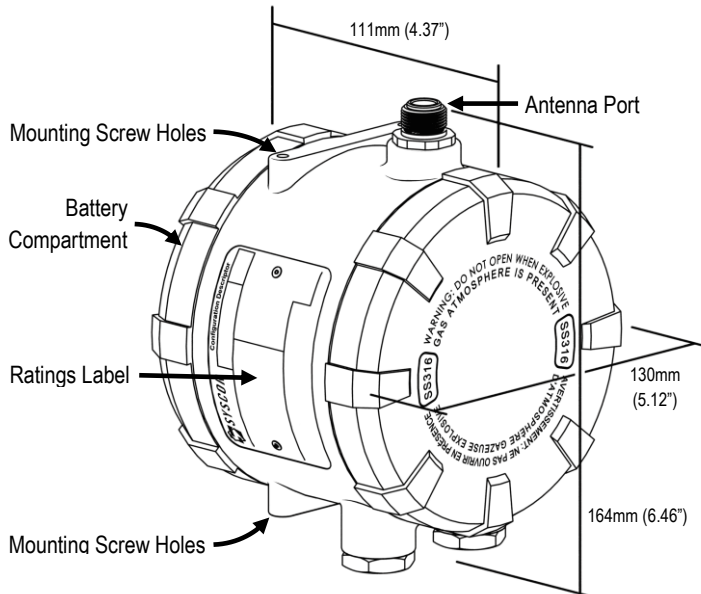


# PCU-X00 WirelessHART Repeater – Installer Reference



Syscor's battery-powered WirelessHART Repeater may be used to improve or extend any WirelessHART network, even networks provided by other vendors. The 136.8Wh battery pack provides 10+ years lifespan. The Repeater may not be used with attached Syscor sensor probes.

## Safety Information

The PCU-X00 Repeater has been certified for operation in hazardous locations under the following parameters and conditions:

- Class 1, Division 1, Groups C, and D;
- Intrinsically safe Ex ia;
- Ambient temperature range -40°C to +60°C, Temperature Code T4;
- Pollution degree 4
- Water submersion to a depth of 1m (3.28 ft.)
- Enclosure is Type 4X and IP67

Specific Conditions of Use:

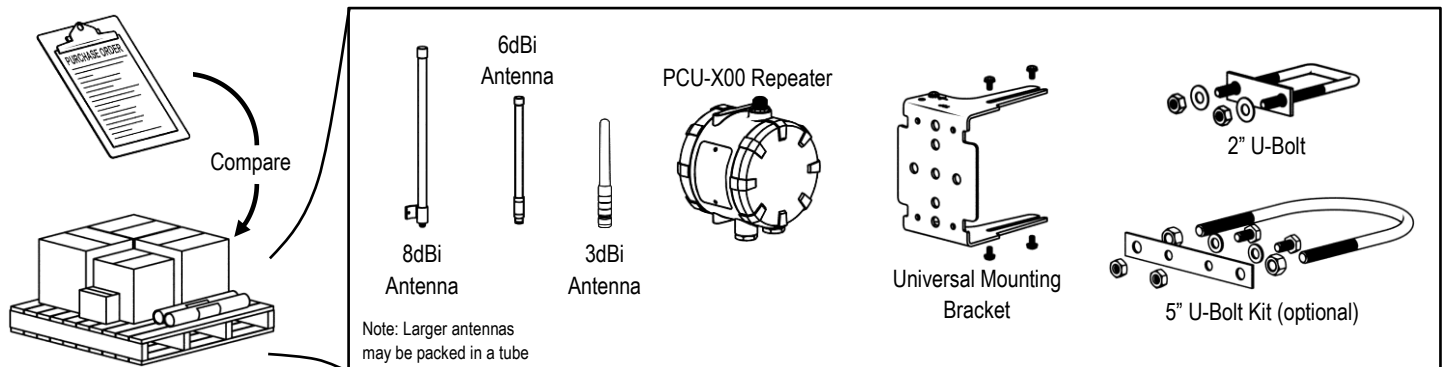
1. A passive antenna may be supplied by the manufacturer or provided by the customer. Permitted antennas must have <10 000mm<sup>2</sup> plastic surface when connected directly to the enclosure. Antennas connected through an extension cable are not subject to the plastic surface area restriction.
2. When a non-metallic antenna is connected directly to the enclosure, it is possible that under certain extreme circumstances, the non-metallic antenna may generate an ignition-capable level of electrostatic charge. Therefore, when a non-metallic antenna is connected to the enclosure without the use of an extension cable, the equipment shall be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
3. The HART maintenance port in the PCU must not be used in the hazardous area. When used in the non-hazardous area, a battery-powered HART Field Communicator with intrinsic safety approvals shall be used. Examples are the Emerson 375 or 475 HART Field Communicator, and the AMS Trex Device Communicator.

