

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% rated current capability, independent of ambient temperature
- One, two, three pole, 1+N and 3+N
- VC 8036 compliant
- SANS 556-1 tested
- VDE, EAC and CCC approved, CE certified
- Ratings 1 A to 63 A
- Wide range of time delays & operating currents
- Precision tripping characteristics
- Trip indication with mid-trip position
- Can be switched on immediately after tripping
- DIN mount product in grey shells
- Suitable to use for electrical isolation

Applications

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

Auxiliary Switch: Features

- Factory fitted
- Attached to right hand side of the circuit breaker
- Compact 6.5 mm width
- IEC 60947-5-1
110 Vdc, 0.5 A; 240 Vac, 6A

Optional Accessories

- Handle lock (QFAP001)
- Surface mounting clips (2096001)
- Busbar (2121381)

VC 8036



(AS/NZS 3111)

Hydraulic-Magnetic Circuit Breakers are unaffected by ambient temperature and carries 100% rated current

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Technical Data

Product Type	Circuit Breaker				
Approvals	SANS 556-1 (VC 8036)				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 Vac		415 Vac		
Minimum Current Rating	1 A				
Maximum Current Rating	63 A				
Ultimate S/C Breaking Capacity (Icu)	5 kA				

Product Type	Circuit Breaker				
Approvals	IEC / EN 60947-2, CE, EAC				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 Vac		415 Vac		
Minimum Current Rating	1 A				
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Product Type	Circuit Breaker				
Approvals	GB14048.2				
Number of Poles	1	2 (1+N)	2	3	4 (3+N)
Operating Voltages	240 Vac		415 Vac		
Minimum Current Rating	1 A				
Maximum Current Rating	63 A				
Ultimate S/C Breaking Capacity (Icu)	6 kA				

Auxiliary Module	
Auxiliary Switch	DIN mounted

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Technical Data

Product Type	QF(18)
Ambient Operating Temperature	-40 °C to +85 °C
Mounting Options	DIN rail, surface mount
Time Delay Curves	1, 2, 9
Endurance	10000 operations; 1500 with current, 8500 without current (IEC 60947-2 Clause 7.2.4.2)*
Dielectric Strength	1000 - 2000 Vac for one minute (IEC 60947-2 Clause 8.3.3.3)*
Rated Impulse Withstand Voltage	4 kV (IEC 60947-2 Clause 8.3.3.2)
Weight	120 g per pole, 180 g with auxiliary (unpacked)
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 960 °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.

* Refer to standard for details.

Breaker QF	Wire Size mm ² (IEC)	Torque (IEC)	Comments
1 Pole to 4 Pole	0.75 - 25 mm ²	2.5 Nm	Pozidriv #2 Combi head

Cu only

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Long Code

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

Group	1	2	3	4	5	6	7	8	9	10	11	12	13
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	Special requirement	Special termination	Customer specific
Long Code	QF	-	A	3	(18)	D	2	50A	-	-	-	-	-

Ordering Information

Group 1: Frame Type	Code	Description	Comments	
	QF	Miniature circuit breaker	18 mm wide DIN mount	
Group 2: Switch/Neutral	Code	Description	Comments	
	-	Not applicable		
	S	Switch	Green handle	
	N	Neutral	Green handle	
Group 3: Auxiliary / Trip Alarm	Code	Description	Comments	
	-	Not applicable		
	A	Auxiliary switch (1 x Aux 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 1P + N	
	3	Triple pole		
	4	Four pole	3P + N only	
Group 5: Module Width	Code	Description	Comments	
	(18)	18 mm module width		
Group 6: Mounting	Code	Description	Comments	
	D	DIN mount	DIN mount supplied in grey body only - 45 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, 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	Description	Comments	
	-	Not applicable	For future use (-)	

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QF(18) - Series Miniature Circuit Breakers

