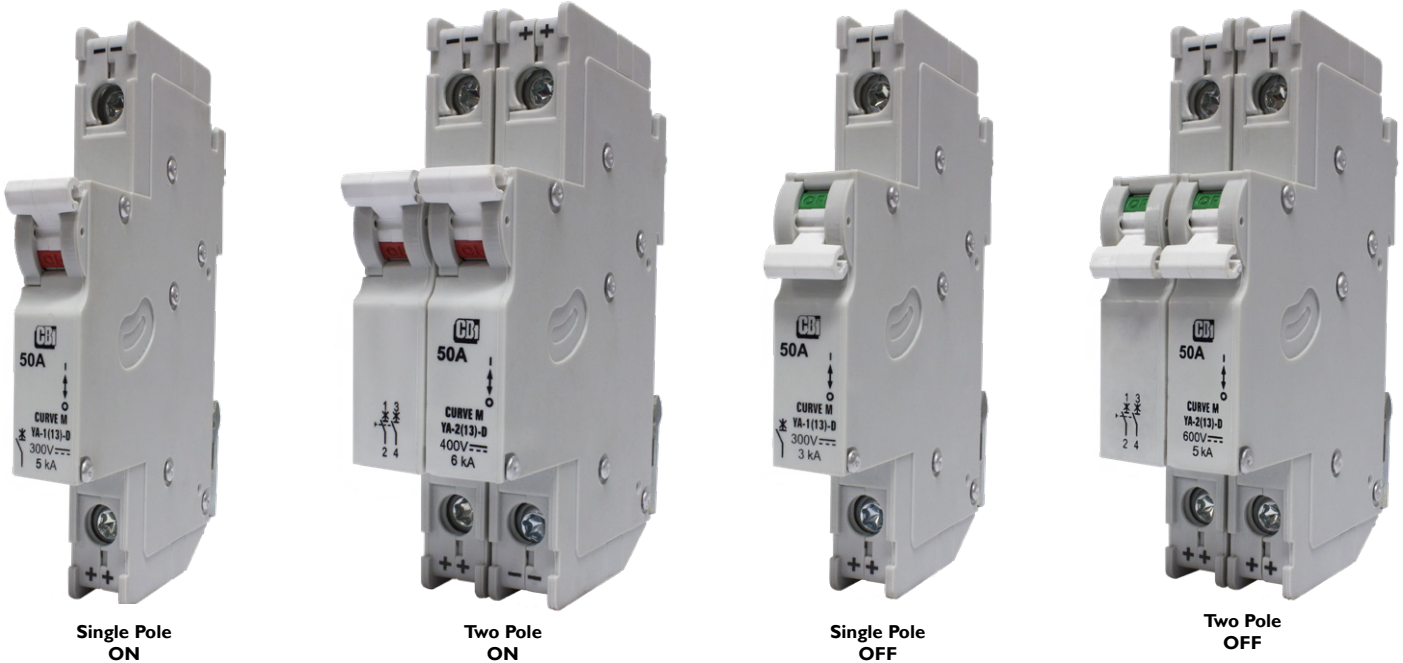


Y - Series Miniature Circuit Breakers



Features

- High energy DC circuit breaker
- 300Vdc single pole, 400Vdc and 600Vdc double pole
- (1 & 2 pole) Up to 50 A
- Ultra compact - 13 mm wide module
- VDE, EAC and CCC approved, CE certified
- UL listed (UL 489A; 489B)
- Hydraulic-magnetic technology
- Reset immediately after overload
- DIN mount product in grey shell
- Polarity sensitive
- ON and OFF indication
- Torx screw terminals
- Suitable for electrical isolation
- 100% rating capability, independent of ambient temperature
- RoHS compliant

Applications

- Solar (photovoltaic) (UL 489B)
- DC branch circuit protection (IEC / EN 60947-2)
- Telecom / datacom equipment (UL 489A)
- UPS equipment
- Alternative energy equipment
- Battery protection & switching
- Telecommunication DC power distribution
- Railway signalling equipment and infrastructure

