Zelio Relay - Solid State Relays
SSR solid state relays

Applications	**Panel mounted**

Contact type		1 N/O SPST contact
Control voltage ranges	∼	90…280 V
	⎓	3…32 V
Operating voltages	∼	24…280 V, 48…530 V, 48…660 V
Type of switching	∼	Zero voltage switching
Current	∼	10, 25, 50, 75, 90, 125 A
Degree of protection		IP20
LED indication		Yes
Cooling		Thermal protection or with heat sink accessory
Solid state relay type		**SSR P**
Page		76

rail mounted

PF526339-18-Q

PF526062-32-Q

1 N/O SPST contact

90…280 V	90…140 V
4…32 V	3…32 V
24…280 V	
Zero voltage switching	
10, 20, 30 A	45 A
IP20	
Yes	
Built-in heat sink	

SSR D

76

Zelio Relay - Solid State Relays
SSR solid state relays

Presentation

The **SSR** solid state relay range comprises:
- relays for panel mounting: **SSR P**.
- relays for ⊔ rail mounting: **SSR D**.

Description

SSR P relays for panel mounting

1 2 x Ø 4.5 holes for fixing.
2 Connection terminals.
3 Connection terminal screws.
4 Input indicator LED, green.
5 Thermal interface which must be via the back of the product.

SSR D relays for ⊔ rail mounting

1 Lugs for panel mounting.
2 Integrated heat sink.
3 Connection terminals.
4 Connection terminal screws.
5 Input indicator LED, green.
6 Bracket for mounting on ⊔ rail.

Zelio Relay - Solid State Relays
SSR P solid state relays
Panel mounting

General characteristics					
Product certifications			UL E258297, CSA 168986		
Product marking			CE, IEC 60950		
Ambient air temperature around the device	Operation	°C	- 40…+ 80		
	Storage	°C	- 40…+ 125		
Encapsulation			Thermally conductive epoxy		
Degree of protection			IP20		
Terminal screw torque		Nm	Inputs: 1.1 Outputs: 2.2		
Relay type	**SCR output, Zero voltage switching**		**SSR PCDS10A1**	**SSR PCDS25A1**	**SSR PCDS50A1**
Input specification					
Control voltage range		⎓ V	3…32	3…32	3…32
Minimum turn-on voltage		⎓ V	3	3	3
Maximum turn-off voltage		⎓ V	1.0	1.0	1.0
Typical input current		mA	10 at ⎓ 12 V	10 at ⎓ 12 V	10 at ⎓ 12 V
Output specification					
Operating voltage		~ V	24…280	24…280	24…280
Load current range		A	0.15 …10	0.15…25	0.15…50
Transient overvoltage		Vpk	600	600	600
Maximum surge current (16.6 ms)		Apk	120	250	625
Maximum On-state voltage drop at rated current		Vpk	1.6	1.6	1.6
Thermal resistance junction to case		°C/W	1.48	1.02	0.63
Maximum I^2t for fusing (8.3 ms)		A^2sec	60	260	1620
Maximum off-state leakage current at rated voltage		mA	1.0	1.0	1.0
Minimum off-sate dv/dt at maximum rated voltage		V/µsec	500	500	500
Maximum turn-on time		Cycle	1/2	1/2	1/2
Maximum turn-off time		Cycle	1/2	1/2	1/2
Relay type	**SCR output, Zero voltage switching**		**SSR PCDS75A2**	**SSR PCDS90A3**	**SSR PCDS125A3**
Input specification					
Control voltage range		⎓ V	4…32	4…32	4…32
Minimum turn-on voltage		⎓ V	4	4	4
Maximum turn-off voltage		⎓ V	1.0	1.0	1.0
Typical input current		mA	15 at ⎓ 5 V	15 at ⎓ 5 V	15 at ⎓ 5 V
Output specification					
Operating voltage		~ V	48…530	48…660	48…660
Load current range		A	0.15…75	0.15…90	0.15…125
Transient overvoltage		Vpk	1200	1200	1200
Maximum surge current (16.6 ms)		Apk	1000	1200	1750
Maximum On-state voltage drop at rated current		Vpk	1.6	1.6	1.7
Thermal resistance junction to case		°C/W	0.31	0.28	0.22
Maximum I^2t for fusing (8.3 ms)		A^2sec	4150	6000	12 700
Maximum off-state leakage current at rated voltage		mA	10	1.0	1.0
Minimum off-sate dv/dt at maximum rated voltage		V/µsec	500	500	500
Maximum turn-on time		Cycle	1/2	1/2	1/2
Maximum turn-off time		Cycle	1/2	1/2	1/2

