

**20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201****Use of the application program**

Product family: Push button  
Product type: Push button, 2-fold  
Manufacturer: Siemens

Name: Push button IKE 282  
Order no.: 5WG1 282-8AB01

**Functional description**

Using this application program, it is possible to use both push buttons of the 2-fold push button IKE 282 either as a pair or individually for switching functions (On/Off/Toggle), sending 8-bit values, programming/recalling scenes, dimming and shutter control. The LEDs can be selected for status display (On/Off), as an orientation light or they can have no function.

**Functions as a pair of push buttons****Dimming**

A distinction is made between a short and long push button action.

- **Switch (short push button action)**  
A switching signal (EIS 1) is sent after a short push button action. This signal is sent via the switching object. An "On" or "Off" telegram is sent depending on which push button has been pressed. It is also possible to invert the last signal ("Toggle" function).
- **Dimming (with stop telegram)**  
After a long push button action (the duration of which can be set), a command is sent to dim brighter or darker. Depending on the assignment of the push buttons, push button I corresponds to "Brighter" and push button II corresponds to "Darker" (or vice versa). After a long push button action, the command "100% dimming" is sent via the dimming object while the "Stop" command is sent when the push button is released (=falling pulse edge). The "Dimming time" can be set. If a stop command is received before the end of the dimming process, the process is interrupted and the achieved brightness value is maintained.
- **Dimming (cyclical)**  
The function of dimming with cyclical sending generates dimming telegrams according to an adjustable sending interval (e.g. 1/8 brighter) for the duration of the push button action. Depending on the assignment of the push buttons, push button I corresponds to "Brighter" and push button II corresponds to "Darker" (or vice versa). When the push button is released, the cyclical sending stops and the dimming actuator remains at the last achieved value.

**Shutter**

A distinction is made between a short and long push button action.

After a short push button action, a switching signal is sent which adjusts the louvres. Depending on the assignment of the push buttons, push button I corresponds to "Open" and push button II corresponds to "Closed" (or vice versa).

After a long push button action (the duration of which can be set), the shutter is raised or lowered. Depending on the assignment of the push buttons, push button I corresponds to "Up" and push button II corresponds to "Down" (or vice versa).

If the push button is pressed briefly during shutter movement (short push button action), this is interpreted as a stop command and the shutter is halted. Otherwise, the louvres are rotated in the corresponding direction after a short push button action.

**Scene**

The function of programming/recalling scenes distinguishes between a short and long push button action. The scene is recalled after a short push button action while a long push button action programs the scene. The duration of the switch operation can be selected. The default value for a long push button action is 5 seconds. The sending values "0" and "1" can be recalled with push buttons I and II. (It is therefore possible to operate two scenes).

**Functions as individual push buttons****Switch (On/Off/Toggle)**

If a push button is configured for switching, it sends the corresponding switching signal when it is pressed. The duration of the push button action is not evaluated. If "Toggle" is selected, the inverse object value is always sent.

It is also possible to assign a type of "bell function". When the push button is pressed, an On/Off signal is sent. The inverse signal is sent when the push button is released.

**Sending 8-bit value**

If a push button is configured for sending values, it sends the set value (this value must be assigned accordingly in the parameters). The duration of the push button action is not evaluated. When the push button is pressed, the corresponding value is sent immediately. It is therefore possible to set e.g. a dimming actuator to a defined value.

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201

### **Dimming with one button (special function)**

The software enables the dimming function to be carried out with only one push button. A distinction is made between a short and long push button action.

- **Switch (short push button action)**  
After a short push button action, the value that is contained in the switching object (=dimming on/off) is inverted and then sent. An "On" or "Off" telegram is only generated once the push button has been released (=falling pulse edge).
- **Dimming (with stop telegram)**  
After a long push button action (the duration of which can be set), a command is sent to dim darker or brighter, depending on the object value and the previous dimming direction. If the dimming actuator was switched off, it is switched on after a long push button action and dimmed brighter. If it was dimmed to 100%, it is dimmed darker after a long push button action. If the dimming actuator is set to a dimming value between 0 and 100%, the last selected dimming direction is inverted.  
The command "100% dimming" is sent via the dimming object after a long push button action and the "Stop" command is sent when the push button is released (=falling pulse edge). The "Dimming time" can be set. If a stop command is received before the end of the dimming process, the process is interrupted and the achieved brightness value is maintained.
- **Dimming (cyclical)**  
The function of dimming with cyclical sending generates dimming telegrams according to an adjustable sending interval (e.g. 1/8 brighter) for the duration of the push button action. When the push button is released, the cyclical sending stops and the dimming actuator remains at the last achieved value.

