12 CO Switching, Value, Scene 7F0601

Application program usage

Product family: Timer
Product type: REG-Devices
Manufacturer: Siemens

Name: Time Switch 4-Channel REG 372
order-no.: 5WG1 372-5EY01

Name: Time Switch 4-Channel REG 372/02
order-no.: 5WG1 372-5EY02

Functional description

For any of the 4 channels these telegram types may be selected:

- Switching telegram (1-Bit)
- Positive drive telegram (2-Bit)
- Dimming or value telegram (8-Bit)

Additionally, channel 4 may be used for scene control with up to 4 different telegram types. This allows for control of different types of actuators or actuator groups (switch / dimming / shutter actuators) at the same clock switching time.
Example: Scene „End of work day“ effects at the same time following instructions with different group addresses:

- light off
- lower heating setpoint
- close shutters
- arm alarm system

Additionally, the time switch program of the clock may be blocked via the bus by a blocking object.
Whether the blocking object has an influence on the transmission behaviour of the individual channel objects can be set by the channel object parameters. If blocking is enabled, then one message can be sent corresponding to the switching off/on instruction of the clock or no message may be sent when setting the blocking object for each channel object. Subsequently, no message is transmitted by the corresponding channel object. When the blocking object is reset, then the current status of the channel object is transmitted immediately on the bus.

Cyclical sending may be selected for each channel. The cycle interval is the same for all four channels.

Note

Communication between bus coupler and clock (and thus execution of the application program) occurs only if the clock is in automatic mode (display shows **Auto**). Any clock actions that occurred while the clock was not in automatic mode are executed when automatic mode resumes.

Communication objects

	Phys.Addr.	Program		Order number
	no.	Object name	Function	Type
	01.01.005	12 CO Switching,Value,Scene 7F0601		5WG1 372-5EY0_
	0	Channel 1	On / Off	1 Bit
	1	Channel 2	8-bit Value (EIS 6)	1 Byte
	2	Channel 3	Positive drive (EIS 8)	2 Bit
	3	Channel 4	On / Off	1 Bit
	4	Channel 4	8-bit Value (EIS 6)	1 Byte
	5	Channel 4	Positive drive (EIS 8)	2 Bit
	6	Channel 4	On / Off	1 Bit
	7	Blocking	0=normal / 1=blocked	1 Bit

Note

Your screen presentation may vary from these typical snap shots.

Obj	Object name	Function	Type	Flag
0	Channel 1	**On / Off**	1 Bit	CT
		8-bit Value (EIS 6)	1 Byte	
		Positive drive (EIS 8)	2 Bit	
1	Channel 2	...	...	CT
2	Channel 3	...	...	CT
3	Channel 4	...	...	CT
4	Channel 4	...	...	CT
5	Channel 4	...	...	CT
6	Channel 4	...	...	CT
On / Off: Send a switching telegram when the clock channel switches. 8-bit Value (EIS 6): Send an 8-bit value, when the clock channel switches. Positive drive (EIS 8): Send a positive drive telegram, when the clock channel switches.				
7	Blocking	0=normal / 1=blocked	1 Bit	CWT
If Blocking is set to 1 = blocked and the parameter for blocking of a channel object is enabled then sending for that channel object is blocked.				

Maximum number of group addresses: 10
Maximum number of assignments: 10

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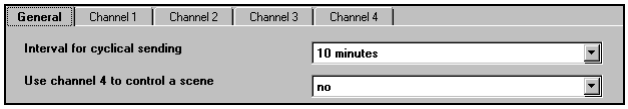
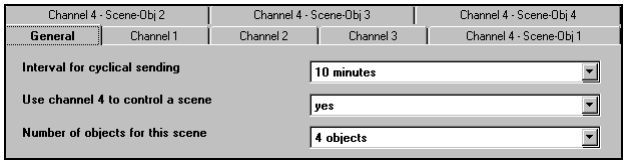
Parameter

