

Required hardware:**CBX 500****BM3x0 Profibus interface board****BM100****DS2100N
DS2400N****DS4800****Required software:**

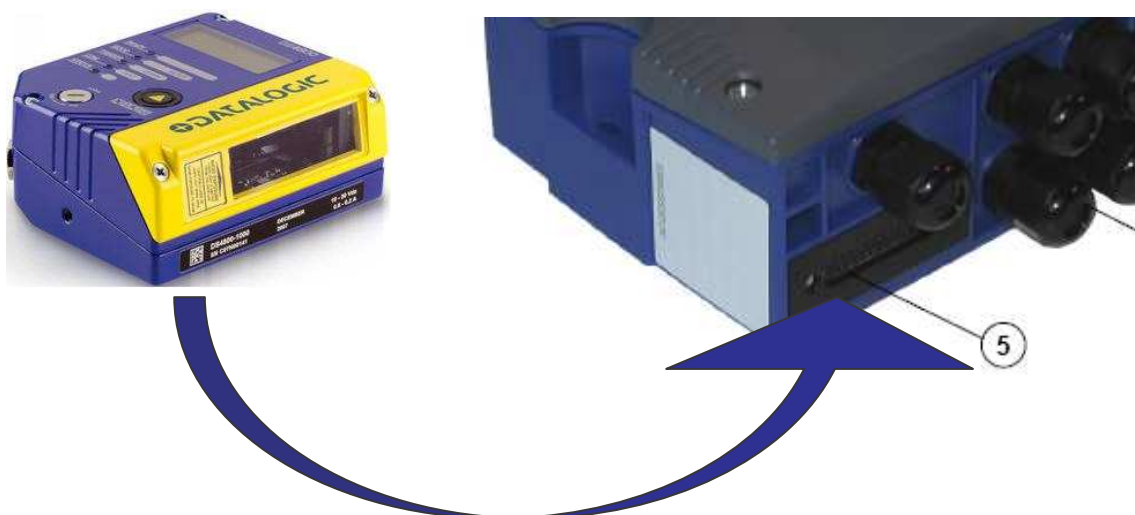
- Package DL2K4KST_002 or later: **sw for DS2100N-DS2400N-DS4800**
- DLA_0BAC.gsd, rel. 1.2 or later: **GSD file**

Optionale software:

- CBX_DEV.dib, CBX_SF.dib, CBX_DI.dib: **Bitmap files¹**

¹ Compatible with the gsd file "DLA_0BAC" rel. 3.3 or later. See Appendix on this manual for further information about the GSD file revision field

1. Connect the 25 pin connector cable of the laser scanner to the CBX500

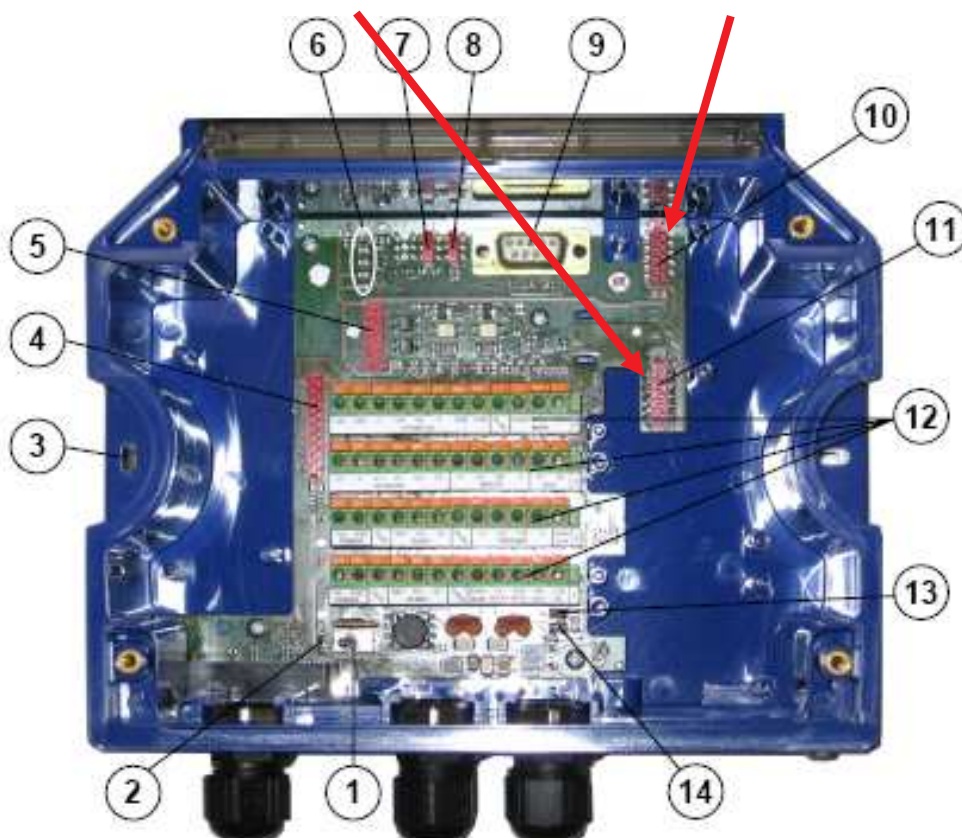


2. Plug the BM3x0 Profibus interface board into the box²



² Refer to the [Datalogic Host Interfaces Modules - Instruction Manual](#) for further information

