THE DUAL TEMPERATURE SENSOR
FOR ANY CLIMATE

Going To Extremes

TS300 Leading-Edge Temperature Sensor

From one extreme to the other, no temperature sensor outperforms the TS300. As the first temperature sensor equipped as a dual temperature sensor, the TS300 provides simultaneous operation of local and remote probes. Added features such as programmable hysteresis, output matrix mapping and alarm memory offer users a higher level of protection and flexibility. The distinctive design of the TS300 also features an audible alarm with silence timeout which can be programmed to resound according to user preferences.

- Simultaneous operation of local and remote probes
- Programmable hysteresis prevents multiple alarms
- Output Matrix Mapping provides versatility and flexibility
- Programmable Alarm Delay ignores temporary conditions
- Audible Alarm with Silence Timeout
- Alarm Memory (Up to eight events)

Advanced Technologies Introduce
A New Level of Freedom & Versatility

The TS300 is far and away the most flexible temperature sensor available today. When guarding temperature sensitive environments, versatility is important to the both the dealer/installer and the end-user. This fully featured sensor is designed and engineered to allow the end-user to independently program local and remote temperature probes in accordance with the varying environmental requirements. With TS300, alarm point ranges may be customized, as can the timing and resounding of audible alarms.

Simultaneous Operation Of Local And Remote Probes:
The TS300 features a dual temperature sensor which has the capacity to control both a local and a remote probe at the same time. This is the first and only temperature sensor available today that supports simultaneous operation of more than one probe.

Programmable Hysteresis: (see chart A, B)
The distinctive versatility of the TS300 is evidently demonstrated by its innovative hysteresis feature. Temporary conditions often influence the gradual rise or fall of temperatures around the alarm point. Under such conditions, conventional sensors generate multiple alarm and restore messages. The TS300, with its unique Programmable Hysteresis feature, generates an alarm only the first time the temperature reaches the alarm point. As long as the temperature fluctuates within the hysteresis range, no subsequent alarms will be transmitted to the central station until the environment has reached the predetermined restore temperature.

**Programmable Alarm Delay: (see chart C)**
The TS300's programmable alarm delay feature is but one of the sensors advanced alarming options. Designed to reduce the incidence of nuisance alarms during temporary conditions, this feature allows the user to delay the sounding of the alarm for a designated period of time. Routine tasks such as restocking or cleaning, which may cause the temperature to rise above or fall below the programmed alarm point, may be completed without generating an alarm.

Output Matrix Mapping: (see chart D)
End-users may specify any combination of zone characteristics and alarm conditions with the TS300's sophisticated output matrix mapping. Two Form A relays allow the local and remote sensors to be programmed identically or individually. Flexibility is key, as users may customize both sensors to meet any range of temperature.

Audible Alarm With Silence Timeout:
An alarm feature that sets the TS300 apart is its silence timeout capability. The TS300 is equipped with an audible alarm which sounds once the temperature at an enabled sensor varies outside of its defined limits. The TS300 additionally allows users to designate a "time-out" time. With the touch of a button, users may silence a sounding alarm for a period of time.

Without Programmable Hysteresis

A

With Programmable Hysteresis

B

Programmable Alarm Delay

C
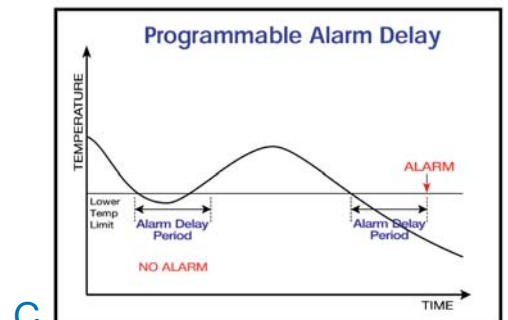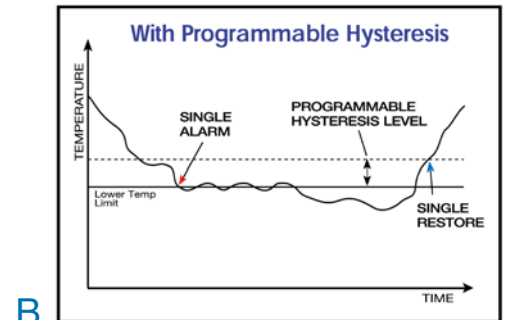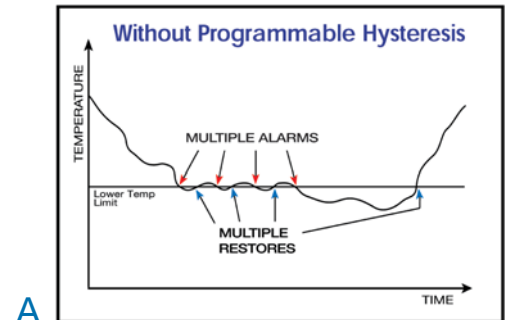
Output Matrix Mapping
(Example)

