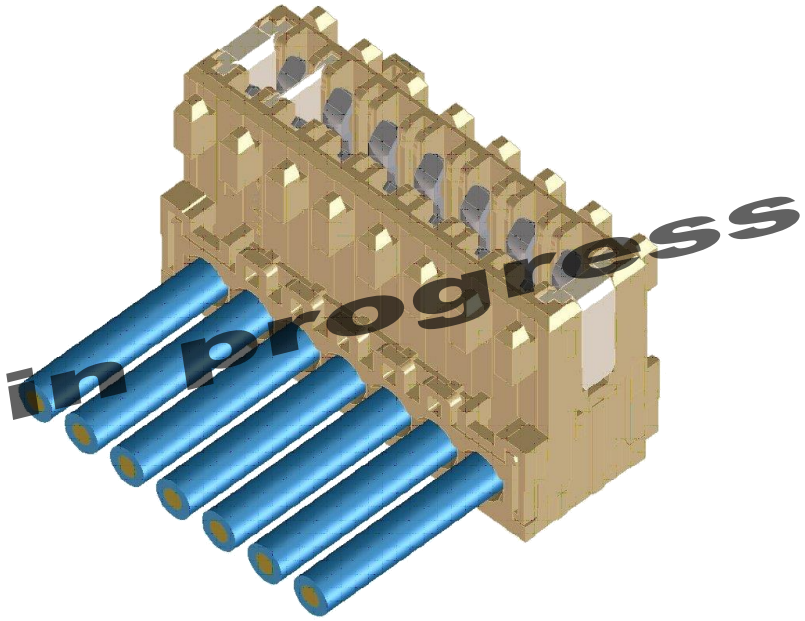
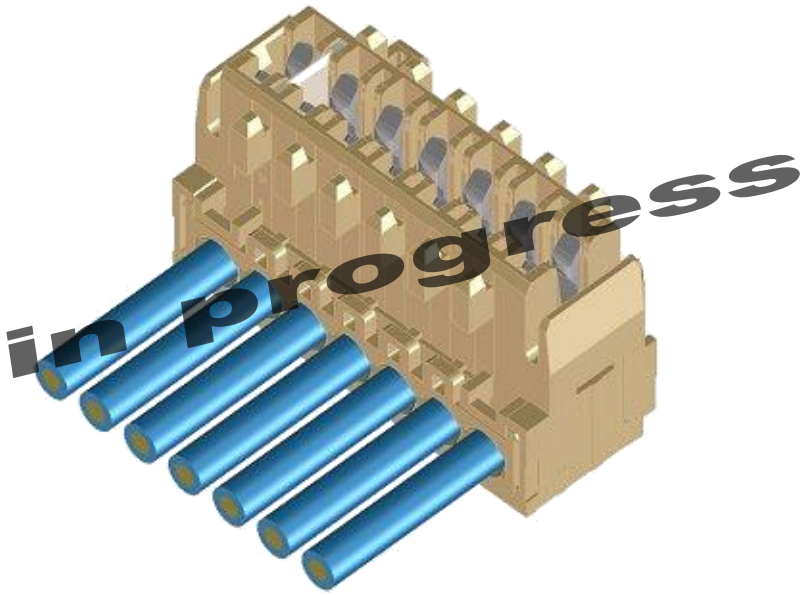
351000 / 351100

(not illustrated)



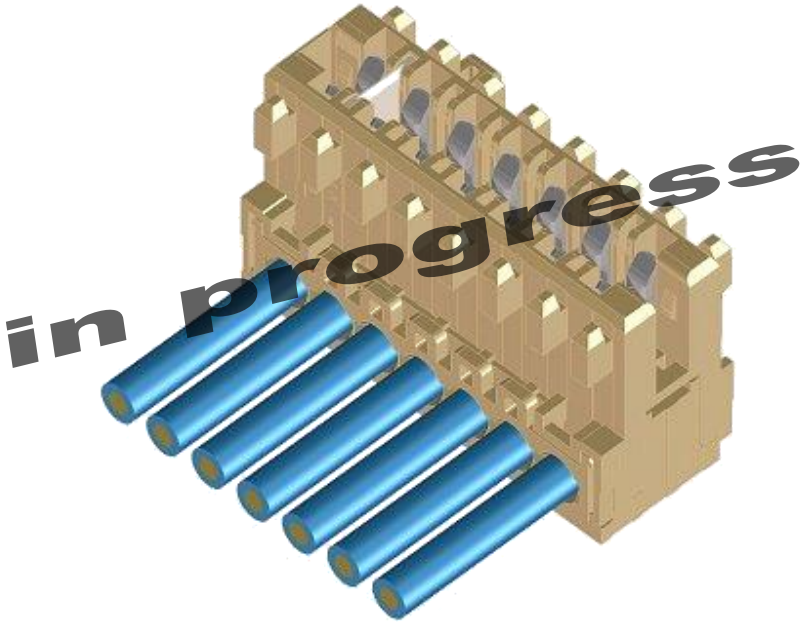
351200 / 351300

(not illustrated)