General

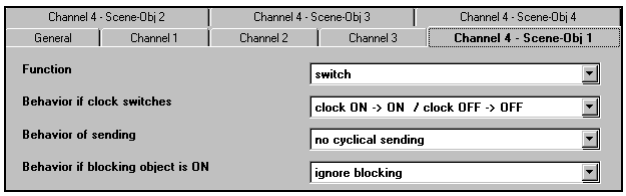


Parameter	Settings
Interval for cyclical sending	3 min. 5 min. **10 min.** 15 min. 20 min. 30 min. 45 min. 60 min.
Setting of the time interval with which the message is sent repeatedly on the bus. This parameter is applied to all channels where the sending behaviour is set to „cyclical sending“.	
Use channel 4 to control a scene	**No** Yes
Setting whether channel 4 shall be used to control a scene. If „Yes“ is selected then the next parameter appears.	
Number of objects for this scene	**2 objects** 3 objects 4 objects
Setting how many objects shall be part of the scene control for channel 4.	

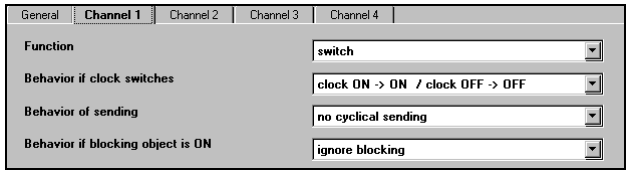
When using the scene function for channel 4 a tab for parameter settings is displayed for each scene object of this channel.



Each scene object can be used for switch, 8-bit value or positive drive control. All parameter settings of these objects are identical to the others for switch, 8-bit value and positive drive.



Switch Channel 1 (2 – 4)



Function and parameters of channels 1 - 4 are identical and described only once.

Parameter	Settings
Function	**switch** 8-bit value positive drive
Select if a switch (1 bit) , value (8 bit), or positive drive (2 bit) telegram shall be sent via this clock channel.	
Behaviour if clock switches	**clock ON > ON /** **clock OFF > OFF** clock ON > OFF / clock OFF > ON
This parameter appears if a switching telegram shall be sent. Select if an ON (OFF) telegram shall be sent when the clock channel switches ON (OFF), or if an OFF (ON) telegram shall be sent when the clock channel switches OFF (ON).	
Behaviour of sending	**no cyclical sending** cyclical sending
Select if the telegram shall be sent once only or cyclically.	
Behaviour if blocking object is ON	**ignore blocking** enable blocking
If the object 7 (Blocking) is set to 1 = blocking and this parameter is set to enable blocking then sending for this channel is blocked.	
Behaviour at the beginning of blocking	do not send any telegrams **send telegram**
This parameter appears if blocking is enabled. It determines the sending behaviour when blocking starts.	
	as if clock switches OFF as if clock switches ON
This parameter appears if a telegram shall be sent once after blocking starts.	

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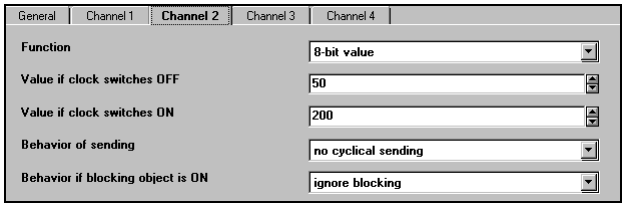
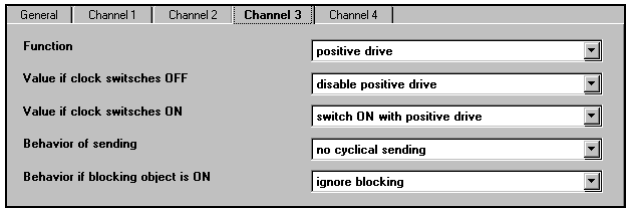
8-bit Value Channel 1 (2 – 4)



Function and parameters of channels 1 - 4 are identical and described only once.

Parameter	Settings
Function	**switch** 8-bit value positive drive
Select if a switch (1 bit) , value (8 bit), or positive drive (2 bit) telegram shall be sent via this clock channel.	
Value if clock switches OFF	**0 ... 255**
This parameter appears if a value telegram shall be sent. Select which value telegram shall be sent when the clock channel switches off.	
Value if clock switches ON	**0 ... 255**
This parameter appears if a value telegram shall be sent. Select which value telegram shall be sent when the clock channel switches on.	
Behaviour of sending	**no cyclical sending** cyclical sending
Select if the telegram shall be sent once only or cyclically.	
Behaviour if blocking object is ON	**ignore blocking** enable blocking
If the object 7 (Blocking) is set to 1 = blocking and this parameter is set to enable blocking then sending for this channel is blocked.	
Behaviour at the beginning of blocking	do not send any telegrams **send telegram**
This parameter appears if blocking is enabled. It determines the sending behaviour when blocking starts.	
	as if clock switches OFF as if clock switches ON
This parameter appears if a telegram shall be sent once after blocking starts.	

