

SIEMENS
Ingenuity for life

Industry Online Support
Home

LOGO! 8 Access controls

LOGO! 8

<https://support.industry.siemens.com/cs/ww/en/view/109758541>

Siemens
Industry
Online
Support



Legal information

Use of application examples

Application examples illustrate the solution of automation tasks through an interaction of several components in the form of text, graphics and/or software modules. The application examples are a free service by Siemens AG and/or a subsidiary of Siemens AG ("Siemens"). They are non-binding and make no claim to completeness or functionality regarding configuration and equipment. The application examples merely offer help with typical tasks; they do not constitute customer-specific solutions. You yourself are responsible for the proper and safe operation of the products in accordance with applicable regulations and must also check the function of the respective application example and customize it for your system.

Siemens grants you the non-exclusive, non-sublicensable and non-transferable right to have the application examples used by technically trained personnel. Any change to the application examples is your responsibility. Sharing the application examples with third parties or copying the application examples or excerpts thereof is permitted only in combination with your own products. The application examples are not required to undergo the customary tests and quality inspections of a chargeable product; they may have functional and performance defects as well as errors. It is your responsibility to use them in such a manner that any malfunctions that may occur do not result in property damage or injury to persons.

Disclaimer of liability

Siemens shall not assume any liability, for any legal reason whatsoever, including, without limitation, liability for the usability, availability, completeness and freedom from defects of the application examples as well as for related information, configuration and performance data and any damage caused thereby. This shall not apply in cases of mandatory liability, for example under the German Product Liability Act, or in cases of intent, gross negligence, or culpable loss of life, bodily injury or damage to health, non-compliance with a guarantee, fraudulent non-disclosure of a defect, or culpable breach of material contractual obligations. Claims for damages arising from a breach of material contractual obligations shall however be limited to the foreseeable damage typical of the type of agreement, unless liability arises from intent or gross negligence or is based on loss of life, bodily injury or damage to health. The foregoing provisions do not imply any change in the burden of proof to your detriment. You shall indemnify Siemens against existing or future claims of third parties in this connection except where Siemens is mandatorily liable.

By using the application examples you acknowledge that Siemens cannot be held liable for any damage beyond the liability provisions described.

Other information

Siemens reserves the right to make changes to the application examples at any time without notice. In case of discrepancies between the suggestions in the application examples and other Siemens publications such as catalogs, the content of the other documentation shall have precedence.

The Siemens terms of use (<https://support.industry.siemens.com>) shall also apply.

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the Internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit: <https://www.siemens.com/industrialsecurity>

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed at: <https://www.siemens.com/industrialsecurity>

Table of contents

	Legal information	2
1	Introduction	4
2	Task.....	5
3	Structure and description	7
4	Commissioning	8
5	Mode of operation of the switching programs	9
5.1	“Basic” access control	10
5.2	"Extended" access control.....	11
5.3	“Advanced” access control	15
6	Appendix	20
6.1	Service and Support.....	20
6.2	Links and Literature	21
6.3	Change documentation	21

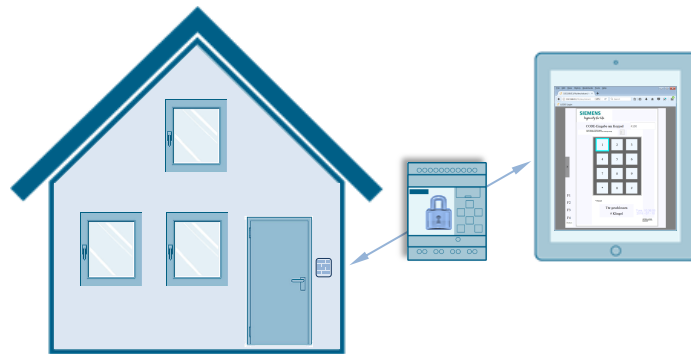
1 Introduction

This application example provides you with three ready-made switching programs for LOGO! 8, with which you can integrate a CODE input, e.g. for a door access control.

[Figure 1-1](#) shows the basic principle of this application example, here with integration of the user-defined web server, which you can find in the example "Advanced". To configure the user-defined Web server, use the downloadable software "[LOGO Web Editor](#) ([\5](#); [\6](#); [\7](#))".

The application example consists of a basic example "Basic", a direct extension of its "Extended" and a complex example "Advanced".

Figure 1-1: (door) access control via CODE input on the keypad



The integrated functions of LOGO! 8 offer many additional possibilities to solve tasks, e.g. in Home Automation, quickly and easily.

With LOGO! 8, prefabricated function blocks support project creation, e.g. weekly timer, pulse generator, astro timer, year timer, stopwatch and simple logic gates.

The LOGO! text display (TDE) and the integrated web server of the LOGO! basic module (BM) offer additional options for operation and monitoring using function keys and message texts. This enables you to call up and control functions via the Internet, whereby reference is made here to the individual security requirements "Security Notes".

Note

LOGO! 8 is hereinafter referred to as LOGO! if the context allows it.

The benefits of LOGO!

Simple integration of LOGO offers you the following benefits:

- Extendability of the software program by further tasks, such as (blind control, room lighting, staircase lighting, further safety and monitoring functions, etc.)
- Simple, star-shaped wiring of the components
- Integration of LOGO! inputs and outputs into a KNX system

Target group

This application example is aimed at qualified specialist personnel, such as installers, machine and plant manufacturers alike, who want to set up individual access control on a local or machine basis, or who want to extend an existing LOGO! installation.

2 Task

In a simple scenario, a door is released by a weekly timer on certain days of the week and at certain times of the day (08:00-18:00).

However, access should be possible for a certain group of people, at all other times of the day and night.

The door itself should always be closed after a defined time, which should be monitored by a reed contact (normally closed contact). If this time is exceeded, a message should be displayed without immediately triggering an alarm (optional).

The relevant Functions can be found in [Table 2-1](#).

Basic - (12-key pad with internal coding)

In the basic example, a 12-digit keypad is to be attached to the input that requires a 4-digit CODE input for access.

Since individual extensions such as status, warning and alarm messages will also be output as SMS messages or the CODE inputs will be counted in the future, the use of LOGO! offers the necessary flexibility.

In the basic example, the keypad contains the coding and management of the CODE settings. After successful CODE input, a digital 24 V output signal is transmitted to the LOGO! BM and the door contacts are opened and access is enabled for a certain time.

Extended - (CODE input without keypad on LOGO! TDE)

In an extension of the basic example, in-house access control is to be set up.

However, an external input console should not be used and instead a LOGO! TDE should be installed next to the door to enter the access code. Coding and CODE management must be integrated into LOGO!

In a later expansion stage you have the possibility to control various extensions with the LOGO! TDE, e.g. a lighting control, or the blinds.

Instead of the LOGO! TDE, a touch screen at the door that accesses the integrated LOGO! web server would be conceivable.

Important Requirement!

Changing the LOGO! internal coding and the parameters of the weekly timer must only be possible after successful CODE entry!

Advanced - Complex example with (12-key field without own coding)

In this example, an inexpensive 12-pin keypad without logic is used for outdoor use and a weekly switching time clock is dispensed with.

The 12 keys of the keypad are connected in a matrix structure in which 7 contacts (pins) forward the inputs on the keypad to a terminal (here LOGO! 8). One key is connected with 2 pins each, whereby the pins are connected to a digital input of the LOGO! BM.

