

CIRCUIT CLOSER 500

Pyrotechnic circuit closer for high-voltage applications in electric vehicles.
Closing switch for a secure and permanent electrical connection activated by a trigger signal.

- Provides irreversible secure connection
- High insulation resistance before activation
- Low internal resistance after activation
- Lightweight design at small formfactor
- No emissions
- Operating Voltage 500 VDC



Key functional parameters

Continuous & peak current after activation	300 A for 0,5 s + 4 kA for 5 ms (superimposed) (higher/alternate values on request)
Operating voltage	500 VDC
Switching time	<1 ms
Operating temperature	-40 °C to +95 °C
Ambient temperature	-40 °C to +85 °C
Storage temperature	+5 °C to +40 °C
Product lifetime	15 years*
Qualification	in accordance with LV 123 and LV 124
Weight	20 g

*operating hours depending on temperature collective & activation energy

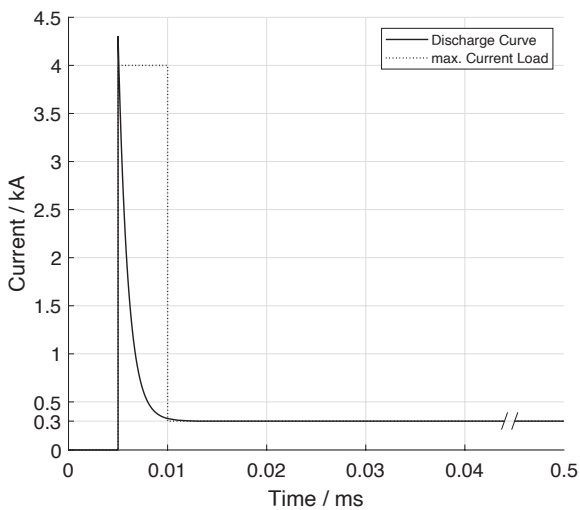
HV connection (busbar)

Busbar - igniter - insulation resistance	> 100 MΩ (before and after activation)
Busbar resistance	< 10 mΩ (after activation) > 100 MΩ (before activation)
Busbar material	copper + Ni/Ag plating (alternatives on request)
Intended type of connection	FastOn mating receptacle: 6.35x0.5 mm (PN: 63442-1)

LV connection (igniter)

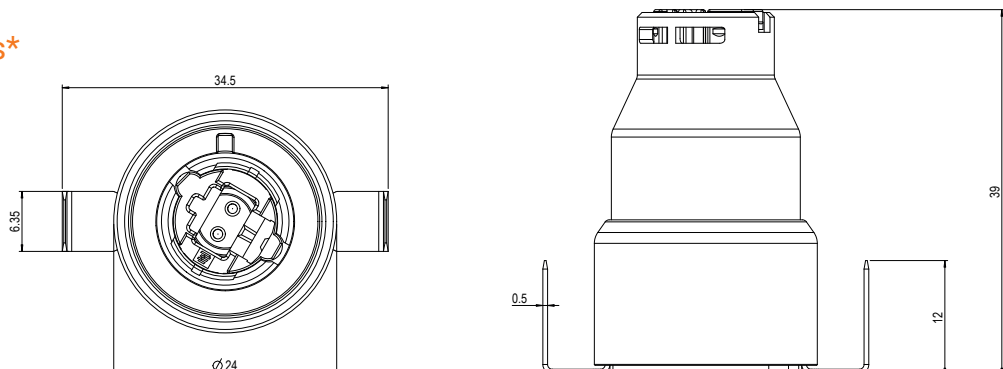
Terminal type	Pin type (2 pins), gold-coated
11 mm Squib-Interface (unsealed)	AK-1/AK-2 following ISO 19072-1 commonly used: AK-1 Code A
Pyrotechnics	GTMS igniter (TS 70116 (LV 16) & USCAR-28), maximum pyrotechnic mass 43 mg
Igniter resistance	2.1 $\Omega \pm 0.4 \Omega$ (TS 70116 (LV 16)) 2.0 $\Omega \pm 0.3 \Omega$ (USCAR28)
Igniter parameter "No fire"	$\leq 0.4 \text{ A}$ $\leq 5 \text{ A for } \leq 4 \mu\text{s}$
Igniter parameter "All fire"	1.75 A to 40 A for 0.5 ms $\geq 1.2 \text{ A for } \leq 2 \text{ ms}$

Typical current carrying curve



Outline dimensions*

*in mm



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