TESCO METERING

HANDS-ON TRAINING – SERVICE TROUBLESHOOTING

TESCO's Meter School
TESCOOL
July 21-24, 2024

July 23, 2024

3:15 PM – 4:30 PM

Fran White

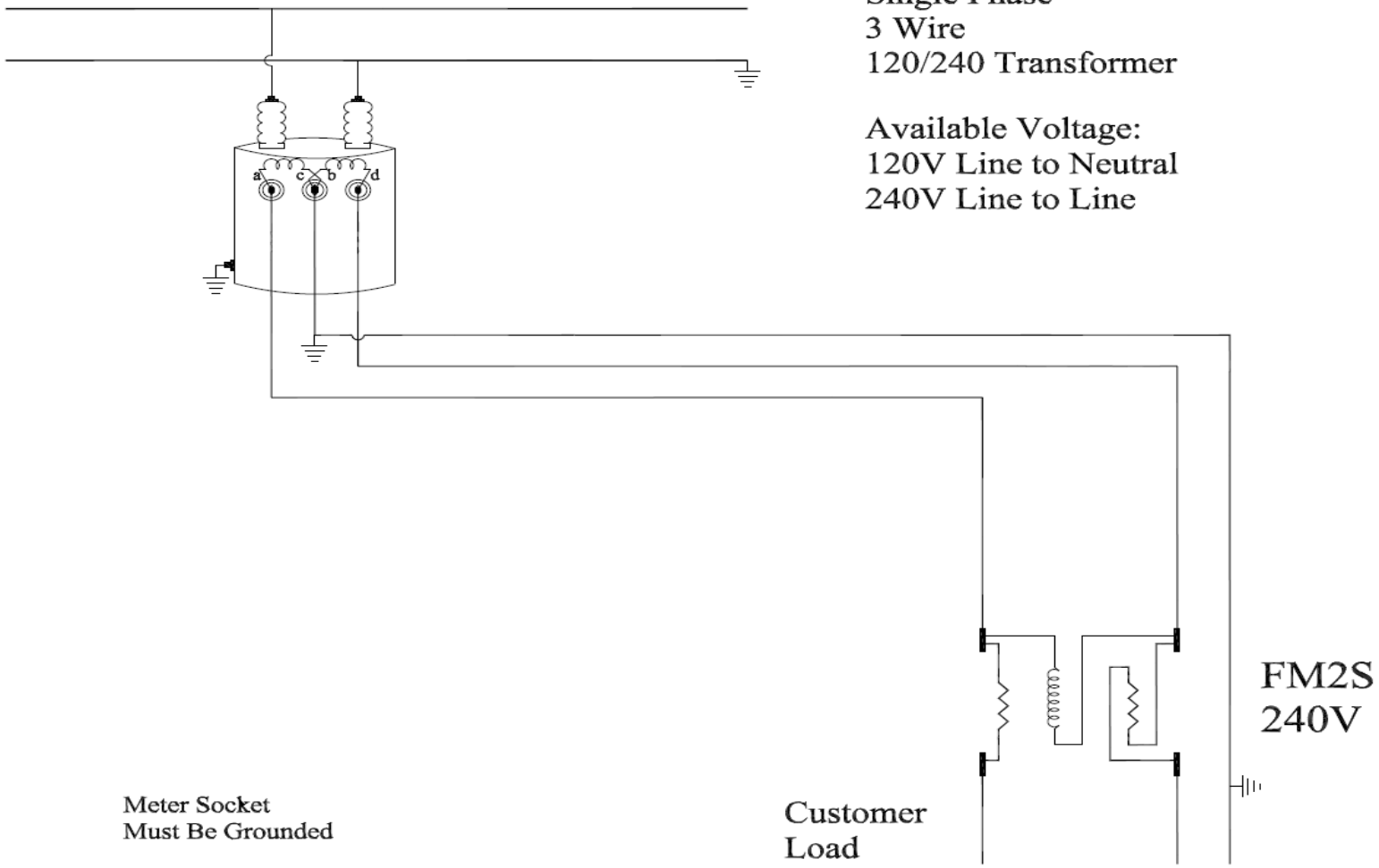
HANDS-ON TRAINING – SERVICE TROUBLESHOOTING SINGLE PHASE