CODE input and coding is processed within LOGO! A new code may only be entered after entering the previous code!

In addition to the integrated web server, the user-defined web server should offer a functional and extended keypad for input. The integrated web server should be optionally usable as a display device.

Brief overview of the differences and functionality of the examples

The complexity of the application examples is continuously increasing, especially due to the LOGO! internal coding. However, significant parts of the previous example are included, which is illustrated by [Table 2-1](#). Functions with higher complexity have a darker background.

Some functions have been adapted and reused directly, as described in Chapter 5 [\[Mode of operation of the switching programs\]](#)

Table 2-1: Brief overview of the differences and functionality of the examples

Function	109758541_LOGO8_AccessControl_ "Example" _en.lsc		
	Basic	Extended	Advanced
CODE - Management Hardware	12-pin keypad (Integrated Logic)	LOGO! 8 Basic Module (Programming)	LOGO! 8 Basic Module (Programming)
CODE input	Keypad (Logic)	Integrated web server LOGO! 8 and TDE	Keypad (no Logic)
			User defined Web server
Input management	Counter stores number of CODE inputs (Reset: weekly)	Counter stores number of CODE inputs (Reset: weekly)	3x wrong input Message after 30 seconds
CODE Change	12-pin keypad (Integrated Logic)	Integrated web server After CODE input	Integrated web server After CODE input
Reed contact	Message after 30 seconds	Message after 30 seconds	optional
Specifics	Weekly timer Reed contact Message after 30 seconds	Weekly timer Reed contact Message after 30 seconds	UDF used
Security functions	-	Block protection by "Protection active" parameter	Program password: [AAAA] Block protection by "Protection active" parameter

3 Structure and description

Components used

This application example contains three switching programs which you can use on all variants of LOGO! BM (12 V, 24 V and 230 V).

All examples use only one LOGO! BM, with 8 switchable inputs and 4 outputs.

You can choose between the LOGO! BM with or without integral screen.

Without a display, use the internal LOGO! web server, which displays the message texts.

The Application Example was created with the components from [Table 3-1](#).

Table 3-1: Hardware and software components for the application example

Component	Number	Article number	Note
LOGO! Soft Comfort V8.2 DVD	1	6ED1058-0BA08-0YA1	You can find an upgrade to V8.2 at: http://www.siemens.com/logo
LOGO! 8.2 12/24 RCE	1	6ED1052-1MD08-0BA0	LOGO! BM with 4 relay outputs
LOGO! TDE	1	6ED1055-4MH08-0BA0	Optional components
LOGO! POWER 24V / 0.6A	1	6EP3330-6SB00-0AY0	24V supply for LOGO! TDE (LOGO! 24 V variants)

The components used are LOGO! 8 for 12/24 V.

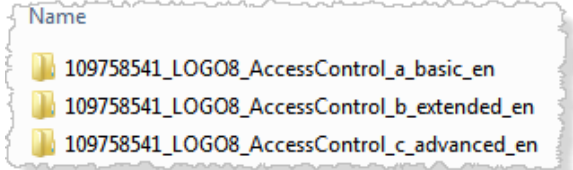
Note

A configuration with 230 V components can be found in the application example:

- <https://support.industry.siemens.com/cs/ww/en/view/109755864>

This application example consists of the documents according to [Table 3-2](#).

Table 3-2: Connectors for our application example

Component:	File name:	Note
Documentation	109758541_LOGO8_AccessControl_en.pdf	-
LOGO! 8 Programs	109758541_LOGO8_AccessControl_en.ZIP 	Requirement: LOGO! Soft Comfort V8.2

LOGO! TDE

The external text display LOGO! TDE for LOGO! provides you with an inexpensive and central user interface for your applications. You have the possibility to adjust parameters and use the LOGO! TDE for troubleshooting.

The LOGO! TDE is configured via the same "Message text" function block as the internal display. The use of message texts allows the display of all messages via the integrated web server and thus also the control of applications via a smartphone.

4 Commissioning

This chapter contains information on commissioning LOGO!

For further information on mounting and wiring, use the LOGO! 8 manual and follow the connection instructions in the product information supplied with your device.

Commissioning may only be carried out by qualified personnel!

Connecting LOGO! 8 to 24 V

For the examples "Basic" and "Extended" connect the reed contact (opener) to the digital input [I2] of the LOGO! BM. This signals whether the door is open. The door contacts for enabling the doors are located at [Q1] and [Q2].

In the "Advanced" example, the digital inputs of the LOGO!BM [I1-I7] are connected to the respective pins of the 12-key keypad.

The digital output [Q3] is used as a signal for an alarm transmitter (light and/or horn).

Connecting LOGO! TDE

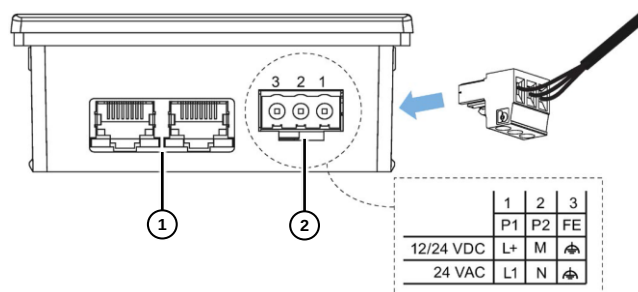
The LOGO! TDE must be operated with a voltage of 12 V DC or 24 V AC/V DC and is installed separately.

It is recommended that the LOGO! TDE is protected by a 0.5 A fuse on the power supply.

The voltage connection is bipolar. If you connect a DC power supply to the LOGO! TDE, you can connect the positive supply line or the negative supply line according to [Figure 4-1](#) (2) either to pin 1 or to pin 2. Pin 3 must be connected to the ground.

Communication with the LOGO! BM is via the Ethernet interface (1).

Figure 4-1: Hardware structure for application example



Starting the Application Example

Follow these steps:

1. Start the LOGO! Soft Comfort V8.2
2. Open the supplied LOGO! example program *.lsc
3. Transfer the program to the LOGO! basic module
 - **Password for the Example "Advanced" = [AAAA]**

Note

In the application example the IP address 192.168.0.3 has been preset for the LOGO! How to set the IP address can be found in the manual, chapter: [3.8.1 "Configuring Network settings"](#).

5 Mode of operation of the switching programs

This application example provides three variants for CODE input and CODE management for the LOGO! soft comfort software.

