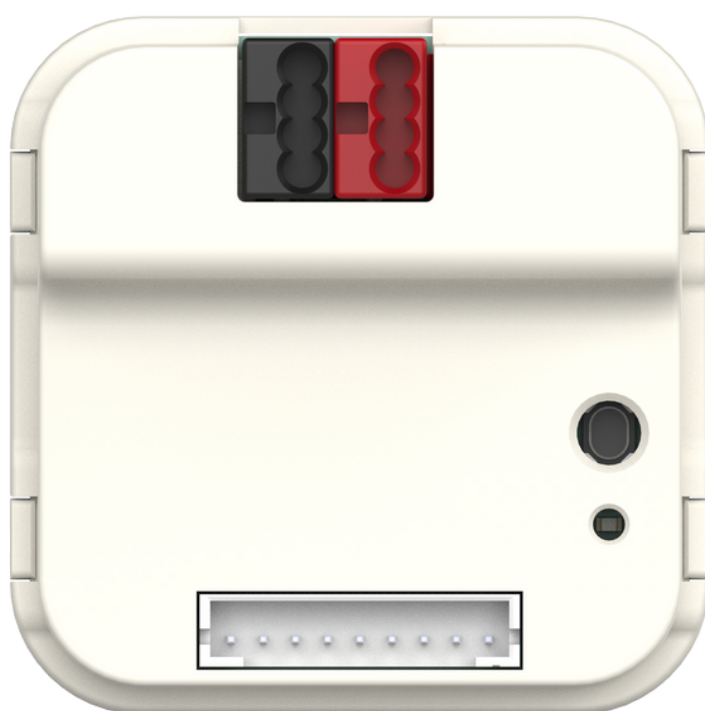




Universal Interface

Product Manual



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1. General Features

Mutlusan KNX Universal Interface works as an interface between conventional switches/push buttons and the KNX system. It can also be connected to any device that sends dry contact signals.

There are two versions available: 4-channel and 8-channel. Each channel can be configured as either an input or an output.

Each channel supports the following functions:

- Switching
- Dimming
- Shutter control
- Sending values
- Scene control
- Counter
- External LED control

Mutlusan KNX Universal Interface includes 4 logic function blocks, which can be set to AND, OR, or XOR operations.

It is compatible with ETS5 and higher versions.

To support external LED operation, series resistors are integrated into the device. The power supply for the external LEDs is provided directly by the device.

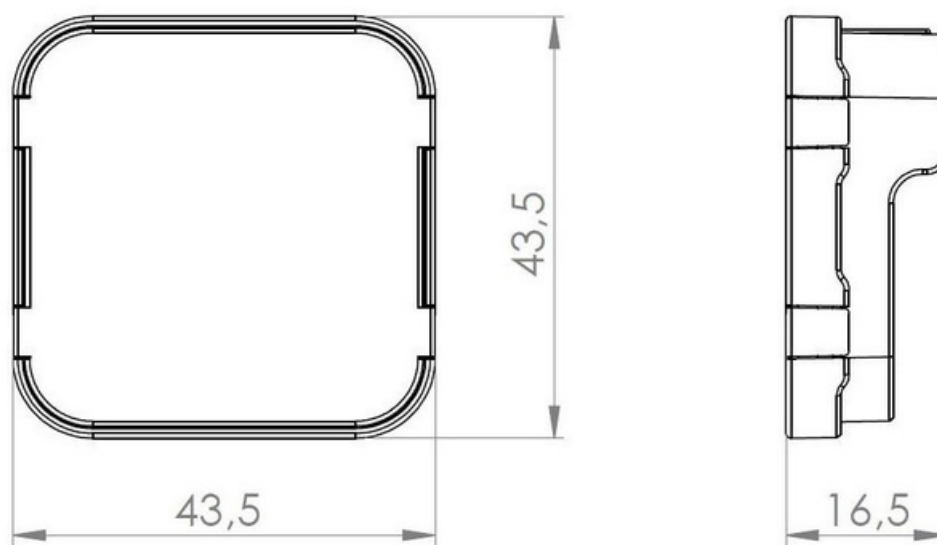
1. 1. Technical Data

The following table shows the technical information of the Universal Interface.

Product Name	Universal Interface
Product Code	4-channel: MX-00100400 8-channel: MX-00100800
Power Supply	20V...32V DC
Current Consumption	< approx. 10 mA
Input	
Voltage	3.3 V DC
Current	0.5 mA
Output	
Voltage	3.3 V DC
Current	Max. 2 mA, limited by 560Ω series resistors
Inputs	4/8
Mode of Commissioning	S-Mode
Type of Protection	IP 20
Temperature Range	Operation: -5°C ... 45°C
	Storage: -25°C ... 60°C
Colour	RAL 7047 (Telegray 4)
Dimensions	43.5 x 43.5 x 16.5 mm
Weight	16.8 g
Configuration	Configuration with ETS

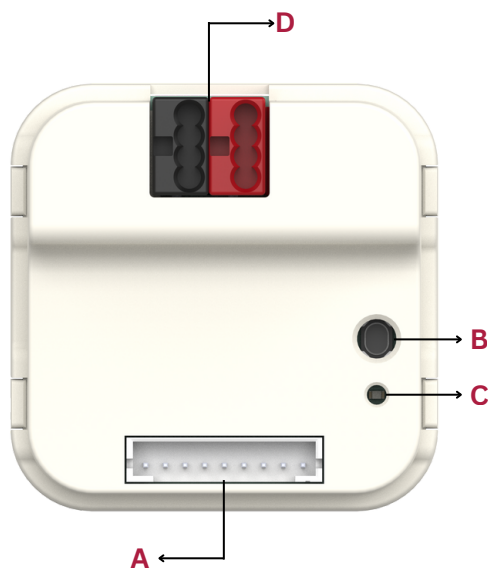
1. 2. Dimensions

All values given in the device dimensions are millimetres.



1. 3. Connection Features

The figures below shows the Universal Interface connectors.

