# SET safe SET fuse

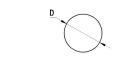
## Miniature Fuses Cartridge Fuse-links (CFL)

SC625 Series, Fast/Medium Acting, Ceramic Tube



## Dimensions (mm)

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L	L <sub>1</sub>	D
25.4 <sup>+0.8</sup> -0.4	5.5 ± 0.8	Φ6.30 <sup>+0.20</sup> <sub>-0.05</sub>

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## Description

 $\Phi$ 6.3 x 25.4 mm, Fast/Medium Acting, high breaking capacity cartridge fuse, designed to BS, GB/T and IEC standards.

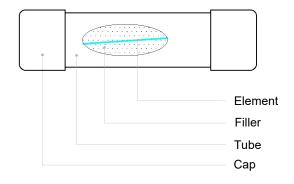
## Key Features

- Body Size: Φ6.3 × 25.4 mm
- Fast/Medium Acting
- High Breaking Capacity
- Ceramic Tube, Nickel-plated Brass End cap Construction
- Designed To BS 1362, IEC 60269-3, GB/T 13539.3
- Lead-free (Pb-free)
- RoHS and REACH Compliant

## Applications

- BS Plug
- BS Socket
- Household Appliance
- Smart Home
- Cable

## Structure



## **Product Number System**

#### SC625FM13A264V



## **Time/Current Characteristic**

% of Ampere Rating	Ampere Rating	Opening Time
160%	3 A ~ 13 A	30 minutes, Min.
190%	3 A ~ 13 A	30 minutes, Max.

## Agency Approvals

Agency Symbol	The file No. and certification No. obtained by SETsafe SETfuse	Ampere Range
	Pending	3 A ~ 13 A
A\$A	Pending	3 A ~ 13 A

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## **Specifications**

	Rated	Rated		Rated Power	Average		Agency A	pprovals	Enviror	nmental
Series	Current	Voltage	Rated Breaking Capacity	Dissipation	Typical Melting <i>l²t</i> <sup>a</sup>	Color			RoHS	REACH
	(A)	(VAC)		(VV)	(A²sec)		ccc	ASTA		
SC625	3	264			33.2	Red	0	0	٠	•
SC625	5	264			164	Black	0	0	٠	•
SC625	7	264	6 kA@264 VAC <sup>b</sup>	1	232	Black	0	0	•	•
SC625	10	264			365	Black	0	0	•	•
SC625	13	264			1052	Brown	0	0	•	•

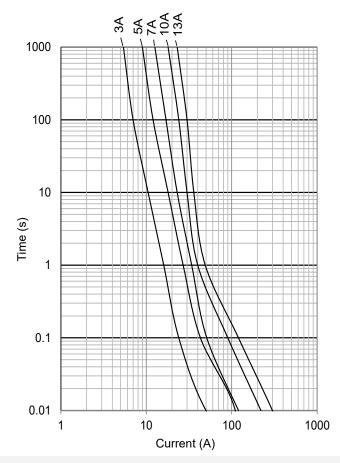
Remark:

a: The fusing time used to calculate  $l^2 t$  shall be within the standard range of 8 ms ~ 10 ms.

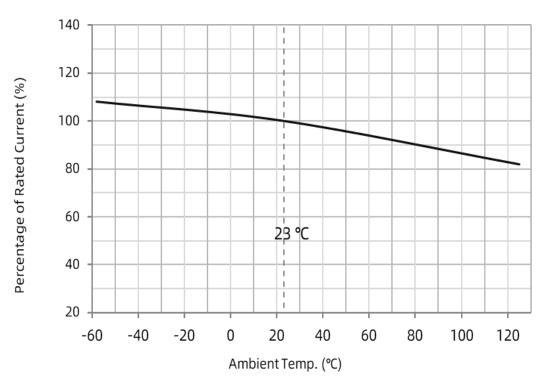
b: 50 Hz, P.f. 0.3-0.4 .

 $\circ:\,$  Pending; RoHS and REACH Compliant.

