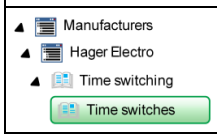
application software



Yearly KNX/EIB time switch

Electrical/Mechanical characteristics: see product user manual

	Product reference	Product designation	Application software ref	TP device Radio device
	TYA720	Yearly KNX/EIB time switch	STYA720	▬

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1. General

1.1 About this guide

The purpose of this manual is to describe the operation and configuration of the KNX-devices using the ETS program. It consists of 4 parts:

- General information.
- Parameter description.
- Overview of KNX objects.
- Technical characteristics.

1.2 About the program

1.2.1 ETS compatibility

The application programs are compatible with ETS4 and ETS5. They can be downloaded from our website under the order number.

ETS Version	File extension of compatible files
ETS4 (V4.1.8 or higher)	*.knxprod
ETS5	*.knxprod

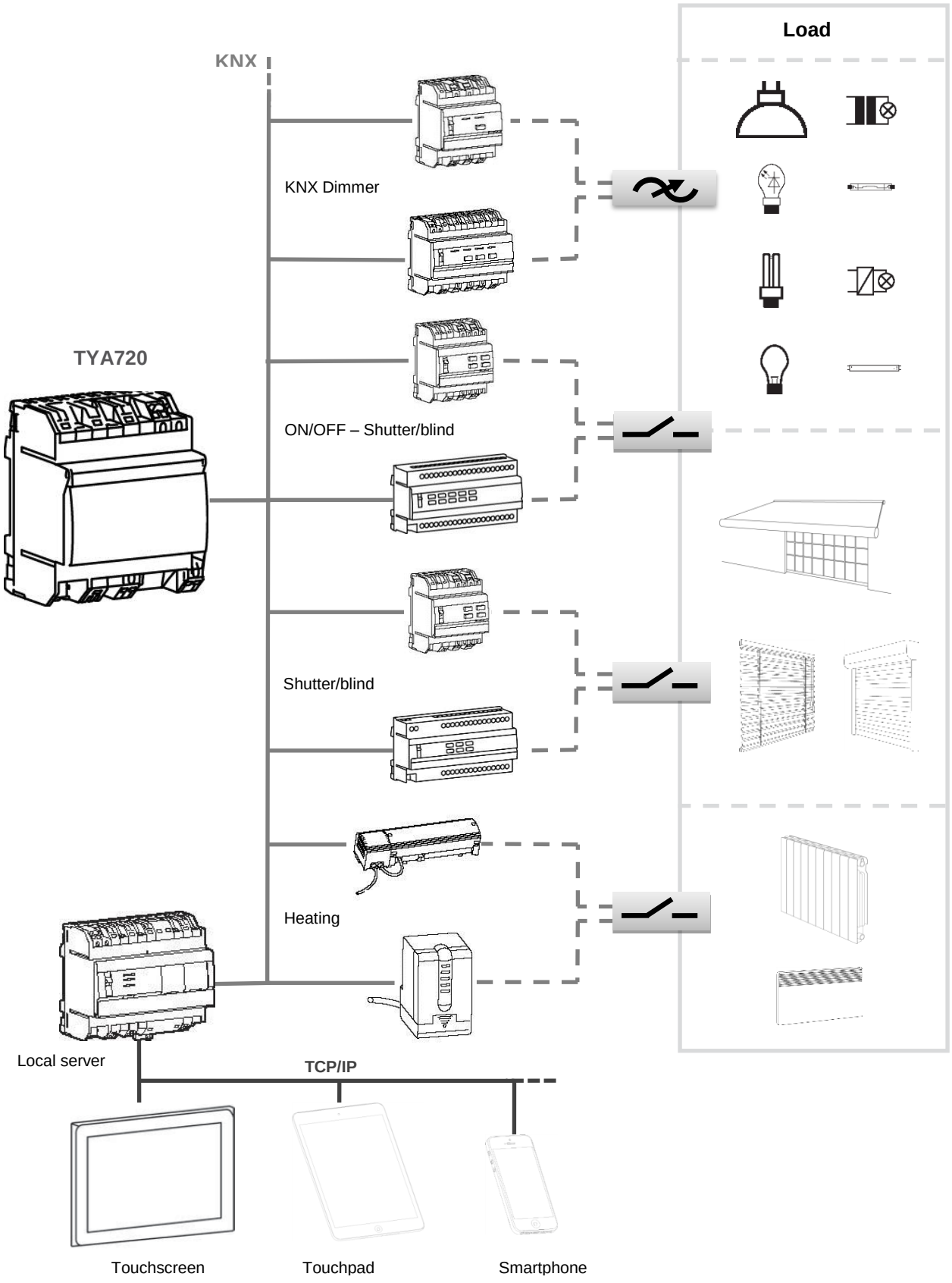
1.2.2 Application descriptions

Application	Product reference
STYA720	TYA720

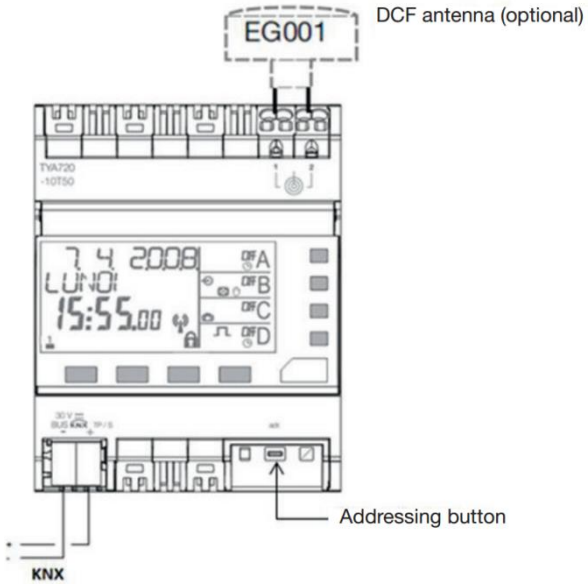
2. General Description

2.1 Installation of the device

2.1.1 Overview presentation



2.1.2 Description of the device



2.1.3 Physical addressing

In order to perform the physical addressing or to check whether or not the bus is connected, press the lighted push button (see chapter 2.1.2 for the button location).

Light on = bus connected and ready for physical addressing.

Programming mode is activated, until the physical address is transferred from ETS. Pressing the button again, exits programming mode.

2.2 Function modules of the application

The most important functions are:

- ON/OFF

An output can be switched on or off using the ON/OFF function.

- Priority

The Priority function is used to force the output into a defined state. The Priority function is controlled with a 2-bit command.
Application: Keeping lighting on for security reasons.

- Value

This function enables a predefined value to be transmitted to the KNX bus according to several formats.

- Integer 1 byte (0-255)
- Integer 2 byte (0-65535)
- Float 2 byte (-671088,64 – 670760,96)

- Scene

The Scene function is used to switch groups of outputs into a configurable predefined state.
A scene is activated by receipt of a 1-byte command (Scene 1 -64).

- Heating

This function enables a heating or air-conditioning instruction (Auto, Comfort, Economy, Night setpoint, Frost protection) to be selected

- Percent

This function enables a percentage value to be transmitted to the KNX bus, enabling control of shutters, blinds or dimmers.

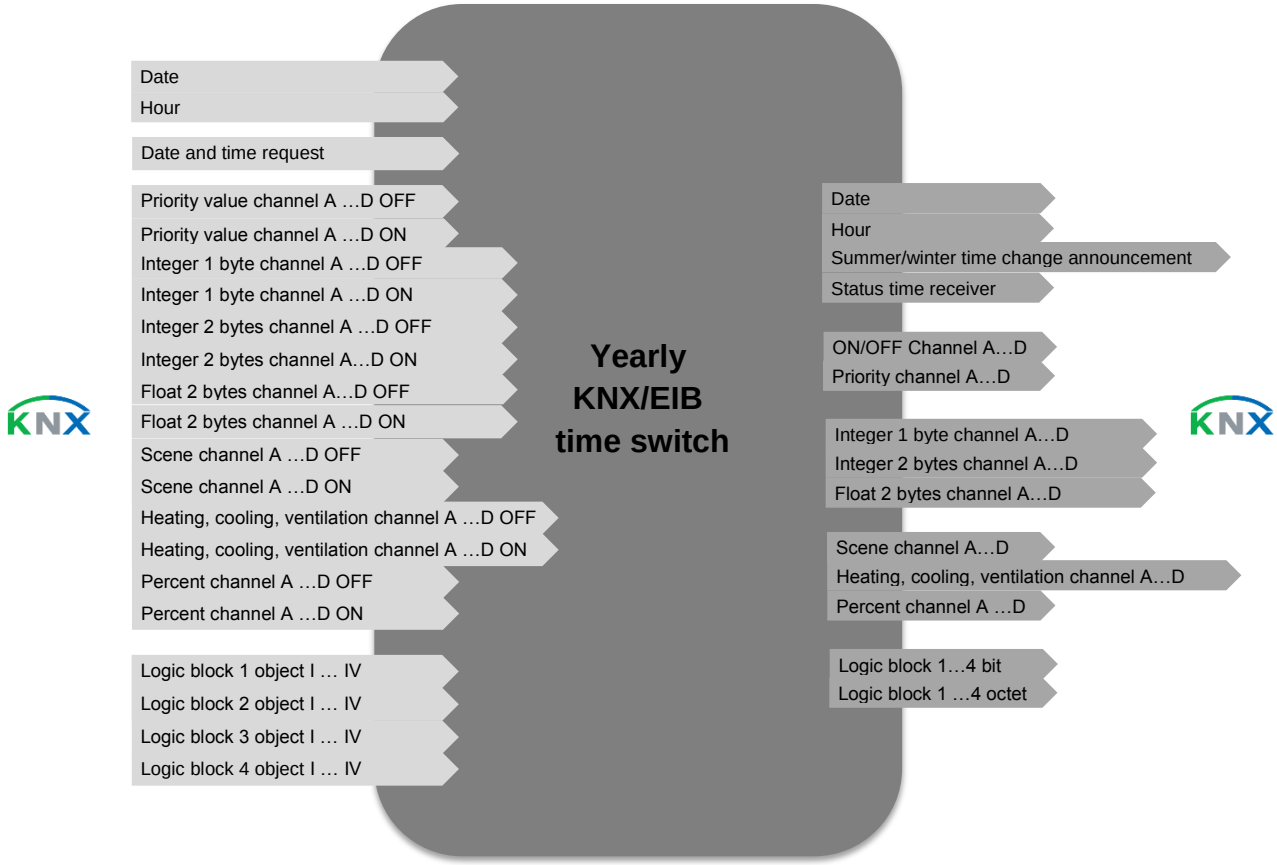
- Random function

This function enables the switching command to be sent to the bus with a certain random delay. It is used essentially for the presence simulation.