Zelio Relay - Solid State Relays

SSR P solid state relays

Panel mounting

Relay type	SCR output, Zero voltage switching		SSR PP8S10A1	SSR PP8S25A1	SSR PP8S50A1
Input specification					
Operating voltage		∼ V	90…280	90…280	90…280
Minimum turn-on voltage		Vrms	90	90	90
Maximum turn-off voltage		Vrms	10	10	10
Typical input current		mA	2 at 120 Vrms	2 at 120 Vrms	2 at 120 Vrms
Output specification					
Operating voltage		∼ V	24…280	24…280	24…280
Load current range		A	0.04…10	0.04…25	0.04…50
Transient overvoltage		Vpk	600	600	600
Maximum surge current (16.6 ms)		Apk	120	250	625
Maximum On-state voltage drop at rated current		Vpk	1.6	1.6	1.6
Thermal resistance junction to case		°C/W	1.48	1.02	0.63
Maximum I^2t for fusing (8.3 ms)		A^2sec	60	260	1620
Maximum off-state leakage current at rated voltage		mA	8…10	8…10	8…10
Minimum off-sate dv/dt at maximum rated voltage		V/µsec	500	500	500
Maximum turn-on time		Cycle	1/2	1/2	1/2
Maximum turn-off time		Cycle	1/2	1/2	1/2

Relay type	SCR output, Zero voltage switching		SSR PP8S75A2	SSR PP8S90A3	SSR PP8S125A3
Input specification					
Operating voltage		∼ V	90…280	90…280	90…280
Minimum turn-on voltage		Vrms	90	90	90
Maximum turn-off voltage		Vrms	10	10	10
Typical input current		mA	2 at 120 Vrms	2 at 120 Vrms	2 at 120 Vrms
Output specification					
Operating voltage		∼ V	80…530	48…660	48…660
Load current range		A	0.04…75	0.04…90	0.15…125
Transient overvoltage		Vpk	1200	1200	1200
Maximum surge current (16.6 ms)		Apk	1000	1200	1750
Maximum On-state voltage drop at rated current		Vpk	1.7	1.7	1.7
Thermal resistance junction to case		°C/W	0.31	0.28	0.22
Maximum I^2t for fusing (8.3 ms)		A^2sec	4150	6000	12 700
Maximum off-state leakage current at rated voltage		mA	10	5	5
Minimum off-sate dv/dt at maximum rated voltage		V/µsec	500	500	500
Maximum turn-on time		Cycle	1/2	1/2	1/2
Maximum turn-off time		Cycle	1/2	1/2	1/2

