

High-Voltage Contactors

Kiepe HzS

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Introduction

Kiepe Elektrik took over the production of the HzS high-voltage contactors from the former AEG in 1993.

Since then, these contactors have been manufactured in accordance with the original AEG documents. This brochure reproduces the contents of the last AEG published leaflet (A 3411.5.2/0789-862).

Description

In modern passenger coaches, much of the equipment is operated with electric energy. Heating, ventilation, air-conditioning, lighting, door control, etc. are some of the components which consume electric energy.

Heating and air-conditioning have the highest power requirements. These are supplied with high voltage by the train line from the locomotive. This leads to the demand for high voltage switching devices for a large number of tasks.

Contactors of different switching frequencies are needed for the regulation of the heating circuits depending on the type of heating.

For convection and hot-water heating, contactors with small switching frequencies are sufficient, whereas contactors of higher switching frequencies are necessary for air heating and air-conditioning units.

Depending on how the vehicles are used, the installations are constructed as single or multi-voltage installations. Accordingly, the contactors are designed for the following kinds of UIC-stipulated electricity and nominal voltages:

AC 1~16 $\frac{2}{3}$ Hz	1000 V
AC 1~50 Hz	1500 V
DC	1500 V
DC	3000 V

The following designs are available:

For 1 Million Operations Type HzS 3000.100

The HzS 3000.100 contactor's design corresponds to the isolation group D in accordance with VDE 0110 for DC 3000 V. The HzS 3000.100 contactor consists of two contact systems positioned next to each other. These are driven via an axis by a shared magnet. The two contacts are connected in series.

For 10 Million Operations

Type HzS 1000.63 S
HzS 4000.16 S
HzS 4000.50 S

The contactor's designs of this series correspond to the insulation group D in accordance with VDE 0110 for AC 1500 V (HzS 1000.63 S) and DC 3000 V (HzS 4000.16 S and HzS 4000.50 S).

The contactors are operated by hinged armature solenoids. For the limitation of excess voltage when switching off, the solenoid is equipped with a voltage suppressor element. The contactor works flawlessly within the 0.75 to 1.25 times the rated control voltage range.

If the contactors are set up next to each other, partitions are to be planned between them.



HzS 1000.63

HzS 3000.100

Technical data				
Type	HzS 1000.63	HzS 4000.16	HzS 4000.50	HzS 3000.100
Switching Element				
Main contact (normally open contact)	1	1	1	1
Rated insulation voltage U_i (VDE 0110 / group D)	AC 1.5 kV	DC 3 kV	DC 3 kV	DC 3 kV
Rated thermal current I_{th}	80 A	40 A	80 A	125 A
Rated Breaking Capacities				
Resistive Load				
AC 16 2/3 Hz	1000 V	63 A	16 A	50 A
AC 50 Hz	1500 V	40 A	10.7 A	33.4 A
DC	1500 V	-	10.7 A	33.4 A
DC	3000 V	-	5.3 A	16.7 A
Switching category DC 4/5	750 V	-	10 A	25 A
Auxiliary Switch ¹⁾				
Rated thermal current I_{th}	10 A			
Rated breaking capacities ³⁾ DC 24 V (DC 110 V)	3 (0.5) A			
Solenoid Coil				
Rated control supply voltage U_s ²⁾	DC 24 / 110 V \pm 25%			
Coil suppression	VDR + Diode			
Solenoid coil power consumption	10 W	7 W	12 W	16 W
Other				
Mechanical life expectancy	10 x 10 ⁶	10 x 10 ⁶	10 x 10 ⁶	1 x 10 ⁶
Weight approx.	3.5 kg	3.4 kg	4.1 kg	7 kg