- Logic block

The Logic function is used to control an output depending on the result of a logic operation
The result of the operation is transmitted to the KNX bus in 1 bit or 1 byte format.
There are 4 logic blocks per device with up to 4 inputs available

Communication objects

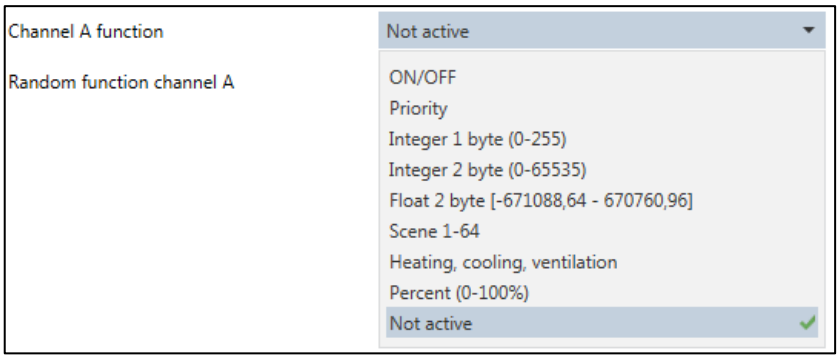


The hourly programming of the time switch is performed directly on the product.

3. Programming by ETS

3.1 Configuring the channels

This configuration allows the operating mode of each channel to be defined. These parameters are available individually for each channel.



The input default value is not active.

The following parameters are available:

- ON/OFF
- Priority
- Integer 1 byte (0-255)
- Integer 2 byte (0-65535)
- Float 2 byte (-671088,64 – 670760,96)
- Scene 1-64
- Heating, cooling, ventilation
- Percent (0-100%)

3.1.1 ON/OFF

An output can be switched on or off using the ON/OFF function.

Communication objects:

4- ON/OFF Channel A - Emission (1 Bit – 1.001 DPT_Switch)
5- ON/OFF Channel B - Emission (1 Bit – 1.001 DPT_Switch)
6- ON/OFF Channel C - Emission (1 Bit – 1.001 DPT_Switch)
7- ON/OFF Channel D - Emission (1 Bit – 1.001 DPT_Switch)

This object enables the transmission of the ON/OFF command according the time switch's programming.

- To issue an OFF command, a telegram with a logical value 0 is issued
- To issue an ON command, a telegram with a logical value 1 is issued

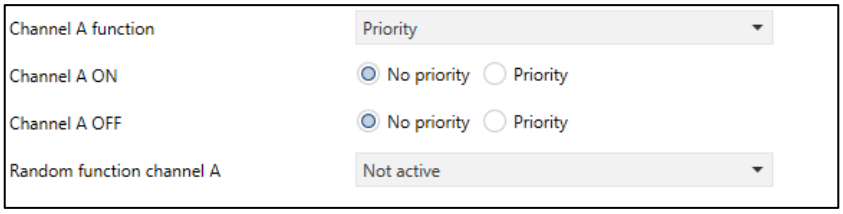
This operation is identical for the 4 channels

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.2 Priority

The Priority function is used to force the output into a defined state.
The priority action depends on the type of application commanded: Lighting ON/OFF, Rolling shutter, Heating.
This function the priority or priority cancellation controls to be issued. No other command is taken into account when the Priority is active.



Parameter	Description	Value
Channel A ON	This parameter defines the type of forcing to use when the channel is set to ON No priority Priority ON	 **No priority*** Priority
Channel A OFF	This parameter defines the type of forcing to use when the channel is set to OFF No priority Priority OFF	 **No priority*** Priority

Channel A ON *can only be forced to ON.*
Channel A OFF *can only be forced to OFF.*

Below is a recap chart of the **Priority** object operation:

Parameter		Value on the Priority object (2 bits)			
Canal A OFF	**Canal A ON**	**Canal A OFF**		**Canal A ON**	
No priority	No priority	00	No priority	01	No priority
No priority	Priority	00	No priority	03	Priority ON
Priority	No priority	02	Priority OFF	01	No priority
Priority	Priority	02	Priority OFF	03	Priority ON

Communication objects:
8 - Priority channel A - Emission (2 Bit – 2.002 DPT_Bool_Control)
9 - Priority channel B - Emission (2 Bit – 2.002 DPT_Bool_Control)
10 - Priority channel C - Emission (2 Bit – 2.002 DPT_Bool_Control)
11 - Priority channel D - Emission (2 Bit – 2.002 DPT_Bool_Control)

This operation is identical for the 4 channels.
The value of the parameters can also be modified using the communication objects.
- If the **Priority Channel A OFF** object receives a 0 value, then channel A OFF is not being forced.
- If the **Priority Channel A OFF** object receives a 1 value, then channel A OFF is in **Priority OFF**.
- If the **Priority Channel A ON** object receives a 0 value, then channel A ON is not being forced.
- If the **Priority Channel A ON** object receives a 1 value, then channel A ON is in **Priority ON**.

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

* Default value

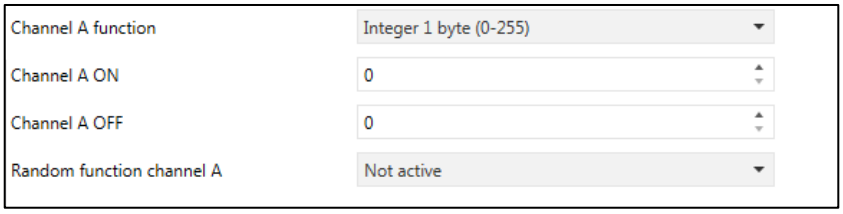
Communication objects:

36 - Priority value channel A OFF - Reception (1 Bit – 1.003 DPT_Enable)
37 - Priority value channel A ON - Reception (1 Bit – 1.003 DPT_Enable)
38 - Priority value channel B OFF - Reception (1 Bit – 1.003 DPT_Enable)
39 - Priority value channel B ON - Reception (1 Bit – 1.003 DPT_Enable)
40 - Priority value channel C OFF - Reception (1 Bit – 1.003 DPT_Enable)
41 - Priority value channel C ON - Reception (1 Bit – 1.003 DPT_Enable)
42 - Priority value channel D OFF - Reception (1 Bit – 1.003 DPT_Enable)
43 - Priority value channel D ON - Reception (1 Bit – 1.003 DPT_Enable)

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

3.1.3 Integer 1 byte (0-255)

This function enables a predefined value to be transmitted to the KNX bus in 1-byte integer format. The values of this number are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Channel A ON	This parameter defines the value to transmit when the channel is set to ON	**0*** - 255
Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	**0*** - 255

Communication objects:

12 - Integer 1 byte channel A - Emission (1 byte – 5.010 DPT_Counter_Pulses)
13 - Integer 1 byte channel B - Emission (1 byte – 5.010 DPT_Counter_Pulses)
14 - Integer 1 byte channel C - Emission (1 byte – 5.010 DPT_Counter_Pulses)
15 - Integer 1 byte channel D - Emission (1 byte – 5.010 DPT_Counter_Pulses)

This operation is identical for the 4 channels
The value of the parameters can also be modified using the communication objects.
- The value of the **Integer 1 byte channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Integer 1 byte channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

Communication objects:

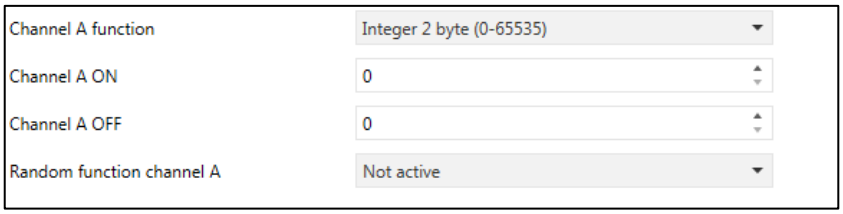
44 - Integer 1 byte channel A OFF - Reception (1 byte – 5.010 DPT_Counter_Pulses)
45 - Integer 1 byte channel A ON - Reception (1 byte – 5.010 DPT_Counter_Pulses)
46 - Integer 1 byte channel B OFF - Reception (1 byte – 5.010 DPT_Counter_Pulses)
47 - Integer 1 byte channel B ON - Reception (1 byte – 5.010 DPT_Counter_Pulses)
48 - Integer 1 byte channel C OFF - Reception (1 byte – 5.010 DPT_Counter_Pulses)
49 - Integer 1 byte channel C ON - Reception (1 byte – 5.010 DPT_Counter_Pulses)
50 - Integer 1 byte channel D OFF - Reception (1 byte – 5.010 DPT_Counter_Pulses)
51 - Integer 1 byte channel D ON - Reception (1 byte – 5.010 DPT_Counter_Pulses)

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.4 Integer 2 byte (0-65535)

This function enables a predefined value to be transmitted to the KNX bus in 2-byte integer format. The values of this number are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Channel A ON	This parameter defines the value to transmit when the channel is set to ON	**0*** -65535
Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	**0*** -65535

Communication objects:
16 - Integer 2 bytes channel A - Emission (2 bytes – 7.001 DPT_Pulses)
17 - Integer 2 bytes channel B - Emission (2 bytes – 7.001 DPT_Pulses)
18 - Integer 2 bytes channel C - Emission (2 bytes – 7.001 DPT_Pulses)
19 - Integer 2 bytes channel D - Emission (2 bytes – 7.001 DPT_Pulses)

This operation is identical for the 4 channels

The value of the parameters can also be modified using the communication objects.
- The value of the **Integer 2 bytes channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Integer 2 bytes channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

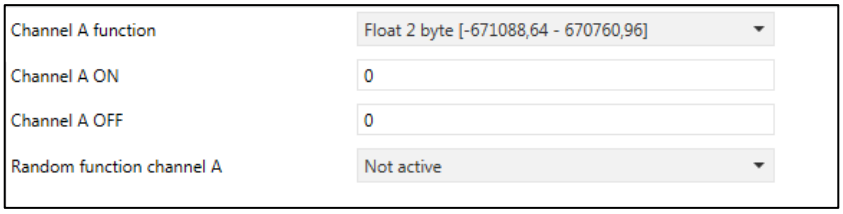
Communication objects:
51 - Integer 2 bytes channel A OFF - Reception (2 bytes – 7.001 DPT_Pulses)
52 - Integer 2 bytes channel A ON - Reception (2 bytes – 7.001 DPT_Pulses)
53 - Integer 2 bytes channel B OFF - Reception (2 bytes – 7.001 DPT_Pulses)
54 - Integer 2 bytes channel B ON - Reception (2 bytes – 7.001 DPT_Pulses)
55 - Integer 2 bytes channel C OFF - Reception (2 bytes – 7.001 DPT_Pulses)
56 - Integer 2 bytes channel C ON - Reception (2 bytes – 7.001 DPT_Pulses)
57 - Integer 2 bytes channel D OFF - Reception (2 bytes – 7.001 DPT_Pulses)
58 - Integer 2 bytes channel D ON - Reception (2 bytes – 7.001 DPT_Pulses)

