

# Product Datasheet

Product Name: B3S Series Circuit Break for Equipment

Models: B3S 1-50.0/240S-2700B-A2-B1-K

Date: 20241030

Made by	Checked by	Approved by
GCB02	GCB04	GCB01

<b>BSB</b>	ZHEJIANG BSB ELECTRICAL APPLIANCES CO.,LTD.			
	Product Name	B3S Series Circuit Break for Equipment		
	Version	A	Date	20241030

## 1 The Scope of Application

B3S series circuit breaker for equipment are suitable for overload and short circuit protection in electrical systems with rated current 1A to 125A, AC 50/60 Hz, rated voltage AC 415V and below, and also for infrequent connection and disconnection. It is widely used in computer and its peripheral equipment, industrial automation equipment, telecommunication equipment, communication power supply system, UPS equipment, railway locomotive, marine electrical system, elevator control system and mobile power supply equipment.

## 2 Basic parameters

Current rating: 1A ~ 125A

Rated insulation voltage  $U_i$  (V): 500V

Rated impulse withstand voltage  $U_{imp}$  (V) : 4kV

Electrical lifecycle: 6000

Mechanical lifecycle: 10000

Insulation resistance: When 500VDC, Min 100 megohm

Resistance/Impedance: The value between the terminal and the load terminal under closure

Power frequency withstand voltage: AC testing voltage 1890V, 5s, negotiate with manufacture when special demand.

The class of pollution: 3 level

Use classes: A

Working temperature:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Trip free: when overload, the breaker is tripped internally even if the actuator handle is forcibly kept ON position

Trip indicate: when overload, the actuator handle indicates the OFF position. When the middle trip, the actuator handle in the middle position once overload.

Poles: 1pole, 2poles, 3poles, 4poles

Standards: GB/T 14048.2 /IEC 60947-2, UL489

Type	Rated working voltage $U_e$ (V)	Frequency (Hz)	Poles	Rated current $I_n$ (A)	Interrupting Capacity	
					AIC(A)	$I_{cu}=I_{cs}$ (A)
B3S	120	50/60	1	50	UL489	CCC
	240		1, 2, 3		10000	/
	120/240		1, 2, 3		10000	/
	250		1, 2		22000	/
	415		2, 3, 4		/	10000
						/

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### Connecting capacity

Wire Range	#16-#4 AWG	#3-#2/0 AWG
lb-in/lb-po	25	60
mm <sup>2</sup>	1.31-21.2	26.7-67.4
Torque (N.m)	2.8	6.8
Ampere Rating (A)	$1 < I_n \leq 63$	$63 < I_n \leq 125$

### Resistance/ Impedance

Current (A)	AC Impedance (Ohm)	Current (A)	AC Impedance (Ohm)
1.0	1.10	50	0.0018
2.0	0.29	60	0.00121
5.0	0.051	70	0.00118
10.0	0.016	80	0.00112
20.0	0.006	90	0.00107
30.0	0.004	100	0.00107
40.0	0.0021	125	0.000542

### Time-delay performance (Unit: second)

No.	Delay	Test current name	Test current	Specified time	Initial state
1	A2, H2	Specified not trip current	$1.05 I_n$	1h ( $I_n \leq 63A$ ) 2h ( $I_n > 63A$ )	Cold state
2		Specified trip current	$1.3 I_n$	1h ( $I_n \leq 63A$ ) 2h ( $I_n > 63A$ )	Immediately start after the sequence test

### Time-delay performance (Unit: second)

Delay	$1I_n$	$1.25I_n$	$1.5I_n$	$2I_n$	$4I_n$	$6I_n$	$8I_n$
H1, Short	No tripping	0.5-6.5	0.3-3	0.1-2	0.03-0.5	0.01-0.25	0.004-0.1
H2, Medium	No tripping	2.0-60	1.2-40	1-20	0.15-2	0.04-1	0.008-0.5
H3, Long	No tripping	80-700	40-400	15-200	2-20	0.23-9	0.018-0.55
A1, Short	No tripping	0.7-12	0.35-7	0.13-3	0.03-1	0.01-0.3	0.01-0.15
A2, Medium	No tripping	10-120	6-60	2-20	0.2-3	0.02-2	0.015-0.8
A3, Long	No tripping	50-700	30-400	10-200	1.5-20	0.4-10	0.013-0.85