Use the connector n.**11**(standard board) or n.**10** (IP65 board)

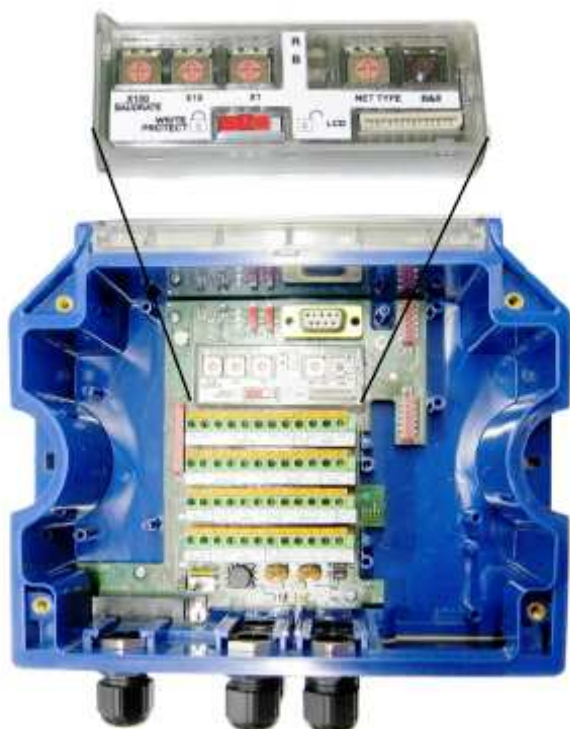


3. Move the RS485 termination switch to the OFF position



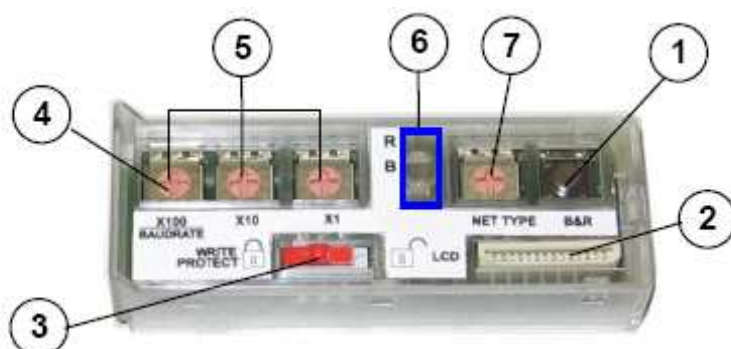
RS485 Termination Resistance Switch

4. Mounting BM100 into the CBX500



The BM100 can easily be installed into the CBX500 connection box by aligning it over its corresponding connector and pushing down until correctly seated. When closed, the plastic support inside the CBX cover holds the module in place.

5. Set the BM100 rotary switches

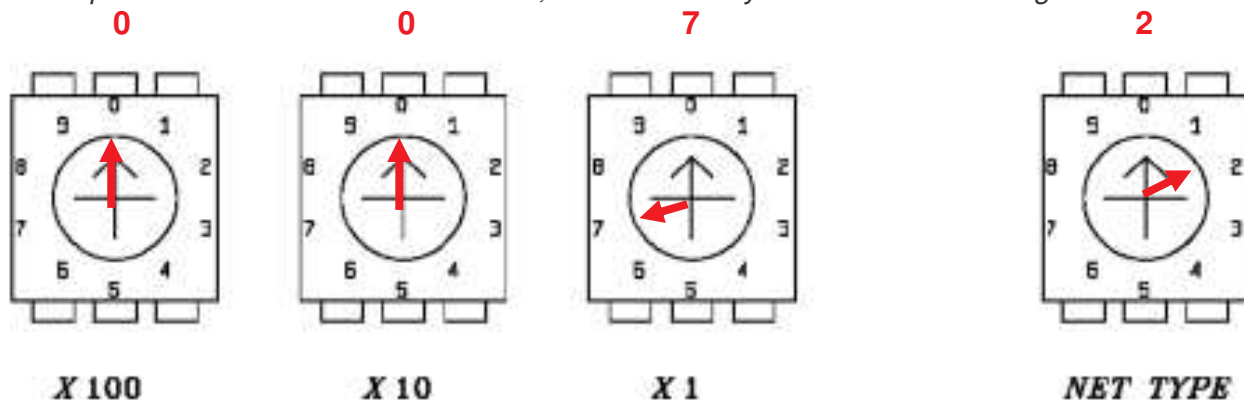


on these positions:

- (7)Net Type = **2**
- (5)Address X100 = **0,1**
- (5)Address X 10 = **0..9**
- (5)Address X 1 = **0..9**

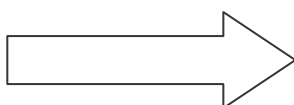
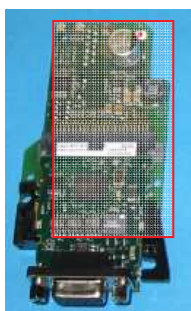
Note: the allowed address range is 000...126³

Example: to set the Profibus address "7", move the rotary switches like in the figure below:



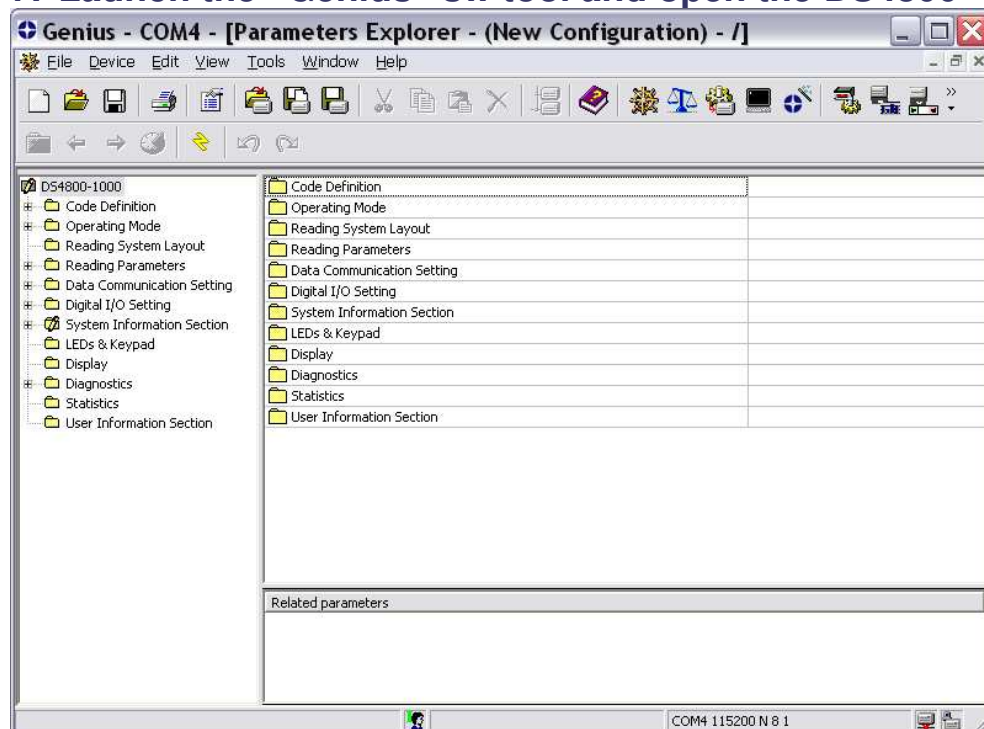
6. Switch ON the CBX 500

The laser scanner turns on, then in approximately 10 seconds the **GREEN** Status LEDs (the couple n.2 on the picture) on the BM300 board turns ON



³ **126** is a special address which allows the Fieldbus Master, through software, to set the node address in the range from 000 to 125. Refer to the **Datalogic BM100 Instruction Manual** for further information.