**WARNING: Substitution of components not expressly specified by Syscor will void intrinsic safety certification.**

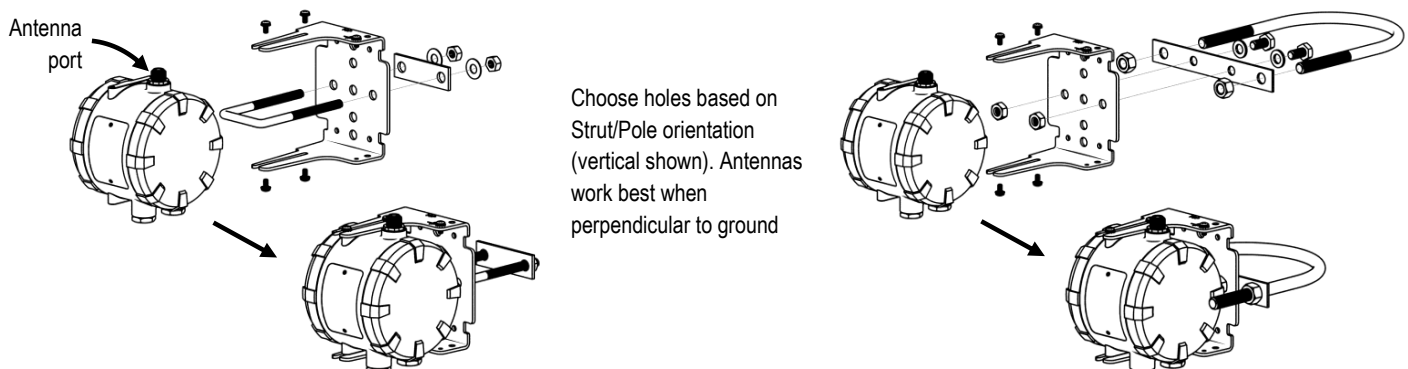
**WARNING: Do not open in an explosive gas atmosphere.**

**WARNING: Do not power on without first connecting an antenna.**

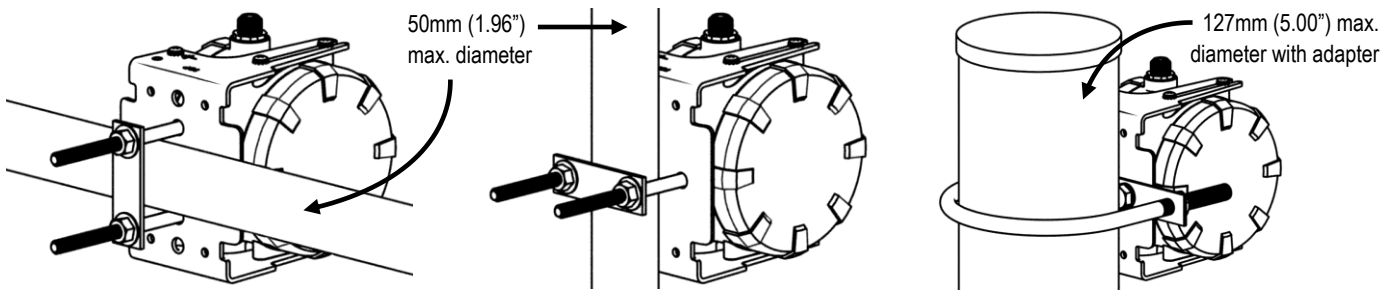
## Package 1 – Standard Configuration Kit