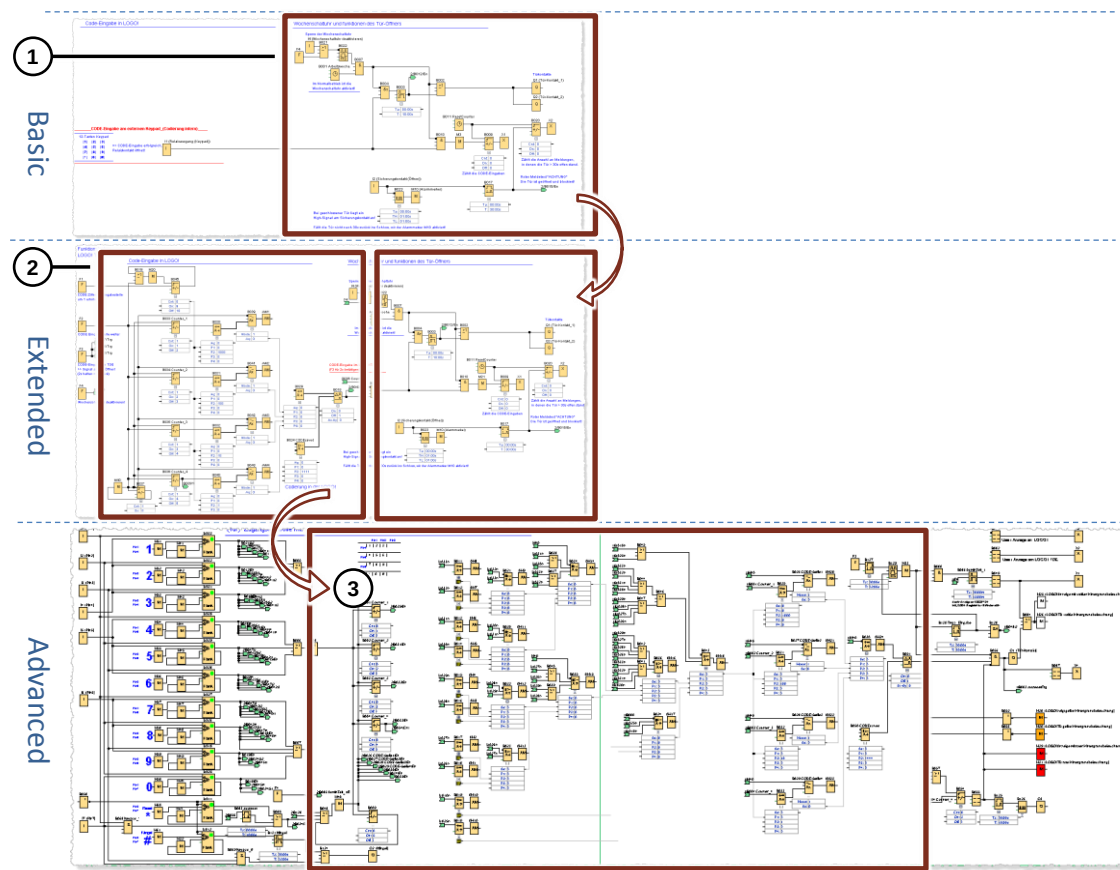
Reused Switching functions

[Figure 5-1](#) gives an overview of how the main program functions, based on the previous example, were adopted (1) and extended and adapted by new requirements (2).

According to the task, an external keypad is used in the basic switching program, which already has an encoding and programming function.

In the extended switching program, CODE management takes place in LOGO! BM. The CODE management from the example "Extended" was reused for the example "Advanced" (3). In the final example, the CODE is entered using a simple keypad. The coding of the 12 keys by 7 digital inputs into 12 analog numerical values requires a more complex programming effort within LOGO!

Figure 5-1: Reused Switching functions in the examples



Note

You will find a functional description of the gearshift as a comment on the gearshift program under LOGO! soft comfort:
"File > Properties > Comment"

Hint: Activate under "Tools > Options > Print > Comment", so that the function description is printed with the program.

5.1 “Basic” access control

In the basic switching program, ([Figure 5-2](#)) a weekly time switch (block: [B001]) is parameterized in LOGO! by entering it on the LOGO! TDE. Alternatively, parameterize the weekly time switch using the key combination [ESC] + [C4 ►] of the LOGO! in the LOGO! BM display. After 2 minutes, the display is reset to the initial screen by the switch-off delay [B014].

You have the option of deactivating the weekly switching time clock via the digital input [I4] or the function key [F4] on the LOGO! TDE, so that only a correct CODE entry releases the doors.

The enable opens the door contacts connected to [Q1] and [Q2].

For time ranges outside the parameterization, a CODE must be entered on a keypad with 12 keys. After correct entry, the keypad sends a 24 V enabling signal to the digital input [I1] of the LOGO! BM, whereby the door contacts are enabled for 10 seconds.

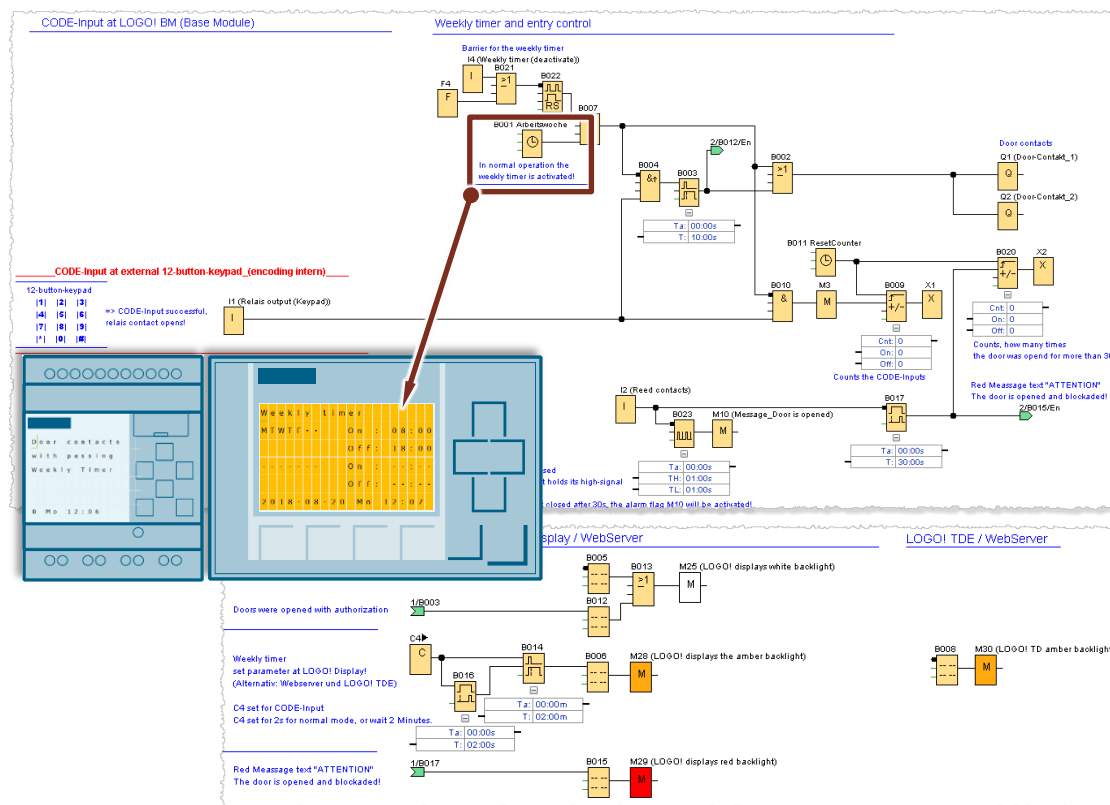
The counter [B009] records the number of CODE entries, i.e. accesses outside the releases by the weekly time switch.

If the door is opened, the reed contact [I2] is also opened and a message appears in the interval of 1 s via marker [M10].

If the door remains open, a red display is shown after 30 s via [B017] in the message window of the LOGO! BM. An alarm via another output has been dispensed with, whereby the number of messages in which the door was open for more than 30 seconds is recorded via the counter [B020].

The counters [B009] and [B020] are reset via a second weekly timer [B011] on a weekend.

