OPDL-6000-DL-18G: Rack Mounted 18 GHz , RF Photonic Delay Line

Supports Fixed and Variable Delays Over Frequency Ranges from 100 MHz to 18.0 GHz

The MPS Optical / Photonic Delay Line (OPDL) is a "Best in Class" integrated subrack that leverages MPS's field proven optical packaging methodologies, proprietary control software, and RF / Photonic integration techniques.

The OPDL-6000-DL-18G provides time delay capability for Radio Frequency (RF) input signals from 100 MHz to 10 GHz, is packaged in an 2RU x 19" rack chassis, configurable with delays up to 500 us, and available options for all RF and optical connectors.

The OPDL-6000-DL-18G can be configured with multiple time delay segment values. The delay values of the segments can either be configured as discrete time delay values, or can be configured as a binary 2^n series. The binary 2^n series configuration provides the ability to select delay values over a broader range with smaller time increments. Delay values are visible on the front panel display and can be incremented through the use either the front panel key pad or remotely using the digital communications interface.

The OPDL-6000-DL-18G has an option to integrate Variable Optical Attenuators (VOA) which allow the operator to balancing the system gain profile. Similar to the switch, the VOA is controlled by the front panel control keys or through the digital communications interface.

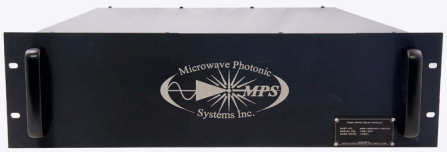
Contact MPS for additional details and available options.

Market Applications

- Test & Calibration Labs
- Radar Target Simulation
- Signal Processing
- Phase Noise Testing

Features & Options

- Fixed or Variable Delay Options
- High Optical Pathway Isolation
- Front Panel Control Display
- Remote Status Monitor and Control
- Unity Gain Options
- 2 Year Warranty
- CD ROM User Manual



FODS - Rack Mounted, Auxiliary Fiber Optic Delay Line Spool

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Microwave Photonic Systems, Inc.
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Specifications

System Performance Parameters:

Operational Frequency	0.1 to 18.0 GHz
Delay	0.1, 1, 5, 10 micro-seconds (see functional block diagram)
Delay Accuracy	0.1%
Delay Repeatability	< 0.01 %
System RF Gain (S21)	+10 dB, min.
Flatness:	+/- 1.0 dB
Noise Figure (NF)	25 dB
1dB Input Compression (P1dB)	-15 dBm
Minimum RF Input Power	-50 dBm
Max RF Input Level	+15 dBm
Spurious Free Dynamic Range	100 dB/Hz (2/3)
Phase Noise	100 dBc
Input VSWR	2.0:1 (Max) , 1.5:1 (Typical)
Output VSWR	2.0:1 (Max) , 1.5:1 (Typical)
Impedance	50 Ohm

Mechanical and Electrical Specifications:

Optical Wavelength	1550 nm
Optical Output Power	20 mW
Optical Fiber Type	Single Mode (SMF-28e)
Remote Switching & Communication	RS-232 via DB-9 and Remote Computer (PC)
Local Switching & Communication	Front Panel Key Pad Switch with Vacuum Fluorescent Display
Delay Switching Time	10 ms, max.
RF Connectors	SMA (Female)
Auxiliary Delay Connectors	FC/APC
AC Power Supply	220/110 VAC
Dimensions	19" x 14" Rack Mount, 2RU Standard

Environmental Specifications:

Operating Temperature	0°C to +60°C
Storage Temperature	-40°C to +85°C
Operational Humidity	0 to 90%
Vibration Profile	Random Vibration, 20 to 500 Hz per customer specification
Vibration Duration	15 minutes in each Axis
Functional Testing	During Vibration Testing

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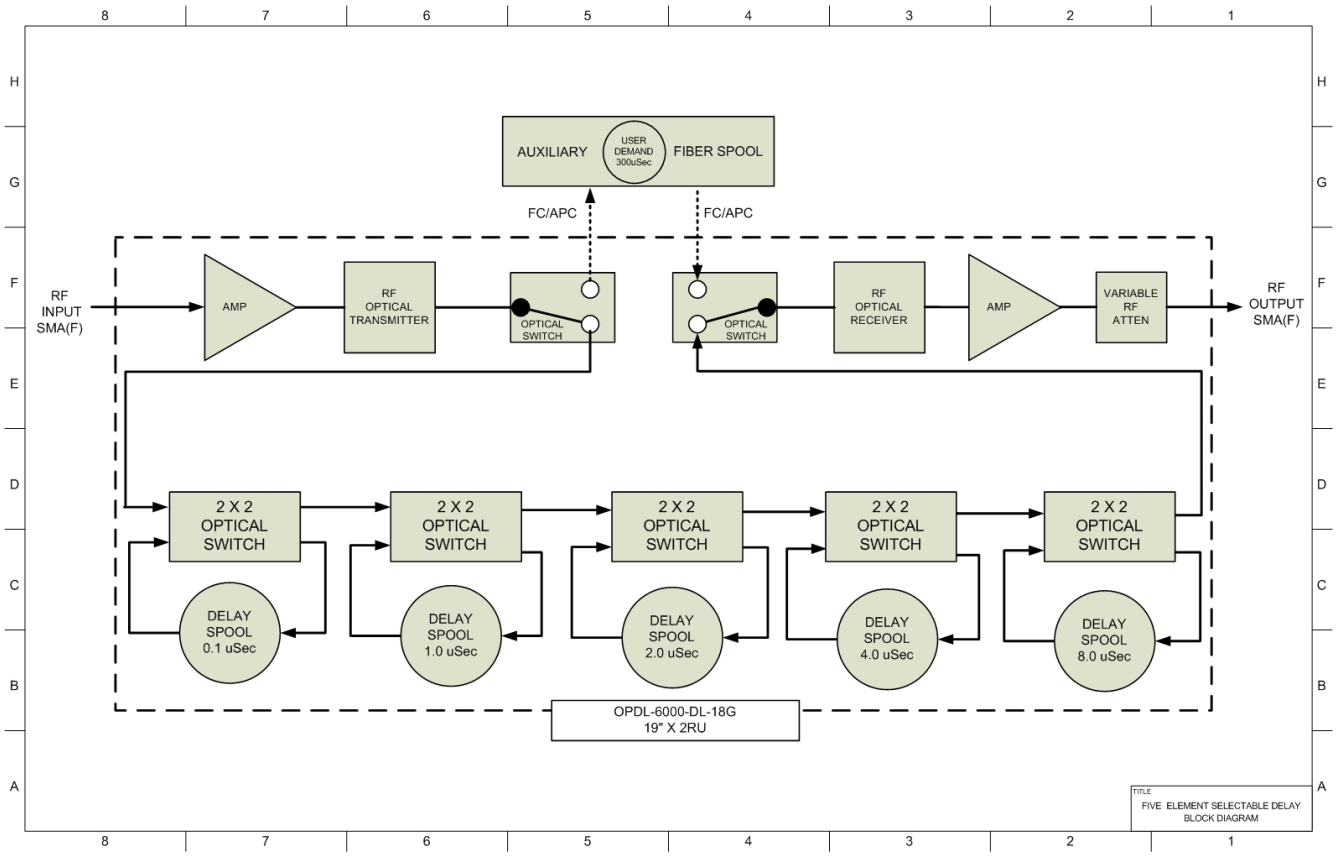
OPDL-6000-DL-18G , Functional Block Diagram:

User Selectable Optical Delay Line with Auxiliary Delay Option



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