Robert Bosch GmbH

1 928 A00 70M-EN

Processing Specification

BCB 0,6

VALID	CHANGE	DWN.	CHK.
20.02.2003	First edition	Jupe	Rehbein
03.07.2003	Release	Frauhammer	Rehbein
03.12.2003	Change of tolerance for insulation crimp and conductor crimp	Jupe	Rehbein
18.10.2006	92J14000	Seel	Rehbein
03.05.2007	F1928498748 (Added information for wire cross section 0,85 mm² JASO)	Seel	Rehbein
05.10.2007	92J14687 Rev. 1	Seel	Rehbein
16.12.2009	F1928499044 (Added information for Ag-terminal variant 1 928 499 044 /...045)	Seel	Vogt

1 General

These specifications include the processing guidelines for the terminal BCB 0,6.
The specification is valid for the contacts in chapter 7.1. For the processing are only tools from Bosch according to chapter 7.2 to be used.
The processing for products in series has to be performed with automatic tools. The usage of manual crimping tools are only permissible in case of repair.

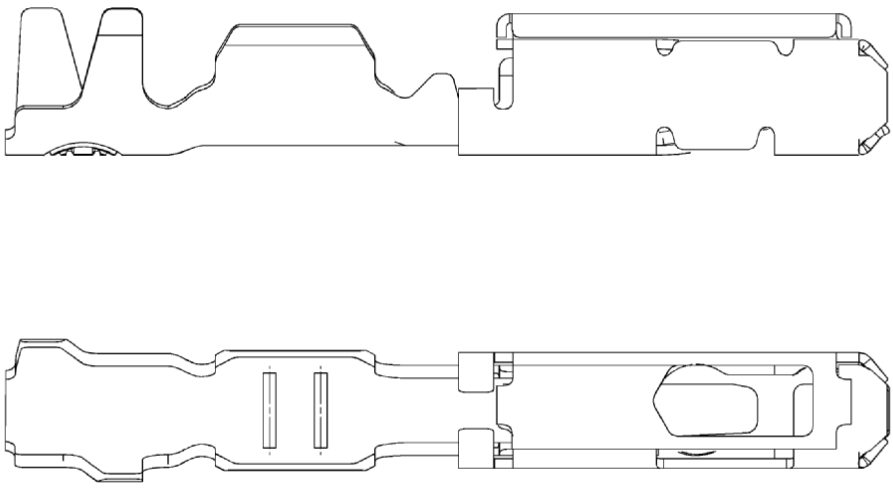
Dimensions, material and other relevant documents can be obtained from the current Bosch offer drawings.

2 Description

The crimping connection area is laid out for wires type FLR-B according to ISO 6722.
FLR-wires with 0,35 -0,85 mm² may be applied (according order number refer to chapter 7.1).
Other wires need the approval of the development department. For permissible wire measures refer to current Bosch offer drawing. Double appliances are not permissible.

The terminal can be mounted in only one orientation.

The terminals are delivered on disposable contact-reels (11000 terminals per reels). The packaging must be disposed off by the user. The terminals are suitable for transverse feed from the left.



3 Processing

3.1 Manual crimping tool

Manual crimping tools can be obtained for the processing of the terminals (for order information refer to chapter 7.2)
Manual crimping tools are intended for the repair of defect wiring harnesses. For operation in series-manufacturing, an application tool is essential.

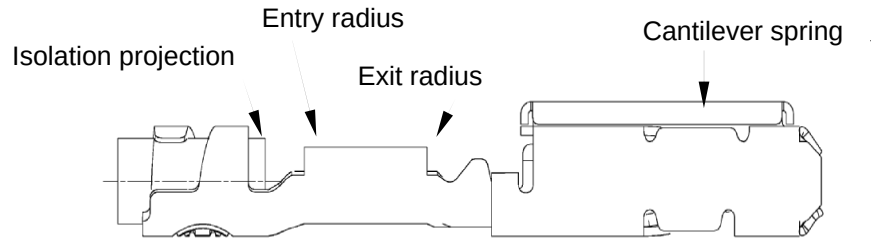
Features of the crimping tool:
- Positioning of the contact per insertion notch
- Possibility of unlocking in case of faulty handling

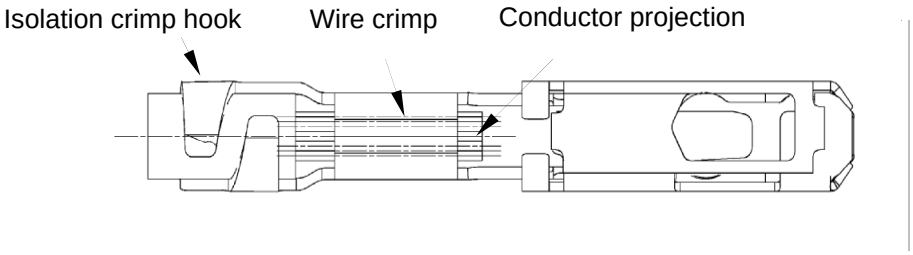
3.2 Application tool

For the automatic processing of the terminals, application tools can be obtained
The application tools are only suitable for the processing of parts in series!

