1 PPS generator„D1PPS"

Introduction

The 'D1PPS' generator is to produce a 1 PPS signal from reference frequency sources, such as a Rubidium clock or stable XSC. It also offers synchronization of the generated signal to reference PPS signals (for example, from TTS-5 GNSS receivers).

Specifications

A. Inputs and outputs

FIN input (frequency input):
- connector: BNC,
- impedance: 50Ω,
- coupling: AC,
- frequency: 10MHz,
- signal level: 0.1…5.0Vpp
- waveform: sinusoidal wave recommended (square, sawtooth, and triangle are acceptable).
- hysteresis: 0.1mV,
- a constant component is permissible, but the instantaneous value of the input signal must always be within the range of -5…+5V.

1PPSIN input (reference 1 PPS):
- connector: BNC,
- impedance: 50Ω,
- coupling: DC,
- frequency: 1Hz,
- duty cycle of a rectangular waveform: any (recommended pulses duration in the high state - 20us),
- signal level 1.5…5.0V,
- switching threshold: 1V,
- hysteresis: 0.1mV.

1PPSO1 output:
- connector: BNC,
- impedance: 50Ω,
- coupling: DC,
- frequency: 1Hz,
- filling of the rectangular waveform: pulses duration in the high state – 20us,
- signal level: typical 2.2V at a 50Ω load,
- signal level control: below 1.5V enables alert.

1PPSO2 output (parameters as for 1PPSO1 output).

Alert output (option)
- Molex 22-05-7035 connector (3 pins),
- NO contact, pins 2 and 3 max. 42V, current 0.5A (the contact is closed when there is no alarm).

B. Power supply

Main power supply:
- socket: USB type A,
- voltage: 5V,
- maximum current: 250mA,
- USB adapter included.

Buffer power supply (option):
- HDD male connector, 4 pins,
- 12VDC voltage,
- galvanic separation,
- 1.5W power, ca. 0.15W in standby mode,
- pin alignment compliant with HDD PC.