Zelio Relay - Solid State Relays

SSR D solid state relay

⎍ rail mounting

General characteristics						
Product certifications			UL E258297, CSA 168986			
Product marking			CE, IEC 60950			
Ambient air temperature around the device	Operation	**°C**	- 40…+ 80			
	Storage	**°C**	- 40…+ 125			
Encapsulation			Thermally conductive epoxy			
Degree of protection			IP20			
Terminal screw torque	10…30 A relays	**Nm**	Inputs: 0.6…0.7 Outputs: 0.6…0.7			
	45 A relays	**Nm**	Inputs: 0.6…0.7 Outputs: 1.1…1.7			
Relay type	**SCR output, Zero voltage switching**		**SSR DP8S10A1**	**SSR DP8S20A1**	**SSR DP8S30A1**	**SSR DF8S45A1**
Input specification						
Operating voltage		**~ V**	90…280	90…280	90…280	90…140
Minimum turn-on voltage		**Vrms**	90	90	90	90
Maximum turn-off voltage		**Vrms**	10	10	10	10
Typical input current		**mA**	2 (120 Vrms), 4 (240 Vrms)	2 (120 Vrms), 4 (240 Vrms)	2 (120 Vrms), 4 (240 Vrms)	15 (120 Vrms)
Output specification						
Operating voltage		**~ V**	24…280	24…280	24…280	24…280
Load current range		**A**	0.15…10	0.15…20	0.15…30	0.15…45
Transient overvoltage		**Vpk**	600	600	600	600
Maximum surge current (16.6 ms)		**Apk**	120	250	625	625
Maximum On-state voltage drop at rated current		**Vpk**	1.6	1.6	1.6	1.6
Maximum I^2t for fusing (8.3 ms)		**A^2sec**	60	260	1620	1620
Maximum off-state leakage current at rated voltage		**mA**	10	10	10	10
Minimum off-sate dv/dt at maximum rated voltage		**V/µsec**	500	500	500	500
Maximum turn-on time		**Cycle**	1/2	1/2	1/2	1/2
Maximum turn-off time		**Cycle**	1/2	1/2	1/2	1/2
Relay type	**SCR output, Zero voltage switching**		**SSR DCDS10A1**	**SSR DCDS20A1**	**SSR DCDS30A1**	**SSR DCDS45A1**
Input specification						
Control voltage range		**⎓ V**	4…32	4…32	4…32	3…32
Minimum turn-on voltage		**⎓ V**	4.0	4.0	4.0	4.0
Maximum turn-off voltage		**⎓ V**	1.0	1.0	1.0	1.0
Typical input current		**mA**	8…12	8…12	8…12	17
Output specification						
Operating voltage		**~ V**	24…280	24…280	24…280	24…280
Load current range		**A**	0.15…10	0.15…20	0.15…30	0.15…45
Transient overvoltage		**Vpk**	600	600	600	600
Maximum surge current (16.6 ms)		**Apk**	120	250	625	625
Maximum On-state voltage drop at rated current		**Vpk**	1.6	1.6	1.6	1.6
Maximum I^2t for fusing (8.3 ms)		**A^2sec**	60	260	1620	1620
Maximum off-state leakage current at rated voltage		**mA**	10	10	10	10
Minimum off-sate dv/dt at maximum rated voltage		**V/µsec**	500	500	500	500
Maximum turn-on time		**Cycle**	1/2	1/2	1/2	1/2
Maximum turn-off time		**Cycle**	1/2	1/2	1/2	1/2

Zelio Relay - Solid State Relays
SSR solid state relays

PF526060-24-Q

SSR PCDS25A1

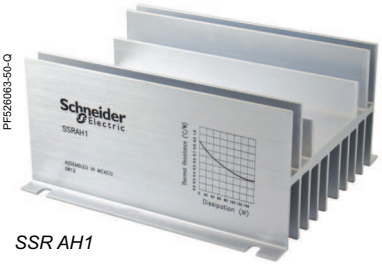
PF526339-18-Q

SSR DCDS10A1

PF526062-32-Q

SSR DCDS45A1

PF526063-50-Q



SSR AH1

PF526064-28-Q

SSR AT1

Solid state relays, 1 N/O SPST contact

■ Panel mounting

Switching	Voltage range		Load current range	References	Weight
	Input	Output			
	V	V	A		kg
SCR output					
Zero voltage switching	⎓ 3…32	∿ 24…280	10	**SSR PCDS10A1**	0.113
			25	**SSR PCDS25A1**	0.113
			50	**SSR PCDS50A1**	0.113
	⎓ 4…32	∿ 48…530	75	**SSR PCDS75A2**	0.113
		∿ 48…660	90	**SSR PCDS90A3**	0.113
			125	**SSR PCDS125A3**	0.113
	∿ 90…280	∿ 24…280	10	**SSR PP8S10A1**	0.113
			25	**SSR PP8S25A1**	0.113
			50	**SSR PP8S10A1**	0.113
		∿ 80…530	75	**SSR PP8S75A2**	0.113
		∿ 48…660	90	**SSR PP8S90A3**	0.113
			125	**SSR PP8S125A3**	0.113

■ ⊔ rail mounting

SCR output					
Zero voltage switching	∿ 90…280	∿ 24…280	10	**SSR DP8S10A1**	0.272
			20	**SSR DP8S20A1**	0.272
			30	**SSR DP8S30A1**	0.272
	∿ 90…140	∿ 24…280	45	**SSR DF8S45A1**	0.482
	⎓ 4…32	∿ 24…280	10	**SSR DCDS10A1**	0.272
			20	**SSR DCDS20A1**	0.272
			30	**SSR DCDS30A1**	0.272
	⎓ 3…32	∿ 24…280	45	**SSR DCDS45A1**	0.482

