



ACT Inc., D'MAND KONTROLS[®] Systems

Installation Instructions

Model DCKB-AP-CR for Standard recirculation lines on boiler systems

Installations shall be in accordance with the manufacturer's instructions per the requirements of the Uniform Plumbing Code (UPC)
Conforms to UL STD 508
Certified to CSA STD C22.2 #14

BE CAREFUL

Do not connect power into an electrical receptacle until the System is installed and in place.

Pre-Installation Checklist

1. Check the package contents. Your ACT Inc., D'MAND KONTROLS[®] DCKB-AP-CR should include:

- A preassembled DCKB-AP-CR Controller
- Thermistor and mounting clamp with zip ties
- Instructions

2. Make sure you have the tools to do the job:

- Wire/nuts for the appropriate size required by code
- Liquidtite or conduit
- Small Phillip's head and medium flat head screwdriver
- Wire strippers
- Drill
- Mounting screws and anchors

3. Determine where you will install the ACT Inc., D'MAND KONTROLS[®] System:

Typically, this should be located between the recirculation pump and the power supply to the pump.
(See Figures 1 & 2)

Figure 1



Liquid-tight conduit
& power supply

Figure 2



Boiler/Commercial
Water heater

Recirc pump

Return/Recirc line

Placement

To connect your controller, we will need to locate the recirculation pump, the power supply to the pump, and the hot water return line. The best position for the unit is away from direct contact of heat or flame over 120°F or under 32°F. It is recommended that the unit be located at least 18" above ground on a firm and stable surface. These recommendations are in addition to any local electrical codes which must be followed in all applications.

Installing with Concealed Screw Wells

This is for installation of the ACT Inc. DCKB-AP-CR only. Be sure you have read the instructions carefully before proceeding with your installation. When removing or replacing the cover, do not use a power drill. Loosen with a Phillips screwdriver or hand loosen to ensure no damage to the threads.

Step 1:

Figure 3



Place DCKB-AP-CR on wall and mark holes with a pencil or pen.

Step 2:

Figure 4



Drill the surface where marked and install appropriate anchors (not included).

Step 3:

Figure 5



Place DCKB-AP-CR controller over the top and align with the wall anchors. Fasten to wall with appropriate screws until flat and secure.

Step 4:

Figure 6



Replace cover and secure all four (4) lid fasteners. Hand tighten and then 1/2 - 3/4 inch turn with a Phillips screw driver to ensure a water tight seal.

Note: The unit can now be safely wired.

The ACT Inc. D'MAND® System is equipped with liquid tight fittings to help with the install of your System. To comply with local electrical codes these may be replaced with compliant fitting(s).

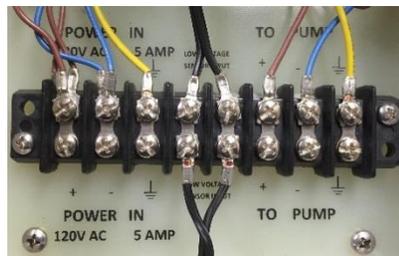
The wiring is marked plainly in the box above and below the barrier terminal block strip. Starting from left to right.

