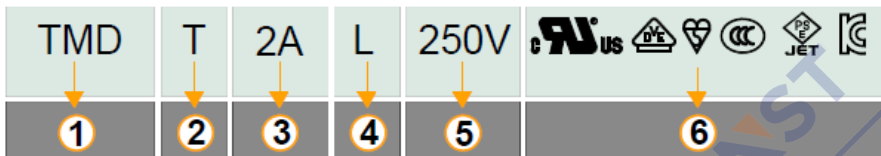


### 1. 適用範圍 / SCOPE

TMD 系列小型保險絲，適用於一般電子設備。  
TMD series Miniature-Fuse, used in electronic equipment.

### 2. 產品型號 / TYPE

例「example」：



- ① 系列號 / Series Number
- ② 特性符號 / Characteristic Symbol
- ③ 額定電流 / Rated Current
- ④ 斷路容量符號 / Breaking Capacity Symbol
- ⑤ 額定電壓 / Rated Voltage
- ⑥ 認證符號 / Approved Symbol

### 3. 額定電流和額定電壓/ RATED CURRENT AND RATED VOLTAGE

額定電流 / Rated Current:

100mA~15A

額定電壓 / Rated Voltage:

250VAC

### 4. 標示 / MARKING

保險絲兩端銅帽上需有下列標示/The fuses cap shall have the following marking




















①規 格：製造工廠的商標+額定電流+額定電壓

Specification: The Manufacture's Logo + Rated Current + Rated Voltage

100mA~800mA :  T\_\_mA L 250V  
1A~15A :  T\_\_A L250V

②系列號+認證符號

Trade mark: Part Number + Approved Symbol.

100mA~800mA (250V) :	TMD					
1A ~ 6.3A (250V) :	TMD					
8A 、 10A (250V):	TMD					
12.5A(250V):	TMD					
12A 、 15A(250V) :	TMD					

注意 / Note:

對標示的大小和位置沒有規定 / Size and position of the markings shall not be provided.

## 5. 外觀及形狀 / APPEARANCES AND CONFIGURATION

5-1 外觀：不應有破碎、明顯的汗斑。

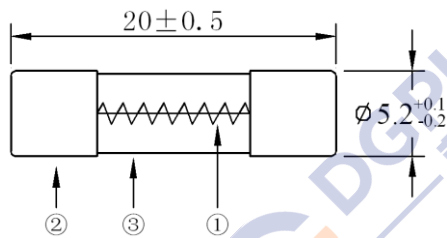
Appearances: There shall not be break up and any remarkable blotch.

5-2 形狀：小型保險絲。

Configuration: Miniature-Fuse.

## 6. 工程圖和結構 / OUTLINE DRAWING AND STRUCTURE

6-1 工程圖（單位：mm） / Outline Drawing and Dimensions (Unit: mm)



6-2 結構 / Structure

編號 No.	元件 Component	材質 Material	數量 Quantity
①	熔絲 Wire	合金 Alloy	1
②	銅帽 Cap	黃銅鍍鎳 Brass with nickel plated	2
③	本體 Body	玻璃管 Glass Tube	1

## 7. 產品特性 / PRODUCT CHARACTERISTICS

7-1 拉力測試/Tensile test

軸向拉力 5 牛頓，持續 60 秒/Pulling the cap of the fuse with 5 N at axial direction keep 60 sec.

7-2 推力測試/Thrust test

軸向推力 2 牛頓，持續  $10 \pm 1$  秒/Thrust two cap's bottom of the fuse with 2N at axial direction keep  $10 \pm 1$  sec.

**8. 電氣特性 / ELECTRICAL CHARACTERISTICS**
**8-1 熔斷 / 電流特性：Pre-Arcing Time / Current Characteristic (limits)**

RATED CURRENT	2.1 In		2.75 In		4 In		10 In	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
100mA	2 min	200 ms	10 s	40 ms	3 s	10 ms	300 ms	
Above 100mA to 15A	2 min	600 ms	10 s	150 ms	3 s	20 ms	300 ms	

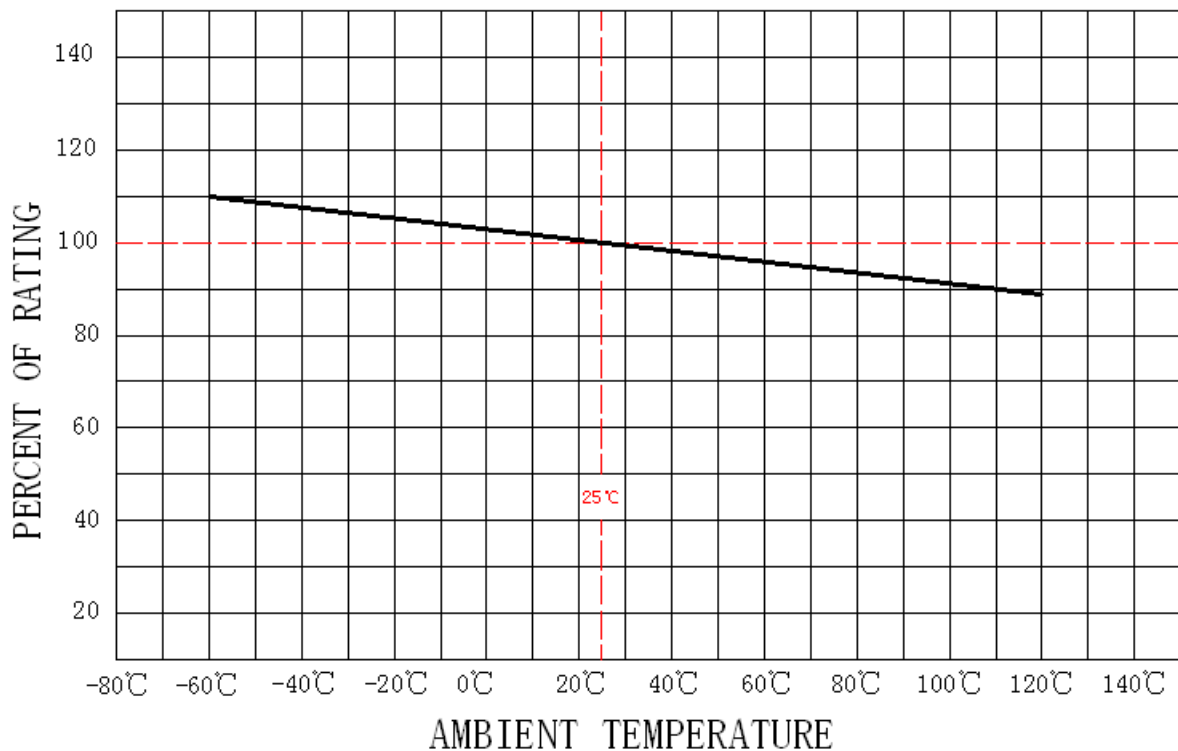
**9. 環境特性 / ENVIRONMENTAL CHARACTERISTIC**
**9-1 操作溫度範圍: -55°C ~ 125°C / Operating Temperature: -55°C ~ 125°C**

若貴司操作環境溫度超出 $25 \pm 5^\circ\text{C}$ 範圍，在選用保險絲規格時，需考慮操作環境溫度對保險絲的影響。  
 請參照：溫度-電流曲線圖。

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from  $20 \sim 30^\circ\text{C}$ , you should consider the environmental temperature's affection to fuses.

Please refer:

Temperature-Current curve:



### 9-2 存儲條件 / Storage Conditions

在溫度+10°C ~ 60°C、相對濕度 ≤ 75%的密閉條件下可存放 3 年。

Under airtight in temperature+10°C ~ 60°C、relative humidity ≤ 75% can store 3 years.

