Switching amplifier Type 8581

8581

Description

The type 8581 switching amplifier is used especially to amplify the switching voltage in railway power units.

There is always the problem with switching contacts, for example, from sensors (such as the temperature monitoring units of the 8432 type series), which are not suitable for switching DC voltages such as 600 V or 750 V, that need to operate together switches with operating voltages of DC 600 V or DC 750 V.

This can be handled without any problems with the aid of the type 8581 switching amplifier. The switching amplifier reduces the contact loading of the contact to be switched to < 40 V and to less than 30 mA, but with its own output contact it is in a position to switch operating voltages of DC 600 V or DC 750 V with tolerances of +20% or -30% The switching capacity is sufficient to operate auxiliary fuses (for voltages of this type).

Note: The input power circuit (control voltage) is not separated galvanically from the operating voltage.

A special version is available for units in which the plus potential corresponds to the earthing potential. Please specify when ordering.

Function

An electronically clocked switching amplifier made with the latest electronic components produces the voltage of less than DC 40 V that is required for the control current circuit and limits it to this low low value.

An inert gas contact is used as a make-type contact to control switchgear with an operating voltage of up to DC 1000 V. The exciter coil of this output contact is supplied by the regulated voltage of less than DC 40 V and is interrupted by the minus potential (earthling potential) and passed to the connecting terminals.

The desired switching contact can now be connected to these terminals. The voltage loading on the terminals is limited to less than DC 40 V by the electronic regulation. The current loading on the contacts is set at approx. 30 mA by the internal resistance of the exciter coil for the output inert gas contact.

Once the operating voltage (auxiliary voltage) has been applied to terminals 2 (+) and 8(-), the LED (green) for the operating voltage display lights up. Approx. DC 40 V is applied to terminals 4 and 5. The zero-potential output contact terminals 10 and 18 is opened. If a conductive connection is made between terminals 4 and 5 by a »control switch«, the LED (red) for the switching state display lights up and the output contact terminals 10 and 18 is closed.

See the complete brochure folder for other switching and special devices for railway operating voltages.

