



DPA1-40: DC to 10MHz Pulse Distribution Amplifier

Key Features

- DC - 10 MHz Wideband Operation.
- 1U or 2U 19" rack mounted case. 1U for 5 to 20 outputs and 2U for 21 to 40 outputs.
- Input - squarewave TTL levels, or optional 10 MHz sinewave.
- Output same as input, or divided signal from 10 MHz sinewave input.
- Outputs all aligned to each other to within 10 ns. Ideal to distribute 1 pps timing signals.
- Standard Output can either be TTL or RS422 voltage compatible.
- Optional LVDS Outputs
- External synchronizing input. Outputs can be synchronized to external input waveform.
- Alarm monitoring. All outputs have alarm monitoring. Indication by LEDS or rear panel DC outputs.
- Optional internal back-up oscillator. Automatically switched in, if external input fails.
- Optional Redundancy (two units with automatic switchover)
- Many other options and customized options.

General Description

The DPA1-40 is a wide band digital pulse distribution amplifier with a wide bandwidth of DC to 10 MHz. It can be used to synchronize up to forty instruments to a frequency reference input. The reference input will typically be a 1 pps timing signal, although many other types of signals can be used.

Outputs

There are five to forty pulse outputs. Each output is isolated from the input and each other. Therefore, the reference oscillator connected to the DPA1-40's input is protected against load variations that may be applied to the outputs. The outputs can either be single ended TTL or dual complimentary RS422 levels (set by the factory). LVDS levels can be ordered as an option.

Alarms

Every output has alarm monitoring. Should the output level drop on any output, an alarm will be raised. Also, front panel LED's shows the status of the alarms. The alarm signals are also available on the rear panel.

Applications

The DPA1-40 has been primarily designed to distribute 1 pps timing signals, although any type of TTL squarewave from DC to 10 MHz can be distributed. An external synchronizing input allows the outputs rising or falling edge to be synchronized to an external pulse input.

Miscellaneous Information

The DPA1-40 is a highly reliable unit. The DPA1-40 is housed in a fully screened 19" rack mount case and operates from a 100 to 240 VAC supply (usable 90 to 260 VAC). The DPA1-40 is CE marked for sale within the EEC.

Options available from Precision Test Systems

- LVDS voltage levels. Twin complimentary outputs - 0.9 to 1.3V nominal. ANSI EIA / TIA-644 standard
- Multiplied or divided outputs. E.g. 10 MHz, input with 5 MHz output. .
- Various numbers of outputs from 5 to 40. Taylor made to suit your application.
- External DC Power Input with automatic switchover from AC. External input 10-12 V or 20-30 VDC.
- Redundancy. Two units operate together. If 1st unit fails, the outputs are automatically switched to 2nd unit. .
- Internal backup oscillator. This oscillator is automatically enabled should the input signal fail.
- Two reference inputs. Each reference input with have five isolated outputs derived from it, at different frequencies.

DPA1-40 SPECIFICATIONS

Specification Parameter	Specification	Comments
Input		
Frequency	DC to 10 MHz	Wideband Frequency Input
Input Level	TTL compatible	
Pulse Outputs		
Output Waveform	Pulse	BNC Connector on rear panel
Output Frequency	Exactly the same as the input	
Delay match between outputs	< 10 ns	
TTL Output level	0 to 3V into 100 ohm	Single Ended. Optional 50 ohm drive
RS422 Output Level	0 to 3V in 100 ohm	Twin complimentary outputs
LVDS Output levels (option)	0.9 to 1.3 V into 100 ohm	Twin complimentary outputs
General		
Power (AC)	100 - 240 VAC (usable 90 - 260)	50 Watts max
Size and weight	483 x 300 x 44 mm and 2.8 kg	Width x Depth x Height
Ambient Operating Temperature	-10°C to +50 °C	
Alarm Output	Alarm Outputs on rear panel	
Precision Test Systems		
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Full specifications available from www.ptsyst.com. Specifications and features subject to change without notice (100112)