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SAR & SAS Circuit Protectors

Applications: Typical applications include tight spaces in radio signal amplifiers for base transceiver stations, uninterruptible power supplies, thin-type power supplies, office equipment, and entertainment equipment

Features:

- Ultra-compact and ultralight circuit protectors with reinforced insulation and an electromagnetic safety system
- Smallest hydraulic 20A rating circuit protector (SAR) and 15A rating circuit protector (SAS) in the world
- Trip-free function, smooth handle action
- Conforms to IEC950

Ratings & Specifications

Circuit Breaker	Maximum Rated Current / Voltage				Breaking Capacity
	32VDC	50VDC	125VAC	250VAC	
SAR, SUR, SER	20A	----	20A	15A	500A
SARM, SURM, SERM	15A, 30A*	15A, 30A*	----	----	300A
SAS, SUS, SES	15A	----	15A	15A	500A
SASM, SUSM, SESM	15A	15A	----	----	300A

*Agency approvals: Pending

Specifications:

- Maximum rated current / voltage: 20A (125 V_{AC}), 15A (250V_{AC}, 32V_{DC}), 30A (50V_{DC})
- Number of poles:
SAR(M), SUR(M), SER(M) = 1 to 2 poles
SAS(M), SUS(M), SES(M) = 1 pole
- Operating temperature: -25°C to 65°C
- Allowable relative humidity: 45%-85%
- Breaking capacity: 500A
(in accordance with UL 1077 and EN60934)
- Insulation resistance: At least 100 M with 500V_{DC} megger
- Dielectric strength: V_{AC} 50/60 Hz 1500V_{AC} for 1 minute (UL/CSA/general products), V_{AC} 50/60 Hz 3000V_{AC} for 1 minute (TÜV products) leakage current 1mA or less. Auxiliary switch: V_{AC} 50/60 Hz 500V_{AC} for 1 minute
- Vibration resistance: Approximately 98m/s² (10G) (Mil-STD-202 Method 201A @ I_n)
- Shock resistance: 490m/s² (50G) (Mil-STD-202 Method 213 test condition A @ I_n)
- Operational life: At least 10,000 times (6 times per minute, ON-OFF 6,000 times @I_n, 4,000 times under no-load condition)

Approvals:



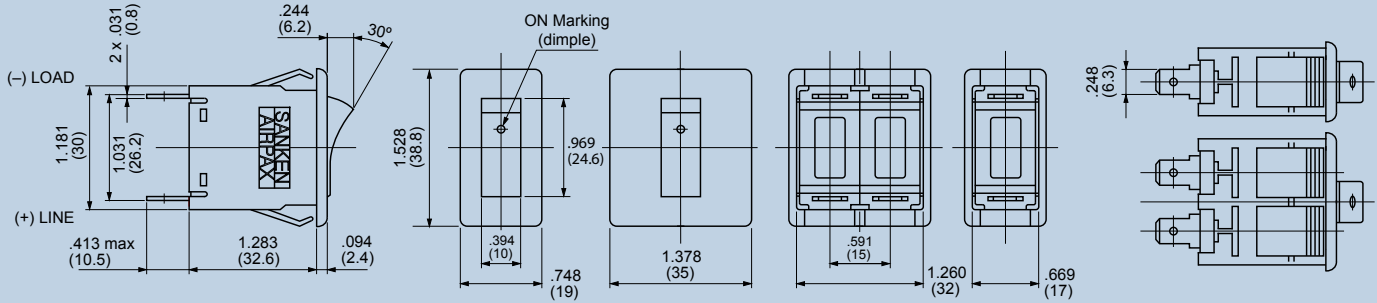
Overcurrent Protection for Small Equipment

The SAR and SAS circuit protectors provide protection from over-current conditions in an ultra-compact package. The SAR and SAS are the standard products, the SUR and SUS have both UL and CSA approvals, and the SER and SES carry UL, CSA and TÜV approvals.

Please contact Airpax for assistance in applying the SAR, SUR, SER, SAS, SUS, and SES circuit protector to meet your power protection needs.

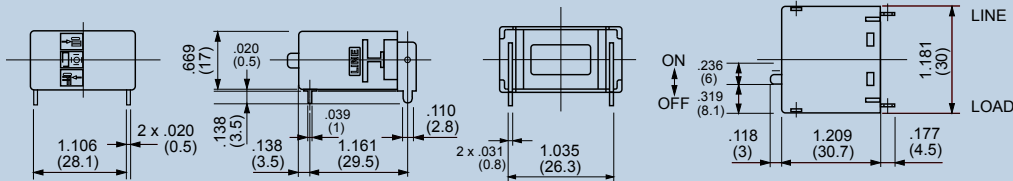
SAR, SUR, SER, SARM, SURM, SERM

*Outline drawings show quick connect specifications. Dimensions = in (mm)



SAS, SUS, SES, SASM, SUSM, SESM

*Outline drawings show PCB mount. Dimensions = in (mm)



SAR - F - 1RE 1 - 51 - 10A - 52F - 5A - BWT - AC

1 First Decision	
Model	
Code	Description
SAR	General Product
SUR	RU / CSA approved
SER	RU / CSA / TÜV approved
SARM	General Product with magnet
SURM	cRUus approved with magnet
SERM	cRUus / TÜV approved with magnet
SARM, SURM, SERM: note terminals have porlarity, LINE connect to (+)	
SAS	General Product
SUS	RU / CSA approved
SES	RU / CSA / TÜV approved
SASM	General Product with magnet
SUSM	RU / CSA approved with magnet
SESM	RU / CSA / TÜV approved with magnet
SASM, SUSM, SESM: note terminals have porlarity, LINE connect to (+)	

