65-2391RK
CO_2 Transmitter
Operator's Manual

Part Number: 71-0121RK

Revision: A

Released: 4/12/11

WARNING

Read and understand this instruction manual before operating transmitter. Improper use of the transmitter could result in bodily harm or death.

Periodic calibration and maintenance of the transmitter is essential for proper operation and correct readings. Please calibrate and maintain this transmitter regularly! Frequency of calibration depends upon the type of use you have and the sensor types. Typical calibration frequencies for most applications are between 6 and 12 months, but can be required more often or less often based on your usage.

Product Warranty

RKI Instruments, Inc., warrants gas alarm equipment sold by us to be free from defects in materials, workmanship, and performance for a period of one year from date of shipment from RKI Instruments, Inc. Any parts found defective within that period will be repaired or replaced, at our option, free of charge. This warranty does not apply to those items which by their nature are subject to deterioration or consumption in normal service, and which must be cleaned, repaired, or replaced on a routine basis. Examples of such items are:

a) Absorbent cartridges

b) Pump diaphragms and valves

c) Fuses

d) Batteries

e) Filter elements

Warranty is voided by abuse including mechanical damage, alteration, rough handling, or repair procedures not in accordance with the operator's manual. This warranty indicates the full extent of our liability, and we are not responsible for removal or replacement costs, local repair costs, transportation costs, or contingent expenses incurred without our prior approval.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESSED OR IMPLIED, AND ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF RKI INSTRUMENTS, INC. INCLUDING BUT NOT LIMITED TO, THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL RKI INSTRUMENTS, INC. BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL LOSS OR DAMAGE OF ANY KIND CONNECTED WITH THE USE OF ITS PRODUCTS OR FAILURE OF ITS PRODUCTS TO FUNCTION OR OPERATE PROPERLY.

This warranty covers instruments and parts sold to users by authorized distributors, dealers, and representatives as appointed by RKI Instruments, Inc.

We do not assume indemnification for any accident or damage caused by the operation of this gas monitor, and our warranty is limited to the replacement of parts or our complete goods.

Table of Contents

Overview

This manual describes the 65-2391RK CO_2 transmitter. This manual also describes how to install, start up, configure, maintain, and calibrate the transmitter when it is used with a gas monitoring controller. A parts list at the end of this manual lists replacement parts and accessories for the CO_2 transmitter.

Specifications

Table 1 lists specifications for the CO_2 transmitter.

Table 1:Specifications

Target/Calibration Gas	Carbon Dioxide (CO_2)
Area Classification	Explosionproof for Class I, Groups B, C, and D
Sampling Method	Diffusion
Signal Output	4 to 20 mA
Detection Range	65-2391RK-02: 0 - 5,000 ppm 65-2391RK-03: 0 - 5% Volume 65-2391RK-05: 0 - 50% Volume 65-2391RK-10: 0 - 100% Volume
Response Time	90% in 45 seconds
Accuracy	± 5% of reading or ± 2% of full scale (whichever is greater)

WARNING: ***When using the 65-2391RK, you must follow the instructions and warnings in this manual to assure proper and safe operation of the 65-2391RK and to minimize the risk of personal injury. Be sure to maintain and periodically calibrate the 65-2391RK as described in this manual.***

Description

This section describes the components of the CO_2 transmitter. The transmitter is a 4 - 20 mA type detector head. It consists of the infrared CO_2 detector, amplifier, and junction box.

