



Labeling and serial number record of specified assemblies

Labeling of specified assemblies

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CONTENT

1.	PURPOSE AND SCOPE OF DOCUMENTS	4
2.	IDENTIFICATION / LABELLING	5
2.1	Labelling of circuit boards and flat modules (PCB and PCBA).....	5
2.1.1	Labels for unassembled printed circuit boards (PCB)	5
2.1.2	Labels for flat modules, assembled (PCBA).....	6
2.1.3	Additional labels for variant x: Definition of the variant	7
2.1.4	Supplementary labels for design deviations	7
2.2	Mechanical Parts (MET) & Specification Parts (BGR).....	8
2.3	Labelling of units, components and products (BGR)	9
2.4	Labels for packaging / outer packaging	10
2.5	Labeling quality management / functional testing	10
2.6.1	Procedure for the labeling of inspected articles.....	11
3.	SERIAL NUMBER RECORDING	12
3.1	Information on the delivery note	12
3.2	Serial number recording of units and products	12
3.2.1	Which serial number must be recorded?.....	12
3.2.2	In which form are serial numbers to be recorded?	12
3.2.3	How should the recorded serial numbers be transmitted?	13
4.	CONTACT	13
5.	APPENDIX	15
5.1	Issue.....	15

1. Purpose and Scope of documents

The purpose of this guideline is to achieve uniform labelling and continuous traceability in order to meet the quality requirements of AVL SET GmbH and the requirements of ISO 9001:2015.

We ask you as a supplier and partner to comply with the requirements of the specified label guideline so that we can jointly develop and produce our products to meet the highest standards.


These instructions apply to suppliers of AVL SET GmbH.

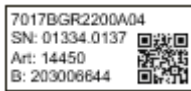
The Purchasing Department of AVL SET GmbH is responsible for the definition, maintenance and further development of these process instructions. Each supplier is required to point out any necessary changes in the documentation as required.

5 | Labeling of specified assemblies

2. Identification / Labelling

2.1 Labelling of circuit boards and flat modules (PCB and PCBA)

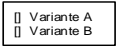
2.1.1 Labels for unassembled printed circuit boards (PCB)		
Dimensions	9 x 20mm	(size may vary)
Type	Label Ident	ERT-A025x008Z1 (if necessary heat resistant for soldering process)
Glue	Non-detachable	
Material	Heat resistant material	(Suitable for soldering process)
Colour	White	
Font	Black / ARIAL	Thermal transfer
Lettering	Module number	Format: 9999PCB9999-99 Example: 7017PCB2200-04
	Serial number	Format: SN: 99999.9999 Example: SN: 01334.0137 Manufacturer number at AVL-SET (5 digits). SNR (4 digits) The manufacturer number and serial number must be separated by a full stop! If the article has serial numbers, this will be indicated in the manufacturing documents. The manufacturer number (supplier number) is indicated in the order header.
	ERP article number	Format: Art: 99999 Example: Art: 14450
	Order number	Format: B: 999999999 Example: B: 203006644 Order number see order header
Barcode	QR Code accord. to ISO/IEC 18004:2006	QR Code should contain the serial number. Format: 99999.9999 Example: 01334.0137
Example label for circuit boards (PCB)		

2.1.2 Labels for flat modules, assembled (PCBA)		
Dimensions	9 x 20mm	(size may vary)
Type	Label Ident	ERT-A025x008Z1 (if necessary heat resistant for soldering process)
Glue	Non-detachable	
Material	Heat resistant material	(Suitable for soldering process)
Colour	White	
Font	Black / ARIAL	Thermal transfer
Lettering	Module number	Format: 9999BGR9999X99 Example: 7017BGR2200A04
	Serial number	Format: SN: 99999.9999 Example: SN: 01334.0137 Manufacturer number at AVL-SET (5 digits). SNR (4 digits) The manufacturer number and serial number must be separated by a full stop! If the article has serial numbers, this will be indicated in the manufacturing documents. The manufacturer number (supplier number) is indicated in the order header.
	ERP article number	Format: Art: 99999 Example: Art: 14450
	Order number	Format: B: 999999999 Example: B: 203006644 Order number see order header
Barcode	QR Code accord. to ISO/IEC 18004:2006 Minimum 6mm x 6mm	QR Code should contain the ERP article number , serial number and optional: Design deviation (BAW) . These are separated by comma. Format: 88888,99999.9999,BAW99 Beispiel für BGR mit BAW: 14450,01334.0137,BAW99 Beispiel für BGR ohne BAW: 14450,01334.0137
Example label for flat module (PCBA) with design deviation		