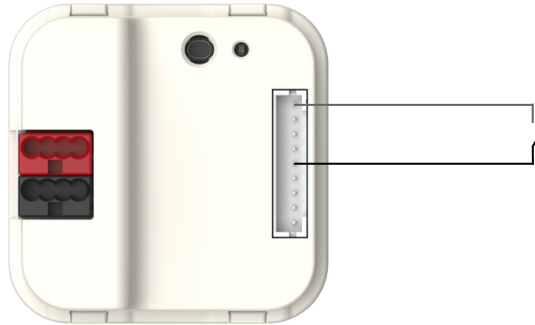


Letter	Feature
A	Input Connector
B	Programming Button
C	Programming LED
D	KNX Connector

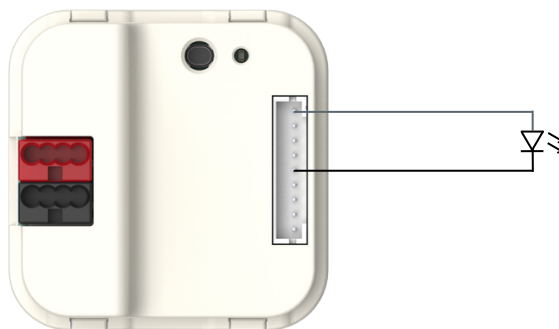
1. 4. Device Connection

The contact or load is connected between the brown cable and the color-coded cable, whether used as an input or output.

Connection of a floating push button/switch:



Connection of a external LED:



2. ETS Parameters & Descriptions

In this chapter, the ETS parameters of Universal Interface device is described using the parameter pages and options. The parameter pages features are dynamic structures which mean further parameters and parameter pages are enabled depending on the configuration.

In the ETS parameter configuration pages, each of the parameters has got a default parameter value. These default values are written in bold.

- E.g.: Device alive operation active
- **No** Yes

2. 1. General

When the Universal Interface ETS configuration file is attached to the project from the ETS software, a configuration setting must be made primarily before loading. When entering the “GENERAL” in the parameter page, the configuration screen will be appeared shown below. General settings for the devices are made in this window.

General	
Channel 1	Channel count ☒ 4 Channel ☐ 8 Channel
Channel 2	Transmission delay [2...255s] after bus voltage recovery 2
Channel 3	The transmission delay time contains the initialization time <--- NOTE
Channel 4	Device alive operation active ☒ No ☐ Yes
+ Logic Channels Configuration	

2. 1. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel count	This parameter is used to determine which device configure in ETS.	4 channel 8 channel
Transmission delay [2...255s] after bus voltage recovery	Transmission delay time determines the period between bus voltage recovery and the point after which telegrams can be sent. An initialisation period of approx. 2 seconds for starting the device is included in the delay time.	2...255
Device alive operation active	This parameter is used to determine the existence of the Universal Interface on the KNX bus line. The cyclic telegram can be monitored by an external KNX device. If a telegram is not received, the device may be defective or the KNX cable to the transmitting device may be interrupted. No: The group object is enabled. Yes: The group object is not enabled.	No Yes
In operation value	This parameter is used to determine the send value of “General - Telegr. operation” group object on the KNX bus line.	ON OFF
Operation send interval [min]	This parameter is used to set the cyclically sending time interval value of the “General - Telegr. operation” group object.	1... 15 ...65535

2. 1. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
1	General	Telegr. operation	1.002	1-bit	X			X	
This communication object becomes visible when the "Device alive operation active" parameter is set to "Yes." It is a communication object used to indicate the operational status of the Universal Interface on the KNX bus line by sending cyclic telegrams to notify the system that the device is active and functioning properly. The value of this object can be adjusted using the "In operation value" parameter, which allows it to be set to either "ON" or "OFF."									

2. 2. Functions

Universal Interface has 4/8 digital channels. By connecting buttons to digital inputs, you can choose the lighting, curtains/blinds, dim devices etc. you want to control. You can control the devices by making the necessary configurations via the Universal Interface.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	Channel name
Channel 5	Function of the channel
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	



No Function

No Function ✓

Switch Sensor

Switch/Dimming Sensor

Shutter Sensor

Value/Forced Sensor

Control Scene

Counter

Control LED

2. 2. 1. Switch Sensor

In this section, it is explained how to control the related automation unit via the Universal Interface by switching via buttons connected to digital channels. Detailed information on the relevant parameter configurations is described in the table below.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	

Channel name

Function of the channel

Distinction between long and short operation

Reaction on closing the contact

Reaction on opening the contact

Debounce time



Switch Sensor ▼

☒ No ☐ Yes

ON ▼

OFF ▼

50ms ▼

2. 2. 1. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type an channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Distinction between long and short operation	This parameter determines whether the input distinguishes between short and long operations. When set to "Yes," the contact must first be evaluated to determine if the operation was short or long.	No Yes
Reaction on closing the contact	This parameter is visible if there is no distinction between short and long operation. For the "Reaction on closing the contact," you can set whether the object value should be switched to ON, OFF, TOGGLE, or if no reaction should occur.	ON OFF TOGGLE no reaction
Reaction on opening the contact	This parameter is visible if there is no distinction between short and long operation. For the "Reaction on opening the contact," you can set whether the object value should be switched to ON, OFF, TOGGLE, or if no reaction should occur.	ON OFF TOGGLE no reaction
Connected contact type	This parameter is used to specify the contact type that is connected to the channel x.	normally open normally closed
Reaction on short operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the short press operation sending the value of the channel x.	ON OFF TOGGLE no reaction

PARAMETERS	DESCRIPTION	VALUES
Reaction on long operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the long press operation sending the value of the channel x.	ON OFF TOGGLE no reaction
Long operation after: Base	It defines the time period, referred to as "T," which contributes to determining the threshold for a long operation. The duration after which an input action is recognized as a long operation is calculated by multiplying the selected base time with the factor parameter. $T = \text{Base} \times \text{Factor}$	100ms 1s 10s 1min 10min 1h
Factor [2...255]	This parameter specifies a multiplier that is used in conjunction with the "Long operation after: Base" parameter; By adjusting this factor, the user can effectively fine-tune the duration required for a long operation to be recognized, allowing for greater customization.	2...255
Number of object for short/long operation	This parameter is used to determine the object count to use for short and long operations. 1 object: Short and long operations will proceed with the same object. 2 object: Short and long operations will proceed with 2 different objects.	1 Object 2 Object
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms

2. 2. 1. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Telegr. switch	1.001	1-bit	X		X	X	
This object adjusts its functionality based on the chosen input function. According to the parameter settings, it can be set to ON, OFF or TOGGLE when the input is triggered.									
4	Input x	long - Telegr. switch	1.001	1-bit	X		X	X	
This object is visible when the "Distinction between long and short operation" parameter is set to "Yes" and the "Number of object for short/long operation" parameter is set to "2 object." It adjusts its functionality based on the chosen input function. According to the parameter settings, it can be set to ON, OFF, or TOGGLE when the input is triggered.									

