

1. 用範圍 / SCOPE

WN10 系列小型保險絲，適用於數字儀表。
WN10 series Miniature-Fuse, used in Digital Measuring Instruments.



2. 產品型號 / TYPE

例「example」：



- ① 系列號 / Series Number
- ② 額定電流 / Rated Current
- ③ 額定電壓 / Rated Voltage
- ④ 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: 200mA~20A
額定電壓 / Rated Voltage: 600V AC

4. 標示 / MARKING

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

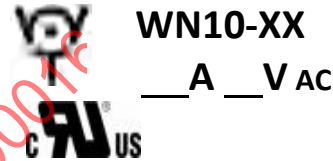
製造工廠的標識+系列號/ Manufacture' s Logo+ Part Number:

額定電流+額定電壓/ Rated Current (A)+ Rated Voltage(V):

認證符號/ Approved Symbol

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、明顯的污斑。

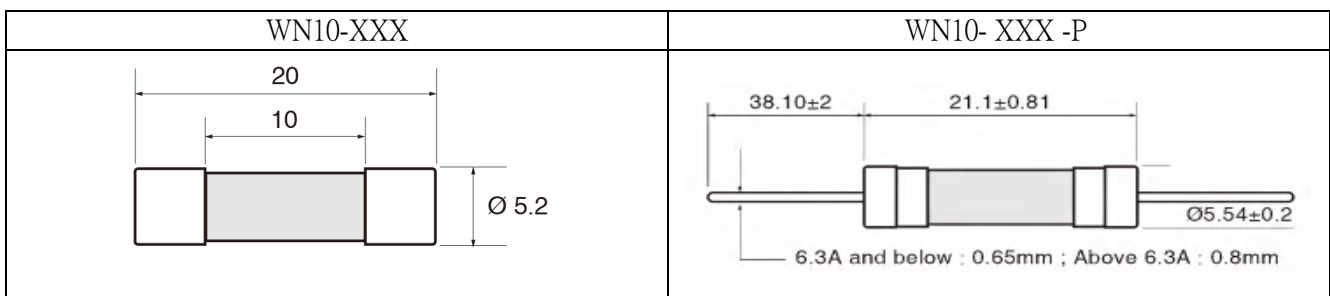
Appearances: There shall not be break up and any remarkable blotch.

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)



7. 電氣特性 / ELECTRICAL CHARACTERISTICS

Rated Current	1.0In	2.0In	4.0In
200mA - 600mA	4 hour min.		120 sec max.
1A - 20A	4 hour min	120 sec max	


說明/Specifications

品名 Type	料號 Ordering P/N.		額定電壓 Rated Voltage	額定電流 Rated Current	分斷能力 Breaking Capacity	電阻 Typical Cold. Resistance (mΩ)	電壓降 Maximum Voltage Drop (mV)	I ² t 值 Typical Pre-Arcing I ² t (A ² Sec)			
					AC						
WN10	WN10-XXX	WN10-XXX-P	AC 600V		1000A						
	WN10-0.2	WN10-0.2-P		200mA					1750	333	0.032
	WN10-0.4	WN10-0.4-P		400mA					663	278	0.172
	WN10-0.5	WN10-0.5-P		500mA					382	190	0.287
	WN10-0.6	WN10-0.6-P		600 mA					360	234	0.396
	WN10-1	WN10-1-P		1 A					230	280	0.28
	WN10-1.6	WN10-1.6-P		1.6 A					148	310	2.56
	WN10-2	WN10-2-P		2A					100	248	1.68
	WN10-2.5	WN10-2.5-P		2.5 A					90	360	1.48
	WN10-3.15	WN10-3.15-P		3.15 A					49	215	4.91
	WN10-4	WN10-4-P		4 A	38	220	8				
	WN10-5	WN10-5-P		5 A	29	200	16				
	WN10-6	WN10-6-P		6 A	24	150	30				
	WN10-6.3	WN10-6.3-P		6.3 A	19	162	48				
	WN10-8	WN10-8-P		8 A	14	149	64				
	WN10-10	WN10-10-P		10A	12	166	90				
	WN10-12	WN10-12-P		12 A	9.5	160	130				
	WN10-15	WN10-15-P		15 A	7.3	165	225				
	WN10-20	WN10-20-P		20 A	5	150	520				

