitters on the input if required.

Input Connections With Open Collector Output

- When ordering 4-20mA input terminal 8 is connected internally to +20Vdc for use with a loop powered sensor or transmitter.
- All other input signal types are connected to terminals 6 and 7.
- The open collector connection is used where the input circuit of the receiving device provides the power for switched signal.

Voltage Output Connections

- For pulse output operation terminal 5 and 10 are joined. The amplitude of the output signal is set using ADJ while measuring between terminals 9 and 4.
- The inverting or non inverting signal is available by connecting the output to different terminals.
- Only one output connection may be used at any one time.



In the interest of development and improvement, APCS reserve the right to amend, without notice, details contained in this publication. APCS will accept no legal liability for any errors, omissions or amendments.