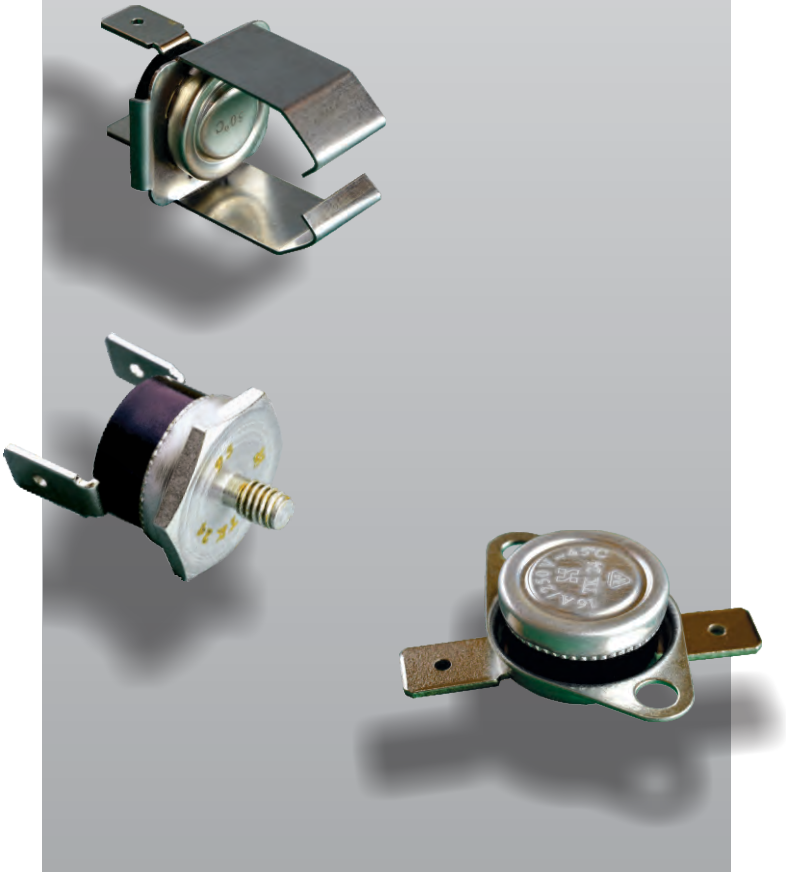
thermorex® We Control The Temperature

thermorex®



TK24

1/2"Disc Thermostat

Operating Temperature Range (-45°C to +200°C)

This is a cyclic operating temperature sensitive device, which is intended to control the temperature between two particular values under normal operating conditions, automatically switching on or off the electrical circuit.

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

BASIC TECHNICAL DATA FOR TK24 (10 °C – 175 °C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	30 000
Number of automatic cycles, at rated current 10 A and power coeff. 0,95, not less than	100 000
Operating temperature, ^{O}C	10 to 175
Tolerance of operating temperature, %, but not less than °C	±1; ±3
Reset temperature, lower than operating temperature, ^{O}C, on	5±3; 15±5; 40±10
Transient resistance, Ω, not more	0,005; 0,01; 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; IP64

BASIC TECHNICAL DATA FOR TK24 (175 °C – 200 °C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	30 000
Number of automatic cycles, at rated current 10 A and power coeff. 0,95, not less than	100 000
Operating temperature, ^{O}C	175 to 200
Tolerance of operating temperature, %	±3; ±6
Reset temperature, lower than operating temperature, ^{O}C, on	30±10; 50±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; IP64

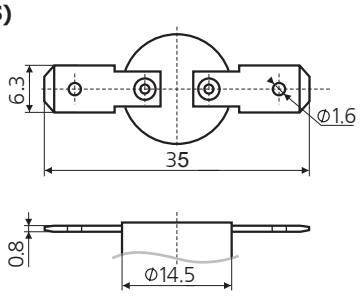
BASIC TECHNICAL DATA FOR TK24 (-45 °C - +10 °C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	30 000
Number of automatic cycles, at rated current 10 A and power coeff. 0,95, not less than	100 000
Operating temperature, ^{O}C	- 45 to 10
Tolerance of operating temperature, °C	±3
Reset temperature, lower than operating temperature, ^{O}C, on	10±3; 15±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	IP64

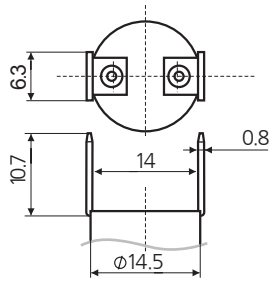
*May differ depending on the wire type and length

Table 1.1 (TERMINALS)

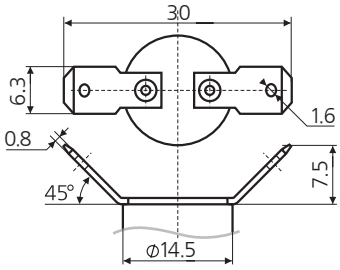
T 01



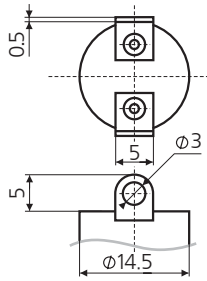
T 02



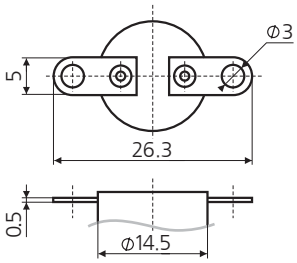
T 03



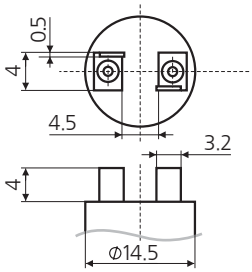
T 04



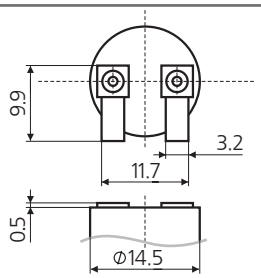
T 05



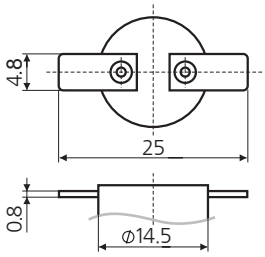
T 06



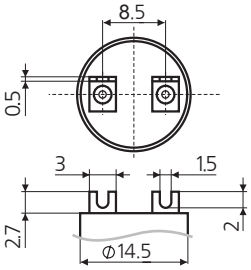
T 07



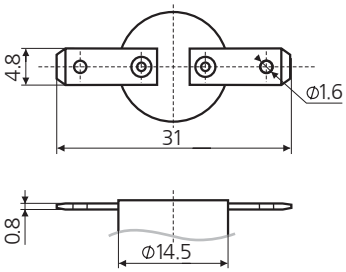
T 08



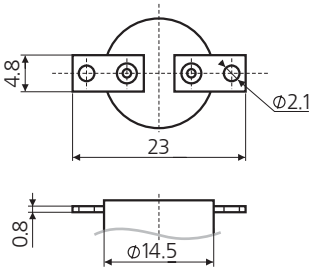
T 09



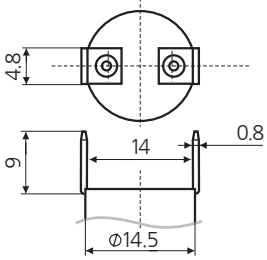
T 10



T 11

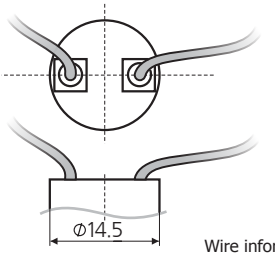


T 12



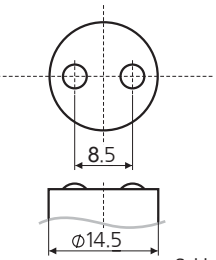
T 13

Wire standard length: 150 mm



Wire information to be specified on the order form (type; cross-section; lengths; stripping)
The only option for TK24 (-45-+10)

T 14

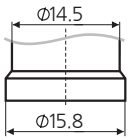


Soldering balls

Table 1.2 (MOUNTING)

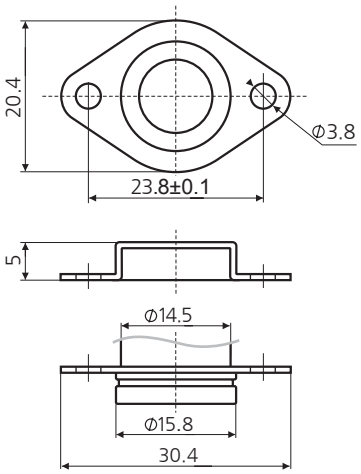
MG 00

NO MOUNTING

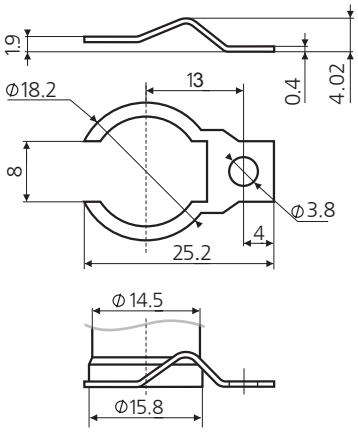


MG 02

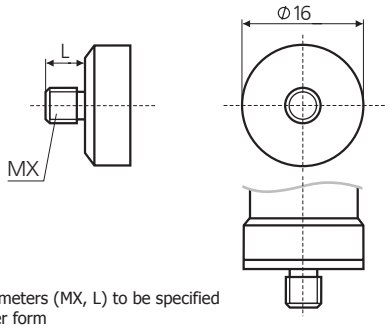
CAP-FLANGE



MG 04



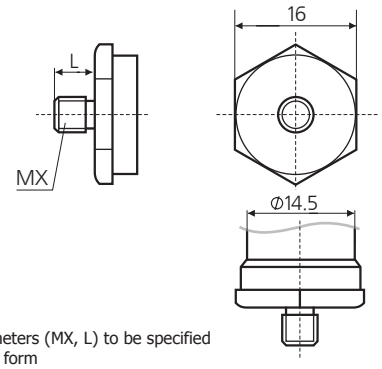
MG 06



Screw parameters (MX, L) to be specified on the order form

MG 08

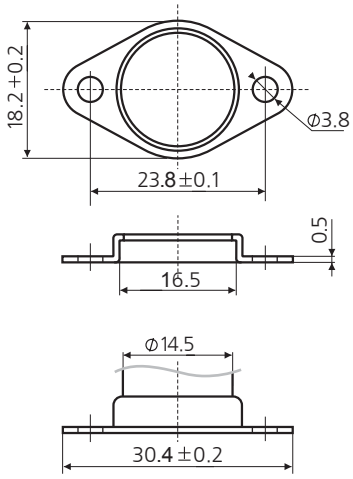
SCREW CAP HEXAHEDRAL 16



Screw parameters (MX, L) to be specified on the order form

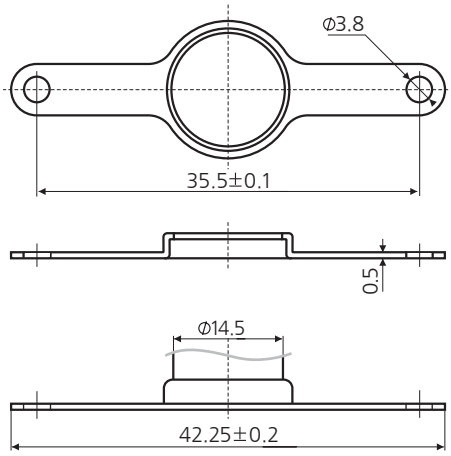
MG 01

ROTATION OR FIXED CLIP



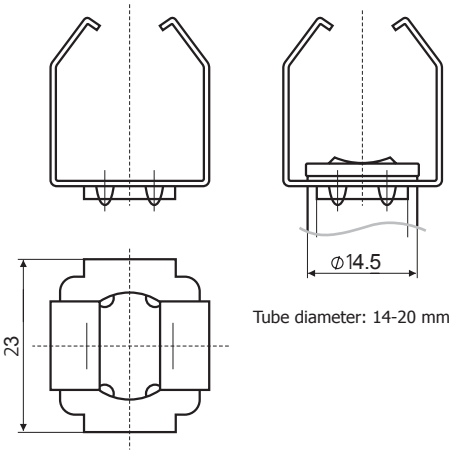
MG 03

ROTATION CLIP



MG 05

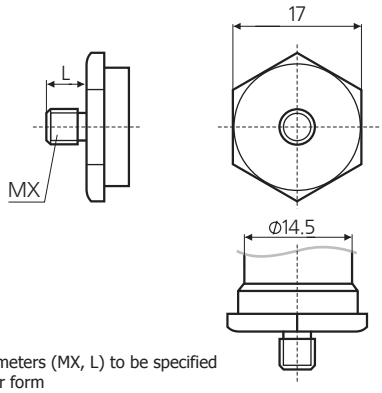
TUBE MOUNTING



Tube diameter: 14-20 mm

MG 07

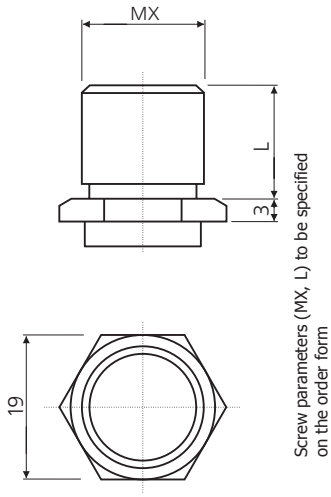
SCREW CAP HEXAHEDRAL 17



Screw parameters (MX, L) to be specified on the order form

Table 1.2 (MOUNTING)