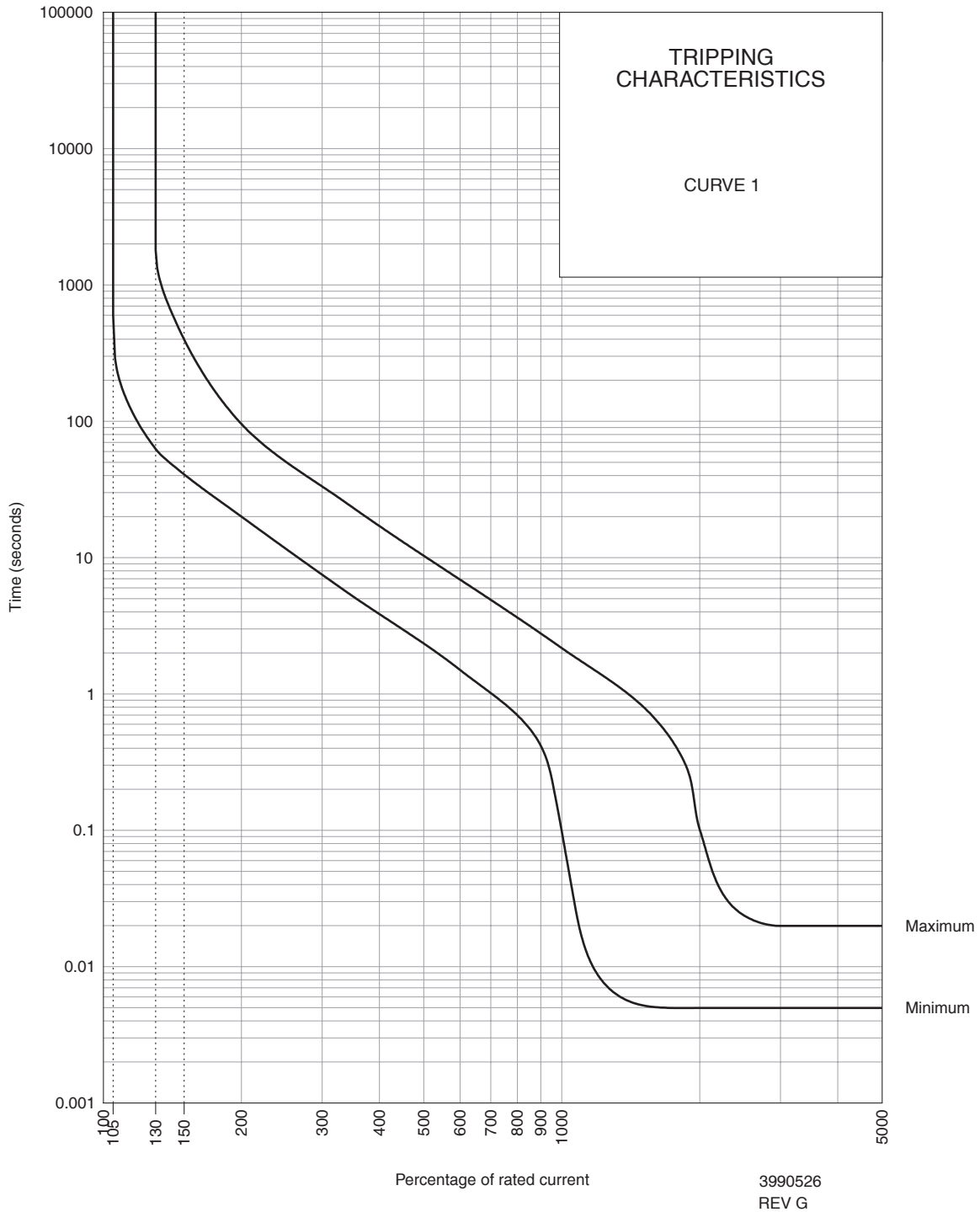
Ordering Information continues

Group 10: Shunt Trip	Code	Description	Comments
	-	Not applicable	
Group 11: Special Requirement	Code	Description	Comments
	-	Not applicable	For future use
Group 12: Special Termination	Code	Description	Comments
	-	Not applicable	For future use
Group 13: Customer Specific	Code	Description	Comments
	-	Not applicable	For future use

