BM-1	SPECIFICICATIONS	SPEC NO.
		B130411-01

TITLE : BM-1 SPECIFICATION (TYPE B)

CUSTOMER :

DATE	REV NO.	DESCRIPTION	ORIGINATOR	REMARK
2013. 04. 11	0	1st ISSUE.	S.W. SUN	

DEPART.	SIGNATURE	DATE	CUSTOMER	SIGNATURE	DATE
ORIGINATOR	S.W. SUN	2013. 04. 11	CHECKED		/ /
CHECKED	S.T. HAN	2013. 04. 11	CHECKED		/ /
APPROVAL	M.G. Cheon	2013. 04. 11	APPROVAL		/ /
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1. APPLICATION.

This specification is for BM-1 thermal protector (B Type).

2. CONSTRUCTION.

Shown on a separate drawing BM-1

3. SPECIFICATION

3-1. RATING : AC125V-20A (UL/CSA/VDE) / AC250V-8A (UL/CSA/VDE/KC)
AC 250V 9A (VDE/CQC), AC 240V 10A (VDE), AC115V 22A(CQC)
DC16V 20A (UL/CSA/CQC), DC24V 10A (UL/CSA)

3-2. OPERATING TEMPERATURE : SEE. TABLE 1
Operatung temperature measurement should be done at 1°C/minute rate of rising/cooling of temperature with the sufficient air flow.
When the ambient temperature becomes the device's opening and closing temperature, contacts of device instantly break and make.

3-3. CONTACT CIRCUIT RESISTANCE
Less than 80mΩ, but if the parts pass the continuity at 1A/80V-AC, it is regarded as a good part.

3-4. INSULATION RESISTANCE
The insulation resistance of between live parts and ground dead material parts is more than 100 MΩ, measured by D.C. 500V MEGAR at room temperature and room humidity

3-5. DIELECTRIC STRENGTH
An insulation sleeve shall withstand for a minute without breakdown a test potential as 1500 V-AC or for 1 second without breakdown as 1800 V-AC and maximum leak current shall be within 10mA.

3-6. HEAT ENCURANCE TEST
A protector is exposed to the air condition at 150°C - 96hrs.

3-7. CHATTERING : No chattering (Less than 10 ms)

3-8. HUMDITY-PROOF TEST
A protector is exposed to relative humidity 95 % RH at a temperature of 40°C for 48 hrs.

3-9. HEAT SHOCK TEST
A protector is subjected to 5 cycles of heat shock between -40°C +/-3°C for 30 minutes and 150°C +/-3°C for 30 minutes.

3-10. VIBRATION ENDURANCE TEST

The test apparatus is to consist of a vibration table which provides synchronous motion with total displacement of 1.5mm, and vibration is varied uniformly from 10HZ to 55HZ in 1 cycle for period of 3-5 minutes.
Protector is to be tested so that X, Y, Z axis of the sample ars subjected to vibration, each for a period of 2 hrs. (total 6 hrs.)

3-11 . DROP TEST

A Protector is dropped to vinyle tile floor from 70cm height with natural condition.

After the item 3-6, -8, -9, -10,-11 test, the test sample should be meet to following condition.

A) Operating temperature shall not shift from initial temperature by more than +/-7。C.

B) Contact circuit resistance : same as prargraph 3-3

C) The CAN is not damaged

D) Wire lead insulation does not have a crack of expansion.

4. LIFF TEST

In the condition applied maximum current and voltage rating, power factor 1, a switch of a protector shall perform by automatic means for number of 1000 cycles. After this, satisfy the following conditions.

4-1. Operating temperature shall not vary from the set point temperature by more than +/-5。C.

4-2. Contact resistance : Same as paragraph 3-3.

And after an additional 5000 cycles, then shall bo no electrical or mechanical failure of the protector.

5. TEMPERATURE MEASUREMENT METHODS

Operating temperature measurement should be done at 1°C/minute rate of rising/cooling of temperature with the sufficient air flow.
When the ambient temperature becomes the device's opening and closing temperature, contacts of device instantly break and make.