### **Shutter control with one button (special function)**

The program also enables the shutter control function to be carried out via a single push button. A distinction is made between a short and long push button action. After a long push button action (the duration of which can be set), the shutter is raised or lowered. If the push button is pressed briefly during shutter movement (short push button action), this is interpreted as a stop command and the shutter is halted. Otherwise, the louvres are rotated in the corresponding direction after a short push button action. The function is basically identical to the shutter function using 2 push buttons, however the inverse function to the previous long push button action is carried out after each long push button action. A short push button action produces the inverse value to the value which was sent after the last long push button action. The direction of shutter movement when the push

button is pressed is therefore dependent on the content of the object for "Shutter Up/Down". It is thus also possible to connect several push buttons in parallel.

### **Display LED**

Each of the 2 LEDs can display "Off", "On" (orientation light) or the status of the corresponding object (a separate status object is available for the LED). A status display function can therefore be implemented. A further parameter determines whether the object value "On" or "Off" causes the LED to light up. Using an additional parameter, each LED can also be assigned for push button operation. This LED remains lit until the push button beneath the corresponding LED is released.

### **Initialisation signal**

It is not possible to carry out an initialisation signal (on bus voltage recovery). You should ensure that the push button is always in the neutral position (i.e. not pressed) on bus voltage recovery. If the push button is not in this position on bus voltage recovery, the application program will then send the corresponding signal. This could however not yet be understood by other bus devices as all the devices in the system are loaded up (ready for operation) at different rates.

Maximum number of group addresses:	28
Maximum number of associations:	28

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201

### Parameters

#### General

General	LED	Push buttons
Button assignments: Button I	Button left	
Button assignments: Button II	Button right	
Push button I blockable	No	
Push button II blockable	No	

Parameters	Settings
<b>Button assignments:</b> Button I	Button left Button right
<b>Button assignments:</b> Button II	Button left <b>Button right</b>
These parameters define the push button assignment for the left and right push buttons.	
<b>Push button I blockable</b>	<b>No</b> Yes (via blocking object, with value 1) Yes (via blocking object, with value 0)
<b>Push button II blockable</b>	<b>No</b> Yes (via blocking object, with value 1) Yes (via blocking object, with value 0)
These parameters specify whether push buttons I or II can be disabled via a separate object (blocking object). "No": The function of the push button is enabled. "Yes (via blocking object, with value 1)": The push button can be disabled with a "1" telegram via the blocking object that is now available in the object list. "Yes (via blocking object, with value 0)": The push button can be disabled with a "0" telegram via the blocking object that is now available in the object list.	

### Communication objects

#### LED

Phys. Addr.		Applikation		Typ
Nr.	Funktion	Objektname		
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201			
---	---	---	---	---
8	Status	LED left		1 Bit
9	Status	LED right		1 Bit

#### Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
8	Status	LED left	1 Bit	CT
9	Status	LED right	1 Bit	CT
If the function of the LED in the parameter window is selected as "Status (via separate object)", the relevant objects [8] and [9] are displayed.				

### Parameters

#### LED

General	LED	Push buttons
Function of left LED	On	
Function of right LED	On	

Parameters	Settings
<b>Function of left LED</b>	Off <b>On</b> Status (via separate object) Inverted (via separate object) On while pressing push button
<b>Function of right LED</b>	Off <b>On</b> Status (via separate object) Inverted (via separate object) On while pressing push button

The LED can permanently display "Off" or "On" (orientation light) or can be selected for status display via a separate status object. A further parameter determines whether the LED lights up for the object value "On" or "Off". Using an additional parameter, it is possible to select that the LED only remains lit for the duration of the push button action.