2. 2. 2. Switch/Dimming Sensor

In this section, it is explained how to control the unit of a lighting unit through the Universal Interface, both by switching and dimming, via the buttons connected to the digital channels. Detailed information on the relevant parameter configurations is described in the table below. Make sure that the lighting unit to be controlled has a dimming feature.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	Channel name
Channel 5	Function of the channel
Channel 6	Connected contact type
Channel 7	Dimming functionality
Channel 8	Reaction on operation
	Dimming mode
Logic Channels Configuration	Debounce time



Switch/Dimming Sensor ▼

☒ normally open
☐ normally closed

☒ Only dimming
☐ Dimming and switching

Dim BRIGHTER ▼

☒ Start-stop-dimming
☐ Dimming steps

50ms ▼

2. 2. 2. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type an channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Connected contact type	This parameter is used to specify the contact type that is connected to the channel x.	normally open normally closed
Dimming functionality	This parameter is used to define if the lighting can only be dimmed “Only dimming” or if additional switching is also permitted “Dimming and switching”. In this case, a long button press dims and a short button push switch.	Only dimming Dimming and switching
Reaction on operation	A distinction is not made between short and long operations here. It is used to determine the press operation sending the value of the channel x.	Dim BRIGHTER Dim DARKER Dim BRIGHTER/DARKER
Reaction on short operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the short press operation sending the value of the channel x.	ON OFF TOGGLE no reaction
Reaction on long operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the long press operation sending the value of the channel x.	Dim BRIGHTER Dim DARKER Dim BRIGHTER/DARKER

PARAMETERS	DESCRIPTION	VALUES
Dimming direction after switching ON	This parameter is used to determine the dimming direction when the switch object is ON on long operation.	BRIGHTER DARKER
Long operation after	This parameter is used to determine long operation detection after the button press operation. For making a long operation, the button should be pressed at least the configured value.	0.3s, 0.4s, 0.5s , 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
Brightness change on every sent telegram	This parameter is only visible with “Dimming steps”. This parameter is set to change the brightness (in per cent), which is cyclically sent with every dimming telegram.	100% 50% 25% 12.5% 6.25% 3.13% 1.56%
Transmission cycle time: telegram is repeated every	This parameter is used to determine the transmission cycle time. The dimming telegram is sent cyclically during a long operation if “Dimming steps” is set. The cycle time for sending corresponds with the time interval between two telegrams during cyclical sending.	0.3s, 0.4s , 0.5s, 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms

2. 2. 2. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Telegr. switch	1.001	1-bit	X		X	X	
This object is visible when the "Dimming functionality" parameter is set to "Dimming and switch." It can take ON, OFF, or TOGGLE values depending on the parameter settings and is triggered by a short press on the input.									
4	Input x	Telegr. dimming	3.007	4-bit	X			X	
This object is triggered by a long press on the input. Depending on the parameter settings, it sends the "BRIGHTER" or "DARKER" command.									

2. 2. 3. Shutter Sensor

In this section, it is explained how to control a shutter/blind unit via the buttons connected to the digital channels via the Universal Interface. Detailed information on the relevant parameter configurations is described in the table below.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	



Channel name

Function of the channel

Connected contact type

Operating functionality of blind

Short operation: STOP/lamella UP/DOWN
Long operation: move UP/DOWN

Reaction on short operation

Reaction on long operation

Long operation after

Debounce time

Shutter Sensor

☒ normally open ☐ normally closed

2-push-button, standard

<--- NOTE

☒ STOP / lamella UP ☐ STOP / lamella DOWN

☐ MOVE UP ☒ MOVE DOWN

0.5s

30ms

2. 2. 3. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type an channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Connected contact type	This parameter is used to specify the contact type that is connected to the channel x.	normally open normally closed
Operating functionality of blind	This parameter define the type of operation.	1-push-button, short = stepping, long = moving 1-push-button, short = moving, long = stepping 1-push-button-operation, moving 1-switch-operation, moving 2-push-button, standard 2-switch-operation, moving (shutter) 2-push-button, moving (shutter) 2-push-button, stepping

PARAMETERS	DESCRIPTION	VALUES
1-push-button, short = stepping, long = moving		
Long operation: Move UP/DOWN Short operation: Lamella	NOTE	NOTE
Long operation after	This parameter is used to determine long operation detection after the button press operation. For making a long operation, the button should be pressed at least the configured value.	0.3s, 0.4s, 0.5s , 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
1-push-button, short = moving, long = stepping		
Long operation: Lamella Short operation: Move UP/DOWN	NOTE	NOTE
Long operation after	This parameter is used to determine long operation detection after the button press operation. For making a long operation, the button should be pressed at least the configured value.	0.3s, 0.4s, 0.5s , 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
“Telegr. STOP/lamella adj.” is repeated every	This parameter is used to determine the time between two telegrams is set. This parameter is visible in operations in which the object “Telegr. STOP/lamella adj.” is sent cyclically on the bus during a long operation.	0.3s, 0.4s , 0.5s, 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
1-push-button-operation, moving		
On every operation in succession UP - STOP - DOWN - STOP	NOTE	NOTE