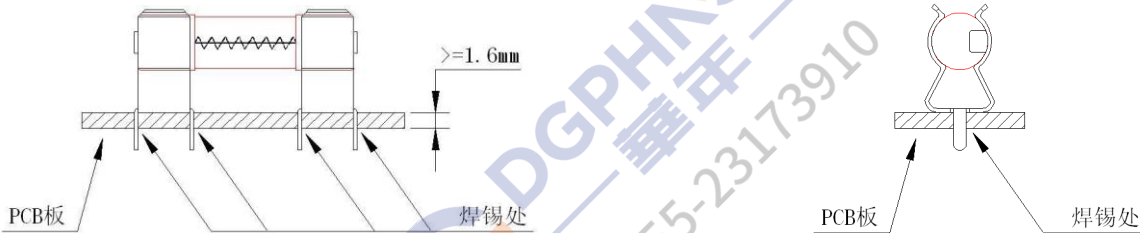
在溫度+10°C ~ 60°C、相對濕度為 95%的非露天下最多可存放 30 天。

Without dew in temperature+10°C ~ 60°C、relative humidity be 95% maximum value for 30days.

## 10. 安裝方式及條件 / INSTALLATION WAY AND PARAMETERS

### 10-1 建議如下圖安裝方式安裝，並滿足所要求的尺寸。

Propose that the following picture installation way is installed, and satisfied the required size.



### 10-2 建議客戶焊接參數 / Recommended Customer Soldering Parameters

波峰焊參數 / Wave Parameters:

錫爐溫度 / Solder Pot Temperature:

260°C Max

焊接時間 / Solder Dwell Time:

2~5s

手工焊參數 / Hand-Solder Parameters:

烙鐵溫度 / Solder Iron Temperature:

350±5°C

焊接時間 / Heating Time:

5 s Max

## 11. 其他使用注意事項 / OTHER NOTICE IN USED

如果需在保險絲上加熱縮套管，烘烤溫度與時間需參照以下規定

If need to add heat draws back the sleeve pipe on the fuse, it needs to consult the following regulation to toast temperature and time

溫度 temperature	120°C	130°C	140°C	150°C	160°C	170°C	180°C
時間 time	Max 80s	Max 75s	Max 70s	Max 65s	Max 60s	Max 55s	Max 50s

12.安全認證及編號 / STANDARDS AND APPROVALS

UL	E56092(100mA~15A)
VDE	40018200(100mA~10A)      40018201(12A ~15A)
BSI	KM70911(100mA~6.3A)
CCC	2003010207031313 (100mA~6.3A)
CQC	CQC08012023812(8A~12.5A)
PSE	JET2179-31003-2003(1A~5A 250V)      JET2179-31003-2004(5.1A~15A 250V)
KC	SU05015-5007(100mA~250mA)      SU05015-5008(315mA~400mA) SU05015-5006(500mA~800mA)      SU05015-5004(1A~2.5A) SU05015-5003 (3.15A~4A)      SU05015-5005(5A~6.3A) SU05015-12009(8A~15A)

13. 包裝 / PACKING

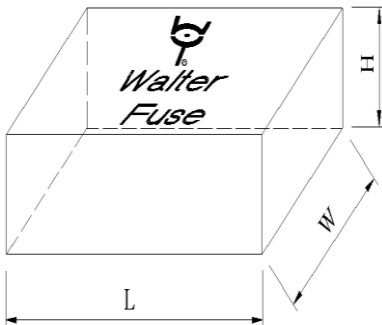
13-1 包裝數量 / Packing Quantity

A：每內盒裝 1000 個保險絲。  
1000pcs per inner box .

B：每外箱裝 10 內盒保險絲。  
10 inner boxes per outer box .

13-2 內包裝盒/Inner box of packing

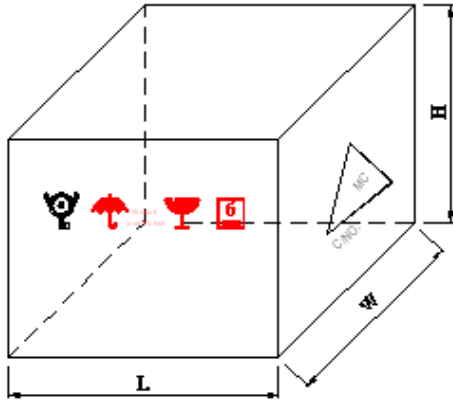
單位/Unit : mm



L	W	H
157±3	127±3	84±2

13-3 外包裝箱/Outer box of packing

單位/Unit : mm



L	W	H
270±5	445±5	190±5

14.其他 / OTHERS

14-1 如果在使用中有超出本規格書的要求，必須經由雙方協商確認。

In the event that an impropriety is found beyond this specification, it shall be fixed by mutual agreement between the parties.

14-2 如果本規格書有不適當的情況，必須通過雙方協商並由本公司修改。

In the event that an impropriety is found in this specification, WALTER ELECTRONIC CO., LTD. shall amend it by mutual agreement between the parties.

版次	製作	確認	審核
第十一版	饒紅	蔡明威	郭硯玲



# UL iQ for Fuses



## Fuses

E56092

### Guide Information

## SUZHOU WALTER ELECTRONIC CO LTD

Fenhu Technic Development Zone, Wujiang Jiangsu 215211 CN

### TMD

Supplemental fuses: cartridge enclosed

<u>Size</u> <u>mm(in)</u>	<u>Amps</u> <u>(A)</u>	<u>Volts</u> <u>(V)</u>	<u>Interrupting</u> <u>Rating (A)</u>
5 x 20 (0.20 x 0.79)	0.1 - 3.5	250Vac	35
	0.1 - 6.3	125Vdc	35
	0.1 - 6.3	125Vac	10000
	3.6 - 6.3	250Vac	10x Ampere rating
	8 - 15	125Vac	10x Ampere rating
	8 - 15	250Vac	10x Ampere rating

Report Date: 2002-06-21

Last Revised: 2018-09-04

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DGPHNCS  
— 德中  
电话: 0755-23773910

## ZEICHENGENEHMIGUNG MARKS APPROVAL

Suzhou Walter Electronic  
Co. Ltd.  
Fenhu Technic Development Zone  
215211 LUXU TOWN, WUJIANG CITY  
Jiangsu  
CHINA

ist berechtigt, für ihr Produkt /  
*is authorized to use for their product*

**G-Sicherungseinsatz**  
**Cartridge fuse-link**

die hier abgebildeten markenrechtlich geschützten Zeichen  
für die ab Blatt 2 aufgeführten Typen zu benutzen /  
*the legally protected Marks as shown below for the types referred to on page 2 ff.*



Geprüft und zertifiziert nach /  
*Tested and certified according to*

DIN EN 60127-1 (VDE 0820-1):2015-12; EN 60127-1:2006+A1:2011+A2:2015  
DIN EN 60127-2 (VDE 0820-2):2015-07; EN 60127-2:2014  
IEC 60127-1:2006  
IEC 60127-1:2006/AMD1:2011  
IEC 60127-1:2006/AMD2:2015  
IEC 60127-2:2014

VDE Prüf- und Zertifizierungsinstitut GmbH  
VDE Testing and Certification Institute  
Zertifizierungsstelle / Certification

M. Tasotti

Aktenzeichen: 5000410-1170-0028 / 253499

File ref.:

Ausweis-Nr. 40018200

Blatt 1

Certificate No.

Page

Weitere Bedingungen siehe Rückseite und Folgeblätter /  
*further conditions see overleaf and following pages*

Offenbach, 2006-07-06

(letzte Änderung / updated 2018-12-03)

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<http://www.vde.com/certificate>



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Suzhou Walter Electronic Co. Ltd., Fenu Technic Development Zone, 215211 LUXU TOWN, WUJIANG CITY,  
Jiangsu, CHINA

Aktenzeichen / *File ref.*

5000410-1170-0028 / 253499 / TL3 / EUL

letzte Änderung / *updated*

2018-12-03

Datum / *Date*

2006-07-06

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40018200.

