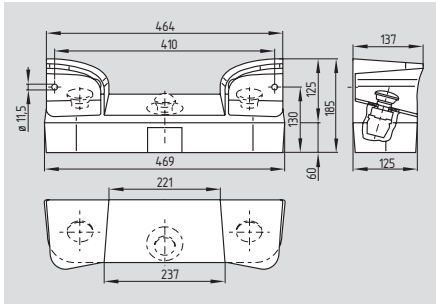
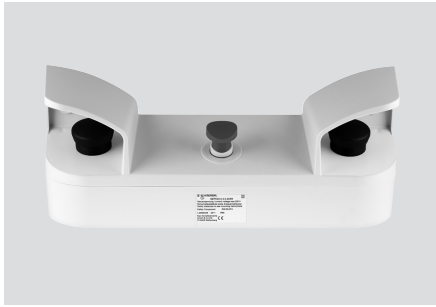


Two-hand control panels

SEPK

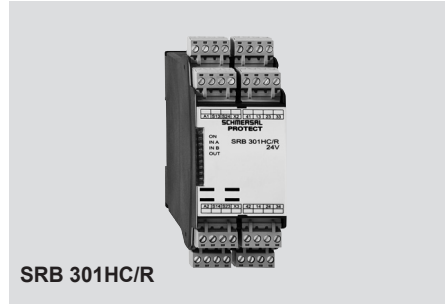
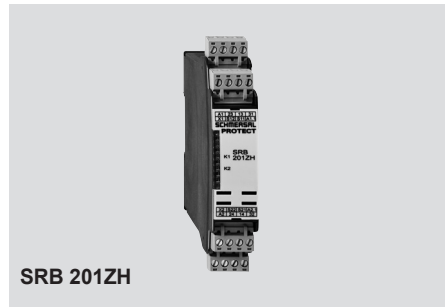


- Thermoplastic enclosure
- 2 black operating push buttons Ø 55 mm each with 1 NC and 1 NO contacts according to EN 574
- 1 Emergency-Stop button in thermoplastic version, KDRRKZ 40 RT, with 1 NC and 1 NO contact
- 8 knockouts for additional operating devices Ø 22.3 mm
- Stand and wall mounting possible
- 2 part enclosure
- Protection class IP64

Technical data

Standards:	IEC/EN 60947-5-5 EN 574 EN ISO 13850
Enclosure:	Thermoplastic (Lexan 503 R)
Protection class:	IP64
Connection:	Screw terminals
Cable section:	max. 1.5 mm ²
U _i :	440 V
I _{the} :	10 A
Utilization category:	AC-15, DC-13 8 A / 250 VAC 5 A / 24 VDC
Mechanical life:	10 million operations
Dimensions:	469 x 185 x 140 mm
Classification:	
Standards:	EN ISO 13849-1; IEC 61508; IEC 60947-5-3
PL:	up to e
Category:	up to 4
PFH value:	5.0 x 10 ⁻⁹ /h up to max. 100.000 switching cycles/year and max. 40% contact load up to 3 in combination with safety monitoring module
SIL:	
Mission time:	20 years

System components



Approvals



Ordering details

Standard: SEPK 02.0.4.0.22/95

1NO/1NC per button
1NO/1NC for Emergency-Stop

Empty enclosure: SEPK 02.0.L.22

with 3 mounting holes

Note

Customer-specific designs (also entirely pre-wired, special colors, etc.) available on request

Safety distance calculation:

$$S = (K \times T) + C$$

Legend:

K = Gripping speed = 1,600 mm/s

T = Run-on time in seconds

C = Additional value = 250 mm

Ordering details

Safety monitoring modules for two-hand control circuits:

SRB 201ZH

refer to page 2-28

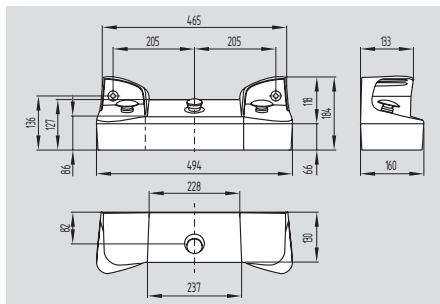
SRB 301HC/R

refer to page 3-14

See Section 5 for details on safety controllers

Two-hand control panels

SEPG

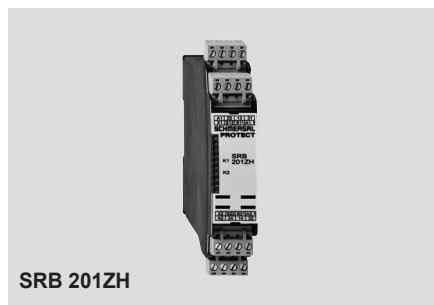


- Aluminum enclosure
- 2 black operating push buttons Ø 55 mm each with 1 NC and 1 NO contacts according to EN 574
- 1 Emergency-Stop button in metal version, EDRRZ 40 RT, with 1 NC and 1 NO contact
- Control panel suitable for mounting 8 supplementary signalling and command devices
- Stand and wall mounting possible
- 2 part enclosure
- Protection class IP65

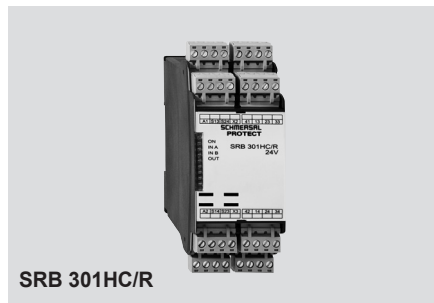
Technical data

Standards:	IEC/EN 60947-5-5 EN 574 EN ISO 13850
Enclosure:	Cast aluminum, powder-coated
Protection class:	IP65
Connection:	Screw terminals
Cable section:	max. 1.5 mm ²
U _i :	440 V
I _{the} :	10 A
Utilization category:	AC-15, DC-13
I _e /U _e :	8 A / 250 VAC 5 A / 24 VDC
Mechanical life:	10 million operations
Dimensions:	494 x 184 x 160 mm
Classification:	
Standards:	EN ISO 13849-1; IEC 61508; IEC 60947-5-3
PL:	up to e
Category:	up to 4
PFH value:	5.0 x 10 ⁻⁹ /h up to max. 100.000 switching cycles/year and max. 40% contact load
SIL:	up to 3 in combination with safety monitoring module
Mission time:	20 years

System components



SRB 201ZH



SRB 301HC/R

Approvals



Ordering details

Standard: SEPG 05.3.4.0.22/95

1NO/1NC per button
1NO/1NC for Emergency-Stop

Empty enclosure: SEPG 05.3.L.22

with 3 mounting holes

Note

Customer-specific designs (also entirely pre-wired, special colors, etc.) available on request

Safety distance calculation:

$$S = (K \times T) + C$$

Legend:

K = Gripping speed = 1,600 mm/s

T = Run-on time in seconds

C = Additional value = 250 mm

Ordering details

Safety monitoring modules for two-hand control circuits:

SRB 201ZH

refer to page 2-28

SRB 301HC/R

refer to page 3-14

See Section 5 for details on safety controllers

Two-hand control panels

SRB 201ZH



Monitoring two-hand control panels to EN 574 III C

- 2 safety contacts, STOP 0
- 1 auxiliary NC contact
- With feedback circuit
- With electronic protection
- 2 LEDs to show operating conditions
- Plug-in screw terminals

Technical data

Standards:	IEC/EN 60204-1, EN 60947-5-1, EN ISO 13849-1, IEC 61508
Feedback circuit (Y/N):	yes
ON delay with automatic start:	typ. 50 ms
Drop-out delay:	typ. 30 ms
Rated operating voltage U_e :	24 VDC -15%/+10% residual ripple max. 10%
Fuse rating for the operating voltage:	Internal electronic trip, tripping current $F1/F2$: > 0.2 A, tripping current $F3$: > 0.6 A
Internal electronic protection (Y/N):	yes
Power consumption:	1.2 W
Monitored inputs:	
- Short-circuit recognition:	yes
- Wire breakage detection:	yes
- Earth connection detection:	yes
Number of NC contacts:	2
Number of NO contacts:	2
Max. conduction resistance:	max. 40 Ω
Outputs:	
Stop category:	0
Number of safety contacts:	2
Number of auxiliary contacts:	1
Max. switching capacity of the safety contacts:	250 VAC, 6 A resistive (inductive in case of appropriate protective wiring); min. 10 V, 10 mA
Utilization category to EN 60947-5-1:	AC-15; DC-13
Fuse rating of the safety contacts:	6.3 A slow blow
Fuse rating of the auxiliary contacts:	2 A slow blow
Mechanical life:	10 million operations
Ambient conditions:	
Ambient temperature:	-25 °C ... +45 °C
Storage and transport temperature:	-40 °C ... +85 °C
Protection class:	Enclosure: IP40, Terminals: IP20, Clearance: IP54
Mounting:	Snap onto standard DIN rail to EN 60715
Connection type:	Screw terminals, plug-in
- min. cable section:	0.25 mm ²
- max. cable section:	2.5 mm ²
Weight:	200 g
Dimensions (Height x Width x Depth):	120 x 22.5 x 121 mm

