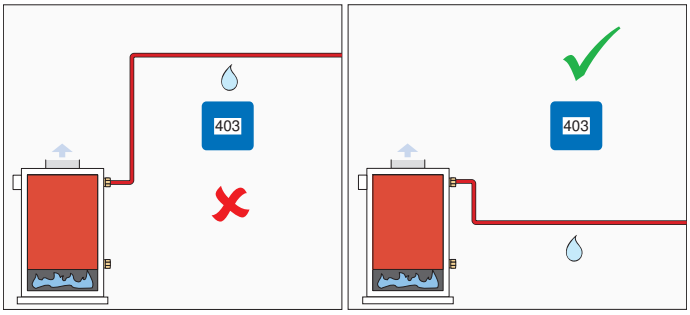
tekmar® Quick Setup Guide
tekmarNet®2 House Control 403

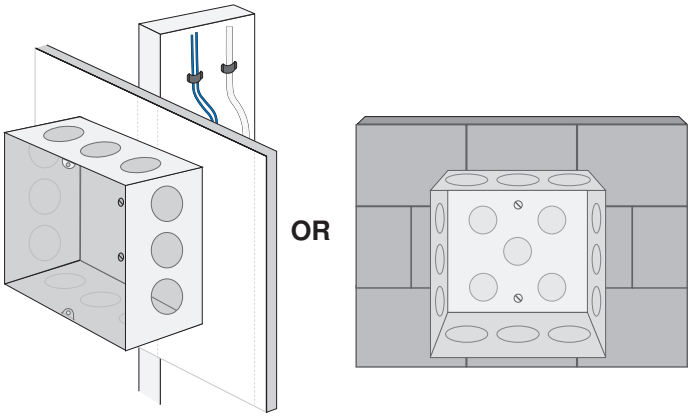
HVAC Systems

Q 403
09/10
Replaces: New

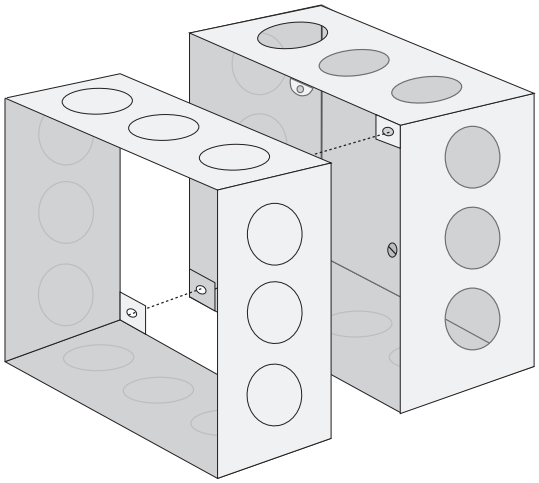
1. Location



2. Install Junction Box

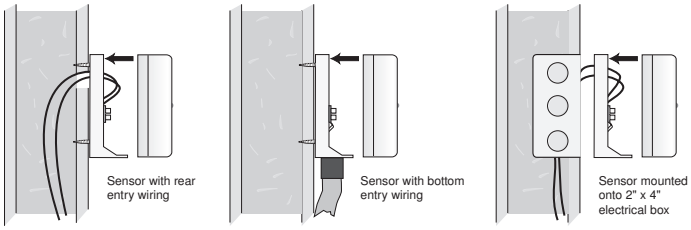


3. Install Extension Ring

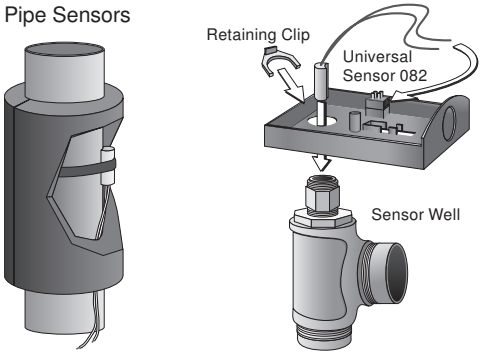


4. Install Sensors

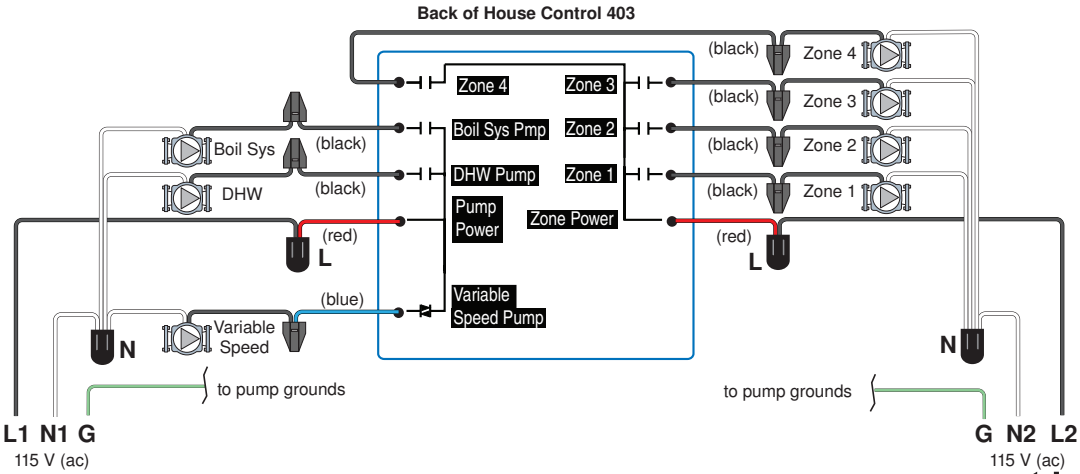
Outdoor Sensors



