ConsoliDator+

MasterClass

Week 6 – Modbus Applications

Today's Key Topics

- New Modbus Nomenclature
- New Modbus "Modes"
- Add-On Feature Upgrades
- Modbus using RS-585
- Modbus using Ethernet

ConsoliDator+

MasterClass

New Modbus Nomenclature

PREVIOUSLY USED TERMS		CURRENTLY USED TERMS
Master	→	**“Client”**
Slave	→	**“Server”**

Simple Way to Remember:

Think of being at a restaurant. Since you are paying money, YOU are the “Client” in that situation. The person who brings you your food and drink is your “Server”, right?

The paying Client makes orders, and the Server fills those requests. That is an easy way to help you remember this seemingly sudden shift in nomenclature.

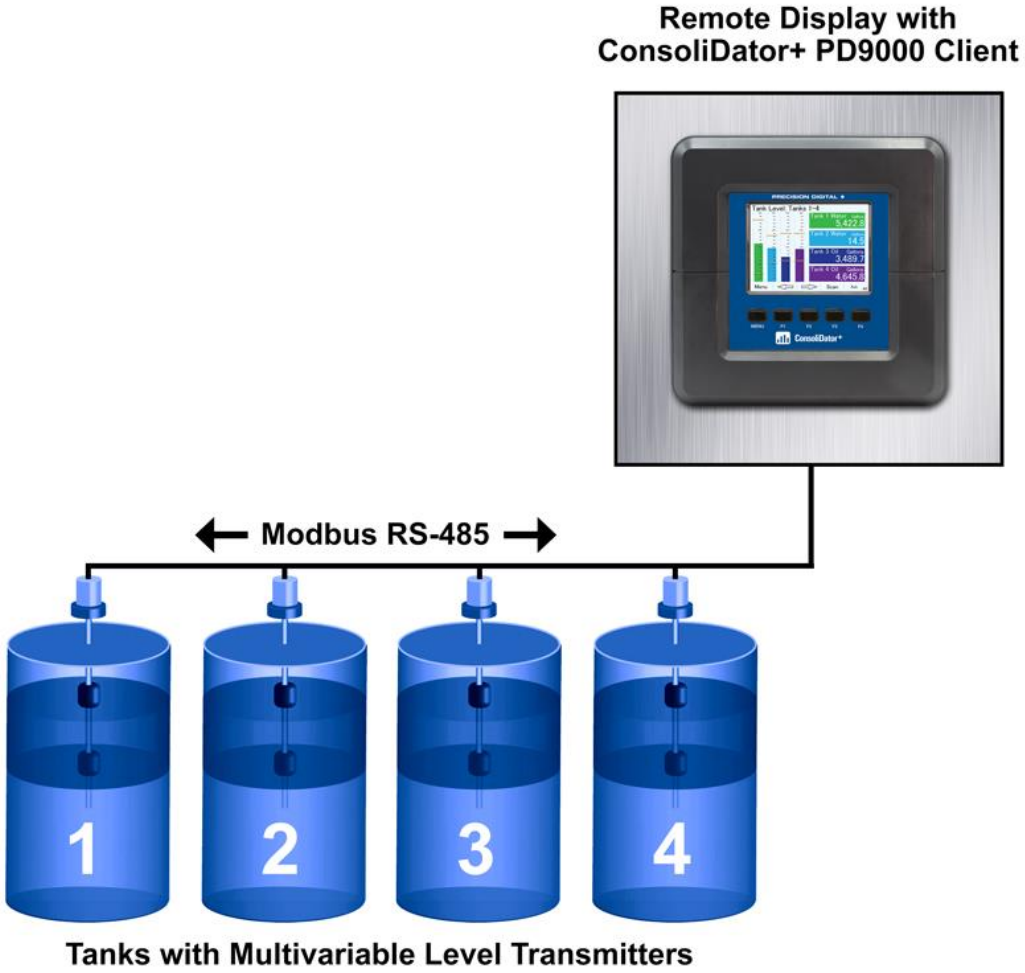
Enhanced and NEW Modbus Features

Client (Master) Capabilities

Packet Sniffer Functionality (Snooper)

