

PDC3301 *Pulse Distribution Chassis*

2x10 Distribution Amplifier with Intelligent Autoswitching

The PDC3301 is a dual-input, ten-output, pulse distribution amplifier in a 1U rackmount chassis. The PDC3301 provides ten isolated copies of an input signal and it maintains the input phase characteristics over a range of environmental conditions. Fault sensing of signal levels is provided on all inputs and outputs, fault status is easily visible via front-panel LED indicators and monitoring via an RS-232 port is a standard feature. The PDC3301 is unique in the industry - no other low-cost system offers this combination of capabilities and performance in a single product.

FEATURES

- Single Input or Autoswitching Between Dual Inputs
- 10-Channel Output Distribution of 1 PPS to 50 MPPS Pulse-Rate Signals
- Very High Isolation Between Outputs
- 500 ps Differential Delay Between Outputs
- RS-232 Port for Control and Monitoring
- Dual-Redundant AC or DC Power Supply Options
- Ethernet Port Option for Remote Control and Monitoring



Output Signal Quality

The PDC3301 features very high isolation between output channels. Power supply voltages are post-regulated and all output buffers are individually regulated. This feature ensures that minimal phase disturbance of adjacent channels occurs due to the accidental shorting or unterminating of an output.

Intelligent Autoswitching

The PDC3301 can be configured for single or dual input operation. If two inputs are available then the PDC3301 will continuously measure the input signals as part of its intelligent failover switching algorithm. If an input is removed or the signal level is greatly reduced it will automatically switch to the other input. This feature prevents the loss of even a single clock for pulse widths greater than 500 nanoseconds.

Alarm Input

The PDC3301 is compatible with the alarm output signal from the Meridian Precision GPS TimeBase and the Tycho Frequency Reference. If one of these units is sourcing the PDC3301 and its alarm output goes active, then the PDC3301 will automatically switch to the backup source. Since this alarm input may be cascaded to multiple PDC3301 units simply, using BNC T adapters and coaxial cable, multiple PDC3301 units can be bank switched.

Status Indicators

Front panel LEDs provide you at-a-glance status of the distribution chassis. The PDC3301 provides LED indicators for the power supply(ies), the two inputs, all output signals and a summary alarm indicator. The summary alarm is also available as an open-collector output on a rear-panel BNC.

Control and Status Monitoring

The PDC3301 can be configured and monitored by means of an RS-232 serial port. Both switch status and output status can be monitored in this way. For remote control and monitoring, a network port is available as an optional upgrade.

Options

The PDC3301 Pulse Distribution Chassis can be configured for one input or two inputs with autoswitch. Two inputs is the factory default. An additional option is the capability of having dual redundant, AC or DC power supplies. The two power supplies can be any combination of AC/AC, AC/DC, or DC/DC. A network port that can be used for remote control and status monitoring is also available with a full suite of network protocols.

Two-Year Warranty

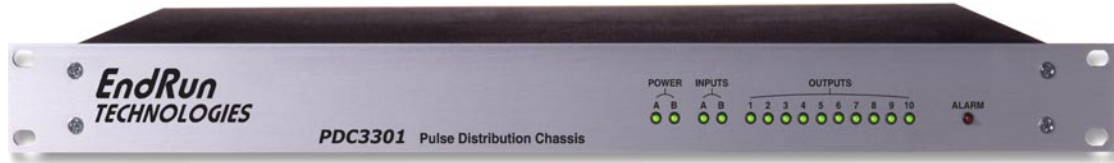
The PDC3301 Pulse Distribution Chassis is backed by a full two-year warranty against defects in material and workmanship.

Money-Back Guarantee

If your PDC3301 does not meet your time and frequency distribution needs for any reason, simply return it within 60 days for a full refund. Refer to www.endruntechnologies.com/guarantee.htm for more details.



PDC3301 Pulse Distribution Chassis Specifications



INPUTS (A and B):

- Repetition Rate: 1 PPS - 50 MPPS.
- Impedance: 50Ω.
- Duty Cycle: 0-50% Max.
- Logic One: > 2.4V, < 10V.
- Logic Zero: < 0.8V, > -10V.
- Rise Time: < 100 ns.
- Fall Time: < 100 ns.
- Minimum Pulse Width: 80 nanoseconds for rates < 5 MPPS.
- Protection: Protected to 24V peak-to-peak.
- Connectors: Rear-panel female BNCs.

OUTPUTS (1 through 10):

- Impedance: 50Ω. VSWR < 2 @ f < 500 MHz.
- Logic One: > 3.5V.
- Logic Zero: < 0.2V.
- Rise Time: < 4 ns.
- Fall Time: < 4 ns.
- Jitter: < 50 ps RMS.
- Skew Between Outputs: < ±500 ps.
- Propagation Delay: < 20 ns.
- Protection: Outputs may be shorted to ground with no damage.
- Connectors: Rear-panel female BNCs.

EXTERNAL ALARM INPUTS (A and B):

- Normal State: TTL low.
- Alarm State: TTL high or high Z (internal 10K pull-up).
- Connectors: Rear-panel female BNCs.

ALARM OUTPUT:

- All fault indicators are summed together providing this common alarm output.
- Open Collector, 40V Max, 100 mA Max Saturation Current.
- High impedance when fault condition exists.
- Connector: Rear-panel female BNC.

MAINTENANCE PORT:

- RS-232 serial I/O on DB9M jack for local terminal access. Used for control and status information.
- User-Selectable Port Settings: 9600 to 57600 baud; 7 or 8 data bits; odd, even or no parity; 1 or 2 stop bits.
- Factory default settings are: 19200,8,n,1.

SYSTEM STATUS INDICATORS:

- Input LEDs: Green when a signal is detected on the input channel and red when the signal is absent. The PDC3301 can be configured for two input signals with autoswitch or for only one input signal.
- Output LEDs: Green when the output signal is OK and red when a short is detected.
- Power LEDs: Green when the power supply is OK, and red when a fault condition exists.
- Alarm LED: Red when any fault condition exists. All fault indicators are summed together providing this one common fault.

POWER:

- 90-264 VAC, 47-63 Hz, 0.5A Max. @ 120 VAC.
- 110-370 VDC, 0.5A Max. @ 120 VDC.
- 3-Pin IEC 320 on rear panel, 2-meter cord included.

SIZE:

- Chassis: 1.75"H x 17"W x 10.75"D.
- Weight: < 5 pounds.

ENVIRONMENTAL:

- Temperature: 0° to +50° C.
- Humidity: 0 to 95%, non-condensing.

COMPLIANCE:

- CE, FCC.

OPTIONS:

- Can be configured for one or two inputs. Factory default is two inputs with autoswitch.
- -48, +12, +24/28 VDC input.
- Dual-redundant AC or DC power supplies.
Power supply combinations can be AC/AC, AC/DC, or DC/DC.
- Network Port: Ethernet 10Base-T or 100Base-TX; RJ-45 connector;
Protocols include: TCP/IP, SSH, DHCP, Telnet and SNMP MIB-II.

