

1. 適用範圍/SCOPE

FHP 系列小型保險絲，適用於一般電子設備。

FHP series Miniature-Fuse, used in electronic equipment.

2. 產品型號/TYPE

例「example」：



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

額定電流 / Rated Current: 8A~25A

額定電壓 / Rated Voltage: 420V AC/DC

4. 標示/MARKING

保險絲上需有下列標示 / The fuses shall have the following marking

①規 格:額定電流+額定電壓

Specification:Rated Current + Rated Voltage

8A~25A: A 420 V

②商 標: 製造工廠的商標+系列號+認證符號

Trade mark:The Manufacture' s Logo +Part Number + Approved Symbol.

8A~25A:  FHP  

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.

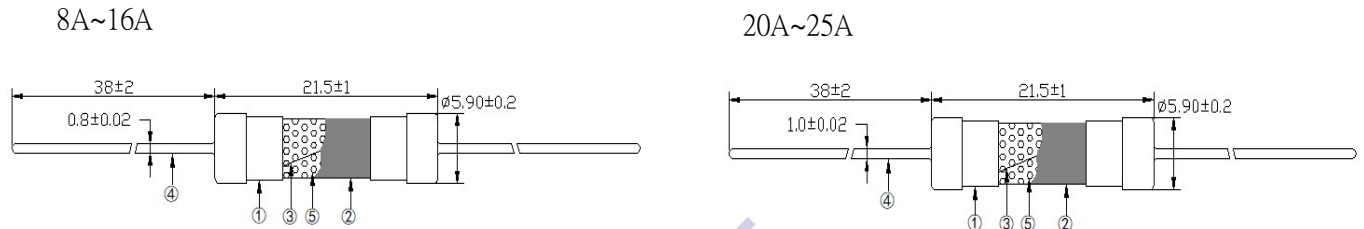
5. 外觀及形狀/APPEARANCES AND CONFIGURATION

5-1 外觀: 不應有破碎、明顯的汗斑/Apearances: There shall not be break up and any remarkable blotch.

5-2 形狀: 帶腳的小型保險絲/Configuration: Axial Leaded Miniature-Fuse.

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

6-1 工程圖 (單位: mm) / Engineering drawing (Unit: mm)



6-2 結構 / Structure

編號 No.	元件 Component	材質 Material	數量 Quantity
①	銅帽 Cap	黃銅鍍鎳 Brass with nickel plated	2
②	本體 Body	陶瓷管 Ceramic Tube	1
③	熔絲 Wire	合金 Alloy	1
④	引線 Lead	鍍錫銅線 Tinned Copper wire	2
⑤	填充物 Filler	石英砂 Quartz sand	

7. 產品特性/PRODUCT CHARACTERISTICS

7-1 引腳拉力強度 / Lead Pull Strength

10 牛頓 10±1 秒 / 10N for 10±1 Sec.

7-2 引腳推力強度 / Lead Thrust Strength

2 牛頓 10±1 秒 / 2N for 10±1 Sec.

7-3 可焊性 / Solderability

波峰焊/Wave : 260°C, ≤3s;

烙鐵焊/Soldering Iron: 350±10°C, ≤3s.

7-4 耐焊接熱 / Soldering Heat Resistance

波峰焊/Wave : 260°C, 10s;

烙鐵焊/Soldering Iron: 350°C, 5s.

