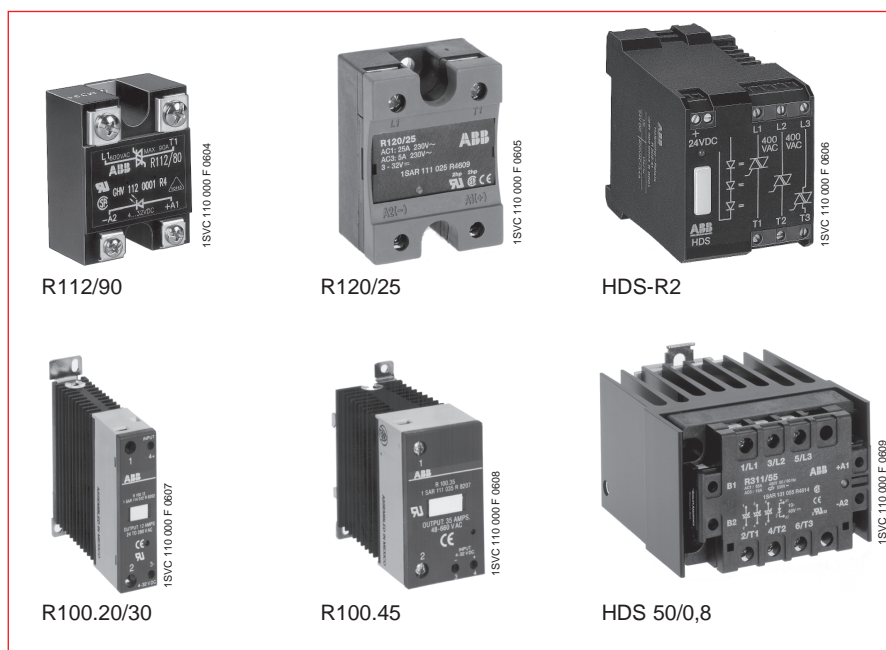


# ABB Solid-state relays SIGMASWITCH®

## Content

### Solid state relays

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## Description

### Type series R100

#### General features

- Complete, compact design
- Mounting on 35 mm DIN rail or screw-mounting on panel
- Current range 20A, 30A and 45A (thyristors)
- Cage terminal with incorporated shock protection (touch proof)
- Zero voltage or instantaneous tripping
- LED display of the input status
- **Integrated heat sink, ready for use**

#### Application

- Solid state switching of resistive and inductive AC and 3-phase loads

AC 1: resistive load  
AC 3: motor load

#### Certifications and Approvals

R100	x
R111 / R115 / R112	x
R12x	x
R311 / R315	x
HS / HDS	x
HDS-R2/HDWS	x

### Type series 111 / 311

#### General features

- Load side:  
Single-phase devices: Thyristors for AC1 and AC3 up to 690VAC and 100A  
3-phase devices:  
alternistors for AC 1 and AC3 up to 530VAC and 55A, with internal RC-circuit
- Electrical isolation by means of an optocoupler between control circuit and load circuit
- Zero voltage switching, radio interference suppressed
- Screw mounting, snap on mounting with adapter for 35 mm top-hat rail to EN DIN 50 022
- Electrical connection: screw connection
- Shock protection  
Series R111/R115 with additional terminal cover  
NEW for Series R12x, R311/R315  
Incorporated shock protection  
LED status display

#### Application

- Contactless and wear-free switching of AC and 3-phase loads up to 0.5 power factor.

	UL	CSA
	cUL <sup>1)</sup>	
x	x	
x	x	
x	x	
x	x	
x	x	

### Semi-conductor 3-phase contactor HDS Semi-conductor 3-phase reversing contactor HDWS

#### General features

- Load side:  
HDS R2: Triacs für AC 1 / AC 3 up to 460VAC and 3.4 A with internal overvoltage protection  
HDS-50: Alternistors for AC 1 / AC 3 up to 530VAC and 50A, with internal RC-circuit and overvoltage protection
- Electrical isolation by means of optocoupler between control circuit and load circuit
- Switch-position indication by LED
- Control circuit protected against reverse polarity
- Zero voltage switching, radio interference suppressed
- Snap on mounting with adapter for 35 mm top-hat rail to EN DIN 50 022.
- Integrated shock hazard protection
- Electrical connection: screw connection
- **Integrated heat sink, ready-to-use**

