

# Analogue to Pulse Converter v2 APC253

## DESCRIPTION

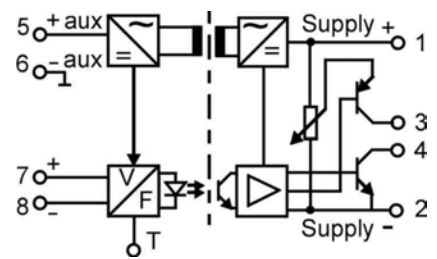
The APC253 is a analogue to pulse conversion module specifically designed to interface to PLC or other systems requiring pulse inputs. The APC253 can be configured for a wide range of process and probe inputs (for full range see ordering information). Output modes available are NPN, PNP, or DC Pulse. The output frequency range can be factory calibrated for any frequency span from 10Hz up to 10kHz, with low scale frequency offsetting also available. eg. Input 0 - 10Vdc Output 1 - 2kHz. The input/output configuration can also be set for reverse action if required using internal coding pins. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments. A front mounted L.E.D. and a test socket verify module function and assist in calibration checks. The output pulse amplitude is adjustable via an internal 15-turn reference potentiometer which allows exact pulse voltage levels to be set. The APC253 provides isolation up to 2kV rms between supply/output and input terminals. Double surge protection is standard with all Series 200 transmitters to prevent failure due to spikes induced by DC switched inductive loads.



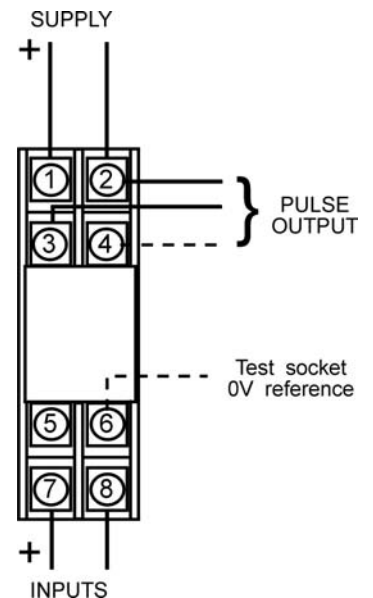
## General Specifications

Size:	Size: 23.5W x 71.5H x 109D (mm)..
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Termination:	Top mounted screw terminals.
Protection class:	IP40 (IP55 Enclosure Opt).
Weight:	0.120 kg.
Protection class:	IP40.
Calibration accuracy:	<0.2%.
Front 'SPAN' adjust:	±15% typical.
Front 'ZERO' adjust:	±10% typical.
Linearity:	<0.1%.
Long term drift:	<0.1%.
Temperature effect:	Typically 0.02% of span per °C.
Operating temperature:	-10...+50°C.
Output frequency range:	10Hz to 10KHz.
Pulse voltage level:	1Vdc (min) up to supply voltage less 2.5Vdc (adjustable).
Output pulse drive:	20mA maximum.
Input/output isolation:	2kV rms.
Open collector output:	30V, 30mA sinking.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)

## Block Diagram



## Connection



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

## TYPE NO. DESIGNATION

## APC253 - X XX X X X

### Power Supply:

- 1 = 12Vdc  $\pm 20\%$
- 2 = 24Vdc  $\pm 20\%$

\*) 9 = Other < 63Vdc (Specify).

### Input:

- 01 = 0 - 100mV
- 02 = 0 - 200mV
- 03 = 0 - 500mV
- 04 = 0 - 1V
- 05 = 0 - 2V
- 06 = 0 - 5V
- 07 = 0 - 10
- 08 = 0 - 100V
- 09 = 1 - 5V
- 11 = 0 - 1mA
- 12 = 0 - 5mA
- 13 = 0 - 10mA
- 14 = 0 - 20mA
- 15 = 0 - 50mA
- # 16 = 4 - 20mA
- 17 = 10 - 50mA

Specify all required calibration details

- \*) 21 = DC voltage up to 2000Vdc.
- \*) 22 = DC millivolt, <100mVdc.
- \*) 23 = DC voltage, bipolar 10mV to  $\pm 2kV$ .
- \*) 24 = DC current input 10A max.
- \*) 30 = AC voltage 10mV to 500V.
- \*) 31 = AC current. 0.5 up to 10A.
- \*) 40 = Conductivity 50uS/cm to 100mS/cm (k=1.0)
- \*) 41 = Resistance 2W const. current exc.
- \*) 42 = Potentiometer 3W voltage excited.
- \*) 43 = RTD.
- \*) 44 = Thermocouple.
- \*) 45 = Frequency sine, 5Hz up to 5kHz Span.
- \*) 46 = Frequency pulse, 5Hz up to 5kHz Span.
- \*) 47 = Frequency NAMUR/prox. Sensor.
- \*) 48 = Frequency contact, 5Hz up to 5kHz Span.
- \*) 49 = pH/Electrochemical sensor.
- \*) 99 = Other.

### Output:

- 1 = 0 - 50Hz
- 2 = 0 - 100Hz
- 3 = 0 - 250Hz
- 4 = 0 - 500Hz

- 5 = 0 - 1000Hz.
- 6 = 0 - 2000Hz.
- 7 = 0 - 5000Hz.
- 8 = 0 - 10000Hz.

Specify pulse voltage level,  
1Vdc up to (supply -2.5Vdc).

\*) 9 = Other - span or live zero eg. 20 - 100Hz (Specify)

### Action:

1 = Direct.

2 = Reverse.

### Options:

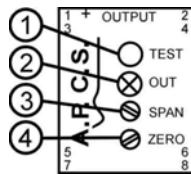
0 = None

# = Includes 22Vdc @20mA auxiliary supply on terminal 5.

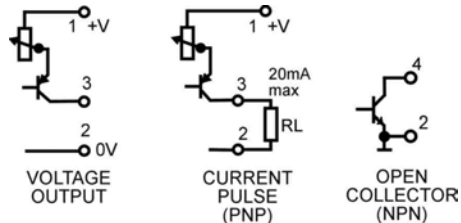
\*) = Price Extra.

### Front Control Explanation

1. Test socket - reference to terminal 6 for input calibration check.
2. Output indicator.
3. SPAN (full scale) adjust 15 turn.
4. ZERO (start scale) adjust 15 turn.



### Output Circuit



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