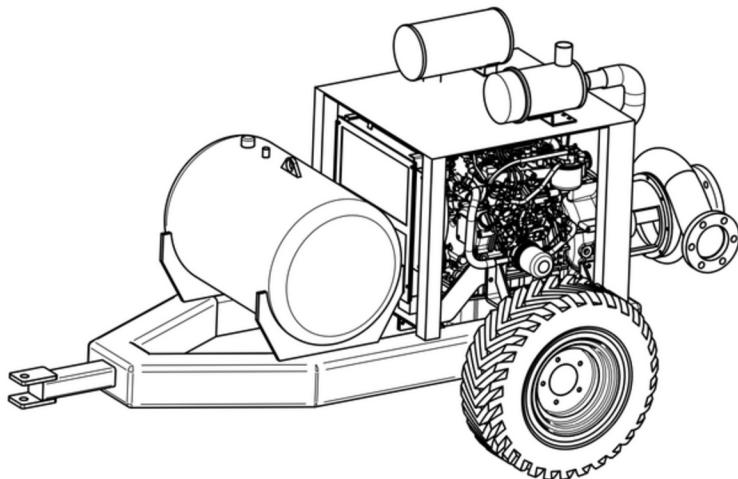


FarmHQ DIESEL PUMP INSTALLATION



www.farmhq.com

August 2024 • Version 3.2

TC-3 PUMP INSTALLATION



⚠️ WARNING ⚠️ - ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENSED ELECTRICIAN. IMPROPER INSTALL CAN CAUSE INJURY OR DEATH.

⚠️ WARNING ⚠️ - DO NOT INSTALL WHILE YOUR EQUIPMENT IS RUNNING. FAILURE TO COMPLY MAY CAUSE INJURY OR DEATH.

WHAT YOU WILL NEED

- DRILL
- VOLTMETER
- METRIC ALLEN WRENCHES
- CRESCENT WRENCH
- WIRE STRIPPERS
- OPEN END WRENCH SET
- TEFLON TAPE
- 1/4" PIPE ADAPTORS