#### Application

- Solid state switching of resistive and inductive AC and 3-phase loads

<sup>1)</sup> pending

# SIGMASWITCH® solid state relays

## Ordering details

### Solid state relays - standard version

- Convenient
- Space-saving
- Standard enclosure

Type	Rated control circuit voltage $U_c$	Rated operating voltage $U_e$	Rated current $I_e$ AC1	Order code	Pack. unit piece	Price 1 piece	Weight 1 piece kg/lb
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#### Standard version, single-phase, load voltage: 24-280VAC

R111/25	3-32VDC	24-280VAC	25A	1SAR 111 025 R 0102	1		0.110/0.24
R111/45	3-32VDC	24-280VAC	50A	1SAR 111 050 R 0102	1		0.110/0.24
R115/25	90-280VAC/DC	24-280VAC	25A	1SAR 111 025 R 0302	1		0.110/0.24
R115/45	90-280VAC/DC	24-280VAC	50A	1SAR 111 050 R 0302	1		0.110/0.24

#### Standard version, single-phase, load voltage: 42-530VAC

R111/20	3-32VDC	42-530VAC	25A	1SAR 111 025 R 0106	1		0.110/0.24
R111/40	3-32VDC	42-530VAC	50A	1SAR 111 050 R 0106	1		0.110/0.24
R111/90	3-32VDC	42-530VAC	90A	1SAR 111 090 R 0106	1		0.140/0.28
R115/20	90-280VAC/DC	42-530VAC	25A	1SAR 111 025 R 0306	1		0.110/0.24
R115/40	90-280VAC/DC	42-530VAC	50A	1SAR 111 050 R 0306	1		0.110/0.24
R115/90	90-280VAC/DC	42-530VAC	90A	1SAR 111 090 R 0306	1		0.140/0.28

#### Standard version, single-phase, load voltage: 24-690VAC

R112/50	4.5-32VDC	24-690VAC	50A	1SAR 111 050 R 0608	1		0.110/0.24
R112/90	4.5-32VDC	24-690VAC	90A	1SAR 111 090 R 0608	1		0.140/0.28
R112/110	4.5-32VDC	24-690VAC	110A	1SAR 111 110 R 0608	1		0.140/0.28

### Solid state relays - touch proof, compact version

- Incorporated shock protection (no additional terminal cover necessary)
- LED status display
- Save foot print as in the standard series (easy interchangeability)

#### Compact version, single-phase, load voltage: 24-265VAC

R120/25	3-32VDC	24-265VAC	25A	1SAR 111 025 R 4609	1		0.060/0.13
R120/50	3-32VDC	24-265VAC	50A	1SAR 111 050 R 4609	1		0.060/0.13

#### Compact version, single-phase, load voltage: 42-530VAC

R121/25	4-32VDC	42-530VAC	25A	1SAR 111 025 R 4606	1		0.060/0.13
R121/50	4-32VDC	42-530VAC	50A	1SAR 111 050 R 4606	1		0.060/0.13
R121/75	4-32VDC	42-530VAC	75A	1SAR 111 075 R 4606	1		0.100/0.22
R121/100	4-32VDC	42-530VAC	100A	1SAR 111 100 R 4606	1		0.100/0.22
R126/25	24-265VAC/24-48VDC	42-530VAC	25A	1SAR 111 025 R 4707	1		0.060/0.13
R126/50	24-265VAC/24-48VDC	42-530VAC	50A	1SAR 111 050 R 4707	1		0.060/0.13
R126/75	24-265VAC/24-48VDC	42-530VAC	75A	1SAR 111 075 R 4707	1		0.100/0.22
R126/100	24-265VAC/24-48VDC	42-530VAC	100A	1SAR 111 100 R 4707	1		0.100/0.22

#### Compact version, single-phase, load voltage: 42-660VAC

R122/50	4-32VDC	42-660VAC	50A	1SAR 111 050 R 4607	1		0.060/0.13
R122/75	4-32VDC	42-660VAC	75A	1SAR 111 075 R 4607	1		0.100/0.22
R122/100	4-32VDC	42-660VAC	100A	1SAR 111 100 R 4607	1		0.100/0.22

#### Compact version, three-phase, load voltage: 12-530VAC

R311/25	10-40VDC	12-530VAC	25A	1SAR 131 025 R 4814	1		0.380/0.84
R311/55	10-40VDC	12-530VAC	55A	1SAR 131 055 R 4814	1		0.380/0.84
R315/55	20-265VAC/DC	12-530VAC	55A	1SAR 131 055 R 4914	1		0.380/0.84