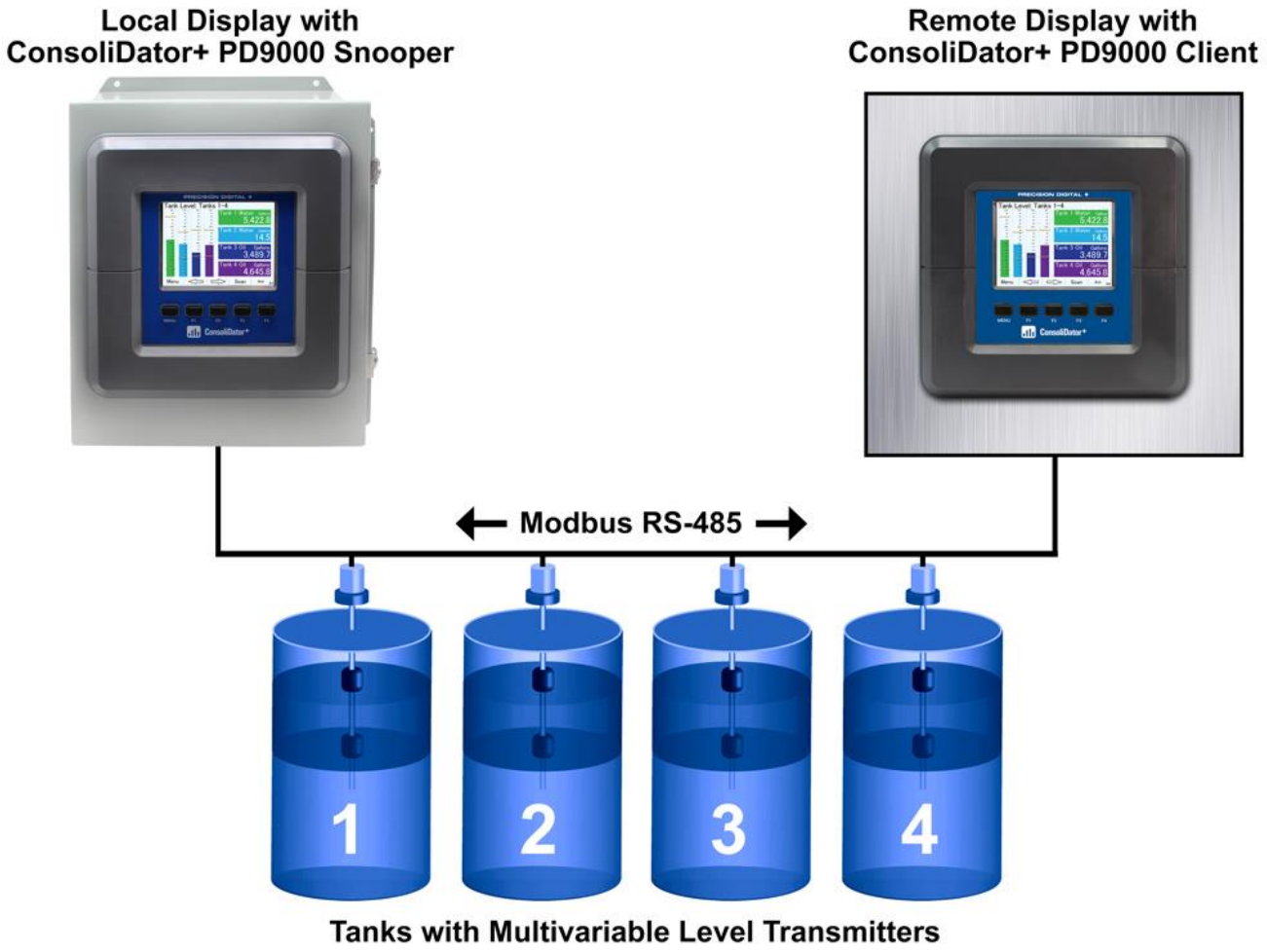
Assign Multiple Addresses & Customized Register Numbers (Spoofer)