Features of the application tool:
- Crimp height adjustments by small raster per 0,02 mm crimp height
- Anvil adjustable in height
- Parts subject for wear are exchangeable
- Adjustable to different spacing of the transport lead
- Tyco-Standard–Compliance allows the use of conventional presses.

3.3 Crimping guidelines





Adjustment of the stripping length of 0,35 - 0,50 mm² = 3,20 mm ±0,15
Adjustment of the stripping length of 0,75 / 0,85 mm² = 3,50 mm ±0,15

3.3.1 Positioning of the wire in the crimp

Insulation projection: min: 0 mm
max: 1,5 mm

Conductor projection: min. 0,1 mm
max. 0,7 mm

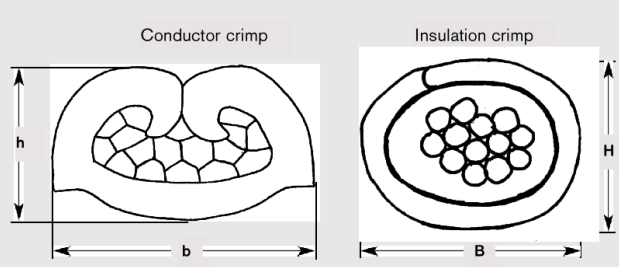
Separator length: max. 0,3 mm

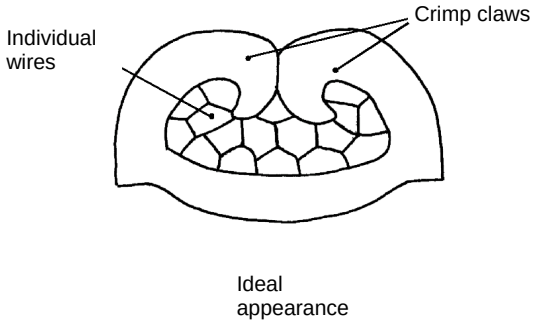
Separator ridge: max. 0,03 mm

Entry radius: exists visibly, max. 0,15 mm

Exit radius: not required, permissible up to max. 0,05 mm

3.3.2 Crimp dimensions





- specified values refer to type FLR-B (ISO 6722)

		Conductor crimp (wire crimp)		Insulation crimp	
wire [mm²]	**contact**	**Conductor crimp height - h - ± 0,03 [mm]**	**Conductor crimp width - b - ± 0,05 [mm]**	**Insulation crimp height - H - ± 0,05 [mm]**	**Insulation crimp width - B - ± 0,05 [mm]**
0,35	1928 492 555 1 928 499 044	0,76	1,43	1,50	1,83
0,50	1928 492 555 1 928 499 044	0,86	1,43	1,80	1,83
0,75	1928 492 556 1 928 499 045	1,07	1,43	2,05	2,03

- specified values refer to JASO - wire type 2

JASO wire type 2 AVSS (nominal size)	**diameter [mm²]** (calculated area)	**contact**	**Conductor crimp (wire crimp)**		**Insulation crimp**	
			Conductor crimp height - h - ± 0,03 [mm]	**Conductor crimp width - b - ± 0,05 [mm]**	**Insulation crimp height - H - ± 0,05 [mm]**	**Insulation crimp width - B - ± 0,05 [mm]**
0,50	0,562	1928 492 556	0,86	1,43	1,95	1,95
0,75	0,789	1928 498 748	1,07	1,47	2,12	2,05
0,85	0,859	1928 498 748	1,08	1,47	2,17	2,05

notes:

1. **The force measuring the conductor crimp should be performed with a calibrated crimp height micrometer: F = 3–10 N**
2. **The crimp width is a tool-related dimension and is defined as the distance between the two tangential points of the rolling radii and the edges of the crimp. It is not possible to test the crimp width for production monitoring purposes.**

