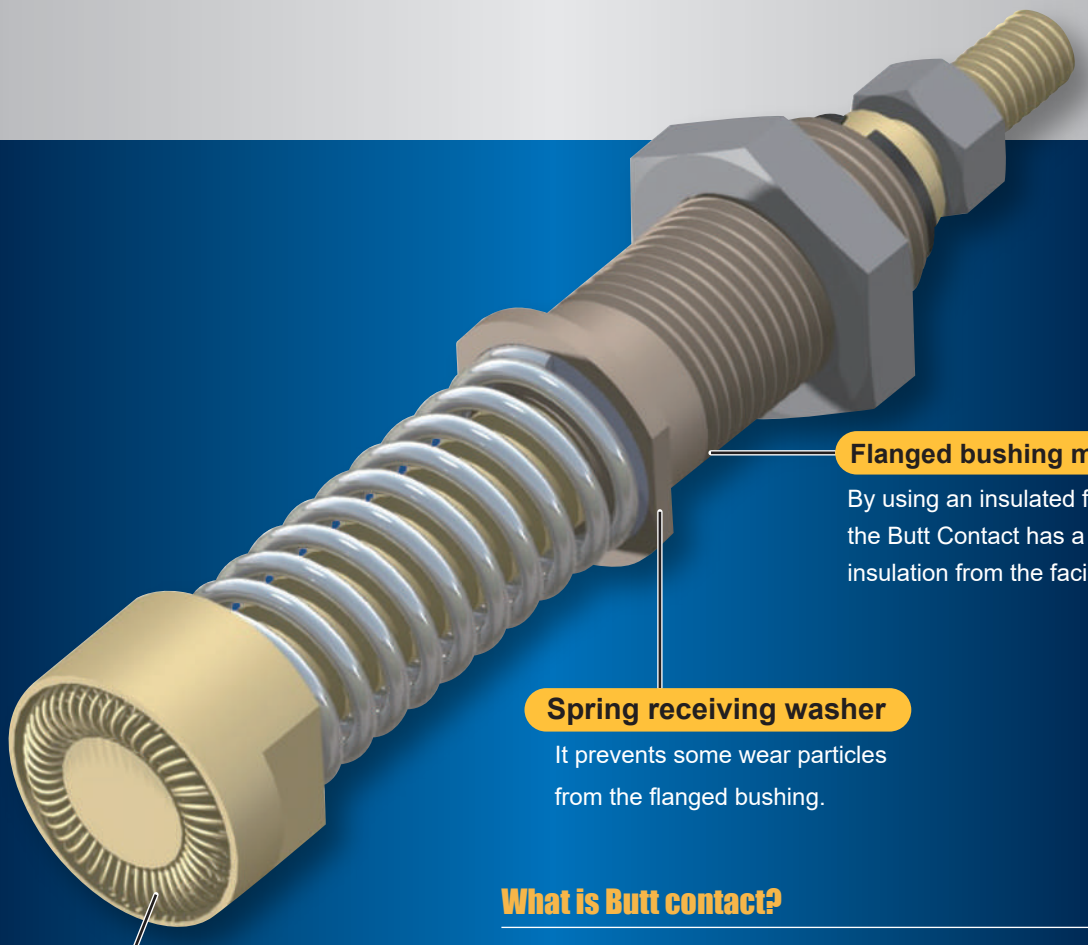
High Current Probe

Butt Contact

BC Series



Flanged bushing made from PEEK

By using an insulated flanged bushing, the Butt Contact has a secured insulation from the facility.

Spring receiving washer

It prevents some wear particles from the flanged bushing.

Canted coil spring

The electrical contact that ensures stable energization of electronic devices.

What is Butt contact?

A Butt Contact is a high-current probe that can energized electronic devices by simply pressing the coil spring to have contact with the inspection module in the manufacturing of automobile parts, power semi-conductor modules and other electronic devices.

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Advantages of the Butt Contact

-It reduces defective products by using a stable energizing contact.