**Application program description**

September 2001

**20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201****Assigning parameters to the push buttons as individual push buttons****Communication objects****Push buttons**

Phys. Adr.		Applikation		
Nr.	Funktion	Objektname	Typ	
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val	904201		
0	On	Switch, Button I	1 Bit	
1	Off	Switch, Button II	1 Bit	

**Note:**

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	On	Switch, Button I	1 Bit	CT
1	Off	Switch, Button II	1 Bit	CT

These objects serve as switching objects for push buttons I and II. Depending on the parameter settings, either an "On" or "Off" telegram is sent. If the function "Toggle" is selected, the inverse value is sent depending on the current switching state (toggling).

**Parameters****Push buttons**

General	LED	Push buttons
Function of button I and II	Switch or special functions	
Push button I	On	
Push button II	Off	

Parameters	Settings
Push button I (Push button II)	On Off Toggle 8-bit Value press: On, release: Off press: Off, release: On Shutter with one button Dimming (one button) with stop telegram Dimming cyclical with one button Step=1/1 Dimming cyclical with one button Step=1/2 Dimming cyclical with one button Step=1/4 Dimming cyclical with one button Step=1/8 Dimming cyclical with one button Step=1/16 Dimming cyclical with one button Step=1/32 Dimming cyclical with one button Step=1/64

The function of the push button is set via this parameter. Depending on the selected function, the parameter window "Push buttons" changes and the relevant parameters are displayed with default settings.

The following settings are available for the "Switch" function: "On" or "Off": When the push button is pressed, an "On" or "Off" telegram is sent.

"Toggle": When the push button is pressed, the object value of the switching object is inverted and sent.

"press: On, release: Off": An "On" telegram is sent when the push button is pressed, while an "Off" telegram is sent when the push button is released (bell function).

"press: Off, release: On": An "Off" telegram is sent when the push button is pressed, while an "On" telegram is sent when the push button is released (bell function).

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)

This parameter defines the basic function of the push buttons. If the setting "Switch or special functions" is selected, the push buttons can be parameterised as individual push buttons with special functions.

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201

### Communication objects

#### 8-bit Value

Phys. Adr.		Applikation	
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201		
0	8-bit Value	Value, Button I	1 Byte
1	8-bit Value	Value, Button II	1 Byte

#### Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	8-bit Value	Value, Button I	1 Byte	CT
1	8-bit Value	Value, Button II	1 Byte	CT

The set value telegrams are sent via the group addresses in these objects when the push buttons are pressed.

### Parameters

#### 8-bit Value

General	LED	Push buttons
Function of button I and II	Switch or special functions	
Push button I	8-bit Value	
Value Button I (0-255)	1	
Push button II	8-bit Value	
Value Button II (0-255)	0	

The functions of push buttons I and II are identical in the setting "Switch or special functions".

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)

This parameter defines the basic function of the push buttons. If the setting "Switch or special functions" is selected, the push buttons can be parameterised as individual push buttons with special functions.

Parameters	Settings
Push button I (Push button II)	On Off Toggle <b>8-bit Value</b> press: On, release: Off press: Off, release: On Shutter with one button Dimming (one button) with stop telegram Dimming cyclical with one button Step=1/1 Dimming cyclical with one button Step=1/2 Dimming cyclical with one button Step=1/4 Dimming cyclical with one button Step=1/8 Dimming cyclical with one button Step=1/16 Dimming cyclical with one button Step=1/32 Dimming cyclical with one button Step=1/64

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

In the setting "8-bit Value", pressing the push button causes an adjustable 8 bit value to be sent.

Value Button I (0 - 255)	1
Value Button II (0 - 255)	0

This parameter defines the sending value that is sent after a push button action. The range covers the values 0 – 255.

This parameter defines the sending value that is sent after a push button action. The range covers the values 0 – 255.

Phys. Adr.	Applikation		
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201		
0	Open / Closed	Louvres, Button I	1 Bit
1	Open / Closed	Louvres, Button II	1 Bit
4	Up / Down	Shutter, Button I	1 Bit
5	Up / Down	Shutter, Button II	1 Bit

#### Note:

The view of the objects can be arranged individually i.e. this view can vary.

