



## Type 8WA2 for Standard Mounting Rails

### Application

Terminal blocks are used for the space-saving connection of incoming and outgoing lines in switchgear and distribution boards.

### Specifications

DIN VDE 0110 Part 1,  
DIN VDE 0609 and  
IEC 60 947-7-1 or  
IEC 60 947-7-2.

The size of the connecting holes for 8WA1 is as laid down in DIN VDE 50 027. For 8WA2 the size of the connecting holes corresponds to the rated cross-sections of the conductors.

The terminals are safe from finger-touch in accordance with IEC 60 529 and DIN VDE 0106 Part 100 (except for bare terminals and solder terminations). Through-type terminals are also resistant to earthquakes in accordance with IEC 60 068-2-6.

### Colored Terminal Blocks

With colored wiring in accordance with DIN VDE 0113 Part 1, the connecting level can also be included in the colored markings:

- Red for control circuits with AC current
- Blue for control circuits with DC current or neutral conductor
- Orange for interlock circuits with AC or DC current which are fed from outside and are live when the main switch is turned off
- Green-yellow through-type terminals for protective conductors (without a link to the main mounting rail)

### Design

The terminal blocks are insulated on both sides. End plates are therefore not required. The symmetrical structure of the standard terminals prevents them from being snapped on the wrong way round. The insulating bodies up to and including terminal size 70 are made of thermoplastic, polyamide 6.6 with a tracking resistance of CTI 600 according to DIN VDE 0303 Part 1.

The materials used are environmentally compatible: e.g. free of cadmium and without halogen or silicone.

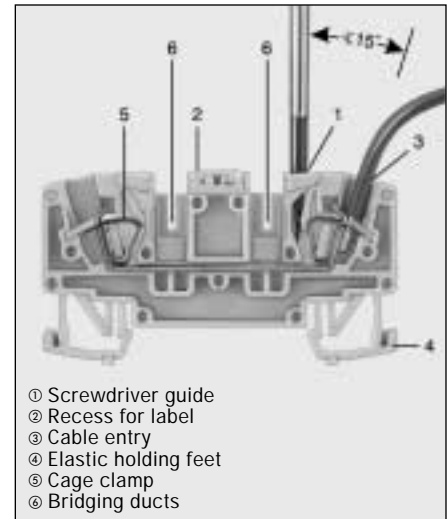
The plastics used are flame-retardant and self-extinguishing according to IEC 60 695 Part 2-2, VDE 0471 Part 2-2 and UL 94 V-2.

### Mounting

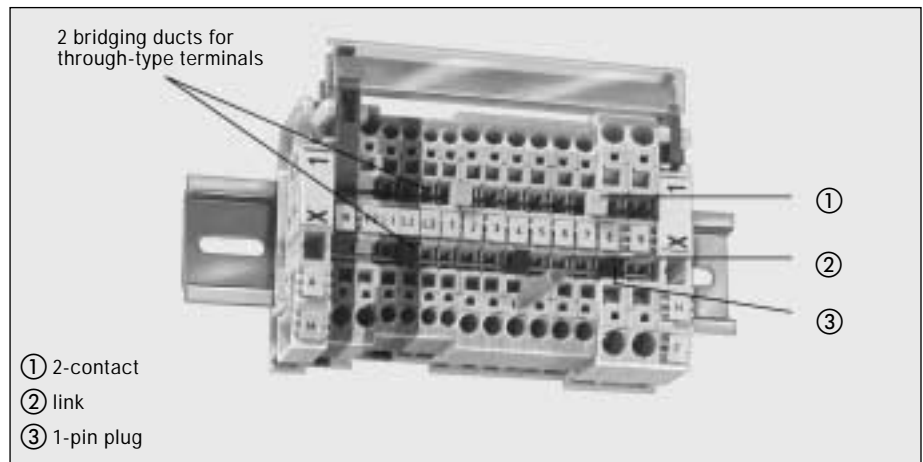
The terminals are snapped onto 35 mm mounting rails conforming to EN 50 022-35 or IEC 60 112 and IEC 60 715 TH35 and secured against sliding by means of end retainers. A lateral mounting tolerance of 0.2 mm has to be observed.

### Advantages

- Fast Mounting
  - easy to snap on
  - insulated on both sides, no end plates required
- Easy to connect
  - front connection, no end sleeves required
  - 15° angle between screwdriver and conductor
  - same screwdriver for terminal sizes 1.5, 2.5, 4 and 6 mm<sup>2</sup>
  - screwless connection of N isolating terminal to N busbar
- Small amount of linking accessories
  - screwless cross connection system consisting of only 3 accessories: two-contact bridge, link with one-pin plugs for terminal sizes 2.5, 4 and 6 mm<sup>2</sup>
- Uniform labels on cards for the entire terminal range up to 70 mm<sup>2</sup>



8WA20 screwless through-type terminal, cross section



8WA2011-1XF terminal strip with components fitted

### Clamping Method

The clamping point is opened by insertion of the operating device, the conductor is inserted to the stop and is clamped tight after the screwdriver is removed. This method guarantees observation of all national and international tensile requirements. The spring steel of the Cage Clamp is of nickel-chromium, ensuring that the contact between the conductor and the terminal will be corrosion-proof and vibration-resistant.