Figure 5-2: Access control “Basic” - Switching program und start screens



5.2 "Extended" access control

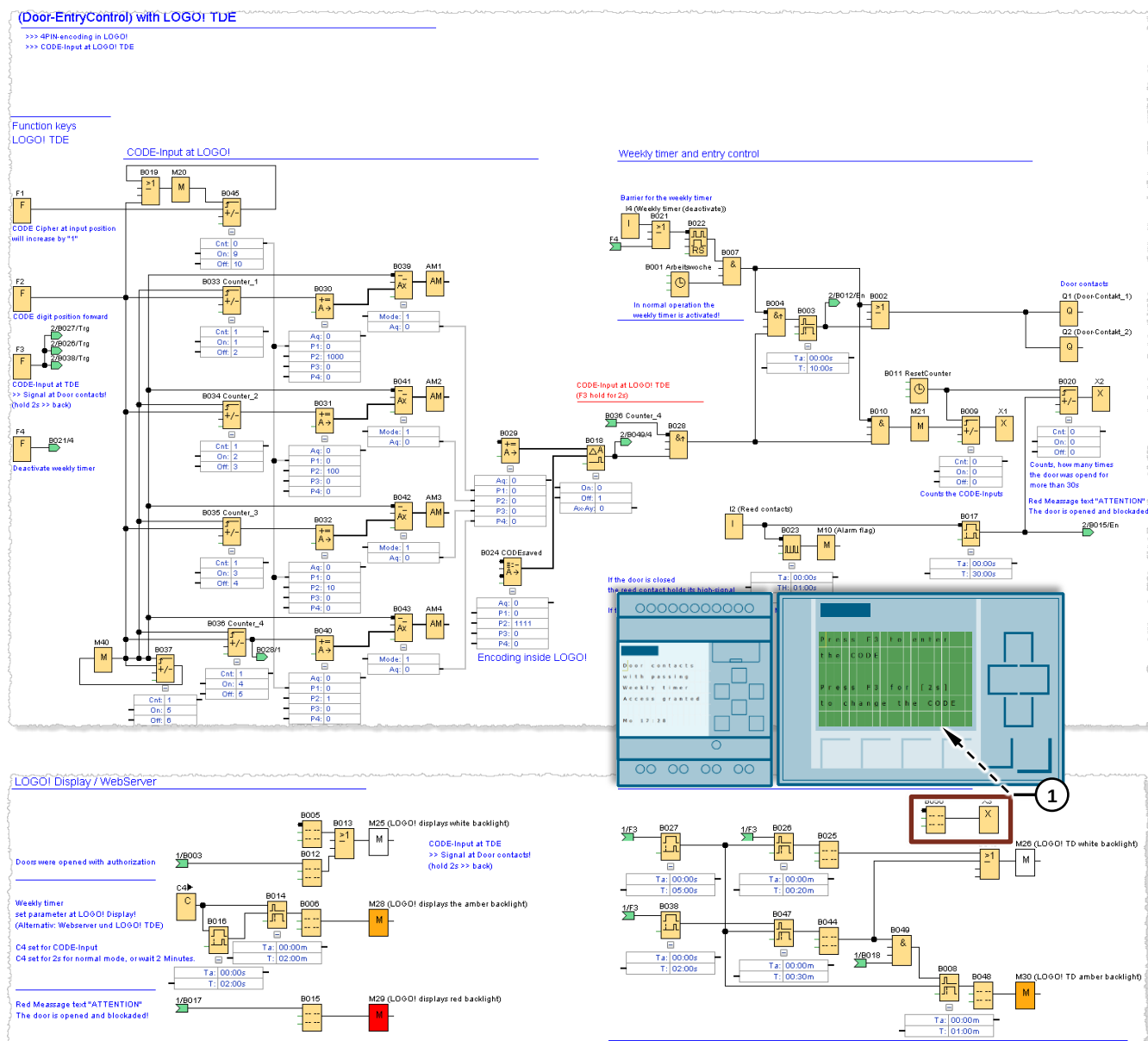
The extended switching program from [Figure 5-3](#) shows how you can extend the basic example by adding the functionality of an expensive external keypad. Coding and code entry is easy with LOGO!

An essential difference to the previous example is that the weekly time switch may no longer easily be parameterized via the LOGO! TDE, as any activation time can be entered via the weekly time switch. The start screen of the LOGO! TDE indicates the procedure for entering the CODE, see position (1) in [Figure 5-3](#).

The input via the locally remote LOGO! BM (keys [ESC] + [C4 ▶]) is taken from the previous example, as is the function of the reed contact at [I2] with the signaling and counting function (red LOGO! display).

The CODE entry and CODE change is described on the following pages.

Figure 5-3: Access control "Extended" - Switching program und start screens



CODE entry via the message texts on the LOGO! TDE

Outside the release times of the weekly timer, enter the activation code via the LOGO! TDE. The initial code in this example is "1111". Use the [F3] function key to access the message text for CODE input [Figure 5-4](#) (1).

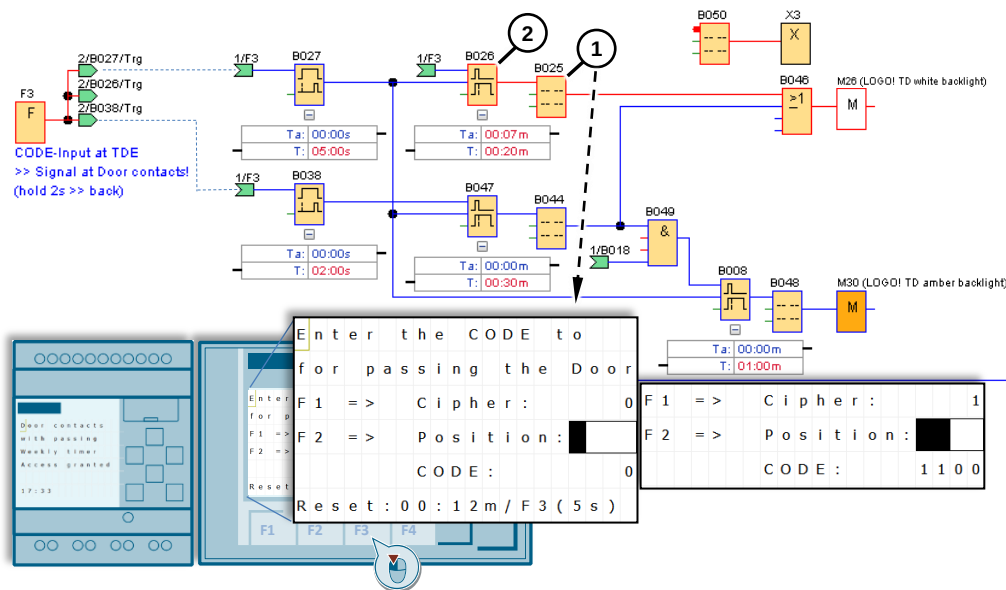
Using the switch-off delay [B026] (2), the input period was limited to 20 s. If necessary, change the time limit in the LOGO! switching program via the block parameters.

Press [F1] key to increase the input value of (digit) by one.

Use the [F2] key to move down by one tens digit, starting with the thousands digit. A final actuation of [F2] releases the door after correct CODE entry or restarts it with the start number "0".

The switching functions for [F1] and [F2] can be found for description, [Figure 5-6](#).

Figure 5-4: CODE entry via the message texts on the LOGO! TDE



CODE change via the message texts on the LOGO! TDE

If you hold down [F3] for 2 s, the switch-on delay [B038] switches on the message text [B044] to enter the code for 30 s [B047], [Figure 5-5](#).