## Application program description

September 2001

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201

Obj	Function	Object name	Type	Flags
0	Open / Closed	Louvres, Button I	1 Bit	CT
1	Open / Closed	Louvres, Button II	1 Bit	CT
These objects send a switching command for louvre adjustment after a short push button action. A short push button action produces the inverse value to the value that was sent after the last long push button action. The direction of movement of the louvres after a short switch operation is therefore dependent on the content of the object for "Shutter Up / Down".				
4	Up / Down	Shutter, Button I	1 Bit	CWT
5	Up / Down	Shutter, Button II	1 Bit	CWT
After a short push button action, these objects send a switching command for raising or lowering the shutters. A push button action produces the inverse value to the value that was sent after the last long push button action.				

## Parameters

## Shutter operation with one button

General	LED	Push buttons
Function of button I and II	Switch or special functions	
Push button I	Shutter with one button	
Long switch operation min.	0.5 seconds	
Push button II	Shutter with one button	
Long switch operation min.	0.5 seconds	

The functions of push buttons I and II are identical in the setting "Switch or special functions".

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)
This parameter defines the basic function of the push buttons. If the setting "Switch or special functions" is selected, the push buttons can be parameterised as individual push buttons with special functions.	

Parameters	Settings
Push button I (Push button II)	On Off Toggle 8-bit Value press: On, release: Off press: Off, release: On
Shutter with one button	Dimming (one button) with stop telegram Dimming cyclical with one button Step=1/1 Dimming cyclical with one button Step=1/2 Dimming cyclical with one button Step=1/4 Dimming cyclical with one button Step=1/8 Dimming cyclical with one button Step=1/16 Dimming cyclical with one button Step=1/32 Dimming cyclical with one button Step=1/64

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

In the setting "Shutter with one button", the software enables the shutter function to be carried out via a single push button. The function is basically identical to the shutter function using 2 push buttons, however the inverse function to the previous long push button action is carried out after each long push button action. A short push button action produces the inverse value to the value which was sent after the last long push button action. The direction of shutter movement when the push button is pressed is therefore dependent on the content of the object for "Shutter Up/Down". It is thus also possible to connect several push buttons in parallel.

Long switch operation min.	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.	

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201

### Communication objects

#### Dimming with one button (stop telegram)

Phys. Adr.		Applikation	
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201		
0	Toggle / Toggle	Dimming Toggle, Button I	1 Bit
1	Toggle / Toggle	Dimming Toggle, Button II	1 Bit
4	Brighter / Darker	Dimming, Button I	4 Bit
5	Brighter / Darker	Dimming, Button II	4 Bit

#### Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	Toggle / Toggle	Dimming Toggle, Button I	1 Bit	CWT
1	Toggle / Toggle	Dimming Toggle, Button II	1 Bit	CWT
4	Brighter / Darker	Dimming, Button I	4 Bit	CWT
5	Brighter / Darker	Dimming, Button II	4 Bit	CWT

After each push button action, the push button sends the respective inverse switching signal. The push button receives the status signal from the dimmer. The receipt of the status signal makes it possible to connect push buttons in parallel.

A long push button action causes a dim darker or dim brighter command to be sent. The push button sends the inverse switching signal to the last switching signal if it has not been switched off in the meantime.

### Parameters

#### Dimming with one button (with stop telegram)

General	LED	Push buttons
Function of button I and II	Switch or special functions	
Push button I	Dimming (one button) with stop telegram	
Long switch operation min.	0.5 seconds	
Push button II	Dimming (one button) with stop telegram	
Long switch operation min.	0.5 seconds	

The functions of push buttons I and II are identical in the setting "Switch or special functions".

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)

This parameter defines the basic function of the push buttons. If the setting "Switch or special functions" is selected, the push buttons can be parameterised as individual push buttons with special functions.

Push button I (Push button II)	On Off Toggle 8-bit Value press: On, release: Off press: Off, release: On Shutter with one button <b>Dimming (one button) with stop telegram</b> Dimming cyclical with one button Step=1/1 Dimming cyclical with one button Step=1/2 Dimming cyclical with one button Step=1/4 Dimming cyclical with one button Step=1/8 Dimming cyclical with one button Step=1/16 Dimming cyclical with one button Step=1/32 Dimming cyclical with one button Step=1/64
-----------------------------------	---

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

In the setting "Dimming (one button) with stop telegram", the software enables the dimming function to be carried out via a single push button. The function is basically identical to dimming via two push buttons, however after a push button action, the inverse function to the previous operation is carried out.

