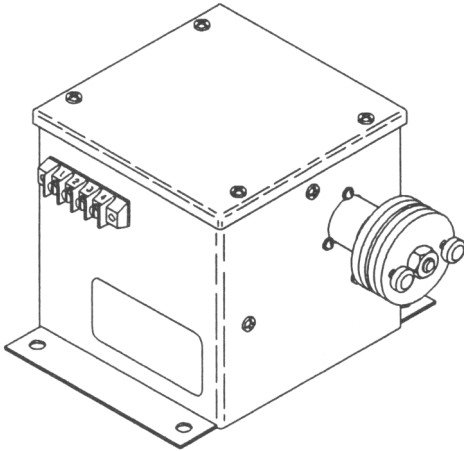


Pulse Generator III (PG-III)



- English or metric input
- Pulse output for Stevens loggers
- Stand-alone or recorder mounting versions
- Very low power requirement
- Rugged metal enclosure
- Time-proven design

The Stevens Pulse Generator III (PG- 111) accepts water level input and provides up or down electrical pulse outputs at an external barrier strip. The PG-III is normally used as an input device for the Stevens Telemark 11, the Pulse Logger or the Multi-Logger. However, it can also be used to drive any up and down-counting device (counter, logger or recorder) that is compatible with the PG-III electrical output.

The stand-alone version (above) of the PG-III is housed in a painted aluminum sheet-metal enclosure, equipped with a float pulley shaft and clamping hardware that accepts standard Stevens English or metric float pulleys. The recorder mounted version is contained in a machined housing which mounts beneath a Stevens Type A Recorder. The PG-III input shaft is driven by gears, which are coupled, to the recorder float pulley input shaft. Both versions feature an external barrier strip for convenient electrical connections.

Mounting either an English or metric float pulley on the pulley shaft can change the output scale of the PG-III. A number of different scales can be obtained with different pulley sizes and Stevens loggers; see the individual logger instruction.

PG-IIIs with certain pulley sizes can be equipped with an external mechanical counter, to indicate water level directly; contact Stevens Marketing for details.

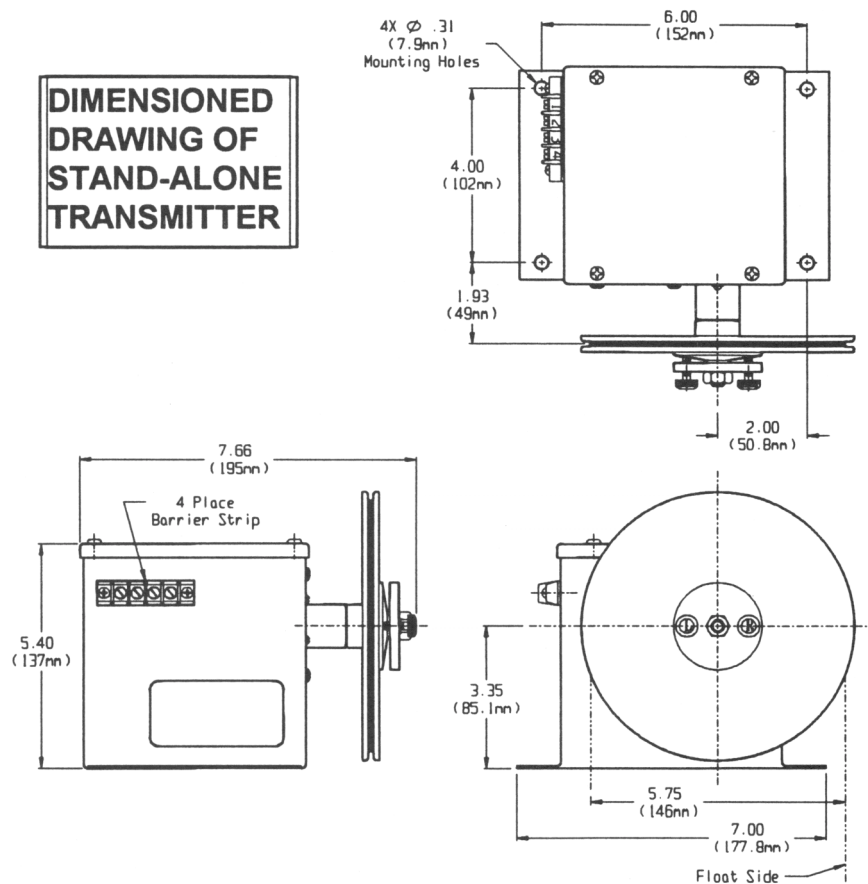
Principles of Operation

The patented basic PG-III assembly consists of an input shaft coupled to a disk with four magnets mounted at 90° around the rim. These magnets are magnetically coupled to three reed switches that connect to a very low power circuit that keeps track of pulse count and direction of rotation. The circuit has two outputs that provide short up or down pulses to drive the associated Stevens logger or other connected device.

The stand-alone PG-III has internal gears with a 25:1 ratio, resulting in 300 up or down counts per revolution of the input shaft. The recorder-mounted PG-III has external gears, which results in equivalent operation.

PULSE GENERATOR III SPECIFICATIONS:

- **Input:**
Stand-alone: Float pulley shaft with hardware to accept standard Stevens float pulleys
Type A Recorder Mount: gears coupled to the existing Recorder float pulley shaft.
- **Output:** Independent up or down pulses, consisting of one millisecond duration switching of open collector NPN signal transistors to power supply common; current rating: 1 mA into a resistive load (>22,000 ohms recommended)
- **Scale:**
Stand-alone: 300 pulses per revolution of input shaft
Type A Recorder mount: 12 pulses per revolution for basic Pulse Generator on Type A Recorder.
- **Rate:** 500 pulses/second, maximum.
- **Power:** 5 to 16 volts, direct current; typical quiescent current: <60uA, exclusive of switched load current.
- **Enclosure:**
Stand-alone: Aluminum, protected by polyurethane paint; 5.4 in high x 7 in wide x 7.4 in deep (137 x 178 x 188 mm), exclusive of float pulley.
- **Weight:** Stand-alone: 2.2 lb. (1 kg.)
- **Temperature:** -40 to +160°F (-40 to 71°C).
- **Humidity:** to 95%, non-condensing, this can be improved by installing fresh desiccant in the stand-alone enclosure.



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