6. ITEM WHICH ARE NOT MENTIONED IN THIS FORM, PLEASE CONTACT BTK CO., LTD.

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* TABLE : OPERATING TEMPERATURE.

NO	CODE	OPEN(°C)	CLOSE(°C)	CHATTERING	RESISTANCE	REMARK
1	BM-1-030A	30±5℃	(22±8℃)	less than 10 ms	50mΩ or less	
2	BM-1-035A	35±5℃	(26±9℃)	less than 10 ms	50mΩ or less	
3	BM-1-040A	40±5℃	(30±10℃)	less than 10 ms	50mΩ or less	
4	BM-1-045A	45±5℃	(34±11℃)	less than 10 ms	50mΩ or less	
5	BM-1-050A	50±5℃	(38±12℃)	less than 10 ms	50mΩ or less	
6	BM-1-055A	55±5℃	(42±13℃)	less than 10 ms	50mΩ or less	
7	BM-1-060A	60±5℃	(46±14℃)	less than 10 ms	50mΩ or less	
8	BM-1-065A	65±5℃	(50±15℃)	less than 10 ms	50mΩ or less	
9	BM-1-070A	70±5℃	(52±15℃)	less than 10 ms	50mΩ or less	
10	BM-1-075A	75±5℃	(54±15℃)	less than 10 ms	50mΩ or less	
11	BM-1-080A	80±5℃	(56±15℃)	less than 10 ms	50mΩ or less	
12	BM-1-085A	85±5℃	(58±15℃)	less than 10 ms	50mΩ or less	
13	BM-1-090A	90±5℃	(60±15℃)	less than 10 ms	50mΩ or less	
14	BM-1-095A	95±5℃	(62±15℃)	less than 10 ms	50mΩ or less	
15	BM-1-100A	100±5℃	(65±15℃)	less than 10 ms	50mΩ or less	
16	BM-1-105A	105±5℃	(68±15℃)	less than 10 ms	50mΩ or less	
17	BM-1-110A	110±5℃	(71±15℃)	less than 10 ms	50mΩ or less	
18	BM-1-115A	115±5℃	(74±15℃)	less than 10 ms	50mΩ or less	
19	BM-1-120A	120±5℃	(77±15℃)	less than 10 ms	50mΩ or less	
20	BM-1-125A	125±5℃	(80±15℃)	less than 10 ms	50mΩ or less	
21	BM-1-130A	130±5℃	(83±15℃)	less than 10 ms	50mΩ or less	
22	BM-1-135A	135±5℃	(86±15℃)	less than 10 ms	50mΩ or less	
23	BM-1-140A	140±5℃	(90±15℃)	less than 10 ms	50mΩ or less	
24	BM-1-145A	145±5℃	(94±15℃)	less than 10 ms	50mΩ or less	
25	BM-1-150A	150±5℃	(98±15℃)	less than 10 ms	50mΩ or less	
26	BM-1-155A	155±5℃	(116±15℃)	less than 10 ms	50mΩ or less	
27	BM-1-160A	160±5℃	(120±15℃)	less than 10 ms	50mΩ or less	
28	BM-1-165A	165±5℃	(124±15℃)	less than 10 ms	50mΩ or less	
29	BM-1-170A	170±5℃	(128±15℃)	less than 10 ms	50mΩ or less	
30	BM-1-175A	175±6℃	(132±15℃)	less than 10 ms	50mΩ or less	
31	BM-1-180A	180±6℃	(136±15℃)	less than 10 ms	50mΩ or less	

* CLOSE TEMPERATURE IS REFERENCE FOR THE CUSTOMER.

