

easySoft V7.41



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Original Release Notes

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Translation of the original Release Notes

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Subject to alteration

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1 easySoft 7

1.1 System requirements

1 easySoft 7

1.1 System requirements

Hardware

- Recommended minimum resolution of 1280 x 1024 pixels
- Min. 300 MB of free space on the hard drive

Software

PC with one of the following operating systems:

- Windows 7 SP1 (32 + 64 Bit)
- Windows 8/8.1 (32 + 64 Bit)
- Windows 10 (32 + 64 Bit)
- Windows 11 (64 Bit)

1.2 Installation instructions

To install the program, you must have administrator rights, user rights are not sufficient! Only with administrator rights can the setup program correctly install the required system components on your system.

If errors occur during the installation which refer to the fact that files or directories cannot be copied or created, please check whether your user account has administrator rights.

- Download the full version of the programming software easySoft 7 from the Download Center - Software
 - Download Center - Software
<http://www.eaton.eu/software>
- Select the product group easySoft and the latest product version.
- Click on the latest product version for download.
- Save the easySoftV7xx_setup.exe on your PC.
- Start easySoftV7xx_setup.exe on your PC.
- Follow the instructions of the easySoft 7 setup program on the screen.

1 easySoft 7

1.3 easySoft 7 programming software license

1.3 easySoft 7 programming software license

Please note that easyE4 devices can only be programmed with easySoft 7.

The easySoft 7 programming software is available for free. However, you will need to buy a software license in order to be able to use all software functions.

- Online function
You will not be able to load any programs onto a connected device (no online function).
- Card manager
There will not be any card manager functions available for the microSD memory card
- Download the full version of the easySoft 7 program from the Software Download Center.
<http://www.eaton.eu/software>
- You can order a programming software license through your supplier or through the EATON online catalog EASYSOFT-SWLIC, article no. 197226.
<http://www.eaton.eu/ecat>
- You will receive a license product certificate containing a 36-digit certificate number.
- Open the following website:
<http://www.eaton.eu/license>
- Now enter the 36-digit certificate number from your license product certificate.
- A dialog box will appear. For your own security, enter the license owner information into this dialog box.

Once you enter all your information, a 24-digit license key will be sent to the e-mail address you provided.

The e-mail will contain the following information:

- License type: SW-EASYSOFT
- License product certificate number: 7-digit number for your certificate
- License key: Automatically generated 24-digit code
- Information regarding the owner's registration

During the easySoft 7 installation process, enter the 24-digit license key.

1.4 Adding a license later on

1.4 Adding a license later on

If you installed the demo version of easySoft 7, you can add a valid license key later on in order to unlock the full version. How to get the license key is described in chapter 1.3 easySoft 7 programming software license.

- Go to easySoft 7 ? menu and click on License.
- A dialog box for entering the license key will appear.
- Now enter the 24-digit license key that you received by e-mail.
- Click on Check license.

Once the check is completed successfully, close the dialog box by clicking on OK. All program functions, which require a license, will now be unlocked.

1.5 Legal disclaimer

All the information in this release notes has been prepared to the best of our knowledge and in accordance with the state of the art. However, this does not exclude the possibility of there being errors or inaccuracies. We assume no liability for the correctness and completeness of this information. In particular, this information does not guarantee any particular properties.

It is assumed that the user of this manual is thoroughly familiar with the information found in the manuals for incorporating the control relay into automation processes. Hazards posed by the control relay cannot be ruled out if the safety instructions are not observed – especially if the control relay is installed and commissioned by inadequately qualified personnel or if it is used improperly. Eaton assumes no liability for any damages resulting from cases such as these.

1 easySoft 7

1.6 easySoft V7.41 version changes

1.6 easySoft V7.41 version changes

1.6.1 Important modifications

1.6.1.1 Project view:

Modbus variable export

The operands MD and ND are exported with the correct operand number. #35686

Operands are no longer exported with comment, so that the entries can be imported into Galileo. #35467

Marker area assignment dialog

For the function blocks MC and MU (acyclic Modbus requests) the display of the occupied markers has been corrected. #35729

1.6.1.2 Programming view:

Protocol window of the plausibility check:

It is now possible to jump repeatedly to a user function block by double-clicking on an entry within the protocol output window without opening the user function block multiple times in the programming view. #34846

Cross-reference list:

Accesses to the marker area by the function blocks MC and MU are now included in the cross-reference list. #35750

Sorting entries by operands now also works for marker. #35787

ST programming:

The incomplete entry of "UF1" in the source code no longer leads to a permanent allocation of the FB instance. #35561

Text display editor:

The installation of the font "Arial Unicode MS" is no longer required and an unintentional termination of easySoft during the parameterization of text modules is avoided. # 35953

1.6.1.3 Communication view:

On the HW Info tab, the internet links have been updated for base devices. #35579

In the device search via easyNET (NET... button in the Program / Configuration dialog), an error has been corrected that previously prevented the display of all devices found. #35687

When uploading an EDP program (Device=>PC), the pre-circuit at input I1 for the function blocks VC and NC is now restored. #35799

