

P6X Pulse I/O Specifications

This document describes the properties of the Pulse input and Pulse output of the P6X terminal series.

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Abstract

NOTICE

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1. Pulse Output

The P6X terminal is equipped with one Pulse output, accessible through the Minifit connector on the back of the terminal.

When the terminal is configured with the Pulse output option, a valid transaction will automatically trigger a response on the pulse output.

Depending on the interface type, the pulse output response can be customized, to fit the needs, for a variety of applications.

Because the pulse output is electrically isolated and Potential free it is capable of interfacing with many different types of devices, without causing interference.

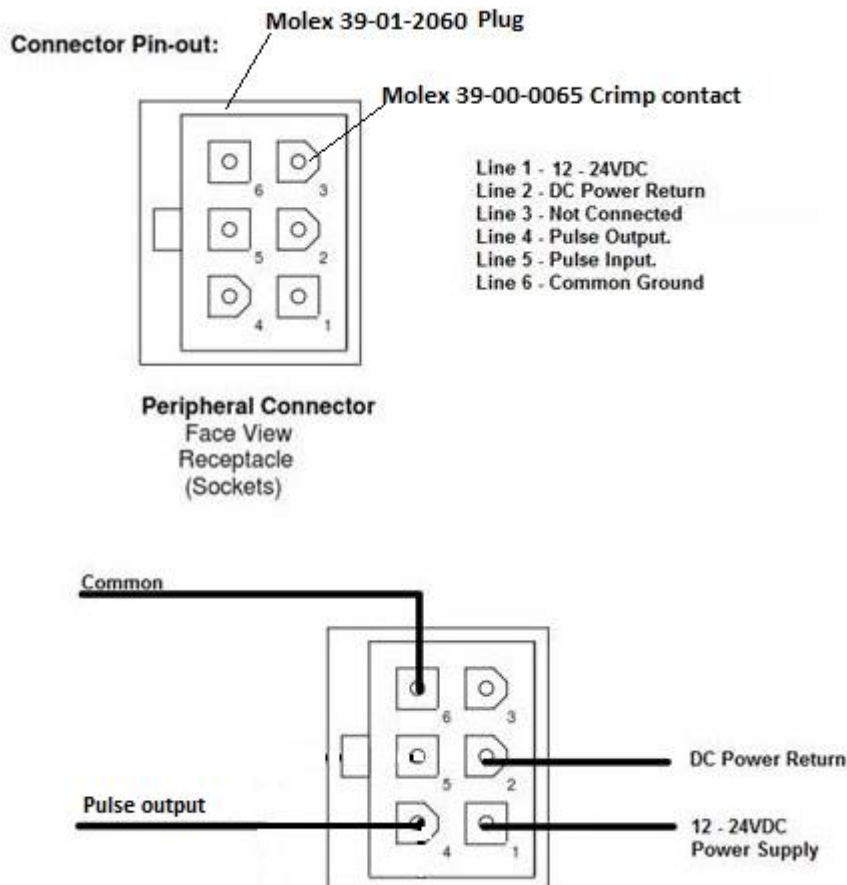
1.1 Functional specifications:

- Idle State: Normally Open or Normally Closed.(Initial startup condition is always Normally Open).
- A successful transaction results in a single pulse(single pulse mode) or multiple pulses of a fixed amount (burst mode).
- Active State Pulse Width: 1ms to 49days, in 1ms increments.
- Idle State Pulse Width: 1ms to 49days, in 1ms increments, only used in burst mode.
- Galvanically isolated from the terminal power supply.

1.2 Electrical specifications:

- 3.3- 24VDC nominal switching voltage range.
- Absolute maximum voltage applied on pulse output pin, referenced to common, is 70VDC.
- Potential Free Open Collector Configuration.
- Maximum sink current is internally limited to 12.5mA.
- Maximum leakage current <30µA.

1.3 Connection diagram:

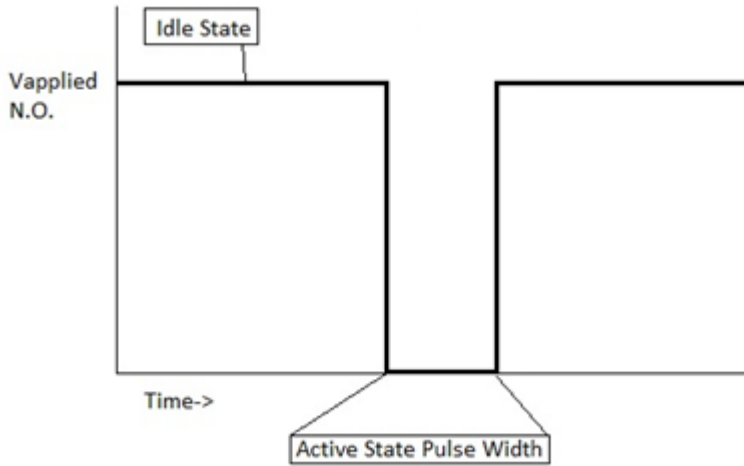


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1.4 Single Pulse mode example

This mode of operation is designed to interface with a device that performs a single operation, each time a pulse is given.

