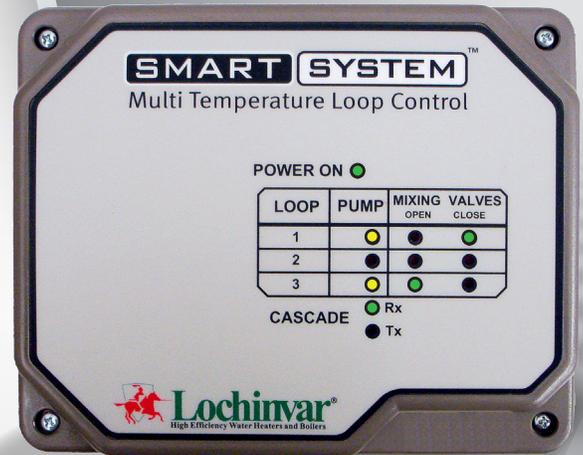




Multi Temperature Loop Control

The Smart System™ Multi Temperature Loop Control (MTLC) is designed to **simplify the integration of FTXL and KNIGHT Heating Boilers** into multiple temperature hydronic heating systems, and **control up to three separate hydronic heating loop temperatures**, while **maximizing the efficiency of the heating boiler system as a primary function**. The new MTLC works in conjunction with the on-board SMART SYSTEM Control on all floor-standing and wall-mount KNIGHT Heating Boilers (KBN081-286, WHN055-399) for residential applications as well as FTXL (FTX400-850) and KNIGHT XL (KBN400-801) Commercial Heating Boilers.

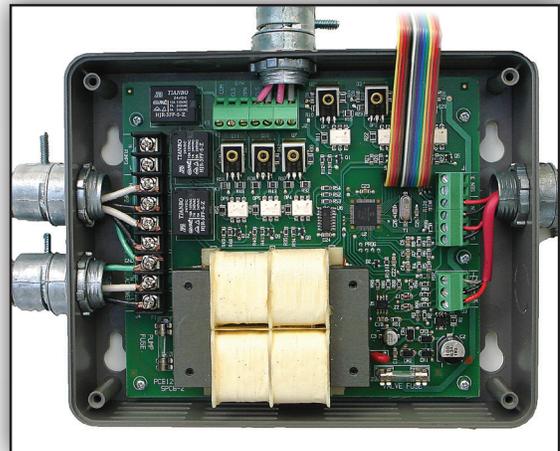
Heating comfort and energy-efficient boiler operation are the driving forces behind the MTLC. Many of today's hydronic heating systems are complex in that they distribute heat to as many as three different supply loops plus an indirect water heater, all requiring a unique temperature. MTLC takes the guesswork out of how to control the boiler supply water temperature without sacrificing efficiency of the heating boiler system.



The Smart System™ Multi Temperature Loop Control

FEATURES

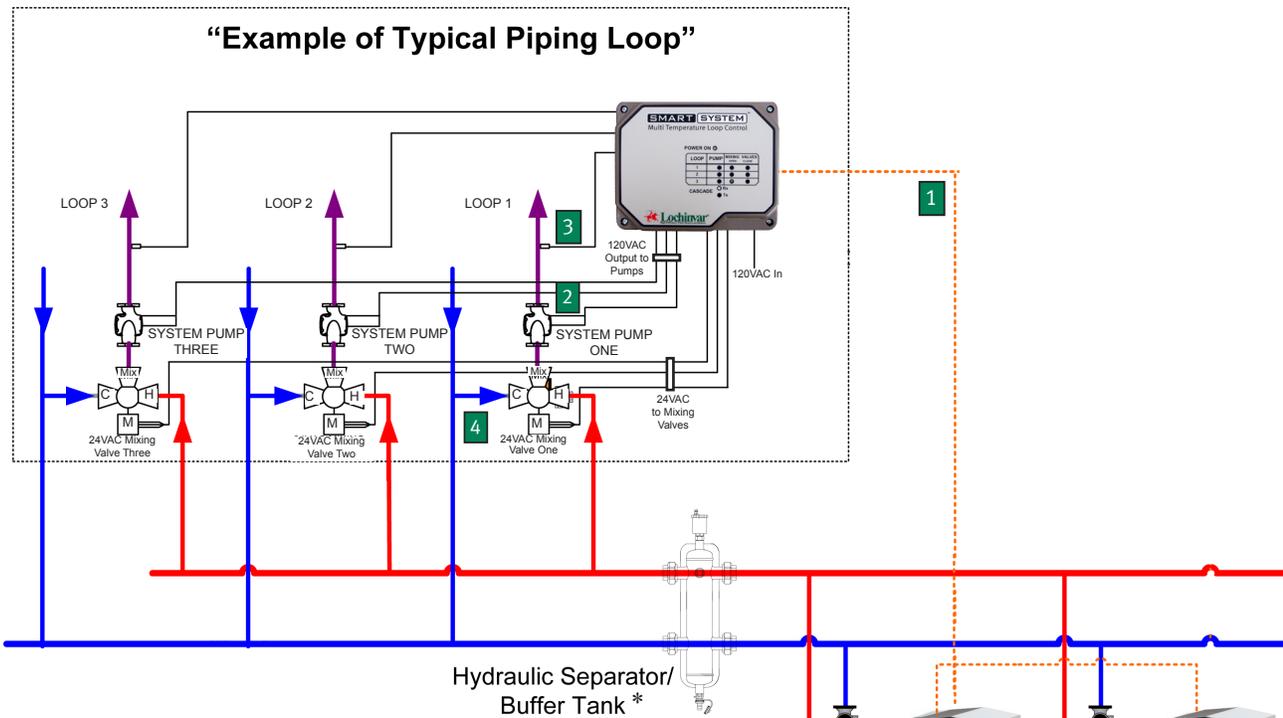
- Control up to three separate hydronic heating loop temperatures.
- Outdoor reset control of up to three hydronic heating loop temperatures.
- On/Off control of up to three hydronic heating loop pumps.
- Control of up to three 24 VAC mixing valves
- Loop temperature feedback from up to three hydronic heating loops (Sensors are standard equipment).



“Under the cover”, the Smart System MTLC utilizes a microprocessor based control board to control up to 3 different hydronic heating loop temperatures while maximizing the boiler system efficiency.

Smart System™ Multi Temperature Loop Control

How It Works



1 The Smart System™ Multi Temperature Loop Control (M TLC) communicates with FTXL, Knight, and KnightXL through the cascade connection on the boiler's low voltage connection board. The M TLC has its own individual cascade address so there is no need to assign an address through on-screen programming.

2 As a heat demand is initiated, the associated loop pump will be enabled and begin to circulate water.

3 A loop temperature sensor will communicate the actual loop water temperature with the Multi Temperature Loop Control. Each loop temperature will be displayed on the boiler's user interface panel.

4 The M TLC will actuate the three way valve via a 24 VAC signal to meet the required setpoint. As space heating water temperature approaches setpoint, the M TLC will actuate the three way valve to keep the loop temperature within the programmed range. Indicator lights on the M TLC will display cascade communication with the boiler, pump status and three way valve activity.

*Primary/secondary piping is also acceptable.

Model Number	Kit Contents
RLY30086	Multi Temp Loop Control Board with Installation Accessories Wall Mount Installation Hardware, 3 Loop Temperature Sensors, and Instruction Booklet

Electrical Requirements	
Supply Voltage	120 VAC
Pump Output	120 VAC (5A Max)
Mixing Valve Output	24 VAC *(Floating Signal)
Sensor	NTC Thermister 10KΩ



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