32 17x2xBxx Product Specification

**UNIVERSAL COLLECTION**

Single-phase overexcitation rectifiers for universal use

These rectifiers with time controlled bridge/half-wave changeover are ideal for installation in the connection boxes of brake motors, brakes and solenoids with high dynamic requirements. Accessories include flying leads and mounting hardware so that installation on DIN rails is also possible. Encapsulated versions for an extended operating temperature range are available as options. In case of additional DC side fast disconnection, the induction voltage induced by inductive loads is internally limited.

### Technical specifications

#### Principle of operation

<table>
<thead>
<tr>
<th>Rectifier with time-controlled bridge-/ half-wave change-over</th>
</tr>
</thead>
<tbody>
<tr>
<td>fast switching</td>
</tr>
<tr>
<td>Offswitching DC over external protective contact</td>
</tr>
</tbody>
</table>

#### Installation

| Screws, accessories |

#### Rectification

| Time-controlled bridge-/ half-wave change-over |

#### Type | Rated input voltage $U_1$ / VAC (±10%) | Overexcitation time $T_{UE}$ / s (±15%) | Max. output current overexcitation / holding period $I_{ADC}$ / s (±15%) | Min. recovery time $T_{rp}$ / s | Output voltage $U_2$ / VDC (±8%) | Design temperature range $\theta_1$ / °C | DC side switching / disconnection voltage $Y/N$ / $U_{0\text{max}.}$ / V |
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>17320B00</td>
<td>220 ... 500</td>
<td>0.25</td>
<td>2.0 / 1.0</td>
<td>0.15</td>
<td>0.890 / 0.445</td>
<td>standard, non-encapsulated -25 ... 85</td>
<td>yes / 350</td>
</tr>
<tr>
<td>17320B03</td>
<td>110 ... 240</td>
<td>0.25</td>
<td>3.0 / 1.5</td>
<td>0.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17320B13</td>
<td>110 ... 240</td>
<td>0.50</td>
<td>3.0 / 1.5</td>
<td>0.15</td>
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<td></td>
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<tr>
<td>17320B23</td>
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<td>1.10</td>
<td>3.0 / 1.5</td>
<td>0.30</td>
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<tr>
<td>17221B00</td>
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<td>2.0 / 1.0</td>
<td>0.15</td>
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<tr>
<td>17221B03</td>
<td>110 ... 240</td>
<td>0.25</td>
<td>3.0 / 1.5</td>
<td>0.15</td>
<td></td>
<td></td>
<td>no / 2</td>
</tr>
</tbody>
</table>

**CE**

EMC Directive 2014/30/EU:
Compliance with the following standards is confirmed:
EN 55081-2 (Emission):
EN 55011 (VDE 0875, part 11, 2011)
Group 1, Class A conducted interference
Group 1, Class B radiated interference
EN 61000-6-2 (Immunity):
EN 61000-4-3 (2011) severity level 4
EN 61000-4-4 (2013) severity level 3
EN 61000-4-5 (2015) severity level 3

Low Voltage Directive 2014/35/EU:
Compliance with the following standards is confirmed:
HD 625.1 S1.2009 (VDE 0110) insulation coordination
EN 60529 (2014) IP 54
external mounting

Maximum no. of switching operations and duty cycle

With resistive/inductive load for specific power
Reference: KENDRION series 76 431..H.. at ambient temperature: $\theta_1 \leq 40^\circ$C

Machinery Directive 2006/42/EC:
These products are considered components in the sense of Machinery Directive 2006/42/EC and must not be put into service until the machinery in which they are incorporated has been declared in conformity with the provisions of the EC Directives

ROHS
We hereby declare that the above-mentioned products comply with the requirements of the RoHS Directive 2011/65/EU on the restriction of the usage of certain hazardous substances in electrical and electronic equipment, assigned to equipment category 11.

Protection:
IP 00 to EN60529

Subject to change without notice.
Please observe ordering data.
Connection and operation

Overexcitation rectifiers with possible DC side switching are ideal for use with electromagnetic brakes of electric motors or with other electromagnetic components with high dynamic performance. They also enable the reduction of losses during holding periods.

The technical specifications depend on the connected loads and on their electric and mechanical properties. When electromagnetic brakes are operated in parallel with the motor without DC side switching, brake engagement may be significantly delayed after disconnection due to the generator function of the motor.

The mechanical time constants during brake release or engagement and during switching of the electromagnetic component must be taken into consideration.

The maximum switching frequency of the rectifier merely defines a limit value for the dissipated power that can be absorbed by the rectifier, taking account of the overexcitation time and its tolerance, the minimum holding time and minimum recovery time.

In case of DC side switching, AC side switching is also required. Otherwise no overexcitation will occur when the system is restarted.

DC side switching must take place at holding current since repeated disconnection during overexcitation may cause thermal overloading of the rectifier.

Attention!

Rectifier operation must take place in such a way that the connected load is not overloaded and that any use of the load other than its intended use is avoided.

As a rule, the mean power must not exceed the rated power of the connected load at the rated duty cycle. The mean current load of the rectifier must not exceed the specified rated holding current at the specified ambient temperature. Check that the rectifier pinout is correct. Incorrect connection would cause irreversible damage to the rectifier.

The rectifiers are not short-circuit proof. Output short-circuit to ground will destroy the rectifier. All work must only be carried out by suitably qualified personnel. Make sure that no voltage is applied during connection. The specifications on the rating plate and the information provided in the circuit diagram or in the datasheet must be strictly observed.

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