

Accuracy of output current

Triangular with -less than 0.05% low frequency distorsion at 5Hz base frequency.
-less than 0.005% at 10 Hz and above

Rise time of square wave time derivative: (10% to 90%)
- 6 microseconds in 10 mh load (normal loop)
- 10 microseconds in 20 mh load (equivalent to the largest loop used)

Note: the current in far parts of the loop may have slower rise times depending on capacitive leakage

Current regulation: (long term reproduceability)
- less than 2% variation after 40. micro-seconds (channel 9 at 30 Hz base freq.)
- less than 0.2% 120-1000 microseconds
- less than 0.05% after 1 ms
(these are typical specifications allowing for normal variations in characteristics from loop to loop)

Stability of the current per day after warm-up (15 min.):
- better than 0.02% per day

Temperature coefficient: less than 100 ppm/°C

Output impedance: (insensitivity to changes in load imped.)
- more than 20 kOhm 0-500 Hz
- more than 3 kOhm 500Hz-30KHz
- trimmer adjustment to align within specifications after component aging
(A 20kOhm output impedance means that a 20 Ohm change in load resistance causes only a 0.1% change in the output current)

Phase drift specifications: see time base (common to receiver and transmitter)

Main features:

- precise current regulation
- up to 250 V output voltage
- precise crystal clock for phase reference
- built in battery operated timer for clock warm-up (includes battery and charger)
- as a safety precaution, the high voltage turns off when the loop wire is broken
- diagnostic codes to guide operator
- fully protected and self-resetting
- fail-safe shut down for gross overloads and overheating
- +/- 4 A in normal 1 km² loop
- up to 5 A in smaller loops