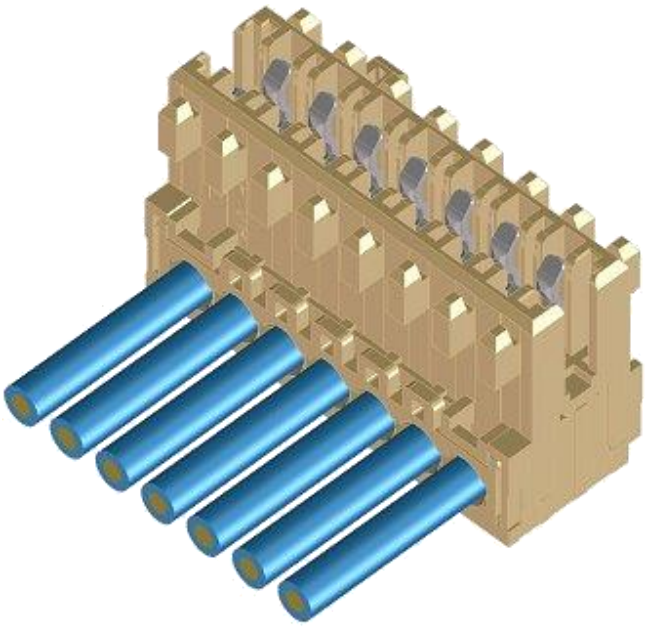
351700 / 351800

(not illustrated)



352100 / 352300

(not illustrated)



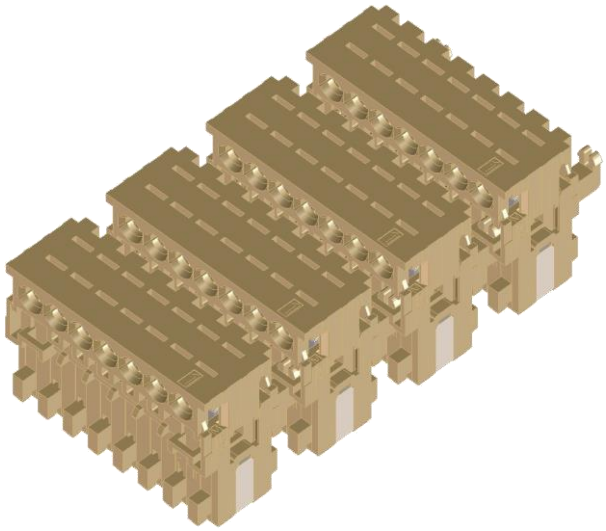
Alteration description

Edition	Alteration carried out
1	7.10 Electrical test added

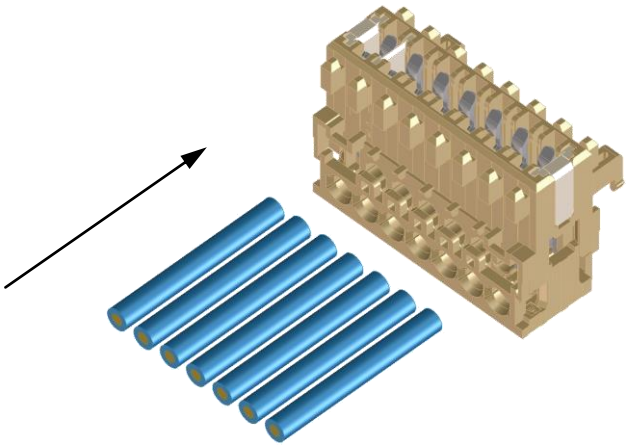
Contents:

1 System features

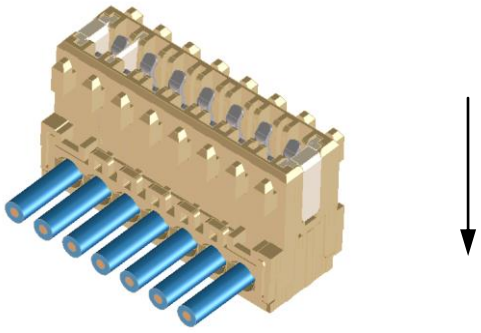
Two-post body
Supplied following stacks



Wire termination

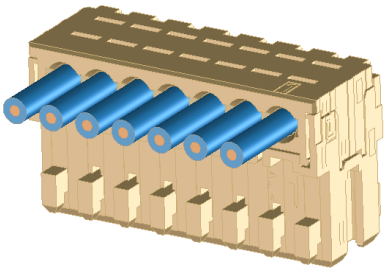


Insulation displacement connection by pressing the top
Wire exit 90°

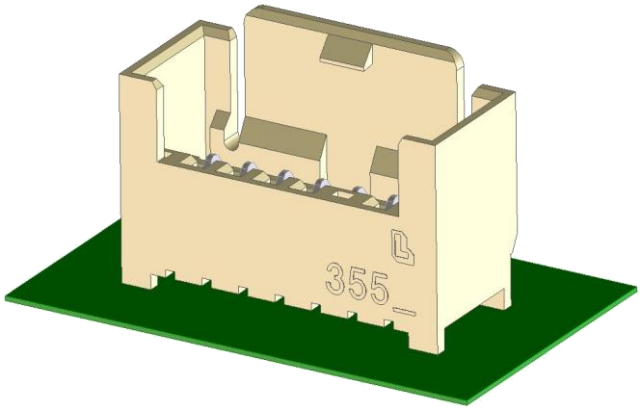


The connectors are used with pin headers as indirect connectors or with guide frames as direct connectors (edge connectors).