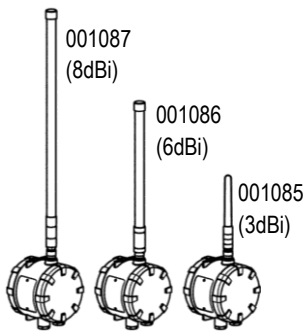
## Package 1-1 – Mounting bracket



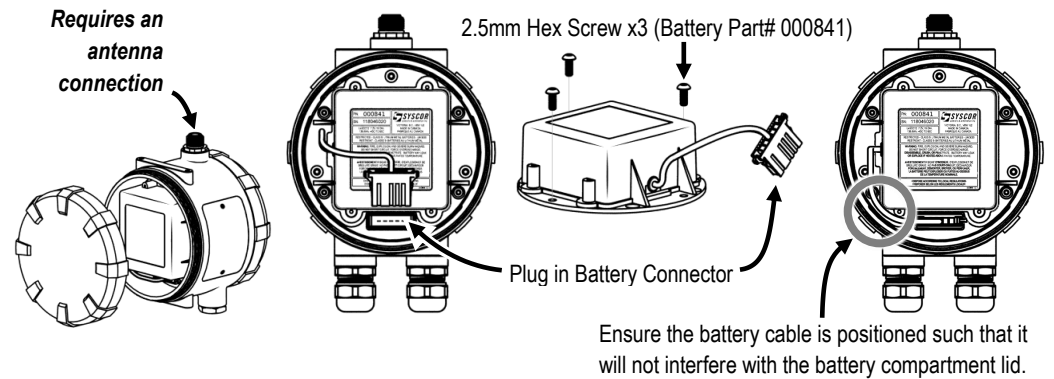
## Package 1-2 – Install the Repeater to a strut or pole



