

# Защитные автоматические выключатели QF(19) Технические характеристики



Архангельск (8182)63-90-72  
Астана +7(7172)727-132  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Брянск (4832)59-03-52  
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Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Казань (843)206-01-48

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Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81

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Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
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Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

## QF(19) - Series Miniature Circuit Breakers



Dual mount  
1 pole

Dual mount  
2 pole

Dual mount  
3 pole

Dual mount  
3+N

### Features

- AC circuit breaker
- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- One, two, three pole, 1+N and 3+N
- VC 8036 compliant (SANS 556-1)
- VDE, EAC and CCC approved, CE certified
- UL 1077 recognised (supplementary protector)
- Ratings 1 to 63 A (subject to certification)
- Optional shunt trip (IEC / EN 60947-2)
- Available in various currents and time delays
- Precision tripping characteristics
- Trip indication with mid-trip position
- Reset immediately after overload
- Dual mount product in black shells
- Suitable to use for electrical isolation

### Applications

- AC branch circuit protection (IEC / EN 60947-2)
- Supplementary protection (UL 1077)
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Railway signalling equipment
- Residential equipment
- Industrial equipment

### Auxiliary Switch, Trip Alarm & Combo:

#### Features

- Auxiliary switch
- Auxiliary switch + trip alarm
- Trip alarm
- AC and DC voltages
- UL 489 listed (Auxiliary Switch: 6 A 250 V AC, 0.5 A 80 V DC)
- IEC 60947-5-1 approved (Auxiliary Switch: 6 A 240 V AC, 0.5 A 110 V DC; trip alarm: 6 A 240 V AC, 0.5 A 110 V DC)
- Factory fitted
- Attached to right hand side of circuit breaker
- Compact 6.5 mm width

### Optional Accessories

- Handle lock
- Surface mounting clips
- Busbar
- Escutcheon blank
- Safety blank

## QF(19) - Series Miniature Circuit Breakers

### Ordering Information

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 V AC		415 V AC		
Minimum Current Rating	1 A				
Maximum Current Rating	63 A				
Specific Ratings (Verify Certification)	5, 10, 15, 16, 20, 25, 30, 35, 40, 45, 50, 63 A				
Interrupting Capacity	5 kA				

Product Type	Circuit Breaker				
Approvals	IEC / EN 60947-2, VDE, CE, EAC				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 V AC		415 V AC		
Minimum Current Rating	1 A				
Maximum Current Rating	63 A				
Specific Ratings (Verify Certification)	5, 10, 15, 16, 20, 25, 30, 35, 40, 45, 50, 63 A				
Interrupting Capacity	6 kA				

Product Type	Supplementary Protector		
Approvals	UL 1077		
	Tested with and without series fuse		
Number of Poles	1	2	3
Operating Voltages	277 V AC	480 V AC	480 V AC
Minimum Current Rating	1 A		
Maximum Current Rating	60 A		
Specific Ratings (Verify Certification)	5, 10, 15, 16, 20, 25, 30, 35, 40, 45, 50, 60 A		
Interrupting Capacity	3 kA		

Product Type	Circuit Breaker				
Approvals	CCC				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 V AC		415 V AC		
Minimum Current Rating	1 A				
Maximum Current Rating	63 A				
Specific Ratings (Verify Certification)	5, 10, 15, 16, 20, 25, 30, 35, 40, 45, 50, 63 A				
Interrupting Capacity	6 kA				

Auxiliary Module	
Auxiliary Switch	DIN and CBI Mini Rail mounted
Trip Alarm	CBI Mini Rail mount only
Auxiliary Switch / Trip Alarm Combo	CBI Mini Rail mount only

