

## QA(13) - Series Miniature Circuit Breakers



1 pole  
Mini rail mount



2 pole  
Mini rail mount



3 pole  
Mini rail mount



3 + N  
Mini rail mount

### Features

- AC circuit breaker
- Hydraulic-magnetic technology
- One, two, three, four pole, 1+N and 3+N
- 100% rating capability, independent of ambient temperature
- VC 8036 compliant (SANS 556-1)
- Ratings 5 to 60 A (subject to certification)
- Precision tripping characteristics
- Ultra compact – 13 mm wide module
- Trip indication with mid-trip position
- Can be switched on immediately after tripping
- Mini rail mount, 57 mm front escutcheon (Black)
- Suitable to use for electrical isolation
- Shell designed for easier installation onto busbar

### Applications

- AC branch circuit protection
- Switch disconnecter (SANS 60947-3)
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Railway signalling equipment
- Residential equipment
- Industrial equipment

### Optional Accessories

- Handle lock - QFAP001
- Surface mounting clips - SAAX000
- Busbar - SABBM54
- 57 mm escutcheon blank - 2305608
- 57 mm safety blank - SAEB000

VC 8036

**Hydraulic-Magnetic Circuit Breakers 100% rated, unaffected by ambient temperature**

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### Technical Data

Product Type	Circuit Breaker				
Approvals	VC 8036 (SANS 556-1)				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 Vac			415 Vac	
Minimum Current Rating	5 A			5 A	
Maximum Current Rating	60 A			50 A	
Specific Ratings (Verify Certification)	5, 6, 7, 8, 9, 10, 12, 15, 16, 20, 25, 30, 35, 40, 45, 50, 60 A				
Ultimate S/C Breaking Capacity (Icu)	2.5 kA				

Product Type	Switch Disconnecter			
Approvals	SANS 60947-3			
Number of Poles	1	2 (1+N)	3	4 (3+N)
Operating Voltages	240 Vac	415 Vac		
Current Rating	63 A			
Rated S/C Withstand Capacity (Icw)	6 kA 50 ms			

Product Type	QA(13)
Operating Temperature Range	-40 °C to +85 °C
Mounting Options	Mini rail mount
Time Delay Curve	3
Endurance	10000 operations - 1500 electrical at rated current and voltage (IEC 60947-2)
Dielectric Strength	1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing
Weight	102 g per pole, 160 g with auxiliary (depending on rating) (unpacked)
Humidity	35 to 85% relative
Altitude	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
Shock	16 G (IEC 60068-2-27)
Vibration	1 G (IEC 60068-2-6) (sinusoidal wave)
Flammability	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28
Toxicity	F1 - Smoke index of ≤ 20 which determines the fume class
Pollution Degree	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

Breaker QA	Wire Size (IEC)	Torque (IEC)	Comments
1 Pole to 4 Pole	0.75 - 35 mm <sup>2</sup>	2.5 Nm	Pozidriv #2 Combi head

## QA(13) - Series Miniature Circuit Breakers

### Long Code

Example Code: QA----3(13)-MR-3-15A-----

Group	1	2	3	4	5	6	7	8	9	10	11	12	13
Requirement	QA frame	Switch / neutral	Auxiliary + trip alarm	Triple pole	13 mm module width	Mini rail	Short delay curve 3	Current rating 15 A	Future use	Shunt trip	Future use	Special Termination	Customer Specific
Long Code	QA	-	-	3	(13)	-	3	15A	-	-	-		