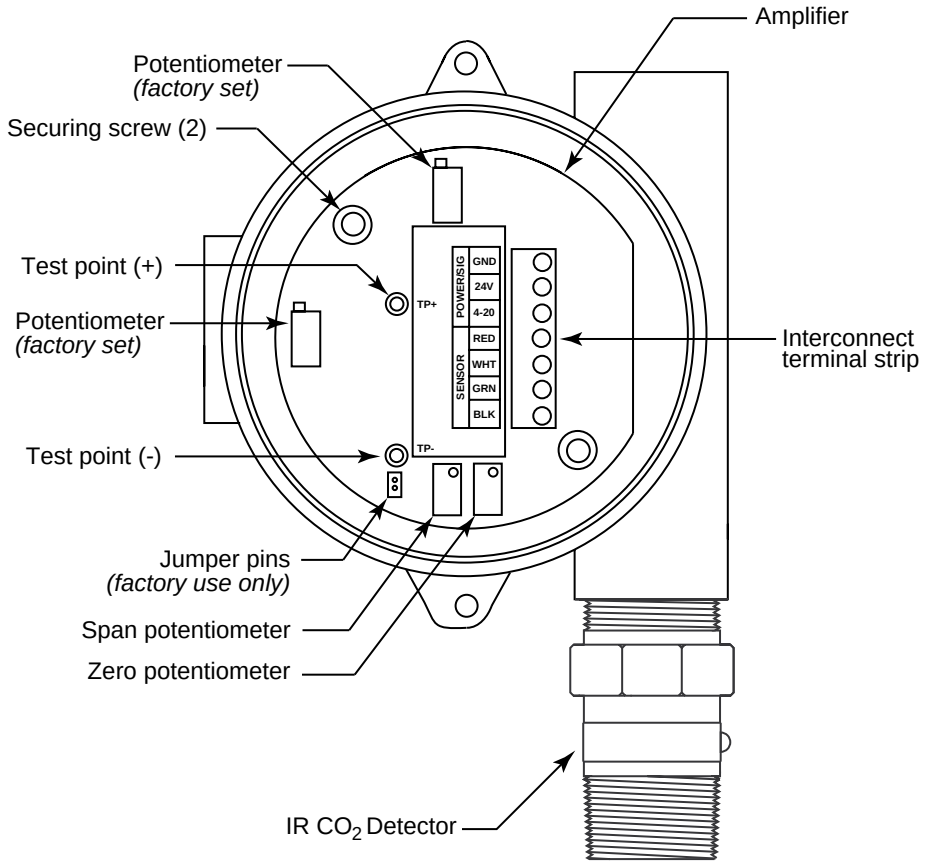

Figure 1: CO_2 Transmitter Component Location

Infrared CO_2 Detector

The infrared CO_2 detector is made up of a miniature infrared CO_2 detector housed and encapsulated in a pipe nipple. The pipe nipple has 3/4 inch NPT threads on each end and a 1 1/4 inch hex that allows removal or installation of the detector with a wrench. A porous flame arrestor that is coated with a hydrophobic film that repels liquids is on one end of the detector and allows sample gas to enter the detector. Four color coded leads, red, white, green, and black, extend from the other end of the detector. The leads allow you to connect the detector to the amplifier.

To distinguish the different ranges of CO_2 detectors from one another, a short length of shrink tubing is applied to the wiring where it comes out of the nipple. The following table indicates the color of the shrink tubing and the color of the wire to which it is applied.

Table 2: CO_2 Detector Color Designations

Detector	Color Designations
0 - 5,000 ppm	black shrink tubing on white wire
0 - 5% volume	green shrink tubing on white wire
0 - 50% volume	green shrink tubing on red wire
0 - 100% volume	red shrink tubing on green wire

Amplifier

The amplifier converts the electrical output from the detector to a 4 to 20 mA signal that corresponds to the detection range and transmits the signal to a gas monitoring controller. The amplifier includes the interconnect terminal strip, span potentiometer, zero potentiometer, and test points (see Figure 1).

Interconnect Terminal Strip

The interconnect terminal strip is a seven-point terminal strip. Use the interconnect terminal strip to connect the IR CO_2 detector to the amplifier and the amplifier to a controller.

NOTE: The IR CO_2 detector is factory-wired to the amplifier. See the Installation section of this manual for all wiring procedures related to the transmitter.

Span Potentiometer

The span potentiometer is near the bottom of the amplifier (see Figure 1). Use the span potentiometer to adjust the transmitter's response output during the calibration procedure. Turn the adjustment screw clockwise to increase the gas response and counterclockwise to decrease the gas response.

Zero Potentiometer

The zero potentiometer is to the right of the span potentiometer (see Figure 1). Use the zero potentiometer to adjust the transmitter's target gas-free output during the start-up and calibration procedures. Turn the adjustment screw clockwise to increase the zero output and counterclockwise to decrease the zero output.

CAUTION: *The amplifier includes two additional potentiometers. They are factory-set. Do not adjust them.*

Test Points

The test points (labeled **TP+** and **TP-**) are to the left of the interconnect terminal strip (see Figure 1). The test points produce a 100 to 500 mV output that corresponds to the transmitter's 4 to 20 mA output. Use the test points and a voltmeter to measure the transmitter's output during the start-up and calibration procedures.

