

# QAS, QAL, QFS, QFL Quick-Action Fuses



## Specifications:

- Rated voltage: 250-600V<sub>AC</sub>; 300-500V<sub>DC</sub>
- Rated current: 10A-300A
- Breaking capacity: 100kA at 250V<sub>AC</sub> and 600 V<sub>AC</sub>; 10kA at 300 V<sub>DC</sub> and 500 V<sub>DC</sub>
- Power loss: 1W-43W
- Connecting bar: 0.016-0.310in<sup>2</sup> (10-200mm<sup>2</sup>)
- I<sup>2</sup>t (A<sup>2</sup>S)X10<sup>3</sup>: Pre-arcing = .009-14; Operating at 250V<sub>AC</sub> = .04-102; Operating at 600V<sub>AC</sub> = .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.

# AIRPAX

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

## Features:

- L-type terminal construction for easy installation
- RU, cRUus, and TÜV approved products available
- Large breaking capacity (100kA)
- Low I<sup>2</sup>t 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- <input type="checkbox"/>	20 to 100	250VAC / 300VDC	10kA / 10kA
	QAL25U- <input type="checkbox"/>	75 to 300	250VAC / 300VDC	10kA / 10kA
	QAS60U- <input type="checkbox"/>	20 to 75	600VAC / 500VDC	100kA / 10kA
	QAL60U- <input type="checkbox"/>	100 to 300	600VAC / 500VDC	100kA / 10kA
	QFS25U- <input type="checkbox"/>	10 to 100	250VAC (cRUus, TÜV) 400VDC (cRUus)	10kA / 10kA
	QFL25U- <input type="checkbox"/>	75 to 300	250VAC (cRUus, TÜV) 400VDC (cRUus)	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.  (Available for QFS25 & QAS25 only)			

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

\*cRUus, 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.

# AIRPAX

[www.airpax.net](http://www.airpax.net)

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### Ratings & Specifications