PARAMETERS	DESCRIPTION	VALUES
1-switch-operation, moving		
On operation UP/DOWN, end of operation STOP	NOTE	NOTE
2-push-button, standard		
Reaction on short operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the short press operation sending the value of the channel x.	STOP / lamella UP STOP / lamella DOWN
Reaction on long operation	This parameter is visible if there is a distinction between short and long operations. It is used to determine the long press operation sending the value of the channel x.	MOVE UP MOVE DOWN
Long operation after	This parameter is used to determine long operation detection after the button press operation. For making a long operation, the button should be pressed at least the configured value.	0.3s, 0.4s, 0.5s , 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
2-switch-operation, moving (shutter)		
On operation: moving, end of operation: STOP	NOTE	NOTE
Reaction on operation	This parameter is used to determine the reaction when an operation occurs. A distinction is not made between short and long operations here.	MOVE UP MOVE DOWN

PARAMETERS	DESCRIPTION	VALUES
2-push-button, moving (shutter)		
On operation: moving	NOTE	NOTE
Reaction on operation	This parameter is used to determine the reaction when an operation occurs. A distinction is not made between short and long operations here.	MOVE UP MOVE DOWN
2-push-button, stepping		
On operation: stepping	NOTE	NOTE
Reaction on operation	This parameter is used to determine the reaction when an operation occurs. A distinction is not made between short and long operations here.	STOP / lamella UP STOP / lamella DOWN
“Telegr. STOP/lamella adj.” is repeated every	This parameter is used to determine the time between two telegrams is set. This parameter is visible in operations in which the object “Telegr. STOP/lamella adj.” is sent cyclically on the bus during a long operation.	0.3s, 0.4s , 0.5s, 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms

2. 2. 3. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Telegr. shutter UP/DOWN	1.008	1-bit	X			X	
This object sends the UP or DOWN command to the bus, depending on the parameter settings. 0: UP 1: DOWN									
4	Input x	Telegr. STOP / lamella adj.	1.007	1-bit	X			X	
This object sends the STOP command or lamella adjustment to the bus, depending on the parameter settings. 0: STOP / lamella adjustment UP 1: STOP / lamella adjustment DOWN									
5	Input x	Upper limit position	1.002	1-bit	X		X		
This object indicates when the shutter has reached its upper limit position. It is applicable for 1-button operation functions. 0: No upper limit position 1: Upper end limit position									
6	Input x	Lower limit position	1.002	1-bit	X		X		
This object indicates when the shutter has reached its lower limit position. It is applicable for 1-button operation functions. 0: No lower limit position 1: Lower end limit position									

2. 2. 4. Value/Forced Sensor

In this section, it is explained how to control an automation unit via the Universal Interface via a value/forced via buttons connected to digital channels. Detailed information on the relevant parameter configurations is described in the table below.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	

Channel name	
Function of the channel	Value/Forced Sensor ▼
Connected contact type	☒ normally open ☐ normally closed
Distinction between long and short operation	☒ No ☐ Yes
Reaction on operation	1-byte-value [0...255] ▼
Transmitted value [0...255]	0
Transmit object value after bus voltage recovery	☒ No ☐ Yes
Debounce time	50ms ▼



2. 2. 4. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type a channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Connected contact type	This parameter is used to specify the contact type that is connected to the channel x.	normally open normally closed
Distinction between long and short operation	This parameter is used to set if the input differentiates between long and short operations. With the option “yes”, after opening/closing of the contact, it must, first of all, be ascertained if a long and short operation has occurred here. Only thereafter will a possible reaction be triggered.	No Yes
Reaction on operation	This parameter is visible if there is no distinction between short and long operation. It determines the data type that is sent when a contact is actuated.	no reaction 1-bit-value 2-bit-value (forced position) 1-byte-value [0...255] 2-byte-value [-32768...32767] 2-byte-value [0...65535] 4-byte-value (floating point) 4-byte-value [0...4294967295]
Transmitted value	This parameter defines the value which is sent on operation. The value range is dependent on the set data type.	Dependent on the selection made at Reaction on operation

PARAMETERS	DESCRIPTION	VALUES
Transmit object value after bus voltage recovery	This parameter is visible if there is no distinction between short and long operation. If “Yes” is set here, the device sends the object “Telegr. value” on the bus after bus voltage recovery (once the sending delay has elapsed).	No Yes
Reaction on short operation	This parameter is visible if there is a distinction between short and long operation. It determines the data type that is sent with a long or short operation.	no reaction 1-bit-value 2-bit-value (forced position) 1-byte-value [0...255] 2-byte-value [-32768...32767] 2-byte-value [0...65535] 4-byte-value (floating point) 4-byte-value [0...4294967295]
Transmitted value	This parameter defines the value which is sent on short operation. The value range is dependent on the set data type.	Dependent on the selection made at Reaction on short operation
Reaction on long operation	This parameter is visible if there is a distinction between short and long operation. It determines the data type that is sent with a long or short operation.	no reaction 1-bit-value 2-bit-value (forced position) 1-byte-value [0...255] 2-byte-value [-32768...32767] 2-byte-value [0...65535] 4-byte-value (floating point) 4-byte-value [0...4294967295]
Transmitted value	This parameter defines the value which is sent on long operation. The value range is dependent on the set data type.	Dependent on the selection made at Reaction on long operation

PARAMETERS	DESCRIPTION	VALUES
Long operation after: Base	It defines the time period, referred to as "T," which contributes to determining the threshold for a long operation. The duration after which an input action is recognized as a long operation is calculated by multiplying the selected base time with the factor parameter. $T = \text{Base} \times \text{Factor}$	100ms 1s 10s 1min 10min 1h
Factor [1...255]	This parameter specifies a multiplier that is used in conjunction with the "Long operation after: Base" parameter; By adjusting this factor, the user can effectively fine-tune the duration required for a long operation to be recognized, allowing for greater customization.	1...255
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms

2. 2. 4. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Telegr. value			X			X	
This object can take values in various data types, depending on the parameter settings.									
4	Input x	long - Telegr. value			X			X	
This object is visible when the "Distinction between long and short operation" parameter is set to "Yes." It can take values in various data types, depending on the parameter settings.									

2. 2. 5. Control Scene

In this section, it is explained how to control the related automation unit via the Universal Interface by triggering a scenario via buttons connected to digital channels. Detailed information on the relevant parameter configurations is described in the table below.

