

Application profiles in PLC Tecomat

TXV 003 39.01
first edition
September 2012
changes reserved

Change History

Date	Edition	Change description
Sept. 2012	1	First edition

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T; S; M; D; X; B; L; R; S1; LD; C; SET;
date; time; operand; BCD; leading edges; downward edges; user program;
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1 INTRODUCTION

Application profile is in fact a form of licence, which is needed for running of some libraries and programs supplied for PLC Tecomat. This licence is always determined for particular PLC and is saved in PLC. PLC is usually supplied without application profiles. These have to be ordered separately. If an application profile order is a part of PLC order, then the application profile will be saved to a particular PLC directly in the manufacturing facility Teco a.s. and delivered PLC will be equipped by ordered application profiles.

Already delivered PLC system can be equipped by application profile additionally. In this case a serial number and a type of central unit must be given to the order. It is also necessary to give an email address to which a file with required application profile will be sent. This file can be saved to PLC system via a system web page (see below).

Order numbers and application profiles names for PLC Tecomat are given in the following chart..

<i>Order number</i>	<i>Name of application profile</i>	<i>Description</i>
TXF 689 01	AP IEC 870-5-104 SLAVE	Licence for library Iec104sLib
TXF 689 02	AP GANTRY SERVER 8	Licence and support for library GantryLib8
TXF 689 03	AP DSC PWR LICENCE	Licence for library DscLib
TXF 689 04	AP GALAXY LICENCE	Licence for library GalaxyLib
TXF 689 05	AP PARADOX LICENCE	Licence for library ParadoxLib
TXF 689 90	MOSAIC SINGLE LICENCE	Licence Compact+ for programming environment Mosaic determined for Foxtrot systems. If PLC is equipped by this licence, no HW key is needed (for Mosaic environment).
TXF 689 91	MOSAIC SINGLE LICENCE	Licence Profi+ for programming environment Mosaic specified for TC700. If PLC is equipped by this licence, no HW key is needed (for Mosaic environment).

Necessary versions firmware PLC

Application profiles are supported in central units of series K and L (TC700 CP-7000, CP-7004 a CP-7007, every variation of Foxtrot system) of version in 5.8. For saving of application profile to PLC is needed firmware PLC at least in 7.3 and a version of system web sites must be at least in 1.9. Upgrade of older firmware versions can be done by **FirmwareUpdater** program. This one is a part of Mosaic flow environment instalation from version 2012.2 or can be downloaded from <http://www.tecomat.com/wpimages/other/sw/Utility/FirmwareUpdater.zip>.

Application profiles are not supported in TC-650 systems, in TC700 system the application profile cannot be used with processor modules CP-7002, CP-7003 a CP-7005.

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2 CHECK OF APPLICATION PROFILES SAVED IN PLC

Information about application profiles saved in particular PLC can be found out by several ways:

- from LCD display integrated on basic PLC module
- using Mosaic programming environment
- via web interface with application of web site browser

For particular steps in individual cases see the following chapters.

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2.1 Check of application profiles in PLC using integrated LCD display

Basic modules Foxtrot CP-101x a CP-103x are equipped by LCD display 4 x 20 signs. Following information can be displayed:

- channel ethernet ETH1 parameters
- serial channels CH1 až CH4 parameter
- memory (EEPROM, information DataBox, SD karta)
- user program information
- firmware versions information
- application profiles information

MODE button on basic PLC module switches between display of stated system information and display of application displays, which are programmed in user program PLC. If the LCD display is switched to system information display, it is possible to scroll using "arrow up" and "arrow down" keys.