*This supplement is only valid in conjunction with page 1 of the Certificate No. 40018200.*

## G-Sicherungseinsatz Cartridge fuse-link

Typ(en) / *Type(s)*

### TMD-Serie(s)

Bemessungsspannung  
*Rated voltage*

AC 250 V (100 mA - 6,3 A)  
AC 250 V / AC 125 V (8A; 10 A)

Bemessungsstrom  
*Rated current*

100 mA; 125 mA; 160 mA; 200 mA; 250 mA;  
315 mA; 400 mA; 500 mA; 630 mA; 800 mA;  
1 A; 1,25 A; 1,6 A; 2 A; 2,5 A; 3,15 A; 4 A;  
5 A; 6,3 A; 8 A; 10 A

Normblatt  
*Standard sheet*

3

Maße in mm  
*Dimension in mm*

5 x 20

Kennzeichnung der Charakteristik  
*Characteristic symbol*

T

Kennzeichnung des Ausschaltvermögens  
*Breaking capacity symbol*

L

Bemessungsausschaltvermögen  
*Rated breaking capacity*

35 A bzw. 10 x In  
35 A resp. 10 x In

Zeit/Strom-Charakteristik  
*Time/current-characteristic*

träge  
time-lag

Fortsetzung siehe Blatt 3 /  
*continued on page 3*

# VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Blatt /  
Certificate No. / Page  
40018200 3

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

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Jiangsu, CHINA

Aktenzeichen / *File ref.*

5000410-1170-0028 / 253499 / TL3 / EUL

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2018-12-03

Datum / *Date*

2006-07-06

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40018200.

*This supplement is only valid in conjunction with page 1 of the Certificate No. 40018200.*

Anmerkung

*Remark*

Wahlweise mit Drahtanschlüssen (pigtails)

*Optional with lead wires (pigtails)*

Dieser Zeichengenehmigungs-Ausweis bildet eine Grundlage für die EG-Konformitätserklärung und CE-Kennzeichnung durch den Hersteller oder dessen Bevollmächtigten und bescheinigt die Konformität mit den grundlegenden Schutzanforderungen der **EG-Niederspannungsrichtlinie 2014/35/EU**.

*This Marks Approval is a basis for the EC Declaration of Conformity and the CE Marking by the manufacturer or his agent and proves the conformity with the essential safety requirements of the **EC Low-Voltage Directive 2014/35/EU**.*

VDE Prüf- und Zertifizierungsinstitut GmbH

*VDE Testing and Certification Institute*

Fachgebiet TL3

*Section TL3*

# VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Beiblatt /  
Certificate No. Supplement  
40018200

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Aktenzeichen / *File ref.*

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letzte Änderung / *updated*

2018-12-03

Datum / *Date*

2006-07-06

Dieses Beiblatt ist Bestandteil des Zeichengenehmigungsausweises Nr. 40018200.

*This supplement is part of the Certificate No. 40018200.*

## G-Sicherungseinsatz Cartridge fuse-link

### Fertigungsstätte(n) Place(s) of manufacture

Referenz/*Reference*  
**30006375**

Dongguan Walter Electric Co., Ltd.  
Yan Tian, Feng Gang Town  
523702 DONGGUAN CITY  
Guangdong  
CHINA

Referenz/*Reference*  
**30011941**

Suzhou Walter Electronic  
Co. Ltd.  
Fenu Technic Development Zone  
215211 LUXU TOWN, WUJIANG CITY  
Jiangsu  
CHINA

VDE Prüf- und Zertifizierungsinstitut GmbH  
*VDE Testing and Certification Institute*  
Fachgebiet TL3  
*Section TL3*

# VDE Prüf- und Zertifizierungsinstitut Zeichengenehmigung

Ausweis-Nr. / Infoblatt /  
Certificate No. / Info sheet  
40018200

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Suzhou Walter Electronic Co. Ltd., Fenu Technic Development Zone, 215211 LUXU TOWN, WUJIANG CITY,  
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Aktenzeichen / File ref.

5000410-1170-0028 / 253499 / TL3 / EUL

letzte Änderung / updated

2018-12-03

Datum / Date

2006-07-06

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*This supplement is only valid in conjunction with page 1 of the Certificate No. 40018200.*

## **Genehmigung zum Benutzen des auf Seite 1 abgebildeten markenrechtlich geschützten Zeichens des VDE:**

Grundlage für die Benutzung sind die Allgemeinen Geschäftsbedingungen (AGB) der VDE Prüf- und Zertifizierungsinstitut GmbH ([www.vde.com\AGB-Institut](http://www.vde.com\AGB-Institut)). Das Recht zur Benutzung erstreckt sich nur auf die bezeichnete Firma mit den genannten Fertigungsstätten und die oben aufgeführten Produkte mit den zugeordneten Bezeichnungen. Die Fertigungsstätte muss so eingerichtet sein, dass eine gleichmäßige Herstellung der geprüften und zertifizierten Ausführung gewährleistet ist.

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Produkte, die das Biozid Dimethylfumarat (DMF) enthalten, dürfen gemäß der Kommissionsentscheidung 2009/251/EG nicht mehr in den Verkehr gebracht oder auf dem Markt bereitgestellt werden.

Der VDE-Zeichengenehmigungsausweis wird ausschließlich auf der ersten Seite unterzeichnet.

### **Approval to use the legally protected Mark of the VDE as shown on the first page:**

*Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute ([www.vde.com\terms-institute](http://www.vde.com\terms-institute)). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.*

*The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).*

*The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.*

*Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.*

*The approval is solely signed on the first page.*

## GUTACHTEN MIT FERTIGUNGSÜBERWACHUNG CERTIFICATE OF CONFORMITY WITH FACTORY SURVEILLANCE

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215211 LUXU TOWN, WUJIANG CITY  
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ist berechtigt, für ihr Produkt /  
*is authorized to use for their product*

**G-Sicherungseinsatz**  
**Cartridge fuse-link**

die hier abgebildeten markenrechtlich geschützten Zeichen  
für die ab Blatt 2 aufgeführten Typen zu benutzen /  
*the legally protected Marks as shown below for the types referred to on page 2 ff.*



REG B864 oder/or



oder/or VDE-REG B864

REG B864

Geprüft und zertifiziert nach /  
*Tested and certified according to*

DIN EN 60127-1 (VDE 0820-1):2015-12; EN 60127-1:2006+A1:2011+A2:2015  
DIN EN 60127-2 (VDE 0820-2):2015-07; EN 60127-2:2014  
IEC 60127-1:2006  
IEC 60127-1:2006/AMD1:2011  
IEC 60127-1:2006/AMD2:2015  
IEC 60127-2:2014

Aktenzeichen: 5000410-1170-0028 / 253500

File ref.:

Ausweis-Nr. 40018201

Blatt 1

Certificate No.

Page

Weitere Bedingungen siehe Rückseite und Folgeblätter /  
*further conditions see overleaf and following pages*

Offenbach, 2006-07-06

(letzte Änderung / updated 2018-12-03)

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Aktenzeichen / File ref.