3 Third Decision	
Circuit type	
Code	Select 2 options****
0	Switch type
0RE	Switch type with auxiliary switch
1	Series type
1RE	Series type with auxiliary switch
1RS	Series type with alarm switch
3	Parallel type (SAR, SUR, SER, SARM, SURM, SERM only)
4	Relay type (SAR, SUR, SARM, SURM, only)
When the auxiliary switch or alarm switch is a gold contact, "G" is added to the symbol. For example "1REG"	

4 Fourth Decision	
Trip Delay	
Code	Description
51	VDC medium speed
52	VDC low speed
61	VAC medium speed
62	VAC low speed
SP	Relay type for voltage trip (SAR, SUR, SARM, SURM, only)
If an inertial wheel is required, add "F" to the end of the code. Example: 62F	
If any switch type was selected in the 3rd decision, do not choose a trip delay (4th decision)	

5 Fifth Decision	
Rated current*	
Code	
0.1A	
0.5A	
1.0A	
2.0A	
3.0A	
5.0A	
7.5A	
10.0A	
15.0A	
20.0A	
25.0A	
30.0A	

7 Seventh Decision	
Remarks	
Code	Description
AC	Switch type - service circuit AC
DC	Switch type - service circuit DC
A, B, D	PCB type Chose A, B, or D (SAR, SUR, SER, SARM, SURM, SERM only)

6 Sixth Decision	
Handle marking (*1)	
Code	Description
	No mark standard
Use the options below for: SAR, SUR, SER, SARM, SURM, SERM only	
BWT	Black handle
RWT	Red handle
BWY	Black handle
RWY	Red handle
BWO	Black handle
WBO	White handle
GUARD	Handle Guard

2 Second Decision	
Terminal type	
Code	Description
F	0.25" quick connect terminals (SAR, SUR, SER, SARM, SURM, SERM only)
P	PCB - PC board terminals

SAR, SUR, SER, SARM, SURM, SERM				
*Rated current depends on the circuit type & circuit voltage				
Circuit Voltage	Switch type with alarm switch	Series type with alarm switch	Parallel type	Relay type
125VAC	Main = 20A max	0.1 to 20A	0.1 to 20A	0.1 to 1A
250VAC	Main = 15A max	0.1 to 15A	0.1 to 15A	0.1 to 1A
32VDC	Main = 15A max	0.1 to 15A	0.1 to 15A	0.1 to 1A
50VDC	Main = 30A max (*4)	0.1 to 30A (*4)	----	----
SAS, SUS, SES, SASM, SUSM, SESM				
0.1 to 15A				

*1.) This decision only applies to: SAR, SUR, SER, SARM, SURM, SERM

*2.) 2-pole options are only available for: SAR, SUR, SER, SARM, SURM, SERM

*3.) If the same specifications are required in the 4th and 5th decision for each pole in a 2-pole device (example, both poles require 51-10A), do not enter a Optional Pole 2 entry into the 4th and 5th decision.

*4.) SARM - 50VDC, 30A max
SURM/SERM - 50VDC, 15A max

Disregard sixth decision for: SAS, SUS, SES, SASM, SUSM, SESM

Disregard the pole 2 option for: SAS, SUS, SES, SASM, SUSM, SESM

Example: SAR-F-1RE 1 - 51 - 10A both poles need 51-10A

QAS, QAL, QFS, QFL Quick-Action Fuses



Specifications:

- Rated voltage: 250-600V_{AC}; 300-500V_{DC}
- Rated current: 10A-300A
- Breaking capacity: 100kA at 250V_{AC} and 600 V_{AC}; 10kA at 300 V_{DC} and 500 V_{DC}
- Power loss: 1W-43W
- Connecting bar: 0.016-0.310in² (10-200mm²)
- I^2t (A²S)X10³: Fusing = .009-14; Operating at 250V_{AC} = .04-102; Operating at 600V_{AC} = .6-175
- Approvals:



Overcurrent Protection for Semiconductor Elements and Cables

The QAS, QAL, QFS, QFL product lines feature L-type terminals and carry a rated voltage of up to 600 VAC and 500 VDC, 300A max, 100K AIC. They feature a high current-limiting effect and superior quick-action fusing performance, excellent arc-suppressing performance, and reliable breaking action. Because of their low power loss, they save energy and also feature low surge voltage at the breaking point. Superior non-degradation characteristics make it ideal for motors subject to extreme load variations.

Applications: Typical applications include inverters, arc welders, rectifiers, CNC equipment, battery circuits, and other protective applications.

Features:

- L-type terminal construction for easy installation
- UL, cULus, and TÜV approved products available
- Large breaking capacity (100kA)
- Low I^2t value, semiconductor protection balance can be easily obtained
- Compact and lightweight
- Resistant to repetitive currents
- Excellent current-limiting characteristics
- Low power loss

Options				
	Model	Rated Current (A)	Rated Voltage (V)	Breaking Capacity (VAC / VDC)
	QAS25U-□	20 to 100	250VAC / 300VDC	10kA / 10kA
	QAL25U-□	75 to 300	250VAC / 300VDC	10kA / 10kA
	QAS60U-□	20 to 75	600VAC / 500VDC	100kA / 10kA
	QAL60U-□	100 to 300	600VAC / 500VDC	100kA / 10kA
	QFS25U-□	10 to 100	250VAC (cULus, TÜV) 400VDC (cULus)	10kA / 10kA
	QFL25U-□	75 to 300	250VAC (cULus, TÜV) 400VDC (cULus)	10kA / 10kA
Indicator Fuse	Increase uptime by pinpointing open fuses with this instant visual identification.			
Microswitch with Housing	Couple the indicator fuse with a microswitch to create an integrated system which provides a signal to a panel or CPU to inform a technician about which fuse is blown.			
Fuse Holder	Increase mounting options by incorporating a fuse holder into your system.			