When the information about application profiles is displayed at first push the MODE button, which switches the display to the system information mode. Afterwards using the buttons "arrow up" or "arrow down" we can find a display with information about application profiles. If there is no application profile in PLC, the following text will appear on the integrated LCD display:

```
a p p l i c a t i o n   p r o f i l e s
n o   p r o f i l e s
```

Otherwise the information about programmed application profiles will be displayed. For example if the application profile TXF 689 90 Mosaic Single Licence is saved in PLC:

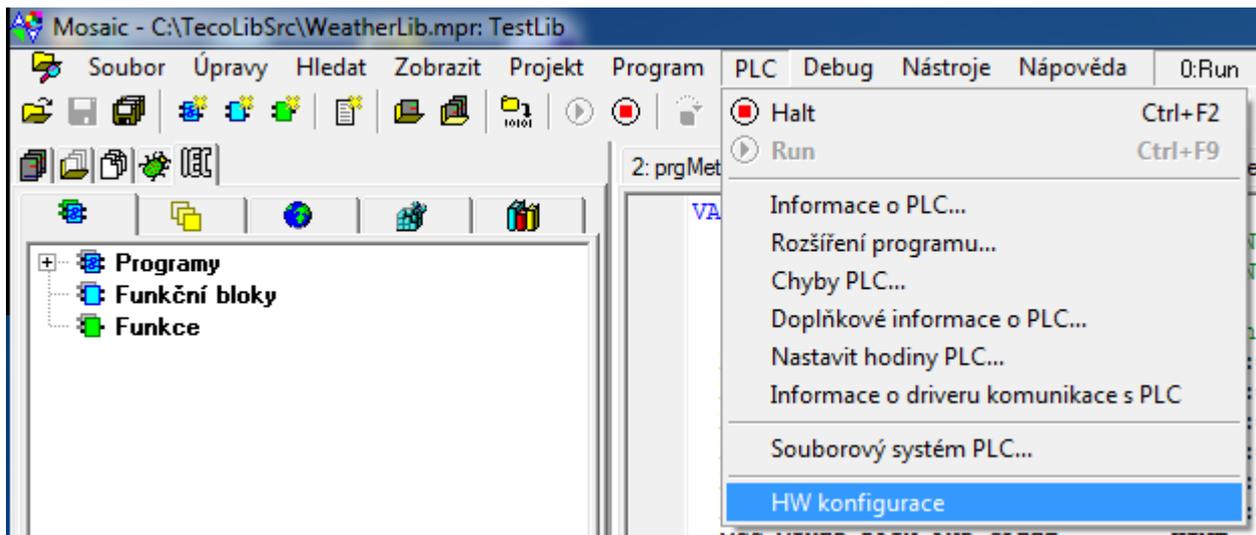
```
a p p l i c a t i o n   p r o f i l e s
T X F 6 8 9 9 0
```

```
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[TITLE] 2.2 The environment Mosaic application profiles check [/TITLE]
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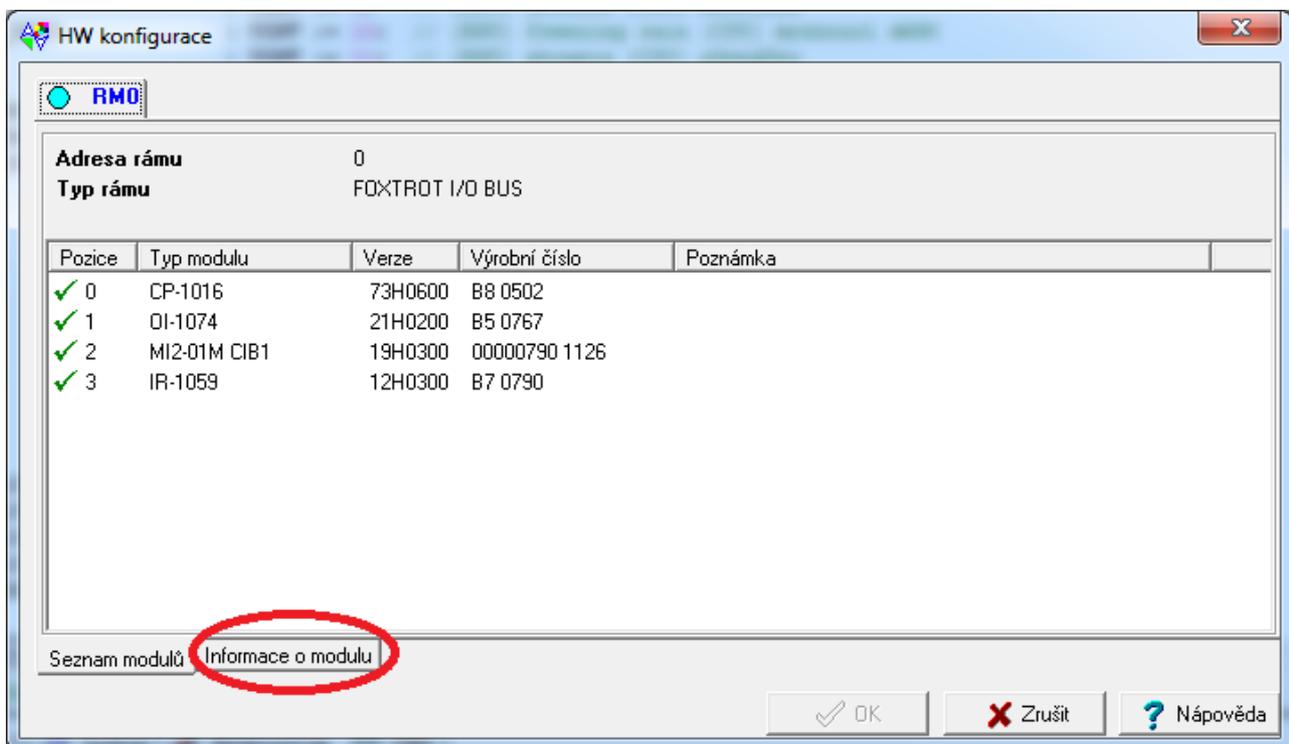
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2.2 Check of application profiles in PLC using Mosaic environment

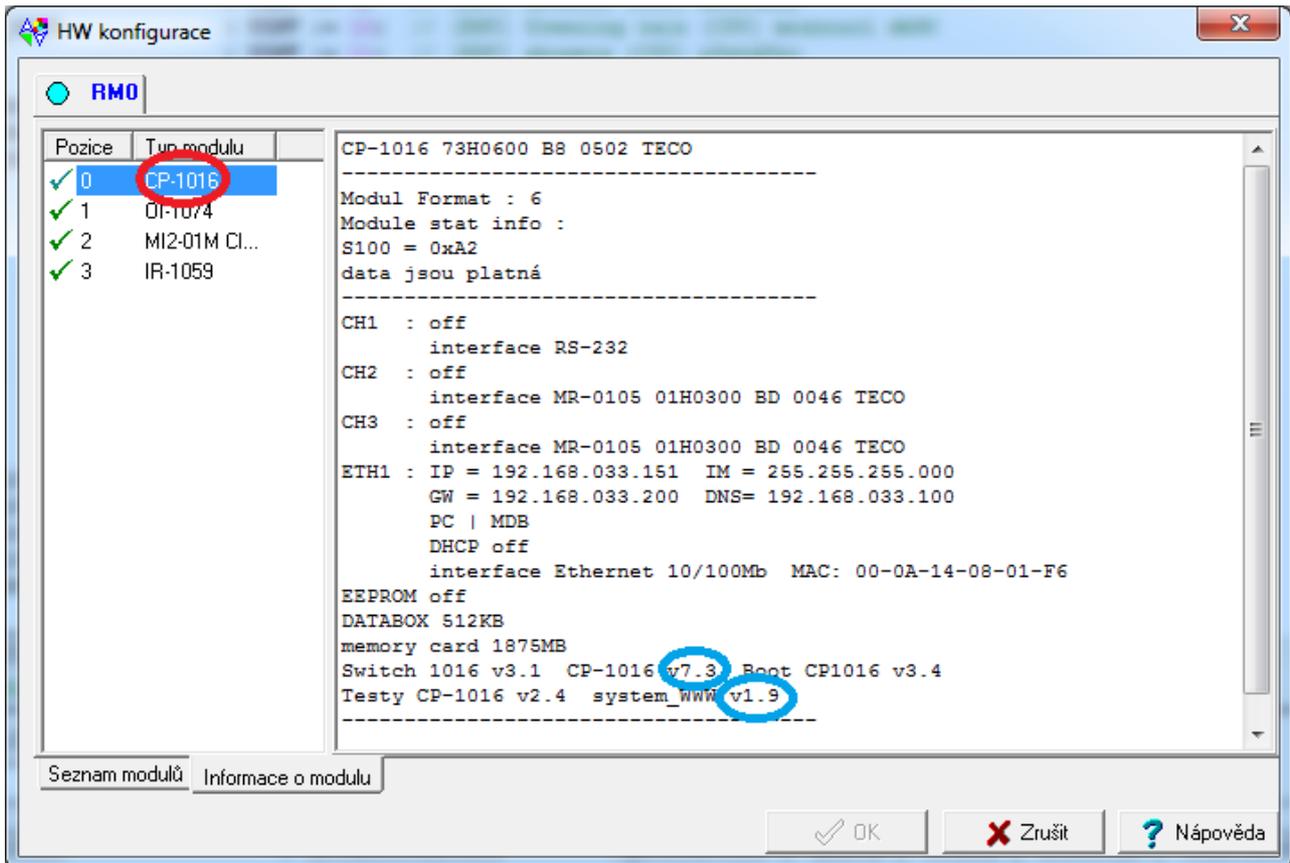
After starting Mosaic environment it is necessary to make contact with PLC. Afterwards it is necessary to choose the item *HW configuration* in PLC menu



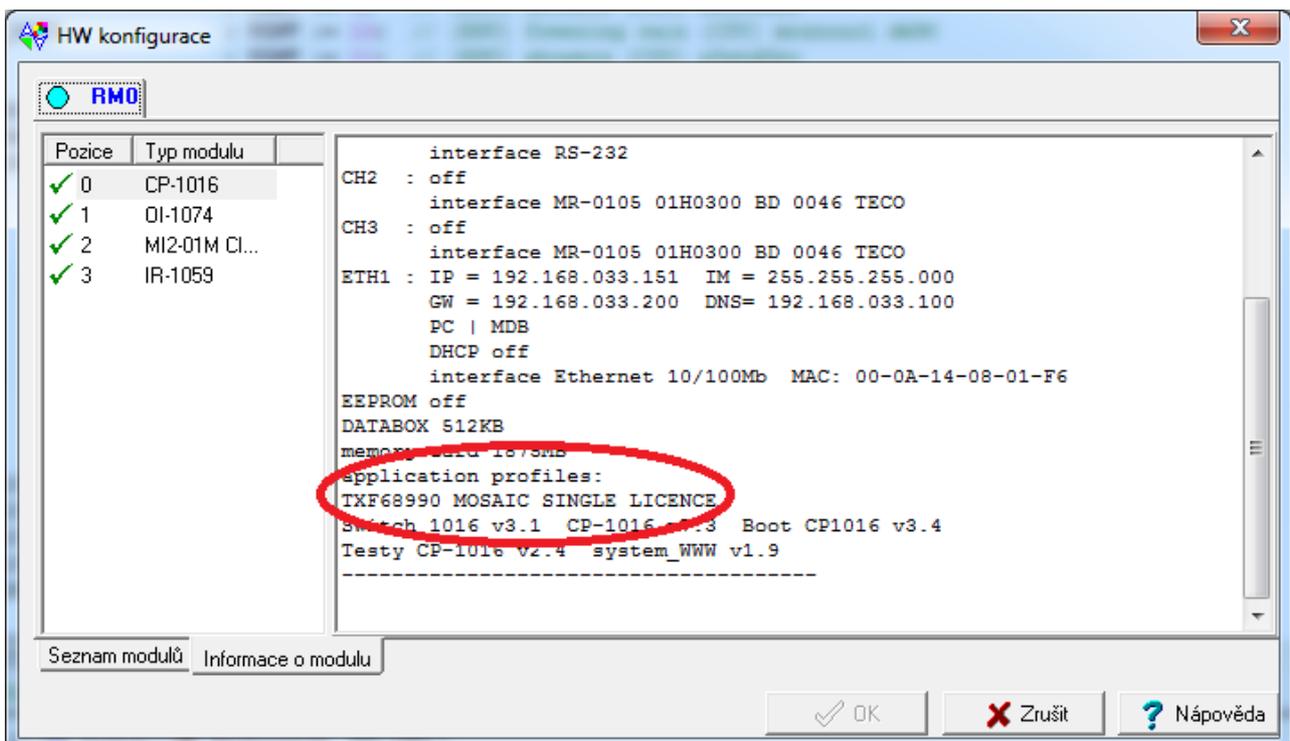
