imos Barcode

The barcode is configurable in imos and can be output via the bills of material. In the following document you can find which settings have to be applied.

The explanations are based on imos 12.0.

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1. imos INI Settings

1.1 Systemflag (Systembit)

The settings in the **Systemflag** have an effect on the evaluation of the settings for the INI entry **BARCODE**.

```
!                0123456789012345678901234567890123456789012345678901234567890123
!                0000000000111111111122222222223333333333444444444455555555556666
SYSTEMFLAG=      1101100100000101001101010101100100010111100210000000010000000000
```

1.1.1 Systembit 5

With Systembit 5 the **order name** and the **part number** are applied for the Barcode.
Example.:
BARCODE=**%.4s%4d**

1.1.2 Systembit 38

With Systembit 38 the **order name**, **position** and **part number** are applied.
Example:
BARCODE=**%.4s%2s%.4d**

Systembit 5 has priority over the Systembit 38!
If either Systembit 5 or Systembit 38 are not set on 1, then **BARCODE=%.4s%2s%.4d** is always applied for the order name, position and number.

1.2 BARCODE

By default the barcode is defined as described in **1.1** Systemflag (Systembit)**.**

36er-System
%a can also be applied next to **%** for the number now. „**a**“ stands for alphanumeric.
Then the number is output in a 36-number system. That means with the characters 0 to 1 and A to Z.
At least 4 characters are output with **%.4a**. It is filled with zeros in front. However, a number in front of the point is ignored.

Extensions
Following additional information can also be defined for the barcode:

A) The additional instructions start and end with an @ sign.
B) The remaining instruction is from the digit where the String is output. If a „**-**“ is put in front of this position, then it is counted from the string end.
C) If a „**.**“ follows the described parameter in B, then you can also define how many characters of the string should be taken for the maximum length.

Example:

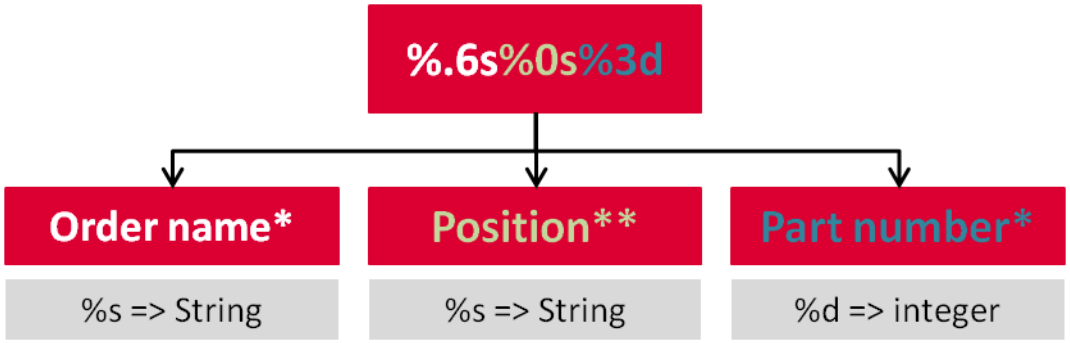
above	shines	The	sun“
12345	67890123	4567	89012
00000	00001111	1111	11222

Argument	Output content	Explanation
„@6.3@	sch	From the sixth digit 3 characters are output from the front
„@-4.4@	onne	From the fourth digit 4 characters are output from the end
„@14.4@	die	From the fourteenth digit 8 characters are output from the front
„@99.5@	Sonne	Since 99 is bigger than the number of the characters, the last 3 characters are taken in this case. This can also be achieved with @-3.3@.
„@-99.4@	Oben	As described before, only starting from the first digit.

Systembit 38 must be set on **1** to make the setting under **BARCODE =** effective.

1.2.1 Variants

The barcode can be defined as follows:
%.6s%0s%.3d



*) The **.** (point) in front of the string is important to have a correct barcode if the order name or the number has less characters as given.
**) The plan position is not output here.

