HCB2 Series MCB Specifications

UL 489 Product Features

◇UL 489 Full range of listed certified micro circuit breakers

◇ Rated current up to 125A

◇ The voltage at 277Vac/480Vac meets the 5kA/10kA short-circuit breaking capacity

◇ Hydraulic tripping mechanism, stable working at 40℃ ~ +70℃

◇ Prompt trip sensitivity circuit

◇ Suitable for protection of main loop devices

◇ Contact position indication (red or green)

Application condition

◇Dc circuit: photovoltaic, energy storage, DC signal control

◇Power supply: switching power supply, inverter power supply

◇Communication industry: communication base station, data center

◇Household appliances: lighting appliances, socket appliances

◇Industrial control: pure resistive or micro inductive circuit, no power circuit

Product Model:

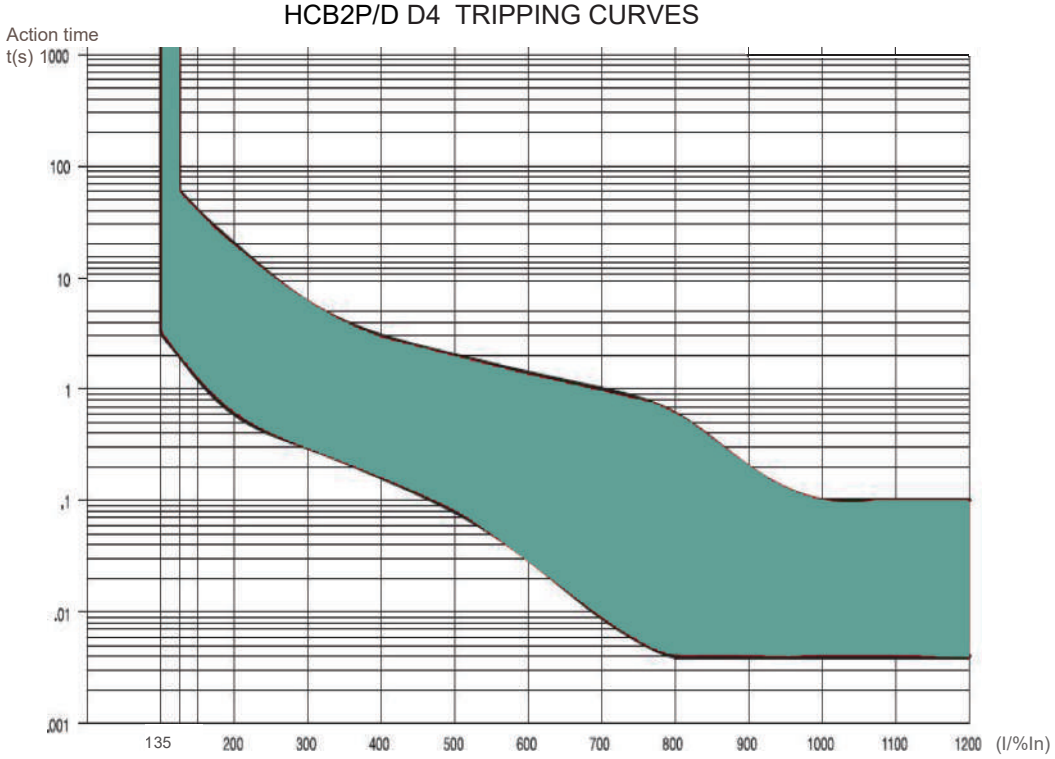
	HC	B2	P	125	/4
Hecheng					
B1 Series thermomagnet type MCB B2 Series hydraulic type MCB					
Specification:	P: Photovotaic DC125~500Vdc D: DC80~125Vdc N: AC120/240Vac，277/480Vac H: AC 22kA interrupting，120/240Vac				
Rated Current :	0.5~125A				
Poles:	1:Pole 2:poles 3:Poles 4:poles				

