



# INTRODUCTION FLYER

## Mini K HV - Compact Precharge Relay

The Mini K HV supports the connection and disconnection of the traction battery in switching assemblies for hybrid and battery electric vehicles. As a compact precharge relay, the Mini K HV takes over the charging of the filter capacitors over a precharge resistor directly before the operation of the main relay, protecting the main relay's contacts from extreme inrush currents.

With significantly reduced dimensions of 25.5x20.7x19.3mm for the PCB version, the Mini K HV represents a major innovation compared to current precharge relay solutions. A specially optimized design of the switching contacts enables this miniature relay to switch loads of up to 20A at a system voltage of up to 450V. Even under fault conditions, it is able to reliably disconnect the precharge circuit from the traction battery. In addition to the standard version with printed circuit board terminals, it is also available as a plug-in relay with quick-connect terminals.



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<http://www.te.com/en/product-launch/mini-khv.html>

## Mini K HV - Plug-in and PCB



### KEY FEATURES

- Compact high voltage relay for precharge applications up to 450V
- Precharge currents up to 20A
- Limiting break currents up to 20A
- Available with PCB and plug-in terminals
- Reduced dimensions in mm: for PCB version 25.5x20.7x19.3, 29.9x29.95x36.6 for plug-in version

### MORE INFORMATION

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<http://www.te.com/en/product-launch/mini-khv.html>

#### Data Sheet Link

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### APPLICATIONS

- DC high voltage precharge applications in
  - Hybrid
  - Full battery electric vehicles
  - Fuel cell cars

### CONTACT DATA

- Contact arrangement: 1 form X (NO-DM)
- Rated voltage: 400VDC
- Limiting continuous current: max. continuous current is limited and depends on operating conditions<sup>1)</sup>
- Limiting making current: 20A (make, >10<sup>5</sup>ops.)
- Limiting breaking current: 20A (break, >10ops.)<sup>2)</sup>
- Operate/release time max. (typ.): 2.5/1ms

1) Consult TE Relay Products for details. 2) Min. 10 fault break operations.

### COIL DATA

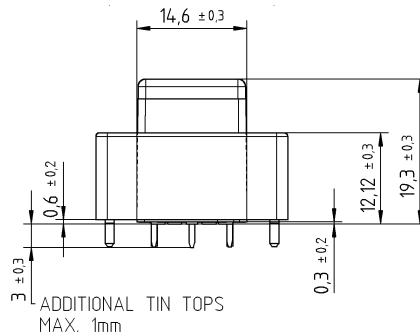
- Rated coil voltage/power: 12VDC<sup>1)</sup>
- Rated coil power: 2.9W<sup>1)</sup>

### OTHER DATA

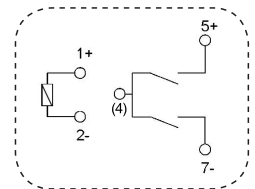
- Ambient temperature: -40 to +85°C
- Category of environmental protection: sealed
- Terminal type: plug-in, quick connect, PCB
- Dimensions LxWxH: 25.5x20.7x19.3mm (PCB version), 29.9x29.9x36.6mm (plug-in version without terminals)

### DIMENSIONS AND TERMINAL ASSIGNMENT

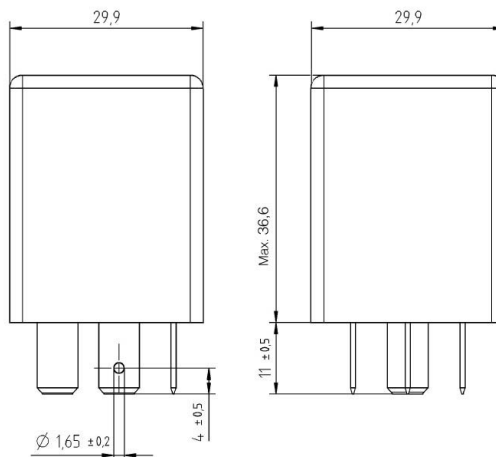
#### Dimensions PCB version



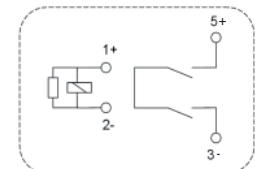
#### Terminal Assignment 1 form X (NO DM)



#### Dimensions plug-in version



#### Terminal Assignment 1 form X (NO DM) with resistor



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