## QF(19) - Series Miniature Circuit Breakers

### Technical Data

<b>Product Type</b>	QF(19)
<b>Operating Temperature Range</b>	-40 °C to +85 °C
<b>Mounting Options</b>	Dual mounting (DIN & Mini), surface mount
<b>Time Delay Curves</b>	1, 2, 9
<b>Endurance</b>	10000 operations - 1500 electrical at rated current and voltage (IEC 60947-2) 6000 electrical operations (UL 1077)
<b>Dielectric Strength</b>	1480V (single pole) / 1830V (multi pole), 50 Hz for one minute after testing
<b>Weight</b>	130 g per pole, 190 g with auxiliary (unpacked)
<b>Humidity</b>	35 to 85% relative
<b>Altitude</b>	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
<b>Shock</b>	16 G (IEC 60068-2-27)
<b>Vibration</b>	2 G (IEC 60068-2-6) (sinusoidal wave)
<b>Flammability</b>	I3 - Ignition does not persist at 850 °C after glow wire is withdrawn with an oxygen index of ≥ 28
<b>Toxicity</b>	F1 - Smoke index of ≤ 20 which determines the fume class
<b>Pollution Degree</b>	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

Breaker QF	Wire Size mm <sup>2</sup> (IEC)	Wire Gauge (UL)	Torque (IEC)	Torque (UL)	Comments
1 Pole to 4 Pole	0.75 - 35 mm <sup>2</sup>	18 - 2 - AWG	2.5 Nm	20 in-lb	Pozidriv #2 Combi head

## QF(19) - Series Miniature Circuit Breakers

### Ordering Information

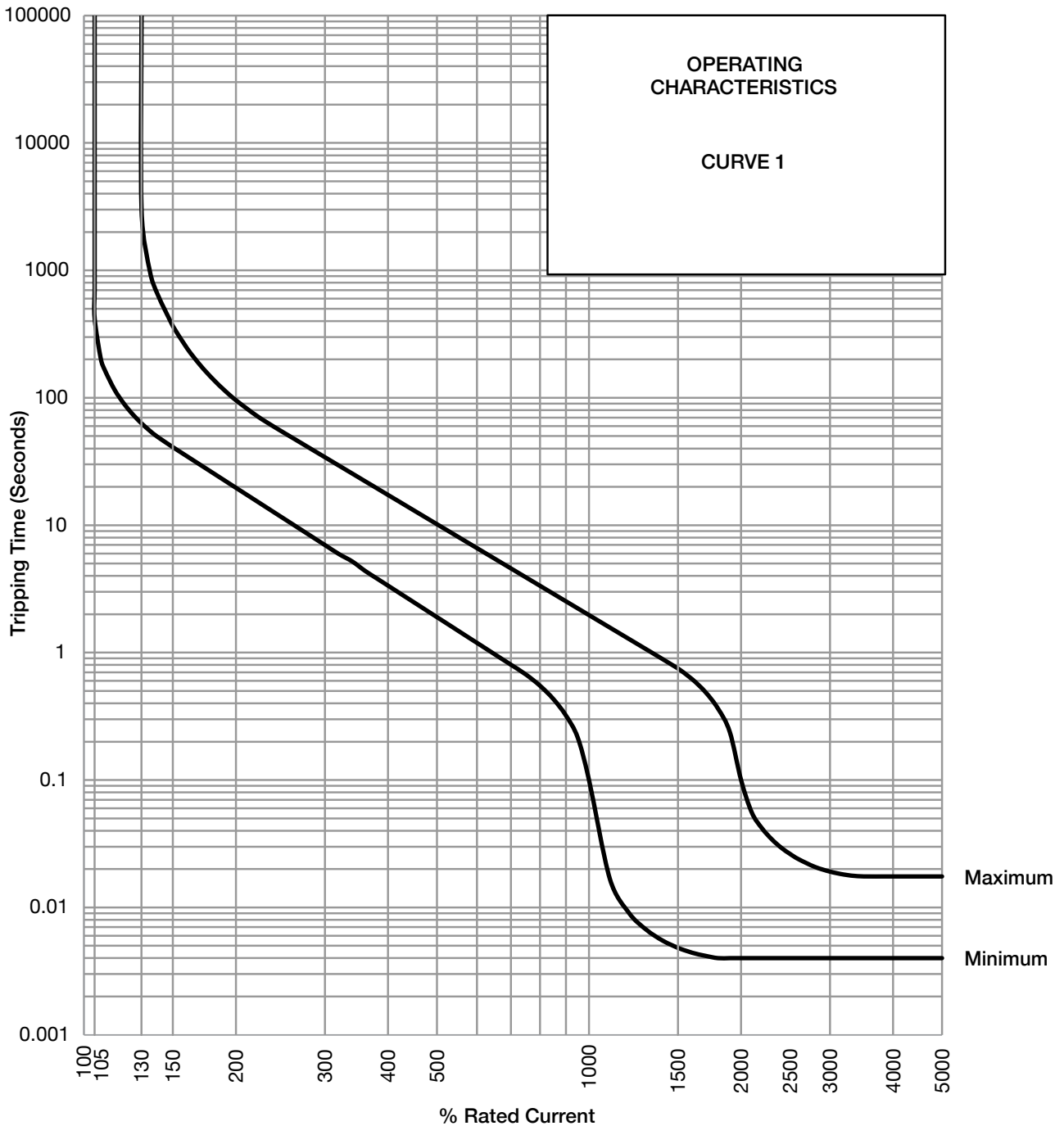
Example Code: QF--AT-3(19)-DM-2-63A-----