1.7 easySoft V7.40 version changes

1.7 easySoft V7.40 version changes**1.7.1 New functions**

- easySoft V7.40 can be installed and run in parallel with the previous versions. #30993
- easySoft V7.40 is released for Windows 11. #31752
- Support of base devices with firmware version V1.40
- Support of the communication module EASY-COM-RTU-M1 (Modbus RTU Master or Slave) with configuration of slaves and cyclic requests directed to them (from V1.40)
Note: In RTU slave mode, direct access to network flags will be supported in a later firmware version!
- Support of new Function block MU – Modbus RTU acyclic request (from V1.40)
- Support of SWD Module PXR-RCAM-SWD
- Adding new devices and modules to the project configuration by double-clicking on the entry in the device catalog, if possible #16833
- E-Mail tab of base device: new edit field "Sender (From)" (from V1.40) #30851
- new options in the Modbus TCP client function of the base device (from V1.40):
 - 32-bit mode for easier transfer of double words with FB MC #31620
 - Configuration extension for TCP server modules with "twisted" byte sequences #31426
 - Configuration extension for TCP server modules with option „Auto-Decrement on all addresses“, if the addressing in the server starts at 0 and not at 1 #31628
- Structured Text – Editor extensions:
By keyboard (Ctrl + Acute-Accent) the insertion point can be moved between the beginning and the end of a parenthesized expression or complex statement in both directions. #18939
- Extensions in the display dialog "Operand window+Oscilloscope"
 - Display of numeric values decimal or sedecimal
 - State changes of input operands and markers directly in the operand window (markers can thus also be changed online) #30474
 - Limiting the range of values for the display in the oscilloscope #30889
- When the status display is turned on, changes to setpoints (e.g., caused by user inputs in FB D) are automatically detected and displayed updated in the workbench window. #17711
- „Clock“ tab in Communication view:
Manual triggering of clock synchronization with the SNTP server specified in the program (from V1.40) #30857
- The operand ID18 indicates whether the SD card is available (from V1.40). #32470

1 easySoft 7

1.7 easySoft V7.40 version changes

1.7.2 Important modifications

After changing the Windows screen resolution in easySoft operation, the user interface (menu bar, toolbar and status bar) is still displayed correctly. #19071

1.7.2.1 Project view:

Dialog Marker area assignment:

Minor corrections have been made to the occupancy display. #30566

1.7.2.2 Programming view:

In the first FB D parameter tab, the checkbox descriptions have been redesigned to clarify that enabling the P-key functionality results in disabling the default key function. #29204

In the printout, the layout of the function block parameters has been revised for all programming methods to avoid truncated texts. #33597

EDP programming:

In the circuit diagram, pasting from clipboard contacts at coil position as well as coils at contact position is rejected. #30816

LD and FBD programming:

The creation of bit coils as parallel connection is supported by keyboard input. #30764

If more than one symbol or network is selected, keyboard input of operands is inactive. #31460

The click area for expanding and collapsing a network has been enlarged to the entire number field of the network header. #31432

When adding a network via the context menu, the new network is inserted before the first network, even if the latter is not fully displayed. #30272

ST programming:

If the jump target of an entry in the log window or in the cross-reference list is in a collapsed ST construct, the ST construct is automatically expanded to be able to position on the jump target. This also works for nesting constructs. #29110

After starting the search, the Find/Replace dialog is no longer closed automatically. Even when switching to the workbench window the dialog remains open. #32652

Print output has been optimized for extra-long lines, word wrapping is avoided. #32143

If printing is started from the preview, a complete printout is generated. #32433

User function blocks:

In firmware version V1.40, there are no changes regarding the programming in user blocks in compared to the previous versions. Therefore, version 1.30 still appears in the "From firmware version" selection field for a user block that is created for a device with firmware version 1.40. #32338

1.7 easySoft V7.40 version changes

Cross-reference list:

When printing a long list usage points of operands, a required switch to a subsequent page is considered. #32495

All operand access types are correctly listed in the project printout. #33595

1.7.2.3 Simulation view:

For expansion module EASY-E4-DC-6AE1 the value ranges of the analog inputs are displayed correctly. #33227

1.8 easySoft V7.32 version changes

1.8.1 Important modifications

1.8.1.1 Programming view:

EDP programming:

The keyboard operation in the circuit diagram editor has been changed in such a way, that a single press of the Ctrl or Shift key remains without consequences, when navigating within the diagram with the cursor keys. #32031

LD and FBD programming:

When multiple diagram symbols are selected (moving the mouse with the left key pressed), automatic scrolling no longer occurs to bring the last selected symbol back into the visible area. #31118

Constants entered via keyboard at function block value inputs are now accepted correctly. #31121

In the parameter dialog for an analog contact, it is now possible to enter the minus sign for a negative constant directly. #31124

ST programming:

The printout has been corrected:

Control characters for color formatting no longer appear in the printout. #30893

The background color setting for screen display is completely ignored for printing. #32138

Previously, the program lines were generally printed in black color except for keywords and comments. Now the preset text colors are considered in the print output, unless they resemble the white sheet color – in this case they are printed in black color instead. #32033

Cross-reference list:

In the cross-reference list dialog, the comments for marker operands with three-digit operand numbers appeared incorrectly assigned after a comment change, but the internal data management was correct.

For example, comments entered for MW10 also showed up for MW100 through 109.

This is now corrected. #30987

1.8.1.2 Communication view:

The preparation of the configuration data for a program with Modbus TCP client function has been corrected:

If a cyclic FC23 request with a different number of registers for reading and writing was configured in a Modbus TCP server module, the operand assignments for all subsequent requests in this module no longer matched the configuration. Faulty process data were transferred. #31116

1.8.1.3 Simulation view:

The emulation of the FB MC behavior has been improved; the function block now always shows the number of requested Modbus elements at the QV output after the end of the BY phase. #32030

1.8 easySoft V7.32 version changes

1.8.1.4 Project migration:

The high-speed counters C12 and C13 of easy500/700 are migrated correctly, if their RE inputs are used. #31444

An UC extension is now generally added to a base unit of UC type. #31446

1 easySoft 7

1.9 easySoft V7.31 version changes

1.9 easySoft V7.31 version changes

1.9.1 Important modifications

1.9.1.1 Project view:

Exchange of E70 files with different Windows region settings

E70 project files saved with V7.30 can also be opened on a computer that has different Windows language or region settings, e.g., files can now be exchanged between computers with Polish and German Windows.