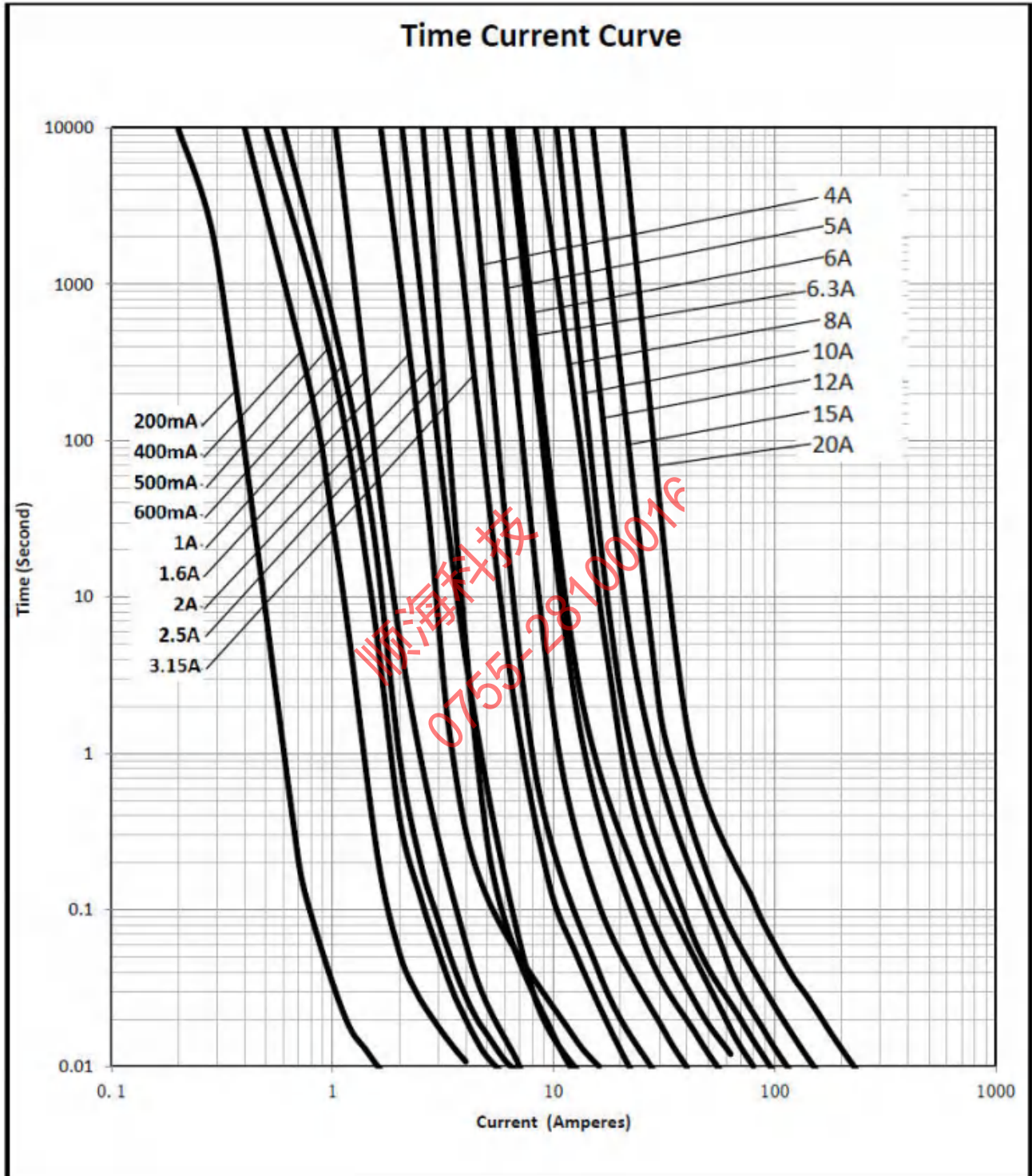
DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C

