CORNING

Installation Instructions

Issue 2, March 2005

xDSL Block S1000RT with Splitters

These installation instructions are provided as guidance for the trained craftsperson carrying out the installation.

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1. General

Caution: During the installation work, observe the relevant safety regulations.

In electrical systems certain parts will inevitably be live. Some parts may also have a high operating temperature. If this situation and the warning notices are ignored, personal injury and/or physical damage may occur as a result. For this reason it is essential that these systems should only be installed/maintained by trained/qualified personnel.
The installation can be carried out with commercially available tools.

Caution: Sound grounding of the distribution frame is essential for ensuring that the electro-magnetic energy, e.g. due to lightning strikes, is diverted away safely without harming personnel or technical facilities.

It is therefore necessary to take great care in mounting the distribution components and also to check the resistance to ground.

2. Mounting the Distribution Components

Locating the splitters in the main distribution frame reduces cabling runs and termination points to the basic minimum required.

The xDSL blocks in the 1000RT series are supplied with integrated functional elements and splitter boards. Each functional element can terminate 4 subscribers. Each subscriber is provided with the three services LINE, VOICE and DSLAM (Data).

2.1 Mounting the Distribution Blocks

The distribution blocks can be mounted either vertically or horizontally on suitable racks in the central office or in remote units.

When blocks are mounted vertically, the orientation point must be located on the left side (Fig. 1).

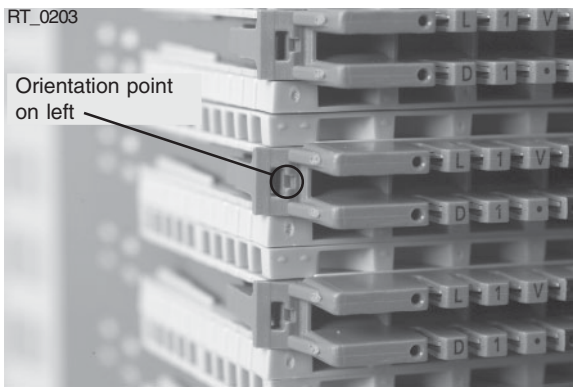

Fig. 1

When blocks are mounted horizontally, the orientation point must be at the top (Fig. 2).

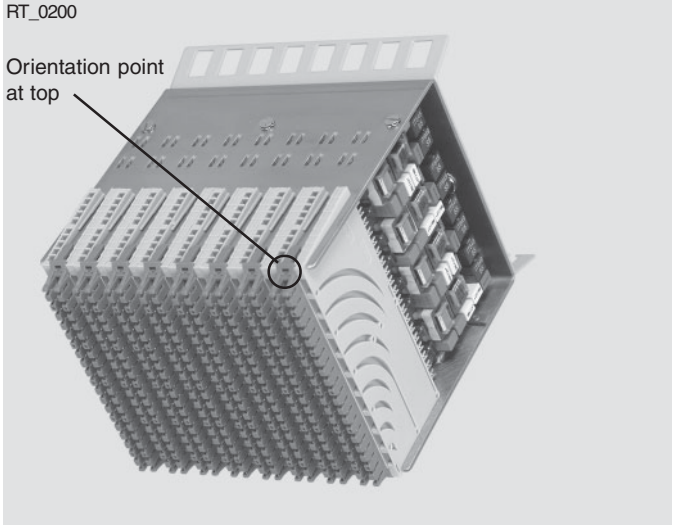

Fig. 2

Position the distribution block on the component mount of the frame and screw it tight using the supplied contact washers (1) and hex nuts (2).

In order to establish the electrical bond (conductivity), the distribution components must be secured very carefully and the supplied contact washers and hex nuts must be used.

Ensure that the **concave** side of the contact washer is in contact with the component mount.