Product Parameter	
According to standard	UL489
Release type	Hydraulic type
Level of protection	IP30
Electrical operating life	6000
Mechanical operating life	10000
Nominal insulation voltage(Vac)	1000
Rated impulse withstand voltage(kV)	6
Short-circuit current rating(kA)	10
Function	Overcurrent protection, short circuit protection, isolation
Operating temperature range	40℃ ~ +70℃（fiducial temperature 30℃）
Class of pollution	Class III
Altitude ft (m)	It is less affected by altitude
RH(relative air humidity)	20 ℃：≤ 90%,40 ℃：≤ 50%
Wire (mm2)	18~4 (0.75~25)
Assemble	35mm DIN

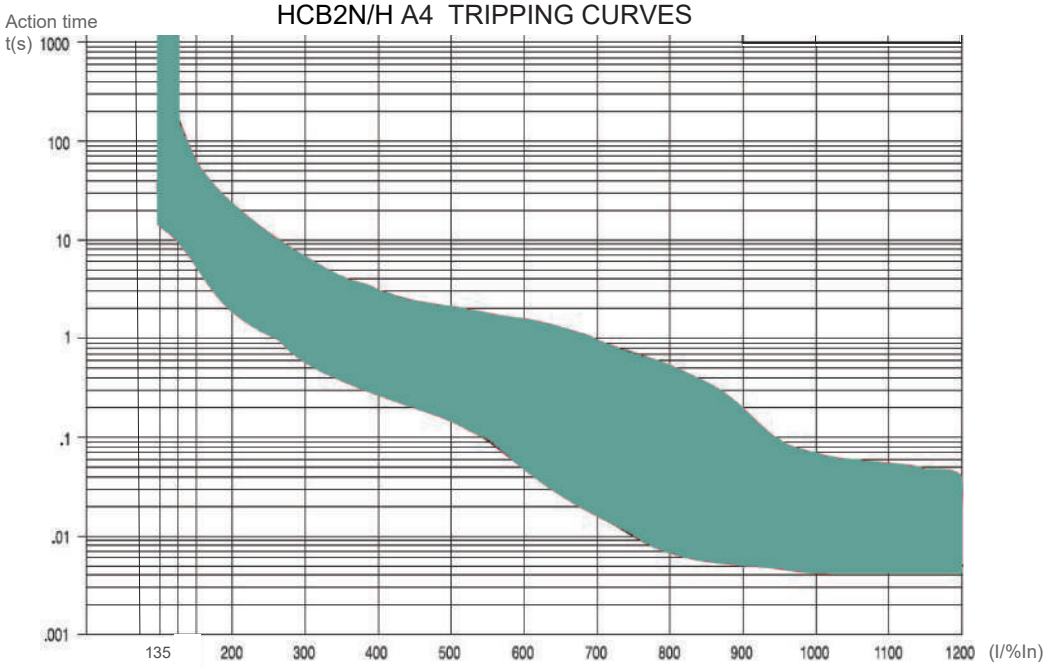
Voltage Parameter Table

Product	Type	Rated voltage	Rated current(A)	Interrupting capacity	Poles	Trip curve
HCB2P	DC	125Vdc	0.5~125	10kA	1	D4
		250Vdc			2 series	
		375Vdc			3 series	
		500Vdc			4 series	
HCB2D	DC	125Vdc	0.5~125	10kA	1 or 2	
		80Vdc	126~200		2 parallel	
		80Vdc	201~300		3 parallel	
		80Vdc	301~400		4 parallel	
HCB2N	AC50/60Hz	120/240Vac/277Vac	0.5~125	10kA	1、2 or 3	A4
		277/480Vac	0.5~125		2、3 or 4	
HCB2H		120/240Vac	0.5~125	22kA	1 or 2	