If the dimmer is switched off (the push button receives the status signal of the dimmer), it is switched on again via the next short push button action and vice versa. Due to the receipt of the status signal, it is also possible to connect push buttons in parallel.

After a long push button action, the command for 100% dimming is sent while a stop command is sent when the push button is released.

If a command to dim brighter was sent previously via a long push button action, it is dimmed darker again via the next long push button action (if it has not been switched off again in the meantime) and vice versa.

## Application program description

September 2001

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201

Parameters	Settings
Long switch operation min.	0.3 seconds
	0.4 seconds
	<b>0.5 seconds</b>
	0.6 seconds
	0.8 seconds
	1.0 seconds
	1.2 seconds
	1.5 seconds
	2.0 seconds
	2.5 seconds
	3.0 seconds
	4.0 seconds
	5.0 seconds
	6.0 seconds
	7.0 seconds

This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.

## Communication objects

## Dimming with one button (cyclical sending)

Phys. Adr.	Applikation		
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val	904201	
0	Toggle / Toggle	Dimming Toggle, Button I	1 Bit
1	Toggle / Toggle	Dimming Toggle, Button II	1 Bit
4	Brighter / Darker	Dimming, Button I	4 Bit
5	Brighter / Darker	Dimming, Button II	4 Bit

## Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	Toggle / Toggle	Dimming Toggle, Button I	1 Bit	CWT
1	Toggle / Toggle	Dimming Toggle, Button II	1 Bit	CWT
4	Brighter / Darker	Dimming, Button I	4 Bit	CWT
5	Brighter / Darker	Dimming, Button II	4 Bit	CWT

After each push button action, the push button sends the respective inverse switching signal. The push button receives the status signal from the dimmer. The receipt of the status signal makes it possible to connect push buttons in parallel.

This object serves as a dimming object and sends dimming telegrams cyclically after a long push button action. If a dim brighter command with an adjustable change in the brightness was last sent via a long push button action, it is dimmed darker again via the next long push button action (if it has not been switched off in the meantime) and vice versa.

## Parameters

## Dimming with one button (cyclical sending)

General	LED	<b>Push buttons</b>
Function of button I and II	Switch or special functions	
Push button I	Dimming cyclical with one button Step=1/8	
Long switch operation min.	0.5 seconds	
Interval for cyclical sending	0.5 seconds	
Push button II	Dimming cyclical with one button Step=1/8	
Long switch operation min.	0.5 seconds	
Interval for cyclical sending	0.5 seconds	

The functions of push buttons I and II are identical in the setting "Switch or special functions".

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)

This parameter defines the basic function of the push buttons. If the setting "Switch or special functions" is selected, the push buttons can be parameterised as individual push buttons with special functions.

Push button I (Push button II)	On Off Toggle 8-bit Value press: On, release: Off press: Off, release: On Shutter with one button Dimming (one button) with stop telegram <b>Dimming cyclical with one button Step=1/1</b> <b>Dimming cyclical with one button Step=1/2</b> <b>Dimming cyclical with one button Step=1/4</b> <b>Dimming cyclical with one button Step=1/8</b> <b>Dimming cyclical with one button Step=1/16</b> <b>Dimming cyclical with one button Step=1/32</b> <b>Dimming cyclical with one button Step=1/64</b>
-----------------------------------	---

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings. In the setting "Dimming cyclical with one button Step=x", the software enables the dimming function to be carried out via a single push button. The function is basically identical to dimming via two push buttons, however after a push button

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201

Parameters	Settings
action, the inverse function to the previous operation is carried out. If the dimmer is switched off (the push button receives the status signal of the dimmer), it is switched on again via the next short push button action and vice versa. Due to the receipt of the status signal, it is also possible to connect push buttons in parallel. After a long push button action, dimming telegrams (e.g. 1/8 brighter) are generated for the duration of the push button action. When the push button is released, the cyclical sending stops and the dimming actuator remains at the last achieved value.	
<b>Long switch operation min.</b>	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.	
<b>Interval for cyclical sending</b>	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
The interval for cyclical sending after a long push button action is set here. The bus load should be taken into consideration when setting the cyclical time period.	

