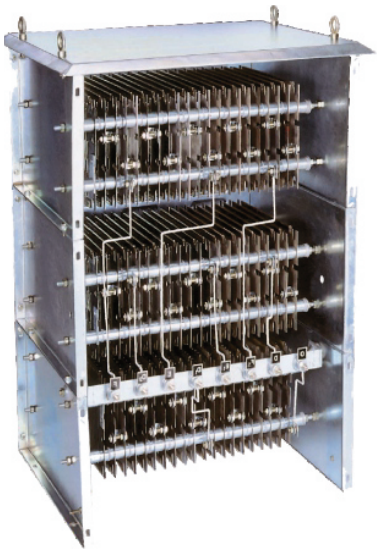
DEUS - SNT Resistance Box / DBR



Introduction

Braking Resistors are used in the d. c. Link of the frequency converter. A braking chopper activates the resistor. If the output frequency converter drops-be it by a control process, a drop in speed or a braking operation-below the current operating frequency of the motor, the motor takes on the function of a generator. The consequence is arise in the link voltage. If this voltage exceeds the specific value of the unit in question, chopper will activate the braking resistor. If the voltage drops to a value just above the grid voltage of the link, the chopper will interrupt the circuit. This process will be repeated until the motor speed once again matches the applied operating frequency. The braking resistor takes on the energy and converts it into heat.

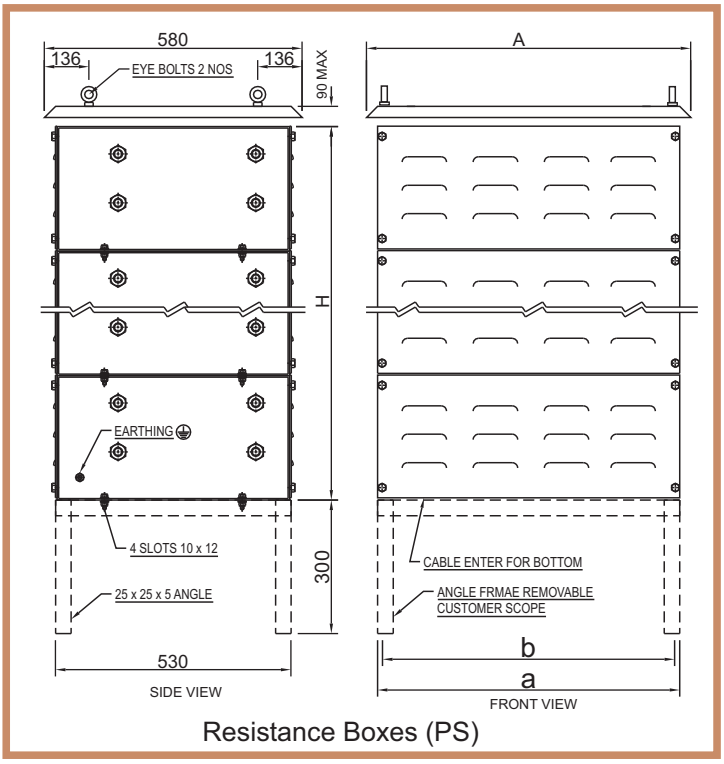
Braking resistor operating modes

Braking resistors are usually only activated for a short time, save the braking energy and give o ffthe short time, save the braking energy and give o ffthe stored heat to the environment during the breaks when they are inactive. This is intermittent operation with a cyclic duration factor (c.d.f) indicated in % of the duty cycle time. The duty cycle time tsp is calculated from the total of the braking time to plus resting time tr. The overload capacity of the resistor is dependent on the thermal time constant and thus on the design, among others.

The resistance value of the braking resistors

In general, the resistance value of a braking resistor is not critical, If may range between the lowest value of the admissible value for the braking chopper and a maximum value where the required braking performance is still achieved. Assuming a standard reserved of 25% which takes into account the manufacturing tolerance and the resistance change due to heating up as well as the lower mean value of the link voltage as compared with the chopper activating voltage, the maximum value for the braking resistor is calculated as:

GA DRAWING



Resistance Boxes (PS)

Dimension Details

Unit Size	A	a	b	Unit Size	A	a	b	H
A1	430	380	360	B1	580	530	510	280
A2	430	380	360	B2	580	530	510	560
C1	730	680	650	D1	880	830	805	280
C2	730	680	650	D2	880	830	805	560
C3	730	680	650	D3	880	830	805	840
C4	730	680	650	D4	880	830	805	1120
C5	730	680	650	D5	880	830	805	1400
C6	730	680	650	D6	880	830	805	1680