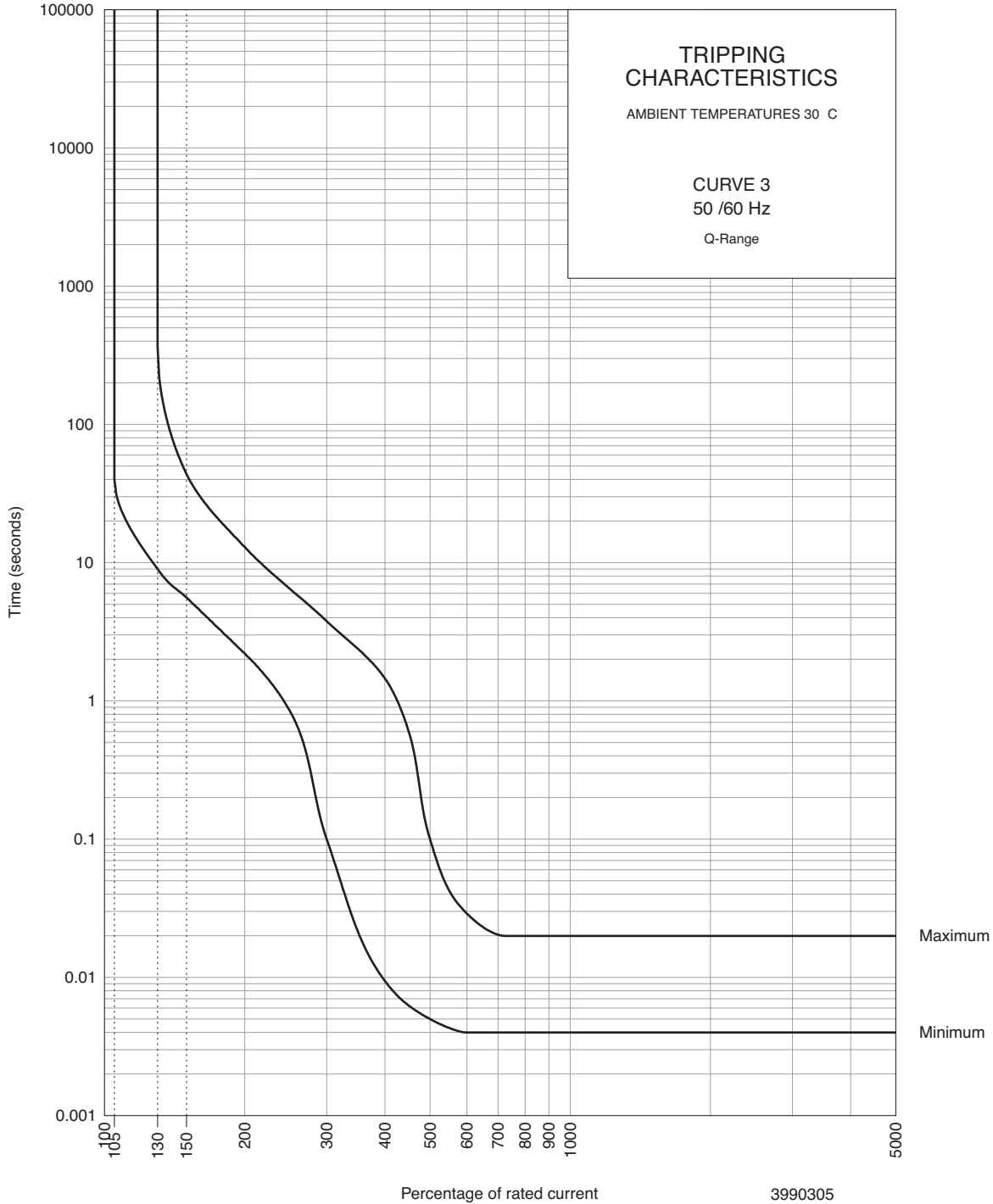
### Ordering Information

Group 1: Frame Type	Code	Description	Comments
	QA	13 mm wide miniature circuit breaker	
Group 2: Switch/Neutral	Code	Description	Comments
	-	Not applicable	Overload poles do not have any further coding
	S	Switch	Green handle
	N	Neutral	Green handle
Group 3: Auxiliary	Code	Description	Comments
	-	Not applicable	Use this code if no auxiliary used
Group 4: No of Poles	Code	Description	Comments
	1	Single pole	
	2	Double pole	2 pole or 1+N
	3	Triple pole	
	4	Four pole	4 pole or 3+N
Group 5: Module Width	Code	Description	Comments
	(13)	13 mm module width	
Group 6: Mounting	Code	Description	Comments
	-	Mini rail mount	Mini rail mount supplied in black body only - 57 mm front escutcheon
Group 7: Time Delays	Code	Description	Instantaneous Trip Point (x In) Comments
	3	Short time delay	3 – 5 White handle
Group 8: Current Ratings	Code / Description		Comments
	5, 10, 15, 16, 20, 25, 30, 35, 40, 45, 50, 60 A		Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.
Group 9:	Code	Description	Comments
	-		For future use
Group 10: Shunt Trip	Code	Description	Comments
	-	Not applicable	Use this code if no shunt trip is used
Group 11:	Code	Description	Comments
	-		For future use
Group 12: Special Termination	Code	Description	Comments
	-		For future use
Group 13: Customer Specific	Code	Description	Comments
	-		For future use

