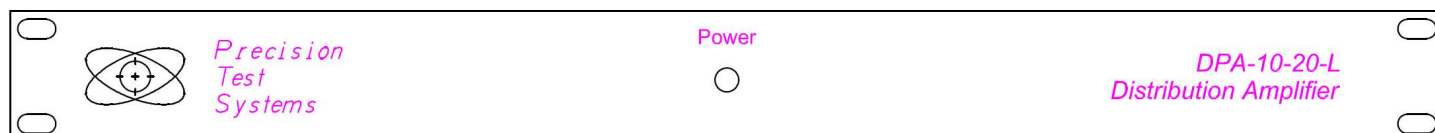




DPA-10-20-L: 1 pps Distribution Amplifier



Key Features

- 1 pps input with 24 outputs.
- All connectors are RJ45 type
- Outputs drive 54 Ω loads
- 1 pps input format: TTL or RS422 levels.
- Output skew < 1 ns
- All outputs are at RS422 levels

General Description

The DPA-10-20-L can be used to synchronize up to twenty-four instruments to a 1 pps (pulse per second) input. The input can either be a TTL 1 pps or at RS422 levels (jumper selectable). A typical input is the 1 pps output from a GPS receiver or another timing generator. The DPA-10-20-L can also work with faster rates up to 30 Mbps.

Outputs

There are twenty-four outputs. All outputs are at RS422 levels and are available on 24 RJ45 connectors. All outputs are aligned to each other to within 1 ns. The output duty cycle will be the same as the input duty cycle.

Options

Contact Precision Test Systems if any special options are required.

Miscellaneous Information

The DPA-10-20 series of distribution amplifiers are highly reliable products with an MTBF of over 60 years. The DPA-10-20-L is housed in a fully screened 19" rack mount case and operates from a 100 - 240 VAC supply (usable 90 - 260 VAC). The DPA-10-20-L is CE marked for sale within the EEC.

DPA-10-20-L SPECIFICATIONS

Specification Parameter	Specification	Comments
Input		
Date Rate	Up to 30 Mbps	Typically, 1 pps used as an input
Input Impedance:	100 Ω typical	
Input Level	TTL, 0 -3 V minimum, or RS422 levels	RS422 levels are ± 2V minimum
Connector (RJ45 default)	BNC for TTL, RJ45 for RS422	Internal jumper selects BNC or RJ45
RJ45 pin-out (Input)	Pin 3=1ppsN, Pin4=Ground, Pin5=Ground, Pin6=1ppsP, Pin7=TimeN, Pin8=TimeP. Pins1 and 2 have no connection.	
Outputs		
Output Waveform	Pulse	
Number of Outputs	24 outputs	
Output Connector	RJ45	
RJ45 pin-out (Ouputs)	Pin 3=1ppsN, Pin6=1ppsP, Pin7=TimeN, Pin8=TimeP. Pins1, 2, 4 and 5 have no connection.	
Output level (RS422)	Typically, ± 2V into 54 Ω	Twisted pair cable
Duty Cycle	Output duty same as input duty	Minimum pulse size 100 ns
Jitter (1 second, Allan Deviation)	< 0.8 ps	Typical
Risetime	< 7 ns typical	Typically 4 to 7 ns
Delay Match between outputs	< 1 ns for all 24 outputs	Assumes input rise time < 10 ns
Propagation delay (input to output)	< 42 ns	
Protection	Protected against short circuits	
General		
Power: AC / DC	100 - 240 VAC	30 Watts max / 1.0Amps with opt 03
Size and weight	483 x 300 x 44 mm and 4.6 kg	Width x Depth x Height
Ambient Operating Temperature	-10°C to +50 °C	
Precision Test System Contact Details		
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Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (130318)