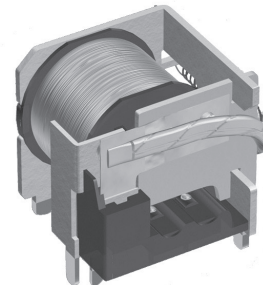


## Power Relay K-S

- Very low voltage drop
- Wide voltage range

### Typical applications

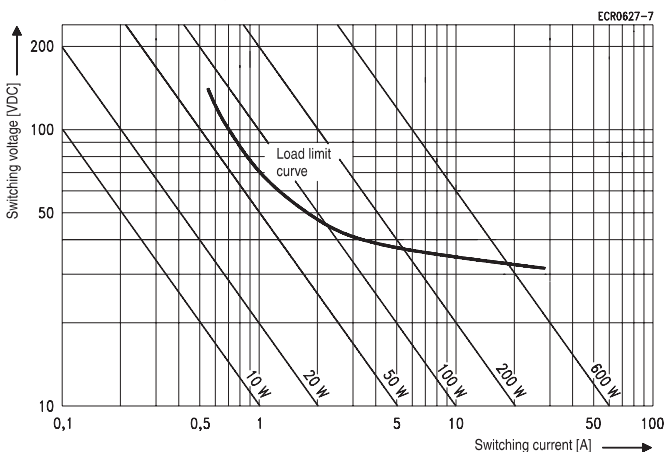
ABS control, blower fans, cooling fan, engine control, glow plug, heated rear screen, ignition, main switch/supply relay, preheating system, valves, wiper control.



C071S\_fcw1b

| Contact Data                           | 12VDC                    | 24VDC                   |
|----------------------------------------|--------------------------|-------------------------|
| Contact arrangement                    | 1 form A, 1 NO           |                         |
| Rated voltage                          | 12VDC                    | 24VDC                   |
| Rated current                          | 70A                      |                         |
| Limiting continuous current            |                          |                         |
| 23°C                                   | 70A                      |                         |
| 85°C                                   | 50A                      |                         |
| Limiting making current                | 300A <sup>1)2)</sup>     | 150A <sup>1)2)</sup>    |
| Limiting breaking current              | 70A <sup>1)</sup>        | 35A <sup>1)</sup>       |
| Contact material                       | AgNi0.15                 |                         |
| Min. recommended contact load          | 1A at 5VDC <sup>3)</sup> |                         |
| Initial voltage drop at 10A, typ./max. | 10/300mV                 |                         |
| Frequency of operation                 | 20 ops./s <sup>4)</sup>  |                         |
| Operate/release time max.              | typ. 4/3ms <sup>5)</sup> |                         |
| Electrical endurance                   |                          |                         |
| resistive load,                        | >5x10 <sup>4</sup> ops.  | >1x10 <sup>5</sup> ops. |
|                                        | at 13.5VDC, 50A          | at 27.5VDC, 15A         |
| Mechanical endurance                   | >10 <sup>6</sup> ops.    |                         |

### Max. DC load breaking capacity



Max. DC load breaking curve: safe shutdown, no stationary arc.  
Load limit curves measured with low inductive resistors verified for 1000 switching events.

- 1) The values apply to a resistive or inductive load with suitable spark suppression and at maximum 13.5VDC for 12VDC or 27VDC for 24VDC load voltages.
- 2) For a load current duration of maximum 3s for a make/break ratio of 1:10.
- 3) See chapter Diagnostics of Relays in our Application Notes or consult the internet at <http://relays.te.com/appnotes/>
- 4) With load the values depend on PCB layer design and max. environmental temperature.
- 5) For unsuppressed relay coil. A low resistive suppression device in parallel to the relay coil increases the release time and reduces the lifetime caused by increased erosion and/or higher risk of contact tack welding (monostable version only).

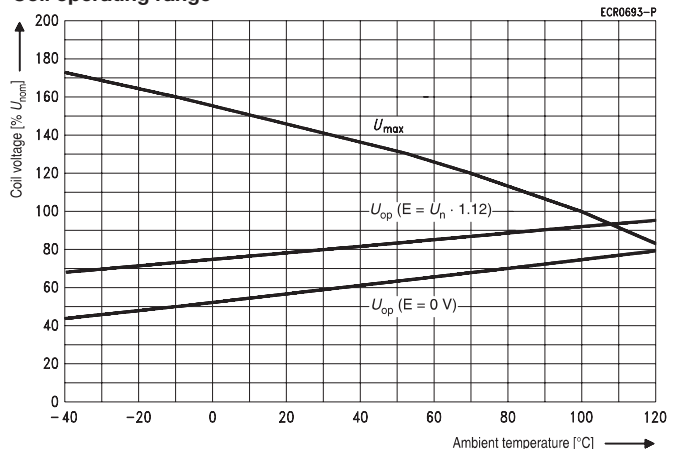
| Coil Data                                       | 12VDC, 24VDC <sup>6)</sup> |
|-------------------------------------------------|----------------------------|
| Rated coil voltage                              | 12VDC, 24VDC <sup>6)</sup> |
| 6) Other nominal voltages available on request. |                            |

### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power W |
|-----------|-------------------|---------------------|---------------------|-----------------------------------|--------------------|
| 009       | 12                | 6.9                 | 1.2                 | 64                                | 2.3                |
| 010       | 24                | 14.1                | 2.4                 | 234                               | 2.5                |

All figures are given for coil without pre-energization, at ambient temperature +23°C.

