32 673x4B00 Product Specification

32 67304B00

UNIVERSAL COLLECTION

Hybrid half-wave/bridge rectifiers with internal DC side turn-off through voltage detection

These hybrid rectifiers deliver bridge or half-wave rectified voltage, depending on circuitry. They are ideal for installation in the connection boxes of brake motors, brakes and solenoids. The internal DC side turn-off ensures simple, straight forward rectifier connection. 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. Thanks to the integral fast turn-off, the induction voltage generated by inductive loads is limited within the rectifier.

Technical specifications

Type	Rectifi-cation	Rated input voltage (40 – 60 Hz) U_1 / VAC (±10%)	Max. output current bridge / half-wave rectification I / ADC	Output voltage bridge / half-wave rectification U_2 / VDC BD2 / BD2 2+ / 1+	Version, temperature range ϑ_{13} / °C	Turn-off voltage / OFF voltage OFF delay $U_{offmax.}$/ VAC $U_{0max.}$ / V T_{off} / ms	Installation	Connections
32 67304B00	bridge / half-wave	220 ... 500	1.0 / 1.0	$U_2 = 0.890 / 0.445 \cdot U_1$	non-encapsulated, standard range -25 ... 85	190 / 350 / 30	screws, accessories	6 terminals, max. 2.5 mm²
32 67334B00		220 ... 500	1.0 / 1.0		encapsulated, extended range -30 ... 100	190 / 350 / 30	screws, accessories	6 terminals, max. 2.5 mm²

CE

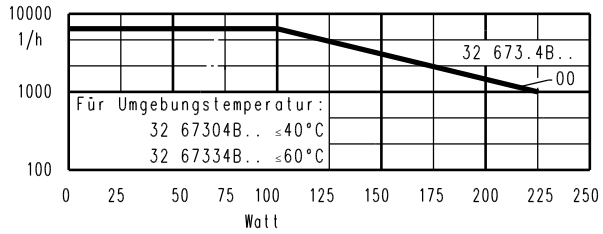
EMC Directive 2004/108/EEC:
Compliance with the following standards is confirmed:
EN 50081-2 (Emission):
EN 55011 (VDE 0875, part 11, 1992)
Group 1, Class A conducted interference
Group 1, Class B radiated interference
EN 61000-6-2 (Immunity):
EN 61000-4-3 (1997) severity level 3
EN 61000-4-4 (1996) severity level 3
EN 61000-4-5 (1996) severity level 3

Low Voltage Directive 2006/95/EEC:
Compliance with the following standards is confirmed:
HD 625.1S1 (1996), (VDE 0110) insulation coordination, EN 60529 (1991) IP 54 external mounting
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.

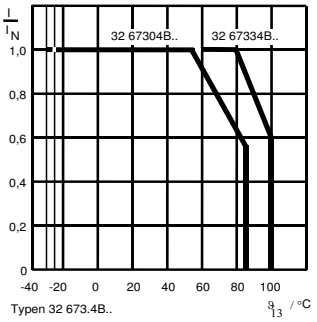
ROHS

The specified products comply with Directive 2002/95/EC (ROHS).

Max. no. of switching operations and duty cycle
with resistive/inductive load for specific power
Reference: KENDRION series 76 431..H.. at specified max. ambient temperature



Max. current load



Protection
IP 00 to EN 60529

Subject to change without notice

Please observe ordering data!

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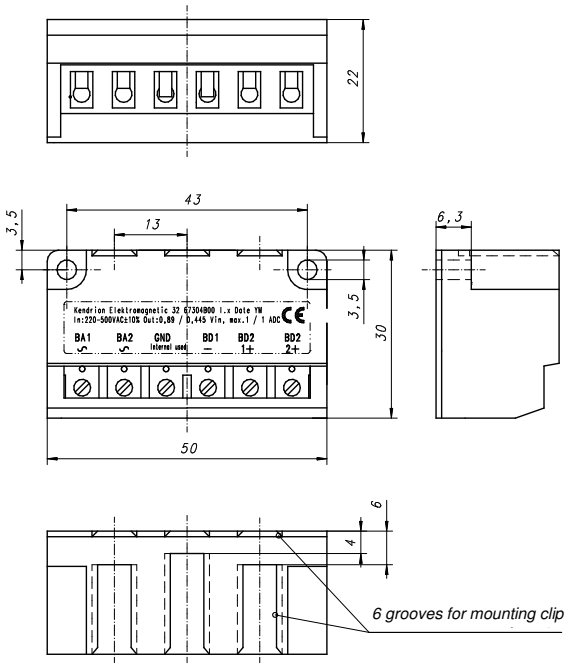
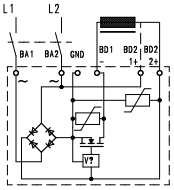
Dimensions (mm)
All types



Connection and block diagrams
All types



Accessories

Mounting rail clip:
32 07322A00103
Set of clips for 35 mm mounting rails to EN 50022. 1 set per rectifier

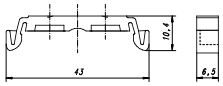
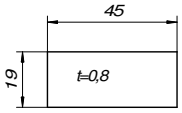
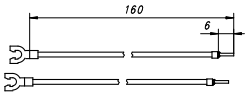


Figure similar to design

Adhesive pad:
32 07322A00104
Double-sided adhesive pad for installation on smooth surfaces
Dimensions 45x20x1mm³
1 pad per rectifier



Flying leads:
32 17221A03004
Set of 2 flying leads with self-retaining fork cable lug M4, preferably for rectifier connection to motor terminal board



Operation and connection

Hybrid rectifiers with internal DC side switching are ideal for use with electromagnetic brakes of electric motors or with other electromagnetic devices. The technical specifications depend on the connected loads and on their electric and mechanical properties. If the rectifiers are used on electromagnetic brakes which are operated in parallel with the motor, brake engagement may be significantly delayed in the presence of driving loads when the motor operates in generator mode after turn-off. If the rectifiers are operated at a voltage below the permitted minimum operating voltage, uncontrolled turn-off of the voltage sensor may cause malfunctions or even irreversible damage to power transmission components. The mechanical time constants during brake release or engagement and during switching of the electromagnetic device 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. The dissipated power results from fast de-energisation of the connected electromagnetic devices by the internal voltage limiting system.

Attention!
The rectifier must be operated as half-wave or bridge rectifier. Simultaneous operation of two loads connected to both outputs (half-wave and bridge output) is not allowed as this may cause overloading of internal components.
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. The rectifiers are not short-circuit proof. Output short-circuit to ground will destroy the rectifier.

Ordering example

Hybrid rectifier with internal fast turn-off voltage sensor

32 673 [.] 4B 0 [.]

0 = non-encapsulated standard version
3 = reinforced encapsulated version

0 = 220 – 500 VAC

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