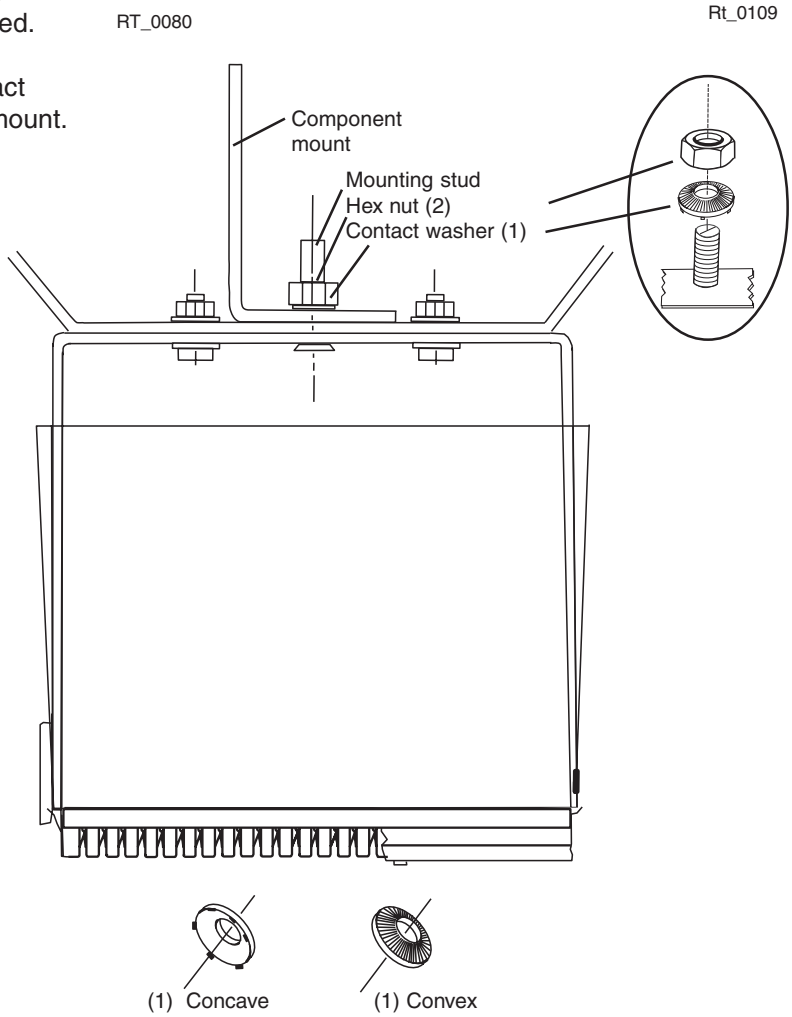

Fig. 3

3. Mounting the Functional Elements

3.1 Variants of the Functional Elements and their Assignment

The xDSL block S1000RT is supplied with 8-pair functional elements. Horizontal and vertical block mounting differ merely in the direction of the wire guide openings (cf. Figs. 5 and 7).

3.1.1 Horizontal Block Mounting

With horizontal block mounting the wire pairs for the LINE and VOICE signals are always applied to the IDC contacts on the right-hand side of each functional element from the top of the block. The DSLAM signals are applied from the bottom side of the block and are terminated on the left row of IDC contacts (cf. Fig. 4).

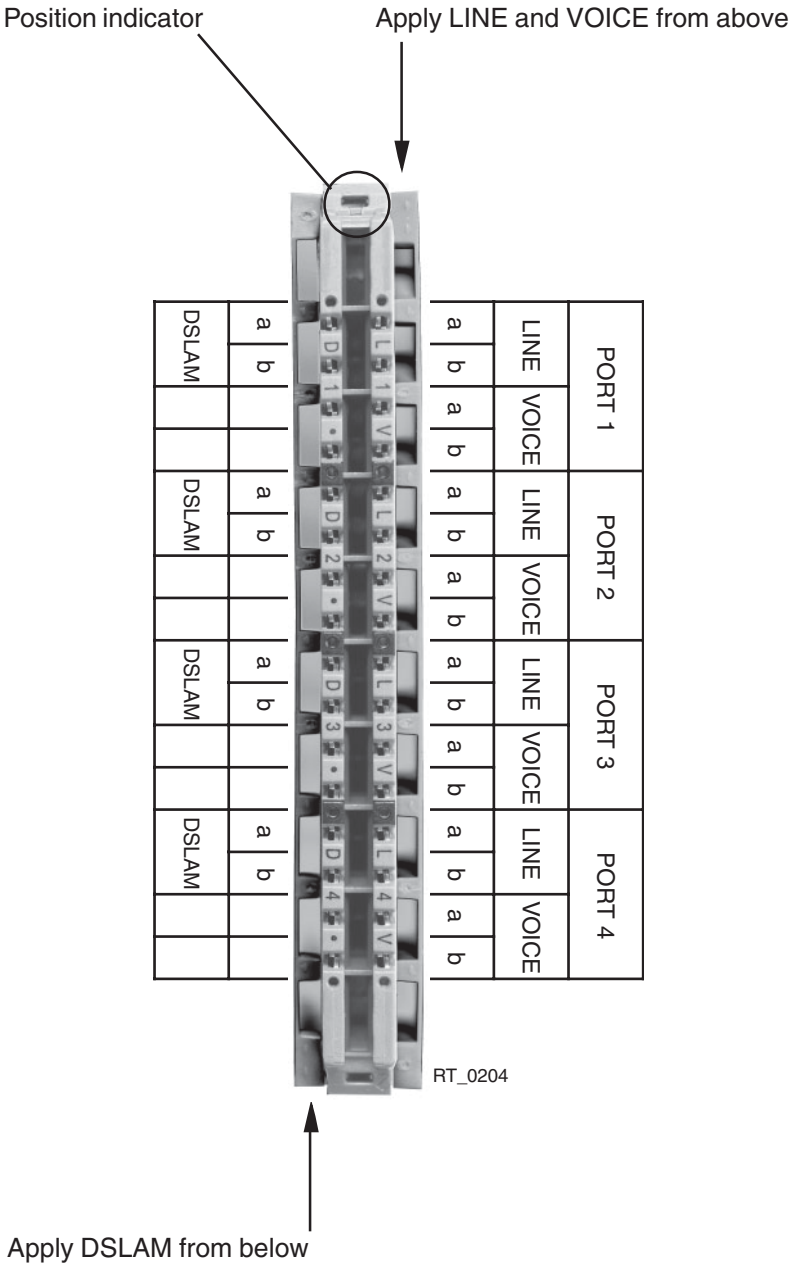

Fig. 4

Fig. 4: Functional element with wire guide and assignment for horizontal block mounting

