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DACO

Circuit Protectors

DAERYUK CO.,LTD.

www.e-daco.net

CP

Circuit Protectors

No matter where you are in the world or in which industrial field,
Daeryuk provides Total Solutions in order to deliver stable power for our customers.

In order to provide stable power and protection control, Daeryuk has provided all the best solutions demanded by our customers in the past and will continue to do so in the future. We provide Total Solutions to wherever power is needed, from power stations, large-scale plants, factories, and subways to residential houses, offices, and department stores.

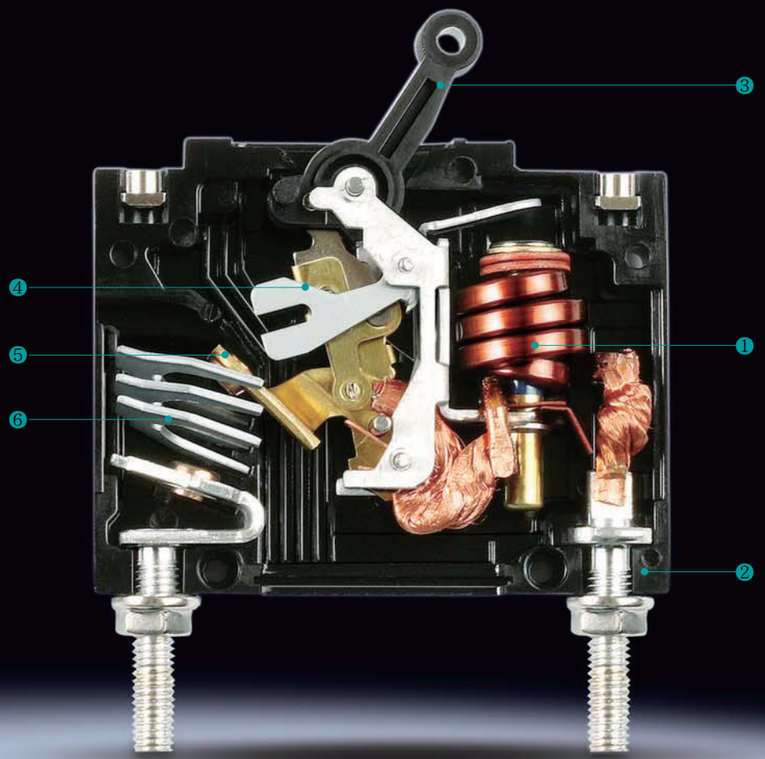
Circuit Protectors

Contents

Circuit Protectors

Daeryuk' s technology has been recognized as we apply next generation technologies a step ahead of others.

Our premium product with innovative new structure achieves the maximization of performance, customer' s safety in addition to convenience.



Internal Structure

1 Trip Coil Ass'y
- A device that drives the mechanism assembly by generating magnetomotive force if current becomes over loaded or a short circuit develops

2 Case Cover
- Groove-and-rail structure that is designed to secure insulation distance; excellent in withstanding insulation, arc, and abrasion

3 Handle
- **Control handle that opens and closes tips.** The handle is automatically tripped to the OFF position when excess current is cut off.
- **Trip Free** Excess current is tripped even when the handle is restrained on the ON position.

4 Mechanism Ass 'y
- A device that is designed to withstand maximum abrasion and shock; it guarantees more than 10,000 opening and closing cycles.

5 Tip
- It is made of silver alloy that has excellent conductivity and can withstand maximum oxidation and arc.

6 Arc chamber
- A device that extinguishes arcs that occur between tips promptly by inducing distribution and cooling

DACO

Our circuit protectors are designed to provide maximum protection to the customers no matter where they use it.

Safety & Reliability

We guarantee customer satisfaction by providing quality products with a proven safety record.

Wide selection range with diverse products

- Work was rendered convenient through common use of AC and DC. (CP 50DR Series)
- Terminal structure was rendered diverse with the use of a Screw, Side Screw, Plug-in, Bolt and Clip.
- Panel and DIN-rail mounting available.

Enhanced user practicality with the adoption of diverse circuits

- User practicality was enhanced with the adoption of diverse circuits including Series, Auxiliary Switch, Alarm Switch, Switch only, Parallel, and Relay types.

Improved quality through diverse protection characteristics

- More accurate protection became available with the adoption of the Instantaneous, High speed, Middle speed and Low speed types.
- Diverse certifications including CE, UL, CSA, TÜV, CCC and PSE