The dialogue *HW konfigurace* with information about connected PLC will be displayed.



In this dialogue click with left mouse button on *Informace o modulu* (Module information) in the lower part. Detailed module information will be displayed in the window *HW konfigurace*. It is necessary to choose the central module (e.g. CP-1016) in the list of modules on the left. In the right part of the dialogue information about central unit will appear, including the information about application profiles.



If the information about application profiles is missing, it means, that no application profile is saved in PLC (see above mentioned dialogue picture). In this dialogue it is also possible to check required firmware versions of the central unit. For working with application profiles within this guide firmware CP-1016 v7.3 and system_www v1.9 (or higher) is needed. On the contrary the lower picture shows, that the profile TXF 689 90 Mosaic Single Licence is saved in PLC.

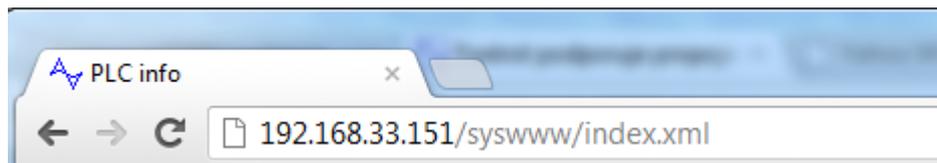


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[/TECO_HTML_TO_HTML_GENERATOR]

2.3 Check of application profiles in PLC using the web browser

