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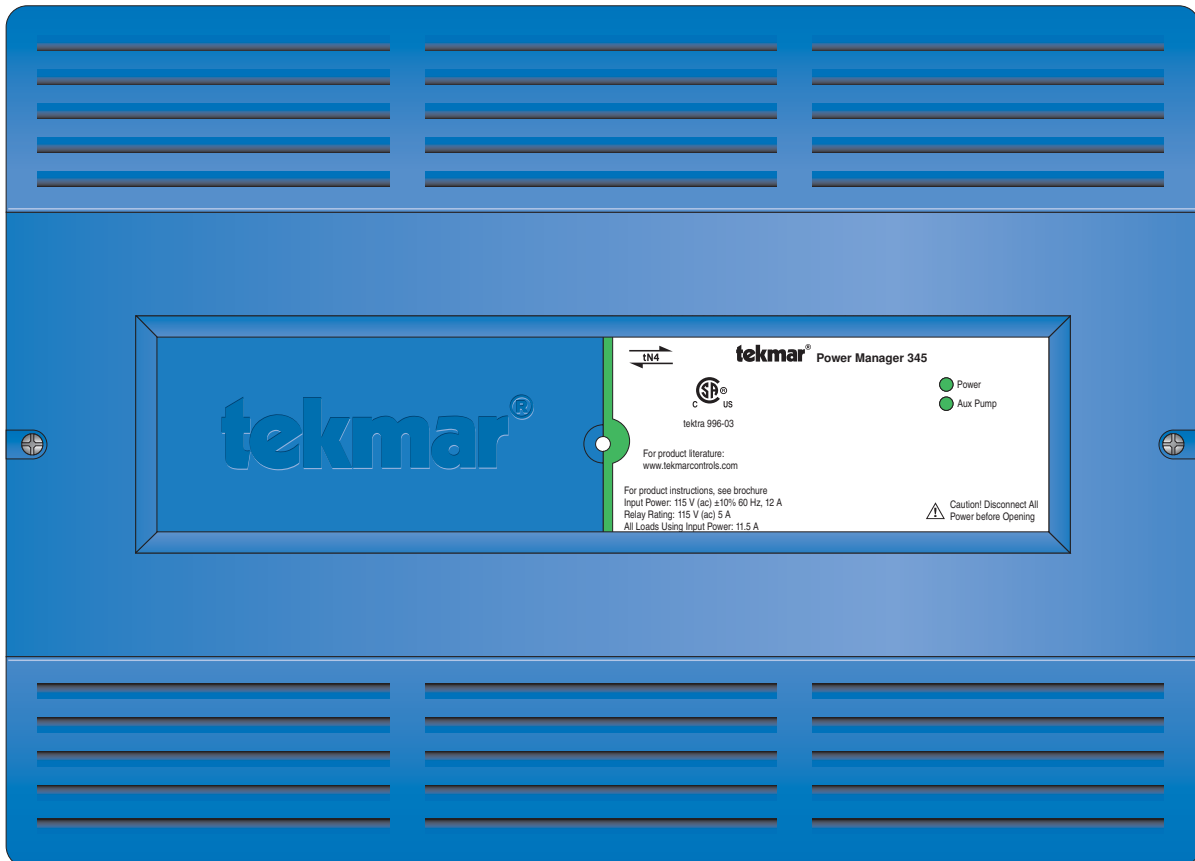
Record settings & wiring details for future reference

Introduction

The Power Manager 345 has an internal transformer that powers a Reset Module 420, 421, 422, or 423. A single tN4 bus input is available to allow Zone Managers and in some cases, Mixing Expansion Modules, to be connected.

Features:

- tN4 Compatible
- Internal 56 VA Transformer
- CSA C US Certified for use in USA and Canada

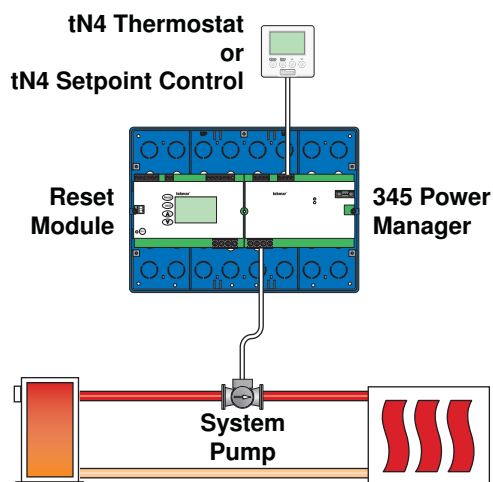


Sequence of Operation

The primary purpose of the 345 is to provide power to a Reset Module 420, 421, 422, or 423, and to provide power to other tN4 devices such as tN4 Thermostats or tN4 Setpoint Controls.