Approvals



(IEC / EN 60947-2)
Pending



LISTED (UL 489A; UL 489B)
Pending



Pending



Approved

Y - Series Miniature Circuit Breakers

Technical Data: Approvals Pending

Product Type	Circuit Breaker							
Approvals	IEC / EN 60947-2, VDE, CE		UL 489A		UL 489B		CCC	
Number of Poles	1	2	1	2	1	2	1	2
Operating Voltages & Interrupting Capacity	300Vdc @ 5 kA	400Vdc @ 6 kA 600Vdc @ 5 kA	300Vdc @ 5 kA	400Vdc @ 6 kA 600Vdc @ 5 kA	300Vdc @ 3 kA	600Vdc @ 3 kA	300Vdc @ 5 kA	400Vdc @ 6 kA 600Vdc @ 5 kA
Minimum Current Rating	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A	0.5 A
Maximum Current Rating	50 A	50 A	50 A	50 A	50 A	50 A	50 A	50 A

Product Type	Y
Operating Temperature Range	-40 °C to +85 °C
Mounting Options	DIN rail
Time Delay Curves	Fast, medium and Instantaneous
Endurance	10000 operations - 1500 electrical at rated current and voltage
Dielectric Strength	1600 V (single pole) / 2200 V (double pole)
Weight	110 g per pole
Humidity	35 % to 85 % relative
Altitude	Certification tests conducted at altitude ≈ 2000 metres. Will operate at higher altitudes.
Shock	20 G (IEC 60068-2-27)
Vibration	3 G (IEC 60068-2-6) (sinusoidal wave)
Flammability	I3 - Ignition does not persist at 850 °C
Toxicity	F1 - Smoke index of ≤ 20
Pollution Degree	PD2 - Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

T25 TORX SCREW

Breaker Y	Wire Size mm ² (IEC)	Wire Gauge (UL)	Torque (IEC)	Torque (UL)
1 Pole & 2 Pole	0.75 - 25 mm ²	18 - 4 AWG	3.5 Nm	30 in-lb

Long Code

Example Code: **YA- - - -2-(13)-D-M-50A-B7- - - - -600V-3kA**

Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Requirement	Y frame	Future use	Future use	Double pole	13 mm module width	DIN rail	Medium delay curve M	Current rating 50 A	Voltage rating 600 V	No shunt trip	Future use	Future use	Future use	Voltage 600Vdc	kA rating 3 kA
Long Code	YA	-	-	2	(13)	D	M	50A	B7	-	-	-	-	600V	3kA