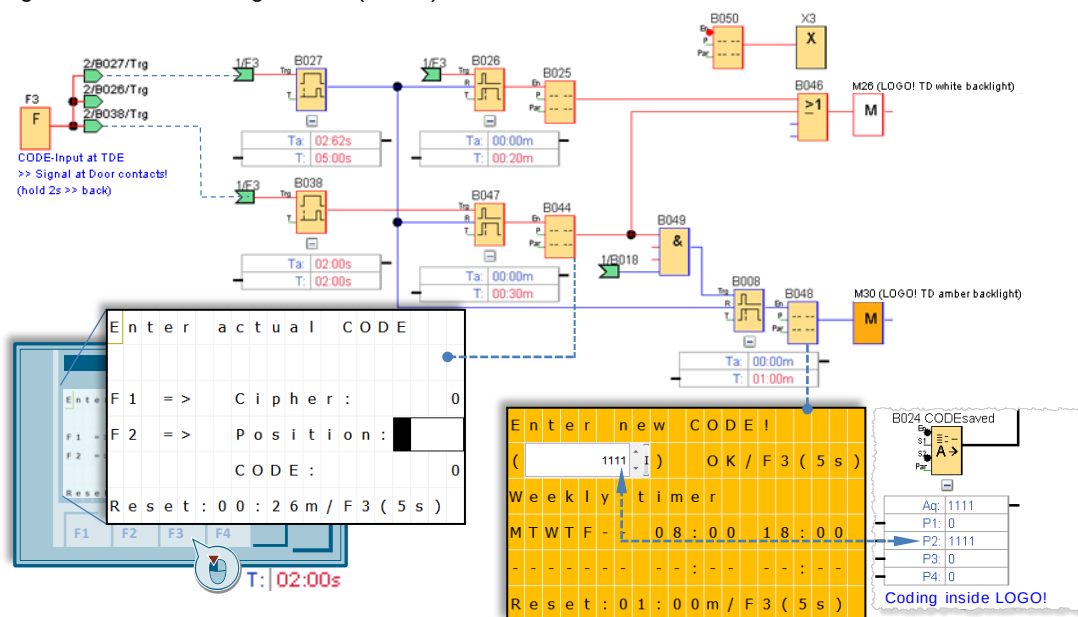
The message text [B044] has a higher priority than, for example, the green start screen (message text [B050]) or the simple CODE entry in the message text [B025].

After successful CODE entry via [B044], the message text [B048] opens for 1 minute to enter the new code and to parameterize the weekly switching time clock.

Within the message text you access the Analog MUX [B024], whose function is described in the following chapter [Figure 5-6](#)

Press [F3] for 5 s and you will always reach the start screen before the remaining time is up.

Figure 5-5: CODE change via F3 (for 2 s)



CODE change via LOGO! TDE parameterization - ☒ Protection active

Via the LOGO! TDE it is possible to change block parameters directly, which would allow an unhindered input of a new code.

With the exception of the ResetCounter [B011], protection has been activated in each block of the switching program. For example, you can change the weekly time switch of the ResetCounter as follows:

- **Display LOGO! TDE** > [ESC] > [Set LOGO! ▶] > [Program ▶] > [Parameterize] > [ENTER] > [B011] > **Parameter**

In LOGO! Soft Comfort you can adjust the block parameters of all blocks comfortably one after the other:

- **LOGO! Soft Comfort** > [Edit] > [Block properties (All blocks)...]

Note

You also have the option of password-protecting the LOGO! Soft Comfort switching program to prevent unauthorized changes.

This protective measure is used in the "Advanced" example.

Function of CODE input and CODE change

As shown in [Figure 5-6](#) (1), press the [F1] key to increase the input value of the digit (Counter [B045]) from "0" to "9". The counter switches on at "10", whereby a reset signal is set via marker [M20].

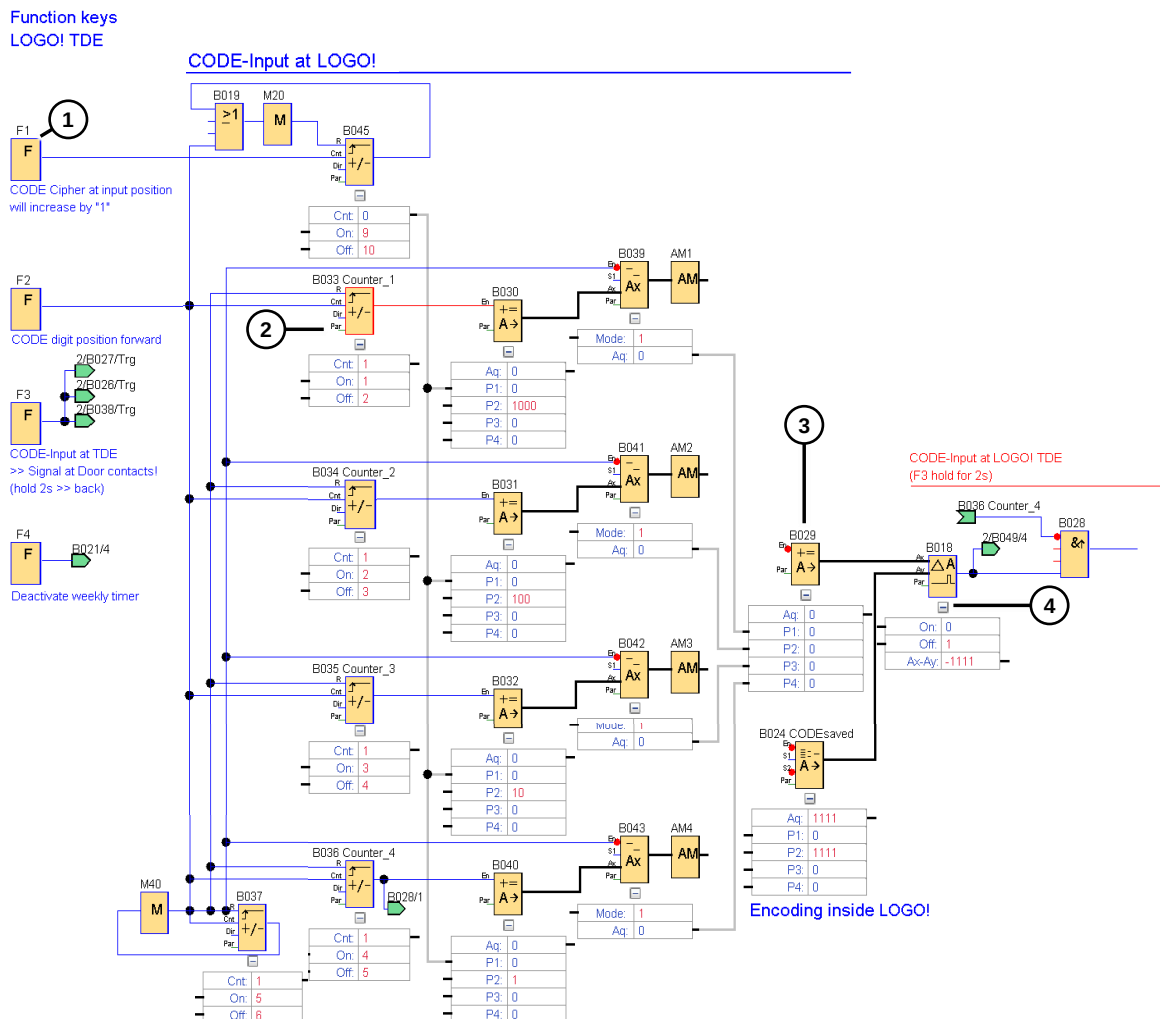
Press [F2] to activate a counter "Counter_N" for each digit (2). The counter [B033] activates the arithmetic function [B030] for a "1". This function multiplies the current counter value [B045] of the input (digit) by the preset value for the digit, in this case "1000" for the thousand digit. This value is passed to the "Min/Max" block [B039] and then written finally, as parameter to the thousands digit, of the block parameter [B029]"P1" (3).