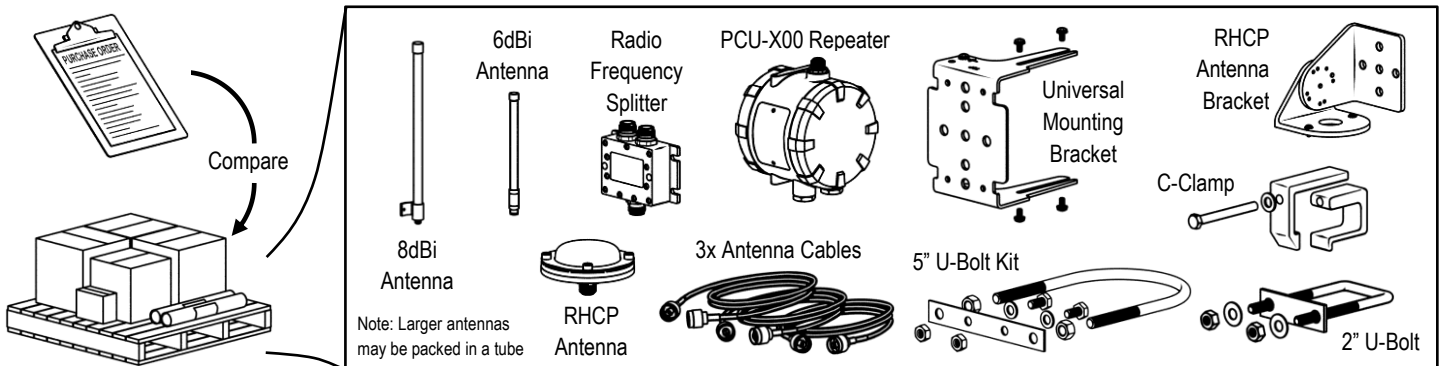
## Package 1-3 – Antenna Install



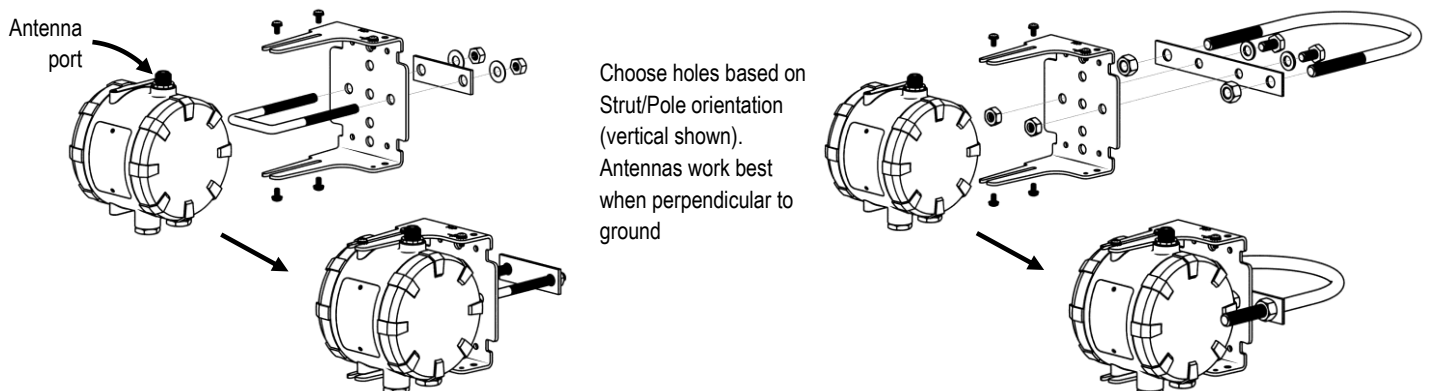
## Package 1-4 – Power the Repeater

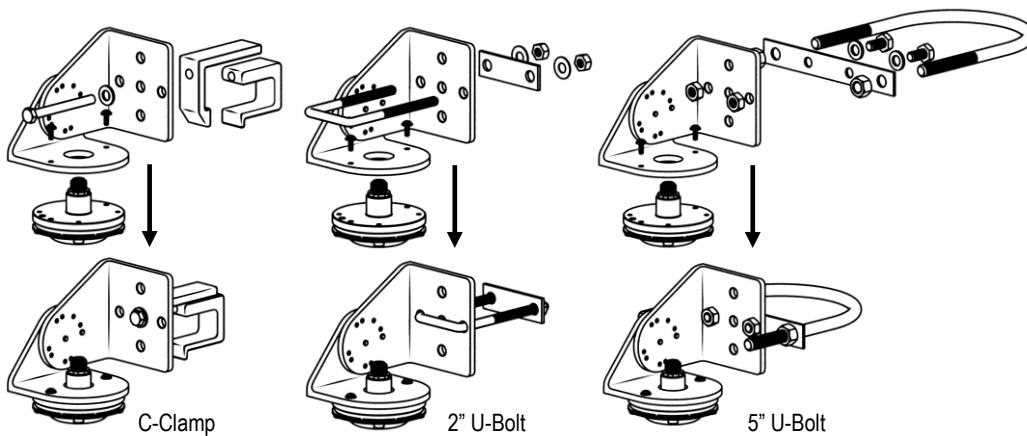


## Package 2 – Radio Frequency Splitter Configuration