

## QF17 - Series Earth Leakages

The QF17 type earth leakage device is available with or without overload protection as a circuit breaker and as a switch. The overload version has the suffix A and the version without overload has the suffix C.



**QF17A**  
Dual (DIN & CBI Mini rail) mount



**QF17C**  
Dual (DIN & CBI Mini rail) mount

### Features

- Hydraulic-magnetic technology
- 100% rating capability, independent of ambient temperature
- VC 8035 compliant
- VDE, CCC and AS/NZS 60947-2 approved, CE certified
- UL recognised (UL 1053)
- Ratings 1 A to 63 A
- Earth leakage sensitivity 30 mA, **Type A**
- Single pole plus switched neutral earth leakage protection
- Switch versions fitted with short circuit protection
- Available in various currents ratings
- Precision tripping characteristics
- Compact 26 mm wide module
- Trip indication with mid-trip position
- Can be switched on immediately after tripping
- Suitable to use for electrical isolation
- Shell designed for easier installation onto busbar

### Auxiliary Switch, Trip Alarm & Combination: Features

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

### Applications

- Residential and commercial applications requiring high sensitivity earth leakage protection from electrical shock and fire hazards
- Earth leakage protection (DIN / EN 60947-2, Annexure B and Annexure L)
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Railway signalling equipment
- Industrial equipment

### Optional Accessories

- Rear studs (factory fitted)
- Handle lock - QFAP001
- Surface mounting clips - SAAX000
- Busbar - 2121380
- Escutcheon blank - SFEB000
- Safety blank - SAEB000

VC 8035



AS/NZS 60947-2



## QF17 - Series Earth Leakages

### Technical Data

Product Type	QF17A	QF17C
Approvals	VC 8035	
Number of Poles	2 (1+N)	2 (1+N)
Standard Ampere Ratings	5 to 63 A	40 and 63 A
Sensitivity	30 mA	30 mA
Rated Voltage	230 Vac	230 Vac
Rated S/C Withstand Capacity (Icw)	-	5 kA / 50 ms
Ultimate S/C Breaking Capacity (Icu)	5 kA	-

Product Type	QF17A	QF17C
Approvals	AS/NZS 60947-2, DIN / EN 60947-2, CE, UKCA	
Number of Poles	2 (1+N)	2 (1+N)
Standard Ampere Ratings	5 to 63 A	40 and 63 A
Sensitivity	30 mA	30 mA
Rated Voltage	240 Vac	240 Vac
Rated S/C Withstand Capacity (Icw)	-	6 kA
Ultimate S/C Breaking Capacity (Icu)	6 kA	-

Product Type	QF17A	QF17C
Approvals	UL 1053	
Number of Poles	2 (1+N)	2 (1+N)
Standard Ampere Ratings	1 to 63 A	63 A
Sensitivity	22 mA	22 mA
Rated Voltage	240 Vac	240 Vac

Product Type	QF17A	QF17C
Approvals	GB 14048.2	
Number of Poles	2 (1+N)	2 (1+N)
Standard Ampere Ratings	5 to 63 A	40 and 63 A
Sensitivity	30 mA	30 mA
Rated Voltage	240 Vac	240 Vac+
Rated S/C Withstand Capacity (Icw)	-	6 kA
Ultimate S/C Breaking Capacity (Icu)	6 kA	-

Verify approvals for specific ratings in accordance with the relevant test certificates.