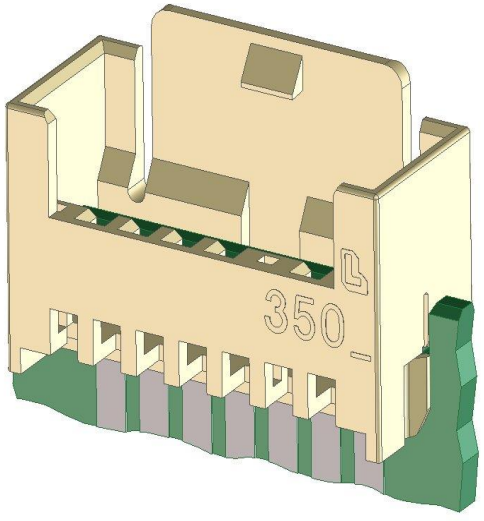
Connector acc. RAST 2.5



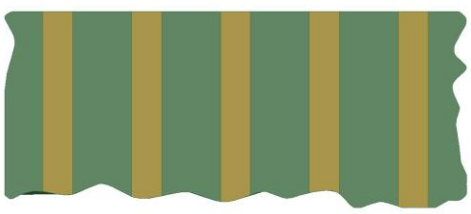
Pin header



Guide frame



PCB

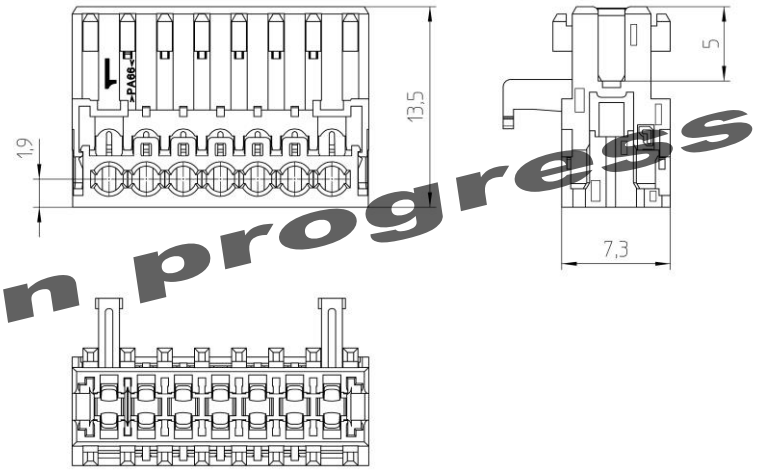


1.1 Product types

Series RAST 2.5 plus 351000

Partition 2,5 mm

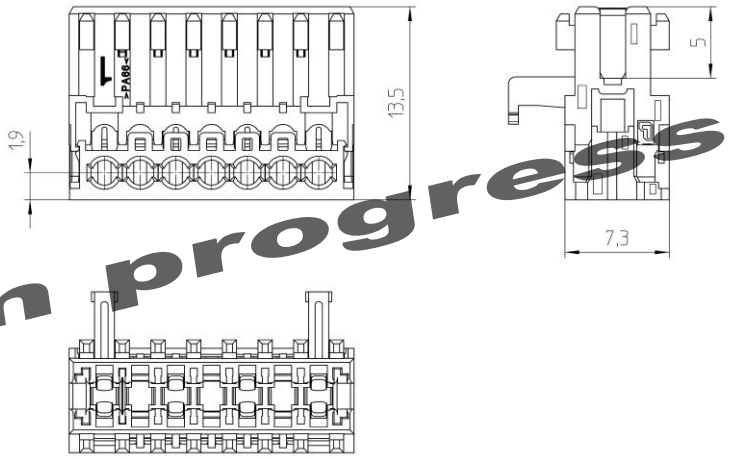
- for 2 A
- 2-11-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351000 01



Series RAST 2.5 plus 351100

Partition 5 mm

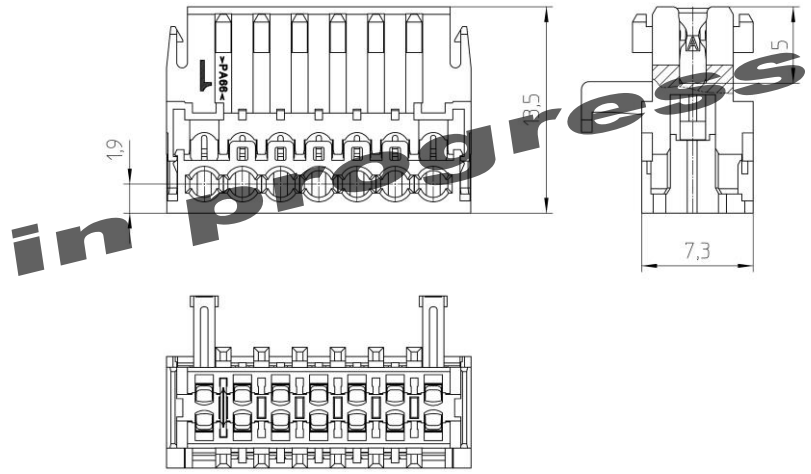
- for 2 A
- 2-6-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351100 01



Series RAST 2.5 plus 351200

Partition 2,5 mm

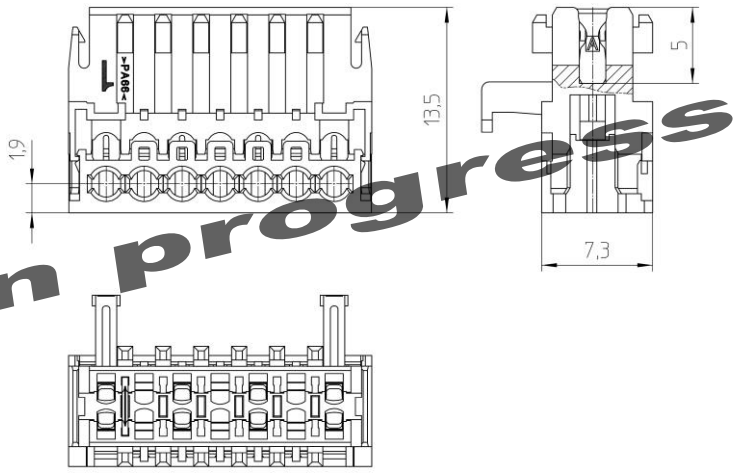
- for 2 A
- 2-11-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351200 01