## Time Current Curve (For Reference Only)

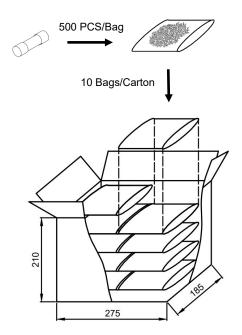


## Rated Current Derating Curve (For Reference Only)



## **Packaging Information**

Dimensions (mm)



Cartridge Type					
Item PE Bag Carton					
Q'ty (PCS)	500	5,000			
Gross Weight (kg) 13.5×(		13.5×(1±10%)			



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# ATTENTION

### Inspection

#### **Cold Resistance Test**

- a. Applied current shall be less than 10% of rated current, at ambient Temp. of (23±2) °C.
- b. 4-Wire Resistance Measurement.

## Usage

- a. Do not touch the fuse body or lead wire when power on, avoiding scald or electric shock.
- b. The air pressure is 80 kPa to 106 kPa, corresponding to the altitude of +2000 m to -500 m.

## Replacement

For safety reasons, the Fuse is a non-resettable product, please ensure that the alternative Fuse is the same type when replace it.

## Storage

Fuse storage should avoid high temperature, high humidity, direct sunlight, and corrosive gases, so as not to affect the solderability of the lead wire. Please use them up within 1 year after receiving the goods.

## Installation

Do not apply mechanical stress to the fuse body during or after the installation.

## **Installation Position**

Do not install the fuse on an assembly that may often subject to severe continuous vibration or with corrosive gases (NH<sub>3</sub>, SO<sub>2</sub>, Cl<sub>2</sub> etc.).

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## Glossary

Item	Description
Fuse	A device, by the fusing of one or more of its specially designed and proportioned components, opens the circuit in which it is inserted by breaking the current when this exceeds a given value for a sufficient time. —(IEC 60127)
Rated Current	The rated current of a fuse identifies its current-carrying capacity based on a controllable set of test conditions. Each fuse is marked with its rated current, this rating can be identified with a numeric, alpha, or color code mark. —(IEC 60127)
Rated Voltage	A Max. open circuit voltage in which a fuse can be used, yet safely interrupt an overcurrent. Exceeding the voltage rating of a fuse impairs its ability to clear an overload or short circuit safely. —(IEC 60127)
Ampere Squared Seconds <i>I<sup>2</sup>t</i>	The melting, arcing, or clearing integral of a fuse, termed $l^2t$ , is the thermal energy required to melt, arc, or clear a specific current. It can be expressed as melting $l^2t$ , arcing $l^2t$ or the sum of them, clear- ing $l^2t$ . —(IEC 60127)
Overload	Can be classified as an overcurrent which exceeds the normal full load current of a circuit by 2 to 5 times its magnitude and stays within the normal current path. —(UL 248)
Overcurrent	A condition which exists in an electrical circuit when the normal load current is exceeded. Overcurrent take on two separate characteristics-overloads and short circuits. —(UL 248)
Short Circuit	An overcurrent that leaves the normal current path and greatly exceeds the normal full load current of the circuit by a factor of tens, hundreds, or thousands times. —(UL 248)
Breaking Capacity of a Fuse-link	Value (r.m.s. for AC) of prospective current that a fuse-link is capable of breaking at a stated voltage under prescribed conditions of use and behaviour. —(IEC 60127)

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## **Reliability Test**

No.	Items	Inspection Standards	Standards
1	High Temp. Test	Test Condition: Temperature: (105 ± 2) °C Time: 1000 hours Test Requirement: After the test, the voltage drop shall not have changed by more than 10% of the value measured before the test. The clearing time of the fuse shall be in range.	MIL-STD-202(Test Method 108) GJB360B(Test Method 108)
2	High Humidity Test	Test Condition: Temperature: $(40 \pm 2)$ °C Humidity: 90% to 95% Time: 96 hours Test Requirement: After the test, the voltage drop shall not have changed by more than 10 % of the value measured before the test. The clearing time of the fuse shall be in range.	MIL-STD-202(Test Method 103) GJB360B(Test Method 103)
3	Thermal Shock Test	Test Condition: Per Cycle: -55 °C / 30 minutes, 125 °C / 30 minutes Time: 100 Cycles Test Requirement: After the test, the voltage drop shall not have changed by more than 10 % of the value measured before the test. The clearing time of the fuse shall be in range.	MIL-STD-202(Test Method 107) GJB360B(Test Method 107)

