PFM FMS Integration

Figure 6.1: FMS Wiring

FMS Configuration

Set Input Type to a Digital NO Input type for each PFM Relay Output wired into the Falcon.

FMS Input Configuration Interface

AFS-D FMS Integration

Figure 9.1: FMS Wiring

FMS Input Configuration Interface

FMS Configuration

Set Input Type to a NC Digital Contact for each AFS-D wired into the Falcon. Assign an on/off label for each sensor connected.
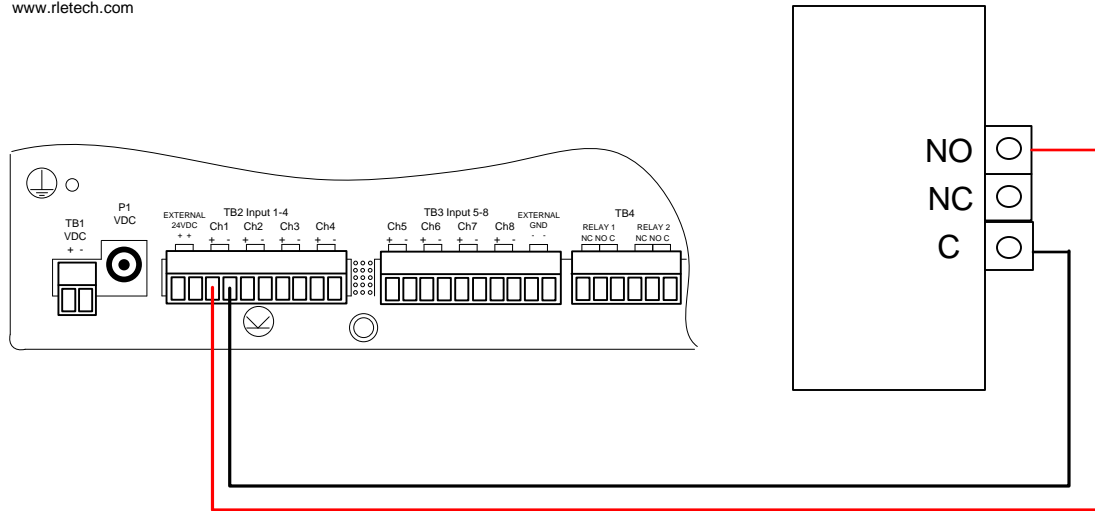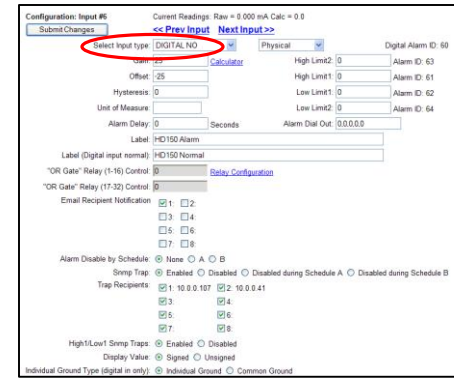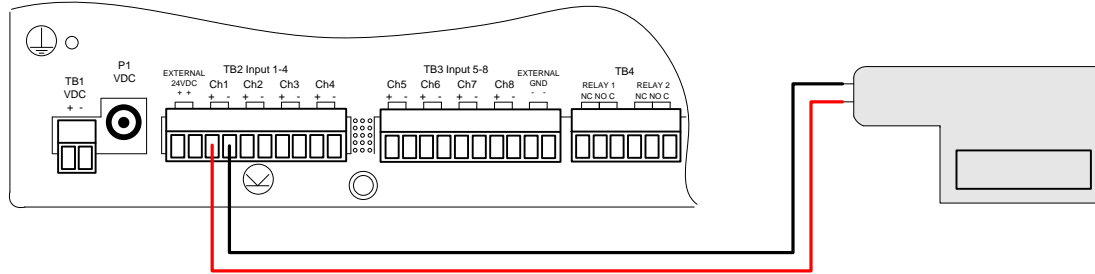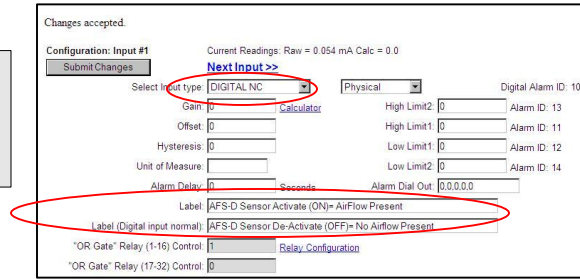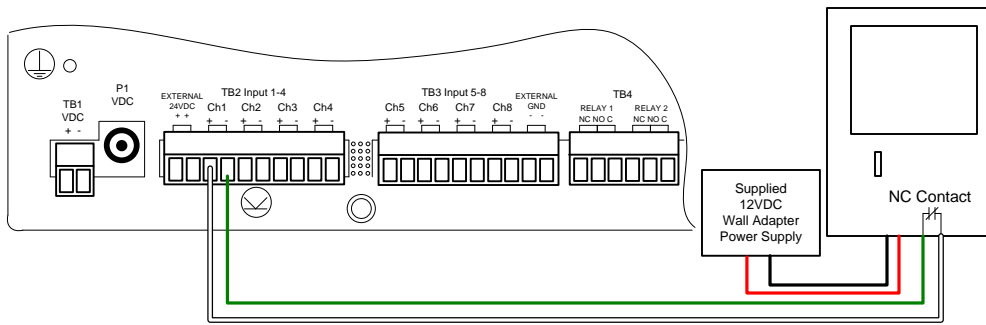
MD3 FMS Integration