Kit

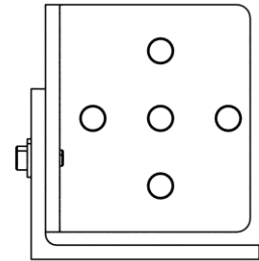
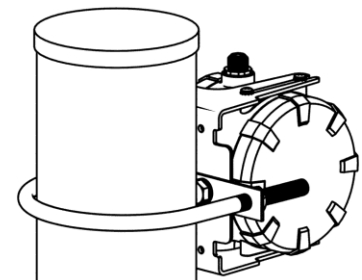
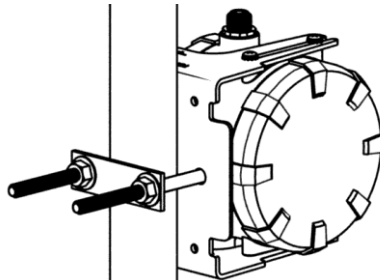
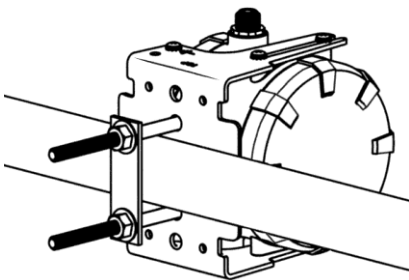
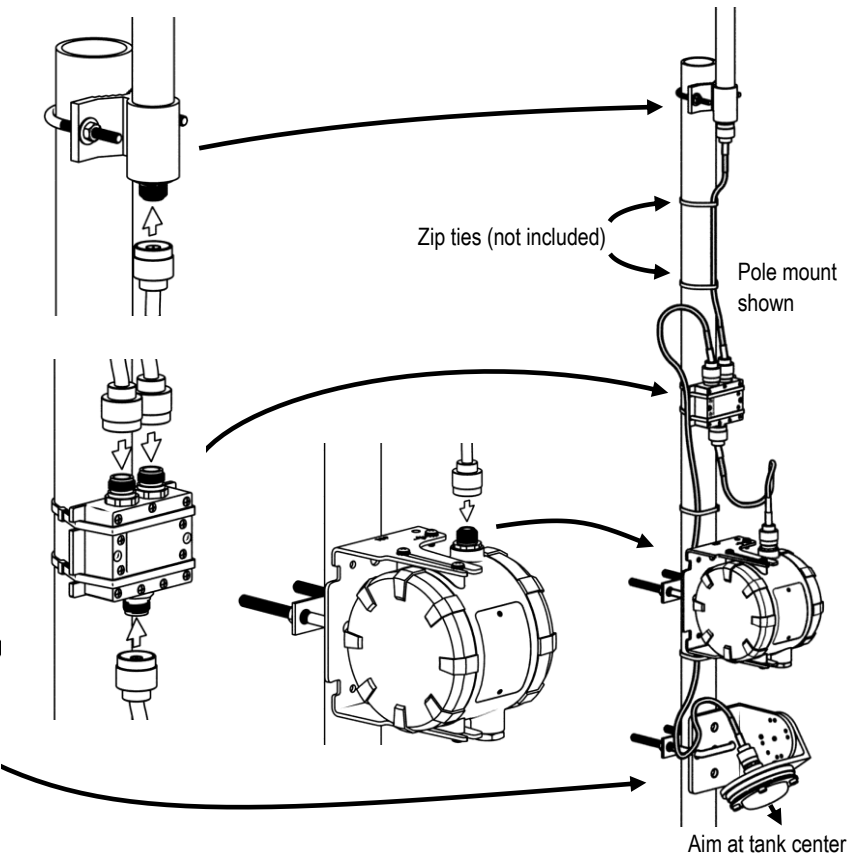
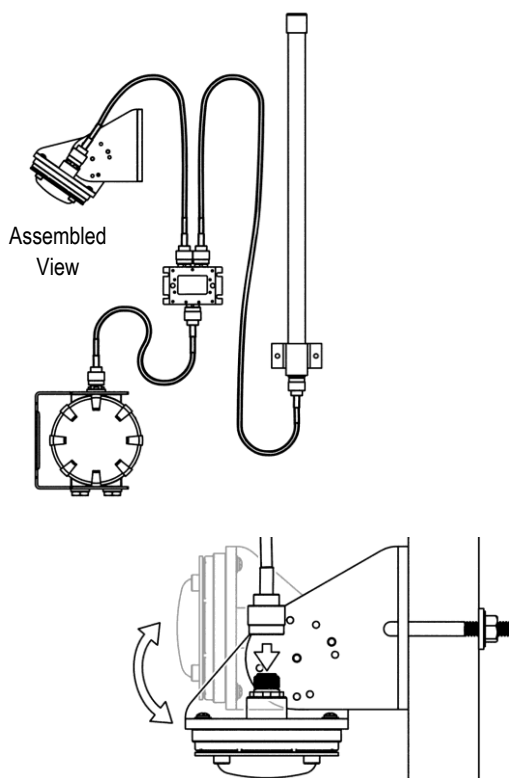


