PML’s 3720 / 7700 Meter Waveform Capture

Special Handling of Delta Mode WFC of Line-to-Line Voltage

APPLIES TO: PML’s 3720 and 7700 Meters.

NOTES:

The standard 2 PT installations for delta mode does not support waveform capture on 3rd phase Vca. The meters attempt to compute the Vca waveform using captures for Vab & Vbc. This results in inaccurate waveform for meters the 3720 & 7700 meters allow to add a 3rd PT across Vca (on V2) to facilitate real waveform computing it. This solution works only with waveform captures (WFC) and not with waveform reco

1. All PML meters in delta mode support only 2 PT installation. The 3720 and 7700 may acquire improved waveform as explained below. See following installation drawing for the 3rd PT connection.

2. WFR - All PML meters "attempts" to derive the "missing" Vca voltage and record it in the Waveform Recorder when operating in Delta Mode. Because the Vca voltage is derived by subtracting Vcb from Vab on a sample by sample basis, the waveform is not as smooth as for the measured two Vab and Vcb. In Delta Mode, the WFR function does not look at the V2 input, so adding a 3rd PT across Vca would not improve the Vca waveform.

3. WFC - All meters correctly show waveforms for only Vab and Vcb and they will be shown 60 degrees apart. Vcb leads Vab by 60 degrees.

4. WFC - Only 3720 and 7700 installations offer possibility to improve Vca waveform by adding a 3rd PT across Vca and applying this signal to V2. When this is done the WAVEFORM CAPTURE (not WFR) V2 and correctly display the signal as input V2. Adding this 3rd PT will not provide any other advantage and will not affect any other measurements or WFR.

5. WFC - The 3710 does not allow triggering of the waveform capture for Vca in delta mode.
(4) The only function of the Vac PT is to provide a true 1 cycle WFC for Vac. No other meter functions are affected.

KEYWORDS:

EPM, 3710, 3720, 7700

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