7. Launch the “Genius” sw tool and open the DS4800⁴ configuration



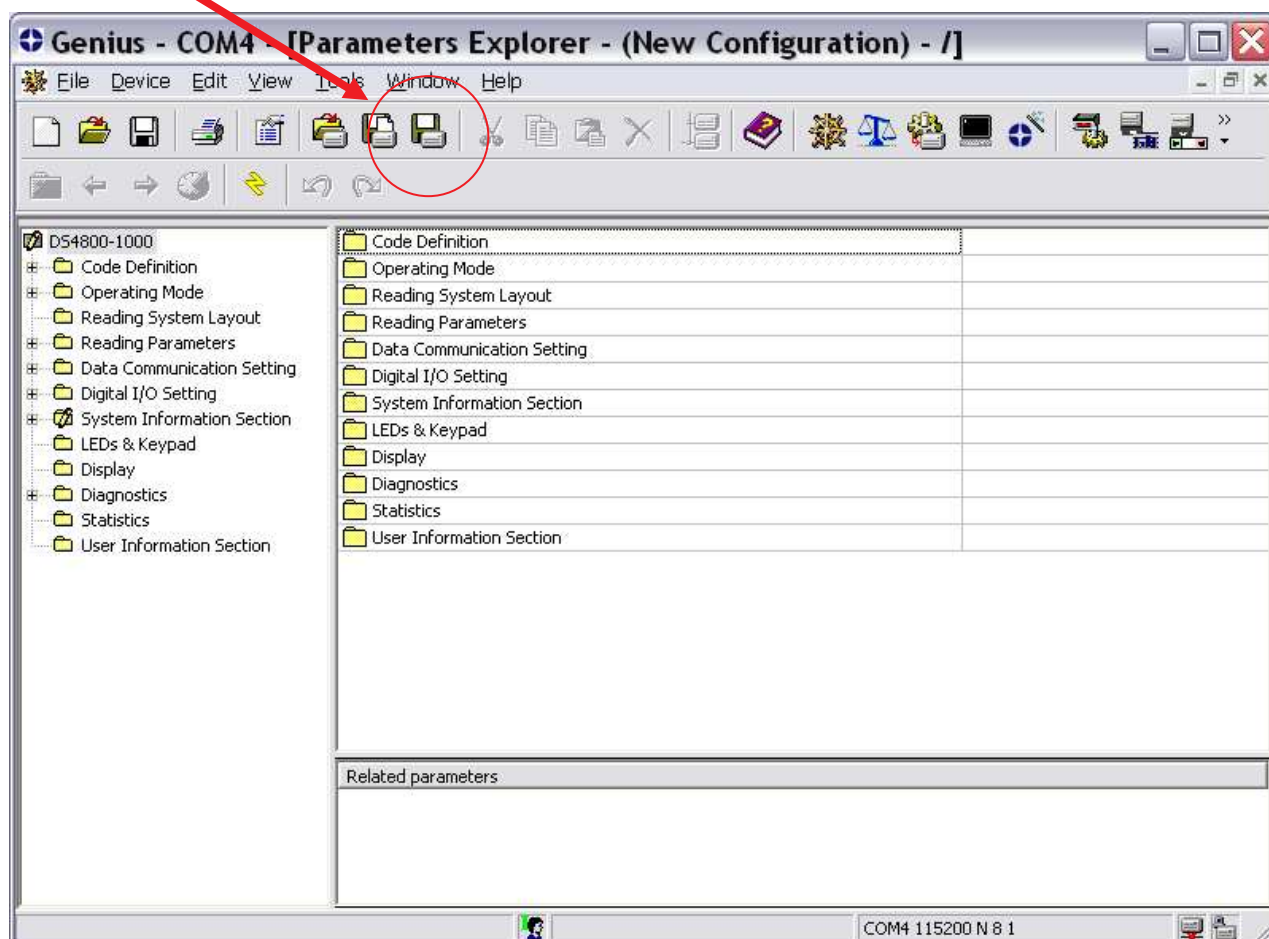
8. Set / verify the DS4800 parameters as on the table below:

DS4800 Parameters	Value	Note
Topology role	Other Master(Synchronized) Master(Multidata)	Topology Role = Slave (Synchronized) or Slave(Multidata) are <u>not compatible</u> to the fieldbus communication
Data Communication Settings / CBX Gateway / Type	Profibus	This value should be already selected
Data Communication Settings / CBX Gateway / Bus Communication / Node Address	000..126	The showed value should be aligned to the address rotary switch positions
Data Communication Settings / Gateway / Bus Communication / Data Flow Control	Disable	Suggested value to check the good bus communication

Note: keep the default values on all the other parameters

⁴ Later on the document refers the DS4800 as laser scanner device sample

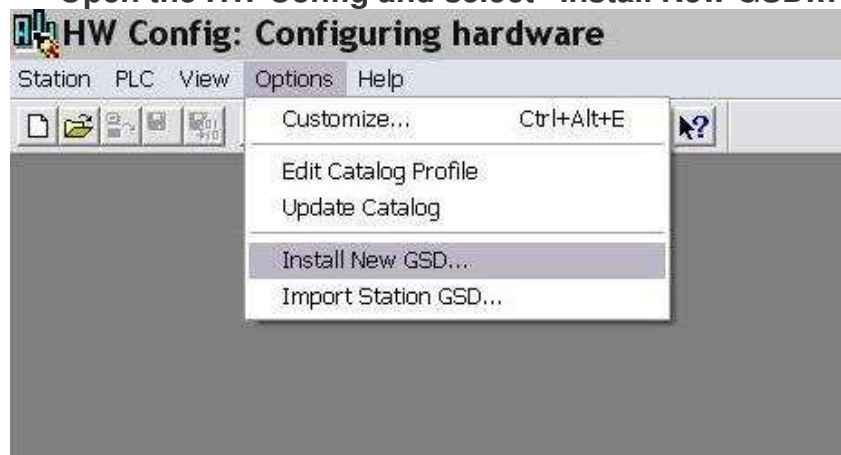
9. **Send⁵** the configuration to the device



⁵ Saving permanently, if requested

10. Profibus Master⁶ configuration

- Open the HW Config and select “Install New GSD...” in “Options” tab



- select the “DLA_0BAC.gsd” file

The **Bitmap (.dib)** files must be copied in the same local directory where the gsd file is.