## Package 2-1 – Mounting bracket



**Package 2-2** – RHCP antenna mounting bracket

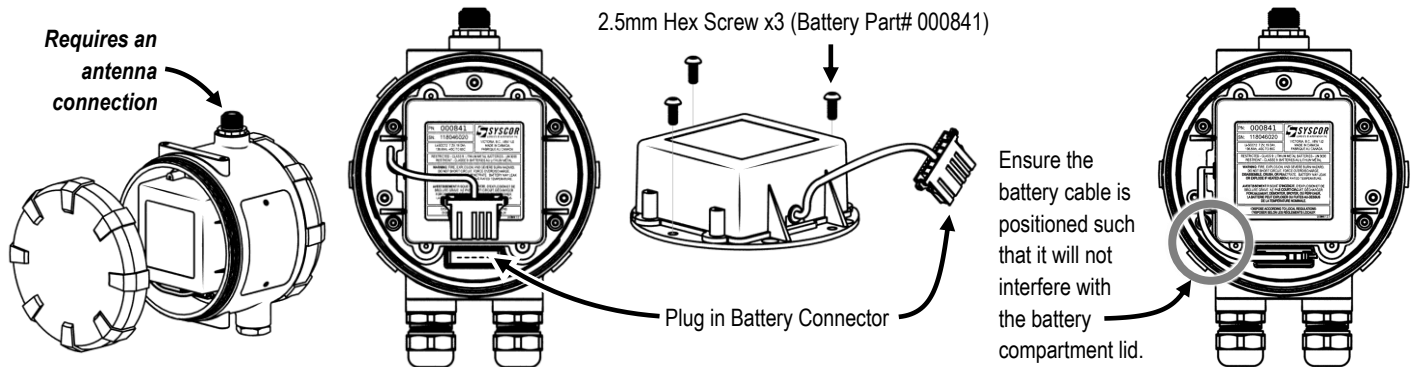
The RHCP Antenna bracket has 5 holes for varying C-Clamp position or U-Bolt orientation as required by the installation site