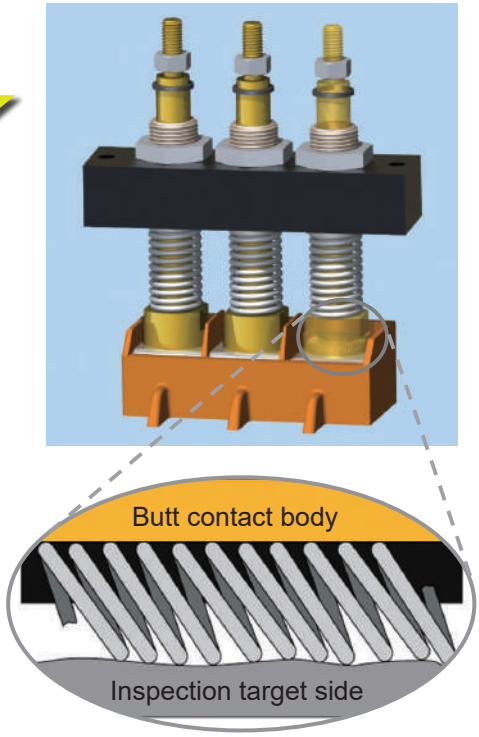
High contact reliability is achieved by ensuring that the coil spring is in contact with the touching surface therefore a stable contact is achieved.

-It reduces scratches to the products

The canted coil spring makes a soft contact with the inspection target with multiple points of contact.

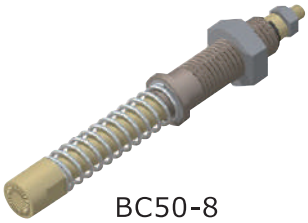
-It keeps running costs down

It has passed 1 million cycles in our in-house endurance test. Since it is highly durable, it reduces the frequency of maintenance and it last longer than other existing probes.



Each coil spring contact follows the roughness of the target surface.

product line-up


BC50-8

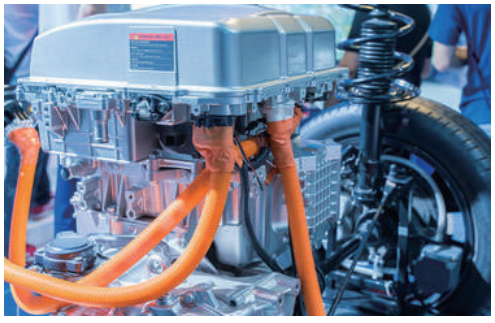

BC75-12


BC140-17

Model	Rated Current	Tip diameter	Pressurizing spring Force	Screw size
BC50-8	50A	φ8 ㎜	**5N - 9N**	M3
BC75-12	75A	φ12 ㎜	**16N - 28N**	M4
BC140-17	140A	φ16.5 ㎜	**16N - 28N**	M5

Application examples

- For shipment inspection of power semiconductor modules and smart meters
- For manufacturing inspection process for automobile parts.
- Used for power supply connection for Auto Guided Vehicles (AGV).
- For operation check in the production process of inverters, etc.



