

Pierce Pepin Cooperative Services

Wiring Diagram for Current Transformer (CT)

submetering of Off-peak Electric

Revised: Friday, May 09, 2008

Contact Information:

If you have any questions on other off-peak metering options,
please call -
Manager of Member Services – Ron Blado
715/273-2412

R1 – Water Heater (240 VAC, 30A)
Blue wires (N.C.)

R2 – Dual Fuel (120 VAC, 5A)

- Electric Boiler : Orange } (N. O.)
- Heat Pump Yellow } (N. C.)
- Base board White/green
- A/C

R3 – Storage (120 VAC, 5A)

- In-floor heat White / Blue } (N. O.)
- ETS heaters Grey } (N. C.)
- Violet

R4 – Warning

- Brown / White – Relay driver

Load Control (L.C.) Power -

- Red (N) } (120 V)
- Black } (240 V)
- White/Red

✓ Current Transformer (CT) provided by Pierce Pepin

NOTE:

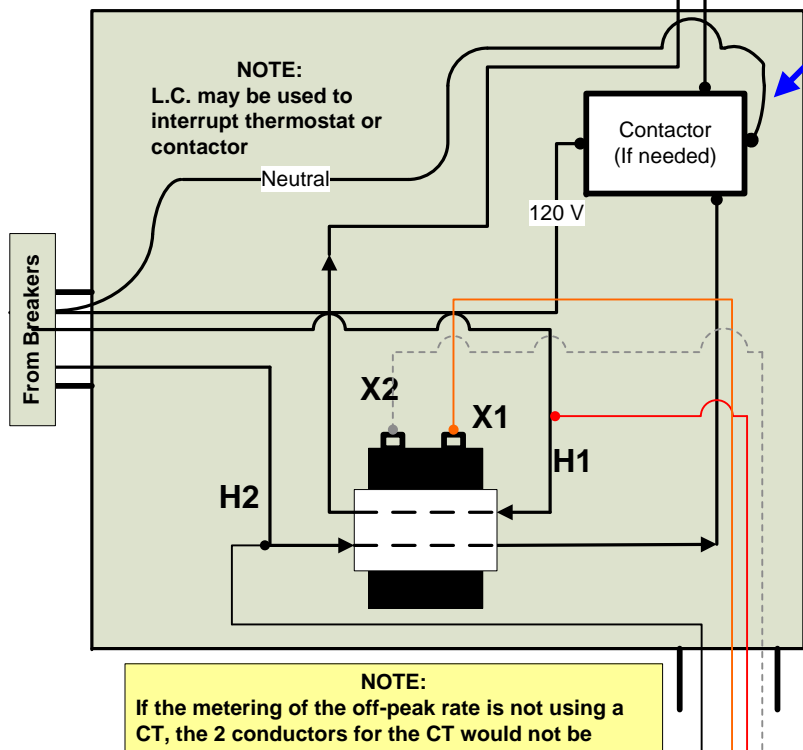
All wires of the same leg in the breaker panel must pass through the CT in the same direction.
CT X2 must be grounded either in the meter socket or the CT enclosure but not at both ends.



**PPCS
Load Control (LC)**

NOTE:
CT / Contact enclosure – minimum size: 12x12x4

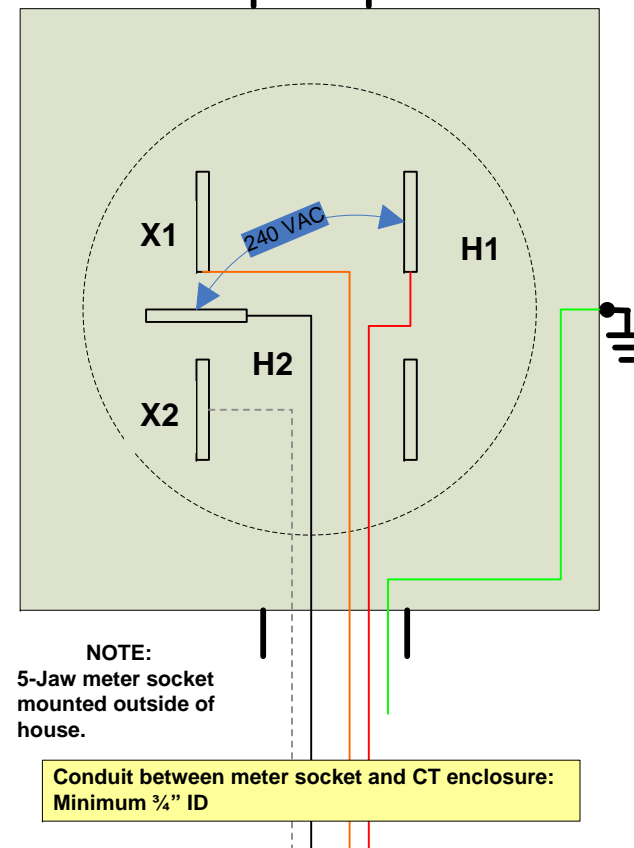
To Heaters



NOTE:

- No Contactor is needed for the Water Heater (use 30A relay in L.C.)
- Use contactors with 120 V coils, normally open contacts

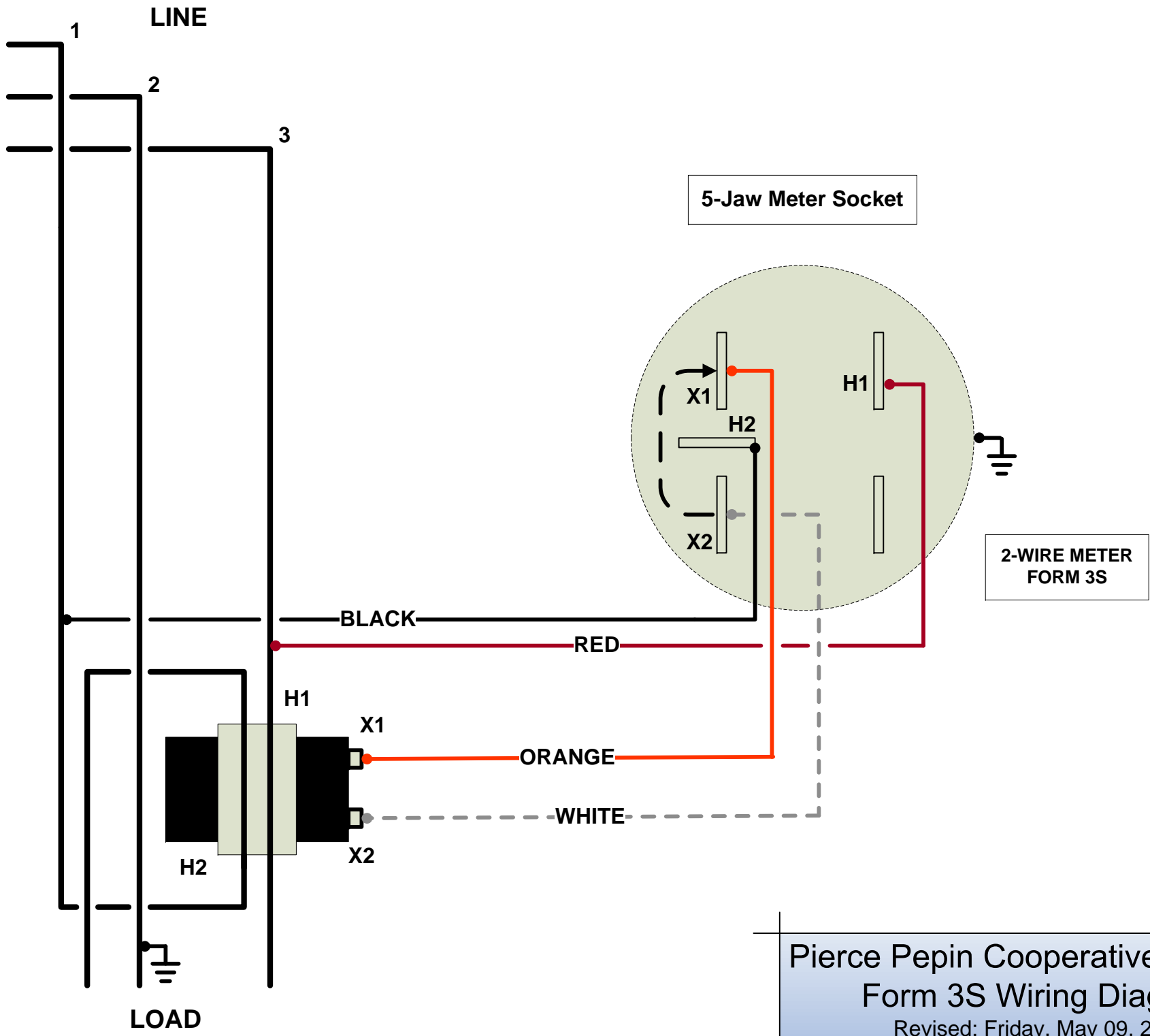
- Wire sizes & colors pulled/ran by Electrician from Members panel**
- 2 – Blue #10 THHN (Water Heater)
 - 2 – Yellow #12 THHN (Dual Fuel: Electric heat / A/C)
 - 2 – Purple #12 THHN (Storage Heat)
 - 2 – Brown #14 THHN (Alert) – [If needed]
 - 1 – Black (H2)
 - 1 – Red (H1) } (240 V) #12 THHN
 - 1 – Orange (X1) #12 THHN
 - 1 – White (X2) #12 THHN
 - (NOTE: Check CT burden table to verify wire size)
 - 1 – Green #12 THHN to ground meter socket