HCB2P/D D4 TRIPPING CURVES



HCB2N/H A4 TRIPPING CURVES



DELAY	100%	100~135%	135%	150%	200%	400%	600%	800%	1000%	1200%
D4(t/s)	No Trip	May Trip	2-60	1.2-40	0.6-20	0.15-3	0.03-1.3	0.004-0.6	0.004-0.1	0.004-0.1
A4(t/s)	No Trip	May Trip	10-120	6-60	2.2-20	0.2-3	0.02-2	0.013-0.85	0.013-0.05	0.005-0.04

HCB2P 125-500Vdc Photovoltaic 5kA/10kA

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HCB2P	1 Pole-125Vdc		2 Poles-250Vdc		3 Poles-250Vdc		4 Poles-250Vdc	
Rated Amperage(A)	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
0.5	HCB2P0.5/1	227000180001	HCB2P0.5/2	227000190001	HCB2P0.5/3	227000200001	HCB2P0.5/4	227000210001
1.0	HCB2P1/1	227000180002	HCB2P1/2	227000190002	HCB2P1/3	227000200002	HCB2P1/4	227000210002
1.6	HCB2P1.6/1	227000180003	HCB2P1.6/2	227000190003	HCB2P1.6/3	227000200003	HCB2P1.6/4	227000210003
2.0	HCB2P2/1	227000180004	HCB2P2/2	227000190004	HCB2P2/3	227000200004	HCB2P2/4	227000210004
3.0	HCB2P3/1	227000180005	HCB2P3/2	227000190005	HCB2P3/3	227000200005	HCB2P3/4	227000210005
4.0	HCB2P4/1	227000180006	HCB2P4/2	227000190006	HCB2P4/3	227000200006	HCB2P4/4	227000210006
5.0	HCB2P5/1	227000180007	HCB2P5/2	227000190007	HCB2P5/3	227000200007	HCB2P5/4	227000210007
6.0	HCB2P6/1	227000180008	HCB2P6/2	227000190008	HCB2P6/3	227000200008	HCB2P6/4	227000210008
7.0	HCB2P7/1	227000180009	HCB2P7/2	227000190009	HCB2P7/3	227000200009	HCB2P7/4	227000210009
8.0	HCB2P8/1	227000180010	HCB2P8/2	227000190010	HCB2P8/3	227000200010	HCB2P8/4	227000210010
10.0	HCB2P10/1	227000180011	HCB2P10/2	227000190011	HCB2P10/3	227000200011	HCB2P10/4	227000210011
13.0	HCB2P13/1	227000180012	HCB2P13/2	227000190012	HCB2P13/3	227000200012	HCB2P13/4	227000210012
15.0	HCB2P15/1	227000180013	HCB2P15/2	227000190013	HCB2P15/3	227000200013	HCB2P15/4	227000210013
16.0	HCB2P16/1	227000180014	HCB2P16/2	227000190014	HCB2P16/3	227000200014	HCB2P16/4	227000210014
20.0	HCB2P20/1	227000180015	HCB2P20/2	227000190015	HCB2P20/3	227000200015	HCB2P20/4	227000210015
25.0	HCB2P25/1	227000180016	HCB2P25/2	227000190016	HCB2P25/3	227000200016	HCB2P25/4	227000210016
30.0	HCB2P30/1	227000180017	HCB2P30/2	227000190017	HCB2P30/3	227000200017	HCB2P30/4	227000210017
32.0	HCB2P32/1	227000180018	HCB2P32/2	227000190018	HCB2P32/3	227000200018	HCB2P32/4	227000210018
35.0	HCB2P35/1	227000180019	HCB2P35/2	227000190019	HCB2P35/3	227000200019	HCB2P35/4	227000210019
40.0	HCB2P40/1	227000180020	HCB2P40/2	227000190020	HCB2P40/3	227000200020	HCB2P40/4	227000210020
50.0	HCB2P50/1	227000180021	HCB2P50/2	227000190021	HCB2P50/3	227000200021	HCB2P50/4	227000210021
60.0	HCB2P60/1	227000180022	HCB2P60/2	227000190022	HCB2P60/3	227000200022	HCB2P60/4	227000210022
70.0	HCB2P70/1	227000180023	HCB2P70/2	227000190023	HCB2P70/3	227000200023	HCB2P70/4	227000210023
80.0	HCB2P80/1	227000180024	HCB2P80/2	227000190024	HCB2P80/3	227000200024	HCB2P80/4	227000210024
100.0	HCB2P100/1	227000180025	HCB2P100/2	227000190025	HCB2P100/3	227000200025	HCB2P100/4	227000210025
125.0	HCB2P125/1	227000180026	HCB2P125/2	227000190026	HCB2P125/3	227000200026	HCB2P125/4	227000210026

