

# CRLDS Quantified Refrigerant Test

## Bump Test Instructions

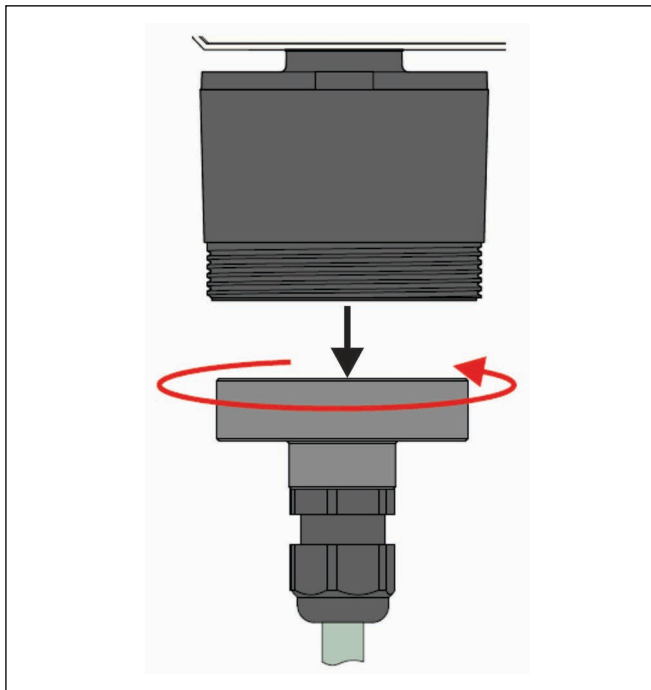
### EQUIPMENT

- 809-1207 Gas Detector - Calibration Kit For CRLDS Sensor
- Flow regulator, 0.5 L/min constant flow (L.P.)
- Gas cylinder
- Smartphone with CRLDS App Installed (optional)

### TEST PROCEDURE

#### STEP 1:

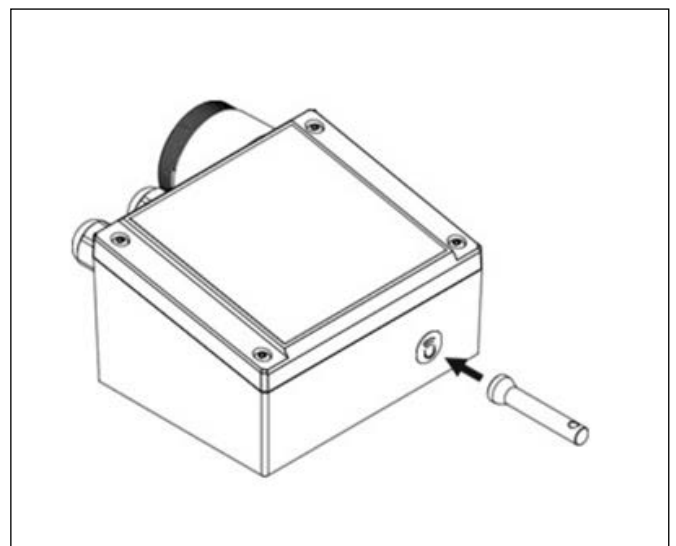
Attach the provided calibration adapter to the sensor.



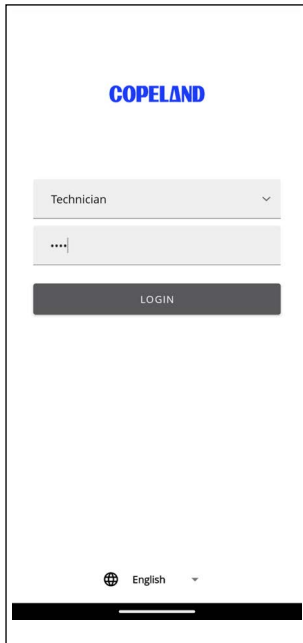
#### STEP 2:

Connect to the CRLDS via Bluetooth® and prepare to monitor the sensor while gas is flowing.

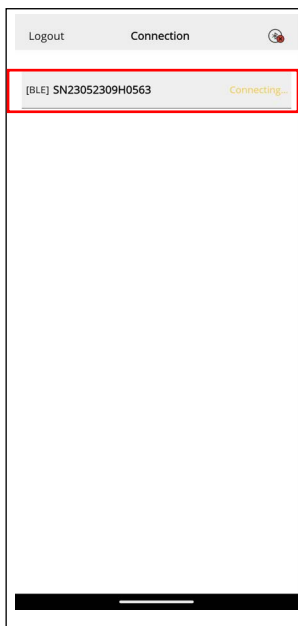
1. Download and install Copeland CRLDS app from the App Store® or Google Play Store.
2. Activate Bluetooth® on the CRLDS sensor by touching the red magnetic wand to the magnetic switch on top of the enclosure for 5 seconds continuously.



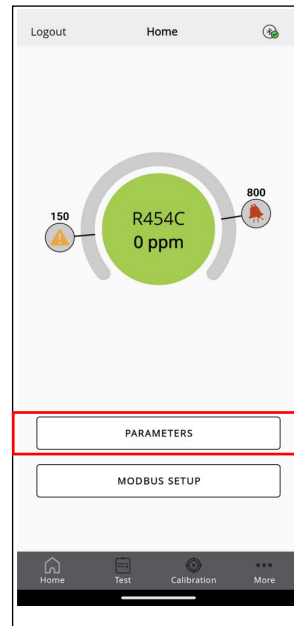
- Once Bluetooth® is activated, the green LED will change from solid green to blinking green.
- Open the CRLDS app, select **Technician** and login with password **2222**.



