

# TK34

## 3/4" Disc Thermostat

Operating Temperature Range (-25°C to +190°C)

This thermostat comes in 3 variations: automatic operation, manual reset and with resistance based internal heater. This thermostat can be used in high current applications (up to 45A).

This thermostat can be built to either open or close its electrical contacts as the temperature increases. Once the temperature of the bimetal disc has returned to the specified reset temperature, the contacts will automatically return to their original state.

Besides its variety of standard configurations the thermostat can also be customized to the specific technical needs of the customer, assuring maximum design flexibility and usage in broad range of temperature control applications for consumer, industrial and commercial products.

Contact Type: Normally Closed; Normally Open

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## BASIC TECHNICAL DATA FOR TK34 (with internal heater) (-25°C - 120°C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Maximum current, A, at power coeff. 0,95, not more	25
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	100 000
Number of automatic cycles, at rated current 25 A and power coeff. 0,95, not less than	100 000
Operating temperature, °C	(-18) to 112
Tolerance of operating temperature, %, but not less than °C	±3; ±5
Reset temperature, lower than operating temperature on, °C not less than	10
Transient resistance, Ω, not more	0,05
Contact operating time, ms, not more	3
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Heating speed, K/min	minimum-0,1; maximum-1,0
Degrees of protection provided by enclosure	IP4X

## TEMPERATURE DEPRESSION FOR TK34 (with internal heater)

Internal heater		Maximum Calibration	Temperature Depression	
Voltage	Resistance		Open	Close
120VAC	7000 Ohms	82.2°C	7.2°C	8.3°C
120VAC	9000 Ohms	111.7°C	5.0°C	6.1°C
120VAC	3600 Ohms	68.3°C	15°C	17.8°C
24VAC	281 Ohms	77.2°C	5.6°C	6.1°C

## CALIBRATION TEMPERATURES, DIFFERENTIALS AND STANDARD TOLERANCES OF THE TK34 (with internal heater)

Highest calibration Set Point Range (Open or Close)	Nominal Differentials (temperature difference between nominal open and close set point)									
	5-5.8°C		8.5-10.5°C		11-16°C		16.5-21.5°C		22-33°C	
	Open	Close	Open	Close	Open	Close	Open	Close	Open	Close
(-18)°-(+26)°C	±3	±3.5	±3	±3.5	±3	±3.5	±3	±4	±3	±4
(+28)°-(+111.7)°C	±3	±3	±3	±3	±3	±3	±3	±4	±3	±4

**Table 1.4 (CONTACT TYPE AND CONTACT TRANSIENT RESISTANCE VALUE)**

CODE	CONTACT TYPE	CONTACT TRANSIENT RESISTANCE, mOhm
1	Normally closed (NC)	≤50
2	Normally open (NO)	≤50

**BASIC TECHNICAL DATA FOR TK34 (Automatic) (-25°C - 120°C)**

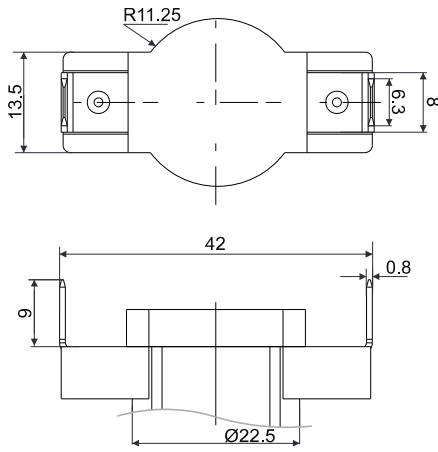
Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Maximum current, A, at power coeff. 0,95, not more	45
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	100 000
Number of automatic cycles, at rated current 25 A and power coeff. 0,95, not less than	100 000
Number of automatic cycles, at rated current 45 A and power coeff. 0,95, not less than	6 000
Operating temperature, °C	(-25) to 120
Tolerance of operating temperature, %, but not less than °C	±3; ±5
Reset temperature, lower than operating temperature on, °C not less than	10
Transient resistance, Ω, not more	0,05
Contact operating time, ms, not more	3
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Heating speed, K/min	minimum-0,1; maximum-1,0
Degrees of protection provided by enclosure	IP4X

**BASIC TECHNICAL DATA FOR TK34 (Manual Reset) (50°C - 120°C)**

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Maximum current, A, at power coeff. 0,95, not more	40
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	1 000
Number of automatic cycles, at rated current 25 A and power coeff. 0,95, not less than	500
Number of automatic cycles, at rated current 40 A and power coeff. 0,95, not less than	500
Operating temperature, °C	50 to 120
Tolerance of operating temperature, %, but not less than °C	±3; ±5
Transient resistance, Ω, not more	0,05
Contact operating time, ms, not more	3
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Heating speed, K/min	minimum-0,1; maximum-1,0
Degrees of protection provided by enclosure	IP4X

