

QL - Series Miniature Circuit Breakers



DIN mount
(grey body)



Dual mount
(black body)



Dual mount + Auxiliary
(black body)

Features

- AC Circuit Breaker
- Hydraulic-Magnetic technology
- 100% rating capability, independent of ambient temperature
- One, two and three pole (UL). One, two, three pole and 1+N, 3+N (VDE).
- VDE and CCC approved, CE certified
- UL listed (CSA / UL 489)
- Ratings 0.1 to 25 A
- Optional Auxiliary Switch / Trip Alarm - factory fitted (6.5 mm wide)
- Optional Shunt Trip (no approvals)
- Wide range of time delays and operating currents
- Precision tripping characteristics
- Ultra compact – 13 mm wide module
- Trip indication with mid-trip handle
- Reset immediately after overload
- DIN mount product in grey shells
- Dual mount product in black shells
- Current limiting capability
- Ring terminal ready (terminal screw is removable)
- Suitable to use for electrical isolation

Applications

- AC branch circuit protection (UL 489, IEC / EN 60847-2)
- Telecom / datacom equipment
- Lighting control
- UPS equipment
- Alternative energy equipment
- Mobile power generation equipment
- Power conditioning equipment

Auxiliary Switch, Trip Alarm & Combo: Features

- 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

- Auxiliary Switch (DIN and Dual Mount)
- Auxiliary Switch + Trip Alarm (Dual Mount only)
- Trip Alarm (Dual Mount only)
- Handle lock
- Surface mounting clips
- Busbar
- 57 mm Escutcheon blank (Dual Mount only)
- 57 mm Safety blank (Dual Mount only)

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Technical Data

Approvals	IEC / EN 60947-2, VDE				
Number of Poles	I	2 (I+N)	2	3	4 (3+N)
Operating Voltages	240 V AC		415 V AC		
Minimum Current Rating	0.1 A				
Maximum Current Rating	25 A				
Interrupting Capacity	6 kA				
Operating Temperature Range	-40°C to +85°C				
Mounting Options	DIN Rail, Dual mounting (DIN & Mini), surface mounting clip				
Time Delay Curves	I, 3, 9, KM, OP				

Approvals	UL 489			
Number of Poles	1	1	2	3
Operating Voltages	120 V AC	240 V AC	120 / 240 V AC	240 V AC
Minimum Current Rating	0.1 A			
Maximum Current Rating	25 A	20 A	25 A	25 A
Interrupting Capacity	10 kA	5 kA	10 kA	5 kA
Operating Temperature Range	-40°C to +85°C			
Mounting Options	DIN Rail, Dual mounting (DIN & Mini), surface mounting clip			
Time Delay Curves	I, 3, 9, KM, OP			

Approvals	CCC		
Number of Poles	1	2 (1+N)	2
Operating Voltages	240 V AC	240 V AC	240 V AC
Minimum Current Rating	0.1 A		
Maximum Current Rating	25 A	25 A	25 A
Interrupting Capacity	6 kA		
Operating Temperature Range	-40°C to +85°C		
Mounting Options	DIN Rail, Dual mounting (DIN & Mini), surface mounting clip		
Time Delay Curves	I, 3, 9, KM, OP		

Breaker QL	Wire Size mm ² (IEC)	Wire Gauge (UL)	Torque (IEC)	Torque (UL)	Comments
1 Pole & 2 Pole	0.75 - 35 mm ²	18 - 2 - AWG	2.5 Nm	20 in-lb	Pozidriv #2 Combi head