Power in, +, -, ⚡

Two (2) low voltage sensor connectors

Power to pump, +, -, ⚡

Figure 7



Before wiring example



Figure 8

Completed wiring example

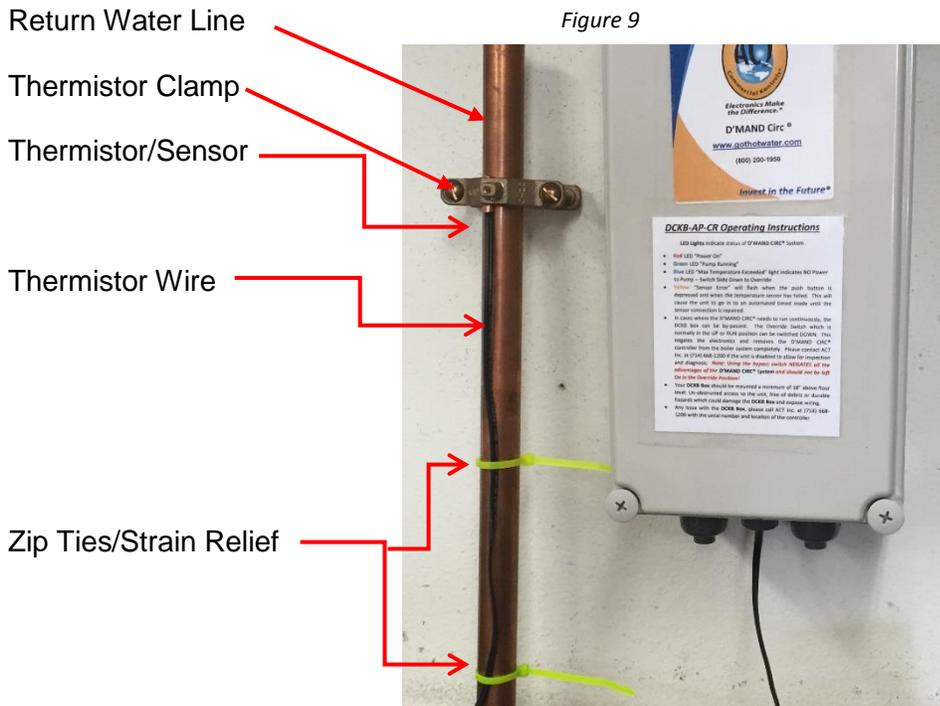
Commercial Thermistor Install

Placement/Installation of Temperature Sensor on Return Line

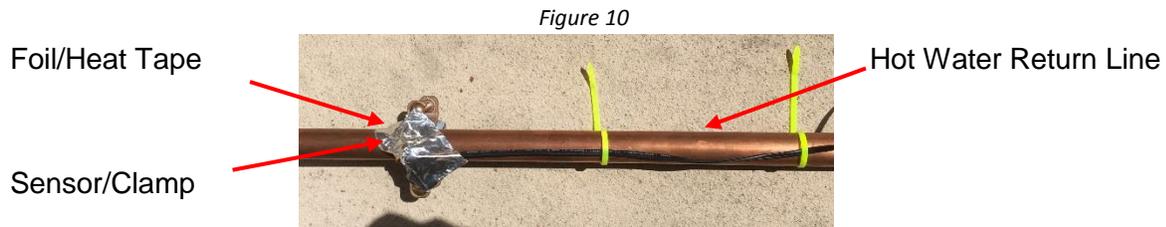
The sensor needs to be placed on the plumbing return line at a position before entering the pump and preferably before any check valves on the return line. Additionally, the sensor placement should be away from any external heat source (i.e. boiler, heat exhaust, hot outgoing pipe, direct sunlight etc.). In an optimum installation the sensor would be placed in a position that closely mimics the return line's median temperature.

Physical Install (See Figure 9)

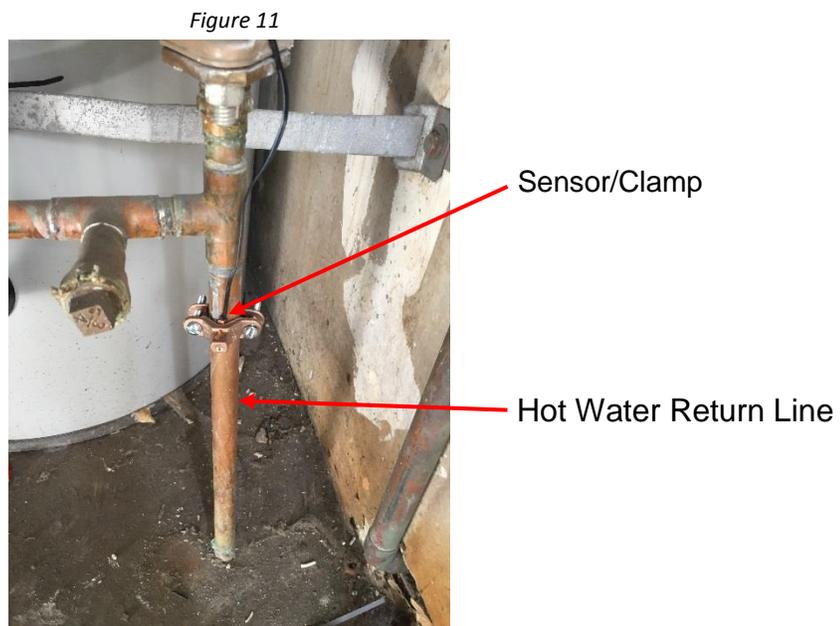
To install the thermistor wire we will need to locate a clean smooth piece of piping (do not install on a fitting, tee or elbow). The copper sensor is simply laid flat on the piping with the provided clamp holding it firmly in place. DO NOT OVER TIGHTEN clamp as this could harm the enclosed sensor. Once secure we recommend using the supplied zip ties to affix the wire to the pipe for strain relief.