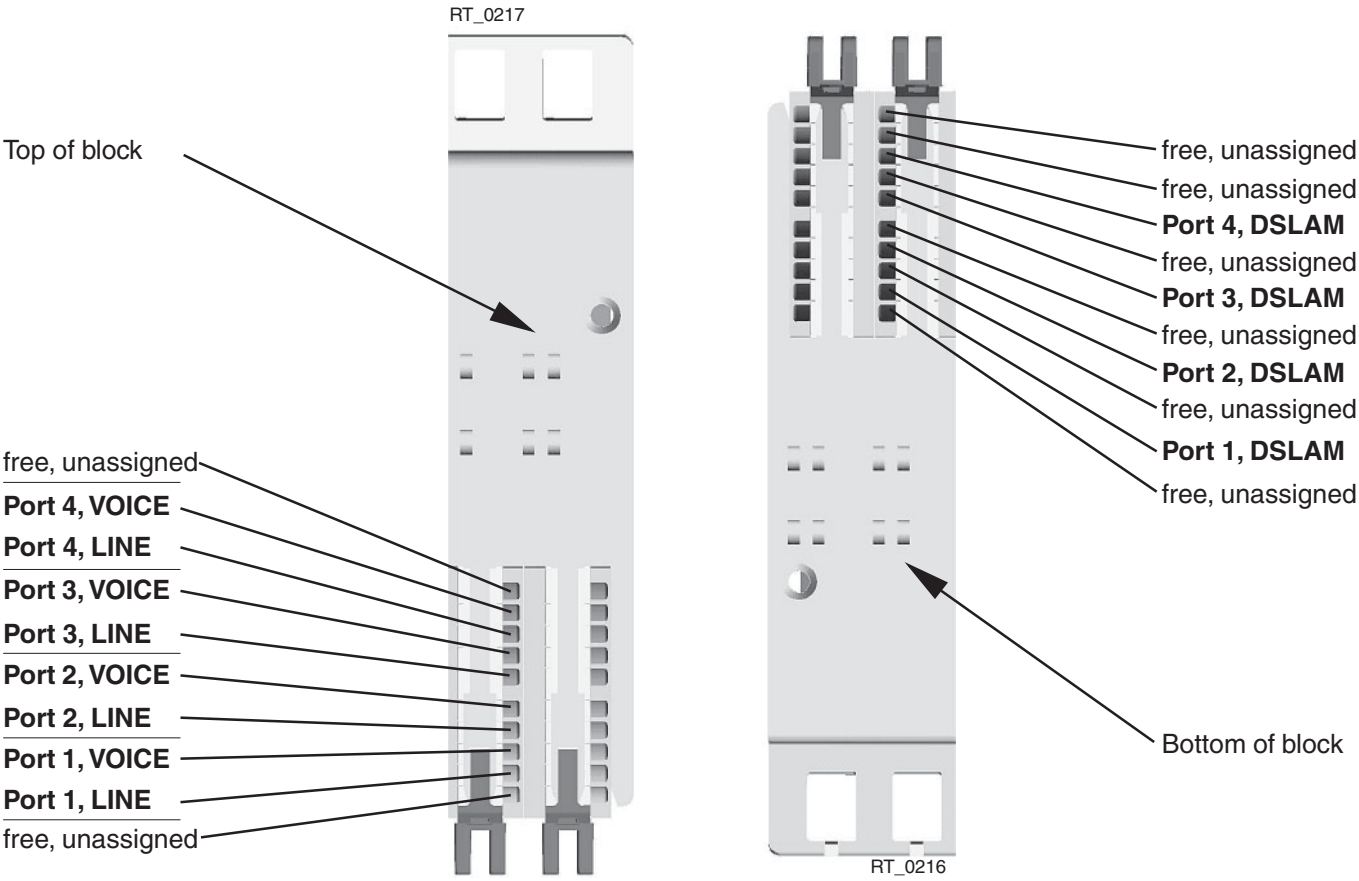

Fig. 5: Assignment of the wire guide channels for horizontal block mounting

3.1.2 Vertical Block Mounting

When an xDSL block is mounted vertically, the LINE and VOICE pairs are applied from the right-hand side of the block to the upper row of IDC contacts of each functional element. The DSLAM signals are routed via the left-hand side of the block to the lower row of IDC contacts in each case and terminated there (cf. Fig. 6).