For options not listed, please contact CBI

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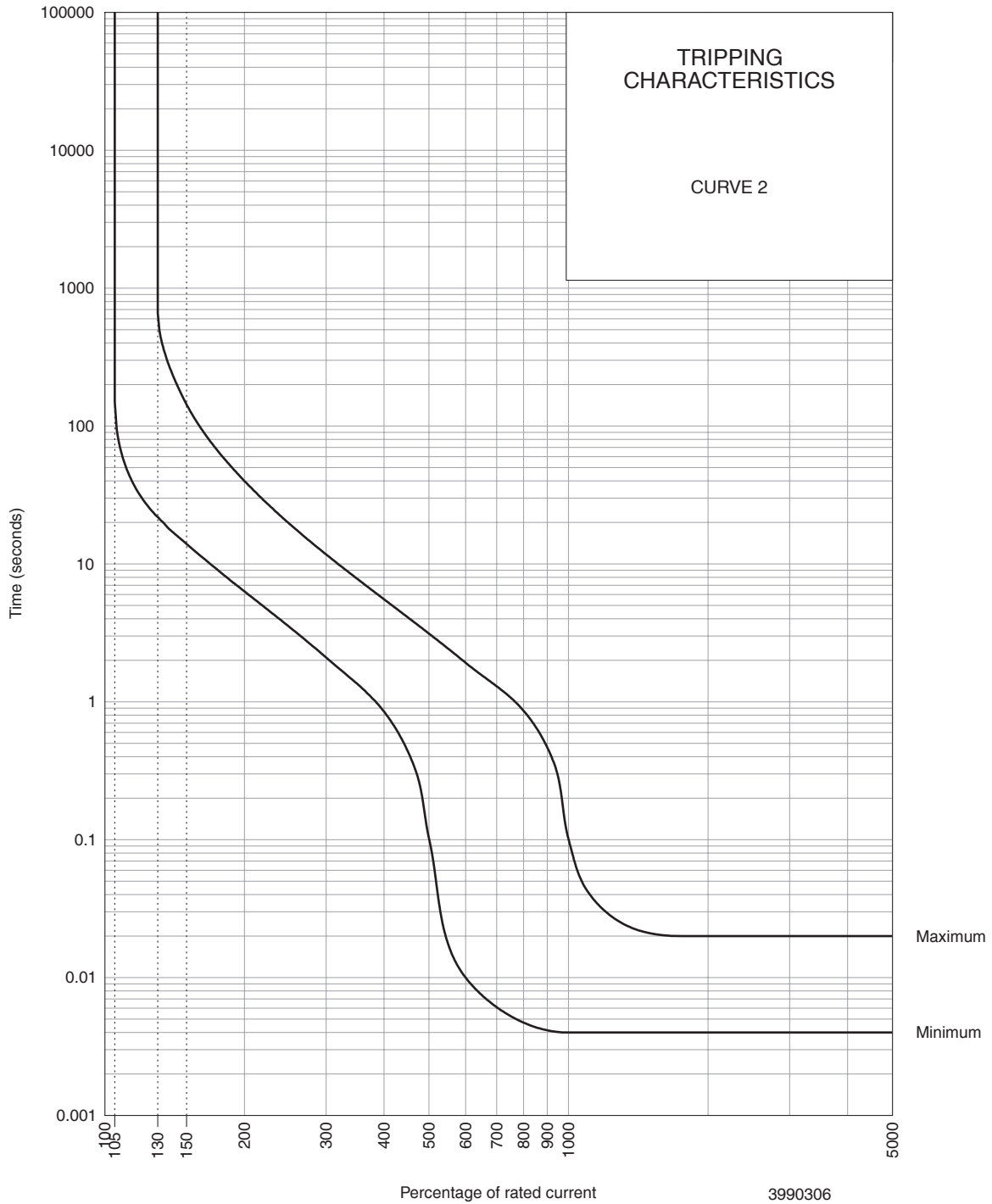
Time Delay Curve



