



NanoPlex™ Series

P/N: NP-04-06A

Universal ISP Relay Demultiplexer Quick Start Guide

DC04007

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General description

NP04-06A Universal ISP Relay Demultiplexer allows you to multiply the number of Channels of your ISP-Programmer by a factor of four with a galvanic isolation. The number of signals of any relays-switched-Channel is six. A dedicated GND is also provided for any single multiplied Channel. You can address one of the four Channels by using A1, A0 input control signals. ENA is also present and allows you to un-connect all relays-switched Channels from target PCBAs.

Set-up instructions

NP-04-06A easily accommodates on your Test Systems (ATE) or Test Fixture. The product connector is a dual PRECI-DIP 350-10-120-00-001101 (Digi-Key P/N: 1212-1137-ND), 20-pin male strip placed at the borders of the PCB. Connector pins have a diameter of 0.47mm.

For an easy substitution of NanoPlex product, we strongly recommend not to solder connector pins to ATE/Test Fixture directly. Instead, the two 20-pin female strips included as accessories on product package or any other equivalent female strip should be used. Female strips included on NanoPlex package are PRECI-DIP 323-87-120-41-001101 (Digi-Key P/N: 1212-1134-ND) and allow the connection in WireWrap, typical Test-Fixture-style.

Alternatively, solder ATE/Test Fixture cables and trim long WireWrap pins. However, if WireWrap connection system is chosen, we suggest to use the Jonard Tools WSU-30 pen (Digi-Key P/N: K104-ND) which is suitable for WireWrap AWG 30 wires.

Connect NanoPlex to a power source, with voltage range recommended on data-sheet General Characteristics section. Power is pin 21 and ground is at pins 22 and 23.

Connect up to six signals from the ISP-Programmer (could be JTAG, SPI, I2C, SGI, SWG, UART, USART, OneWire™, etc.) to the NanoPlex connector, pins 15 to 20. These signals will be directed to the output channels. Channel selection is on A0, A1 (pins 26 and 25, respectively) and NanoPlex enable on ENA (pin 24).

Connect NanoPlex relays contacts Q0.xx, Q1.xx, Q2.xx, Q3.xx to the target PCBAs. Qn.00 correspond to D0, Qn.01 with D1, and so on.

NanoPlex is now ready to be power supplied. Green LED turns on, and one of the four channel-selection yellow LEDs reflect the status of ENA, A0, A1 input signals. Channel selection and NanoPlex enable are driven by ATE/Test Fixture, etc. VIH and VIL of these input signals are described on data-sheet General Characteristics section.

**Please download this NanoPlex model data-sheet from
www.mantasys.com**