

## QF(18) - Series Miniature Circuit Breakers



**DIN Mount**  
1 pole

**DIN Mount**  
2 pole

**DIN Mount**  
3 pole

**DIN 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
- DIN mount product in grey 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:

#### Features

- Auxiliary switch
- AC and DC voltages
- UL 489 listed (6 A 250 V AC, 0.5 A 80 V DC)
- IEC 60947-5-1 approved (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

**Approvals**

VC 8036



(IEC / EN 60947-2)

**UL** US (UL 1077)



**CE** **EAC**

## QF(I8) - Series Miniature Circuit Breakers

### 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 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				

## QF(18) - Series Miniature Circuit Breakers

### Technical Data

Auxiliary Module	
Auxiliary Switch	DIN mounted

Product Type	QF(18)
Operating Temperature Range	-40 °C to +85 °C
Mounting Options	DIN Rail, surface mount
Time Delay Curves	1, 2, 9
Endurance	10000 operations - 1500 electrical at rated current and voltage (IEC 60947-2) 6000 electrical operations (UL 1077)
Dielectric Strength	1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing
Weight	120 g per pole, 180 g with auxiliary (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	2 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 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(18) - Series Miniature Circuit Breakers

### Ordering Information

Example Code: QF--A-3(18)-D-2-50A-----

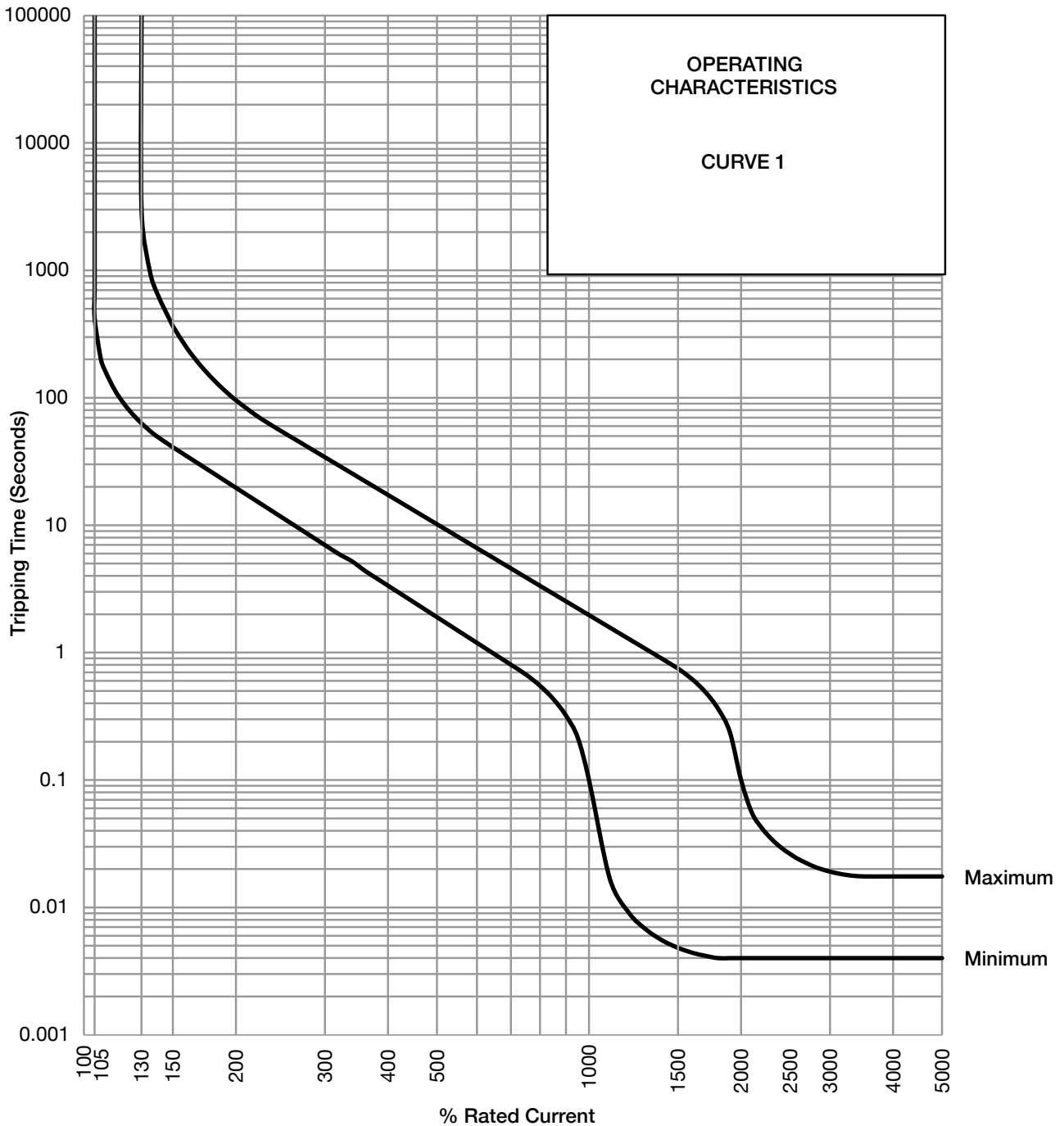
Group	1	2	3	4	5	6	7	8	9	10	11
Requirement	QF Frame	Switch / Neutral	Auxiliary switch	Triple pole	18 mm module width	DIN Mount	Medium delay curve 2	Current Rating 50 A	Future use	Shunt trip	Future use
Long Code	QF	-	A	3	(18)	D	2	50A	-	-	-

