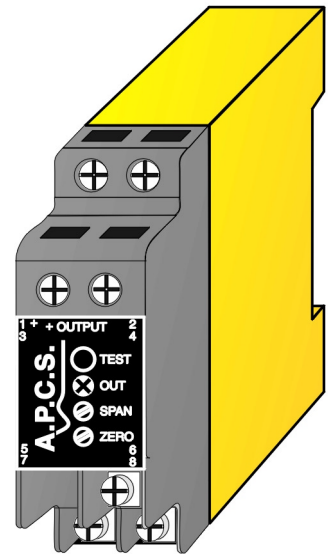


## ANALOGUE TO PULSE CONVERTER (v1) APC253

### DESCRIPTION

The ANALOGUE TO PULSE CONVERTER APC253 is a low cost universal analog to pulse conversion module specifically designed to interface to PLC's and other systems requiring pulse inputs. Due to its total width of only 22.5mm and the 35mm DIN-Rail mounting arrangement the APC253 is ideal for "nestmounting" in field enclosures or as a "space saver" in larger control cabinets. 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 r.m.s. 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.

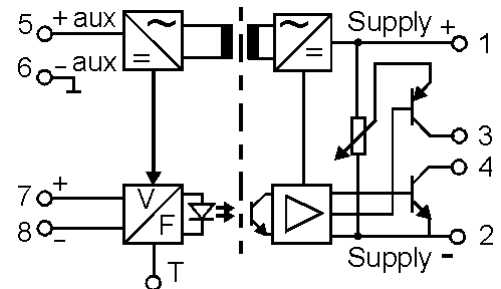


### General Specifications

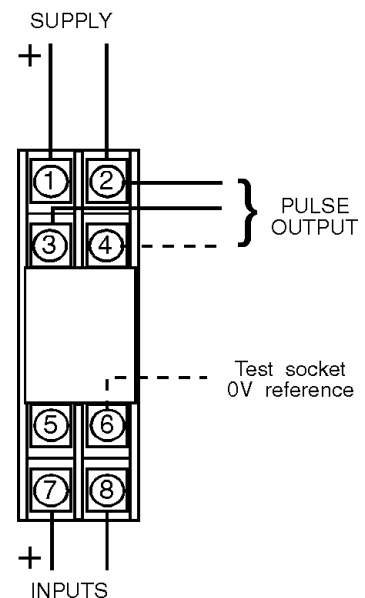
Size:	22.5W x 68H x 109D (mm).
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	Polycarbonate.
Termination:	Top mounted screw terminals.
Protection class:	IP40 (IP55 Enclosure Opt).
Weight:	0.120 kg.
Protection class:	IP40.
Calibration accuracy:	<0.2%.
Front 'SPAN' adjust:	±15% typical.
Front 'ZERO' 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 r.m.s.
Open collector output:	30V, 30mA sinking.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1)

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

### Block Diagram



### Connection Diagram



## TYPE NO. DESIGNATION

## APC253 - X XX X X X

### Power Supply:

- 1 = 12Vdc ±20%
- 2 = 24Vdc ±20%

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

### Input:

- |                |  |
|----------------|--|
| 01 = 0 - 100mV | 11 = 0 - 1mA                                 |
| 02 = 0 - 200mV | 12 = 0 - 5mA                                 |
| 03 = 0 - 500mV | 13 = 0 - 10mA                                |
| 04 = 0 - 1V    | 14 = 0 - 20mA                                |
| 05 = 0 - 2V    | 15 = 0 - 50mA                                |
| 06 = 0 - 5V    | # 16 = 4 - 20mA                              |
| 07 = 0 - 10V   | 17 = 10 - 50mA                               |
| 08 = 0 - 100V  |  |
| 09 = 1 - 5V    | *) 19 = Other. (Specify 100Vdc or 100mA max) |

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

### Input Opt: (Inputs continued)

- |   |   |
|---|---|
| *) 21 = DC voltage up to 2000Vdc.         | *) 43 = RTD                                     |
| *) 22 = DC millivolt, <100mVdc.           | *) 44 = Thermocouple.                           |
| *) 23 = DC voltage, bipolar 10mV to ±2kV. | *) 45 = Frequency sine, 5Hz up to 5kHz Span.    |
| *) 24 = DC current input 10A max.         | *) 46 = Frequency pulse, 5Hz up to 5kHz Span.   |
| *) 30 = AC voltage 10mV to 500V.          | *) 47 = Frequency NAMUR/prox. sensor.           |
| *) 31 = AC current. 0.5 up to 10A.        | *) 48 = Frequency contact, 5Hz up to 5kHz Span. |
| *) 41 = Resistance 2W const. current exc. | *) 49 = pH/Electrochemical sensor.              |
| *) 42 = Potentiometer 3W voltage excited. | *) 99 = Other.                                  |
- Specify calibration details for all optional inputs.

### Output:

- |               |  |
|---------------|--|
| 1 = 0 - 50Hz  | 5 = 0 - 1000Hz.                            |
| 2 = 0 - 100Hz | 6 = 0 - 2000Hz.                            |
| 3 = 0 - 250Hz | 7 = 0 - 5000Hz.                            |
| 4 = 0 - 500Hz | 8 = 0 - 10000Hz.                           |
|               | *) 9 = Other - span or live zero (Specify) |

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

Live Zero output available as an option, eg. 20 - 100Hz.

### Action:

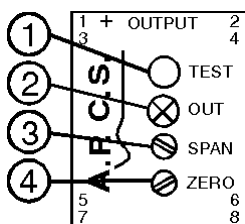
- 1 = Direct.
- 2 = Reverse.

### Options:

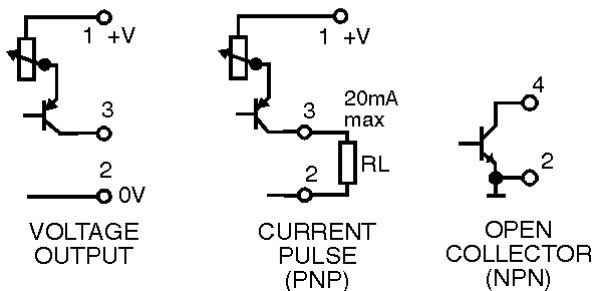
- 0 = None

### 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



\*) Price Extra.

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