11 S4 Zone terminal 241C01

Use of the application program

Product family: Monitor, Report
Product type: Sensors
Manufacturer: Siemens

Name: Zone terminal N 266
Order no.: 5WG1 266-1AB01

Functional description

The zone terminal N 266 is used for the monitored connection of passive sensors to the EIB and/or for the connection of potential-free contacts (e.g. magnetic contacts, glass breakage sensors) in applications with increased security requirements. It has four zone inputs whose status can be displayed via four LEDs. Two 12 V outputs “Test” and “Set/Unset” are available for the control of passive infrared detectors. The zone terminal is not an alarm system in the sense of VdS guidelines. An external 12 V DC SELV power supply is required.

Monitor / Report
The zone terminal monitors the connected zones and the external 12 V auxiliary voltage. It is possible to select for the auxiliary voltage whether the status should only be sent once in the event of a fault or sent cyclically. In both cases, a fault in the auxiliary voltage is stored internally until a reset is carried out via object no. 5 “Reset inputs A...D”. If there is no cyclical sending, a telegram with the value “1” is only sent once when a fault occurs. If cyclical sending is activated, the zone terminal sends telegrams with the value “0” cyclically until a fault occurs. In the event of a fault, it only sends telegrams with the value “1” due to the internal memory until the fault is rectified and a telegram for resetting the fault has been received.

Description of the functions
There are three different operating modes for the zone terminal: *set*, *unset* or *unset with stored alarm*. Depending on the selected mode, the device reacts differently to various events. The communication object no. 4 “Device status” is used to toggle between the different operating modes. It is only possible to set the system if the zone terminal is in the *unset* mode and there are no faults in the zones or auxiliary voltage. When the operating mode is changed, the zone terminal issues a status response via object no. 7 “Status reply”. If it is not possible to set the device successfully because e.g. there is a fault in one of the zones, the status is reported as *unset*.

Output “S/U” and “Test”
The output “S/U” reports the status of the zone terminal and can be used for example in order to control the memory logic in PIR detectors. This voltage is applied if the device is *set* and is disconnected if switches to the *unset* state. The relevant LED “S/U” behaves in the opposite way and always lights up if the zone terminal is in the *unset* state.
The output “Test” is used for commissioning and for configuring or checking the connected PIR detectors. This output can be controlled solely via the parameter “Behaviour on bus voltage recovery”. This voltage is either continually on or off in all three states depending on this parameter setting. This LED indicates the status of this voltage but only during the two *unset* modes. When the device is in set mode, the LED is always switched off.

Note
The connecting cables of the four detector zones must each be terminated with a resistance 2.7 kΩ . To enable the zone terminal to function correctly, it is important that even unused inputs are terminated with a 2.7 kΩ resistor. In this case, the resistor can be connected directly to the input terminals of the device.
The current status of the zones is displayed in the unset state via four LEDs. There is no display when the device is set. When the device is deactivated, the current status of the zones is displayed again. The required external SELV auxiliary voltage is connected to the terminals “+ 12V DC” and “– 12V DC”. The terminal “– 12V DC” is also used as a common reference potential for the outputs “S/U” and “Test”.

Maximum number of group addresses: 8
Maximum number of associations: 8

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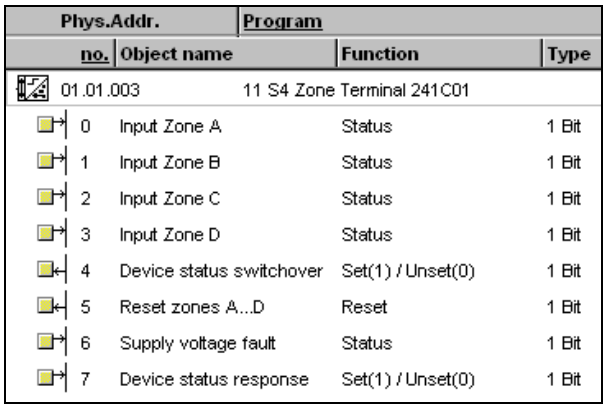
Communication objects

Report and display



Phys.Addr.		Program		
	no.	Object name	Function	Type
	01.01.003		11 S4 Zone Terminal 241C01	
	0	Input Zone A	Status	1 Bit
	1	Input Zone B	Status	1 Bit
	2	Input Zone C	Status	1 Bit
	3	Input Zone D	Status	1 Bit
	4	Device status switchover	Set(1) / Unset(0)	1 Bit
	5	Reset zones A...D	Reset	1 Bit
	6	Supply voltage fault	Status	1 Bit
	7	Device status response	Set(1) / Unset(0)	1 Bit