If [F2] is pressed again, the hundreds digit is described, then the tens and ones. In the analog multiplexer [B024], parameter "P2" contains the enable code, in this case "1111".

The CODE input and the stored CODE are compared (4) in the analog comparator [B018] and if there is a difference of "0", the output is switched to enable the door.

Enter a new code using [F3] as described above. The functions of the weekly timer and the reed contact are shown in the input example.

Figure 5-6: Functional representation of the CODE input



5.3 “Advanced” access control

The “Advanced” switching program contains the principle of CODE input, from the previous switching program “Extended” (Section 5.2).

The weekly timer and the reed contact are not the subject of this example.

If the switching program is transferred to the LOGO! BM, a password [AAAA] is used. This password prevents unauthorized uploading of the program from LOGO! BM. All blocks are also protected against unauthorized parameterization by the respective block protection.

Short overview of the switching “Advanced”

Figure 5-7 shows the complete switching program, whose functions (positions 1-10) are described below, starting with the connection of the keypad to (1) and the connection of the user-defined web server to (2) via flags of LOGO! BM and a so-called UDF (User Defined Function).

Note

A UDF “Flank_1” can be found in the download folder of the application example. You integrate a UDF into the LOGO! switching program by right-clicking on the folder [UDF] in the navigation tree of the blocks. Enter the file path of the UDF here.

On (3) is the digit position, realized by 4 counters for 4 digit positions.

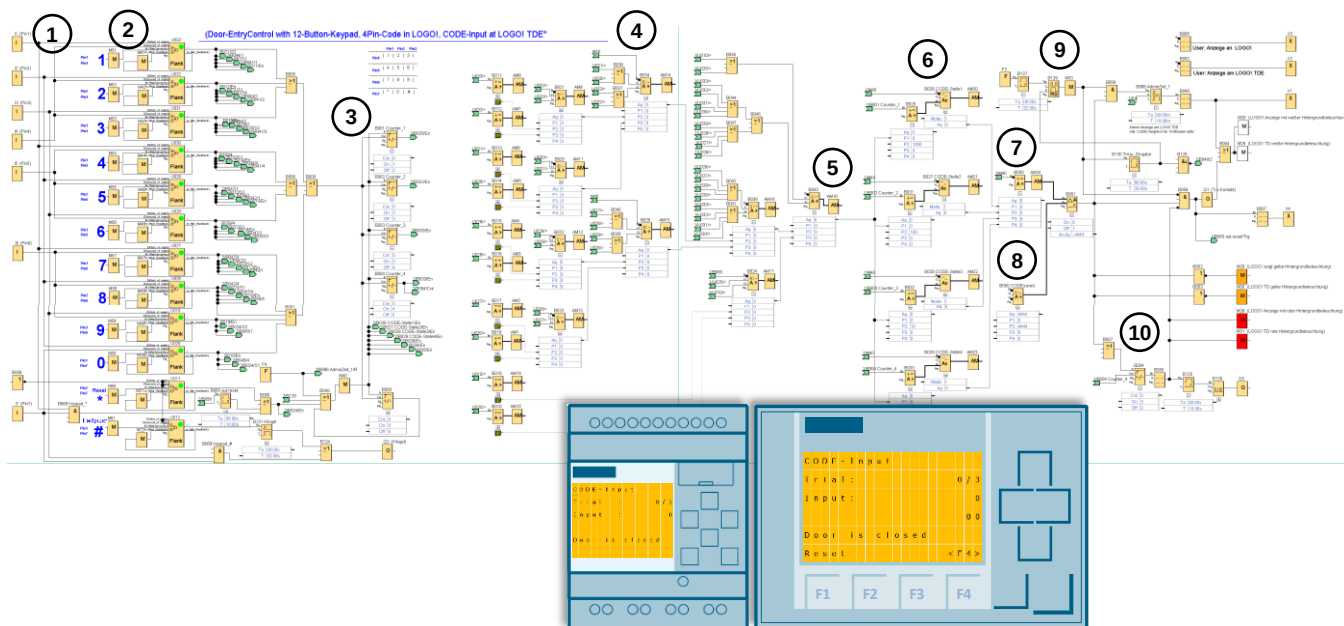
At (4) the numerical values are determined from the inputs of the 7 DI, the result of which is output in the block at (5).

Below position (6), the digit digits are multiplied by the digit values and written to the respective CODE digit (7).

The access code is stored in the block below (8).

The message texts and navigation to CODE entry are located at (9) and counting incorrect CODE entries at (10).

Figure 5-7: “Advanced” access control - switching program and start screens (overview)



CODE input – Key pad und web server

CODE is entered via an external keypad [Figure 5-8](#) (1) or the user-defined web server (2), which is a virtualized keypad.

The illustration shows the operation of the keys by the mouse symbol and the activated switching points by the white digits highlighted in red.