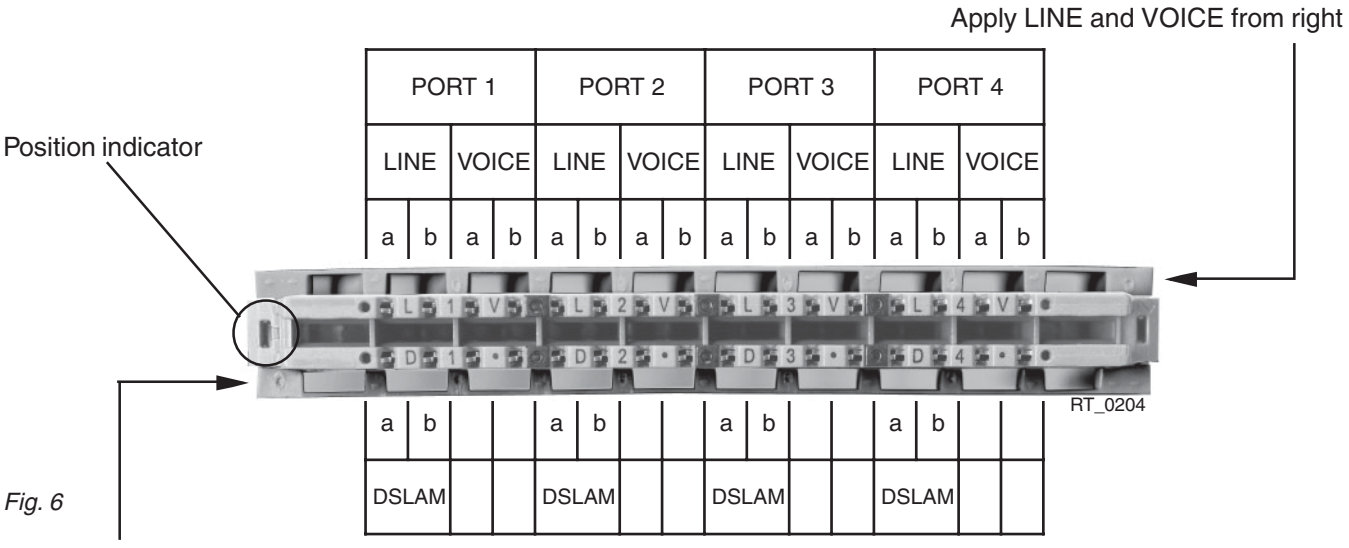

Fig. 6

Fig. 6: Functional element with wire guide and assignment for vertical block mounting

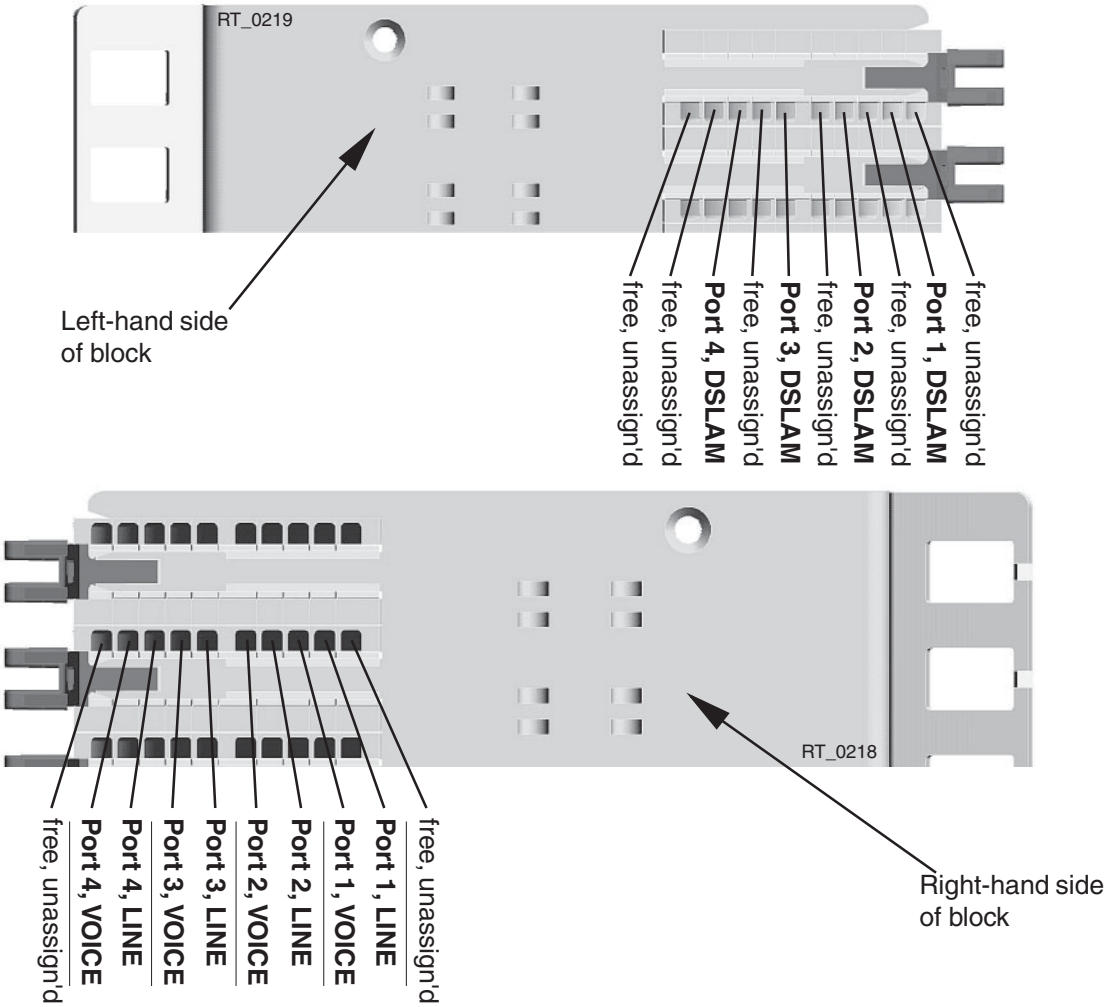

Fig. 7: Assignment of the wire guide channels for vertical block mounting

3.2 Replacing an xDSL Module

If replacement of an xDSL module is required e.g. due to mechanical damage, this can be carried out as follows.
The functional elements with splitter board are pushed onto the tongues of the mounting frame and latched in position.
In the case of the xDSL block S1000RT the xDSL modules are always replaced together with a splitter board.