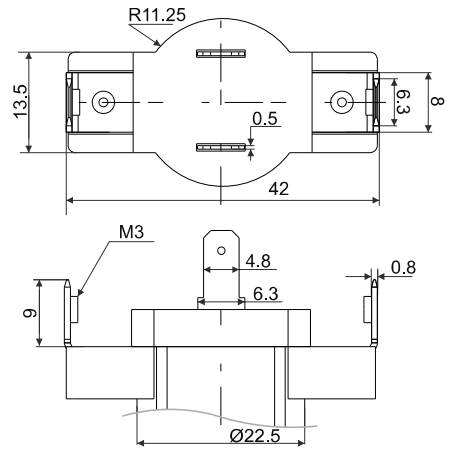
**Table 1.1 (TERMINALS)**

**T 01**



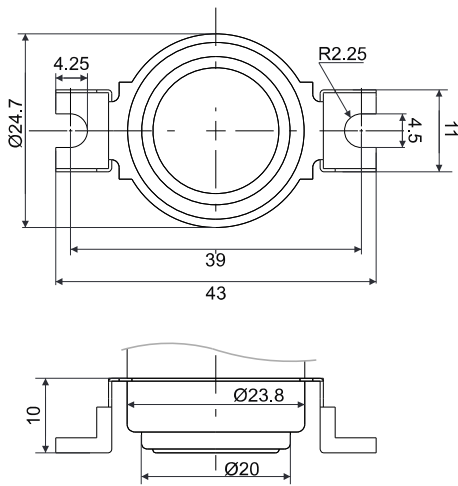
**T 02**

SELF-RESET  
TERMINALS

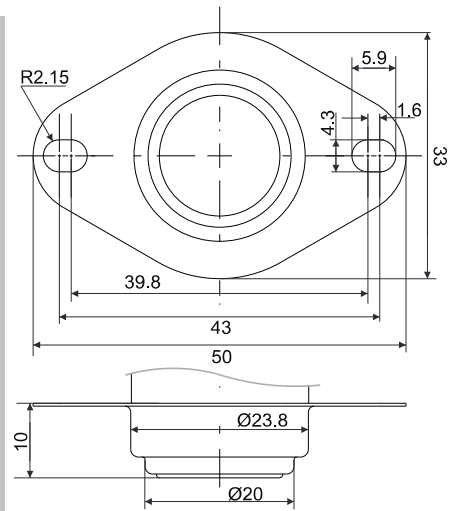


**Table 1.2 (MOUNTING)**

**MG 01**

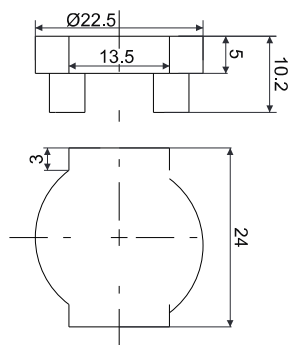


**MG 02**



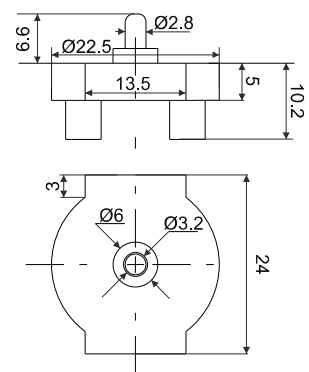
**Table 1.3 (CAPS)**

**C1P**



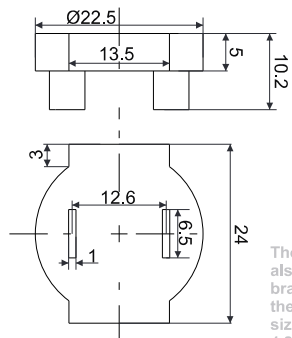
**C2P**

MANUAL  
RESET  
CAP



**C3P**

INTERNAL  
HEATER  
CAP



The B3P package also includes 2 brass terminals for the connector, the size of which is 4.8x0.5 millimeters

## PART ORDERING SYSTEM

TK34	TX*	MGX**	CXP	X	X±X***	X±X***
1	2	3	4	5	6	7
1	Thermostat model					
2	Terminals version (select from Table 1.1)					
3	Mounting version (select from Table 1.2)					
4	Cap version (select from Table 1.3)					
5	Contact type and contact transient resistance value (select from Table 1.4)					
6	Operating temperature value in °C and tolerance in ± %***					
7	Reset temperature value in °C and tolerance in ± %***					

**Example:** TK34-T01-MG01-C1P-1-60°C±3%-35°C±5%

\*Tolerance in % or °C, whichever numerical value is bigger.