|		Local Probe		Remote Probe	
	N.O./N.C.	Lo Limit	Hi Limit	Hi Limit	Lo Limit
Output 1	N.O.	Yes	Yes	Yes	No
Output 2	N.C.	Yes	No	No	No
	Alarm State	Conditions for Alarm			

D

TS300 The Dual Temperature Sensor

A butcher may require portions of his stock to be stored at different temperatures. Since the TS300's dual temperature sensors operate simultaneously, two areas can be monitored with ease at the same time. And, with the TS300's Output Matrix Mapping feature, the butcher has the flexibility to specify alarm points or ranges for each one of the two temperature probes – the local and the remote.
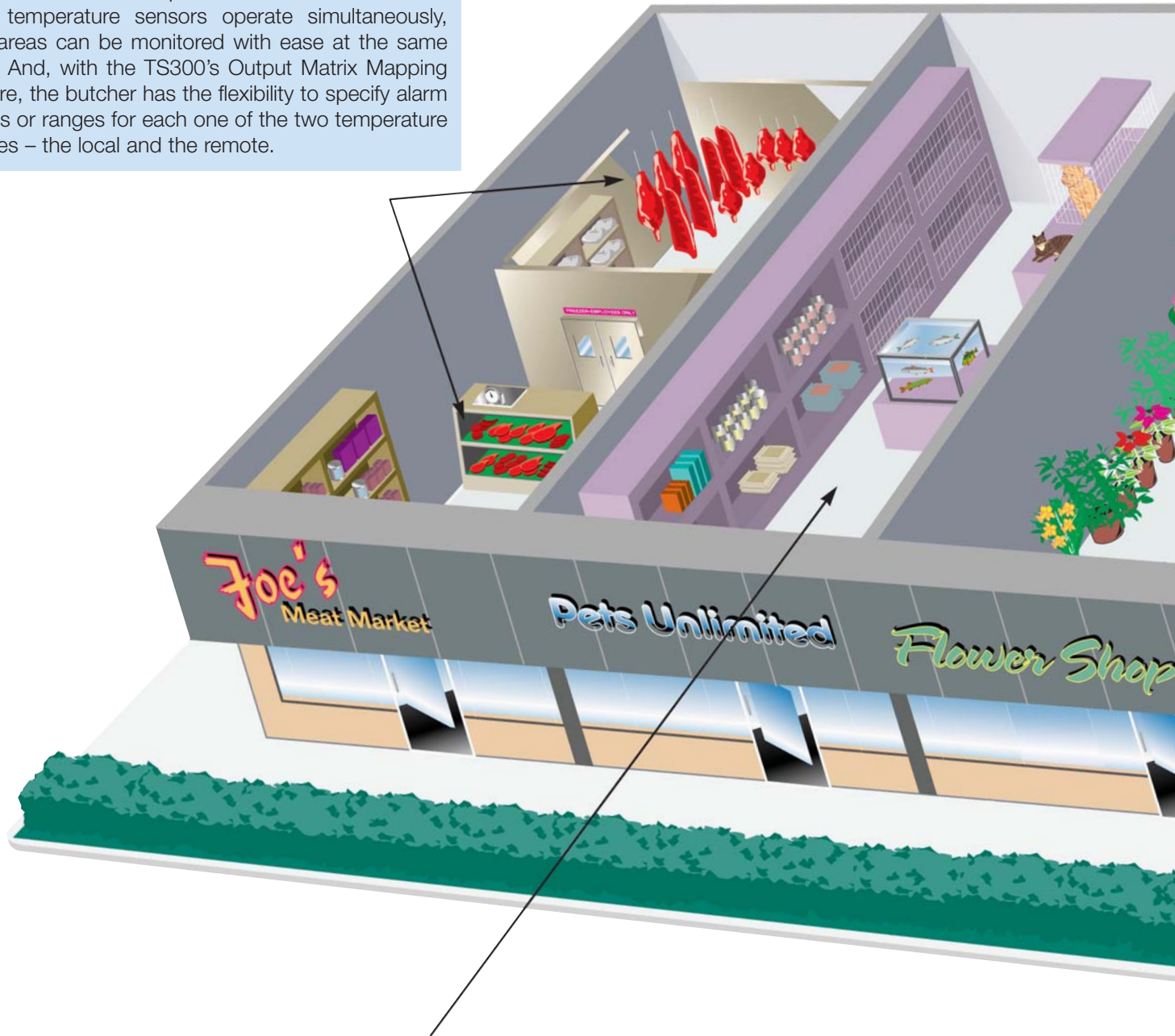
Animals, especially when young, may be easily frightened by the sounding of alarms. The TS300's unique Audible Alarm with Silence Timeout allows pet shop staff to readily silence an alarm for a pre-programmed period of time with the touch of a button.