ADDITIONAL HARDWARE

- ADDITIONAL HARDWARE MAY BE REQUIRED DEPENDING ON YOUR PUMP. CONTACT SUPPORT FOR HARDWARE RECOMMENDATIONS

FARMHQ APP

- AVAILABLE FOR BOTH IOS AND ANDROID. DOWNLOAD ON OUR WEBSITE
FarmHQ.com/support

SUPPORT

- IF YOU HAVE ANY TROUBLE DURING INSTALL REFERENCE THE USER MANUAL AT
FarmHQ.com/support

CONTACT US AT

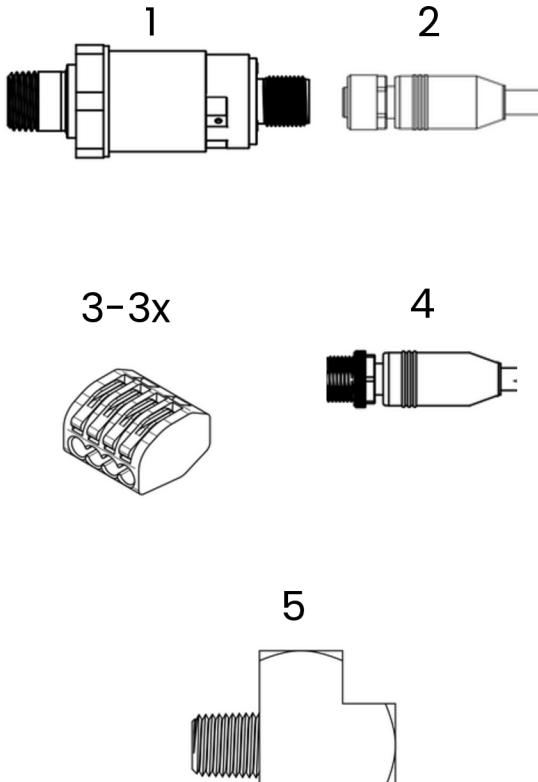
- SUPPORT@FARMHQ.COM
- +1 360-818-2632



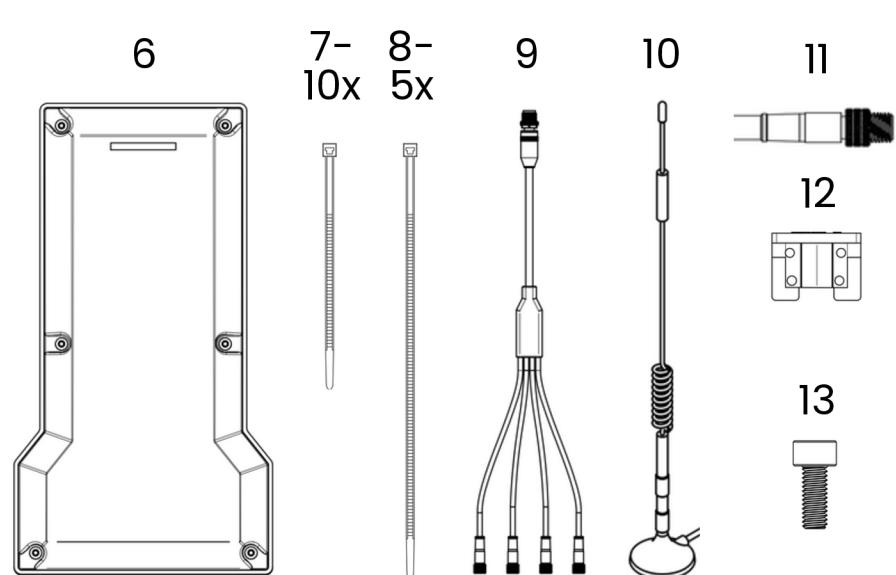
INSTALLATION HARDWARE



