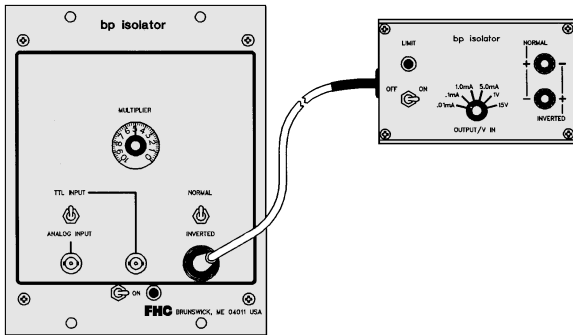


bp Isolator

- LINEAR AMPLIFIER CIRCUIT ALLOWS COMPLEX, BIPOLAR WAVEFORMS TO BE ISOLATED
- UNIQUE ISOLATION TRANSFORMER PERMITS LINE POWERED OPERATION — NO BATTERIES REQUIRED
- ±140V, 50mA DRIVE CAPABILITY
- PROBE CAN BE MOUNTED NEAR PREPARATION TO MINIMIZE INTERFERENCE



bp Isolator with Probe (Catalog number 74-65-6)

Our **bp Isolator** provides the electrophysiologist with the means to deliver isolated bipolar or other complex waveforms, in either constant current (50mA maximum) or voltage ($\pm 140V$ maximum) modes. The instrument uses optically isolated circuits and is line powered utilizing a state-of-the-art isolation transformer to eliminate the nuisance of replacing or recharging batteries.

The bp Isolator features a probe (with 4m cable) which can be mounted in electrically shielded environments without introducing line interference. A warning LED illuminates when the compliance voltage ($\pm 140V$) has been reached.

The Control Module (FHC case size C) includes an output polarity reverse switch.

The bp Isolator can be operated in a linear amplifier mode, where the output is proportional to the input. It also has a triggered (logic pulse) mode, where single polarity output pulses can be triggered by TTL level (+5V) input pulses; the output magnitude is determined by the range position selected and a 0-10 calibrated single turn multiplier.

OPERATIONAL DESCRIPTION

The 74-65-6 and 74-65-7 bp Isolators convert a signal referenced to power line ground to a signal (stimulus) that is isolated from ground. This isolation is provided by coupling the input signal through an optical isolator to the output circuitry which is powered by a special transformer having high isolation from the AC power line. This isolated output circuitry can provide any of four constant current or two constant voltage ranges. The unisolated input voltage can be either an analog signal in the range of ± 10 volts or a digital signal (TTL level - nominally +5V). In the latter case, the output amplitude is controlled by a front panel potentiometer.

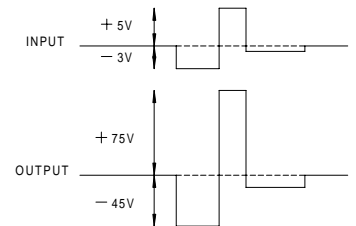
SPECIFICATIONS

- Input Impedance:** 1M Ω m (analog input); TTL compatible (TTL input)
- Input dynamic range:** $\pm 10V$ (analog input) TTL compatible (TTL input)
- Output:** Amplitude proportional to input voltage (analog input) or adjustable with 0 - 10 calibrated multiplier (TTL) input; Polarity reverse switch provided
- Constant current:** $\pm 50mA$ maximum in 4 ranges: $\pm 100\mu A$, $\pm 1mA$, $\pm 10mA$, $\pm 50mA$
- Constant voltage:** $\pm 140V$ maximum in 2 ranges: $\pm 10V$, $\pm 140V$
- Power required:** 115/230VAC, switch selectable, 50/60Hz
- Dimensions; Main module:** 7" h x 5 1/2" w x 9d" (18 x 14 x 23 cm) 9 lbs. (4 kg). **Probe:** 4 1/2" x 2 1/2" x 2 3/4" (12 x 6 x 7 cm) 1 lb. (0.4 kg) connected with 12' (4m) cable

FUNCTIONAL DESCRIPTION

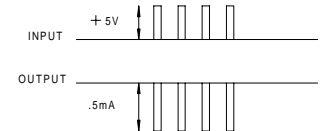
1. Ground referenced waveforms with amplitudes up to $\pm 10V$ presented to the ANALOG input will be isolated and amplified based on the setting of the RANGE switch. In the example below, the high voltage output is generated by the input signal shown with the bp Isolator controls set:

POWER: ON
 INPUT: ANALOG
 POLARITY: NORMAL (set to INVERTED to reverse polarity)
 MULTIPLIER: N.A.
 RANGE: 15V
 OUTPUT: ON



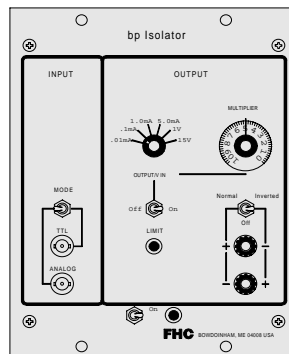
2. If only a timing pulse is available as, for example, from a computer, the waveform can be presented to the TTL input and the output amplitude set using the MULTIPLIER dial times the RANGE switch setting.

POWER: ON
 INPUT: TTL INPUT
 POLARITY: INVERTED
 MULTIPLIER: 5
 RANGE: .1mA
 OUTPUT: ON



ORDERING INFORMATION

- 74-65-6 bp Optical Isolator w/probe
 74-65-7 bp Optical Isolator



bp Isolator
 (Catalog number 74-65-7)