Junction Box

Use the junction box to install the CO_2 transmitter at a mounting site that is remote from the controller. The junction box also protects the amplifier and wiring connections made to the amplifier. Use the two 3/4 in. conduit hubs to mount the detector to the junction box (bottom hub) and connect wiring from the amplifier to the controller (top hub).

NOTE: The detector and amplifier are factory-mounted to the junction box.

Use the junction box's two mounting holes to mount the CO_2 transmitter to a vertical surface at the monitoring site. Use the cover on the front of the junction box to access the interior of the junction box.

Installation

This section describes procedures to mount the CO_2 transmitter in the monitoring environment and wire the transmitter to a controller.

Mounting the CO_2 Transmitter

1. Select a mounting site that is representative of the monitoring environment. Consider the following when you select the mounting site.
   - Select a site where the transmitter is not likely to be bumped or disturbed.
   - Select a site where there is sufficient room to perform start-up, maintenance, and calibration procedures.
   - Mount the transmitter at least six feet from the floor to minimize the possibility of someone breathing on the unit. The exhaled CO_2 may cause an alarm.

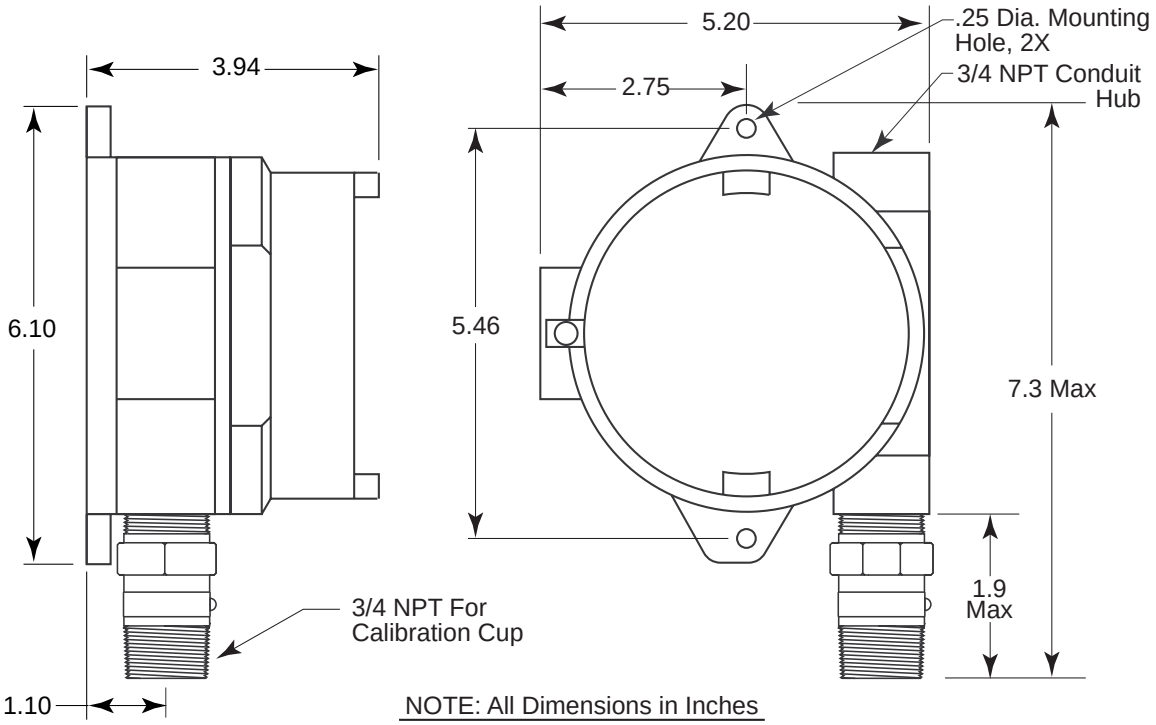

Figure 2: Mounting the CO_2 Transmitter

If the detector is mounted to the junction box, skip to step 5. If not, continue with step 2.

2. Remove the junction box cover.
3. Guide the four wires that extend from the top of the detector through the bottom conduit hub of the junction box.
4. Screw the detector into the bottom conduit hub of the junction box.
5. At the monitoring site, use #10 screws through the junction box's two mounting holes to secure the junction box to a vertical surface.

