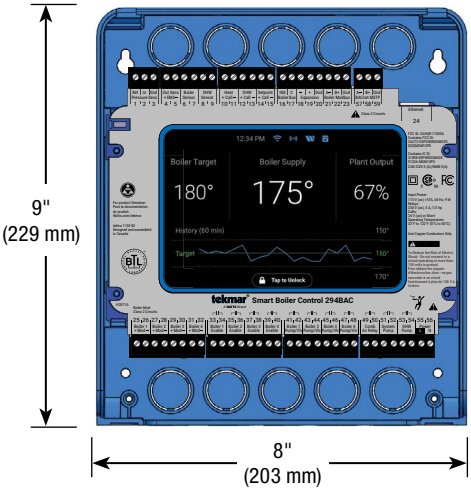
Submittal

Job _____ Designer _____ Contact _____

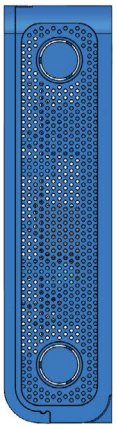
Smart Boiler Control 294BAC

The Smart Boiler Control 294BAC provides central and indirect domestic hot water heating or volume domestic hot water heating by operating up to four boilers. This can be expanded in groups of four boilers through the use of expansion controls up to a maximum of sixteen boilers. The 294BAC operates both condensing and non-condensing boilers that are either modulating, single, two, three or four-stage to provide a flexible, cost-effective hybrid boiler plant solution. The Nexa™ by Watts web and mobile applications provide real-time remote monitoring, setting adjustments, and notifications. The control supports BACnet/IP and BACnet MS/TP for integration with building automation systems (BAS) and third party analytics platforms.

Front View



Side View



Features

- Compatible with BACnet/IP and BACnet MS/TP protocols
- Remote access using web/mobile app
- Email and text message notifications
- Operates 4 boilers
- Expandable to 16 boilers
- Boiler equal runtime rotation
- Central heating with outdoor reset
- Domestic hot water heating
- DHW priority and priority override
- Setpoint heating
- tekmarNet compatible
- Condensing/non-condensing groups
- Variable primary flow
- Combustion air damper control
- Programmable setback schedule
- PID and proportional staging options
- Sequential or parallel staging
- Fixed lead and fixed last options
- Warm weather shut down
- Pressure monitoring and alert
- Setup Wizard

works with nexa

Specifications

Smart Boiler Control 294BAC

Call customer service if you need assistance with technical details.

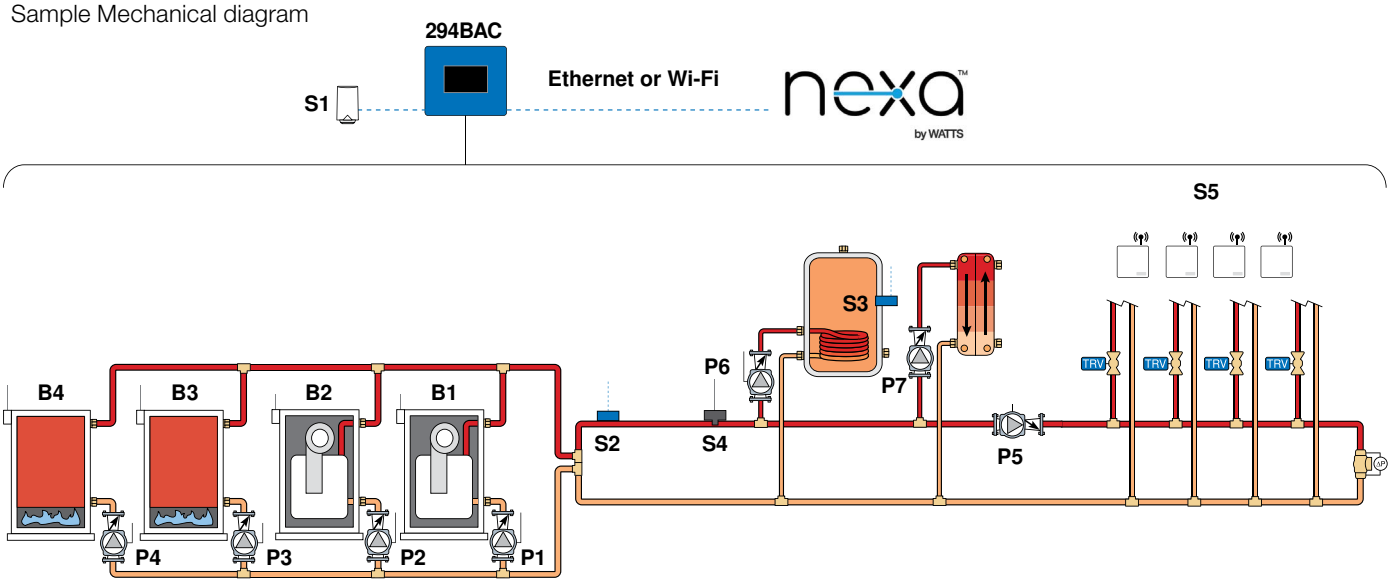
Literature	Submittal, Application, Installation and Operation Manual, Installation Sheet, Job Record, BACnet Integration Guide
Packaged weight	3.3 lb. (1500 g)
Dimensions	9" H x 8" W x 2-11/32" D (229 x 203 x 60 mm)
Display	5" color touchscreen
Enclosure	Blue ABS plastic, NEMA type 1
Approvals	CSA C US, FCC Part 15B, ICES-003 Class A, BTL Listed
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C), RH ≤90% non-condensing, Altitude < 6560 feet (2000 m), Installation Category II, Pollution Degree 2
Power supply	115 V (ac) ±10%, 60 Hz, 9 W
Relays	230 V (ac), 5A, 1/3 hp
Modulating outputs	0-10 V (dc) 500 Ω minimum load impedance or 4-20 mA 1 kΩ max load impedance
Calls	24 V (ac) or Short
Sensor	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) ß=3892
–Included	Outdoor Sensor 070, Universal Sensor 082
–Optional	tekmar type # 042, 043, 071, 078, 087, 088
Communications	10/100 Ethernet, WiFi 802.11n, 2.4 GHz, WPA2 encryption, BACnet/IP, BACnet MS/TP
Mobile App	Apple iOS 14 or higher, Android 10 or higher
Warranty	Limited 3 Year (See IOM for full warranty)