MG 09
SCREW CAP
HEXAHEDRAL 19



MG 10
WITH GROUNDING

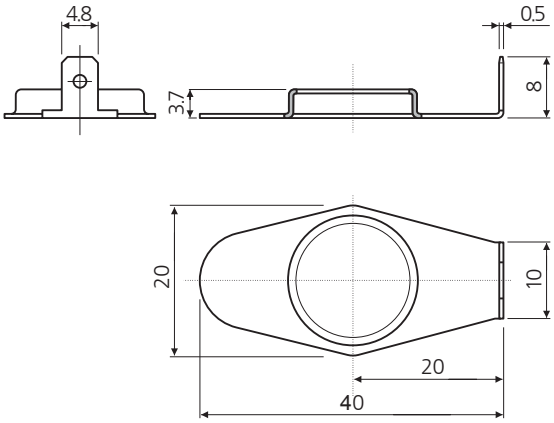
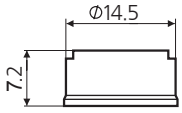
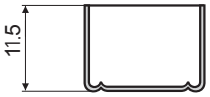


Table 1.3 (BODY and/or CASE)

B1P
PLASTIC BODY

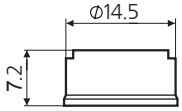


B3S
STEEL CASING

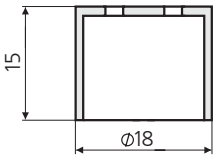


Only with lead wires
Protection degree IP64

B1C
CERAMIC BODY

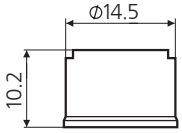


B4P
PLASTIC BODY

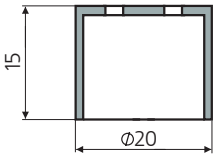


Only with lead wires
and screw caps
Protection degree IP64

B2P
PLASTIC BODY

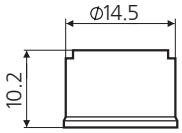


B4C
CERAMIC BODY

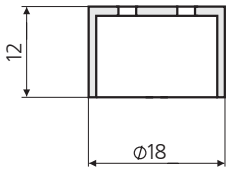


Only with lead wires
and screw caps
Protection degree IP64

B2C
CERAMIC BODY

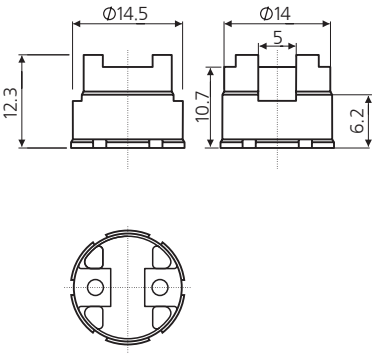


B5P
PLASTIC BODY

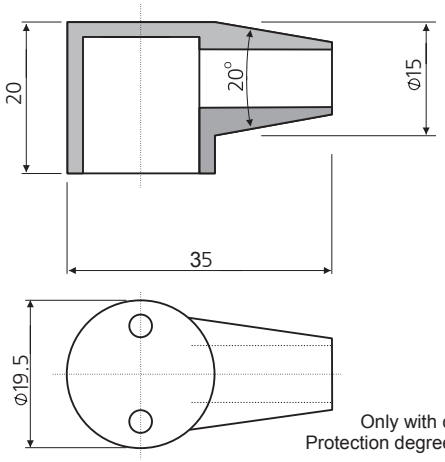


Only with lead wires
Protection degree IP64

B3C
CERAMIC BODY



B6S
SILICONE CASING



Only with cables
Protection degree IP64

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
3	Normally closed (NC)	≤10
4	Normally open (NO)	≤10
5	Normally closed (NC)	≤5
6	Normally open (NO)	≤5

PART ORDERING SYSTEM

TK24	TX*	MGX**	BXX	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	Body 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 ± %***

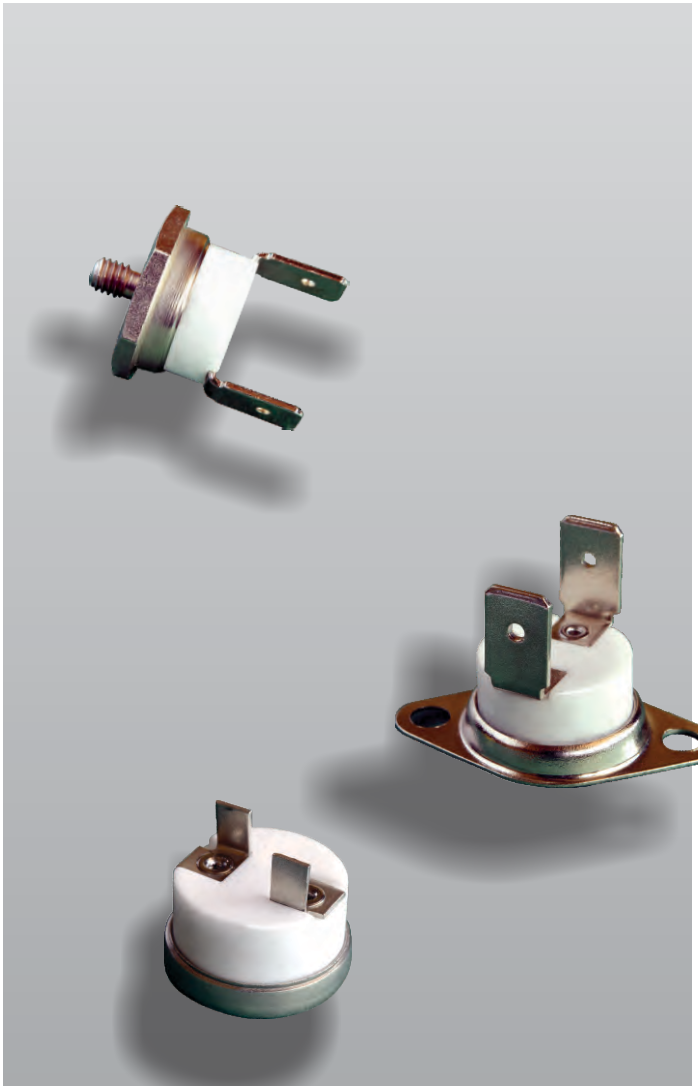
Example: TK24-T01-MG04-B2C-2-60±3%-20±5%

*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

**For screw cap mountings, screw parameters must be specified when placing an order.

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

thermorex®



TK24HT

1/2"Disc Thermostat

Operating Temperature Range (+200°C to +425°C)

This is a cyclic operating temperature sensitive device, which is intended to control the temperature between two particular values under normal operating conditions, automatically switching off the electrical circuit. This thermostat is designed to operate in higher temperatures.

This thermostat is available only with electrical contacts that open 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 applications.

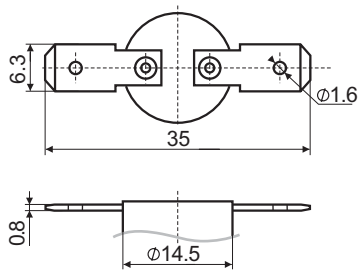
Contact Type: Normally Closed

BASIC TECHNICAL DATA

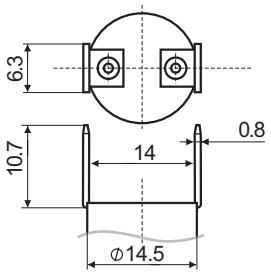
Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	10
Rated current, A, at power coeff. 0,6, not more	6,3
Number of automatic cycles, at rated current 10 A and power coeff. 0,95, not less than	10 000
Operating temperature, ^{O}C	200 to 425
Tolerance of operating temperature, %	±6
Reset temperature, lower than operating temperature, ^{O}C, on	60±10; 100±10; 150±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

Table 1.1 (TERMINALS)

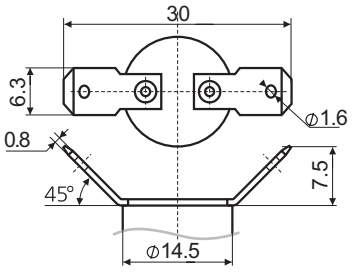
T 01



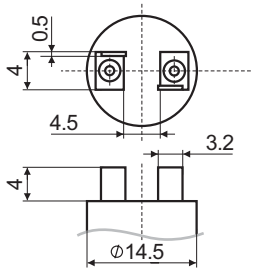
T 02



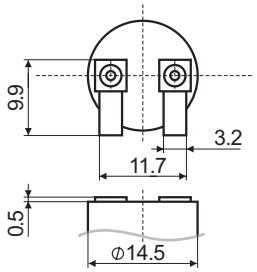
T 03



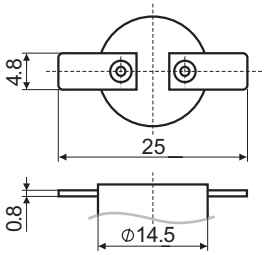
T 06



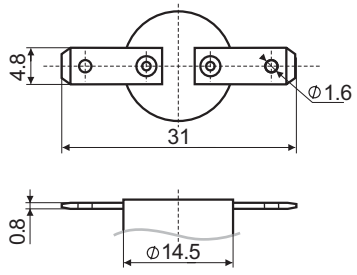
T 07



T 08



T 10



T 11

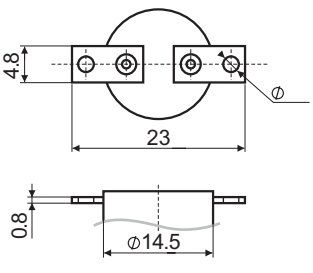
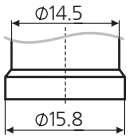
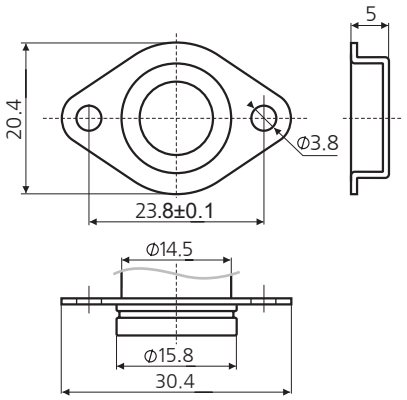


Table 1.2 (MOUNTING)

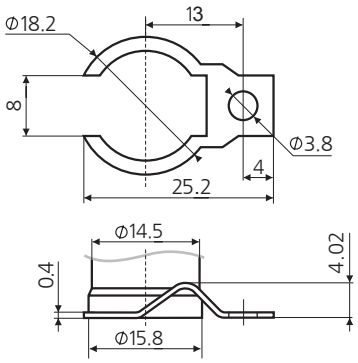
MG 00
NO MOUNTING



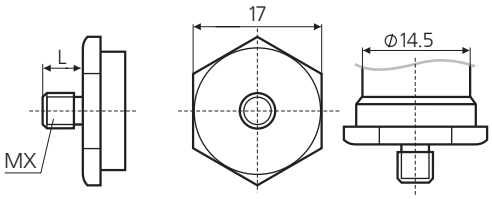
MG 02
CAP-FLANGE



MG 04
CLIP WITH ONE FIXING HOLE

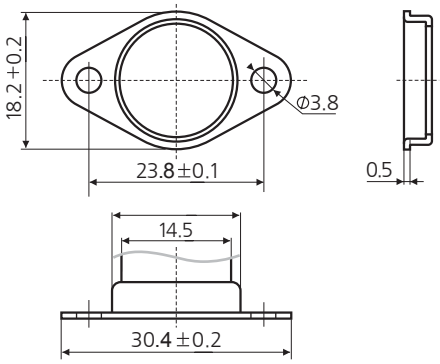


MG 07
SCREW CAP HEXAHEDRAL 17

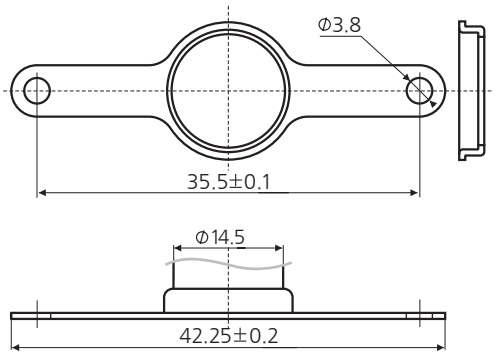


Screw parameters (MX, L) to be specified on the order form

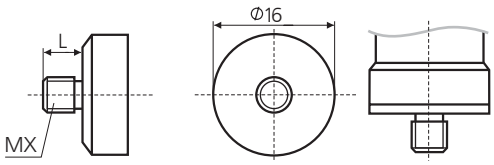
MG 01
ROTATION OR FIXED CLIP



MG 03
ROTATION CLIP

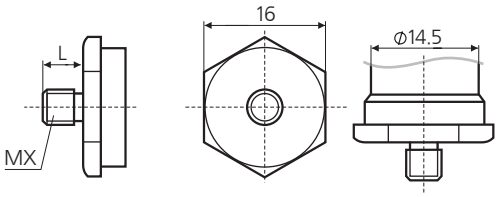


MG 06
SCREW CAP ROUND



Screw parameters (MX, L) to be specified on the order form

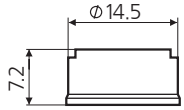
MG 08
SCREW CAP HEXAHEDRAL 16



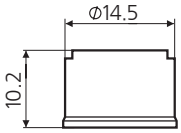
Screw parameters (MX, L) to be specified on the order form

Table 1.3 (BODY and/or CASE)

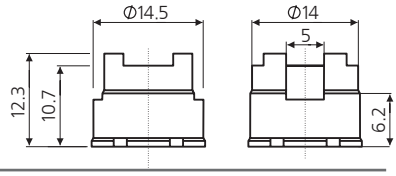
B1C
CERAMIC BODY



B2C
CERAMIC BODY



B3C
CERAMIC BODY



PART ORDERING SYSTEM

TK24HT	TX	MGX*	BXX	X±X	X±X
1	2	3	4	5	6

1	Thermostat model
2	Terminals version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Body version (select from Table 1.3)
5	Operating temperature value in °C and tolerance in ± %
6	Reset temperature value in °C and tolerance in ± %

Example: TK24HT - T01 - MG04 - B2C - 350 ± 6% - 200 ± 10%

*For screw cap mountings, screw parameters must be specified when placing an order.

thermorex®

TK32

½" Disc Temperature Limiter

Operating Temperature Range (+30°C to+250°C)

This is a temperature sensitive device, which is intended to keep a temperature below one particular value during normal operating conditions, automatically switching off the electrical circuit. This device is not self-resetting and operates with manual reset option. It prevents overheating in variety of consumer, industrial and commercial products.

