

Technical service bulletin Low Water Cut Off & Manual Reset High Limit

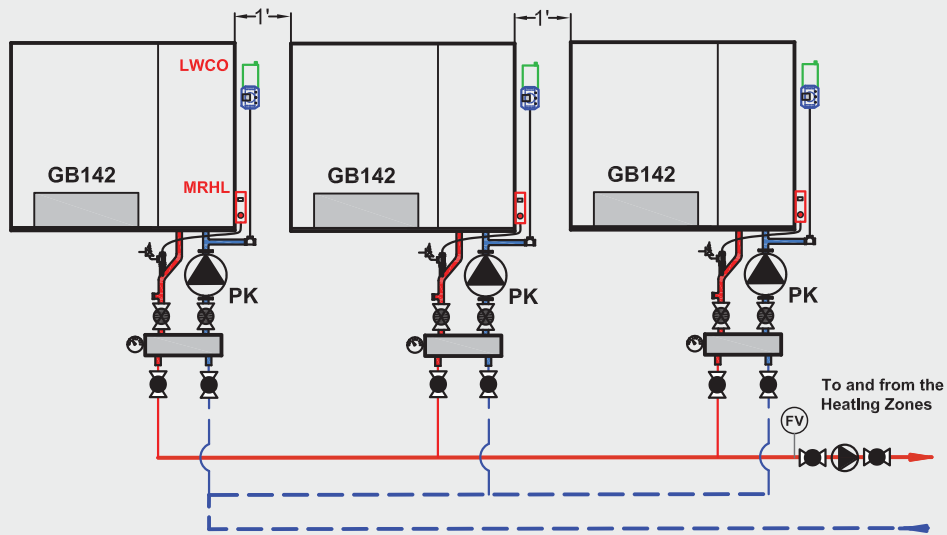
Introduction

Each GB142 boiler is equipped with several internal safety sensors and a controller that prevents boiler operation when it is unsafe to do so.

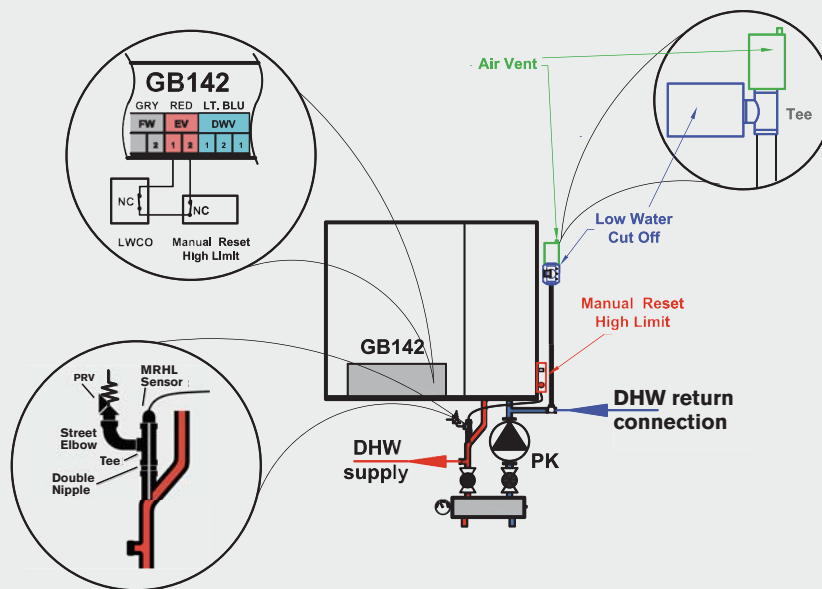
This bulletin describes the recommended location, installation and wiring for the low water cut off (LWCO) and manual reset high limit (MRHL).

Local jurisdictions may require the installation of additional safety devices external to the boiler that meet certain requirements.

