



功得電子工業股份有限公司  
CONQUER ELECTRONICS CO.,LTD.

# 規格書

Spec. No. SFA007

## Specification For Approval

品名：GSL/GST-A 系列 慢速型玻璃管保險絲

Type：GSL/GST-A *Time-Lag Glass Tube Fuse Series*

[www.conquer.com.tw](http://www.conquer.com.tw)

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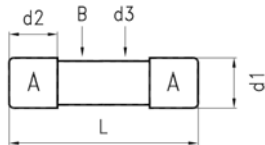


～ 筒管狀保險絲 ～

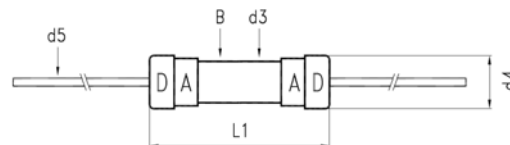
*Fuses for Instrument, Power and Telephone (Non-indicating)*

1 適用範圍: 本標準適用於保護儀器、電源供應器和電話機用之筒管式熔斷保險絲。  
Available Range: For protecting instruments, power supplies and telephone sets.

2 形狀及尺寸如下圖 單位: mm  
Shape & Size as following illustrations.



**GSL Series**



**GST-A Series**

2.1 構造形狀 Structure & Shape : 如上圖 As shown in figure above

2.2 額定電壓 Rated Voltage: 250V/125V

2.3 額定電流 Rated Current: 10mA~20A

3 材料 Material:

3.1 筒管本體: 透明玻璃管不可破裂或變形。

Tube (Body): Transparent glass tube. No breaking or deformation is allowed.

3.2 兩端銅蓋: 需以導電率良好之黃銅為材料。

Two brass end caps: Made of brass of good conductivity.

3.3 銅蓋處理: 銅蓋部份鍍鎳, 標示最後若加 "S" 者, 表示須鍍銀。

Coating of brass caps: Plating the surface with nickel. If the indication is added with "S", it needs to be plated with silver.

NO.	Part Name 部品名稱	Volume 數量
A	Brass Cap - Nickel Plating 銅帽 - 鍍鎳	2
B	Glass Tube - Transparent Glass 玻璃管 - 透明玻璃	1
C	Fuse Element 可熔體	1
D	Cap-on Lead-Cap - Tinned Copper Wire and Cap 銅帽附腳 - 銅蓋加鍍錫銅線	2
d1	Dia. of Cap - $5.2^{+0.1}_{-0.2}$ mm 銅頭直徑	
d2	Height of Cap - $5.25 \pm 0.1$ mm 銅頭高度	
d3	Dia. of Glass - $4.56 \pm 0.2$ mm 玻璃管直徑	
d4	Dia. of Cap - $5.9 \pm 0.2$ mm 銅帽直徑	
d5	Dia. of Lead Wire - $(\text{※註1}) \pm 0.05$ mm 附腳直徑 Length of Lead Wire - $38 \pm 2$ mm 長度	
L	Body of Fuse - $20.00 \pm 0.75$ mm 本體尺寸	
L1	Total Length W/Cap-on on Both Ends $21.00 \pm 0.75$ mm	

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#### 4 電氣特性Electrical Characteristics:

4.1 負載容量: 通過額定電流值 100 % (亦即  $1.0 \times I_n A$ ) 4小時以上, 能繼續通電無任何熔化現象。

Loading Capacity: Loading the 100 % Listed Electrical Current (i.e.  $1.0 \times I_n A$ ) for flowing, and it's available to let current keep on flowing without any melting. (Can keep 4 Hour minimum)

4.2 溫度特性: 通過額定電流值100%(亦即  $1.0 \times I_n A$ ) 1.5小時, 繼續維持原加之電流, 每隔十分鐘測試一次, 連續測三次, 溫度不得升高, 若使用熱偶式測量方法。(Thermocouple method) 則本體溫升在(※註2)°C 以下(For UL Listed)。

Temperature: Loading the 100 % ( $1.0 \times I_n A$ ) for 1.5 hours, keep testing it with the original current every 10 minutes. Continue to test it for 3 times. The temperature is not allowed to be higher. The main temperature rise is below (※Note2)°C by way of Thermocouple Method(For UL Listed)..