Obj	Object name	Function	Type	Flags
0	Input Zone A	Status	1 Bit	CRT
1	Input Zone B	Status	1 Bit	CRT
2	Input Zone C	Status	1 Bit	CRT
3	Input Zone D	Status	1 Bit	CRT
The zone terminal has four 1 bit communication objects which store the status of the input contacts. Depending on the operating state of the zone terminal, these objects send different telegrams. In ***set*** mode, the zone terminal functions with an internal memory logic. If a fault occurs in a zone, the corresponding communication objects only send a telegram with the value "1" once. All the LEDs (except the programming LED) on the zone terminal are switched off in this operating mode.				
4	Device status switchover	Set(1) / Unset(0)	1 Bit	CWT
Toggling between the *set* and the *unset* states is carried out via object no. 4 "Device status". A reset via object no. 5 "Reset inputs A…D" is not possible in this state and does not have any effect on the program processing. When switching to the unset mode, if a fault is stored in at least one of the zones, the device switches to the state ***unset with stored alarm***. In this mode, the communication objects of the four zones do not send any further telegrams. The LEDs A-D each display the current status of the zones.				

Obj	Object name	Function	Type	Flags
5	Reset zones A…D	Reset	1 Bit	CWT
The device only switches to the normal *unset* state once the stored faults have been reset via communication object no. 5 "Reset zones A...D". In the event of this transition, the stored alarm signals are reset and a telegram with the value "0" is sent for each of the inputs that have been reset. It is necessary to wait until these telegrams have been sent before the zone terminal can be reactivated. A delay of approx. 2 seconds between the reset via object no. 5 and activation of the system via object no. 4 is therefore required.				
6	Supply voltage fault	Status	1 Bit	CRT
7	Device status response	Set(1) / Unset(0)	1 Bit	CRT
If no alarm signals have been stored, the device switches directly from *set* mode to the normal ***unset*** mode without requiring the zones to be reset. In the *unset* state, the objects send corresponding telegrams after each change in the status of the inputs. The object value "0" means "OK" while object value "1" indicates a "fault" i.e. the detector contact has been touched or the cable to the detector contact has been disrupted. In this mode, the LEDs A…D each display the current status of the zones.				

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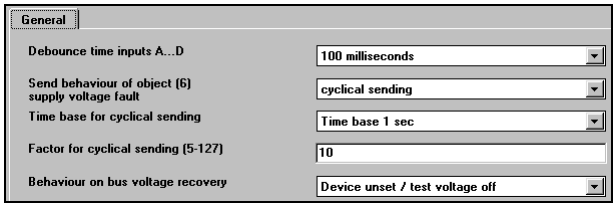
Parameters

General



Parameters	Settings
Debounce time inputs A…D	10 milliseconds 20 milliseconds 40 milliseconds 60 milliseconds 80 milliseconds **100 milliseconds** 130 milliseconds
This parameter sets the debounce time of inputs A…D. It is thus possible to avoid false alarms which occur due to bouncing of the detector contacts.	
Send behaviour of object (6) supply voltage fault	**cyclical sending** no cyclical sending
Time base for cyclical sending	Time base 130 ms Time base 0.5 s **Time base 1.0 s** Time base 2.1 s Time base 4.2 s Time base 8.4 s Time base 17 s Time base 34 s 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
This parameter indicates the time interval for cyclical sending together with the parameter “Factor for cyclical sending (5...127)”. **Note:** If there is a fault in the external voltage, there is **no cyclical sending**.	

Parameters	Settings
Factor for cyclical sending (5 – 127)	**default 10**
This parameter indicates the interval for cyclical sending together with the parameter “Base for cyclical sending”.	
Behaviour on bus voltage recovery	Device set / test voltage on Device set / test voltage off Device unset / test voltage on **Device unset / test voltage off**
This parameter is used to define the device status after a bus voltage recovery. On the one hand, the alarm status is defined as *set* or *unset* and on the other hand, the status of the test voltage is defined as on or off. The status of the test voltage can only be set in this parameter. It is not possible to make any later changes via the communication objects. A fault is only detected after the time selected in the parameter “Debounce time inputs A….D” has elapsed. It is therefore possible to avoid false alarms due to bouncing of the detector contacts.	

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Space for notes