8. 電氣特性/ELECTRICAL CHARACTERISTICS

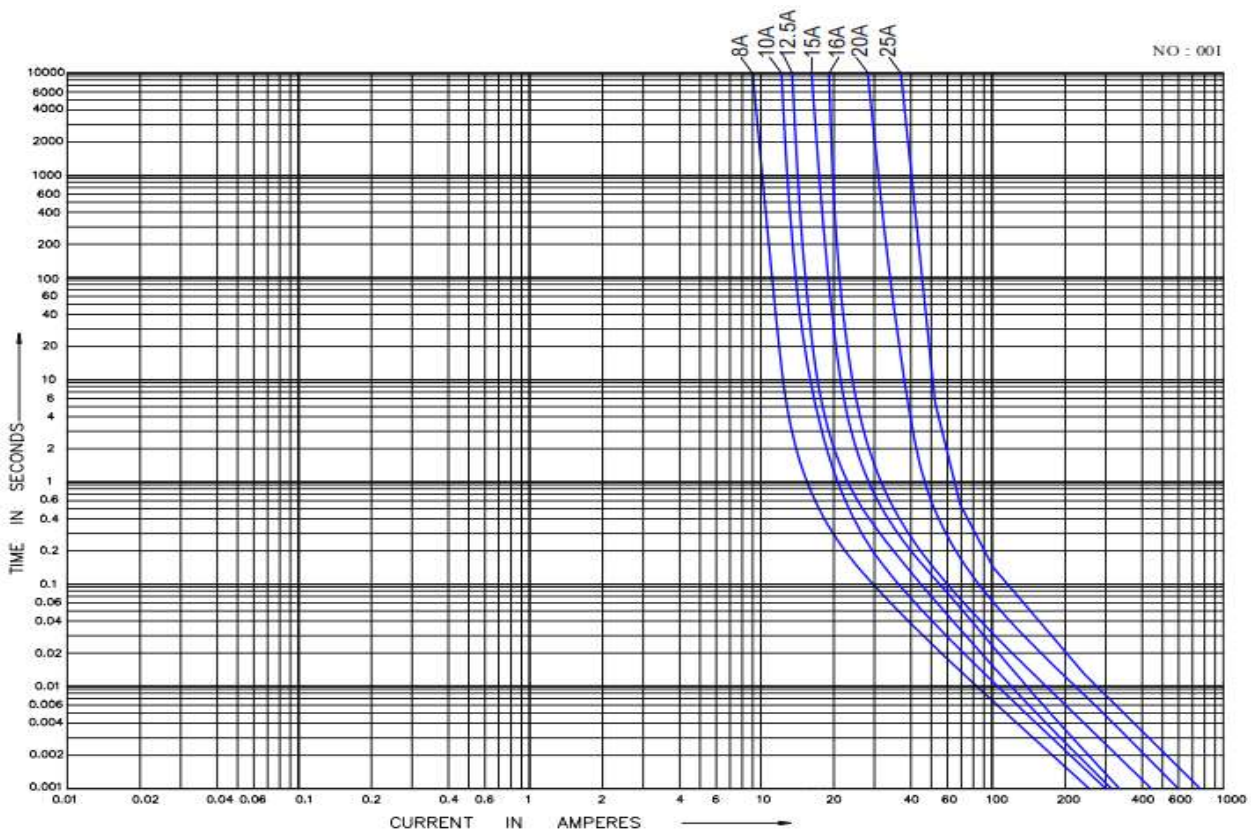
8-1 熔斷 / 電流特性: Pre-Arcing Time / Current Characteristic (limits)

RATED CURRENT	2.1 In	2.75 In		4 In		10 In
	Max.	Min.	Max.	Min.	Max.	Max.
Above 8A to 25A	30 min	40 ms	20 s	10 ms	1 s	30 ms

8-2 產品規格/Specification

額定電流 Rated Current	冷電阻 Cold resistance	最大電壓降 Max Voltage Drop (mV)	最大功耗 Max Power Dissipation (mW)	I ² T 值 I ² T Value (A ² Sec@8ms)
8A	12.40m Ω	220	4000	64.4
10A	9.86m Ω	220		111
12.5A	7.61m Ω	240		160
15A	7.43m Ω	280	5000	200
16A	6.15m Ω	300		242
20A	4.05m Ω	300		560
25A	3.30m Ω	300		870