## Assigning parameters to the push buttons as a pair of push buttons

## Communication objects

## Shutter

Phys. Adr.	Applikation			Typ
	Nr.	Funktion	Objektname	
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201			
0	Open / Closed	Louvres		1 Bit
1	Up / Down	Shutter		1 Bit

## Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	Open / Closed	Louvres	1 Bit	CT
This object sends a switching command for louvre adjustment after a short push button action. An "Open" or "Closed" command is sent dependent on which push button has been pressed.				
1	Up / Down	Shutter	1 Bit	CT
This object serves as a switching object for shutter movement after a long push button action. A short push button action during shutter movement causes the shutter to stop.				

## Parameters

## Shutter

General	LED	Push buttons
Function of button I and II	Shutter	
Push button I / II	Up / Down	
Long switch operation min.	0.5 seconds	

Parameters	Settings
<b>Function of button I and II</b>	Switch or special functions <b>Shutter</b> Dimming with stop telegram Dimming with cyclical sending Scene (recall / program)
The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.	

## Application program description

September 2001

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201

Parameters	Settings
<b>Push button I / II</b>	<b>Up / Down</b> Down / Up
This parameter defines the function of push buttons I and II. In the default setting, pressing push button I briefly opens the louvres by a step with an "Off" telegram. Pressing push button II closes the louvres by a step with an "On" telegram. Pressing push button I for a longer period raises the shutter with an "Off" telegram while pressing push button II for a long period lowers the shutter with an "On" telegram.	
<b>Long switch operation min.</b>	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.	

## Communication objects

## Dimming with stop telegram

Phys. Adr.	Applikation		
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val	904201	
0	On / Off	Dimming On / Off	1 Bit
1	Brighter / Darker	Dimming	4 Bit

## Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	On / Off	Dimming On / Off	1 Bit	CT
This object serves as a switching object for the push buttons after a short push button action. In the default setting, pressing push button I sends an "On" telegram while an "Off" telegram is sent when push button II is pressed. If the setting "Toggle / Toggle" is selected, either an "On" or "Off" telegram is sent depending on the current switching state (toggling).				

Obj	Function	Object name	Type	Flags
1	Brighter / Darker	Dimming	4 Bit	CT
This object serves as a dimming object after a long push button action. The following applies: pressing push button I for a long period sends a "Dim brighter" telegram while a "Dim darker" telegram is sent when push button II is pressed for a long period.				

## Parameters

## Dimming with stop telegram

General	LED	Push buttons
Function of button I and II	Dimming with stop telegram	
Push button I / II	On / Off	
Long switch operation min.	0.5 seconds	

Parameters	Settings
<b>Function of button I and II</b>	Switch or special functions Shutter <b>Dimming with stop telegram</b> Dimming with cyclical sending Scene (recall / program)

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

<b>Push button I / II</b>	<b>On / Off</b> Toggle / Toggle
This parameter defines the function for push buttons I and II. In the default setting, pressing push button I briefly sends an "On" telegram. Pressing push button II briefly sends an "Off" telegram. If a long push button action is detected, a "Dim brighter" telegram is sent when push button I is pressed while a "Dim darker" telegram is sent when push button II is pressed. When the push button is released, a "Stop" telegram is sent. If the setting "Toggle / Toggle" is selected, either an "On" or "Off" telegram is sent after a short push button action depending on the object status (toggling). The dimming function remains the same as in the setting "On / Off".	
<b>Long switch operation min.</b>	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201

Parameters	Settings
	6.0 seconds 7.0 seconds

This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.

## Communication objects

### Dimming with cyclical sending

Phys. Addr.		Applikation	
Nr.	Funktion	Objektname	Typ
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val	904201	
0	On / Off / Toggle	Dimming On / Off / Toggle	1 Bit
1	Brighter / Darker	Dimming	4 Bit

### Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	On / Off / Toggle	Dimming On / Off / Toggle	1 Bit	CWT
1	Brighter / Darker	Dimming	4 Bit	CT

This object serves as a switching object for the push buttons. In the default setting, an "On" telegram is sent when push button I is pressed while an "Off" telegram is sent when push button II is pressed. If the setting "Toggle / Toggle" is selected, either an "On" or "Off" telegram is sent depending on the current switching state (toggling).