ConsoliDator+ in “Client” Mode



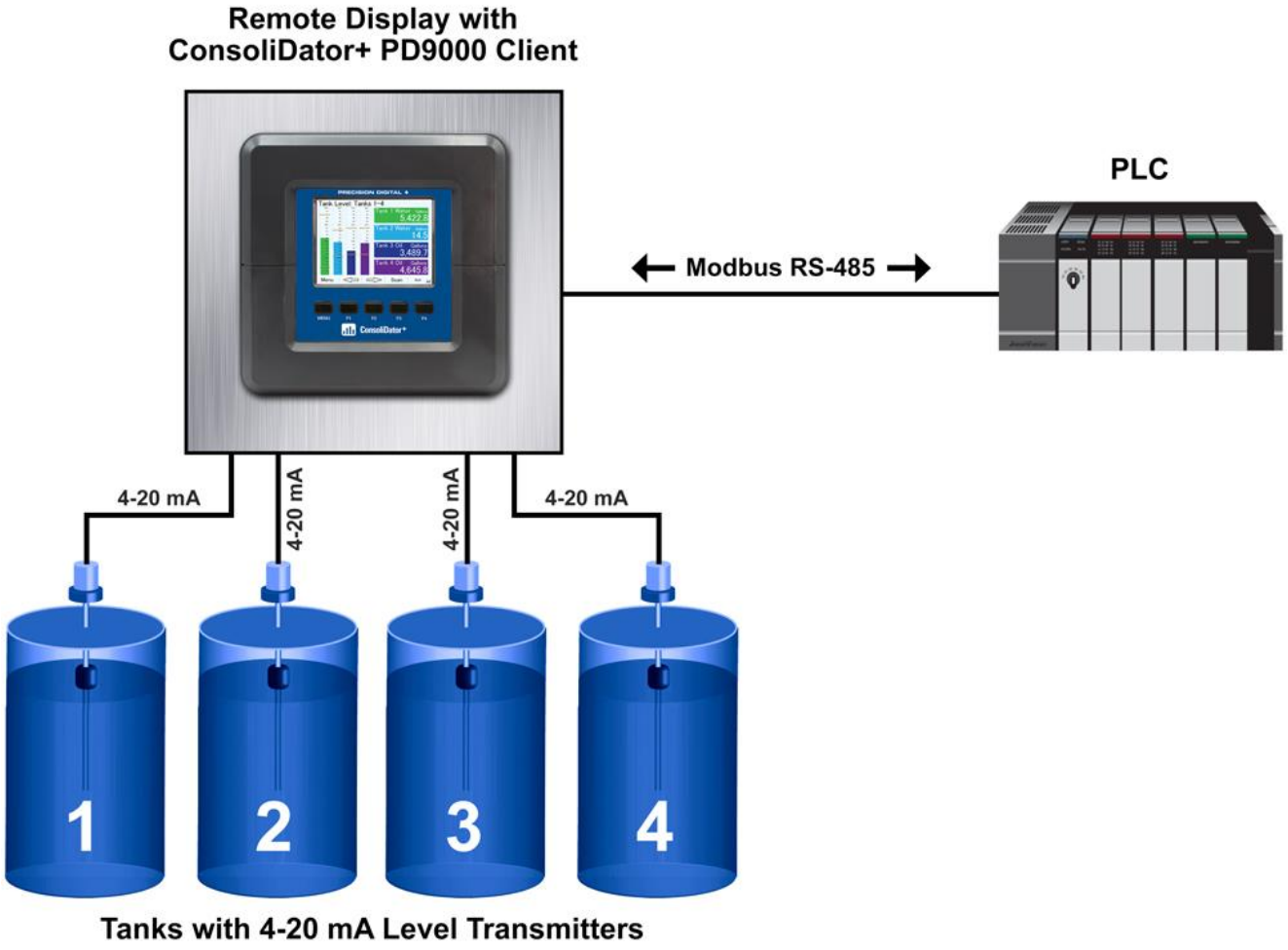
- The ConsoliDator+ can read AND write Modbus registers on several Server devices using Modbus RTU with RS-485 (*Legacy products, like the ProVu, were NOT capable of writing Modbus registers – only reading*)
- The device can handle up to 199 Modbus registers when in “Client” mode (*Legacy products, like the ProVu, could only handle a maximum of 16 registers*).