General	
- Channel 1	
1-Scene	
Channel 2	
Channel 3	Channel name
Channel 4	Function of the channel
Channel 5	Connected contact type
Channel 6	Control the scene via
Channel 7	Reaction on short operation
Channel 8	Store scene
	Debounce time
Logic Channels Configuration	



Channel name	
Function of the channel	Control Scene ▼
Connected contact type	☒ normally open ☐ normally closed
Control the scene via	☒ 5 separate objects ☐ 8-bit-scene
Reaction on short operation	☐ no reaction ☒ Recall scene
Store scene	no ▼
Debounce time	50ms ▼

2. 2. 5. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type a channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Connected contact type	This parameter is used to specify the contact type that is connected to the channel x.	normally open normally closed
Control the scene via	It is possible to select whether the scene control is carried out or stored in the actuators via "5 separate objects" or an "8-bit-scene".	5 separate objects 8-bit-scene
Reaction on short operation	This parameter indicates whether a light scene is recalled after a short operation of the input or whether there is no reaction.	no reaction Recall scene

PARAMETERS	DESCRIPTION	VALUES
Store scene	This parameter is used to determine to store or not to store the related scene. On long operation: The scene will be stored after a long operation. With object value = 1: The scene will be stored on operation if the Store Scene object value is 1. on long operation (if object value = 1): The scene will be stored on long operation if the Store scene object is 1.	no on long operation with object value = 1 on long operation (if object value = 1)
No of scene	This parameter is visible if 8-bit-scene is selected. This parameter is used to configure the scene number to send to the KNX when a short press operation occurs.	Scene no. 1...64

Additional parameter window “1-scene” with control of the scene via “5 separate objects”:

General	Control of actuator group A via	☒ 1-bit-object ☐ 8-bit-object
Channel 1	Preset value actuator group A	☒ ON ☐ OFF
1-Scene	Control of actuator group B via	☒ 1-bit-object ☐ 8-bit-object
Channel 2	Preset value actuator group B	☒ ON ☐ OFF
Channel 3	Control of actuator group C via	☒ 1-bit-object ☐ 8-bit-object
Channel 4	Preset value actuator group C	☒ ON ☐ OFF
Channel 5	Control of actuator group D via	☒ 1-bit-object ☐ 8-bit-object
Channel 6	Preset value actuator group D	☒ ON ☐ OFF
Channel 7	Control of actuator group E via	☒ 1-bit-object ☐ 8-bit-object
Channel 8	Preset value actuator group E	☒ ON ☐ OFF
Logic Channels Configuration		

PARAMETERS	DESCRIPTION	VALUES
Control of actuator group A...E via	A value can be preset for each actuator group whether a “1-bit-object” or an “8-bit-object”. The type of communication object “Switch/Value Actuator group A to ... E” is set accordingly.	1-bit-object 8-bit-object
1-bit-object		
Preset value actuator group A...E	In this parameter, a value can be preset for every actuator group A...E. If a scene has been stored, after programming or bus voltage recovery and renewed recall of the scene, the current object values of the actuator groups A...E are overwritten with the values set here.	ON OFF
8-bit-object		
Preset value actuator group A...E [0...255]	In this parameter, a value can be preset for every actuator group A...E. If a scene has been stored, after programming or bus voltage recovery and renewed recall of the scene, the current object values of the actuator groups A...E are overwritten with the values set here.	0...255
Long operation after	This parameter is used to determine long operation detection after the button press operation. For making a long operation, the button should be pressed at least the configured value.	0.3s, 0.4s, 0.5s, 0.6s, 0.8s, 1s, 1.2s, 1.5s, 2s, 3s , 4s, 5s, 6s, 7s, 8s, 9s, 10s
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms

2.2.5.2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Switch actuator group A	1.001	1-bit	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group A via" parameter is set to "1-bit-object." It can take 0 or 1 values, depending on the parameter settings.									
3	Input x	Telegr. value actuator group A	5.010	1-byte	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group A via" parameter is set to "8-bit-object." It can take 8-bit values, depending on the parameter settings.									
3	Input x	8-bit-scene	18.001	1-byte	X			X	
This object is visible when the "Control the scene via" parameter is set to "8-bit-scene." With this communication object, commands can be sent to recall or save scenes numbered from 1 to 64. When a scene save command is sent, the actuators store their current state as the specified scene number.									

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
4	Input x	Switch actuator group B	1.001	1-bit	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group B via" parameter is set to "1-bit-object." It can take 0 or 1 values, depending on the parameter settings.									
4	Input x	Telegr. value actuator group B	5.010	1-byte	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group B via" parameter is set to "8-bit-object." It can take 8-bit values, depending on the parameter settings.									
5	Input x	Switch actuator group C	1.001	1-bit	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group C via" parameter is set to "1-bit-object." It can take 0 or 1 values, depending on the parameter settings.									
5	Input x	Telegr. value actuator group C	5.010	1-byte	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group C via" parameter is set to "8-bit-object." It can take 8-bit values, depending on the parameter settings.									

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
6	Input x	Switch actuator group D	1.001	1-bit	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group D via" parameter is set to "1-bit-object." It can take 0 or 1 values, depending on the parameter settings.									
6	Input x	Telegr. value actuator group D	5.010	1-byte	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group D via" parameter is set to "8-bit-object." It can take 8-bit values, depending on the parameter settings.									
7	Input x	Switch actuator group E	1.001	1-bit	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group E via" parameter is set to "1-bit-object." It can take 0 or 1 values, depending on the parameter settings.									
7	Input x	Telegr. value actuator group E	5.010	1-byte	X		X	X	X
This object is visible when the "Control the scene via" parameter is set to "5 separate objects" and the "Control of actuator group E via" parameter is set to "8-bit-object." It can take 8-bit values, depending on the parameter settings.									
8	Input x	Store scene	1.003	1-bit	X		X	X	
This object indicates whether scene storage is enabled or disabled. When this communication object is set to "1," scene storage is enabled, and when set to "0," scene storage is disabled.									

2. 2. 6. Counter

In this section, it is explained how to count input pulses on the Universal Interface. Detailed information on the relevant parameter configurations is described in the table below.

