

PCOM Access Guide VisiLogic

With the release of VisiLogic 9.9.0 they have added in new security measures to deny access to unwanted outside sources. To achieve this, they have now given the user ways to disable areas on the VisiLogic PLC so that only trusted people can access the areas they need to.

Please note that these new changes will now be **MANDATORY** if you are using ethernet communications. If you are using serial then these changes will not need to be made.

This Guide will go through each of these new steps and guide you on how to implement them into your projects.

Set PCOM (Ethernet) Password

You will now need to set a PCOM password to allow ethernet communications from a PC to PLC to take place. This Applies for the use of remote tasks like remote operator and the use of updating and changing projects remotely from VisiLogic.

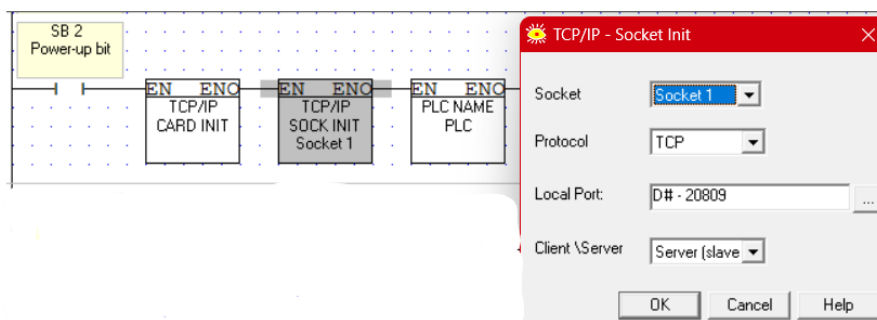
The Set PCOM (Ethernet) Password Function allows you to set the beginning of a vector that is 8 MIs (16 bytes) long that will hold the password values. To optimize protection, use a complex password that uses all 16 characters.

You create the password by storing the desired password values into this vector, please note that the password is case sensitive.

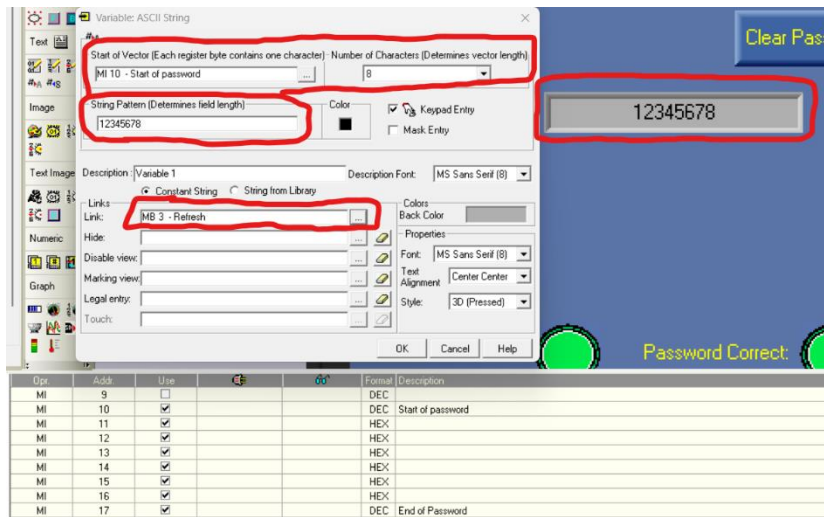
Then, when the function is activated and an attempt is made to establish Ethernet communications, VisiLogic asks the user to enter the password, and then verifies the entered password. If the values match, Ethernet communication is established.