*UL, UL Recognized Component:
UL file # E174284 (250VAC/300VDC, 600VAC/500VDC)

*cULus, UL Recognized Component, U.S.A. & Canada:
UL file # E174284 (250VAC/400VDC)

*TÜV Approved:
TÜV file # J2150262, J2150268, J2150270, J2150271 (250VAC)

*These approvals are options available in this product family, general products do not carry these approvals. Review the Airpax catalog and website for further information on part numbers and product specifications for these approvals.

Ratings & Specifications

Model	Rated Voltage	Rated Current (A)	Breaking Capacity	Power Loss ^{*6}		Fusing ^{*2,7} at Vac	Operating at Vac ^{*3,4,8}
				Connecting Bar	in ² mm ²		
QAS25-20 (S)	250 Vdc	20		2.0	0.019	12	0.03
QAS25-30 (S)		30		3.0	0.019	12	0.054
QAS25-50 (S)		50	10kA at 250Vdc	5.0	0.037	24	0.17
QAS25-75 (S)		75	(FNU)	7.0	0.060	32	0.49
QAS25-100 (S)	300 Vdc	100		10.0	0.070	45	0.87
QAL25-75 (S)		75	100kA at 250 Vdc	8.0	0.060	32	0.49
QAL25-100 (S)		100		10.0	0.070	45	0.87
QAL25-150 (S)		150	10kA at 300 Vdc	15.0	0.116	75	1.9
QAL25-200 (S)	400 Vdc	200		20.0	0.248	160	3.5
QAL25-300 (S)		300		30.0	0.310	200	8.9
QAS60-20 (S)	600 Vdc	20		3.0	0.019	12	0.030
QAS60-30 (S)		30		5.0	0.019	12	0.054
QAS60-50 (S)		50		10.0	0.037	24	0.17
QAS60-75 (S)		75	100kA at 600 Vdc	17.0	0.060	32	0.47
QAL60-100 (S)	500 Vdc	100		20.0	0.050	32	0.87
QAL60-150 (S)		150	10kA at 500 Vdc	26.0	0.155	100	2.3
QAL60-200 (S)		200		32.0	0.248	160	4.4
QAL60-250 (S)		250		38.0	0.310	200	7.9
QAL60-300 (S)	600 Vdc	300		43.0	0.310	200	14.0
QF525-10 (S)		10		1.0	0.016	10	0.009
QF525-20 (S)		20		2.1	0.022	14.4	0.035
QF525-30 (S)		30	10kA at 250Vdc	3.8	0.040	26	0.055
QF525-50 (S)	250 Vdc	50	(c)RIUs (TUV)	5.9	0.070	45	0.18
QF525-75 (S)		75		8.0	0.093	60	0.49
QF525-100 (S)		100	100kA at 250 Vdc	11.6	0.124	80	0.88
QF125-75 (S)	400 Vdc	75		7.7	0.093	60	0.49
QF125-100 (S)		100	10kA at 400 Vdc	10.6	0.124	80	0.88
QF125-150 (S)		150		17.6	0.194	125	1.98
QF125-200 (S)		200	(c)RIUs	22.5	0.310	200	3.51
QF125-300 (S)		300		35.4	0.465	300	8.99

External Dimensions

Model	External dimensions: in (mm)											Weight: oz (gram)	Mounting Hole, Bolt Size Limit
	A	B	C	D	E	F	G	T	W	J	K	L	
QF525-10 (S)													
QAS25-20 (S)													
QF525-20 (S)													
QAS25-30 (S)													
QF525-30 (S)													
QAS25-50 (S)													
QF525-50 (S)													
QAS25-75 (S)													
QF525-75 (S)													
QAS25-100 (S)													
QAL25-75 (S)													
QF125-100 (S)													
QAL25-150 (S)													
QF125-200 (S)													
QAL25-300 (S)													
QAS60-20 (S)													
QAL60-30 (S)													
QAS60-50 (S)													
QAS60-75 (S)													
QAS60-100 (S)													
QF125-300 (S)													
QAS60-250 (S)													
QAS60-300 (S)													

*1. Time constant is 4ms max.

*2. Calculated value.

*3. Actual measured value at conventional current of 250VAC at 100kA (r.m.s.) and short-circuit power factor of 14%.

*4. Indicates actual measured value at conventional current of 600VAC at 100kA (r.m.s.) and short-circuit power factor of 7%.

*5. QAS / QAL / QFS / QFI - Specifications of the indicator fuse are the same.

*6. Max value at rated current.

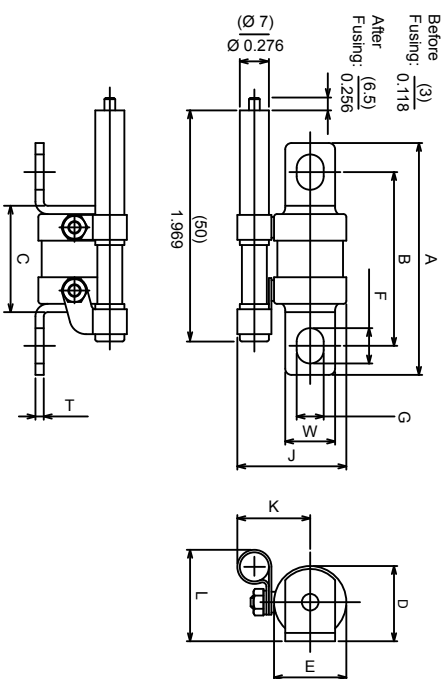
*7. Radiation is not considered in this calculated value.