This temperature limiter is available only with contacts that open as the temperature increases. The contacts may be reset by manually pushing on the reset button after the device has cooled below the open temperature calibration.

Besides its variety of standard configurations this limiter 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.

Contact Type: Normally Closed

BASIC TECHNICAL DATA FOR TK32 (30 °C – 170 °C)

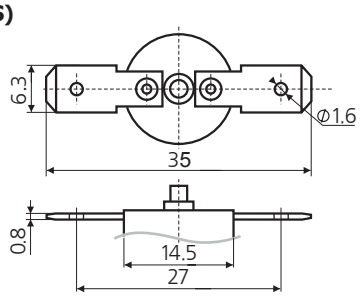
Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	10 000
Operating temperature, ^{O}C	30 to 170
Tolerance of temperature limiter operating temperature, %, but not less than ^{O}C	± 3
Transient resistance, Ω, not more	0,01; 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; IP64

BASIC TECHNICAL DATA FOR TK32 (170 °C – 250 °C)

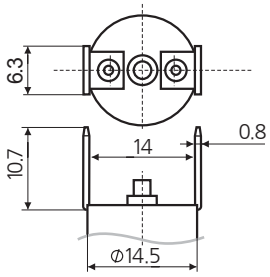
Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	10 000
Operating temperature, ^{O}C	170 to 250
Tolerance of operating temperature, %	± 3; ± 6
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; IP64

Table 1.1 (TERMINALS)

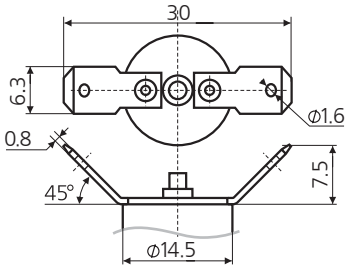
T 01



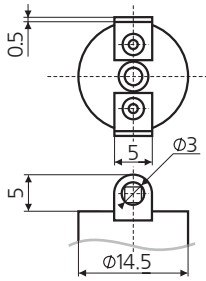
T 02



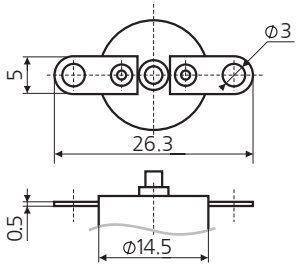
T 03



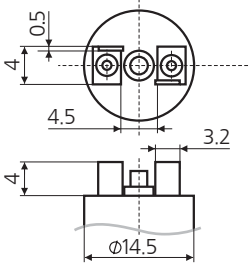
T 04



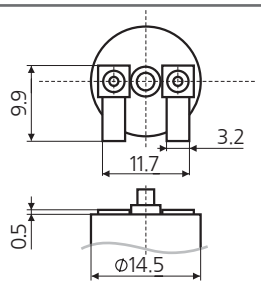
T 05



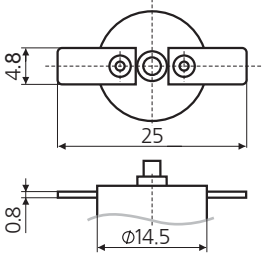
T 06



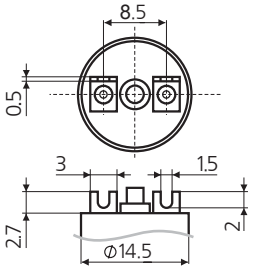
T 07



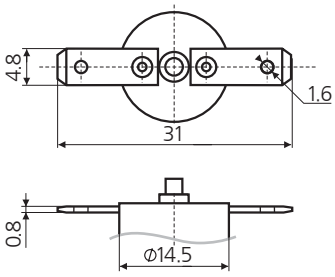
T 08



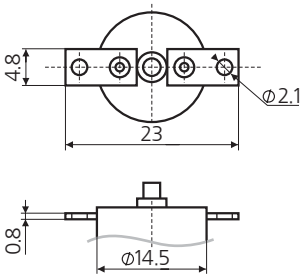
T 09



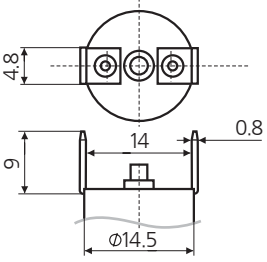
T 10



T 11

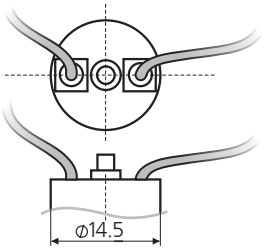


T 12



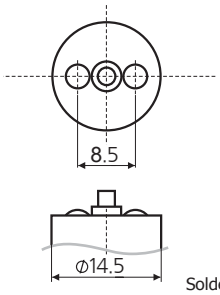
T 13

Wire standard length: 150 mm



Wire information to be specified on the order form (type; cross-section; lengths; stripping)

T 14

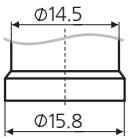


Soldering balls

Table 1.2 (MOUNTING)

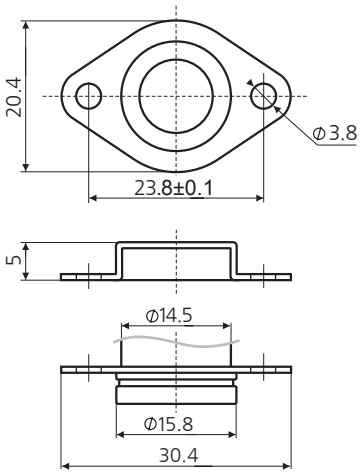
MG 00

NO MOUNTING



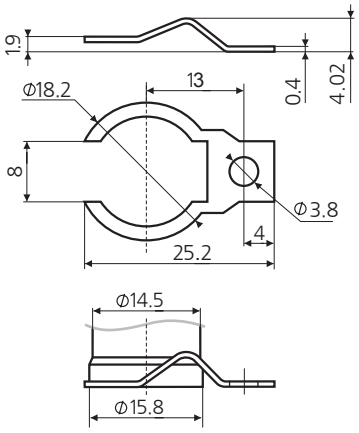
MG 02

CAP-FLANGE



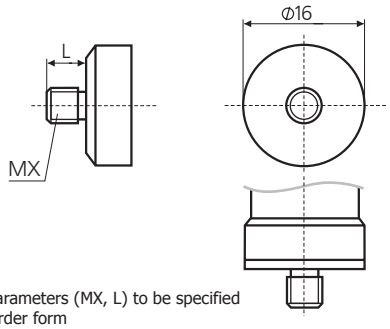
MG 04

CLIP WITH ONE FIXING HOLE



MG 06

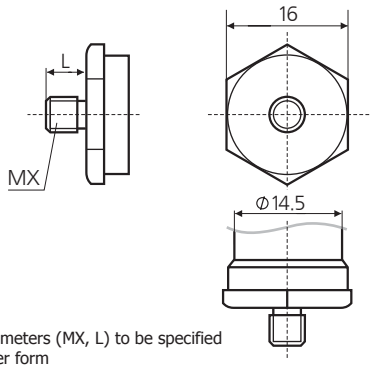
SCREW CAP ROUND



Screw parameters (MX, L) to be specified on the order form

MG 08

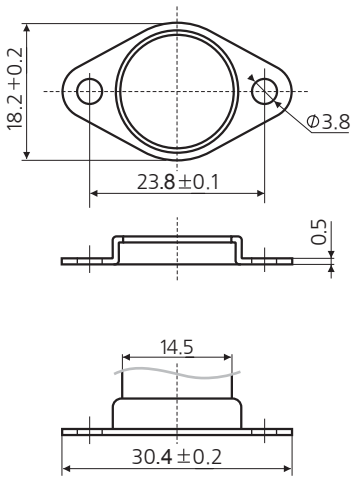
SCREW CAP HEXAHEDRAL 16



Screw parameters (MX, L) to be specified on the order form

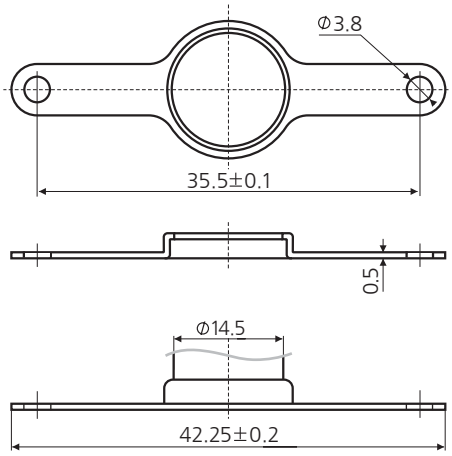
MG 01

ROTATION OR FIXED CLIP



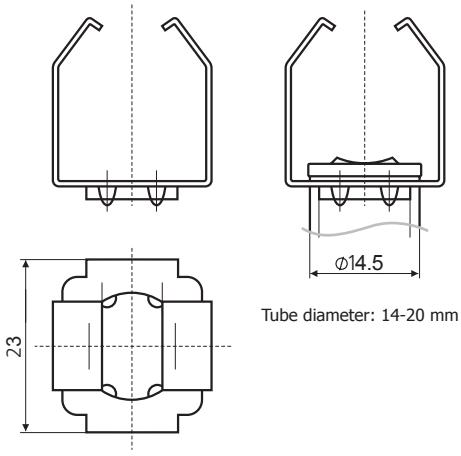
MG 03

ROTATION CLIP



MG 05

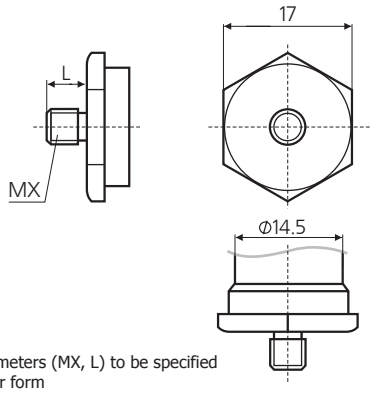
TUBE MOUNTING



Tube diameter: 14-20 mm

MG 07

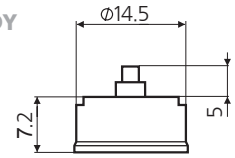
SCREW CAP HEXAHEDRAL 17



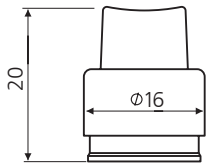
Screw parameters (MX, L) to be specified on the order form

Table 1.3 (BODY and/or CASE)

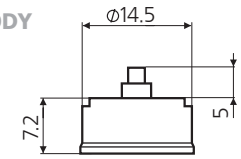
B1P PLASTIC BODY



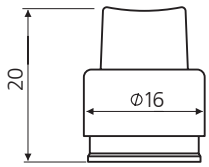
B1PR



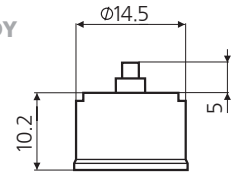
B1C CERAMIC BODY



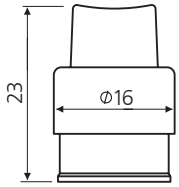
B1CR



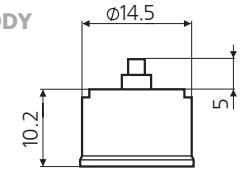
B2P PLASTIC BODY



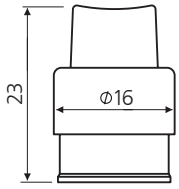
B2PR



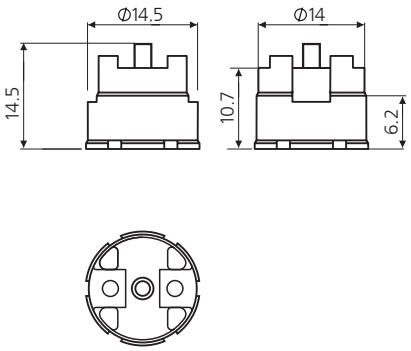
B2C CERAMIC BODY



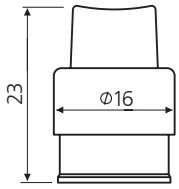
B2CR



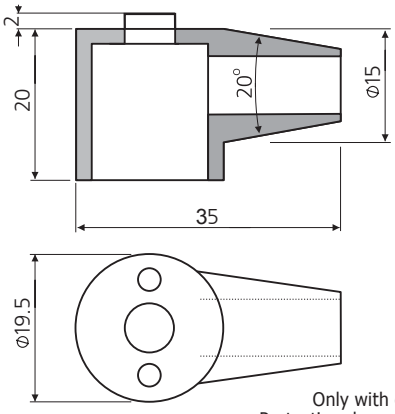
B3C CERAMIC BODY



B3CR



B4S



Only with cables
Protection degree IP64

PART ORDERING SYSTEM

TK32	TX*	MGX**	BXX	X±X***
1	2	3	4	5

1	Temperature limiter model
2	Terminals version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Body version (select from Table 1.3)
5	Operating temperature value in C and tolerance in ± %***