7 | Labeling of specified assemblies

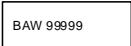
2.1.3 Additional labels for variant x: Definition of the variant

If the assembly number has an x as variant, the goods must be provided with a supplementary label.
(Example variant x: 7017BGR2200x04)

Dimension	5 x 10mm	(Size may vary)
Type	N.n.	(If necessary heat resistant for soldering process)
Glue	Not removeable	
Material	Heat resistant material	(Suitable for soldering process)
Colour	White	
Font	Black / ARIAL	Thermal transfer
Lettering	Variant	[] Type of variant e.g. [] 36 V [] 48 V
Example label variant x / embossing		

2.1.4 Supplementary labels for design deviations

Construction deviations from product specifications must be notified in advance to the AVL SET Purchasing Department and approved by the AVL SET Product Manager. For traceability purposes AVL SET assigns a construction deviation number with the release of the construction deviation. The goods of the affected delivery as well as the delivery note must be provided by the supplier with a corresponding indication of the construction deviation.

Dimension	5 x 10mm	(Size may vary)
Type	N.n.	(If necessary heat resistant material for soldering process)
Glue	Not removeable	
Material	Heat resistant material	(Suitable for soldering process)
Farbe	Weiß	
Font	Black / ARIAL	Thermal transfer
Lettering	Deviation of dimension	Format: BAW 99999 Example: BAW 00044 Number of SPS - Deviation of dimension number
Example Label Deviation of dimension		

2.2 Mechanical Parts (MET) & Specification Parts (BGR)

Labels for Mechanical Parts (MET) & Specification Parts (BGR)		
Dimension	25,4 x 50,8 mm	(Size may vary)
Type	Label Ident	ERT-J051X05Z1 (Removeable)
Glue	Removeable	
Material	Polypropylene	(Suitable for soldering process)
Colour	White	
Font	Black / ARIAL	Thermal transfer
Lettering	Drawing number	Format: 9999MET9999-99 / 9999BGR9999X99 Example: 7017MET2200-04 / 7017BGR2200X04
	Serial number	Format: SN: 99999.9999 Example: SN: 01334.0137 Serial numbers are made up: Manufacturer number for AVL SET (5 digits).SNR (4 digits) The manufacturer number and serial number must be separated by a period (!) If the article has serial numbers, this will be indicated in the manufacturing documents. The manufacturer number (supplier number) is indicated in the order header.
	ERP Article number	Format: Art: 99999 Example: Art: 14450
	Manufacturer number	Format: Art: 99999 Example: Art: 14450 Supplier number see order header For serial number-guided parts, the manufacturer number does not need to be listed again.
	Order number	Format: B: 999999999 Example: B: 203006644 Order number see order header.
Barcode	Later barcode if necessary 128	
Example label mechanical part	<p><i>Without serial number</i></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>7055MET2200-04 MAN: 01139 Art: 14452 B: 203008470</p> </div> <p><i>With serial number</i></p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>7055MET2200-04 SN: 01334.0137 Art:14452 B: 203008470</p> </div>	

2.3 Labelling of units, components and products (BGR)

Labels for units (BGR)			
Dimension	25,4 x 50,8 mm	(Size may vary)	
Glue	Not Removeable		
Material	Polypropylen	or comparable properties	
Colour	White		
Font	Black / ARIAL	Thermal transfer	
Lettering	Module number	Format: 9999BGR9999X99 Example: 7017BGR2200A04	
	Serial number	Format: SN: 99999.9999 Example: SN: 01334.0137 Serial numbers are made up: Manufacturer number for AVL SET (5 digits).SNR (4 digits) The manufacturer number and serial number must be separated by a period (!) If the article has serial numbers, this will be indicated in the manufacturing documents. The manufacturer number (supplier number) is indicated in the order header.	
	ERP Article number	Format: Art: 99999 Beispiel: Art: 14450	
	Order number	Format: B: 999999999 Example: B: 203006644 Order number see order header.	
Example label for unit (BGR)		<table border="1"> <tr> <td>7017BGR2200A04 SN: 01334.0137 Art: 14450 B: 203006644</td> </tr> </table>	7017BGR2200A04 SN: 01334.0137 Art: 14450 B: 203006644
7017BGR2200A04 SN: 01334.0137 Art: 14450 B: 203006644			