*For options not listed, please contact CBI for assistance*

## QA(13) - Series Miniature Circuit Breakers

### Time Delay Curves



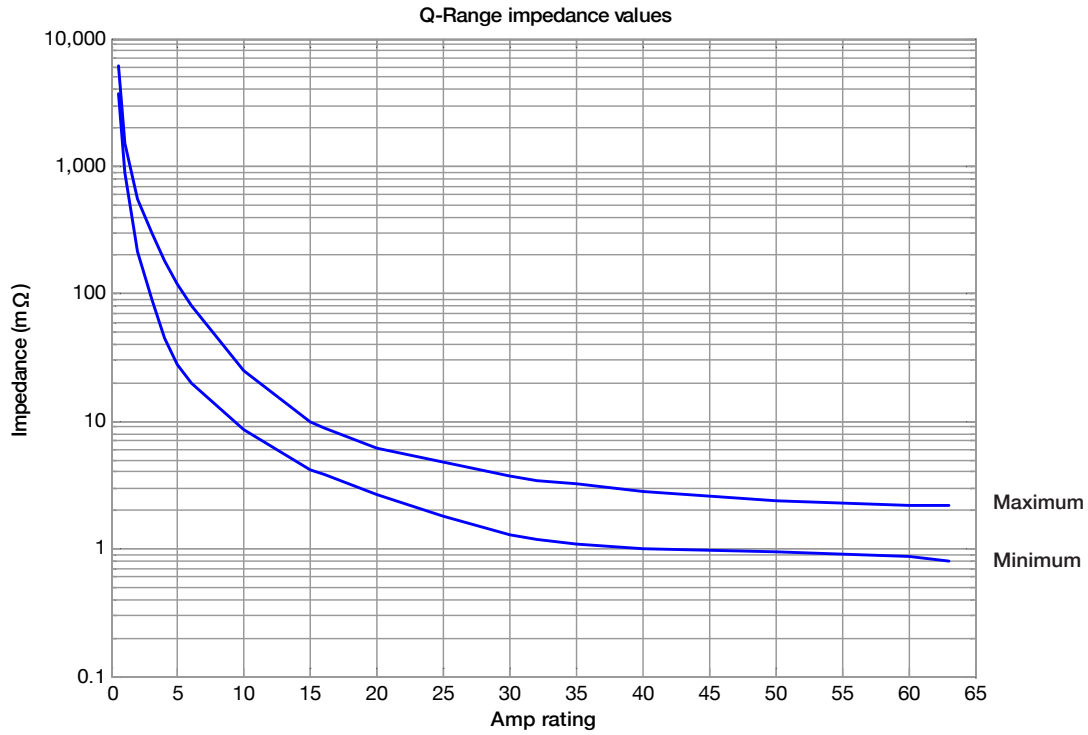
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REV G

PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	9	6	5.6	2.2	0.1	0.009	0.005	0.004	0.004	0.004	0.004	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	365	57	44	13	3.8	1.45	0.1	0.028	0.02	0.02	0.02	0.02	0.02

\* The published time delay curves are generated at 30 °C ambient temperature with the circuit breaker mounted in the up-right position. The "must hold", "must trip" and "instantaneous trip" current values are not affected by temperature, although delay time for the other operating current values may have to be adjusted using the temperature compensation curve which is available on request.