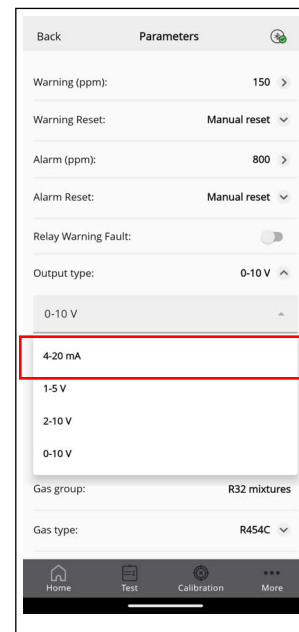
- Select on the CRLDS serial number in the device list to connect.



- From the Home tab, select the **Parameters** button.



- Select the Output Type **4-20mA**, and press **Back** to save. Change the corresponding zone in the MZLD iPro to be 4-20mA for the analog input.



**STEP 3:**



According to *EN 14624:2020\** in "12.7 Response time" is stated that the response time of the detector must be 30 sec (seconds) or less at a concentration of 1.6 times the preset value.

Choose the gas sensor accordingly.

Note that in cases where semi-conductive sensors are tested, the test gas must be balanced with air.

*\*Based on EN 378:2016, 9.3.1*

**STEP 4:**



Use the gas regulator with constant flow of 0.5 L /min.

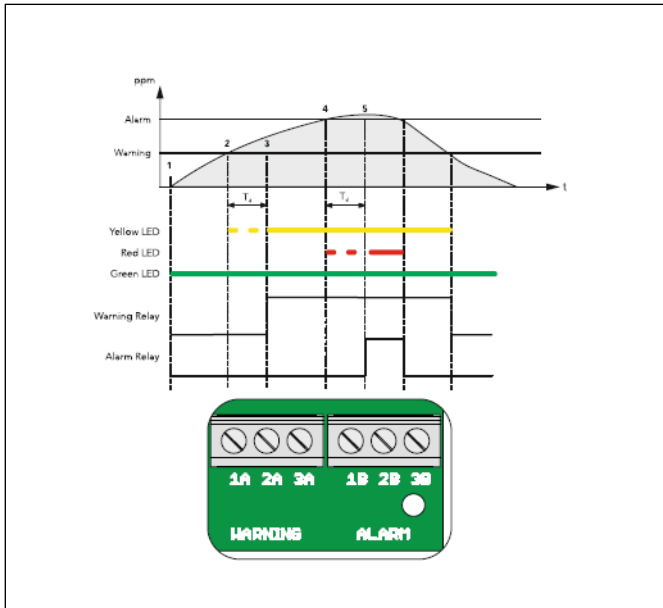
Note that in case of ammonia sensors, the stainless steel regulator must be used.

**STEP 5:**



In cases where semi-conductor sensors are tested, moisten the air humidifier with tap water.

## STEP 6:



Control if the alarm indication starts within 30 seconds from the start of the gas exposure:

LED indication: Visual inspection

Relay indication:

Sound (relays clicking)

Electrical continuity test on relay terminals

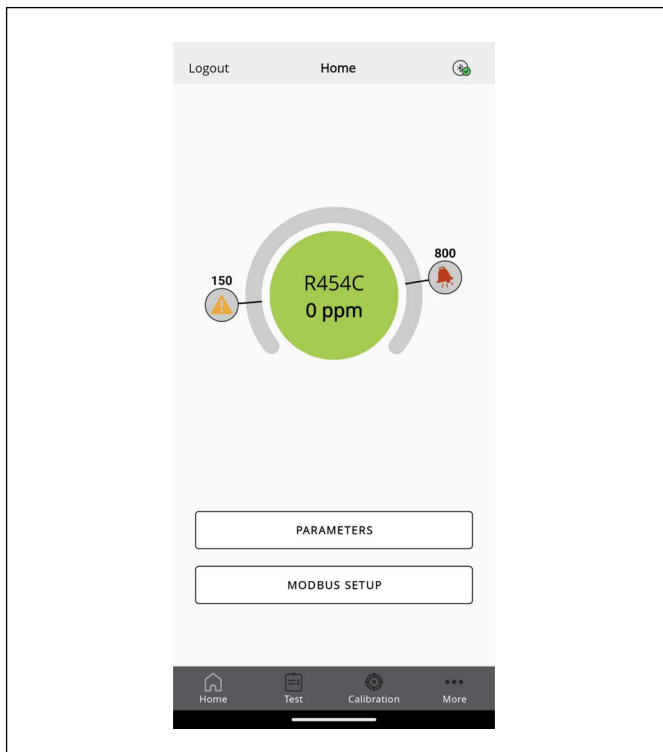
User Manual References:

5.5 Alarm Management

4.3 Installation Instructions and Electrical Connections

URL: <https://www.copeland.com/documents/026-1318-crls-user-manual-en-9291542.pdf>

## STEP 7:



Check the CRLDS mobile app Home tab to verify the PPM reading and alarm state while gas is flowing.

Verify the desired PPM has been reached and relay states are performing as intended.