5000410-1170-0028 / 253500 / TL3 / EUL

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2018-12-03

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2006-07-06

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*This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 40018201.*

## G-Sicherungseinsatz Cartridge fuse-link

Typ(en) / Type(s)

### TMD-Serie(s)

Bemessungsspannung  
Rated voltage

AC 250 V (12,5 A)  
AC 250 V / AC 125 V (12 A; 15 A)

Bemessungsstrom  
Rated current

12 A; 12,5 A; 15 A

Normblatt  
Standard sheet

3

Maße in mm  
Dimension in mm

5 x 20

Kennzeichnung der Charakteristik  
Characteristic symbol

T

Kennzeichnung des Ausschaltvermögens  
Breaking capacity symbol

L

Bemessungsausschaltvermögen  
Rated breaking capacity

10 x In

Zeit/Strom-Charakteristik  
Time/current-characteristic

träge  
time-lag

Fortsetzung siehe Blatt 3 /  
continued on page 3

# VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Blatt /  
Certificate No. / Page  
40018201 3

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Jiangsu, CHINA

Aktenzeichen / File ref.

5000410-1170-0028 / 253500 / TL3 / EUL

letzte Änderung / updated

2018-12-03

Datum / Date

2006-07-06

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*This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 40018201.*

Anmerkung

Die Anforderungen für 12 A, 12,5 A und 15 A waren die gleichen wie für 10 A (höchster Bemessungsstrom des Normblatts).  
Wahlweise mit Drahtanschlüssen (außer 12,5 A).

Remark

*The requirements for 12 A, 12,5 A and 15 A were the same as for 10 A (highest rated current in standard sheet).  
Optional with lead wires (pigtaills; except 12,5 A).*

Dieser Zeichengenehmigungs-Ausweis bildet eine Grundlage für die EG-Konformitätserklärung und CE-Kennzeichnung durch den Hersteller oder dessen Bevollmächtigten und bescheinigt die Konformität mit den grundlegenden Schutzanforderungen der **EG-Niederspannungsrichtlinie 2014/35/EU**.

*This Marks Approval is a basis for the EC Declaration of Conformity and the CE Marking by the manufacturer or his agent and proves the conformity with the essential safety requirements of the **EC Low-Voltage Directive 2014/35/EU**.*

VDE Prüf- und Zertifizierungsinstitut GmbH  
VDE Testing and Certification Institute  
Fachgebiet TL3  
Section TL3

# VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Beiblatt /  
Certificate No. Supplement  
40018201

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*

Suzhou Walter Electronic Co. Ltd., Fenu Technic Development Zone, 215211 LUXU TOWN, WUJIANG CITY,  
Jiangsu, CHINA

Aktenzeichen / *File ref.*

5000410-1170-0028 / 253500 / TL3 / EUL

letzte Änderung / *updated*

2018-12-03

Datum / *Date*

2006-07-06

Dieses Beiblatt ist Bestandteil des Gutachtens mit Fertigungsüberwachung Nr. 40018201.

*This supplement is part of the Certificate of Conformity with factory surveillance No. 40018201.*

## G-Sicherungseinsatz

### Cartridge fuse-link

#### Fertigungsstätte(n)

#### Place(s) of manufacture

Referenz/*Reference*

**30006375**

Dongguan Walter Electric Co., Ltd.

Yan Tian, Feng Gang Town

523702 DONGGUAN CITY

Guangdong

CHINA

Referenz/*Reference*

**30011941**

Suzhou Walter Electronic

Co. Ltd.

Fenu Technic Development Zone

215211 LUXU TOWN, WUJIANG CITY

Jiangsu

CHINA

VDE Prüf- und Zertifizierungsinstitut GmbH

*VDE Testing and Certification Institute*

Fachgebiet TL3

*Section TL3*



# VDE Prüf- und Zertifizierungsinstitut Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Infoblatt /  
Certificate No. / Info sheet  
40018201

Name und Sitz des Genehmigungs-Inhabers / Name and registered seat of the Certificate holder

Suzhou Walter Electronic Co. Ltd., Fenuh Technic Development Zone, 215211 LUXU TOWN, WUJIANG CITY,  
Jiangsu, CHINA

Aktenzeichen / File ref.

5000410-1170-0028 / 253500 / TL3 / EUL

letzte Änderung / updated

2018-12-03

Datum / Date

2006-07-06

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 40018201.

*This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 40018201.*

## **Genehmigung zum Benutzen des auf Seite 1 abgebildeten markenrechtlich geschützten Zeichens des VDE:**

Grundlage für die Benutzung sind die Allgemeinen Geschäftsbedingungen (AGB) der VDE Prüf- und Zertifizierungsinstitut GmbH ([www.vde.com\AGB-Institut](http://www.vde.com\AGB-Institut)). Das Recht zur Benutzung erstreckt sich nur auf die bezeichnete Firma mit den genannten Fertigungsstätten und die oben aufgeführten Produkte mit den zugeordneten Bezeichnungen. Die Fertigungsstätte muss so eingerichtet sein, dass eine gleichmäßige Herstellung der geprüften und zertifizierten Ausführung gewährleistet ist.

Die Genehmigung ist so lange gültig wie die VDE-Bestimmungen gelten, die der Zertifizierung zugrunde gelegen haben, sofern sie nicht auf Grund anderer Bedingungen aus der VDE Prüf- und Zertifizierungsordnung (PM102) zurückgezogen werden muss.

Der Gültigkeitszeitraum einer VDE-GS-Zeichengenehmigung kann auf Antrag verlängert werden. Bei gesetzlichen und / oder normativen Änderungen kann die VDE-GS-Zeichengenehmigung ihre Gültigkeit zu einem früheren als dem angegebenen Datum verlieren.

Produkte, die das Biozid Dimethylfumarat (DMF) enthalten, dürfen gemäß der Kommissionsentscheidung 2009/251/EG nicht mehr in den Verkehr gebracht oder auf dem Markt bereitgestellt werden.

Der VDE-Zeichengenehmigungsausweis wird ausschließlich auf der ersten Seite unterzeichnet.

### **Approval to use the legally protected Mark of the VDE as shown on the first page:**

*Basis for the use are the general terms and conditions of the VDE Testing and Certification Institute ([www.vde.com\terms-institute](http://www.vde.com\terms-institute)). The right to use the mark is granted only to the mentioned company with the named places of manufacture and the listed products with the related type references. The place of manufacture shall be equipped in a way that a constant manufacturing of the certified construction is assured.*

*The approval is valid as long as the VDE specifications are in force, on which the certification is based on, unless it is withdrawn according to the VDE Testing and Certification Procedure (PM102E).*

*The validity period of a VDE-GS-Mark Approval may be prolonged on request. In case of changes in legal and / or normative requirements, the validity period of a VDE-GS-Mark Approval may be shortened.*

*Products containing the biocide dimethylfumarate (DMF) may not be marketed or made available on the EC market according to the Commission Decision 2009/251/EC.*

*The approval is solely signed on the first page.*

# Kitemark™ Certificate

This is to certify that:

Suzhou Walter Electronic Co., Ltd  
Fenhu Technic Development Zone  
Wujiang  
Jiang Su Province  
China

Holds Certificate Number:

KM 70911

In respect of:

**BS EN 60127**  
**Cartridge fuse-links**

This issues the right and licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Certificate shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Certificate provided at or from the above address.

For and on behalf of BSI:

  
Chris Lewis - Certification Director, Product Certification

First Issued: 2003-02-21  
Latest Issue: 2017-11-02

Effective Date: 2017-11-02  
Expiry Date: 2020-11-01



# Kitemark™ Certificate

No. KM 70911

## BS EN 60127-2:2014 (BS EN 60127-1:2006 + A2:2015) Standard Sheet 3 Fuse-links

Type: TMD Time-lag, low breaking capacity		
Type Ref	Rating	Reference Report
TMD	T 100 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 125 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 160 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 200 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 250 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 315 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 400 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 500 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 630 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 800 mA L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 1.00 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 1.25 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 1.60 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 2.00 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 2.50 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 3.15 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 4.00 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 5.00 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)
TMD	T 6.30 A L 250 V	0150174/01 (SE-20049), 2003-0026 & 8071524 (GJW2013-3564BSI)

First Issued: 2003-02-21  
Latest Issue: 2017-11-02

Effective Date: 2017-11-02  
Expiry Date: 2020-11-01

Page: 4 of 6

This certificate has been issued by and remains the property of BSI Assurance UK Ltd, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP, United Kingdom and should be returned immediately upon request.  
To check its validity telephone +44 (0) 345 080 9000. An electronic certificate can be authenticated [online](#).