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Long Code

Example Code: QL--AT-3(13)-D-KM-15A-----Z

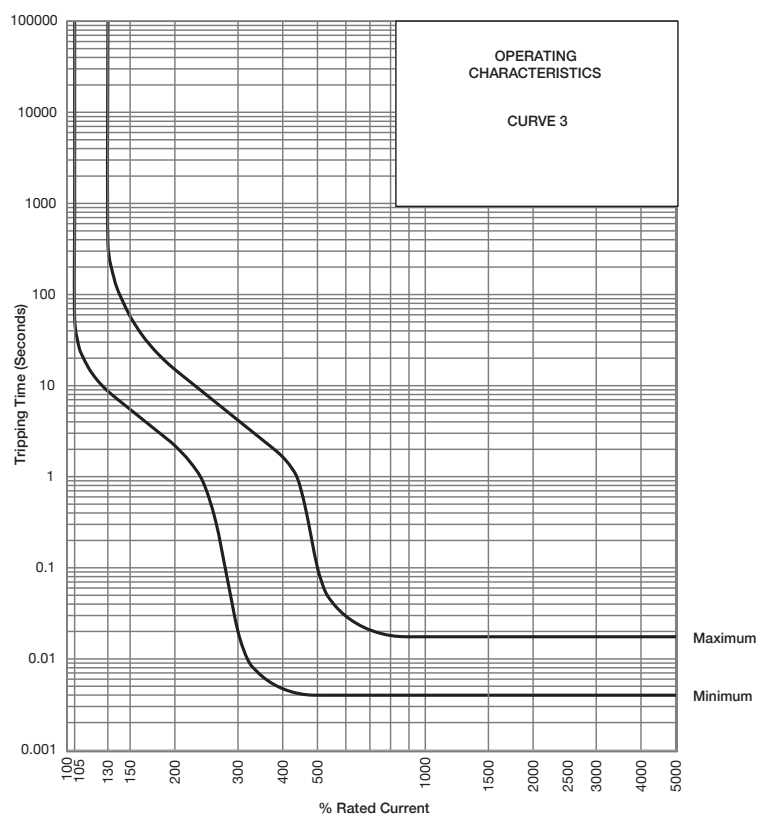
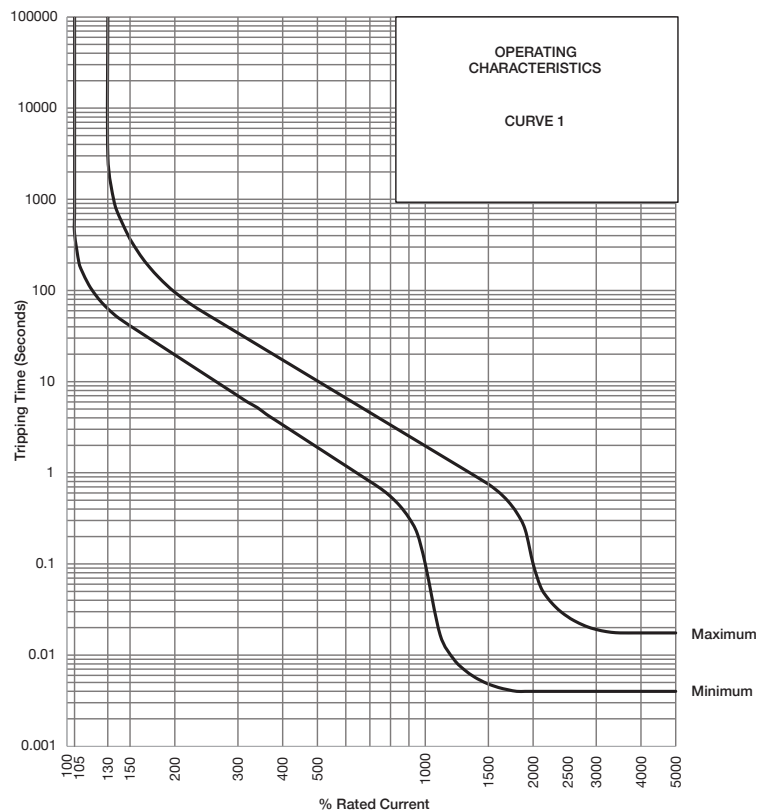
Group	1	2	3	4	5	6	7	8	9	10	11	12
Requirement	QL Frame	Switch / Neutral	Auxiliary + Trip Alarm	Triple pole	13 mm module width	DIN Rail	Medium delay curve KM	Current Rating 15 A	Future use	No Shunt Trip	Future use	Parallel bridged (by customer)
Long Code	QL	-	AT	3	(13)	D	KM	15A	-	-	-	Z

