# Battery Disconnection Switch – PSS-3

## Pyro-switch – Automotive Switch – High Current Device

Autoliv

- **Maximum continuous current 300A at 85° C**
- **Second circuit power off simultaneously**
- **Non-reversible device**
- **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 used to separate the "starter-generator-cable" from the electrical system (battery).
A second circuit is disconnected simultaneously.

## Typical applications:

Battery disconnection to prevent fires caused by short circuits during/after an accident. Second circuit can be used as cut-off information

## Switching capacity

| | |
|---|---|
| Ohmic load | 2 000 A / 200 V |
| Inductive load (60µH) | 2 000 A / 150 V |
| Capacitive load | > 200 V, contact us |

## Current carrying capacity

| | |
|---|---|
| 85°C, load cable 50 mm² | 300 A |
| 105°C, load cable 50 mm² | 250 A |
| 125°C, load cable 50 mm² | 200 A |
| Maximum short-time current | |
| 23°C, load cable 50 mm² | 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 mm² |

## Second circuit

| | |
|---|---|
| Contact raw-material (base) | Cu-Alloy |
| Contact plating material (lead-free) | Ag/Ni |
| wire cross section | 0.2 mm² |

## Initiator Data (1/2)

| | |
|---|---|
| Qualified acc. to | AK-LV 16 & USCAR |
| Initiator resistance | ≥1,7 Ω and ≤ 2,5 Ω |
| Triggering pulse slope | 10 µs / A |

## Initiator Data (2/2)

| | |
|---|---|
| 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 |

## Operation time

| | |
|---|---|
| Release time | < 3 ms |

## Resistance & Insulation data

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

## Temperature

| | |
|---|---|
| Operating temperature | -40°C… + 105° C |
| Environmental temperature | -40°C… + 105° C |
| Storage temperature | -40°C… + 65° C |
| Self-ignition | ≥ 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 second circuit | NanoMQS |
| on initiator | AK-1 |
| Weight | 65 g |
| Packaging unit | |
| Cardboard box | 98 pcs. |

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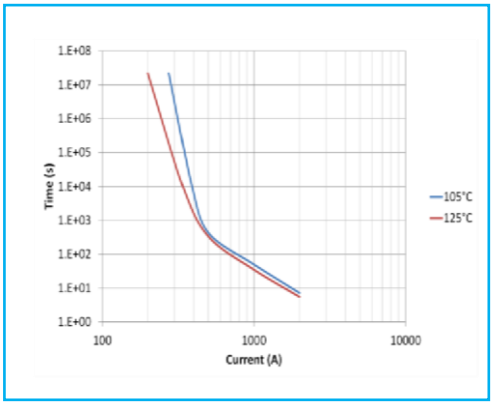
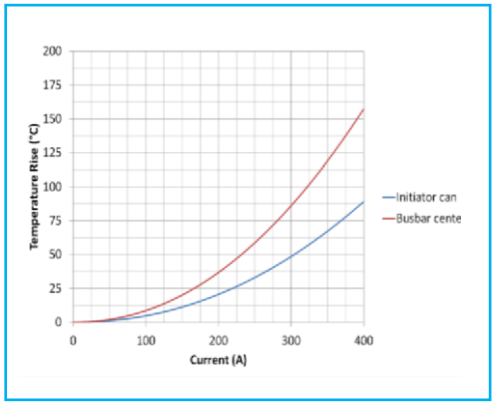
### Derating curve




### Temperature rise curve




### Dimensions