Group	Code	Description	Comments
Group 1: Frame Type	QF	18 mm wide miniature circuit breaker DIN mount	
Group 2: Switch/Neutral	-	Not applicable	Overload poles do not have any further coding
	S	Switch	Green handle
	N	Neutral	Green handle
Group 3: Auxiliary	-	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
Group 4: No of Poles	1	Single pole	
	2	Double pole	2 pole or 1+N
	3	Triple pole	
	4	Four pole	3+N only
Group 5: Module Width	(18)	18 mm module width	
Group 6: Mounting	D	DIN mount	DIN mount supplied in grey body only - 45 mm escutcheon
Group 7: Time Delays	1	Long time delay, high instantaneous trip	Instantaneous Trip Point (x In) 10 – 20 Comments 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, 5, 10, 15, 16, 20, 25, 30, 32, 35, 40, 45, 50, 60, 63A		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 (-)	

*For options not listed, please contact CBI*

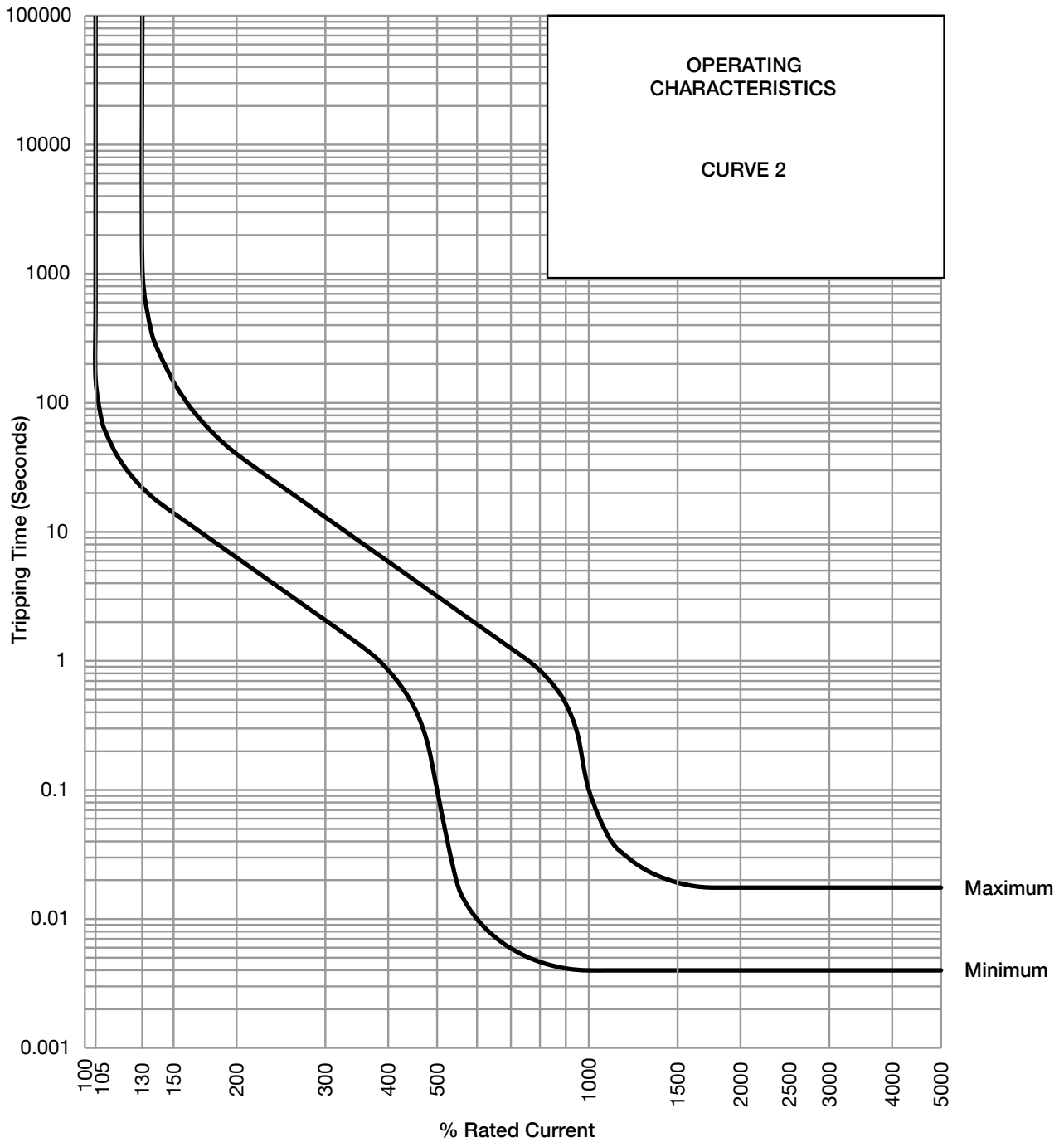
# QF(18) - Series Miniature Circuit Breakers

## Time Delay Curves



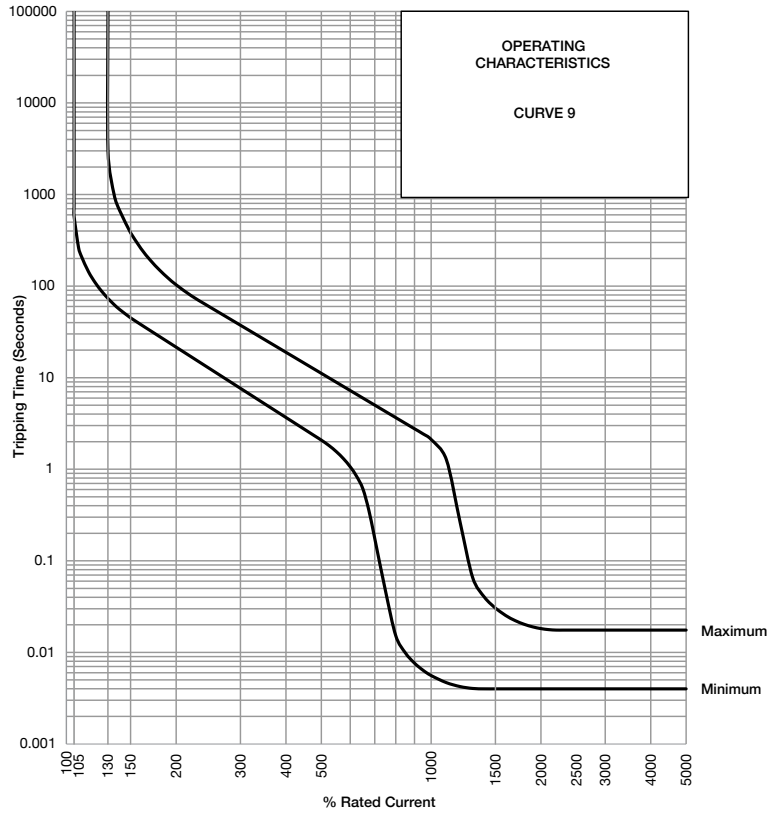
## QF(18) - Series Miniature Circuit Breakers