Group 1: Frame Type	Code	Description	Comments	
	QL	13 mm wide Miniature Circuit Breaker	UL 489, IEC / EN 60947-2,VDE, CE, CCC	
Group 2: Switch/Neutral	Code	Description	Comments	
	-	Not applicable	Overload poles do not have any further coding	
	N	Neutral		
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 (DIN & Dual Mount)	
	T	Trip Alarm (1 x Trip Alarm in 1 module)	6.5 mm module fitted on right-hand side (Dual Mount only)	
	AT	Auxiliary Switch + Trip Alarm combo (combined in 1 module)	6.5 mm module fitted on right-hand side (Dual Mount only)	
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	
	(13)	13 mm module width	13 mm per pole	
Group 6: Mounting	Code	Description	Comments	
	D	DIN rail mount – 45 mm Escutcheon, grey body	DIN mount supplied in grey only	
	DM	Dual mount – 57 mm Escutcheon, black body	Dual mount supplied in black only	
Group 7: Time Delays	Code	Description	Instantaneous Trip Point (x In)	Comments
	I	Long time delay, high instantaneous trip	10 – 20	Orange handle
	3	Short time delay	3 – 5	White handle
	9	Long time delay	7 – 12	White handle
	KM	Medium time delay	6 – 12	White handle
	OP	Instantaneous	None	White handle
Group 8: Current Ratings	Code / Description		Comments	
	0.1, 0.2, 0.3, 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 16, 20, 25 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 (not certified, only offered as special order)	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.			
Group 11	Code	For future use (-)		
Group 12: Special Termination	Code	Description	Comments	
	-	Not applicable	Use this code if no special terminations are used	
	P	Plug-in		
	Z	Bridged unit (bridge to be fitted by customer)		
	ZL	Bridged unit (factory fitted)		

For options not listed, please contact CBI for assistance

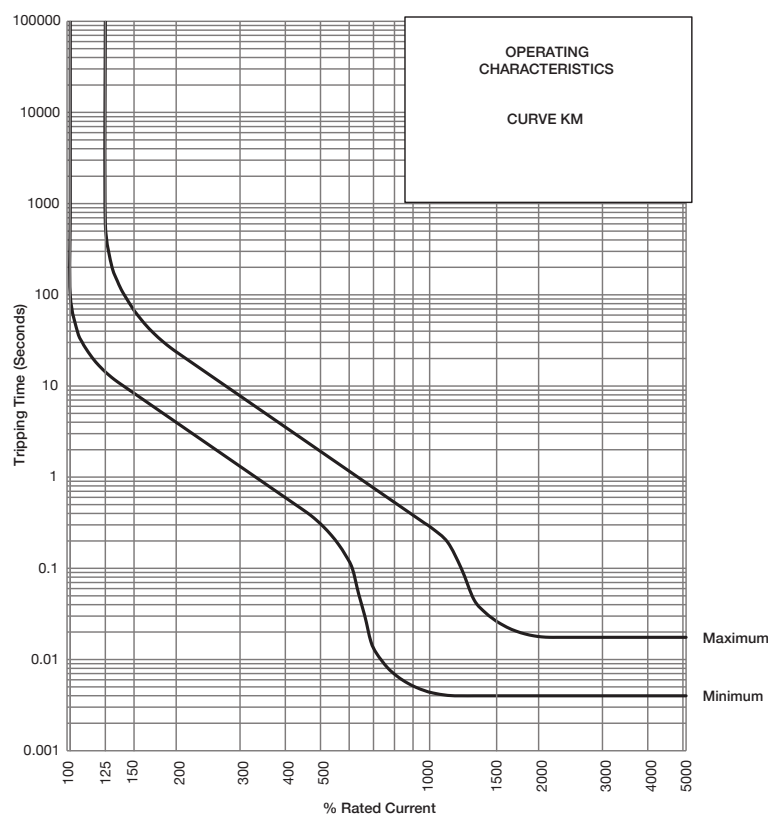
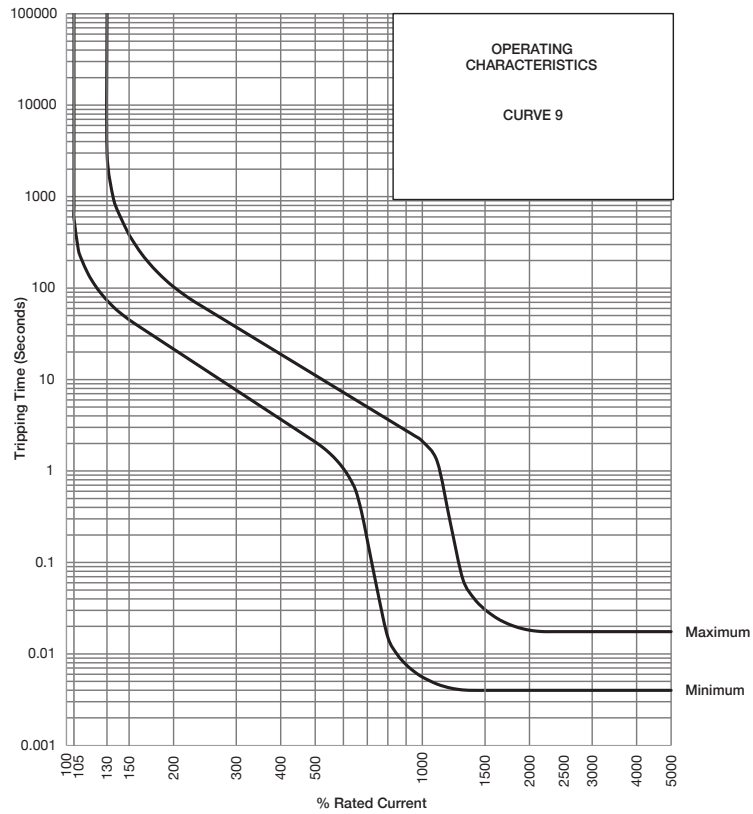
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Time Delay Curves



