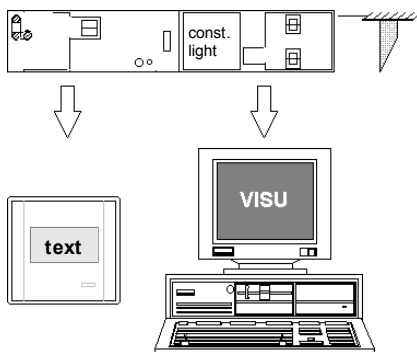## 12 S1 LuxValue 210401

Devices Employing the Program

Product family: Physical Sensors
Product type: Brightness
Manufacturer: Siemens

Name: Brightness Controller GE252
Order-no.:   5WG1 252-4AB02

Application Description

This application program provides parameters to measuring the light intensity with a brightness controller GE 252 and send it as a 2-byte telegram on the bus.

The measured light intensity can be sent in the following modes:

Send on request:
The measured light intensity is sent only as response to a request telegram.

Send on change:
The measured light intensity is sent automatically on differing from the value sent last by more than the threshold specified in the parameter list.

Cyclic sending:
The measured light intensity is sent cyclically with a frequency that can be specified in the parameter list.

Cyclic sending on change only:
The measured light intensity is sent automatically on differing from the value sent last by more than the threshold set in the parameter list. To avoid the sending of multiple bus telegrams in case of large fluctuations of the light intensity, telegrams are not sent before the time passed since the sending of the previous telegram exceeds the time period as specified in the parameter list to cyclic sending.

Communication Objects

Phys.Addr.	Program		
no.	**Function**	**Object name**	**Type**
01.01.039	12 S1 LuxValue 210401		
0	Illuminance	Send Lux value	2 Byte
1	Enabling/interlocking	Switch	1 Bit
2	Interlocking	Switch	1 Bit
3	Interlocking	Dimming	4 Bit
4	Interlocking	Value	1 Byte

Note:

The order of the entries may vary from the above due to individual customization of the table.

Obj	Function	Object name	Type	Flag
0	Illuminance level	Send Lux value	2 Byte	AKLÜ
	The group address of this object is used to sending the measured Lux value and reading it via the bus.			
1	Enabling / Interlocking	Switch	1-Bit	CWU
	With the group address of this object the brightness controller can be released with a "1" telegram and locked with a "0" telegram. When the brightness controller is locked no telegrams are sent via object [0]. The actual status of this object is preserved on bus voltage failure and automatically restored on bus voltage recovery.			
2	Interlocking	Switch	1-Bit	CWU
	When receiving a switching telegram at this object the brightness controller is locked, ignoring any "on" or "off" telegrams until the brightness controller is released again with a "1" telegram at object [1].			
3	Interlocking	Dimming	4-Bit	CWU
	When receiving a switching telegram at this object the brightness controller is locked, ignoring any "brighten" or "darken" telegrams until the brightness controller is released again with a "1" telegram at object [1].			
4	Interlocking	Value	1-Byte	CWU
	When receiving a switching telegram at this object the brightness controller is locked, ignoring any light intensity telegrams until the brightness controller is released again with a "1" telegram at object [1].			

Maximum number of group addresses: 18
Maximum number of assignments: 18

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Parameters

Brightness level (light intensity):

Parameters	Settings
Send condition	**Cyclical sending only on change** Send on change Send on request Cyclical sending
This parameter governs the sending of the Lux value: "Delayed send on change"(cyclic send on change): The measured actual light intensity is sent automatically on differing from the value sent last by more than the threshold set in the parameter list. To avoid the sending of multiple bus telegrams in case of large fluctuations of the light intensity, telegrams are not sent before the time passed since sending the previous telegram exceeds the time period as specified in the parameter list to cyclic sending. "Send on change": The measured light intensity is automatically sent on differing from the value sent last by more than the threshold specified in the parameter list. Fluctuations in the light intensity that might lead to a significant rise in bus traffic cannot be countered. "Send on request": The measured light intensity is not sent automatically, it must be manually read via the bus e.g. with the menu item "Testing, Groups, Read value" of the ETS commissioning tool or visualization software. "Cyclic send": The measured light intensity is sent cyclically with a frequency that can be specified in the cyclic send parameters below.	
Sending on change > = (1-20)*(8 Lux)	**4**
This parameter governs the difference to the previously sent value that must be exceeded in order to send a telegram when using an appropriate mode. The difference is generated by multiplying the specified value by 8 Lux. I.e., the default value is 32 Lux.	
Base for cyclical sending	**Time base 130 ms** Time base 260 ms Time base 520 ms Time base 1,0 sec Time base 2,1 sec Time base 4,2 sec Time base 8,4 sec Time base 17 sec Time base 34 sec Time base 1,1 min Time base 2,2 min Time base 4,5 min Time base 9,0 min Time base 18 min Time base 35 min

	Time base 1,2 h
Factor for cyclical sending (2-127) * base	**5**
This parameter governs the frequency to repeating the sending of Lux values when using an appropriate sending condition. The cyclic send period is generated by multiplying the cyclic send base and factor. I.e., the default value is approx. 650 ms.	
Limit number of telegrams	**disabled** enabled
Limit number of telegrams	**127 telegrams per 17 sec.** 30 telegrams per 17 sec. 60 telegrams per 17 sec. 100 telegrams per 17 sec.
This parameter governs the maximum number of telegrams that can be sent per 17 s period when the telegram rate limit is enabled. To reduce bus traffic caused by fluctuating light intensity, the "Telegram rate limit" should be enabled when using the "send on change" mode. "Disabled": The number of telegrams that can be sent per 17 s period is not limited. "Enabled": According to the above setting no more than 30, 60, 100 or 127 telegrams can be sent per 17 seconds.	

Enabling/interlocking

Parameters	Settings
Behaviour after commissioning	**Send telegrams** do not send any telegrams
This parameter defines the locking status upon commissioning the brightness controller with the ETS. On bus voltage failure the actual status is preserved and re-established on bus voltage recovery. " Send telegrams ": On commissioning the brightness controller is released. " do not send any telegrams ": On commissioning the brightness controller is locked.	

Calibration:

Parameters	Settings
Enter calibration result here (0 = no funct., 255 = faulty)	**0**
This parameter holds the amplification factor provided by the application program 12 C1 Calib 710101". A "0" disables the brightness controller. A result of "255" indicates a faulty calibration. Repeat the calibration procedure.	

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