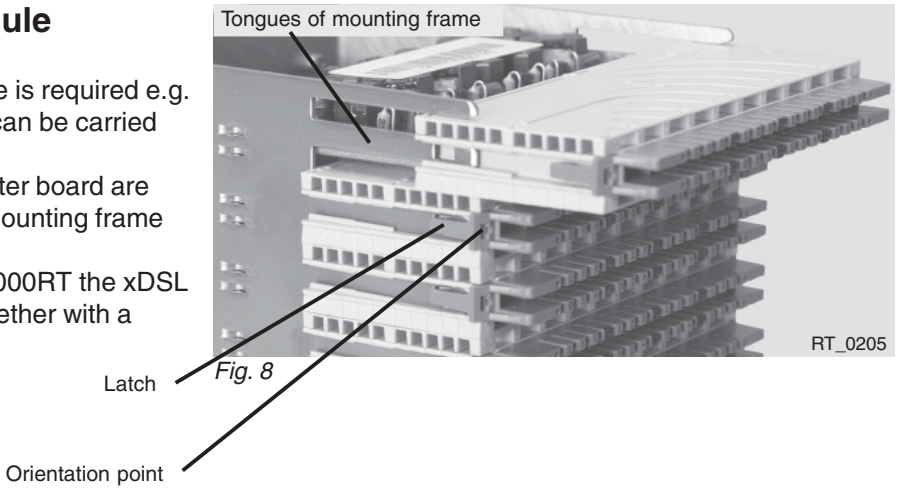

Fig. 8

When sliding the elements into the mounting frame, it is important to ensure that the module is correctly seated between the board guides in the frame.

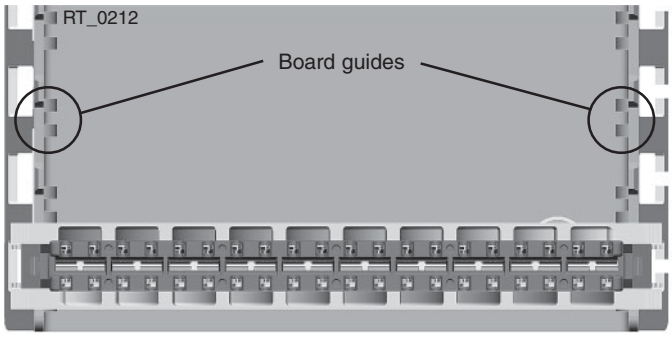

Fig. 9

a) For vertically mounted xDSL modules the orientation point must be located on the left (Fig. 1+10).

b) For horizontally mounted functional elements the orientation point of the element must be at the top (Fig. 2).

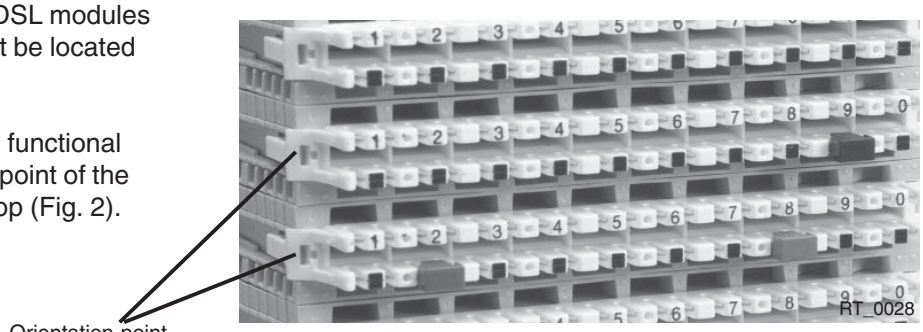

Fig. 10

3.2.1 Removing an xDSL Module

a) Detach wiring using the extraction hook (termination tool); pull the wires out of the wire guide.

b) Bend the two latches of the functional element outwards slightly by hand or with the extraction tool (C39407-A149-A15) and pull the element out to the front

Fig. 11

Extraction tool for functional elements

Normally, xDSL modules can be replaced without the need for tools.
If, however, the installation rails for instance are mounted from one side in inaccessible enclosures, we recommend using the extraction tool to assist removal (Order No. C39407-A149-A15).