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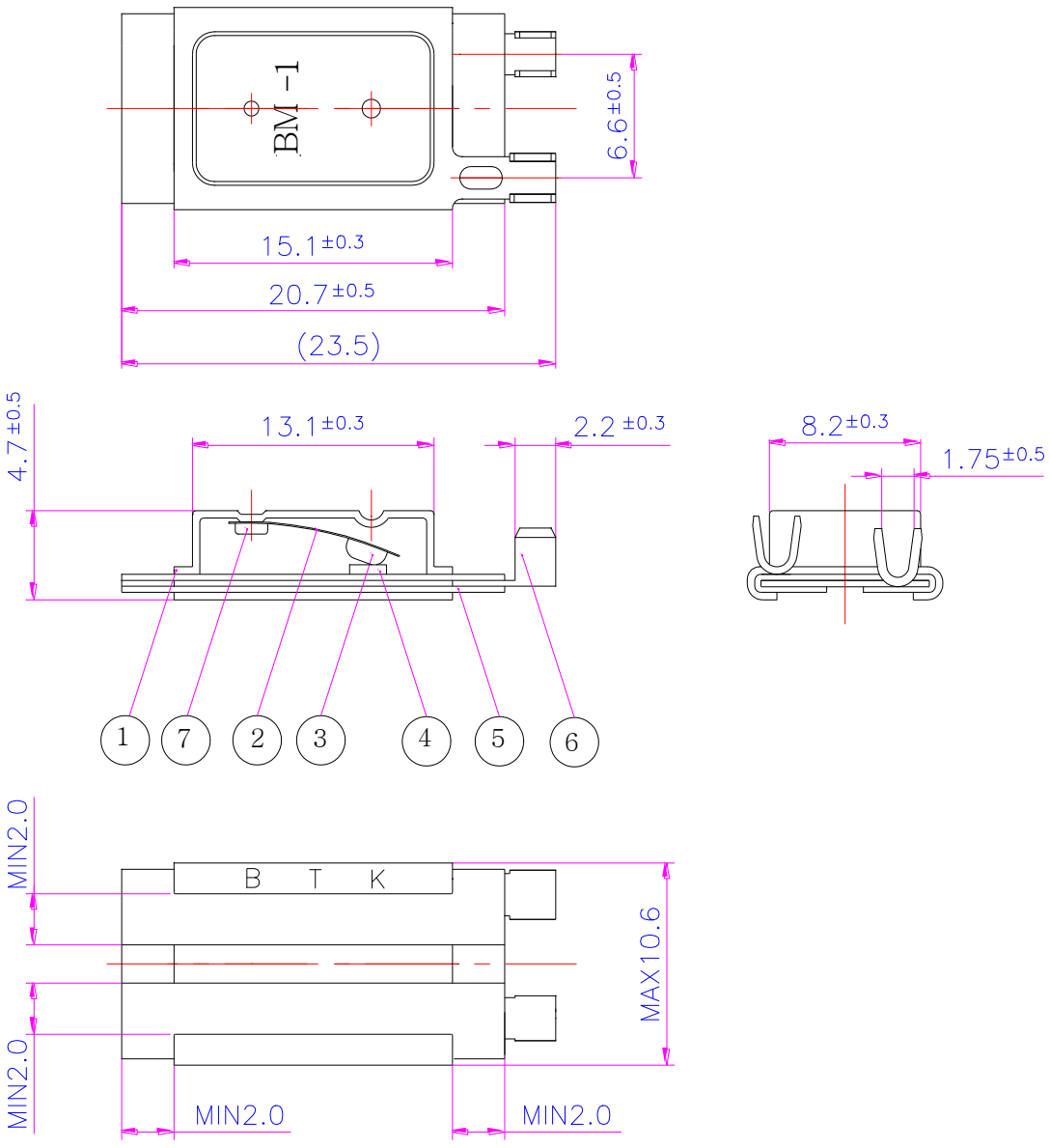

NO	PARTS	MATERIAL	REMARKS
1	CAN	STEEL	t=0.4, Nickel plated steel
2	BIMETAL	TRUFLEX & SUMITOMO	t=0.13
3	M.CONTACT	Ag-alloy,Cu,Fe CLAD	Trilayer, t=1.0, ∅2.3
4	S.CONTACT	Ag-alloy,Cu,Fe CLAD	Trilayer, t=0.61, 3.18 x 2.1
5	INSULATION	PETP	t=0.27, coated dry epoxy
6	PLATE	STEEL	t=0.5, Nickel plated steel
7	SLUG	PURE STEEL	t=0.95,∅2.23, Nickel plated steel