PUMP KIT

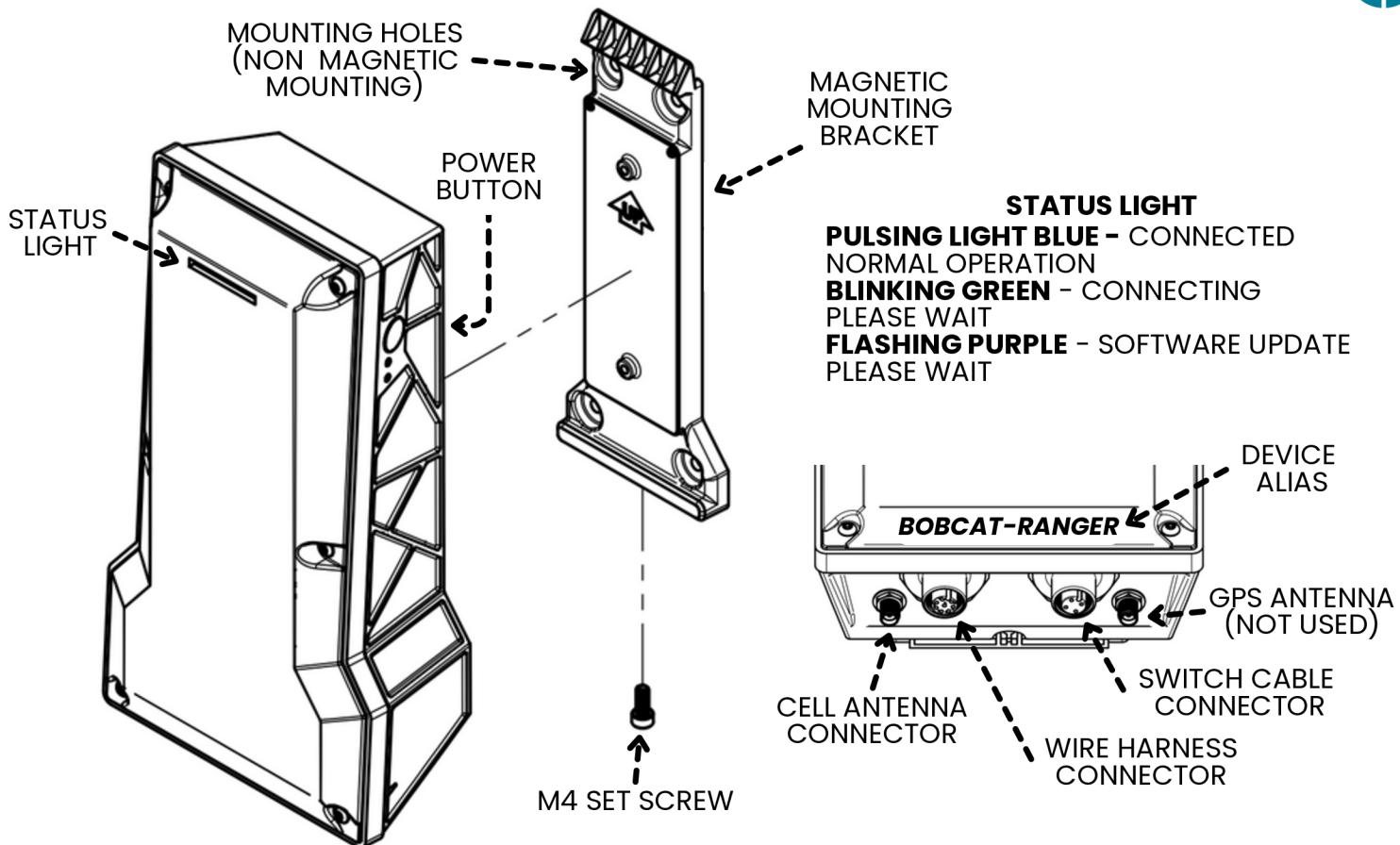


DEVICE KIT

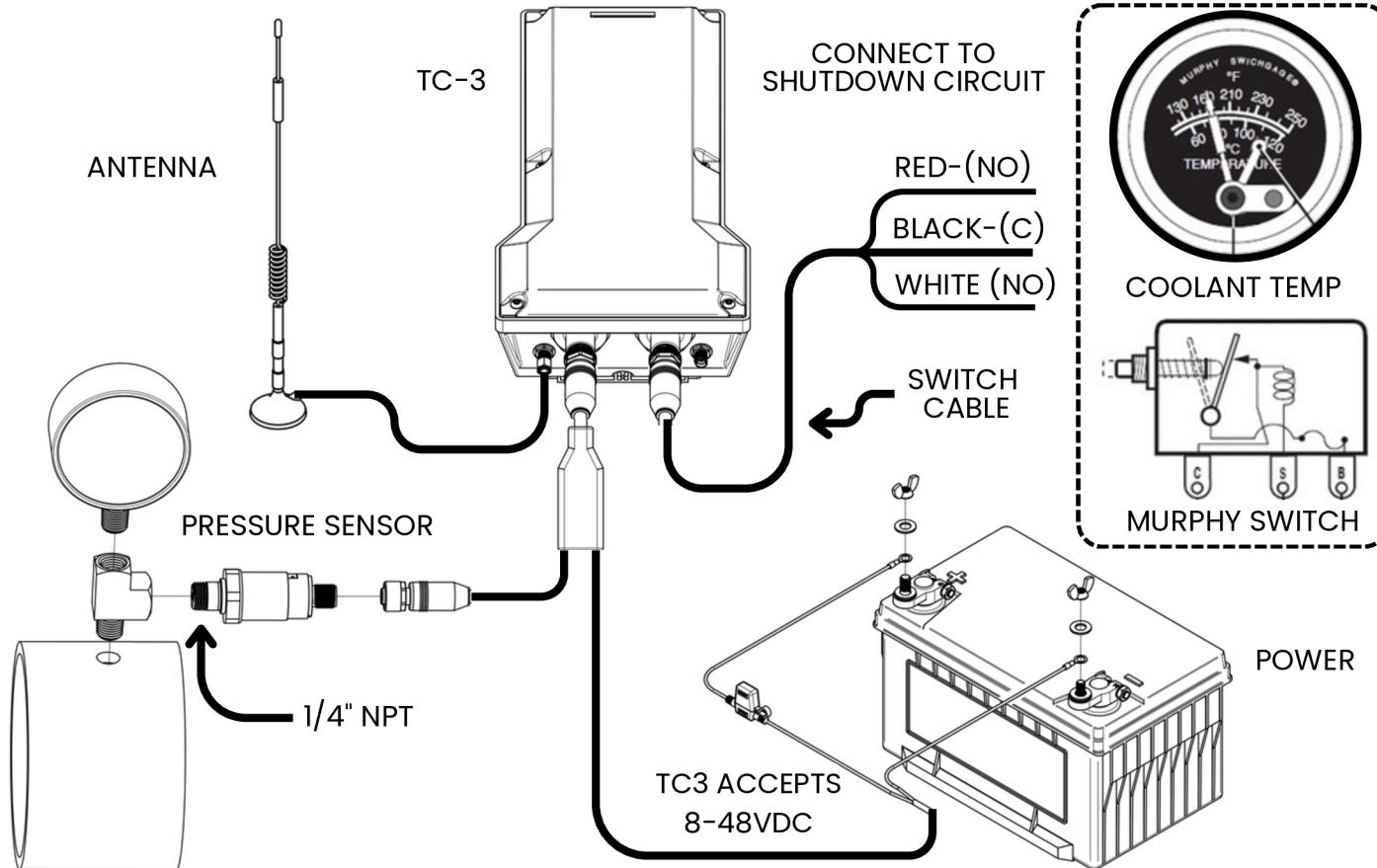


- | | |
|--------------------------|-------------------------|
| 1. PRESSURE SENSOR | 8. 11" CABLE TIES |
| 2. PRESSURE SENSOR CABLE | 9. TC-3 WIRE HARNESS |
| 3. WAGO WIRE CONNECTORS | 10. ANTENNA |
| 4. SWITCH CABLE | 11. POWER CABLE |
| 5. 1/4" NPT BRASS TEE M5 | 12. SPARE 5A BLADE FUSE |
| 6. TC-3 | 13. SPARE M4 SET SCREW |
| 7. 6" CABLE TIES | |

