

November 15, 2016

## Divelbiss E-News - November 2016

**Complete the survey at the end of the newsletter to receive your free gift!!!**



### (IOT) The Internet of Thanksgiving

How many times have you heard stories of a burnt turkey ruining Thanksgiving dinner? Whether it was in a movie or a story you heard around the water cooler, it happens, and can be detrimental to this highly anticipated feast. So what do you do? Chinese takeout?

Grandma has performed flawlessly for the past 40 years, so what happened? Did grandma's faithful oven from the 1950's decide this was the day to go haywire? Did Tommy the toddler turn up the oven to 500 degrees? Or was the turkey just forgotten amongst the holiday festivities? So many variables go into cooking that perfect bird, it could have been anything. Now Grandma's reputation and the Thanksgiving turkey are both in the trash.

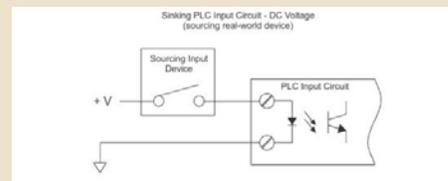


### Make Me Smarter

#### Sinking vs Sourcing???

Real-world input devices are typically either sinking or sourcing (referring to what the output of the device is), just as PLC input circuits are typically either sinking or sourcing (referring to what the input circuit does). When connecting input devices, you must identify what the devices require. A sourcing real-world input device is named because it sources (or supplies) the voltage to the input while a sinking real-world input device is named because it sinks (or dissipates) the voltage supplied (or sourced) from the input. The actual type of circuit that can be used may be limited based on whether or not the PLC input section has isolated inputs (+ and - for each input) or is commoned (commoned one side of + or - for all inputs).

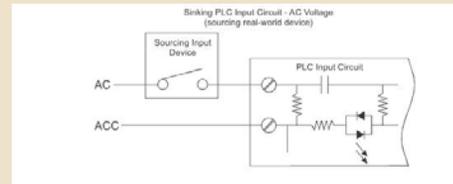
The first two figures illustrate typical sinking input circuits, one with a DC voltage supply and the other with an AC voltage supply. Notice, while the inputs are sinking, the actual input devices are sourcing.



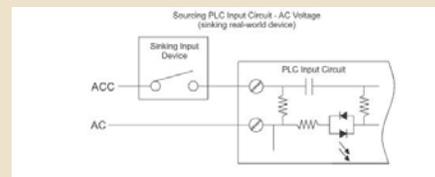
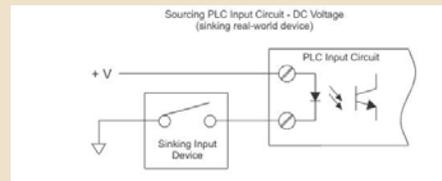
If only Grandma's kitchen was connected to the cloud, that faithful oven could have sent her an email weeks ago that something wasn't quite right. When Tommy turned up the heat, it could have sent her a text message that the temperature was out of range. When grandma didn't get up from her nap in time, did Aunt Nancy get a text to come save the perfectly cooked bird from its impending cremation and trip to the trash?

It only takes one overlooked item, misbehaving machine or rogue employee to ruin what is normally a great thing. So the question is, do you want the IOT to help you create that delectable Turkey every year or end up having Chinese takeout for Thanksgiving dinner?

-Dave Divelbiss - Manufacturing Engineer



The second two figures illustrate typical sourcing input circuits, one with a DC voltage supply and the other with an AC voltage supply. Notice, while the inputs are sourcing, the actual input devices are sinking.



## Application - Remote Troubleshooting

In the world of electronics there is nothing more difficult than finding a fault that only shows up intermittently. The possible sources are endless and downtime costs money, so the support team needs to isolate and fix the problem as soon as possible. Giving the team the most reliable data can mean saving both time and money.



If that fault is in the middle of the desert thousands of mile away, the task becomes that much harder. This is what our team encountered over the past summer. The customer was experiencing the most ominous of all computer malfunctions, a blank screen on a third party HMI. Armed with a [VersaCloud M2M](#) enabled [HEC gateway](#), a few thermocouples and a cellular data plan we were able to bring back live data from a remote location while the fault condition was occurring. Analyzing the voltage and temperature fluctuations in this extreme environment allowed our technical team to isolate and eventually repair this intermittently

blank third party HMI: all without interfering with the customers production.

Whether it is to troubleshoot, manage equipment or to collect data, the ability to remotely monitor a situation is a powerful tool. A full line of [VersaCloud](#) enabled devices with multiple communication and I/O configurations will do the trick in the most extreme environments.

Contact me today at 1-800-245-2327 to discuss your remote monitoring application today.

-Chris Bigler - Technology Specialist

## Working for You - Chris Bigler - Technical Specialist



Technical Specialist, Christopher Bigler is the latest addition to the Divelbiss team. Since June, Chris has worked with our customers on applications, product selection and technical support. He graduated from Marion Technical College in 2009 with an AASEET and has worked in Industrial Electronics and Nuclear Qualification Testing.

Whether you need help selecting a product, have applications questions, need help with programming or need product technical support, Chris is here to help you.

Contact Chris today at 1-800-245-2327

## Product Highlight - Harsh Environment Gateways

### Harsh Environment Gateway Products



The HEC-Gateway Family is a Series of Harsh Environment Programmable Communications Gateways for Local Device and Network Interfacing, Remote Monitoring, Reporting, Datalogging and Control with available Cellular Data and Wi-Fi Connectivity, utilizing [VersaCloud M2M](#).

- [HEC-GW-X-W](#) Harsh Environment (HEC) Programmable Gateway with Wi-Fi connectivity. Includes 1 Digital Input, 1 Digital Output, 2 Analog Inputs, 2 Serial Ports (RS232) and 1 CAN port (SAE J1939/NMEA 2000). Supports Modbus and can be GPS enabled.
- [HEC-GW-C-X](#) Harsh Environment (HEC) Programmable Gateway with Cellular Data Modem. Includes 1 Digital Input, 1 Digital Output, 2 Analog Inputs, 2 Serial Ports (RS232) and 1 CAN port (SAE J1939/NMEA 2000). Supports Modbus and can be GPS enabled.
- [HEC-GW-C-W](#) Harsh Environment (HEC) Programmable Gateway with Wi-Fi Connectivity and Cellular Data Modem. Includes 1 Digital Input, 1 Digital Output, 2 Analog Inputs, 2 Serial Ports (RS232) and 1 CAN port (SAE J1939/NMEA 2000). Supports Modbus and can be GPS enabled.

## Thanksgiving Trivia!

Free Survey Giveaway!!

1. The First Thanksgiving Lasted?
  - a. One day
  - b. Two Days
  - c. Three Days
2. Which Indian Tribe taught the Pilgrims how to cultivate the land and invited them to the Thanksgiving meal?
  - a. Apache
  - b. Wampanoag
  - c. Cherokee
3. What is snood?
  - a. The loose skin under a turkey's neck
  - b. A hat worn by a Pilgrim
  - c. A hot cider drink served at Thanksgiving
4. What is a baby turkey called?
  - a. A chick
  - b. A nestling
  - c. A poult

Answers:

1. C
2. B
3. A
4. C

Receive a free USB stick for completing our short survey.