2.4 Labels for packaging / outer packaging

Labels for packaging / outer packaging		
Dimension	25,4 x 50,8 mm	(Size may vary)
Type	Label Ident	ERT-J051X05Z1 (Removeable)
Material	Polypropylene	(Suitable for soldering process)
Colour	White	
Font	Black / ARIAL	Thermal transfer
Lettering	ERP Article number	Format: Art: 99999 Example: Art: 14450
	Quantity of packaging	Format: Quantity: 99 pieces Quantity depends on delivery quantity
	Order number	Format: 99999999 Order number see order header
Example label packaging / outer packaging		<div style="border: 1px solid black; padding: 5px;"> Art:14452 Menge: xx Stück B: 203008470 </div>

2.5 Labeling quality management / functional testing

Articles that are subjected to a functional test should be clearly labeled for the following reasons:

1. **Thrustworthiness and credibility:**
A label indicates that the article has been checked and is based on reliable information. This strengthens readers trust in the content.
2. **Quality management:**
Labels act as seal of quality, confirming that the article meets specified standards. This helps the high quality of the content.
3. **Transparency and traceability:**
The labeling makes it clear according who which criteria and by which authority the article was tested. This promotes transparency and avoids misunderstandings
4. **Reader Focus:**
Labels make it easier for readers to quickly recognize high-quality and trustworthy articles without having to carry out their own checks.
 - In addition, a different color coding is used to differentiate between internal and external functional testes, which is defined in the marking guidelines. Labels help to increase the quality of information and reduce the spread of misinformation

11 | Labeling of specified assemblies

2.6.1 Procedure for the labeling of inspected articles

1. General labeling specification:

AVL SET defines a differentiated color coding to clearly distinguish between intern and extern performed functional tests. As far as possible the marking is applied in the immediate vicinity of the article label.

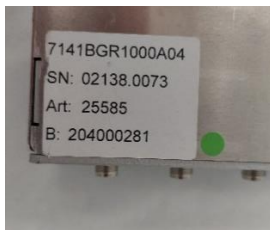
2. Labeling of articles with supplier functional test:

Article that have only been checked at the suppliers premises are marked with a **yellow point**.



3. Labeling of articles with internal functional testing at AVL SET:

Articles that only undergo a functional test at AVL SET are marked with a **green point**.



4. Labeling of articles with double testing (supplier and AVL SET):

Article that have been tested by the supplier and AVL SET:

- If both tests are passed, they are marked with a **green point** next to the supplier's **yellow point**.
- If the test at AV SET is not passed, the article is marked with a **red point** next to the supplier's **yellow point**. Wird die Prüfung bei AVL SET nicht bestanden, erfolgt die Kennzeichnung durch einen **roten Punkt** neben dem **gelben Punkt** des Lieferanten.



3. Serial number recording

3.1 Information on the delivery note

If parts are supplied with serial numbers, these must be indicated on the delivery note. It must be ensured that the information corresponds to the form on the labels.

Format: SN: 99999.9999
 Example: SN: 01334.0137

Serial numbers are composed of the 5-digit AVL SET manufacturer number and the 4-digit serial number. The manufacturer number and serial number must be separated by a dot (.). The manufacturer number (supplier number) is indicated in the order header.

3.2 Serial number recording of units and products

3.2.1 Which serial number must be recorded?

AVL SET defines units and products as all assemblies in which subassemblies and individual parts (specified or purchased externally) have been installed.