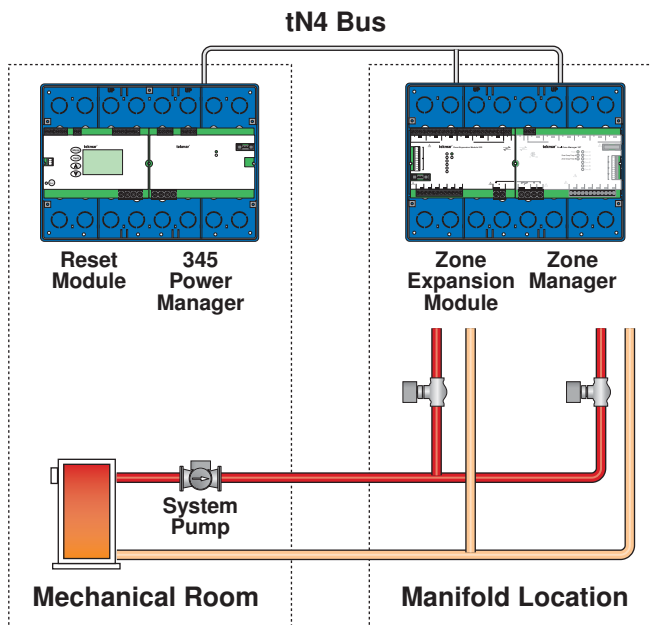
Single Zone Application

A basic application allows a 345 to connect to a reset module and to a single tN4 Thermostat or tN4 Setpoint Control to operate single zone systems. The auxiliary pump is used to operate the system pump.



Remote Manifold Location Application

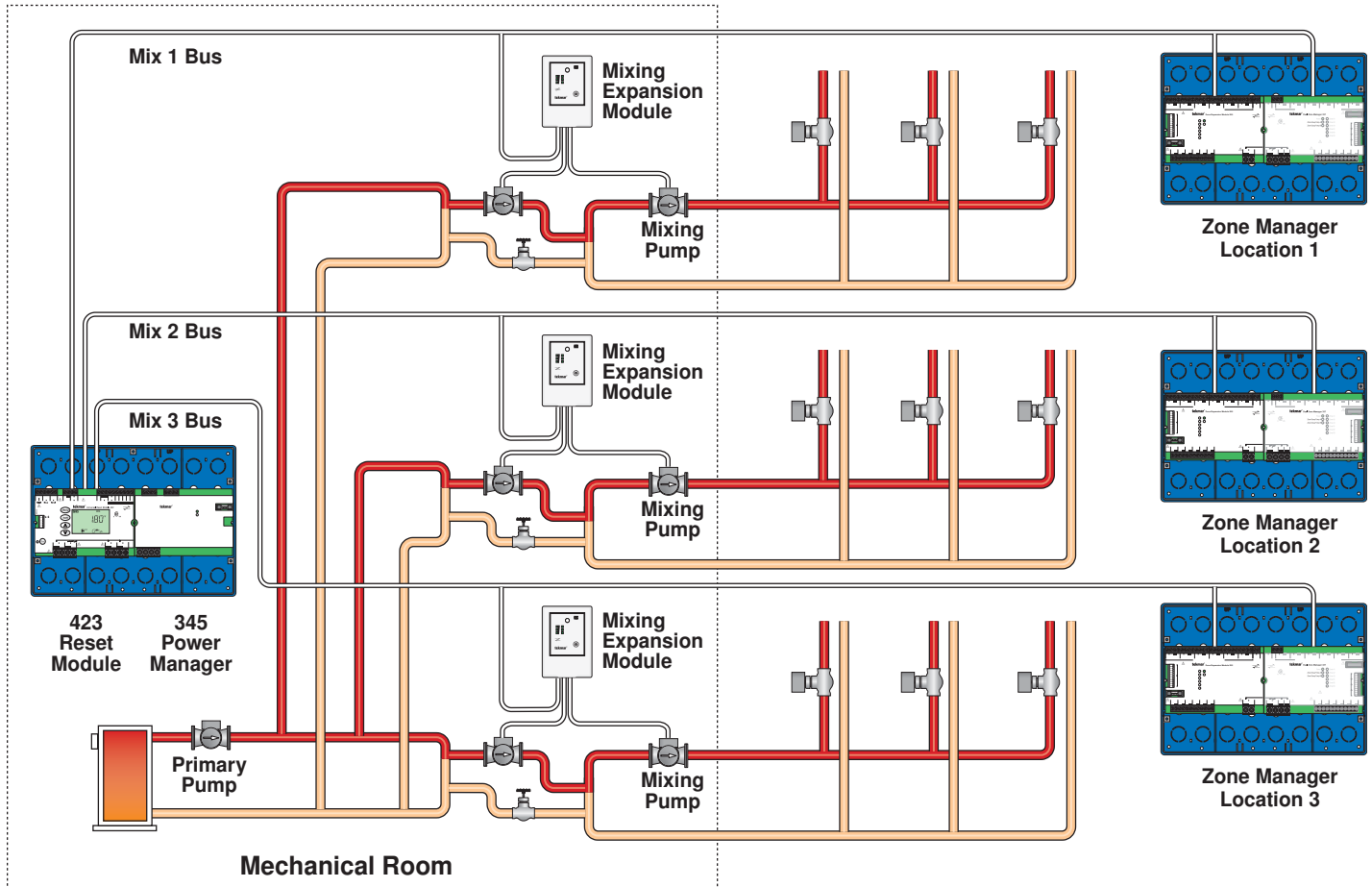
Another application is to locate the 345 and the Reset Module in the mechanical room while the Zone Managers can be located at remote manifold locations.