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BC Series

BC50-8

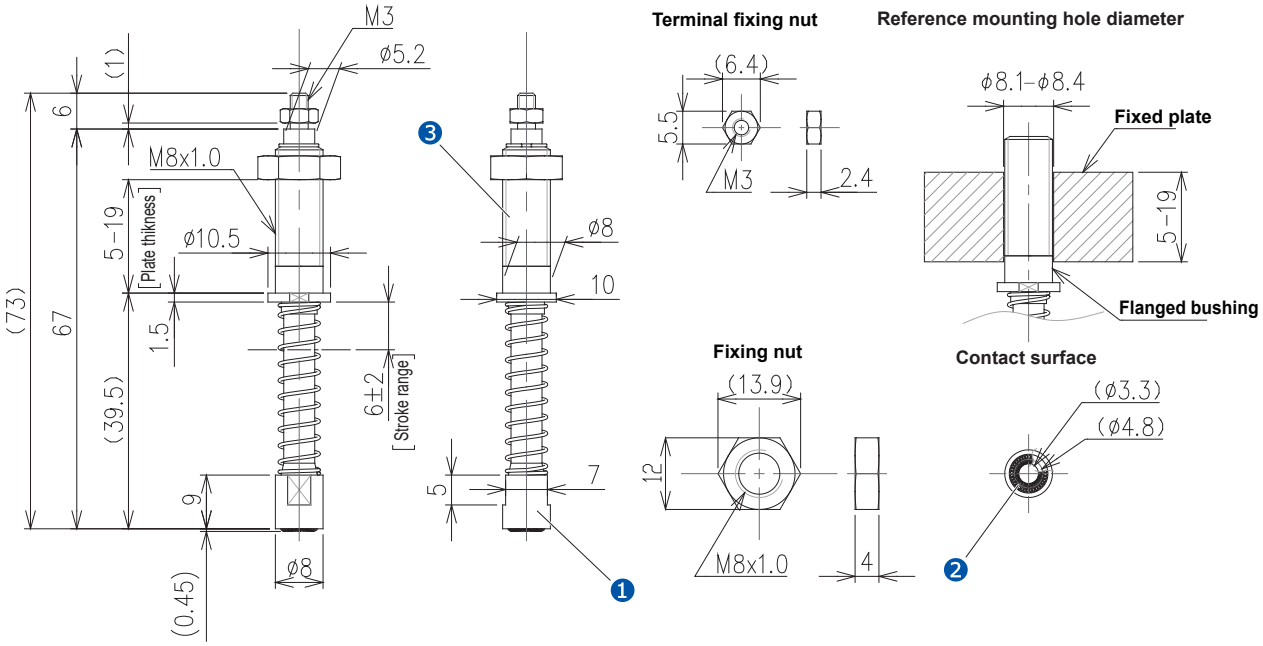
Specifications

Usable temperature : -20 to +140℃ * Including its own temperature rise value when energized.

Continuous current : 50A

Estimated durability : 100,000 to 1,000,000 cycles

External dimensions



❶	❷	❸
Butt contact body Copper + Gold plating	Canted coil spring Copper + Gold plating	Flanged bushing PEEK

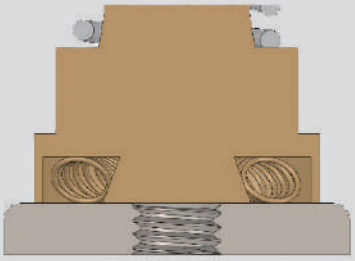
Technical Info BC50-8

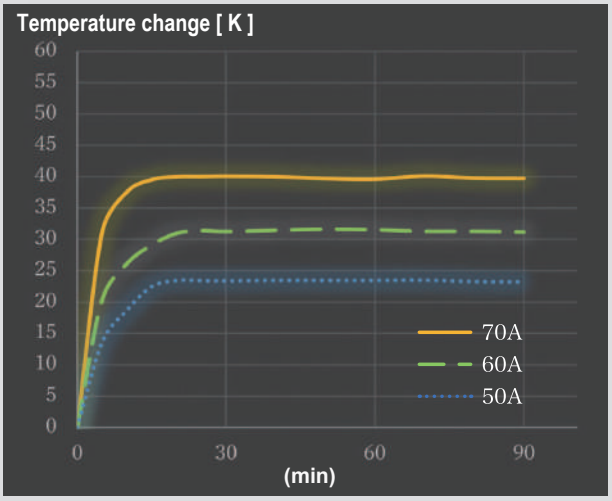
Current energization test result

Globetech shows the results of the rising of temperature by conducting an in-house energization test using the connection method below.
Please use it for your reference for current selection.

TEST 1

Energizing with touching all surface

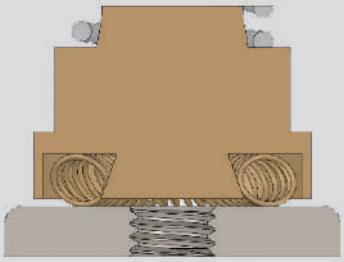


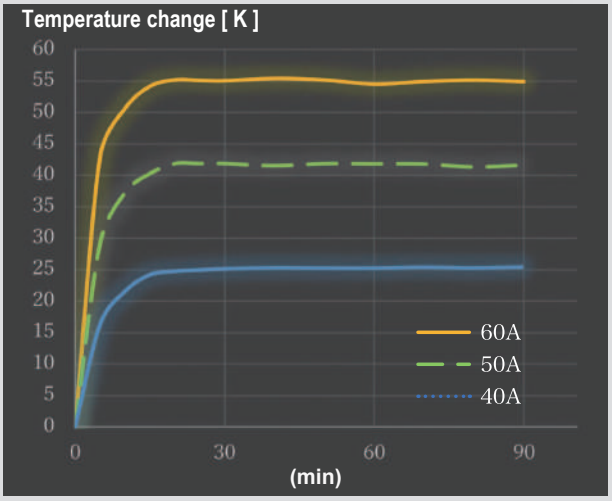


Current [A]	Temperature rise value over time [K]			
	5min	10min	30min	60min
50	13.5	18.7	23.4	23.4
60	20.3	26.1	31.3	31.5
70	31.1	37.6	40.1	39.6