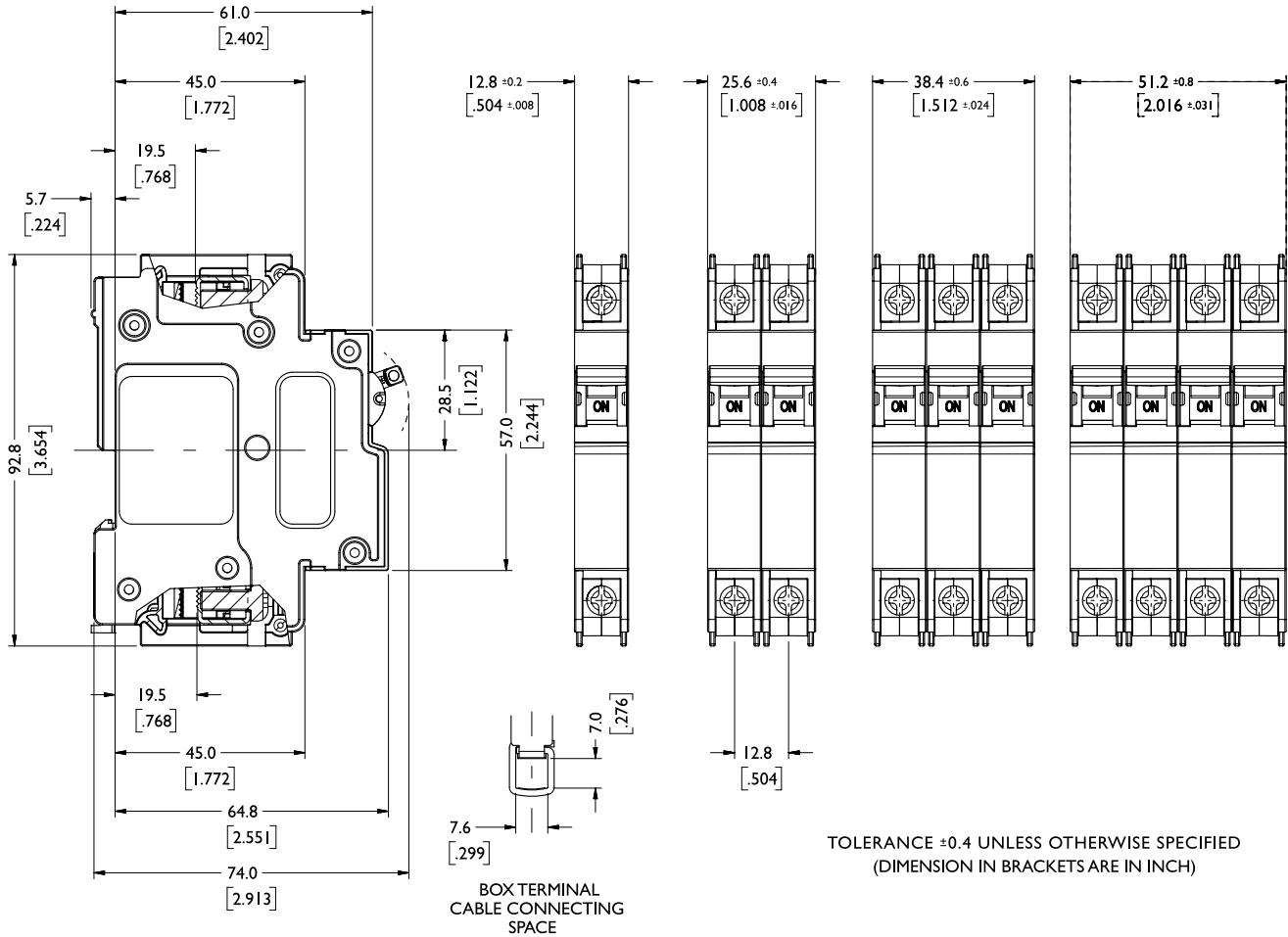
## QA(13) - Series Miniature Circuit Breakers

### Internal Impedance vs Current Rating



## QA(13) - Series Miniature Circuit Breakers

### Outline Dimensions: Mini rail



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#### AUSTRALIA

**CBI-electric: Australia**  
27 Wedgewood Rd, Hallam  
Victoria 3803 Australia  
Tel: +61 3 8752 9300  
Fax: +61 3 9796 5407  
Email: [sales@cbi-electric.com.au](mailto:sales@cbi-electric.com.au)  
Website: [www.cbi-electric.com.au](http://www.cbi-electric.com.au)

#### INDIA

**CBI-electric: Asia**  
A1, Pushpagiri Residency, 1st Cross  
2nd Main, Jyothi Nagar, B.G Road  
Bengaluru 560083, India  
Tel: +91-9880553153  
Email: [salesasia@cbi-electric.com](mailto:salesasia@cbi-electric.com)  
Website: [www.cbibreakers.com](http://www.cbibreakers.com)  
Website: [www.cbi-lowvoltage.com](http://www.cbi-lowvoltage.com)

#### SOUTH AFRICA

**CBI-electric: low voltage**  
Tripswitch Drive Elandsfontein  
Gauteng South Africa  
Tel: +27 11 928 2000  
Fax: +27 11 392 2354  
Email: [cbi@cbi-electric.com](mailto:cbi@cbi-electric.com)  
[internationalsales@cbi-electric.com](mailto:internationalsales@cbi-electric.com)  
Website: [www.cbi-lowvoltage.com](http://www.cbi-lowvoltage.com)

#### USA

**CBI-electric: North America**  
35 E. Uwchlan Ave Suite 328  
Exton PA 19341 USA  
Tel: +1 610 524 9949  
Fax: +1 610 524 9945  
E-mail: [info@cbibreakers.com](mailto:info@cbibreakers.com)  
Website: [www.cbibreakers.com](http://www.cbibreakers.com)