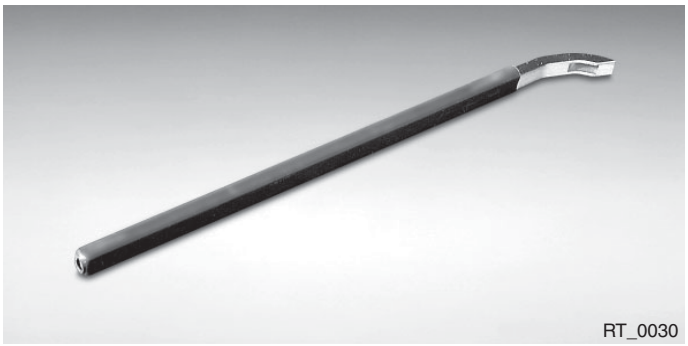

Fig. 12

3.3 Terminating the Wires

3.3.1 Terminating Unshielded Wires

The tool used for wiring/termination provides the following functions:

- Terminate and trim wires
- Terminate wires without trimming
- Extraction hook for removing wires (Order No. C39407-A139-A12)

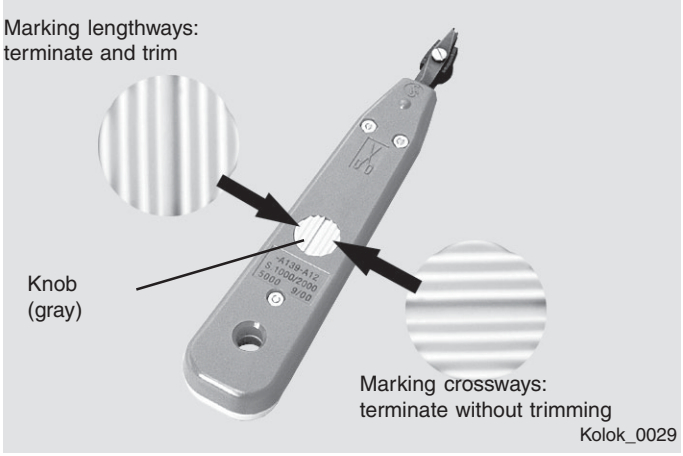

Fig. 13: Termination tool (red handle side)

Note: **On vertically mounted blocks, wire the upper contact row of a functional element with the red handle side (with scissors symbol) pointing down. Wire the lower row of contacts with the red handle side (with scissors symbol) pointing upward.**

On horizontally mounted blocks, wire the right contact row of a functional element with the red handle side (with scissors symbol) pointing left.

Wire the left row of contacts with the red handle side (with scissors symbol) pointing right.

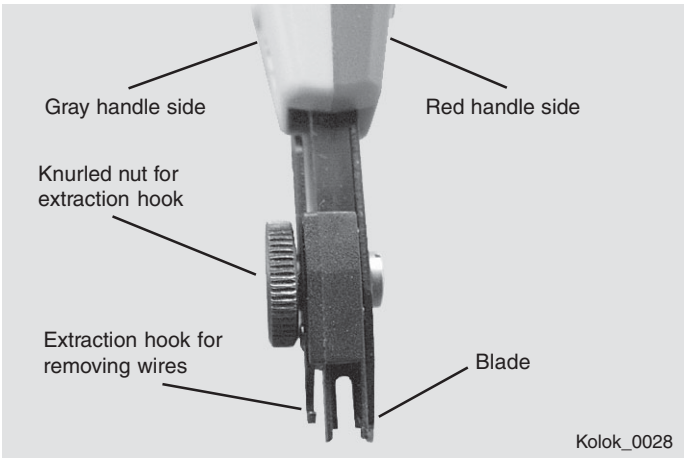

Fig. 14

Tensioning the wire slightly, insert it by hand in the slot of the IDC terminal.
To terminate the wire, press it into the terminal slot using the termination tool. This automatically terminates the wire and trims it depending on the setting of the knob on the tool. Any depressions in the wire insulation near the termination are due to the tool and are a normal occurrence in the terminating process.

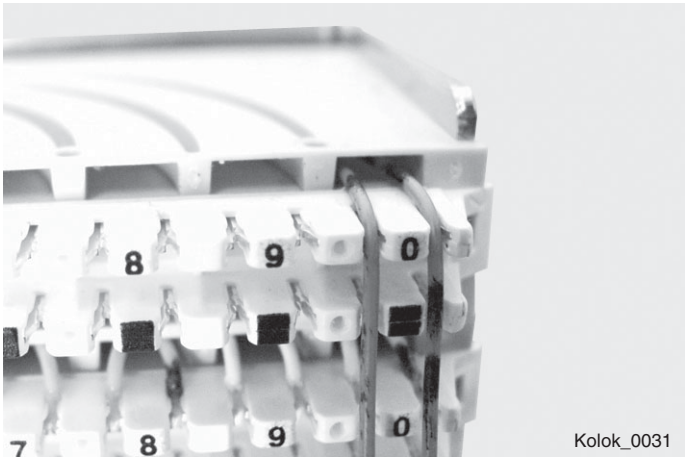

Fig. 15

To insert the termination tool (Order No. C39407-A139-A12), hold it straight as shown. Press the wire into the parked position as shown.

