

# 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 $\mu$ H)	200 A / 400 V
Inductive load (60 $\mu$ H)	2000 A / 150 V
Capacitive load	> 400V, contact us

### Current carrying capacity

85°C, load cable 50 mm <sup>2</sup>	300 A
105°C, load cable 50 mm <sup>2</sup>	250 A
125°C, load cable 50 mm <sup>2</sup>	200 A
Maximum short-time current	
23°C, load cable 50 mm <sup>2</sup>	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 <sup>2</sup>

### Initiator Data

Qualified acc. to	AK-LV 16 & USCAR
Initiator resistance	$\geq 1,7 \Omega$ and $\leq 2,5 \Omega$
All- Fire current	1,75 A / 0,5 ms
Or	1,20 A / 2,0 ms
No-Fire current	$\leq 0,4$ A
Or	$\leq 5,0$ A / $\leq 4$ $\mu$ s
Monitor current:	100 mA
Triggering pulse slope	10 $\mu$ s / A

### Operation time

Release time	< 3 ms
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### Resistance & Insulation data

Busbar resistance (at RT)	
before ops.	$\leq 0,1$ m $\Omega$
after ops	$\geq 10$ M $\Omega$

### Temperature

Operating temperature	-40°C... + 105°C
Environmental temperature	-40°C... + 105°C
Storage temperature	-40°C..... + 65°C
Self-ignition	$\geq 300$ °C

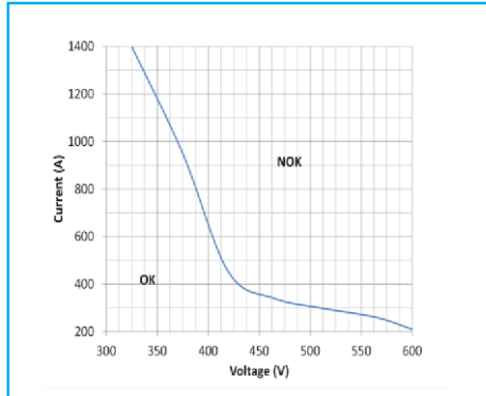
### Other Data

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.

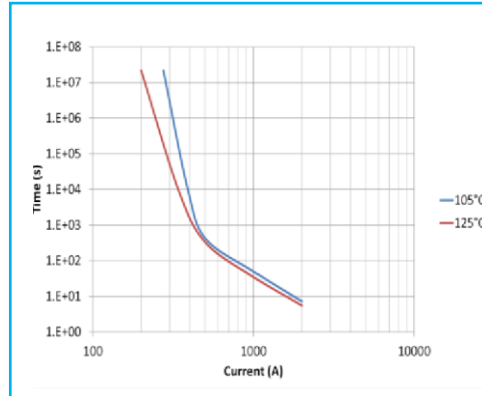
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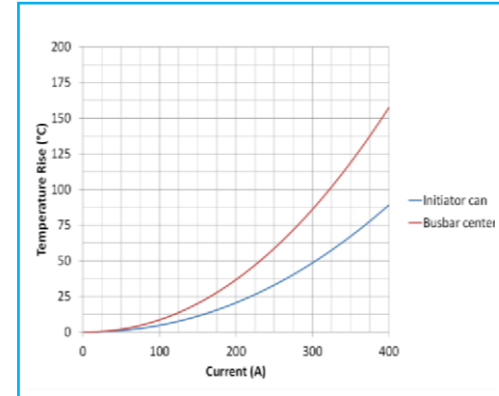
### Switching capacity ind. load (60µH)



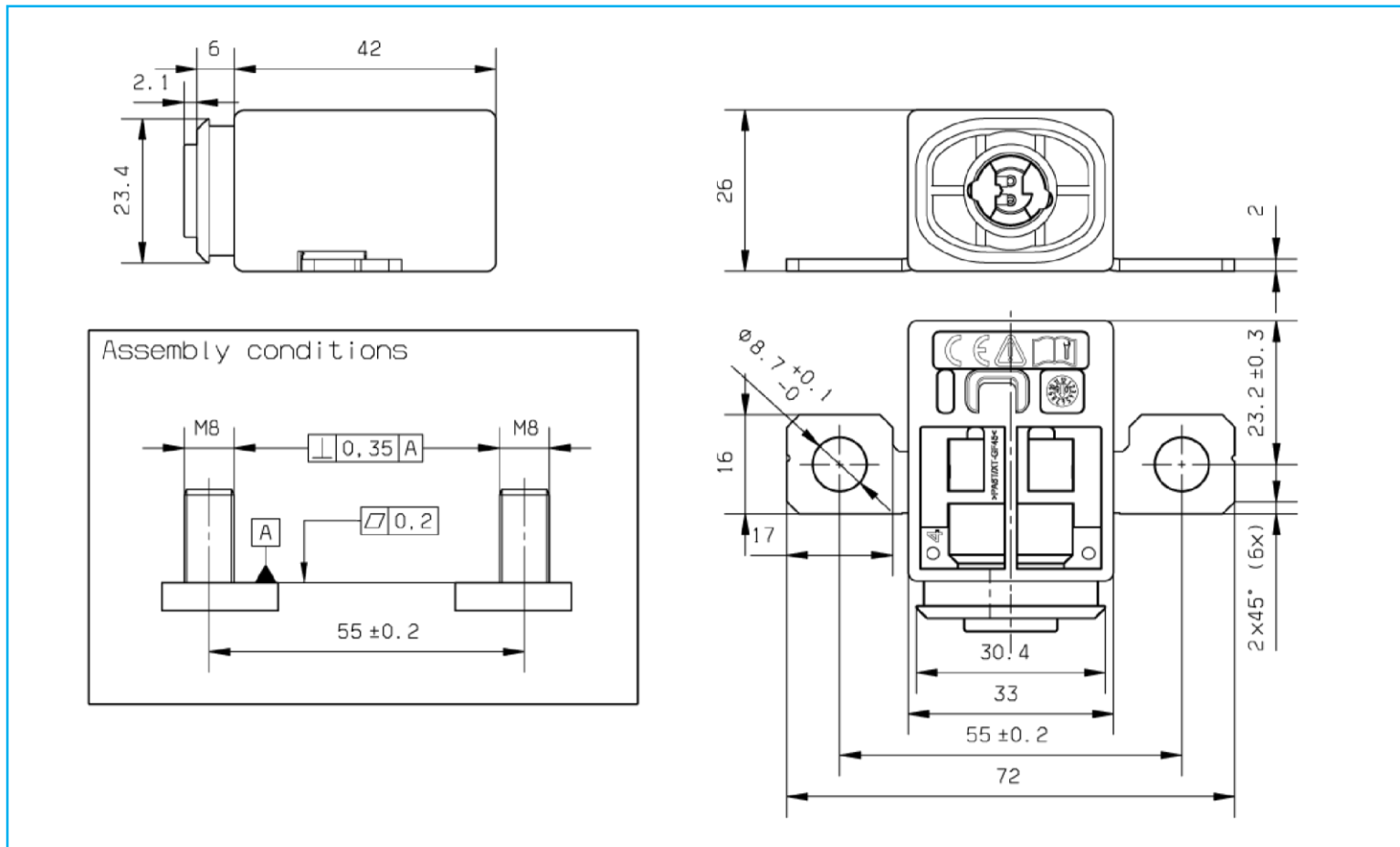
### Derating curve



### Temperature rise curve



## Dimensions



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