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### 3 Ordering

B3S 1-50.0/240S - 1700B - A2 - B1 - K XXXXXX  
 1 2 3 4 5 6 7 8 9 10 11 12

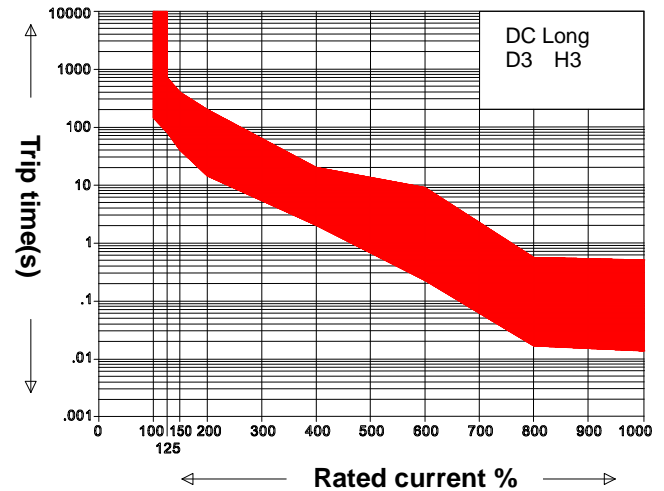
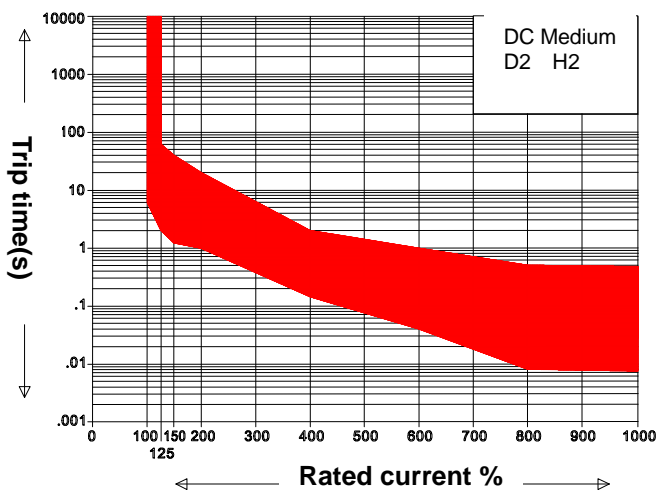
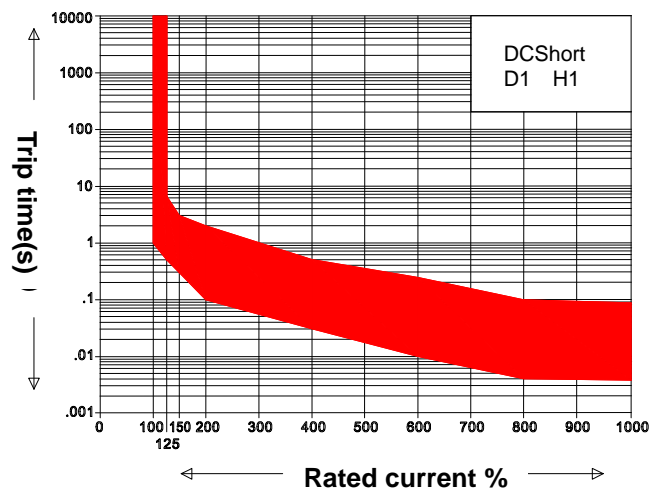
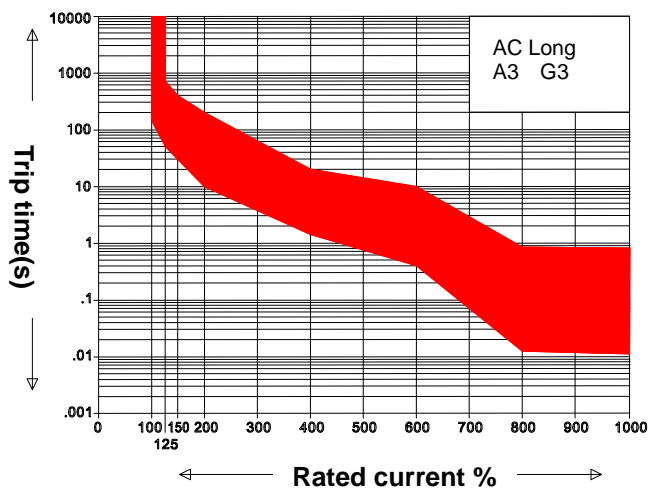
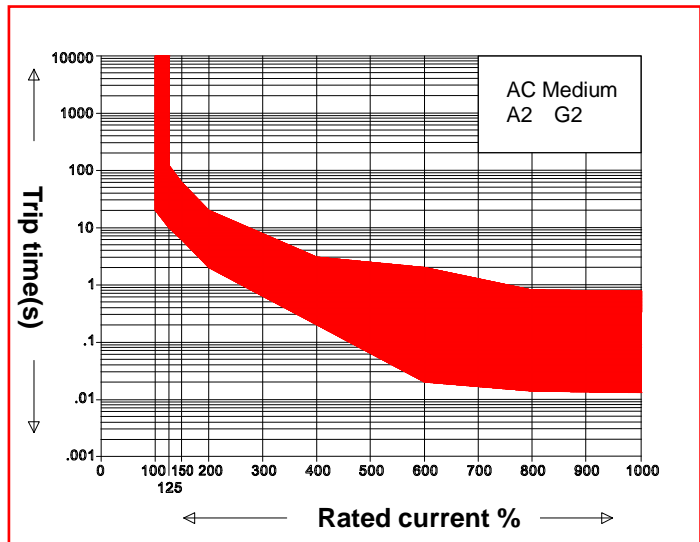
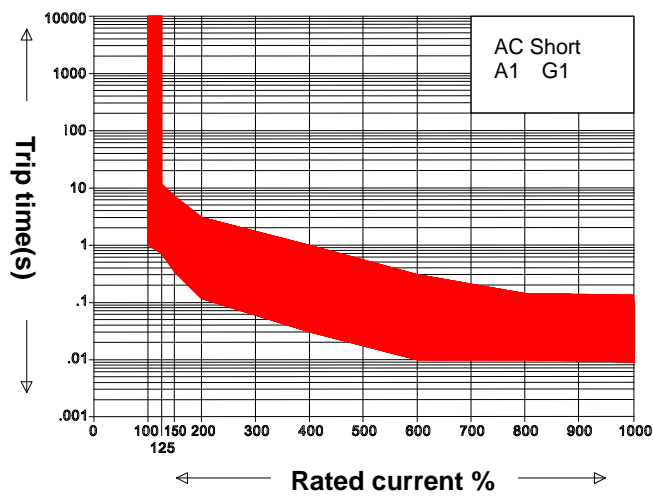
No.	Specification	Code		
1	Series	B3S		
2	Actuator	1: Handle, one per pole		
3	Rated current	1~125A; 50A		
4	Rated voltage	120:AC120V, 240:AC240V, 240S:AC120/240V, 250: 250VAC, 415:415VAC;		
5	Poles	1:1P, 2: 2P, 3: 3P, , 4: 4P		
6	Terminal Type	7: Fast push-in		
7	Barriers	00: Nil		
8	Circuit type (Remark 1)	A: Switch only (No coil), B: Regular cascaded current circuit		
9	Delay type (Remark 2)	A1: AC short delay, A2: AC medium delay, A3: AC long delay; D1: DC short delay, D2: DC medium delay, D3: DC long delay; H1: DC short delay, high surge, H2: DC medium delay, high surge, H3: DC long delay, high surge; G1: AC short delay, high surge, G2: AC medium delay, high surge, G3: AC long delay, high surge; A: No delay (Switch only);		
10	Handle	Code name	Handle colour	Legend colour
		B1	Black	Write
		B2	Write	Black
		B3	Green	Write
B4	Red	Write		
11	Approval (Remark 3)	E: TUV, CCC; K: UL489		
12	Customer code	Consists of at least 6 digits or letters		