Auxiliary Module	
Auxiliary Switch	DIN and CBI mini rail mounted
Trip Alarm	CBI mini rail mount only
Auxiliary Switch + Trip Alarm	CBI mini rail mount only

## QF17 - Series Earth Leakages

### Technical Data

<b>Product Type</b>	QF17
<b>Ambient Operating Temperature</b>	-40 °C to +85 °C
<b>Mounting Options</b>	Dual (DIN & mini rail) mount, surface mount
<b>Endurance</b>	10000 operations - 1500 with current, 8500 without current (IEC 60947-2, clause 7.2.4.2)*
<b>Dielectric Strength</b>	1480 V (single pole) / 1830 V (multi pole), 50 Hz for one minute after testing
<b>Rated Impulse Withstand Voltage</b>	4 kV (IEC 60947-2 Clause 8.3.32)
<b>Weight</b>	264 g - QF17C, 265 g - QF17A (unpacked)
<b>Altitude</b>	Certification tests done at altitude ≈ 2000 metres. Will operate at higher altitudes.
<b>Shock</b>	10 G (IEC 60068-2-27)
<b>Vibration</b>	2 G (IEC 60068-2-27) (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.

\* Refer to the standard for details

Earth Leakage	Wire Size mm <sup>2</sup> (IEC)	Torque (IEC)	Comments
Main Terminals	0.75 - 25 mm <sup>2</sup>	2.5 Nm	Pozidriv #2 Combi head

## QF17 - Series Earth Leakages

### Long Code

Example Code: Q-F-17-A---DM-2-63A-30mA-240V----

Group	1	2	3	4	5	6	7	8	9	10	11	12	13
Requirement	Q Frame	Type F	1 pole + N	Overload	No auxiliary switch	Dual mount	Medium delay curve 2	Current rating 63 A	Sensitivity 30 mA	Voltage 240 Vac	No special termination	Future use	Customer specific
Long Code	Q	F	17	A	-	DM	2	63A	30mA	240V	-	-	-