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SET safe SET fuse

#### Cartridge Fuse-links (CFL) Features & Model List Overview

(mm)		Ф6.35	× 31.8	
Breaking Capacity ysical Size	10 kA -	~ 30 kA	1000 A -	~ 50 kA
tandards		IEC	/ UL	
be Material		Cera	amic	
		/	/	
ne Feature	(200 ~ 6	/	(200 ~ 60	
Ur (VAC) Voltage (VDC)		500) VAC 500) VDC	(250 ~ 6) (250 ~ 6)	
0.10	0	0	0	0
0.125				
0.16				
0.20				
0.25				
0.315				
0.40				
0.50				
0.60				
0.80			SCF0321A	SCF632P1A
1.25			SCF6321.25A SCF6321A	SCF632P1.25A SCF632P1A
1.60			SCF6321.6A	SCF632P1.6A
1.60				
3.00 2.50 2.00			SCF6322A	SCF632P2A
2.50			SCF6322.5A	SCF632P2.5A
5.15			0	0 0
3.15			SCF6323.15A	SCF632P3.15A
6.00 5.00 4.00			SCF6324A	SCF632P4A
5.00			SCF6325A	SCF632P5A
6.00			SCF6326A	SCF632P6A
<ul><li>7.00</li><li>6.30</li></ul>			SCF6326 3A	SCF632P6.3A
			0	0
8.00			SCF6328A	SCF632P8A
10.00			SCF63210A	SCF632P10A
12.00			SCF63212A	SCF632P12A
12.50			SCF63212.5A	SCF632P12.5A
13.00	SCF632A15A	SCF632AP15A	SCF63215A	SCF632P15A
16.00 15.00	SCF632A16A	SCF632AP16A	SCF63216A	SCF632P16A
20.00	SCF632A20A	SCF632AP20A	SCF63220A	SCF632P20A
21.00	0	0	SCF63221A	SCF632P21A
25.00	SCF632A25A	SCF632AP25A	SCF63225A	SCF632P25A
30.00	SCF632A30A	SCF632AP30A	SCF63230A	SCF632P30A
40.00				

## SET safe SET fuse

SC625 Series, Fast/Medium Acting, Ceramic Tube

#### Cartridge Fuse-links (CFL) Features & Model List Overview

(mm) Product Structure					
Capacity hysical Si	Size \$ \$ \$ \$ \$ \$ \$ \$		6 kA Φ6.35 × 25.4	35 A ~ 200 A Φ5 × 20	
Standards Breaking		UL	IEC / BS	IEC	/ UL
ube Mater		Ceramic	Ceramic		ass
ime Featu		Fast Acting	Medium-Acting	Fast Acting	Time-Lag
Ur (\ ated Voltage (\	AC) DC)	250 VAC 75 ~ 400) VDC	264 VAC	250	VAC
	10 0	0	0	0	0
0.1			0	0	
0	16 ்		0	0	
0	20 0		0	0	
	25 0		0	0	
0.3			0	0	
	<b>40</b> °		0	O	0
	50 °		0	SGF520-500mA (-L)	
	63 °		0	SGF520-630mA (-L)	
	80 0		0	SGF520-800mA (-L)	
	<b>00</b> •		0	SGF5201.23A (-L)	SGT520-1.25A (-L)
	<b>25</b> 0		0	SGF520-1.0A (-L)	SGT520-1.25A (-L)
	60 °		0	SGF520-2A (-L)	SGT520-2A (-L)
2 2	00 0		0	SGF520-2A (-L)	SGT520-2A (-L)
<b>.</b>	50 °		000251 MISA	SGF520-2.5A (-L)	SGT520-2.5A (-L)
D 3	00 0		SC625FM3A	o	001020 0.10/( E)
	15 °		0	SGF520-3.15A (-L)	SGT520-3.15A (-L)
el 4	00 0	0	0002011007	SGF520-4A (-L)	SGT520-4A (-L)
t 5	00 SCF625F5		SC625FM5A	SGF520-5A (-L)	SGT520-5A (-L)
- 6	00 SCF625F6		0	0010200.07(2)	0 0
₹ 6	30 SCF625F6.		000201 11171	SGF520-6.3A (-L)	SGT520-6.3A (-L)
7	00 00 0201 0	001023110A	SC625FM7A	ост <u>з</u> 20-од (-L)	осто20-0А (-L) о
	00 SCF625F8		0	SGF520-8A (-L)	SGT520-8A (-L)
10			SC625FM10A	SGF520-12A (-L)	SGT520-12A (-L)
12			0	SGF520-12.5A (-L) SGF520-12A (-L)	SGT520-12.5A (-L)
13. 12			SC625FM13A	SGF520-12.5A (-L)	SGT520-12.5A (-L)
		5A SCF625PF15A	0	SGF520-15A (-L)	SGT520-15A (-L)
16. 15.			0	SGF520-16A (-L)	SGT520-16A (-L)
20			0	SGF520-20A (-L)	SGT520-20A (-L)
21		0	0		
25			0	0	
30			0	0	
40			0	0	