### Time Delay Curves



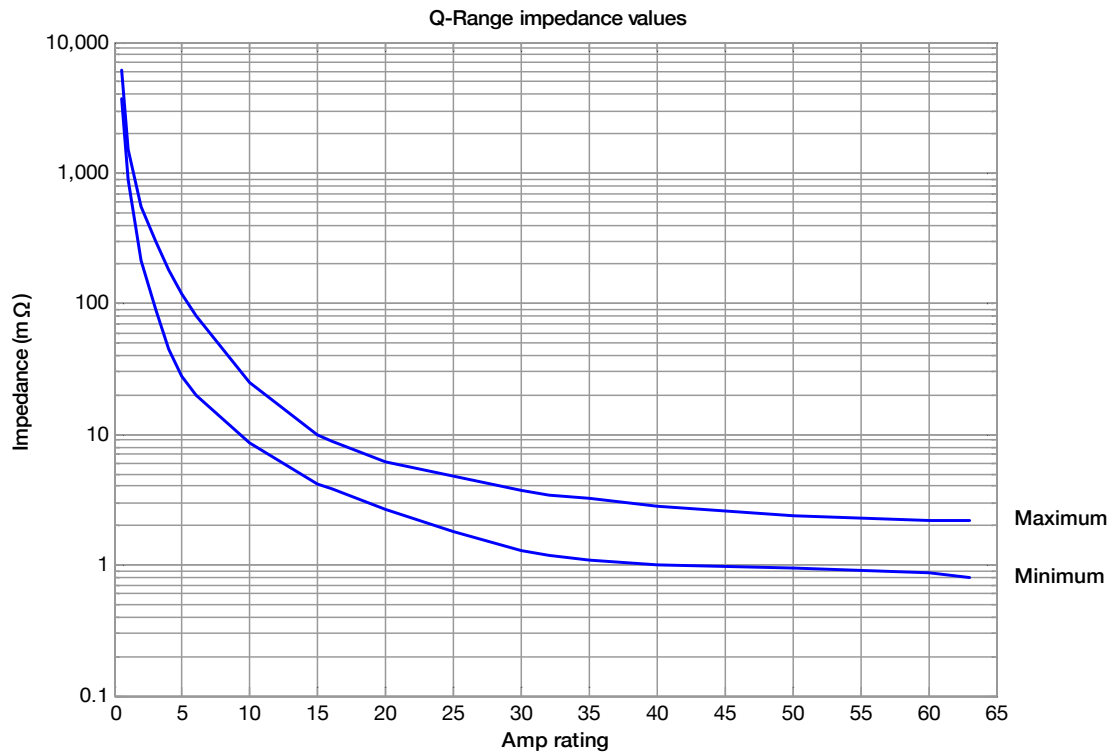
# QF(18) - Series Miniature Circuit Breakers