4.3 過載熔斷: 請參照下表。Melting due to overloading: Details as follows Table.

※最大熔斷時限Operating Characteristics

安培數 Rating	100% Rating		135% Rating		200% Rating	
	Min.	Max.	Min.	Max.	Min.	Max.
10mA~20A	4 Hrs			60 min	3 sec	120 sec

#### 5 機械特性 Mechanical Properties:

5.1 拉力強度: 當施加軸拉力720g/cm於兩端附腳(或銅帽), 無鬆動或損壞現象發生。

Terminal Strength: Leads and/or caps are soldered (adhered) to withstand axial pulling force of 720g/cm without loosening or any harmfulness to firmly attachment.

5.2 彎折強度 Bending Strength:

(1) 銅帽附腳腳徑1.0mm(含)以下, 經過兩次反向之彎折後(彎折90度再折回原位謂之一次彎折)不發生損壞。

Diameter of lead wire  $\leq 1.0$  mm: After two bends of opposite directions (bending through an angle of 90° and back is defined as one bend) of lead, no damage is to be visualized.

(2) 銅帽附腳腳徑1.2mm(含)以上, 距離銅帽附腳卯合處10mm以上, 作一次90度之彎折, 不發生損壞。

Diameter of lead wire  $\geq 1.2$  mm: Only one bend of an angle of 90° without back shall be tested for each lead wire and the bending position shall be at least 10mm a way from the cap-on. After the test there shall be no damage to be visualized.

6 突波實驗: 為適應電感或電容性電路所產之暫態電流, 本品可承受最少10ms 10 In 電流之突波。

Surge Test: In order to stand transient current caused by inductive or capacitive, the fuses are designed to have minimum clearing time of 10 millisecond at 1000% rated current.

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- 7 **脈波實驗**:本實驗乃保證產品之壽命與可靠度，施加60%額定電流之脈波，1分鐘ON，2分鐘OFF，1000次以後，本品不熔斷且內阻變化20%以下(For UL Listed)。  
 Cycle Test (On-Off Test):This test is designed to assure a reliable fuse, Controls are set giving 60% of rated ampere. 1 minute ON, 2 minutes OFF per time, the fuse will not open before 1000 times and the internal resistance change will be below 20%(For UL Listed).
- 8 **高溫效應**:本品置於70°C之高溫中，4.1之負載容量將降至室溫之80%(For UL Listed)。  
 Derating Test:In an air circulating oven at 70°C, the carry capacity will be derated to 80% of current specified in item 4.1(For UL Listed).
- 9 **遮斷能力 Interrupting rating**:  
 10mA~8A 10000 amperes at 125V AC  
 10mA~1A 35 amperes at 250V AC  
 1.1A~3.5A 100 amperes at 250V AC  
 3.6A~8A 200 amperes at 250V AC
- 10 **包裝**:GSL-1000 PCS/盒 ; GST-500 PCS/盒 內盒印明下列標示:料號、額定(電壓、電流、遮斷能力)及安規名稱。包裝材料均符合RoHS或者HF的環保要求,且包裝材料不會和零件發生化學反應，造成不良。  
 Packing :GSL-1000 pcs in an inner box. ; GST-500 pcs in an inner box. The following items indicated on the box. Mark: Catalog number; ratings (voltage, current, interrupting capacity), and safety mark. The packing material conforms to ROHS or the HF environmental protection request. And the packing material can't have the chemical reaction with the components.
- 11 **其他 Other**:  
 11.1 除非另有指定，上述機械、電器特性，係於常溫，標準狀況下測試之。  
 Unless otherwise, specified, all tests to be performed at 25±5°C and 35-75% RH.  
 11.2 於標準狀況下儲放一年，本品乃確保上述機械與電氣之特性。  
 After one year's storage under normal condition, this item is guaranteed to meet the requirements mentioned above.
- 12 **標記/安規認證 Mark/ Safety certification**:

**GSL Series**

Mark Approvals					Nominal Resistance Cold Ohms
			125V	250V	
10 mA	**	**			-
20 mA	**	**			-
30 mA	**	**			-
32 mA	**	**			-
40 mA	**	**			-
50 mA	**	**			-
63 mA	**	**			-