Continues on page 3

Y - Series Miniature Circuit Breakers

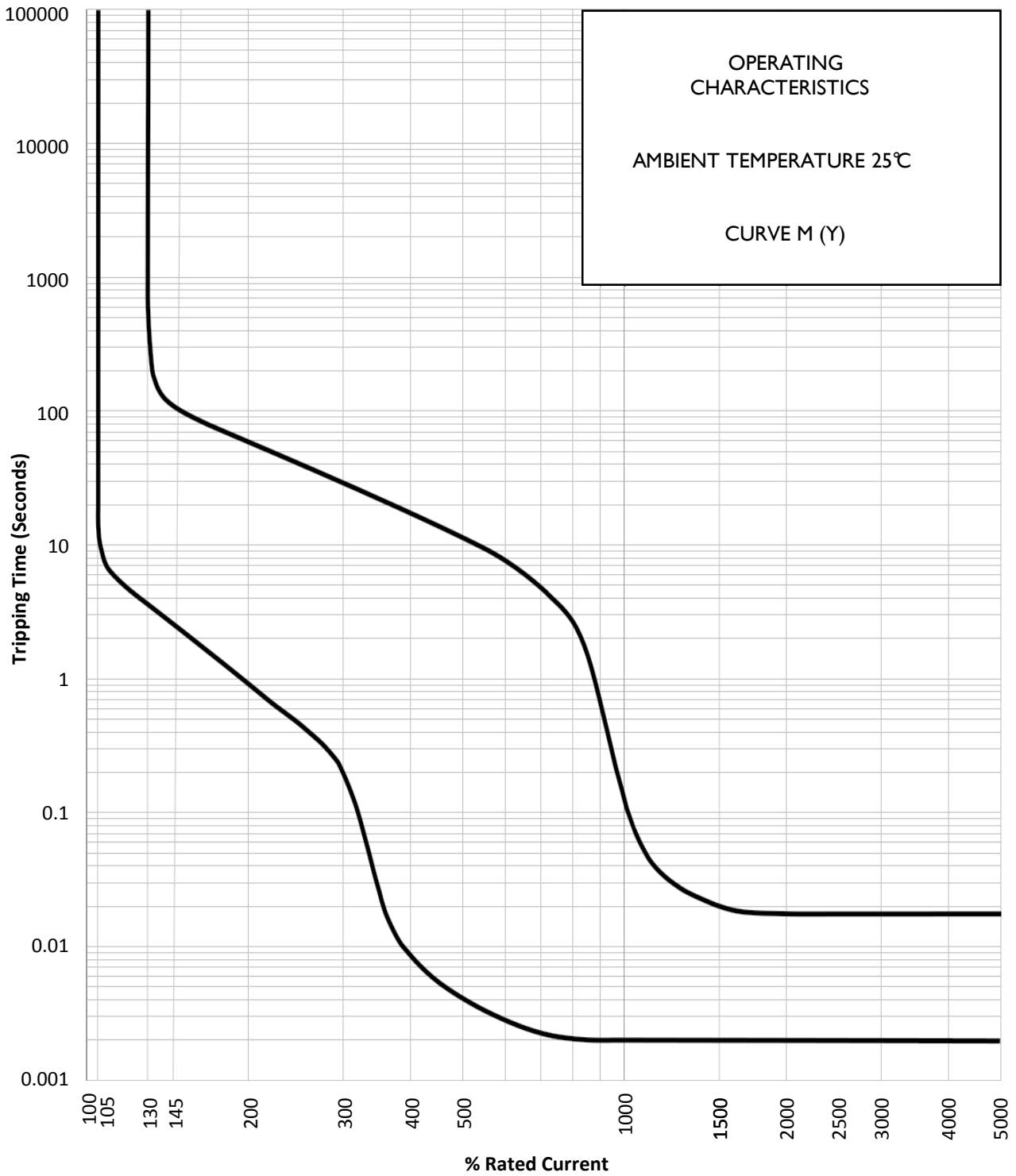
Ordering Information

Group 1: Frame Type	Code	Description	Comments	
	YA	13 mm wide miniature circuit breaker	IEC 60947-2 & UL489A	
	YB	13 mm wide miniature circuit breaker	IEC 60947-2 & UL489B	
	YR	13 mm wide miniature circuit breaker	IEC, UL & Railway compliance	
Group 2: Switch/Neutral	Code	Description	Comments	
	-	Not applicable	Future use	
Group 3: Auxiliary	Code	Description	Comments	
	-	Not applicable	Future use	
Group 4: No of Poles	Code	Description	Comments	
	1	Single pole	-	
	2	Double pole	-	
	3	Triple pole	Future use	
	4	Four pole	Future use	
Group 5: Module Width	Code	Description	Comments	
	13	13 mm per pole		
Group 6: Mounting	Code	Description	Comments	
	D	DIN rail mount – 45 mm escutcheon, grey body	DIN mount, supplied in grey	
	DM	Dual mount - 57 mm escutcheon, black body	Dual mount, supply in black	
Group 7: Time Delays	Code	Description	Comments	
	F	Fast time delay	White handle	
	M	Medium time delay	White handle	
	I	Instantaneous time delay	White handle	
Group 8: Current Ratings	Code / Description		Comments	
	0.5, 1, 2, 3, 5, 6,10, 15,16, 20, 25, 30, 32, 35, 40, 45, 50 A		Ratings available vary depending on certification, bridging configuration and voltage. (See comments in Group 9)	
Group 9: Voltage	Code	Voltage	Description	Comments
	B5	300Vdc	Polarity marking. Positive bottom	
	B6	600Vdc	Top bridged series	Future use
	B7	600Vdc	Polarity marking. Positive bottom	Bridged in series from the top of pole 1 to the bottom of pole 2 load maybe after the contacts or between the contacts
	B8	400Vdc	Polarity marking. Positive bottom, positive top	Bridged in series from the top of pole 1 to the top of pole 2 load between contacts
Group 10: Shunt Trip	Code	Description	Comments	
	-	Not applicable	Future use	
Group 11	Code	For future use (-)		Comments
	-			Future use
Group 12: Special Termination	Code	Description	Comments	
	-	Not applicable	Future use	
Group 13: Customer Specific	Code	Description	Comments	
	-	Not applicable	Future use	
Group 14: Voltage	Code	Voltage	Description	Comments
	300V	300Vdc	One pole	
	400V	400Vdc	Two poles in series	
	600V	600Vdc	Two poles in series	
Group 15: kA Rating	Code	Description	Comments	
	1	3 kA		
	2	5 kA		
	3	6 kA		