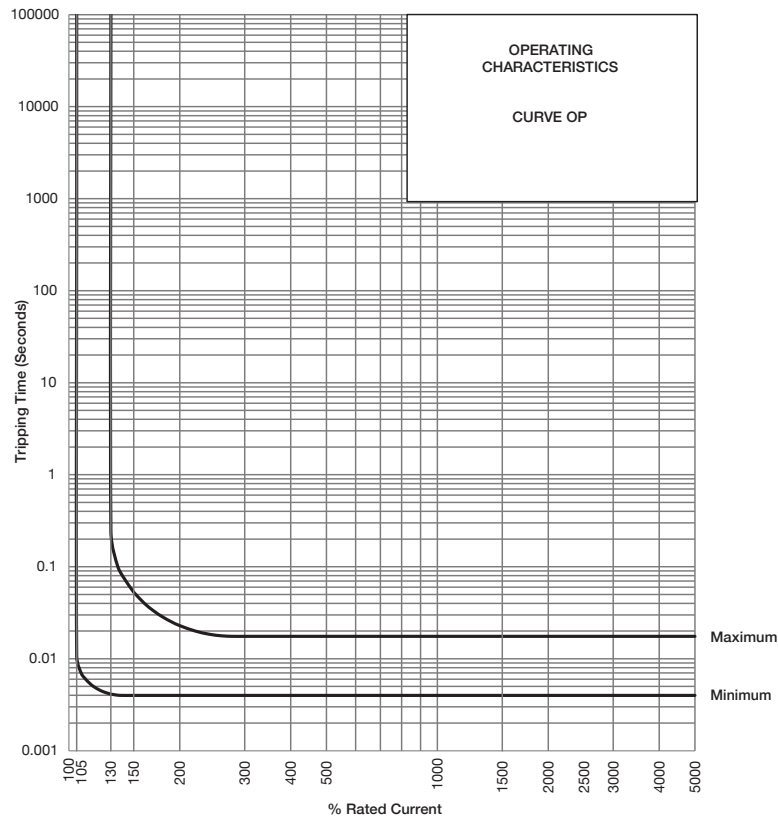
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Time Delay Curves