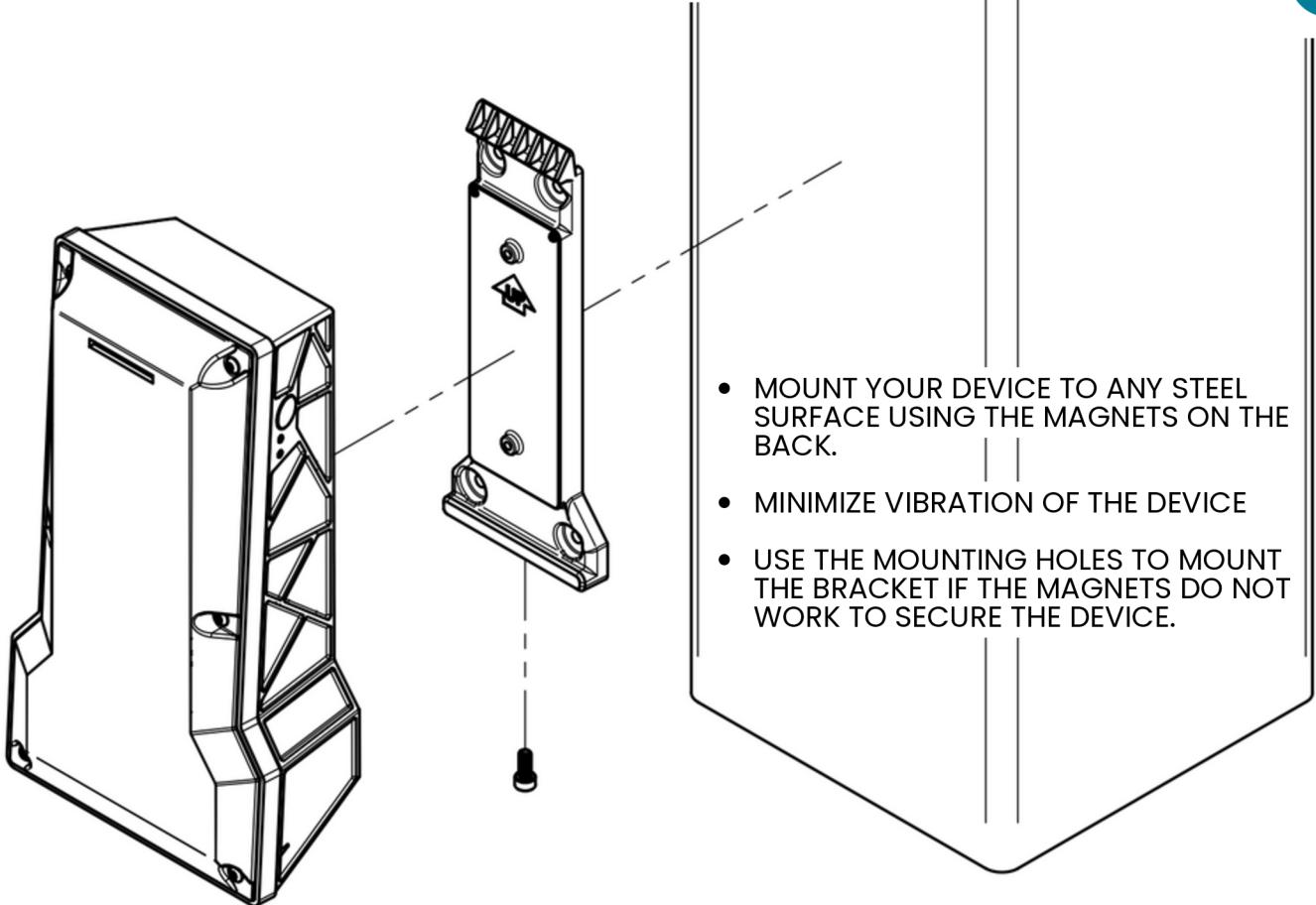
DEVICE OVERVIEW



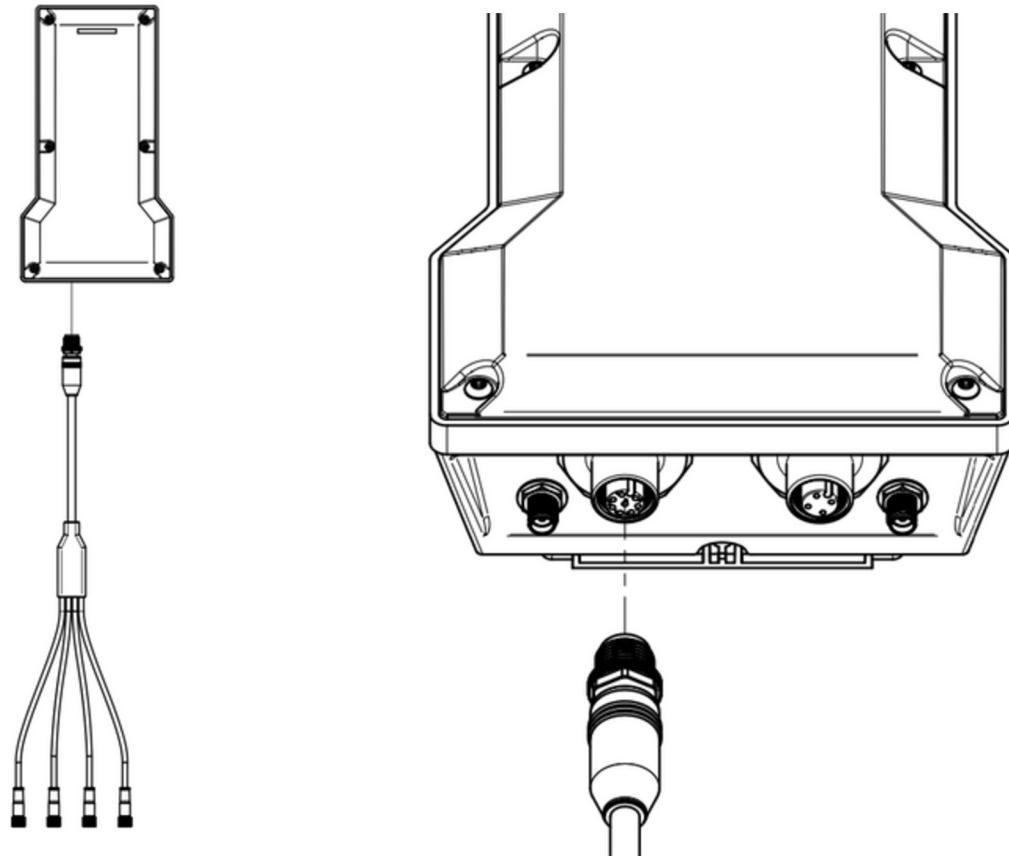
INSTALLATION OVERVIEW



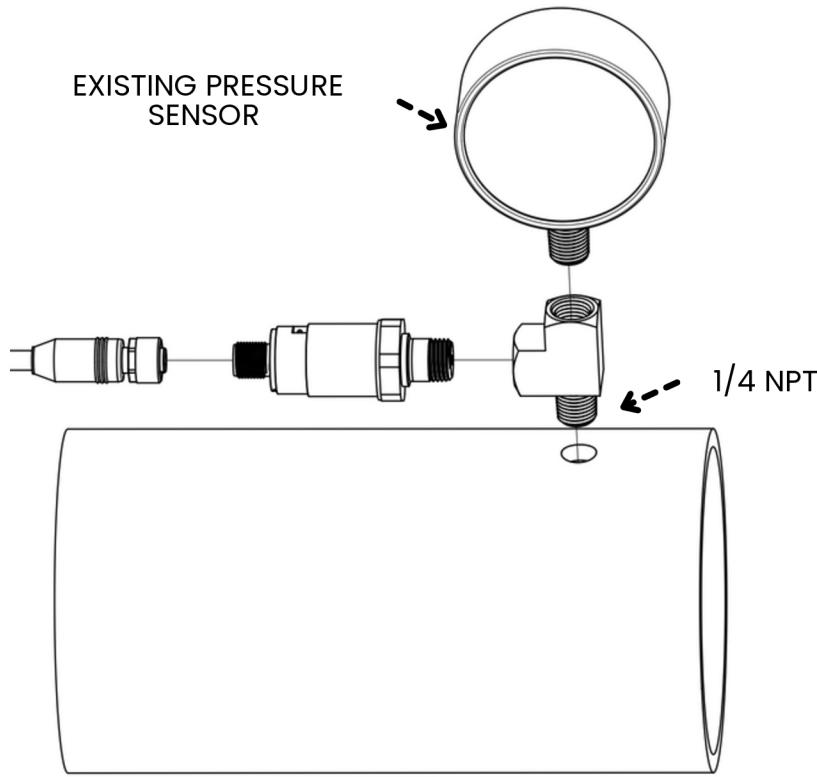
1. MOUNT YOUR DEVICE



2. CONNECT WIRE HARNESS



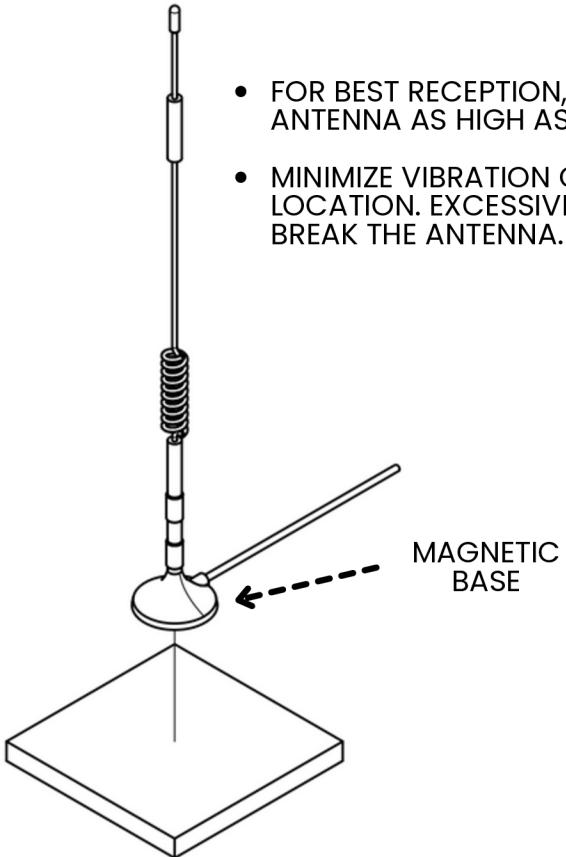
3. CONNECT PRESSURE SENSOR



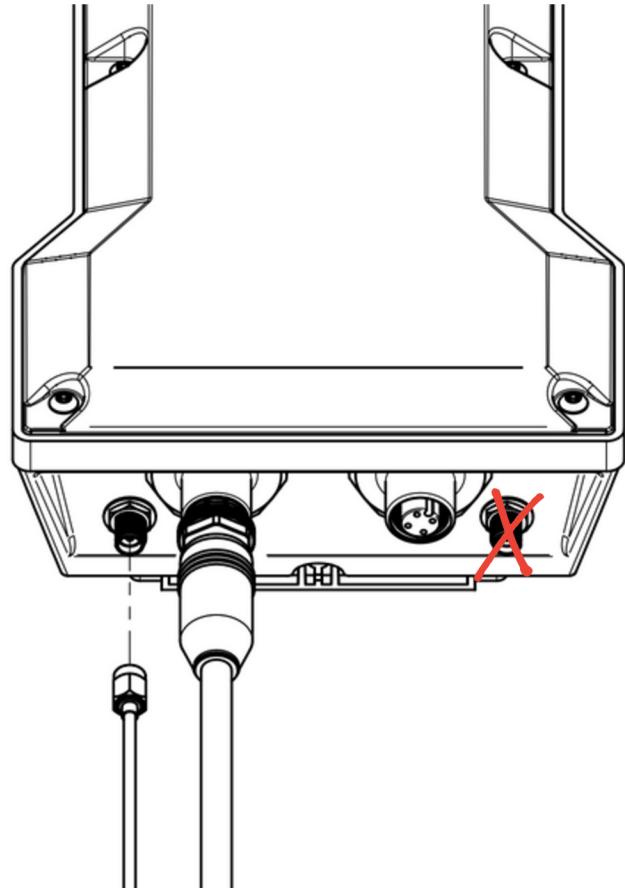
CONNECT TO
SENSOR 2



4. CONNECT THE ANTENNA

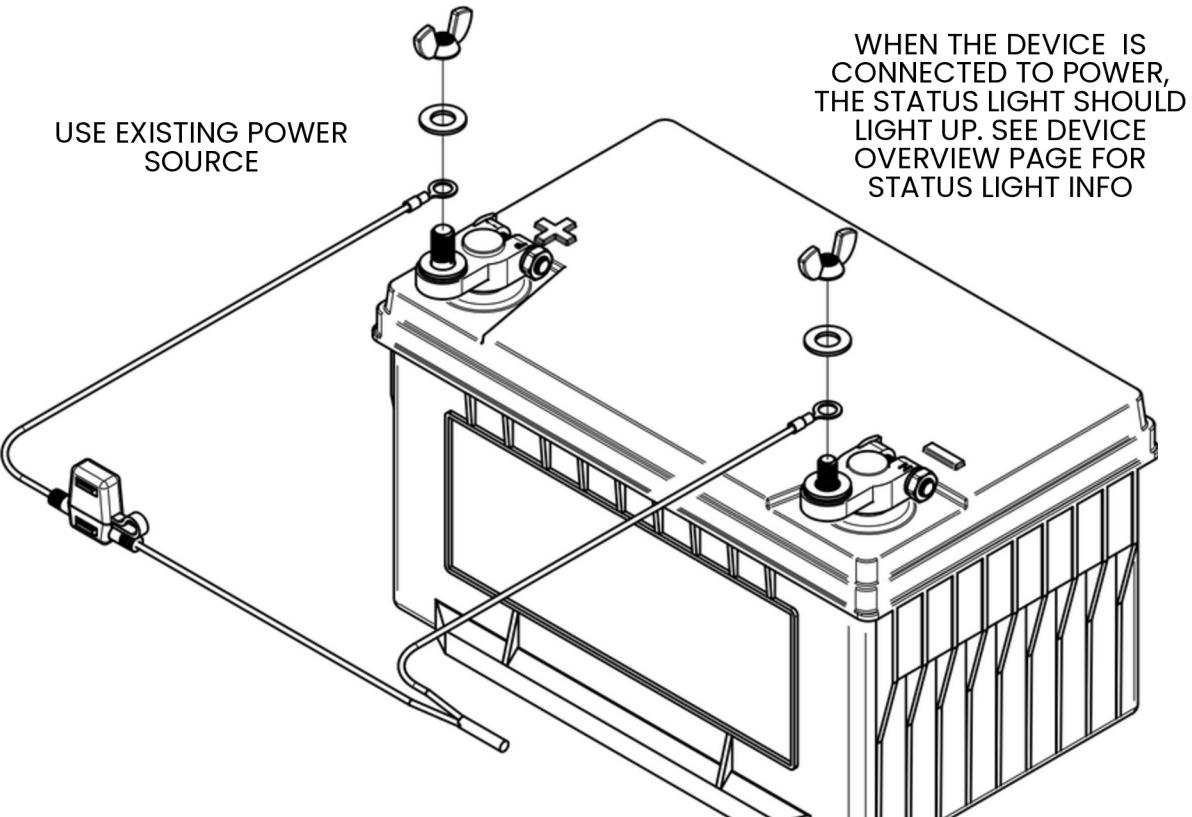


- FOR BEST RECEPTION, ATTACH ANTENNA AS HIGH AS POSSIBLE.
- MINIMIZE VIBRATION OF MOUNTING LOCATION. EXCESSIVE VIBRATION WILL BREAK THE ANTENNA.