For options not listed, please contact CBI for assistance

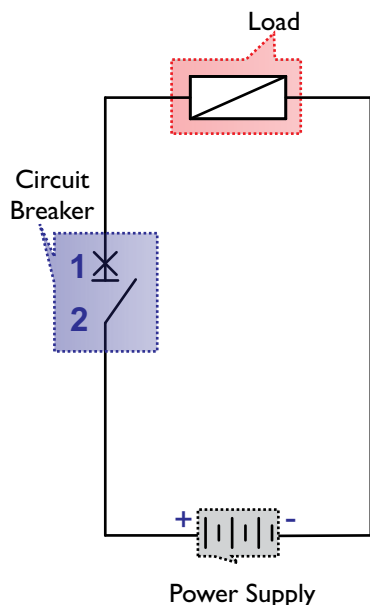
Y - Series Miniature Circuit Breakers

Time Delay Curves: Provisional



Y - Series Miniature Circuit Breakers

Connections Diagrams



**Figure 1:
Single Pole Single Break**

Figure 1: Single Pole Single Break

This circuit makes use of a single pole circuit breaker connected in series with the load providing a single contact break to the circuit before the load.

Figure 2: Double Pole Double Break

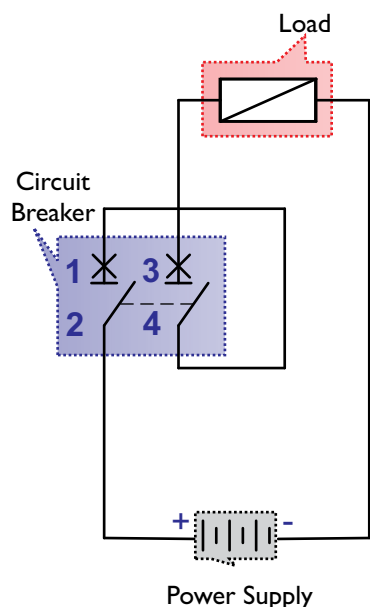
This circuit makes use of a double pole circuit breaker with both contacts in series with the load providing for a double contact break to the circuit before the load.

Figure 3: Double Pole Double Break isolates the load (top and bottom connect)

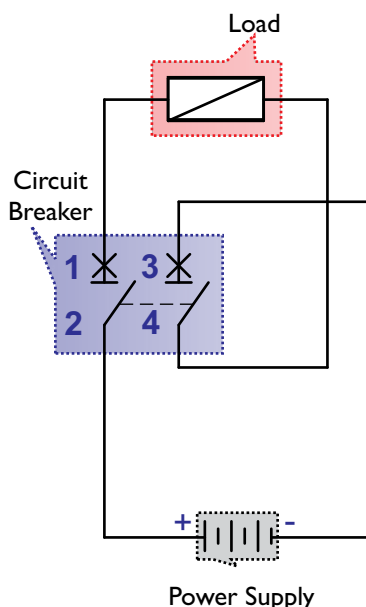
This circuit makes use of a double pole circuit breaker where the load is between the contacts, the connections are within the top terminal of pole 1 and the bottom terminal of pole 2, providing a full isolation to the load.

Figure 4: Double Pole Double Break isolates the load (top connect)

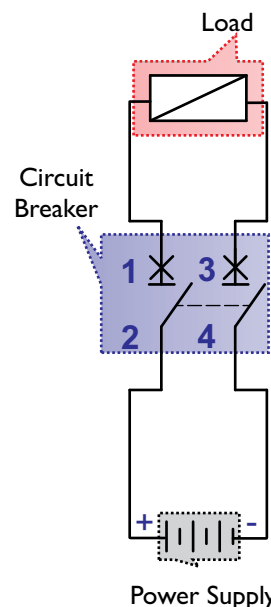
This circuit makes use of a double pole circuit breaker where the load is between the contacts, the connections are within the top terminals of pole 1 and pole 2, providing a full isolation to the load. (IEC 60947-2)