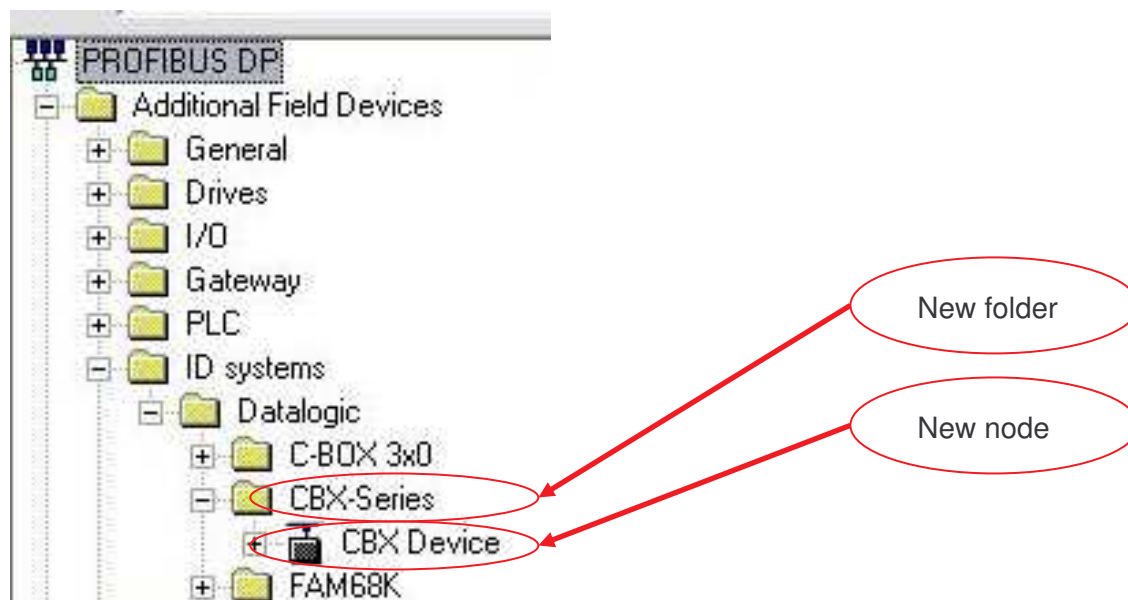
⁶ As Profibus Master sample, we refer a **S7-300 Siemens PLC**

- Update the catalogue



- Find the new node

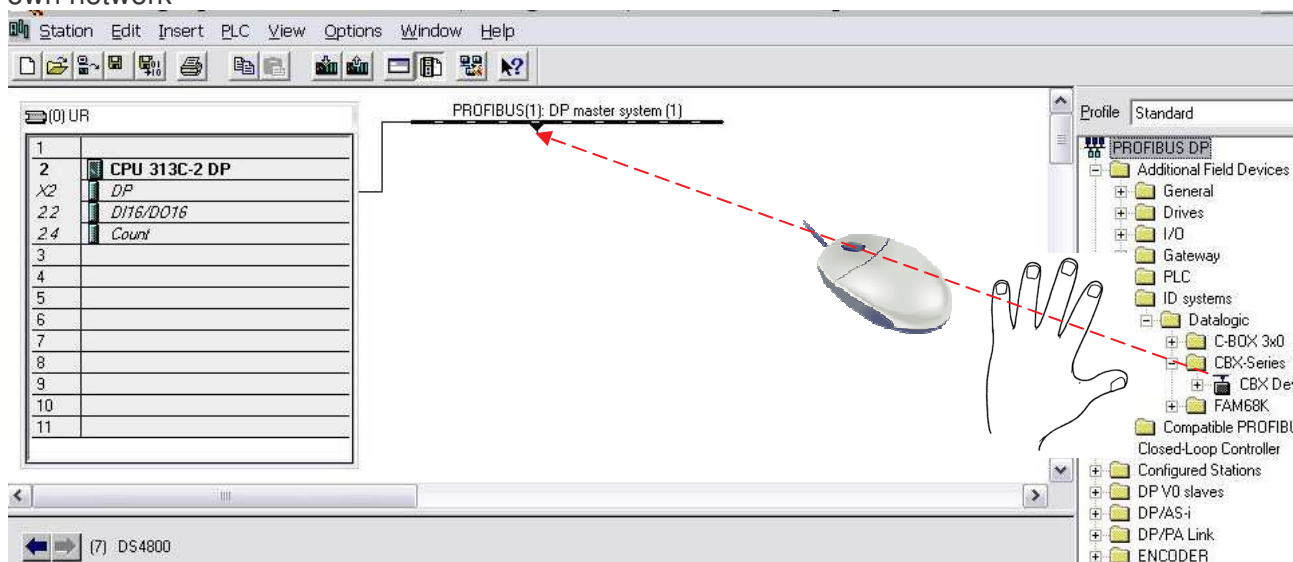
A new **CBX Device**⁷ node will appear in the PLC HW catalogue under the folder:
Profibus DP - Additional Field Devices - ID Systems - Datalogic – CBX Series