**Remark:**

1. Circuit type A, switch only, current should be 50A or 100A.Type B, the code can be omitted.
2. For 3C approved breaker, delay type code use A2, default as medium delay.
3. Please contact manufacturer if you have other requirement.

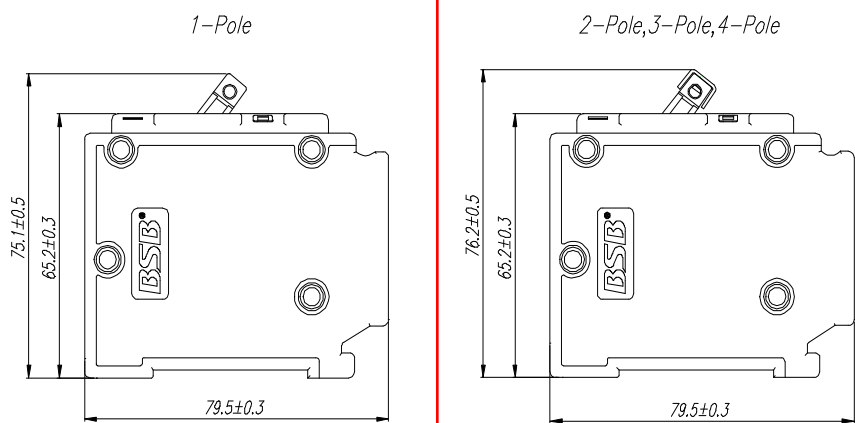
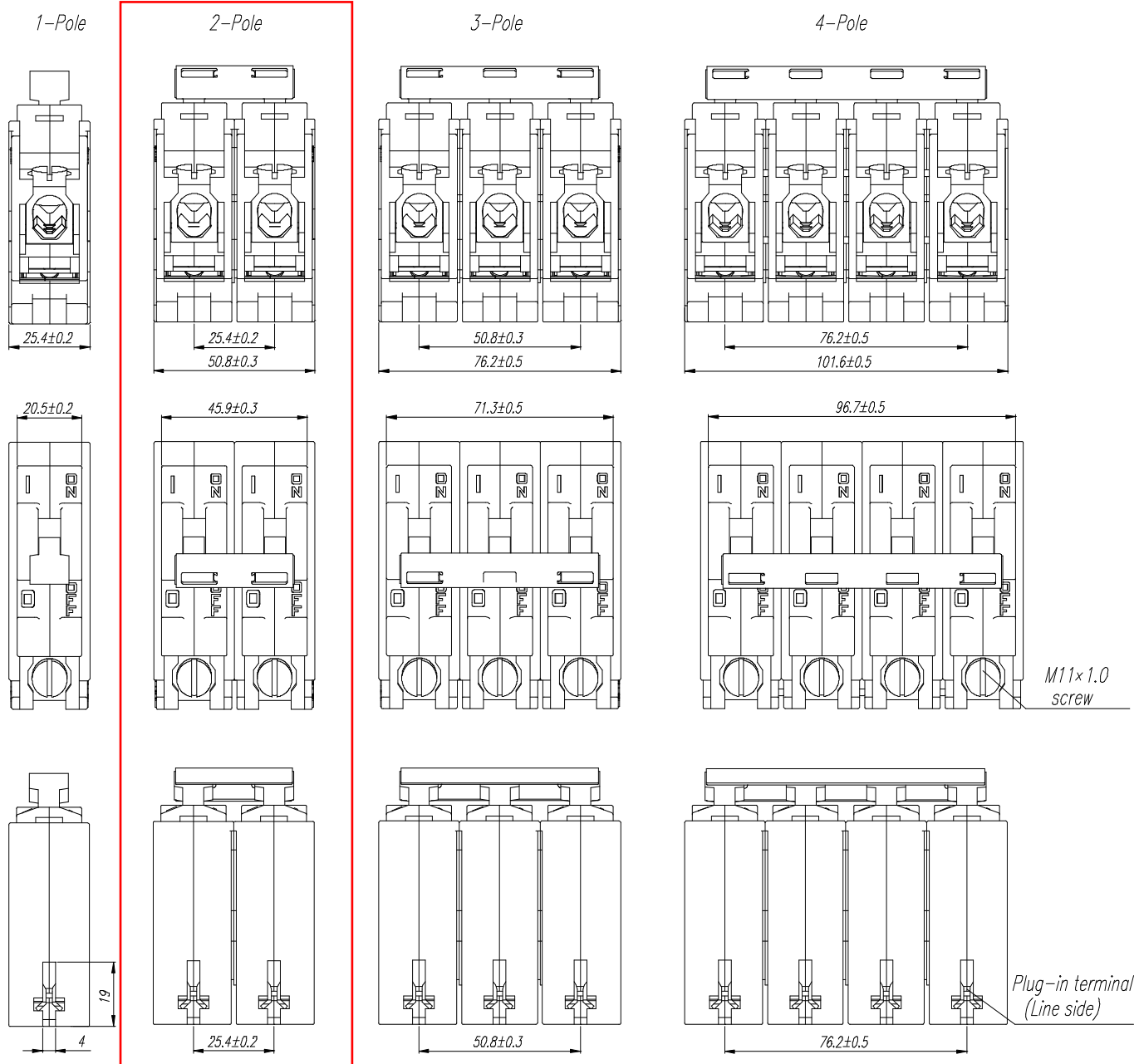
### 4 Delay Curve