Group	1	2	3	4	5	6	7	8	9	10	11
Requirement	QF Frame	Switch / Neutral	Auxiliary switch + trip alarm	Triple pole	19 mm module width	Dual Mount	Medium delay curve 2	Current Rating 63 A	Future use	Shunt trip	Future use
Long Code	QF	-	AT	3	(19)	DM	2	63A	-	-	-

Group 1: Frame Type	Code	Description	Comments	
	QF	19 mm wide miniature circuit breaker dual mount		
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	
	A	Auxiliary switch (1 x Aux in 1 module)	6.5 mm module fitted on right-hand side	
	AA	Double auxiliary switch (2 x Aux in 1 module)	6.5 mm module fitted on right-hand side	
	T	Trip alarm (1 x Trip Alarm in 1 module)	6.5 mm module fitted on right-hand side	
	AT	Auxiliary switch + trip alarm combo (combined in 1 module)	6.5 mm module fitted on right-hand side	
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	3+N only	
Group 5: Module Width	Code	Description	Comments	
	(19)	19 mm module width		
Group 6: Mounting	Code	Description	Comments	
	DM	Dual mount	Dual mount supplied in black body only - 57 mm escutcheon	
Group 7: Time Delays	Code	Description	Instantaneous Trip Point (x In)	Comments
	1	Long time delay, high instantaneous trip	10 – 20	Orange handle
	2	Medium time delay	5 – 10	White handle
	9	Long time delay	7 – 12	White handle
Group 8: Current Ratings	Code / Description		Comments	
	1, 2, 3, 4, 5, 6, 8, 10, 15, 16, 20, 25, 30, 32, 35, 40, 45, 50, 60, 63 A		Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.	
Group 9:	Code	For future use (-)		
Group 10: Shunt Trip	Code	Description	Comments	
	-	Not applicable	Use this code if no shunt trip is used	
	V0	100 – 480 V AC	Fly leads (approximately 60 mm long)	
	V5	100 – 480 V AC	Internally connected	
	Other voltages are available as special orders. Check availability. Voltage on the shunt trip up to 240 V AC.			
Group 11	Code	For future use (-)		