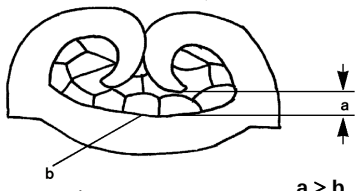
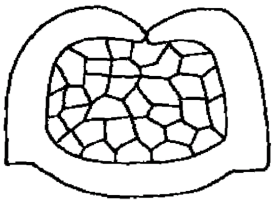
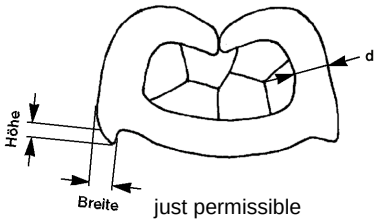
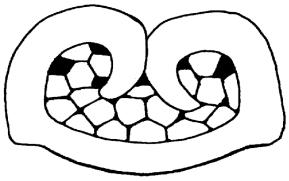
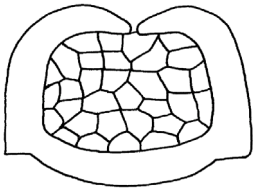
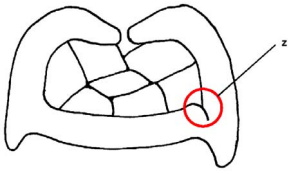
parallelism:

- Conductor crimp to cantilever spring: 0,25 mm
- Insulation crimp to cantilever spring: 0,25 mm

symmetry:

- Insulation crimp to cantilever spring: 0,15 mm

3.3.3 Micrographs

just permissible		
b = ½ Diameter of a stranded conductor  just permissible **a ≥ b**	 just permissible	 just permissible **max. width = ½ d**
not permissible		
 not permissible **hollows**	 **crimp claws not closed** not permissible	 **material torn** not permissible

3.3.4 Extraction force of crimp

Extraction forces must be according to the requirements of TKU 1 928 A00 65T.
The measurement is performed according to DIN IEC 512-8 with open insulation crimp.
Pull out speed: 25 mm/min

Requested values:

Conductor cross section [mm²]	Extraction force F [N]
0,35	≥ 50
0,50	≥ 70
0,75	≥ 90
0,85	≥ 110

3.3.5 Visual test

- All individual cores have to be included in the conductor crimp.
- Individual cores must be undamaged.
- Crimp claws must be closed.
- Formation of ridges on base of crimp should not be too big. (ridge height max. 0,1 mm).
- Terminal must be undamaged: control if bends or contusions on raster spring, cantilever spring and body of terminal.
- Adherence of conductor position and stripping length.
- Adherence of symmetry of terminal.

4 Assembly

4.1 manual

The terminal can be assembled only one orientation. The alignment is put into operation via the flag on the terminal. The flag serves as orientation on the terminal. The alignment of the terminal must not be lost during assembly.

After the assembly, the complete locking of the terminal is to be tested with a subtle tuck on the conductor (max. 15 N), before the secondary locking lance is pushed in.

A so called Push – Test (checking the correct locking through inserting a pin or similar with defined test force) is ***not permissible*** .

5 Final test

The electrical final test is to be performed with a suspended test pin. The test pins have to be constituted in a way, that the „finding“ of the plug opening is possible in all tolerated positions (without springing in), at the same time the test pins must not be able to penetrate the contact zone. Queries regarding the test pins see address (chapter 8).

The electrical final test is to be performed after the closing of the secondary locking device.

6 Disassembly

In case of a faulty assembly or in case of repair of faulty wiring harnesses, the secondary locking device has to be opened first and the terminal has to be removed with a special disassembly tool (refer to chapter 7.2).
The disassembly is exclusively to be performed with an RB-tool.

After the disassembly, faulty terminals are to be tested for damage. Are the requested test-criteria as described in chapter 3.3.6 not met, the terminal has to be replaced.

7 Order information

7.1 Terminal

Crimping range [mm²]	Surface	Part no.
0,35 - 0,50 mm²	Sn	1 928 492 555
0,35 - 0,50 mm²	Ag	1 928 499 044
0,75 mm²	Sn	1 928 492 556
0,75 mm²	Ag	1 928 499 045
0,85 mm² JASO wire	Sn	1 928 498 748

7.2 Processing tools

Article	Profile of inset	Part no.
Crimping pliers FLR-B wire	0,35 / 0,50 / 0,75	1 928 498 753
Crimping pliers JASO wire	0,50 / 0,75 / 0,85	1 928 498 754

Article	Crimping range [mm²]	Part no.
Crimping tool	0,35 - 0,50 mm²	1 928 498 749
Crimping tool	0,75 mm² / 0,85 mm²	1 928 498 750
Wear part set	0,35 - 0,50 mm²	1 928 498 751
Wear part set	0,75 mm² / 0,85 mm²	1 928 498 752

Article	Part-no.
Disassembly tool	1 928 498 755

8 Information and addresses

8.1 Ordering

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8.2 Technical information

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