This object serves as a dimming object for the push buttons after a long push button action. The following applies: after a long switch operation of push button I, the dimming object sends a "Dim brighter" telegram at cyclical intervals while a "Dim darker" telegram is sent cyclically after a long switch operation of push button II.

## Parameters

### Dimming with cyclical sending

General	LED	Push buttons
Function of button I and II	Dimming with cyclical sending	
Push button I / II	On / Off, Step=1/8	
Long switch operation min.	0.5 seconds	
Interval for cyclical sending	0.5 seconds	

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram <b>Dimming with cyclical sending</b> Scene (recall / program)

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

Push button I / II	On / Off, Step = 1/1 On / Off, Step = 1/2 On / Off, Step = 1/4 <b>On / Off, Step = 1/8</b> On / Off, Step = 1/16 On / Off, Step = 1/32 On / Off, Step = 1/64 Toggle / Toggle, Step = 1/1 Toggle / Toggle, Step = 1/4 Toggle / Toggle, Step = 1/8 Toggle / Toggle, Step = 1/16 Toggle / Toggle, Step = 1/32 Toggle / Toggle, Step = 1/64
--------------------	---

This parameter defines which switching value is sent when push button I or II is pressed briefly and which change in the brightness is sent via a dimming telegram on detection of a long push button action.

In the default setting, "step = 1/8", 8 dimming telegrams must be sent for example in order to dim from 0% to 100%.

"On / Off, Step = x": A brief operation of push button I generates an "On" telegram while an "Off" telegram is sent when push button II is pressed briefly. After a long switch operation of push button I, "Dim brighter" telegrams are sent while "Dim darker" telegrams are sent when push button II is pressed for a long period.

"Toggle / Toggle, Step = x": After a short push button action, the value in the switching object is inverted.

The dimming function remains the same as in the setting "On / Off, Step = x".

Long switch operation min.	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
----------------------------	--

This parameter defines the time limit for a short/long push button action. If a push button is pressed for longer than the set time, the software detects a long push button action.

## Application program description

September 2001

## 20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201

Parameters	Settings
Interval for cyclical sending	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
The interval for cyclical sending after a long push button action is set here. The bus load should be taken into consideration when setting the cyclical time period.	

## Communication objects

## Scene

Phys. Adr.		Applikation		
Nr.	Funktion	Objektname	Typ	
01.01.005	20 S2 Tableau, On-Off-Tog/Dim/Shu/Val	904201		
0	Recall	Scene	1 Bit	
1	Save	Scene	1 Bit	

## Note:

The view of the objects can be arranged individually i.e. this view can vary.

Obj	Function	Object name	Type	Flags
0	Recall	Scene	1 Bit	CT
The telegrams for recalling the scene are sent via the group address in this object. On receipt of the telegram, the scene module sends the stored brightness values of the scene via the group objects to the addressed switch/dim actuators.				
1	Save	Scene	1 Bit	CT
The programming telegrams are sent via the group address in this object to the corresponding scene module.				

## Parameters

## Scene

General	LED	Push buttons
Function of button I and II	Scene (recall / program)	
Button I / II sending	0 / 1	
Start to save scene at	0.5 seconds	

Parameters	Settings
Function of button I and II	Switch or special functions Shutter Dimming with stop telegram Dimming with cyclical sending <b>Scene (recall / program)</b>

The function of the push button is set via this parameter. Depending on the function selected, the parameter window changes and the relevant parameters are displayed with default settings.

Button I / II sending	0 / 1 1 / 0
-----------------------	----------------

This parameter sets the sending signal when push button I or II is pressed.

"0 / 1": When push button I is pressed briefly, scene 1 is set with a "1" telegram by the addressed scene module while scene 2 is set when push button II is pressed briefly. When the push buttons are pressed for a long period, the addressed scene modules are requested to scan the current set brightness values and switching states of the actuators and to save them into corresponding scenes.

"1 / 0": In this setting, the assignment of the scenes to the push buttons is reversed.

Start to save scene at	0.3 seconds 0.4 seconds <b>0.5 seconds</b> 0.6 seconds 0.8 seconds 1.0 seconds 1.2 seconds 1.5 seconds 2.0 seconds 2.5 seconds 3.0 seconds 4.0 seconds 5.0 seconds 6.0 seconds 7.0 seconds
------------------------	--

If the push button is pressed for less than the set time, the scene is recalled.

