



MODEL RCB-1, RCB-2, RCB-3 REMOTE CONTROL BOX FOR MULTI-BLADE DAMPERS

In today's real world of budget cut backs and lack of time to periodically check damper operation, NCA is pleased to introduce this labor saving option. NCA, Model RCB-X, Remote Control Boxes are for use on dampers where it is desired to note dampers operation without the necessity of shutting the HVAC system down. NFPA, local and national codes state that fire and smoke dampers shall be checked periodically for operation. Most actuator manufacturer's recommend their actuators be cycled every 6 - 12 months, to insure proper operation of the damper/actuator. This unit can be installed in the wall below the damper, a central location, mounted in the ceiling below the damper, or on the duct connected to the damper. When properly installed the building maintenance department can save as much as 70% time in locating and checking damper operation. With a simple flip of the switch and watching the lights gives you the assurance that the damper is properly working without the need for shutting the HVAC system down, removing ceiling tiles, removing duct access doors, and using a ladder and flash light to look down the duct to see if the damper is closed or open.

Model RCB-1: The RCB-1 is a single electrical box panel that is composed of an On/Off switch, one red and one green light. This model can be used in conjunction with any of our combination fire/smoke dampers, smoke dampers, multi-blade fire dampers, and air control dampers with the proper options. The dampers must be ordered with one of the following options: M/S, STO/R, or DTO/R. See **Control Switch Functions** below for switch function.

Model RCB-2: The RCB-2 is a single electrical box panel that is composed of an On/Off/On switch, one red and one green light. This model can be used in conjunction with our combination fire/smoke dampers that are ordered with options DTO/R. This model, when wired properly, will allow for bypassing the lower thermostatic disk (usually 165°F or 212°F). While in Bypass mode, the damper will remain open until the upper limit thermostatic disk activates (usually 250°F or 350°F depending on what is ordered). See **Control Switch Functions** below for switch function.

Model RCB-3: The RCB-3 is a single electrical box panel that is composed of a red and green light. This model can be used in conjunction with any of our combination fire/smoke dampers, smoke dampers, multi-blade fire dampers, and air control dampers with the proper options. The dampers must be ordered with one of the following options: M/S, STO/R, or DTO/R. This model only incorporates lights for visual observation of the dampers' blade position. See **Control Switch Functions** below for switch function.

Control Switch Functions:

Normal/Open: Switch in this position allows the damper to operate as if it was wired directly to a smoke detector or other power source. The damper remains open until the power source is disconnected from a smoke detector signal, fan interlock, etc or until the temperature in the duct elevates above the heat responsive device located on the damper.

Closed: Switch in this position, disconnects power to the actuator, thus allowing the damper to close. It will remain closed until the switch is positioned into the normal/open position regardless of any input signals. This wording is only used on RCB-1 only.

Off: Switch in this position, disconnects power to the actuator, thus allowing the damper to close. It will remain closed until the switch is positioned into the normal/open position regardless of any input signals. This wording is only used on RCB-2 only when used in conjunction with a DTO/R option.

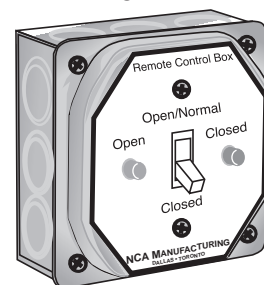
By-pass: Switch in this position, the operator is allowed to by-pass the low temperature thermostat, thus opening the damper until the air in the duct elevates to high temperature thermostat limit. At this time the damper will close and cannot be re-opened.

Green Light (Open): This light is wired in series with the micro-switch package and indicates when the blades are open. Standard ratings for this light are 120vac. 24 vac and Direct Current (vdc) lights will need voltage noted on order and ordered special.

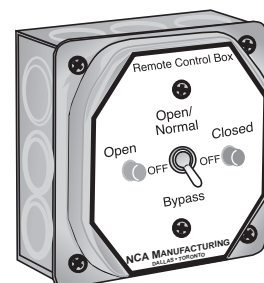
Red Light (Closed): This light is wired in series with the micro-switch package and indicates when the blades are closed. Standard ratings for this light are 120vac. 24 vac and Direct Current (vdc) lights will need voltage noted on order and ordered special.

Note: Wires indicated are for M/S Package mounted on right hand side of damper. If the M/S package is on the left hand side of the damper, then the open/close wires will need to be switched..