CAUTION: *Mount the CO_2 transmitter with the detector facing down (see Figure 2.)*

Wiring the CO_2 Transmitter to a Controller

WARNING: ***Always verify that the power to the controller is off before you make wiring connections.***

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1. Turn off power to the controller.
2. Place the controller's power switch in the OFF position.
3. Remove the junction box cover.
4. Verify that the detector leads are wired to the amplifier's interconnect terminal strip. If necessary, connect the detector leads to the interconnect terminal strip as shown in Figure 3.
5. Guide a three-conductor, shielded cable or three wires in conduit through the top conduit hub of the junction box.
6. Connect the three wires to the interconnect terminal strip as follows (see Figure 3).
   - Connect the positive wire to the **24VDC** terminal.
   - Connect the feedback wire to the **4-20 (FB)** terminal.
   - Connect the negative wire to the **GND (DC -)** terminal.

CAUTION: *If shielded cable is used, leave the cable shield's drain wire insulated and disconnected at the transmitter. You will connect the opposite end of the cable's drain wire at the controller to chassis ground.*

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7. Secure the junction box cover to the junction box.
8. Route the cable or wires leading from the CO_2 transmitter through one of the conduit hubs at the controller housing.

CAUTION: *Do not route power and transmitter wiring through the same conduit hub. The power cable may disrupt the transmission of the transmitter signal to the controller.*

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9. Connect the wires to the applicable transmitter terminal strip at the controller as shown in Figure 3 below.

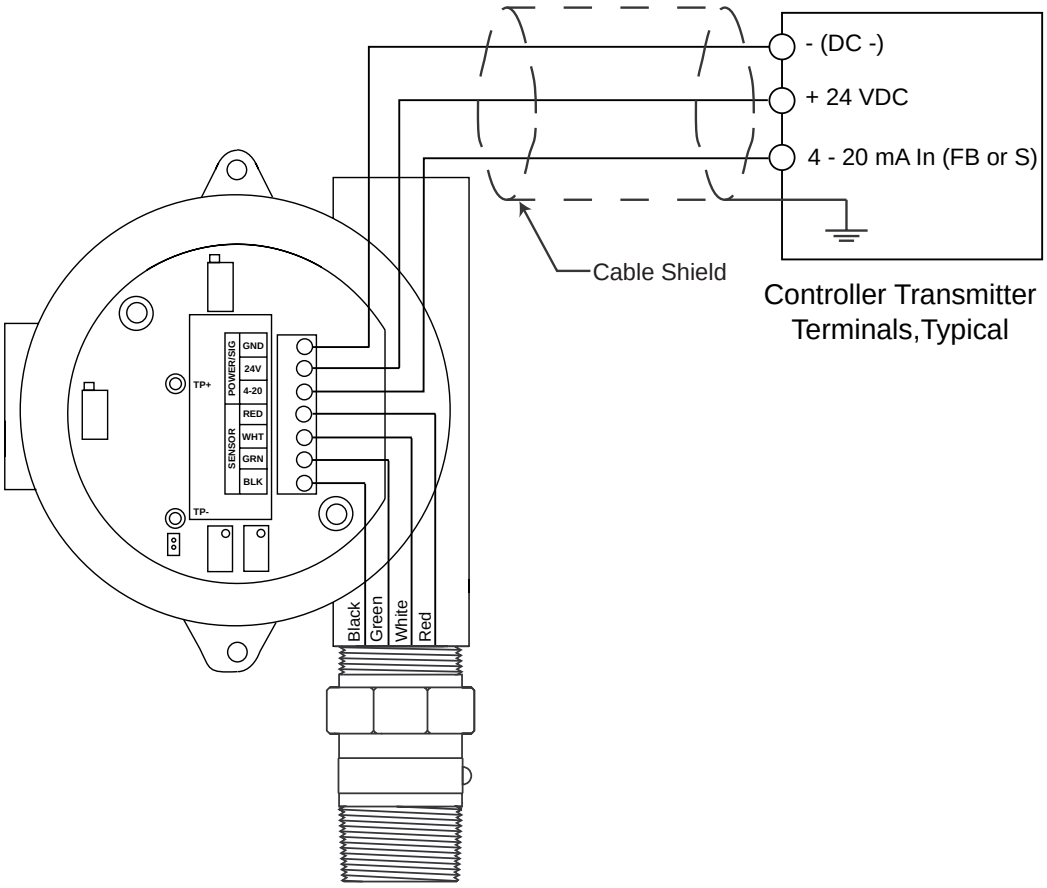

Figure 3: Wiring the CO_2 Transmitter to a Controller

10. If shielded cable is used, connect the cable's drain wire to an available chassis ground at the controller.

Start Up

This section describes procedures to start up the CO_2 transmitter and place the transmitter into normal operation.