**GST Series**

Mark Approvals					Nominal Resistance Cold Ohms
			125V	250V	
10 mA	**	**			-
20 mA	**	**			-
30 mA	**	**			-
32 mA	**	**			-
40 mA	**	**			-
50 mA	**	**			-
63 mA	**	**			-

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### GSL Series

Mark Approvals					Nominal Resistance Cold Ohms
			125V	250V	
70 mA	**	**			-
80 mA	**	**			-
100 mA	**	**			10.606
125 mA	**	**			7.727
150 mA	**	**			5.643
160 mA	**	**			5.346
175 mA	**	**			4.130
200 mA	**	**			3.105
250 mA	**	**			2.197
300 mA	**	**			1.176
350 mA	**	**			1.147
400 mA	**	**			0.888
500 mA	**	**			0.677
600 mA	**	**			0.536
630 mA	**	**			0.393
700 mA	**	**			0.337
750 mA	**	**			0.338
800 mA	**	**			0.261
1 A	**	**	**	**	0.194
1.25 A	**	**	**	**	0.147
1.5 A	**	**	**	**	0.117
1.6 A	**	**	**	**	0.106
2 A	**	**	**	**	0.072
2.5 A	**	**	**	**	0.064
3 A	**	**	**	**	0.046
3.15 A	**	**	**	**	0.045
3.5 A	**	**	**	**	0.038
4 A	**	**	**	**	0.033
5 A	**	**	**	**	0.022
6 A	**	**		**	0.016
6.3 A	**	**		**	0.016
7 A	**	**		**	0.013
7.5 A	**	**		**	0.012
8 A	**	**		**	0.011
10 A					0.009
12 A					0.007
15 A					0.005
20 A					0.003

### GST Series

Mark Approvals					Nominal Resistance Cold Ohms
			125V	250V	
70 mA	**	**			-
80 mA	**	**			-
100 mA	**	**			10.606
125 mA	**	**			7.727
150 mA	**	**			5.643
160 mA	**	**			5.346
175 mA	**	**			4.130
200 mA	**	**			3.105
250 mA	**	**			2.197
300 mA	**	**			1.176
350 mA	**	**			1.147
400 mA	**	**			0.888
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600 mA	**	**			0.536
630 mA	**	**			0.393
700 mA	**	**			0.337
750 mA	**	**			0.338
800 mA	**	**			0.261
1 A	**	**	**	**	0.194
1.25 A	**	**	**	**	0.147
1.5 A	**	**	**	**	0.117
1.6 A	**	**	**	**	0.106
2 A	**	**	**	**	0.072
2.5 A	**	**	**	**	0.064
3 A	**	**	**	**	0.046
3.15 A	**	**	**	**	0.045
3.5 A	**	**	**	**	0.038
4 A	**	**	**	**	0.033
5 A	**	**	**	**	0.022
6 A	**	**	**	**	0.016
6.3 A	**	**	**	**	0.016
7 A	**	**	**	**	0.013
7.5 A	**	**	**	**	0.012
8 A	**	**	**	**	0.011
10 A					0.009
12 A					0.007
15 A					0.005
20 A					0.003

\*: 有安規認證 Have safety certify

\*\* : 有安規認證及銅帽上有安規印字標記 Have safety certify and safety mark on the cap

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13 系列品名列表 series model list :

品名	安培數
GSL ___A ___V(PF) GST-A ___A ___V(PF)	10A~20A
U/C GSL ___A ___V(PF) U/C GST-A ___A ___V(PF)	0.01A~8A

例： U/C    GSL    A    V    (PF)  
           1        2        3        4        5

- 1 安規認證 Safety Approval
- 2 系列品名 Series Model : GSL/GST-A
- 3 安培數 Ampere Rating : 0.01A~20A
- 4 伏特數 Voltage : 250V/125V
- 5 無鉛標示 mean : Pb free (PF)

※註1 (Note1)

安培數 Ampere Rating	腳徑 Lead Wire
≤14A	φ 0.8 mm
15A~19.9A	φ 1.0 mm
≥20A	φ 1.2 mm

※註2 (Note2)

10mA~8A (75°C)

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