* I²t 值是以 10In 電流測量

Typical Pre-arching I²t are measured at 10In Current



8. 時間電流曲線 Time-Current Curve



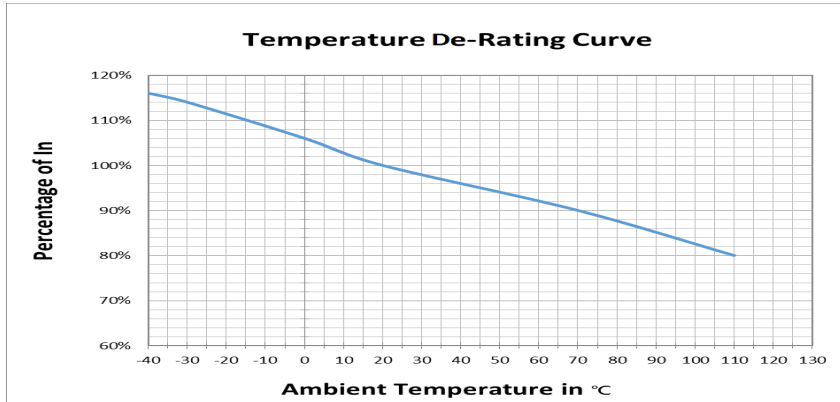
9. 環境特性 / ENVIRONMENTAL CHARACTERISTIC

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°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 30days.

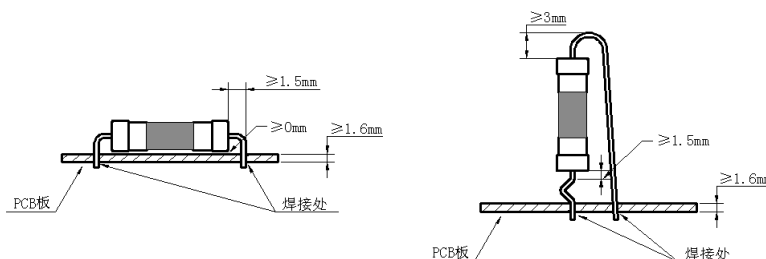
10.安全認證及編號 / STANDARDS AND APPROVALS

UR	E56092 (100mA~20A JDYX2)
CUR	E56092 (100mA~20A JDYX8)
TUV	B101823 0001 Rev. 00 (1A~16A)

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

11-1 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.



11-2 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: $260\pm 3^{\circ}\text{C}$

焊接時間 / Solder Dwell Time: 10s Max

手工焊參數 / Hand-Solder Parameters:

烙鐵溫度 / Solder Iron Temperature: $350\pm 5^{\circ}\text{C}$

焊接時間 / Heating Time: 5 s Max



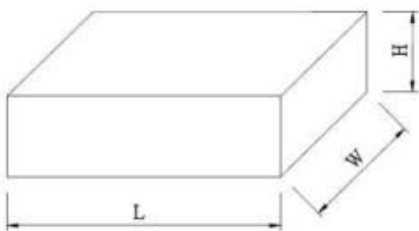
12. 包裝 / PACKING

12-1 數量 / Quantity

規格/Specs	袋 Inner polybag	小盒 Inner small box .	大盒 Inner big box	外箱 outer carton
WN10-XXX (rated current <1A)	500 PCS	/	500 PCS	10K PCS
WN10-XXX (rated current 1-2.5A)	/	40 PCS	400 PCS	9600 PCS
WN10-XXX (rated current $\geq 3\text{A}$)	500 PCS	/	500 PCS	10K PCS
WN10-XXX-P	50	/	200 PCS	4000 PCS

