ITT

Bulletin D-431C

Bell & Gossett®

ZONE BIAS CONTROL SYSTEMS PRODUCT DATA BULLETIN

ZONESĀV™

Packaged Systems Group

The Technologic 5500 Zonesāv Controller utilizes a superior method to minimize the water flow volume required for each hydronic zone without sacrificing humidity control and comfort. Zones now can be "decoupled" thermally as well as hydraulically from the primary chilled or hot water distribution system.

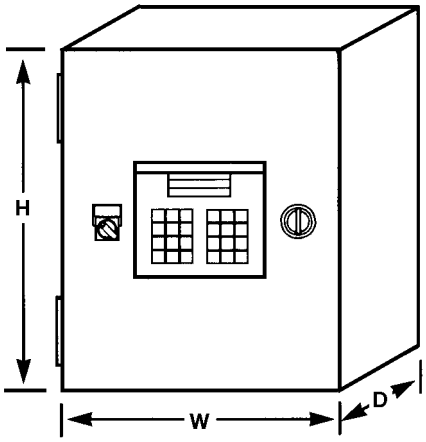
STANDARD FEATURES

- Wall Mounted NEMA 1 Enclosure
- Temperature Inputs/Readouts
- On Screen Help Functions
- Field Modifiable Set Points
- Adjustable PID Functions
- Automatic or Manual System Control
- Fused 24 Volt Power Supply
- Choice of one of the following Programs:
  - Temperature/Humidity Optimization
  - GPM/BTU Readout
  - Flow Limit Control (Zone Flow Limiting)
  - Differential Temperature
- System Purge
- PID Auto-Tuning Functions
- PID Energy Optimization
- Valve Limit User-Accessible Parameters
- Logging of Alarms, Valve Position, Data
- UL Listed

OPTIONS

- Temperature Detectors with 4-20ma output
- Control Valve
- Actuator–Electric or Pneumatic
- Valve Positioner–Electric or Pneumatic
- Insertion Flow Meter with Pulse and 4-20ma output
- Digital and Analog Logic Input Modules for Expanded Communications
- RS Communications
  - Johnson N2
  - Modbus RTU
  - Bacnet MSTP
  - Lonworks
- Bacnet IP

DIMENSIONAL DATA



Zonesāv	
H	20"
W	16"
D	8⅝"
LBS	40

Engineered for life

ITT

Zonesāv Controller

Each independent zone shall be furnished with an ITT Bell & Gossett Type ZONESĀV™ Independent Zone Valve Control System to thermally and hydronically decouple the zone. The system shall monitor and control chilled water supply to the zone to assure maximum allowable temperature rise and minimum flow demand on the chiller plant. It shall allocate chilled water resources on a predetermined and preprogrammed basis.

The control system shall include as, a minimum, the programmable logic independent zone valve controller and remote sensor/transmitters as indicated on the plans. Provide additional items as specified or as required to properly execute the sequence of operation.

The ZoneSāv Valve Controller assembly shall be listed by and bear the label of Underwriter's Laboratory, Inc. (UL). (Canadian Standards Association (CSA) listing available upon request.) The controller shall be specifically designed for independent zone valve control to thermally and hydronically decouple the zone.

The logic controller shall be capable of accepting four (4) (option for total of 8) discrete analog inputs from zone sensor/transmitters as indicated on the plans. Analog input resolution shall be 12-bit minimum, and the controller shall scan each analog input a minimum of once every 100 milliseconds. Use of a multiplexer for multiple sensor inputs is not acceptable. All sensor/transmitter inputs shall be individually wired to the pump logic controller for continuous scan and comparison function. All analog inputs shall be provided with current limit circuitry to provide short circuit protection and safeguard against incorrect wiring of sensors.

The logic controller shall be self-prompting. All messages shall be displayed in plain English. The following features shall be provided: Multi-fault memory and recall, on-screen help functions, LED pilot lights, and soft-touch membrane keypad switches.

The logic controller display shall be no less than four lines with each line capable of displaying up to twenty characters. The human interface panel shall include, but not limited to the following:

- System supply temperature - Actual
- Zone supply temperature - Actual
- Zone supply temperature - Setpoint
- Zone return temperature - Actual
- Zone return temperature - Setpoint
- Chilled water supply flow in GPM (requires optional flowmeter)
- Thermal consumption in BTU's (MBH) and tonnage (requires optional flowmeter)

A data-logging feature shall be provided as a function of the logic controller. The Alarm log shall include the last 20 alarms with date/time stamp. The Sensor Data log shall display a log of sensor values over a user selectable log rate. The Valve Data log shall display a log of valve position values over a user selectable log rate.

The unit shall totalize chilled water flow, BTU's and tons of refrigeration consumed by the load. The interval of totalization shall be over a user adjustable period of time.

The logic controller shall incorporate a Flash Memory for saving and reloading customized settings. These field determined values shall be permanently retained in Flash memory for automatic reloading of the site specific setup values in the event of data corruption due to external disturbances.

The valve controller shall be a Bell & Gossett Technologic Series 5500 ZoneSāv Controller. Each system shall consist of a microprocessor based controller housed in a NEMA 1 enclosure suitable for wall mounting. The operator interface panel shall provide authorized personnel access to the program including setpoints and operational mode. Access will be protected by password security.

As an option, the valve controller shall include a panel mounted 2-position Summer/Winter Switch. The switch will allow the user to select (1) of (2) sets of setpoints.

The system manufacturer or factory trained representative shall provide start-up of the valve control system. This start-up shall include verification of proper installation, system initiation, adjustment and fine tuning. Start-up shall not be considered complete until the sequence of operation, including all alarms, has been sufficiently demonstrated to the owner or owner's designated representative. This jobsite visit shall occur only after all hook-ups, tie-ins, and terminations have been completed and signed-off on the manufacturer's start-up request form.

ITT
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TÜV CERT DIN ISO 9001

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