HCB2N 120/240,277/480Vac 5kA/10kA

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HCB2N	1Pole-120/240/277Vac		2Poles-120/240/277Vac 277/480Vac		3Poles-277/480Vac		4Poles-277/480Vac	
Rated Amperage(A)	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
0.5	HCB2N0.5/1	225000090001	HCB2N0.5/2	225000100001	HCB2N0.5/3	225000110001	HCB2N0.5/4	225000120001
1.0	HCB2N1/1	225000090002	HCB2N1/2	225000100002	HCB2N1/3	225000110002	HCB2N1/4	225000120002
1.6	HCB2N1.6/1	225000090003	HCB2N1.6/2	225000100003	HCB2N1.6/3	225000110003	HCB2N1.6/4	225000120003
2.0	HCB2N2/1	225000090004	HCB2N2/2	225000100004	HCB2N2/3	225000110004	HCB2N2/4	225000120004
3.0	HCB2N3/1	225000090005	HCB2N3/2	225000100005	HCB2N3/3	225000110005	HCB2N3/4	225000120005
4.0	HCB2N4/1	225000090006	HCB2N4/2	225000100006	HCB2N4/3	225000110006	HCB2N4/4	225000120006
5.0	HCB2N5/1	225000090007	HCB2N5/2	225000100007	HCB2N5/3	225000110007	HCB2N5/4	225000120007
6.0	HCB2N6/1	225000090008	HCB2N6/2	225000100008	HCB2N6/3	225000110008	HCB2N6/4	225000120008
7.0	HCB2N7/1	225000090009	HCB2N7/2	225000100009	HCB2N7/3	225000110009	HCB2N7/4	225000120009
8.0	HCB2N8/1	225000090010	HCB2N8/2	225000100010	HCB2N8/3	225000110010	HCB2N8/4	225000120010
10.0	HCB2N10/1	225000090011	HCB2N10/2	225000100011	HCB2N10/3	225000110011	HCB2N10/4	225000120011
13.0	HCB2N13/1	225000090012	HCB2N13/2	225000100012	HCB2N13/3	225000110012	HCB2N13/4	225000120012
15.0	HCB2N15/1	225000090013	HCB2N15/2	225000100013	HCB2N15/3	225000110013	HCB2N15/4	225000120013
16.0	HCB2N16/1	225000090014	HCB2N16/2	225000100014	HCB2N16/3	225000110014	HCB2N16/4	225000120014
20.0	HCB2N20/1	225000090015	HCB2N20/2	225000100015	HCB2N20/3	225000110015	HCB2N20/4	225000120015
25.0	HCB2N25/1	225000090016	HCB2N25/2	225000100016	HCB2N25/3	225000110016	HCB2N25/4	225000120016
30.0	HCB2N30/1	225000090017	HCB2N30/2	225000100017	HCB2N30/3	225000110017	HCB2N30/4	225000120017
32.0	HCB2N32/1	225000090018	HCB2N32/2	225000100018	HCB2N32/3	225000110018	HCB2N32/4	225000120018
35.0	HCB2N35/1	225000090019	HCB2N35/2	225000100019	HCB2N35/3	225000110019	HCB2N35/4	225000120019
40.0	HCB2N40/1	225000090020	HCB2N40/2	225000100020	HCB2N40/3	225000110020	HCB2N40/4	225000120020
50.0	HCB2N50/1	225000090021	HCB2N50/2	225000100021	HCB2N50/3	225000110021	HCB2N50/4	225000120021
60.0	HCB2N60/1	225000090022	HCB2N60/2	225000100022	HCB2N60/3	225000110022	HCB2N60/4	225000120022
70.0	HCB2N70/1	225000090023	HCB2N70/2	225000100023	HCB2N70/3	225000110023	HCB2N70/4	225000120023
80.0	HCB2N80/1	225000090024	HCB2N80/2	225000100024	HCB2N80/3	225000110024	HCB2N80/4	225000120024
90.0	HCB2N90/1	225000090025	HCB2N90/2	225000100025	HCB2N90/3	225000110025	HCB2N90/4	225000120025
100.0	HCB2N100/1	225000090026	HCB2N100/2	225000100026	HCB2N100/3	225000110026	HCB2N100/4	225000120026
125.0	HCB2N125/1	225000090027	HCB2N125/2	225000100027	HCB2N125/3	225000110027	HCB2N125/4	225000120027

