

20425 SERIES | HIGH CURRENT DEFROST THERMOSTATS

SNAP-ACTION AUTOMATIC RESET

Introduction

Klixon® 20425 Series thermostats are fixed setting, low-cost snap-action temperature controls designed with sealed construction for refrigeration, air conditioning and heat pump applications.

Sensata Technologies has been a leading global supplier of pressure sensors & switches for over 50 years.

The 20425 Series is available in single-pole, single-throw (SPST) or single-pole, double-throw (SPDT) automatic reset configurations. All operating parts and lead connections are contained within a metal cup which is filled with an epoxy resin compound to completely seal out moisture, dust and other contamination.

Temperature actuation is initiated by the Klixon snap-action bi-metallic disc. The snap-action of the disc provides fast, accurate switching. The disc is located at the bottom of the cup where thermal change at the mounting point is quickly transmitted to give this product a high degree of thermal sensitivity.

A variety of mountings are available, as shown on the following pages.

Features and Benefits

- Completely sealed thermostat.
- Resists shock and vibration regardless of mounting position - Klixon® snap-action thermal disc assures positive make/break action.
- Splash proof enclosure - sealed against dirt and moisture.
- Easy to mount - available with bottom, thru-wall or tube mounting
- High capacity - up to 25 amp, 120 and 240 VAC resistive. UL recognized for 100,000 cycles. (SA995)
- Tamperproof - temperatures are factory set.
- Automatic reset - recycles automatically.



TECHNICAL SPECIFICATIONS

Temperature Settings, Tolerances and Nominal Differentials

The list of temperature settings, tolerances and nominal differentials shown below are standard. (Selection of larger differentials and wider tolerances offer the lowest unit price). If settings and differentials other than those shown are desired, please contact Sensata Marketing.

** Customers checking tolerances should allow for differences in test equipment.*

Range of Temperature Settings		Mfg.* Tolerances		Minimum Mean Temperature Differential
		Open	Close	
(-10) 81	80	±6	±6	15°F
	221	±5	±5	15°F
(-10) 81	80	±6	±6	20°F
	221	±5	±5	20°F
(-10) 81	80	±6	±7	30°F
	221	±5	±5	30°F
(-10) 81	80	±6	±7	40°F
	221	±5	±5	40°F

Ambient Temperature Exposure (Maximum)

20425 Series	0°F to 221°F
20427 Series	0°F to 221°F
20428 Series	0°F to 221°F

Contact Description

Klixon 204 Series thermostats are supplied in two contact structures identified by the numbers following the basic series number.

The letter "F" added to the series number indicates that the thermostat is supplied as a fan switch (closes on temperature rise). The letter "L" indicates that the thermostat is supplied as a controlling and high limit control (opens on temperature rise).

All thermostats with "F" and "L" designations are supplied with single-pole, single-throw switching action while "D" indicates single-pole, double-throw switching action.

Leads

Leads are attached to the terminals of the basic unit prior to sealing. Leads are #14, #16, or #18 gauge wire size, and are provided with ends stripped. Quick connect terminals, eyelets, or other terminal configurations are available at additional cost.

Length of lead as required by customers is measured from the center of the thermostat to:

1. End of stripped wire
2. Center of eyelet
3. Center of right angle Quick Connect
4. End of straight Quick Connect

Standard Polyvinyl Chloride (PVC) insulation is available in a variety of colors as required. XLP wire insulation is available as an option.

Wire Size (AWG)	20425 Series
#14 5/16th wall	105°C PVC, UL approved 1060 appliance wire
#16 1/16th wall	UL Style 1056
#16 1/32nd wall	UL Style 1015
#18 1/16th wall	UL Style 1056
#18 1/32nd wall*	UL Style 1015

Electrical Clearances

1/4" through air to ground
3/8" oversurface to ground

Electrical Ratings - UL and CSA Recognized

	TERMINALS 1 & 3, 14 or 16 AWG WIRE SPST				TERMINALS 1 & 2, 14 or 16 AWG WIRE SPDT			
	100,000 Cycles							
	VDC	VAC			VDC	VAC		
		120	240	277		120	240	277
RES		25	25	15		10	5	
FLA		13	13			5.8	2.9	
LRA		60	60			34.8	17.4	
VA		125	125			125	125	

	30,000 Cycles							
	VDC	VAC			VDC	VAC		
		120	240	277		120	240	277
RES		16	16			5	2.5	
FLA		16	16	15				
LRA		65	65	60				
VA		125	125	125		125	125	

	6,000 Cycles							
	VDC	VAC			VDC	VAC		
	12	120	240	277	12	120	240	277
RES	1	16	16	10	1	15	15	10
FLA		16	16	10				10
LRA		65	65	45				45
VA		125	125					

*Note: FLA rating 7A with 18AWG wire

RES Resistive Amps
 FLA Full Load Amps
 LRA Locked Rotor Amps
 VA Volt Amp, Pilot Duty

Engineering Services

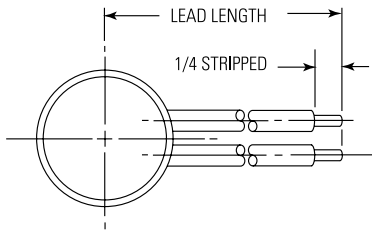
Sensata field sales engineers who understand your temperature control problems and how our products solve them are available to discuss your application needs. Use their expertise to eliminate needless engineering cost and give your products a competitive edge.