TEST 2

Energizing with only touching the canted coil spring

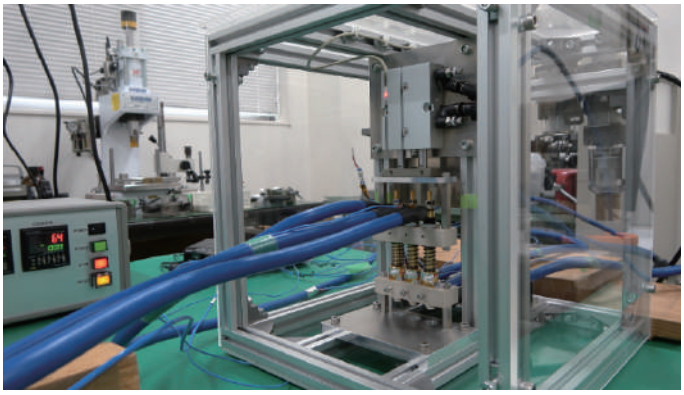




Current [A]	Temperature rise value over time [K]			
	5min	10min	30min	60min
40	16.3	21.5	25.1	25.2
50	29.2	37.2	41.9	41.8
60	42.9	50.6	55.0	54.6

Test measurement conditions

Product model	: BC50-8
Test stroke	: 6mm
Pressing force	: 6N
Target plate material	: Copper + silver plating
Surrounding temperature	: 25 ℃(Room temperature)



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BC Series

BC75-12

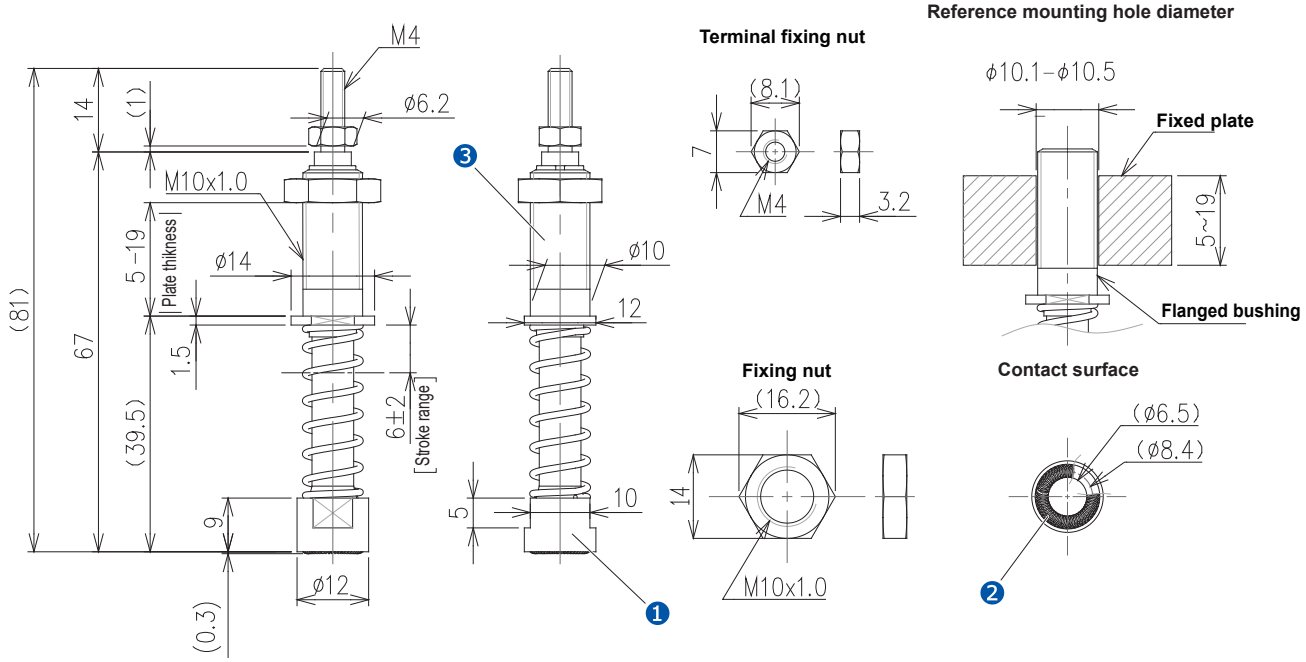
Specifications

Usable temperature : -20 to +140℃ * Including its own temperature rise value when energized.