Pipe Sensors

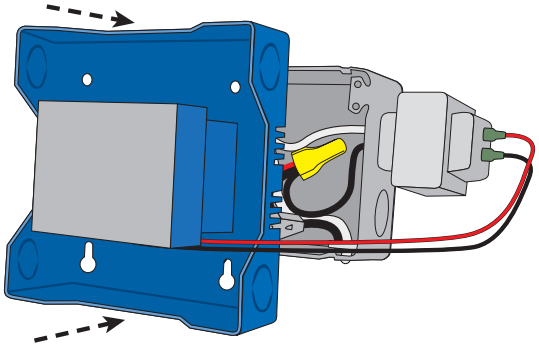


5. Line Voltage Wiring

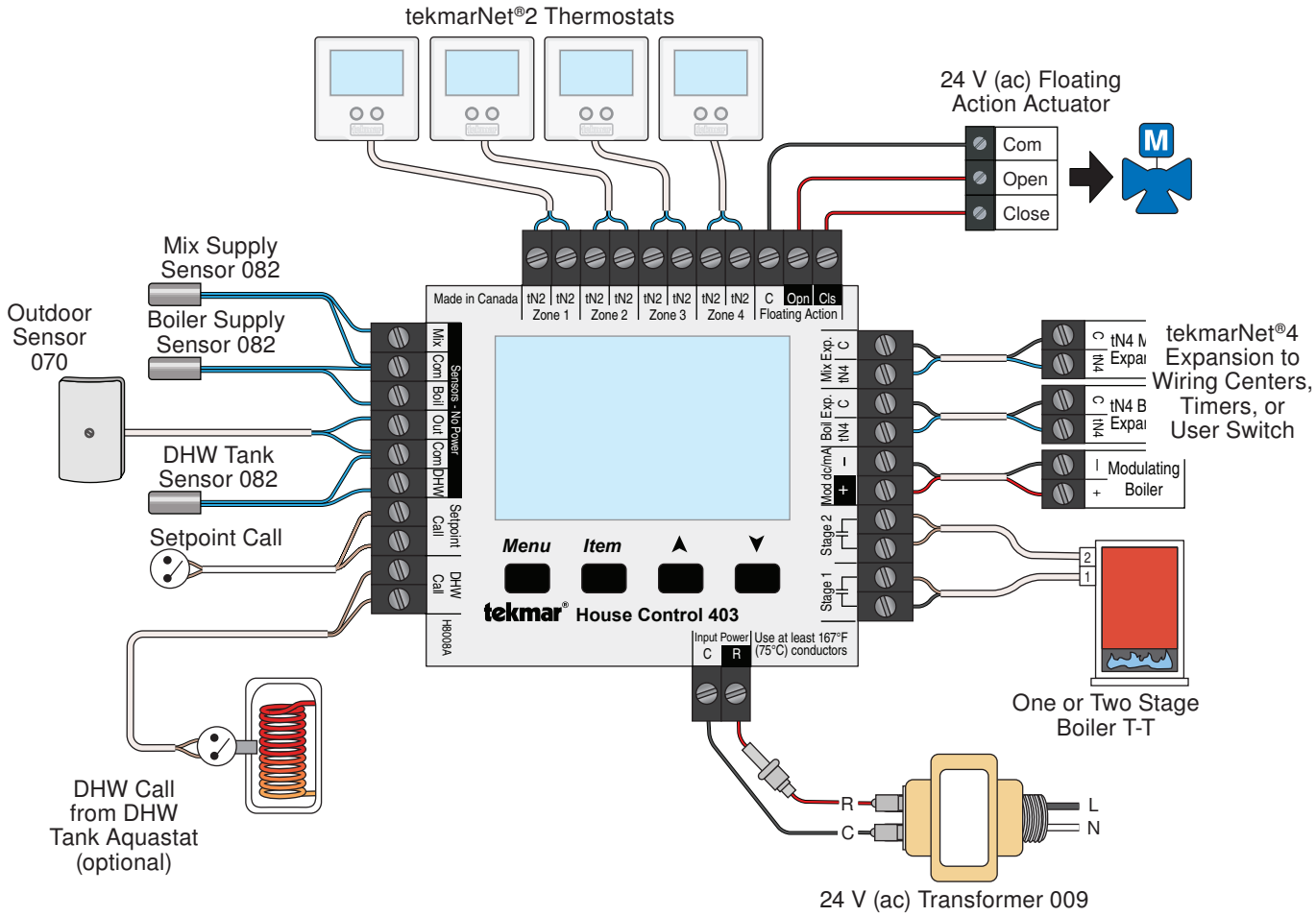


© 2010 tekmar® Q 403 - 09/10

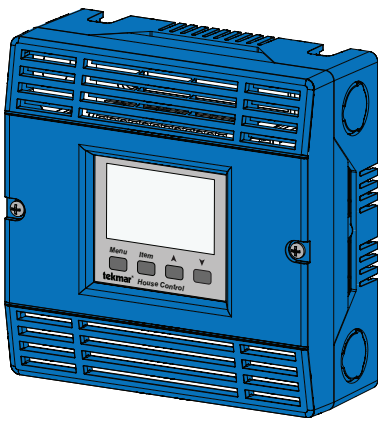
6. Install Enclosure



7. Low Voltage Wiring

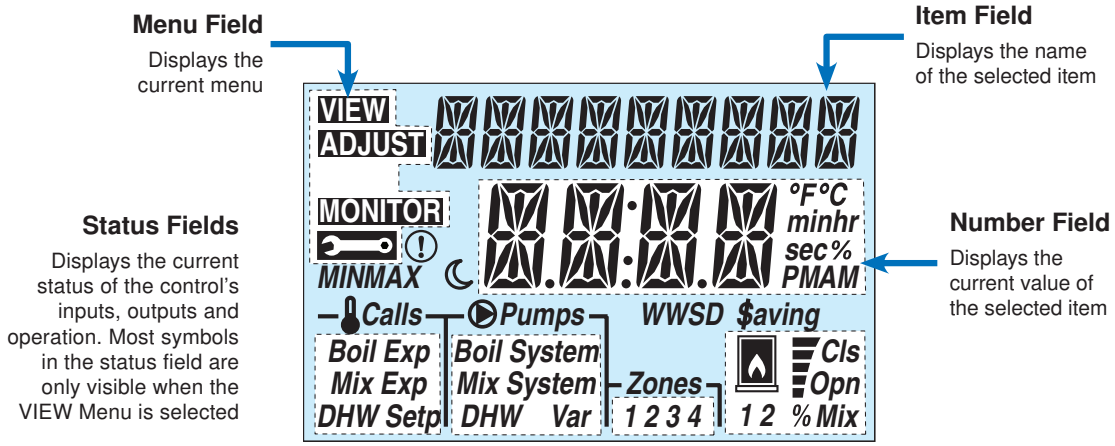


8. Install Cover



9. User Interface

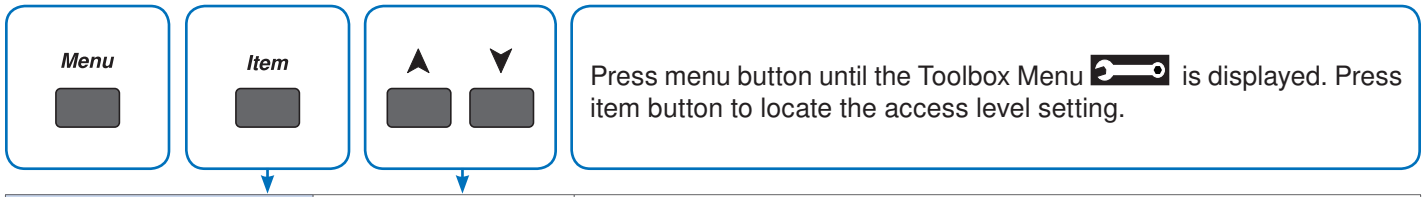
Display

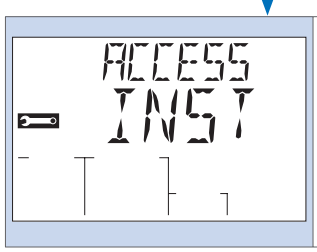


Symbols

Calls	**CALLS** Displays any call for heat the control is receiving.	**°F°C minhr sec%**	**°F, °C, %, HOURS, MINUTES, SECOND** Units of measurement for current number.
Pumps	**PUMPS** Displays any pump currently operating.		**UNOCCUPIED** Indicates that a User Switch or Timer has put the system into UnOccupied.
Zones 1 2 3 4	**ZONES** Displays if an on-board zone is operating.		**BOILER** Indicates that the boiler should be heating.
	WARNING Displays if an error exists on the system.		**DEVICE OUTPUT SCALE** Displays output of the mixing valve or injection pump.
$aving	**ENERGY SAVING INDICATOR** Displays when the system is saving energy. See the Saving Indicator section.	**Cls Opn**	**CLOSE / OPEN** Displays whether the mixing valve motor is opening or closing.
WWSD	**WWSD** Displays when the system is in Warm Weather Shut Down.	**MINMAX**	**MIN / MAX** Displays when an operating temperature reaches a minimum or maximum value.