*8. Max value at conventional current of 250VAC at 100kA (r.m.s.) and short-circuit power factor of 16%.

(S) : Indicator fuse option available.
place an S at the end of the PN. Example QAS60-300 becomes QAS60-300S

Outline drawings show fuse with indicator fuse specifications

***Review the Airpak full catalog and website for further info on PNs and options available



1 First Decision

Model	General Product (no approvals)
QAS25	
QAL25	
QAS60	
QAL60	
QF525	
QF125	
QAS25U	
QAL25U	
QAS60U	
QF525U	
QF125U	
QF125U □-T	

QAS25 - □ - □

2 Second Decision

Rated current (A)

Input a value from 10 to 300
Use reference table
"Ratings & Specifications"

3 Third Decision

Accessories

No entry	Fuse unit only
S	Equipped with fusing indicator fuse
S-M1	Equipped with fusing indicator fuse and microswitch with housing (silver contacts, solder-on terminals)***
S-M2	Equipped with fusing indicator fuse and microswitch with housing (gold contacts, quick-connect #110 terminals)
S-M3	Equipped with fusing indicator fuse and smaller microswitch with housing (silver contacts, solder-on terminals)***
S-M4	Equipped with fusing indicator fuse and smaller microswitch with housing (gold contacts, solder-on terminals)***
T	cRIUs, TÜV approved product, available only on QF525U and QF125U. No indicator fuse or microswitch options.

QAB & HQA

Quick-Action Fuses



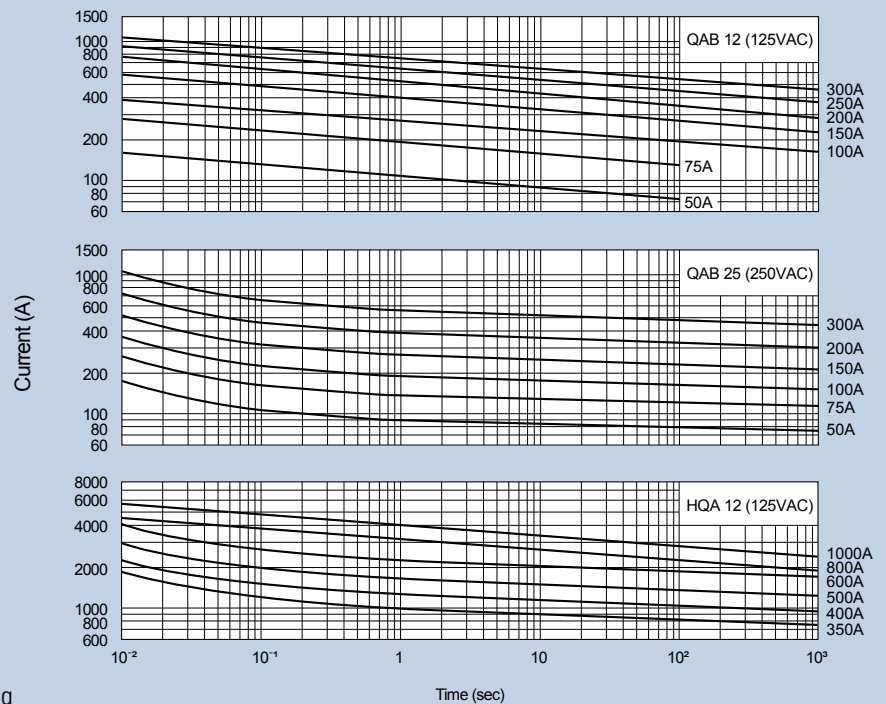
Overcurrent Protection for Semiconductor Elements and Cables

The QAB and HQA product lines feature axial bolted tag connectors and carry a rated voltage of up to 250 VAC, 1000A max, 30k AIC. They feature a high current-limiting effect and superior quick-action fusing performance, excellent arc-suppressing performance, and reliable breaking action. Because of their low power loss, they save energy and also feature low surge voltage at the breaking point. Superior non-degradation characteristics make it ideal for motors subject to extreme load variations.

Applications: Typical applications include inverters, arc welders, rectifiers, CNC equipment, battery circuits, and other protective applications.

Features:

- Axial bolted tag connectors for easy installation
- Large breaking capacity (30kA)
- Low I^2t value, semiconductor protection balance can be easily obtained
- Compact and lightweight
- Resistant to repetitive currents
- Excellent current-limiting characteristics
- Low power loss

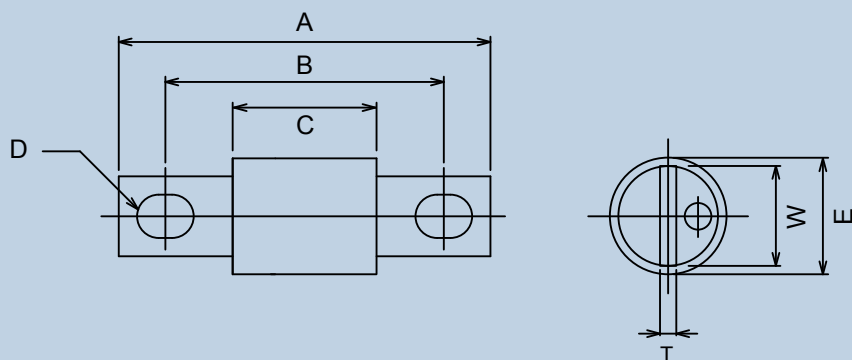


Specifications:

- Rated voltage: 125-250VAC
- Rated current: 50A-1000A
- Breaking capacity: 10kA-30kA at 125VAC and 250 VAC
- Power loss: 4W-27W
- Connecting bar: 0.866-1.085 in² (22-700 mm²)
- I^2t (A²S) $\times 10^3$: Fusing = .025-21 ; Operating at 125VAC = .075-63 ; Operating at 250VAC = .096-3.72

Ratings & Specifications

Model	Rated Voltage	Rated Current (A)	Breaking Capacity	Power Loss			I ² t(A ² s)x10 ³		External dimensions: in (mm)							Mounting Hole, Bolt Size Limit
				(W)	Connecting Bar		Fusing	Operating at V _{AC}	A	B	C	E	W	T	D	
					in ²	mm ²										
QAB12-50	125 V _{AC} rms	50	10kA	4.1	0.034	22	0.025	0.075	3.150 (80)	2.244 (57)	1.024 (26)	Ø1.102 (Ø28)	0.866 (22)	0.197 (5)	0.354 x 0.551 (9 x 14)	? 5/16 - 18 (? M9)
QAB12-75		75		5.3	0.059	38	0.073	0.22								
QAB12-100		100		9.0	0.059	38	0.14	0.42								
QAB12-150		150		10.8	0.155	100	0.34	1.02								
QAB12-200		200		14.0	0.233	150	0.56	1.68								
QAB12-250		250		18.0	0.372	240	0.81	2.43								
QAB12-300		300		18.0	0.465	300	1.0	3.00								
HQA12-350		30kA	350	18.5	0.465	300	3.6	10.8	4.331 (110)	2.913 (74)	1.299 (33)	Ø1.969 (Ø50)	1.654 (42)	0.315 (8)	0.354 x 0.669 (9 x 17)	? 5/16 - 18 (? M9)
HQA12-400			400	18.0	0.465	300	5.5	16.5								
HQA12-500			500	22.5	0.620	400	9.0	27								
HQA12-600			600	25.2	0.620	400	18.0	54								
HQA12-800			800	27.0	0.648	450	13.0	39								
HQA12-1000			1000	27.0	1.085	700	21.0	63								
QAB25-50		250 V _{AC} rms	50	10kA	4.1	0.034	22	0.032	0.096	3.150 (80)	2.244 (57)	1.024 (26)	Ø1.102 (Ø28)	0.866 (22)	0.197 (5)	0.354 x 0.551 (9 x 14)
QAB25-75	75		6.9		0.059	38	0.078	0.23								
QAB25-100	100		9.0		0.059	38	0.14	0.42								
QAB25-150	150		12.5		0.155	100	0.29	0.87								
QAB25-200	200		16.0		0.155	100	0.58	1.74								
QAB25-300	300		19.5	0.465	300	1.24	3.72	3.937 (100)	2.559 (65)	1.181 (30)	Ø1.417 (Ø36)	1.181 (30)	0.236 (6)	0.394 x 0.591 (10 x 15)	? 3/8 - 16 (? M10)	



1 First Decision

Model

QAB

HQA

2 Second Decision

Rated Voltage (V)

Code	Voltage
12	125 V _{AC}
25	250 V _{AC}

3 Third Decision

Rated Current (A)

Input a value from 50 to 1000
Use reference table
"Ratings & Specifications"

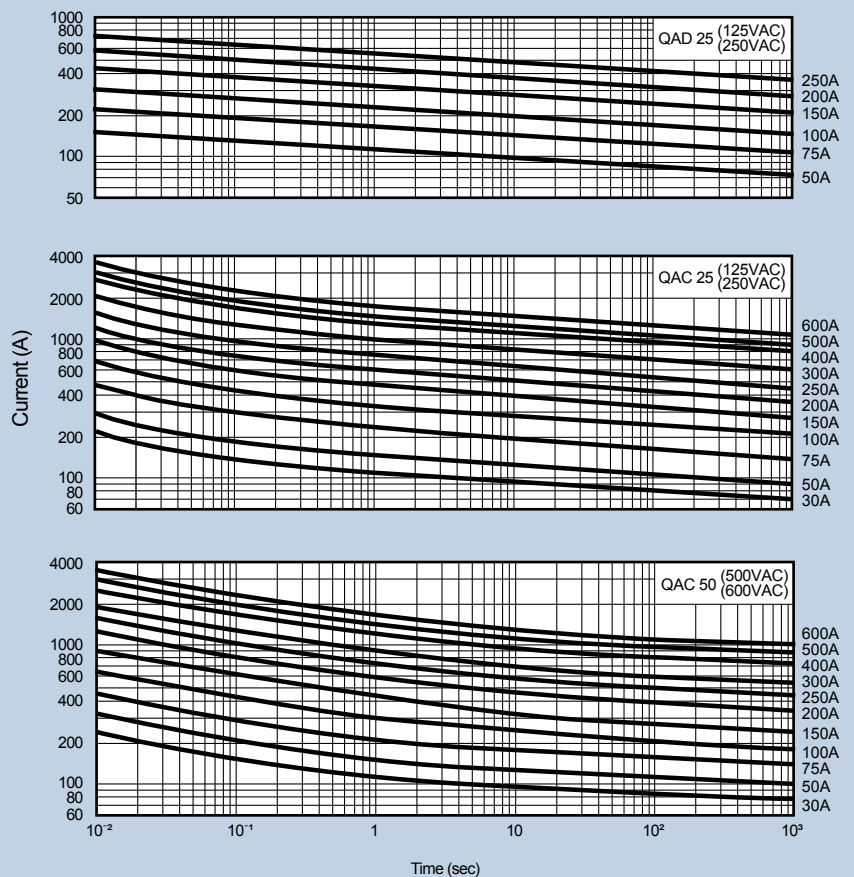
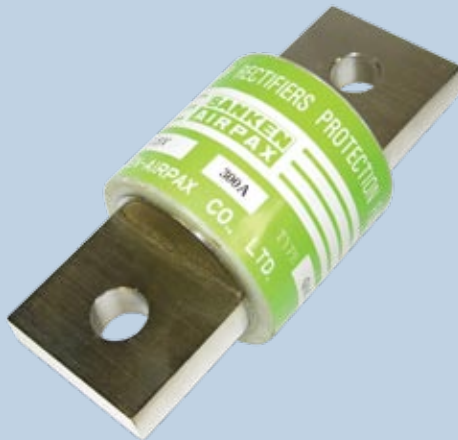
QAB 25 - 100