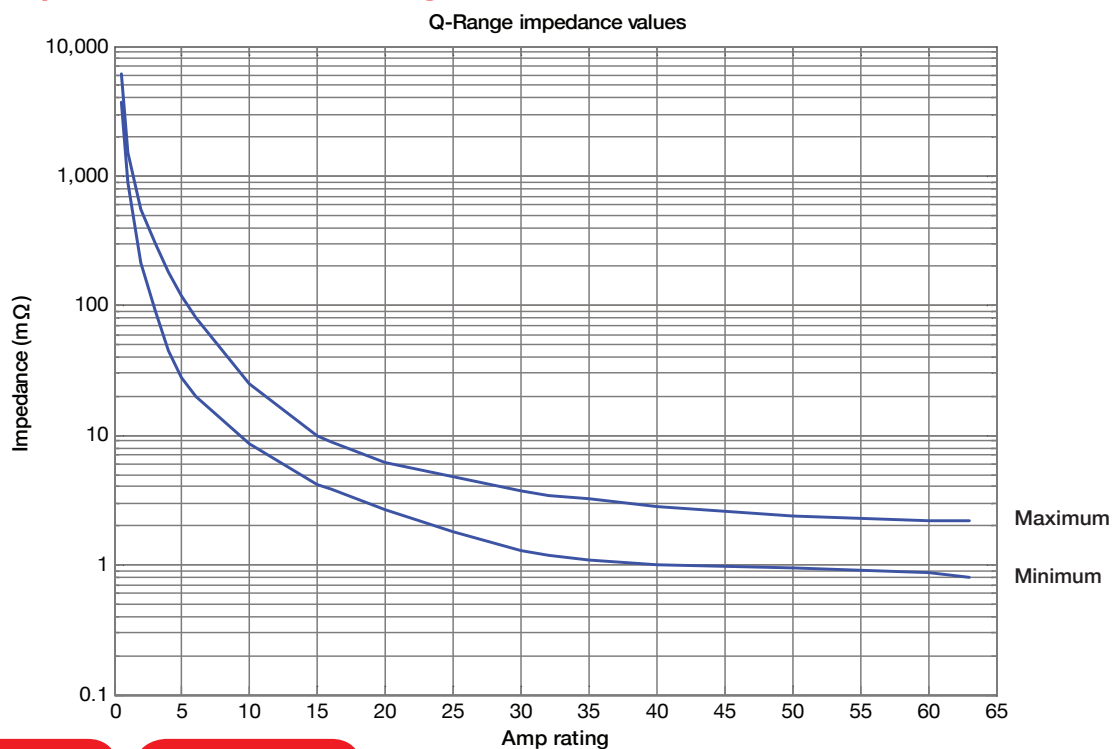
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Time Delay Curves



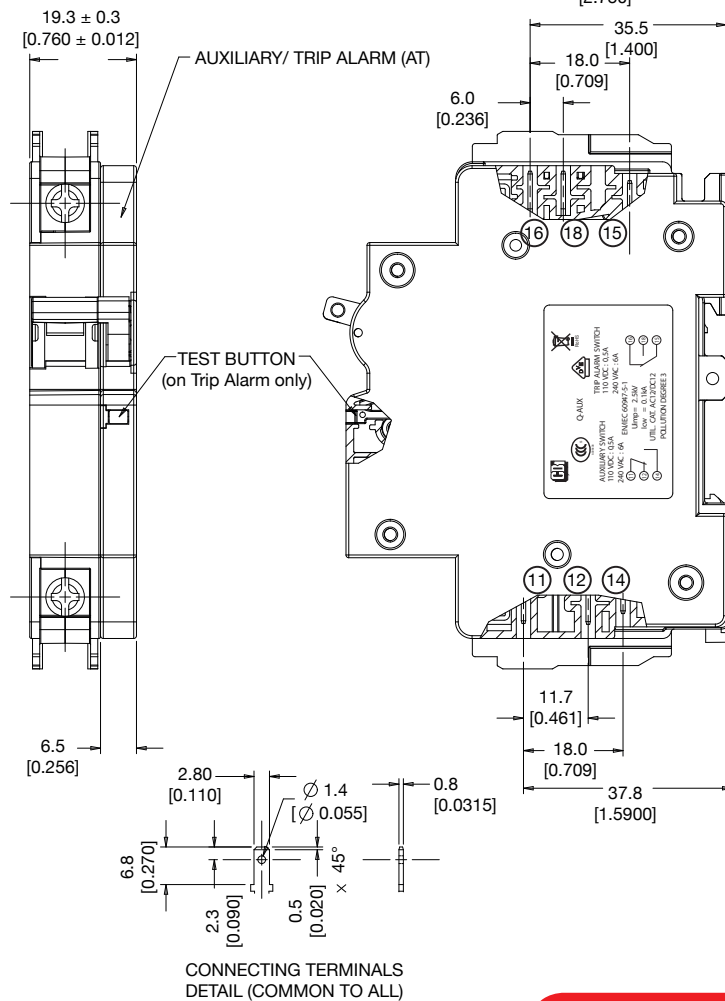
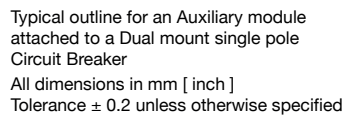
* The published time delay curves are generated at 30°C ambient temperature with the Circuit Breaker mounted in the up-right position. The “must hold”, “must trip” and “instantaneous trip” current values are not affected by temperature, although delay time for the other operating current values may have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