Introducing Incoming Power

1. Complete the installation procedures described earlier in this manual.
2. Verify that the power wiring to the controller is correct and secure. Refer to the controller operator's manual.
3. Turn on or plug in power to the controller, then place the controller's power switch in the ON position.
4. Verify that the controller is on and operating properly. Refer to the controller operator's manual.

NOTE: When first powered up, the transmitter will enter about a one minute period when the 4-20 mA output is stabilizing and may be above the controller alarm points or well below zero momentarily. RKI controllers have a one minute warmup period when the controller does not display any gas reading or give any alarm indication. The CO_2 transmitter's 4-20 mA signal should be stable by the time the controller's warmup period is over.

CAUTION: *Allow the detector to warm up for 5 minutes before you continue with the next section, "Setting the Zero Signal".*

Setting the Zero Signal

Since there is a background of CO_2 in air of typically 200 - 400 ppm, it is necessary to use a calibration kit with a 100% nitrogen cylinder to set the zero signal of a CO_2 transmitter with a low range detector. Fresh air can be used to zero the transmitter if a 0-50 %volume or 0-100 %volume detector is being used.

NOTE: The following procedure assumes the use of a calibration kit which includes a 100% nitrogen calibration gas cylinder, a 0.5 LPM fixed flow regulator with an on / off knob, a calibration cup for the detector, and a short piece of sample tubing to connect the regulator to the calibration cup.

1. Place the controller into its calibration program or disable external alarms to avoid accidental alarms during the zero setting procedure.
2. Screw the calibration cup onto the bottom of the detector.
3. Use the sample tubing that comes with the calibration kit to connect the regulator to the calibration cup.
4. Set a voltmeter to measure in the millivolt (mV) range.
5. Remove the junction box cover, then plug the voltmeter leads into the test points on the amplifier.

   Plug the positive lead into the test point labeled **TP+**; plug the negative lead into the test point labeled **TP-**.
6. Screw the regulator into the 100% nitrogen calibration cylinder.
7. Turn the regulator knob counterclockwise to open the regulator.
8. Allow the gas to flow for one minute and verify a reading of 100 mV (±2 mV). If necessary, use the zero potentiometer on the amplifier to adjust the reading to 100 mV (±2 mV).
9. Turn the regulator knob clockwise to close the regulator.
10. Unscrew the regulator from the 100% nitrogen calibration cylinder.
11. Unscrew the calibration cup from the detector.
12. Reinstall the junction box cover.
13. Return the controller to normal operation or enable external alarms.

Maintenance

This section describes maintenance procedures. It includes preventive maintenance, troubleshooting, and component replacement procedures.

Preventive Maintenance

This section describes a preventive maintenance schedule to ensure the optimum performance of the CO_2 transmitter. It includes daily, monthly, and biannual procedures.

Daily

Verify a display reading at the controller of the background concentration of CO_2. Typical background concentrations of CO_2 vary from about 200 to 400 ppm depending on location. The 0-5,000 ppm and 0-5 %volume detectors will display a reading in a fresh air environment because they have low ranges. The 0-50 %volume and 0-100% volume detectors will not display a reading in fresh air because their ranges are too large. Investigate significant changes in the display reading.

Monthly

This procedure describes a test to verify that the CO_2 transmitter responds properly to the target gas.

WARNING: ***The controller is not an active gas monitoring device during the response test procedure.***

NOTE: Performing a response test on the CO_2 transmitter may cause alarms. Be sure to put the controller into its calibration program or disable external alarms before performing this test.

NOTE: The following procedure assumes the use of a calibration kit which includes a calibration gas cylinder, a 0.5 LPM fixed flow regulator with an on/off knob, a calibration cup for the detector, and a short piece of sample tubing to connect the regulator to the calibration cup.