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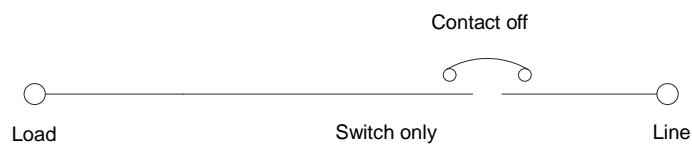
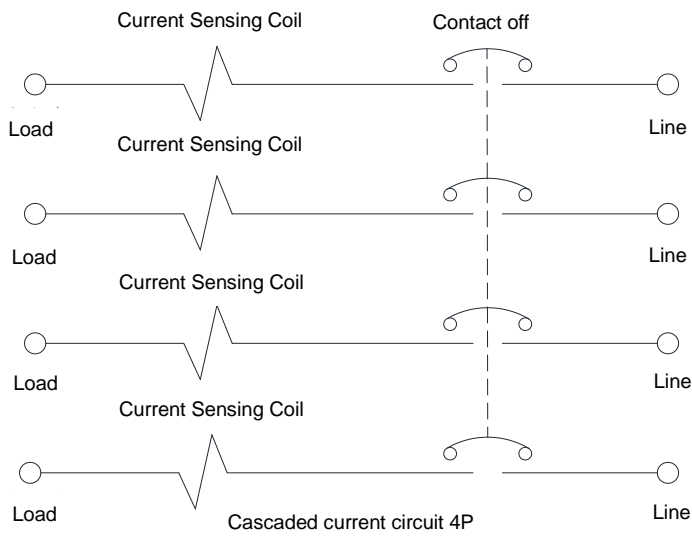
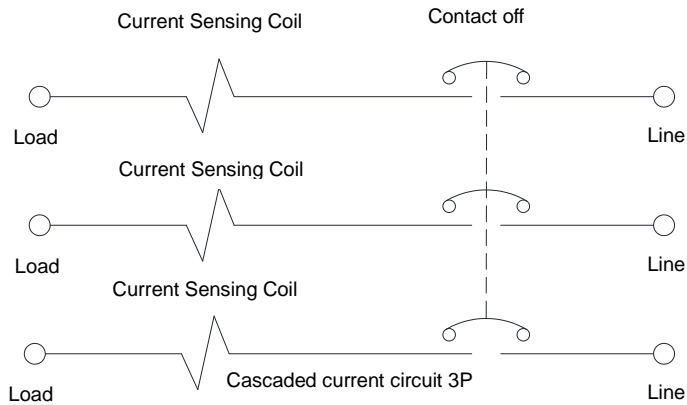
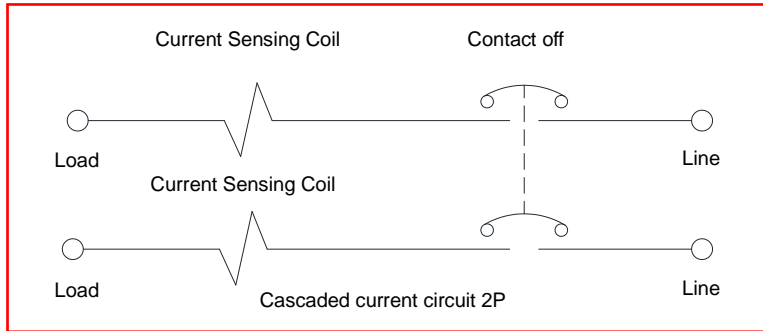
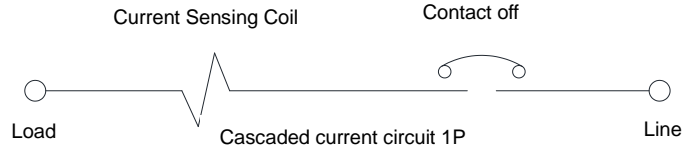
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### 5 B3S Circuit Breaker Dimension



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## 6 Schematic



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### 7 Circuit breaker horizontal installation diagram