Series RAST 2.5 plus 351300

Partition 5 mm

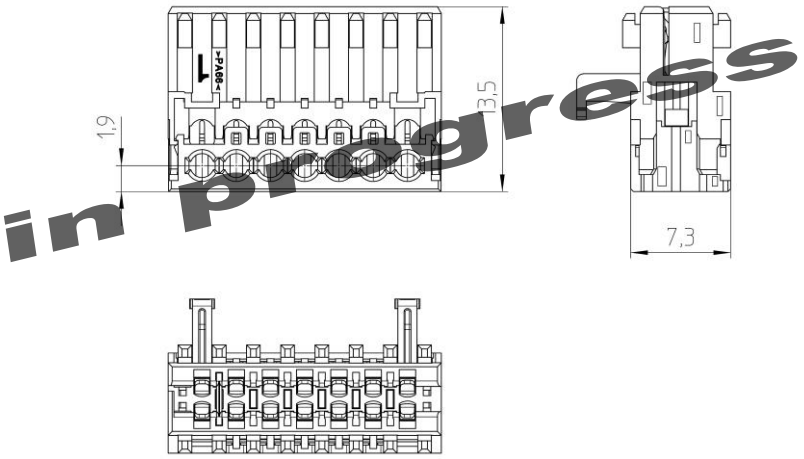
- for 2 A
- 2-6-polig
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351300 01



Series RAST 2.5 plus 351700

Partition 2,5 mm

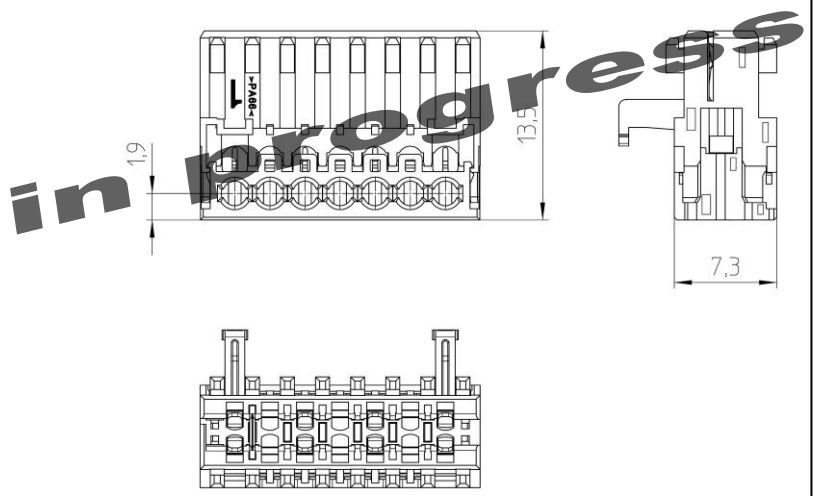
- for 2 A
- 2-11-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351700 01



Series RAST 2.5 plus 351800

Partition 5 mm

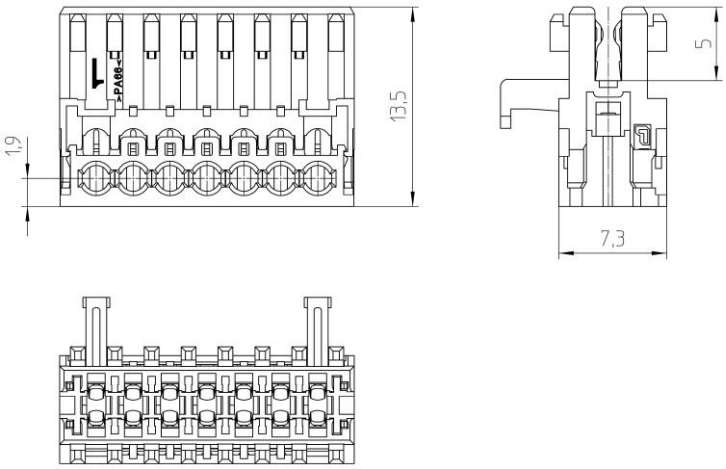
- for 2 A
- 2-6-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 351800 01



Series RAST 2.5 plus 352100

Partition 2,5 mm

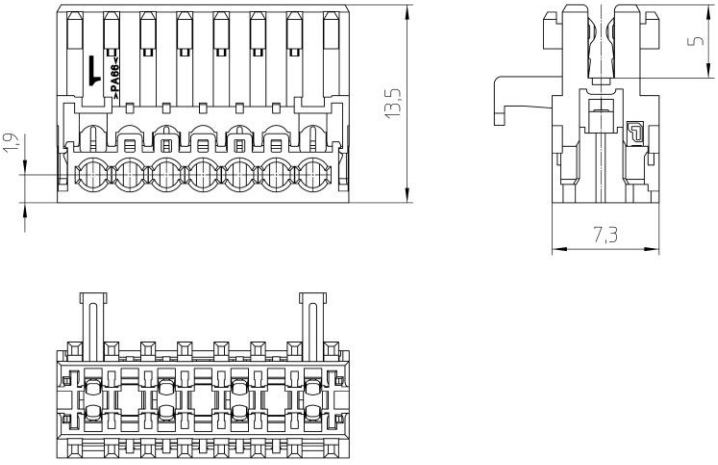
- for 2 A
- 2-11-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 352100 01



Series RAST 2.5 plus 352300

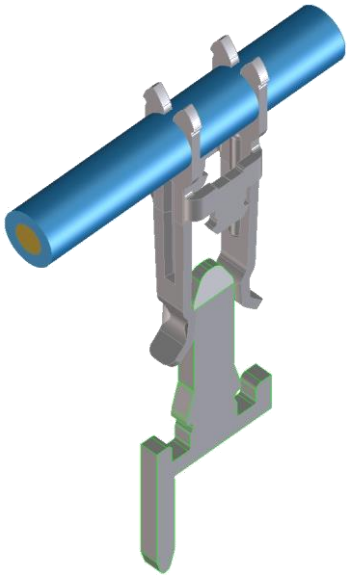
Partition 5 mm

- for 2 A
- 2-6-pole
- cross section
  0,22…0,38 mm²
- acc. to spec sheet 352300 01