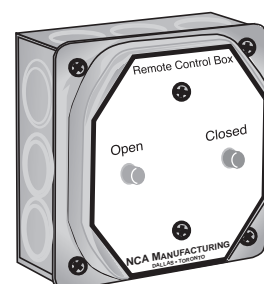
RCB-1



RCB-2



RCB-3

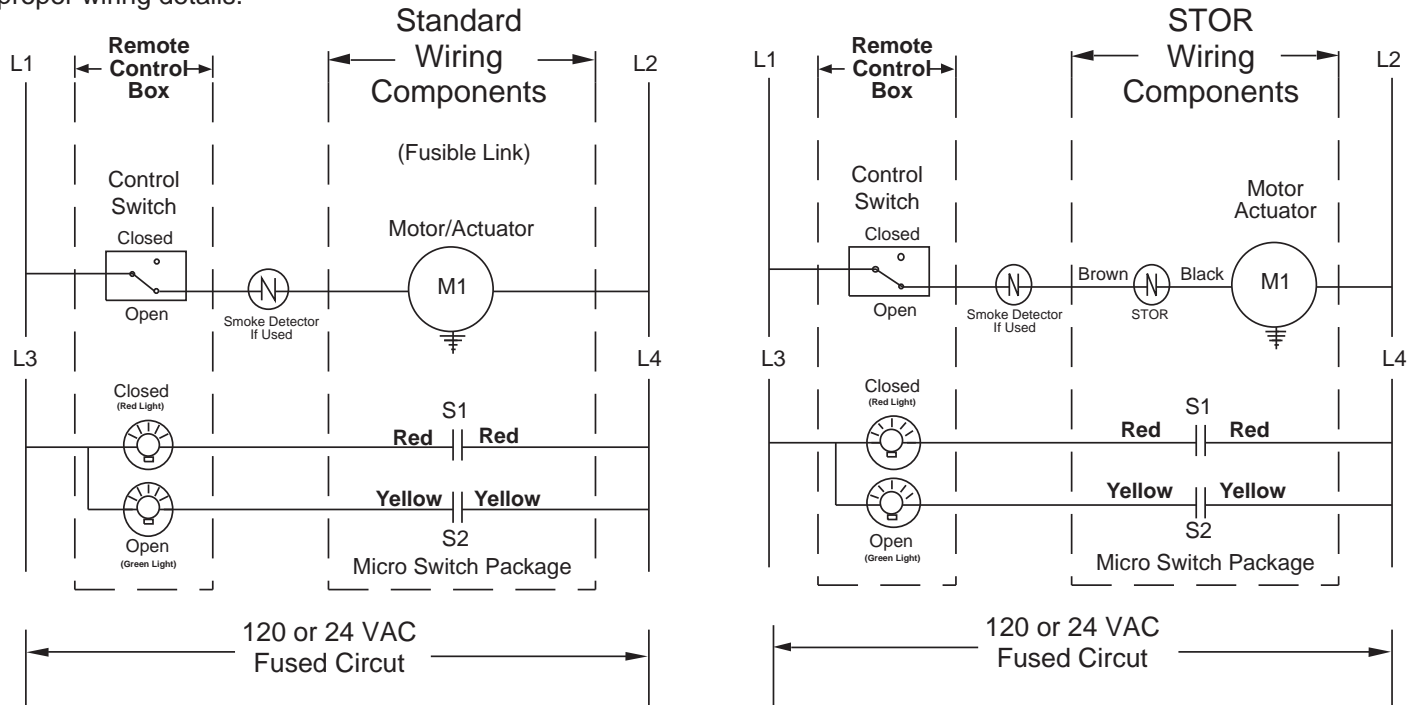


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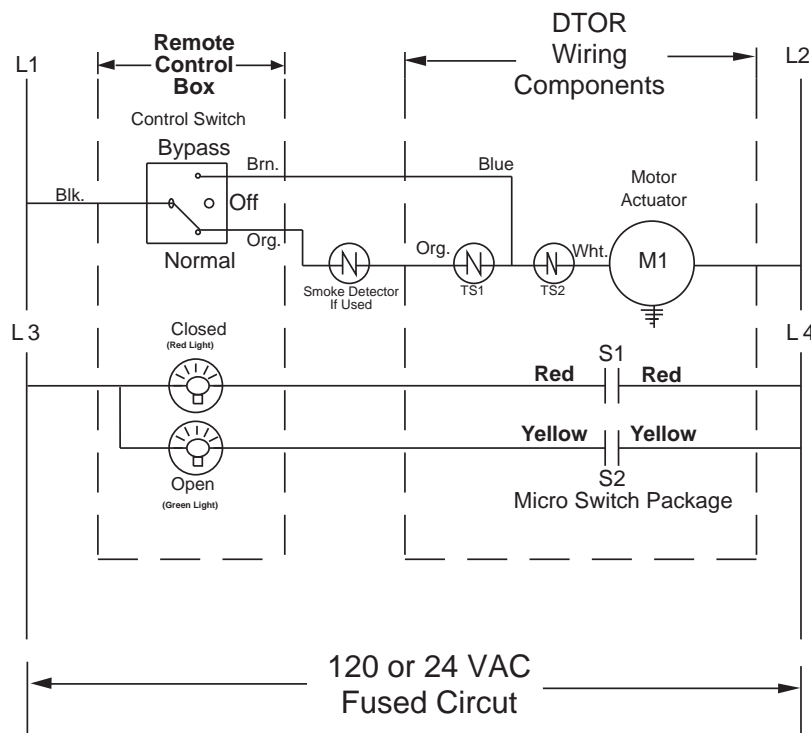


REMOTE CONTROL BOX WIRING DETAILS FOR DAMPER WITH OPTIONS

Note: Remote Control Boxes are standardly shipped loose from damper for field wiring and desired placement. Choose the wiring diagram below with the correct option (standard/fusible link, STO/R, or DTO/R) ordered for proper wiring details.



Note: Boxes are standardly shipped with 120vac lights. Special and indicate on order 24vac or vdc lights if needed.



Note: Wires indicated are for M/S Package mounted on the right hand side of the damper. If the M/S package is on the left hand side, then the open/close wires will need to be switched.