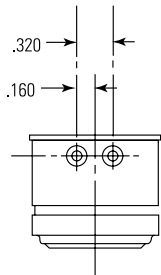
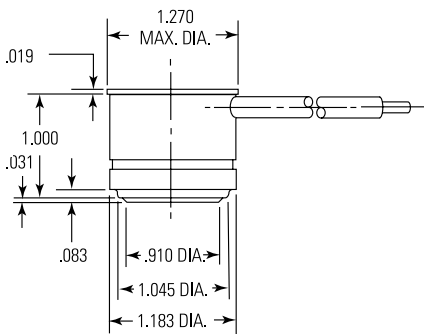
DIMENSIONS AND SCHEMATICS

All dimensions are in inches.

Plain Mounting

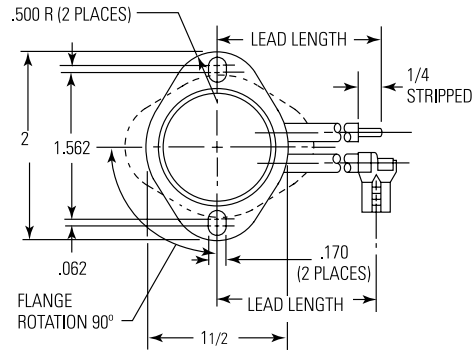


STRIPPED ENDS SHOWN, quick connect, eyelets and other terminal configurations available

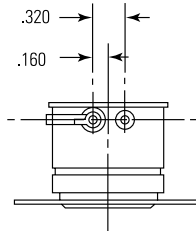
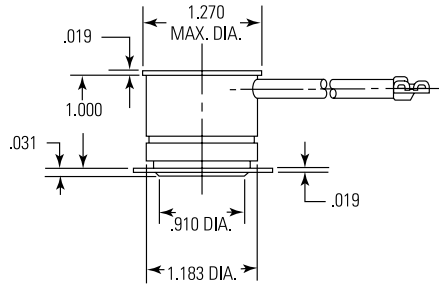


Surface Mounting Oval Flange

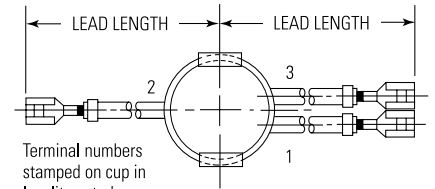
FLANGE: BRASS, TIN-PLATED, SOLDERED TO TIN-PLATED COPPER CUP



Stripped ends, quick connect, eyelets and other terminal configurations available

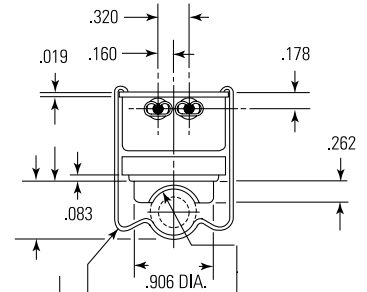
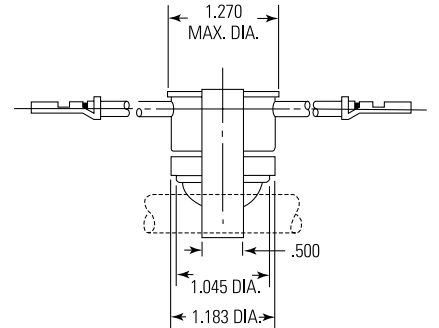


Mounting Cup for 3/8", 1/2", 5/8", and 3/4" Dia. Tubes



Terminal numbers stamped on cup in locality noted

QUICK CONNECTS SHOWN, stripped ends, eyelets and other terminal configurations available



- .514 for 3/8" tube
- .639 for 1/2" tube
- .764 for 5/8" tube
- .889 for 3/4" tube
- .187 R for 3/8" tube
- .250 R for 1/2" tube
- .312 R for 5/8" tube
- .375 R for 3/4" tube

SPRING CLIP OPTIONAL. NOT SUPPLIED UNLESS REQUESTED.

no. 50097-1 must be specified when 1/2" spring clip is ordered
no. 50097-2 must be specified when 3/8" spring clip is ordered
no. 50097-3 must be specified when 5/8" spring clip is ordered
no. 50097-5 must be specified when 3/4" spring clip is ordered



ORDERING OPTIONS

Sensata field sales engineers who understand your temperature control problems and how our products solve them are available to discuss your application needs. Use their expertise to eliminate needless engineering cost and give your products a competitive edge.

Load Requirements

Temperature Settings

Maximum Tolerances allowable on temperature settings.

Lead Wire Specifications

(Length, wire size, type termination).

Type Mounting Flange

Estimated Yearly Usage

Other conditions which affect the thermostat should be described:

1. Maximum and minimum temperature exposure.
2. Location with respect to heat source.
3. Temperature transfer medium (air, metal surface, etc.).
4. Possible contamination sources (lint, chemical fumes, etc.).
5. Exposure to liquid and submersion.



AGENCY APPROVALS AND CERTIFICATIONS



Agency	File Number
UL / CSA	SA995 Guide No. SDFY2 Guide SDFY8 for category

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