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.5 Float 2 byte (-671088,64 – 670760,96)

This function enables a predefined value to be transmitted to the KNX bus in 2-byte floating-point format. The values of this number are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Channel A ON	This parameter defines the value to transmit when the channel is set to ON	-671088.64 …**0***…670760.96
Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	-671088.64 …**0***…670760.96

Communication objects
20 - Float 2 bytes channel A - Emission (2 bytes – 9.xxx DPT_float)
21 - Float 2 bytes channel B - Emission (2 bytes – 9.xxx DPT_float)
22 - Float 2 bytes channel C - Emission (2 bytes – 9.xxx DPT_float)
23 - Float 2 bytes channel D - Emission (2 bytes – 9.xxx DPT_float)

This operation is identical for the 4 channels

The value of the parameters can also be modified using the communication objects.
- The value of the **Float 2 bytes channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Float 2 bytes channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

Communication objects
60 - Float 2 bytes channel A OFF - Reception (2 bytes – 9.xxx DPT_float)
61 - Float 2 bytes channel A ON - Reception (2 bytes – 9.xxx DPT_float)
62 - Float 2 bytes channel B OFF - Reception (2 bytes – 9.xxx DPT_float)
63 - Float 2 bytes channel B ON - Reception (2 bytes – 9.xxx DPT_float)
64 - Float 2 bytes channel C OFF - Reception (2 bytes – 9.xxx DPT_float)
65 - Float 2 bytes channel C ON - Reception (2 bytes – 9.xxx DPT_float)
66 - Float 2 bytes channel D OFF - Reception (2 bytes – 9.xxx DPT_float)
67 - Float 2 bytes channel D ON - Reception (2 bytes – 9.xxx DPT_float)

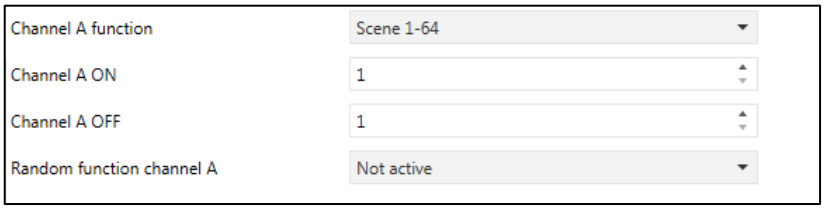
*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.6 Scene 1-64

This function enables scenes to be selected.
These concern different types of output (lighting, blind, shutter, heating) to create ambiances or scenarios (leaving scenario, reading ambiance etc.).

The scene control is carried out according to the scene number. The values of these scenes are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Channel A ON	This parameter defines the value to transmit when the channel is set to ON	**1***…64
Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	**1***…64

Communication objects:
28 - Scene channel A - Emission (1 Byte – 17.001 DPT_SceneNumber)
29 - Scene channel B - Emission (1 Byte – 17.001 DPT_SceneNumber)
30 - Scene channel C - Emission (1 Byte – 17.001 DPT_SceneNumber)
31 - Scene channel D - Emission (1 Byte – 17.001 DPT_SceneNumber)

This operation is identical for the 4 channels

The value of the parameters can also be modified using the communication objects.
- The value of the **Scene channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Scene channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

Communication objects:
76 - Scene channel A OFF - Reception (1 Byte – 17.001 DPT_SceneNumber)
77 - Scene channel A ON - Reception (1 Byte – 17.001 DPT_SceneNumber)
78 - Scene channel B OFF - Reception (1 Byte – 17.001 DPT_SceneNumber)
79 - Scene channel B ON - Reception (1 Byte – 17.001 DPT_SceneNumber)
80 - Scene channel C OFF - Reception (1 Byte – 17.001 DPT_SceneNumber)
81 - Scene channel C ON - Reception (1 Byte – 17.001 DPT_SceneNumber)
82 - Scene channel D OFF - Reception (1 Byte – 17.001 DPT_SceneNumber)
83 - Scene channel D ON - Reception (1 Byte – 17.001 DPT_SceneNumber)

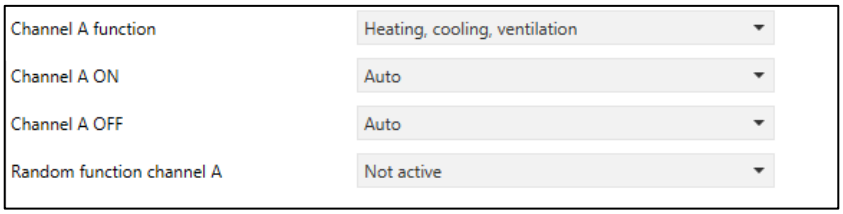
*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.7 Heating, cooling and ventilation

This function enables a heating or air-conditioning instruction (Auto, Comfort, Economy, Night setpoint, Frost protection) to be selected

The instructions are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Channel A ON	This parameter defines the value to transmit when the channel is set to ON	**Auto*** Confort Standby Night setpoint Frost protection
Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	**Auto*** Confort Standby Night setpoint Frost protection

Communication objects:
28 - Heating, cooling, ventilation channel A - Emission (1 Byte – 20.102 DPT_HVAC mode)
29 - Heating, cooling, ventilation channel B - Emission (1 Byte – 20.102 DPT_HVAC mode)
30 - Heating, cooling, ventilation channel C - Emission (1 Byte – 20.102 DPT_HVAC mode)
31 - Heating, cooling, ventilation channel D - Emission (1 Byte – 20.102 DPT_HVAC mode)

This operation is identical for the 4 channels

The value of the parameters can also be modified using the communication objects.
- The value of the **Heating, cooling, ventilation channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Heating, cooling, ventilation channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

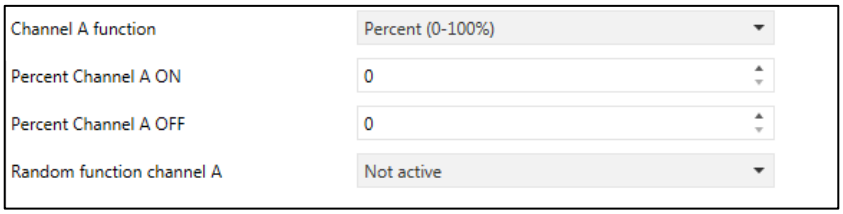
Communication objects:
84 - Heating, cooling, ventilation channel A OFF - Reception (1 Byte – 20.102 DPT_HVAC mode)
85 - Heating, cooling, ventilation channel A ON - Reception (1 Byte – 20.102 DPT_HVAC mode)
86 - Heating, cooling, ventilation channel B OFF - Reception (1 Byte – 20.102 DPT_HVAC mode)
87 - Heating, cooling, ventilation channel B ON - Reception (1 Byte – 20.102 DPT_HVAC mode)
88 - Heating, cooling, ventilation channel C OFF - Reception (1 Byte – 20.102 DPT_HVAC mode)
89 - Heating, cooling, ventilation channel C ON - Reception (1 Byte – 20.102 DPT_HVAC mode)
90 - Heating, cooling, ventilation channel D OFF - Reception (1 Byte – 20.102 DPT_HVAC mode)
91 - Heating, cooling, ventilation channel D ON - Reception (1 Byte – 20.102 DPT_HVAC mode)

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.8 Percent (0-100%)

This function enables a percentage value to be transmitted to the KNX bus, enabling control of shutters, blinds or dimmers. The values of this percentage are defined by configuration or by the communication objects for a channel set to ON or OFF.



Parameter	Description	Value
Percent Channel A ON	This parameter defines the value to transmit when the channel is set to ON	**0*** -100%
Percent Channel A OFF	This parameter defines the value to transmit when the channel is set to OFF	**0*** -100%

Communication objects:
126 - Percent channel A - Emission (1 Byte – 5.001 DPT_Percentage)
127 - Percent channel B - Emission (1 Byte – 5.001 DPT_Percentage)
128 - Percent channel C - Emission (1 Byte – 5.001 DPT_Percentage)
129 - Percent channel D - Emission (1 Byte – 5.001 DPT_Percentage)

This operation is identical for the 4 channels

The value of the parameters can also be modified using the communication objects.
- The value of the **Percent channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
- The value of the **Percent channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

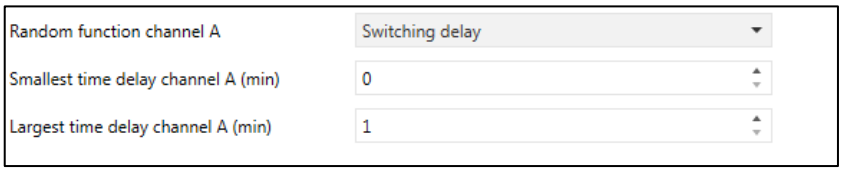
Communication objects:
130 - Percent channel A OFF - Reception (1 Byte – 5.001 DPT_Percentage)
131 - Percent channel A ON - Reception (1 Byte – 5.001 DPT_Percentage)
132 - Percent channel B OFF - Reception (1 Byte – 5.001 DPT_Percentage)
133 - Percent channel B ON - Reception (1 Byte – 5.001 DPT_Percentage)
134 - Percent channel C OFF - Reception (1 Byte – 5.001 DPT_Percentage)
135 - Percent channel C ON - Reception (1 Byte – 5.001 DPT_Percentage)
136 - Percent channel D OFF - Reception (1 Byte – 5.001 DPT_Percentage)
137 - Percent channel D ON - Reception (1 Byte – 5.001 DPT_Percentage)

*The **Random function channel A** enables different time intervals for triggering. For further information, please consult chapter 3.1.9*

* Default value

3.1.9 Random function

This function enables the switching command to be sent to the bus with a certain random delay. It is used essentially for the presence simulation. It can be used for any functions available on the channel.



