

TI

17AMC THERMAL PROTECTOR

GENERAL SPECIFICATION

RoHS Directive 2002/95/EC Compliance

TEXAS INSTRUMENTS JAPAN LIMITED
SENSORS & CONTROLS GROUP-JAPAN
CONTROL PRODUCTS ENGINEERING

17AMC SPECIFICATION REVISIONS

REV	DESCRIPTION	DATE	APP.
A	1ST ISSUE Y. Takasugi	2/10/'06 2/15/'06	M. Unno

1 APPLICATION.

This form is applicable to specification of 17AMC type Thermal protector as a Motor Protector, which is produced by Texas Instruments.

2 CONSTRUCTION.

Geometry, component details are as per attached Envelop drawing. Component parts shall comply with the RoHS directive 2002/95/EC.

3 SPECIFICATION.

3.1 MAX RATING: 115VAC 22A, 250VAC 8A.

3.2 OPERATING TEMPERATURE: See table in "6-3 17AMC DEVICE NUMBERING SYSTEM".

3.3 DIELECTRIC STRENGTH:

The dielectric strength between insulation wire and sleeve withstand for 1 minute without breakdown at test potential of 1500V-AC for 1 second without breakdown or at 1800V-AC. (Maximum leakage current shall be 10mA or less)

3.4 INSULATION RESISTANCE:

The insulation resistance between wire conductor and sleeve is more than 100Mohms, measured by 500V-DC "MEGA" at room temperature and room humidity.

3.5 CONTACT CIRCUIT RESISTANCE:

50mohms or less.

Please refer to the description of "NOTE 1" of page 4.

4 ENVIRONMENT CAPABILITY

After each test condition 4-1, 4-2, 4-3, 4-4 and 4-5, the tested samples should be meet to following requirement.

- A) Open temperature should not be shifted from initial temperature by more than 7K.
- B) Contact circuit resistance should be 50mohms or less.
- C) The can has no deformation.
- D) Wire lead insulation does not have a crack or expansion.

4-1 HEAT ENDURANCE TEST:

A motor protector is exposed to the air condition for 96hours with either temperature above 20 degC from nominal open temperature or 150 degC low one.

4-2 HUMIDITY TEST:

A motor protector is exposed to relative humidity 95% RH at 40degC ambient for 48hours.

4-3 HEAT SHOCK TEST:

A motor protector subjected to 5 cycles of heat shock between -20degC for 30 minutes and either of temperature above 20 degC from nominal open temperature or 150 degC low one.

4-4 VIBRATION ENDURANCE TEST:

A motor protector is tested by sinewave vibration with total displacement of 1.5mm, and sweep frequency from 10Hz to 55Hz in 1 cycle for period of 3 5 minutes.

During the test, Motor protector is to be rotated so that three positions X,Y,Z axis of the sample are subjected to vibration, each for a period of 2 hours (total 6 hours).

4-5 DROP TEST:

A motor protector is dropped by free fall onto vinyl tile floor from 70cm height.

5 LIFE TEST

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

- A) Open temperature should not be shifted from initial temperature by more than 5K.
- B) Contact resistance should be 50mohms or less.
- C) Contact does not have welding and falling.

Moreover, after 5000 cycles, there should be no electrical or no mechanical failure of the Motor Protector.

6. OTHER

6-1 Operation temperatures shall be measured with the rate of 1degC per 2 minutes in circulating air.

6-2 SEALING PERFORMANCE:

No bubble from the inside of the product in the hot water of 85 degC.

6-3 ANY ITEM NOT DESCRIBED IN THIS SPECIFICATION LIST HAS TO BE DISCUSSED SEPARATELY.

NOTE.1

In case contact resistance reading is higher than the specification when measured by low volt resistance meter, Please eliminate the slight residual or oxidative film on the contact in accordance with following procedure.

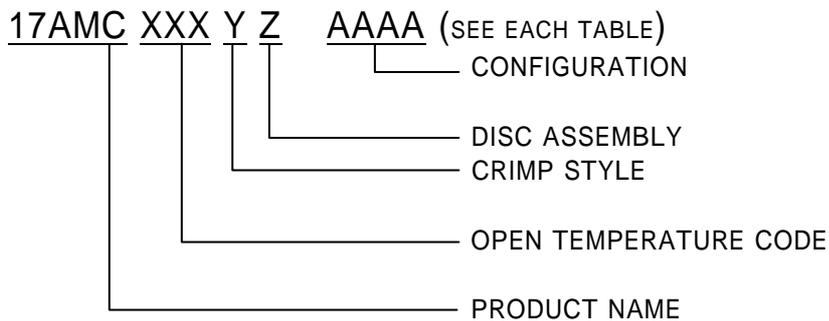
- 1) Apply AC 60 100 volt, 2 5 amp. And cycle the protector 2 3 times by heating.
- 2) Re-measure the contact resistance.

