Instructions

CENTERLINE® Motor Control Centers Servicing Water Damaged Equipment

ATTENTION

Water-damaged Rockwell Automation electronic and electro-mechanical products normally are presumed to be beyond repair. Damage can result from immersion, submersion or exposure to excessive moisture brought about through flooding, fire fighting activities, hurricanes, sewage overflows, and the like. Due to potential problems with water-borne sediments and contaminants, damage to insulating materials, and rust and corrosion to metal parts, users should replace the affected products in total or take other action as described in the following table:

Type	Examples	Required Action
Electronic products	Programmable controllers, I/O cards, drives, video displays	Remove product from service and scrap or discard.
Normally non-repairable electro-mechanical products	Push buttons, relays, small contactors, limit switches	Remove product from service and scrap or discard.
Normally repairable electro-mechanical products	Motors, large contactors, starters	Product may be repairable in some instances, as determined by Rockwell Automation on a case-by-case basis. Otherwise, remove product from service and scrap or discard.
Mechanical products	Metal cabinets and enclosures, sheaves, couplings, bushings, belts, gear reducers and mounted bearings	Return the product to service only following proper cleaning, re-lubrication, repair or replacement of any damaged components, and inspection. Where applicable, qualified personnel should conduct appropriate electrical insulation resistance testing to ensure that products and associated field wiring are free from short circuits and grounds.

On a normal for-fee basis, users should forward affected repairable products to an appropriate Rockwell Automation service and repair facility for evaluation, assessment of repair costs, and possible reconditioning following the Company's regular factory repair or remanufacturing procedures. Users should call their local Rockwell Automation office or applicable authorized product distributor for assistance in locating an appropriate service and repair facility and to receive an estimate of applicable inspection and repair charges.

Users should scrap or discard all affected non-repairable products and components in a way that eliminates the possibility of their reuse by anyone, as well as in compliance with applicable hazardous waste and environmental laws and regulations.

Users should assume that water-immersed Rockwell Automation equipment has been damaged, and Rockwell Automation cannot warrant or take responsibility for any damaged equipment, regardless of its original manufacturer's warranty. Products subsequently repaired or reconditioned by Rockwell Automation will be warranted in accordance with the Company's then current published repair warranty.

For further important safety information refer to the NEMA publication entitled “Guidelines of Handling Water-Damaged Electrical Equipment.”
www.nema.org/stds/water-damaged.cfm#download

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Introduction

The intent of this publication is to provide guidance for servicing Bulletin 2100 CENTERLINE Motor Control Centers that have been water damaged. It is the general recommendation of Rockwell Automation that water damaged equipment be replaced. However, in the event the user chooses to put the water damaged equipment back into service, this publication provides guidance restoring the motor control center.

Water damaged equipment is assumed to have been damaged. Therefore, Rockwell Automation cannot warrant the product or take responsibility for repaired damaged equipment.

Instructions

Motor Control Center Units

Motor control devices and components are assumed to have been water logged and damaged.
Due to potential problems because of sediments left in the components, contaminated insulating materials and rust or corrosion to metal parts, it is necessary to replace the items in total. Thus, plug-in unit inserts must be replaced with new units. Water logged frame mounted controller sections must be replaced with a new frame mounted controller sections.

Motor Control Center Sections

It is recommended that water damaged motor control center sections be replaced. However, should the decision be made to restore the motor control center sections, follow the steps outlined below.

For assistance ordering replacement MCC units and section, contact Rockwell Automation or your local Allen-Bradley distributor.

ATTENTION To prevent injury or death to personnel servicing equipment, make sure that the motor control center remote power source(s) is disconnected and the respective disconnect(s) is locked in the OFF/O position.

1. Remove all water damaged plug-in units and properly discard. (For removal of units, refer to the *Installing and Removing Plug-in Units* section of CENTERLINE Motor Control Center Instruction Manual, publication number 2100-IN012*x*-EN-P.)

2. Open doors, remove covers and disassemble motor control center to permit access to the horizontal and vertical bus.

3. Wash down (hose down under moderate pressure) the motor control center and the various parts with clean water. **Do not use any cleaning solvents.**

4. Dry out the motor control center. It is recommended that heated dry air be used. The temperature of the air should not exceed 85°C (approximately 190°F).
   Additional assistance is available from service companies that specialize in airing and drying out water damaged equipment.

5. Reassemble the motor control center after it has been thoroughly dried out. For additional assistance in reassembling the motor control center, contact Rockwell Automation Global Manufacturing Solutions to arrange for field service or others who specialize in water damaged equipment restoration or replacement. Contact the Low Voltage Motor Control Center Post Shipment Support for replacement parts.

6. Conduct an electrical bus insulation resistance test to make sure the motor control center and field wiring are free from short circuits and grounds. Conduct this test using an insulation resistance tester (megger) with a potential of 500-1000 volts.

   This test should be conducted phase-to-phase, phase-to-ground and when applicable, phase-to-neutral. Typical insulation resistance values are 50 megohms or greater. Next, check the field wiring; for example, motor cables and/or incoming line cables.

   NOTE: The insulation resistance values are affected by dampness which may cause a considerably lower insulation resistance reading. If this is the case and insulation resistance values are below one megohm, it is recommended that the equipment be dried out a second time. Dry out the motor cables by injecting a low voltage current. When the equipment is dry, repeat the insulation resistance test. The minimum accepted value for insulation resistance is one megohm.

7. Install the replacement plug-in units. (For installation of units, refer to the *Installing and Removing Plug-in Units* section of CENTERLINE Motor Control Center Instruction Manual, publication number 2100-IN012*x*-EN-P.)

www.ab.com/mcc

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