

BM-1	SPECIFICICATIONS	SPEC NO.
		B130411-01

TITLE : BM-1 SPECIFICATION (TYPE A)
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	<i>M.G. Cheon</i>	2013. 04. 11	APPROVAL		/ /
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<p>1. APPLICATION.</p> <p>This specification is for BM-1 thermal protector (A Type).</p> <p>2. CONSTRUCTION.</p> <p>Shown on a separate drawing BM-1</p> <p>3. SPECIFICATION</p> <p>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)</p> <p>3-2. OPERATING TEMPERATURE : SEE. TABLE 1</p> <p>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.</p> <p>3-3. CONTACT CIRCUIT RESISTANCE</p> <p>Less than 80mΩ, but if the parts pass the continuity at 1A/80V-AC, it is regarded as a good part.</p> <p>3-4. INSULATION RESISTANCE</p> <p>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</p> <p>3-5. DIELECTRIC STRENGTH</p> <p>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.</p> <p>3-6. HEAT ENCURANCE TEST</p> <p>A protector is exposed to the air condition at 150°C - 96hrs.</p> <p>3-7. CHATTERING : No chattering (Less than 10 ms)</p> <p>3-8. HUMDITY-PROOF TEST</p> <p>A protector is exposed to relative humidity 95 % RH at a temperature of 40°C for 48 hrs.</p> <p>3-9. HEAT SHOCK TEST</p> <p>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.</p>		
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<p>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.)</p> <p>3-11 . DROP TEST A Protector is dropped to vinyle tile floor from 70cm height with natural condition.</p> <p>After the item 3-6, -8, -9, -10,-11 test, the test sample should be meet to following condition.</p> <p>A) Operating temperature shall not shift from initial temperature by more than +/-7。 C.</p> <p>B) Contact circuit resistance : same as prargraph 3-3</p> <p>C) The CAN is not damaged</p> <p>D) Wire lead insulation does not have a crack of expansion.</p> <p>4. LIFF TEST</p> <p>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.</p> <p>4-1. Operating temperature shall not vary from the set point temperature by more than +/-5。 C.</p> <p>4-2. Contact resistance : Same as paragraph 3-3.</p> <p>And after an additional 5000 cycles, then shall bo no electrical or mechanical failure of the protector.</p> <p>5. TEMPERATURE MEASUREMENT METHODS</p> <p>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.</p> <p>6. ITEM WHICH ARE NOT MENTIONED IN THIS FORM, PLEASE CONTACT BTK CO., LTD.</p>		
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* TABLE : OPERATING TEMPERATURE.