Positive drive Channel 1 (2 – 4)



Function and parameters of channels 1 - 4 are identical and described only once.

Parameter	Settings
Function	**switch** 8-bit value positive drive
Select if a switch (1 bit) , value (8 bit), or positive drive (2 bit) telegram shall be sent via this clock channel.	
Value if clock switches OFF	**disable positive drive** switch OFF with positive drive switch ON with positive drive
This parameter appears if a positive drive telegram shall be sent. Setting which positive drive value shall be sent when the clock channel switches OFF.	
Value if clock switches ON	disable positive drive switch OFF with positive drive **switch ON with positive drive**
This parameter appears if a positive drive telegram shall be sent. Setting which positive drive value shall be sent when the clock channel switches ON.	
Behaviour of sending	**no cyclical sending** cyclical sending
Select if the telegram shall be sent once only or cyclically.	
Behaviour if blocking object is ON	**ignore blocking** enable blocking
If the object 7 (Blocking) is set to 1 = blocking and this parameter is set to enable blocking then sending for this channel is blocked.	
Behaviour at the beginning of blocking	do not send any telegrams **send telegram**
This parameter appears if blocking is enabled. It determines the sending behaviour when blocking starts.	
	as if clock switches OFF as if clock switches ON
This parameter appears if a telegram shall be sent once after blocking starts.	

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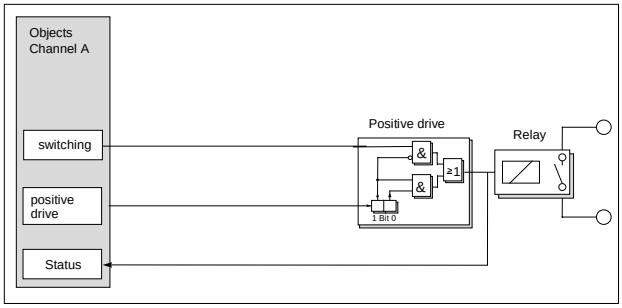
Positive drive

Actuators with positive drive input allow for overriding of outputs via central control commands.
E.g. when in energy savings or night operation mode switching on of selected lights or loads can be blocked. In the case of night operation mode a switch OFF positive drive telegram may be sent at 20h00 and at 06h00 a switch ON positive drive telegram.

For explanation of positive drive assume a switch actuator with two input objects. The input object switching controls the output dependent on the status of the input positive drive.



The positive drive object is a 2-bit object.
Bit 1 determines, whether positive drive is “active” (= 1) or „passive“ (= 0).

If Bit 1 has the value 0, then positive drive is set to be „passive“ and the switching input value is directly available at the positive drive output. At the same time this value is loaded into Bit 0 of the positive drive object. Thus Bit 0 of the positive drive object always contains the status.

If Bit 1 of the positive drive object has the value 1, then the positive drive is set to be “active“ and the switching input value is irrelevant for the output value. In this case Bit 0 of the positive drive object determines the output of the positive drive. If positive drive is not activated then the switching input value is directly available at the output of the positive drive.

Bit 1	Bit 0	Function
0	0	Positive drive is not activated
0	1	Positive drive is not activated
1	0	Off with positive drive object value
1	1	On with positive drive object value

Review

If the time or the date is modified (via keyboard entry, via radio or bus synchronization), a review takes place in the clock. That means in order to avoid switching times being skipped and thus not executed, the clock calculates its switching status again. If the clock detects a modification of the switching conditions, then these are transmitted. However, with this principle favourable procedure the following points are to be considered:

- As manual switchings (circuit anticipations) are not in the switching time memory, manual switching can be lost under certain conditions by the review.
- In addition, impulses from the past are not detected by the review.

The review is performed:

- after resets
- after programming
- after deleting or modifying switching times
- after summer / winter time switching