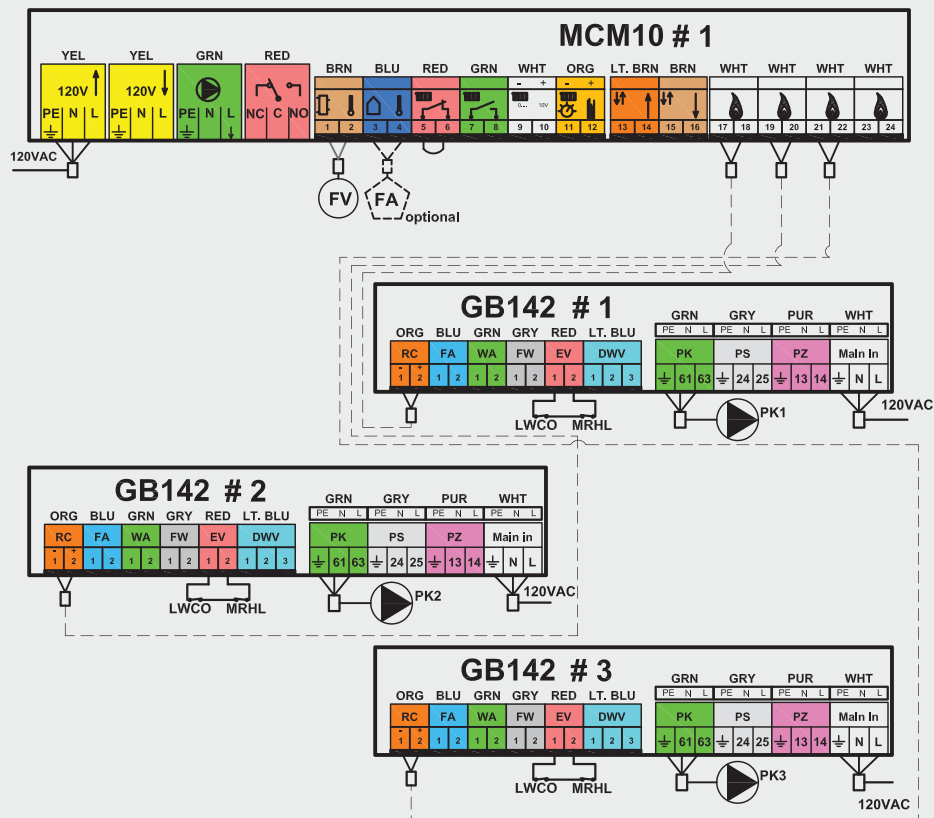
GB142 Cascade piping diagram



GB142 Low water cut off & manual reset high limit detail



GB142 Casade wiring diagram



Installing the MRHL

Required components:

- 3/4" x 2" Nipple
- 3/4" Tee
- 3/4" Street elbow

Remove the PRV from the manifold. Install the nipple and tee. Turn the tee to face to the left and install the street elbow and PRV from the left into it. Thread the MRHL probe from the top into the tee and mount the device on the wall or the side of the boiler.

Installing the LWCO:

Required components:

- 1" Tee or elbow depending if DHW loading is used or not
- 1" to 3/4" reducer
- 3/4" tee
- Air vent

If the boiler is used for DHW tank loading, install a tee into the DHW supply pipe to the tank near the boiler. If DHW is not used install a horizontal piece of pipe from the DHW supply connection of the manifold reaching beyond the right side of the boiler, and an elbow facing up. Use a 3' piece of pipe to reach the top of the heat exchanger. Install the tee, an air vent at the top, and the LWCO on the side.

Wiring:

LWCO and MRHL are wired in series with the EV terminal of the respective boiler. Upon activation the MRHL or LWCO will open their normally closed (NC) contacts and interrupt the EV terminal which will immediately shut off the burner. Power to the boiler remains and the pump may continue to run.

Testing the MRHL:

Turn the MRHL threshold below the setting on the boiler dial and run the boiler. The burner will shut off as soon as the threshold is reached.

Testing the LWCO:

Follow the device's instructions on how to test its performance without draining fluid from the system.

Buderus

Bosch Thermotechnology Corp.
50 Wentworth Ave
Londonderry, NH 03053
Tel: (800) 283-3787
Fax: (603) 965-7581
www.buderus.us