Figure 10.1: FMS Wiring

FMS Input Configuration Interface

FMS Configuration

Set Input Type to a Digital NC Input Type for each MD3 wired into the Falcon.
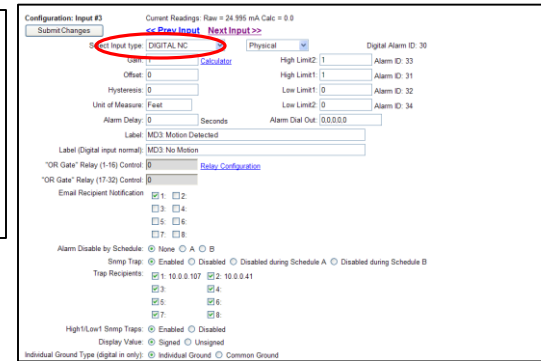
MDS FMS Integration

Figure 11.1: FMS Wiring

FMS Input Configuration Interface

FMS Configuration

Set Input Type to a Digital NC Input Type for each MDS wired into the Falcon.

SMK FMS Integration

104 Racquette Drive
Fort Collins, CO 80524
(970) 484-6510 Phone
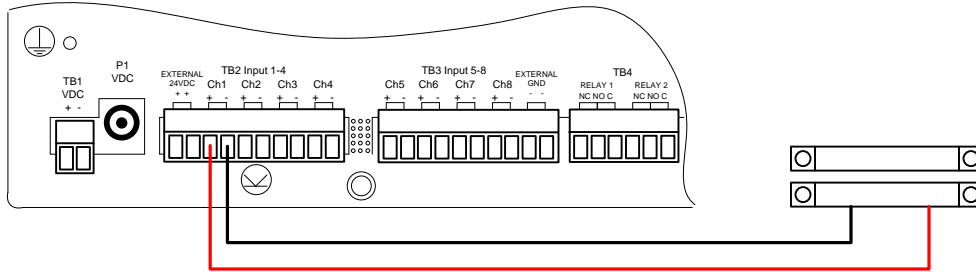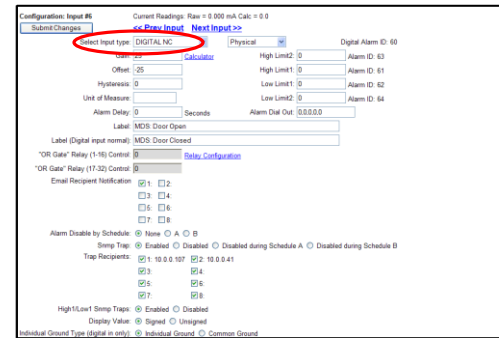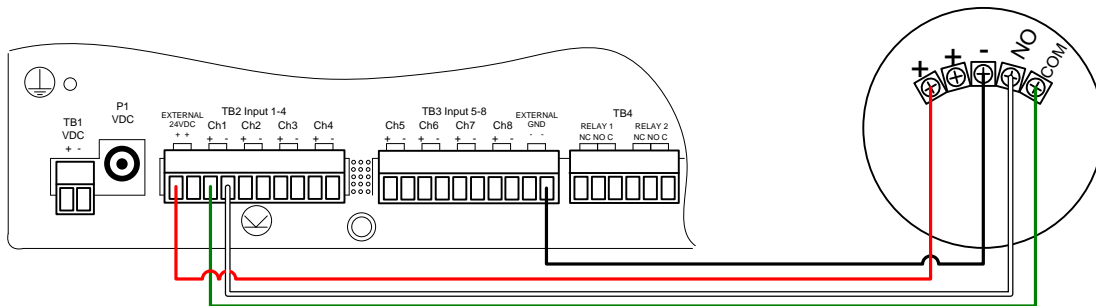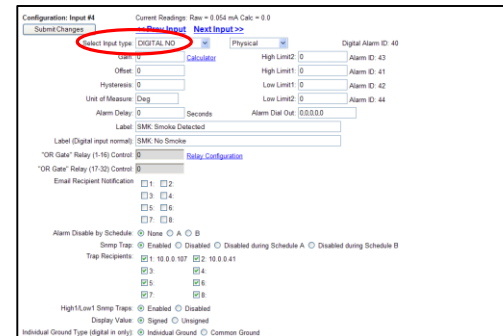(970) 484-6650 Fax
www.rletech.com

Figure 12.1: FMS Wiring

FMS Input Configuration Interface

FMS Configuration
Set Input Type to a NO Digital Contact for each SMK wired into the Falcon.