8-3 時間電流曲線/Time-Current Curve



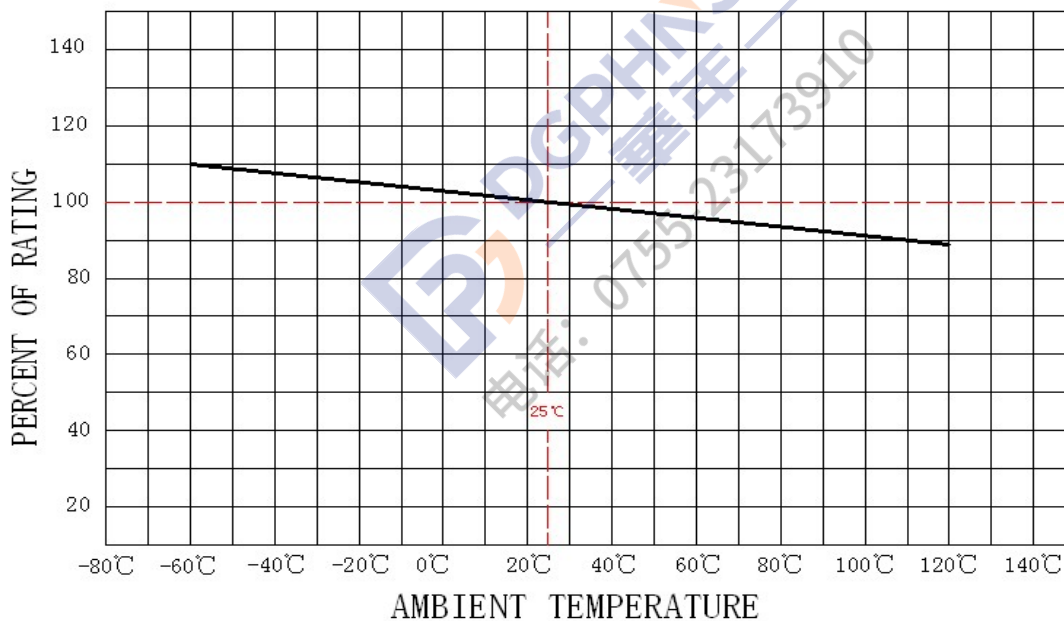
9. 環境特性/ENVIRONMENTAL CHARACTERISTIC

9-1 操作溫度範圍: $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ / Operating Temperature: $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$

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 $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、相對濕度 $\leq 75\%$ 的密閉條件下可存放 3 年。

Under airtight in temperature $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、relative humidity $\leq 75\%$ can store 3 years.

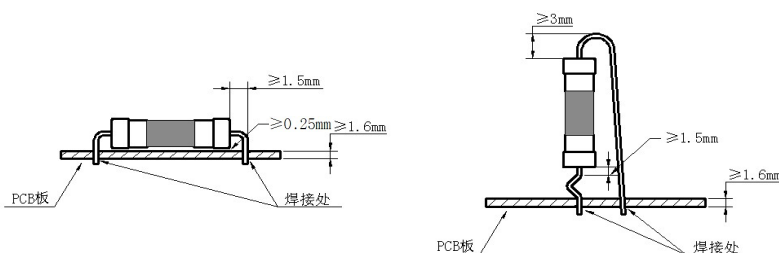
在溫度 $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、相對濕度為 95% 的非露天下最多可存放 30 天。

Without dew in temperature $+10^{\circ}\text{C} \sim 60^{\circ}\text{C}$ 、relative humidity be 95% maximum value for 30 days.