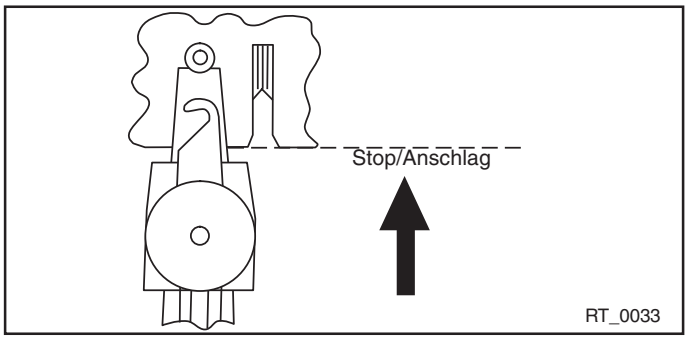

Fig. 16

4. Organizing the Cables

The guide channels of the wire guides ensure that the twisted wire pairs are brought in pairs to precisely the right terminals on the functional element.

Note: For optimum transmission performance ensure that the twist is maintained right up to the IDC terminals.

Suitable cable wires:
Solid conductor with a diameter of 0.32 - 0.8 mm; outer diameter max. 1.2 mm (with PE or PVC insulation).

Suitable jumper wire:
The jumper wire for preferred use should have a solid conductor of diameter 0.5 mm, twisted (e.g.: YV 2 x 0.5 / 0.9).

4.1 Organizing the Cables on Horizontal Distribution Blocks

As described in Sections 3.1.1 and 3.1.2, the three services LINE, VOICE and DSLAM must be brought to the sides of the block appropriate to the block orientation (vertical or horizontal).
Fig. 17 shows where the open and closed jumper combs (fanning strips) are located in the case of horizontal block mounting by way of example.

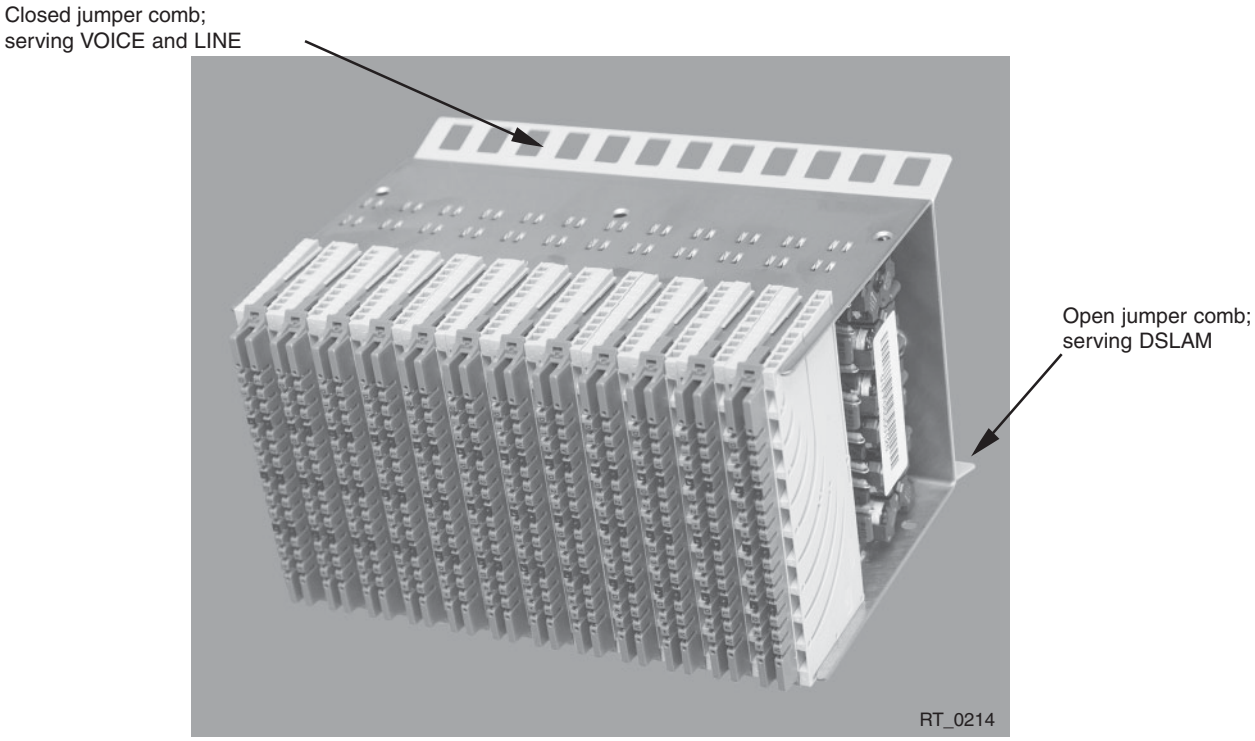

Fig. 17

Fig. 17 : Position of the jumper combs (fanning strips) for horizontal block mounting

The cable wires for the VOICE and LINE services are run on the top of the block through the first hole of the jumper comb into the first wire guide. DSLAM wires should be routed at the bottom of the block through the first slot in the open jumper comb to the first wire guide.