# 中国国家强制性产品认证证书

证书编号：2003010207031313

## 委托人名称、地址

苏州华德电子有限公司  
江苏省吴江市汾湖经济技术开发区(芦墟)

## 生产者(制造商)名称、地址

苏州华德电子有限公司  
江苏省吴江市汾湖经济技术开发区(芦墟)

## 生产企业名称、地址

苏州华德电子有限公司  
江苏省吴江汾湖经济开发区新黎路99号

## 产品名称和系列、规格、型号

管状熔断体

TMD T100mAL250V、TMD T125mAL250V、TMD T160mAL250V、TMD T200mAL250V、TMD T250mAL250V、  
TMD T315mAL250V、TMD T400mAL250V、TMD T500mAL250V、TMD T630mAL250V、TMD T800mAL250V、  
TMD T1AL250V、TMD T1.25AL250V、TMD T1.6AL250V、TMD T2AL250V、TMD T2.5AL250V、TMD  
T3.15AL250V、TMD T4AL250V、TMD T5AL250V、TMD T6.3AL250V

## 产品标准和技术要求

GB9364.1-1997;GB/T9364.2-1997

上述产品符合强制性产品认证实施规则 CNCA-C02-01:2014 的要求，  
特发此证。

发证日期：2018年02月01日 有效期至：2023年02月01日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书，证书首次颁发日期：2003年02月21日

本证书的相关信息可通过国家认监委网站 [www.cnca.gov.cn](http://www.cnca.gov.cn) 查询



主任：



## 中国质量认证中心





# CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

CERTIFICATE NO.: 2003010207031313

## NAME AND ADDRESS OF THE APPLICANT

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## NAME AND ADDRESS OF THE MANUFACTURER

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## NAME AND ADDRESS OF THE FACTORY

Suzhou Walter Electronic Co., Ltd.  
South of Xinli Road, Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## PRODUCT NAME, MODEL AND SPECIFICATION

Cartridge Fuse-link

TMD T100mAL250V, TMD T125mAL250V, TMD T160mAL250V, TMD T200mAL250V, TMD T250mAL250V, TMD T315mAL250V, TMD T400mAL250V, TMD T500mAL250V, TMD T630mAL250V, TMD T800mAL250V, TMD T1AL250V, TMD T1.25AL250V, TMD T1.6AL250V, TMD T2AL250V, TMD T2.5AL250V, TMD T3.15AL250V, TMD T4AL250V, TMD T5AL250V, TMD T6.3AL250V

## THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB9364.1-1997;GB/T9364.2-1997

This is to certify that the above mentioned product(s) complies with the requirements of implementation rules for compulsory certification(REFNO.CNCA-C02-01:2014).

Valid from: Feb.01,2018

Valid until: Feb.01,2023

The validity of the certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

Date of original issued: Feb.21,2003

The certificate information is available through CNCA's website: www.cnca.gov.cn



President:

Wang Kejiao



## CHINA QUALITY CERTIFICATION CENTRE



# 产品认证证书

证书编号: CQC08012023812

## 申请人名称及地址

苏州华德电子有限公司  
江苏省吴江市汾湖经济技术开发区(芦墟)

## 制造商名称及地址

苏州华德电子有限公司  
江苏省吴江市汾湖经济技术开发区(芦墟)

## 生产企业名称及地址

苏州华德电子有限公司 (V005437)  
江苏省吴江汾湖经济开发区新黎路99号

## 产品名称和系列、规格、型号

管状熔断体

TMD T8AL250V, TMD T10AL250V, TMD T12.5AL250V

## 产品标准和技术要求

GB9364.1-1997 GB9364.2-1997 CQC11-462125-2009附件2

## 认证模式

产品型式试验+初次工厂检查+获证后监督

上述产品符合CQC11-462125-2009认证规则的要求,特发此证。

发证日期: 2016年07月19日

证书有效期内本证书的有效性依据发证机构的定期监督获得保持。

本证书为变更证书,证书首次颁发日期: 2008年06月06日

主任: \_\_\_\_\_



## 中国质量认证中心

中国·北京·南四环西路188号9区100070

<http://www.cqc.com.cn>





# PRODUCT CERTIFICATE

No.: CQC08012023812

## NAME AND ADDRESS OF THE APPLICANT

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## NAME AND ADDRESS OF THE MANUFACTURER

Suzhou Walter Electronic Co., Ltd.  
Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## NAME AND ADDRESS OF THE FACTORY

Suzhou Walter Electronic Co., Ltd. (V005437)  
No. 99 Xinli Road, Fenhu Technic Development Zone, Luxu, Wujiang City, Jiangsu

## NAME, MODEL AND SPECIFICATION

Cartridge fuse-links  
TMD T8AL250V, TMD T10AL250V, TMD T12.5AL250V

## THE STANDARDS AND TECHNICAL REQUIREMENTS FOR THE PRODUCTS

GB9364.1-1997 GB9364.2-1997 CQC11-462125-2009附件2

## CERTIFICATION MODEL

Type Testing of Product + Initial Factory Inspection + Follow up Factory Inspection

This is to certify that the above mentioned products have met the requirements of certification rules CQC11-462125-2009.

Date of issue: Jul.19,2016

Validity of this certificate is subject to positive result of the regular follow up inspection by issuing certification body until the expiry date.

Date of original certification: Jun.06,2008

President:

  
Wang Kejiao



## CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nanshuan Xilu, Beijing 100070 P.R.China

<http://www.cqc.com.cn>

C 0085264

# 適合性同等検査合格書

Statement of Conformity Assessment

電気用品安全法第8条第1項に規定する技術基準及び同法第9条第2項の経済産業省令で定める基準（法第9条第1項第2号に係る検査に係るものに限る）に適合していることを証明します

I hereby certify that the product mentioned below complies with the technical requirements stipulated in Paragraph 1 of Article 8 of Electrical Appliance and Material Safety Law (hereunder referred to as the Law) and the requirements defined by the ordinance of the Ministry of Economy, Trade and Industry based on Paragraph 2 of Article 9 of the Law (limited to Item 2 of Paragraph 1 of Article 9 for Inspection of the Law).

1. 合格書番号: JET 2179-31003-2003  
Statement Number
2. 交付年月日: 平成25年 2月 1日  
Effective Date February 1 2013
3. 有効年月日: 平成32年 1月31日  
Date of Validity January 31, 2020
4. 申込者名 (Applicant)  
住所 (Address): FENHU TECHNIC DEVELOPMENT ZONE WUJIANG, JIANGSU PROVINCE, CHINA

氏名又は名称: SUZHOU WALTER ELECTRONIC CO., LTD.  
Name

5. 特定電気用品名: 管形ヒューズ  
Name of Product Cartridge fuses
6. 型式の区分: 別紙のとおり  
Type Classification See attached "Type Classification"
7. 製造工場名 (Manufacturer)  
住所 (Address): FENHU TECHNIC DEVELOPMENT ZONE WUJIANG, JIANGSU PROVINCE, CHINA

氏名又は名称: SUZHOU WALTER ELECTRONIC CO., LTD.  
Name

8. 適用試験規格: 電気用品の技術上の基準を定める省令第2項  
Applied Standard for Testing Article 2 of The Technical Requirements of the METI Ordinance  
J60127-1 (H22) 及び J60127-2 (H20)

J60127-1 (H22) and J60127-2 (H20)

9. 適合性検査の方法: (Testing Method for Conformity Assessment)

- 1) 試験用の特定電気用品については、電気用品の技術上の基準を定める省令に定める方法

With respect to testing for Category A products, the testing method is based on the technical requirements of the Electrical Appliance and Material stipulated in the METI Ordinance.