NO	DESCRIPTION	CHECK	APPROV	DATE
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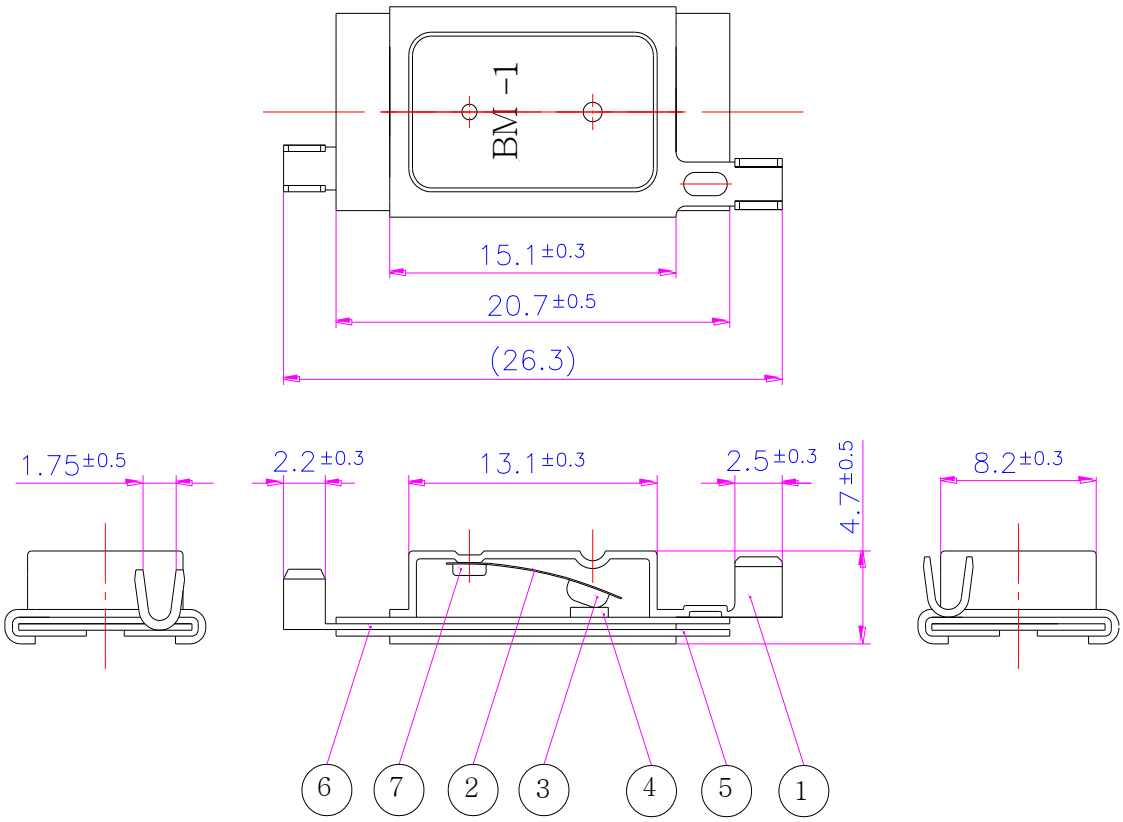
UNIT	mm	SCALE	1 / 3	NAME	BM - 1 (A-TYPE)
APPROVE	CHECK	DESIGN	DRAW	B T K	



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4	S.CONTACT	Ag-alloy,Cu,Fe CLAD	Trilayer, t=0.61, 3.18 x 2.1
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6	PLATE	STEEL	t=0.5, Nickel plated steel
7	SLUG	PURE STEEL	t=0.95, ∅2.23, Nickel plated steel

NO	DESCRIPTION	CHECK	APPROV	DATE
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UNIT	mm	SCALE	1 / 3	NAME	B M - 1 (B -TYPE)
APPROVE	CHECK	DESIGN	DRAW	B T K	