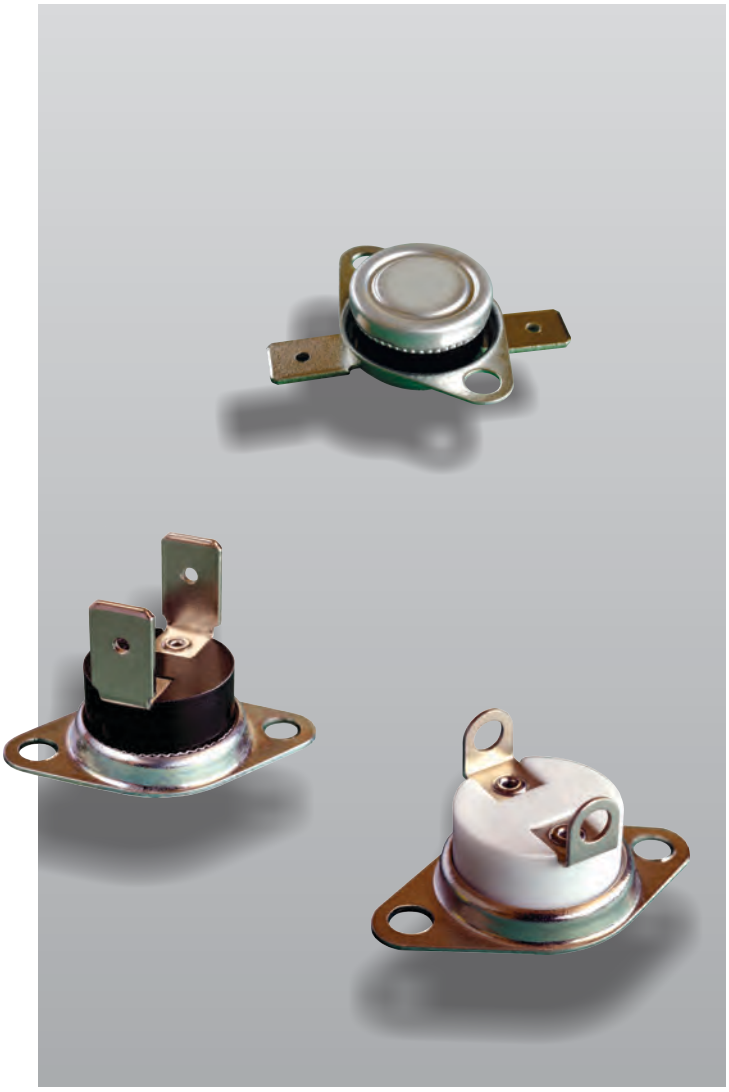
Example: TK32-T01-MG04-B2C-60±3%

*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

**For screw cap mountings, screw parameters must be specified when placing an order.

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

thermorex®



TK320S (One Shot)

½" Disc Temperature Limiter

Operating Temperature Range (+30°C to +250°C)

This is a temperature sensitive device, which is intended to keep a temperature below one particular value during normal operating conditions, automatically switching off the electrical circuit. This device is operating with one-shot action and has no reset option.

This temperature limiter is available only with contacts that open as the temperature increases.

With variety of standard and custom configurations it provides reliable one-shot over-temperature protection and meets the specific technical needs of our customers, assuring maximum design flexibility. It is used in broad range of domestic, industrial and commercial applications.

Contact Type: Normally Closed

BASIC TECHNICAL DATA

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of cycles, at rated current 16 A and power coeff. 0,95,	1
Operating temperature, ^{O}C	30 to 250
Tolerance of operating temperature, %, but not less ^{O}C	± 3
Temperature of self-reset	≤ (-25 ^{O}C)
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; IP64

PART ORDERING SYSTEM

TK32OS	TX*	MGX**	BXX	X±X***
1	2	3	4	5

1	Thermostat model
2	Terminal version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Body version (select from Table 1.3)
5	Operating temperature value in C and tolerance in ± %***

Example: TK32OS-T01-MG04-B2C-90^{O}C ± 3%

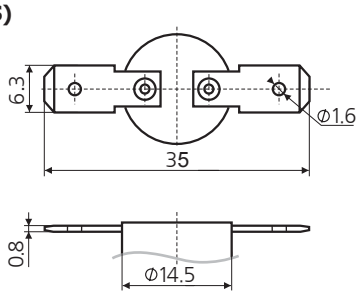
*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

**For screw cap mountings, screw parameters must be specified when placing an order.

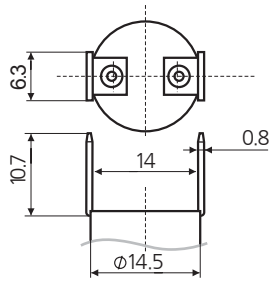
***Tolerance in % or ^{O}C, whichever numerical value is bigger.

Table 1.1 (TERMINALS)

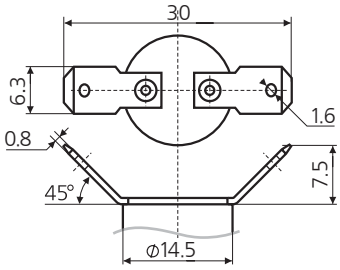
T 01



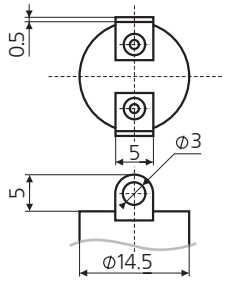
T 02



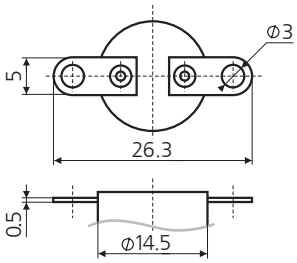
T 03



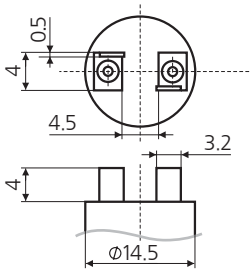
T 04



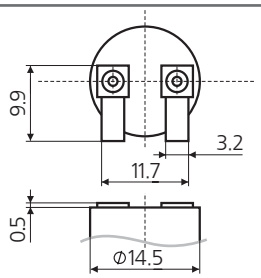
T 05



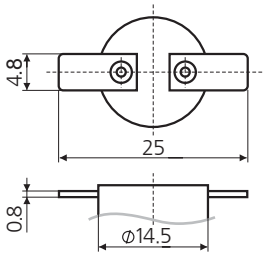
T 06



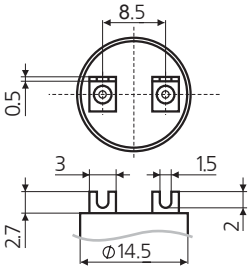
T 07



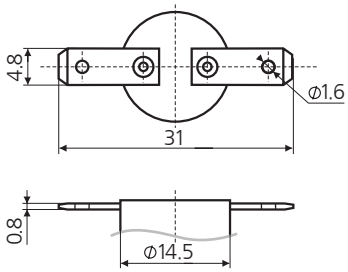
T 08



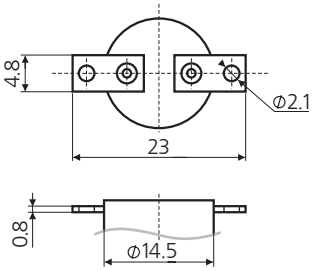
T 09



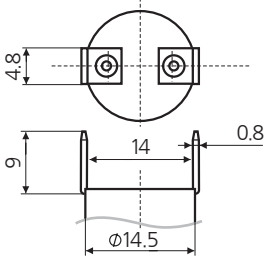
T 10



T 11

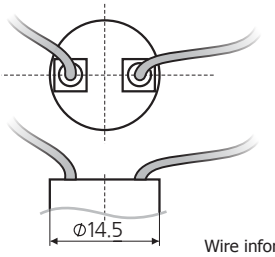


T 12



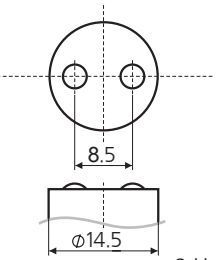
T 13

Wire standard length: 150 mm



Wire information to be specified on the order form (type; cross-section; lengths; stripping)
The only option for TK24 (-45-+10)

T 14

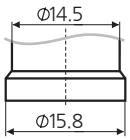


Soldering balls

Table 1.2 (MOUNTING)

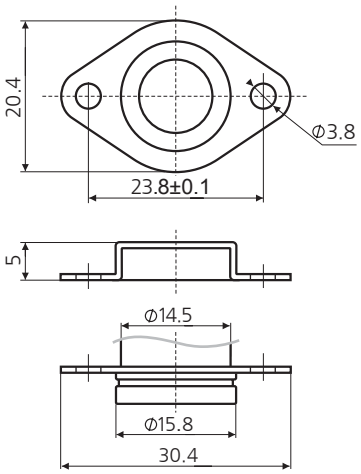
MG 00

NO MOUNTING

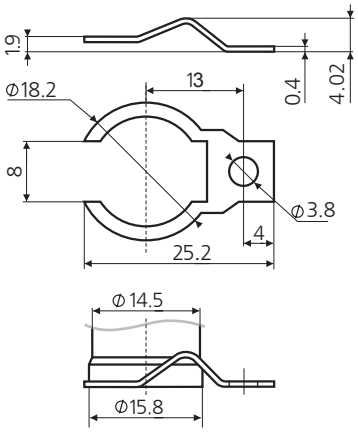


MG 02

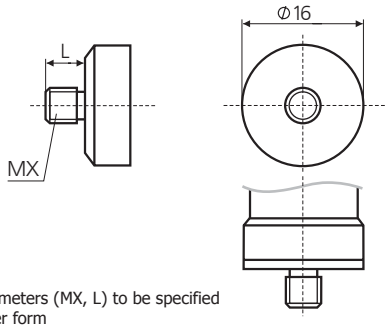
CAP-FLANGE



MG 04



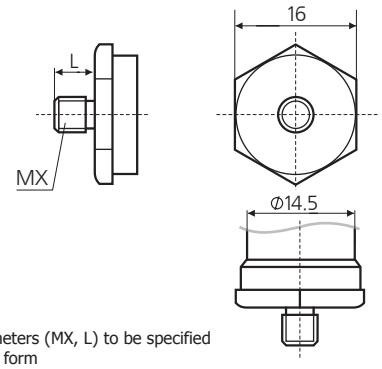
MG 06



Screw parameters (MX, L) to be specified on the order form

MG 08

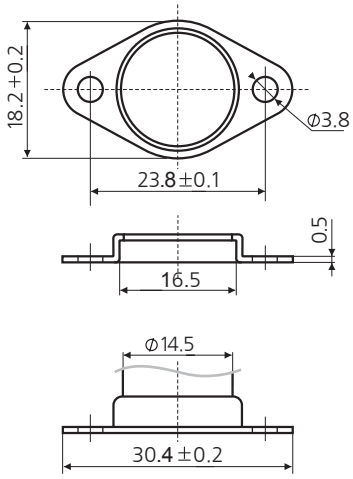
SCREW CAP HEXAHEDRAL 16



Screw parameters (MX, L) to be specified on the order form

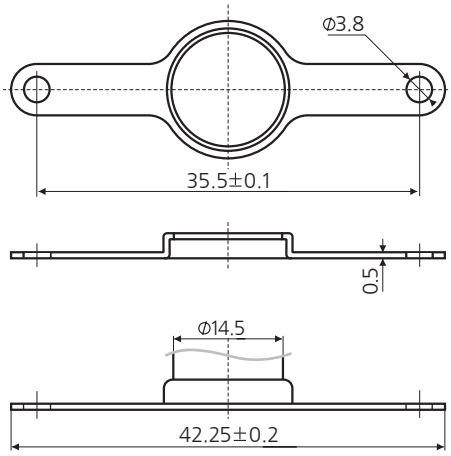
MG 01

ROTATION OR FIXED CLIP



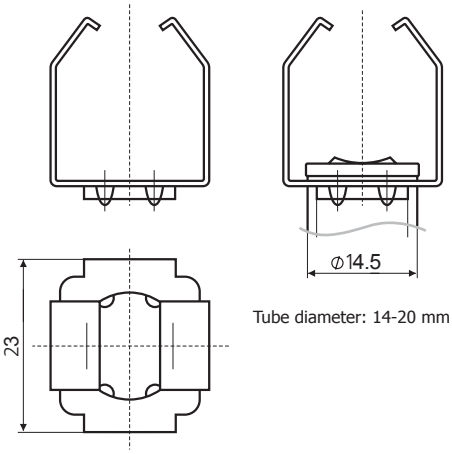
MG 03

ROTATION CLIP



MG 05

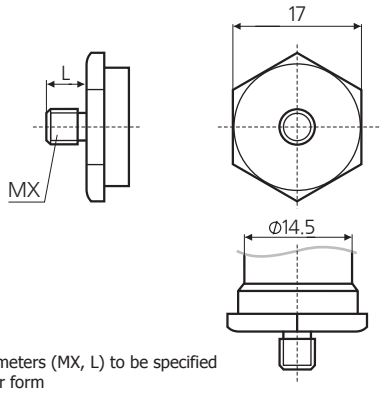
TUBE MOUNTING



Tube diameter: 14-20 mm

MG 07

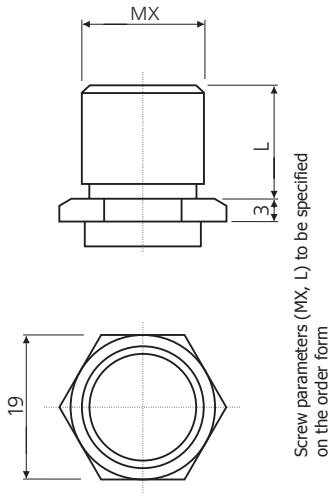
SCREW CAP HEXAHEDRAL 17



Screw parameters (MX, L) to be specified on the order form

Table 1.2 (MOUNTING)