Accessories for panel mounted relays

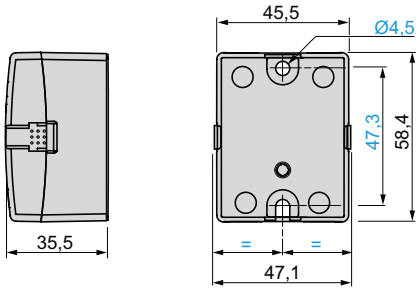
Description	For use with relays	Unit references	Weight kg
Heat sink	SSR PP8S●●●●, SSR PCDS●●●●	**SSR AH1**	0.487
Thermal interface **Sold in lots of 10**	SSR PP8S●●●●, SSR PCDS●●●●	**SSR AT1**	0.011

Presentation : page 72 | Characteristics : page 73 | References : page 76 | Dimensions : page 77

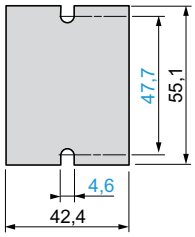
Solid state relays, 1 N/O SPST contact

■ Panel mounting

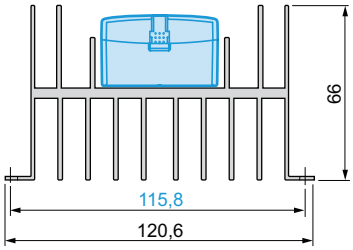
Solid state relays SSR P

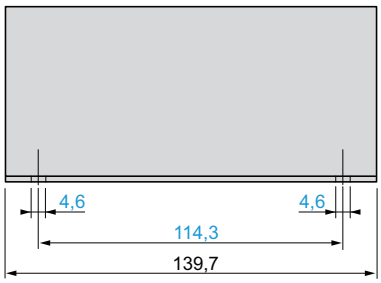


Thermal interface SSR AT1



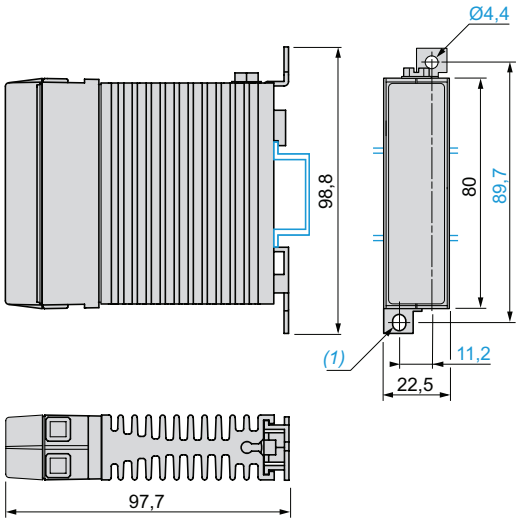
Heat sink SSR AH1





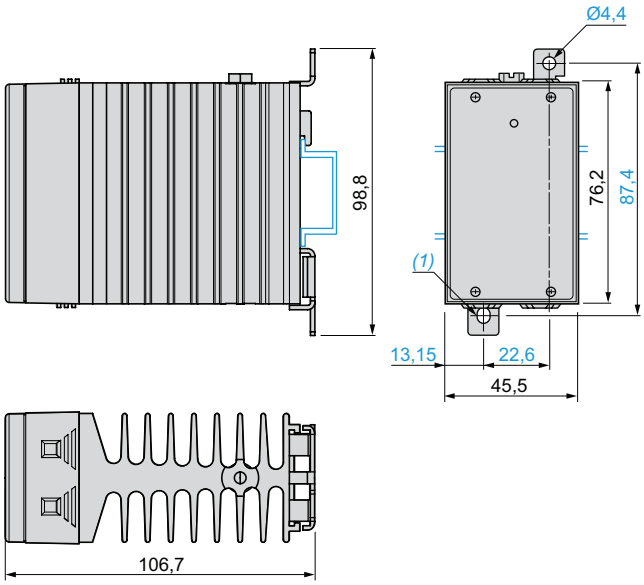
■ ⊔ rail mounting

10…30 A relays



(1) Ø 4.4 x 5.5 elongated hole

45 A relays



(1) Ø 4.4 x 5.5 elongated hole