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	63	45	41	20	7.5	3.8	2.3	1.5	1.01	0.7	0.42	0.1	0.005
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	1800	503	400	96	34	17	10.3	6.8	4.9	3.6	2.8	2.2	0.1

QF(18) - Series Miniature Circuit Breakers

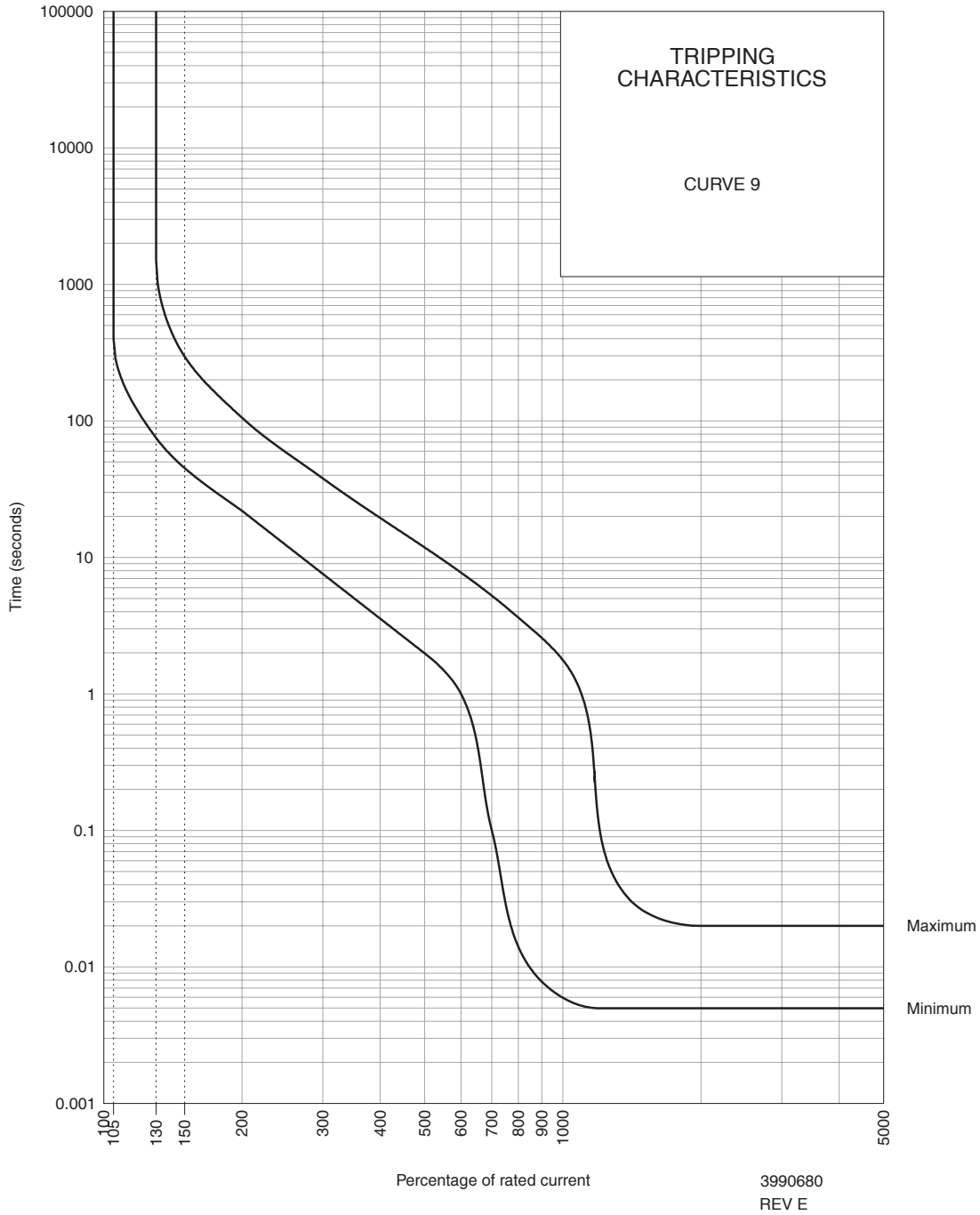
Time Delay Curve



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	22	15.4	14	6.3	2.1	0.85	0.1	0.001	0.006	0.005	0.041	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	660	180	144	40	12	5.5	3	1.92	1.3	0.86	0.47	0.1	0.02