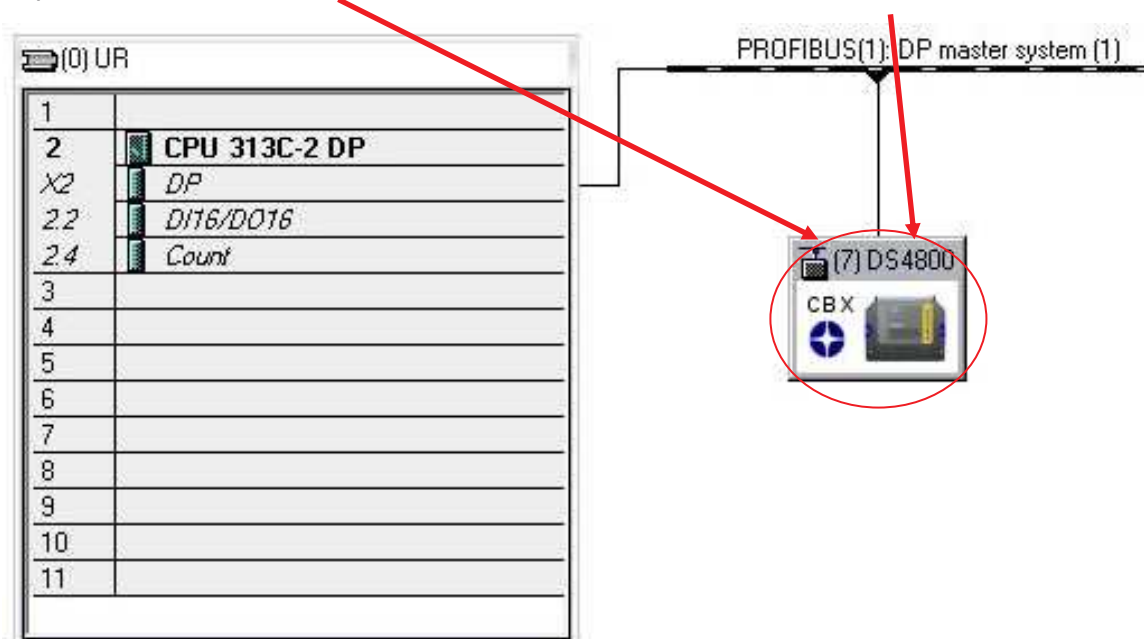
⁷ Folder name and device name refer the gsd file “DLA_0BAC” revision 3.3 or later

- Insert the device into the PROFIBUS network

An easy drag&drop function from the plc HW catalogue allows inserting the new device in your own network



In the picture below it is the **node n.7** and it has been named as “**DS4800**”



