

ComGage – Test step function SFct004

“Automatic generation of serial numbers”



1. Introduction

The ComGage special function “Automatic generation of serial numbers” (*SFct004*) serves for the automatic generation of serial numbers, which shall be saved in the test order as reference information together with the measuring values.

Test order-related serial numbers and serial numbers unrelated to a specific test order can be generated. The serial numbers are generated depending on the configuration of this ComGage special function in the corresponding test scheme.

Additional requirements and function components :

At least ComGage V4.12 is required to execute this function !

In Menu “Options / Reference Information”, the reference information type must be selected, under which the serial numbers shall be saved in the test order.

The nature of reference information datasets is that they are to be stored together with the measurement data. Hence, the influence on certain reference information datasets must be taken **prior to saving** the affected measurement dataset. I.e. the ComGage special function “*Set current reference information dataset*” must be executed **before** saving measurement values in order to take effect on the stored values.

A test order must be created. This ComGage special function works only with a test order.

The current status of generated serial numbers is saved in a file, which is stored in the directory that was selected as “Directory for test orders” in the ComGage menu “Options / Data Directories”.

The file has the following name :

“*SFct004_<Test order name>_<Reference information type number>*” → for serial numbers specific to test orders,

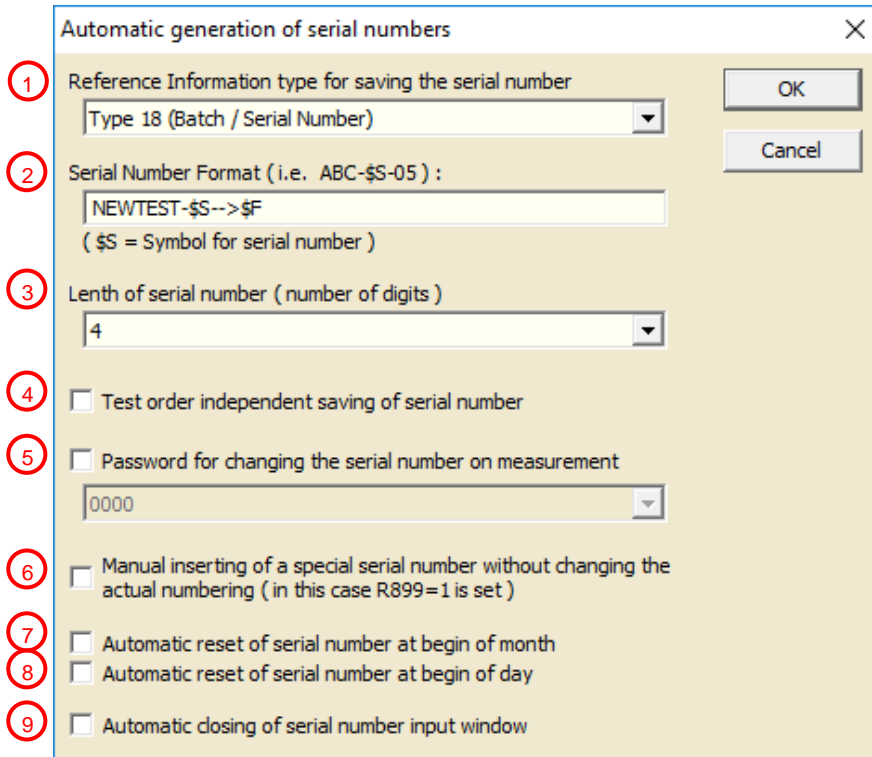
“*SFct004_All_Test_Orders_<Reference information type number>*” → for serial numbers unrelated to a specific test order.

Caution :

By changing the entry for the “Directory for test orders” in ComGage Menu “Options / Data directories”, the current status of the serial numbers is lost if the above-mentioned files are not moved manually!

2. Setup settings of ComGage special function

The setup dialogue of the ComGage special function “Automatic generation of serial numbers” contains the selection / input fields and checkbox options shown below.



Description of selection / input fields and checkbox options of the setup dialogue :

1.) *Reference Information type for saving the serial number*

The reference information type, in which the automatically generated serial number shall be saved, can be selected here.

2.) *Serial Number Format (e.g. ABC-\$\$-05)*

The format of the automatically generated serial number is determined with this input field. A freely definable text with placeholders can be entered here.

The following placeholders are available :

\$\$: Stands for the automatically generated numerical sequence within the serial number string. The length of this numerical sequence is set in a separate selection field, as described under point 3.).

\$F: Stands for additional information that is loaded from the CSV-file “SFct004.csv” into the serial number string. The additional information is loaded from the 3rd column of the file, depending on the current year and month information from the 1st and 2nd column, which matches the year and month as per the PC’s operating system. It is possible to add several lines in the file here.

It is for example possible to add monthly changing additional information to the serial number string.

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Instructions for the CSV file “SFct004.csv” :

Storage location

The file must be stored in ComGage installation directory.

File structure

Column 1: Year

Column 2: Month (1 = January, ..., 12 = December)

Column 3: Additional information string to be inserted in the serial number string.