HCB2D 80/125Vdc 5kA/10kA

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HCB2D	1Pole-80/125Vdc		2Poles-80/125Vdc		3Poles-80Vdc		4Poles-80Vdc	
Rated Amperage(A)	Product	Part Number	Product	Part Number	Product	Part Number	Product	Part Number
0.5	HCB2D0.5/1	227000140001	HCB2D0.5/2	227000150001	HCB2D0.5/3	227000160001	HCB2D0.5/4	227000170001
1.0	HCB2D1/1	227000140002	HCB2D1/2	227000150002	HCB2D1/3	227000160002	HCB2D1/4	227000170002
1.6	HCB2D1.6/1	227000140003	HCB2D1.6/2	227000150003	HCB2D1.6/3	227000160003	HCB2D1.6/4	227000170003
2.0	HCB2D2/1	227000140004	HCB2D2/2	227000150004	HCB2D2/3	227000160004	HCB2D2/4	227000170004
3.0	HCB2D3/1	227000140005	HCB2D3/2	227000150005	HCB2D3/3	227000160005	HCB2D3/4	227000170005
4.0	HCB2D4/1	227000140006	HCB2D4/2	227000150006	HCB2D4/3	227000160006	HCB2D4/4	227000170006
5.0	HCB2D5/1	227000140007	HCB2D5/2	227000150007	HCB2D5/3	227000160007	HCB2D5/4	227000170007
6.0	HCB2D6/1	227000140008	HCB2D6/2	227000150008	HCB2D6/3	227000160008	HCB2D6/4	227000170008
7.0	HCB2D7/1	227000140009	HCB2D7/2	227000150009	HCB2D7/3	227000160009	HCB2D7/4	227000170009
8.0	HCB2D8/1	227000140010	HCB2D8/2	227000150010	HCB2D8/3	227000160010	HCB2D8/4	227000170010
10.0	HCB2D10/1	227000140011	HCB2D10/2	227000150011	HCB2D10/3	227000160011	HCB2D10/4	227000170011
13.0	HCB2D13/1	227000140012	HCB2D13/2	227000150012	HCB2D13/3	227000160012	HCB2D13/4	227000170012
15.0	HCB2D15/1	227000140013	HCB2D15/2	227000150013	HCB2D15/3	227000160013	HCB2D15/4	227000170013
16.0	HCB2D16/1	227000140014	HCB2D16/2	227000150014	HCB2D16/3	227000160014	HCB2D16/4	227000170014
20.0	HCB2D20/1	227000140015	HCB2D20/2	227000150015	HCB2D20/3	227000160015	HCB2D20/4	227000170015
25.0	HCB2D25/1	227000140016	HCB2D25/2	227000150016	HCB2D25/3	227000160016	HCB2D25/4	227000170016
30.0	HCB2D30/1	227000140017	HCB2D30/2	227000150017	HCB2D30/3	227000160017	HCB2D30/4	227000170017
32.0	HCB2D32/1	227000140018	HCB2D32/2	227000150018	HCB2D32/3	227000160018	HCB2D32/4	227000170018
35.0	HCB2D35/1	227000140019	HCB2D35/2	227000150019	HCB2D35/3	227000160019	HCB2D35/4	227000170019
40.0	HCB2D40/1	227000140020	HCB2D40/2	227000150020	HCB2D40/3	227000160020	HCB2D40/4	227000170020
50.0	HCB2D50/1	227000140021	HCB2D50/2	227000150021	HCB2D50/3	227000160021	HCB2D50/4	227000170021
60.0	HCB2D60/1	227000140022	HCB2D60/2	227000150022	HCB2D60/3	227000160022	HCB2D60/4	227000170022
70.0	HCB2D70/1	227000140023	HCB2D70/2	227000150023	HCB2D70/3	227000160023	HCB2D70/4	227000170023
80.0	HCB2D80/1	227000140024	HCB2D80/2	227000150024	HCB2D80/3	227000160024	HCB2D80/4	227000170024
90.0	HCB2D90/1	227000140025	HCB2D90/2	227000150025	HCB2D90/3	227000160025	HCB2D90/4	227000170025
100.0	HCB2D100/1	227000140026	HCB2D100/2	227000150026	HCB2D100/3	227000160026	HCB2D100/4	227000170026
125.0	HCB2D125/1	227000140027	HCB2D125/2	227000150027	HCB2D125/3	227000160027	HCB2D125/4	227000170027