Parameter	Description	Value
Random function channel A	The switching command is sent to the bus	
	Immediately	**Not active***
	with a certain random delay	Switching delay
	with the repetitive ON/OFF during the random delay	Repeatedly ON/OFF

Parameter	Description	Value
Smallest time delay channel A (min)	This parameter defines the shortest time interval applied for engagement or repetitive ON/OFF.	**0*** - 254
Largest time delay channel A (min)	This parameter defines the longest time interval applied for engagement or repetitive ON/OFF.	**1*** - 255

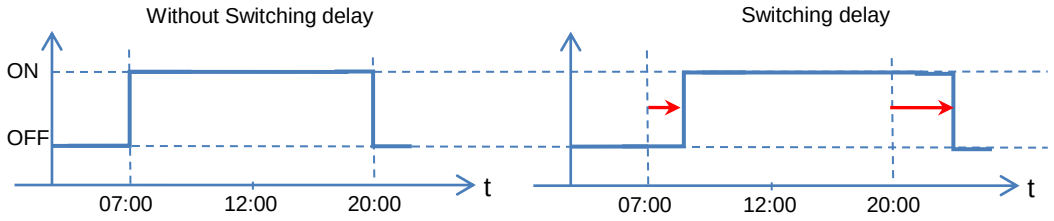
*This parameter is only visible when the **Random function channel A** parameter has the following value: **Switching delay** or **Repeatedly ON/OFF**.*

This operation is identical for the 4 channels.

- Switching delay

According to the set time delay, the switching command is sent to the bus with a certain random delay. The delay is a random time interval between the shortest and longest time delays.

For example: Programming the range of time (ON-7:00 / OFF-20:00)

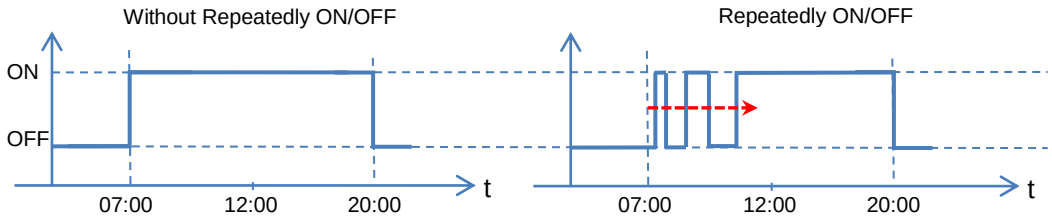


* Default value

- Repeatedly ON/OFF

According to the set time delay, the switching command is sent to the bus with a certain random delay. Additionally, the switching command is executed repetitively between ON and OFF with a random interval between the shortest and longest time delays. However, the final switch to OFF will always be carried out without delay.

For example: Programming the range of time (ON-7:00 / OFF-20:00)



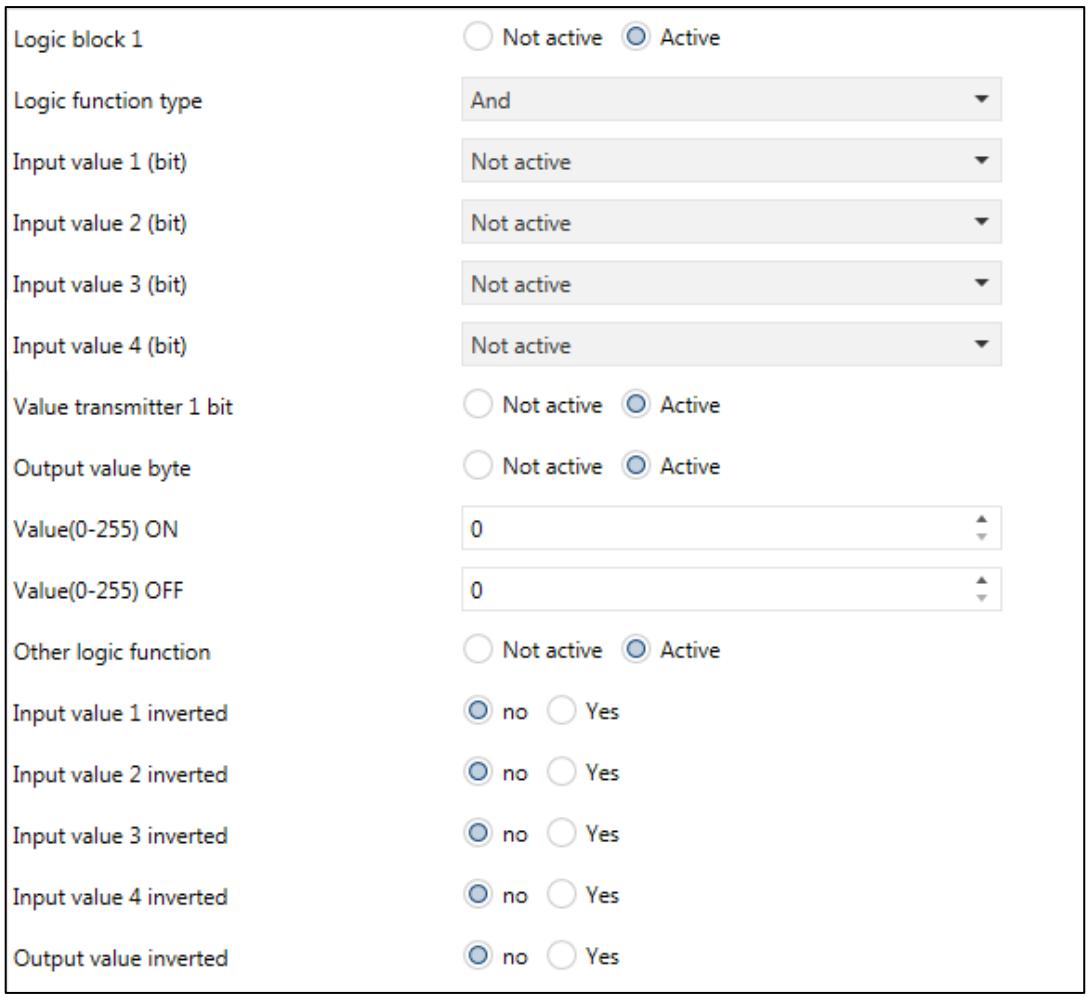
* Default value

3.2 Logic block

The Logic function is used to control an output depending on the result of a logic operation
The result of the operation is transmitted to the KNX bus in 1 bit or 1 byte format.
There are 4 logic blocks per device with up to 4 inputs available

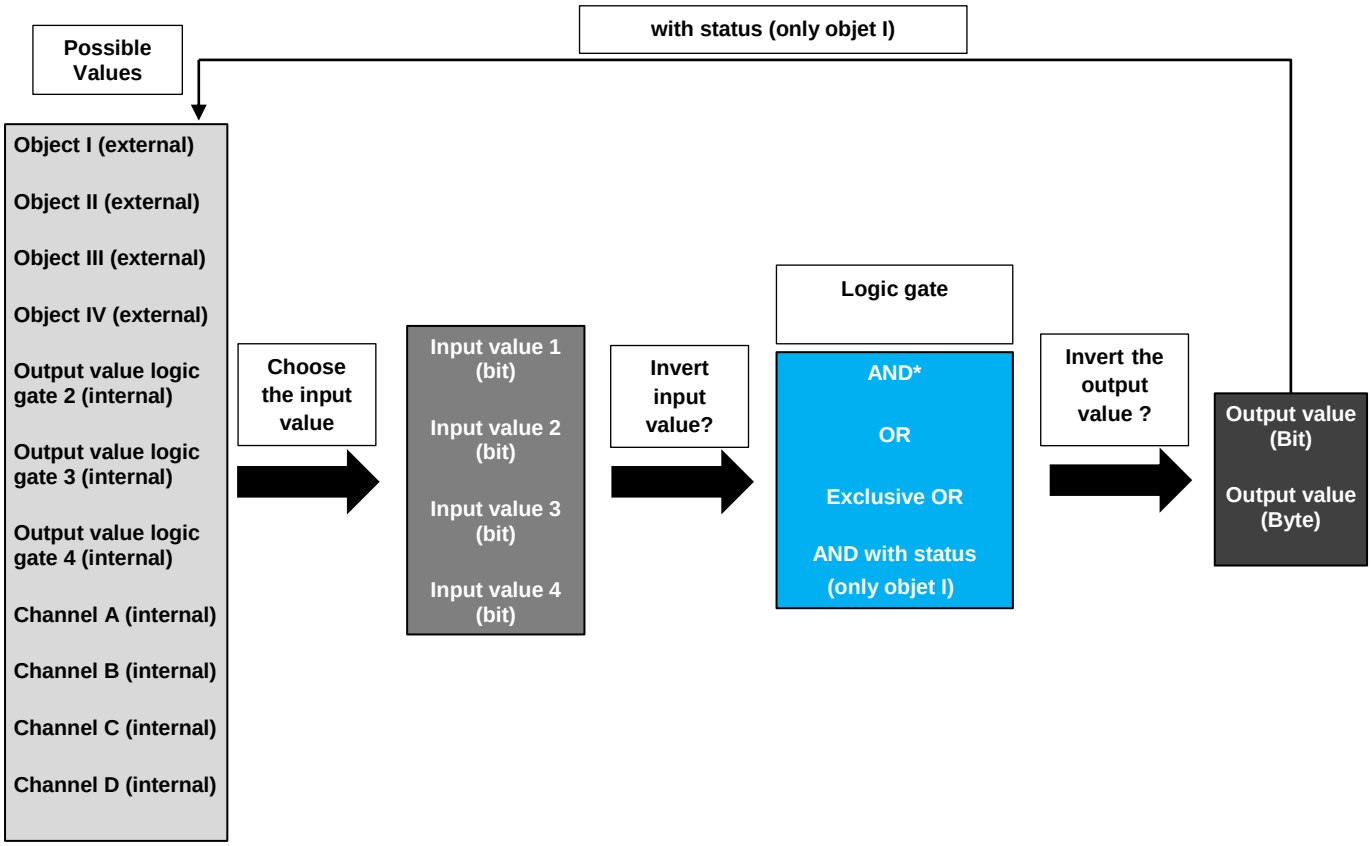
The behaviour is determined by the following parameters.

The description of the parameters is given for logic block 1. The parameters and objects are identical for logic blocks 2, 3 and 4; only the terms will be adjusted.



* Default value

Operating principle of the logic block



The time switch includes four logic gates with up to four logic inputs (input value: 1 to 4). The input values can be internal or external values.
The internal input values correspond with the time switch's channels or the logical result of one of the other logic gates.
The external input value is a communication object from the KNX bus (object I, II, III, IV).
The output format of the logical result can be 1 bit and/or a 1 byte value.
The available logic operations for each of the input values are: AND, OR, exclusive OR, AND with return to state.

