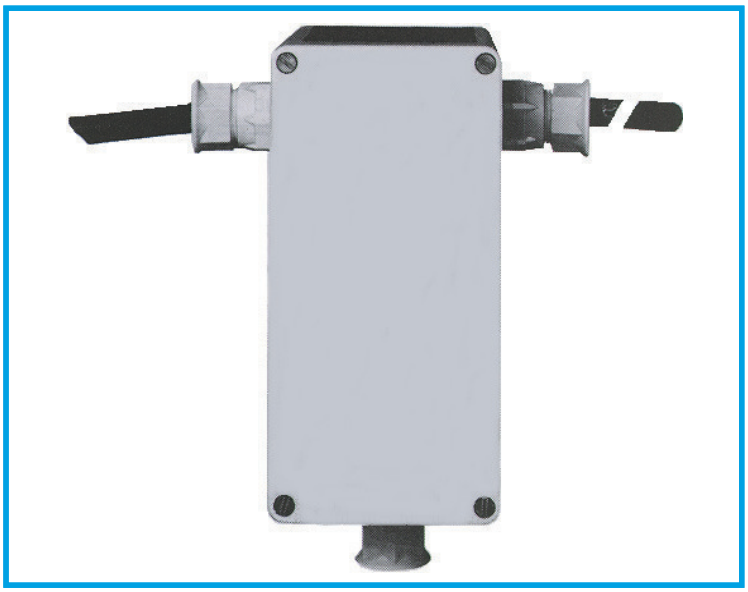
Voltage Signal Relay
Type 8591 insulation group F acc. to DIN 57115

8591



Description

The voltage signal relay of the type 8591 has been developed particularly for the detection and signalling of the voltage states of DC traction power supply systems. (Auxiliary supply is not needed for the operation of this device.)

Due to the special design the big voltage tolerances occurring during rail operation are unproblematic for the voltage signal relay of the type 8591.

This relay stands out due to its fully encapsulated construction. It is connected to the contact line and the return conductor or the voltage source via firmly connected cable ends.

The output contacts (1 or 2 change-over contacts) are encapsulated hermetically and therefore protected against corrosion.

The encapsulation offers the best possible protection of the output side against surges of atmospheric origin. This also applies to the separation of the contacts, change-over contact against change-over contact.

According to section 60 of VDE 0100 concerning auxiliary circuits short-circuit protection is not required for a voltage signal relay if the connecting cables have been laid in a short-circuit proof way.

If the coil current exceeds 5 A, the current path inside the relay is interrupted.

In the so-called "big design" the customer can fit additional terminal blocks in the terminal housing of the relay. Assembly costs can be saved with the so-called "double design", which includes two relays in one housing.

The output contacts are designed as reed contacts. Under no circumstances shall the limit values be exceeded for this kind of contact. Particularly the capacitive inrush currents and the lamp loads have to be considered (see information sheet concerning reed contacts).

Information about further relays is found in our complete brochure folder.

Technical data

Housing:	
Dimensions	See Figs.
Material	Makrolon
Mounting plate	Stainless steel 1.4571
Degree of protection	IP 54
Protective class	Protective class II
Ambient air temperature	-20°C to +70°C
Contact (reed contact, potential-free)	1 change-over contact => 8591 0- 2 change-over contacts => 8591 7-
Switching capacity	Max. 80 VA/60 W
Switching voltage	Max. 250 V
Switching current	Max. 1 A
Coil:	
Nominal direct voltage*	DC 600V to 750 V (+20%/- 30%)
Auxiliary supply	None
U_{pickup}*	DC 400 V ± 10%
U_{drop}*	DC 200 V ± 20%
Resistance (Ri) Inductivity (Li) Power input	> 560 kΩ > 50 H < 1.5 W
Electric strength**	15 kV_{eff} (Coil-Contact)
Coil connections*	Firmly connected and embedded cable ends
Cable	NSGAFöu (3 kV) 10 mm^2 Standard length=2m
Standard design	without mounting plate: 8591 -1 with mounting plate: 8591 -2
Large capacity variant for additional terminals	without mounting plate: 8591 -5 with mounting plate: 8591 -6
Twin variant 2 relays in 1 housing	without mounting plate: 8591 -7 with mounting plate: 8591 -8