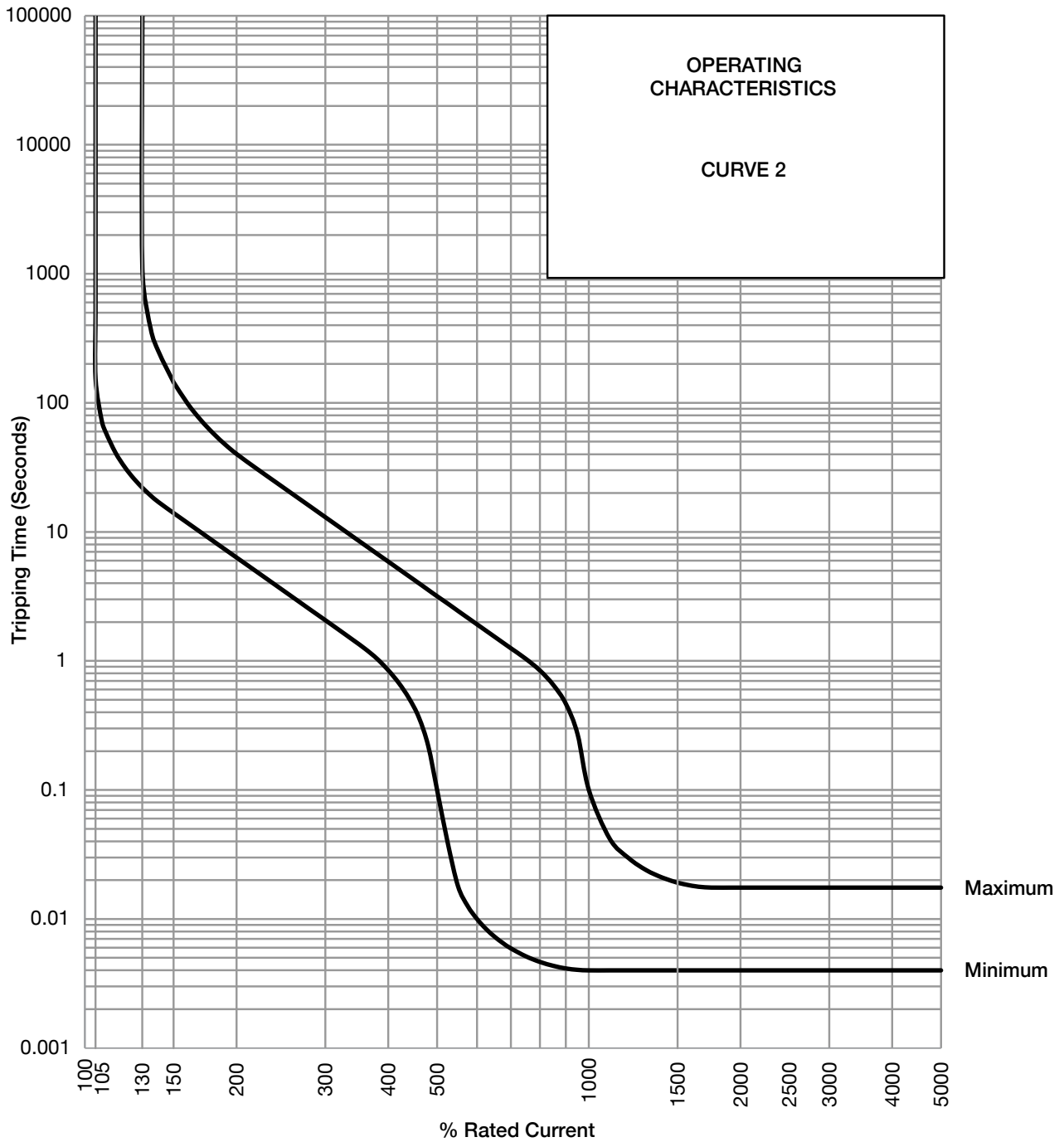
## QF(19) - Series Miniature Circuit Breakers

