



32 57303A00

Overexcitation rectifier with integrated motor current detection

Overexcitation rectifiers with integrated current sensor are designed to be fitted to motor, brake or magnet connector boxes. As switching operations are determined by the motor current, these rectifiers provide braking times that would otherwise only be possible with

additional DC side switching. Dynamic requirements in terms of quick motor stopping can be satisfied by using this type of brake rectifier without necessitating additional lines and external contacts for DC side brake switching. The special rectifier and current sensor combination provides electronic DC side

switching directly within the rectifier. Owing to the integrated overexcitation, these rectifiers also ensure rapid brake release times and thus minimal wear during motor start-up as well as reduced motor starting current and energy consumption of the brake.

Various mounting and connection features and accessories make these rectifiers suitable for equally varied applications as the 32 x7x2xA.. series. All series are equivalent in terms of their mechanical design and connection features and thus fully interchangeable.

Technical data

Rectifier principle			time-controlled change-over from bridge to half-wave rectification			
DC side switching			with integrated motor current detection			
Ambient temperature			(°C)	-25 ... 70	Derating: see diagram	
Motor current detection range <i>I_{motor-rated}</i>			(A AC)	0,6 ... 30		
Transient overload capacity of current detection			(f(I _{lim}))	- 7 * I _{lim}		
Disconnection delay			(ms)	20 ms	at 50 Hz, I _N = 0.6 A	
Disconnection voltage			(V)	ca. 700 V	at I = 1 ADC	
Maximum permitted energy absorption of switching voltage limitation			(J)	28	for 2 ms	
Type	Rated input voltage V ₁ (tol.: ±10%) (40 – 60 Hz) (VAC)	Output voltage V _{20E} / V _{2H} (f(V ₁))	Max. output current I _{OE} / I _H (ADC)	Overexcitation time t _{OE} (tol.: ±20%) (ms)	Housing L x H x W (mm)	Connections
32 571						
03A00	220 - 415	0,89 / 0,445 * V ₁	1,4 / 0,7	300	50 x 22 x 30	6 terminals 1.5 ² fine wire, 2.5 ² single wire

Permitted current load at ambient temperature



CE

These products meet the requirements of the **EMC Directive 89/336/EEC**. Compliance with the following standards is confirmed: EN 55011 (VDE 0875, part 11, 1992) Group 1, class A disturbance voltage Group 1, class B disturbance radiation

DIN EN 61000-4-3 (1997) test severity level 3, DIN EN 61000-4-4 (1996) test severity level 3, DIN EN 61000-4-5 (1996) test severity level 3 The products comply with the **Low Voltage Directive 73/23/EEC**. Compliance with the following standards is confirmed:

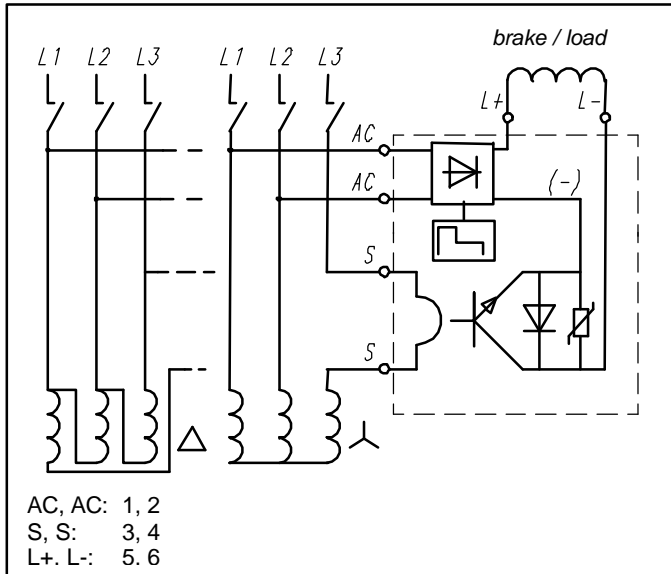
HD 625.1 S1 (1996) EN 60529 (1991) The products are considered components in the sense of the **Machinery Directive 98/37/EEC** and are not to be used until the machine in which they are to be incorporated is declared to conform to the requirements of the EEC Directives.