Parameter	Description	Value
Logic block 1	Communication object and parameter register Logic block 1 are hidden	**Not active***
	Communication object and parameter register Logic block 1 are displayed	Active

The parameters and objects are identical for logic blocks 2, 3 and 4; only the terms will be adjusted.

* Default value

Parameter	Description	Value
Logic function type	The input objects are AND linked OR linked the exclusive OR logic operation the AND with return to state logic operation	 **AND*** OR Exclusive OR AND with status (only objet I)

Parameter	Description	Value
Input value 1…4 (bit)	This parameter defines the input value of the logic operation. The input values can be internal or external values.	Object I (external) Object II (external) Object III (external) Object IV (external) Output value bit logic block 2 (internal) Output value bit logic block 3 (internal) Output value bit logic block 4 (internal) Channel A (internal) Channel B (internal) Channel C (internal) Channel D (internal) **Not active***

Communication objects:
92 - Logic block 1 object I- Reception (1 Bit – 1.001 DPT_Switch)
93 - Logic block 1 object II - Reception (1 Bit – 1.001 DPT_Switch)
94 - Logic block 1 object III - Reception (1 Bit – 1.001 DPT_Switch)
95 - Logic block 1 object IV - Reception (1 Bit – 1.001 DPT_Switch)
100 - Logic block 2 object I - Reception (1 Bit – 1.001 DPT_Switch)
101 - Logic block 2 object II - Reception (1 Bit – 1.001 DPT_Switch)
102 - Logic block 2 object III - Reception (1 Bit – 1.001 DPT_Switch)
103 - Logic block 2 object IV - Reception (1 Bit – 1.001 DPT_Switch)
108 - Logic block 3 object I - Reception (1 Bit – 1.001 DPT_Switch)
109 - Logic block 3 object II - Reception (1 Bit – 1.001 DPT_Switch)
110 - Logic block 3 object III - Reception (1 Bit – 1.001 DPT_Switch)
111 - Logic block 3 object IV - Reception (1 Bit – 1.001 DPT_Switch)
116 - Logic block 4 object I - Reception (1 Bit – 1.001 DPT_Switch)
117 - Logic block 4 object II - Reception (1 Bit – 1.001 DPT_Switch)
118 - Logic block 4 object III - Reception (1 Bit – 1.001 DPT_Switch)
119 - Logic block 4 object IV - Reception (1 Bit – 1.001 DPT_Switch)

Parameter	Description	Value
Value transmitter 1 bit	The **Logic block 1 bit** object is hidden. The **Logic block 1 bit** object is displayed.	**Not active*** Active

Communication objects:
96 - Logic block 1 bit - Emission (1 Bit – 1.001 DPT_Switch)
104 - Logic block 2 bit - Emission (1 Bit – 1.001 DPT_Switch)
114 - Logic block 3 bit - Emission (1 Bit – 1.001 DPT_Switch)
120 - Logic block 4 bit - Emission (1 Bit – 1.001 DPT_Switch)

* Default value

Parameter	Description	Value
Output value byte	The **Logic block 1 byte** object is hidden. The **Logic block 1 byte** object is displayed.	**Not active*** Active

Parameter	Description	Value
Value (0-255) ON	This parameter defines the value to transmit when the channel is set to ON	**0*** - 255
Value (0-255) OFF	This parameter defines the value to transmit when the channel is set to OFF	**0*** - 255

Communication objects:
98 - Logic block 1 octet - Emission (1 byte – 5.010 DPT_Counter_Pulses)
106 - Logic block 2 octet - Emission (1 byte – 5.010 DPT_Counter_Pulses)
114 - Logic block 3 octet - Emission (1 byte – 5.010 DPT_Counter_Pulses)
122 - Logic block 4 octet - Emission (1 byte – 5.010 DPT_Counter_Pulses)

Parameter	Description	Value
Other logic function	This parameter allows additional logic functions to be accessed, which act on the input and output values.	**Not active*** Active

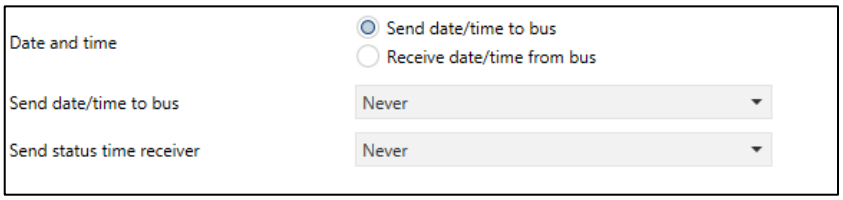
Parameter	Description	Value
Input value 1…4 inverted	The input values are not inverted. The input values are inverted.	**No*** Yes

Parameter	Description	Value
Output value inverted	The output value is not inverted. The output value is inverted.	**No*** Yes

* Default value

3.3 Time settings

This function allows the date and time to be provided through the bus or to sync the time switch with the time and date of an external device connected to the bus.



Parameter	Description	Value
Date and Time	This parameter defines whether the time switch:	
	Transmits the date and time to the KNX bus	**Send date/time to bus***
	Receives the date and time from the KNX bus	Receive date/time from bus

*When selecting the **Receive date/time from bus** parameter, the **summer/winter time** parameter in the settings menu on the front of the time switch must be set to the **No** value for proper syncing.*

3.3.1 Send date/time to bus

Parameter	Description	Value
Send date/time to bus	Transmitting the date and time:	
	Is never carried out	**Never**
	Is carried out according to the state of the **Receive date/time** object	On request
	Is carried out according to the state of the **Receive date/time** object and depending on a configurable time interval.	On query and automatic

*This parameter is only visible when the **Date/time** parameter has the following value: **Send date/time to bus.***

Parameter	Description	Value
Cycle interval for date and time	This parameter determines the time interval between each transmission of the **Date** and **Time** objects.	Every 30 seconds Every minute Every hour Every 6 hours Every 12 hours At 00:00 am At 00:02 am On summer/winter time change Every hour and summer/winter time change Every 6 hours and summer/winter time change Every 12 hours and summer/winter time change At 00:00 am and summer/winter time change **At 00:02 am and summer/winter time change***

* Default value

Communication objects:
0 - Date – Reception/emission (3 bytes – 11.001 DPT_Date)
1 - Time – Reception/emission (3 bytes – 10.001 DPT_Time of day)
3 - Date and time request - Reception (1 Bit – 1.017 DPT_Trigger)
124 - Summer/winter time change announcement - Emission (1 Bit – 1.002 DPT_Boolean)

Parameter	Description	Value
Send status time receiver	Transmission of the time receiver state:	
	Is never carried out	**Never**
	Is carried out upon status change	On change
	Is carried out upon status change and depending on a configurable time interval.	On query and automatic

By activating this function, the status of the radio time receiver is controlled and the status is sent to the bus

Parameter	Description	Value
Cycle interval for time receiver status	This parameter determines the time interval between each transmission of the **Status time receiver** object.	Every 30 seconds Every minute Every hour Every 6 hours Every 12 hours At 00:00 am At 00:02 am

Communication objects:
125 - Status time receiver - Emission (1 Bit – 1.005 DPT_Alarm)

3.3.2 Receive date/time from bus

Activating this function enables the Date and Time objects to be displayed for receipt by the KNX bus.

Communication objects:
0 - Date – Reception/emission (3 bytes – 11.001 DPT_Date)
1 - Time – Reception/emission (3 bytes – 10.001 DPT_Time of day)

* Default value

3.4 Communication objects

	Number	Name	Function of the object	Length	C	R	W	T
	0	Date	Reception/emission	3 bytes	C	-	-	T
	1	Hour	Reception/emission	3 bytes	C	-	-	T
	3	Date and time request	Reception	1 bit	C	-	W	-
	4	ON/OFF Channel A	Emission	1 bit	C	-	-	T
	5	ON/OFF Channel B	Emission	1 bit	C	-	-	T
	6	ON/OFF Channel C	Emission	1 bit	C	-	-	T
	7	ON/OFF Channel D	Emission	1 bit	C	-	-	T
	8	Priority channel A	Emission	2 bit	C	-	-	T
	9	Priority channel B	Emission	2 bit	C	-	-	T
	10	Priority channel C	Emission	2 bit	C	-	-	T
	11	Priority channel D	Emission	2 bit	C	-	-	T
	12	Integer 1 byte channel A	Emission	1 byte	C	-	-	T
	13	Integer 1 byte channel B	Emission	1 byte	C	-	-	T
	14	Integer 1 byte channel C	Emission	1 byte	C	-	-	T
	15	Integer 1 byte channel D	Emission	1 byte	C	-	-	T
	16	Integer 2 bytes channel A	Emission	2 bytes	C	-	-	T
	17	Integer 2 bytes channel B	Emission	2 bytes	C	-	-	T
	18	Integer 2 bytes channel C	Emission	2 bytes	C	-	-	T
	19	Integer 2 bytes channel D	Emission	2 bytes	C	-	-	T
	20	Float 2 bytes channel A	Emission	2 bytes	C	-	-	T
	21	Float 2 bytes channel B	Emission	2 bytes	C	-	-	T
	22	Float 2 bytes channel C	Emission	2 bytes	C	-	-	T
	23	Float 2 bytes channel D	Emission	2 bytes	C	-	-	T
	28	Scene channel A	Emission	1 byte	C	-	-	T
	29	Scene channel B	Emission	1 byte	C	-	-	T
	30	Scene channel C	Emission	1 byte	C	-	-	T
	31	Scene channel D	Emission	1 byte	C	-	-	T
	32	Heating, cooling, ventilation channel A	Emission	1 byte	C	-	-	T
	33	Heating, cooling, ventilation channel B	Emission	1 byte	C	-	-	T
	34	Heating, cooling, ventilation channel C	Emission	1 byte	C	-	-	T
	35	Heating, cooling, ventilation channel D	Emission	1 byte	C	-	-	T
	36	Priority value channel A OFF	Reception	1 bit	C	-	W	-
	37	Priority value channel A ON	Reception	1 bit	C	-	W	-
	38	Priority value channel B OFF	Reception	1 bit	C	-	W	-
	39	Priority value channel B ON	Reception	1 bit	C	-	W	-
	40	Priority value channel C OFF	Reception	1 bit	C	-	W	-
	41	Priority value channel C ON	Reception	1 bit	C	-	W	-
	42	Priority value channel D OFF	Reception	1 bit	C	-	W	-
	43	Priority value channel D ON	Reception	1 bit	C	-	W	-
	44	Integer 1 byte channel A OFF	Reception	1 byte	C	-	W	-
	45	Integer 1 byte channel A ON	Reception	1 byte	C	-	W	-
	46	Integer 1 byte channel B OFF	Reception	1 byte	C	-	W	-
	47	Integer 1 byte channel B ON	Reception	1 byte	C	-	W	-