- 2) 当該特定電気用品に係る届出事業者又は事業場における検査設備については、電気用品安全法施行規則別表第四の検査設備の欄に掲げる検査設備ごとにそれぞれ同表の技術上の基準の欄に掲げる方法

With respect to inspection facilities required for Category A products at the factory, Testing Method described in the column of the technical requirements for each inspection facilities in the column of inspection facilities in the Appendix 4 of Enforcement Regulations of the Law.

一般財団法人 電気安全環境研究所  
Japan Electrical Safety & Environment technology Laboratories (JET)

理事長 末廣 恵雄  
President Shigeo Suehiro

東京都渋谷区代々木5-14-12 (5-14-12, Yoyogi, Shibuya-ku, Tokyo)



# 適合性同等検査合格書別紙

Statement of Conformity Assessment

## 型式の区分

Type Classification

要素 Factor	区分 Classification
定格電圧 Rated voltage	(2) 125Vを超えるもの Exceeding 125V
定格電流（定格電流表示のあるものの場合に限る。） Rated current (limited to those with rated current markings)	(1) 5 A以下のもの 5A or less
適用電動機の定格容量（定格電流表示のないものの場合に限る。） Rated capacity of applicable motor (limited to those without rated current markings)	—
可溶体の主材料 Fuse element materials	(1) 銀のもの Silver
可溶体の数 Number of fuse elements	(1) 1のもの One
内筒（筒形ヒューズの場合に限る。） Inner cartridge (limited to tubular fuses)	—
再使用（管形ヒューズを除く。） Reusability (excluding cartridge fuses)	—
内部充てん物 Filler materials	(2) ないもの Without filler materials
筒（内筒を除く。）の材料（管形ヒューズ、筒形ヒューズ及びその他の包装ヒューズの場合に限る。） Outer cartridge materials (limited to cartridge fuses, tubular fuses, and other enclosed fuses)	(3) 磁器のもの又はガラスのもの Ceramic or glass
端子（栓形ヒューズの場合を除く。） Terminals (excluding plug fuse (formerly known as end contact plug fuses))	(2) 筒形のもの Tubular terminal
排気孔 Exhausting opening	(2) ないもの Without exhausting opening
絶縁体の主材料（栓形ヒューズの場合に限る。） Insulating materials (limited to plug fuse (formerly known as end contact plug fuses))	—
溶断の表示 Blowout fuse indicator	(2) ないもの Without blowout fuse indicator
用途 Application	(2) 電子機器用のもの For use in electric appliances
定格遮断電流 Rated breaking capacity	(1) 100 A以下のもの 100A or less

合格書番号：JET 2179 - 31003 - 2003

# 適合性同等検査合格書

Statement of Conformity Assessment

電気用品安全法第8条第1項に規定する技術基準及び同法第9条第2項の経済産業省令で定める基準（法第9条第1項第2号に係る検査に係るものに限る）に適合していることを証明します

I hereby certify that the product mentioned below complies with the technical requirements stipulated in Paragraph 1 of Article 8 of Electrical Appliance and Material Safety Law (hereunder referred to as the Law) and the requirements defined by the ordinance of the Ministry of Economy, Trade and Industry based on Paragraph 2 of Article 9 of the Law (limited to Item 2 of Paragraph 1 of Article 9 for Inspection of the Law).

1. 合格書番号: JET2179-31003-2004  
Statement Number
2. 交付年月日: 平成25年2月1日  
Effective Date February 1, 2013
3. 有効年月日: 平成32年1月31日  
Date of Validity January 31, 2020
4. 申込者名 (Applicant)  
住 所: FENHU TECHNIC DEVELOPMENT ZONE WUJIANG, JIANGSU PROVINCE, CHINA  
Address

氏名又は名称: SUZHOU WALTER ELECTRONIC CO., LTD.  
Name

5. 特定電気用品名: 管形ヒューズ  
Name of Product Cartridge fuses
6. 型式の区分: 別紙のとおり  
Type Classification See attached "Type Classification"
7. 製造工場名 (Manufacturer)  
住 所: FENHU TECHNIC DEVELOPMENT ZONE WUJIANG, JIANGSU PROVINCE, CHINA  
Address

氏名又は名称: SUZHOU WALTER ELECTRONIC CO., LTD.  
Name

8. 適用試験規格: 電気用品の技術上の基準を定める省令第2項  
Applied Standard for Testing Article 2 of The Technical Requirements of the METI Ordinance  
J60127-1 (H22) 及び J60127-2 (H20)

J60127-1 (H22) and J60127-2 (H20)

9. 適合性検査の方法: (Testing Method for Conformity Assessment)

- 1) 試験用の特定電気用品については、電気用品の技術上の基準を定める省令に定める方法

With respect to testing for Category A products, the testing method is based on the technical requirements of the Electrical Appliance and Material stipulated in the METI Ordinance.

- 2) 当該特定電気用品に係る届出事業者又は事業場における検査設備については、電気用品安全法施行規則別表第四の検査設備の欄に掲げる検査設備ごとにそれぞれ同表の技術上の基準の欄に掲げる方法

With respect to inspection facilities required for Category A products at the factory, Testing Method described in the column of the technical requirements for each inspection facilities in the column of inspection facilities in the Appendix 4 of Enforcement Regulations of the Law.

一般財団法人 電気安全環境研究所  
Japan Electrical Safety & Environment technology Laboratories (JET)

理事長 末廣 恵雄  
President Shigeo Suehiro

東京都渋谷区代々木5-14-12 (5-14-12, Yoyogi, Shibuya-ku, Tokyo)

# 適合性同等検査合格書別紙

Statement of Conformity Assessment

## 型式の区分

Type Classification

要素 Factor	区分 Classification
定格電圧 Rated voltage	(2) 125Vを超えるもの Exceeding 125V
定格電流（定格電流表示のあるものの場合に限る。） Rated current (limited to those with rated current markings)	(2) 5 Aを超え15 A以下のもの Exceeding 5A, and less than or equal to 15A
適用電動機の定格容量（定格電流表示のないものの場合に限る。） Rated capacity of applicable motor (limited to those without rated current markings)	—
可溶体の主材料 Fuse element materials	(1) 銀のもの Silver
可溶体の数 Number of fuse elements	(1) 1のもの One
内筒（筒形ヒューズの場合に限る。） Inner cartridge (limited to tubular fuses)	—
再使用（管形ヒューズを除く。） Reusability (excluding cartridge fuses)	—
内部充てん物 Filler materials	(2) ないもの Without filler materials
筒（内筒を除く。）の材料（管形ヒューズ、筒形ヒューズ及びその他の包装ヒューズの場合に限る。） Outer cartridge materials (limited to cartridge fuses, tubular fuses, and other enclosed fuses)	(3) 磁器のもの又はガラスのもの Ceramic or glass
端子（栓形ヒューズの場合を除く。） Terminals (excluding plug fuse (formerly known as end contact plug fuses))	(2) 筒形のもの Tubular terminal
排気孔 Exhausting opening	(2) ないもの Without exhausting opening
絶縁体の主材料（栓形ヒューズの場合に限る。） Insulating materials (limited to plug fuse (formerly known as end contact plug fuses))	—
溶断の表示 Blowout fuse indicator	(2) ないもの Without blowout fuse indicator
用途 Application	(2) 電子機器用のもの For use in electric appliances
定格遮断電流 Rated breaking capacity	(1) 100 A以下のもの 100A or less

合格書番号：JET 2179 - 31003 - 2004



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 : SU05015-5007  
(Certificate No.)