- Set the I/O areas for the node

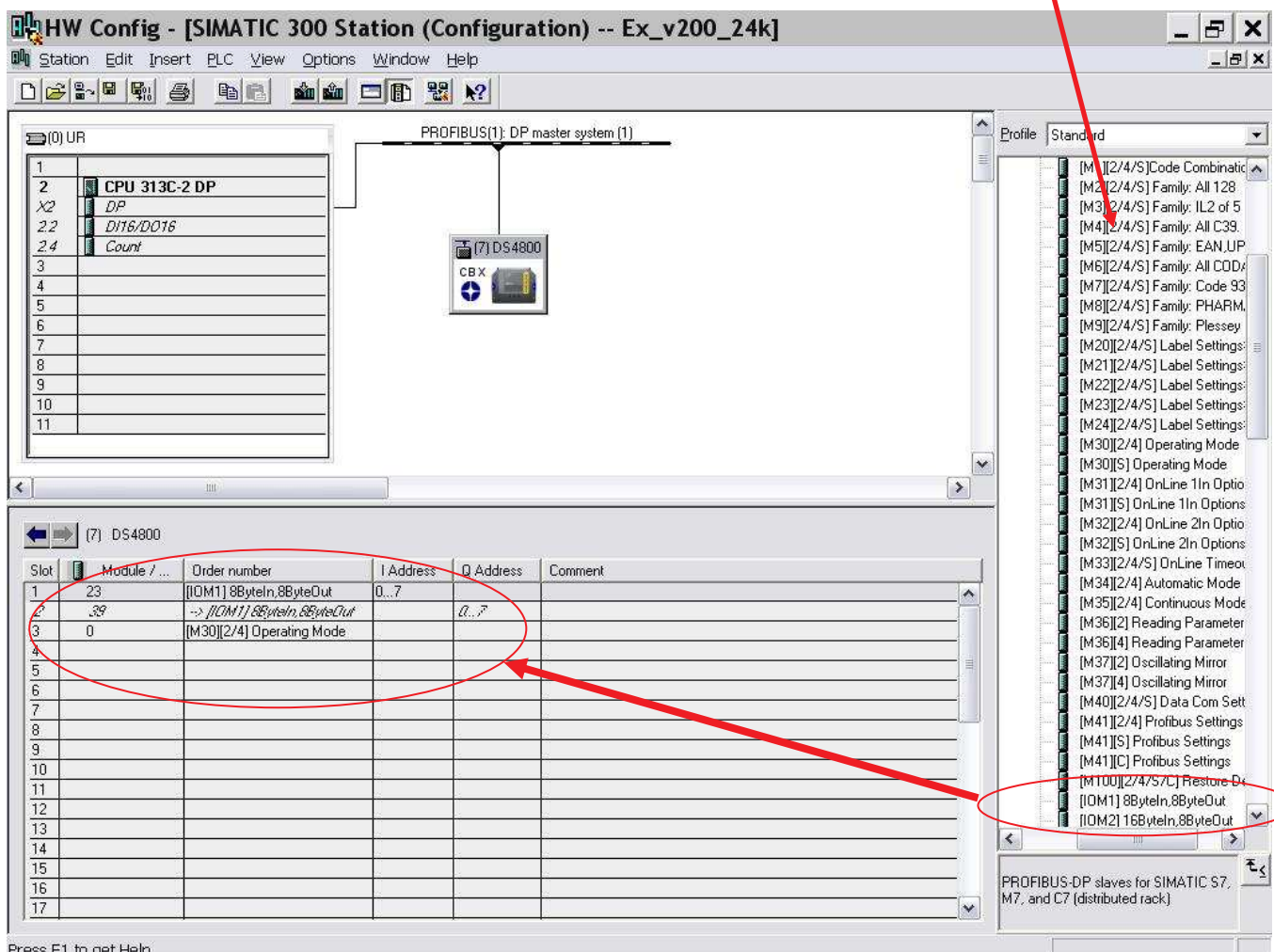
Click on the “CBX Device” item on the HW catalogue list to open the **modules list**.



Use the drag&drop function to take a module from the list and move it onto the table under the network diagram. Do it in order to set the I/O areas for the node.

Warning: 8 INPUT bytes and 8 OUTPUT bytes required, at least!

For example, take the “[IOM1]” module to set 8 input bytes and 8 output bytes



Slot	Module / ...	Order number	I Address	Q Address	Comment
1	23	[IOM1] 8ByteIn,8ByteOut	0...7		
2	38	[IOM1] 8ByteIn,8ByteOut		0...7	
3	0	[M30][2/4] Operating Mode			
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

Press F1 to get Help.

If the application requires more than 8 bytes, take and append more **I/O** modules as list, one below the other, until the requested I/O size has reached.

The **maximum allowed size is 152 bytes**, adding input and output size.

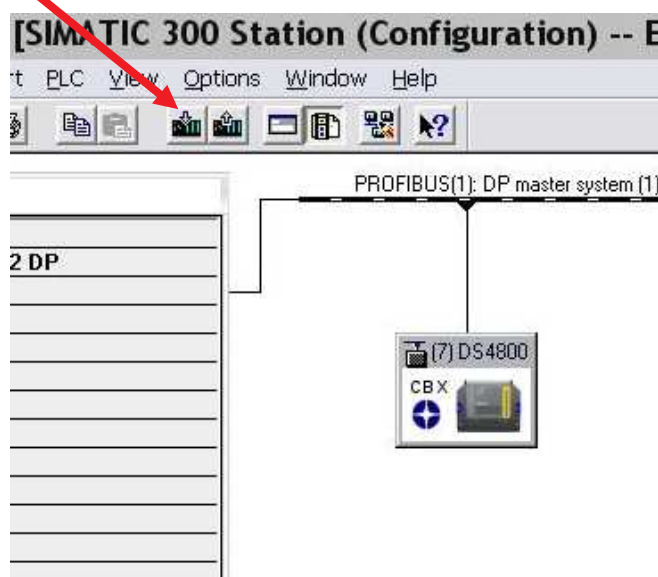
Example:

- output bytes: 24 bytes
- input bytes: 64 bytes

Output bytes + Input bytes = 24 + 64 = 88 bytes. It's less than 152. OK!

- **Your laser device (DS4800) is now properly configured**

Press the **Download** button to transfer sw & hw configuration to your PLC.