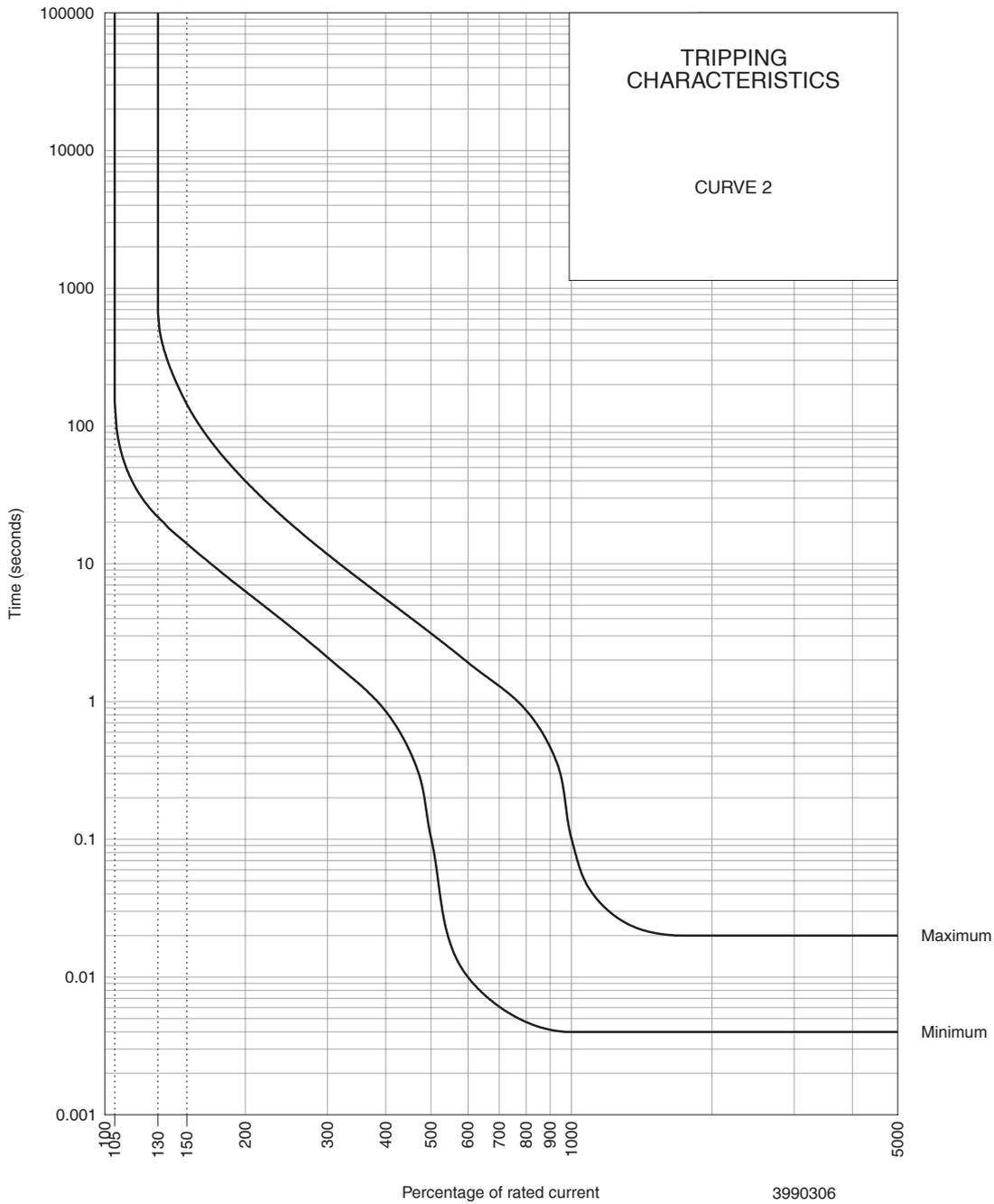
### Ordering Information

Group 1: Frame Type	Code	Description	Comments	
	Q	26 mm wide earth leakage		
Group 2: Product Type	Code	Description	Comments	
	F	240 Vac	6 kA	
Group 3: No of Poles	Code	Description	Comments	
	17	Single phase Earth Leakage Unit (1+N)	QF17	
Group 4: E-L Type	Code	Description	Comments	
	A	Overload protection	White and green handle	
	C	Switch disconnecter	Green handle	
Group 5: Auxiliary / Additional Pole	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	
	T	Trip alarm (1 x trip alarm in 1 module)	6.5 mm module fitted on right-hand side	
	AT	Auxiliary switch + trip alarm ( in 1 module)	6.5 mm module fitted on right-hand side	
Group 6: Mounting	Code	Description	Comments	
	DM	Dual (DIN & Mini rail) mount	Dual mount supplied in black body only - 57 mm escutcheon	
Group 7: Time Delays	Code	Description	Instantaneous Trip Point (x In)	Comments
	-	-	-	Time delays not applicable for the switch
	2	Medium time delay	5 – 10	
Group 8: Current Ratings	Code / Description		Comments	
	1, 5, 10, 15, 16, 20, 25, 30, 32, 40, 50, 60, 63 A		QF17A Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.	
	40, 63 A		QF17C Ratings available vary depending on certification * Other ratings are available as special orders. Check availability.	
Group 9: Sensitivity	Code	Description	Comments	
	30mA	30 mA	Standard	
Group 10: Voltage	Code	Description	Comments	
	230 V	230 Vac	VC 8035	
	240 V	240 Vac		
Group 11: Special Termination	Code	Description	Comments	
	-	-	Box terminals (standard)	
	S	Rear connected stud	Factory fitted	
Group 12:	Code	Description	Comments	
	-	For future use (-)		
Group 13: Customer Specific	Code	Description	Comments	
	-	Not applicable	For future use	