	Number	Name	Function of the object	Length	C	R	W	T
	48	Integer 1 byte channel C OFF	Reception	1 byte	C	-	W	-
	49	Integer 1 byte channel C ON	Reception	1 byte	C	-	W	-
	50	Integer 1 byte channel D OFF	Reception	1 byte	C	-	W	-
	51	Integer 1 byte channel D ON	Reception	1 byte	C	-	W	-
	52	Integer 2 bytes channel A OFF	Reception	2 bytes	C	-	W	-
	53	Integer 2 bytes channel A ON	Reception	2 bytes	C	-	W	-
	54	Integer 2 bytes channel B OFF	Reception	2 bytes	C	-	W	-
	55	Integer 2 bytes channel B ON	Reception	2 bytes	C	-	W	-
	56	Integer 2 bytes channel C OFF	Reception	2 bytes	C	-	W	-
	57	Integer 2 bytes channel C ON	Reception	2 bytes	C	-	W	-
	58	Integer 2 bytes channel D OFF	Reception	2 bytes	C	-	W	-
	59	Integer 2 bytes channel D ON	Reception	2 bytes	C	-	W	-
	60	Float 2 bytes channel A OFF	Reception	2 bytes	C	-	W	-
	61	Float 2 bytes channel A ON	Reception	2 bytes	C	-	W	-
	62	Float 2 bytes channel B OFF	Reception	2 bytes	C	-	W	-
	63	Float 2 bytes channel B ON	Reception	2 bytes	C	-	W	-
	64	Float 2 bytes channel C OFF	Reception	2 bytes	C	-	W	-
	65	Float 2 bytes channel C ON	Reception	2 bytes	C	-	W	-
	66	Float 2 bytes channel D OFF	Reception	2 bytes	C	-	W	-
	67	Float 2 bytes channel D ON	Reception	2 bytes	C	-	W	-
	76	Scene channel A OFF	Reception	1 byte	C	-	W	-
	77	Scene channel A ON	Reception	1 byte	C	-	W	-
	78	Scene channel B OFF	Reception	1 byte	C	-	W	-
	79	Scene channel B ON	Reception	1 byte	C	-	W	-
	80	Scene channel C OFF	Reception	1 byte	C	-	W	-
	81	Scene channel C ON	Reception	1 byte	C	-	W	-
	82	Scene channel D OFF	Reception	1 byte	C	-	W	-
	83	Scene channel D ON	Reception	1 byte	C	-	W	-
	84	Heating, cooling, ventilation channel A	Reception	1 byte	C	-	W	-
	85	Heating, cooling, ventilation channel A	Reception	1 byte	C	-	W	-
	86	Heating, cooling, ventilation channel B	Reception	1 byte	C	-	W	-
	87	Heating, cooling, ventilation channel B	Reception	1 byte	C	-	W	-
	88	Heating, cooling, ventilation channel C	Reception	1 byte	C	-	W	-
	89	Heating, cooling, ventilation channel C	Reception	1 byte	C	-	W	-
	90	Heating, cooling, ventilation channel D	Reception	1 byte	C	-	W	-
	91	Heating, cooling, ventilation channel D	Reception	1 byte	C	-	W	-
	92	Logic block 1 object I	Reception	1 bit	C	-	W	-
	93	Logic block 1 object II	Reception	1 bit	C	-	W	-
	94	Logic block 1 object III	Reception	1 bit	C	-	W	-
	95	Logic block 1 object IV	Reception	1 bit	C	-	W	-
	96	Logic block 1 bit	Emission	1 bit	C	-	-	T
	98	Logic block 1 byte	Emission	1 byte	C	-	-	T
	100	Logic block 2 object I	Reception	1 bit	C	-	W	-
	101	Logic block 2 object II	Reception	1 bit	C	-	W	-
	102	Logic block 2 object III	Reception	1 bit	C	-	W	-

	Number	Name	Function of the object	Length	C	R	W	T
	103	Logic block 2 object IV	Reception	1 bit	C	-	W	-
	104	Logic block 2 bit	Emission	1 bit	C	-	-	T
	106	Logic block 2 bytes	Emission	1 byte	C	-	-	T
	108	Logic block 3 object I	Reception	1 bit	C	-	W	-
	109	Logic block 3 object II	Reception	1 bit	C	-	W	-
	110	Logic block 3 object III	Reception	1 bit	C	-	W	-
	111	Logic block 3 object IV	Reception	1 bit	C	-	W	-
	112	Logic block 3 bit	Emission	1 bit	C	-	-	T
	114	Logic block 3 bytes	Emission	1 byte	C	-	-	T
	116	Logic block 4 object I	Reception	1 bit	C	-	W	-
	117	Logic block 4 object II	Reception	1 bit	C	-	W	-
	118	Logic block 4 object III	Reception	1 bit	C	-	W	-
	119	Logic block 4 object IV	Reception	1 bit	C	-	W	-
	120	Logic block 4 bit	Emission	1 bit	C	-	-	T
	122	Logic block 4 bytes	Emission	1 byte	C	-	-	T
	124	Summer/winter time change	Emission	1 bit	C	-	-	T
	125	Status time receiver	Emission	1 bit	C	-	-	T
	126	Percent channel A	Emission	1 byte	C	-	-	T
	127	Percent channel B	Emission	1 byte	C	-	-	T
	128	Percent channel C	Emission	1 byte	C	-	-	T
	129	Percent channel D	Emission	1 byte	C	-	-	T
	130	Percent channel A OFF	Reception	1 byte	C	-	W	-
	131	Percent channel A ON	Reception	1 byte	C	-	W	-
	132	Percent channel B OFF	Reception	1 byte	C	-	W	-
	133	Percent channel B ON	Reception	1 byte	C	-	W	-
	134	Percent channel C OFF	Reception	1 byte	C	-	W	-
	135	Percent channel C ON	Reception	1 byte	C	-	W	-
	136	Percent channel D OFF	Reception	1 byte	C	-	W	-
	137	Percent channel D ON	Reception	1 byte	C	-	W	-

3.4.1 Date and Time

No.	Name	Function of the object	Data type	Flags
0	Date	Reception/Emission	3 bytes – 11.001 DPT_Date	C, T

This object is activated when the **Date/Time** parameter has the **Send date/time to bus** value and the **Send date/time to bus** parameter has the **On request** or **On query and automatic** value.
This object enables the reference date to be transmitted to or received from the KNX bus

Object value:

Byte 3 (MSB)								Byte 2								Byte 1 (LSB)							
			Day									Month					Year						
0	0	0	D	D	D	D	D	0	0	0	0	M	M	M	M	0	Y	Y	Y	Y	Y	Y	Y

Fields	Code	Value	Units
Day	Binary	1 to 31 (5 bit)	Day
Month	Binary	1 to 12 (4 bit)	Month
Year	Binary	0 to 99 (7 bit)	Year

For further information, see: Time settings

No.	Name	Function of the object	Data type	Flags
1	Time	Reception/Emission	3 bytes – 10.001 DPT_Time of day	C, T

This object is activated when the **Date/Time** parameter has the **Send date/time to bus** value and the **Send date/time to bus** parameter has the **On request** or **On query and automatic** value.
This object enables the reference time to be transmitted to or received from the KNX bus.

Object value:

Byte 3 (MSB)								Byte 2								Byte 1 (LSB)							
Day			Hours							Minutes								Second							
D	D	D	H	H	H	H	H	0	0	M	M	M	M	M	M	0	0	S	S	S	S	S	S

Fields	Code	Value	Units
Day	Binary	0 = any day 1 = Monday ... 7 = Sunday (3 bit)	
Hours	Binary	0 to 23 (5 bits)	Hours
Minutes	Binary	0 to 59 (6 bits)	Minutes
Seconds	Binary	0 to 59 (6 bits)	Seconds

For further information, see: Time settings

No.	Name	Function of the object	Data type	Flags
3	Date and time request	Reception	1 Bit – 1.017 DPT_Trigger	C, W

This object is activated when the **Date/Time** parameter has the **Send date/time to bus** value and the **Send date/time to bus** parameter has the **On request** or **On query and automatic** value.
This object receives a date and time request from an external device.

Object value:
- If the object receives the 1 value, the date and time are transmitted to the KNX bus.

For further information, see: Time settings

No.	Name	Function of the object	Data type	Flags
124	Summer/winter time change announcement	Emission	1 Bit – 1.002 DPT_Boolean	C, T

This object is activated when the **Date/Time** parameter has the **Send date/time to bus** value and the **Send date/time to bus** parameter has the **On request** or **On query and automatic** value.

- If the time switch is in summer time, a telegram is sent with a 1 logic value.
- If the time switch is in winter time, a telegram is sent with a 0 logic value.

For further information, see: Time settings

No.	Name	Function of the object	Data type	Flags
125	Status time receiver	Emission	1 Bit – 1.005 DPT_Alarm	C, T

This object is activated when the **Date/Time** parameter has the **Send date/time to bus** value and the **Send status time receiver** parameter has the **On change** or **On change and automatic** value.

- If the radio time receiver is operating correctly, a telegram is sent with a 0 logic value.
- If the radio time receiver is not operating correctly, a telegram is sent with a 1 logic value.

The value of this object changes to 1 only after the radio time receiver has been malfunctioning for 30 minutes.

For further information, see: Time settings

3.4.2 Channel function

No.	Name	Function of the object	Data type	Flags
4	ON/OFF Channel A	Emission	1 Bit – 1.001 DPT_Switch	C, T
5	ON/OFF Channel B	Emission	1 Bit – 1.001 DPT_Switch	C, T
6	ON/OFF Channel C	Emission	1 Bit – 1.001 DPT_Switch	C, T
7	ON/OFF Channel D	Emission	1 Bit – 1.001 DPT_Switch	C, T

This object is activated when the **Function channel A** parameter has the **ON/OFF** value.
This object enables the transmission of the ON/OFF command according the time switch's programme.

- To issue an OFF command, a telegram with a logical value 0 is issued.
- To issue an ON command, a telegram with a logical value 1 is issued.

This operation is identical for the 4 channels.