The E70 file format has not changed by this! #30525

Modbus TCP server module, Cyclic data tab

The function code list box is now displayed correctly in all situations. The display of a black area when clicking on the "Function code" column in line 1 after a tab change no longer occurs.

#30358

The table of cyclic Modbus requests is now displayed completely in all situations. If the window size of the application is relatively small or it is changed quickly, display errors no longer occur. When adding new rows with the "+" button, parts of the table are no longer cut off. #30482

Base device, Modbus TCP server tab

In the variable export (ITF file), operand comments are no longer added, since this prevented the correct transfer to Galileo in the case of bit flags, for example. #30308

Marker area assignment dialog

The released marker areas from the Modbus TCP server settings are generally no longer considered in the assignment table, since the actual marker accesses via Modbus TCP cannot be determined based on the project. #30258

1.9.1.2 Programming view:

LD Programming:

With large LD diagrams, it could occasionally happen that parallel networks were no longer completely recovered when a project was read in again (missing links or disappeared symbols). This is prevented in V7.31. #30565

EDP Programming:

The comments of operands, which are assigned to value inputs or outputs of a function block, are now automatically deleted on deleting the FB in the function block diagram, unless the operands are still used at another place in the program. #29429

1.9.1.3 Simulation view:

Within LD and FBD diagrams, a multiple selection frame is no longer created (moving the mouse with the left key pressed), since multiple selection of symbols is not supported here. #30270

1.9.1.4 Project migration:

An UC extension is now generally added to a base unit of UC type. #30473

1 easySoft 7

1.10 easySoft V7.30 version changes

1.10 easySoft V7.30 version changes

1.10.1 New functions

- Support of base devices with firmware version V1.30 with new system options:
System settings tab: "System event logging" #19617
Ethernet tab: "Remote display configuration", "Access control" #20626
Webserver tab: Write access rights "E-mail" and "Remote display keys" #19922
Modbus server tab: „Set clock disabled“ #19447
E-mail tab: System message „Configuration error occurred“ #18964
- Support of the communication module EASY-COM-SWD-C1 (SWD coordinator) with complete configuration of the SWD line within project view (from V1.30)
- Support of the Modbus TCP Client function within base device: Configuration of up to 4 server connections and cyclic requests directed to them within the project view (from V1.30)
- Support of new function block MC – Modbus client acyclic request (from V1.30)
- Support of new operating modes GE (greater equal) und LE (less equal) of function block A – Analog value comparator (from V1.30) #20590
Consideration of the new operating modes in the migration of easy500/700 projects #20596
- Support of printable Non-ASCII characters (Unicode) in function block AL – Alarm function block within subject and message text #20229
- Support of new LE operands LE4 ... LE6 to switch the background color in the display of the base unit independently of the FB D text display (from V1.30) #20342
- Tabular presentation of all markers used in the program (menu point Project→Marker area assignment) with the possibility of a transfer to MS Excel #20580
- Search for comments in LD/FBD diagrams extended: whole words, case sensitive/insensitive, search in network comments #19579
- Find and replace dialog in Structured Text no longer blocks switching to the program window; additional hint when reaching the end of the text #19663
- new Make and Break catalog items for the most recently used operands I, Q and M (LD/FBD) #19599
- Entering timer values with keyboard (e.g. T#50ms, T#1h2m, T#1m30s) and automatic creation of new Analog contacts in LD/FBD #19564
- Entering operands with keyboard in LD/FBD without time pressure, the input is terminated with the RETURN or ESC - key. #19563
- automatic closing of wiring gaps when moving contacts within the EDP circuit diagram #19639

1.10 easySoft V7.30 version changes

- automatic closing of wiring gaps when inserting new contacts and coils up to the next adjacent diagram element; no general through-connection up to the left edge of the EDP circuit diagram #20568
- extended configuration dialog for copy & paste of EDP diagram lines #20887
- new accelerator keys Ctrl+Ins and Shift+Ins as an alternative to Ctrl+C and Ctrl+V (Copy & Paste via clipboard) #20856
- Remark on a missing device password at the start of the program transfer extended: an automatically generated password can be used #21339
- Representation of display content in simulation and communication: either as before in the web server view or alternatively monochrome with current background color as in the display of the base device. Visualization of the LE4...LE6 operand states #19502, #19503, #20623, #20624
- Alternative to the input simulator: inverting a state by mouse double-click directly on the point of use in the program window, usable for operands I, ID, M, N und RN (in Online mode also for M); the properties window does not have to be displayed for this #19961
- The automatic exchange of the properties window has been reduced to a minimum in the state display - now it is only done automatically when selecting constants and blocks in the program window. For other operands, the exchange must be triggered explicitly by selecting the corresponding entry in the "Display" catalog tab.. #19960
- Table of contents in document print #20454
- faster switch to several parameter dialogs in project and programming view #20303, #20025
- Output of operand comments in the project migration protocol #19352

Changed E70 file format:

Projects that have been created with previous easySoft versions can be opened and processed with V7.30. Projects that have been stored with easySoft V7.30 cannot be opened with previous software versions anymore! #19365

1.10.2 Important modifications

1.10.2.1 Project view:

Base device, E-mail tab

Deleting an email group no longer generally resets the recipient group for system messages. #20033

Base device, Clock tab

The maximum length for a SNTP server URL has been corrected from 32 to 63 bytes. #21193

1 easySoft 7

1.10 easySoft V7.30 version changes

1.10.2.2 Programming view:

EDP programming:

While editing a sticky note, it is no longer possible to turn off the display of sticky notes. #20181

The options dialog when copying and pasting rungs has been completely revised. #20509, #20901

During the plausibility check, there are no longer any misleading warnings of incomplete wiring (FB BT and DB without edge evaluation at the trigger input). #20775, #20878

When editing in the circuit diagram, function blocks are no more automatically deleted in the function block diagram that are still without parameterization and usage. #21182