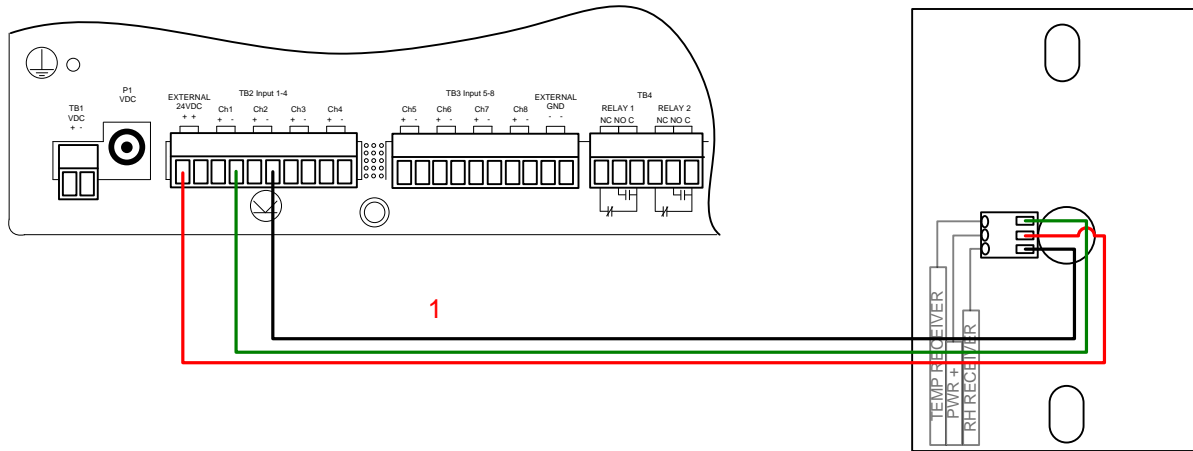# FMS WIRED-TH-O Temp/Humidity Falcon Integration

Figure 16.1: Falcon Wiring with WIRED-TH-O Temp/Humidity sensor

SETUP

1. Wire the sensor as shown.

2. Configure the Falcon Input channel (temperature) for "Analog 4-20mA" and enter the gain and offset values. For the -40 - 140F range use Gain 45, Offset -85.

3. For other temperature ranges, use the Calculator function on the webpage

4. Configure the Falcon Input Channel (humidity) for "Analog 4-20mA" and enter the Gain of 25 and Offset of -25.

5. Verify the "Calc" Value displays the correct room temperature. The temperature can also be viewed on the Falcon main page.

Note: When connecting more than 3 sensors, the FMS external 24VDC supply cannot be used. An external 24VDC supply must be used instead. Contact tech support for more information - support@rletech.com

TROUBLESHOOTING

1. Calculate the WIRED-TH-O Output current for temperature.

((Actual temp - Sensor Low) / (Sensor High - Sensor Low)) x 16 + 4

Example if Room Temp is 70F and your sensor has a range of -40 - 140

((70 - -40) / (140 - -40)) x 16 + 4 = 13.77

2. Measure the current flowing into the Falcon Ch- terminal with a current meter. Verify that it is close to the calculated current (+/-1%)

3. If measured current current does not match calculated current then check wiring.

4. Compare the measured current matches the current reading in the Falcon.

5. Check the wiring if the Falcon current reading does not match the measured current reading.

6. If the Falcon current reading matches the measured current and the Falcon calculated value does not match the room temperature then the offset and gain values are wrong. Double check the Gain and Offset values.

7. If the temperature displayed in the Falcon is 1 or 2 degrees above or below the room temperature then adjust the offset by 1 or 2. Do not adjust the gain. Only tweak the offset once the previous troubleshooting steps have been performed.

8. If the Falcon still does not display the correct temperature contact RLE Technologies technical support at 970.484.6510.