Preparing for the response test

1. Place the controller into its calibration program or disable external alarms.
2. Verify that the controller display reading for the channel you are testing is consistent with typical background levels of CO_2.

   If the display reading is not consistent with typical background levels of CO_2, set the zero reading of the transmitter as described in “Start Up” on page 6 of this manual, then continue this procedure.
3. Screw the calibration cup onto the bottom of the detector.
4. Use the calibration kit sample tubing to connect the regulator to the calibration cup.
5. Set a voltmeter to measure in the millivolt (mV) range.
6. Remove the junction box cover, then plug the voltmeter leads into the test points on the amplifier.

   Plug the positive lead into the test point labeled **TP+**; plug the negative lead into the

test point labeled **TP-**.

7. Use the following formula to determine the correct test points output for the test sample.

   Output (mV) = (calibrating sample/fullscale) X 400 + 100

   For example, with a test sample of 2.5% CO_2 and a fullscale setting of 5% CO_2, the correct output is 300 mV.

   300 (mV) = (2.5/5) X 400 +100

Performing the response test

1. Screw the regulator into the calibration cylinder.
2. Turn the regulator knob counterclockwise to open the regulator.
3. Allow the gas to flow for one minute.
4. Verify that the reading is within ± 20% of the response reading you determined earlier.

NOTE: If the reading is not within ± 20% of the correct response reading, calibrate the transmitter as described in "Calibration" on page 13 of this manual.

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5. Turn the regulator knob clockwise to close the regulator.
6. Unscrew the regulator from the calibration cylinder.
7. Unscrew the calibration cup from the detector.
8. Remove the voltmeter leads from the amplifier test points.
9. Reinstall the junction box cover.
10. When the controller display reading falls below the alarm setpoints, return the controller to normal operation.
11. Store the components of the calibration kit in a safe place.

Biannually

Calibrate the CO_2 transmitter as described in "Calibration" on page 13 of this manual.

Troubleshooting

The troubleshooting guide describes symptoms, probable causes, and recommended action for problems you may encounter with the CO_2 transmitter.

NOTE: This troubleshooting guide describes transmitter problems only. See the controller operator's manual for problems you may encounter with the controller.

Table 3:Troubleshooting the CO_2 Transmitter

Condition	Symptom(s)	Probable Causes	Recommended Action
Fail Condition	• Controller indicates a fail condition.	• The transmitter wiring is disconnected or misconnected. • The transmitter's reading in air is low enough to cause a fail condition. • The transmitter is malfunctioning.	1. Verify that the transmitter wiring is correct and secure. 2. Calibrate the transmitter. 3. If the fail condition continues, replace the detector. 4. If the fail condition continues, contact RKI for further instruction.
Slow or No Response/ Difficult or Unable to Calibrate	• Transmitter responds slowly or does not respond to response test. • Unable to accurately set the zero or response reading during calibration. • Transmitter requires frequent calibration. ***Note:*** *Under "normal" circumstances, the transmitter requires calibration once every six months.* *Some applications may require a more frequent calibration schedule.*	• The calibration cylinder is low, out-dated, or defective. • The transmitter is malfunctioning.	1. Verify that the calibration cylinder contains an adequate supply of a fresh test sample. 2. Verify that the regulator used for calibration is a 0.5 LPM regulator. 3. If the calibration/response difficulties continue, replace the detector. 4. If the calibration/response difficulties continue, contact RKI for further instruction.

Replacing Components of the CO_2 Transmitter

This section includes procedures to replace the IR CO_2 detector and amplifier.

Replacing the IR CO_2 Detector

1. Turn off power to the controller.
2. Place the controller's power switch in the OFF position.
3. Remove the junction box cover.
4. Disconnect the detector leads from the interconnect terminal strip. Note the position of the color-coded leads as you remove them.
5. Unscrew the detector from the junction box.
6. Guide the detector leads of the replacement detector through the bottom conduit hub of the junction box, then screw the mounting threads of the detector into the conduit hub.
7. Connect the detector leads to the interconnect terminal strip as shown in Table 4 below and Figure 3 on page 6 of this manual.