Every LC system Foxtrot is equipped by web server. It enables an access to user website (websites programmed within user program PLC) or to system websites, where the basic information about PLC is given. System websites can be displayed in the browser by entering IP address PLC followed by /syswww/index.xml. For PLC system with 192.168.33.151 IP address we enter 192.168.33.151/syswww/index.xml to the browser address line as the following picture shows:

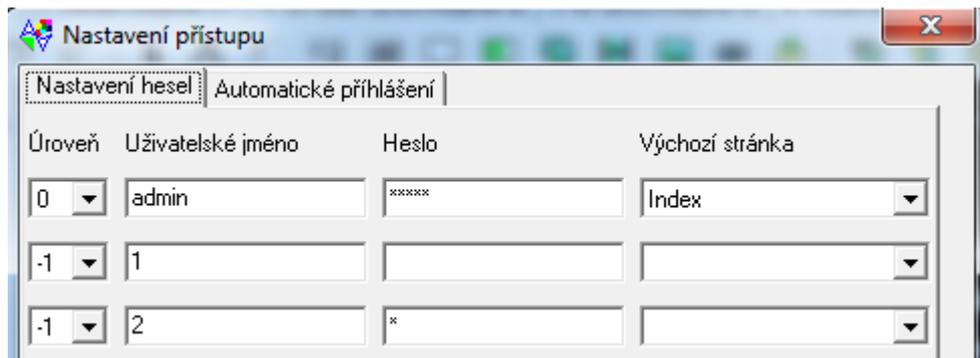


Register dialogue will be displayed in the browser

Vítejte a přihlašte se, prosím.

A login dialog box with a light blue background. It contains two text input fields. The first field is labeled 'Uživatelské jméno:' and the second is labeled 'Heslo:'. Below the fields is a button labeled 'Login'.

If a project saved in PLC contains websites (created by WebMaker in Mosaic environment) user name and password is given by this project. The dialogue for password putting is displayed by pressing the icon  of WebMaker control toolbar.



If the access is to be free, the access level have to be set between 0 and 9 and at least one user name and password have to be filled. After password change it is necessary to transfer the project and load it to PLC.

If no web sites are loaded in PLC then we use the user name 0 and the password 0. The same user name and password is valid if no SD card is fixed in PLC.

After registration a website *PLC info*, containing basic information about PLC (section *PLC Info*) and user program in PLC information, will be displayed:

PLC info

PLC info
App profiles
Logout

PLC Info

PLC mode	RUN EEPROM OFF
CPU type	100 CP1016K V7.3
MAC address	00-0A-14-08-01-F6
Memory card	1875 MB
Startup time	2012-09-10 12:50:17
Current system time	2012-09-10 12:55:19
System runs	00 h, 05 m, 10 s
Last error occurred at:	no fatal errors
Error specification:	

Program Info

User program	KLAVESNICE,1.0
Compiler	xPRO Profi
Compiled	16:19 2012-09-07
Used code memory	3658 B [1%]
Free code memory	192946 B [99%]
Used table memory	3577 B [5%]
Free table memory	61955 B [95%]
Remanent registers	384 B [1 %]

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By clicking on *App profiles* in the left upper corner information about application profiles saved in PLC will be displayed.

The screenshot displays a web browser window with the address `192.168.33.151/syswww/SET_AP.XML`. The page is titled "App profiles". On the left, a sidebar contains "PLC info", "App profiles", and "Logout". The main content area is divided into three sections:

- CPM Info**: Shows "version 7.3", "Type CP-1016", and "Serial number B8 0502".
- Installed Application Profiles**: An empty table with 12 rows.
- Set New Application Profile**: Includes a "Select Application Profile" button and a file selection dialog with "Vybrat soubor" and "Soubo...brán".