**Package 2-3** – Install the Repeater to a strut or pole**Package 2-4** – Install the antennas and RF splitter

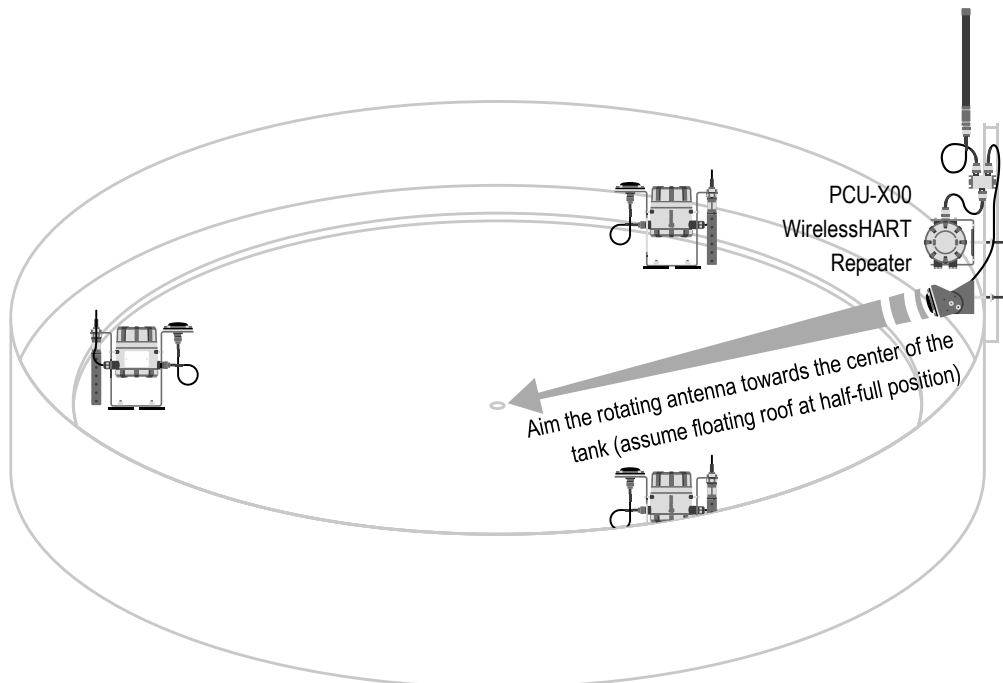
Screw holes for  
angle adjustment

Aim at tank center

### Package 2-5 – Power the Repeater



### Package 2-6 – Aboveground Storage Tank Installation Example



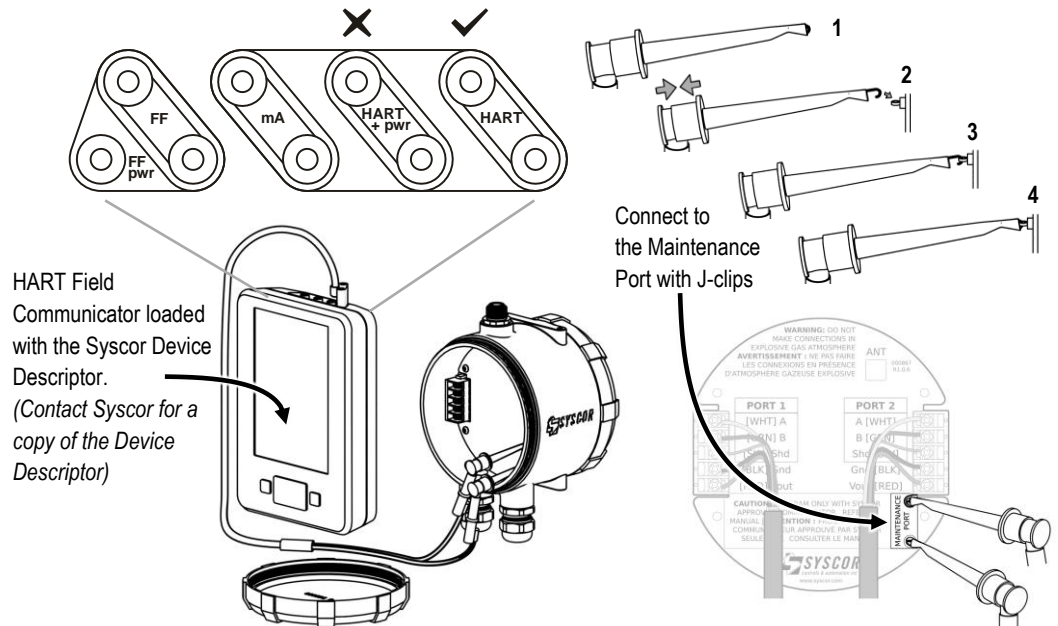
## WirelessHART Networking

The PCU-X00 commonly comes with client-specific gateway join settings already loaded. The following box shows the default network ID and join key:

