



JetControl 647
Version Update
from V3.53 to V3.60



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1 Introduction

Overview of Version Updates			
Version	Description	New	Fixed
V3.60	System function		✓
	CTS support on NET2 in PRIM mode	✓	
	DISPLAY_TEXT and DISPLAY_VALUE instructions can be used for NET2 in PRIM mode	✓	
	String functions	✓	
	Program size	✓	
	PCOM7 to PCOM9	✓	
	Ethernet gateway+Mask register	✓	
	Ethernet TCP/IP	✓	✓

2 Fixed Software Bugs

2.1 System Function / Special Function

In the case of special/system functions parameters 2 and 3 can be specified at a time in direct or simple indirect mode. Functions where the second parameter were specified directly and the third parameter indirectly did not work.

The following functions were affected by this bug:

65 - 66	Modbus/TCP
80 – 82	Remote scan
90 – 96	DA files
110 -	Sending e-mails
150 - 152	NetCopyList

3 New Features

3.1 CTS Support on NET2 in PRIM Mode

The CTS signal is connected to pin 4 of the Sub-D connector (9-pin) on the NET2.

Register 62989, bit 1 = 1 enables CTS support.
Register 62989, bit 1 = 0 disables CTS support.

The current state of the CTS line can be seen in register 61508 from bit 6. However, this bit shows the current state of the CTS line only if bit 1 in register 62989 is set.

Bit 6 = 1 CTS signal enabled.
Bit 6 = 0 CTS signal disabled.

3.2 DISPLAY_TEXT and DISPLAY_VALUE Instructions in Connection with NET2

DISPLAY_TEXT and DISPLAY_VALUE instructions can only be used in connection with the NET2 interface.

Device address 9 is for redirecting data to the NET2 interface, which must be in RS-232 PRIM mode.

3.3 String Functions

Using the special/system functions described below, strings can be processed in text variable format. For information on the format refer to JetSym online help.

The maximum string length must not exceed 255 characters!

Please make sure that the strings do not overlap! Failure to do so will yield undetermined results.

3.3.1 Comparing Strings

Special function **140** is for comparing the contents of two string variables.

`SYSTEMFUNCTION(140, <Source Reg. No.>, <Destination Reg. No.>)`

<Source Reg. No.> Specifies the number of the first register of the parameter block.

<Destination Reg. No.> Specifies the number of the register where the result of this function is stored.

Parameter Block

The function parameters are specified starting from register <Source Reg. No.>.

Register Offset	Description	
0	Address of string 1	Number of the first register of the first string variable
1	Address of string 2	Number of the first register of the second string variable

Result of the Function

The result of the function can be read out of register <Destination Reg. No.>.

Register Contents	Description
0	Strings are identical
-1	String 1 is smaller than string 2
1	String 1 is larger than string 2

The two strings are compared with each other character by character. When the first difference is detected, the ASCII code difference of these two characters is returned as result of the function.

3.3.2 Searching a string within another string

Special function **141** is for checking whether string 2 is contained in string 1.

`SYSTEMFUNCTION(141, <Source Reg. No.>, <Destination Reg. No.>)`

<Source Reg. No.> Specifies the number of the first register of the parameter block.
 <Destination Reg. No.> Specifies the number of the register where the result of this function is stored.

Parameter Block

The function parameters are specified starting from register <Source Reg. No.>.

Register Offset	Description	
0	Address of string 1	Number of the first register of the first string variable
1	Address of string 2	Number of the first register of the second string variable which is being searched within string 1.

Result of the Function

The result of the function can be read out of register <Destination Reg. No.>.

Register Contents	Description
0	String 2 cannot be found in string 1
1	String 2 has been found in string 1

3.3.3 Appending Strings

Special function **142** is for appending the contents of string variable 2 to string variable 1. String variable 2 remains unchanged.

SYSTEMFUNCTION(142, <Source Reg. No.>, <Destination Reg. No.>)

<Source Reg. No.> Specifies the number of the first register of the parameter block.
 <Destination Reg. No.> Specifies the number of the register where the result of this function is stored.

Parameter Block

The function parameters are specified starting from register <Source Reg. No.>.

Register Offset	Description	
0	Address of string 1	Number of the first register of the first string variable
1	Address of string 2	Number of the first register of the second string variable
2	Maximum register number	Maximum number of registers for string 1

Result of the Function

The result of the function can be read out of register <Destination Reg. No.>. The result register contains the number of registers occupied by the new string 1.

3.3.4 Converting register values into strings

Special function **143** is for converting the contents of a register into a string and storing it to a string variable. For this purpose, decimal ASCII coding is used. Contents of integer or floating point registers can be converted into strings. The register contents remain unchanged.

SYSTEMFUNCTION(143, <Source Reg. No.>, <Destination Reg. No.>)

<Source Reg. No.> Specifies the number of the first register of the parameter block.
 <Destination Reg. No.> Specifies the number of the register where the result of this function is stored.

Parameter Block

The function parameters are specified starting from register <Source Reg. No.>.

Register Offset	Description	
0	Register Number	Number of the register the contents of which are to be converted.
1	String address	Number of the first register of the string variable to which the string is to be stored.

Result of the Function

The result of the function can be read out of register <Destination Reg. No.>. The result register contains the number of registers occupied by the string variable.

3.3.5 Copying Strings

Special function **144** is for copying the contents of string variable 1 to string variable 2. String variable 1 remains unchanged.

`SYSTEMFUNCTION(144, <Source Reg. No.>, <Destination Reg. No.>)`

<Source Reg. No.> Specifies the number of the first register of the parameter block.

<Destination Reg. No.> Specifies the number of the register where the result of this function is stored.

Parameter Block

The function parameters are specified starting from register <Source Reg. No.>.

Register Offset	Description	
0	Register Number	Number of the first register of the string variable the content of which is to be stored.
1	String address	Number of the first register of the second string variable into which the content of string 1 is to be copied.

Result of the Function

The result of the function can be read out of register <Destination Reg. No.>. The result register contains the number of registers occupied by the string variable.

3.4 ST Program Size

Starting from version 3.60 the program size has been increased from 256 K to 512 K.

3.5 PCOM7 to PCOM9

The communication interface (Ethernet, serial) has been enhanced from version PCOM7 to PCOM9.

3.6 Ethernet Gateway + Mask Register

Registers 63900 through 63907 are now remanent, that is, their contents will survive when the controller is switched off.

3.7 Ethernet TCP/IP

Starting from version 3.60 a newer version of the TCP/IP stack is used. This new version removes some deficiencies in TCP communication and makes for faster response times.