Protection: as per EN 60529: IP 65 when mounted

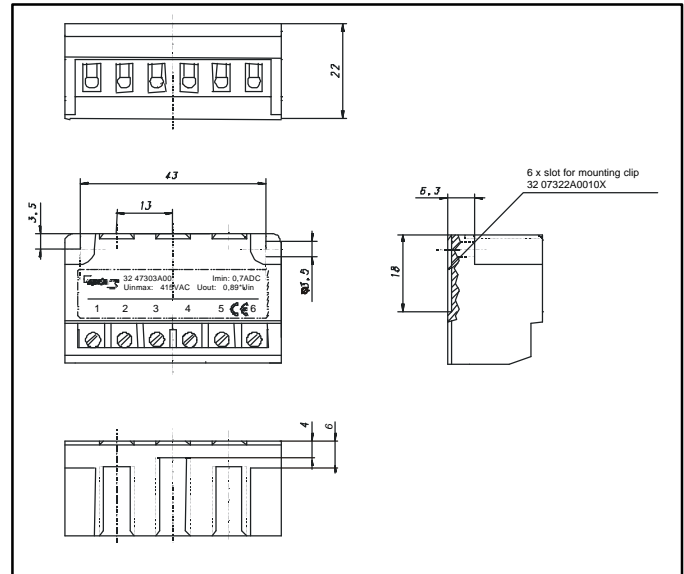
Specification subject to change without notice.

Please observe ordering data!

Connection example: operation with brake motors



Dimensions (mm)



Accessories

Using a dovetail keyway, the clips or straps are to be connected with the rectifier in such a way that a flexible installation is ensured.

Clip: 32 07322A00101
Mounting clip for bores with a diameter of 4.3 mm
1 or 2 clips per rectifier

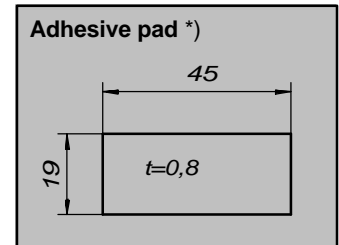
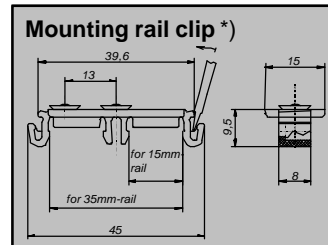
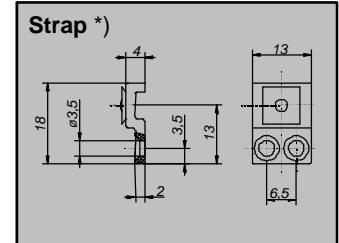
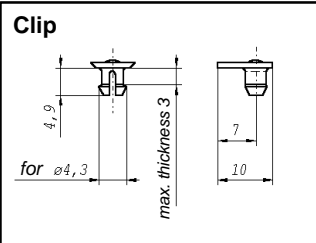
Strap *): 32 07322A00102
Mounting strap with a bore diameter of 4.2 mm for vertical or horizontal screwed mounting.
Alternative: installation in retention grooves.

(see dimensions)
1 or 2 straps per rectifier

Mounting rail clip *): 32 07322A00103
Mounting clip for 35 and 15 mm mounting rails in accordance with EN 50022 and EN 50045
1 or 2 clips per rectifier

Adhesive pad *): 32 07322A00104
Double-sided adhesive tape for mounting on smooth surfaces
1 pad per rectifier

*) upon request



Hints for connection and operation

Rectifiers with current detection have been specifically designed for quick braking of electric motors. The terminals marked "S" are connected in series with a motor winding.

Attention!

The brake is switched off if the current sensor has not been connected correctly or in case of an insufficient motor current flow or phase failure. In this case, it must be ensured that continuous motor operation is

inhibited when the brake is not released as this would cause damage to the brake, magnet or rectifier.
Any motor change-over during operation which would cause the current flowing through the "S" terminals to fall below the minimum switching current for over 10 ms is not allowed as this may cause the brake to engage. The "AC" inputs of the rectifier must be connected in such a way that the brake current cannot flow through the current

sensor terminals marked "S" as this would delay disconnection. The "S" terminals are potential-separated from the "AC" and "L..." terminals.

Attention!

Switching operations must take place in such a way that a dead time at least as long as the overexcitation time specified for the rectifier is observed between disconnection and reconnection. Moreover, the mean power of the load reached as a result of

the switching operations must not exceed its rated power in order to avoid any thermal overload.
Switch operation by switching only the current flow through the terminals "S" without switching the "AC" terminals is not allowed due to dynamic overload of the rectifier. Furthermore the overexcitation will not work in this case.

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Ordering example

Overexcitation rectifier with current detection

32 57303A

0 - t_{OE} = 300 ms

0 - 220 - 415 VAC, 1,4 / 0,7 ADC