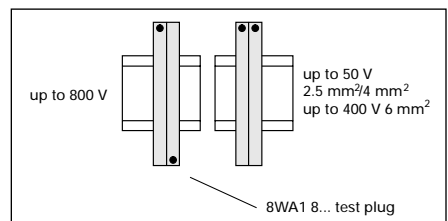
### Terminal Size

The terminal size corresponds to the rated cross-section. In accordance with DIN VDE 0611 and IEC 60 947-7-1, one finely stranded copper conductor without end sleeve can be connected to each clamping point. If the rated cross-section is connected with an end sleeve, the next larger terminal size has to be used.

End sleeves should only be used in particularly corrosive ambient atmospheric conditions.

### Testing

Testing without interrupting operation is possible by inserting the test plug into an opening designed for this purpose. The following arrangement of test plugs has to be observed:



Test plug arrangement

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### Conductor Connection

By application of the cage clamp system solid, stranded or finely stranded conductors can be clamped safely and permanently by front insertion and without the use of end sleeves. It is recommended to connect only one conductor per clamping point. The cable entries are designed in such a way that the insulation of the rated conductor cross-section as well as that of the next smaller cross-section cannot be clamped in this opening. (The length of insulation to be stripped is printed on the terminal). As a splice protection measure when using finely stranded and very finely stranded conductors, the ends can be tin-coated or compacted by means of ultrasound.

### Connection of Aluminum Conductors

Cage Clamp terminals are also suitable for solid aluminum, conductors up to 4 mm<sup>2</sup>, if the standard processing guidelines, e.g. brushing and greasing, are observed.

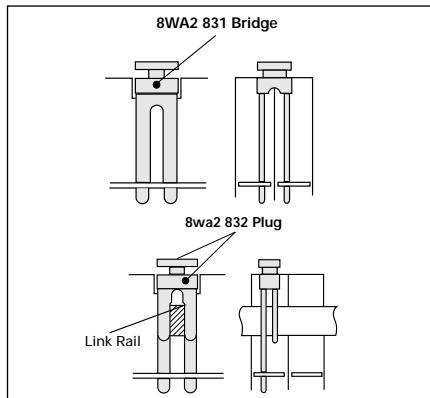
Also it has to be taken into account that due to the lower conductivity of aluminum, the rated uninterrupted currents will be lower:

- 1.5 mm<sup>2</sup> = 10 A
- 2.5 mm<sup>2</sup> = 16 A
- 4 mm<sup>2</sup> = 22 A

### Accessories

#### Bridging System

The 8WA2 831 two-contact bridge is used for the bridging of adjoining terminals. In order to connect separate terminals, the 8WA2 830 link rail, which can be cut to any required length, is inserted into the bridging ducts and the respective terminals are connected by the 8WA2 832 one-pin plugs.



No linking accessories are necessary for initiator-actuator terminals.

#### Small Partitions

8WA2 836 or 8WA2 845 small partitions are used for isolation of the link rails.

#### Barriers

The yellow barriers project from the terminal line and are used as a visual separation as well as to increase the rated insulation voltage.

#### End Retainers and Accessories

The 8WA2 808 end retainers are snapped onto the standard mounting rails to prevent the terminals from sliding out of place. For isolation of the 8WA2 842 N busbar, the 8WA2 837 busbar end (8WA2 826 for Insta terminals) is inserted in the end retainer.

There is a range of options for labeling the end retainer: the 8WA1 806 end label, the 8WA8 826-OAA terminal strip label and 4 identification labels. The end retainers can also be used for the 8WA1 terminals with the 6 X 6 mm N busbar.

### Screwdrivers

The 8WA2 803 and 8WA2 804 screwdrivers are used for opening the clamping points with conductor cross-sections from 1.5 to 6 mm<sup>2</sup>.

### Retaining Partitions

The 8WA2 835 and 8WA2 844 retaining partitions are used for fixing the 8WA2 830 link rail in position and for removing it from the bridging duct.

### Labeling Accessories

To allow easier handling, the 8WA8 860..., 8WA8 861.. and 8WA88 47..., 8WA88 48.. labels are provided in card form with horizontal or vertical inscription, suitable for all terminals from 1.5 to 70 mm<sup>2</sup>.

The 8WA2 850 label holders are included in the scope of supply of the two-tier terminals. They can also be snapped into the sockets for test plugs on the standard terminals.

### Lockout

The 8WA2 848 lockout prevents impermissible switching of the N disconnect on terminals with an N isolation function.

### Insulation Stop

The 8WA2 821 insulation stops ensure reliable retention of the conductor insulation for thin conductors.

### 10 x 3 mm N Busbars and Accessories

The 8WA2 805 cover is available for the N busbar in order to ensure safety from touching by fingers.

The 8WA2 843 busbar rail is included in the scope of delivery of the 8WA2 011-1NK23 and -3JG11 feeder terminals. The rail can be inserted into the N isolating terminals or the Insta terminals with an N isolating function in order to fix the 8WA2 842 N busbar in position.

### Test Plugs

The terminals have openings for 8WA1 867 test plugs.