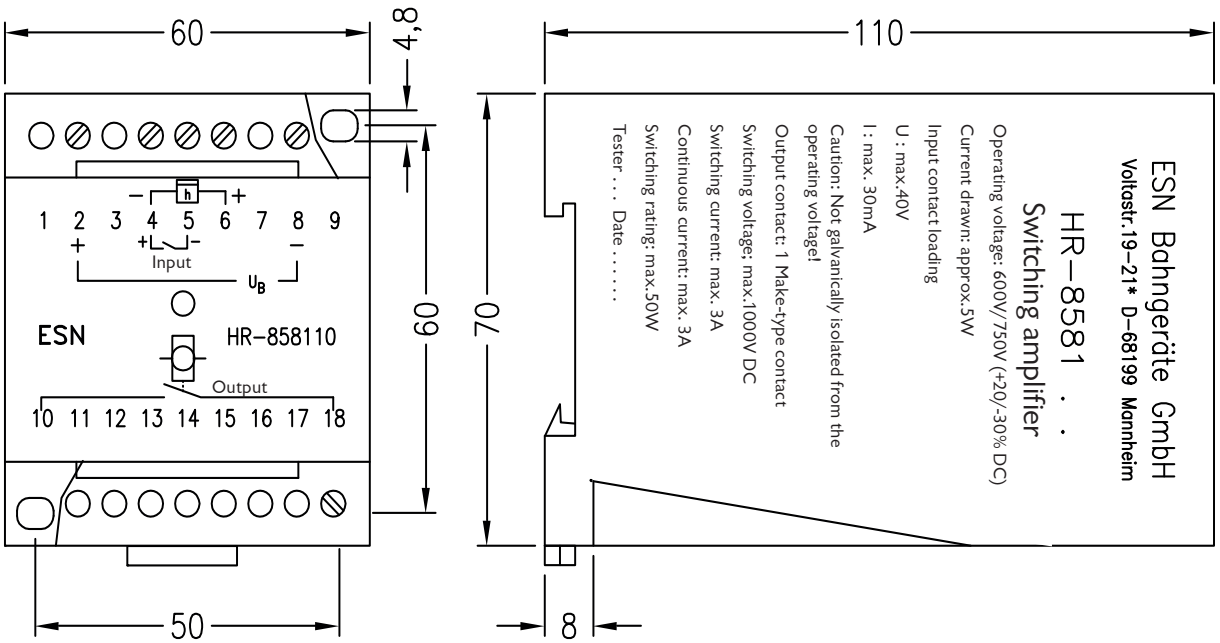
Technical data

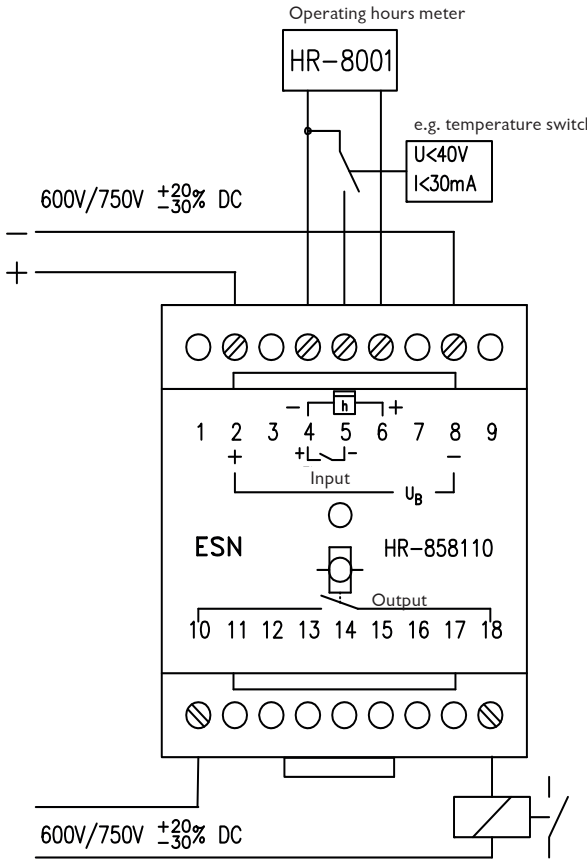
Dimensions	WxHxD 60/70/110 mm
Housing	Polystyrene
Attachment	Two holes in accordance with DIN 43604 or a standard carrying rail in accordance with DIN EN 50022
Type of protection	Housing: IP 30; terminals: IP 20 (Electrical switching encapsulated up to the terminals)
Ambient temperature	-20°C to +70°C
Control voltage	< DC 40 V (against minus = earthing potential) no galvanic separation from the operating voltage
Control current	approx. 30 mA DC
Operating voltage	DC 200 V - 900 V (max. limiting value DC 1000 V)
Power drawn	approx. 3 W
Operating voltage number	Light emitting diode (LED) green
Switching state number	Light emitting diode (LED) red
Working current circuit	Make-type contact (zero-potential) Switching voltage: max. DC 1000 V Switching current: max. 3 A Continuous current: max. 3 A Switching rating: max. 50 W / VA
Configuration	Standard extended (for connection to operating hours counter type 8001)

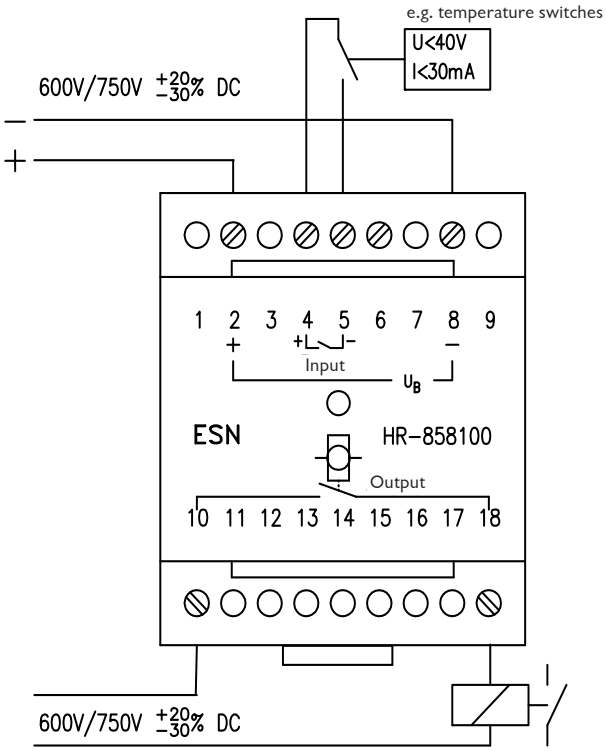
Ordering information

Type	Part No.
8581 00	**420100**
8581 10	**420101**

Special versions, for example, for units with plus = earthing potential, available on request.


60
4,8
110
70
60
50
8
1 2 3 4 5 6 7 8 9
Input
U_B
ESN
HR–858110
Output
10 11 12 13 14 15 16 17 18
ESN Bahngeräte GmbH
Voltastr.19–21* D–68199 Mannheim
HR–8581 . .
Switching amplifier
Operating voltage: 600V/750V (+20/-30% DC)
Current drawn: approx.5W
Input contact loading
U : max.40V
I : max. 30mA
Caution: Not galvanically isolated from the operating voltage!
Output contact: 1 Make-type contact
Switching voltage: max.1000V DC
Switching current: max. 3A
Continuous current: max. 3A
Switching rating: max.50W
Tester . . . Date . . . . . .


Operating hours meter
HR–8001
e.g. temperature switches
U<40V
I<30mA
600V/750V +20% −30% DC
1 2 3 4 5 6 7 8 9
Input
U_B
ESN
HR–858110
Output
10 11 12 13 14 15 16 17 18
600V/750V +20% −30% DC


e.g. temperature switches
U<40V
I<30mA
600V/750V +20% −30% DC
1 2 3 4 5 6 7 8 9
Input
U_B
ESN
HR–858100
Output
10 11 12 13 14 15 16 17 18
600V/750V +20% −30% DC