It should be acceptable if the contact resistance reduce to within the specification.

6-2 AGENCY

Agency	File No	Certified Date
UL	E15962	Mar./2005
CQC	CQC02002001513	Jun./2005
VDE	40013211	May./2005

6-3 17AMC DEVICE NUMBERING SYSTEM



XXX

OPEN TEMPERATURE CODE

Marking	Open temp.	Close temp.
65	65 ± 5	45 ± 15
70	70 ± 5	55-40
75	75 ± 5	60-40
80	80 ± 5	65-40
85	85 ± 5	70-40
90	90 ± 5	75-45
95	95 ± 5	80-45
100	100 ± 5	85-50
105	105 ± 5	90-50
110	110 ± 5	90-50
115	115 ± 5	95-55
120	120 ± 5	95-55
125	125 ± 5	100-60
130	130 ± 5	105-60
135	135 ± 5	110-60
140	140 ± 5	115-60
145	145 ± 5	120-60
150	150 ± 5	120-60
155	155 ± 5	125-60
160	160 ± 5	130-60

Close temperature is reference only.

Y

CRIMP STYLE (A or B)

REFER TO THE ATTACHED ENVELOP DRAWING.

Z

DISC ASSEMBLY

CODE	RESISTANCE
6	LOW
9	HIGH

-AAAA

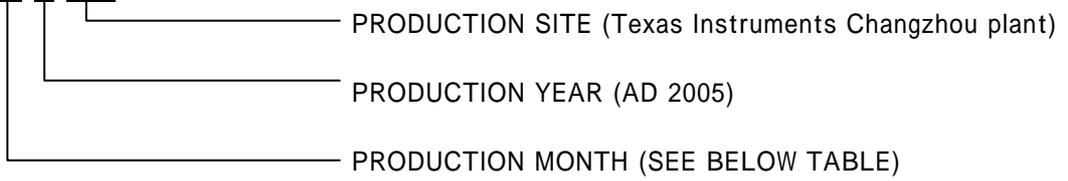
CONFIGURATION CODE

CODE	WIRE LEAD	SLEEVE	ENV. DWG#	REMARKS
-1000	X	X	17AMC-1000 ENV	
-1001	O	O	17AMC-1001 ENV	
-1002	O	X	17AMC-1002 ENV	
-1003	X	(O)	17AMC-1003 ENV	-1000 with sleeve (packing only)
-1006	X	(O)	17AMC-1006 ENV	-1000 with sleeve (packing only)
-1007	O	O	17AMC-1007 ENV	

* THIS CODE IS NOT MARKED ON THE PRODUCT.

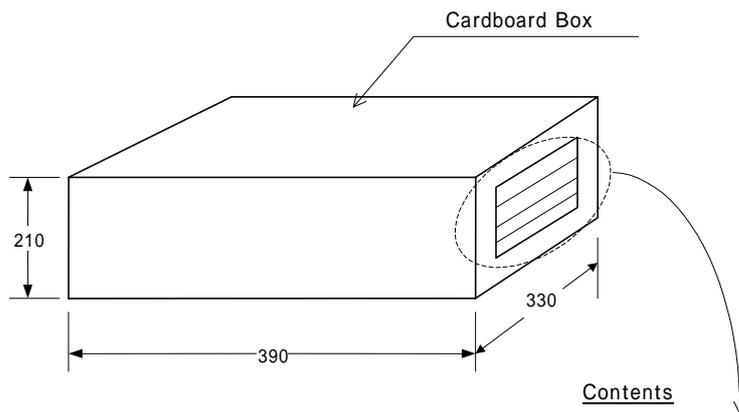
6-4 PRODUCT LOT CODE

B 5 CZ



CODE	B	D	F	H	K	M	P	R	T	V	X	Z
MONTH	1	2	3	4	5	6	7	8	9	10	11	12

6-4 Packing



* Quantity: n = MAX 5,000pcs/Box

TO	
TYPE	
QTY	
LOT NO.	

Note: Above table is based on TI (Changzhou)