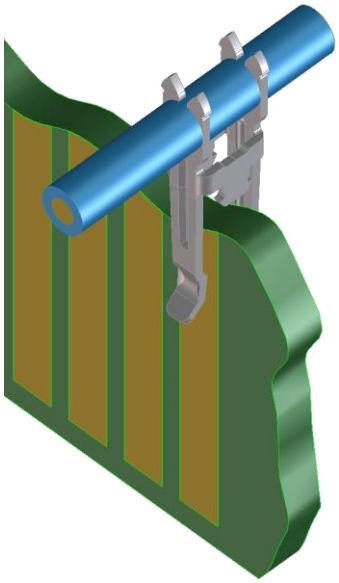
2 Contact principle

Indirect plugging on the contact pin



Insulation displacement connection
(test acc. to DIN EN 60352-4 / IEC 60352-4)

Direct plugging on the PCB



Insulation displacement connection
(test acc. to DIN EN 60352-4 / IEC 60352-4)

3 Application tooling and machines for 351000, 351100, 351200, 351300, 351700, 351800, 352100 und 352300

The function, safety and quality of the connectors are only guaranteed by using of LUMBERG processing equipment. It has to be taken into account that the connectors aren't checked electrically before the processing / assembling. Because of that an electrical test should be carried out after processing / assembling.

The user bears full responsibility if any other processing equipment is used.

In case of using any lubricants or sliding agents in the feed and press areas residues (impurities) must not come onto contact with the connectors.

Manual processing tool
For fitting single wires and ribbon cables. For single and small series.

Manual processing device
For fitting single wires and ribbon cables. For small series.

Pneumatic processing device
Pneumatically assisted processing device with manual cable feed and connector feed. For small and middle series.

Semi-automatic processing device
To the economic assembling of automatic connector feed and manual cable feed. For serial production.

Automatic processing device
For optimal assembling of automatic wire feed and connector feed. For industrial mass production.

4 Cable specification

The cable specification must be kept. Any deviation must be discussed and approved by LUMBERG.

4.1 Cable specification cross section for connection 0,38mm²

Technical specification sheet 908 14

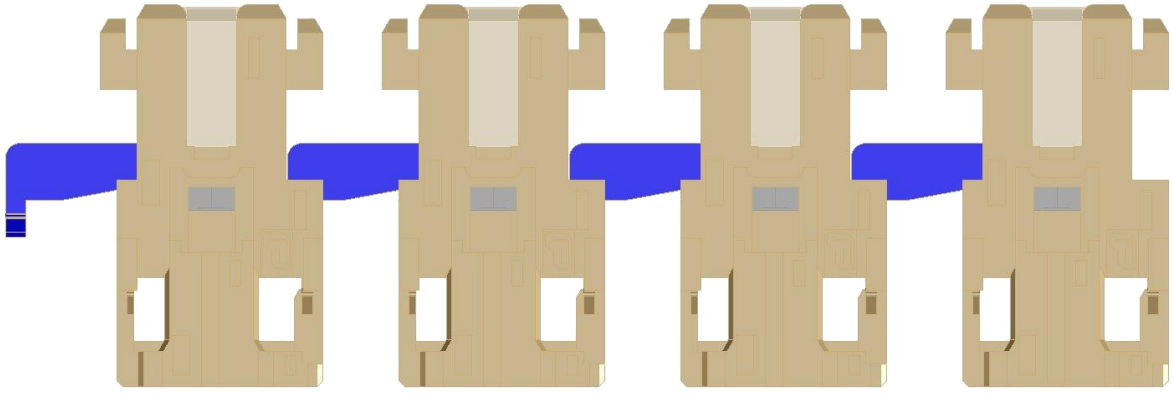
Other approved cable see LUMBERG release list in the internet at
www.lumberg.com