In this example a successful transaction results in a single pulse, with its pulse width defined by the Active State Pulse Width.



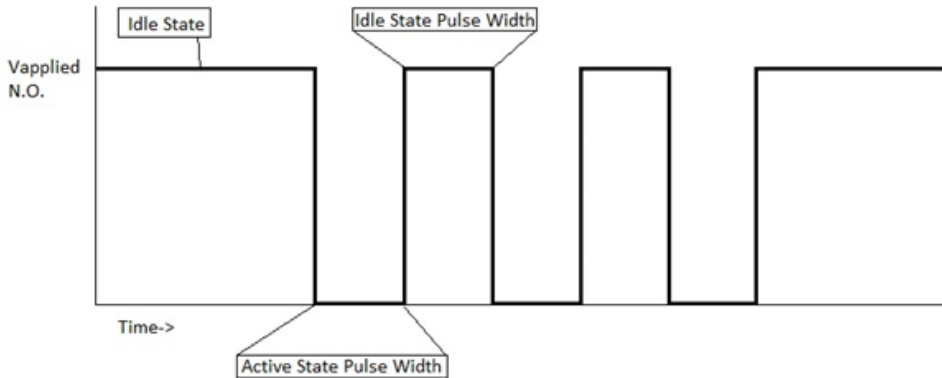
1.5 Burst mode example

This mode is particularly designed to interface with a device that can only interpret fixed amount pulses.

In this example a transaction amount of €1,50 is divided in 3 consecutive pulses, each representing €0,50.

The configured Idle state, before and after the pulses, is Normally Open. In case normally closed is configured the pulse shape will be inverted.

The pulse shape can be further customized by adjusting the Active and Idle State Pulse Width properties.



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2. Pulse input

The P6X terminal is equipped with one Pulse input, accessible through the Minifit connector on the back of the terminal.

The pulse input is can be used for two modes of operation, as a terminal inhibit or for counting pulses.

When a device has an output available for disabling the terminal, the inhibit mode is used. No transactions are possible while the inhibit line is active.

This mode is useful when a device can temporarily out of order, it can be used as a persistent or transient mechanism to disable the terminal.

The pulse counting mode is a very specific mode of operation and is not part of the standard terminal software,

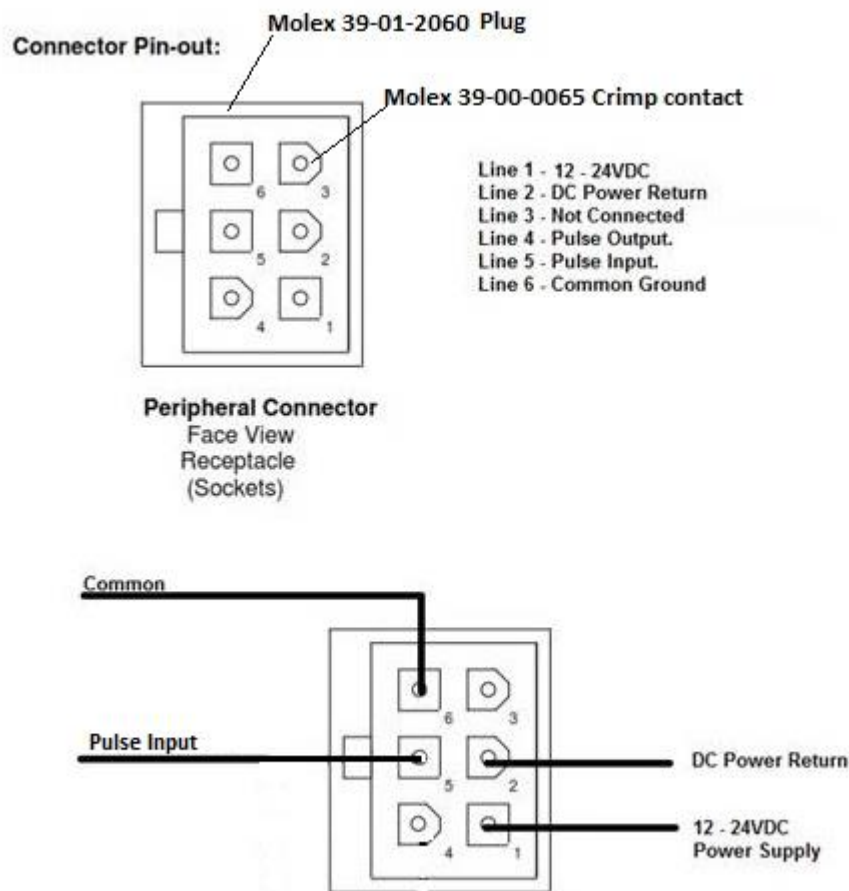
2.1 Functional specification:

- An active signal state on the pulse input will inhibit the terminal from performing transactions.
- The polarity of the inhibit signal can be configured for active high or active low operation.

