

## Program transfer to PLC controller

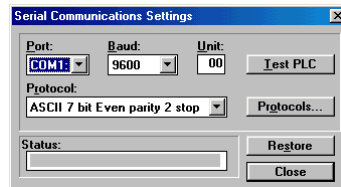
- First, check whether PLC is connected with a PC correctly (physically)
- Select a Communication option from Project menu in order to set parameters for serial communication

## Program transfer to PLC controller (2)

- Default settings for CPM2A are: COM1, 9600 Baud, Unit 00, protocol ASCII 7 bit Even Parity 2 stop and they need to be left so
- To check how communication functions, you can click on Test PLC to test link with a PLC controller

## Program transfer to PLC controller (3)

- Serial Communication Settings Dialog Box



## Program transfer to PLC controller (4)

- When a connection has been established, program transfer begins with a click on download from Online menu
- Select expansion function or memory allocation
- Before you program a PLC, it's good to erase program's memory contents

## Program transfer to PLC controller (5)

- Finally, after a successful program transfer to a PLC, a message window will come up to inform us of this

## PLC controller working modes

- PLC controller has three modes, MONITOR, RUN and PROGRAM/STOP mode
- RUN MODE
  - This PLC mode enables program to be executed as basic operation. It is used in final testing, after a program has been tested in detail, and errors have been eliminated. SYSWIN can not change memory contents of PLC controller in this mode, neither is the change of a program being executed possible

## PLC controller working modes (2)

- **MONITOR MODE**
  - In this mode, program execution is possible, as well as editing and monitoring during operation. This is the most frequently used mode in program development. When this mode has been selected, controller has an obligation to supply a PC with information which relates to program itself, or more precisely to status of variables in the program. If we additionally confirm Monitoring option from an Online menu, we can follow current values of variables on the monitor itself, in real time.

## PLC controller working modes (3)

- **PROGRAM/STOP mode**
  - Choosing this mode simply stops a PLC controller if PLC was in RUN or MONITOR mode. It is used for data and program transfer to PLC controller

## Program execution and monitoring

- Program transferred from a PC to a PLC starts executing at the moment when you move from a Stop/Program mode to a Monitor or Run mode
- When Monitoring function starts executing, some sections of the monitor will be shaded, and this way you can follow program execution

## Program execution and monitoring (2)

- Monitoring is active during editing of some program segment, and is stopped at the moment when a changed section of the program is transferred into a PLC controller

## Impact on the program during monitoring

- During monitoring, you can use the right button on the mouse to call up a menu of some elements of ladder diagram
- Menu that appears when we click on location where address of some bit is positioned, contains the following elements:

## Impact on the program during monitoring (2)

- **Force Set** - used for permanent forced set up of bit status to ON
- **Force Reset** - used for permanent forced set up of bit status to OFF
- **Cancel** - cancels out the forced status
- **Set (1)** - used for a brief change of bit status from OFF to ON status
- **Reset (0)** - used for a brief change of bit status from ON to OFF status
- **Cancel All** - cancels out forced status of all bits

## Graphic representation of dimension changes in a program

- SYSWIN allows graphic representation of dimensions with time as abscissa
- When a monitoring mode is in use, monitor display changes through time, showing changes in values of monitored dimensions

## Graphic representation of dimension changes in a program (2)

- Monitor refreshment is done after a reception of each sample where sample intervals are 0,1-65.5 seconds
- Graphics saved in this way can be stored for later analysis as a file, or read in an already saved file

# END OF CHAPTER 6