TECHNICAL NOTE 08-01
WATER RESTRAINT SYSTEM (WRS)
Installing the 480-120 VAC transformer into the Power Control Enclosure

Dated: May 29, 2001

Introduction

This procedure describes how to install the 480 VAC to 120 VAC, 500 VA transformer in the Power Control Enclosure.

Description

Some WRS electrical system installations do not have 120 VAC electrical power provided at the Power Control Enclosure. In these cases, a transformer must be installed that will provide 120 VAC power from the 480 VAC three phase power line. The transformer will be installed in an open area of the enclosure and the interconnecting wiring routed through the existing wiring ducts.

Requirements

The following materials are needed:

1. Transformer, Square D part no. 9070TF500D1
2. 2 Fuses, HF and HI, Littelfuse KLDR 5
3. 1 fuse, XF, Fusetron FNM-5
4. Self tapping mounting screws
5. #14 stranded, THHN 600 Volt insulation interconnect wire, color red

Procedures

1. Refer to the attached photograph.
2. Disconnect all power using all disconnect switches before proceeding. This modification is best made before the Power Control Enclosure is installed and connected at the site.
3. Remove the tops of the wiring ducts.
4. Set the transformer in place as shown tin the photograph and fasten in place using the self tapping screws.
5. Using one piece of #14 THHN interconnect wire, connect the transformer HF terminal to the Phase A output terminal of the three phase circuit breaker located in the upper left of the Power Control Enclosure.
6. Using another piece of #14 THHN interconnect wire, connect the transformer HI terminal to the Phase B output terminal of the three phase circuit breaker located in the upper left of the Power Control Enclosure.
7. Using another piece of #14 THHN interconnect wire, connect the transformer XF terminal to the PCC terminal strip 110 VAC terminal marked AC ~ (to the right of the three phase power input terminals).

8. Using another piece of #14 THHN interconnect wire, connect the transformer X2 terminal to the terminal strip 110 VAC neutral terminal marked “N” (just to the right of the AC ~ terminal).
9. Install the fuses as follows:
    A. Install the two KLDR fuses in the transformer HF and HI fuse holders.
    B. Install the one FNM fuse in the transformer XF fuse holder.
10. The transformer should have come already prewired to the fuse holder. If not check with the office before proceeding.
    A. The high voltage (480 VAC) fuse, HF should be wired to transformer terminal H4.
    B. The high voltage (480 VAC) fuse, HI should be wired to transformer terminal H1.
    C. The low voltage (120 VAC) fuse, XF should be wired to transformer terminal X1.
11. Use an ohmmeter to check all wiring before reinstalling the wiring duct covers.
12. If there are any problems please contact our office.