5. CONNECT TO POWER

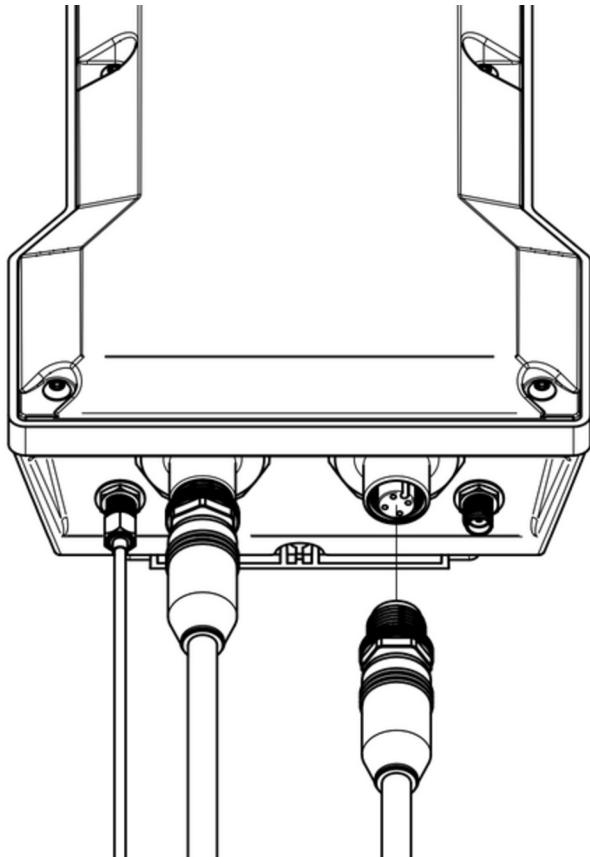


THE TC-3
ACCEPTS
8-48VDC

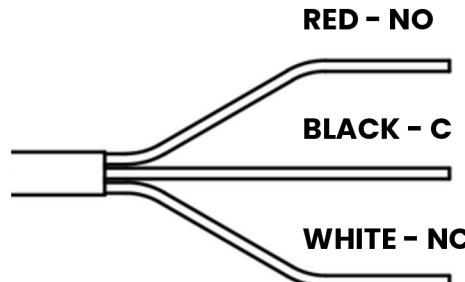


IF NO POWER IS AVAILABLE, FarmHQ OFFERS A SOLAR CHARGING OPTION OR
YOU CAN FIND RECOMMENDATIONS AT FarmHQ.com/support

6. CONNECT SWITCH CABLE



THE TC-3 HAS AN INTERNAL RELAY DESIGNED FOR SWITCHING SIGNALS AND SHOULD NOT BE USED FOR CARRYING CURRENT (RATED FOR 4A, 250V) USE THE SWITCH CABLE TO SHUTDOWN YOUR PUMP. THE SWICH CABLE EXPOSES THE NO, NC, AND C CONTACTS OF THE REALY. YOU WILL NEED TO DETERMINE HOW TO PROPERLY WIRE IN FarmHQ FOR PROPER PUMP SHUTDOWN.



NO - NORMALLY OPEN

C - COMMON

NC - NORMALLY CLOSED

7. WIRING INTO THE SHUTDOWN CIRCUIT



TIP 1 - LOOK FOR A MURPHY SWITCH OR TIMER

IF YOU PUMP DOESN'T HAVE A TIMER LOOK FOR A LOW OIL PRESSURE SWITCH, HIGH TEMP SWITCH, KEY SWITCH OR ANOTHER SAFETY THAT WILL SHUTDOWN THE PUMP.

TIP 2 - WIRING IN PARALLEL

THE MAJORITY OF INSTALLS WILL USE THE RED AND BLACK WIRES (NORMALLY OPEN) TO WIRE THE SWITCH CABLE IN PARALLEL TO THE SAFETIES. FARMHQ WILL WORK THE SAME AS A TIMER OR SAFETY.