General	
- Channel 1	
1-Counter	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	



Channel name	
Function of the channel	Counter
Pulse detection on	☒ closing contact ☐ opening contact
Data width of counter	32-bit [-2.147.483.648 ... 2.147.483.647]
Counter starts at [-2.147.483.648...2.147.483.647]	0
Debounce time	50ms
The debounce time must be shorter than the pulse period of the input signal	<--- NOTE
Transmit counter values after bus voltage recovery	☒ No ☐ Yes

2. 2. 6. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type a channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
Pulse detection on	In this parameter, the type of input signal is determined. You can determine whether the contact is a normally closed contact (opens) or a normally opened contact (closes).	closing contact opening contact
Data width of counter	This parameter defines the data type of the counter, which determines the maximum and minimum values the counter can hold.	8-bit [0...255] 16-bit [-32768...32767] 16-bit [0...65535] 32-bit [-2.147.483.648...2.147.483.647]
Counter starts at	This parameter is used to set the initial value of the counter.	Values depends on Data width of counter selection.

Additional parameter window “1-counter”:

General	Divider: number of input pulses for one counter step [1...65535]	1
– Channel 1	Factor: One counter step changes counter value by [1...65535]	1
1-Counter	Enable differential counter	☒ No ☐ Yes
Channel 2		
Channel 3		
Channel 4		
Channel 5		
Channel 6		
Channel 7		
Channel 8		
Logic Channels Configuration		

PARAMETERS	DESCRIPTION	VALUES
Divider: number of input pulses for one counter step	This parameter defines how many input pulses (signals) the device must receive before the counter increases its value by one step. It effectively acts as a divider for the incoming pulses, allowing you to control the counting speed.	Values depends on Data width of counter selection.
Factor: One counter step changes counter value by	This parameter determines how much the counter's value increases with each single counter step. It acts as a multiplier.	Values depends on Data width of counter selection.
Enable differential counter	This parameter activates a secondary counter that tracks the change or difference in the main counter's value. When enabled, this differential counter becomes available.	No Yes
Over/underrun of differential counter at	This parameter is visible if the parameter "Enable differential counter" is equal to "Yes". This parameter allows you to set the maximum value the differential counter can reach. When the differential counter reaches this set limit, it will reset, and a notification (e.g., "Differential counter overflow") will typically be sent.	Values depends on Data width of counter selection.
The overrun value must be greater than the factor	NOTE	NOTE

PARAMETERS	DESCRIPTION	VALUES
Debounce time	This parameter is used to determine the debounce time. Debouncing prevents unwanted multiple operations of the channel, e.g., due to bouncing of the contact.	10ms 20ms 30ms 50ms 70ms 100ms 150ms
The debounce time must be shorter than the pulse period of the input signal	NOTE	NOTE
Transmit counter values after bus voltage recovery	If set to "Yes", this parameter ensures that the device automatically sends its counter value (and the differential counter value, if enabled) to the bus after power is restored (bus voltage recovery).	No Yes

2.2.6.2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
2	Input x	Disable	1.003	1-bit	X		X		
This object is visible for every channel operated as an input. The function of the input circuitry can be disabled or enabled using the communication object "Disable". A disabled input behaves as if there has been no change of the input signal. The input objects continue to be available. 0: Enable input 1: Disable input									
3	Input x	Telegr. counter value			X		X	X	
This object stores the count of pulses received from the input. The size of the object varies depending on the parameter settings.									
4	Input x	Differential counter			X		X	X	
This object becomes visible when the "Enable differential counter" parameter is set to "Yes." It represents a dynamically managed counter that can be reset to its initial value using the "Reset differential counter" object. Additionally, a maximum value for the counter can be defined, and when the counter reaches or exceeds this value, it triggers the "Differential counter overflow" object. The size of this object varies based on the parameter settings.									
5	Input x	Request counter values	1.017	1-bit	X		X		
This object is used to request the counter values. Both the normal counter and the differential counter values can be requested using this communication object. When the device receives this object from the bus, it responds by sending the values of the normal counter and the differential counter to the bus.									

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
6	Input x	Differential counter overflow	1.017	1-bit	X			X	
This object is visible when the "Enable differential counter" parameter is set to "Yes." It is triggered when the differential counter overflows, sending the value "1" to the bus to indicate the overflow condition.									
7	Input x	Reset differential counter	1.015	1-bit	X		X		
This object is visible when the "Enable differential counter" parameter is set to "Yes." When the device receives the value "1" for this object from the bus, the differential counter is reset to its default value, which is "0."									

2. 2. 7. Control LED

In this section, it is explained how to control LEDs to be connected to the channels. Detailed information on the relevant parameter configurations is described in the table below.

General	
Channel 1	
Channel 2	
Channel 3	
Channel 4	
Channel 5	
Channel 6	
Channel 7	
Channel 8	
Logic Channels Configuration	

Channel name	
Function of the channel	Control LED ▼
LED is switched ON, if	☒ Object "Telegr. switch" = 1 ☐ Object "Telegr. switch" = 0
LED functionality	☒ switch ON/OFF ☐ Flashing
Time limit of LED-control	☒ No ☐ Yes
Transmit status via object "Telegr. status/ackn."	☒ No ☐ Yes
State of LED on bus voltage recovery	☐ ON ☒ OFF



2. 2. 7. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Channel name	This parameter is used to type a channel name. The name can consist of up to 40 characters.	40 bytes allowed
Function of the channel	This parameter is used to determine the channel x function. If no function is selected, the channel x will not be used. For other choices, all functionalities are configured separately.	No Function Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter Control LED
LED is switched ON, if	This parameter is visible if the LED function has been set to “switch ON/OFF”. It can be defined in which state of the object “LED switch” the LED is switched on.	Object “Telegr. switch” = 1 Object “Telegr. switch” = 0
LED functionality	This parameter defines whether the output should control the LED permanently (“switch ON/OFF”) or whether it should be “Flashing”. The corresponding objects “LED switch” or “LED flashing” are enabled.	switch ON/OFF Flashing
LED is switched ON for	This parameter is visible if the LED function has been set to “Flashing”. The length of time for which the LED is switched on or switched off during the flashing signal is set. The flash rate of the signal can thus be set.	200ms, 400ms, 600ms, 800ms, 1s , 1.5s, 2s, 3s, 4s, 5s, 7s, 10s, 15s, 20s, 25s, 30s, 40s, 50s, 60s
LED is switched OFF for	This parameter is visible if the LED function has been set to “Flashing”. The length of time for which the LED is switched on or switched off during the flashing signal is set. The flash rate of the signal can thus be set.	200ms, 400ms, 600ms, 800ms, 1s , 1.5s, 2s, 3s, 4s, 5s, 7s, 10s, 15s, 20s, 25s, 30s, 40s, 50s, 60s