When inserting rungs, the original station number is retained even if it is invalid – a manual correction is now possible. #21382

LD and FBD programming:

To avoid layout errors in LD/FBD diagrams, it is recommended to set the desired printer (e.g. Print To PDF) as the default Windows printer and to select it under "Printer setup" in easySoft. #18242, 19335

When subsequently switching the time range setting of a Timer, an upstream constant is converted as far as possible to the new time range. #16919

In the "Search" dialog, a NET ID can now be specified as a separate search criterion. #20294

If you click with the mouse in a free diagram area, the last selection is retained. #21156

ST programming:

Within a function block call the identifiers of FB inputs and FB outputs (e.g. OF) are no longer colored as ST keyword. #15004

The keyword CASE is supported in any upper and lower case. #20473

The printout of an ST program is made in the font setting for the screen display. #29244

Cross-reference list:

Even if interrupt function blocks are used in the program, navigation within the usage locations is possible. #20951

User function blocks

The print layout of the parameter page has been optimized. #19008

Within a user block LD/FBD networks can be expanded or collapsed as required without triggering an unnecessary prompt for saving. #21203

In project view a device including its program can be copied and pasted. If a user function block is used in the program, there is no longer a premature close of the easySoft. #21209

1.10 easySoft V7.30 version changes

Communication view:

The RUN/STOP state of the coupled device is now periodically determined and visualized in the user interface. #20803

When starting the status display, the circuit diagram content is shown even if the oscilloscope tab was previously active. #21147

When the status display is turned on, the current caret position in the ST text is retained when switching temporarily to another tab (e.g. Oscilloscope). #21149

The entire visible area of the program window is refreshed in the status display, even if collapsed ST text blocks are present. #21340

When transferring a program to the device, the column position of the FB D element "Date and time display" with the setting "weekday" is no longer shifted one column to the right. #21403

When a program is transferred to the device, additional management data is generated for user blocks without bit inputs so that upstream setpoints can be edited at the device. #29555

1.10.2.3 Simulation view:

When switching between programming view and simulation view (back and forth), the last cursor position is retained. #19519

Within a FOR loop, the states are displayed at the moment of loop termination; this now also applies to assignments of constants. #20034

Within the operand window loading of an operand list file can be done from any directory. #20559

1.10.2.4 Project migration:

The mapping of the operands R and S to I and Q in easyE4 is now correct.

Operands I and Q for which there is no longer a terminal in the easyE4 base device are generally moved to the starting number for expansions from I17 or Q17. #19047, #19048

A supplemented expansion now always receives the same power supply type as the base device (e.g. DC+DC or UC+UC). #21071

1 easySoft 7

1.10 easySoft V7.30 version changes

Note on the migration of projects with Remote IO NET devices

The NET operands I, Q, R and S of the easy8xx device family are no longer available for remote access in easyE4. As part of the migration they are mapped to the new NET operands N according to the table below. The direct link to the input and output terminals of the addressed Remote IO devices therefore no longer exists:

NET-Operand easy8xx	new NET-Operand easyE4
nI1 ... nI16	nN80 ... nN95
nR1 ... nR16	nN96 ... nN111
nQ1 ... nQ8	nN112 ... nN119
nS1 ... nS8	nN120 ... nN128

Remote IO devices without a circuit diagram are currently not included in the e70 project and must be added manually and, if necessary, extended with a digital expansion module.

Subsequently, a program must be created in each of the added devices, which takes over the mirroring of the terminal states to the N operands and back by means of simple assignments (based on the above assignment and the information of the conversion protocol).

1.11 easySoft V7.22 version changes

1.11.1 New Functions

Context help and easyE4 manual are now available in French, Spanish and Czech.

1.11.2 Important modifications

1.11.2.1 Programming view:

LD and FBD Programming:

With large LD or FBD diagrams, it could occasionally happen that parallel networks were no longer completely recovered when a project was read in again (missing links or disappeared symbols). This is prevented in V7.22. (#20583)

EDP programming:

After changing the operand number of a contact by keyboard, its context menu can be called immediately and not only after reselection of the contact; also, the corresponding parameter dialog is displayed immediately. (#20839)

Cross-reference list:

The creation of a cross-reference list has been optimized: all used operands are now listed, even in large programs. (#20632)

Operands which are used in an FB pre-circuit or FB post-circuit are now included in the cross-reference list. (#20669)

The call of a function block is now listed separately in the cross-reference list with access type C. (#20669)

For programs with interrupt blocks it is now possible to navigate to the usage locations. (#20750)

User function blocks:

After renaming or changing the version of user function blocks, data loss or incorrect display of the content may occur when saving the user function block. Therefore, this function is no longer available in this context.

In this situation only use the function Close → User function block. (#20712, #20713)

After changing the content of a user function block, a crash no longer occurs when closing the easySoft project. (#20714)

1.11.2.2 Simulation view:

Function block PM (Performance map)

The simulation now supports characteristic curves with very large reference values. (#20630)

1 easySoft 7

1.12 easySoft V7.21 version changes

Function block PW (Pulse width modulation)

The simulation now considers the special use case that the controlled output is permanently set to HIGH or LOW due to too short switching times. (#20637)

1.12 easySoft V7.21 version changes

1.12.1 Important modifications

1.12.1.1 Project view:

Security configuration

A meaningful error message will be issued, in case an invalid device password „000000“ is entered. (#19665)

E-mail Configuration

Automatic deletion of un-valid e-mail addresses won't be done any more.

Checking a recipient list will only be done via plausibility check.