Example: VOICE and/or LINE cable

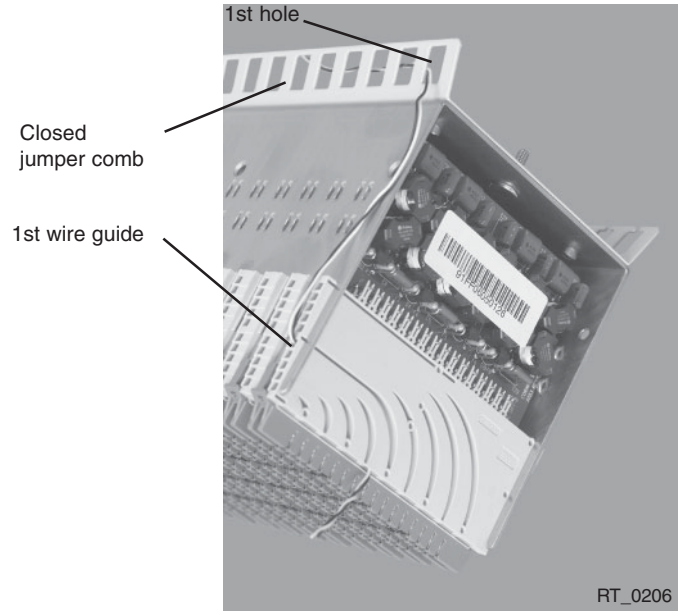

Fig. 18: VOICE and/or LINE wire routing for horizontal block mounting

Example: DSLAM cable

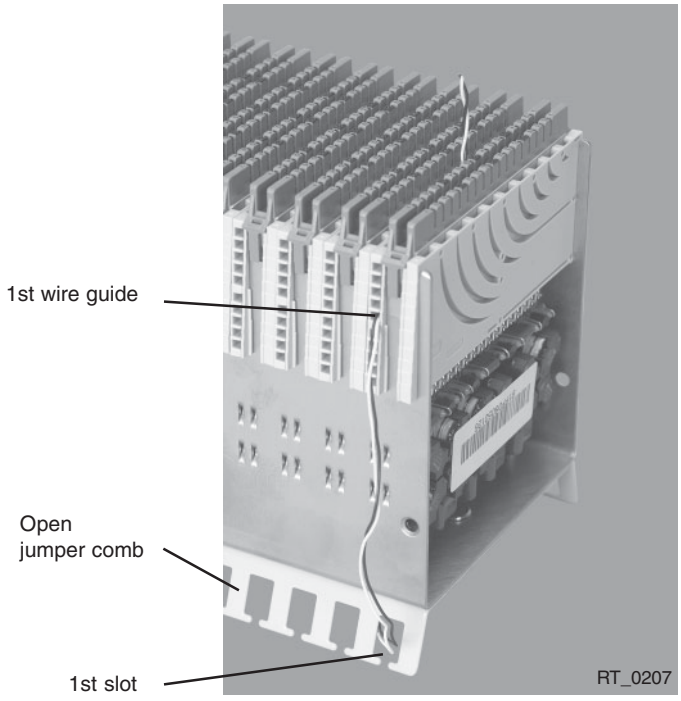

Fig. 19: DSLAM wire routing for horizontal block mounting

5. Identifying the Distribution Components

The distribution components can be furnished with the following accessories:

5.1 Range Label

The range label comprises the label holder, a lettering strip and a transparent cover strip. It is clipped onto the upper contact row of the top functional element.

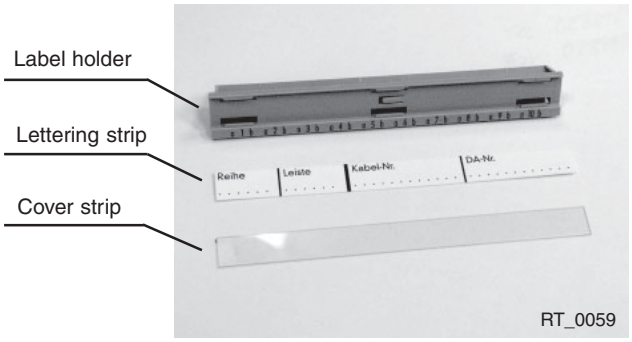

Fig. 20: Range label

5.2 Marking Caps

The marking caps are fitted on the plastic projection between the a- and b-wire.

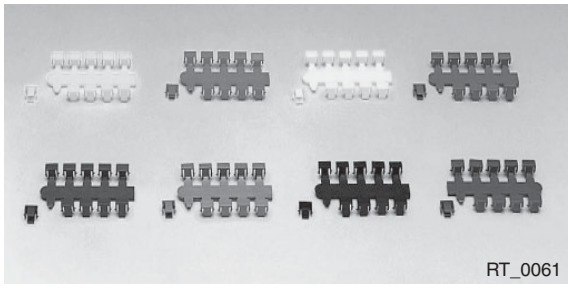

Fig. 21: Marking caps

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Gedruckt in der Bundesrepublik Deutschland auf sauerstoffgebleichtem Papier.
Printed in the Federal Republic of Germany on oxygen-bleached paper.
Liefermöglichkeiten und technische Änderungen vorbehalten.
Subject to availability. Right of modification reserved.
Best.-Nr.: S30264-D1013-V081-1-7631
Order No.:
04.04.2005