Model	Rated Voltage	Rated Current (A)	Breaking Capacity *1	Power Loss *6		Pre-Operating at V <sub>ac</sub> 3,48
				(W)	Connecting Bar In <sup>2</sup> mm <sup>2</sup> Arcing	
QAS25-20 (S)	250 V <sub>ac</sub>	20	10kA at 250V <sub>ac</sub>	2.0	0.019	12
QAS25-30 (S)	250 V <sub>ac</sub>	30	10kA at 250V <sub>ac</sub>	3.0	0.019	12
QAS25-50 (S)	250 V <sub>ac</sub>	50	10kA at 250V <sub>ac</sub>	5.0	0.037	24
QAS25-75 (S)	250 V <sub>ac</sub>	75	10kA at 250V <sub>ac</sub>	7.0	0.050	32
QAS25-100 (S)	250 V <sub>ac</sub>	100	10kA at 250V <sub>ac</sub>	10.0	0.070	45
QAL25-75 (S)	300 V <sub>ac</sub>	75	10kA at 300 V <sub>ac</sub>	8.0	0.050	32
QAL25-100 (S)	300 V <sub>ac</sub>	100	10kA at 300 V <sub>ac</sub>	10.0	0.070	45
QAL25-150 (S)	300 V <sub>ac</sub>	150	10kA at 300 V <sub>ac</sub>	15.0	0.116	75
QAL25-200 (S)	300 V <sub>ac</sub>	200	10kA at 300 V <sub>ac</sub>	20.0	0.248	160
QAL25-300 (S)	300 V <sub>ac</sub>	300	10kA at 300 V <sub>ac</sub>	30.0	0.310	200
QAS60-20 (S)	600 V <sub>ac</sub>	20	10kA at 600 V <sub>ac</sub>	3.0	0.019	12
QAS60-30 (S)	600 V <sub>ac</sub>	30	10kA at 600 V <sub>ac</sub>	5.0	0.019	12
QAS60-50 (S)	600 V <sub>ac</sub>	50	10kA at 600 V <sub>ac</sub>	10.0	0.037	24
QAS60-75 (S)	600 V <sub>ac</sub>	75	10kA at 600 V <sub>ac</sub>	17.0	0.050	32
QAL60-100 (S)	600 V <sub>ac</sub>	100	10kA at 600 V <sub>ac</sub>	20.0	0.050	32
QAL60-150 (S)	600 V <sub>ac</sub>	150	10kA at 600 V <sub>ac</sub>	26.0	0.155	100
QAL60-200 (S)	600 V <sub>ac</sub>	200	10kA at 600 V <sub>ac</sub>	32.0	0.248	160
QAL60-250 (S)	600 V <sub>ac</sub>	250	10kA at 600 V <sub>ac</sub>	38.0	0.310	200
QAL60-300 (S)	600 V <sub>ac</sub>	300	10kA at 600 V <sub>ac</sub>	43.0	0.310	200
QFS25-10 (S)	250 V <sub>ac</sub>	10	10kA at 250V <sub>ac</sub>	1.0	0.016	10
QFS25-20 (S)	250 V <sub>ac</sub>	20	10kA at 250V <sub>ac</sub>	2.1	0.022	14.4
QFS25-30 (S)	250 V <sub>ac</sub>	30	10kA at 250V <sub>ac</sub>	3.8	0.040	26
QFS25-50 (S)	250 V <sub>ac</sub>	50	10kA at 250V <sub>ac</sub>	5.9	0.070	45
QFS25-75 (S)	250 V <sub>ac</sub>	75	10kA at 250V <sub>ac</sub>	8.0	0.093	60
QFS25-100 (S)	250 V <sub>ac</sub>	100	10kA at 250V <sub>ac</sub>	11.6	0.124	80
QFL25-75 (S)	400 V <sub>ac</sub>	75	10kA at 400 V <sub>ac</sub>	7.7	0.093	60
QFL25-100 (S)	400 V <sub>ac</sub>	100	10kA at 400 V <sub>ac</sub>	10.6	0.124	80
QFL25-150 (S)	400 V <sub>ac</sub>	150	10kA at 400 V <sub>ac</sub>	17.6	0.194	125
QFL25-200 (S)	400 V <sub>ac</sub>	200	10kA at 400 V <sub>ac</sub>	22.5	0.310	200
QFL25-300 (S)	400 V <sub>ac</sub>	300	10kA at 400 V <sub>ac</sub>	35.4	0.465	300