Continuous current : 75A

Estimated durability : 100,000 to 1,000,000 cycles

External dimensions



❶	❷	❸
Butt contact body	Canted coil spring	Flanged bushing
Copper + Gold plating	Copper + Gold plating	PEEK

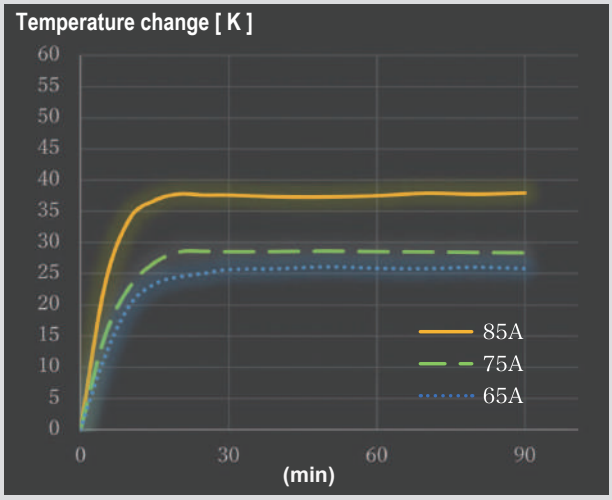
Technical Info BC75-12

Current energization test result

Globetech shows the results of the rising of temperature by conducting an in-house energization test using the connection method below.
Please use it for your reference for current selection.

TEST 1

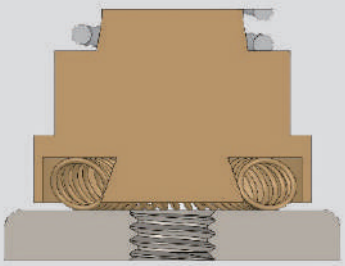
Energizing with touching all surface

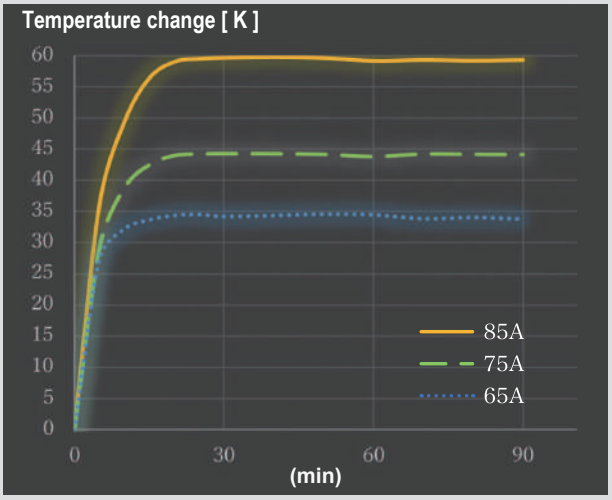


Current [A]	Temperature rise value over time [K]			
	5min	10min	30min	60min
65	11.8	20.0	25.7	25.9
75	15.1	22.9	28.5	28.5
85	23.3	33.8	37.6	37.5

TEST 2

Energizing with only touching the canted coil spring





Current [A]	Temperature rise value over time [K]			
	5min	10min	30min	60min
65	27.3	32.2	34.2	34.5
75	29.1	38.7	44.3	43.8
85	36.0	49.3	59.7	59.2

Test measurement conditions

Product model	: BC75-12
Test stroke	: 6mm
Pressing force	: 22N
Target plate material	: Copper + silver plating
Surrounding temperature	: 25 ℃(Room temperature)