접수번호 : 05-1920-4150  
(Order No.)

제조사명 : Suzhou Walter Electronic Co., Ltd.  
(Manufacturer)

공장소재지 : Fenu, Technic Development Zone, Luxu Wu Jiang, Jiangsu,  
(Factory Address) P.R.China

제품명 : 소형퓨즈 (Miniature fuse-link)  
(Product)

기본모델명 : TSD 250mA  
(Basic Model)

정격 : AC250V, 250mA  
(Electrical Ratings)

파생모델명 : See the Attachment 1  
(Series Model)

적용기준 : K60127-1, K60127-2  
(Applied Standard)

- 첨부 : 1. 기본모델-파생모델의 내용 (General Descriptions of Certified Products)  
2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 03일  
year month day



안전인증기관  
KOREA TESTING LABORATORY





첨부 1 : 기본모델·파생모델의 내용  
 General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 100mA	Different in Cross section of fusible.
TSD 125mA	Different in Cross section of fusible.
TSD 160mA	Different in Cross section of fusible.
TSD 200mA	Different in Cross section of fusible.
TSD 100mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 125mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 160mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 200mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 250mA(+p)	adhere reed wire
TMD 100mA	Fusible different, Different in Cross section of fusible
TMD 125mA	Fusible different, Different in Cross section of fusible
TMD 160mA	Fusible different, Different in Cross section of fusible
TMD 200mA	Fusible different, Different in Cross section of fusible
TMD 250mA	Fusible different
TMD 100mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 125mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 160mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 200mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 250mA(+p)	Fusible different, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 05-1920-4150 (2005. 10. 31)  2. Product Description - Ratings : 250V~, 250mA - Model : TSD 250mA	
본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 장운식 / (02)8601-406 If you have any question on product testing, please contact the person below : Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung / +82 2 8601-406	



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 (Certificate No.) : SU05015-5008      접수번호 (Order No.) : 05-1920-4151

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제조사명 (Manufacturer) : Suzhou Walter Electronic Co., Ltd.

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공장소재지 (Factory Address) : Fenhui, Technic Development Zone, Luxu Wu Jiang, Jiangsu, P.R.China

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제품명 (Product) : 소형퓨즈 (Miniature fuse-link)

기본모델명 (Basic Model) : TSD 400mA

정격 (Electrical Ratings) : AC250V, 400mA

파생모델명 (Series Model) : See the Attachment 1

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적용기준 (Applied Standard) : K60127-1, K60127-2

- 첨부 : 1. 기본모델-파생모델의 내용 (General Descriptions of Certified Products)  
 2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

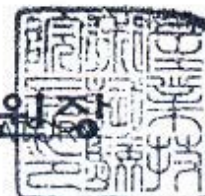
전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 07일  
 year month day



안전인증기관  
**산업기술시험원장**  
 KOREA TESTING LABORATORY





첨부 1 : 기본모델-파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 315mA	Different in Cross section of fusible
TSD 315mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 400mA(+p)	adhere reed wire
TMD 315mA	Fusible different, Different in Cross section of fusible
TMD 400mA	Fusible different
TMD 315mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 400mA(+p)	Fusible different, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 05-1920-4151 (2005. 10. 31)  2. Product Description <ul style="list-style-type: none"> <li>- Ratings : 250V~, 400mA</li> <li>- Model : TSD 400mA</li> <li>- Miniature fuse-link</li> </ul>	
<input type="checkbox"/> 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 정문식 / (02)8601-406 <input type="checkbox"/> If you have any question on product testing, please contact the person below : Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung /+82 2 8601-406	

첨부 2 : 전기용품안전인증서의 변경발급현황  
Status of Compliance Certificate Revisions

변경발급 내용 Contents of Certificate Revisions	비고 Remarks
Not Applicable	

FP511-11-00



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 : SU05015-5006  
(Certificate No.)

접수번호 : 05-1920-4149  
(Order No.)

제조사명 : Suzhou Walter Electronic Co., Ltd.  
(Manufacturer)

공장소재지 : Fenhu, Technic Development Zone, Luxu Wu Jiang, Jiangsu,  
(Factory Address) P.R.China

제품명 : 소형퓨즈 (Miniature fuse-link)  
(Product)

기본모델명 : TSD 800mA  
(Basic Model)

정격 : AC250V, 800mA  
(Electrical Ratings)

파생모델명 : See the Attachment 1  
(Series Model)

적용기준 : K60127-1, K60127-2  
(Applied Standard)

- 첨부 : 1. 기본모델·파생모델의 내용 (General Descriptions of Certified Products)  
2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 03일  
year month day



안전인증기관  
산업기술시험원장  
KOREA TESTING LABORATORY





첨부 1 : 기본모델·파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 500mA	Different in Cross section of fusible.
TSD 630mA	Different in Cross section of fusible.
TSD 500mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 630mA(+p)	Different in Cross section of fusible, adhere reed wire
TSD 800mA(+p)	adhere reed wire
TMD 500mA	Fusible different, Different in Cross section of fusible.
TMD 630mA	Fusible different, Different in Cross section of fusible.
TMD 800mA	Fusible different
TMD 500mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 630mA(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 800mA(+p)	Fusible different, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 05-1920-4149 (2005. 10. 31) 2. Product Description - Ratings : 250V~, 800mA - Model : TSD 800mA	
본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 정문식 / (02)8601-406 <i>If you have any question on product testing, please contact the person below :</i> <i>Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung / +82 2 8601-406</i>	

첨부 2 : 전기용품안전인증서의 변경발급현황  
Status of Compliance Certificate Revisions

변경발급 내용 Contents of Certificate Revisions	비고 Remarks
Not Applicable	

FP511-11-00



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 : SU05015-5004  
(Certificate No.)

접수번호 : 05-1920-4147  
(Order No.)

제조사명 : Suzhou Walter Electronic Co., Ltd.  
(Manufacturer)

공장소재지 : Fenhu, Technic Development Zone, Luxu Wu Jiang, Jiangsu,  
(Factory Address) P.R.China

제품명 : 소형퓨즈 (Miniature fuse-link)  
(Product)

기본모델명 : TSD 2.5A  
(Basic Model)

정격 : AC250V, 2.5A  
(Electrical Ratings)

파생모델명 : See the Attachment 1  
(Series Model)

적용기준 : K60127-1, K60127-2  
(Applied Standard)

- 첨부 : 1. 기본모델·파생모델의 내용 (General Descriptions of Certified Products)  
2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

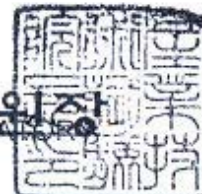
전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 03일  
year month day



안전인증기관  
KOREA TESTING LABORATORY  
KTL





첨부 1 : 기본모델-파생모델의 내용  
 General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 1A	Different in Cross section of fusible.
TSD 1.25A	Different in Cross section of fusible.
TSD 1.6A	Different in Cross section of fusible.
TSD 2A	Different in Cross section of fusible.
TSD 1A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 1.25A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 1.6A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 2A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 2.5A(+p)	adhere reed wire
TMD 1A	Fusible different, Different in Cross section of fusible
TMD 1.25A	Fusible different, Different in Cross section of fusible
TMD 1.6A	Fusible different, Different in Cross section of fusible
TMD 2A	Fusible different, Different in Cross section of fusible
TMD 2.5A	Fusible different
TMD 1A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 1.25A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 1.6A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 2A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 2.5A(+p)	Fusible different, adhere reed wire
TMD 1A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 05-1920-4147 (2005. 10. 31)  2. Product Description - Ratings : 250V~, 2.5A - Model : TSD 2.5A	
본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 정문식 / (02)8601-406 If you have any question on product testing, please contact the person below : Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung : +32 2 8601-406	



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 : SU05015-5003  
(Certificate No.)