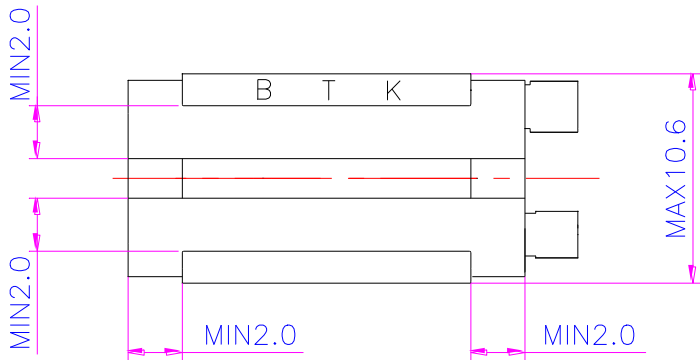
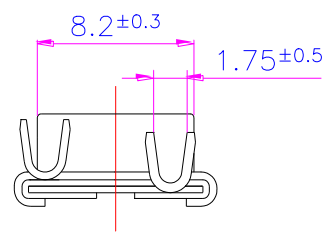
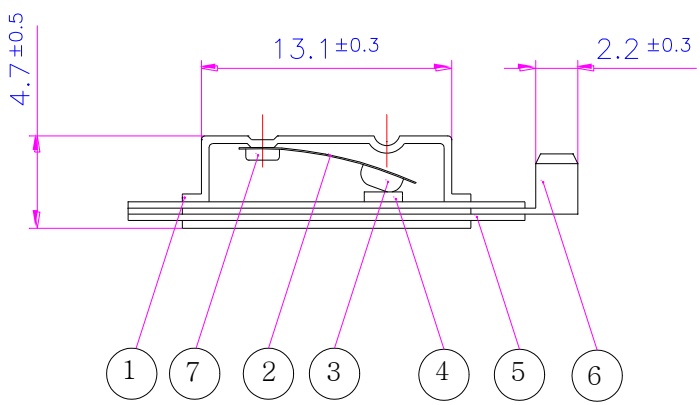
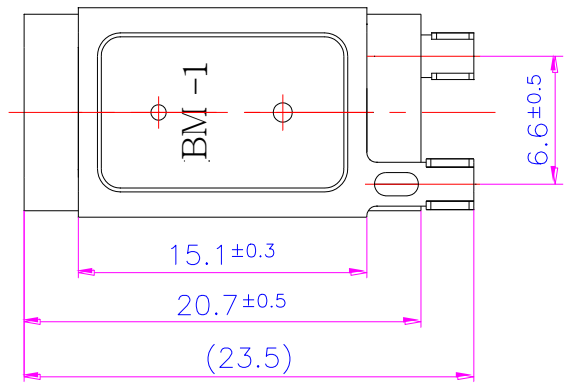
NO	CODE	OPEN(°C)	CLOSE(°C)	CHATTERING	RESISTANCE	REMARK
1	BM-1-030A	30±5°C	(22±8°C)	less than 10 ms	50mΩ or less	
2	BM-1-035A	35±5°C	(26±9°C)	less than 10 ms	50mΩ or less	
3	BM-1-040A	40±5°C	(30±10°C)	less than 10 ms	50mΩ or less	
4	BM-1-045A	45±5°C	(34±11°C)	less than 10 ms	50mΩ or less	
5	BM-1-050A	50±5°C	(38±12°C)	less than 10 ms	50mΩ or less	
6	BM-1-055A	55±5°C	(42±13°C)	less than 10 ms	50mΩ or less	
7	BM-1-060A	60±5°C	(46±14°C)	less than 10 ms	50mΩ or less	
8	BM-1-065A	65±5°C	(50±15°C)	less than 10 ms	50mΩ or less	
9	BM-1-070A	70±5°C	(52±15°C)	less than 10 ms	50mΩ or less	
10	BM-1-075A	75±5°C	(54±15°C)	less than 10 ms	50mΩ or less	
11	BM-1-080A	80±5°C	(56±15°C)	less than 10 ms	50mΩ or less	
12	BM-1-085A	85±5°C	(58±15°C)	less than 10 ms	50mΩ or less	
13	BM-1-090A	90±5°C	(60±15°C)	less than 10 ms	50mΩ or less	
14	BM-1-095A	95±5°C	(62±15°C)	less than 10 ms	50mΩ or less	
15	BM-1-100A	100±5°C	(65±15°C)	less than 10 ms	50mΩ or less	
16	BM-1-105A	105±5°C	(68±15°C)	less than 10 ms	50mΩ or less	
17	BM-1-110A	110±5°C	(71±15°C)	less than 10 ms	50mΩ or less	
18	BM-1-115A	115±5°C	(74±15°C)	less than 10 ms	50mΩ or less	
19	BM-1-120A	120±5°C	(77±15°C)	less than 10 ms	50mΩ or less	
20	BM-1-125A	125±5°C	(80±15°C)	less than 10 ms	50mΩ or less	
21	BM-1-130A	130±5°C	(83±15°C)	less than 10 ms	50mΩ or less	
22	BM-1-135A	135±5°C	(86±15°C)	less than 10 ms	50mΩ or less	
23	BM-1-140A	140±5°C	(90±15°C)	less than 10 ms	50mΩ or less	
24	BM-1-145A	145±5°C	(94±15°C)	less than 10 ms	50mΩ or less	
25	BM-1-150A	150±5°C	(98±15°C)	less than 10 ms	50mΩ or less	
26	BM-1-155A	155±5°C	(116±15°C)	less than 10 ms	50mΩ or less	
27	BM-1-160A	160±5°C	(120±15°C)	less than 10 ms	50mΩ or less	
28	BM-1-165A	165±5°C	(124±15°C)	less than 10 ms	50mΩ or less	
29	BM-1-170A	170±5°C	(128±15°C)	less than 10 ms	50mΩ or less	
30	BM-1-175A	175±6°C	(132±15°C)	less than 10 ms	50mΩ or less	
31	BM-1-180A	180±6°C	(136±15°C)	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, ϕ 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, ϕ 2.23, Nickel plated steel

△				UNIT	mm	SCALE	1 / 3	NAME	BM - 1 (A-TYPE)
△				APPROVE	CHECK	DESIGN	DRAW	B T K	
△									
△	NO	DE SC RI PT I ON	CHEK	APPROV	D A TE				