For further information, see: ON/OFF

No.	Name	Function of the object	Data type	Flags
8	Priority channel A	Emission	2 Bit – 2.001 DPT_Switch_Control	C, T
9	Priority channel B	Emission	2 Bit – 2.001 DPT_Switch_Control	C, T
10	Priority channel C	Emission	2 Bit – 2.001 DPT_Switch_Control	C, T
11	Priority channel D	Emission	2 Bit – 2.001 DPT_Switch_Control	C, T

This object is activated when the **Function channel A** parameter has the **Priority** value.
This object enables the transmission of the Priority command according the time switch's programme.
Details on the format of the object are given below.

Telegram received by the priority operation object			Output behaviour
Hexadecimal Value	Binary Value		
	Bit1 (MSB)	Bit0 (LSB)	
00	0	0	End of the priority
01	0	1	End of the priority
02	1	0	Priority OFF
03	1	1	Priority ON

The first bit of this object (Bit 0) determines the status of the output contact, which should be priority controlled. The second bit activates or deactivates the Priority.
This operation is identical for the 4 channels.

For further information, see: Priority

No.	Name	Function of the object	Data type	Flags
12	Integer 1 byte channel A	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
13	Integer 1 byte channel B	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
14	Integer 1 byte channel C	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
15	Integer 1 byte channel D	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T

The object is activated when the **Function channel A** parameter has the **Integer 1 byte (0-255)** value. This object allows a predefined value in 1-byte integer format according to the time switch's programme.

Object value: 0 to 255

- The defined value for **channel A OFF** is transmitted to the bus by the time switch when the channel is set to OFF.
- The defined value for **channel A ON** is transmitted to the bus by the time switch when the channel is set to ON.

This operation is identical for the 4 channels.

For further information, see: Integer 1 byte (0-255)

No.	Name	Function of the object	Data type	Flags
16	Integer 2 bytes channel A	Emission	2 bytes – 7.001 DPT_Pulses	C, T
17	Integer 2 bytes channel B	Emission	2 bytes – 7.001 DPT_Pulses	C, T
18	Integer 2 bytes channel C	Emission	2 bytes – 7.001 DPT_Pulses	C, T
19	Integer 2 bytes channel D	Emission	2 bytes – 7.001 DPT_Pulses	C, T

This object is activated when the **Function channel A** parameter has the **Integer 2 bytes (0-65535)** value.
This object enables a predefined value in 2-byte integer format to be transmitted according to the time switch's programme.
Object value: 0 to 65535

- The defined value for **channel A OFF** is transmitted to the bus by the time switch when the channel is set to OFF.
- The defined value for **channel A ON** is transmitted to the bus by the time switch when the channel is set to ON.

This operation is identical for the 4 channels.

For further information, see: Integer 2 bytes (0-65535)

No.	Name	Function of the object	Data type	Flags
20	Float 2 bytes channel A	Emission	2 bytes – 9.xxx DPT_float	C, T
21	Float 2 bytes channel B	Emission	2 bytes – 9.xxx DPT_float	C, T
22	Float 2 bytes channel C	Emission	2 bytes – 9.xxx DPT_float	C, T
23	Float 2 bytes channel D	Emission	2 bytes – 9.xxx DPT_float	C, T

This object is activated when the **Function channel A** parameter has the **Float 2 bytes (-671088.64 – 670760.96)** value.
This object enables a predefined value in 2-byte floating-point format to be transmitted according to the time switch's programme.
Object value: -671088.64 à 670760.96

- The defined value for **channel A OFF** is transmitted to the bus by the time switch when the channel is set to OFF.
- The defined value for **channel A ON** is transmitted to the bus by the time switch when the channel is set to ON.

This operation is identical for the 4 channels.

For further information, see: Float 2 bytes (-671088.64 – 670760.96)

No.	Name	Function of the object	Data type	Flags
28	Scene channel A	Emission	1 Byte – 17.001 DPT_SceneNumber	C, T
29	Scene channel B	Emission	1 Byte – 17.001 DPT_SceneNumber	C, T
30	Scene channel C	Emission	1 Byte – 17.001 DPT_SceneNumber	C, T
31	Scene channel D	Emission	1 Byte – 17.001 DPT_SceneNumber	C, T

This object is activated when the **Function channel A** parameter has the **Scene 1-64** value.
This object enables the transmission of a scene number according the time switch's programme.
Scene numbers from 0 (Scene 1) to 63 (Scene 64).
This operation is identical for the 4 channels.

For further information, see: Scene 1-64

No.	Name	Function of the object	Data type	Flags
32	Heating, cooling, ventilation channel A	Emission	1 Byte – 20.102 DPT_HVAC mode	C, T
33	Heating, cooling, ventilation channel B	Emission	1 Byte – 20.102 DPT_HVAC mode	C, T
34	Heating, cooling, ventilation channel C	Emission	1 Byte – 20.102 DPT_HVAC mode	C, T
35	Heating, cooling, ventilation channel D	Emission	1 Byte – 20.102 DPT_HVAC mode	C, T

This object is activated when the **Function channel A** parameter has the **Heating, cooling, ventilation** value.
This object enables the heating mode to be transmitted according the time switch's programme.

Heating mode	Value
Auto	0
Confort	1
Standby	2
Night setpoint	3
Frost protection	4

This operation is identical for the 4 channels.

For further information, see: Heating, cooling, ventilation

No.	Name	Function of the object	Data type	Flags
126	Percent channel A	Emission	1 Byte – 5.001 DPT_Percentage	C, T
127	Percent channel B	Emission	1 Byte – 5.001 DPT_Percentage	C, T
128	Percent channel C	Emission	1 Byte – 5.001 DPT_Percentage	C, T
129	Percent channel D	Emission	1 Byte – 5.001 DPT_Percentage	C, T

This object is activated when the **Function channel A** parameter has the **Percent (0-100%)** value.
This object enables a percentage value to be transmitted according to the time switch's programme, enabling control of shutters, blinds or dimmers.
Object value

- 0 (0%)
- 255 (100%)

This operation is identical for the 4 channels.

For further information, see: Percent (0-100%)

No.	Name	Function of the object	Data type	Flags
36	Priority value channel A OFF	Reception	1 Bit – 1.003 DPT_Enable	C, W
38	Priority value channel B OFF	Reception	1 Bit – 1.003 DPT_Enable	C, W
40	Priority value channel C OFF	Reception	1 Bit – 1.003 DPT_Enable	C, W
42	Priority value channel D OFF	Reception	1 Bit – 1.003 DPT_Enable	C, W

This object is activated when the **Function channel A** parameter has the **Priority** value.
This object enables the priority status to be defined when the channel is set to OFF.

- If the **Priority Channel A OFF** object receives a 0 value, then channel A OFF is not being forced.
- If the **Priority Channel A OFF** object receives a 1 value, then channel A OFF is being forced.

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Priority

No.	Name	Function of the object	Data type	Flags
37	Priority value channel A ON	Reception	1 Bit – 1.003 DPT_Enable	C, W
39	Priority value channel B ON	Reception	1 Bit – 1.003 DPT_Enable	C, W
41	Priority value channel C ON	Reception	1 Bit – 1.003 DPT_Enable	C, W
43	Priority value channel D ON	Reception	1 Bit – 1.003 DPT_Enable	C, W

This object is activated when the **Function channel A** parameter has the **Priority** value.
This object enables the priority status to be defined when the channel is set to ON.

- If the **Priority Channel A ON** object receives a 0 value, then channel A ON is not being forced.
- If the **Priority Channel A ON** object receives a 1 value, then channel A ON is being forced.

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Priority

No.	Name	Function of the object	Data type	Flags
44	Integer 1 byte channel A OFF	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
46	Integer 1 byte channel B OFF	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
48	Integer 1 byte channel C OFF	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
50	Integer 1 byte channel D OFF	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W

This object is activated when the **Function channel A** parameter has the **Integer 1 byte (0--255)** value.
This object enables a predefined value in 1-byte integer format to be defined when the channel is set to OFF.
- The value of the **Integer 1 byte channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.

Object value: 0 to 255

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Integer 1 byte (0-255)

No.	Name	Function of the object	Data type	Flags
45	Integer 1 byte channel A ON	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
47	Integer 1 byte channel B ON	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
49	Integer 1 byte channel C ON	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W
51	Integer 1 byte channel D ON	Reception	1 byte – 5.010 DPT_Counter_Pulses	C, W

This object is activated when the **Function channel A** parameter has the **Integer 1 byte (0--255)** value.
This object enables a predefined value in 1-byte integer format to be defined when the channel is set to ON.
- The value of the **Integer 1 byte channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

Object value: 0 to 255

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Integer 1 byte (0-255)

No.	Name	Function of the object	Data type	Flags
52	Integer 2 bytes channel A OFF	Reception	2 bytes – 7.001 DPT_Pulses	C, W
54	Integer 2 bytes channel B OFF	Reception	2 bytes – 7.001 DPT_Pulses	C, W
56	Integer 2 bytes channel C OFF	Reception	2 bytes – 7.001 DPT_Pulses	C, W
58	Integer 2 bytes channel D OFF	Reception	2 bytes – 7.001 DPT_Pulses	C, W

This object is activated when the **Function channel A** parameter has the **Integer 2 bytes (0-65535)** value.
This object enables a predefined value in 2-byte integer format to be defined when the channel is set to OFF.
- The value of the **Integer 2 bytes channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.

Object value: 0 to 65535

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Integer 2 bytes (0-65535)

No.	Name	Function of the object	Data type	Flags
53	Integer 2 bytes channel A ON	Reception	2 bytes – 7.001 DPT_Pulses	C, W
55	Integer 2 bytes channel B ON	Reception	2 bytes – 7.001 DPT_Pulses	C, W
57	Integer 2 bytes channel C ON	Reception	2 bytes – 7.001 DPT_Pulses	C, W
59	Integer 2 bytes channel D ON	Reception	2 bytes – 7.001 DPT_Pulses	C, W

This object is activated when the **Function channel A** parameter has the **Integer 2 bytes (0-65535)** value.
This object enables a predefined value in 2-byte integer format to be defined when the channel is set to ON.
- The value of the **Integer 2 bytes channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

Object value: 0 to 65535

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Integer 2 bytes (0-65535)

No.	Name	Function of the object	Data type	Flags
60	Float 2 bytes channel A OFF	Reception	2 bytes – 9.xxx DPT_float	C, W
62	Float 2 bytes channel B OFF	Reception	2 bytes – 9.xxx DPT_float	C, W
64	Float 2 bytes channel C OFF	Reception	2 bytes – 9.xxx DPT_float	C, W
66	Float 2 bytes channel D OFF	Reception	2 bytes – 9.xxx DPT_float	C, W

This object is activated when the **Function channel A** parameter has the **Float 2 bytes (-671088.64 – 670760.96)** value.
This object enables a predefined value in 2-byte floating-point format to be defined when the channel is set to OFF.
- The value of the **Float 2 bytes channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.