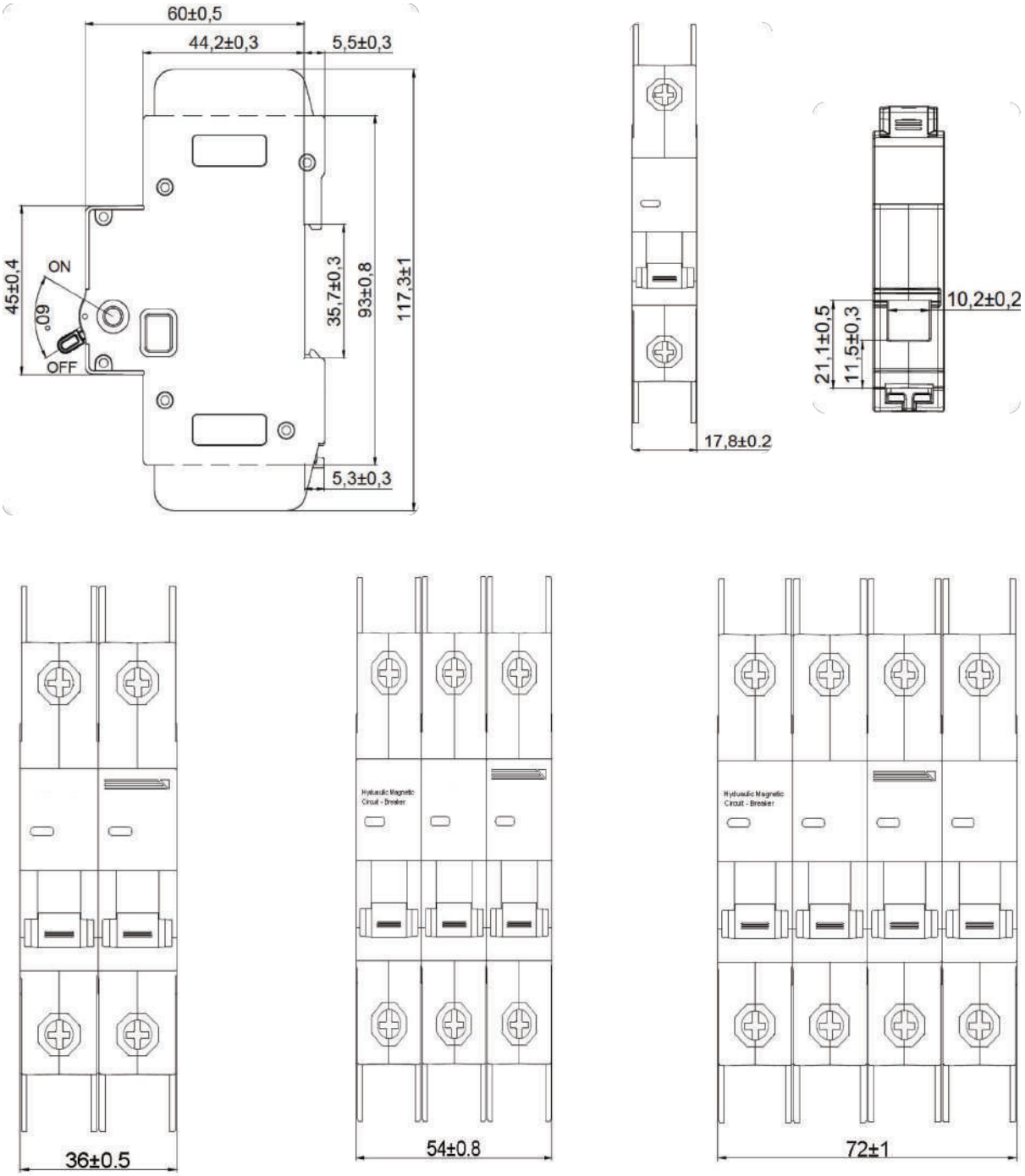
HCB2D (DC80Vdc) large current reduction type selection table