### Time Delay Curves



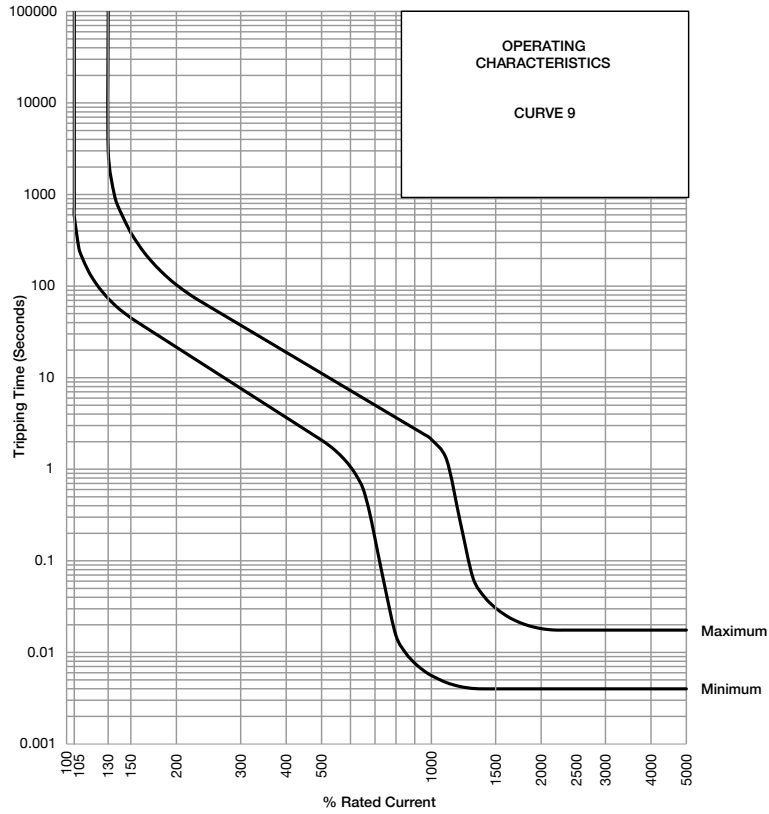
## QF(19) - Series Miniature Circuit Breakers

### Time Delay Curves



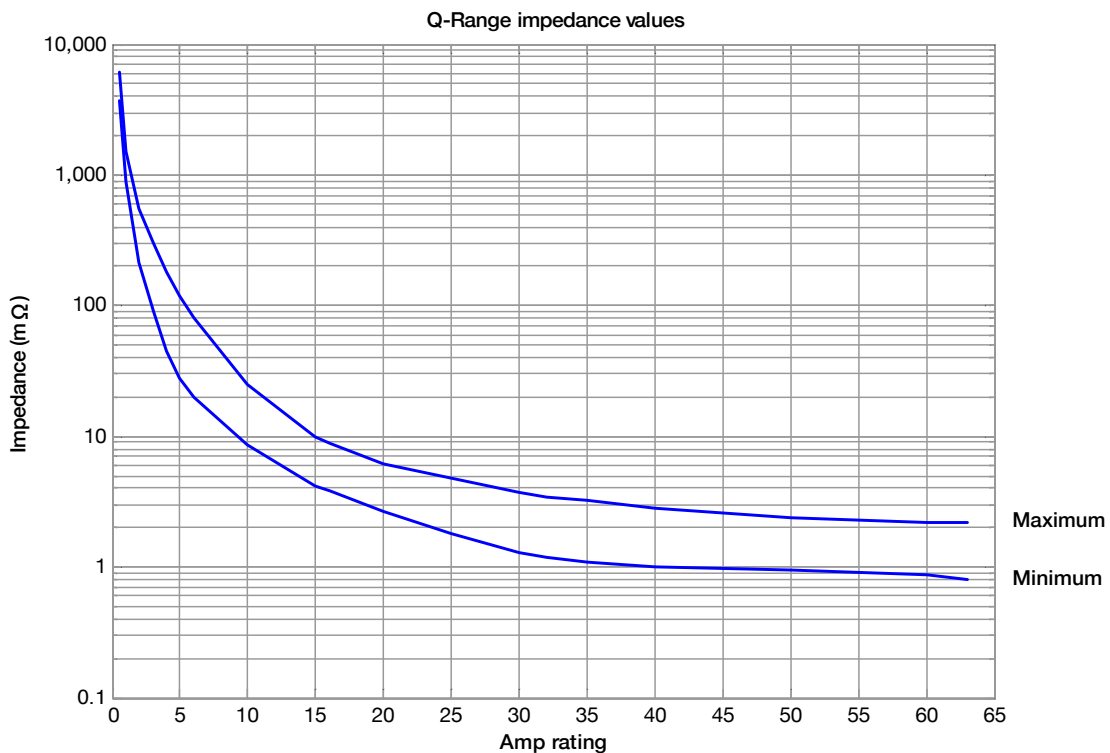
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### Time Delay Curves



\* 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.

