32 57103A.. Product Specification

32 57103A00

Overexcitation rectifier with integrated motor current detection

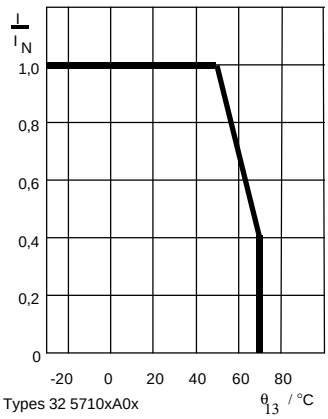
Overexcitation rectifiers with integrated current sensor are designed to be fitted to motor, brake or magnet connector boxes.
As switching operations are determined by the motor current, these rectifiers provide braking times that would otherwise only be possible with additional DC side switching. Dynamic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

The housings are designed for mounting to PG screw connectors or metric screw connectors by means of suitable adapters. These features allow the rectifiers to be used irrespective of the available space within the connector box.

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 $I_{motor-rated}$			(A AC)	0,6 … 30		
Transient overload capacity of current detection			($f(I_{Mn})$)	- 7 * I_{Mn}		
Disconnection delay			(ms)	20 ms	at 50 Hz, I_M = 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 **32 571**	Rated input voltage V_1 (tol.: ±10%) (40 – 60 Hz) (VAC)	Output voltage V_{2OE} / V_{2H} ($f(V_1)$)	Max. output current I_{OE} / I_H (ADC)	Overexcitation time t_{OE} (tol.: ±20%) (ms)	Mounting	Connections
03A00	220 - 415	0,89 / 0,445 * V_1	2,8 / 1,4	300	PG13,5	2 x S: 1.5 mm² blue, cable lug 4 mm 2 x AC: 0.75 mm² brown, cable lug 4 mm 2 x L: 0.75 mm² black, wire end ferrule

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 EC Directives.

Protection:
as per EN 60529: IP 65 when mounted

Specification subject to change without notice.

Please observe ordering data!

KES: 28052002

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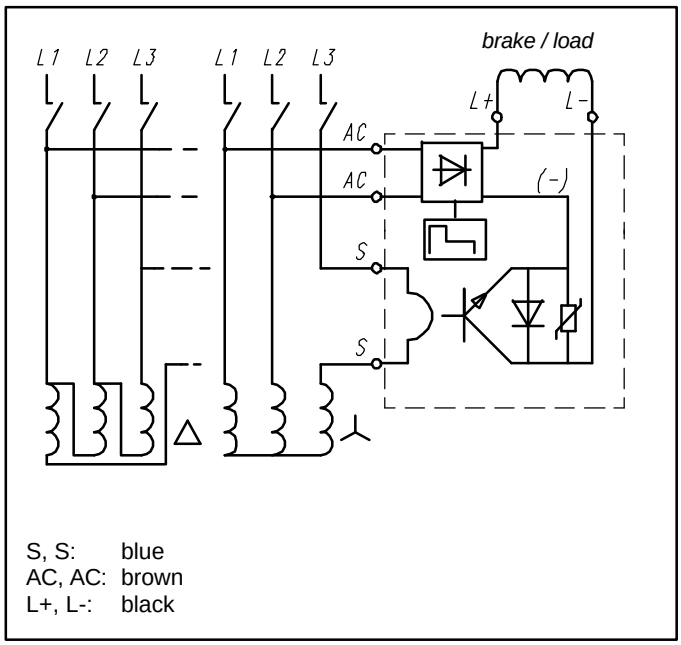
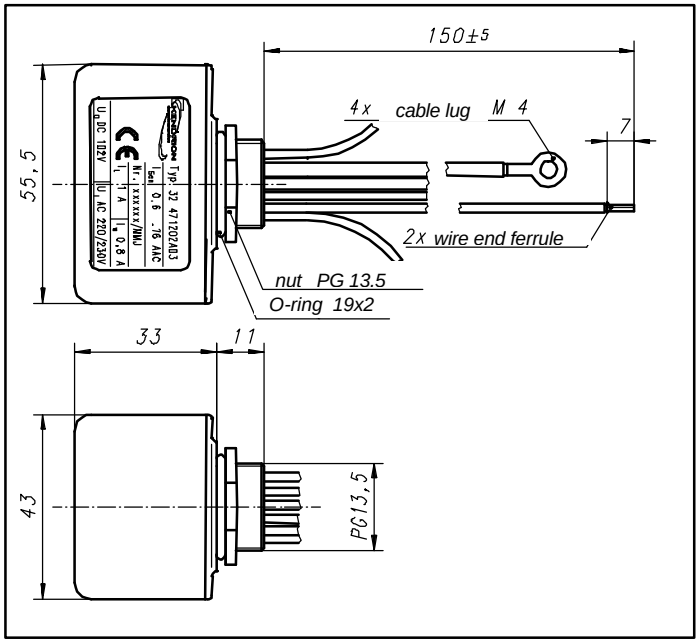
Connection example: operation with brake motors



S, S: blue
AC, AC: brown
L+, L-: black

Dimensions (mm)



Hints for connection and operation

Rectifiers with current detection have been specifically designed for quick starting and 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 **Rectifier with current detection**
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0 – t_{OE} = 300 ms

0 – 220 - 415 VAC, 2,8 / 1,4 ADC