But this can also be written:
%@-6.6@6s%0s%3d

⇨ The last six digits oft he order name are applied for the barcode.
⇨ The complete plan position is output

Interleaving is also possible:
%@7.2@@11.2@

⇨ From the seventh digit 2 characters and form the eleventh digit 2 characters are output.

1.3 BARCODE_VERSION

Version	Imos Version	Explanation	Barcode clearly
0	Previous	The barcode is generated from the Part-ID. The barcode is only regenerated with user input. The barcode is clear in this modus.	Yes
1		The barcode does not depend on the Part-ID. It is counted continuously without a gap. Automatically regenerating of the barcode with any output. The barcode is clear in this modus.	Yes
2	New	The barcode generation determines the barcode via the NC-Checksum. That means identical parts always obtain order related the same barcode. This is especially important with existing CAM connections, because assigned barcodes cannot be modified if the part is not modified. Every modification on a part modifies the barcode at the same time. Since several parts can have the same NC-Checksum, the barcode is not clear in this modus.	No
3	From imos 9.6.c00b21	The barcode is determined via the so-called UID. The UID identifies a part on the basis of its constructive position in an article. Thereby the zone hierarchy is evaluated in an article. Example: The width of an article is modified. As a result the width of the third construction shelf in the second zone and therefore its NC-Checksum as well. However, the shelf keeps its UID. The UID remains as well if the shelf is manually modified. UIDs are clear in an article. Combined with the imos ID of the article group, which remains the same when modifying, follows a clear ID within an order.	Yes
3.1	From imos 9.6.c00b21	Like BARCODE_VERSION=3, however, the barcodes of deleted parts are not applied again. This can lead to possible big gaps in the barcodes which are not filled.	Yes

1.4 IDRENUM

Only relevant for BARCODE_VERSION = 0 or 1
Defines if the imos-IDs need to be renumbered when reloading an order.
0 = No
1 = Yes

1.5 Format

With the 36-system **%a** can also be applied next to **%** for the number now. „**a**“ stands for alphanumeric.
Then the number is output in a 36-number system. That means with the characters 0 to 9 and A to Z.
At least 4 characters are output with **%.4a**. It is filled with zeros in front. However, a number in front of the point is ignored.

36er-System
%a can also be applied next to **%** for the number now. „**a**“ stands for alphanumeric.
Then the number is output in a 36-number system. That means with the characters 0 to 9 and A to Z.

2. Settings in the CMS.ini

2.1 BARCODEDEFHEIGHT

Defines the height of the barcode on the label.

2.2 BARCODEDEFWIDTH

Defines the width of the barcode on the label.

2.3 BARCODETYPE

BARCODETYPE **=>** defines which barcode type has to be output.

2.3.1 Supported Barcode Types

The following variants:

Nr.	Barcodetype	Explanation
1	BCT_EAN13	• Check digit required • Font **OCR-B** required
2	BCT_EAN8	• Check digit required • Font **OCR-B** required
3	BCT_UPCA	• Check digit required • Font **OCR-B** required
5	BCT_CODABAR	• Check digit optional
6	BCT_CODE39 **Standard**!	• Code 3 from 9 • Check digit optional
7	BCT_2OF5	• 2 from 5 Industrial (25ID) • Check digit optional
8	BCT_INTERLEAVED2OF5	• 2 from 5 interleaved • Check digit optional
9	BCT_UPCE	• First digit always 0 • Check digit required