List of Standard Series




Frame Size			30AF										30AF						
Type			DCP 30 DN Series			DCP 30 PS Series			DCP 30 SS Series			DCP 30 PP/PA Series				DCP 30 TS Series		
Model			DCP 31 DN	DCP 32 DN	DCP 33 DN	DCP 31 PS	DCP 32 PS	DCP 33 PS	DCP 31 SS	DCP 32 SS	DCP 33 SS	DCP 31 PP	DCP 32 PP	DCP 33 PP	DCP 31 PA	DCP 31 TS	DCP 32 TS	DCP 33 TS
Ratings	No. of poles		1	2	3	1	2	3	1	2	3	1	2	3	1	1	2	3
	Rated current (In) A		0.1, 0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30			0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30						0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30				3, 4, 5, 7, 10, 15, 20, 25, 30		
	Rated voltage (Ue)	AC(V)	250V	250V	250V	220V / 250V						220V / 250V						
		DC(V)	65V	125V	-	65V						65V						
Rated breaking capacity (kA) UL 1077 KS C 8321 IEC 60934	AC	380V	-	-	-	-						-						
		250V	2.5	2.5	2.5	1.0						1.0						
		220V	2.5	2.5	2.5	1.5						1.5						
	DC	65V	2.5	-	-	1.0						1.0						
		125V	-	2.5	-													
Trip characteristics			Instantaneous, High speed, Middle speed, Low speed type									Instantaneous, High speed, Middle speed, Low speed type						
Life expectancy	Mechanical		4,000 times									4,000 times						
	Electrical		6,000 times									6,000 times						
Dimension (mm)	A		17.5	35	52.5	16.5	32.5	49	16.5	32.5	49	16.5	32.5	49	16.5	16.5	32.5	49
	B			65		42			42			42				42		
	C			73		42			42			42				42		
Weight (g)			78	152	234	40	81	122	40	81	123	40	81	122	41	41	82	130
Overcurrent trip method			Hydraulic Magnetic (HM)									Hydraulic Magnetic (HM)						
Terminal connection method			Screw Type			Plug Type			Side-Screw Type			Terminal type for PCB				Plug-in Type		
Installation method			DIN - RAIL, Screw			Front plate screw tightening (flush mounting)						Front plate screw tightening (flush mounting)						
Internal circuits	Series		●			●			●			●			●	●		
	Parallel		-			-			-			-			-	-		
	Dual		-			-			-			-			-	-		
	Relay (Current type)		-			-			-			-			-	-		
	Switch Only		-			●			●			●			●	●		
	Inertial Delay		-			●			●			●			●	●		
Accessories	Aux. switch W		●			●			●			●			●	●		
	Alarm switch E		●			●			●			●			●	●		
	Voltage type		-			-			-			-			-	-		
	DIN-Rail Socket		-			-			-			-			-	-		
Standards acquired	KSC 8321		-			●			●			●			●	●		
	UL 1077		●			●			●			-			-	-		
	CSA		-			●			●			●			-	●		
	CCC		●			●			●			-			-	-		
	CE		●			-			-			-			-	-		
	TUV		-			●			●			-			-	-		
	PSE(Japan)		●			●			●			-			-	-		

Note 1. Rating within the parenthesis of rated current is the specification of a special order. 2. For standards acquired, refer to the List of Certifications acquired by Model Name.

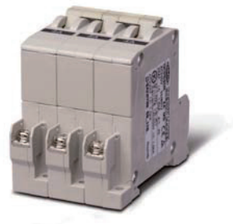
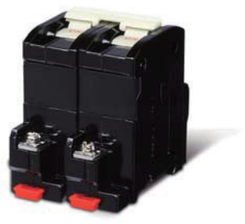
List of Standard Series




Frame Size			30AF							50AF								
Type			DCP 30 PR Series			DCP 30 SR Series				DCP 50 PR Series			DCP 50 SR Series			DCP 50 TR Series		
Model			DCP 31 PR	DCP 32 PR	DCP 33 PR	DCP 31 SR	DCP 32 SR	DCP 33 SR		DCP 51 PR	DCP 52 PR	DCP 53 PR	DCP 51 SR	DCP 52 SR	DCP 53 SR	DCP 51 TR	DCP 52 TR	DCP 53 TR
Ratings	No. of poles		1	2	3	1	2	3		1	2	3	1	2	3	1	2	3
	Rated current (In) A		0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30(40, 45)							3, 4, 5, 7, 10, 15, 20, 25, 30(40, 45, 50)								
	Rated voltage (Ue)	AC(V)	220V / 250V							220V / 250V								
		DC(V)	65V							65V								
Rated breaking capacity (kA) UL 1077 KS C 8321 IEC 60934	AC	380V	-							-								
		250V	1.5							1.5								
		220V	1.5							1.5								
	DC	65V	1.0							1.0								
Trip characteristics			Instantaneous, High speed, Middle speed, Low speed type							Instantaneous, High speed, Middle speed, Low speed type								
Life expectancy	Mechanical		4,000 times							4,000 times								
	Electrical		6,000 times							6,000 times								
Dimension (mm) 	A		19	38	57	19	38	57		19	38	57	19	38	57	19	38	57
	B		40			40				40			40			40		
	C		51			51				51			51			51		
Weight (g)			56	115	176	57	117	181		58	119	182	58	119	182	60	120	185
Overcurrent trip method			Hydraulic Magnetic (HM)							Hydraulic Magnetic (HM)								
Terminal connection method			Plug Type			Side Screw Type				Plug Type			Side Screw Type			Plug-in Type		
Installation method			Front plate screw tightening (flush mounting)							Front plate screw tightening (flush mounting)								
Internal circuits	Series		●			●				●			●			●		
	Parallel		●			●				●			●			-		
	Dual		-			-				-			-			-		
	Relay (Current type)		●			●				●			●			-		
	Switch Only		●			●				●			●			●		
	Inertia Delay		-			-				-			-			-		
Accessories	Aux. switch W		●			●				●			●			●		
	Alarm switch E		-			-				-			-			-		
	Voltage type		●			●				●			●			-		
	DIN-Rail Socket		●			-				●			-			-		
Standards acquired	KSC 8321		●			●				●			●			●		
	UL 1077		●			●				-			-			-		
	CSA		-			-				-			-			-		
	CCC		-			-				-			-			-		
	CE		-			-				-			-			-		
	TÜV		-			-				-			-			-		
	PSE(Japan)		●			●				-			-			-		