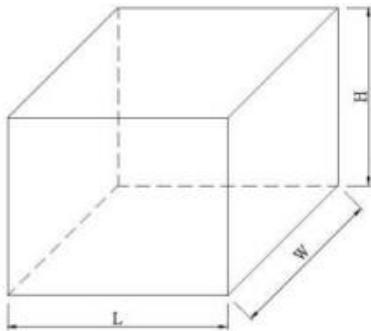
12-2 內盒(大) / Inner big box

單位/Unit : mm



規格/ Specs	L	W	H
WN10-XXX (rated current <1A)	185 ± 3	75 ± 3	65 ± 3
WN10-XXX (rated current 1-2.5A)	115 ± 3	110 ± 3	45 ± 3
WN10-XXX (rated current $\geq 3\text{A}$)	185 ± 3	75 ± 3	65 ± 3
WN10-XXX-P	140 ± 3	105 ± 3	45 ± 3

12-3 外箱 / Outer carton



單位/Unit : mm

规格/ Specs	L	W	H
WN10-XXX (rated current <1A)	400±5	380±5	140±5
WN10-XXX (rated current 1-2.5A)	380±5	245±5	200±5
WN10-XXX (rated current ≥ 3A)	400±5	380±5	140±5
WN10-XXX-P	340±5	270±5	210±5

13.其他 / OTHERS

13-1 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.

13-2 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
第七版	侯愛珍	吳讓彬	Andrew



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

WN10

Supplemental fuses: filled-tube

<u>Size</u> mm(in)	<u>Amps</u> (A)	<u>Volts</u> (V)	<u>Interrupting</u> Rating (A)
-	0.1 - 20	600Vac	200
	0.1 - 20	500Vdc	300
	0.1 - 10	400Vdc	2000
	0.1 - 1	600Vac	1000

Report Date: 2016-04-01

Last Revised: 2018-11-13

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0755-28100016



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

WN10.XXXP (!), WN20.XXXP (!), WN30.XXXP (!)

Supplemental fuses: pigtail leads, filled-tube

<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>
-	0.1 - 20	600Vac	200
	0.1 - 20	500Vdc	300
	0.1 - 10	400Vdc	2000
	0.1 - 1	600Vac	1000

(!) - ("XXX" represents current rating, i.e. 0.1 - 20)

Report Date: 2016-04-01

Last Revised: 2018-11-13

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0755-28100016



Product Service

CERTIFICATE

No. B 101823 0001 Rev. 00

Holder of Certificate: **Suzhou Walter Electronic Co., Ltd.**
Fenhu Technic Development Zone, Luxu
215211 Wujiang City, Jiangsu
PEOPLE'S REPUBLIC OF CHINA

Certification Mark:



Product: **Tubular fuses
(Miniature fuse-links for special applications)**

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 64105180174802A
Valid until: 2023-09-16

Date, 2018-11-02
Boris Ouyang
(Boris Ouyang)





Product Service

CERTIFICATE

No. B 101823 0001 Rev. 00

Model(s): **WN10, WN20, WN30, WN10P, WN20P, WN30P**

Parameters:

Rated voltage:	420VAC/DC, 500VAC/DC
Rated current:	1A, 1.6A, 2A, 3.15A, 4A, 5A, 6.3A, 8A, 10A, 12A, 12.5A, 15A, 16A
Rated breaking capacity:	AC: 500A (for rated current: 1A, 1.6A, 2A, 3.15A, 4A, 5A, 6.3A, 8A, 10A, power factor \geq 0.95) AC: 200A (for rated current: 12A, 12.5A, 15A, 16A, power factor \geq 0.95) DC: 1000A (for rated current: 1A, 1.6A, 2A, 3.15A, 4A, 5A, 8A, 10A, 12A, 12.5A, 15A, 16A, time constant \leq 1ms)
Time/current characteristics:	$t_2 \leq 1h/2.1I_N$, $t_s \leq 1s/10I_N$
Size:	5 x 20 mm
Altitude:	Not exceed 2000m

Tested according to: EN 60127-1:2006/A2:2015
EN 60127-7:2016

Production Facility(ies): 001319

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