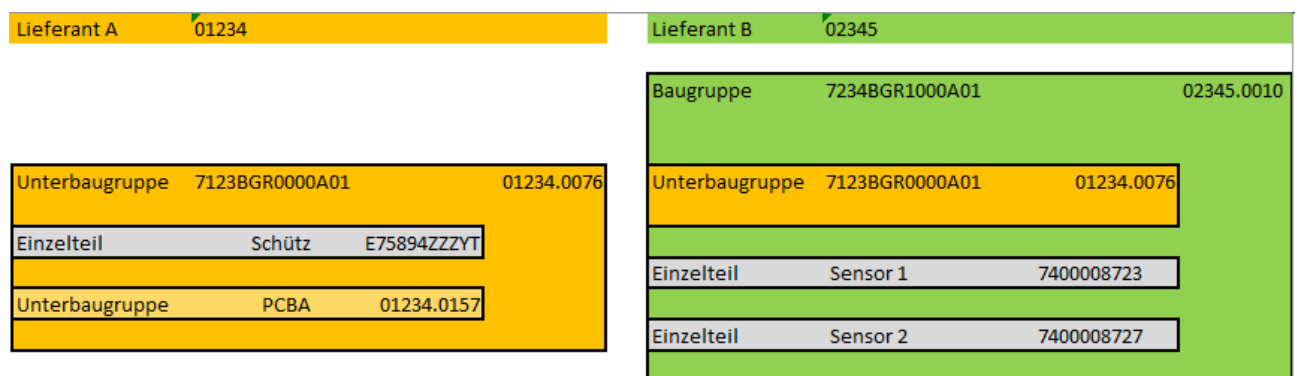
These integrated serial numbers must also be recorded in a CSV file and transmitted with the delivery.

All serial numbered components (identification;article;serial number), which are installed in the plug-in unit or the product, have to be recorded.

In case you deliver AVL SET specified sub-assemblies to another supplier of AVL SET GmbH, the electronic transmission of the serial number recording to AVL SET is also required with delivery to supplier B (see following diagram).

As supplier B, you only have to transmit the serial number of the subassembly to us, but not the individual parts installed in it and any further subassemblies.

The following diagram shows which serial numbers have to be recorded and in which depth serial numbers have to be recorded.



3.2.2 In which form are serial numbers to be recorded?

The following form is to be used for serial number recording:

13 | Labeling of specified assemblies

H;14450;01334.0137 (AVL specified main assembly)
E;15731;01334.0017 (AVL specified sub-assembly)
E;20597;7ZY3BA123578991 (Externally purchased component)

Explanation

1. Specification:
Identification main assembly or subassembly/individual part
H
E
E
...
H
E
E
...
By the identification (H/E) a separation to the next main assembly takes place.
I.e. several main assemblies can be transmitted in one CSV file.
2. Specification:
Part number
3. Specification:
Serial number

The specifications must be separated by a semicolon (;)..

Identifikation (H/E)	Artikelnummer	Seriennummer
H	14400	01378.0123
E	15730	01378.0017
E	20750	7TZ51389990012
H	14400	01378.0127
E	15730	01378.0022
E	20750	7TZ51389990031

Figure: Example of a serial number entry file

3.2.3 How should the recorded serial numbers be transmitted?

As a supplier of AVL SET you will receive an access for the AVL SET Supplier Extranet.

In this extranet you have to store the CSV file of the serial number recording as well as all agreed documentation like test reports and manuals.

For an better overview we ask you to create a folder for each order.

If you have not yet received access to your extranet, please contact einkauf-wangen@avl.com or contact your responsible AVL SET purchaser directly.

4. Contact

Address	AVL SET GmbH
----------------	--------------

14 | Labeling of specified assemblies

	Spinnerei 8 88239 Wangen im Allgäu GERMANY
Created by	Purchasing
Telephon	Zentrale: +49 7522 91609-0
Mail	creator: einkauf-wangen@avl.com Central: info-wangen@avl.com Service: support-wangen@avl.com

5. Appendix

5.1 Issue

Rev.No.	Date	Reason of changes
06	14.01.2022	Splitting PCB and PCBA Adding QR-Code
07	04.08.2022	Adapting QR-Code requirements Change of adress to Spinnerei 8
07.1	14.12.2022	Adaption of text part
07.2	16.02.2023	Correction reference footer
08	24.04.2023	Addition of serial number registration
09	25.03.2024	Update Layout
10	14.10.2024	Adding capter 2.5

FOR FURTHER INFORMATION; PLEASE CONTACT:

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