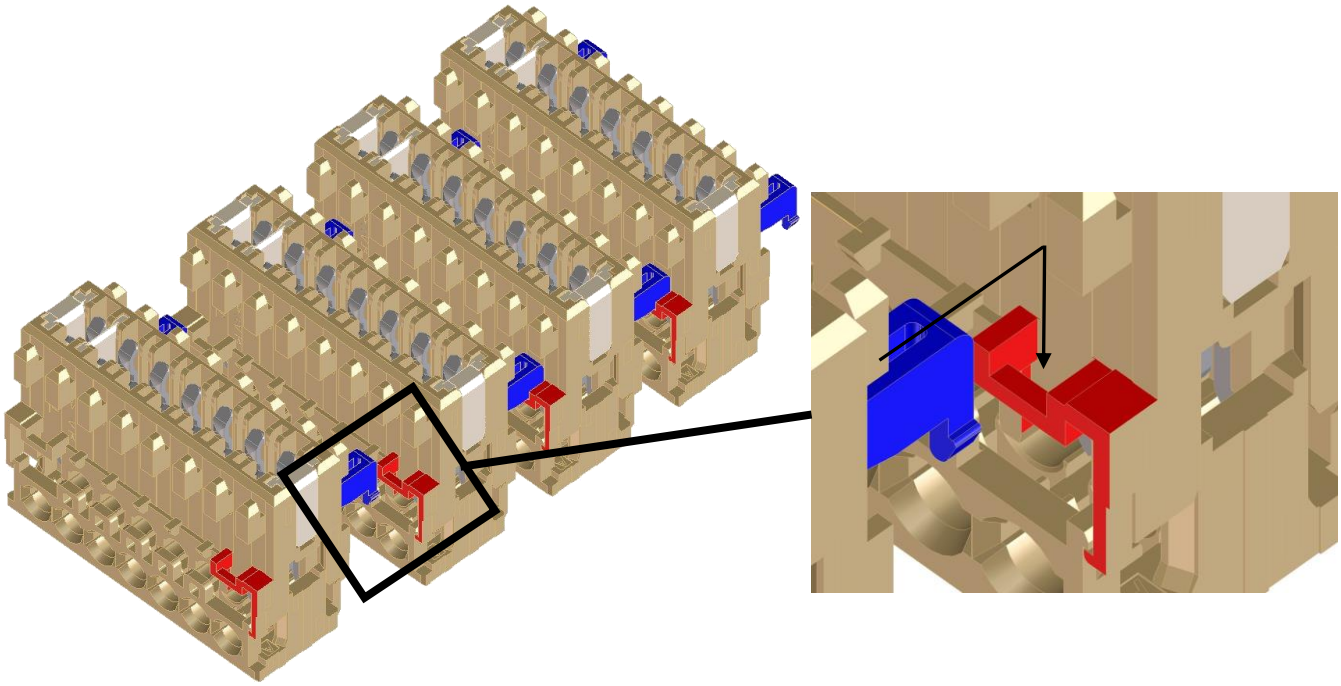
5 Assembly

Connector and cross section should be adapted with each other acc. LUMBERG specification (see technical Datasheet).

5.1 Connector feed

The links are processed with taped connectors. The connectors are separated for processing. Before assemble is a separation of the chain links needed. To optimize the processing of the chain can, if necessary, by simple assembly of chain links (see figure) are automatically fair.





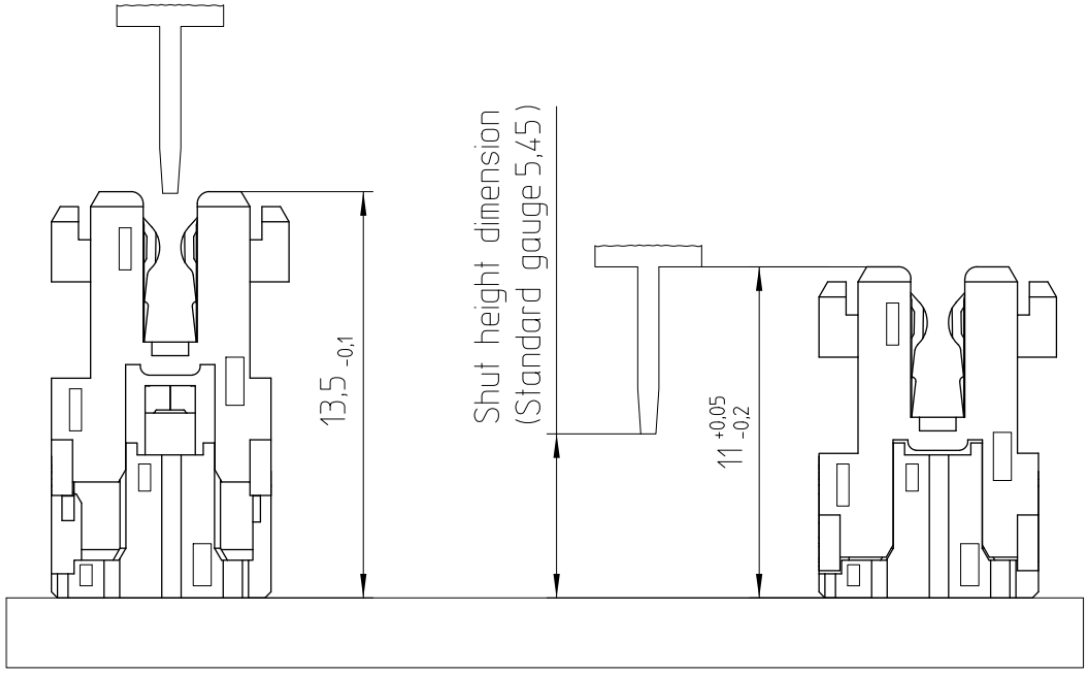
5.2 Impression die stamp

Only use impression die stamps from LUMBERG
Impression die stamps: free of lubricants and sliding agents.

5.3 Adjustment dimension of the processing machine

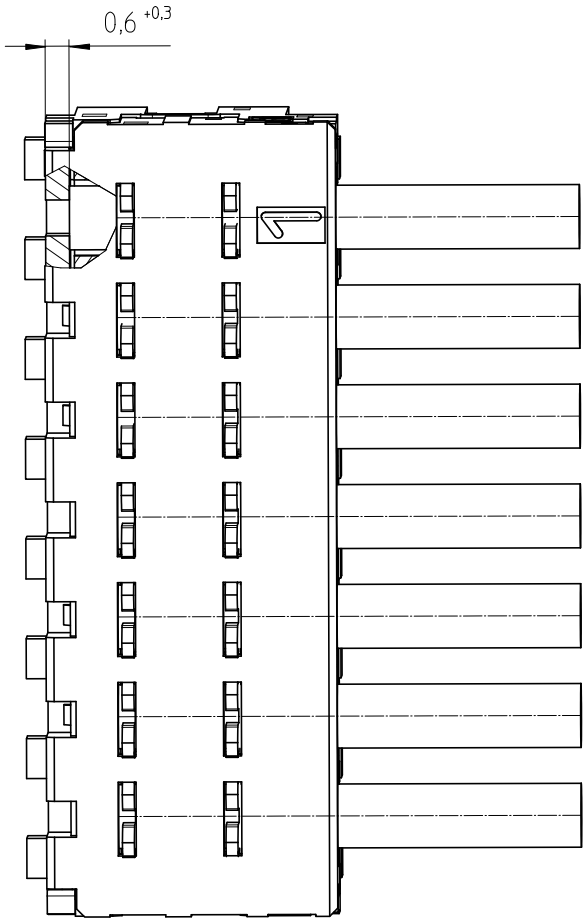
The height of the connector is a decisive factor for the functionality of the connector. It is determined by the adjustment dimension on the processing machine. The crimp height must be determined no more than 30 minutes after the crimping process. For the acceptance of the processing machine, it must achieve a cmk > 1.67, and a cpk > 1.33 for series production. We recommend setting the crimping dimension to the tolerance center for the configuration of the processing machine. When measuring the crimp height, a plate micrometer gauge should be used with a plate diameter of 20 mm. The crimp height should be measured at both ends and in the middle.