PARAMETERS	DESCRIPTION	VALUES
Time limit of LED-control	If “Yes” has been entered in this parameter, the switch on period or flashing period of the LED has a time restriction.	No Yes
Time limit: base	If the time limit is active, it is possible to indicate in this parameter the maximum period that an LED is switched on or flashes. Once this time limit has elapsed, the LED is switched off. Duration = Time base x Factor	1s 10s 1min 10min 1h
Time limit: factor [1...255]	This parameter is used to adjust the time period before the LED turns off. By modifying this factor, the duration for which the LED remains active can be fine-tuned.	1... 5 ...255
Transmit status via object “Telegr. status/ackn.”	The object “Telegr. status/ackn.” is enabled with this object. The object value is ON if the LED has been switched on or flashes.	No Yes
State of LED on bus voltage recovery	This parameter, when set to "Yes," activates the "Telegr. status/ackn." object, allowing the current state of the LED to be sent to the bus.	ON OFF

2.2.7.2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
3	Input x	LED, switching	1.001	1-bit	X		X		
This object is visible when the "LED functionality" parameter is set to "switch ON/OFF." The value of the object is configured based on the parameter settings.									
4	Input x	LED, flashing	1.001	1-bit	X		X		
This object is visible when the "LED functionality" parameter is set to "Flashing." The value of the object is configured based on the parameter settings. 0: End flashing 1: Start flashing									
5	Input x	LED permanent ON	1.001	1-bit	X		X		
This object ensures that the LED remains permanently on.									
6	Input x	Telegr. status/ackn.	1.001	1-bit	X			X	
This object provides feedback on the status of the output.									

2. 3. Logic

This section describes the logical function modules of the Universal Interface. With the logical function blocks on the Universal Interface, a logical expression can be created with the data coming through the local digital channels and various “TRUE” or “FALSE” results can be obtained. Actions can be taken and scenarios can be triggered.

2. 3. Logic Channels Configuration

This section allows you to enable and configure the logic channels (A, B, C, and D) of the Universal Interface. Each logic channel can be activated individually, unlocking advanced configuration options tailored to specific application needs.

General	Use logic channel A	☒ No ☐ Yes
Channel 1	Use logic channel B	☒ No ☐ Yes
Channel 2	Use logic channel C	☒ No ☐ Yes
Channel 3	Use logic channel D	☒ No ☐ Yes
Channel 4		
Channel 5		
Channel 6		
Channel 7		
Channel 8		

Logic Channels Configuration

2.3.1.1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Use logic channel A...D	These parameters are used to enable or disable the respective logic channels (A, B, C and D) of Universal Interface. No: Disables the selected logic channel. The channel will remain inactive, and its associated configuration options will not be accessible. Yes: Enables the selected logic channel. Once enabled, the channel's specific functions and behaviors can be configured.	No Yes

2.3.2. Logic A...D

This section allows for the detailed configuration of the selected logic channel. It is used to define settings such as which inputs are enabled and which logic operation is selected. Please note that channels configured as "Control LED" cannot be used as inputs in the Logic section.

General	Function	Switch (ON/OFF) ▼
Channel 1	Send condition	☒ When result changes ☐ When input changes
Channel 2	Initial result status	False ▼
Channel 3	Logic operation	And ▼
Channel 4	Enable input 1	☒ Disable ☐ Enable
Channel 5	Enable input 2	☒ Disable ☐ Enable
Channel 6	Enable input 3	☒ Disable ☐ Enable
Channel 7	Enable input 4	☒ Disable ☐ Enable
Channel 8	Enable input 5	☒ Disable ☐ Enable
— Logic Channels Configuration	Enable input 6	☒ Disable ☐ Enable
Logic A	Enable input 7	☒ Disable ☐ Enable
Logic B	Enable input 8	☒ Disable ☐ Enable
Logic C		
Logic D		

2. 3. 2. 1. Parameters List

PARAMETERS	DESCRIPTION	VALUES
Function	This parameter defines the specific type of action that this logic channel will perform. The selected function determines how the logic output (e.g., its Communication Object) will behave when the logic conditions are met.	Switch (ON/OFF) Scene Value
Scene		
Scene number	This parameter defines which scene number will be sent by the device.	Scene no. 1...64
Value		
Value type	This parameter defines the type of value to be sent	Percentage Temperature Luminosity Angle
Send condition	This parameter determines when the logic channel will send its output to the bus.	When result changes When input changes
Initial result status	This parameter defines the starting state of the logic channel's output when the device powers on or after a reset.	False True None
Logic operation	This parameter defines how the multiple enabled inputs of this logic channel are combined to produce a single output result. It determines the logical relationship between the inputs.	And Or Xor
Enable input 1...8	These parameters allow you to individually activate or deactivate the specific inputs (from 1 to 8) for this logic channel. Only inputs that are enabled will be considered in the logic operation.	Disable Enable
Contact input status	This parameter defines how the physical state of the connected input is interpreted as a logical "TRUE" or "FALSE" value for the logic operation.	Pressed TRUE else FALSE Pressed FALSE else TRUE

2. 3. 2. 2. Communication Objects

No	Name		Data Type	Length	Flags				
					C	R	W	T	U
58	Logic x	On / Off	1.001	1-bit	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Switch (ON/OFF)".									
58	Logic x	Scene	17.001	1-byte	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Scene".									
58	Logic x	Percentage	5.001	1-byte	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Value" and the "Value Type" parameter is set to "Percentage".									
58	Logic x	Temperature	9.001	2-bytes	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Value" and the "Value Type" parameter is set to "Temperature".									
58	Logic x	Luminosity	9.004	2-bytes	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Value" and the "Value Type" parameter is set to "Luminosity".									
58	Logic x	Angle	5.003	1-byte	X	X		X	X
This object is visible when the "Function" parameter of the logic channel is set to "Value" and the "Value Type" parameter is set to "Angle".									