tekmar product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact tekmar Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on tekmar products previously or subsequently sold.

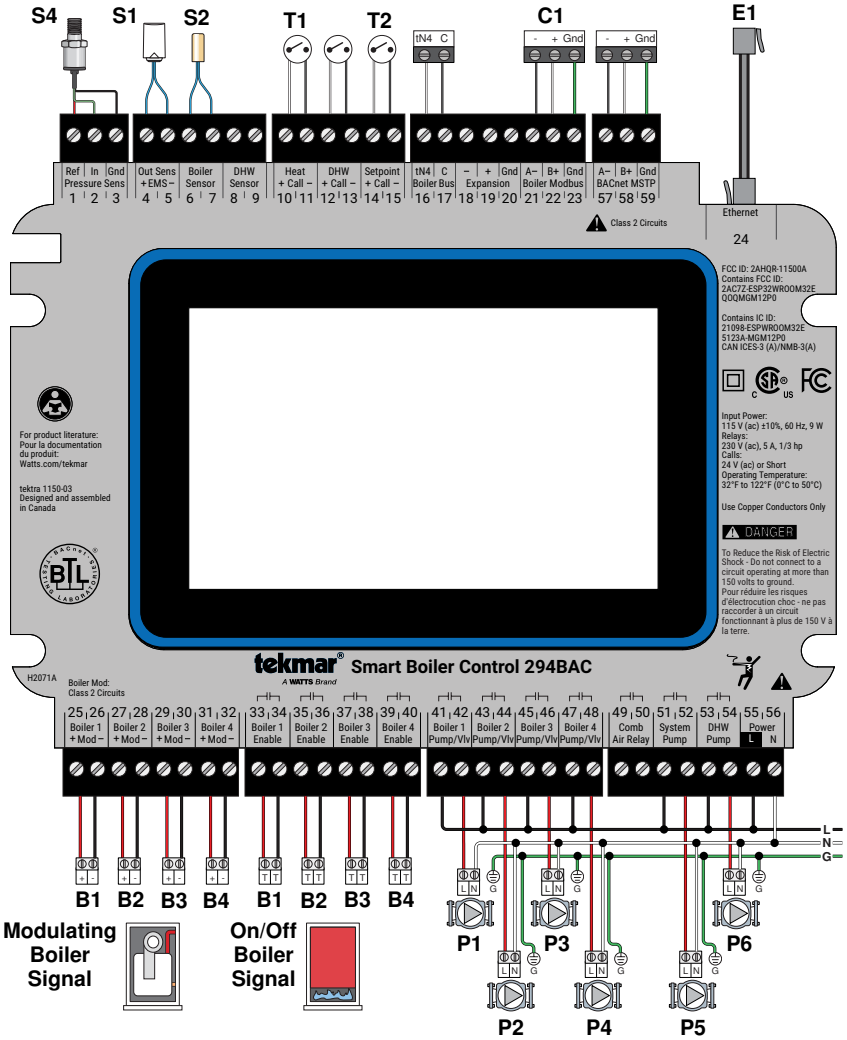
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Sample Application Drawing

Sample Mechanical diagram



Sample Electrical diagram



LEGEND

B1 = Boiler 1
B2 = Boiler 2
B3 = Boiler 3
B4 = Boiler 4
C1 = Modbus Communication to Boiler
E1 = Ethernet (Optional)
P1 = Boiler Pump 1
P2 = Boiler Pump 2
P3 = Boiler Pump 3
P4 = Boiler Pump 4
P5 = System Pump
P6 = DHW Pump
P7 = Setpoint Pump
S1 = Outdoor Sensor 070 or Optional Wireless Mesh Outdoor Sensor 043
S2 = Boiler Supply Sensor 071
S3 = DHW Tank Sensor 078 (Optional)
S4 = Pressure Sensor 088 (Optional)
S5 =Wireless Mesh Indoor Sensor 042 (Optional)
T1 = Central Heating Call
T2 = Setpoint Call

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

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