Separator : “;”

3.) *Length of serial number (number of digits)*

With this selection field, the fixed length of the automatically generated numerical sequence within the serial number string is selected.

Leading zeros are used to ensure the length of the numerical sequence.

4.) *Test order independent saving of serial number*

If this checkbox is checked, then the automatically generated numerical sequence within the serial number string is further incremented and does not start with “1” again, even if a new test order is created or while switching between different test orders.

5.) *Password for changing the serial number (4-digit number)*

If this checkbox is checked, then a password (4-digit number) can be assigned, which can be used to change the automatically generated numerical sequence within the serial numbers string in a running measurement operation. The automatically generated numerical sequences thereupon are counted from the changed numerical sequence. I.e. a permanent offset is generated within the automatically generated numerical sequences.

This option can be called with the button “Change” in the serial number input window.

Note:

If this checkbox is checked, the given password is prompted also in the option described under 6.).

6.) *Manual insertion of a serial number without changing the actual numbering (in this case R899=1 is set).*

If this checkbox is checked, a single numerical sequence deviating from the automatically generated numerical sequence within the serial numbers string can be entered without changing the actual numbering. I.e. permanent offset is not generated within the automatically generated numerical sequences and the following automatically generated numerical sequences are further counted up without change.

This option can be called with the button “Rework” in the serial number input window. In this case, the register is set as R899 = 1.

In the next regular call of the function “Automatic Generation of Serial Numbers” without the input of an individual, deviating numerical sequence, the register is set as R899 = 0.

Note:

If the checkbox for the option described under 5.) is checked, the password given in 5.) is prompted for this option as well. The button “Rework” in the serial number input window is shown as active only if this checkbox is checked.

7.) *Automatic reset of the serial number at the beginning of the month*

If this checkbox is checked, then the automatically generated numerical sequence within the serial numbers string is again reset to “1” in the first call of the function “Automatic Generation of Serial Numbers” after changing the month as per the PC’s operating system.

8.) *Automatic reset of serial number at the beginning of the day*

If this checkbox is checked, then the automatically generated numerical sequence within the serial numbers string is again reset to “1” in the first call of the function “Automatic Generation of Serial Numbers” after changing the day as per the PC’s operating system.

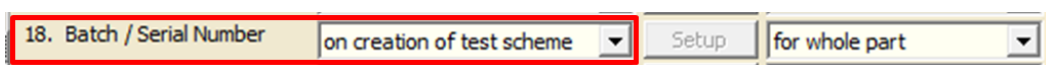
9.) Automatic closing of the serial number input window

If this checkbox is checked, then the serial number input window is closed automatically after calling the function “Automatic Generation of Serial Numbers”. I.e. manual acknowledgement or any other manual intervention in the programme flow is not required or possible. Thus, the integration in fully automated systems is possible.

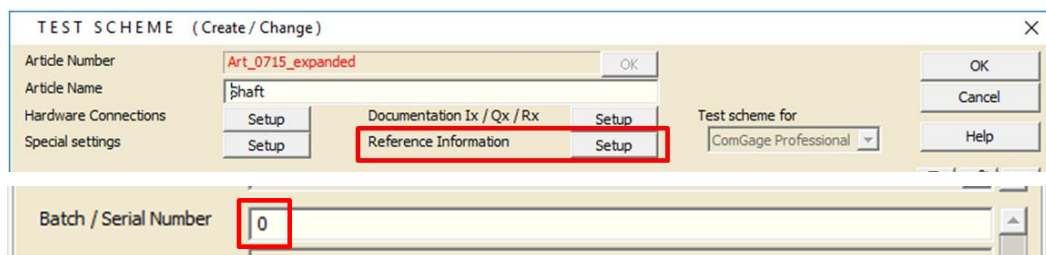
3. Integration of the ComGage special function in a test scheme

The following points are crucially important for the integration of the ComGage special function “Automatic Generation of Serial Numbers” in a test scheme.

- In the menu “Options / Reference Information”, the reference information type, under which the serial numbers in test order shall be stored has to be activated. Thereby, the query mode “on creation of test scheme” should be selected (see image below).



- While creating the test scheme, the reference information input window has to be opened in the programming window of the concerned test scheme with the Setup button of the option “Reference Information” (upper image). Then, the value “0” has to be entered in the selected reference information (lower image).



- In the sequence control of the test scheme, the call of the ComGage special function “Automatic Generation of Serial Numbers” must take place before the beginning of the test sequence in each case, so that the current serial number can be saved in the test order as reference information along with the measurement data.
- A test order must be created since the ComGage special function “Automatic Generation of Serial Numbers” can only be executed out in a running test order.

Note : A test order can only save 32700 different values (e.g. serial numbers) for each reference information type. I.e. after 32700 serial numbers, generated with the SFct004, a new test order has to be created.

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- The dialogue window shown below is opened by calling the function in measurement mode (i.e. test order is carried out).

Manual insertion
without changing
the consecutive
numbering

Permanent offset in
the automatically
generated serial
numbers

This field is activated
for editing the serial
number via one of
the two buttons.