Mixing Expansion Module Application

The 345 can also be used to provide power to up to four Mixing Expansion Modules. The 345, Reset Module, and the

Mixing Expansion Modules can be located in the mechanical room, while each Zone Manager can be remotely located beside a manifold.



Auxiliary Pump

Zone Group Pump

The 345 includes an auxiliary pump input (terminal 1) and a powered auxiliary pump output (terminals 9 and 10). When the auxiliary pump input is powered with 24 V (ac), the auxiliary pump output is energized with 115 V (ac).

The auxiliary pump can be used in two different ways:

- 1) In single zone applications, a tN4 Thermostat or tN4 Setpoint Control activates the auxiliary pump output to power the system pump.
- 2) In applications with Mixing Expansion Modules, the low voltage system pump output on the Mixing Expansion Module activates the auxiliary pump output to power the system pump.

LED Status Indicators

Power LED

Green:

- Normal operation.

Amber:

- Power is present but the fuse for the internal 24 V (ac) transformer is blown.

Off:

- No power to the Power Input of the Power Manager.

Auxiliary Pump LED

Green:

- The Auxiliary Pump is on.

Off:

- The Auxiliary Pump is off.

Power Manager 345

-  Power
-  Aux Pump

Cleaning the Control

The control's exterior can be cleaned using a damp cloth. Moisten the cloth with water and wring out prior to wiping the control. Do not use solvents or cleaning solutions.

Limited Warranty and Product Return Procedure

Limited Warranty *The liability of tekmar under this warranty is limited. The Purchaser, by taking receipt of any tekmar product ("Product"), acknowledges the terms of the Limited Warranty in effect at the time of such Product sale and acknowledges that it has read and understands same.*

The tekmar Limited Warranty to the Purchaser on the Products sold hereunder is a manufacturer's pass-through warranty which the Purchaser is authorized to pass through to its customers. Under the Limited Warranty, each tekmar Product is warranted against defects in workmanship and materials if the Product is installed and used in compliance with tekmar's instructions, ordinary wear and tear excepted. The pass-through warranty period is for a period of twenty-four (24) months from the production date if the Product is not installed during that period, or twelve (12) months from the documented date of installation if installed within twenty-four (24) months from the production date.

The liability of tekmar under the Limited Warranty shall be limited to, at tekmar's sole discretion: the cost of parts and labor provided by tekmar to repair defects in materials and / or workmanship of the defective product; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit limited to the original cost of the defective product, and such repair, exchange or credit shall be the sole remedy available from tekmar, and, without limiting the foregoing in any way, tekmar is not responsible, in contract, tort or strict product liability, for any other losses, costs, expenses, inconveniences, or damages, whether direct, indirect, special, secondary, incidental or consequential, arising from ownership or use of the product, or from defects in workmanship or materials, including any liability for fundamental breach of contract.

The pass-through Limited Warranty applies only to those defective Products returned to tekmar during the warranty period. This Limited Warranty does not cover the cost of the parts or labor to remove or transport the defective Product, or to reinstall the repaired or replacement Product, all such costs and expenses being subject to Purchaser's agreement and warranty with its customers.

Any representations or warranties about the Products made by Purchaser to its customers which are different from or in excess of the tekmar Limited Warranty are the Purchaser's sole responsibility and obligation. Purchaser shall indemnify and hold tekmar harmless from and against any and all claims, liabilities and damages of any kind or nature which arise out of or are related to any such representations or warranties by Purchaser to its customers.

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Product Warranty Return Procedure All Products that are believed to have defects in workmanship or materials must be returned, together with a written description of the defect, to the tekmar Representative assigned to the territory in which such Product is located. If tekmar receives an inquiry from someone other than a tekmar Representative, including an inquiry from Purchaser (if not a tekmar Representative) or Purchaser's customers, regarding a potential warranty claim, tekmar's sole obligation shall be to provide the address and other contact information regarding the appropriate Representative.



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