TIP 3 - PUMP CONTROLLERS

MANY PUMP PANELS CAN BE CONFIGURED TO ACCEPT THE SWITCH INPUT FROM FARMHQ AS A DIGITAL INPUT TO START AND STOP THE PUMP. FOR MORE INFORMATION CONTACT THE MOTOR CONTROLLER MANUFACTURER OR FARMHQ FOR HELP WITH INTEGRATION.

TIP 4 - KEY SWITCH INTEGRATION

IF YOU ARE INTEGRATING WITH THE KEY SWITCH YOU WILL LIKELY NEED THE BLACK AND WHITE WIRES (NORMALLY CLOSED).

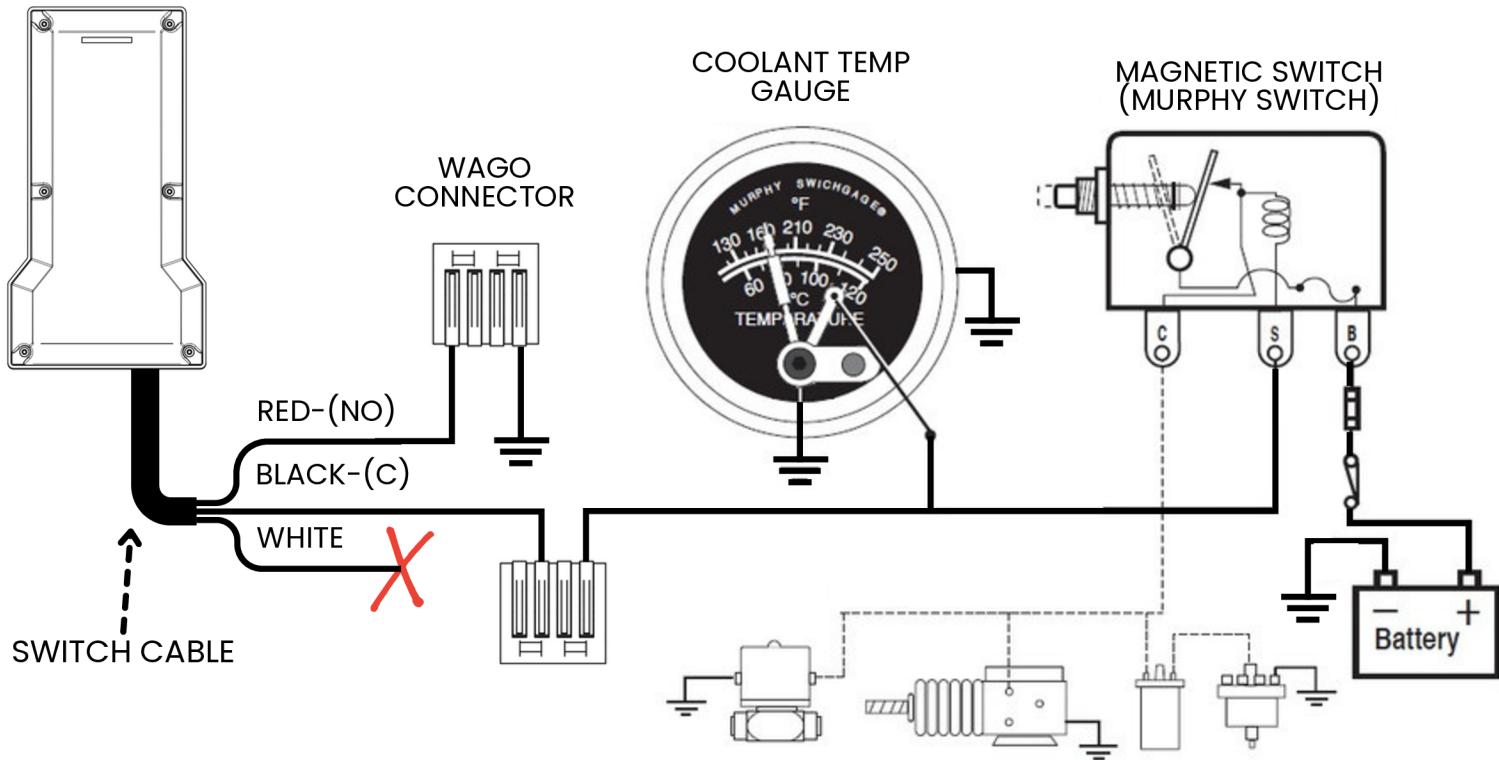
TIP 5 - DISCONNECTING THE SHUTDOWN TIMER

YOU MAY NEED TO USE BOTH THE SHUTDOWN TIMER AND FARMHQ TO OPERATE YOUR PUMP. IF THE TIMER IS EXPIRED IT MAY PREVENT YOUR PUMP FROM RUNNING, SO YOU CAN EITHER DISCONNECT THE TIMER OR USE THE TIMER AS YOU DID BEFORE EXCEPT FARMHQ HAS THE ABILITY TO START YOUR PUMP.

TIP 6 - SOFT SHUTDOWN

SOME PUMPS HAVE A SOFT SHUTDOWN FEATURE. THEY SLOW THE PUMP DOWN TO IDLE BEFORE TURNING IT OFF. CALL THE MANUFACTURER OF THE PUMP CONTROLLER TO SEE IF THERE IS AN EASY WAY TO INTEGRATE WITH THE SOFT SHUTDOWN OF YOUR PUMP.