Product	Reference product parallel		Product	Reference product parallel		Product	Reference product parallel	
HCB2D140	HCB2D80/2	227000150024	HCB2D210	HCB2D80/3	227000160024	HCB2D280	HCB2D80/4	227000170024
HCB2D160	HCB2D90/2	227000150025	HCB2D240	HCB2D90/3	227000160025	HCB2D320	HCB2D90/4	227000170025
HCB2D180	HCB2D100/2	227000150026	HCB2D270	HCB2D100/3	227000160026	HCB2D360	HCB2D100/4	227000170026
HCB2D200	HCB2D125/2	227000150027	HCB2D300	HCB2D125/3	227000160027	HCB2D400	HCB2D125/4	227000170027

HCB2H 120/240Vac 22kA

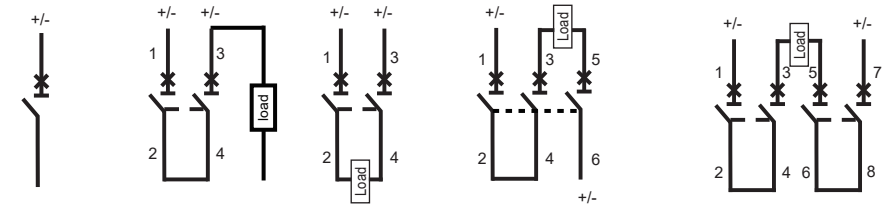
HCB2H	2Poles-120/240Vac		3Poles-120/240Vac	
Rated Amperage(A)	Product	Part Number	Product	Part Number
0.5	HCB2H0.5/2	225000130001	HCB2H0.5/3	225000140001
1.0	HCB2H1/2	225000130002	HCB2H1/3	225000140002
1.6	HCB2H1.6/2	225000130003	HCB2H1.6/3	225000140003
2.0	HCB2H2/2	225000130004	HCB2H2/3	225000140004
3.0	HCB2H3/2	225000130005	HCB2H3/3	225000140005
4.0	HCB2H4/2	225000130006	HCB2H4/3	225000140006
5.0	HCB2H5/2	225000130007	HCB2H5/3	225000140007
6.0	HCB2H6/2	225000130008	HCB2H6/3	225000140008
7.0	HCB2H7/2	225000130009	HCB2H7/3	225000140009
8.0	HCB2H8/2	225000130010	HCB2H8/3	225000140010
10.0	HCB2H10/2	225000130011	HCB2H10/3	225000140011
13.0	HCB2H13/2	225000130012	HCB2H13/3	225000140012
15.0	HCB2H15/2	225000130013	HCB2H15/3	225000140013
16.0	HCB2H16/2	225000130014	HCB2H16/3	225000140014
20.0	HCB2H20/2	225000130015	HCB2H20/3	225000140015
25.0	HCB2H25/2	225000130016	HCB2H25/3	225000140016
30.0	HCB2H30/2	225000130017	HCB2H30/3	225000140017
32.0	HCB2H32/2	225000130018	HCB2H32/3	225000140018
