



SAFETY TIME CONTROL DEVICE

**SCB**



# SAFETY TIME CONTROL DEVICE

## SCB

### SAFETY

## Safe and time-delayed shut-down of machines and plants

The new safe time control device **SCB** is a safety relay in a very compact design measuring only 22.5 mm, which offers a number of functions for the safe and time-delayed shut-down of machines and plants. It fulfils the highest safety requirements cat. 4 / PL e / SILCL 3 according to EN ISO 13849-1 and EN 62061 and is thus, ideal suited for machine tools and automatic machines. Additionally, the **SCB** also applies furnaces and ancillary equipment in continuous operation according to EN 50156-1.

- 2 safety relay outputs for switching high loads
- 2 safe semi-conductor outputs for applications with high switching cycles
- Different combinations of time-delayed and non-time-delayed outputs in one **SCB**
- On-delay or off-delay outputs
- 2 semi-conductor auxiliary outputs
- Automatic start or monitored manual start
- Simple, accurate and quick time setting via the push/rotary button and LED display
- Suitable for highest safety standards: PL e / Cat. 4 / SIL 3 according to EN ISO 13849-1 and EN 62061; Furnaces and ancillary equipment for continuous operation according to EN 50156-1



## Variable function

Depending on the variant, the **SCB** has up to four independent safe outputs, which switch on or off time-delayed or non-time-delayed.

Cat. 4 / PL e / SILCL 3 according EN ISO 13849-1 and EN 62061 will always be achieved.

### On-delay safety contacts:

Depending on the variant, the outputs of the **SCB** will switch on immediately or time-delayed if the safety circuit I11-I21 and I12-I22 are closed.

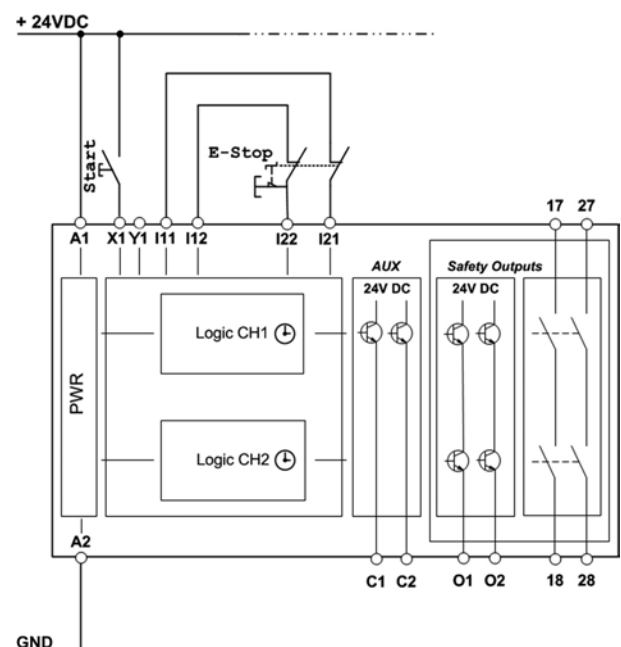
### Off-delay safety contacts:

When a safety requirement (E-Stop) prevails, the non-delayed safety contacts will switch off immediately and the time-delayed safety contacts will switch off at the end of the parametrised delay time.

### Auxiliary outputs:

Auxiliary output C1 is the instantaneous contact for the time-delayed safety contacts.

For example, if a safety requirement prevails, C1 switches off immediately and thereby indicates the forthcoming time-delayed shut-down of the safety output. Auxiliary output C2 indicates an occurred error which is detected by the **SCB**.



# SAFETY TIME CONTROL DEVICE

## SCB

### SAFETY

## Economical, because ...

### ... detailed and clear monitoring.

The **SCB** has an detailed monitoring. Errors such as faulty sensors, short circuits or wrong wiring will be detected and indicated with an error number on the LED-display and via the auxiliary output.

This means:

- Avoiding downtime during troubleshooting
- Eliminates tedious process of troubleshooting
- Quick commissioning

... complete overview during every operating status!