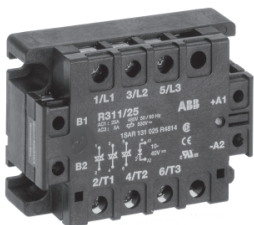
R 111/25



R 120/50



R 126/25

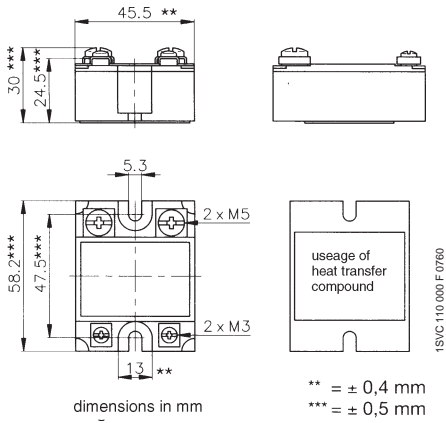


R 311/25

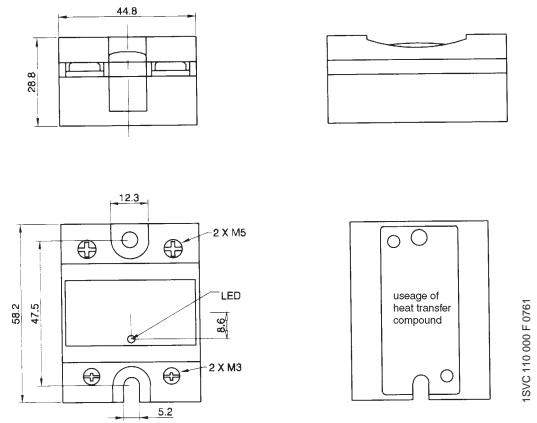
# Solid state relays

## Dimensional drawings

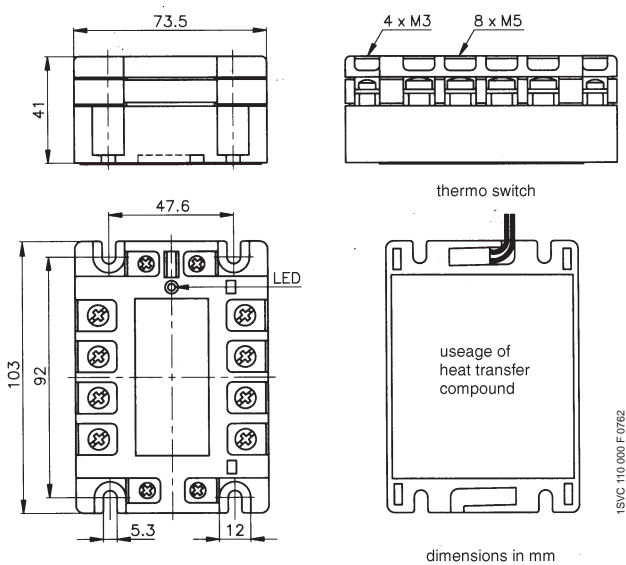
### Dimensional drawings, standard and compact series



Standard Version  
R111 / R112 / R115



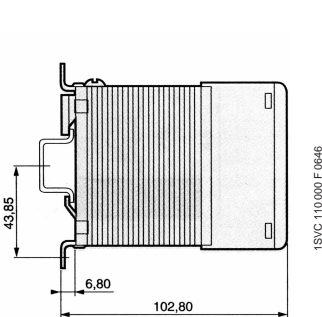
Compact Version  
R120 / R121 / R122 / R126



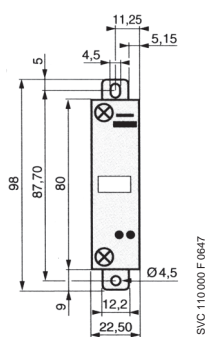
Compact Version  
R311 / R315

Solid-state relays

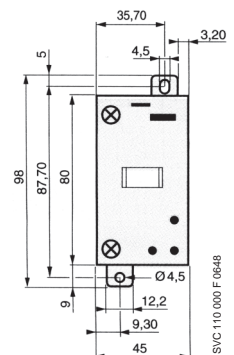
### Dimensional drawings Series R 100



R 100.20  
R 100.30  
R 100.45 / R100.45-SG



R 100.20  
R 100.30



R 100.45  
R 100.45-SG