

# SERIES SRB 301 ST

## SERIES SRB 301 ST - 230V

## SERIES SRB 301 SQ - 230V

**General Purpose  
Safety Controllers**  
(for dry contact and  
PNP-type input monitoring)

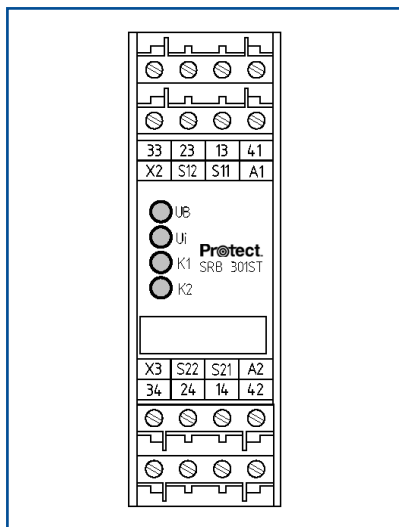


Model SRB 301 ST shown.

### Description

The above “general-purpose” safety controllers are designed for use with safety devices having Normally-Closed (N.C.) or PNP-type switching outputs. Each is equipped for connection of one input device in single- or dual-channel configuration. In addition they feature plug-in screw terminals, user-selectable monitored-manual or automatic reset, feedback monitoring of positive-guided controlled loads and cross-short recognition (on selected models).

#### Front View



Model SRB 301 ST shown.

### TECHNICAL FEATURES

<b>Input Voltage</b>	SRB 301 ST SRB 301 ST - 230 V SRB 301 SQ - 230 V	24 VAC / DC 48 - 230 V AC 48 - 230 V AC
<b># Discrete Input Devices Monitored</b>	1 (Single or Dual-Channel) (SRB 301 SQ Dual-Channel Only)	
<b>Monitored Contact Configuration</b>	N.C. (Dry Contacts) PNP-switching	
<b>Number &amp; Type Safety Outputs</b>	3 N.O. (Dry Contacts)	
<b>Number &amp; Type Auxiliary (Non-Safety or Signalling Output)</b>	1 N.C. (Dry Contacts)	
<b>Typical Input Devices Monitored</b>	<ul style="list-style-type: none"> <li>E-stops (N.C.)</li> <li>Interlock switches (N.C.)</li> <li>Devices with PNP semiconductor outputs (SRB 301 ST-24V only)</li> <li>Coded Magnets (SRB 301 ST-24V only)</li> </ul>	
<b>Type of Reset (Selectable)</b>	<ul style="list-style-type: none"> <li>Monitored-manual (24 VDC trailing edge)</li> <li>Automatic</li> </ul>	
<b>Feedback Monitoring</b>	Yes	
<b>LED Displays</b>	Green LEDs for: <ul style="list-style-type: none"> <li>K1 (safety relay 1)</li> <li>K2 (safety relay 2)</li> <li>U<sub>i</sub> (voltage beyond internal fuse)</li> <li>U<sub>B</sub> (voltage at input terminals, SRB 301 ST only)</li> </ul>	
<b>Conformity to Standards</b>	UL, CSA, BG (CE-compliant)	
<b>Stop Category</b>	0	
<b>Safety Classification</b>	PL <sub>e</sub> , per EN ISO 13849-1 Category 4, per EN 954-1	
<b>Type Fuse</b>	Hybrid	
<b>Selected Features</b>	<ul style="list-style-type: none"> <li>Cross-short recognition (SRB 301ST 24 VAC / DC &amp; SRB 301 SQ only)</li> <li>Plug-in screw terminals</li> <li>Selectable monitored-manual or automatic reset</li> <li>Feedback monitoring</li> </ul>	

### AVAILABLE MODELS

Model Number	Operating Voltage
SRB 301 ST*	24V AC/DC
SRB 301 ST - 230 V	48-230VAC
SRB 301 SQ - 230 V*	48-230VAC

\*Feature cross-short recognition.