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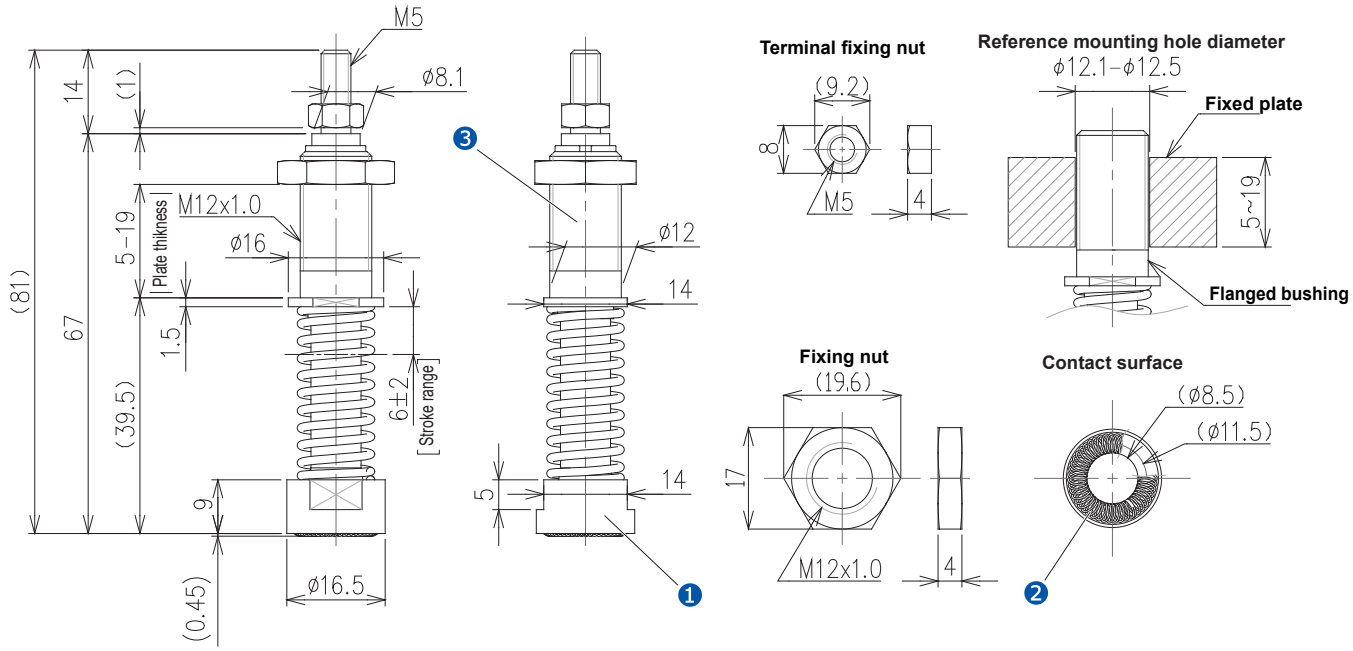
BC Series

BC140-17

Specifications

Usable temperature	**: -20 to +140℃**	*** Including its own temperature rise value when energized.**
Continuous current	**: 140A**	
Estimated durability	**: 100,000 to 1,000,000 cycles**	

External dimensions



❶	❷	❸
Butt contact body	**Canted coil spring**	**Flanged bushing**
Copper + Gold plating	**Copper + Gold plating**	**PEEK**

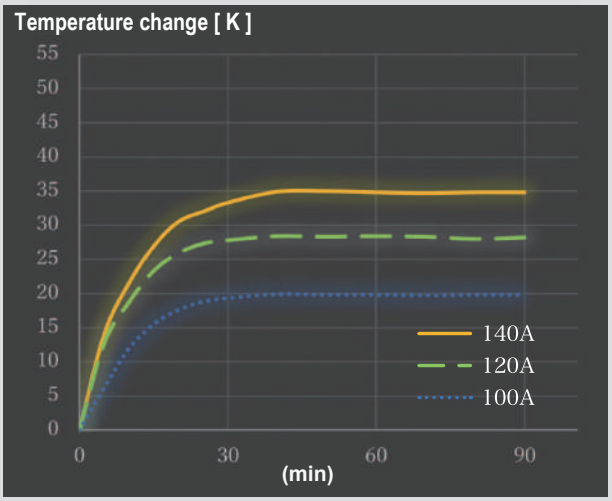
Technical Info BC140-17

Current energization test result

Globetech shows the results of the rising of temperature by conducting an in-house energization test using the connection method below.
Please use it for your reference for current selection.