Nr.	Barcodetype	Explanation
		• Font **OCR-B** required
10	BCT_EAN13_2	• Check digit required • Font **OCR-B** required
11	BCT_EAN13_5	• Check digit required • Font **OCR-B** required
12	BCT_EAN8_2	• Check digit required • Font **OCR-B** required
13	BCT_EAN8_5	• Check digit required • Font **OCR-B** required
14	BCT_UPCA_2	• Check digit required • Font **OCR-B** required
15	BCT_UPCA_5	• Check digit required • Font **OCR-B** required
16	BCT_UPCE_2	• First digit always 0 • Check digit required • Font **OCR-B** required
17	BCT_UPCE_5	• First digit always 0 • Check digit required • Font **OCR-B** required
21	BCT_CODE93	• Code 93 • Check digit optional
22	BCT_POSTNET	• uThick/ uThin
26	BCT_CODE128	• consisting of CODE 128A, B und C • Check digit required •
27	BCT_EAN128	• consisting of EAN 128A, B und C • Check digit required •
28	BCT_EAN2	• No check digit
29	BCT_EAN5	• No check digit

Nr.	Barcodetype	Explanation
30	BCT_CODE39EXT	• Code 3 from 9 extended • Check digit optional
31	BCT_CODE93EXT	• Code 93 extended • Check digit optional
32	BCT_RM4SCC	• Royal Mail 4 Start Customer Code • Check digit required
33	BCT_MSI	• Check digit optional
34	BCT_ISBN	• International Standard Book number • Check digit required
35	BCT_ISBN_5	• ISBN + EAN5 (for calculating) • Check digit required
36	BCT_IDENTCODE	• Identcode of the German Post AG • Check digit required
37	BCT_LEITCODE	• Postal code of the German Post AG • Check digit required
38	BCT_PZN	• Pharma Central code • Check digit required
39	BCT_CODE11	• Code 11 • Check digit optional
40	BCT_2OF5MATRIX	• Matrix 2 from 5 • Check digit optional
41	BCT_TELEPENA	• Telepen-A • Check digit optional

2.3.2 Display of the variants



*) The red written numbers are the numbers, which must be inserted in CMS.ini for **BARCODETYPE**.

Barcode

3. Example

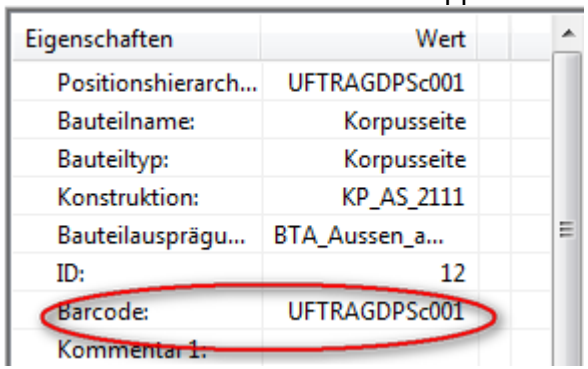
The output of the barcode is explained on an example below.

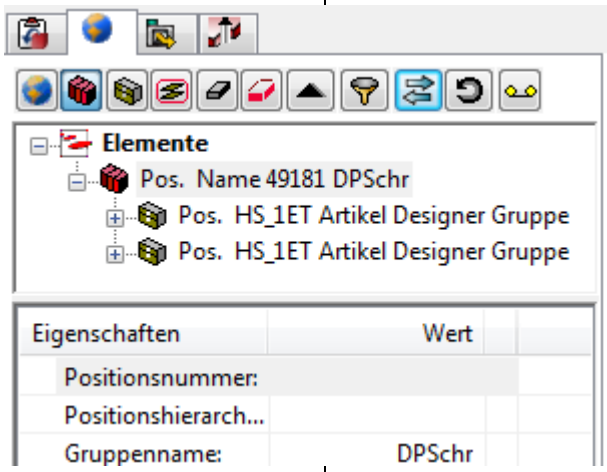
In the **INI** the barcode has been defined as follows:
BARCODE=%@-6.6@s%.4s%.3d

The order has been saved under the name **ORDER**.

The article is in aplan position with the group name **DPSchr**.

The barcode **UFTRAGDPSc001** appears





%@-6.6@s	=> the last 6 digits from the end of the order name are applied	=> **UFTRAG**
%.4s	=> 4 digits of the plan position are output	=> **DPSc**
%.3d	=> 3 digits of the part number are output	=> **001**