*For options not listed, please contact CBI*

# QF17 - Series Earth Leakages

## Time Delay Curve

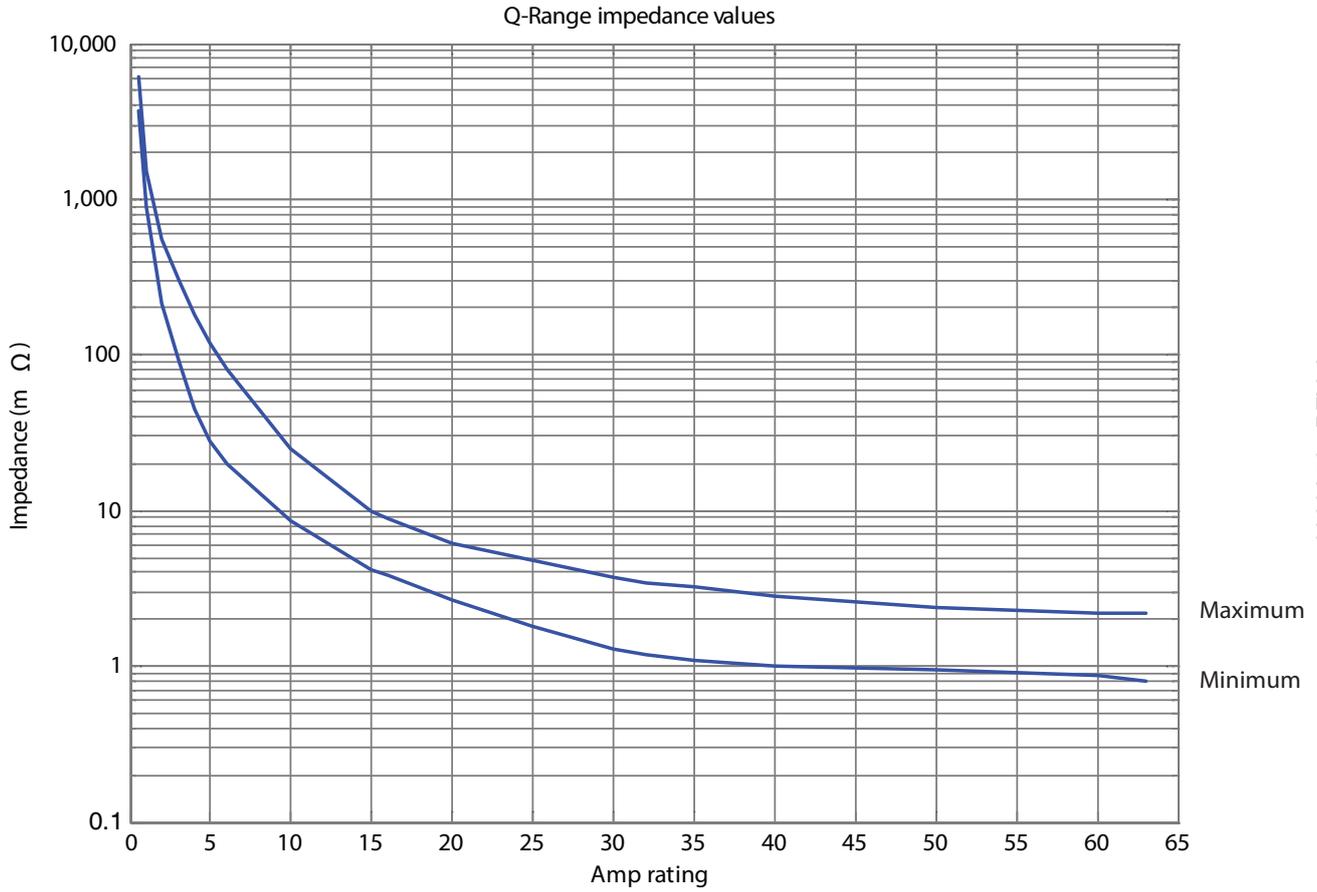


PERCENTAGE OF RATED CURRENT	105%	130%	145%	150%	200%	300%	400%	500%	600%	700%	800%	900%	1000%	2000%
MINIMUM TRIP TIME IN SECONDS	NO TRIP	22	15.4	14	6.3	2.1	0.85	0.1	0.001	0.006	0.005	0.041	0.004	0.004
MAXIMUM TRIP TIME IN SECONDS	NO TRIP	660	180	144	40	12	5.5	3	1.92	1.3	0.86	0.47	0.1	0.02

\* 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.