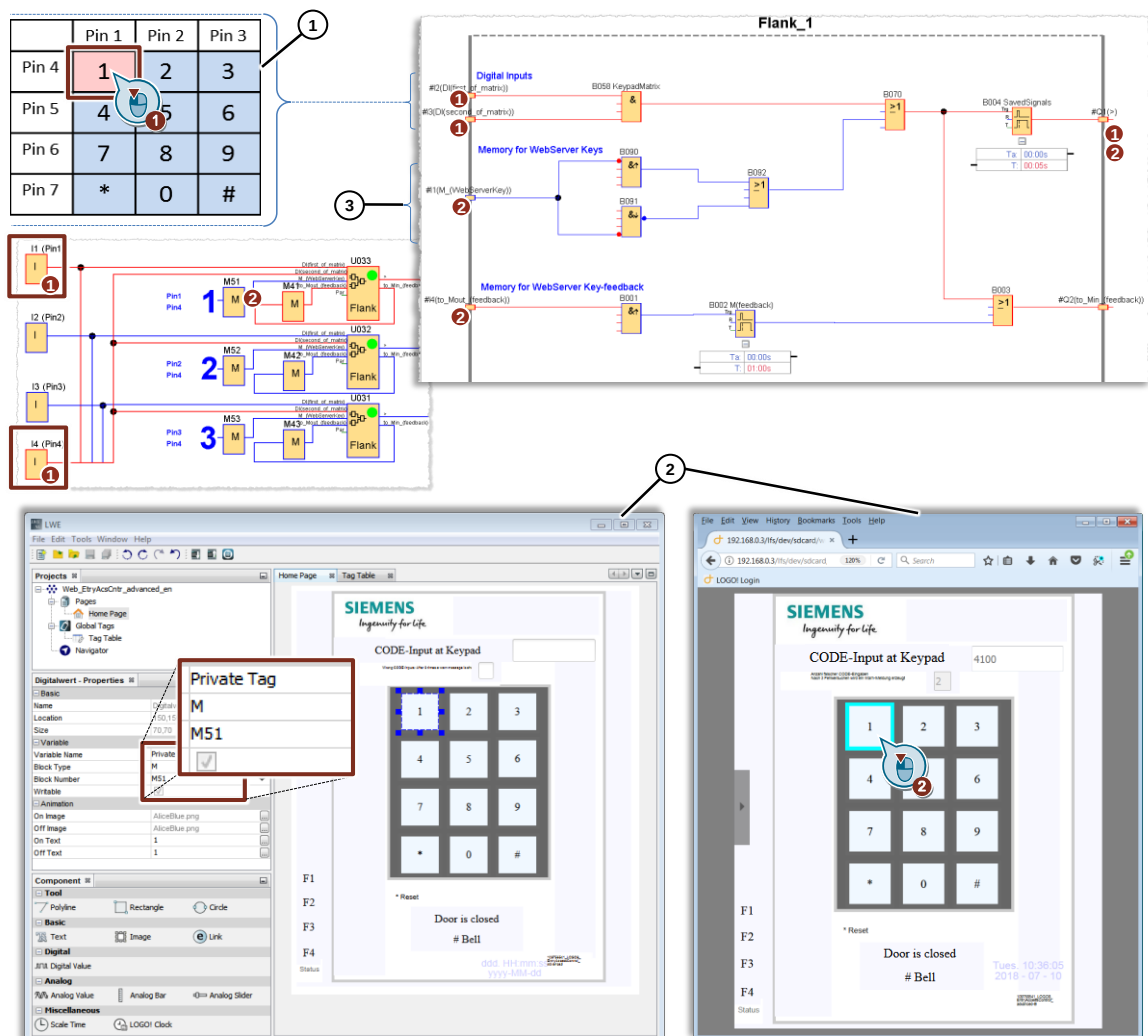
The circuit board of the external keypad is connected in such a way that a specific key press on two defined pins outputs a 24 V signal.

If key [1] is pressed, the 24 V signal is applied to the connected LOGO! BM input [DI1] via [Pin 1] and to [DI4] via [Pin 4].

The virtualized buttons of the web server are each connected to a flag in the LOGO! BM. If the button for the [1] key is clicked, the marker [M51] is set. This remains set by pressing button [1] once in the web server. A new actuation would reset the flag and only a further one would allow the following digit to be entered.

With edge evaluation (3), the input via the buttons of the web server reacts each time a key is pressed. Via flag [M41] and an associated input field in the web editor, a feedback (1 s) is displayed as a light blue border for key entries in the browser.

Figure 5-8: Connection of keypad to LOGO! and user-defined web server



CODE entry and display on the LOGO! TDE

The 4-digit CODE entry starts with the thousand digit and ends with the ones digit, [Figure 5-9](#) (1). An incorrect CODE will be tolerated 3x until a message appears in the red LOGO! BM and LOGO! TDE display (2).

If the correct code is entered within 10 s (3), the message is acknowledged and the door is released.

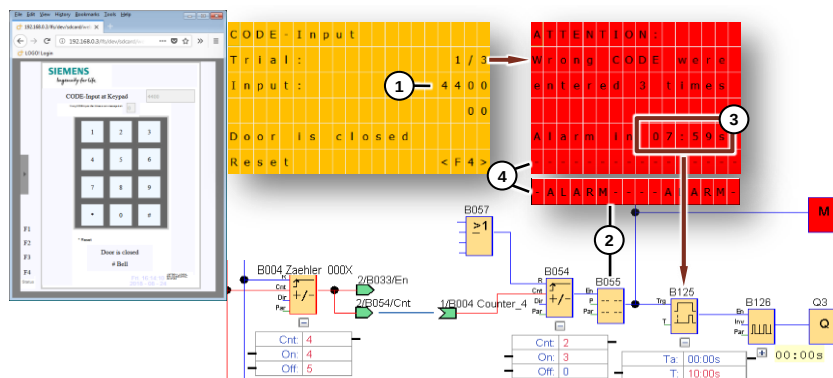
If there is no acknowledgement, a flashing text (4) with the message "-ALARM---ALARM-" and the signal output via [Q3] also appears. You can connect a signal horn or an alarm light to [Q3], for example.

Note

You can also send a message directly to your mobile phone via a LOGO! CMR module. Further information can be found in the following section:

<https://support.industry.siemens.com/cs/ww/en/view/109477418>

Figure 5-9: CODE entry and display on the LOGO! TDE

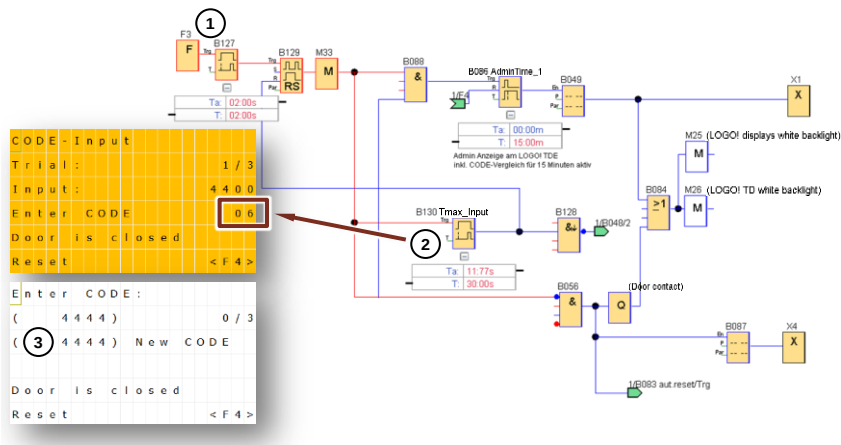


CODE change on the LOGO! TDE

If you hold down [F3] for 2 seconds, you can change the CODE on the LOGO-TDE or the integrated web server after successfully entering the CODE. In [Figure 5-10](#) (1) the switch-on delay for [F3] is set to 2 s. The correct CODE entry is possible for 30 s (2).

If the correct CODE has been entered, you have the option of entering a new CODE on the LOGO! TDE, or the integrated web server (3).

Figure 5-10: CODE change on the LOGO! TDE



Coding of the numerical value in the switching program

In the switching program [Figure 5-11](#) (1) a (En-)able signal is sent to the block [B011] via the UDF [U033]. This block passes on a freely selectable value, in this case the number "1", as an analog value.

The blocks "Arithmetic instruction" [B010] to [B019] store the digits "0-9" as analog values under "P2=V2" in this application. "P" stands for parameter, "V" stands for the value within the "Value" block.

The digit "2" is output by [B012], the digit "3" by [B013].

