

## 11 A2 Binary 520501

### Devices Employing the Program

Product family: Output  
 Product type: Binary output 2-fold  
 Manufacturer: Siemens

Name: Binary output N 562  
 Order-no.: 5WG1 562-1AB01

Name: Binary output N 562 *pl*  
 Order-no.: 5WG1 562-1PB01

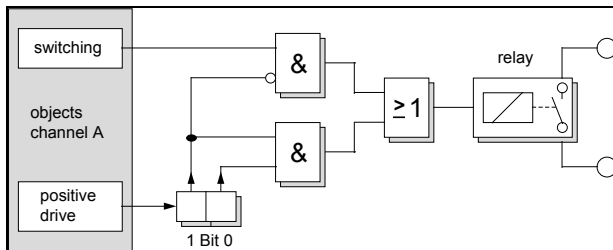
Name: Binary output GE 563  
 Order-no.: 5WG1 563-4AB01

### Application Description

This application program allows you to use both channels of a binary output 2-fold for switching tasks with and without positive drive.

Additionally, parameters are provided to specify the response to bus voltage failure and recovery, and the relay's contact type.

#### Block diagram of channel A



### Communication Objects

Phys. Addr.		Program	
no.	Function	Object name	Type
01.01.023	11 A2 Binary	520501	
0	Channel A	Switch	1 Bit
1	Channel A	Positive drive	2 Bit
2	Channel B	Switch	1 Bit
3	Channel B	Positive drive	2 Bit

#### Note:

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

The positive drive allows you to switch the relay contact on and off and subsequently lock it in that status via the 2-bit positive drive objects [1] and [3]. Here, bit 1 enables the positive drive and bit 0 defines the switching status to the enabled positive drive. The status of the switching object is ignored when the positive drive is enabled.

Bit 1	Bit 0	Mode
0	0	disabled positive drive
0	1	disabled positive drive
1	0	enabled positive drive: switch off
1	1	enabled positive drive: switch on

Obj	Function	Object name	Type	Flag
0	Channel A	Switch	1-bit	CWU
This object's group addresses are used to receive relay channel A's switching telegrams. With an enabled positive drive the switching status of this object is ignored.				
1	Channel A	Positively driven	2-bit	CWU
This object's group addresses are used to receive the switching telegrams to relay channel A's positive drive. The positive drive is disabled with the object status "0" and "1", the switching status is established according to the switching object [0]. With object status "2" the positive drive is enabled to switch "off", with object status "3" to switch "on", overriding the status of switching object [0]. On disabling the positive drive with a "0" or "1" telegram, the status of the switching object [0] is established at the relay.				
2	Channel B	Switch	1-bit	CWU
This object's group addresses are used to receive relay channel B's switching telegrams. With an enabled positive drive the switching status of this object is ignored.				
3	Channel B	Positive drive	2-bit	CWU
This object's group addresses are used to receive the switching telegrams to relay channel B's positive drive. The positive drive is disabled with the object status "0" and "1", the switching status is established according to the switching object [2]. With object status "2" the positive drive is enabled to switch "off", with object status "3" to switch "on", overriding the status of switching object [2]. On disabling the positive drive with a "0" or "1" telegram, the status of the switching object [2] is established at the relay.				

Maximum number of group addresses: 19  
 Maximum number of assignments: 20

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**Parameters**

**Note:**

The sequence of the parameters in the de-scription is the same as in the ETS screen shots. To have a more precise description, the terms used are partly different to the ETS screen shots.

**Channel A:**

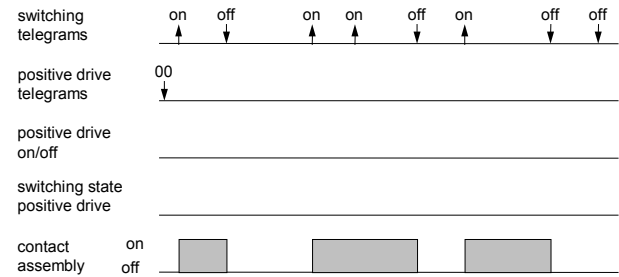
Channel A	Channel B
On bus voltage recovery	no action
On bus voltage failure	no action
Relay mode	normally open contact

Parameters	Settings
<b>On bus voltage recovery</b>	no action switch on switch off
This parameter rules the relay contact's response to bus voltage recovery: "no action": On bus voltage recovery the relay contact maintains its current switching status. "switch on": On bus voltage recovery the relay contact picks up in the setting "Relay mode: normally open" and drops out when using "Relay mode: normally closed". "switch off": On bus voltage recovery the relay contact drops out in the setting "Relay mode: normally open" and picks up when using "Relay mode: normally closed".	
<b>On bus voltage failure</b>	no action switch on switch off
This parameter rules the relay contact's response to bus voltage failure: "no action": On bus voltage failure the relay contact maintains its current switching status. "switch on": On bus voltage failure the relay contact picks up in the setting "Relay mode: normally open" and drops out when using "Relay mode: normally closed". "switch off": On bus voltage failure the relay contact drops out in the setting "Relay mode: normally open" and picks up when using "Relay mode: normally closed".	
<b>Relay mode</b>	normally open contact normally closed contact
This parameter defines the characteristic of the output. "normally open contact": "off" telegram = relay drops out, "on" telegram = relay picks up. "normally closed contact": "off" telegram = relay picks up, "on" telegram = relay drops out.	

The parameters of channel B can be set accordingly.

**Timing Diagrams: Channel Examples**

**1. Switching without positive drive**



**2. Switching with positive drive**