The integrity of electronic computer products is dependent upon a controlled environment. If the air conditioning system were to fail, the temperature within the store would slowly rise. As the temperature reaches the alarm limit, small, natural fluctuations in temperature will generate multiple alarms, causing multiple alarms and restore messages to be communicated to the central station. However, with the TS300 unique Programmable Hysteresis feature, an alarm is generated only the first time the temperature reaches the alarm point. As long as the temperature fluctuations remain within the hysteresis range, no subsequent alarms will be transmitted to the central station until the temperature has reached the predetermined restore point.

Computer & Supplies
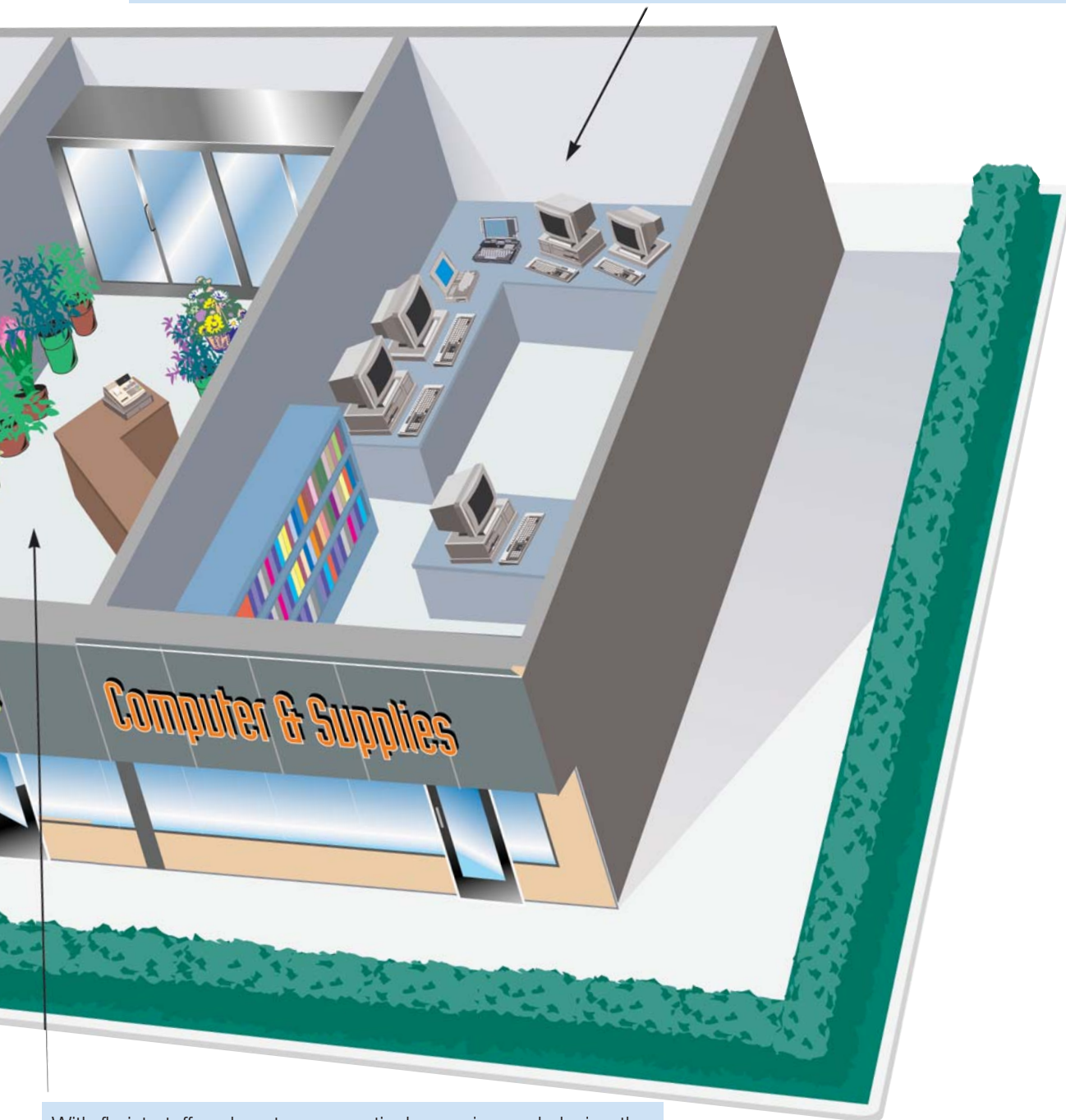
With florist staff and customers routinely opening and closing the refrigerator doors, the temperature will naturally fluctuate. To avoid nuisance alarms, the TS300's Programmable Alarm Delay feature allows the florist to program the sensor to delay an alarm until the limit has been exceeded for a programmed period of time.