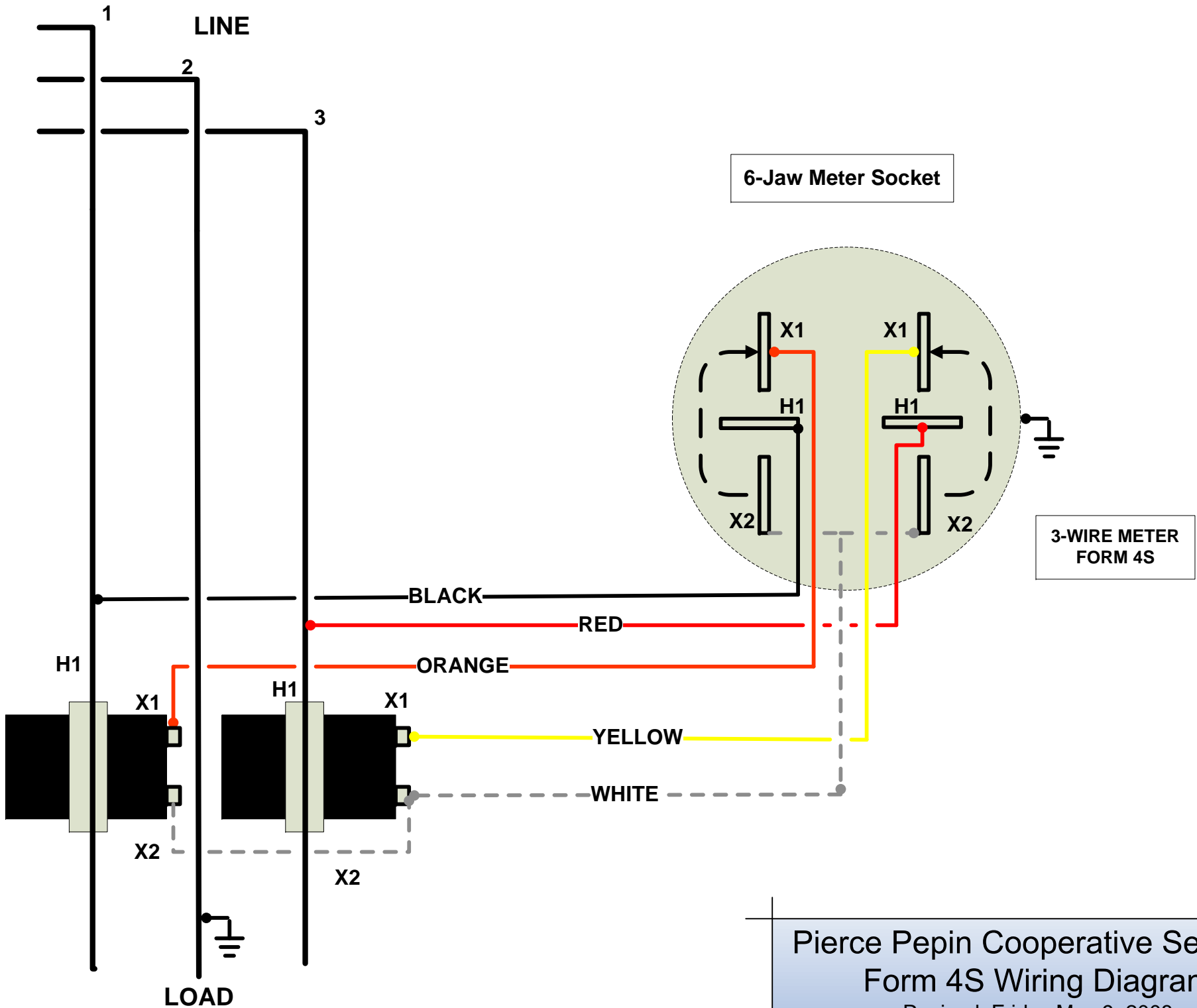


NOTE:
5-Jaw meter socket mounted outside of house.

Conduit between meter socket and CT enclosure: Minimum 3/4" ID

NOTE:
If the metering of the off-peak rate is not using a CT, the 2 conductors for the CT would not be needed.





**Maximum distance in feet between the meter
and the current transformers.**

AWG Secondary Copper Wire Size

BURDEN	#14	#12	#10	#8	#6
.2	19	31	49	79	126
.5	75	120	190	305	485

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800-924-2133

**Electronic Meters - Maximum distance in feet
between the meter and the current
transformers.**

AWG Secondary Copper Wire Size

BURDEN	#14	#12	#10	#8	#6
.2	35	55	85	140	220
.5	90	150	230	380	600

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