1. Prior to setting the single phase (residential) meter (new service installation).
    a. Depending on your utility's procedures, there may be more things to test than this, but at a minimum.
        i. Visual inspection:
            1. Are the wires the proper gauge and color.
            2. Make sure that the conduit connections are secure and flush (no water leakage).
            3. Make sure that there is enough service loop in the wires (particularly with underground installations).
        ii. DVM checks:
            1. Check to make sure that the neutral wire is connected properly.
            2. Make sure that the meter enclosure is properly bonded to ground.
            3. Check for the correct voltages on the line side:
                a. Line to line
                b. Line to neutral (both sides)
            4. Ensure that there is no existing voltage on the load side.
                a. Upside down wiring
                b. Generator or "stolen" power (Diversion).
            5. Check for grounding faults on the load side jaws.
            6. If all the pre-checks are good, set the meter and confirm that it is operational, and the crawler is moving in the right direction.

HANDS-ON TRAINING – SERVICE TROUBLESHOOTING POLYPHASE

1. Prior to setting the polyphase phase meter (new service installation).
    a. Depending on your utility's procedures, there may be more things to test than this, but at a minimum.
        i. Visual inspection:
            1. Are the wires the proper gauge and color.
            2. Make sure that the conduit connections are secure and flush (no water leakage).
            3. Make sure that there is enough service loop in the wires (particularly with underground installations).
        ii. DVM checks:
            1. Check to make sure that the neutral (if used) wire is connected properly.
            2. Make sure that the meter enclosure is properly bonded to ground.
            3. Check for the correct voltages on the line side:
                a. Line to line
                b. Line to neutral (each phase)
            4. Ensure that there is no existing voltage on the load side.
                a. Upside down wiring
                b. Generator or "stolen" power (Diversion).
            5. Check for grounding faults on the load side jaws.
            6. Check for proper phase rotation coming into the line side jaws.
            7. If all the pre-checks are good, set the meter and confirm that it is operational, and the crawler is moving in the right direction.

HANDS-ON TRAINING – SERVICE TROUBLESHOOTING POLYPHASE



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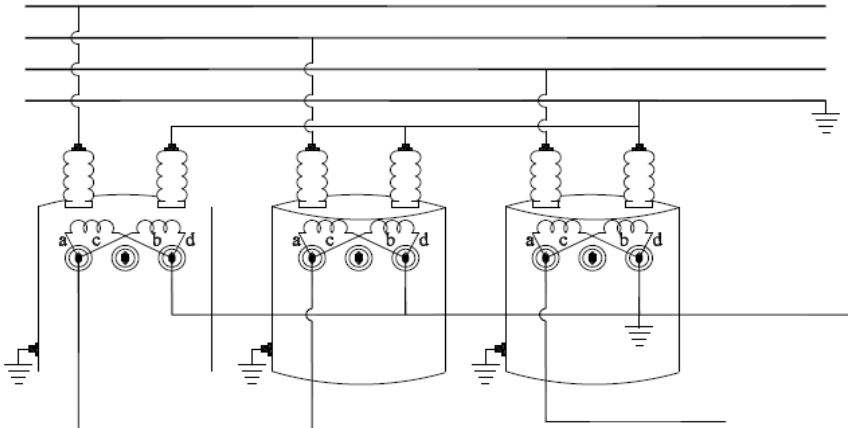
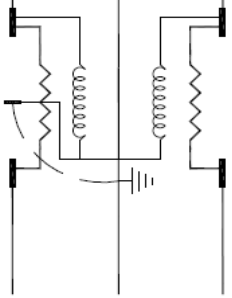