E-mail addresses from a local domain area will now be allowed, e.g. user@localserver. (#19713)

Assigned Operands

Copy and paste of I/O assignments within an assignment list will now be supported. (#19737)

When executing the „Delete program“ context menu option, the display languages for the function blocks Text display will be deleted as well. (#18922)

Printing of NET Projects

The selection dialog does no longer pre-adjust NET station NT1, it will pre-select the actual participant instead. (#19337)

1.12.1.2 Programming view:

Cross-reference list:

The dialog will now support subsequent changes of the sortation for all columns. (#20337)

Text display editor:

For the *Rolling text* element, a display time of 1 second is pre-selected, to improve the readability on the device. (#18903)

If a text display function block is copied to the clipboard, all entries of the display languages table will be copied into the clipboard as well. When pasting the function block from the clipboard, missing languages will be pasted to the insertion point as well. This ensures that all existing texts are available for the inserted text elements. (#19604)

If multiple elements are selected using rubber band selection and then copied to the clipboard, the original navigation sequence is now preserved when pasting. (#18719)

1.12 easySoft V7.21 version changes

User function blocks:

User function blocks can now be exported to the desktop, the Documents folder or a network resource folder. (#19484)

In the *Create user function block* dialog the given remanence scope will now persist when switching between MB, MW or MD presentation. (#20048)

EDP programming:

When re-reading a project, the sticky note of the last used current path won't get lost anymore. (#20220)

When moving coils by mouse, their original coil function will remain. (#19531)

Deleting content of circuit diagrams will only work at the first actuation of the DEL key. (#19618)

Operands and connection elements will only be deleted at the actual position. Sticky notes won't be deleted anymore. (#20086)

The *Search* function will now also find function blocks of the following types:

Analog value comparator A, Counter relay C, Text display D, Weekly timer HW and NET marker N. (#19526)

When using the *Go to* function the content of the circuit diagram won't be changed anymore. (#20041)

Switching on the tool *Drawing connections*, *Eraser* or *Add note* would always show the program info dialog.

Switching off the tool would navigate back to the previous circuit diagram position. The corresponding parameter dialog will be displayed again. (#20079, #20230)

LD and FBD programming:

The maximum number of symbols that can be copied and pasted via clipboard has been increased:

The paste action will be aborted when it takes longer than 5 minutes. (#19046)

When copying and pasting function blocks, the original operand numbers are retained when inserting into an empty diagram.

When inserting into a diagram that is not empty, new operand numbers are assigned to the function blocks that have not been used so far. In this case, contacts and coils referencing these function blocks are now corrected to the new operand number, too. (#19604)

The *Search* function does only expand collapsed networks, if they contain a search hit. (#18897)

ST programming:

If the last application point of an operand has been deleted from the source text, its operand comment now remains, in case the operand still has an assignment to an I/O point configured. (#20000)

1 easySoft 7

1.12 easySoft V7.21 version changes

1.12.1.3 Communication view:

Dialog Search for devices:

If unknown devices are found, their actual parameters will still be displayed. However, it is no longer possible to change their settings. (#19010)

Status display:

A serial connection of user function blocks in LD or FBD, having value inputs and outputs only, will now be supported in the online presentation. In addition, the original program can now be reconstructed by actions like Device → PC. (#19349)

Operand Display:

The dialogs now consider the restricted value range for Byte marker and Word marker, if the user sets a new status value:

If the user input is out of the supported value range, it will be corrected to the maximum or minimum value feasible for this operand. (#19485)

Oscilloscope:

If an oscilloscope channel is set up using a value input or value output of a manufacturer function block, its potentially limited value range will be automatically considered when aligning the vertical scale of the channel. (#18918)

Card setup:

When transferring a program with action Device → Card and selecting a file which already exists on the card, the original file will now remain if the action is aborted by the device. (#19390)

1.12.1.4 Project migration:

Importing expansion modules, the original voltage supply (UC instead of AC) will now be correctly taken over. (#19423).

If a program imported which uses analog input operands of the base device, the I operands will now be re-arranged: (#19341)

- Terminals capable to be digital and analog inputs as well (operand I7, I8, I11, I12), will now be moved towards easyE4 terminals of the same functionality (operand I5, I6, I7, I8).
- The original digital terminals I5 and I6 will be moved towards an expansion module

The diagnostic markers R13 to R16 of an EASY406-DC-ME resp. EASY411-DC-ME expansion are now generally mapped to operands from ID25 (#19424)

A new arrangement of operands will now be more exactly protocolled. (#19422)

The ENC parameter of the CH, CF and CI function blocks will now be configured in a way that the behavior of the function blocks will be the same as in the imported program. (#19388)

The easy500/700's high-speed counters C13 and C14 as well as the frequency counters C15 and C16 are now included in the easyE4 program as CH and CF. (#20351)

Projects using PT function blocks can now be imported. (#19692)

1.12 easySoft V7.21 version changes

Text display function blocks D do now represent their display elements at the right position of the text editor window. (#20227)

When converting a circuit diagram into a LD diagram, circuit diagram jumps without a jump target contact are now considered: To keep the original circuit diagram logic, missing jump links will be added to the LD diagram (#19964).

The easy500/700 operands M1...M16 remain un-changed, operands N1...N16 are moved to M17...M32. Within easyE4, retentive markers can only be configured as one single and connected area. Hence, markers, so far not being retentive, can be part of the retentive area after import.