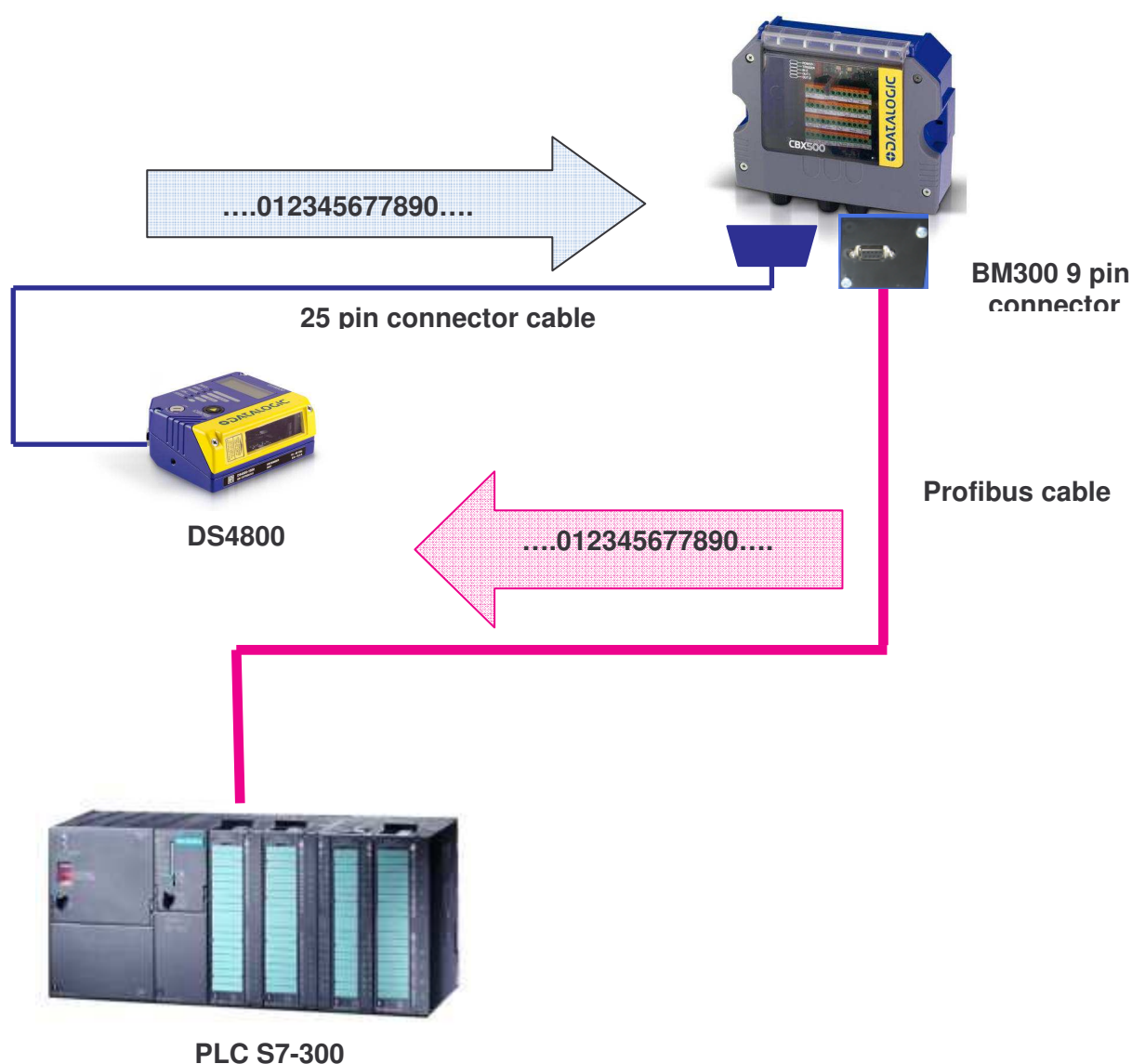


11. Check the BM300 leds

Just successfully downloaded the configuration, the PLC starts the communication with the BM300 board and the **OPERATION MODE LEDs** (the couple n.1 on the picture) will turn ON **GREEN**.



Now you are ready to see the data coming from the DS400 device to the PLC: just a data is available, or through a data handshake control⁸, the data flows to the PLC over the bus.



⁸ Refer to the "DAD-DPD Driver" manual for information how to implement the Datalogic data flow control

Appendix: how to detect the GSD file revision

Open the GSD file as a text file, using a standard text editor, “Microsoft Notepad” for example. Then, check the “**Revision**” field on the “Device identification” section

```
.....
;; Profibus Device Database
;;
;;
;; GSD-Data for Serial PROFIBUS Interface
;; Datalogic Automation S.r.l.
.....

#Profibus_DP

GSD_Revision=2

.....
;; Device identification
.....

Vendor_Name      = "Datalogic Automation s.r.l."

Model_Name       = "CBX Device"

Revision         = "Version 03.3 26/11/2009"

Ident_Number     = 0x0BAC                ; Registered Profibus Device
```

Do not modify any field, then close the file.

The example above shows the gsd file “DLA_0BAC” revision 3.3

WARNING: the GSD file must be unchanged during this procedure. Any modification can corrupt the file and cause unpredicted malfunctions over Profibus