Network ID:  
1234

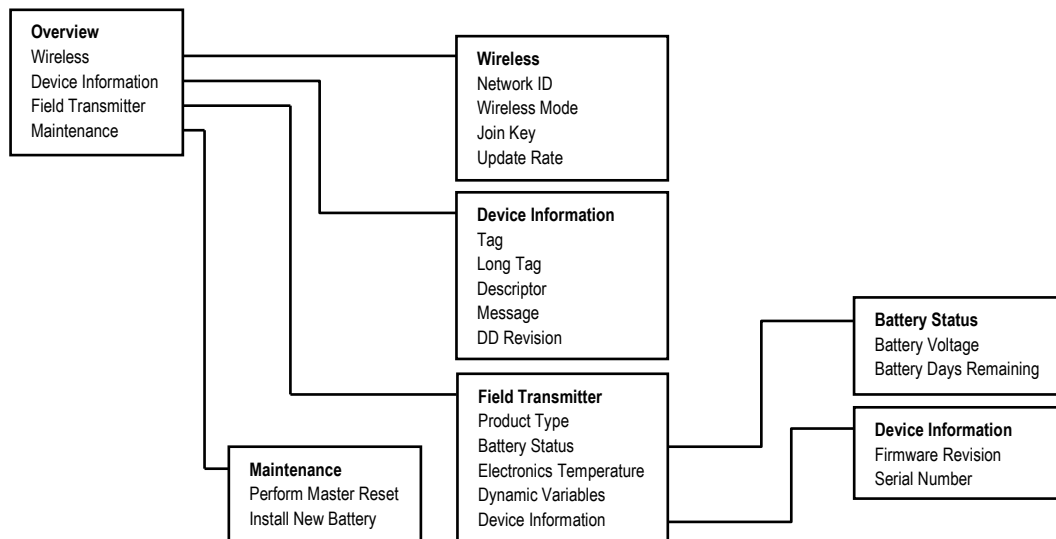
Join Key:  
Part 1: 44555354  
Part 2: 4E455457  
Part 3: 4F524B53  
Part 4: 524F434B

## Change the Network ID and Join Key with a HART Field Communicator



## Using the Field Communicator

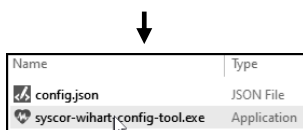
The following is the menu tree for the HART Field Communicator loaded with the PCU Device Descriptor.



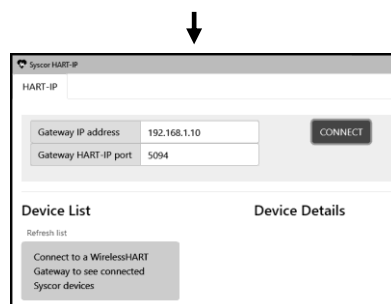
## Syscor WiHART Config Tool

Syscor offers a software tool for adjusting settings remotely once a PCU-X00 has joined the WirelessHART Gateway.

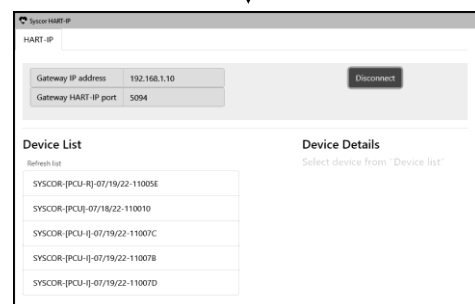
**Step 1** - Run syscor-wihart-config-tool.exe (no installation needed)



**Step 2** - Connect to the gateway using the gateway's IP address and HART-IP port.



**Step 3** - Select the PCU to be configured from the device list.



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