## Time Delay Curves



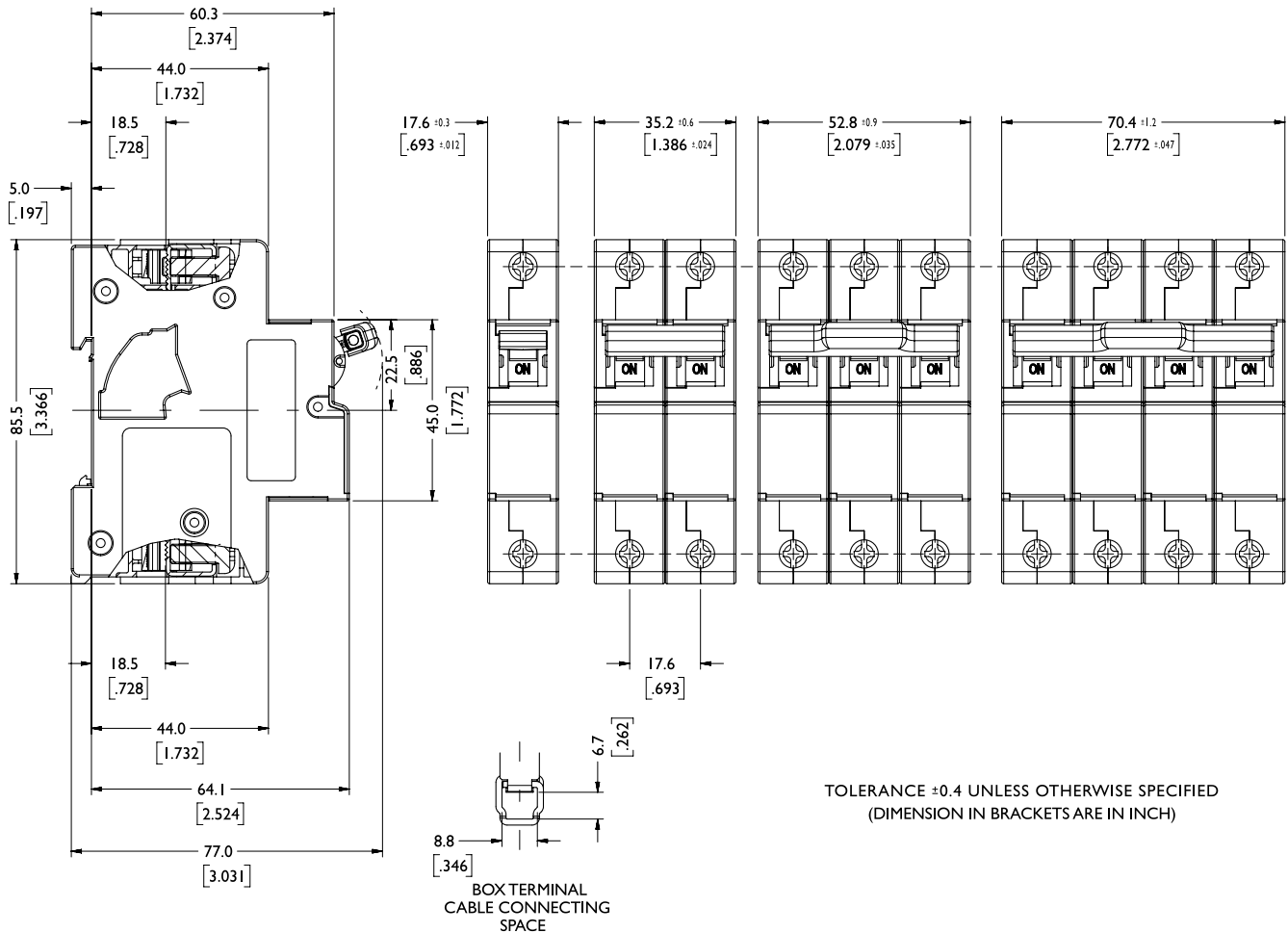
\* The published time delay curves are generated at 30°C ambient temperature with the Circuit Breaker mounted in the up-right position. The “must hold”, “must trip” and “instantaneous trip” current values are not affected by temperature, although delay time for the other operating current values may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

## Internal Impedance vs Current Rating



## QF(18) - Series Miniature Circuit Breakers

### Outline Dimensions: DIN Mount



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