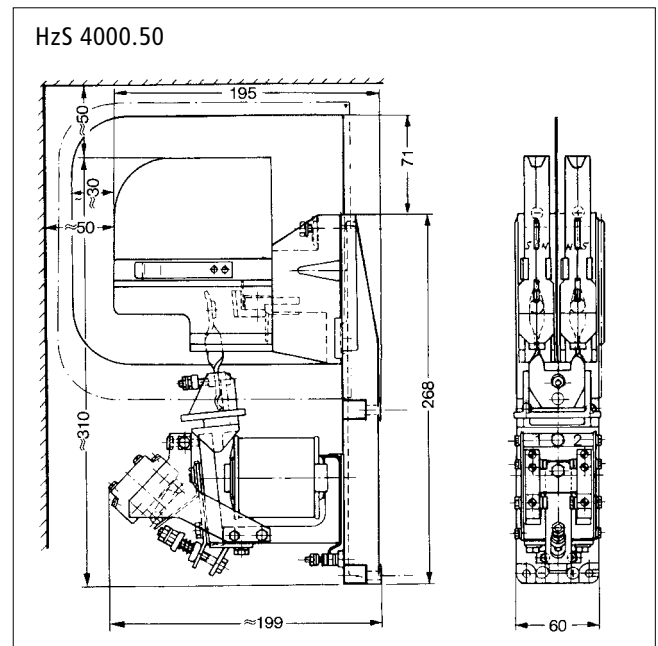
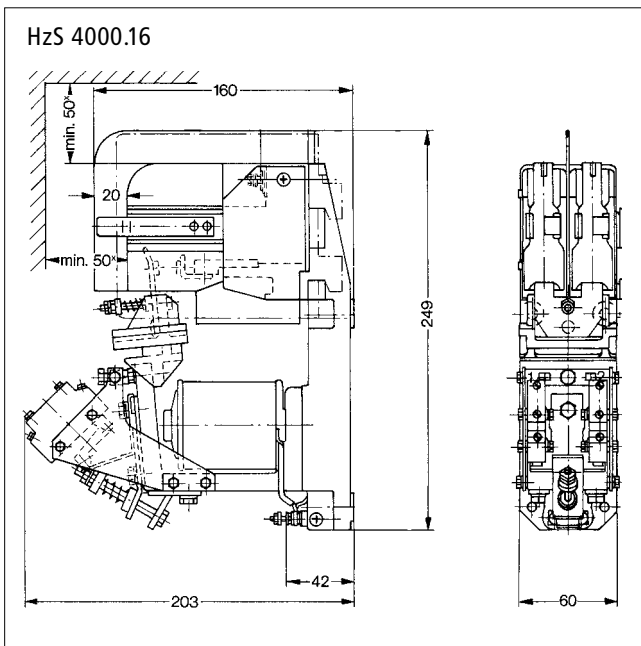
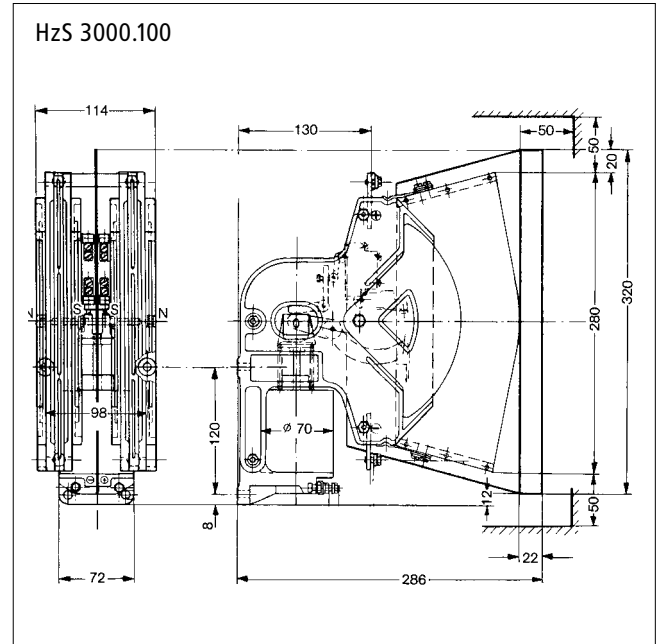
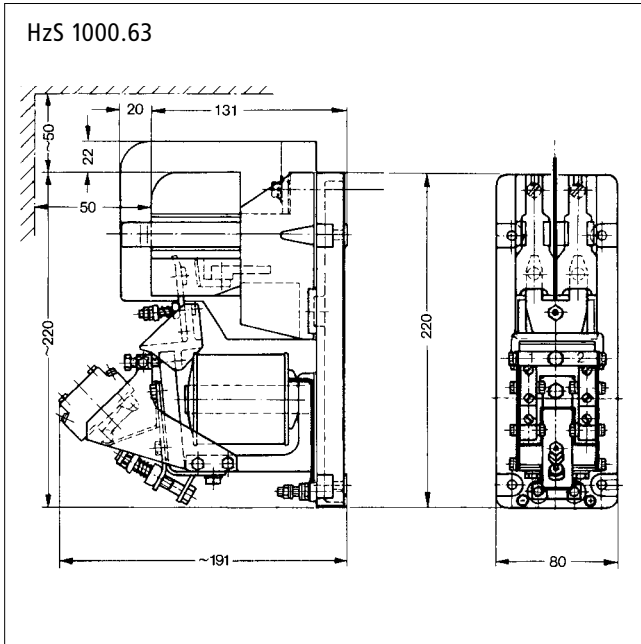
¹⁾ Please indicate with order, up to 2 x 1NO 1NC possible, ²⁾ Other voltages on demand, ³⁾ L/R = 30 ms



HzS 4000.16

HzS 4000.50

Dimensions



Subject to change without notice

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