

# Product data sheet

Specifications



control relay, TeSys K, 4P(3NO +1NC), 690V, 110V DC standard coil

CA3KN31FD

## Main

|                                |  |
|--------------------------------|--|
| Range                          | TeSys                                    |
| Product name                   | TeSys CAK                                |
| Product or component type      | Control relay                            |
| Device short name              | CA3K                                     |
| Contact application            | Control circuit                          |
| Utilisation category           | DC-13<br>AC-15                           |
| Pole contact composition       | 3 NO + 1 NC                              |
| [Ue] rated operational voltage | $\leq 690 \text{ V} \leq 400 \text{ Hz}$ |
| Control circuit type           | DC standard                              |
| [Uc] control circuit voltage   | 110 V DC                                 |

## Complementary

|   |  |
|---|--|
| [Ith] conventional free air thermal current | 10 A (at 50 °C)  |
| Irms rated making capacity                  | 110 A conforming to IEC 60947  |
| Associated fuse rating                      | 10 A gG conforming to IEC 60947<br>10 A gG conforming to VDE 0660  |
| [Ui] rated insulation voltage               | 690 V conforming to IEC 60947<br>750 V conforming to VDE 0110 group C<br>690 V conforming to BS 5424<br>600 V conforming to CSA C22.2 No 14  |
| Mounting support                            | Plate<br>Rail  |
| Connections - terminals                     | Screw clamp terminals 1 cable(s) 1.5...4 mm <sup>2</sup> solid<br>Screw clamp terminals 2 cable(s) 1.5...4 mm <sup>2</sup> solid<br>Screw clamp terminals 1 cable(s) 0.75...4 mm <sup>2</sup> flexible with cable end<br>Screw clamp terminals 2 cable(s) 0.75...4 mm <sup>2</sup> flexible without cable end<br>Screw clamp terminals 1 cable(s) 0.34...1.5 mm <sup>2</sup> flexible with cable end<br>Screw clamp terminals 2 cable(s) 0.34...1.5 mm <sup>2</sup> flexible without cable end |
| Tightening torque                           | 1.3 N.m - on screw clamp terminals - with screwdriver flat Ø 6 mm<br>1.3 N.m - on screw clamp terminals - with screwdriver Philips No 26 mm<br>1.3 N.m - on screw clamp terminals - with screwdriver pozidriv No 2   |
| Control circuit voltage limits              | Operational: 0.8...1.15 U <sub>c</sub> (at <50 °C)<br>Drop-out: 0.1...0.75 U <sub>c</sub> (at <50 °C)  |
| Operating time                              | 10 ms coil de-energisation and NO opening<br>30...40 ms coil energisation and NO closing<br>15 ms coil de-energisation and NC closing<br>25...35 ms coil energisation and NC opening   |

|                                       |                |
|---------------------------------------|----------------|
| <b>Mechanical durability</b>          | 20 Mcycles     |
| <b>Maximum operating rate</b>         | 10000 cyc/h    |
| <b>Immunity to microbreaks</b>        | 2 ms           |
| <b>Inrush power in W</b>              | 3 W (at 20 °C) |
| <b>Hold-in power consumption in W</b> | 3 W at 20 °C   |
| <b>Heat dissipation</b>               | 3 W            |
| <b>Minimum switching voltage</b>      | 17 V           |
| <b>Minimum switching current</b>      | 5 mA           |
| <b>Non overlap distance</b>           | 0.5 mm         |
| <b>Insulation resistance</b>          | > 10 MOhm      |
| <b>Height</b>                         | 58 mm          |
| <b>Width</b>                          | 45 mm          |
| <b>Depth</b>                          | 57 mm          |
| <b>Net weight</b>                     | 0.225 kg       |

## Environment

|  |  |
|--|--|
| <b>Standards</b>                             | BS 5424<br>IEC 60947<br>NF C 63-140<br>VDE 0660  |
| <b>Product certifications</b>                | UL<br>CSA<br>UKCA  |
| <b>IP degree of protection</b>               | IP2X   |
| <b>Protective treatment</b>                  | TC conforming to IEC 60068   |
| <b>Ambient air temperature for operation</b> | -25...50 °C  |
| <b>Ambient air temperature for storage</b>   | -50...80 °C  |
| <b>Operating altitude</b>                    | 2000 m without derating  |
| <b>Flame retardance</b>                      | V1 conforming to UL 94<br>Requirement 2 conforming to NF F 16-101<br>Requirement 2 conforming to NF F 16-102   |
| <b>Mechanical robustness</b>                 | Vibrations contactor open: 2 Gn, 5...300 Hz conforming to IEC 60068-2-6<br>Vibrations contactor closed: 4 Gn, 5...300 Hz conforming to IEC 60068-2-6<br>Shocks contactor open: 10 Gn for 11 ms conforming to IEC 60068-2-27<br>Shocks contactor closed: 15 Gn for 11 ms conforming to IEC 60068-2-27 |

## Packing Units

|                                     |         |
|-------------------------------------|---------|
| <b>Unit Type of Package 1</b>       | PCE     |
| <b>Number of Units in Package 1</b> | 1       |
| <b>Package 1 Height</b>             | 4.8 cm  |
| <b>Package 1 Width</b>              | 6.2 cm  |
| <b>Package 1 Length</b>             | 6.5 cm  |
| <b>Package 1 Weight</b>             | 217.0 g |
| <b>Unit Type of Package 2</b>       | BB1     |
| <b>Number of Units in Package 2</b> | 10      |
| <b>Package 2 Height</b>             | 6.2 cm  |
| <b>Package 2 Width</b>              | 13.2 cm |

|                              |          |
|------------------------------|----------|
| Package 2 Length             | 24.5 cm  |
| Package 2 Weight             | 2.2 kg   |
| Unit Type of Package 3       | S02      |
| Number of Units in Package 3 | 40       |
| Package 3 Height             | 15.0 cm  |
| Package 3 Width              | 30.0 cm  |
| Package 3 Length             | 40.0 cm  |
| Package 3 Weight             | 9.098 kg |

## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>  |
| Toxic heavy metal free     | Yes   |
| Mercury free               | Yes   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Pro-active China RoHS declaration (out of China RoHS legal scope)   |
| RoHS exemption information | Yes   |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins   |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |

## Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

## Recommended replacement(s)