Three Phase
3 Wire Network
120/240 Transformers

Available Voltage:
120V Line to Neutral
208V Line to Line

(also available)
Additional 3W Network Circuits
& 4W Wye Three Phase



FM12S
120V

Meter Socket
Must Be Grounded

Customer
Load

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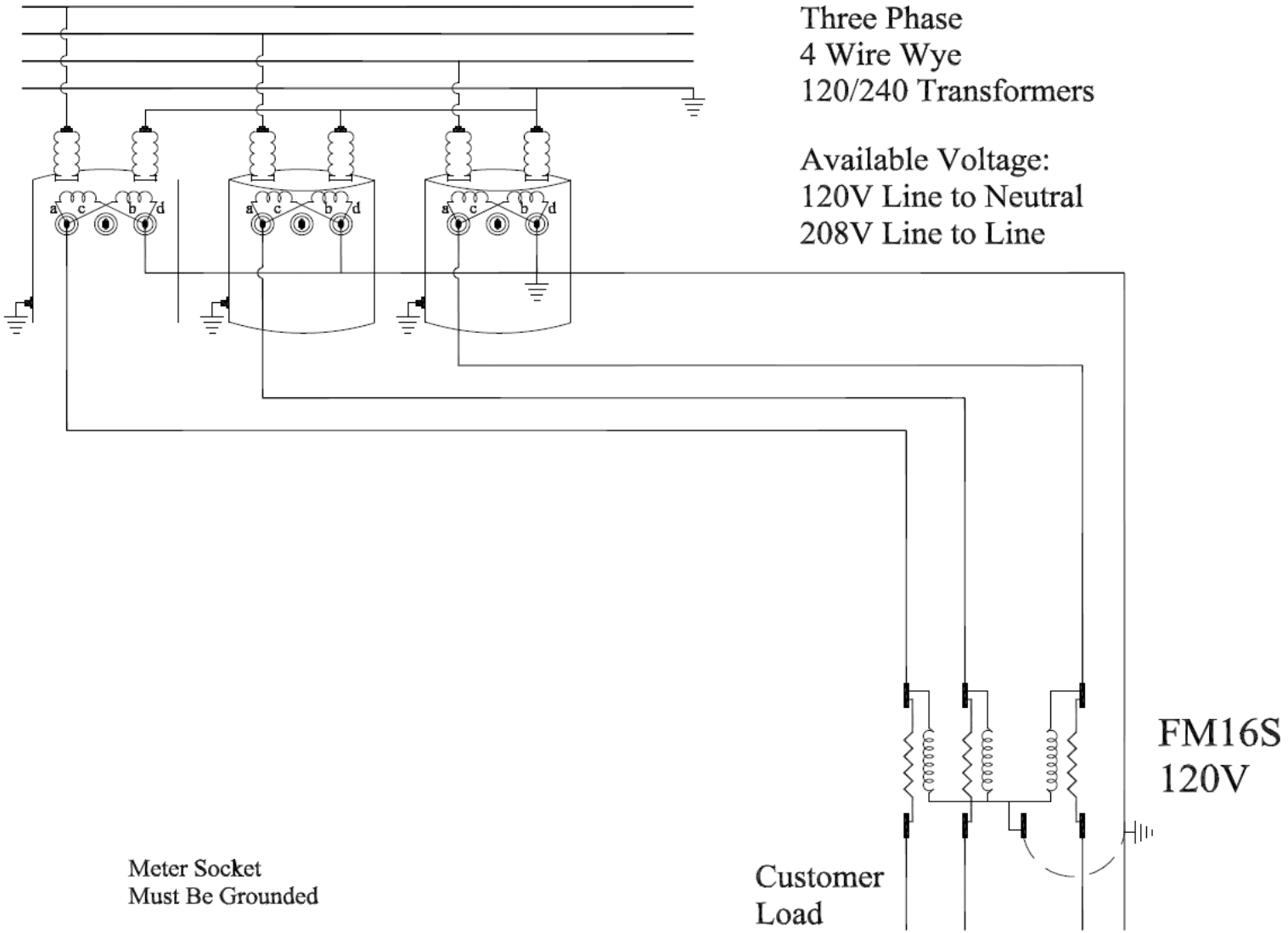

Questions and Discussion

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This presentation can also be found under Meter Conferences and Schools on the TESCO website: tescometering.com

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ISO 17025:2017 Accredited Laboratory

QUESTIONS AND DISCUSSION

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