After importing, please observe the retention settings and correct, if applicable. (#20350)

1 easySoft 7

1.13 easySoft V7.20 version changes

1.13 easySoft V7.20 version changes

1.13.1 New Functions

- The following new devices with push-in terminals are now supported:

EASY-E4-UC-12RC1P
EASY-E4-UC-12RCX1P
EASY-E4-DC-12TC1P
EASY-E4-DC-12TCX1P
EASY-E4-AC-12RC1P
EASY-E4-AC-12RCX1P

EASY-E4-UC-8RE1P
EASY-E4-UC-16RE1P
EASY-E4-DC-6AE1P
EASY-E4-DC-8TE1P
EASY-E4-DC-16TE1P
EASY-E4-DC-4PE1P
EASY-E4-AC-8RE1P
EASY-E4-AC-16RE1P

- New base device function for cancelling the programming language or deleting the program without losing the corresponding system settings, including device parameters; option in context menu *"Delete program"* (#18340)
- New web server option *"Parameters"* for enabling write access to function block inputs (#18200)
- New functions in ? menu (#18449)
Function for opening the easy forum website
Function for opening the YouTube playlist for easyE4/easySoft7
Function for showing the license terms after installation
- The comment and the supported firmware version for a user function block can now also be displayed outside the configuration dialog box (#18302, #18312)
- Text display, message text in value range mode: The *Value range* column now shows, for each row, the interval limits that will trigger a change to the assigned message text. (#18301)
- A new analog contact with a constant value can now be created directly with the keyboard without a leading number sign # (#18277)
- A cross-reference list can now be created exclusively for the current operands using the *Instances* context menu option (#18307)
- When you return to the Programming view, the last saved catalog structure state (expanded and collapsed folders) will be restored. (#18358)

1.13.2 Important modifications

1.13.2.1 Project view:

Exiting easySoft with write-protected project file:

If a project cannot be saved anymore due to its being write-protected, easySoft will not close. The file can then be saved with a different name. (#18281)

Modbus:

The Modbus tab now shows the current options correctly when the current device is changed in a NET project. (#18468)

For programs created using ST, the ITF export file now includes the operands found in the configured Modbus ranges. (#18433)

Concept change in mail server settings:

For devices with FW version 1.20 or higher, the full domain name for the e-mail server (e.g., smtp.strato.de) now needs to be entered into the *DNS name* field, since the firmware no longer puts together the DNS name with the information in the *Mail server domain* field.

It is now necessary to enter the hostname or the domain for the device itself into the *Sender domain* field (previously *Mail server domain*), e.g. easyE4. The information in this field is used only to log in to the mail server now. (#18330)

Pasting programs:

It is no longer possible to paste a program if it contains any operands not supported by the target device. (#18503)

Dialog Card setup:

The dialog is no longer closed automatically if the user cancels selecting a master directory – the path that was last defined will be kept. If there are any error messages, they will be detected directly and shown above the table.

It is no longer necessary to restart the dialog. (#18438)

1.13.2.2 Programming view:

General:

If the report window was resized to a very small size or was not visible fully the last time it was open, it will be automatically positioned over the lower third of the main window if displayed again. (#18429)

Cross-reference list:

The dialog now also shows all operands that are used only in one text display function block. Navigating within instances will take you to the point where the function block is called. (#18198)

1 easySoft 7

1.13 easySoft V7.20 version changes

Text display editor:

If nothing is entered into the status value table for a message text or message text selection of data type bit, easySoft will prevent the device from showing question marks only:

The plausibility check will reject this incomplete configuration for the message text selection.

For message texts, a warning will be output instead, and the default text will be used for the missing texts for downloads. (#18190)

User function blocks:

It is now possible to use the *Create user function block* function twice: The 2nd dialog will no longer contain the content of the 1st dialog box. This prevents the software from being closed prematurely. (#18594)

Inside the user function block, it is now possible in the editor, to use all operand numbers for the local input and output operands without restrictions regardless of the current interface definition. Instead, the plausibility check will point out any discrepancies. (#18046)

If an exclamation mark is shown next to the input field for *Name* and *Version* in the configuration dialog, moving the cursor over it will show a tooltip with a more detailed explanation of why the corresponding entry is not allowed. (#14939)

If the ST programming language is being used and a specific function block is no longer being used in a user function block, the program will ensure that the aforementioned instance will be available for new function blocks. (#18076)

FBD and LD programming:

Directly entering "RN1" or "SN1" with the keyboard is now always interpreted as a RESET or SET coil with operand N1 and is no longer allowed at contact positions. (#18106)

When copying and pasting, coils with input negation (Set, Reset, Impulse relay) are now copied correctly. (#18495)

ST programming:

New drag and drop elements for simulating a SET or RESET circuit (#16892)

Text is no longer lost when the indentation for a selected text block is made smaller. (#18110)

Keywords can now be written with uppercase and lowercase letters as necessary. In order to ensure that source texts can be replaced without a problem, it is recommended to use uppercase or lowercase letters in a consistent manner. (#18140, #18527)

The *Autocomplete* function now supports operands with a prepended NET-ID as well. (#18107)

The *Comment out* and *Uncomment* functions have been improved. (#16842)

1.13.2.3 Communication view:

Dialog Search for devices:

If there is no device name in the currently selected data record, a new connection profile will be always automatically created with the device's current IP address.

If there is a device name, the user will be able to select, whether the new profile should be generated based on the current IP address or on the device name.

If changes have already been made to the currently selected data record, but these changes

1.13 easySoft V7.20 version changes

have not yet been transferred back to the device, the attempt to generate a new profile will now be aborted with the following message: "Please first transfer the modified configuration to the device, as obsolete parameters will otherwise be saved in the new IP profile". (#17791)

Dialog NET configuration:

For the currently connected device (highlighted with a dot in the 1st column in the table), it is no longer possible to make changes to the IP settings, as doing so would normally result in the connection being immediately terminated. (#18318)

Disconnections after program transfers:

If the IP address for the device changes after a program transfer due to a modified address mode, easySoft will automatically attempt to establish a connection using the new address. (#17770)

Status display:

The information indicating whether an LD/FBD network is collapsed is now stored in the device when the program is transferred and considered in the online status display. (#16793)

Online configuration display:

If a configured device is replaced with a compatible expansion in reality, the replaced device is now highlighted in yellow and only the I/O points for the replaced device will continue to be shown. (#17873)

1.13.2.4 Project migration:

If easySoft V6 is not installed, opening an e60 file from Windows Explorer will automatically start easySoft 7 and, if successful, the program will save it as an e70 file. (#18474)

Operands that are copied to the E4 program without changes are no longer included in the conversion report. (#18483)

1 easySoft 7

1.14 easySoft V7.11 version changes

1.14 easySoft V7.11 version changes

1.14.1 New Functions

Extension of following user interface languages

- Spanish
- French
- Portuguese
- Czech
- Hungarian
- Romanian
- Russian
- Turkish

Activation of wiring test function.

