

5.7. Pulse Input – CC-PPIX01

Function

The Pulse Input Module (PIM) provides the Experion C300 controller with the ability to monitor various pulse input field values. The PI module processes signals from pulse-generating devices and provides a calculated rate and an accumulated total. The PI supports a “fast cutoff” capability to stop dosing operations when the threshold has been met. High-accuracy and repeatable measurement capability make the PIM well suited for metering and custody transfer applications.

This module is specifically engineered to support the MeterSuite Custody Transfer Application including support for dual pulse per ISO6551. Implementation of ISO-6551/API 5.5 for dual pulse inputs, including Level A, pulse integrity.

Notable Features

- Extensive self-diagnostics
- Optional redundancy
- High Accuracy Frequency, Period and Pulse Width Measurement
- Supports the MeterSuite Application
- ISO 6551 Fidelity

Detail Specifications -Pulse Input

Parameter	Specification		
Input / Output Model	CC-PPIX01 - Pulse Input		
IOTA Model	CC-TPIX11	Redundant	12"
Number of Inputs	8 (Single) or 4 (Dual) Supports Mixed Combination of Single/Dual Input Channels		
Number of Outputs	2		
Input type	High-impedance, differential voltage , optically isolated (1000 VDC)		
Frequency Range	0 - 100 KHz Single Channel 0 – 10 KHz Dual Pulse Channel		
Frequency Accuracy (0.5 Hz – 100 KHz)	+/- 0.001% of Reading		
Input Voltage (Independent of Input Voltage Range)	0 to 35 VDC		
Input Voltage Trip Points	High Setting: Low to High: 8.4V ; High to Low: 7.7V Low Setting: Low to High: 2.8V ; High to Low: 2.0V		
Input Edge Selection	Configurable: Rising Edge (Default) or Falling Edge		
Channel Input Impedance	Greater than 70 K Ohms		
Input Channel Function	Frequency (PV), Accumulated Value (AV), Pulse Width High, Pulse Width Low, Period		
Isolated / Bussed Input Jumper Option	Isolated or bussed configuration selection per channel		
Internal / External Excitation	Power connection can support internal 24V operation or an external (user supplied) excitation voltage +5 to +30Vdc		

Minimum Pulse Width ⁽³⁾	3us (Pulse Width Rejection Off), 20us (Pulse Width Rejection On)
Fast Cutoff Output Type (Channels 7 and 8 only)	Optically isolated (1500 Vrms) solid state relay with integral user replaceable fuse (2.5 A)
Fast Cutoff Latency	1ms (max)
Fast Cutoff Relay Output Characteristics ⁽¹⁾	Voltage: 5V to 60VDC Current: 0.001A to 2A
Off State Leakage Current	100uA max at 60Vdc
MeterSuite Specifications ⁽²⁾	Supported
Prover Pulse Output Function	Provides “Good Pulses” from selected dual channel pair to support Prover applications. Supports up to 5 Pulse IOTAs bussed together.
Prover Electrical Characteristics	Open Emitter source driver – Referenced to System Ground Open Circuit Voltage: 22V Short Circuit Current Limit : 35mA
Pulse Data Fidelity Compliance	Level A Fidelity per ISO 6551:1995
Note 1: An optional AC relay (51190516-332) can be substituted for the supplied DC relay to provide an AC Cutoff Signal. Cutoff Time is extended to one line cycle of the AC mains signal. Note 2: Requires MeterSuite Application Note 3: For Dual Channel operations, the minimum detectable required pulse width is 10us. (the dual stream configuration has a “built-in” 10us pulse width rejection feature)	