### 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		
QFS25-10 (S)																
QAS25-20 (S)	2.205	1.654	1.024	0.728	0.689	0.335	0.256	0.079	0.472	1.024	0.689	0.866	1.058	≤ 1/4 - 20		
QFS25-30 (S)																
QAS25-50 (S)	(56)	(42)	(26)	(18.5)	(17.5)	(6.5)	(6.5)	(2)	(12)	(26)	(17.5)	(22)	(30)	≤ 1/4 - 20		
QFS25-75 (S)																
QAS25-100 (S)																
QAL25-75 (S)																
QAL25-100 (S)	3.150	2.283	1.142	1.220	1.063	0.433	0.354	0.118	0.787	1.378	0.846	1.181	3.527	≤ 5/16 - 18		
QAL25-150 (S)																
QAL25-200 (S)	(80)	(58)	(29)	(31)	(27)	(11)	(9)	(3)	(20)	(35)	(21.5)	(30)	(100)	≤ 5/16 - 18		
QAL25-300 (S)																
QAS60-20 (S)	3.346	2.362	1.142	1.358	1.220	0.512	0.433	0.118	0.984	1.535	0.925	1.240	4.762	≤ 7/16 - 14		
QAL25-200 (S)	(85)	(60)	(29)	(34.5)	(31)	(13)	(11)	(3)	(25)	(39)	(23.5)	(31.5)	(135)	≤ 1/4 - 20		
QAL25-300 (S)	3.346	2.362	1.142	1.594	1.457	0.512	0.433	0.118	1.181	1.771	1.043	1.358	6.526	≤ 7/16 - 14		
QAL25-300 (S)	(85)	(60)	(29)	(40.5)	(37)	(13)	(11)	(3)	(30)	(45)	(28.5)	(34.5)	(185)	≤ 1/4 - 20		
QAS60-30 (S)	2.756	2.205	1.575	0.728	0.689	0.335	0.256	0.079	0.472	1.024	0.689	0.866	1.270	≤ 1/4 - 20		
QAS60-50 (S)	(70)	(56)	(40)	(18.5)	(17.5)	(6.5)	(6.5)	(2)	(12)	(26)	(17.5)	(22)	(36)	≤ 1/4 - 20		
QAS60-75 (S)																
QAS60-100 (S)	3.661	2.795	1.654	1.240	1.063	0.433	0.354	0.118	0.787	1.378	0.846	1.181	4.056	≤ 5/16 - 18		
QAS60-150 (S)	(93)	(71)	(42)	(31.5)	(27)	(11)	(9)	(3)	(20)	(35)	(21.5)	(30)	(115)	≤ 5/16 - 18		
QAS60-200 (S)	3.819	2.835	1.614	1.358	1.220	0.512	0.433	0.118	0.984	1.535	0.925	1.240	5.291	≤ 7/16 - 14		
QAS60-200 (S)	(97)	(72)	(41)	(34.5)	(31)	(13)	(11)	(3)	(25)	(39)	(23.5)	(31.5)	(150)	≤ 7/16 - 14		
QAS60-250 (S)	3.898	2.913	1.693	1.594	1.457	0.512	0.433	0.118	1.181	1.771	1.043	1.358	7.760	≤ 7/16 - 14		
QAS60-300 (S)	(99)	(74)	(43)	(40.5)	(37)	(13)	(11)	(3)	(30)	(45)	(28.5)	(34.5)	(220)	≤ 7/16 - 14		

\*1. Time constant is 4ms max.

\*2. Calculated value.

\*3. Actual measured value at conventional current or 250V<sub>ac</sub> at 100kA (r.m.s.) and short-circuit power factor of 14%.

\*4. Indicates actual measured value at conventional current of 600V<sub>ac</sub> at 100kA (r.m.s.) and short-circuit power factor of 7%.

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

\*6. Max value at rated current.

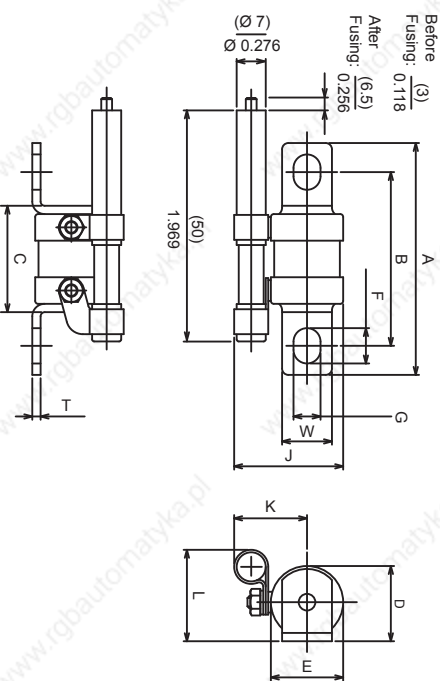
\*7. Radiation is not considered in this calculated value.

\*8. Max value at conventional current of 250V<sub>ac</sub> 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 Aipack full catalog and website for further info on PNs and options available



1 First Decision	
Model	General Product (no approvals)
QAS25	
QAL25	
QAS60	
QAL60	
QFS25	
QFL25	
QAS25U	
QAL25U	
QAS60U	
QAL60U	
QFS25U	
QFL25U	
QFL25U-□-T	

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	cFLUs, TÜV approved product, available only on QFS25U and QFL25U. No indicator fuse or microswitch options.