Export function for marker, NET marker and assigned Inputs and Outputs to an ITF file, readable from Galileo 10 (Project view – Tab Modbus – Button „itf Export“)

Notification message at program download if no device password has been set in project.

1.14.2 Important modifications

1.14.2.1 Project view:

On the System settings tab in the Retention group, you can now enter marker bytes (MB) up to 1024. No marker word limits must be observed. (#18278)

Custom location names for device location can now include quotation marks, apostrophe, and the characters "<", ">", "&". (#18346)

1.14.2.2 Programming view:

General:

The tab cards of the CF, CH and CI parameter dialogs now have the correct designation. (#18112)

When switching between devices in the programming view in projects with several devices and different programming methods, the correct toolbar is now always displayed. (#18156)

A multiple opening and closing of user function blocks now works without problems. (#18173)

The input of comments is now limited to 32 characters for all function blocks. (#18177)

Text display editor:

For date and time input elements of the text function block, 4 different formats are now available in all country settings. (#18230)

If a message text in the text function block is linked to a DB.QV, the plausibility check no longer displays the error message "Unknown error". (#18290)

1.15 easySoft V7.10 version changes

If a message text display is controlled via a bit variable, both status values no longer need to be parameterized so that no "???" is displayed when status value=0. (#18185)

The text display editor can still be opened and closed at any time even after running the plausibility check and opening the report output and clicking on an error in the text display of the D block. (#18416)

EDP programming:

The operand number no longer changes when the pen tool is used. (#18115)

Negated contacts are no longer displayed as coils in the print preview. (#18145)

Inconsistencies when placing FBs in the EDP circuit diagram can no longer occur. (#18199, #18334)

The checkboxes are now fully displayed in the "Optimize Block Diagram" dialog box. (#18214)

The text display editor can still be opened and closed at any time after the plausibility check has been carried out and a click in the report output window on an error in the text display of the D block has been made. (#18416)

ST programming:

When a new function block is entered via the keyboard, e.g. T10(), the parameters of an already entered FB, e.g. T01(), are no longer transferred to the newly entered FB. (#18297)

1.14.2.3 Simulation view:

For the simulation, the maximum cycle time set in the project system settings is limited to a minimum of 18ms. This avoids exceeding the cycle time due to Windows restrictions. (#18252)

1.14.2.4 Communication view:

The filter function in the online version of the device search (dialog "NET Configuration") now works correctly. (#18319)

The output wiring of the RC.HR function block output is correctly transferred to the device during program download. (#18360)

1.15 easySoft V7.10 version changes

1.15.1 New Functions

- Support for new firmware version V1.10
- Web server TLS encryption
- Ability to define user-defined device locations with geodata sets

Support for the following new devices

- EASY-E4-AC-12RC1
- EASY-E4-AC-12RCX1
- EASY-E4-AC-16RE1
- EASY-E4-AC-8RE1

1 easySoft 7

1.15 easySoft V7.10 version changes

- EASY-E4-DC-4PE1

New function blocks

- AC – Astronomical clock
- AV – Average Calculation
- PM – Performance Map
- RE – Recipe – Data Sets

Extension of following user interface languages

- Italian
- Polish

1.15.2 Important modifications

1.15.2.1 Project view:

E70 files can no longer be opened several times simultaneously from Windows Explorer. (#16885)

The dialog box language can now be changed while a project is open. (#16894)

Starting with this version, e-mail passwords must consist exclusively of ASCII characters. (#17396)

It is no longer possible to assign identical names to multiple users when configuring the web server. (#17497)

Printouts and page previews for NET projects now show bus delay values in a station-specific manner. (#17585)

Printouts now show the parameters for all GT function blocks being used. (#17616)

Using the Enter key no longer prevents dragging devices and dropping them onto the work pane subsequently. (#17614)

It is now also possible to enter, on the device, time zone values for which there is no official time zone definition and edit them in easySoft 7. (#17614)

It is now possible to enable e-mail system notifications even if the corresponding program has been read from a device. (#17956)

1.15.2.2 Programming view:

General:


Negative constants can no longer be connected to timer inputs. (#17442)

The cross-reference list now remains open if the view changes when navigating in the cross-reference list. (#17499)

Before the dialog box used to select a programming language appears, the cross-reference list view is now closed. (#17673)

UF user function blocks can now be stored with a different name without a problem. (#17793)

1.15 easySoft V7.10 version changes

The symbol for the "Flashing" timer operating mode has been changed to  in order to make it easier to read. (#17872)

Now, after a UF user function block is deleted, the function block's parameters are maintained. (#17969)

When generating a user function block, the programming language for the main program is now preset in the *Create user function block* dialog box. (#16644)

Clicking on the *Copy from program* button in the *Configure user function block* for a user function block now delivers the correct values for the interface. (#17998)

Text display editor:

The status display is now updated when the text display editor is open. (#16993)

It is now possible to change the dialog box language while the text editor is open. (#17451)

When the name for a language is changed in the Languages tab, pressing the Enter key applies the change now. (#17460)

If a new language is created in the Languages tab by entering a name in the line at the bottom end of the language table, the drop-down box in the *Download* column is now filled out correctly. (#17461)

The validity check now reports when the text display is unable to fully show the configured value range in a value entry or value display element. (#17579)

Text display language changes can now be controlled with the input or output of a user function block as a logic gate variable. (#17881)

EDP programming:

The validity check now reports the invalid use of network markers. (#17026, #17079)

The programming view can now be opened without a problem after changing the active NET station. (#17487)

The original zoom setting is now generated again after closing the print preview. (#17673)

All the operands used are now shown in the cross-reference list. (#17826)

After deleting an AR arithmetic function block in the function block diagram, all access references in the circuit diagram are now deleted as well. (#17825)

The position of sticky notes when copying and pasting rungs is now retained. (#17917)

FBD and LD programming:

Whether networks are expanded or collapsed is now saved in the E70 file, and they are displayed accordingly when the file is loaded again. (#16792)

1 easySoft 7

1.16 easySoft V7.01 version changes

ST programming:

The validity check now detects impermissible divisions or modulo operations with a constant divisor of 0 (#17922).

