



1. Introduction

The ComGage test step function “Communication with PLC over RS232” enables a PLC to set register values and reference information datasets in ComGage. The registers can then be used for the sequence control in the test scheme.

It also enables ComGage to set register values in the PLC.

License module 72 is required to use this test step function.

2. Communications protocol

Transmission format

9600, N, 8, 1

Command 1 : Setting a register in ComGage

ComGage provides one hundred registers (R1 ... R100) for this test step function, which can contain 16-bit integer values.

A register can be set by the PLC with the following command :

S<adr><content><cr> [5 byte]

<adr> → 8-bit address 1 ... 100 [1 byte] (number of the register in ComGage)

<content> → 16-bit integer value 0 ... 65535 [2 byte]

<cr> → ASCII Code : 13

First the high byte and then the low byte of the 16-bit integer value has to be transmitted.

Command 2 : Setting a register in the PLC

If the PLC also provides 100 registers, ComGage can set these registers, e.g. to send a good / not good signal to the PLC at the end of the measurement.

The following command is sent to the PLC :

G<adr><content><cr> [5 byte]

<adr> → 8-bit address 1 ... 100 [1 byte] (number of the register in the PLC)

<content> → 16-bit integer value 0 ... 65535 [2 byte]

<cr> → ASCII Code : 13

First the high byte and then the low byte of the 16-bit integer value is transmitted.

Command 3 : Setting a reference information dataset

This command can be used to send information, e.g. a serial number, from the PLC to one of the available reference information datasets (1 ... 30) in ComGage.

The following command can be used :

R<adr><content><cr>

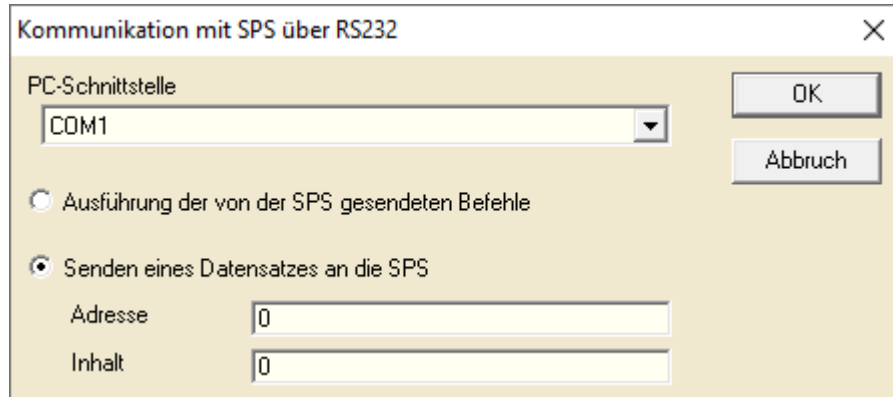
<adr> → 8-bit address 1 ... 30 [1 byte] (e.g. serial number = 18)

<content> → String with information (e.g. serial number, worker, ...)

<cr> → ASCII Code : 13

3. Configuration

The test step function is created within a test step. By clicking the *Setup* button, the following dialogue will be opened :



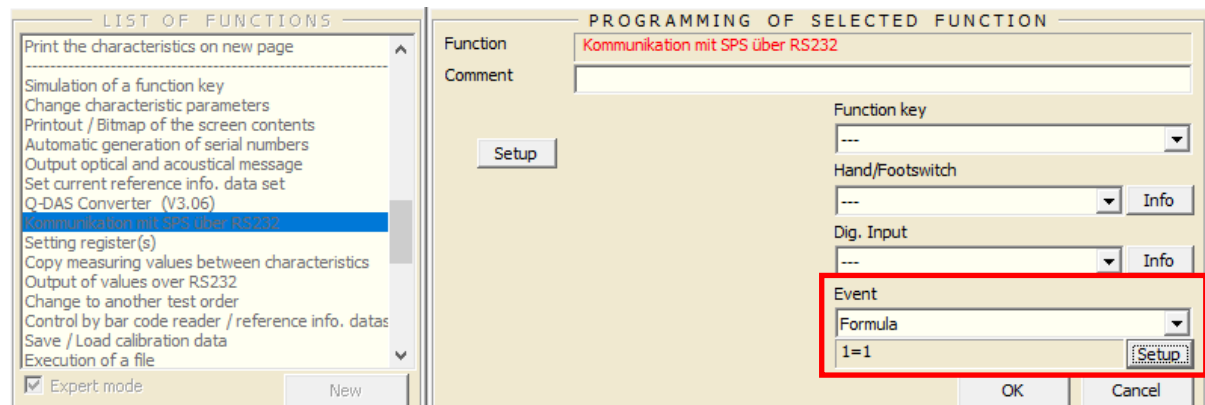
This dialogue allows to configure the following settings :

PC connection (= PC-Schnittstelle)

The COM port has to be selected, to which the PLC is connected.
Available are COM1 ... COM8.

Execute the commands sent by the PLC (= Ausführung der von der SPS gesendeten Befehle)

This option has to be activated to receive commands from the PLC. To check constantly for incoming commands, a formula, e.g. “1=1”, should be used to trigger this test step function :



If reference information shall be received from the PLC, please make sure that the related reference information type is activated under *Options* → *Reference Information*.
Reference information can only be used in test orders, not in test schemes.

Send a data set to the PLC (= Senden eines Datensatzes an die SPS)

The number of the register in the PLC has to be entered in the field *Address* (= *Adresse*). Please make sure that the PLC provides a register with this number.
The content (16-bit integer value 0 ... 65535) that shall be sent to this register has to be entered in the field *Content* (= *Inhalt*).