접수번호 : 05-1920-4146  
(Order No.)

제조사명 : Suzhou Walter Electronic Co., Ltd.  
(Manufacturer)

공장소재지 : Fenu, Technic Development Zone, Luxu Wu Jiang, Jiangsu,  
(Factory Address) P.R.China

제품명 : 소형퓨즈 (Miniature fuse-link)  
(Product)

기본모델명 : TSD 4A  
(Basic Model)

정격 : AC250V, 4A  
(Electrical Ratings)

파생모델명 : See the Attachment 1  
(Series Model)

적용기준 : K60127-1, K60127-2  
(Applied Standard)

- 첨부 : 1. 기본모델·파생모델의 내용 (General Descriptions of Certified Products)  
2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

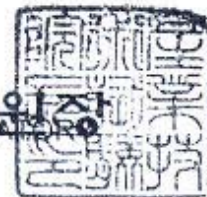
전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 03일  
year month day



안전인증기관  
KOREA TESTING LABORATORY  
상업기술시험원장





첨부 1 : 기본모델·파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 3.15A	Different in Cross section of fusible.
TSD 3.15A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 4A(+p)	adhere reed wire
TMD 3.15A	Fusible different, Different in Cross section of fusible
TMD 4A	Fusible different
TMD 3.15A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 4A(+p)	Fusible different, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 05-1920-4146 (2005. 10. 31) 2. Product Description - Ratings : 250V~, 4A - Model : TSD 250 4A	
본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 정은식 / (02)8601-406 <i>If you have any question on product testing, please contact the person below.</i> <i>Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung / +82 2 8601-406</i>	

첨부 2 : 전기용품안전인증서의 변경발급현황  
Status of Compliance Certificate Revisions

변경발급 내용 Contents of Certificate Revisions	비고 Remarks
Not Applicable	

FP511-11-00



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 : SU05015-5005  
(Certificate No.)

접수번호 : 05-1920-4148  
(Order No.)

제조사명 : Suzhou Walter Electronic Co., Ltd.  
(Manufacturer)

공장소재지 : Fenu, Technic Development Zone, Luxu Wu Jiang, Jiangsu,  
(Factory Address) P.R.China

제품명 : 소형퓨즈 (Miniature fuse-link)  
(Product)

기본모델명 : TSD 6.3A  
(Basic Model)

정격 : AC250V, 6.3A  
(Electrical Ratings)

파생모델명 : See the Attachment 1  
(Series Model)

적용기준 : K60127-1, K60127-2  
(Applied Standard)

- 첨부 : 1. 기본모델·파생모델의 내용 (General Descriptions of Certified Products)  
2. 전기용품안전인증서의 변경발급 현황 (Status of Compliance Certificate Revisions)

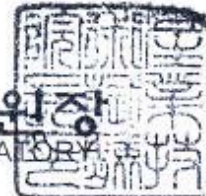
전기용품 안전관리법 제5조의 규정에 의하여 위의 전기용품에 대하여 안전인증서를 교부합니다.

We Certificate Electrical Appliances Safety Certification as above product by Article 5 of the Electrical Appliance Safety Control Law.

2005년 11월 03일  
year month day



안전인증기관  
산업기술시험원장  
KOREA TESTING LABORATORY





첨부 1 : 기본모델-파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TSD 5A	Different in Cross section of fusible.
TSD 5A(+p)	Different in Cross section of fusible, adhere reed wire
TSD 6.3A(+p)	adhere reed wire
TMD 5A	Fusible different, Different in Cross section of fusible.
TMD 6.3A	Fusible different
TMD 5A(+p)	Fusible different, Different in Cross section of fusible, adhere reed wire
TMD 6.3A(+p)	Fusible different, adhere reed wire
제품특기사항 및 시험조건 Remarks & Test conditions	
<p>1. Test Report Ref. No. : 05-1920-4148 (2005. 10. 31)</p> <p>2. Product Description</p> <ul style="list-style-type: none"> <li>- Ratings : 250V~, 6.3A</li> <li>- Model : TSD 6.3A</li> </ul>	
<p>본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 전기전자본부, 부품평가팀, 정문식 / (02)8601-406 If you have any question on product testing, please contact the person below Job holder : Electro-Technical Center, Components Assessment Team, M.S. Jung /+82 2 8601-406</p>	

첨부 2 : 전기용품안전인증서의 변경발급현황  
Status of Compliance Certificate Revisions

변경발급 내용 Contents of Certificate Revisions	비고 Remarks
Not Applicable	

FP511-11-00

접 수 번 호 : 2012-01-920-2437  
(Receipt No.)



# 전기용품안전인증서

## Electrical Appliances Safety Certificate

안전인증번호 (Certificate No.)	: SU05015-12009
제조업자명 (Factory)	: Suzhou Walter Electronic Co., Ltd.
대표자명 (President)	: Mr. Yen Chun Chang
제조공장위치 (Factory Address)	: Fenhui, Technic Development Zone, Luxu Wu Jiang, Jiangsu, P.R.China
제품명 (Product)	: 퓨즈(Cartridge fuse-finks)
기본모델명 (Basic Model)	: TMD 15A
정격 (Rating)	: T15AL 250V
파생모델명 (Series Model)	: See the attachment 2
적용기준 (Standard)	: K60127-1(2011-12), K60127-2(2011-12)

「전기용품안전 관리법 시행규칙」 제6조제2항에 따라 위의 전기용품에 대하여 안전인증서를 발급합니다.

We Issue Electrical Appliances Safety Certification as above product by Article 6 Section 2 of the Electrical Appliances Safety Control Law Enforcement Regulation.

2012년 06월 19일

**ktl**

한국산업기술시험원장

KOREA TESTING LABORATORY



※ 이 인증서는 「전기용품안전 관리법」에 따른 전기용품 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

- 첨 부 : 1. 안전관리부품 및 재질목록 (List of Critical Components)  
(Annex) 2. 기본모델·파생모델의 내용 (General Descriptions of Certified Products)  
3. 전기용품안전인증의 변경 현황 (Status of Certificate Revisions)



□ 첨부 2 : 기본모델 · 파생모델의 내용  
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
TMD 8A	The rated current(8A) and breaking capacity(80A) are different
TMD 10A	The rated current(10A) and breaking capacity(100A) are different
TMD 12A	The rated current(12A) and breaking capacity(120A) are different
TMD+P 8A	The rated current(8A) and breaking capacity(80A) are different, Pigtail type
TMD+P 10A	The rated current(10A) and breaking capacity(100A) are different, Pigtail type
TMD+P 12A	The rated current(12A) and breaking capacity(120A) are different, Pigtail type
TMD+P 15A	Pigtail type
제품특기사항 및 시험조건 Remarks & Test conditions	
<p>1. Test Report Ref. No. : 12-1920-2437 (2012.06.13.)</p> <p>2. Product Description</p> <ul style="list-style-type: none"> <li>- T15AL 250V</li> <li>- Breaking capacity : 150A</li> <li>- Time lag type, Low-breaking capacity</li> <li>- Standard sheet 3</li> </ul>	
<p>□ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험 담당자 / 연락처: 디지털산업본부 전기전자기술센터 조인철 / (02)860-1425</p> <p>□ If you have any question on product testing, please contact the person below : Job holder: Digital Industry Division, Electrics &amp; Electronics Technology Center, INCHUL CHO/+82 2 8601-425</p>	

FP511-09-00

□ 첨부 3 : 전기용품안전인증의 변경 현황  
Status of Certificate Revisions

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-11-00