To set up communications please see the following steps:

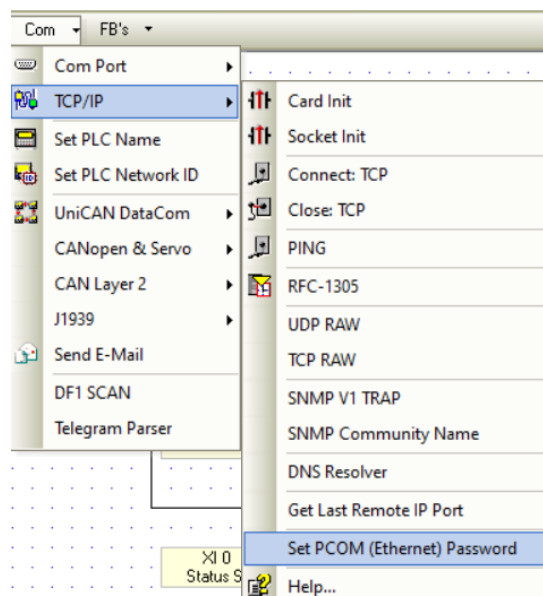
1. Use a SB2 Power-up bit alongside your normal Card INIT, Sock INIT and PLC Name but now you **must** change the default port number, 20256 is no longer a recommended port to have. Please go to the following website to see a list of port numbers:
https://en.wikipedia.org/wiki/List_of_TCP_and_UDP_port_numbers#Registered_ports



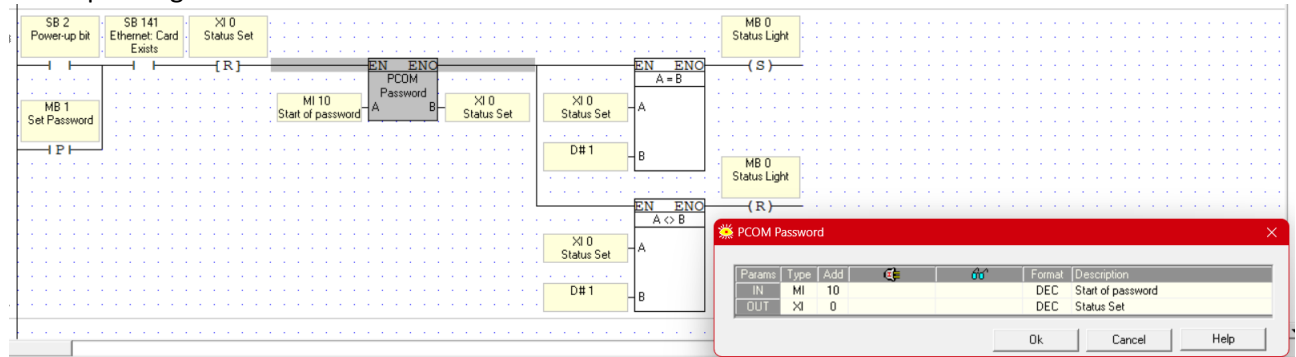
2. Next go to the HMI screen and add an ASCII string variable and select the following:
- **Start of Vector**- select which integer value the vector will start from
 - **Number of characters**- how many characters the password will be and also how many Integers will be needed for the password between 8-16 long (2 characters= 1 integer)
 - **String Pattern** – insert password here that will be used
 - **Link:** - link Variable to a Bit



3. Next, use the new Set PCOM Password FB in the ladder logic under Com-TCP/IP- Set PCOM (Ethernet) Password.



- Connect this FB to the starting vector of the Ascii String Variable you made earlier in the IN-parameter section of the block and a status set function on the OUT-parameter so that you can monitor when it is connected. Please see image showing it being used to toggle a binary image depending on connection.



- Please note: when you made your Vector for the Ascii String it will assign the Integers required but will not tick or show any signs that it has done so, it is advised to go to the last Integer and describing it as the end of vector shown below. Or highlight all used operands and paste a text name to show all are in use.

MI	10	<input checked="" type="checkbox"/>		DEC	Start of password
MI	11	<input checked="" type="checkbox"/>		HEX	
MI	12	<input checked="" type="checkbox"/>		HEX	
MI	13	<input checked="" type="checkbox"/>		HEX	
MI	14	<input checked="" type="checkbox"/>		HEX	
MI	15	<input checked="" type="checkbox"/>		HEX	
MI	16	<input checked="" type="checkbox"/>		HEX	
MI	17	<input checked="" type="checkbox"/>		DEC	End of Password

Deny PCOM Access Bitmap with SDW 10

By using a store function on the power up bit rail to put in the binary values you can now manipulate what is accessible with remote access now.

