

Battery Disconnection Switch – PSS-1

Pyro-switch – Automotive Switch – High Current Device

Autoliv

- Maximum continuous current 300 A at 85°C
- Non-reversible device
- Suitable for voltage levels up to 400 VDC
- High peak current carrying capability up to 2 000 A

Product description:

A pyrotechnical actuator separates the electric connection irreversibly. Pyrotechnical switches are installed in many road vehicles. It is triggered by the ECU, and is used to separate the "starter-generator-cable" from the electrical system (battery).



Typical applications:

Battery disconnection to prevent fires caused by short circuits during/after an accident.

Switching capacity

Inductive load (5 μH)	200 A / 400 V
Inductive load (20 μH)	600 A / 475 V
Inductive load (60 μH)	2000 A / 150 V
Capacitive load	> 400V, contact us

Current carrying capacity

85°C, load cable 50 mm ²	300 A
105°C, load cable 50 mm ²	250 A
125°C, load cable 50 mm ²	200 A
Maximum short-time current	
23°C, load cable 50 mm ²	2 000 A / 10 s
	25 000 A / 5 ms

Busbar

Contact raw-material (base)	CuSn 0,15
Contact plating material (lead-free)	Sn/Ni
Busbar profile	
Cross-section nominal	32 mm ²

Initiator Data

Qualified acc. to	AK-LV 16 & USCAR
Initiator resistance	≥1,7 Ω and ≤ 2,5 Ω
All- Fire current	1,75 A / 0,5 ms
Or	1,20 A / 2,0 ms
No-Fire current	≤ 0,4 A
Or	≤ 5,0 A / ≤ 4 μs
Monitor current:	100 mA
Triggering pulse slope	10 μs / A

Operation time

Release time	< 3 ms
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Resistance & Insulation data

Busbar resistance (at RT)	
before ops.	≤ 0,1 mΩ
after ops	≥ 10 MΩ

Temperature

Operating temperature	-40°C... + 125°C
Environmental temperature	-40°C... + 105°C
Storage temperature	-40°C..... + 65°C
Self-ignition	≥ 210°C

Other Data

Vibration resistance acc. to	ISO 16 750 – 3
Mech. Shock resistance acc. to	ISO 16 750 – 3
Temperature cycle resistance acc. to	ISO 16 750 – 4
Chemical loads resistance acc. to	ISO 16 750 – 5
Terminal type	
on bus-bar	M8 screw
on initiator	AK-1 / AK-2 / ABX-3 unsealed
	ABX-3 sealed
Weight	60 g
Packaging unit	
Small unit (cardboard box)	140 pcs.
Large unit (container)	2520 pcs.

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