ConsoliDator+ in “Snooper” Mode



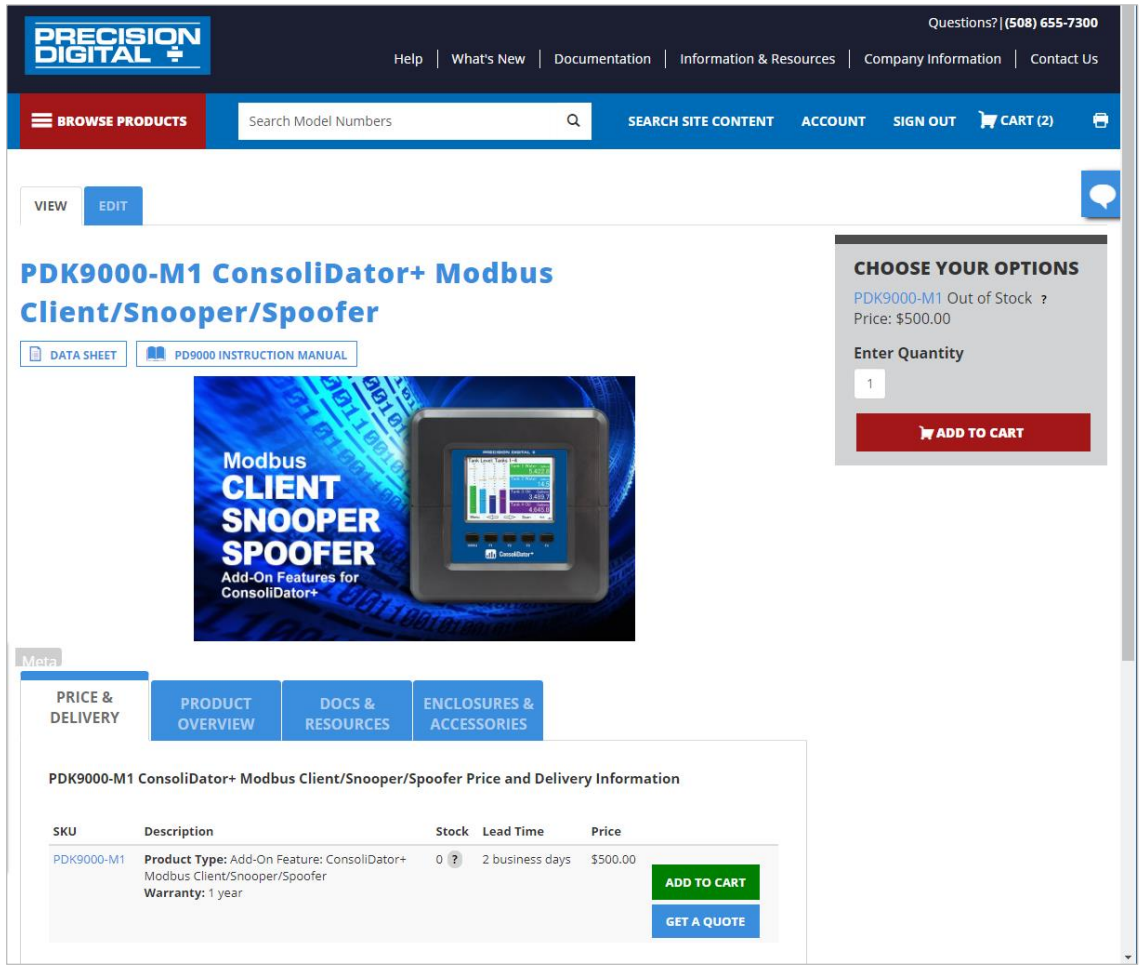
- In “Snooper” Mode, the ConsoliDator+ can sit anywhere on the RS-485 network and “listen” for the registers YOU want to see.
- The Snooper neither makes requests to a Server nor does it fulfill requests from a Client.
- Neither of the other “nodes” on the network have any idea the Snooper is there!

ConsoliDator+ in “Spoofer” Mode



- “Spoofer” mode is a completely new Modbus Mode developed and implemented by Precision Digital engineers.
- This mode can make updating or replacing older field equipment extremely simple!
- Replace older Modbus RTU field equipment WITHOUT having to make ANY programming changes in the PLC!

So, How Do We Unlock These Awesome Features?!

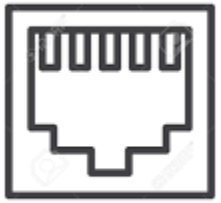


- These modes **are not** standard and must be purchased either at the time the original unit is purchased, or after it has been installed in the field.
- Any ConsoliDator+ unit purchased after 2/15/21 is able to be unlock these Modbus Modes with a unique “Passkey” which can be purchased for only $500.00 USD

NOTE: *The ConsoliDator+ can operate in “Server” mode without additional purchases or passkeys. Server mode is indeed a standard feature as is the RS-485 connections needed for that operation.*

Exactly HOW Do These Devices Communicate?

Ethernet



Server Mode

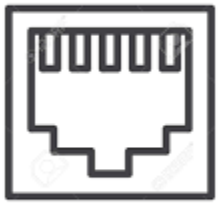
AND/OR

RS-485

Client Mode
Spoofer Mode
Snooper Mode
Server Mode

Which Protocols Will the ConsoliDator+ Support?

Ethernet



Modbus TCP/IP
Modbus UDP/IP

AND/OR

RS-485

Modbus RTU
Modbus Enron
Modbus ASCHII

NOTE: *Highlighted protocols are the most commonly used Modbus protocols, in my experience at Precision Digital. Typically, when someone says they are using RS-485 for Modbus, they are USUALLY using "Modbus RTU". If they are using Ethernet, they are USUALLY using "Modbus TCP/IP".*

ConsoliDator+ Demo Unit – The **ULTIMATE** Learning Tool!

- Easiest way to learn and master the ConsoliDator+ unit
- Highly recommended for the second half of this class – but **NOT** mandatory and you will not receive any less of an experience without one!
- Comes equipped with ALL unlockable features (such as the Modbus modes we looked at, and data logging).
- For being enrolled in this class, you can receive one of these for 50% off the published price!!

Not JUST Another Demo Unit…

A fully programmed ConsoliDator+ demo unit with real-life application examples!

Analog Signal Generator!!

Light/Horn Stack for Audible and Visual Alarming!

USB and Ethernet Cables

Rugged, Compact Carrying Case!

Have any of your customers seen this demo unit?!
Probably not…