QF(18) - Series Miniature Circuit Breakers

Time Delay Curve

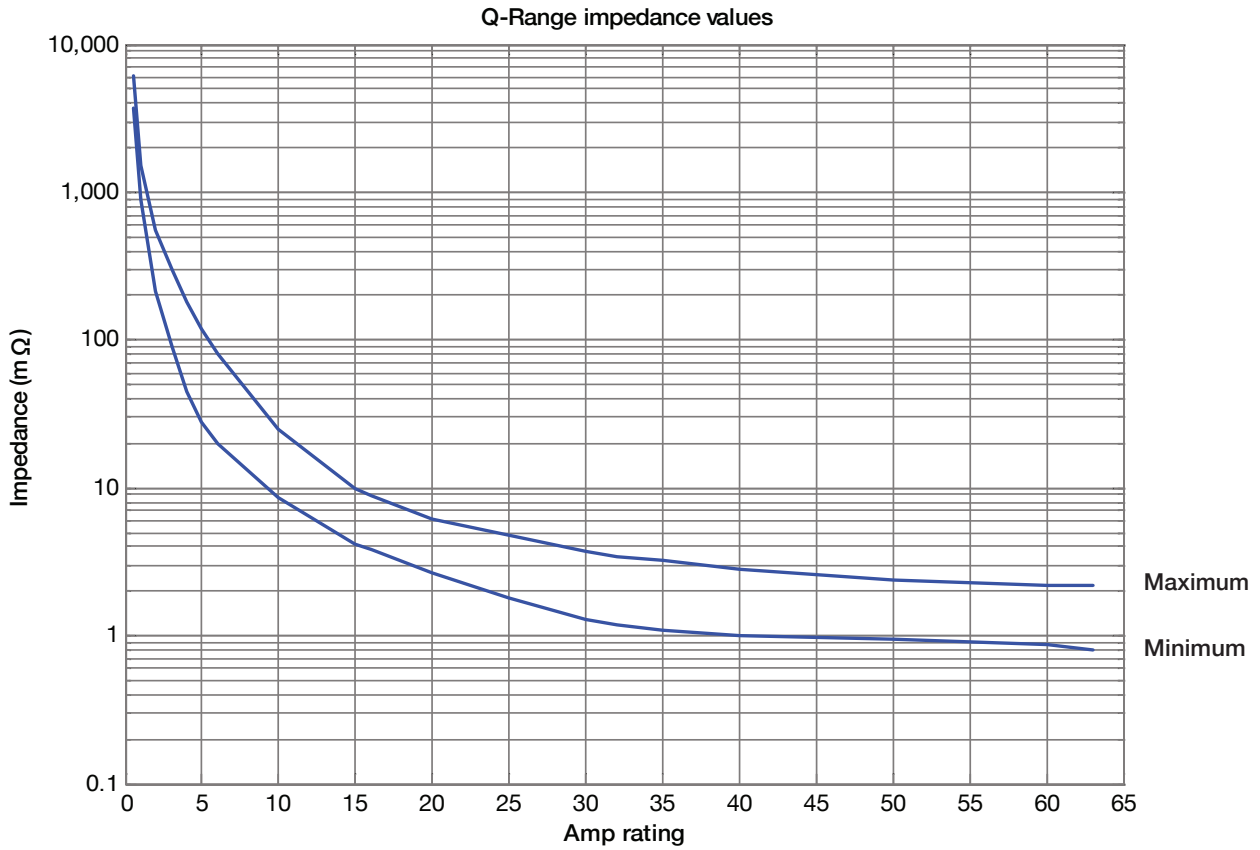


PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1200%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	75	50	45	22	7.6	3.6	2	1	0.1	0.01	0.008	0.005	0.005
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	1500	360	295	100	38	19	11.8	7.7	5.3	3.6	2.6	0.06	0.02