35.0	HCB2H35/2	225000130019	HCB2H35/3	225000140019
40.0	HCB2H40/2	225000130020	HCB2H40/3	225000140020
50.0	HCB2H50/2	225000130021	HCB2H50/3	225000140021
60.0	HCB2H60/2	225000130022	HCB2H60/3	225000140022
70.0	HCB2H70/2	225000130023	HCB2H70/3	225000140023

Dimensions （mm[inch]）



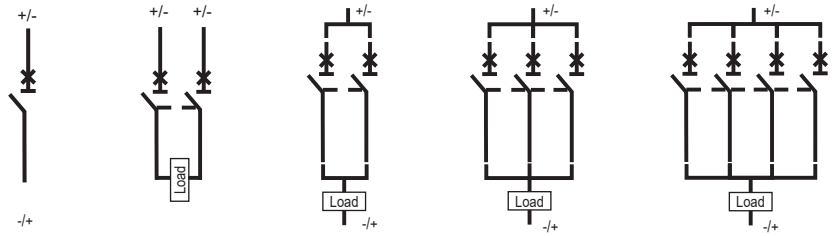
Connection Diagram

HCB2P



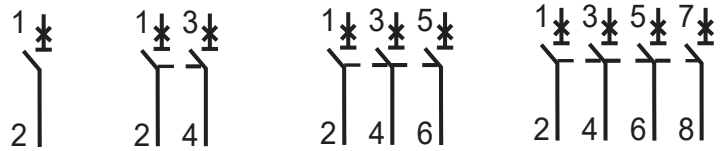
1Pole | 2Poles series | 3 Poles series | 4 Poles series

HCB2D



1Pole | 2 Poles series | 2 Poles Parallel | 3 Poles Parallel | 4 Poles Parallel

HCB2N/H



1Pole | 2 Poles | 3 Poles | 4 Poles

Altitude & temperature capacity reduction coefficient

HCB2 series MCB Altitude capacity reduction coefficient					
Altitude（m）	Operating current	Power frequency withstand voltage	Pulse withstand voltage	Breaking capacity	Electrical life
2000	In	1	1	1	1
3000	0.99	0.89	0.89	0.83	0.83
4000	0.96	0.8	0.8	0.71	0.71
5000	0.94	0.73	0.73	0.63	0.63

HCB2 series MCB temperature reduction coefficient							
temperature（℃）	40	45	50	55	60	65	70
Capacity reduction coefficient	1	0.982	0.963	0.944	0.924	0.904	0.882

Precautions

A. The wiring must be reliable to prevent the circuit breaker from malfunctioning due to abnormal heating of the terminal or causing the terminal to burn.

B. The nut wiring specification of this product is 18-4AWG, and the tightening torque during installation is 2.5 N.m

C. For multi-pole products, the handle should be operated in the middle position, and the time should be less than 1s when the product is normally opened and closed.