QAC & QAD Quick-Action Fuses

Applications: Typical applications include inverters, arc welders, rectifiers, CNC equipment, battery circuits, and other protective applications.

Features:

- Axial bolted tag connectors for easy installation
- Large breaking capacity (50kA)
- Low I^2t value, semiconductor protection balance can be easily obtained
- Compact and lightweight
- Resistant to repetitive currents
- Excellent current-limiting characteristics
- Low power loss



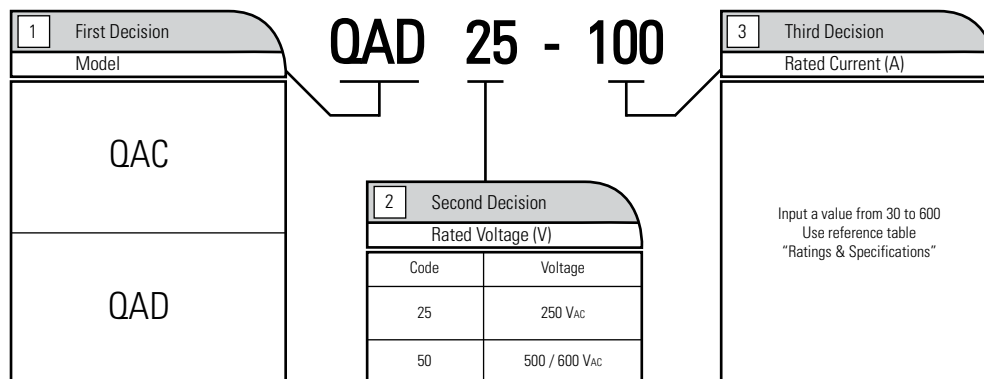
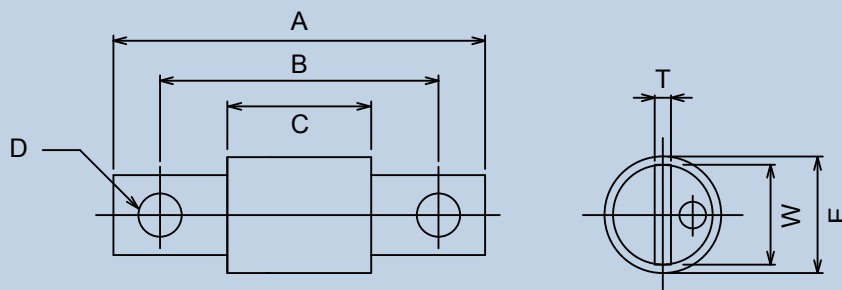
Overcurrent Protection for Semiconductor Elements and Cables

The QAC and QAD product lines feature axial bolted tag connectors and carry a rated voltage of up to 600 VAC, 600A max, 50K AIC. They feature a high current-limiting effect and superior quick-action fusing performance, excellent arc-suppressing performance, and reliable breaking action. Because of their low power loss, they save energy and also feature low surge voltage at the breaking point. Superior non-degradation characteristics make it ideal for motors subject to extreme load variations.

Specifications:

- Rated voltage: 125-600VAC
- Rated current: 30A-600A
- Breaking capacity: 50kA at 125VAC, 250VAC, 500VAC and 600 VAC
- Power loss: 3W-36W
- Connecting bar: 0.012-0.465in² (8-300mm²)
- I^2t (A²S)X10³: Fusing = .013-8.64 ; Operating at 250VAC = .31-77.8 ; Operating at 500VAC & 500VAC = 1.36-154