10. Access Level





INST (Installer) or USER
Default = INST

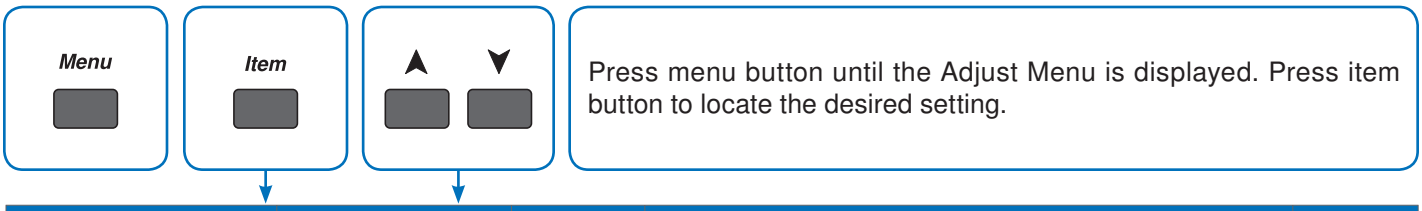
ACCESS LEVEL

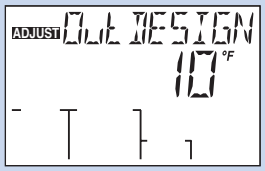
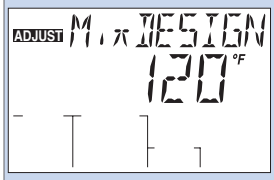
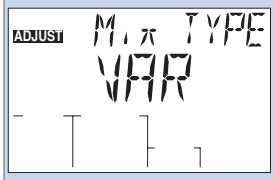
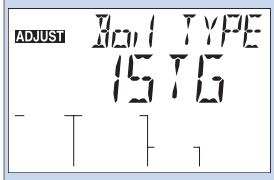
Selects the Access Level of the control, which determines the Menu items available. USER provides the most limited level of access and shows the fewest possible items.

When set to USER, all thermostats are locked and the number of thermostat settings available are reduced.

© 2010 tekmar® Q403 - 09/10

11. Critical Settings



Item Field	Range	Access	Description	Set to
	-60 to 45°F (-51.0 to 7.0°C) Default = 10°F (-12.0°C)	Installer	**OUTDOOR DESIGN** Typically set to the temperature of the coldest day of the year. The outdoor air temperature used in the boiler and mixing heating curves that determine the boiler target and the mix target temperatures.	
	70 to 180°F (21.0 to 82.0°C) Default = 120°F (49.0°C)	Installer	**MIX DESIGN** The supply water temperature required for the mix zones to heat the building on the typical coldest day of the year. Recommendations: High mass radiant floor = 120°F (50°C) Low mass radiant floor = 140°F (60°C) Fancoil or air handling unit = 190°F (90°C) Copper fin-tube convector = 180°F (80°C) Radiators = 160°F (70°C) Low profile baseboard = 150°F (65°C)	
	4-20 mA, 0-10 V (dc) FLOT, VAR Default = VAR	Installer	**MIX TYPE** Select the type of mixing device. VAR = Variable speed injection pump FLOT = Floating action motor for mixing valves 0-10 = 0 -10 V (dc) analog signal for mixing valves 4-20 = 4-20 mA analog signal for mixing valves ***Note:*** 0-10 and 4-20 are only available when Boiler Type = 1 Stage or 2 Stage.	
	EMS2, EMS1, 4-20 0-10, 2STG, 1STG Default = 1STG	Installer	**BOILER TYPE** The type of boiler connected to the control. 1STG = single one-stage on-off boiler 2STG = single two-stage on-off boiler 0-10 = 0-10 V (dc) modulating boiler 4-20 = 4-20 mA modulating boiler EMS1 = tekmar boiler staging controls EMS2 = Viessmann modulating boilers with OpenTherm ***Note:*** Only 1STG and 2STG are available when the Mix Type is set to 0-10 V (dc) or 4-20 mA.	

tekmar Control Systems

tekmar Control Systems Ltd., Canada, tekmar Control Systems, Inc., U.S.A. **Head Office: 5100 Silver Star Road, Vernon, B.C. Canada V1B 3K4, 250-545-7749, Fax. 250-545-0650 Web Site: www.tekmarcontrols.com**

Product design, software and literature are Copyright © 2010 by:
tekmar Control Systems Ltd. and tekmar Control Systems, Inc.

All specifications are subject to change without notice.
Printed in Canada. Q403 - 09/10.