MG 09
SCREW CAP
HEXAHEDRAL 19



MG 10
WITH GROUNDING

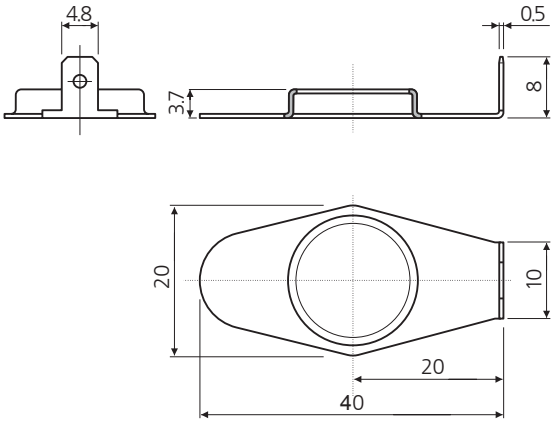
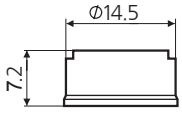
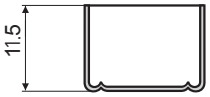


Table 1.3 (BODY and/or CASE)

B1P
PLASTIC BODY

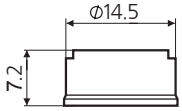


B3S
STEEL CASING

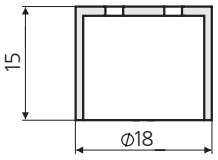


Only with lead wires
Protection degree IP64

B1C
CERAMIC BODY

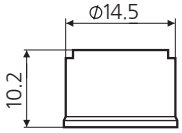


B4P
PLASTIC BODY

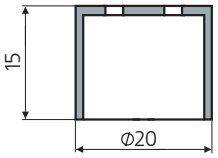


Only with lead wires
and screw caps
Protection degree IP64

B2P
PLASTIC BODY

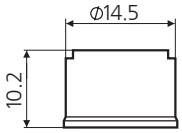


B4C
CERAMIC BODY

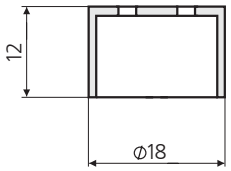


Only with lead wires
and screw caps
Protection degree IP64

B2C
CERAMIC BODY

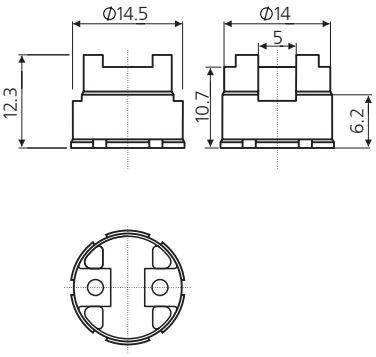


B5P
PLASTIC BODY

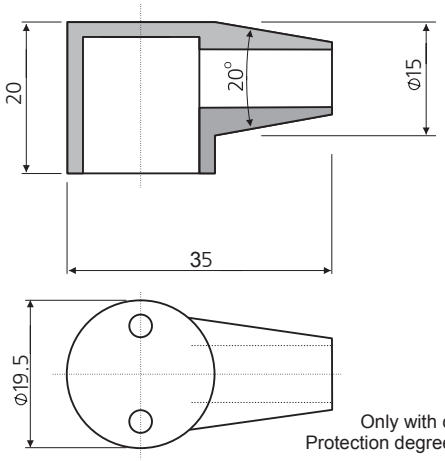


Only with lead wires
Protection degree IP64

B3C
CERAMIC BODY

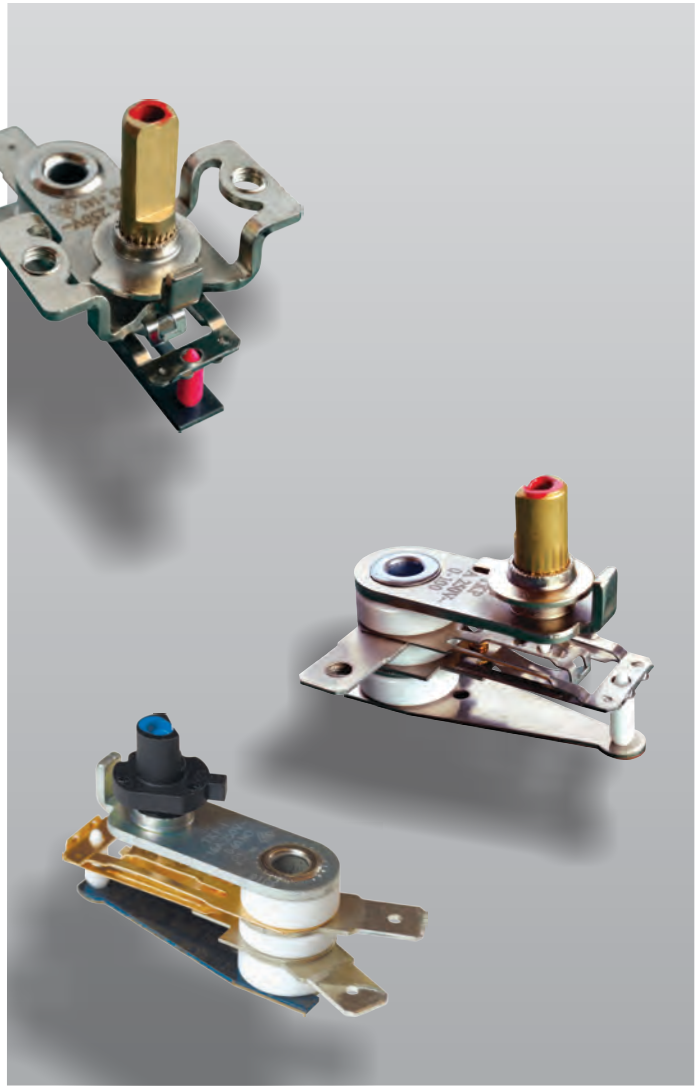


B6S
SILICONE CASING



Only with cables
Protection degree IP64

thermorex®



TKP
adjustable thermostats

(Operating Temperature Range -45°C to + 250° C)

This is a cyclic operation temperature sensitive device, which is intended to keep temperature between two particular values under normal operating conditions, automatically switching on or off the electrical circuit. Once the temperature of the bimetal plate has returned to the specified reset temperature, the contacts will automatically return to their original state. Operating temperature of this thermostat is adjusted by rotating the shaft.
This thermostat can be built to either open or close its electrical contacts as the temperature increases.

The current sensitive model of this thermostat is also available. In this case it is also a regulator of energy.

These thermostats are widely used throughout the heating and cooling appliance industry and are designed for smooth regulation of temperature for variety of heating and cooling devices.

Contact Type: Normally Closed; Normally Open

BASIC TECHNICAL DATA SPECIFIC FOR TKP-1; TKP-2; TKP-3

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16; 10
Rated current, A, at power coeff. 0,6, not more	2,6; 1,6
Number of automatic cycles, at rated current 16 (2,6) A and power coeff. 0,95, not less than	100 000
Control ranges, ^{O}C	min. 60; max. 225*
Reset temperature, lower than operating temperature, on ^{O}C	5; 8; 10; 15
Tolerance of operating temperature, on ^{O}C	± 3; ± 5; ± 8; ± 10
Transient resistance, Ω, not more	0,01; 0,05
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Turning range	270^{O}; 306^{O}
Heating speed, K/min	1,0

*Operating temperature range can be customized according to customers' needs

BASIC TECHNICAL DATA SPECIFIC FOR TKP (Current Sensitive)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16; 10
Rated current, A, at power coeff. 0,6, not more	2,6; 1,6
Number of automatic cycles, at rated current 16 (2,6) A and power coeff. 0,95, not less than	100 000
Operating temperature, ranges, ^{O}C	-25 - +250**
Reset temperature, lower than operating temperature, on ^{O}C	15
Tolerance of operating temperature, on ^{O}C	Low value ± 20; High value ± 10
Transient resistance, Ω, not more	0,15
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Turning range	270^{O}; 306^{O}
Heating speed, K/min	1,0

**Operating temperature range can be customized according to customers' needs

Table 1.1 (CONTACT TYPE AND CONTACT TRANSIENT RESISTANCE VALUE)

CODE	CONTACT TYPE	CONTACT TRANSIENT RESISTANCE, mOhm
1	Normally closed (NC)	≤50
2	Normally open (NO)	≤50
3	Normally closed (NC)	≤10
4	Normally open (NO)	≤10

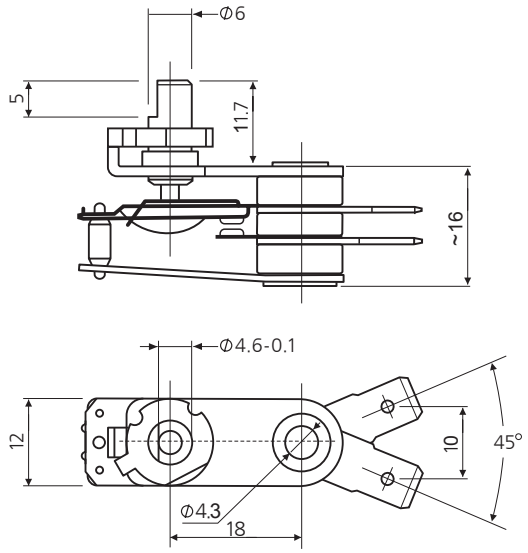
PART ORDERING SYSTEM

TKP	MGX	X	X - X	X
1	2	3	4	5

1	Thermostat type: TKP-1; TKP-2; TKP-3; TKP CS (Current Sensitive)
2	Mounting: A - with one mounting hole; B- with three mounting holes (Both mounting versions are applicable to all types)
3	Contact type and contact transient resistance value (select from Table 1.1)
4	Operating temperature range in °C
5	Rated current, A

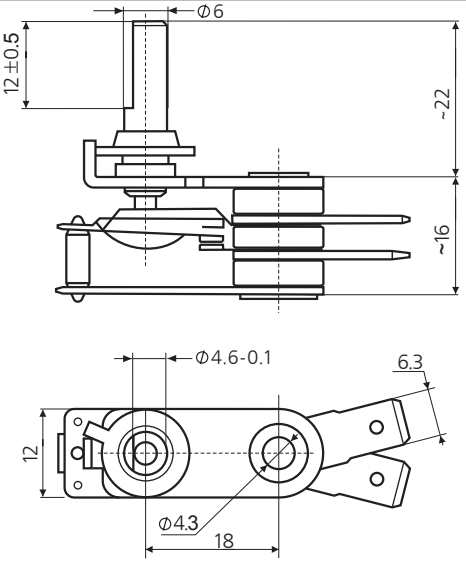
Example: TKP - 1 - MGA - 1 - 0°C - 60°C - 10

TKP-1



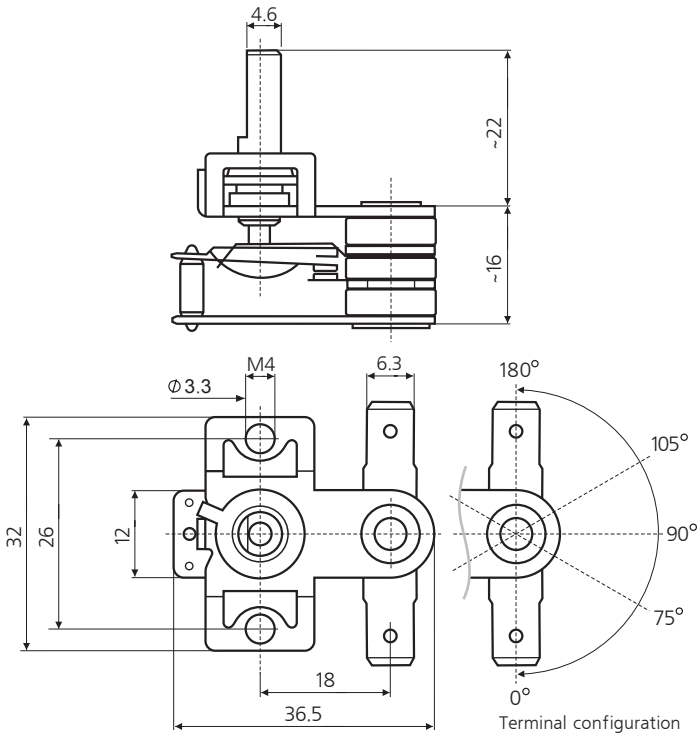
-45°C to + 120°C (with plastic knob)

TKP-2



-45°C to + 120°C (with plastic knob)

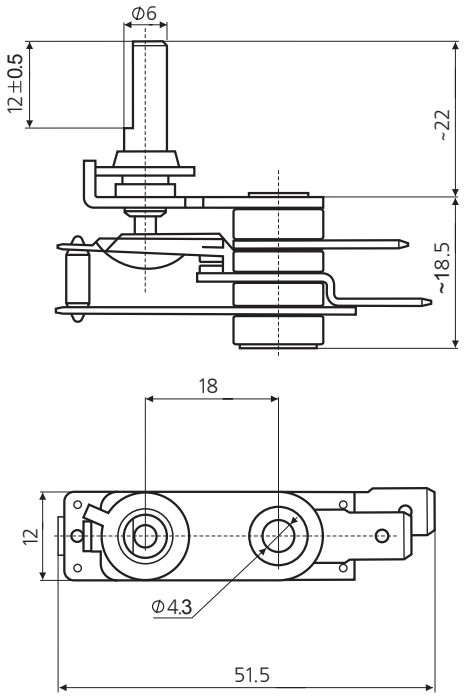
TKP-3



Terminal configuration

-45°C to + 250°C (with brass knob)

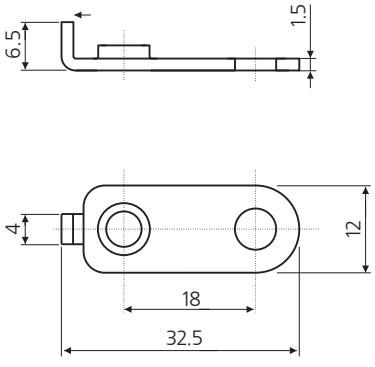
TKP(CS)