8. EXAMPLE WIRING DIAGRAM



YOUR PUMP INSTALLATION WILL LIKELY VARY FROM THE EXAMPLE HOWEVER THE CIRCUIT IS TYPICAL OF A NORMALLY OPEN SHUTDOWN CIRCUIT. REFER TO THE WIRING DIAGRAM OF YOUR PUMP TO VERIFY WHERE YOU NEED TO INTEGRATE FarmHQ WITH YOUR PUMP

9. GETTING STARTED WITH THE APP



A. DOWNLOAD THE FARMHQ APP

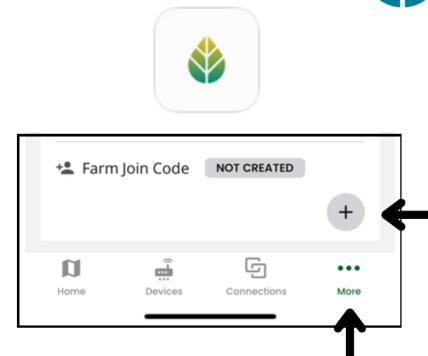
B. SIGN UP, CREATE OR JOIN AN ACCOUNT

CREATE YOUR OWN USER ACCOUNT. EVERY USER NEEDS TO HAVE AN ACCOUNT. FOLLOW THE PROMPTS TO VERIFY YOUR EMAIL ADDRESS AND PHONE NUMBER. NEXT CREATE A NEW FARM ACCOUNT. IF A FARM ACCOUNT ALREADY EXISTS, USE A FARM JOIN CODE TO BE ADDED TO THE EXISTING FARM. SOMEONE WHO HAS ACCESS TO THE ACCOUNT CAN GENERATE ONE FOR YOU.

C. ADD A DEVICE

FROM THE DEVICES TAB ADD A NEW DEVICE. INPUT THE DEVICE ALIAS PRINTED ON THE FRONT OF THE DEVICE. THE CONFIGURATION WORKFLOW GUIDES YOU STEP BY STEP. YOU CAN CHANGE CONFIGURATION DETAILS LATER IF YOU NEED TO.

APP BASICS - GO TO www.farmHQ.com/support FOR AN OVERVIEW OF HOW THE APP WORKS



10. VERIFY YOUR INSTALL



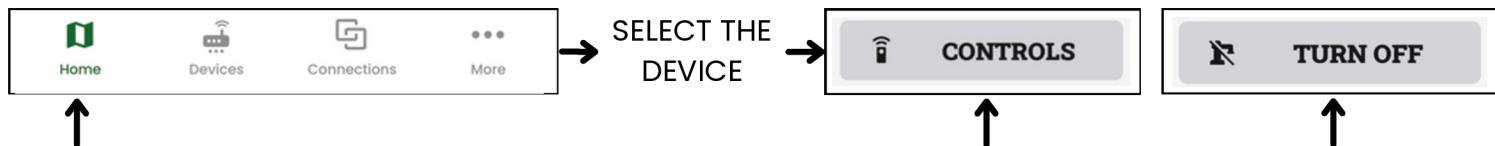
PLEASE DON'T SKIP THIS STEP. IF YOU DO NOT HAVE THE ABILITY TO RUN THE PUMP AT THE TIME OF INSTALL MAKE SURE YOU VERIFY NEXT TIME THE PUMP IS ABLE TO RUN.

- A. TURN THE PUMP ON**

- B. VERIFY PRESSURE. MAKE SURE THE APP IS REPORTING THE SAME PRESSURE AS THE GAUGE ON THE PUMP.**

- C. NAVIGATE TO DEVICE CONTROLS IN THE APP.**

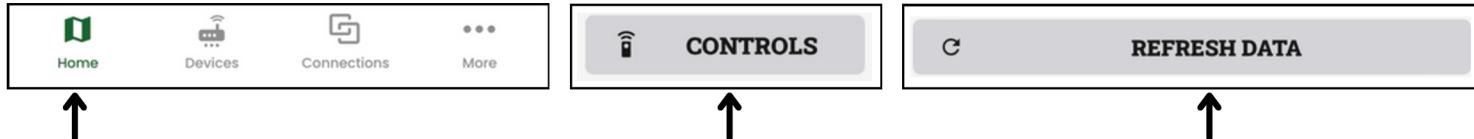
- D. CLICK - "TURN OFF"**



- E. VERIFY THE PUMP SHUTS DOWN**

TROUBLESHOOTING

- A. CHECK THAT THE TC-3 IS POWERED ON AND THE STATUS LIGHT IS PULSING LIGHT BLUE.**
- B. CLICK ON THE HOME TAB AND CLICK ON THE DESIRED DEVICE. CLICK "REFRESH DATA"**



- C. VERIFY THE PUMP CONFIGURATION. CHECK THE FOLLOWING.**
- 1. MAKE SURE YOU SELECTED THE CORRECT PUMP TYPE – “SHUTDOWN ONLY PUMP”
- 2. MAKE SURE THE SENSOR PORT MATCHES HOW IT IS CONNECTED TO THE WIRE HARNESS



- D. RESTART THE DEVICE – HOLD THE POWER BUTTON UNTIL THE LIGHT TURNS GREEN (3 SECONDS) THEN LET GO. PRESS THE BUTTON ON THE RIGHT SIDE AGAIN TO TURN IT BACK ON. WAIT FOR THE DEVICE TO BEGIN PULSING LIGHT BLUE.**

- E. VERIFY SHUTDOWN CIRCUIT WIRING. IF YOUR PUMP NO LONGER STARTS, YOU LIKELY NEED TO CHANGE HOW THE SWITCH CABLE IS WIRED. CONTACT THE MANUFACTURER IF YOU HAVE DIFFICULTY DETERMINING HOW TO PROPERLY SHUT YOUR PUMP DOWN.**