SET safe SET fuse

#### Cartridge Fuse-links (CFL) Features & Model List Overview

( mr Prod			φ3;	~ 20 	
Capa Physica	city al Size	200 A	~ 5 kA  Ф5 ;		- 10 kA
Stand Breal			IEC		
Time Feature Fas			Cera		
		Fast /	Acting	Time	-Lag
Ur ated Voltag	(VAC) ge (VDC)		00) VAC 00) VDC		00) VAC 00) VDC
	0.10	0	0	0	0
	0.125				
	0.16				
	0.20				
	0.25				
	0.315				
	0.40	SCF520F400mA	SCF520PF400mA	SCT520T400mA	SCT520PT400mA
	0.50	SCF520F500mA	SCF520PF500mA	SCT520T500mA	SCT520PT500mA
	0.63	SCF520F630mA	SCF520PF630mA	SCT520T630mA	SCT520PT630mA
	0.80	SCF520F800mA	SCF520PF800mA	SCT520T800mA	SCT520PT800mA
	1.00	SCF520F1A	SCF520PF1A	SCT520T1A	SCT520PT1A
	1.25	SCF520F1.25A	SCF520PF1.25A	SCT520T1.25A	SCT520PT1.25A
	1.60	SCF520F1.6A	SCF520PF1.6A	SCT520T1.6A	SCT520PT1.6A
	2.00	SCF520F2A	SCF520PF2A	SCT520T2A	SCT520PT2A
Rat	2.50	SCF520F2.5A	SCF520PF2.5A	SCT520T2.5A	SCT520PT2.5A
Rated	3.00	SCF520F3A	SCF520PF3A	SCT520T3A	SCT520PT3A
	3.15	SCF520F3.15A	SCF520PF3.15A	SCT520T3.15A	SCT520PT3.15A
urr	4.00	SCF520F4A	SCF520PF4A	SCT520T4A	SCT520PT4A
Current I <sub>h</sub> (A	5.00	SCF520F5A	SCF520PF5A	SCT520T5A	SCT520PT5A
t /	6.00				
(A	6.30	SCF520F6.3A	SCF520PF6.3A	SCT520T6.3A	SCT520PT6.3A
~	7.00				
	8.00	SCF520F8A	SCF520PF8A	SCT520T8A	SCT520PT8A
	10.00	SCF520F10A	SCF520PF10A	SCT520T10A	SCT520PT10A
	12.00	SCF520F12A	SCF520PF12A	SCT520T12A	SCT520PT12A
	12.50	SCF520F12.5A	SCF520PF12.5A	SCT520T12.5A	SCT520PT12.5A
	13.00				
	15.00	SCF520F15A	SCF520PF15A	SCT520T15A	SCT520PT15A
	16.00	SCF520F16A	SCF520PF16A	SCT520T16A	SCT520PT16A
	20.00	SCF520F20A	SCF520PF20A	SCT520T20A	SCT520PT20A
	21.00	0 0	0 0	0	0
	30.00 25.00	SCF520F25A	SCF520PF25A	SCT520T30A SCT520T25A	SCT520PT30A SCT520PT25A
	40.00			0	0
	40.00				

