

DESCRIPTION

The BFRT150 is designed to convert a frequency input signal up to 5kHz to a standard process signal. Input signals of various types or from a variety of sensors can be accommodated:

1. **Low level AC, sine wave** as produced by coil-type pick up (minimum 200mVpp.)
2. **Low level AC, any wave shape** having a consistent frequency pattern (200mVpp. up to 20Vpp.)
3. **DC pulse, zero going** (200mVpp. up to 50Vpp.)
4. **NAMUR proximity sensor or pulsing contact** - the sensor is directly connected to the BFRT150 as the module provides the 8Vdc auxiliary supply.
5. **All types of 3-wire proximity sensors**, optical sensors or any devices with NPN/PNP open collector transistor output requiring 5 - 30Vdc auxiliary supply at 20mA maximum.

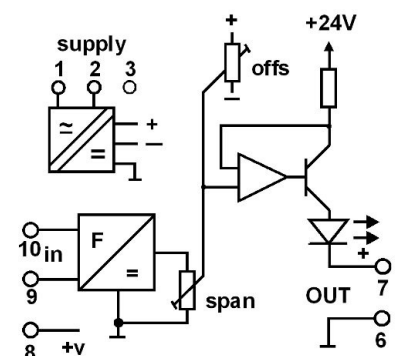


For input to output isolation order with option 8. Output response is tailored to achieve a minimum of ripple with optimum response time. T_{90} response is 0.5 seconds for 50Hz FS and above, increasing to 4 seconds with a 5Hz full scale. Final calibration is trimmed using the front accessible 'offs' and 'span' 15-turn trim adjustments. Zero suppression is available up to 100% of range. Output signal is indicated by the front LED which gives a clear indication of module function. RF and power transient protection are standard as it is with all BASI modules. Various power supply choices are available ranging from 240Vac down to 8Vdc.

General Specifications

Size:	52 W x 70 H x 110 D (mm).
Mounting:	DIN-Rail, gear plate.
Termination:	Screw terminals on front.
Weight:	0.300 kg.
Housing material:	ABS.
Protection class:	IP40.
Calibration accuracy:	<0.3% of range for <10Hz f.s. <0.1% of range for >10Hz.
Front 'OFFS' adjust:	±20% typical.
Front 'SPAN' adjust:	±20% typical.
Combined linearity & drift error:	<0.2% of span.
Temperature effect:	<0.02% per °C.
Ambient operating range:	-10...+60°C.
Storage temperature range:	-20...+70°C.
Full scale input range:	5Hz up to 5kHz standard, >5kHz opt.5.
Response time T_{90} for 0.5% f.s. ripple at 10% of signal:	50Hz and above: <0.5 secs. 5 up to 50Hz: $T_{90} = 20$ secs/Fmax.
Power supply voltage fluctuation effect:	For ±10% fluctuation 0.5% of range.
Output loop drive:	20mA into 0 - 900 Ω. 50mA into 0 - 360 Ω.
Output load change effect:	less than 0.2% up to max load.
Input/output isolation:	None as standard, or >2kv rms with option 8.
Power requirements:	3W.
Electromagnetic compatibility:	Complies with CE and AS/NZS

Block Diagram



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