Model	Rated Voltage	Rated Current (A)	Breaking Capacity	Power Loss			I²t(A²s)x10³		External dimensions: in (mm)							Mounting Hole, Bolt Size Limit
				(W)	Connecting Bar		Fusing	Operating at V _{AC}	A	B	C	E	W	T	D	
					in²	mm²										
QAD25-50	125 / 250 V _{AC}	50	50kA	3.0	0.034	22	0.013	1.4	3.150 (80)	2.283 (58)	1.496 (38)	Ø1.102 (Ø28)	0.866 (22)	0.197 (5)	Ø0.335 (Ø8.5)	? 5/16 - 18 ? M8
QAD25-75		75		5.0	0.059	38	0.03	2.4								
QAD25-100		100		6.5	0.155	100	0.053	3.98								
QAD25-150		150		10.0	0.155	100	0.12	7.00								
QAD25-200		200		13.0	0.233	150	0.21	9.45								
QAD25-250		250		16.5	0.372	240	0.32	14.4								
QAC25-30		30		3.0	0.012	8	0.034	0.31	3.071 (78)	2.362 (60)	1.496 (38)	Ø1.417 (Ø36)	1.181 (30)	0.276 (7)	Ø0.374 (Ø9.5)	? 3/8 - 16 ? M9
QAC25-50		50		4.3	0.034	22	0.6	0.54								
QAC25-75		75		7.5	0.059	38	0.15	1.35								
QAC25-100		100		10.0	0.155	100	0.31	2.77								
QAC25-150		150		15.0	0.155	100	0.62	5.54								
QAC25-200		200		20.0	0.233	150	0.96	8.64								
QAC25-250		250		25.0	0.372	240	1.6	14.0	3.898 (99)	2.795 (71)	1.496 (38)	Ø1.732 (Ø44)	1.378 (35)	0.354 (9)	Ø0.433 (Ø11.0)	? 3/8 - 16 ? M11
QAC25-300		300		30.0	0.372	240	2.8	25.2								
QAC25-400		400		35.0	0.465	300	5.04	45.4								
QAC25-500		500		20.0	0.465	300	6.0	54.0								
QAC25-600		600		18.0	0.465	300	8.64	77.8								
QAC50-30	500 / 600 V _{AC}	30		3.6	0.012	8	0.04	1.36	4.606 (117)	3.504 (89)	2.205 (56)	Ø1.417 (Ø36)	1.181 (30)	0.276 (7)	Ø0.374 (Ø9.5)	? 3/8 - 16 ? M9
QAC50-50		50		6.0	0.034	22	0.07	2.5								
QAC50-75		75		9.0	0.059	38	0.14	4.89								
QAC50-100		100		12.0	0.155	100	0.28	9.98								
QAC50-150		150		19.5	0.155	100	0.55	19.5	4.606 (117)	3.504 (89)	2.205 (56)	Ø1.732 (Ø44)	1.378 (35)	0.354 (9)	Ø0.433 (Ø11.0)	? 3/8 - 16 ? M11
QAC50-200		200		24.0	0.233	150	1.09	38.7								
QAC50-250		250		30.0	0.372	240	1.75	62.1								
QAC50-300		300		36.0	0.372	240	2.4	85.1								
QAC50-400		400		35.0	0.465	300	4.58	91.6	4.606 (117)	3.504 (89)	2.205 (56)	Ø1.969 (Ø50)	1.654 (42)	0.354 (9)	Ø0.433 (Ø11.0)	? 3/8 - 16 ? M11
QAC50-500		500		33.0	0.465	300	6.41	128.0								
QAC50-600		600		32.0	0.465	300	7.71	154.0								



HVS & SARPV Compact Switches for Solar Power Applications



Application: Inverters for a solar power generator typically require the use of a large disconnect switch to handle the high DC voltages associated with solar panels. Introducing the HVS and SARPV high voltage disconnect switches, each with a compact design allowing for expanded design options. This smaller design provides the means for overall system size reduction and eliminates the need for a large separate control enclosure. In addition, the optional remote disconnect configuration and auxiliary switch allows the system controller to be located in an unobstructed location.

Specifications:

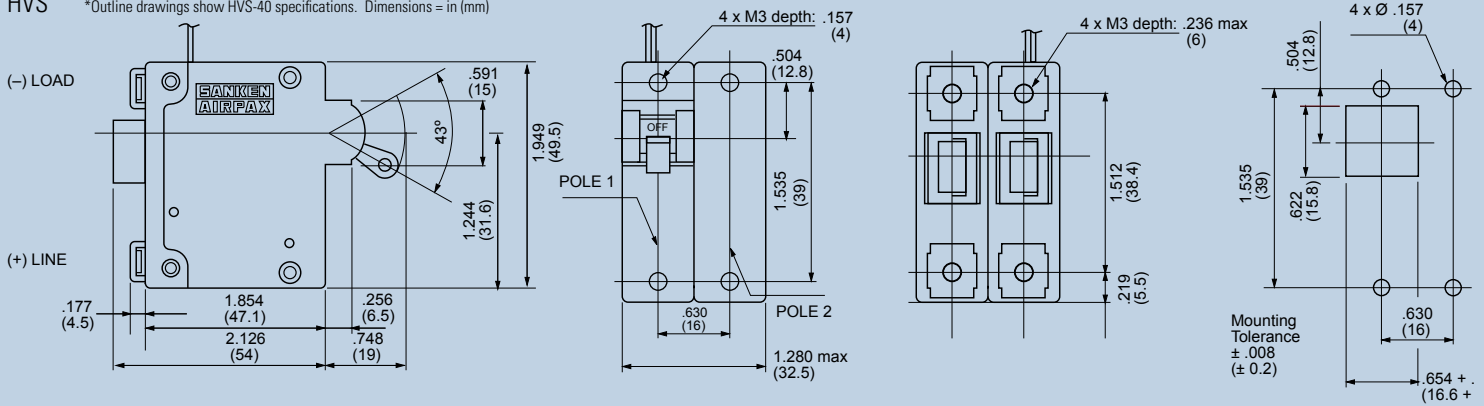
- Maximum rated current / voltage:
HVS = 30A / 300V_{DC} (open voltage 450V_{DC})
SARPV = 10A / 300V_{DC} (open voltage 450V_{DC})
- Number of poles:
HVS = 2 to 3 poles
SARPV = 2 poles
- Ambient operating temperature:
HVS = -25°C to +70°C
SARPV = -25°C to +65°C
- Operational life: >5000 cycles @ 2x per minute @ I_N
- Insulation resistance: > 100M @ 500V_{DC}
- Dielectric strength: V_{AC} 50 / 60 Hz, 2000V for 1 minute
leakage current 1mA or less. Auxiliary switch: V_{AC} 50 / 60 Hz, 500V for 1 minute between contacts
- Auxiliary switch ratings (resistive load):
Silver contacts: 3A / 125V_{AC}, 2A / 30V_{DC}
Gold contacts: 0.05A / 30V_{DC}
- Vibration resistance: Approximately 98m/s² (10G)
(Mil-STD-202 Method 201A test condition A @ I_N)
- Shock resistance: 490m/s² (50G)
(Mil-STD-202 Method 213B test condition A @ I_N)
- Coil resistance (DCR), 24V_{DC} coil: 157 ± 25% @ 25°C
- Agency approvals: Pending