Table 4: Reconnecting the CO2 Detector to the Amplifier

Detector Lead	Amplifier Interconnect Terminal Strip
Red	RED
White	WHT
Green	GRN
Black	BLK

8. Turn on power to the controller.
9. Place the controller's power switch in the ON position.

NOTE: When first powered up, the transmitter will enter about a one minute period when the 4-20 mA output is stabilizing and may be above the controller alarm points or well below zero momentarily. RKI controllers have a one minute warmup period when the controller does not display any gas reading or give any alarm indication. The CO_2 transmitter's 4-20 mA signal should be stable by the time the controller's warmup period is over.

CAUTION: *Allow the replacement detector to warm up for 5 minutes before you continue with the next step.*

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10. Calibrate the replacement detector as described in "Calibration" on page 13 of this manual.

Replacing the Amplifier

1. Turn off power to the controller
2. Place the controller's power switch in the OFF position.

3. Remove the junction box cover.
4. Disconnect the detector leads from the interconnect terminal strip.
5. Disconnect the wiring that connects the CO_2 transmitter to the controller from the amplifier's interconnect terminal strip.
6. Unscrew and remove the two screws that secure the amplifier to the junction box. The screws are at the top left and bottom right of the amplifier.
7. Remove the amplifier.
8. Place the new amplifier in the same position as the amplifier you removed in the previous step.
9. Use the two screws you removed in step 6 to secure the amplifier to the junction box.
10. Reconnect the wiring that connects the controller to the CO_2 transmitter at the amplifier's interconnect terminal strip as shown in Table 5 below and Figure 3 on page 6 of this manual.

Table 5: Reconnecting the CO_2 Amplifier to the Controller

Amplifier Interconnect Terminal Strip	Controller Transmitter Terminal Strip (typical)
GND	- (DC -)
4-20	4 - 20 mA (FB or S)
24V	+ 24V

11. Reconnect the detector leads to the amplifier's interconnect terminal strip as shown in Table 6 below and Figure 3 on page 6 of this manual.

Table 6: Reconnecting the CO_2 Detector to the Amplifier

Detector Lead	Amplifier Interconnect Terminal Strip
Red	RED
White	WHT
Green	GRN
Black	BLK

12. Turn on power to the controller.
13. Turn on the controller and place it into normal operation.

NOTE: When first powered up, the transmitter will enter about a one minute period when the 4-20 mA output is stabilizing and may be above the controller alarm points or well below zero momentarily. RKI controllers have a one minute warmup period when the controller does not display any gas reading or give any alarm indication. The CO_2 transmitter's 4-20 mA signal should be stable by the time the controller's warmup period is over.

CAUTION: *Allow the detector to warm up for 5 minutes before you continue with the next step.*

14. Calibrate the CO_2 transmitter as described in "Calibration" on page 13 of this manual.

Calibration Frequency

Although there is no particular calibration frequency that is correct for all applications, a calibration frequency of every 6 months is adequate for most infrared CO_2 transmitter applications. Unless experience in a particular application dictates otherwise, RKI Instruments, Inc. recommends a calibration frequency of every 6 months for the infrared CO_2 transmitter.

If an application is not very demanding, for example detection in a clean, temperature controlled environment where calibration adjustments are minimal at calibration, then a calibration frequency of every 9 to 12 months is adequate.

If an application is very demanding, for example if the environment is not well controlled, then more frequent calibration than every 6 months may be necessary.

Calibration

This section describes how to calibrate the CO_2 transmitter. It includes procedures to prepare for calibration, set the zero reading, set the response reading, and return to normal operation.

WARNING: ***The controller is not an active gas monitoring device during the calibration procedure.***

NOTE: The following procedure assumes the use of a calibration kit which includes a CO_2 calibration gas cylinder, a 100% nitrogen cylinder, a 0.5 LPM fixed flow regulator with an on/off knob, a calibration cup for the detector, and a short piece of sample tubing to connect the regulator to the calibration cup.

Preparing for Calibration

1. Screw the calibration cup onto the bottom of the CO_2 detector.
2. Use the sample tubing that comes with the calibration kit to connect the regulator to the calibration cup.
3. Set a voltmeter to measure in the millivolt (mV) range.
4. Remove the junction box cover, then plug the voltmeter leads into the test points on

the amplifier.

Plug the positive lead into the test point labeled **TP+**; plug the negative lead into the test point labeled **TP-**.

5. Use the following formula to determine the correct test points output for the calibrating sample.

   Output (mV) = (calibrating sample/fullscale) X 400 + 100

   For example, with a calibrating sample of 2.5% CO_2 and a fullscale setting of 5% CO_2, the correct output is 300 mV.