TEST 1

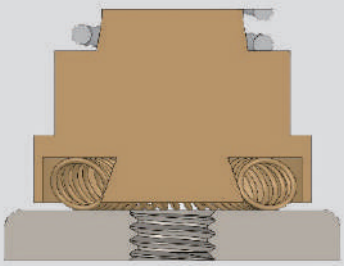
Energizing with touching all surface

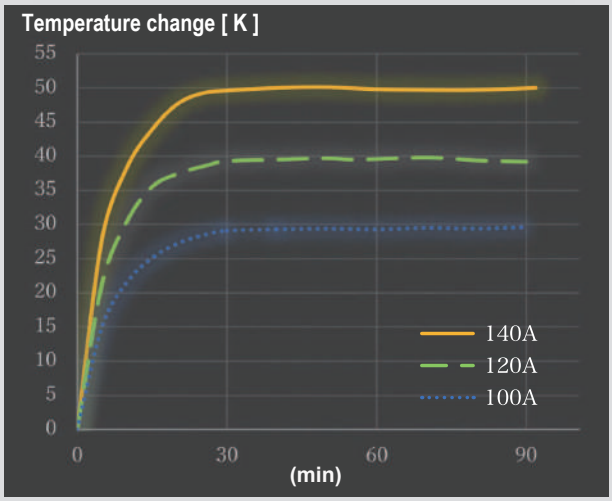


Current [A]	Temperature rise value over time [K]			
	10sec	5min	30min	60min
100	0.4	6.2	19.3	19.8
120	0.5	11.5	27.8	27.8
140	0.7	14.0	33.3	34.8

TEST 2

Energizing with only touching the canted coil spring





Current [A]	Temperature rise value over time [K]			
	10sec	5min	30min	60min
100	0.7	15.1	27.8	28.2
120	0.9	21.4	39.3	39.8
140	1.1	28.1	48.4	48.5

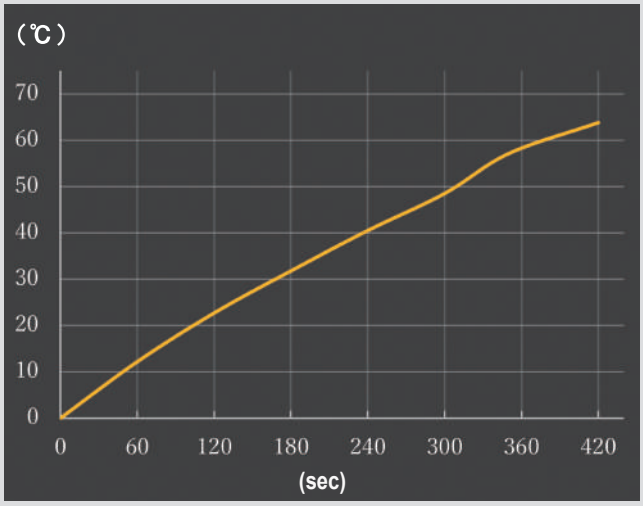
Test measurement conditions

Product model : BC140-17
Test stroke : 6mm
Pressing force : 22N
Target plate material : Copper + silver plating
Surrounding temperature : 25 ℃(Room temperature)

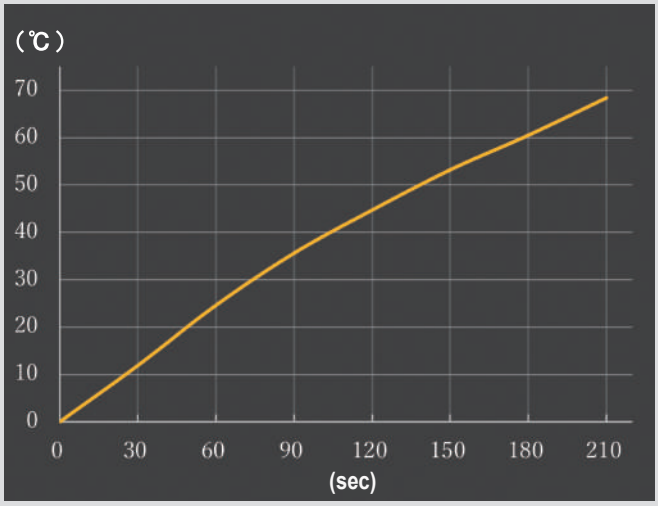
Overcurrent energization Test

This test result based on TEST1which energize with touching all surface.