impression die stamp



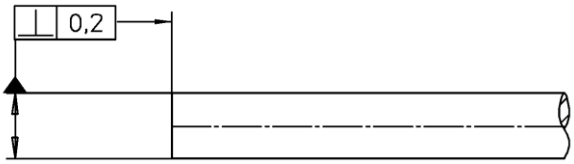
5.4 Wire end position

There must be the correct cable protrusion to guarantee good wire termination in both ID slots of the contact. The stop position of the wire is taken into account when processing and checked with appropriate measures after termination. The end-position query must always be performed completely.



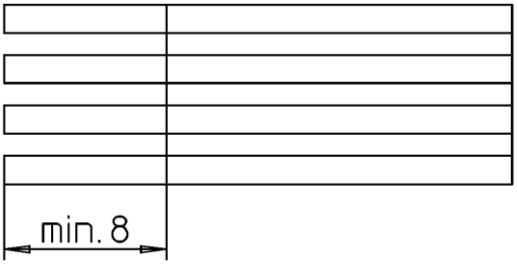
5.5 Wire (stranded wire / flat cable)

The cable ends must be cut off without burr deforming.



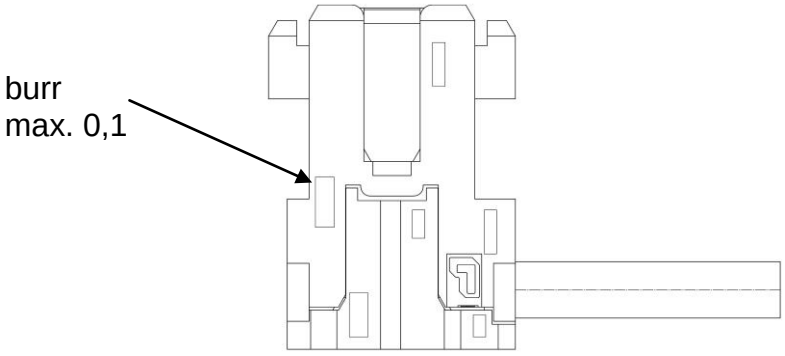
No cuts in the insulation are allowed in wire exit direction (visual check). Insulation cuts are permitted between the ID slots of the contact.

Flat cables must be punched out.



5.6 Housing

No damage of the connector is allowed after termination (visual check).
The links must be cut off without burr.

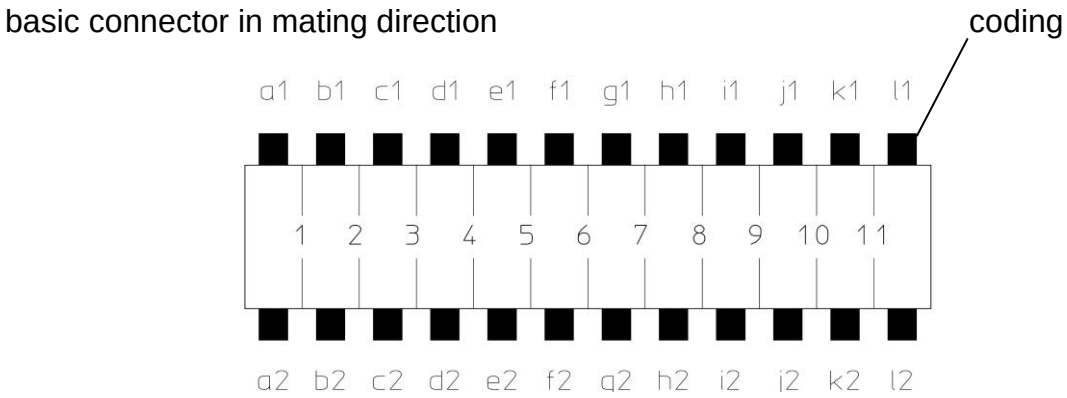


6 Cutting-off coding keys

The cutting-off coding keys acc. to RAST 2.5 standard at the termination machine. The allocation of connector, color marking and cutting-off keys are the sole responsibility of the customer.

Caution!
Connectors, pin headers and guide frames are always marked in mating direction.

6.1 Coding acc. to RAST 2.5



6.2 Cutting blades

To ensure a correct cutting-off of the coding keys, use only LUMBERG cutting blades. The plug-in area must not exceed a dimension of 5.3 mm (a minimum of residual cutting burrs are permitted).

7 Quality assurance

For all working processing steps and alterations (e.g. product launch, changes of the cable, changes of the tool or machine …), which may affect the product quality, the responsible departments have to take care of appropriate quality assurance steps.

7.1 Quality features

The following quality features must be taken into consideration:

7.2 Quality features / IDC

- ID slot width
- Symmetry of the ID slot
- Cable quality
- Cable insertion depth
- Cable protrusion
- Electrical testing

7.3 ID slot width

LUMBERG guarantees correct ID slot.

