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Expert team | Trust guarantee | 100% satisfaction

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Find the *Colby Instruments PDL-100A-1.25NS* at our website: *Click HERE*

Products

PDL-100A (/pdl-100a/)

PDL-100A-OEM (/pdl-100a-oem/)

PDL-200A (/pdl-200a-1/)

CPDL-100A (/cpdl-100a/)

CPDL-200A (/cpdl-200a/)

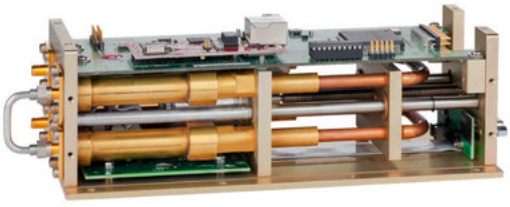
PDM-100A (/pdm-100a/)

PDL-100A

Electromechanical trombone with incredible precision



PDL-100A offers high-resolution electrical delay based on the Electromechanical Trombone delay line structure. The base model PDL-100A-625.0PS offers total delay from 0 to 625.0 ps and signal input bandwidth from DC to 18 GHz. Additional models in the series offer up to 100 ns of delay or more depending on customer requirements. Typical models with delay extensions are at 1.25 nanosecionds (ns), 10.0 ns, and 20.0 ns of total delay.



MAXIMUM DELAY
to 100.0 ns

RESOLUTION
to 0.50 ps per step

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An internal stepper motor produces precise delay steps with a resolution to 0.5 ps when operated in series connected single channel mode. The patented Electro-Mechanical Trombone design has an outstanding operational lifetime with a recommended service interval of 500,000 operations. Precision and accuracy is to 0.1%, ± 0.2 ps.

In the standard set-up (series connected), two identical 312.5 pstrombone sections are connected in series via a short semi-rigid coaxial cable accessible at the front panel. The series connected configuration provides a full delay range of 625.0 ps with 0.50 ps step resolution. Alternatively, if the short semi-rigid coaxial cable is removed to single channel (parallel connected) operation, two very tightly phase matched delay lines are available each with a total delay range of 312.50 ps and a higher resolution of 0.25 ps.

The PDL-100A is fully programmable via GPIB (IEEE488.2 protocol), Ethernet TCP/IP, RS-232 Serial interfaces or via the optional Microterminal (MT-100A). At 18 GHz, the frequency roll-off is typically less than 1.0 dB. Customers have used this delay line for digital applications up to 40 Gb/s NRZ with excellent results. This delay line is unmatched in performance, resolution, and repeatability by any competing product on the market.

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PDL-100A Specifications

Delay Type	Electro-mechanical Trombone
Resolution	0.50 ps
Delay Range	625.0 ps
Total Phase Shift Resolution per 1.0 GHz	225° at 625 ps / 0.18°
Frequency Range	DC to 18.0 GHz
Data Rate	DC to 40 Gb/s DC
Delay at 0 ns	1.60 ns
Connectivity	GPIB (IEEE 488.2), Ethernet TCP/IP, RS-232
Power Handling	10W CW, 50W peak
Repeatability	0.2 ps maximum
Recommended Service Interval	500K operations
Maximum Settling Time	1500 ms
Recommended Operating Temperature	+10° C to 30° C.
Absolute Accuracy	0.1%, 0.03 ps SD
Physical Dimensions (approx)	13.375" L x 12.875" W x 5.625" H
Physical Weight	6.5 kg+

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Options

Options

MT-100A MICROTERMINAL



MT-100A provides convenient LCD display and numeric keypad entry for manual control of desired delay.

RMO-1 19" RACKMOUNT KIT

RMO-1 rack mount kit option to mount delay line instrument chassis into a standard 19" rack.

Resources

(/s/PDL-100A-625PS_625_PS_S21-data.pdf) Insertion/Return Loss Report for PDL-100A (/s/PDL-100A-625PS_625_PS_S21-data.pdf) (38 KB)

(/s/PDL-100A_VER_1_70_FINAL.pdf) Product Manual for PDL-100A (/s/PDL-100A_VER_1_70_FINAL.pdf) (1 MB)

Related Products

- PDL-100A-OEM (/pdl-100a-oem) - Incorporate delay into your product
- PDL-200A (/pdl-200a-1) - handle a differential signal

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