2.2 Electrical specification:

- Input high voltage range is 3.3-5VDC(U_{IH}).
- Maximum input current @ 5VDC <20mA.
- Maximum input low voltage 0.7VDC(U_{IL}).
- Absolute maximum input voltage, referenced to Common Ground, is 5.25VDC.
- Opto-coupler input circuit, galvanically isolated.

2.3 Connection Diagram:



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3. Pulse settings

Use the Terminal settings program(provide by Payter) to enable the Terminal Pulse mode functionality, or to adjust the characteristics of the pulse in/output.

Set the Autoscan->Pulse option to 1 on the main settings screen to enable Pulse functionality.

AUTO_SCAN	
RESET_TIME	1000
PULSE	1

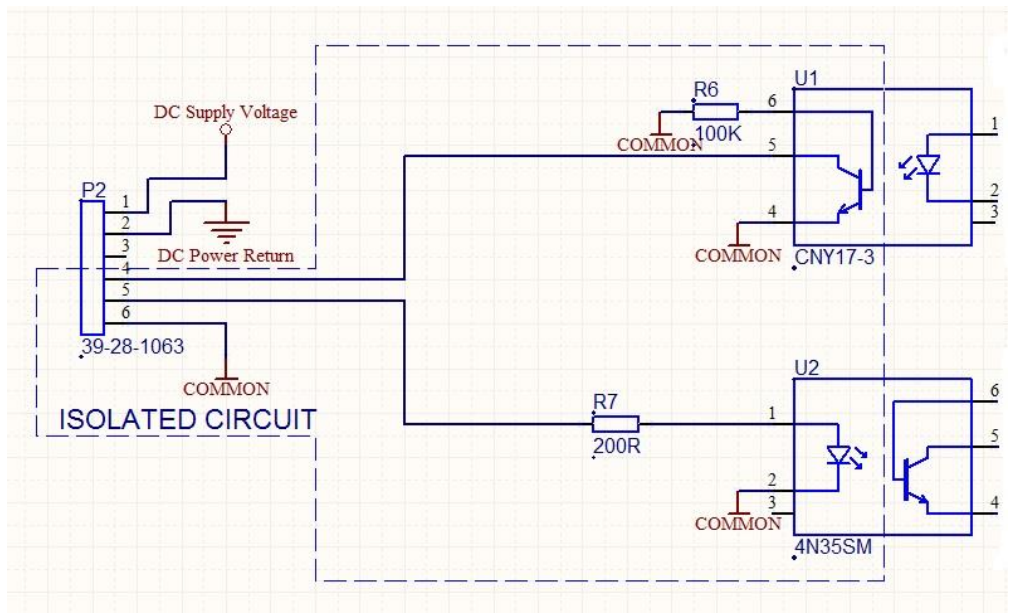
To define the characteristics of the Pulse output/ input, use the following settings under the PTOS2 Tab

PULSE	
WIDTH	150
PER_CENTS	50
PERIOD	150
POLARITY	1
INHIBIT	1

Setting name	Description
WIDTH	Defines the ACTIVE state Pulse width in Milliseconds for the pulse output.
PER_CENT	Defines the Amount per pulse for the pulse output in cents. <ul style="list-style-type: none"> • If PER_CENT matches the transaction DEFAULT AMOUNT, one pulse is given for each transaction(single pulse mode). • Set PER_CENT to one half of the transaction DEFAULT AMOUNT and 2 pulses are given(Burst mode). • When Percent is set to one third of the transaction DEFAULT AMOUNT 3 Pulses are given(Burst mode). ETC.
PERIOD	Defines the IDLE state Pulse width in milliseconds, between ACTIVE state Pulses in Burst mode.
POLARITY	Sets the Pulse output Open Collector IDLE state configuration. 1 = Normally Closed. 0 = Normally Open.
INHIBIT	Defines the Pulse input inhibit functionality. 0 = Not used. 1 = a High level on the input enables the terminal, a Low level Disables the terminal. 2 = a Low Level on the input Enables the Terminal, a High Level Disables the terminal.

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4. Pulse I/O Circuit



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