   300 (mV) = (2.5/5) X 400 +100

6. Place the controller into its calibration program or disable external alarms.

NOTE: Calibrating the CO_2 transmitter may cause alarms. Be sure to put the controller into its calibration program or disable external alarms before continuing.

Setting the Zero Reading

Since there is a background of CO_2 in air of typically 200 - 400 ppm, it is necessary to use a calibration kit with a 100% nitrogen cylinder to set the zero signal of a CO_2 transmitter with a low range detector. Fresh air can be used to zero the transmitter if a 0-50 %volume or 0-100 %volume detector is being used.

1. Screw the regulator into the 100% nitrogen cylinder.
2. Turn the regulator knob counterclockwise to open the regulator.
3. Allow the gas to flow for one minute and verify a reading of 100 mV (±2 mV). If necessary, use the zero potentiometer on the amplifier to adjust the reading to 100 mV (±2 mV).
4. Turn the regulator knob clockwise to close the regulator.
5. Unscrew the regulator from the 100% nitrogen cylinder. Leave the sample tubing connected to the regulator and the calibration cup.

Setting the Response Reading

1. Screw the regulator into the calibration cylinder. Verify that the calibration gas is representative of the transmitter's target gas.
2. Turn the regulator knob counterclockwise to open the regulator.
3. Allow the calibration gas to flow for one minute and verify that the reading matches the response reading (±2 mV) you determined earlier. If necessary, use the span potentiometer on the amplifier to adjust the reading to match the correct response reading.
4. Turn the regulator knob clockwise to close the regulator.
5. Unscrew the regulator from the calibration cylinder.

Returning to Normal Operation

1. Remove the voltmeter leads from the amplifier test points.
2. Unscrew the calibration cup from the detector.

NOTE: For convenience, leave the regulator and calibration cup connected by the sample tubing.

3. Secure the junction box cover to the junction box.
4. When the display reading falls below the alarm setpoints, return the controller to normal operation.
5. Verify that the controller display reading decreases and stabilizes at a typical background CO_2 level. The 0-5,000 ppm and 0-5 %volume detectors will display a reading in a fresh air environment because they have low ranges. The 0-50 %volume and 0-100 %volume detectors will not display a reading in fresh air because their ranges are too large.
6. Store the components of the calibration kit in a safe and convenient place.

Parts List

Table 7 lists replacement parts and accessories for the CO_2 transmitter.

Table 7:Parts List

Part Number	Description
06-1248RK	Sample tubing (3/16 in. x 5/16 in.; specify length when ordering)
18-0405RK-01	Junction box (without cover; pre-drilled for amplifier)
18-0406RK	Junction box cover (cover only)
57-1050RK	Amplifier (specify detector part number when ordering)
61-0191RK-02	Infrared CO_2 detector, 0 - 5,000 ppm
61-0191RK-03	Infrared CO_2 detector, 0 - 5% Volume
61-0191RK-05	Infrared CO_2 detector, 0 - 50% Volume
61-0191RK-10	Infrared CO_2 detector, 0 - 100% Volume
65-2391RK-02	CO_2 transmitter, 0 - 5,000 ppm (includes detector, junction box, and amplifier)
65-2391RK-03	CO_2 transmitter, 0 - 5% Volume (includes detector, junction box, and amplifier)
65-2391RK-05	CO_2 transmitter, 0 - 50% Volume (includes detector, junction box, and amplifier)
65-2391RK-10	CO_2 transmitter, 0 - 100% Volume (includes detector, junction box, and amplifier)
71-0121RK	*65-2391RK CO2 Transmitter Operator's Manual* (this document)
81-0070RK-01	Steel calibration cylinder, 2,000 ppm CO_2, 34-liter
81-0072RK-01	Steel calibration cylinder, 2.5% CO_2, 34-liter

Table 7:Parts List

Part Number	Description
81-0073RK-01	Steel calibration cylinder, 15% CO_2, 34-liter
81-0076RK-01	Zero air calibration cylinder (34-liter)
81-1050RK	Regulator, 0.5 liter/minute, with gauge and knob, for 17- and 34-liter calibration cylinders
81-1103RK	Calibration cup
82-0006RK	Pot adjust screwdriver, for calibration