Internal Impedance vs Current Rating



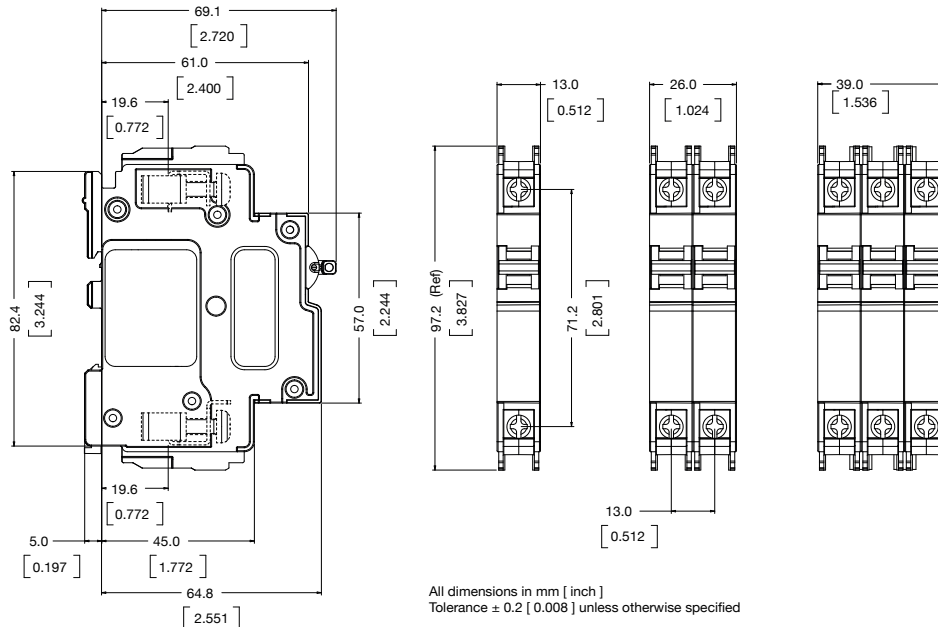
Auxiliary available (6.5 mm module width) to match the unit to which it is attached.

- Type T - Trip Alarm as shown in outline drawings (fitted on a Dual mount product)
- Type AT - Auxiliary Switch + Trip Alarm (as shown)
- Type A - Auxiliary Switch

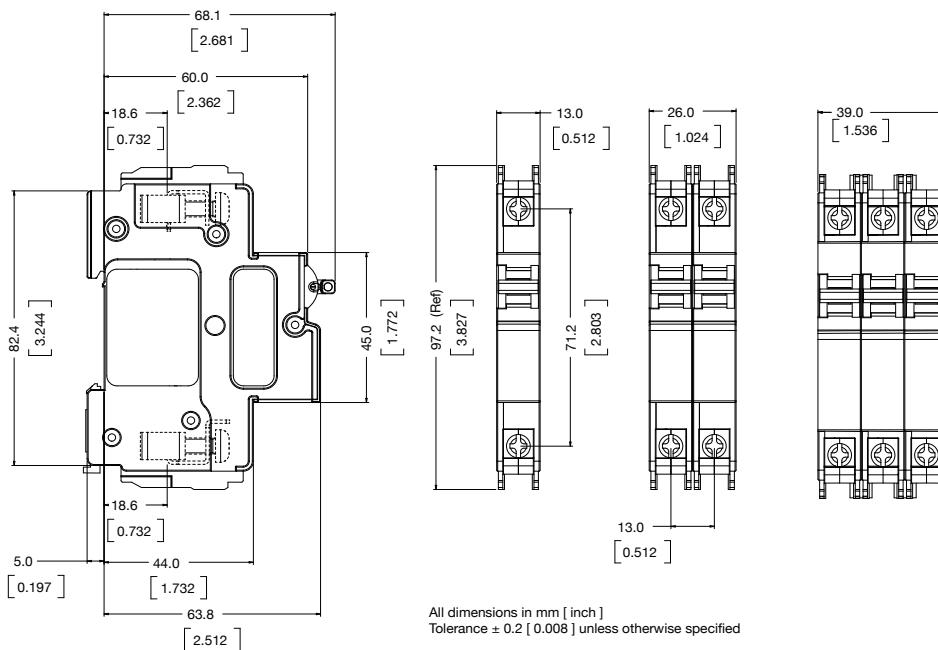


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Outline Dimensions: Dual mount



Outline Dimensions: DIN mount



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