Approvals



Ordering details

SRB 201ZH-24VDC

Classification

Safety parameters:

Standards:	EN ISO 13849-1, IEC 61508, EN 60947-5-1
PL:	STOP 0: up to e
Category:	STOP 0: up to 4
PFH value:	STOP 0: $\leq 2.00 \times 10^{-8}/h$
SIL:	STOP 0: up to 3
Mission time:	20 years

The PFH value of $2.00 \times 10^{-8}/h$ applies to the combinations of contact load (current through enabling contacts) and number of switching cycles (n-op/y) mentioned in the table below. At 365 operating days per year and a 24-hours operation, this results in the below-mentioned switching cycle times (t-cycle) for the relay contacts. Diverging applications upon request.

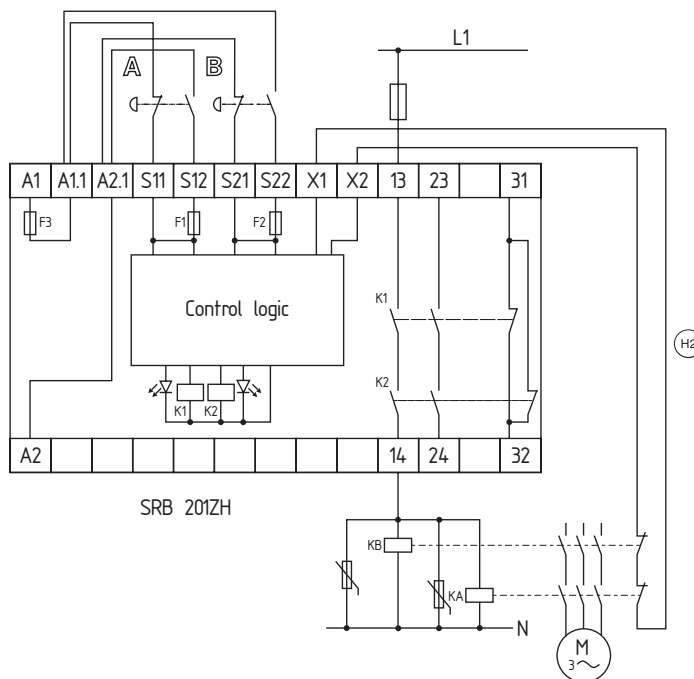
Contact load	n-op/y	t-cycle
20 %	525,600	1.0 min
40 %	210,240	2.5 min
60 %	75,087	7.0 min
80 %	30,918	17.0 min
100 %	12,223	43.0 min

Two-hand control panels

Note

- Button A and B: 1 NC contact / 1 NO contact (note: the NC contact of the buttons A and B must be opened, before the NO contact closes. No overlapping contacts to avoid triggering of fuse F1 und F2).
- Relay outputs: Suitable for 2 channel control, for increase in capacity or number of contacts by means of contactors or relays with positive-guided contacts.
- $\textcircled{H2}$ = Feedback circuit
- The control recognizes cross-short, cable break and earth leakages in the monitoring circuit.
- Simultaneity monitoring 0.5 seconds

Wiring diagram



LED

The integrated LEDs indicate the following operating states.

- Position relay K1
- Position relay K2

Note

- The wiring diagram is shown with guard doors closed and in de-energized condition.
- Inductive loads (e.g. contactors, relays, etc.) are to be suppressed by means of a suitable circuit.