PICO[®] 259 Series Safe-T-Plus Fuse



Agency Approvals

Agency	Agency File Number	Ampere Range
(Ex)	Baseefa02ATEX0071U	0.062A - 5A
IEC.	IECEx BAS 10.0098U	0.062A - 5A
A7	E10480 E358130	0.062A - 5A

Electrical Characteristics for Series

% of Ampere Rating	OpeningTime
100%	4 Hours, Minimum
200%	5 Seconds, Maximum

Reference Standards			
Agency	Standards		
ATEX	EN 60079-0, EN 60079-11		
IECEx	IEC 60079-0, IEC 60079-11		
UL	UL 913, UL 60079-0, UL 60079-11		

Description

The Safe-T-Plus 259 Series offers a range of encapsulated fuses designed to enable greater safety for operating electronic equipment within potentially explosive environments. Originally designed to serve the needs of gas plants, petrochemical and processing industries, these fuses are certitifed for use within intrinsically safe apparatus with ATEX and IECEx certifications.

The fuse design and its encapsulant are suitable for use in intrinsically safe appartatus and associated apparatus for voltage not exceeding 125V rms (190V peak).

Features

- Encapsulated and sealed (1mm minimum)
- 0.062A 5A range options
- Designed to operate within environments where there is danger of gas explosion from faulty circuits
- ATEX and IECEx certified components
- RoHS compliant
- Suitable for use in Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III and Class I, Zone 0, AEx ia IIC Hazardous Locations.

Rohs Gal (Ex) IEC IECEX

• Suitable for use in Gas, Zone 0 Hazardous Locations per IEC and EN 60079 Series

Applications

 Testing, measuring or processing electronic and electrical equipment

Additional Information



Datasheet

Resources



Samples

Application testing is strongly recommended.



Electrical Specifications by Items

Ampere Amp	Interrupting	Nominal		Minimum Cold	Nominal Cold	Agency Approvals			
Bating		Rating	Melting I²t (A² Sec.)	Resistance at -20°C (Ohms)	Resistance at -40°C (Ohms)	Resistance at 25°C (Ohms)	(Ex)		7 Ľ
0.062	.062		0.00011	4.89	4.39	7.00	x	x	х
0.125	.125		0.0012	1.35	1.26	1.70	x	х	х
0.250	.250		0.0095	0.51	0.48	0.665	x	x	х
0.375	.375	50A @ 125 VAC	0.025	0.32	0.29	0.395	x	x	х
0.500	.500	300A @ 125 VDC	0.0598	0.24	0.22	0.302	x	х	х
0.750	.750		0.153	0.14	0.12	0.175	x	x	х
1.00	001.		0.256	0.10	0.07	0.128	x	х	х
3.00	003.		1.27	0.03	0.01	0.03	x	х	х
5.00	005.	50A @ 125 VAC 300A @ 63 VDC	4.14	0.01	0.005	0.0158	x	x	х

1) The fuse must be so mounted that creepage and clearance distances aren't impaired in any way.

2) The fuse is suitable for use in intrinsically safe equipment for voltages not exceeding 190V peak.
3) Maximum surface temperature rise at 170% rated current: ≤750mA=40°C, 1A=55°C, 3A=118°C and 5A=135°C.

Product Characteristics

Materials Body : Polyamide Terminals - Tin Plated Copper Alloy Max. operating temperature of materials 130		
Operating Temperature	Operating temperature depends on fuse rating and max. allowed fuse surface temperature. (Consider re-rating)	
Thermal Shock	Withstands 5 cycles of – 55°C to 125°C	
Vibration Per MIL-STD-202, Method 201		
Insulation Resistance (After Opening)	Greater than 10,000 ohms	

Temperature Re-rating Curve



Note

1. Re-rating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters

Recommended Process Parameters:

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Wave Parameter	Lead-Free Recommendation	
Preheat: (Depends on Flux Activation Temperature)	(Typical Industry Recommendation)	
Temperature Minimum:	100°C	
Temperature Maximum:	150°C	
PreheatTime:	60-180 seconds	
Solder Pot Temperature:	260°C Maximum	
Solder Dwell Time:	2-5 seconds	

Recommended Hand Soldering Parameters:

Solder Iron Temperature: 350°C +/- 5°C Heating Time: 5 seconds max.

Note: These devices are not recommended for IR or **Convection Reflow process**





Part Numbering System



SERIES AMP Code -

The dot is poisitioned before the Packaging Suffix with whole ratings and within the numbering sequence for fractional ratings. Refer to Amp Code column in the Electrical Specifications table.

Example:

1 amp product is 0259<u>001.</u>M (.062 amp product shown).

PACKAGING Code M = Bulk pack, 1000 pcs

T = Bulk pack, 10 pcs

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
Bulk	N/A	1000	M = Bulk 1000 pieces, T = Bulk 10 pieces
Bulk	N/A	10	Please refer to available quantities above in "Part Numbering System"

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