### ... easy and accurate time setting

The **SCB** can be operated quickly and easily via the push/rotary button on the front of the housing. By simply turning the switch, you can set the delay time in the parametrisation mode quickly and accurately in the range of 0.1 s to 9.9 s and 10 s to 99 s. Accurate time setting is possible by displaying the parametrised value via the in-built LED display. Thus, time-consuming re-alignment processes and time measurements can be avoided.

This means:

- Quick commissioning
- Easy and quick parameterizing of delay times
- Clearly structured monitoring of the parametrised delay time

... safety at once!



... developed for furnaces and ancillary equipment in continuous operation.

The **SCB** has been specially developed for furnaces and ancillary equipment in continuous operation, for which regular proof-tests cannot be conducted at sufficiently short intervals according to EN 50156-1.

Thanks to the internal structure of the **SCB**, the use of diverse contactor groups for connecting the safety-related actuators can be dispensed with.

This means

- Less downtime for your plant because of proof-test intervals as per EN 50156-1
- More place in the switch cabinet and reduced wiring effort

... ideally suited for furnaces and ancillary equipment in continuous operation!



# SAFETY TIME CONTROL DEVICE

## SCB

### SAFETY

## The right variant for your application.

The safety outputs of the **SCB** can connect in versatile combinations. Time-delayed or non-time-delayed and with on-delay or off-delay.

You can decide the configuration of your **SCB** by selecting one of the standard configurations saved in the device via the menu control.



The following table includes the standard variants.

Order Number	Article			
472460	SCB-04	2 safe semiconductor outputs	2 safe relay outputs	0 - 99 s
472480	SCB-03	3 safe semiconductor outputs	0 safe relay outputs	0 - 99 s
472490	SCB-02	0 safe semiconductor outputs	2 safe relay outputs	0 - 99 s

We can also parametrise for you other combinations, like mixed on-delay and off-delay outputs or delayed auxiliary contacts.

<b>General technical data</b>		<b>SCB</b>
Order number	472460, 472480, 472490	
<b>Electrical data</b>		
Operating voltage $U_B$	DC 24 V (+10 % / -15 %)	
Power consumption	3.6 W (no load operation)	
<b>Inputs</b>		
Number	1 two-channel input DC 24 V	
Switching thresholds	Log. "0": 0 V up to 5 V; log. "1": 18 V up to $U_B$	
<b>Time domain</b>		
0.1 - 9.9 s	Resolution: 0.1 s	
10 - 99 s	Resolution: 1 s	
<b>Safe semiconductor outputs</b>		
Number		
SCB-02 (Order No. 472490)	0	
SCB-03 (Order No. 472480)	3	
SCB-04 (Order No. 472460)	2	
Switching capacity per output	$U_B$ / 500 mA; PNP; short-circuit proof	
Period of test pulses (0 V)	max. 5 ms	
<b>Safe relay outputs</b>		
Number		
SCB-02 (Order-No. 472490)	2	
SCB-03 (Order-No. 472480)	0	
SCB-04 (Order-No. 472460)	2	
Switching capacity per output	AC-15: 3 A / AC 250 V DC-13: 3 A / DC 24 V	
<b>Auxiliary outputs C1, C2</b>		
Switching capacity per output	1 x DC 24 V / 50 mA; 1 x DC 24 V / 500 mA; PNP, short-circuit proof	
<b>Environmental data</b>		
Ambient temperature / storage temperature	0 °C to 55 °C / -20 °C to 80 °C	
<b>Mechanical data</b>		
Dimensions	22.5 x 99 x 114 mm	
Degree of protection	IP20	
Mounting	DIN rail according to EN 60715 TH35	
Weight	approx. 200 g	



# SAFETY TIME CONTROL DEVICE

## SCB

SAFETY



H. ZANDER GmbH & Co. KG  
Am Gut Wolf 15  
52070 Aachen - Germany

Phone: +49 (0) 241 910 501 0  
Fax: +49 (0) 241 910 501 38  
Mail: [info@zander-aachen.de](mailto:info@zander-aachen.de)

[WWW.ZANDER-AACHEN.DE](http://WWW.ZANDER-AACHEN.DE)