7.4 Symmetry of the ID slot

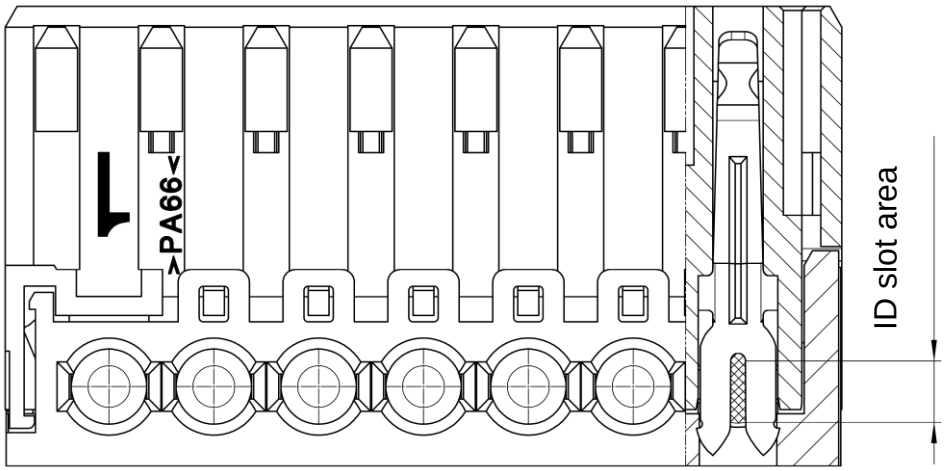
Symmetry of ID slot (cable tolerance ±0,1) is guaranteed by the body.

7.5 Cabel quality

The cable must meet LUMBERG specification acc. to point 4.1.
Customized cables, which are listed in the release lists, have to correspond with the available specification sheets.
Only LUMBERG released cables are to be used. The customer bears full responsibility for the correct mating when cables are used which are not listed in the release lists.

The user must ensure that all approved wires are delivered in an adequate quality. The wire cross-section, concentricity, micro Shore hardness and the termination (lay) length should all be checked.

7.6 Contact insertion depth



The wire insertion depth is determined by the height of the body. All singles conductors must be in the ID slot area.

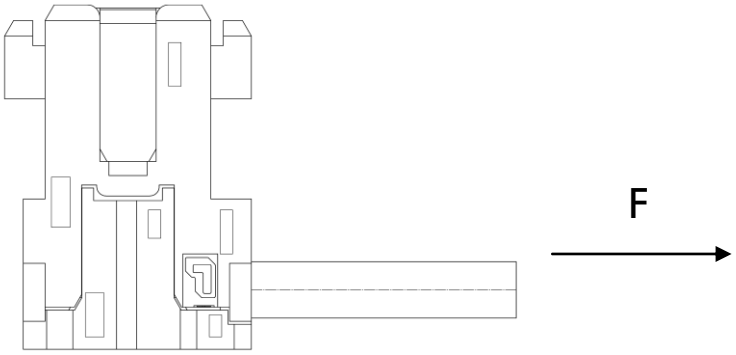
7.7 Cable protrusion

The cable protrusion acc. to point 5.4 must be kept. Aprotrusion of the cable in the housing leads to an incorrect mating.

7.8 Retention force of the wire

The extraction force of the wire from the IDC contact must be as follows:

For PVC wire: 0,38 mm² > 50 N

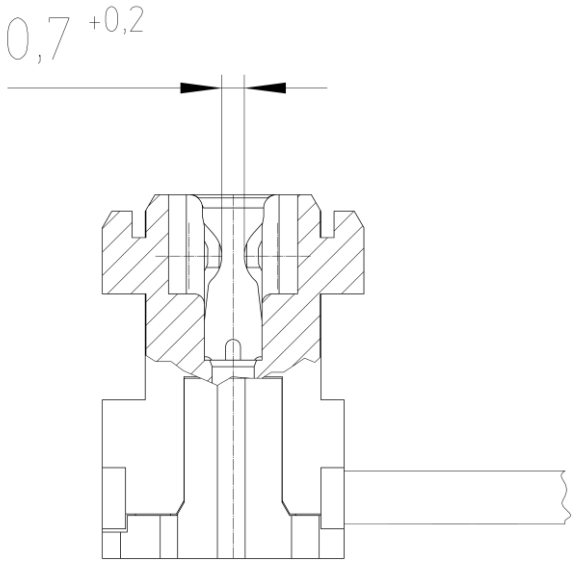


The stated value for the conductor's pull-out force is the typical value established during a test carried out with a standard 0,38 mm² line. All values were determined under laboratory conditions and serve as a reference.

A speed of 50 mm/min is used to determine the extraction force.

7.9 Conatct gap

Contact gap after termination.



7.10 Electrical testing

Electrical testing shall be performed in accordance with IPC/WHMA-A-620.
The nature and extent of the electrical tests (short circuit testing, continuity testing, insulation testing, high voltage testing, etc.) should be specified depending on the application and the processing machine.

8 Storage

Tin-plated and silver-plated surfaces can undergo a physical aging process that may negatively affect their ability to be soldered. In order to maintain the best connection characteristics, make sure that the following instructions are closely followed during additional processing steps:

Storage conditions:
The parts should ideally be stored in the original packaging, at a constant temperature of 21 – 25° C, with a relative humidity of no more than 55%. The components should not be exposed to direct light. They should also be protected from any extreme ambient conditions (such as air pollution).

The storage time should be kept as short as possible, especially for silver-plated components and for solder connections in general. Our experience is that tin-plated components can be soldered for about a year after delivery when using the proper conventional flux. Silver-plated components, owing to their physical characteristics, should be processed within about six months of delivery.

These specifications are based on experience using components stored under optimal conditions. They do not constitute a binding commitment for the fulfillment of any characteristics.

Ask Lumberg for more information about alternative packaging options for other temperatures and environmental conditions.