**Figure 2:
Double Pole Double Break**



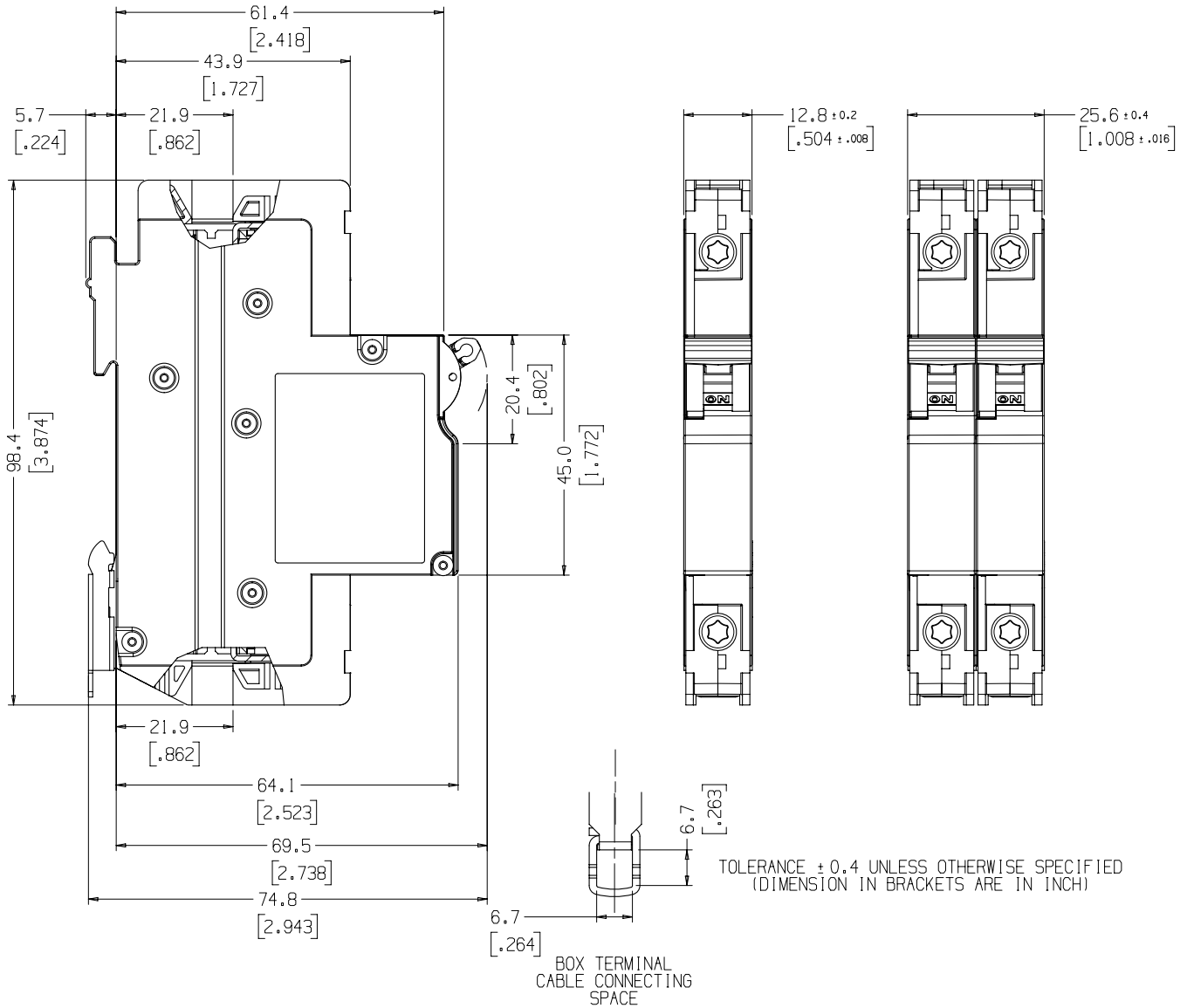
**Figure 3:
Double Pole Double Break
Isolates the Load (top bottom
connect)**



**Figure 4:
Double Pole Double Break
Isolates the Load (top connect)
(IEC 60947-2)**

Y - Series Miniature Circuit Breakers

Outline Dimensions



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