In cases where the return line is outdoors it is always recommended that the sensor is placed out of direct sunlight. Foil or insulation tape can also be used to shield the sensor from outside heat sources. (See Figure 10)



Below is a common installation on a return line indoors.



Note: Once the System is mounted and the sensor correctly installed then we can safely energize the System for use.

Uninterrupted Hot Water

When power is applied to the DCKB-AP-CR Circ[®] controller you will see a red LED for power and shortly after a green LED when the power is distributed to the pump. The System will run and continue to run until the sensor reaches a temperature of 110°F or higher. Only then will the unit shut down and begin in controlled start/stop mode. This will happen every time that power is interrupted to the controller. In the case of a power outage, or interruption in power due to service or other issues, the DCKB-AP-CR Circ[®] controller will ALWAYS deliver hot water first before starting the System's controlled mode. This is a critical feature to ensure all users are never deprived of hot water with the DCKB-AP-CR Circ[®] System.

Once the System is powered and running, the ACT Inc., DMAND Circ[®] System will measure and maintain hot water in the hot water line, but will NOT run if the line is already hot. Typically this can mean 60%-90% reduction of pump run time.

***Refer to Technical Training Instructions for advanced adjustment settings.**



Electronics Make
the Difference.®

WARRANTY

ACT Inc., D'MAND KONTROLS® Systems

ACT, Inc. will replace without charge (at the Company's option) any ACT Inc., D'MAND Kontrols® pump, valve, or component part which is proven defective under normal use. Models DCKB, DCKB-AP, DCKB-AP-CR: Warranty – (Five Years from date of purchase) Accessories: External Sensor(s) Warranty – (One Year from date of purchase.) Labor is not included with Limited Warranty.

In order to obtain services under this warranty, it is the responsibility of the purchaser to promptly notify the Company in writing and promptly deliver the item in question, delivery prepaid to the factory. The address for notification and delivery is ACT, Inc. D'MAND Kontrols® Systems, 3176 Pullman Street, Suite 119, Costa Mesa CA 92626. If the product or part in question contains no defects as covered in the warranty, the purchaser will be notified and billed for parts and labor charges in effect at the time of factory examination and repair.

Any product or part not installed or operated in conformity with instructions or which has been subject to misuse, misapplication, the addition of petroleum based fluids or certain chemical additives to the System, or other abuse, will not be covered by this warranty.

ACT, Inc. D'MAND KONTROLS® Systems OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY WARRANTY IMPLIED BY LAW INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS IS IN EFFECT ONLY FOR THE DURATION OF THE EXPRESS WARRANTY SET FORTH IN THE PARAGRAPH ENTITLED "LIMITED WARRANTY" AS SHOWN ABOVE.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR STATUTORY, OR ANY OTHER WARRANTY OBLIGATION ON THE PART OF ACT, INC. D'MAND KONTROLS® SYSTEMS.

ACT, INC. D'MAND KONTROLS® SYSTEMS WILL NOT BE LIABLE FOR ANY SPECIAL INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF ITS PRODUCTS OR ANY INCIDENTAL COSTS OF REMOVING OR REPLACING DEFECTIVE PRODUCTS.

This warranty gives you specific rights, and you may have other rights, which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts or on the exclusion of incidental or consequential damages, so those limitations or exclusions may not apply to you.

For any ACT, Inc. D'MAND CIRC® questions please call us at (800) 200-1956, or (714) 668-1200, or email us at: info@GotHotWater.com

Please refer to our website at www.gothotwater.com for warranty and indemnification information.

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