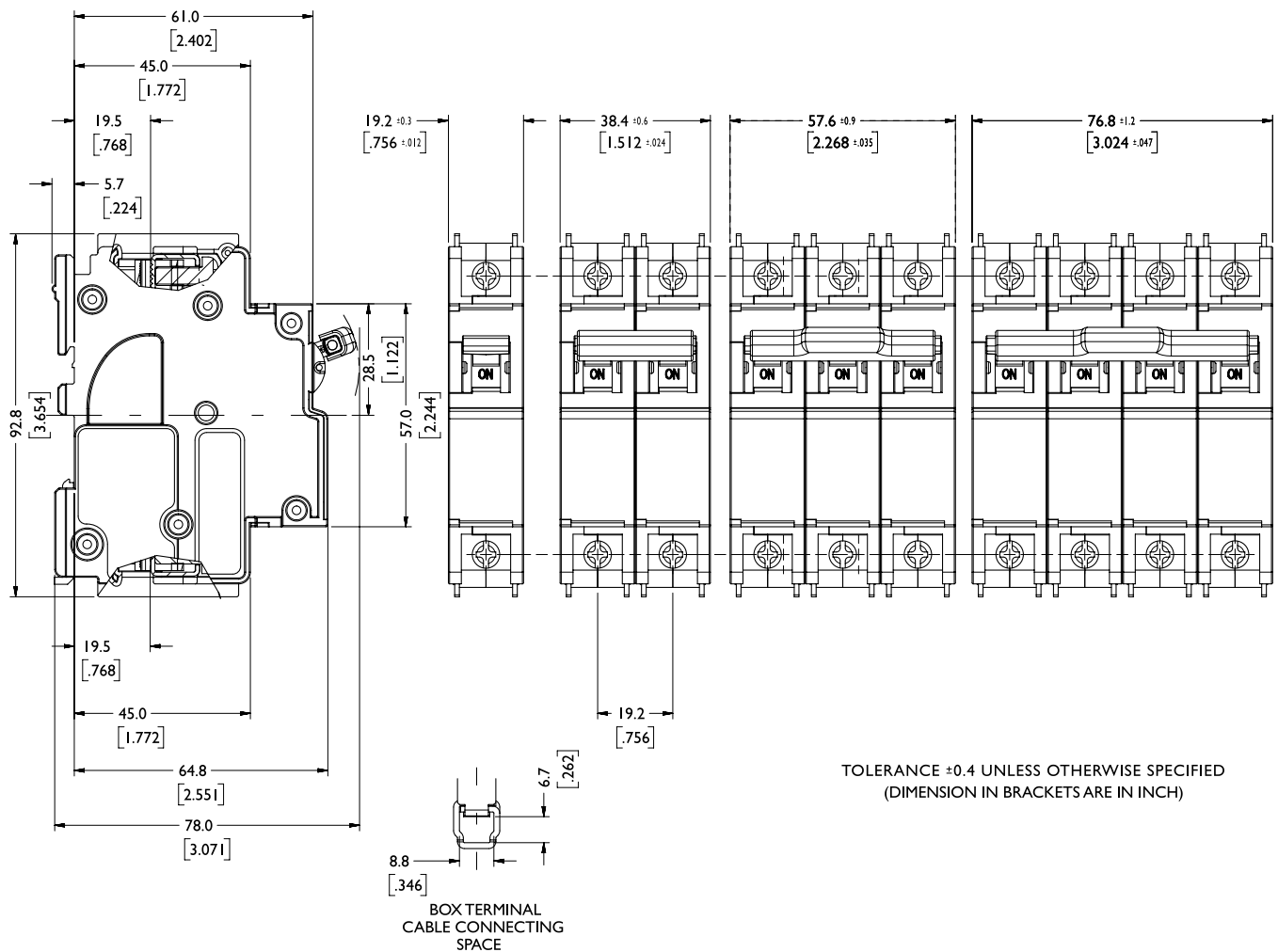
### Internal Impedance vs Current Rating





## QF(19) - Series Miniature Circuit Breakers

### Outline Dimensions: Dual Mount



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