## QF17 - Series Earth Leakages

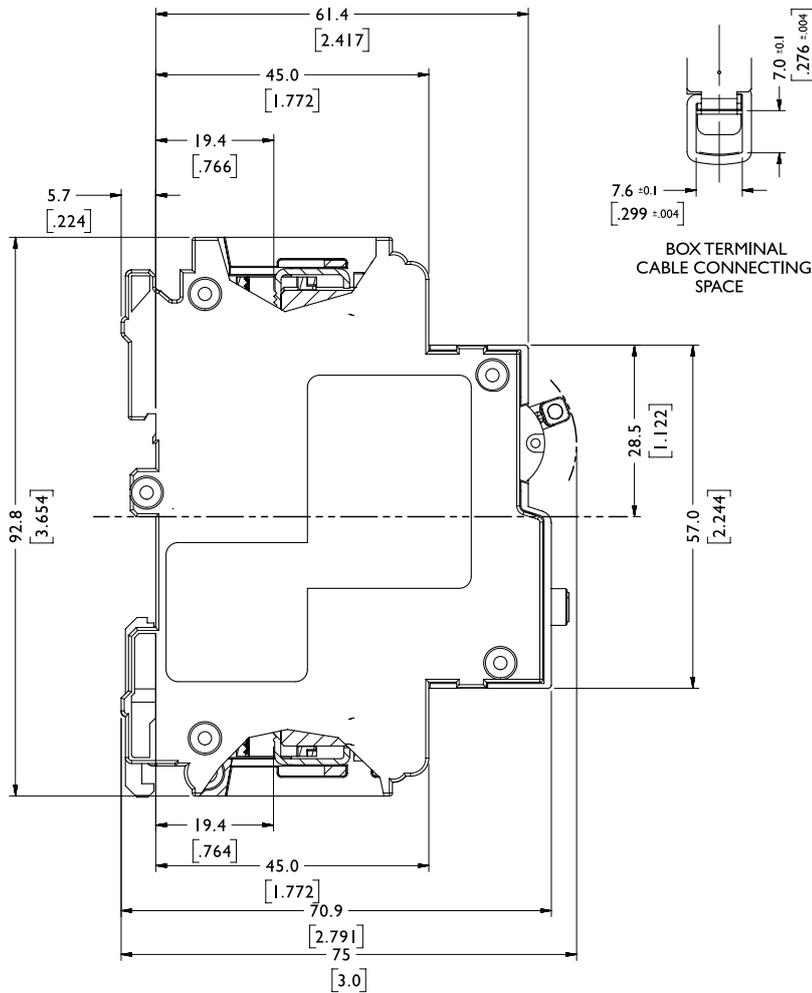
### Internal Impedance vs Current Rating



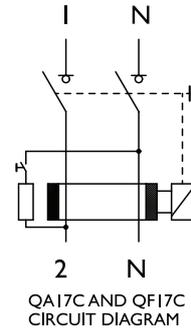
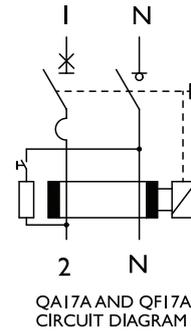
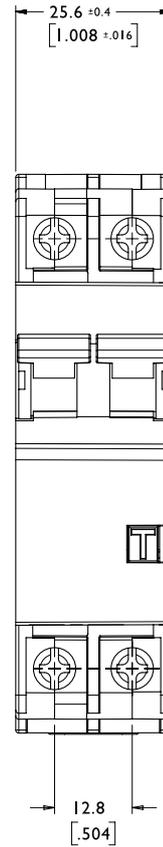
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# QF17 - Series Earth Leakages