9. Use similar troubleshooting procedure except use the following formula to calculate the humidity mA output.

$$mA = \left(\frac{Room\ Humidity}{100} \right) \times 16 + 4$$

Temperature Setup
-40 - 140 Degree F Range

Humidity Setup

FMS WIRED-TH Temperature/Humidity Integration

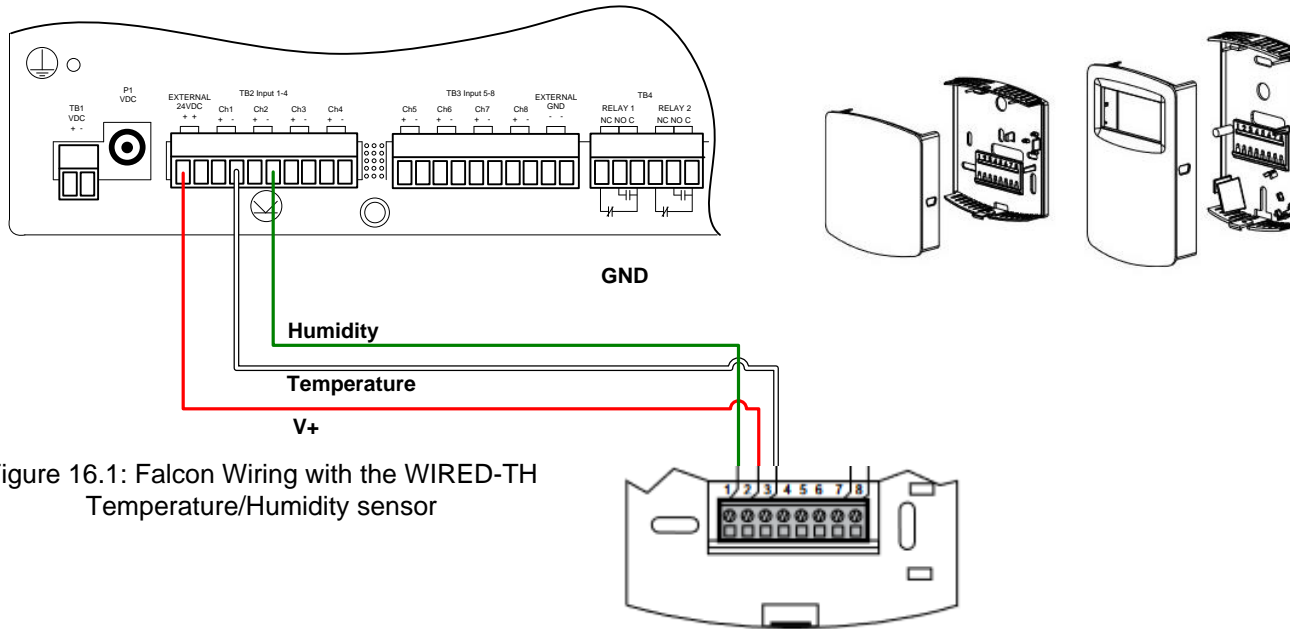**GND**

Humidity

Temperature

V+

Figure 16.1: Falcon Wiring with the WIRED-TH
Temperature/Humidity sensor

SETUP

1. Wire the sensor as shown.

2. Configure the Falcon Input channel (temperature) for "Analog 4-20mA" and enter the gain and offset values. For the -20-140F range use Gain 40.0, Offset 60.0.

3. For other temperature ranges, use the Calculator function on the webpage

4. Configure the Falcon Input Channel (humidity) for "Analog 4-20mA" and enter the Gain of 25 and Offset of -25.

5. Verify the "Calc" Value displays the correct room temperature. The temperature can also be viewed on the Falcon main page.

TROUBLESHOOTING

1. Calculate the output current for temperature.

$$\left(\frac{\text{Actual temp} - \text{Sensor Low}}{\text{Sensor High} - \text{Sensor Low}} \right) \times 16 + 4$$

Example if Room Temp is 70F and your sensor has a range of -20-140

$$(\,(70 - -20) / (140 - -20)) \times 16 + 4 = 13.0$$

2. Measure the current flowing into the Falcon Ch- terminal with a current meter. Verify that it is close to the calculated current (+/-1%)

3. If measured current current does not match calculated current then check wiring.

4. Compare the measured current matches the current reading in the Falcon.

5. Check the wiring if the Falcon current reading does not match the measured current reading.

6. If the Falcon current reading matches the measured current and the Falcon calculated value does not match the room temperature then the offset and gain values are wrong. Double check the Gain and Offset values.

7. If the temperature displayed in the Falcon is 1 or 2 degrees above or below the room temperature then adjust the offset by 1 or 2. Do not adjust the gain. Only tweak the offset once the previous troubleshooting steps have been performed.

8. If the Falcon still does not display the correct temperature contact RLE Technologies technical support at 970.484.6510.

9. Use similar troubleshooting procedure except use the following formula to calculate the humidity mA output.

Temperature Setup
-20 - 140 Degree F Range

Humidity Setup

$$mA = \left(\frac{\text{Room Humidity}}{100} \right) \times 16 + 4$$