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In the upper part of *App profiles* in part *CPM Info*, PLC (CP-1016) type and PLC serial number (B8 0502) is displayed. This information is needed e.g. for ordering new application profile. In the middle part of *Installed Application Profiles* all application profiles saved in PLC are displayed. In the picture above the list of installed profiles is empty which means that no application profiles are saved in PLC. The last part *Set New Application Profile* enables to load new application profile to PLC (see below).

[TITLE] 3 New application profile saving to PLC [/TITLE]
[GROUP] New application profile saving to PLC [/GROUP]

[KEYWORDS] [/KEYWORDS]
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[/TECO_HTML_TO_HTML_GENERATOR]

3 NEW APPLICATION PROFILE SAVING TO PLC

After saving new application profile to PLC licence file with application profile is needed. Teco company sends this file by email after application profile order. File name contains the following information:

- central unit type
- central unit serial number
- application profile name

For example a file with name

AP900032_CP-1016_B8 0502_MOSAIC SINGLE LICENCE.TAP

is for a central unit CP-1016 serial number B8 0502 and contains application profile TXF68990 Mosaic SingleLicence. File contents can be displayed in a usual text editor (e.g. notepad).

AP = TXF68990
APN = MOSAIC SINGLE LICENCE
CPM = CP-1016
SN = B8 0502
COMPANY = Teco a.s.
ADDRESS = Havlickova 260, Kolin
COUNTRY = CR
DATE = 2012-09-10
KEY = D53C689710A814A82FA8516D7839EE4DA4B4DF354912D99F6534F...

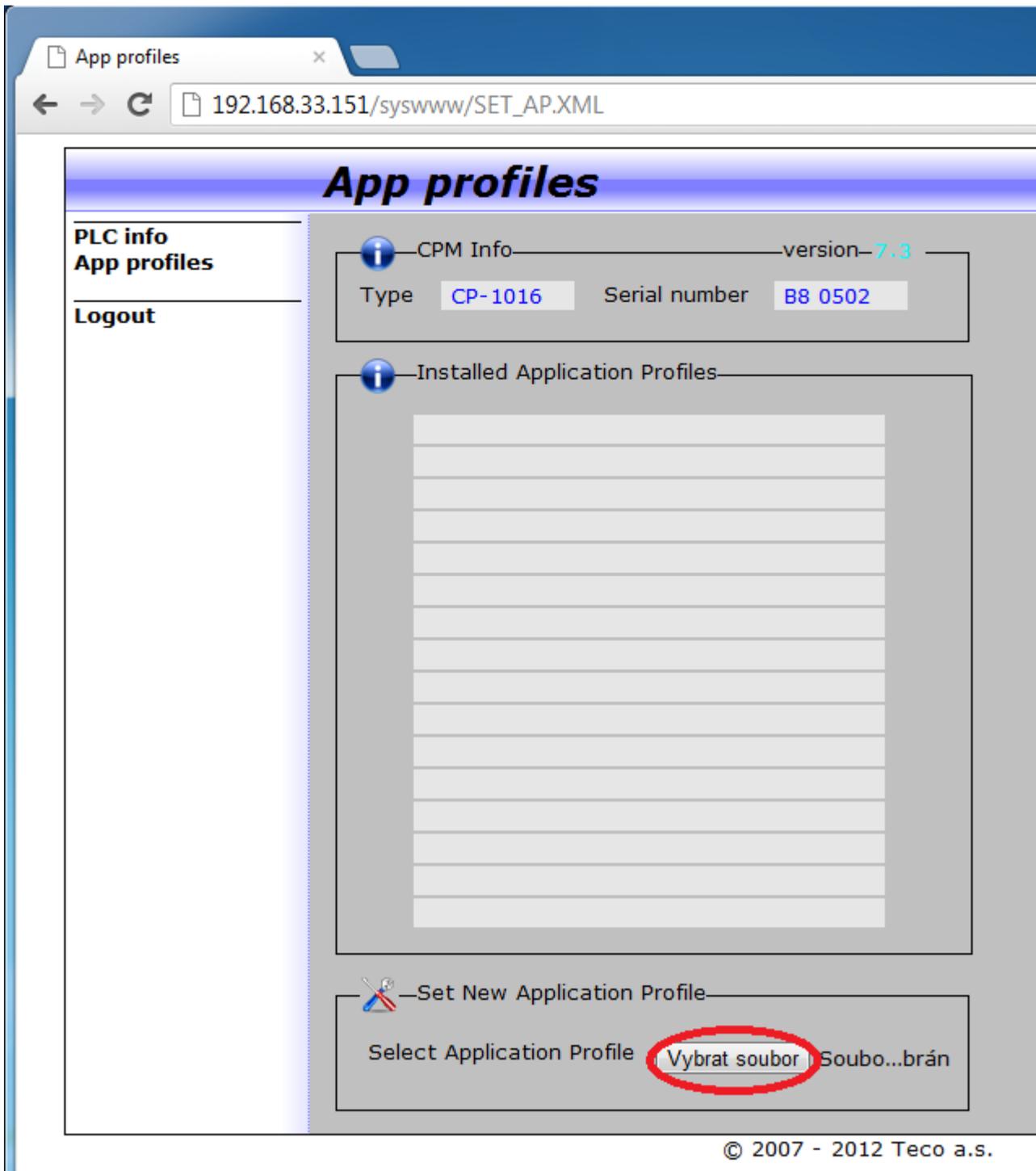
The items meaning is following:

- AP application profile order number
- APN application profile name
- CPM PLC central unit type
- SN central unit serial number
- COMPANY company, which ordered the application profile
- ADDRESS company address
- COUNTRY state, country
- DATE a date when the file with application profile was generated
- KEY application profile key

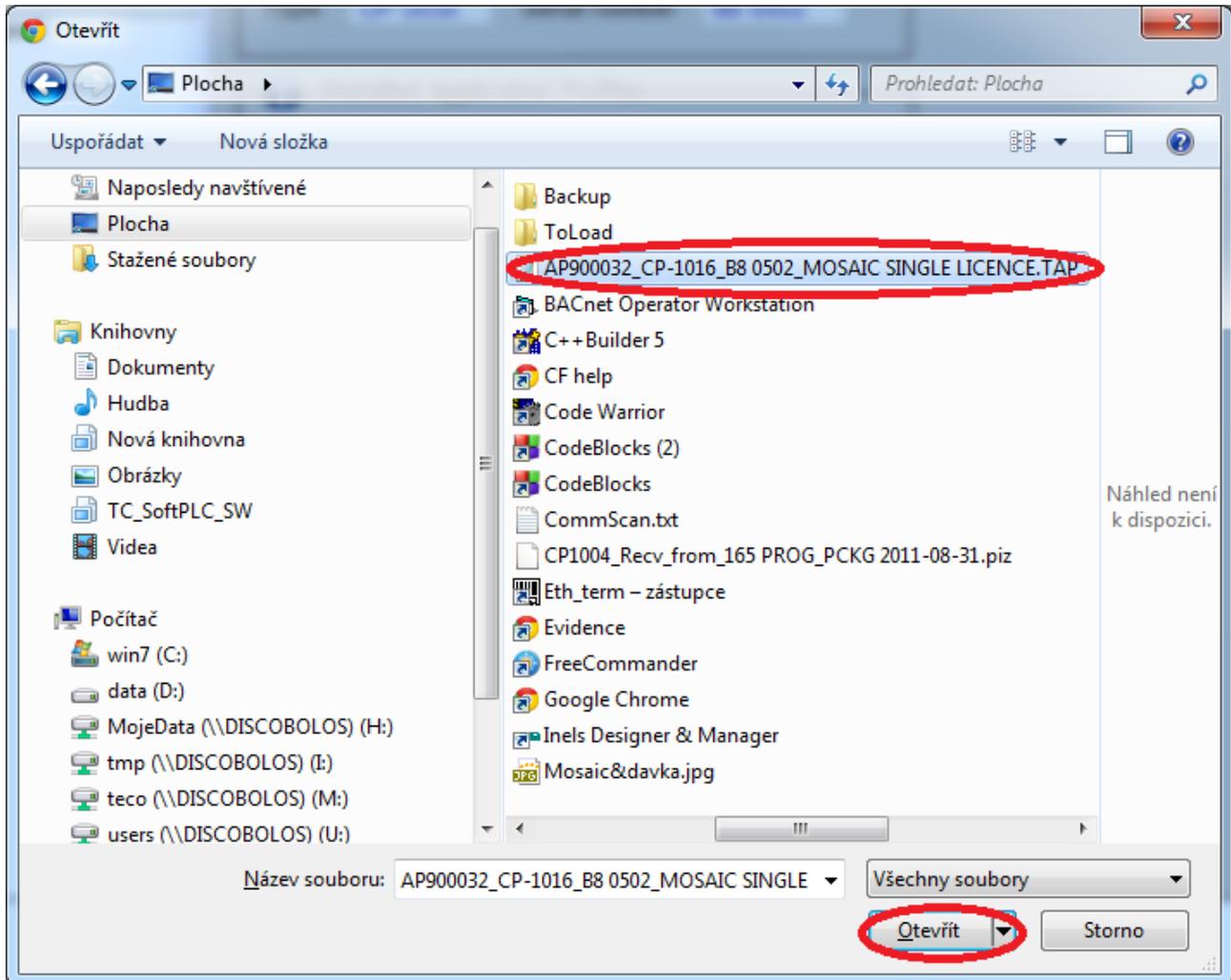
Any file changes (including file names changing) are forbidden and can cause the licence loss.

Before saving the application profile to PLC it is convenient to save the file with application profile from email to commonly accessible file (e.g. to desktop area).

After saving the application profile to PLC at first it is necessary to display *App profiles in the browser* (see the previous chapter). You can enter this site by putting IP address and site name to the address line browser (e.g. http://192.168.33.151/syswww/SET_AP.XML).



After a mouse-click on the button *Vybrat soubor (choose file)*, a standard operating system dialogue will appear. We choose the file with application profile and press *Otevřít (Open)*.



Afterwards the application profile will be saved to PLC and its name will appear in the list of installed application profiles, as the following picture shows. Application profile will be saved in the central unit PLC permanently. If the firmware version of central unit is needed to be changed in the future, saved application profiles will not be touched. In other words change of the central unit firmware will have no impact on saved application profiles.

Attention !!!

It is necessary to keep in mind that every file with application profile is meant for particular central unit PLC. If the central unit type or its serial number doesn't correspond, the application profile will not be saved to PLC.

Attention !!!

PLC must be equipped by SD card at the moment of application profile saving. This card is used for temporary string of files with application profile before its programming to PLC. Without SD card the application profile cannot be saved to PLC! After the application profile appears in the application profiles list, the SD card is not needed anymore.



teco

Objednávky a informace:

Teco a. s. Havlíčkova 260, 280 58 Kolín 4, tel. 321 737 611, fax 321 737 633

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