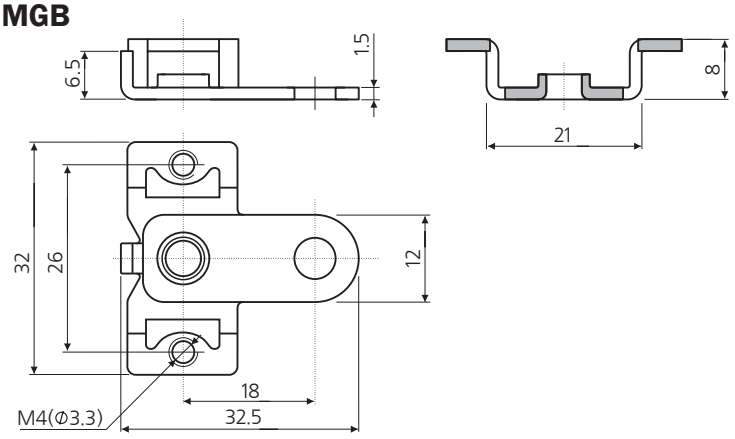
Note: For all types terminal and knob configurations can be customized according to customers' needs

Mounting

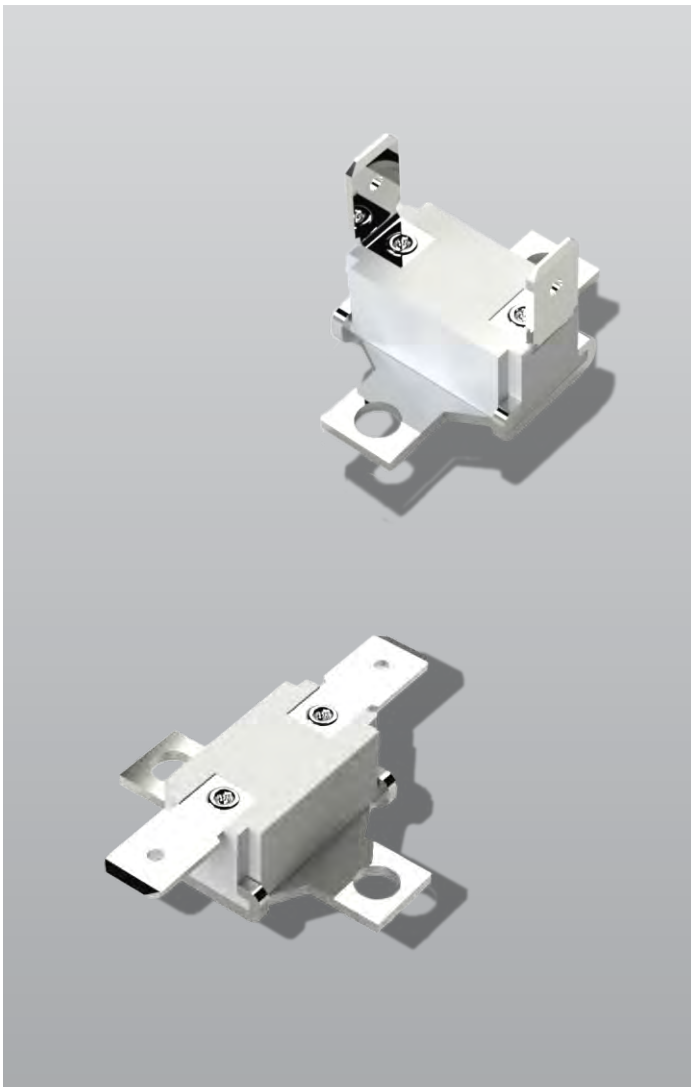
MGA



MGB



thermorex®



TK124

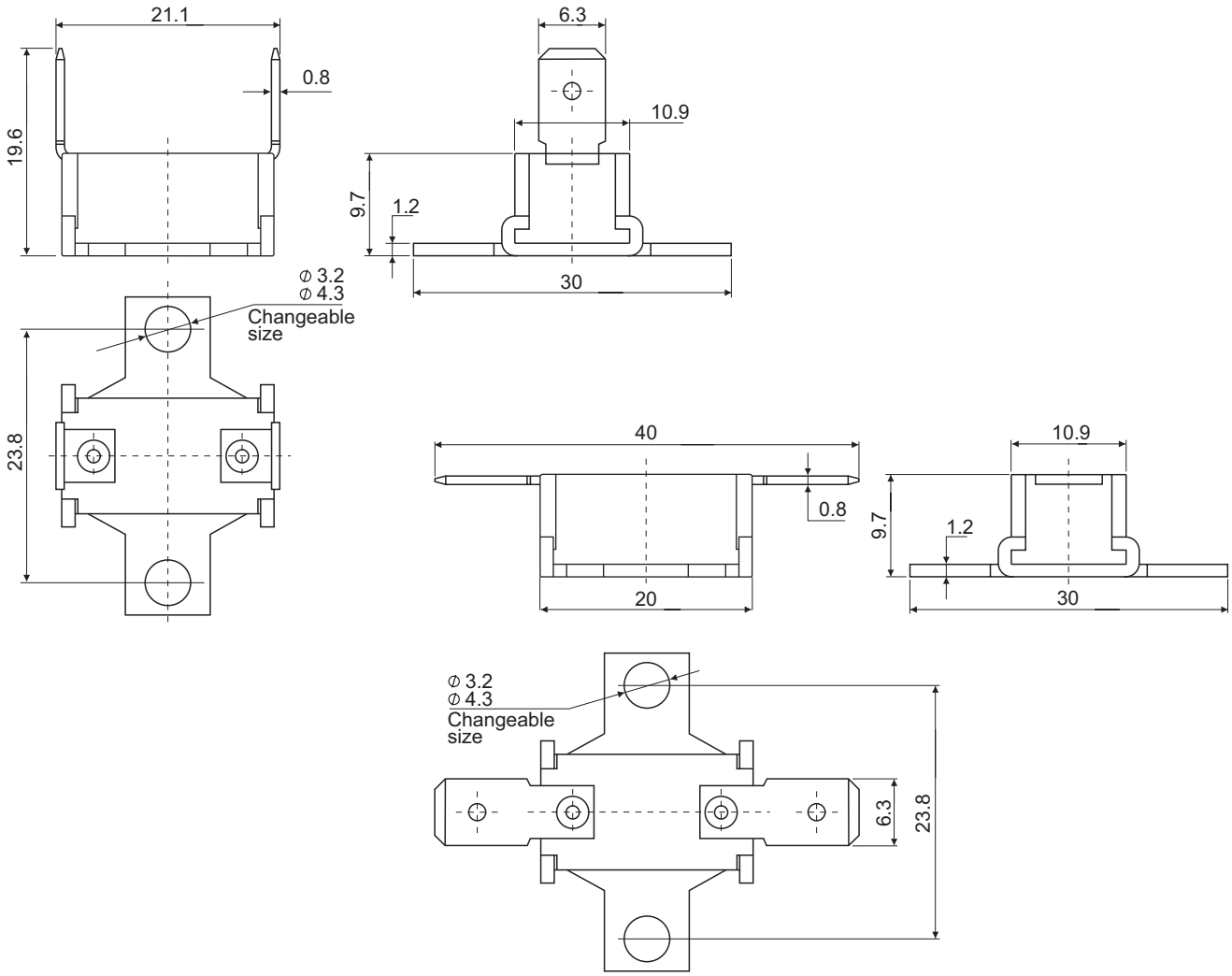
Thermostat

Operating Temperature Range (+30°C to +190°C)

Contact Type: Normally Closed

BASIC TECHNICAL DATA FOR TK124

Parameter	Value
Nominal voltage, V, not more	~250
Nominal current, A, at power coeff. 0.95, not more	16
Nominal current, A, at power coeff. 0.95, not more	10
Switching cycles, at nominal current 16A and power coeff. 0.95, not less than	30 000
Switching cycles, at nominal current 10A and power coeff. 0.95, not less than	100 000
Response temperature range, °C	30 up to 190
Response temperature tolerance, %, but not less than °C	±3
Reset temperature, lower than response temperature on, °C, not less than	20 (for response temperature 30-130°C) 35 (for response temperature 131-190°C)
Contact resistance, Ω not more	0.05
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Degrees of protection provided by enclosure	IP4X
Heating speed, K/min	min-0.1; max-1.0



thermorex®

TK127

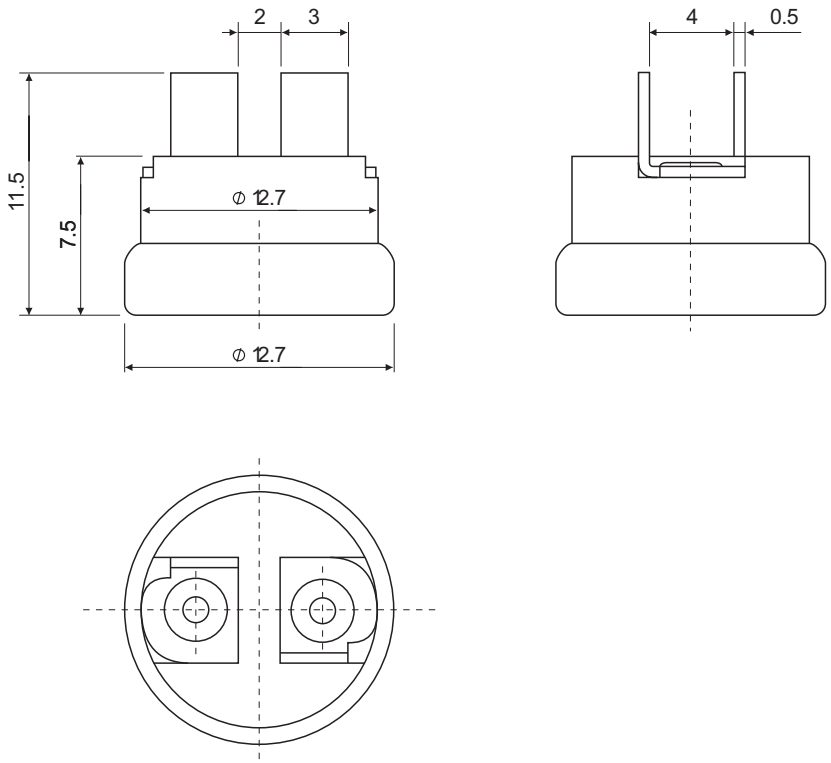
Ø 12.7mm. Thermostat

Operating Temperature Range (+30°C to +200°C)

Contact Type: Normally Closed; Normally Open

BASIC TECHNICAL DATA FOR TK127

Parameter	Value
Nominal voltage, V, not more	~250
Nominal current, A, at power coeff. 0.95, not more	13.5
Nominal current, A, at power coeff. 0.95, not more	10
Nominal current, A, at power coeff. 0.95, not more	5
Switching cycles, at nominal current 13,5A and power coeff. 0.95, not less than	10 000
Switching cycles, at nominal current 10A and power coeff. 0.95, not less than	30 000
Switching cycles, at nominal current 5A and power coeff. 0.95, not less than	100 000
Response temperature range, °C	30 up to 200
Response temperature tolerance, %, but not less than °C	±3
Reset temperature, lower than response temperature on, °C, not less than	20
Contact resistance, Ω not more	0.05
Electric strength of insulation, V, not less than	1500
Insulation resistance, MΩ, not less than	50
Degrees of protection provided by enclosure	IP4X
Heating speed, K/min	min-0.1; max-1.0



thermorex®

Patent No PCT/AM2015/000002

TK77DC

¾"Disc Thermostat

Operating Temperature Range(-40°C to +170°C)

This is a cyclic operating temperature sensitive device, which is intended to control the temperature between two particular values under normal operating conditions, automatically switching off or on the electrical circuit. It is designed to operate in AC and DC circuit applications and has high DC switching capacity.

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.