3. ETS Objects List

In this section, all communication objects used in the Universal Interface are presented in a table format. The table includes details such as the object name, data type, length, and flags, providing a clear overview of the available objects and their characteristics.

No	Name	Function		Data Type	Length	Flags				
						C	R	W	T	U
1	General		Telegr. operation	1.002	1-bit	X			X	
2	Input x	Switch Sensor Switch/Dimming Sensor Shutter Sensor Value/Forced Sensor Control Scene Counter	Disable	1.003	1-bit	X		X		
3	Input x	Switch Sensor	Telegr. switch	1.001	1-bit	X		X	X	
		Switch/Dimming Sensor	Telegr. switch	1.001	1-bit	X		X	X	
		Shutter Sensor	Telegr. shutter UP/DOWN	1.008	1-bit	X			X	
		Value/Forced Sensor	Telegr. value (0,1)	1.001	1-bit	X			X	
			Telegr. value (forced)	2.001	2-bit	X			X	
			Telegr. value [0...255]	5.001	1-byte	X			X	
			Telegr. value [-32768...32767]	8.001	2-bytes	X			X	
			Telegr. value [0...65535]	7.001	2-bytes	X			X	
			Telegr. value (temperature)	14.068	4-bytes	X			X	
			Telegr. value [0...4294967295]	12.001	4-bytes	X			X	

No	Name	Function		Data Type	Length	Flags				
						C	R	W	T	U
3	Input x	Control Scene	Switch actuator group A	1.001	1-bit	X		X	X	X
			Telegr. value actuator group A	5.010	1-byte	X		X	X	X
			8-bit-scene	18.001	1-byte	X			X	
		Counter	Telegr. counter value 1 byte	5.010	1-byte	X		X	X	
			Telegr. counter value 2 bytes	8.001	2-bytes	X		X	X	
			Telegr. counter value 2 bytes	7.001	2-bytes	X		X	X	
			Telegr. counter value 4 bytes	13.001	4-bytes	X		X	X	
		Control LED	LED, switching	1.001	1-bit	X		X		
4	Input x	Switch Sensor	long - Telegr. switch	1.001	1-bit	X		X	X	
		Switch/Dimming Sensor	Telegr. dimming	3.007	4-bit	X			X	
		Shutter Sensor	Telegr. STOP / lamella adj.	1.007	1-bit	X			X	
		Value/Forced Sensor	long - Telegr. value (0,1)	1.001	1-bit	X			X	
			long - Telegr. value (forced)	2.001	2-bit	X			X	
			long - Telegr. value [0...255]	5.001	1-byte	X			X	
			long - Telegr. value [-32768...32767]	8.001	2-bytes	X			X	
			long - Telegr. value [0...65535]	7.001	2-bytes	X			X	
			long - Telegr. value (temperature)	14.068	4-bytes	X			X	
			long - Telegr. value [0...4294967295]	12.001	4-bytes	X			X	
		Control Scene	Switch actuator group B	1.001	1-bit	X		X	X	X
			Telegr. value actuator group B	5.010	1-byte	X		X	X	X

No	Name	Function		Data Type	Length	Flags				
						C	R	W	T	U
4	Input x	Counter	Differential counter 1 byte	5.010	1-byte	X		X	X	
			Differential counter 2 bytes	7.001	2-bytes	X		X	X	
			Differential counter 4 bytes	12.001	4-bytes	X		X	X	
		Control LED	LED, flashing	1.001	1-bit	X		X		
5	Input x	Shutter Sensor	Upper limit position	1.002	1-bit	X		X		
		Control Scene	Switch actuator group C	1.001	1-bit	X		X	X	X
			Telegr. value actuator group C	5.010	1-byte	X		X	X	X
		Counter	Request counter values	1.017	1-bit	X		X		
		Control LED	LED permanent ON	1.001	1-bit	X			X	
6	Input x	Shutter Sensor	Lower limit position	1.002	1-bit	X		X		
		Control Scene	Switch actuator group D	1.001	1-bit	X		X	X	X
			Telegr. value actuator group D	5.010	1-byte	X		X	X	X
		Counter	Differential counter overflow	1.017	1-bit	X			X	
		Control LED	Telegr. status/ackn.	1.001	1-bit	X			X	
7	Input x	Control Scene	Switch actuator group E	1.001	1-bit	X		X	X	X
			Telegr. value actuator group E	5.010	1-byte	X		X	X	X
		Counter	Reset differential counter	1.015	1-bit	X		X		
8	Input x	Control Scene	Store scene	1.003	1-bit	X		X	X	

No	Name	Function		Data Type	Length	Flags				
						C	R	W	T	U
58	Logic A		On / Off	1.001	1-bit	X	X		X	X
			Scene	17.001	1-byte	X	X		X	X
			Percentage	5.001	1-byte	X	X		X	X
			Temperature	9.001	2-bytes	X	X		X	X
			Luminosity	9.004	2-bytes	X	X		X	X
			Angle	5.003	1-byte	X	X		X	X
59	Logic B		On / Off	1.001	1-bit	X	X		X	X
			Scene	17.001	1-byte	X	X		X	X
			Percentage	5.001	1-byte	X	X		X	X
			Temperature	9.001	2-bytes	X	X		X	X
			Luminosity	9.004	2-bytes	X	X		X	X
			Angle	5.003	1-byte	X	X		X	X
60	Logic C		On / Off	1.001	1-bit	X	X		X	X
			Scene	17.001	1-byte	X	X		X	X
			Percentage	5.001	1-byte	X	X		X	X
			Temperature	9.001	2-bytes	X	X		X	X
			Luminosity	9.004	2-bytes	X	X		X	X
			Angle	5.003	1-byte	X	X		X	X
61	Logic D		On / Off	1.001	1-bit	X	X		X	X
			Scene	17.001	1-byte	X	X		X	X
			Percentage	5.001	1-byte	X	X		X	X
			Temperature	9.001	2-bytes	X	X		X	X
			Luminosity	9.004	2-bytes	X	X		X	X
			Angle	5.003	1-byte	X	X		X	X