## Outline Dimensions: Dual Mount

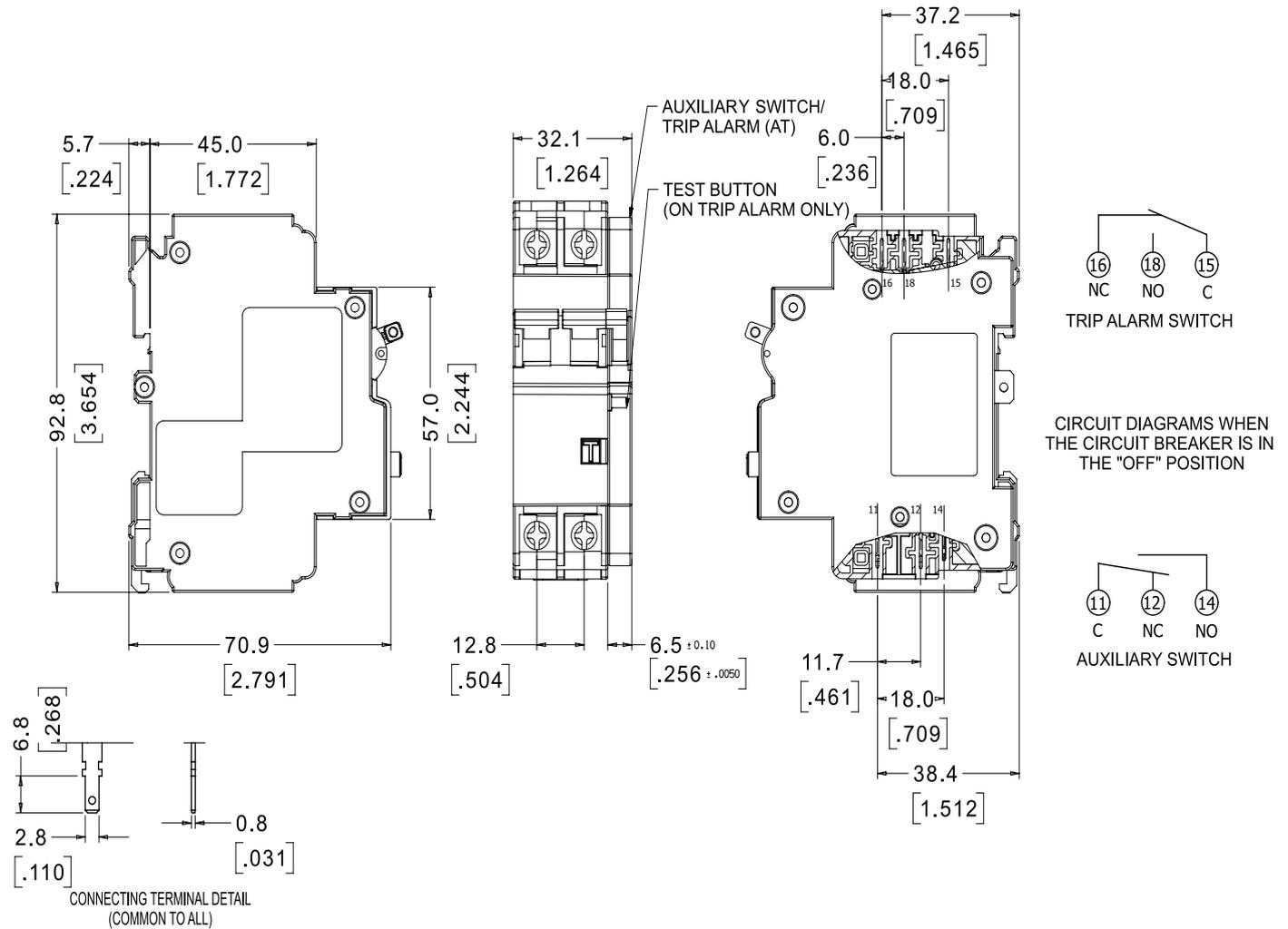


TOLERANCE  $\pm 0.4$  UNLESS OTHERWISE SPECIFIED  
(DIMENSION IN BRACKETS ARE IN INCH)



## QF17 - Series Earth Leakages

### Outline Dimensions: Dual Mount and Auxiliary Switch



TOLERANCE ±0.4 UNLESS OTHERWISE SPECIFIED  
(DIMENSION IN BRACKETS ARE IN INCH)

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