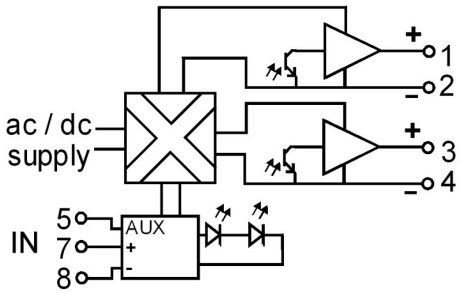
Analogue to Pulse Converter BAPC258

DESCRIPTION

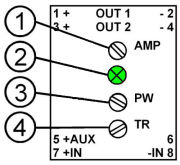
The BAPC258 is an analogue to pulse conversion module specifically designed to interface to systems requiring pulse inputs. A wide range of process and probe inputs are available with two fully isolated pulse outputs. The output frequency range is factory calibrated for required spans of 10Hz up to 10kHz, with low scale offsetting available. Final calibration may be trimmed using the front accessible zero and span trim adjustments. The level of OUT1 (when ordered as pulse source) is set using a top accessible trim pot close to the power plug. The level of OUT2 (when ordered as pulse source) is set using the front accessible 'AMP' trim pot.

General Specifications

Size:	Size: 23.5W x 71.5H x 109D (mm)
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Termination (in/out):	Top mounted screw.
Termination (power):	2-way plug-able screw.
Protection class:	IP40.
Weight:	0.120 kg.
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.
Input/output isolation:	1.5kVrms.
Output frequency range:	10Hz to 10KHz.
Pulse voltage level:	3 – 22V adjustable.
Output transistor rating:	30V, 100mA.
Output Pulse Drive:	20mA maximum
Open collector output:	30V, 100mA.
EMC compatibility:	AS/NZS 4251.1 CE EN 50081.1

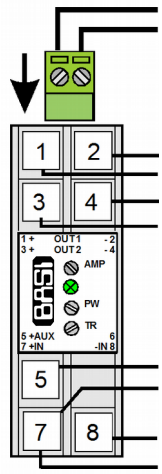


Front Control Controls



1) **AMP -** OUT 2 level adj. OUT 1 level adj. is on top edge of case.
2) **LED -** Output indicator.
3) **PW -** Input span adj.
4) **TR -** Input zero adj.

Input Options and Connections



The supply connects via a plug that is fitted into the top edge

Output 1 -ve.
Output 1 +ve.
Output 2 -ve.
Output 2 +ve.

4-20 mA loop transmitters are connected to terminal 5 +ve and terminal 7 -ve.

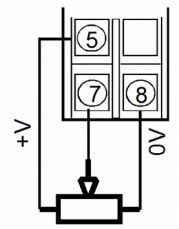
All other signal sourced two terminal inputs including 4-40mA are are connected to terminal 7 +ve and terminal 8 -ve

[1] 4 – 20mA Includes 22Vdc @20mA auxiliary	51Ω.
[2] 10 - 50mA Input [2]	22Ω.
[3] 1mA to 100mA.	1KΩ @1mA.
[4] 1Adc MAX	0.05Ω.
[5] 8Adc MAX	0.01Ω.
[6] 1 - 5V Input	1MΩ.
[7] 0.1V to 40Vdc	1MΩ.
[8] 40V to 500Vdc	1MΩ
[9] 2mV to 100mV.	12kΩ @ 10mV.

[A] ±1mV to ±500V.	
Loading 10mV	12kΩ
Loading 500V	1MΩ
[C] 10mVac to 500Vac	
Loading 10mV	12kΩ
Loading 500V	1MΩ
[E] 1Aac MAX	0.05Ω
[F] 8Aac MAX	0.01Ω.
[J] 50mV to 500V true rms	
Loading 50mV	12kΩ
Loading 500V	1MΩ
Offset:	up to 200% of range
Linearity and drift error:	< 0.5% of range
[L] Resistance 2 wire	
Calibration accuracy:	<0.5%.
Linearity:	<0.5%.
Temperature drift error:	<0.5%.
Input range:	50Ω up to 10kΩ.
Excitation current:	0.6mA max.
[M] Thermocouple	
Linearised:	0.2%
Cold junction comp.:	0.02% per °C.
Input offset adjustment:	200% of range.
Internal Offset Adjust:	±50%.
Input range:	4mV up to 80mV.
Input impedance:	> 1MΩ.
[N] pH/ORP electrode.	
Specify sensor and the input range.	
Input impedance:	$10^{12}\Omega$
Linearity and drift error:	< 0.5% of range
Connection:	BNC.

[P] Pot 3Wire

Excitation voltage: 5V.

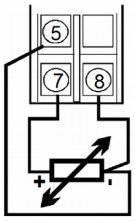


[Q] RTD

Input range: 7Ω up to 230Ω (20 to 650°C, Pt100).

Sensor excitation: 350µA.

For 2 wire connection join terminals 5 and 8.

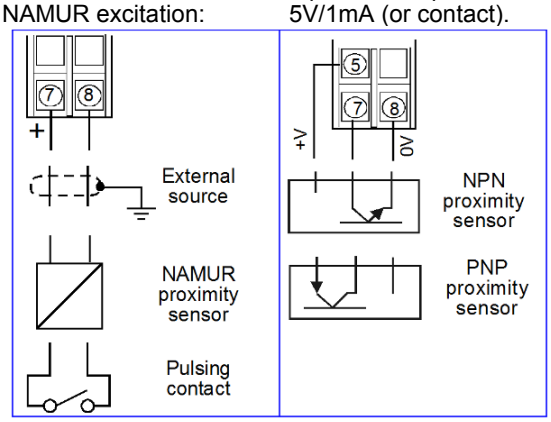


[R] Frequency Inputs

Calibration accuracy: <0.2% of range.
Linearity: <0.2% of range.
Temperature drift error: < 0.5%.

T90 response for 0.5% ripple at 10% : $T_{90} = \frac{20\ sec}{F\ max}$

Internal offset adj.: ±50% typical.
Input range: 5Hz up to 5kHz.
Input level: 0.1Vpp sine
up to 50Vdc pulse.
NAMUR excitation: 5V/1mA (or contact).



TYPE NO. DESIGNATION

BAPC258 X X X X X X

Power Supply:

1 = 10-60Vdc / 16-48V 50/60Hz

Input:

1 = 4 – 20mA
2 = 10 - 50mA
3 = 1mA to 100mA.
*) 4 = 1Adc
*) 5 = 8Adc
6 = 1 - 5V Input
7 = 0.1V to 40Vdc
*) 8 = 40V to 500Vdc
*) 9 = 2mV to 100mV
*) A = ±1mV to ±500V
*) C = 10mVac to 500Vac
*) E = 1Aac
*) F = 8Aac
*) J = 50mV up 500V true rms
*) L = Resistance 2 wire
*) M = Thermocouple
*) N = pH/ORP electrode.
*) P = Pot 3Wire
*) Q = RTD
*) R = Frequency Inputs
*) Z = 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.
*) 9 = Other - span or live zero eg. 20 - 100Hz (Specify)

Action:

1 = Direct.
2 = Reverse.

Pulse Type OUT 1:

1 = Sink
2 = Sourced 3 – 22V Adjustable, 5V default, specify.

Pulse Type OUT 2:

1 = Sourced 3 – 22V Adjustable, 5V default, specify.
2 = Sink.

*) = Price Extra.