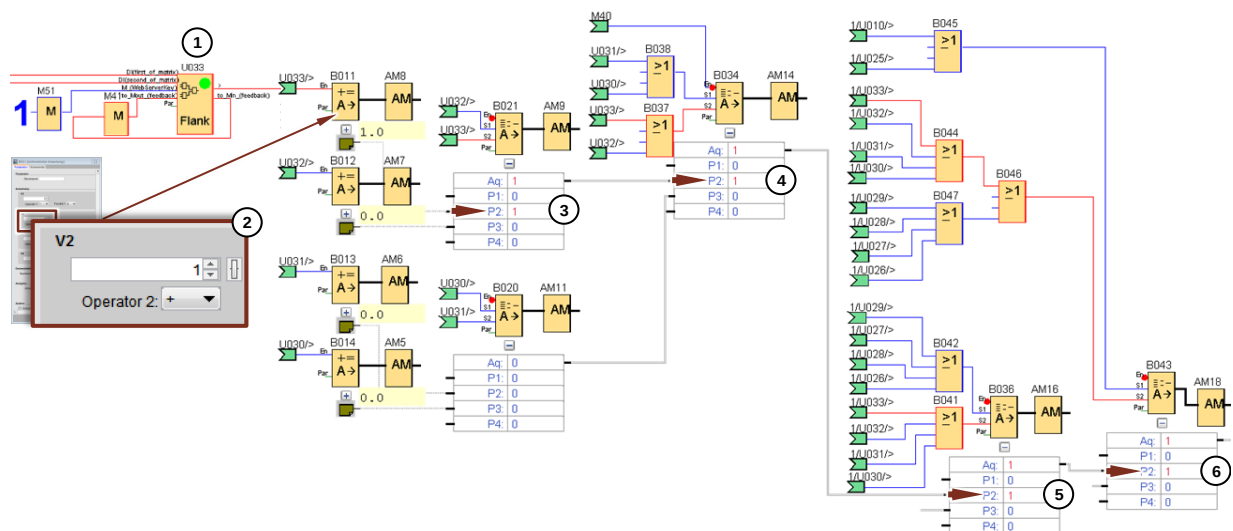
The following analog MUX "3-6" serve as relays for one of two switchable analog values (digits) to the next block.

Thus [B021] forwards the digits "1" or "2" and [B020] the digits "3" or "4" to the block [B034].

The coding of the key input on the keypad is terminated by the block [B043] (6), in which all possible key inputs are displayed.

The following program structure in [Figure 5-12](#) combines the numerical value with the digit to the CODE.

Figure 5-11: Coding the digits in the switching program



Coding of the digit position in the switching program

A total of four digits are dialed via one of four active counters [Figure 5-12](#) (1).

The respective counter sets an arithmetic instruction (2) in which the respective digit position is stored as the value "1000, 100, 10, 1".

The digit is multiplied by the numerical value from [B043].

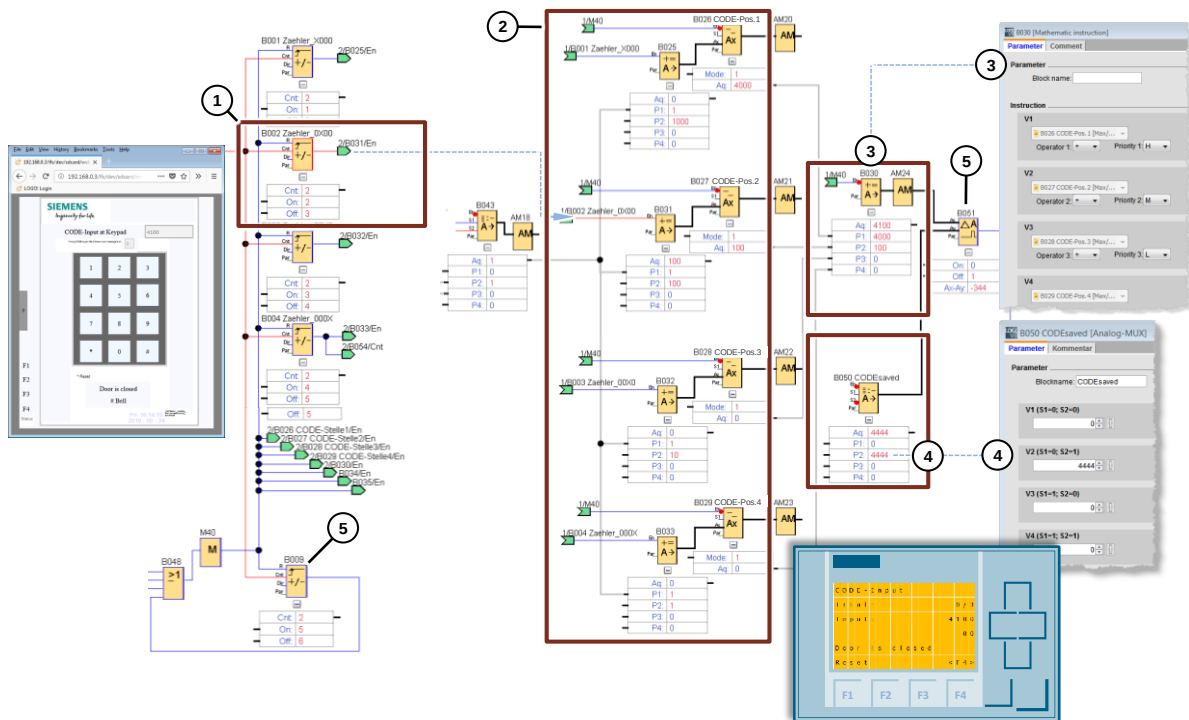
In the figure, a "4" is multiplied by [1000] and the value is written into the arithmetic instruction [B030] (2) as the value "P1=V1".

With the next entry, here on the user-defined web server, a "1" is multiplied by "100", which is written as the value "P2=V2".

The remaining entries have not yet been made in this example.

In the Analog MUX [B050] (4) the current CODE is stored with "4444". The following analog comparator activates door contact [Q1] as soon as the stored value "4444" minus the value in [B030] equals "0".

Figure 5-12: Combinatorics for selecting the current digit position



6 Appendix

6.1 Service and Support

Industry Online Support

Do you have any questions or need assistance?

Siemens Industry Online Support offers round the clock access to our entire service and support know-how and portfolio.

The Industry Online Support is the central address for information about our products, solutions and services.

Product information, manuals, downloads, FAQs, application examples and videos – all information is accessible with just a few mouse clicks:

<https://support.industry.siemens.com>

SITRAIN – Training for Industry

We support you with our globally available training courses for industry with practical experience, innovative learning methods and a concept that's tailored to the customer's specific needs.

For more information on our offered trainings and courses, as well as their locations and dates, refer to our web page:

www.siemens.com/sitrain

Industry Online Support app

You will receive optimum support wherever you are with the "Siemens Industry Online Support" app. The app is available for Apple iOS, Android and Windows Phone: <https://support.industry.siemens.com/cs/ww/en/sc/2067>

6.2 Links and Literature

Table 6-1: Links and Literature

No.	Topic
\1\	Siemens Industry Online Support https://support.industry.siemens.com
\2\	This entry https://support.industry.siemens.com/cs/ww/en/view/109758541
\3\	LOGO! 8 user manual https://support.industry.siemens.com/cs/ww/en/view/109741041
\4\	LOGO! logic module (Application examples, expansion modules) https://w3.siemens.com/mcms/programmable-logic-controller/en/logikmodul-logo/Seiten/Default.aspx
\5\	LOGO! Web-Editor Download: https://w3.siemens.com/mcms/programmable-logic-controller/en/logikmodul-logo/demo-software/seiten/default.aspx#Upgrades
\6\	LOGO! Web-Editor Online help: https://support.industry.siemens.com/cs/ww/en/view/109753033
\7\	LOGO! Web-Editor Video: https://www.youtube.com/watch?v=RFlyS4il2LU

6.3 Change documentation

Table 6-2: Change documentation

Version	Date	Change
V1.0	08/2018	First version