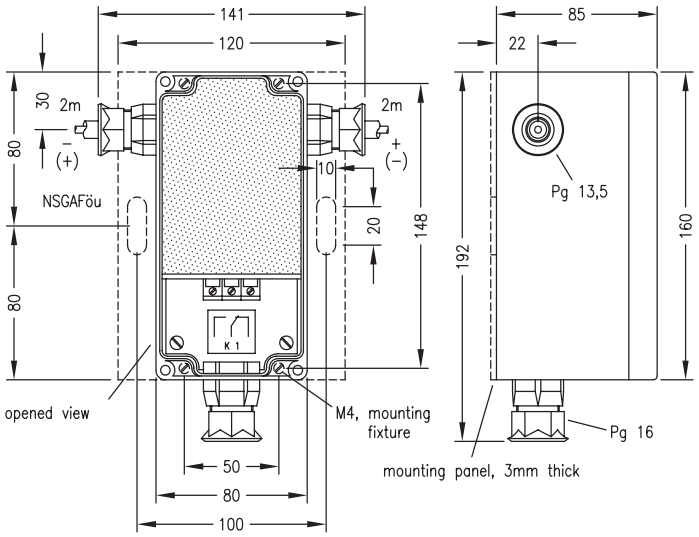
Ordering Information

Type	Order No.
8591 01	230200
8591 02	230201
8591 05	203204
8591 06	230205
8591 07	230208
8591 08	230209
8591 71	230202
8591 72	230203
8591 75	230206
8591 76	230207
8591 77	230210
8591 78	230211

* Other rated voltages, relay operate/dropout voltages, contacts and switching powers, cable lead lengths etc. are available on request.

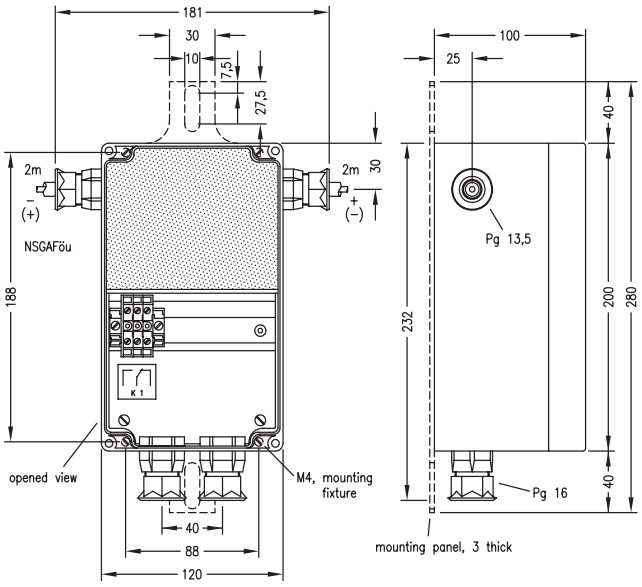
** Test report of Technische Hochschule Karlsruhe (technical college) is available (please request).

ESN Bahngeräte GmbH · Cochemer Straße 12–14 · 68309 Mannheim · Phone +49 62 18 33 47-00 · Fax +49 62 18 33 47-99



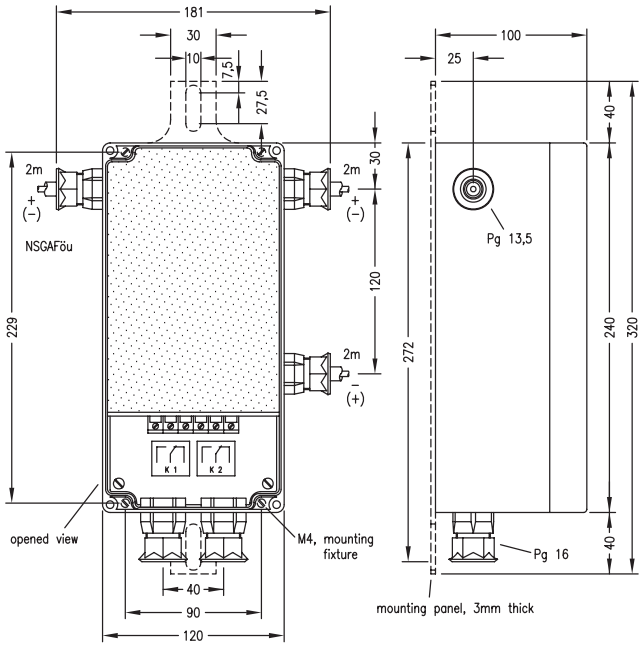
Typ HR–8591 01
Typ HR–8591 02

Standard – design



Typ HR–8591 05
Typ HR–8591 06

Large capacity – variant



Typ HR–8591 07
Typ HR–8591 08

Twin – variant