* 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.

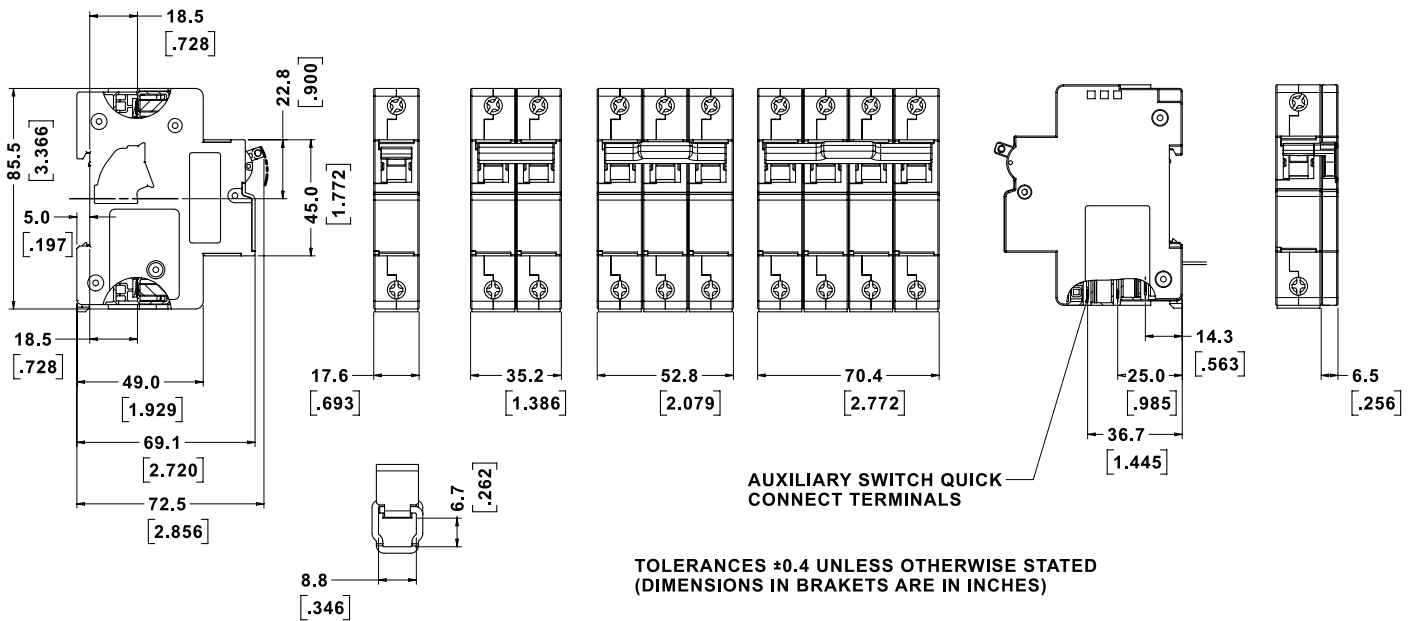
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Internal Impedance vs Current Rating



QF(18) - Series Miniature Circuit Breakers

Outline Dimensions: DIN mount



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