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

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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	5±3; 10±3; 15±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 1.4 (CONTACT TYPE AND CONTACT TRANSIENT RESISTANCE VALUE)

	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

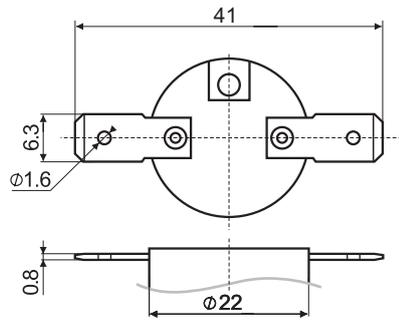|	
1	Thermostat model
2	Terminals version (select from Table 1.1)
3	Mounting version (select from Table 1.2)
4	Cap version (select from Table 1.3)
5	Contact type and contact transient resistance value (select from Table 1.4)
6	Operating temperature value in°C and tolerance in ± %**
7	Reset temperature 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.
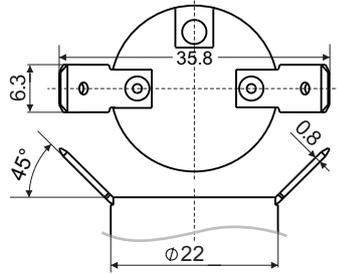
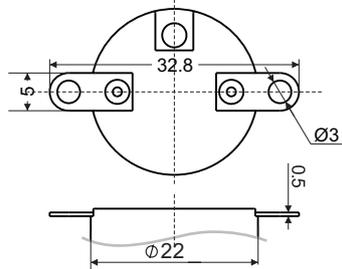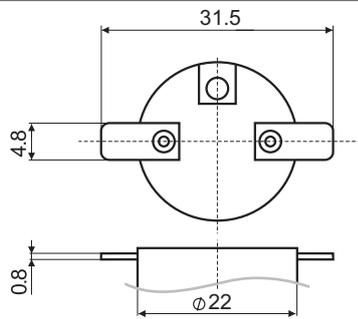**Tolerance in % or°C, whichever numerical value is bigger.

Table 1.1 (TERMINALS)

T 01	**T 02**
T 03	**T 04**
T 05	**T 06**
T 08	**T 09**
T 10	**T 11**
T 12	**T 13**

T 01 — 41, 6.3, Ø1.6, 0.8, Ø22

T 02 — 6.3, 20.5, 0.8, 11, Ø22

T 03 — 35.8, 6.3, 0.8, 45°, Ø22

T 04 — 20.5, 5, 6, 0.5, Ø22

T 05 — 32.8, 5, Ø3, 0.5, Ø22

T 06 — 0.5, 3.2, 11, 4, Ø22

T 08 — 31.5, 4.8, 0.8, Ø22

T 09 — 15, 0.5, 3, 1.5, 2.7, 2, Ø22

T 10 — 37.5, 4.8, Ø1.6, Ø22

T 11 — 29.4, 4.8, Ø2.1, 0.8, Ø22

T 12 — 5, 20.5, 0.8, 9, Ø22
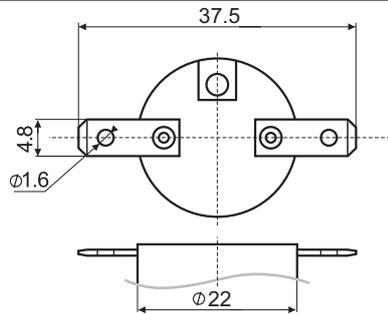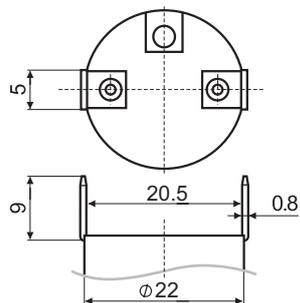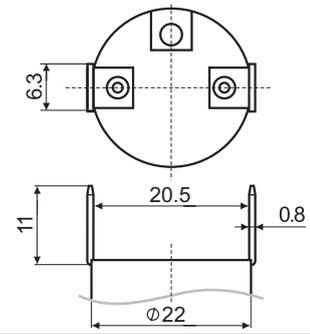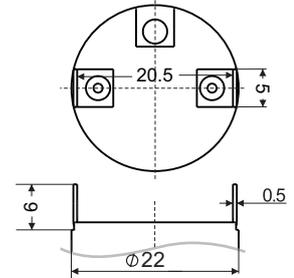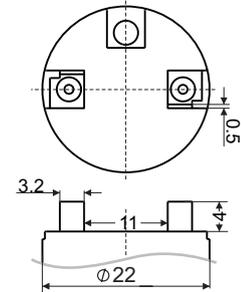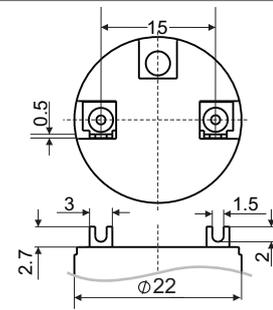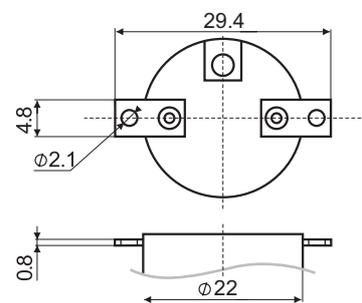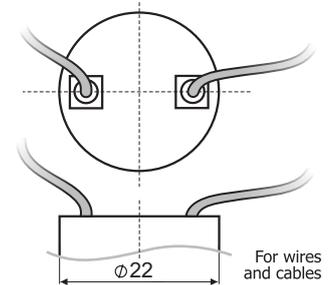
T 13 — For wires and cables, Ø22