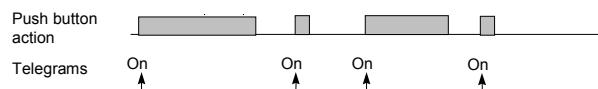
If the push button is pressed for longer than the set time, the saving mode of the scene is activated.

September 2001

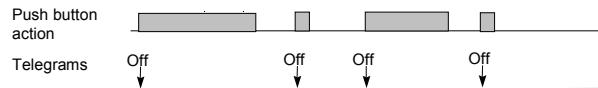
**20 S2 Tableau, On-Off-Tog/Dim/Shu/Val 904201**

**Timing diagrams for one button (special function)**

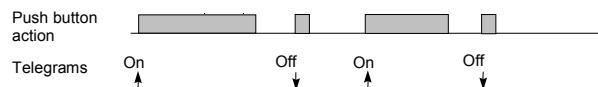
**Configured for switch function: On**



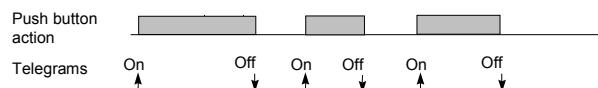
**Configured for switch function: Off**



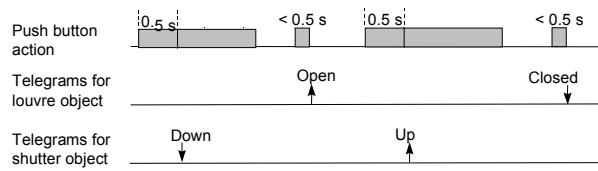
**Configured for switch function: Toggle**



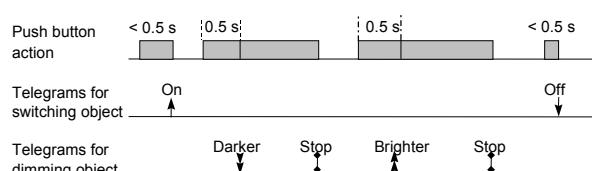
**Configured for switch function: Bell function**



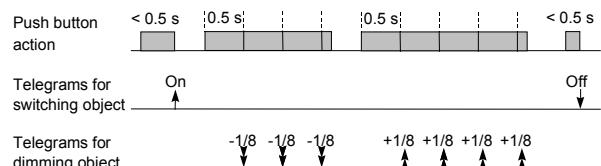
**Configured for shutter**



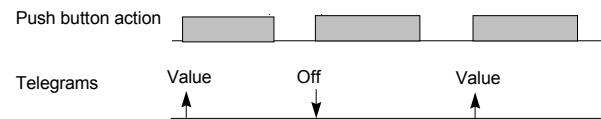
**Configured for dimming with stop telegram**



**Configured for dimming with cyclical sending**

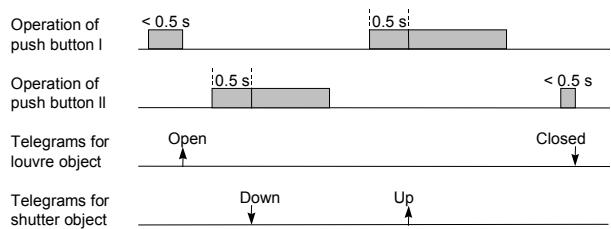


**Configured for sending 8-bit value**

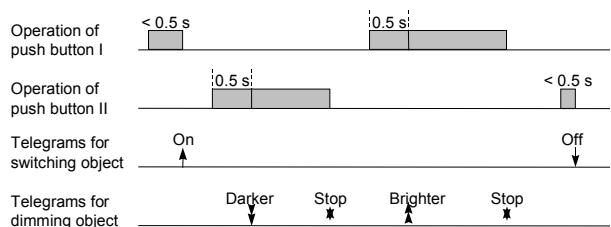


**Timing diagrams for pair of push buttons**

**Configured for shutter**



**Configured for dimming with stop telegram**



**20 S2 Tableau, On-Off-Tog/Dim/Shu/Value 904201**

**Configured for dimming with cyclical sending**