SET safe SET fuse

#### 50.00 Remark: Please refer to each product series specification page for complete models 40.00 30.00 25.00 21.00 20.00 SPT478T20A 16.00 SPT478T16A 15.00 SPT478T15A 13.00 12.50 SPT478T12.5A 12.00 10.00 SPF478F10A SPT478T10A 8.00 SPF478F8A SPT478T8A 7.00 Rated Current In (A) 6.30 SPF478F6.3A SPT478T6.3A 6.00 5.00 SPF478F5A SPT478T5A Mode 4.00 SPF478F4A SPT478T4A 3.15 SPF478F3.15A SPT478T3.15A 3.00 2.50 SPF478F2.5A SPT478T2.5A 2.00 SPF478F2A SPT478T2A 1.60 SPF478F1.6A SPT478T1.6A 1.25 SPF478F1.25A SPT478T1.25A 1.00 SPF478F1A SPT478T1A 0.80 SPT478T800mA 0.63 SPT478T630mA 0.50 SPT478T500mA 0.40 SPT478T400mA 0.315 SPT478T315mA 0.25 SPT478T250mA 0.20 SPT478T200mA 0.16 SPT478T160mA 0.125 SPT478T125mA 0.10 SPT478T100mA ⇒ (VAC) (125 ~ 400) VAC Ur Rated Voltage (VDC) **Time Feature** Fast Acting Time-Lag **Tube Material** Plastic Case Standards IEC / UL Breaking 35 A ~ 200 A Capacity Physical Size $4 \times 7 \times 8$ ( mm ) Product 07 Structure

#### Sub-miniature Fuse-links (SFL) Feature & Model List Overview

SET safe SET fuse

( mm ) Product tructure				
apacity sical Size	50 A ~ 2.7 × 2		100 A ~ 	
andards reaking		IEC /		
e Material		Cera		
e Feature	Fast Acting	Time-Lag	Fast Acting	Time-Lag
voltage (VAC)		25) VDC	(125~3) (32~2	
0.10	○ (125 ~ 3	50) VAC	् (125 ~ 3	SCT1032T100mA 50) VAC
0.125		0		SCT1032T125mA
0.16		0		
		SC161251200mA		SCT1032T200mA SCT1032T160mA
0.25		SCT6125T250mA SCT6125T200mA		SCT1032T250mA
0.315		SCT6125T315mA		SCT1032T315mA
0.40 0.315		SCT6125T400mA		SCT1032T400mA
0.50		SCT6125T500mA		SCT1032T500mA
0.63		SCT6125T630mA		SCT1032T630mA
0.80		SCT6125T800mA		SCT1032T800mA
1.00		SCT6125T1A	SCF1032F1A	SCT1032T1A
1.25		SCT6125T1.25A	SCF1032F1.25A	SCT1032T1.25A
1.60	SCF6125F1.6A	SCT6125T1.6A	SCF1032F1.6A	SCT1032T1.6A
2.00	SCF6125F2A	SCT6125T2A	SCF1032F2A	SCT1032T2A
2.50	SCF6125F2.5A	SCT6125T2.5A	SCF1032F2.5A	SCT1032T2.5A
3.00	SCF6125F3A	SCT6125T3A	SCF1032F3A	SCT1032T3A
6.30 6.00 5.00 4.00 3.15 3.00 2.50	SCF6125F3.15A	SCT6125T3.15A	SCF1032F3.15A	SCT1032T3.15A
4.00	SCF6125F4A	SCT6125T4A	SCF1032F4A	SCT1032T4A
5.00	SCF6125F5A	SCT6125T5A	SCF1032F5A	SCT1032T5A
6.00	0	0	0	0
6.30	SCF6125F6.3A	SCT6125T6.3A	SCF1032F6.3A	SCT1032T6.3A
7.00	0	0	0	0
8.00	SCF6125F8A	SCT6125T8A	SCF1032F8A	SCT1032T8A
10.00	SCF6125F10A	SCT6125T10A	SCF1032F10A	SCT1032T10A
12.00	SCF6125F12A	SCT6125T12A	SCF1032F12A	SCT1032T12A
12.50	SCF6125F12.5A	SCT6125T12.5A	SCF1032F12.5A	SCT1032T12.5A
13.00		0		
15.00	SCF6125F15A	0	SCF1032F15A	SCT1032T15A
16.00	SCF6125F16A	0	SCF1032F16A	
20.00	SCF6125F20A	0	SCF1032F20A	
21.00				
25.00			SCF1032F25A	
30.00		0	SCF1032F30A	
40.00		0	SCF1032F40A	
50.00				

#### Surface Mount Fuse-lingks (SMFL) Feature & Model List Overview