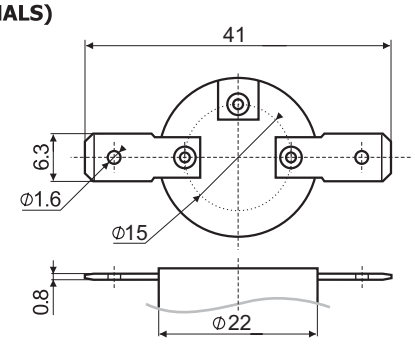
Contact Type: Normally Closed; Normally Open

BASIC TECHNICAL DATA

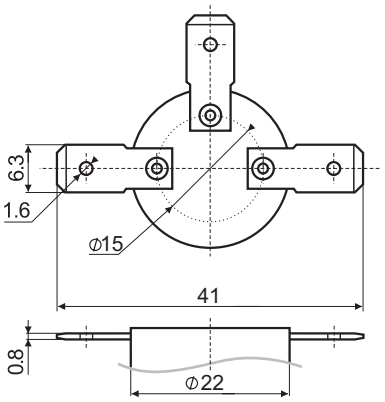
Parameter	Value
Rated voltage, VDC, not more	12-60; 120; 150
Rated DC current, A, resistive not more	5; 1,5 1
Rated voltage, VAC, not more	~250; 440
Rated AC current, A, resistive not more	5; 2.5
Number of automatic cycles, for DC not less	30 000
Number of automatic cycles, for AC not less	100 000
Operating temperature, ^{O}C	-40 to +170
Tolerance of operating temperature,%, but not less than ^{O}C	±3
Reset temperature, lower than operating temperature, ^{O}C, on	10±3; 15±5; 20±5
Transient resistance, Ω, not more	0,05
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; IP65

Table 1.1 (TERMINALS)

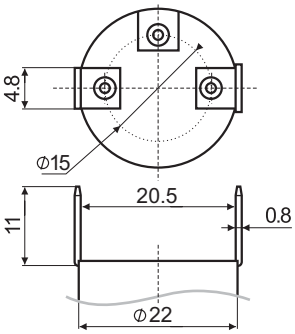
T 01



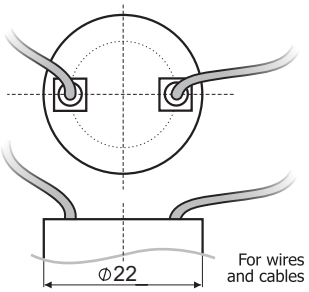
T 01.1



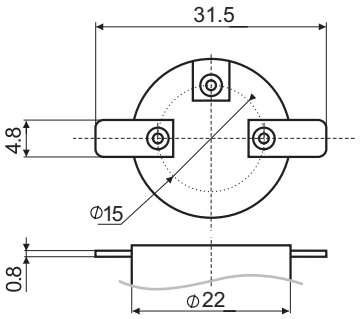
T 02



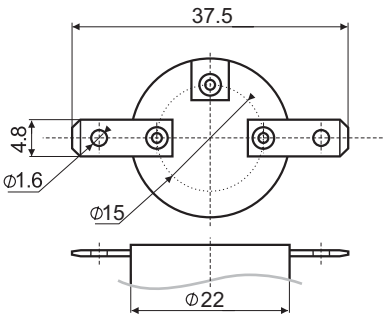
T 03



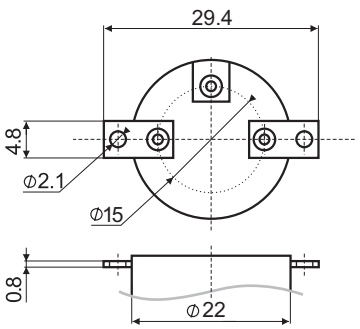
T 04



T 05



T 06



T 07

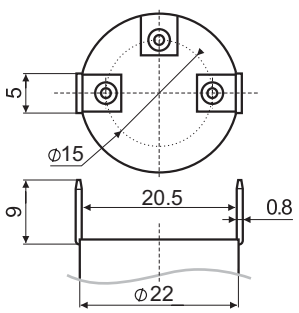
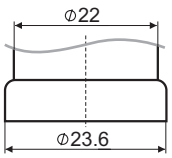
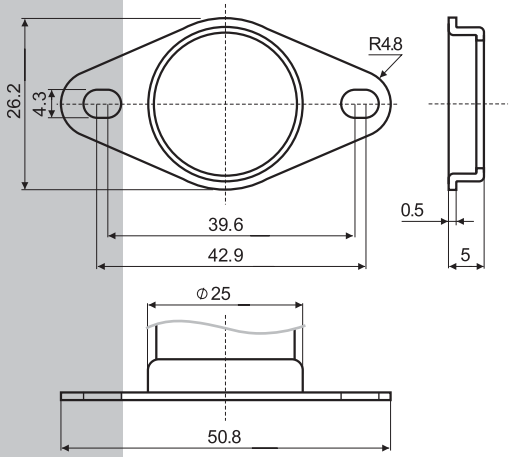


Table 1.2 (MOUNTING)

MG 00
NO MOUNTING



MG 01
ROTATION OR FIXED CLIP



MG 02
SCREW CAP SW 27

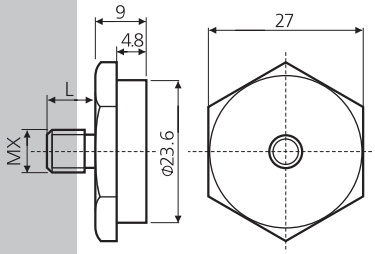
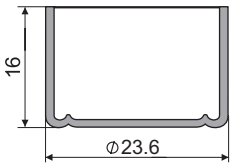


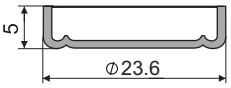
Table 1.3 (CASE or CAP)

B1S
STEEL CASING



Protection degree IP65

B2
CAP



Protection degree IP4X

B6S
SILICONE CASING

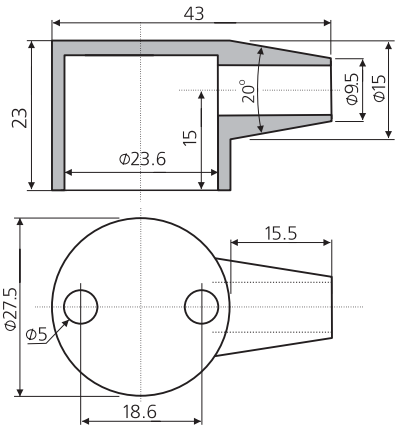


Table 1.4 (CONTACT TYPE AND CONTACT TRANSIENT RESISTANCE VALUE)

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

PART ORDERING SYSTEM

TK77	TX*	MGX	BXX	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: TK77 - T01- MG01 - B1S - 1 - 60±3% - 20±5%

*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

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

thermorex®

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

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, ^{O}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)

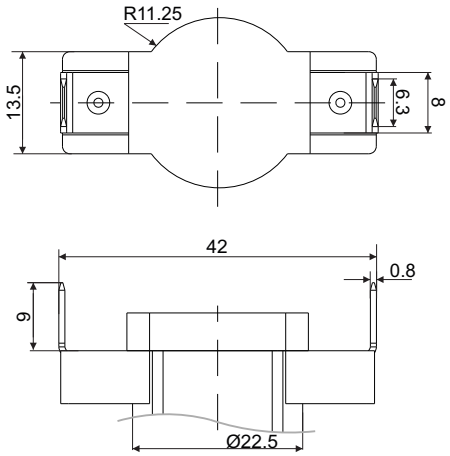
Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Maximum current, A, at power coeff. 0,95, not more	45
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	100 000
Number of automatic cycles, at rated current 25 A and 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, ^{O}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, ^{O}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

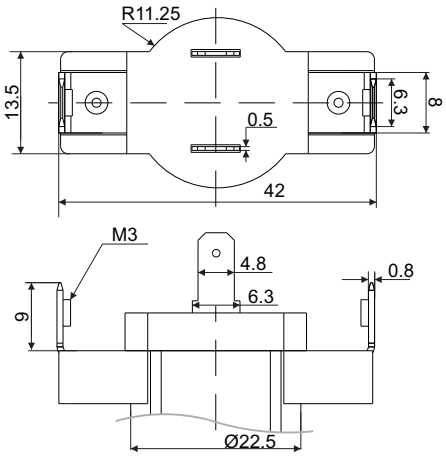
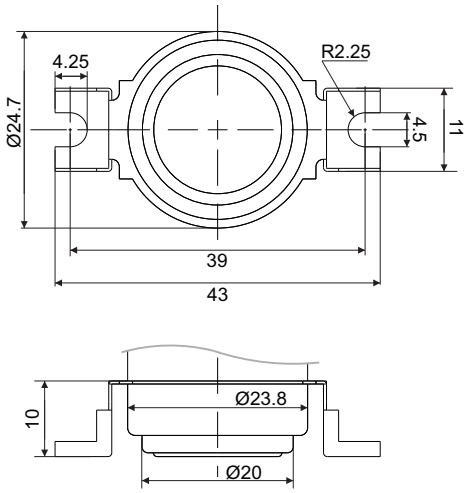


Table 1.2 (MOUNTING)

MG 01



MG 02

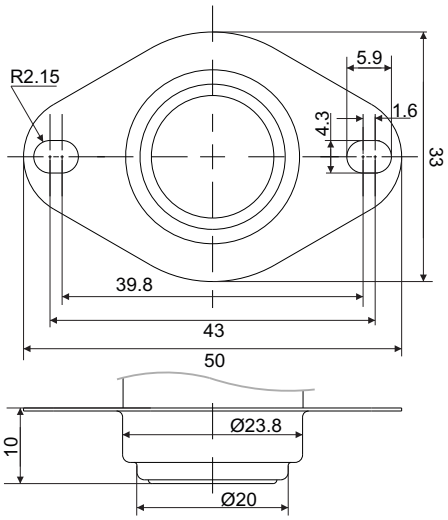
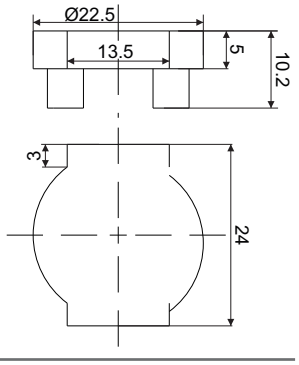


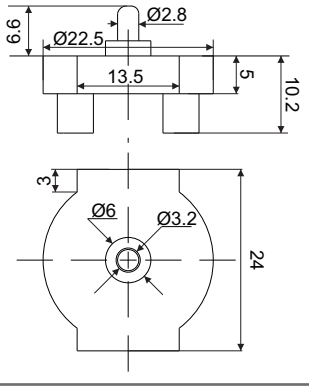
Table 1.3 (CAPS)

C1P



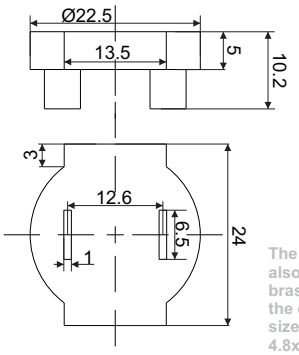
C2P

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

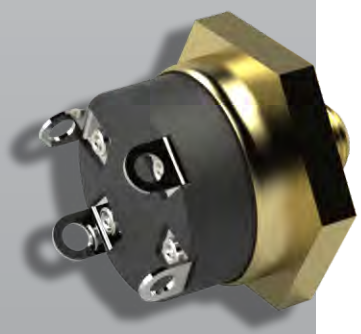
TK34	TX*	MGX**	CXP	X	X±X***	X±X***
1	2	3	4	5	6	7

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.

thermorex®



TK224

2 Pole Thermostat

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

This is a cyclic operating temperature sensitive device, which is intended to control the temperature between two particular values under normal operating conditions, automatically switching on or off 2 poles of the electrical circuit.

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

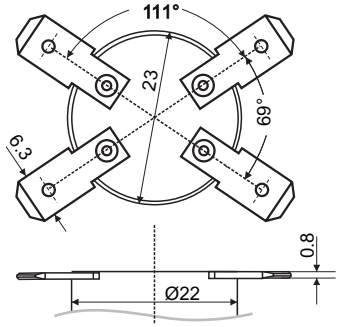
BASIC TECHNICAL DATA FOR TK224 (-25°C - 190°C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Rated current, A, at power coeff. 0,6, not more	10
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	30 000
Number of automatic cycles, at rated current 10 A and power coeff. 0,95, not less than	100 000
Operating temperature, ^{O}C	(-25) to 190
Tolerance of operating temperature, %, but not less than °C	±3; ±5
Reset temperature, lower than operating temperature on, °C not less than	20
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; IP64

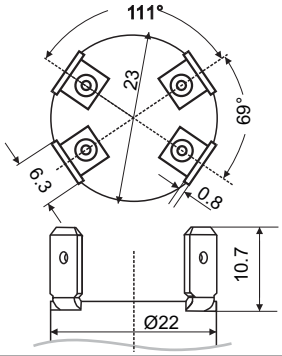
*May differ depending on the wire type and length

Table 1.1 (TERMINALS)

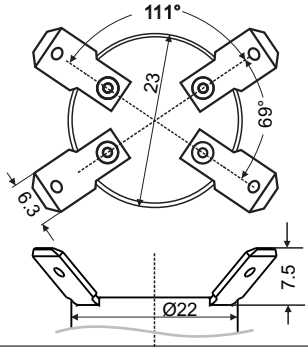
T 01



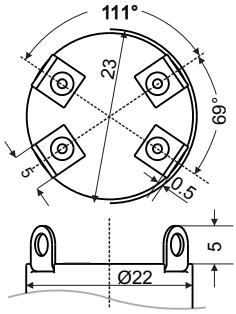
T 02



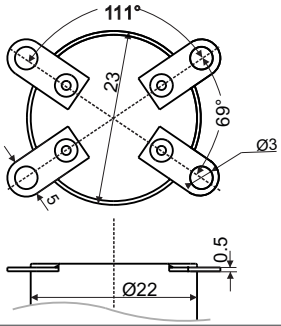
T 03



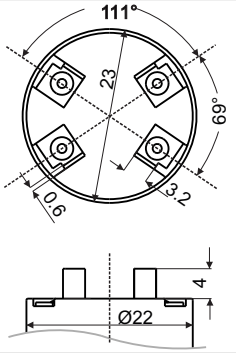
T 04



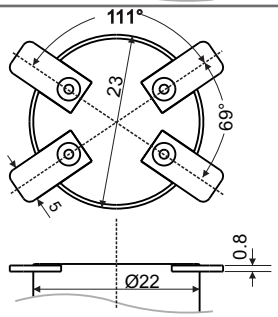
T 05



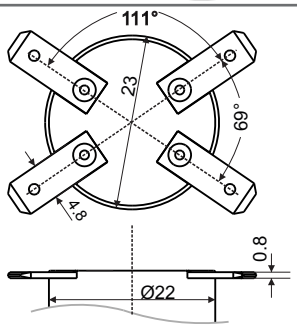
T 06



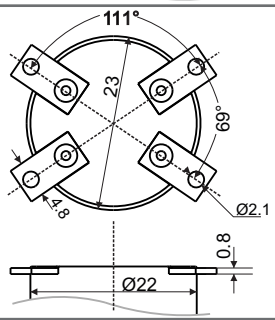
T 08



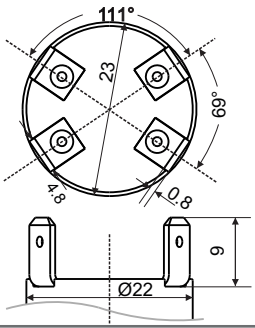
T 10



T 11

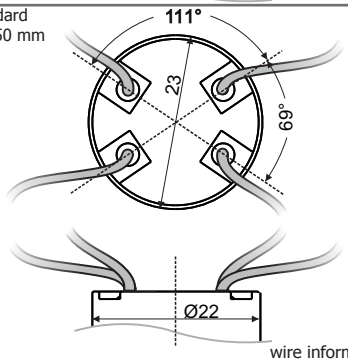


T 12



T 13

wire standard
length: 150 mm



wire information to be
specified on the order form (type; cross-section; lengths; stripping)

