

**Wholesale Revenue Metering
Standard - Hardware
Issue 2.1**

Baseline 11.1 Changes

- **Section 4.3.3(d) revised to clarify text**
- **Appendix C: diagrams revised and text added for further clarification**

4.3.3 (d) - Considerations for

Installations that do not comply with

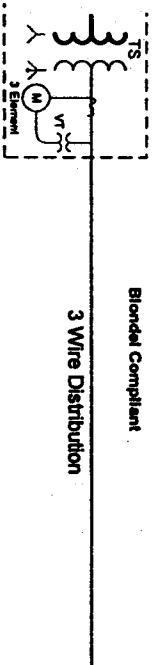
Blondel's Theorem

Issue 2.0 - Two-element metering where the power system neutral is not available - using two current transformers and two voltage transformers connected phase to phase and a two-element meter.

Issue 2.1 - Two-element metering installation located at the transformer station where the power system neutral/ground "is available" but not used - using two current transformers and two voltage transformers connected phase to phase and a two-element meter.

Appendix C: Blondel Conformance

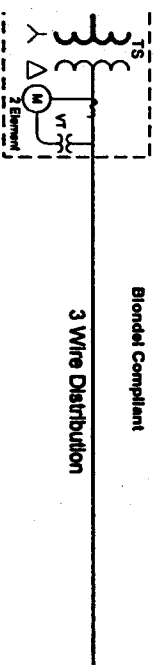
Issue 2.0



Blondel Compliant

3 Wire Distribution

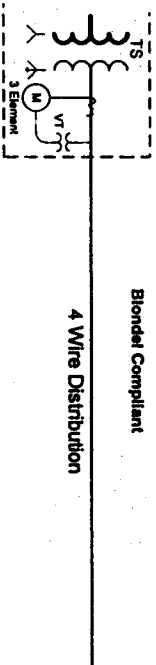
Transformer station (TS) has a wye secondary that is either grounded through impedance or is solidly grounded. The ground/neutral is not brought outside the station. Three current transformers and three voltage transformers connected phase to ground/neutral are inputs to a 3 element meter.



Blondel Compliant

3 Wire Distribution

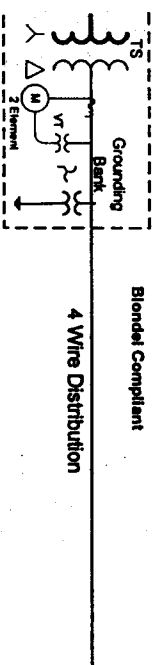
Transformer station has a wye secondary that is either grounded through impedance or solidly grounded. The neutral is brought outside the station. Two current transformers and two voltage transformers connected phase to phase are inputs to a 2 element meter.



Blondel Compliant

4 Wire Distribution

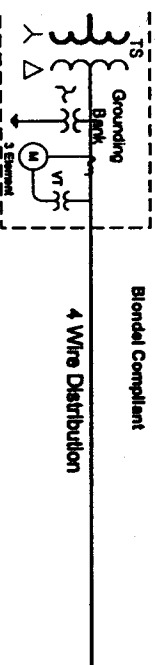
Transformer station has a wye secondary that is either grounded through impedance or solidly grounded. The neutral is brought outside the station. Three current transformers and three voltage transformers connected phase to ground/neutral are inputs to a 3 element meter.



Blondel Compliant

4 Wire Distribution

Transformer station has a delta or ungrounded wye secondary. The neutral is brought outside the station. Two current transformers and two voltage transformers connected phase to phase are inputs to a 2 element meter on the line side or the load side of the grounding bank.



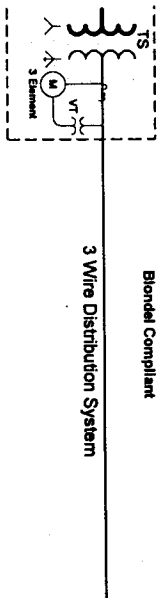
Blondel Compliant

4 Wire Distribution

Transformer station has a delta or ungrounded wye secondary. The neutral is brought outside the station. Three current transformers and three voltage transformers connected phase to ground/neutral are inputs to a 3 element meter on the load side of the grounding bank.

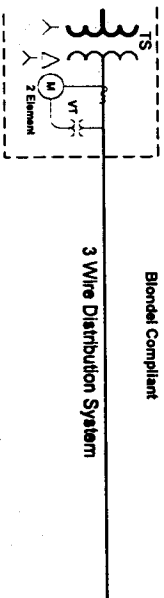
Appendix C: Blondel Conformance

Issue 2.1



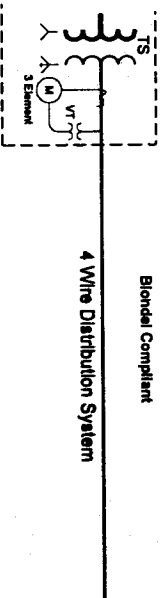
Transformer station (TS) has a wye secondary that is grounded through impedance or is solidly grounded. The ground/neutral is not brought outside the transformer station. Metering installation located inside the transformer station consists of three current transformers and three voltage transformers connected phase to ground/neutral and are inputs to a 3 element meter.

3 Wire Distribution System supplies delta or wye ungrounded loads. Metering installations located within the distribution system are 2 element.



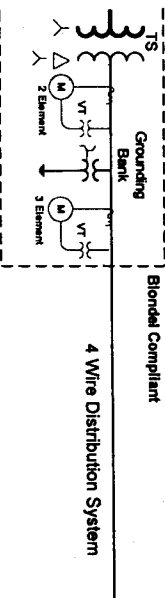
Transformer station has a delta or ungrounded wye secondary. Two current transformers and two voltage transformers connected phase to phase are inputs to a 2 element meter.

3 Wire Distribution System supplies delta, wye grounded or wye ungrounded loads. Metering installations located within the distribution system are 2 element.



Transformer station has a wye secondary that is grounded through impedance or solidly grounded. The neutral is brought outside the transformer station. Three current transformers and three voltage transformers connected phase to ground/neutral are inputs to a 3 element meter.

4 Wire Distribution System supplies delta, wye grounded or wye ungrounded loads. Metering installations located within the distribution system are 3 element.



Transformer station has a delta or ungrounded wye secondary. Grounding bank is located within the transformer station and the neutral is brought outside the station. Metering installation located on the line side of the grounding bank consists of two current transformers and two voltage transformers connected phase to phase and are inputs to a 2 element meter. Metering installation located on the load side of the grounding bank consists of three current transformers and three voltage transformers connected phase to ground/neutral and are inputs to a 3 element meter.

4 Wire Distribution System supplies delta, wye grounded or wye ungrounded loads. Metering installations located within the distribution system are 3 element.