# SERIES SRB 301 ST

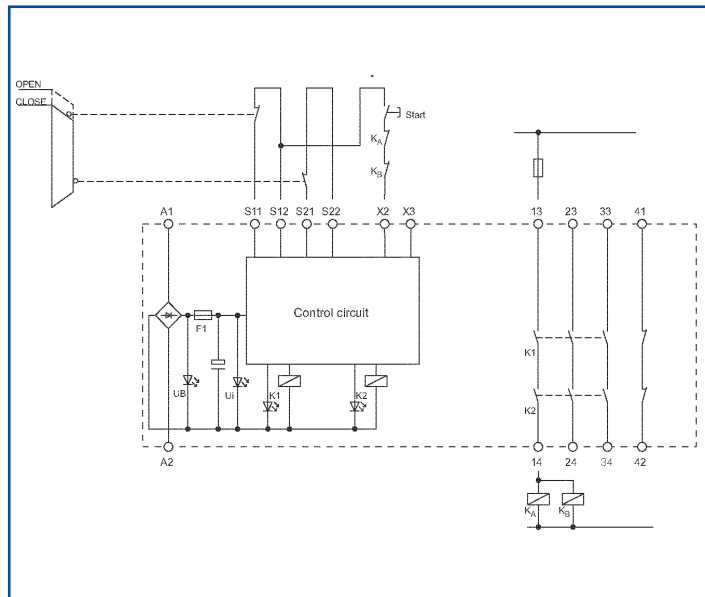
## SERIES SRB 301 ST - 230V

## SERIES SRB 301 SQ - 230V

### MECHANICAL SPECIFICATIONS

<b>Dimensions (W x H x D)</b>	22.5mm x 100mm x 121mm (0.9" x 3.9" x 4.75")
<b>Ambient Operating Temperature Range</b>	-25°C to +45°C (-13°F to +113°F)
<b>Mechanical Life Expectancy</b>	>10 <sup>7</sup> switching cycles
<b>Weight</b>	
SRB 301 ST	240 gm (0.5 lbs.)
SRB 301 ST - 230V	250 gm
<b>Mounting</b>	DIN rail (35mm)

### TYPICAL WIRING DIAGRAM



### ELECTRICAL SPECIFICATIONS

<b>Operating Voltage</b> SRB 301 ST	24 VDC -15% / +20%, residual ripple max. 10%
SRB 301 ST (SQ) - 230V	24 VAC -15% / +10%, 50/60 Hz 48 VAC - 240 VAC, 50/60 Hz
<b>Power Consumption</b> SRB 301 ST	2.4 W (max.), 3.8 VA
SRB 301 ST (SQ) - 230V	2.8 VA
<b>Fuse (Input Power)</b> 24 V	Internal electronic (hybrid) Fuse F1, Tripping current > 0.6 A (Resets after interruption of supply voltage)
230 V	F1 : glass bulb, tripping current 0.5 A Secondary : electronic fuse, tripping current 0.12 A
<b>Fuse (Safety Outputs)</b>	6 A Slow-blow (Recommended)
<b>Switching Capacity (Safety Outputs)</b>	230 VAC, 6 A Resistive (inductive with suitable surge suppressor)
<b>Switching Capacity (Auxiliary Contacts)</b>	24 VDC, 2 A
<b>Application Category</b>	AC 15 / DC 13, EN 60 947-5-1
<b>Pick-up Delay</b> SRB 301 ST	≤ 200 ms
SRB 301 ST (SQ) - 230V	≤ 30 ms
<b>Drop-out Delay</b> SRB 301 ST	≤ 20 ms
SRB 301 ST (SQ) - 230V	≤ 30 ms
<b>Contact Type &amp; Materials</b>	AgSnO, self cleaning, positive-guided
<b>Contact Resistance</b>	100 mOhm (max. in new state)
<b>Air Clearance &amp; Creepage Distance</b>	DIN VDE 0110-1 (04.97), 4 kV/2
<b>Cable Connections</b>	<ul style="list-style-type: none"> <li>Self-lifting, plug-in screw terminals for 13 to 20 AWG</li> <li>Stranded or multi-core with wire end ferrule</li> </ul>
<b>Terminal Labeling</b>	DIN EN 50 005 / DIN 50 013

10

### TERMINAL CONNECTIONS (Model SRB 301 ST shown)