TS300

The fully featured TS300 is distinctly engineered to meet the demands of a wide range of applications. From florists and butchers to pet shops and computer centers, the TS300 is designed to provide uncompromising performance. Features unique to the TS300, such as simultaneous use of local and remote temperature probes, programmable hysteresis and output matrix mapping, illustrate the sensor's flexibility in installation, programming and operation.

Applications

Florist • Walk-In Freezer • Vacation Home • Record Room Storage • Candy Store • Zoo • Laboratory • Operating Room Medicine Storage • Fish Hatcheries • Horse Farms • Wine Cellar Vineyard • Ice Cream Parlor • Butcher • Pet Store • Kennels Candy Store • Blood Bank • Incubators • Food Produce Displays Computer Room • Art Gallery • Vault Disk Room Storage Pharmacy • Bakery

TS300 Specifications

Temperature Range/Accuracy (Local Sensor)
32° F to 140° F (0° C to 60° C) +/-3° F (+/-1.7° C)

Temperature Range/Accuracy (Remote Probe)
-40° F to 140° F (-40° C to 60° C)+/-4° F (+/-2.2° C)

Minimum Span between Hi and Low Limits
4° F (2.2° C)

Alarm Delay
0-255 minutes in one-minute increments

Alarm Output Type
(2) Form A reed relays

Alarm Output Resistance
25 ohms maximum

Alarm Output Rating
50mA/30VDC maximum

Audible Alarm
4k Hz, 75dB @ 10cm pulsed 750 mS on/off

Audible Alarm Silencing
0-255 minutes in 1 minute increments

Input Voltage
7 to 16 VDC

Input Current
25mA (max.)

Case Dimensions
4" x 2.6" x 0.9" (10.2 cm x 6.6 cm x 2.3 cm)

T280R Remote Temperature Probe Specifications

The T280R is a Remote Temperature Probe for use with the TS300. The Remote Probe is a sealed temperature sensor with 15 feet of two conductor, 24 AWG stranded cable.

Chemical Properties
Non-corrosive Waterproof

Max. Compression Force Applied To Probe
10 lb. force

Max. Tensile Force Applied Between Probe and Cable
5 lb. force

Max. Cable Length
300 Feet*

*The T280R may be extended from 15' up to 300' using shielded 24 AWG cable.