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: 5s 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 (8A~25A)
TUV	J50326694 (8A~25A)

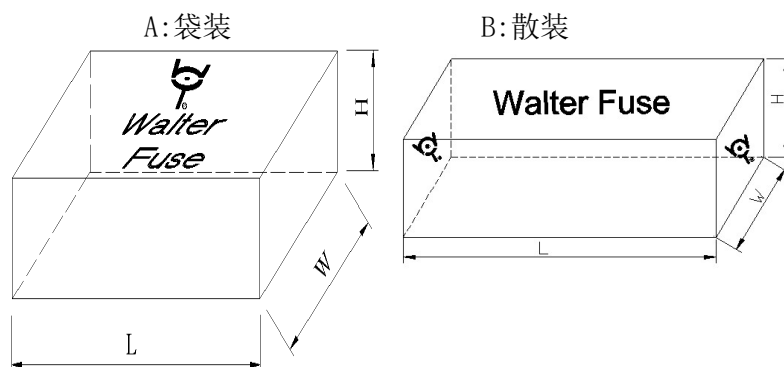
13. 包裝/PACKING

13-1 包裝數量 / Packing Quantity

A: 每內盒裝 500 個保險絲 / 500pcs per inner box .

B: 每外箱裝 20 內盒保險絲 / 20 inner boxes per outer box .

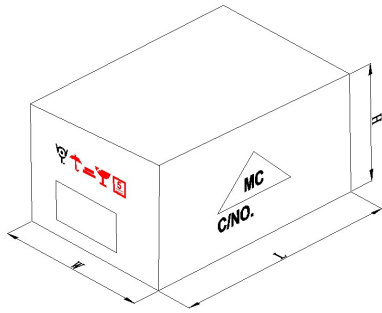
13-2 內包裝盒/Inner box of packing



單位/Unit:mm

類別	L	W	H
A	157±3	124±3	84±2
B	265±3	90±3	65±3

13-3 外包裝箱/Outer box of packing



單位/Unit:mm

類別	L	W	H
A	451±5	345±5	275±5
B	555±5	355±5	206±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 , SUZHOU WALTER ELECTRONIC CO., LTD. shall amend it by mutual agreement between the parties.

版次	製作	確認	審核
第8版	程正永 2022/11/18		王维新2022/11/18



UL iQ for Fuses



Fuses

E56092

Guide Information

SUZHOU WALTER ELECTRONIC CO LTD

NO.99 Xinli Road, Fenhu Technic Development Zone, Wujiang Jiangsu 215211 CN

FHP

Supplemental fuses: pigtail leads, filled-tube, cartridge enclosed

<u>Size</u> mm(in)	<u>Amps</u> (A)	<u>Volts</u> (V)	<u>Interrupting</u> <u>Rating (A)</u>
5.9 x 21.5 (0.23 x 0.85)	8 - 25	420Vac	300
	8 - 25	420Vdc	300

Report Date: 2015-10-07

Last Revised: 2019-07-22

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Zertifikat

mit überwachter Konformität

Certificate

of surveyed conformity



Zertifikat Nr. *Certificate No.*
J 50326694

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0001

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue
(day/mo/yr)

05-LJP- 16071827 001

11.12.2015

Genehmigungsinhaber *License Holder*

Walter Electronic Co., Ltd.
2nd FL. 97 Chung King N RD., Sec. 4
Taipei
Taiwan

Fertigungsstätte *Manufacturing Plant*

Dongguan Walter Electric Co., Ltd.
Yantian Village, Fenggang Town
Dongguan, Guangdong 523702
P.R. China

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1

EN 60127-7:2013

Zertifiziertes Produkt *(Geräteidentifikation)*

Certified Product (Product Identification)

Lizenzentgelte - Einheit

License Fee - Unit

(Miniature Fuse-link)

Type Designation : FHC FHP
Trademark : Walter (Logo) Walter
Rated Voltage : AC/DC 420V
Rated Current : 8A; 10A; 12.5A; 15A; 16A
T/I Characteristic : t2=30min; t3=40ms; t4=20s;
t5=10ms; t6=1s; t8=30ms.
Rated Breaking Capacity: 300A

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Remark :

- 1) The Maximum voltage drop and the Maximum sustained dissipation were based on the statement of the manufacturer. See appendix 1 for detail.
- 2) The labelling requirements acc. to EU Directive 2001/95 have to be observed for distribution within the EEA. The installation has to be carried out according to installation instruction accompanying the products.