Object value: -671088.64 à 670760.96

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.

This operation is identical for the 4 channels.

For further information, see: Float 2 bytes (-671088.64 – 670760.96)

No.	Name	Function of the object	Data type	Flags
61	Float 2 bytes channel A ON	Reception	2 bytes – 9.xxx DPT_float	C, W
63	Float 2 bytes channel B ON	Reception	2 bytes – 9.xxx DPT_float	C, W
65	Float 2 bytes channel C ON	Reception	2 bytes – 9.xxx DPT_float	C, W
67	Float 2 bytes channel D ON	Reception	2 bytes – 9.xxx DPT_float	C, W

This object is activated when the **Function channel A** parameter has the **Float 2 bytes (-671088.64 – 670760.96)** value.
This object enables a predefined value in 2-byte floating-point format to be defined when the channel is set to ON.
- The value of the **Float 2 bytes channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
Object value: -671088.64 à 670760.96
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Float 2 bytes (-671088.64 – 670760.96)

No.	Name	Function of the object	Data type	Flags
76	Scene channel A OFF	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
78	Scene channel B OFF	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
80	Scene channel C OFF	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
82	Scene channel D OFF	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W

This object is activated when the **Function channel A** parameter has the **Scene 1-64** value.
This object enables the scene number to be defined when the channel is set to OFF.
- The value of the **Scene channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.
Scene numbers from 0 (Scene 1) to 63 (Scene 64).
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Scene 1-64

No.	Name	Function of the object	Data type	Flags
77	Scene channel A ON	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
79	Scene channel B ON	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
81	Scene channel C ON	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W
83	Scene channel D ON	Reception	1 Byte – 17.001 DPT_SceneNumber	C, W

This object is activated when the **Function channel A** parameter has the **Scene 1-64** value.
This object enables the scene number to be defined when the channel is set to ON.
- The value of the **Scene channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.
Scene numbers from 0 (Scene 1) to 63 (Scene 64).
The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Scene 1-64

No.	Name	Function of the object	Data type	Flags
84	Heating, cooling, ventilation channel A OFF	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
86	Heating, cooling, ventilation channel B OFF	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
88	Heating, cooling, ventilation channel C OFF	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
90	Heating, cooling, ventilation channel D OFF	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W

This object is activated when the **Function channel A** parameter has the **Heating, cooling, ventilation** value.
This object allows the heating mode to be defined when the channel is set to OFF.
- The value of the **Heating, cooling, ventilation channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.

Heating mode	Value
Auto	0
Confort	1
Standby	2
Night setpoint	3
Frost protection	4

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Heating, cooling, ventilation

No.	Name	Function of the object	Data type	Flags
85	Heating, cooling, ventilation channel A ON	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
87	Heating, cooling, ventilation channel B ON	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
89	Heating, cooling, ventilation channel C ON	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W
91	Heating, cooling, ventilation channel D ON	Reception	1 Byte – 20.102 DPT_HVAC mode	C, W

This object is activated when the **Function channel A** parameter has the **Heating, cooling, ventilation** value.
This object allows the heating mode to be defined when the channel is set to ON.
- The value of the **Heating, cooling, ventilation channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

Heating mode	Value
Auto	0
Confort	1
Standby	2
Night setpoint	3
Frost protection	4

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Heating, cooling, ventilation

No.	Name	Function of the object	Data type	Flags
130	Percent channel A OFF	Reception	1 Byte – 5.001 DPT_Percentage	C, W
132	Percent channel B OFF	Reception	1 Byte – 5.001 DPT_Percentage	C, W
134	Percent channel C OFF	Reception	1 Byte – 5.001 DPT_Percentage	C, W
136	Percent channel D OFF	Reception	1 Byte – 5.001 DPT_Percentage	C, W

This object is activated when the **Function channel A** parameter has the **Percent (0-100%)** value.
This object enables a percentage value to be defined when the channel is set to OFF.
- The value of the **Percent channel A OFF** object is transmitted to the bus by the time switch when the channel is set to OFF.

Object value
- 0 (0%)
- 255 (100%)

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Percent (0-100%)

No.	Name	Function of the object	Data type	Flags
131	Percent channel A ON	Reception	1 Byte – 5.001 DPT_Percentage	C, W
132	Percent channel B ON	Reception	1 Byte – 5.001 DPT_Percentage	C, W
133	Percent channel C ON	Reception	1 Byte – 5.001 DPT_Percentage	C, W
134	Percent channel D ON	Reception	1 Byte – 5.001 DPT_Percentage	C, W

This object is activated when the **Function channel A** parameter has the **Percent (0-100%)** value.
This object enables a percentage value to be defined when the channel is set to ON.
- The value of the **Percent channel A ON** object is transmitted to the bus by the time switch when the channel is set to ON.

Object value
- 0 (0%)
- 255 (100%)

The value of the object and parameter has the same priority and is transmitted according to the time switch's programming or by manual control.
This operation is identical for the 4 channels.

For further information, see: Percent (0-100%)

3.4.3 Logic block

No.	Name	Function of the object	Data type	Flags
92	Logic block 1 object I	Reception	1 Bit – 1.001 DPT_Switch	C, W
93	Logic block 1 object II	Reception	1 Bit – 1.001 DPT_Switch	C, W
94	Logic block 1 object III	Reception	1 Bit – 1.001 DPT_Switch	C, W
95	Logic block 1 object IV	Reception	1 Bit – 1.001 DPT_Switch	C, W
These objects are activated in accordance with the value of the **Input value 1…4 (bit)** parameter. There may be up to a maximum of 4 of these objects. These objects are used to produce the status of a logic input for processing of the logic operation For further information, see: Logic block				

No.	Name	Function of the object	Data type	Flags
96	Logic block 1 bit	Emission	1 Bit – 1.001 DPT_Switch	C, T
This object is activated if the **Value transmitter 1 bit** parameter is active. This object enables output of the results of the logic operation via the bus The value of the object is the result of a logic operation, according to the status of the logic inputs. For further information, see: Logic block				

No.	Name	Function of the object	Data type	Flags
98	Logic block 1 byte	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
This object is activated if the **Output value byte** parameter is active. This object enables the result of the logic operation to be transmitted to the bus in 1-byte value format. The value of the object is defined using the **Value (0-255) ON** parameters when the result of the logic operation is true and **Value (0-255) OFF** parameters when the result of the logic operation is false. For further information, see: Logic block				

No.	Name	Function of the object	Data type	Flags
100	Logic block 2 object I	Reception	1 Byte – 1.001 DPT_Switch	C, W
101	Logic block 2 object II	Reception	1 Byte – 1.001 DPT_Switch	C, W
102	Logic block 2 object III	Reception	1 Byte – 1.001 DPT_Switch	C, W
103	Logic block 2 object IV	Reception	1 Byte – 1.001 DPT_Switch	C, W
See object No.92. Logic block 1				

No.	Name	Function of the object	Data type	Flags
104	Logic block 2 bit	Emission	1 Bit – 1.001 DPT_Switch	C, T
See object No.96. Logic block 1				

No.	Name	Function of the object	Data type	Flags
106	Logic block 2 byte	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
See object No.98. Logic block 1				

No.	Name	Function of the object	Data type	Flags
108	Logic block 3 object I	Reception	1 Byte – 1.001 DPT_Switch	C, W
109	Logic block 3 object II	Reception	1 Byte – 1.001 DPT_Switch	C, W
110	Logic block 3 object III	Reception	1 Byte – 1.001 DPT_Switch	C, W
111	Logic block 3 object IV	Reception	1 Byte – 1.001 DPT_Switch	C, W
See object No.92. Logic block 1				

No.	Name	Function of the object	Data type	Flags
112	Logic block 3 bit	Emission	1 Bit – 1.001 DPT_Switch	C, T
See object No.96. Logic block 1				

No.	Name	Function of the object	Data type	Flags
114	Logic block 3 bytes	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
See object No.98. Logic block 1				

No.	Name	Function of the object	Data type	Flags
116	Logic block 4 object I	Reception	1 Byte – 1.001 DPT_Switch	C, W
117	Logic block 4 object II	Reception	1 Byte – 1.001 DPT_Switch	C, W
118	Logic block 4 object III	Reception	1 Byte – 1.001 DPT_Switch	C, W
119	Logic block 4 object IV	Reception	1 Byte – 1.001 DPT_Switch	C, W
See object No.92. Logic block 1				

No.	Name	Function of the object	Data type	Flags
120	Logic block 4 bit	Emission	1 Bit – 1.001 DPT_Switch	C, T
See object No.96. Logic block 1				

No.	Name	Function of the object	Data type	Flags
122	Logic block 4 bytes	Emission	1 byte – 5.010 DPT_Counter_Pulses	C, T
See object No.98. Logic block 1				

4. Specifications

• Supply Voltage	21...32 V DC SELV
• BUS Consumption	Max 25mA
• Switching functions	ON ; OFF ; Pulse ; cycle ; annual program
• Programming capacity	300 steps
• Minimum time between 2 steps	1 min.
• Clock generator	Quartz, KNX Bus or DCF signal (optional)
• Power reserve	Lithium battery accumulation of 5 years of power outages (unlimited backup of the program)
• Accuracy (at 20° C)	≤ ± 0,25 sec /24 h
• Screen	High resolution LCD (12,8 $cm^{2)}$
• Operating temperature	-10 °C … +50 °C
• Storage temperature	-20 °C … +70 °C
• Ball test temperature	75°C … 125°C
• Dimensions	4 modules (45 x 71,5 x 58 mm)
• Mounting	DIN Rail (DIN EN 60715)
• Terminal Type	Quick Connect
• Connection capacity	- Flexible : 0,75 to 2,5 mm^2 - Rigid : 0,75 to 2,5 mm^2
• Protection index	IP 20 / IK 04
• Protection Class	II
• Standards	EN 60730-1; EN 60730-2-7;EN 50491-3; EN 50491-5-1; EN 50491-5-2; EN 50491-5-3
• DCF input	Yes, with use of double-insulated cable (DCF antenna EG001, optional)
• Rated surge voltage	4kV
• Type of action	1
• Pollution level	2
• Software structure	Class A