### Coil operating range



Does not take into account the temperature rise due to the contact current  
E = pre-energization.

### Insulation Data

|                             |           |
|-----------------------------|-----------|
| Initial dielectric strength | 500VACrms |
| between contact and coil    |           |

## Power Relay K-S (Continued)

### Other Data

|                                                                                                                                   |                                   |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| EU RoHS/ELV compliance                                                                                                            | compliant                         |
| Ambient temperature                                                                                                               | -40 to +85°C <sup>6)</sup>        |
| Category of environmental protection,<br>IEC 61810                                                                                | RT II – fluxproof                 |
| Vibration resistance (functional)<br>IEC 68-2-6 (sine pulse form), 10 to 200Hz<br>no change in the switching state >10µs          | 20 to 40g                         |
| Shock resistance (functional)<br>IEC 68-2-27 (half sine form single pulses), 8ms<br>open form A (NO) contact will not close >10µs | 30g                               |
| Terminal type                                                                                                                     | PCB                               |
| Weight                                                                                                                            | approx. 19g (0.68oz)              |
| Resistance to soldering heat THT<br>IEC 60068-2-20, Tb, method 1A,                                                                | 10s+/-1s<br>with shielding        |
| Storage conditions                                                                                                                | according IEC 60068 <sup>7)</sup> |
| Packaging unit                                                                                                                    | 400 pcs.                          |

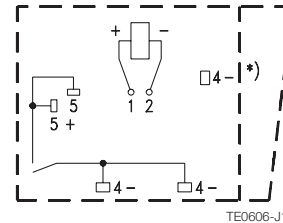
6) See graph: coil operating range.

7) For general storage and processing recommendations please refer to our Application Notes and especially to Storage in the Definitions or at <http://relays.te.com/appnotes/>

### Terminal Assignment

Bottom view on solder pins

1 form A, 1 NO

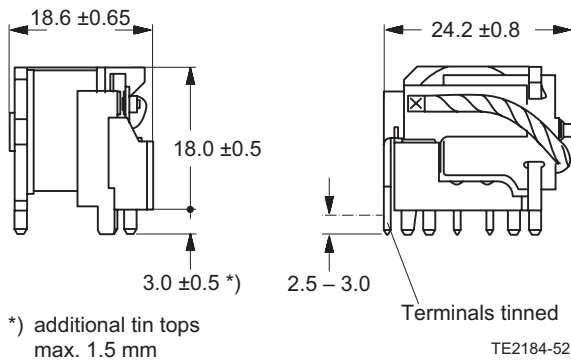


Note:

Check polarity and frame connection (ground)

\* For mounting only, not for electrical connection.

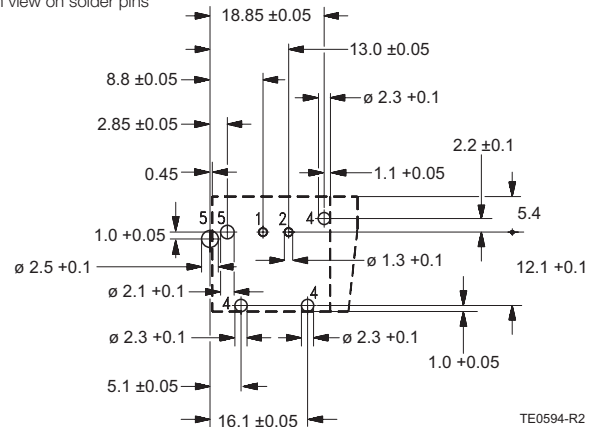
### Dimensions



\*) additional tin tops  
max. 1.5 mm

### PCB Layout

Bottom view on solder pins



### Product code structure

Typical product code

**V23071 -A 1 009 -A 13 2**

#### Type

**V23071** Power Relay K-S

#### Terminal and enclosure

**A** PCB, open (RT II)

#### Design

**1** Single relay

#### Coil

**009** 12VDC **010** 24VDC

#### Contact type

**A** Single contact

#### Contact material

**13** AgNi0.15

#### Contact arrangement

**2** 1 form A, 1 NO

| Product code      | Terminal/Encl. | Design       | Coil   | Contact type   | Cont. material | Arrangement    | Part number |
|-------------------|----------------|--------------|--------|----------------|----------------|----------------|-------------|
| V23071-A1009-A132 | PCB, open      | Single relay | 12 VDC | Single contact | AgNi0.15       | 1 form A, 1 NO | 1393276-3   |
| V23071-A1010-A132 |                |              | 24 VDC |                |                |                | 1393276-7   |