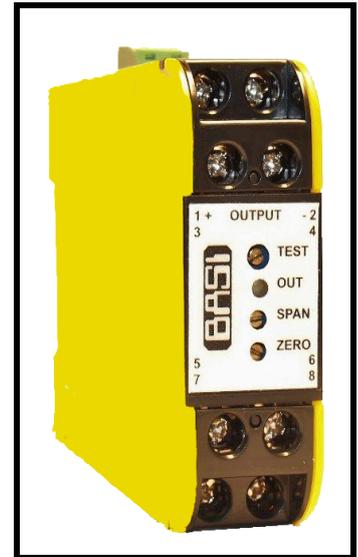


Frequency Transmitter v1 **BFRT287**

DESCRIPTION

The BFRT287 is a isolating transmitter that accepts a variety of frequency or pulse input signals. Typical inputs include signals from turbine flow meters, NAMUR proximity sensors, or any device producing a DC pulse or pulsing contact. Frequency range is 5Hz up to 5kHz with an amplitude range of 0.2Vp-p up to 50V pulses. The input conditioning consists of a charge-pump circuit, converting pulse signals produced by a front trigger circuit to an analogue signal. The measured input is then scaled by an isolating transmitter with a link selectable output providing true three way input/output/supply isolation up to 2000V. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments and a link selectable output range. A wide range ac/dc supply powers the input and the output circuits.

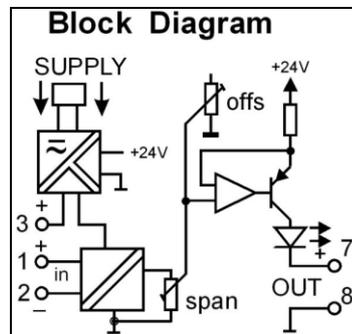
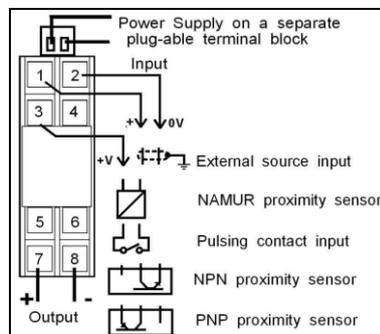


General Specifications

Size:	23.5W x 71.5H x 109D (mm).
Mounting:	Clip for 35mm DIN-Rail.
Housing material:	ABS.
Connection:	Screw terminals.
Weight:	106 g.
Protection class:	IP40.
Front SPAN adjust:	±25% typical.
Front ZERO adjust:	+20/ -10% typical.
Operating temperature:	-20...+70°C.
Output:	Programmable - see table overleaf.
Output drive:	10mA into 0 - 2kΩ, 20mA into 0 - 1kΩ.
Response time:	Programmable - see table overleaf. 20sec for 0.5% ripple at 10% of signal $T_{90} = F_{max}$
Calibration accuracy:	<0.1%.
Linearity:	<0.1%.
Temperature drift error:	0.02% / °C within operating range.
Input range:	5Hz up to 5kHz.
Input level:	0.2Vpp sine up to 50Vdc pulse.
Excitation for NAMUR sensor:	5V/1mA (or contact).
Supply voltage:	85-265Vac 50/60Hz (90-280Vdc) 16-42Vac 50/60Hz (10-60Vdc) .
Supply/Input/Output Isolation:	>2kV r.m.s.
Electromagnetic compatibility:	Complies with EN 50081-1, EN 50082-2, EN 61010-1



Connections



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

BFRT287-X X X X X

TYPE NO. DESIGNATION

Power Supply: _____

1 = 85-265Vac 50/60Hz (90-280Vdc) 2 = 16-42Vac 50/60Hz (10-60Vdc) .

Input Span: _____

The input frequency range must be specified when ordering.

- 1 = Pulse 0.2 - 50Vdc external source.
- 2 = NAMUR proximity sensor or contact.
- 3 = 3-wire proximity sensor NPN 15V.
- 4 = 3-wire proximity sensor PNP 15V.
- 5 = 3-wire proximity sensor NPN 20V.
- 6 = 3-wire proximity sensor PNP 20V.

*) Z = Other (Specify).

Output: _____

0 = Link Selectable. *) Z = Other (Specify).

Action: _____

1 = Direct. 2 = Reverse.

Options: _____

0 = None.

*) 1 = Customised response specify.

*) Z = Other (Specify).

*) = Price Extra.

Response time Table 0

These filter times are applied after the input card filtering and may have no effect.

	LK1/6	LK1/7
5ms		
50ms	X	
500ms		X

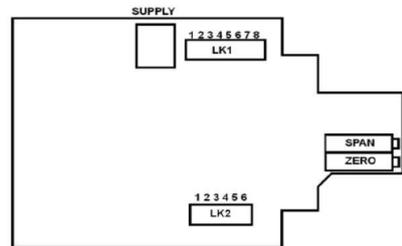
Output Table 5

Output	LK2					
	1	2	3	4	5	6
4-20mA	X		X			
0-20mA		X				
0-10mA				X		
0-5V		X				X
1-5V	X		X			X
0-10V		X			X	

To change ranges

1. Unplug supply plug.
2. Remove terminal covers.
3. Slightly depress lid to base clips and withdraw from housing.
4. Set coding plugs as required.
5. Reassemble unit and connect power.
6. Adjust SPAN and ZERO pots to recalibrate.
7. Change the label information to the new input/output values.

Coding Plug Location Diagram



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