High DC Voltage, Compact Disconnect Switches

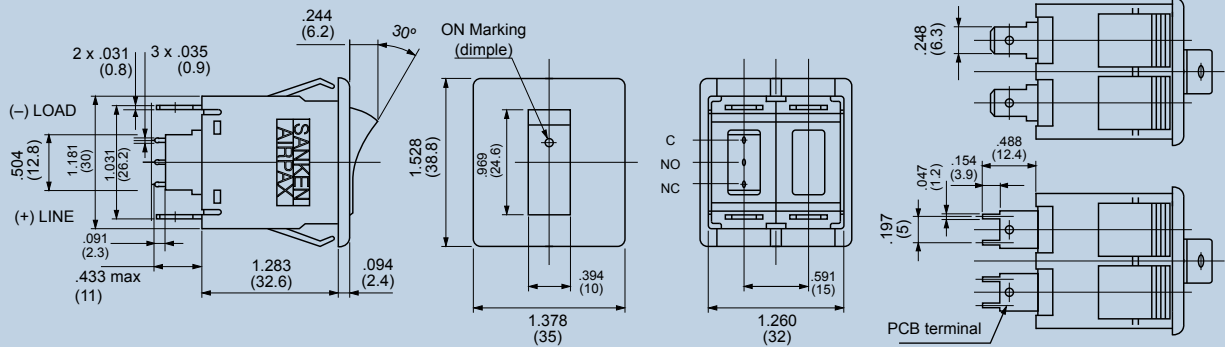
Airpax, a global leader in the supply of power protection products, has expanded its offering to include two new high voltage switch products for the solar power market. The HVS and SARPV switches provide an ultra-compact means of disconnecting higher DC voltages typically seen in solar power generation systems. In addition, for communicating with a central panel or controller, both are available with remote signal disconnect and auxiliary switch option.



HVS *Outline drawings show HVS-40 specifications. Dimensions = in (mm)



SARPV *Outline drawings show: optional auxiliary switch, F terminal, and P terminal dimensions. Dimensions = in (mm)



1. Available trip voltage is only 24 VDC, consult factory for alternative trip ratings
2. Polarity designation: Connect LINE-side terminal to (+) pole

1 First Decision		HVS - 40 - SP - DC24V - M		5 Fifth Decision	
Model				Remarks	
Code	Description			Code	Description
HVS	Single handle			M	Wiring screw attached
HVSH	H-handle				

2 Second Decision		3 Third Decision		4 Fourth Decision	
Circuit type		Tripping characteristics		Trip Voltage	
Code	Select 2 or 3 options***	Code	Description	Code	Description
0	Switch type	SP	Delay SP	DC24V	24VDC
4	Relay type				
ORE	Switch type with auxiliary switch (silver contacts)				
OREG	Switch type with auxiliary switch (gold contacts)				

*** HVS, HVSH can be either a 2-pole or a 3-pole breaker

EXAMPLE: HVS-40

HVS, Pole 1 (LH) Relay type, Pole 2 (RH) Switch type, no 3-pole

Third and fourth decision must be left blank when the second decision is not relay type

Select circuit type for each pole (second decision):

First entry: Pole 1, LH (left-hand) side

Second entry: Pole 2, RH (right-hand) side for 2-pole, center for optional 3-pole

Optional third entry: Pole 3 RH (right-hand) side for 3-pole, leave blank for 2-pole

Fifth decision must be left blank when customer does not require screws to be attached

1 First Decision		SARPV - F - 40 - SP - DC24V - -		7 Seventh Decision	
Model				Remarks	
Code	Description			Code	Description
SARPV	SARPV			D	PCB type

2 Second Decision		3 Third Decision		4 Fourth Decision		6 Sixth Decision	
Terminal type		Circuit type		Trip characteristics		Handle marking	
Code	Description	Code	Select 2 options****	Code	Description	Code	Description
F	Quick-connect	0	Switch type	SP	Delay SP		No mark standard
P	PCB	4	Relay type			BWT	Black handle
		ORE	Switch type with auxiliary switch (silver contacts)			RWT	Red handle
		OREG	Switch type with auxiliary switch (gold contacts)			BWY	Black handle
						RWY	Red handle

5 Fifth Decision	
Trip Voltage	
Code	Description
DC24V	24VDC

**** SARPV can be only be a 2-pole breaker

EXAMPLE: SARPV-F-40

SARPV, quick-connects, Pole 1 (LH) Relay type, Pole 2 (RH) Switch type

Fourth and fifth decision must be left blank when the third decision is not relay type

Select circuit type for each pole (second decision):

First entry: Pole 1, LH (left-hand) side

Second entry: Pole 2, RH (right-hand) side

Seventh decision must be left blank when the second decision is not PCB type