Table 1.1 (TERMINALS)
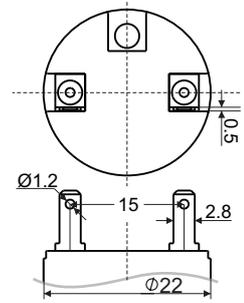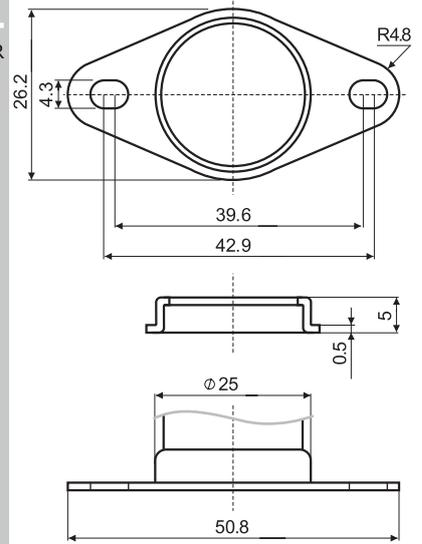
T 14	T 15

15

soldering balls

Ø22

Ø1.2

15

2.8

0.5

Ø22
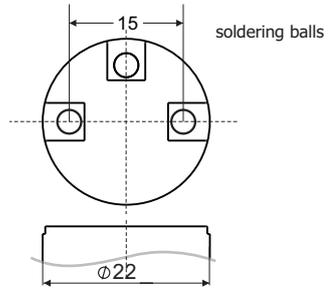
Table 1.2 (MOUNTING)

MG 00
NO MOUNTING

Ø22

Ø23.6
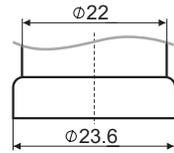
MG 07
SCREW CAP
SW 27

27

Ø23.6

9

4.8

L

MX
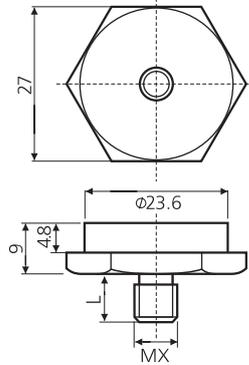
MG 01
ROTATION OR
FIXED CLIP

R4.8

26.2

4.3

39.6

42.9

5

0.5

Ø25

50.8

MG 08
SCREW CAP
SW 24

24

Ø23.6

9

4.8

L

MX
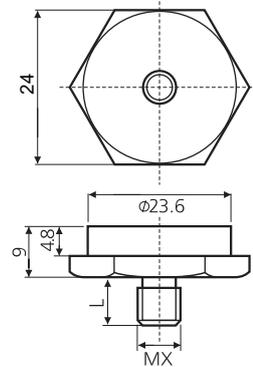
Table 1.3 (CASE or CAP)

BP PLASTIC BODY

Ø22
9

BC CERAMIC BODY

Ø22
9

BS STEEL CASING

16
Ø23.6
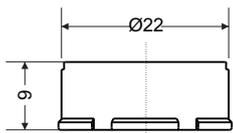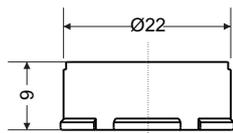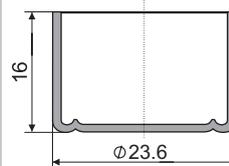
Protection degree IP65

B1R SILICONE CASING

Ø6
5
15
18
Ø27

B2R SILICONE CASING

43
23
20°
Ø9.5
Ø15
15
Ø23.6

15.5
Ø27.5
Ø5
18.6