9

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
This certificate is based on our Testing and Certification Regulation. The product fulfills above mentioned requirements, the production is subject to surveillance.



TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com
Fax: +49 221 806-3935 http://www.tuv.com/safety

G. Yin

Zertifikat

mit überwachter Konformität

Certificate

of surveyed conformity



Zertifikat Nr. *Certificate No.*
J 50326694

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0002

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue
(day/mo/yr)

05-YFC- 16071827 002

18.08.2017

Genehmigungsinhaber *License Holder*

Walter Electronic Co., Ltd.
2nd FL. 97 Chung King N RD., Sec. 4
Taipei
Taiwan

Fertigungsstätte *Manufacturing Plant*

Dongguan Walter Electric Co., Ltd.
Yantian Village, Fenggang Town
Dongguan, Guangdong 523702
P. R. China

Prüfzeichen *Test Mark*



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Regular
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www.tuv.com
ID 0800000000

Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1+A2

EN 60127-7:2016

Zertifiziertes Produkt (Geräteidentifikation)

Certified Product (Product Identification)

Lizenzentgelte - Einheit

License Fee - Unit

(Miniature Fuse-link)

Change

Test Requirement : see above

Remark :

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Zertifikat *Certificate*
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Zertifikat Nr. *Certificate No.*
J 50326694

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0003

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue
(day/mo/yr)

05-YFC- 16071827 003

17.07.2018

Genehmigungsinhaber *License Holder*

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

Fertigungsstätte *Manufacturing Plant*

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

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1+A2
EN 60127-7:2016

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

(Miniature Fuse-link)

as pages 0001-0002

Addition

Name and Address of Factory : see above

Change

Name and Address of License Holder : see above

Remark :

The Maximum voltage drop and the Maximum sustained dissipation were based on the statement of the manufacturer. See appendix 1 for detail.

*Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
Das Produkt entspricht den o.g. Anforderungen, die Herstellung wird überwacht.
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Zertifikat **Certificate**
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Zertifikat Nr. *Certificate No.*
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0004

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue
(day/mo/yr)

05-YFC- 16071827 004

08.11.2018

Genehmigungsinhaber *License Holder*

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

Fertigungsstätte *Manufacturing Plant*

Dongguan Walter Electric Co., Ltd.
Yantian Village, Fenggang Town
Dongguan, Guangdong 523702
P. R. China

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1+A2
EN 60127-7:2016

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Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

(Miniature Fuse-link)

as pages 0001-0003

Addition

Rated Current : 20A, 25A

Remark :

The Maximum voltage drop and the Maximum sustained
dissipation were based on the statement of the manufacturer.
See appendix 1.1 for detail.

ANLAGE (Appendix): 1.1

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0005

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue
(day/mo/yr)

05-YFC- 16071827 005

29.04.2022

Genehmigungsinhaber *License Holder*

Suzhou Walter Electronic Co., Ltd.
Fenu Technic Development Zone, Luxu
Wujiang City
Jiangsu
P.R. China

Fertigungsstätte *Manufacturing Plant*

Suzhou Walter Electronic Co., Ltd.
Fenu Technic Development Zone, Luxu
Wujiang City
Jiangsu
P.R. China

Prüfzeichen *Test Mark*



Geprüft nach *Tested acc. to*

EN 60127-1:2006+A1+A2
EN 60127-7:2016

Zertifiziertes Produkt (Geräteidentifikation)
Certified Product (Product Identification)

Lizenzentgelte - Einheit
License Fee - Unit

(Miniature Fuse-link)

as pages 0001-0004

Change

Name and Address of Factory : See above

ANLAGE (Appendix): 1.2

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.
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