

Master Control Systems, Inc.
Engineering Bulletin

Date: 2000.12.04
To: All M.C.S. Representatives
CC: Wm. F. Stelter, D. P. Carrier, J. Nasby, K. Meyer, B. Urbanik
From: Lorenzo Di Maso, Engineering Manager
Re.: **Series MC*TZ** -- Master Transfer Switch Fire Pump Controllers.

This is a field service, sales and application bulletin.

We're pleased to announce that we've begun shipping MC*TZ controllers using a new Zenith Transfer Switch series. The previous series was Zenith's ZTS series. The new series is Zenith's ZTG series.

Controllers with these new transfer switches are 13.

This new series of transfer switches offers a number of new features and improvements.

- 1) Engine Cool Down (Over-Run) timer is now standard (Mod. Code 23).
- 2) Adjusting normal sources for all three phases is simplified.
- 3) Adjusting Emergency side set point voltage and frequency is also simplified.
- 4) Adjusting Transfer and re-transfer delays is also simplified.

In addition to the above, the control unit has several diagnostic and stated LED indicators. We've made use of a hinged mounting arrangement to allow easy access to these LED's for trouble shooting.

We've also simplified the MC-IF Interface (Auxiliary Control) panel and circuitry as well as simplifying manufacture and field replacement of same. The Motor Delay Timer has been replaced by circuitry that makes use of the MC* series motor Re-Start Delay Timer circuitry.

- 5) The new touch safe construction power base units are reduced in size; but, they have equal or better Withstand (Short Circuit) ratings. All of our existing standard and optional W.I.C. ratings remain the same.
- 6) The Transfer Switch transfer drive is now solenoid driven on all sizes rather than the previous Linear Motor Drive. This drive has been in use on the 400 amp and 600 amp sizes for several years.
- 7) The control module now protects the drive solenoid from burn-out by timing out the time that it's energized. This reduces the risk of damage due to mechanical or electrical problems.

The control module is microprocessor driven. This design has been in common use by Zenith for five years. It is now their standard control module for their transfer switches.

- 8) The Control unit, Power Module and Power base are all plug-in to simplify replacement.

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- 9) The controller wiring is even more modular with reduced parts count, increasing reliability.
- 10) The main Fire Pump Controller circuitry remains unchanged. All main controller power and plug-in components remain unchanged.

We've been shipping selected units since October as we deplete stock of the previous ZTS series.

We created a new family of customer drawings for this new version transfer switch circuitry. Copies of the following drawings are attached.

- 14751 -- Schematic Diagram - Zenith A.T.S. Control Circuitry.
- 14761 -- Schematic Diagram - Zenith A.T.S. Interface Circuit.

We feel that these drawings provide additional details to make it simpler to diagnose operation of the transfer switch control and interface circuitry. All controller External Wiring drawings remain the same. Ditto for the Main Schematic Diagram drawings.

As always, we will continue to provide full support and service the previous units.

We're very pleased with this revised design of both the Zenith transfer switch and our controller circuitry for same. In addition to the above features, this new design provides the same Heavy-Duty and Rugged reliable design as all of our previous versions.

We'll announce the similar change to our now famous EC*TZ series when we begin shipping those units with the new ZTG series switches.

Don't hesitate to contact us if you have any questions on this revised series of controllers.