When the number for a function block call is changed in the ST source text, the original function block parameters are now assigned to the new instance. (#17999)

1.15.2.3 Simulation view:

The "mod 0" error situation is now considered when executing a program. Diagnostic message ID12 is set the same as for "Division by 0." (#17939)

1.15.2.4 Communication view:

For "Division by 0" and "mod 0," the values returned by the device are now shown in the ST status column. (#17922)

When transferring a program (Device=>PC, Card=>PC), it is now ensured that devices already in the project will be completely reinitialized before the contents are copied from the device. This applies above all to the Modbus, E-mail, and Webserver system settings. (#17962)

The part numbers for the devices found are now always displayed correctly in the "Search for devices" dialog box. (#17964)

1.15.2.5 Project migration:

At the end of a conversion for an E60 project, a dialog box for saving the converted project as an E70 file now appears. (#17448)

When migrating E60 projects that contain EASY-406-DC-ME/411-DC-ME- and AC expansions, they are automatically migrated to easyE4 base devices with firmware version V1.10 and higher. (#17747)

1.16 easySoft V7.01 version changes

1.16.1 Important modifications

1.16.1.1 Project view:

The validity check no longer allows addresses in the multicast range.

Saving empty projects is no longer possible.

1.16.1.2 Programming view:

General:

After uploading a program, the set colors are displayed correctly in the text display.

The software now checks to make sure that the text display editor is always displayed on an active monitor.

1.16 easySoft V7.01 version changes

Windows text display sizes no longer affect the position of the text display element.

The instance number of a text function block can now be changed without errors in the parameter configuration dialog box for the text function block.

GT function blocks incorrectly configured with an invalid NET-ID are now detected by the plausibility check.

EDP programming:

User function blocks can no longer be called via the menu bar.

Function blocks that have not been configured and that are not used in the circuit diagram are no longer deleted automatically.

The LB function block is no longer deleted automatically.

Time constants are only offered for timing relays.

The bug causing function block optimization to malfunction has been fixed.

FBD and LD programming:

The state of the notes is now rebuilt when the project is opened.

The plausibility check now catches negative time values.

Upstream circuits connected to function blocks can be cut at all inputs.

ST programming:

The autocomplete drop-down menu is now closed when the user completes the selection with a mouse click.

Autocomplete is now displayed better when the user is in the line at the bottom edge of the screen.

The cross-reference list is no longer closed automatically when the user navigates within it.

When the cursor hovers over a function block, a tool tip will be displayed regardless of case.

1.16.1.3 Simulation view:

Simulations with more than 512 networks in LD/FBD programming now work properly.

1.16.1.4 Communication view:

At the mapping assignment points, the status display now considers the limited value ranges of byte and word operands.

When switching between the oscilloscope view and the status display, the values no longer freeze.

1.16.1.5 Project migration:

A save prompt is now shown for migrated projects closed without changes.

The output log has been improved for the migration of projects with easyNET remote IO stations.

1 easySoft 7

1.17 easySoft V7.00 version changes

1.17 easySoft V7.00 version changes

1.17.1 New Functions

1.17.1.1 New programming languages:

easySoft 7 supports now the programming languages Ladder Diagram (LD), Function Block Diagram (FBD) and Structured Text (ST) and also the easy circuit diagram and block diagram (EDP) known from easySoft 6.

1.17.1.2 New function blocks:

The following function blocks have now been added from the FBs familiar from easySoft 6:

- RC – Realtime Clock
- MM – Min-/Max function
- WT – Weekly timer (new)
- YT – Year time switch (new)
- DL – Data logger
- D – Text display (New)
- AL – Alarm function block (for sending e-mails)
- TC – Three step controller
- IC – Counter-controlled interrupt function block
- IE – Edge-controlled interrupt
- IT – Time-controlled interrupt

In addition, user function blocks (UF) can be defined.

1.17.1.3 Changes to existing function blocks:

All FBs that did not yet have EN except for the "T - Timing relays" have received an additional enable input (EN).

All FBs except for the "T - Timing relays" have expanded by a new parameter for EN - Evaluation (ENC).

The FBs "BT - Block Transfer", "CF - Frequency Counter", "DB - Data Block", "PT - Put value on the NET" have one or two more additional parameters obtained.

The FB "OT - Operating hour meter" has received additional inputs and outputs.

The FB's "DC - PID controller", "FT - PT1-Signal smoothing filter" have received additional outputs.

1.17.1.4 Modified file format (*.e70):

easySoft 7 only supports devices of the **easyE4** family. Devices of the families easy400/500/600/700/800 and MFD-Titan are no longer supported by easySoft 7.

easy500/700/800 projects with the extension *.e60 created with older versions of easySoft can be opened with version 7 or later. The easy circuit diagram will be converted into a contact plan or EDP view and can be further processed then. *.e60 projects with circuit diagrams for easy400/600 and MFD-Titan, plus *.eas- and *.e40-Projekte are not be opened. Converted projects that have been saved with Version 7, cannot be opened with older versions of easySoft!

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