

PLC Test Station Status Report

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1. Python program developed to allow communication between PLC and GPIB instrumentation.
 - 1.1. GPIB communication used to control Krohn-Hite Model 523 precision DC source for test.
 - 1.2. *pycomm* (Python PLC communication package) and *pyvisa* (Python VISA package for GPIB) used to pass string commands from PLC to GPIB.
 - 1.3. Program handles four cases:
 - 1.3.1. Case 1: Initialize GPIB communication
 - 1.3.2. Case 2: Close GPIB communication.
 - 1.3.3. Case 3: Query GPIB device.
 - 1.3.3.1. Used when command results in response from GPIB instrumentation.
 - 1.3.4. Case 4: Write to GPIB.
 - 1.3.4.1. Used when command does not result in a response from GPIB instrumentation.
 - 1.3.4.2. Used most often in 24 VDC input module test to set Krohn-Hite voltage.
2. Developed routine to test voltage required for channel in 24 VDC digital input module to be read as on.
 - 2.1. Routine controls Krohn-Hite precision DC source using Python GPIB translator to output voltage to input channel.
 - 2.2. Preliminary results and flowchart of routine are below.

Channel #	Voltage where Input was Detected [V]
0	7.468313
1	7.405568
2	7.471104
3	7.471104
4	7.471104
5	7.471104
6	7.471104
7	7.471104
8	7.471104
9	7.471104
10	7.471104
11	7.471104
12	7.405568
13	7.471104
14	7.405568
15	7.405568

Table 1: Preliminary results of VDC input test.

PLC Test Station VDC Input Module Test

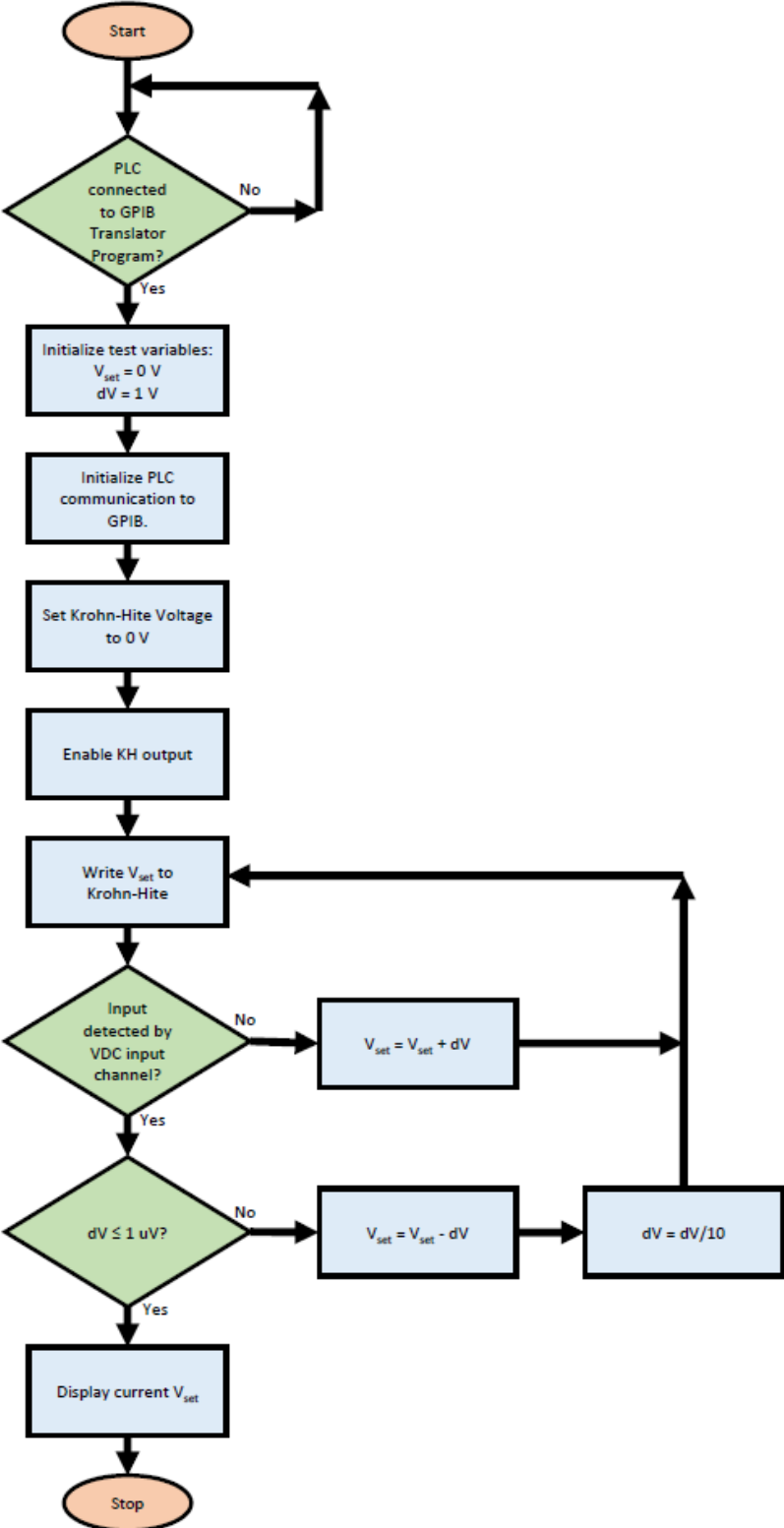


Fig. 1: Flowchart of VDC input test developed for PLC test station.