T 14

soldering balls

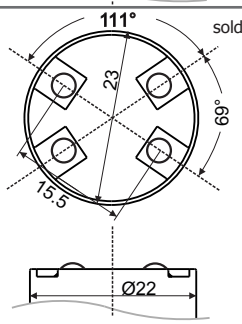
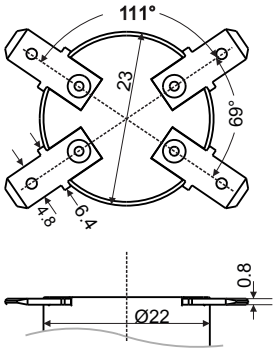


Table 1.1 (TERMINALS)

T 18



T 19

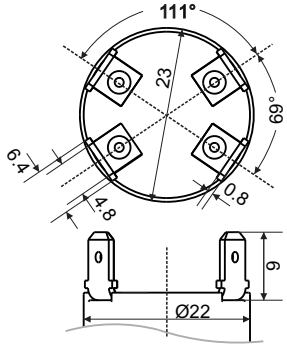
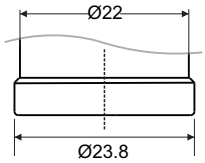


Table 1.2 (MOUNTING)

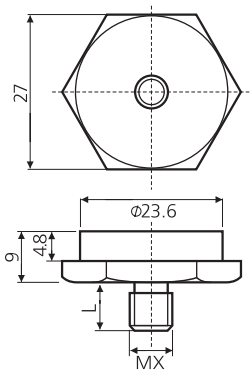
MG 00

NO MOUNTING



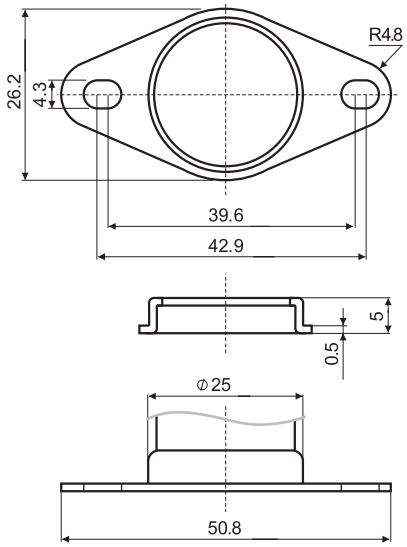
MG 07

SCREW CAP
SW 27



MG 01

ROTATION OR
FIXED CLIP



MG 08

SCREW CAP
SW 24

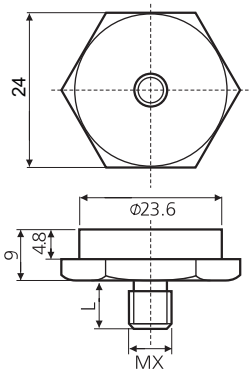


Table 1.3 (BODY and/or CASE)

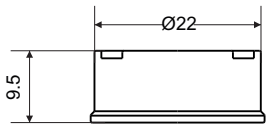
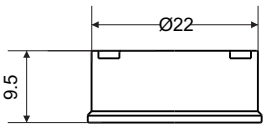
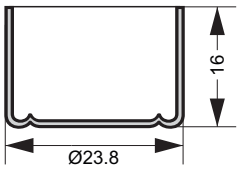
BP	PLASTIC BODY 	**BC**	CERAMIC BODY 
BS	STEEL CASING  Only with lead wires Protection degree IP64		

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

PART ORDERING SYSTEM

TK224	TX*	MGX**	BXX	X	X±X***	X±X***
1	2	3	4	5	6	7

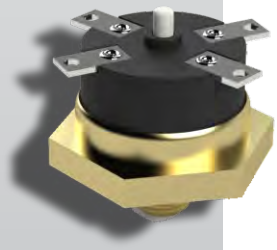
1	Thermostat model
2	Terminals version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Body version (select from Table 1.3)
5	Contact type and contact transient resistance value (select from Table 1.4)
6	Operating temperature value in °C and tolerance in ± %***
7	Reset temperature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

Example: TK224-T01-MG01-BP-1-60°C±3%-35°C±5%

*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

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

thermorex®



TK232

2 Pole Temperature Limiter

Operating Temperature Range (+50°C to +190°C)

This is a temperature sensitive device, which is intended to keep a temperature below one particular value during normal operating conditions, automatically switching off 2 poles of the electrical circuit. This device is not self-resetting and operates with manual reset option. It prevents overheating in variety of consumer, industrial and commercial products.

This temperature limiter is available only with contacts that open as the temperature increases. The contacts may be reset by manually pushing on the reset button after the device has cooled below the open temperature calibration.

Besides its variety of standard configurations this limiter 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.

Contact Type: Normally Closed

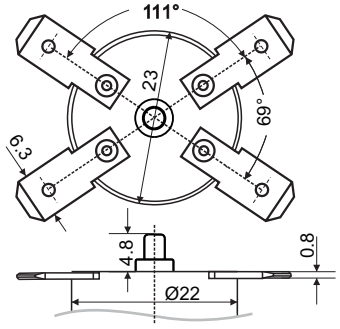
BASIC TECHNICAL DATA FOR TK232 (50 °C – 190 °C)

Parameter	Value
Rated voltage, V, not more	~250
Rated current, A, at power coeff. 0,95, not more	16
Number of automatic cycles, at rated current 16 A and power coeff. 0,95, not less than	10 000
Operating temperature, ^{O}C	50 to 190
Tolerance of temperature limiter operating temperature, %, but not less than ^{O}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; IP64

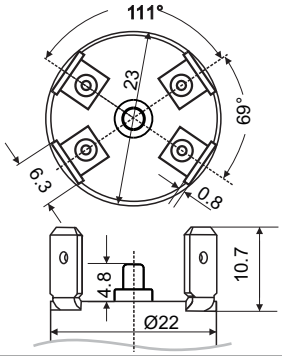
*May differ depending on the wire type and length

Table 1.1 (TERMINALS)

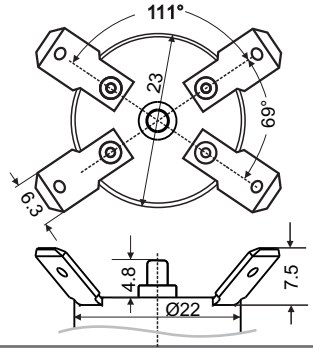
T 01



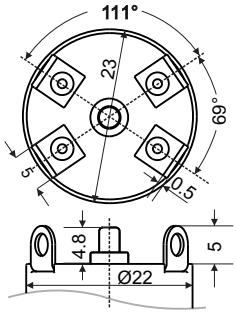
T 02



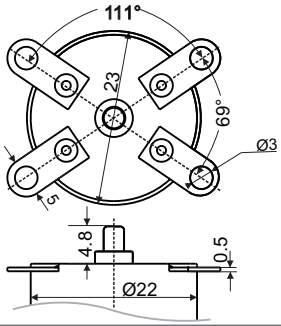
T 03



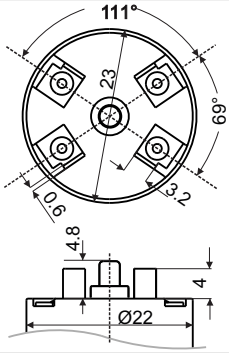
T 04



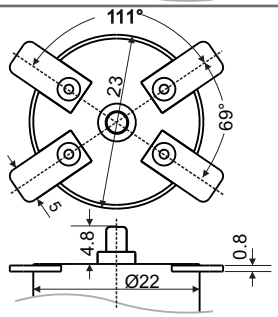
T 05



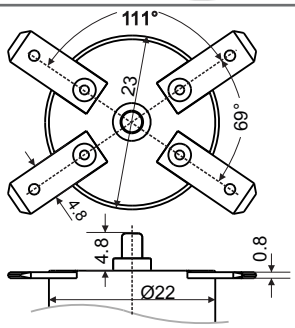
T 06



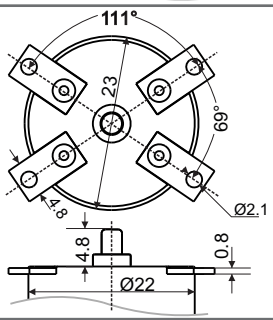
T 08



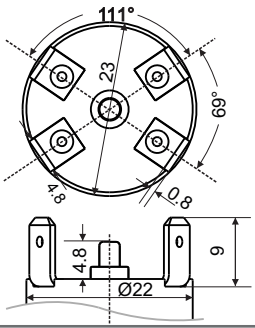
T 10



T 11

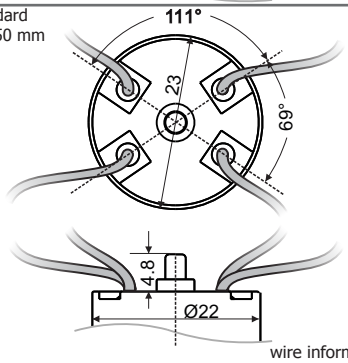


T 12



T 13

wire standard
length: 150 mm



wire information to be
specified on the order form (type; cross-section; lengths; stripping)

T 14

soldering balls

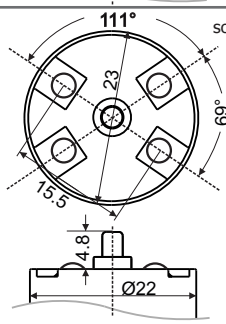
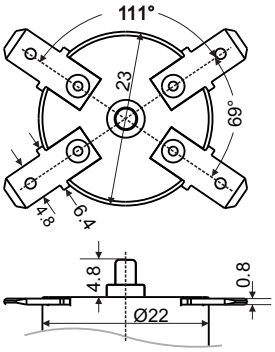


Table 1.1 (TERMINALS)

T 18



T 19

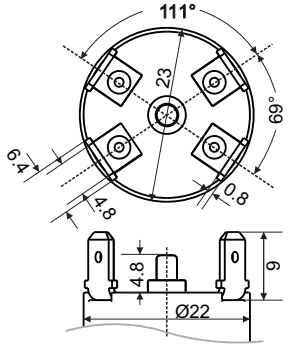
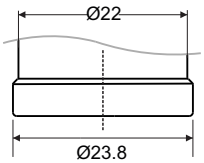


Table 1.2 (MOUNTING)

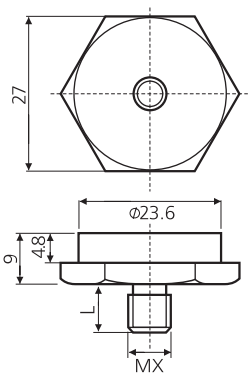
MG 00

NO MOUNTING



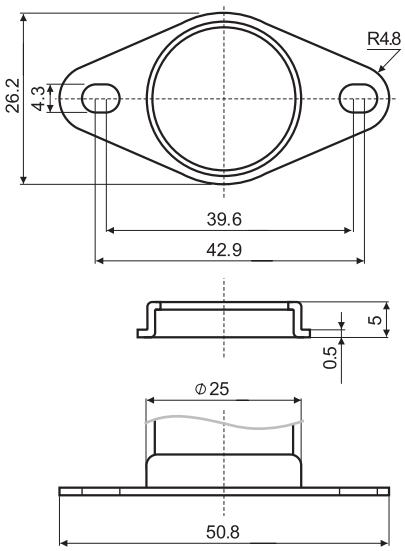
MG 07

SCREW CAP
SW 27



MG 01

ROTATION OR
FIXED CLIP



MG 08

SCREW CAP
SW 24

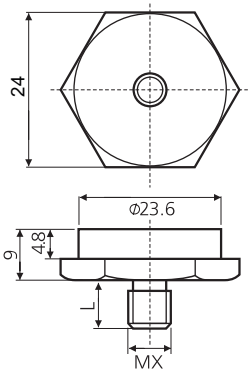
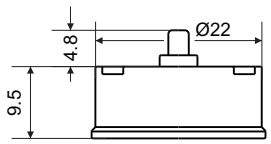
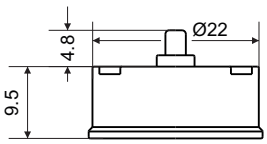


Table 1.3 (BODY and/or CASE)

BP	**PLASTIC BODY** 	**BC**	**CERAMIC BODY** 

PART ORDERING SYSTEM

TK232	TX*	MGX**	BXX	X±X***
1	2	3	4	5

1	Temperature limiter model
2	Terminals version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Body version (select from Table 1.3)
5	Operating temperature value in C and tolerance in ± %***

Example: TK232-T01-MG00-BC-60°C±3%

*For wire terminals, lead wire parameters must be specified when placing an order: insulation type, cross-section area; ends type; lenght; etc.

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

Certificate No. 40029685

Registration Number: 07411

CB TEST CERTIFICATE

Address: “Thermorex” SAS, 18, rue Pasquier, 75008 Paris, France
tel.: +31(0) 61 55 22 880, e-mail: info@thermorex.fr, marketing@thermorex.fr

Manufacturing plant: “Thermorex” CJSC, 24/41 Fuchik str., 0048, Yerevan, Armenia
tel.: +37410 39 58 84, 37410 34 93 51, fax: +37410 34 98 86, e-mail: info@thermorex.org, marketing@thermorex.org

www.thermorex.org