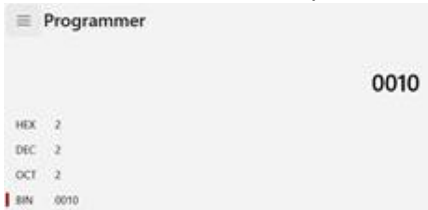
- Bits 0- No uploading, downloading, run, Init or stopping the PLC
- Bit 1 – can't edit RS232 or CANbus params
- Bit 2 - Block Remote Operator
- Bit 3 - Block writing and downloading of data tables
- Bit 4 - Block altering of Operand values (MB,MI,etc.)
- Bit 5 - Block importing or exporting from SD

To Deny PCOM Access for various functions you need to turn ON the appropriate bits for the value in SDW10 –

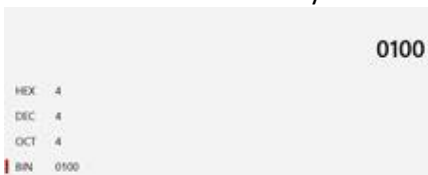
For example, to turn on bit 0 you will store a value of 1 in SDW10



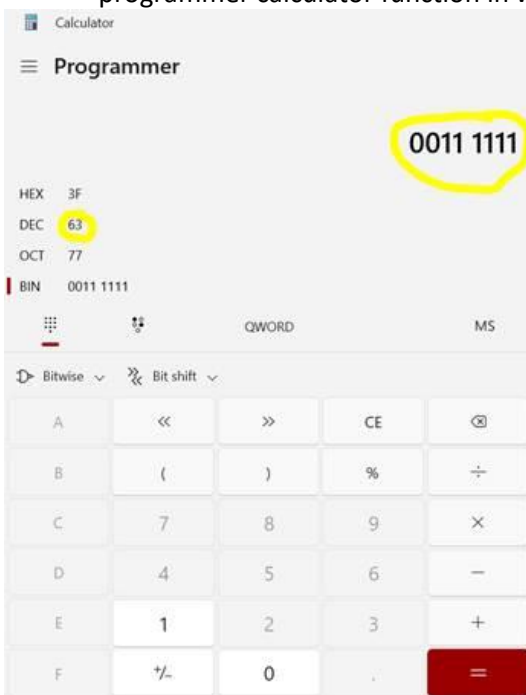
To turn on bit 1 you will store a value of 2 in SDW10



To turn on bit 2 you will store a value of 4 in SDW10 etc



To turn on all the bits you will store a value of 63 in SDW10, this can be calculated easily using the programmer calculator function in windows as per screenshot below –



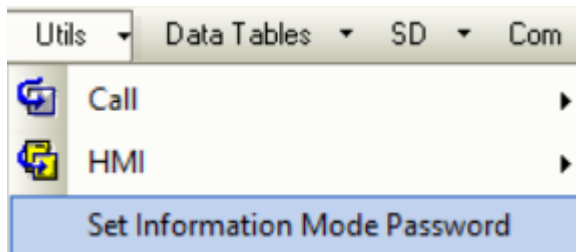
so, when looking at the binary for example 0011 0111, Bits 0-5 go from right to left. 001-Bit 5, 1-4, 0-3, 1-2, 1-1, 1-0.

If you find yourself locked out while messing with SDW10, Info Mode on the PLC itself still has Priority over SDW10 to be able to revert any changes.

Set Info Password

Setting the Info password has now also become a mandatory feature for ethernet communications now which can be set between 1000-9998 using the FB located under Utils- Set Information Mode Password.

It is recommended that this function block is implied on the SB2 Power-up bit so that it makes this change every restart.



If you are still having problems with this then please don't hesitate to contact us at Sales@i4automation.co.uk