



### Description

LFR series high-speed fuses are specially engineered to provide optimized protection for the equipment designed with sensitive power semiconductor devices. They are assembled with precision blanking elements embedded in sand, which helps control arcing characteristics for a lower l<sup>2</sup>t and higher interrupting level.

#### **Features**

- Fast-acting aR & aBAT performance
- Extremely current limiting
- Low watt-loss design
- Superior cycling capability
- RoHS & REACH Compliant

### **Applications**

- Power conversion devices (UPS, inverter, rectifiers, drives)
- DC systems (DC common bus, DC injection braking
- Battery protection application (Energy storage systems)
- Heaters and power supplies

### Agency Approvals

Agency Approvals	Standards	File No.
TUV	IEC 60269-4 IEC 60269-7	
UL	UL 248-13	

### **Dimensions (mm)**



#### LFR20S - 200A-BT





30±1



## LFR20S Series

LV Fuses

#### Glossary

ltem	Description					
Fuse	An overcurrent protective device with a fusible link that operates and permanently opens the circuit on an overcurrent condition.					
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.					
Rated Voltage	A maximum 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.					
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, clearing $l^2t$ .					
Time-current Characteristics	Under stated conditions of operation, the value of time as a function of the prospective current.					
Rated Breaking Capacity	Value (r.m.s. for a.c.) of prospective current that a fuse-link is capable of breaking at a stated voltage under prescribed conditions of use and behaviour.					



### LFR20S Series

### **Specifications**

NO.	Model	Rated Voltage (VDC)	Rated Current (In)	Rated Breaking Capacity (DC)	Watt Loss at In	Weight	Torque
		V	Α	kA	w	g	N∙m
1	LFR20S-32A-BT	150	32	50	8	80	12 (M8)
2	LFR20S-40A-BT	150	40	50	10	80	12 (M8)
3	LFR20S-50A-BT	150	50	50	12	80	12 (M8)
4	LFR20S-63A-BT	150	63	50	14	80	12 (M8)
5	LFR20S-80A-BT	150	80	50	16	80	12 (M8)
6	LFR20S-100A-BT	150	100	50	17	80	12 (M8)
7	LFR20S-125A-BT	150	125	50	18	80	12 (M8)
8	LFR20S-160A-BT	150	160	50	20	80	12 (M8)
9	LFR20S-200A-BT	150	200	50	23	80	12 (M8)
10	LFR20S-250A-BT	150	250	50	30.5	80	12 (M8)

Note:

LV Fuses

1. " $\bullet$ " means that the product has passed the certification.

"O" means that the product plans to apply for certification.

- 2. Operating Temperature: -55°C to +125°C
- 3. Storage Temperature: Up to +35°C with relative humidity < 65%
- 4. Recommended Fastener: 10mm

#### **Temperature Derating Curve**



Alpha Therm GmbH Gewerbering 7 68723 Plankstadt

### **Time Current Curve**







a Therm

**LFR20S Series** 

### Peak Let-Thru Curve



PROSPECTIVE FAULT CURRENT(A)

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LV Fuses