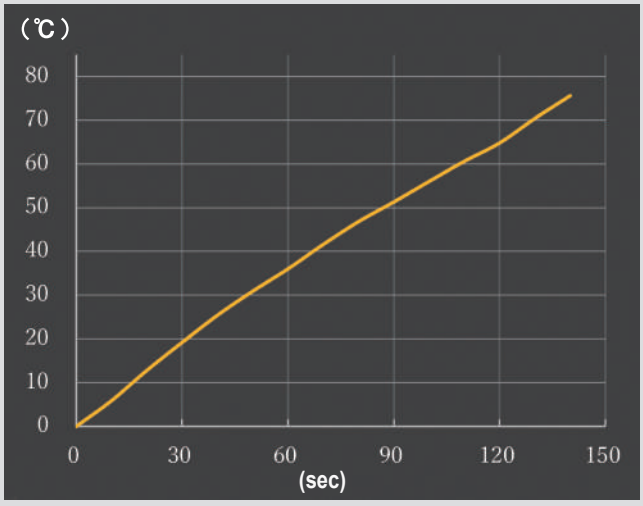
300A



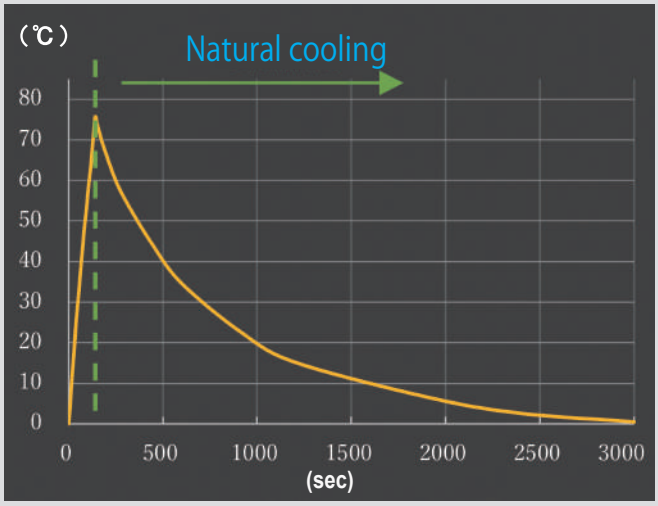
400A



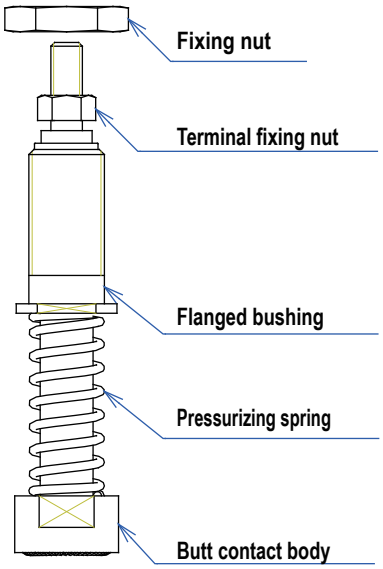
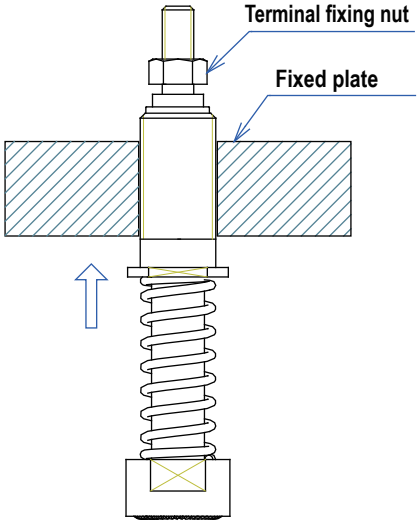
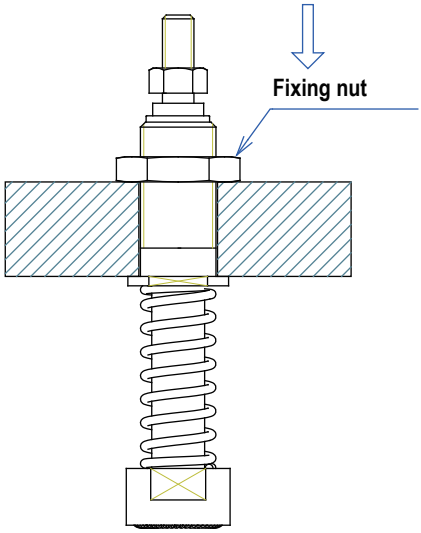
500A



Natural cooling after energizing 500A



How to mount

Procedure 1	Procedure 2	Procedure 3
		
1.Remove the fixing nut from the flanged bushing.	*2.Insert the Butt Contact into the hole to be fixed.*	*3.Tighten the nut to fixed the Butt Contact. Tighten it by crimping the terminal with a nut.*

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NOTICE:

1. All test condition values and results are based on our in-house testing facility. The same exact performance and results are not guaranteed.
2. The durability of Butt Contact is affected by the type of material, shape, working environment, selected current and cable used in energization.
3. The arching and heating of the coil spring might happen due to a normal wear and tear. Kindly check if there are no visible arching or damages on the coil spring before using.
4. Specifications are subject to change without prior notice.