

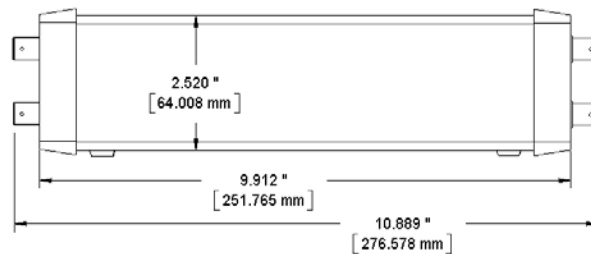
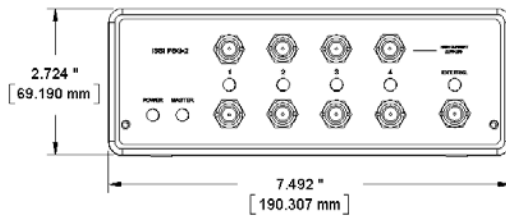
## Pulse/Delay Generator

(Product ID: PSG-3)

The PSG-3 is a four-channel pulse/delay generator. It can be used as a master clock for timing and delay control. It can be externally triggered and/or gated by an external event. Pulse width, delay, repetition rate, and other timing parameters can be controlled by one of two available interfaces.



|                    |  |   |
|--------------------|--|---|
| <b>Capability</b>  | Two dual-channel independently programmable pulse generators                   | Input trigger thresholding  |
| <b>Features</b>    | Four high-current TTL outputs  | Divide-by-N circuit   |
| <b>Control</b>     | Multiple PSG-3s can be cascaded to increase the number of channels             | Easy to use software interface or TCP/IP API commands for integration                   |
| <b>Networking</b>  | Multiple devices can be connected and simultaneously controlled over a network | 10/100 Mbps Ethernet interface  |
| <b>Versatility</b> | Multiple timing bases (s, ms, $\mu$ s, ns)                                     | BNC inhibit input (TTL high level) to allow the PSG-3 to be gated by an external source |



The PSG-3 replaces the PSG-2 in the ISSI product line.

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## PSG-3 Specifications

| I/O Configuration |   |
|-------------------|---|
| TTL Outputs       | 4 standard, 4 high-current (mirroring standard) |
| Inputs            | 1 Ext. Trig. Input<br>1 Inhibit                 |
| Divide-by-N       | 1 input, 1 output                               |

| Internal Generator    |   |
|-----------------------|---|
| Repetition Rate       | 0.100 Hz to 25.00 MHz   |
| Resolution            | 20 nanoseconds  |
| Burst Mode            | 1 – 131,072 pulses  |
| Output Modes          | Single-shot, burst, continuous  |
| Master Clock          | 50 MHz, +/- 30 ppm<br>Dual Clocks allow for independent repetition rates from one PSG-3 |
| Timing Clock Settings | 20-, 40-, 80-, 160-ns   |

| Programming  |   |
|--------------|---|
| Control Mode | Internally triggered, externally triggered and/or gated.<br>Generator 1 & 2 can be independently set to internally or externally triggered. |
| Multiplex    | None  |
| Divide-by-N  | 2-255   |

| Trigger Input       |               |
|---------------------|---------------|
| Threshold           | 0.05 - 5.0 V  |
| Max Input Voltage   | 7.0 V         |
| Max Input Frequency | 5 MHz         |
| Input Impedance     | >1 M $\Omega$ |

| TTL Outputs      |   |
|------------------|---|
| Output Impedance | 50 $\Omega$   |
| Output Voltage   | @ 50 $\Omega$ : 2.5 V (Standard outputs)<br>@ 1 K $\Omega$ : 4.0 V (High-current outputs) |
| Pulse Width      | 20 ns to 10.736 s   |
| Delay Width      | 20 ns to 10.736 s   |
| Rise Time        | 4 ns  |
| Fall Time        | 4 ns  |

| Communication Interfaces |  |
|--------------------------|--|
| Ethernet                 | 1 input, 10/100 Mbps                           |
| USB 2.0                  | 1 input, type B                                |
| RJ-11                    | 2, sync in and sync out (Master/slave config.) |

| Power Input          |                      |
|----------------------|----------------------|
| External Power Input | 85-264 VAC, 50-60 Hz |

| Export |       |
|--------|-------|
| ECCN   | EAR99 |

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