

# Solid-State Switching Devices

## Solid-State Relays

22.5 mm semiconductor relays  
single phase selection

### Selection and ordering data



3RF21 20-1AA02



3RF21 20-2AA02



3RF21 20-3AA02

Type current <sup>1)</sup>	Maximum achievable power for type current and $U_e =$			Screw connection <sup>2)</sup>	Spring-loaded connection <sup>3)</sup>	Ring cable connection	Std. Pack Qty	Weight per pack approx.
	115 V	230 V	400 V					
A	kW	kW	kW	Order No.	Order No.	Order No.		kg
<b>Zero-point switching, rated operational voltage <math>U_e = 24</math> V to 230 V</b>								
20	2.3	4.6	-	3RF21 20-1AA□2	3RF21 20-2AA□2	3RF21 20-3AA□2	1 unit	0.075
30	3.5	6.9	-	3RF21 30-1AA□2	-	-	1 unit	0.075
50	5.8	11.5	-	3RF21 50-1AA□2	3RF21 50-2AA□2	3RF21 50-3AA□2	1 unit	0.075
70	8.1	16.1	-	3RF21 70-1AA□2	-	-	1 unit	0.075
90	10.4	20.7	-	3RF21 90-1AA□2	3RF21 90-2AA□2	3RF21 90-3AA□2	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 24</math> V to 230 V, control DC 4 ... 30 V</b>								
20	2.3	4.6	-	3RF21 20-1AA42	3RF21 20-2AA42	-	1 unit	0.075
30	3.5	6.9	-	3RF21 30-1AA42	-	-	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 48</math> V to 460 V</b>								
20	-	4.6	8	3RF21 20-1AA□4	3RF21 20-2AA□4	3RF21 20-3AA□4	1 unit	0.075
30	-	6.9	12	3RF21 30-1AA□4	-	-	1 unit	0.075
50	-	11.5	20	3RF21 50-1AA□4	3RF21 50-2AA□4 <sup>4)</sup>	3RF21 50-3AA□4	1 unit	0.075
70	-	16.1	28	3RF21 70-1AA□4	-	-	1 unit	0.075
90	-	20.7	36	3RF21 90-1AA□4	3RF21 90-2AA□4	3RF21 90-3AA□4	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 48</math> V to 600 V, control DC 4 ... 30 V</b>								
20	-	4.6	8	3RF21 20-1AA45	3RF21 20-2AA45	-	1 unit	0.075
30	-	6.9	12	3RF21 30-1AA45	-	-	1 unit	0.075
50	-	11.5	20	3RF21 50-1AA45	-	-	1 unit	0.075
70	-	16.1	28	3RF21 70-1AA45	-	-	1 unit	0.075
90	-	20.7	36	3RF21 90-1AA45	-	3RF21 90-3AA44	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 48</math> V to 600 V, blocking voltage 1600 V</b>								
30	-	-	12	3RF21 30-1AA□6	-	-	1 unit	0.075
50	-	-	20	3RF21 50-1AA□6	3RF21 50-2AA□6	3RF21 50-3AA□6	1 unit	0.075
70	-	-	28	3RF21 70-1AA□6	-	-	1 unit	0.075
90	-	-	36	3RF21 90-1AA□6	3RF21 90-2AA□6	3RF21 90-3AA□6	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 48</math> V to 600 V, control 24 V DC low power</b>								
70	-	-	28	3RF21 70-1AA05-0KN0	-	-	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 24</math> V to 230 V, control 110 V to 230 V</b>								
50	-	-	-	3RF21 50-1BA22	-	-	1 unit	0.075
<b>Instantaneous switching, rated operational voltage <math>U_e = 48</math> V to 460 V, control 24 V DC acc. to EN 61131-2</b>								
20	-	-	-	3RF21 20-1BA04	-	-	1 unit	0.075
30	-	-	-	3RF21 30-1BA04	-	-	1 unit	0.075
50	-	-	-	3RF21 50-1BA04	-	-	1 unit	0.075
70	-	-	-	3RF21 70-1BA04	-	-	1 unit	0.075
90	-	-	-	3RF21 90-1BA04	-	-	1 unit	0.075
<b>Zero-point switching, rated operational voltage <math>U_e = 48</math> V to 600 V, control 24 V DC acc. to EN 61131-2, blocking voltage 1600 V</b>								
50	-	-	-	3RF21 50-1BA06	-	-	1 unit	0.075
<b>Low noise<sup>3)</sup> - zero-point switching, rated operational voltage <math>U_e = 48</math> V to 460 V, control 24 V DC acc. to EN 61131-2</b>								
70	-	-	-	3RF21 70-1CA04	-	-	1 unit	0.075

#### Order No. extension for rated control supply voltage $U_c$

DC 24 V acc. to EN 61131-2  
AC 110 V... 230 V

0  
2

0  
2

0  
2

#### Other rated control supply voltages on request.

- 1) The type current provides information about the performance of the semiconductor relay. The actual permitted operational current  $I_e$  can be smaller depending on the connection method and cooling conditions.  
2) Please note that this version can only be used for a rated current of up to 50 A and a conductor cross section of 10 mm<sup>2</sup>.

- 3) Please note that this version can only be used for a rated current of up to 20 A and a conductor cross section of 2.5 mm<sup>2</sup>. See page 19/21 of Industrial Controls catalog for mm<sup>2</sup> to AWG conversion chart.  
4) 50 A version with 24 AC/DC control - 3RF21 50-2AA14.

**Note:** See page 19/21 of Industrial Controls catalog for mm<sup>2</sup> to AWG conversion chart.