Note 1. Rating within the parenthesis of rated current is the specification of a special order. 2. For standards acquired, refer to the List of Certifications acquired by Model Name.

List of Standard Series


Frame Size			50AF								50AF							
Type			DCP 50 DR Series			DCP 50 DF Series		DCP 50 DG Series			DCP 50 BH Series			DCP 50 CH Series			DCP 50 BU Series	
Model			DCP 51 DR	DCP 52 DR	DCP 53 DR	DCP 51 DF	DCP 52 DF	DCP 51 DG	DCP 52 DG		DCP 51 BH	DCP 52 BH	DCP 53 BH	DCP 51 CH	DCP 52 CH	DCP 53 CH	DCP 51 BU	DCP 52 BU
Ratings	No. of poles		1	2	3	1	2	1	2		1	2	3	1	2	3	1	2
	Rated current (In) A		0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30			0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30 , 40, 45, 50					0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50							
	Rated voltage (Ue)	AC (V)	220V / 250V								220V / 250V							
		DC (V)	65V								65V							
Rated breaking capacity (kA) UL 1077 KS C 8321 IEC 60934	AC	380 V	-								-							
		250 V	1.5			1.5		-			1.5							
		220 V	1.5			1.5		2.5			1.5							
	DC	65 V	1.0			1.0		1.5			1.0							
Trip characteristics			Instantaneous, High speed, Middle speed, Low speed type								Instantaneous, High speed, Middle speed, Low speed type							
Life expectancy		Mechanical	4,000 times								4,000 times							
		Electrical	6,000 times								6,000 times							
Dimension (mm) 		A	16.5	33	49.5	25	50	25	50		19	38	57	19	38	57	25	50
		B	61.4			65					47			47			53.9	
		C	67			67.5					63.5			63.5			65	
Weight (g)			63	128	184	107	219	107	219		83	170	255	83	170	255	118	240
Overcurrent trip method			Hydraulic Magnetic (HM)								Hydraulic Magnetic (HM)							
Terminal connection method			Screw Type								Bolt Type			Clip Type			Bolt Type	
Installation method			DIN-Rail, Screw								Front plate screw tightening (flush mounting)							
Internal circuits	Series		●			●					●			●			●	
	Parallel		-			-					●			-			-	
	Dual		-			-					-			-			-	
	Relay (Current type)		-			-					●			-			-	
	Switch Only		●			●					●			●			●	
	Inertia Delay		●			-					●			●			-	
Accessories	Aux. switch W		●			●					●			●			●	
	Alarm switch E		●			-					●			●			●	
	Voltage type		-			-					●			-			-	
	DIN-Rail Socket		-			-					-			-			-	
Standards acquired	KSC 8321		●			●					●			●			●	
	UL 1077		●			-					●			-			● Note 3	
	CSA		-			-					-			-			● Note 3	
	CCC		-			-					●			-			●	
	CE		● Note 1			-					●			-			●	
	TÜV		● Note 1			-					-			-			-	
	PSE(Japan)		●			●		-			●			●			●	

Note 1. Only AC is acquired for CE and TÜV certification. 2. For standards acquired, refer to the List of Certification acquired by Model Name.
3. Only low speed AC has UL, CSA certification from DCP50BU Series.

List of Standard Series


Frame Size			50AF						100AF				100AF								
Type			DCP 50 TH Series			DCP 50 SH Series			DCP 70 BH Series				DCP 70 PH Series			DCP 70 TH Series			DCP 70 SH Series		
Model			DCP 51 TH	DCP 52 TH	DCP 53 TH	DCP 51 SH	DCP 52 SH	DCP 53 SH	DCP 71 BH	DCP 72 BH	DCP 73 BH		DCP 71 PH	DCP 72 PH	DCP 73 PH	DCP 71 TH	DCP 72 TH	DCP 73 TH	DCP 71 SH	DCP 72 SH	DCP 73 SH
Ratings	No. of poles		1	2	3	1	2	3	1	2	3		1	2	3	1	2	3	1	2	3
	Rated current (In) A		0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30 , 40, 45, 50						60, 75, 100				3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50, 60, 75, 100			65, 75					
	Rated voltage (Ue)	AC (V)	220V / 250V						220V / 250V / 380V				220V / 250V			220V / 250V / 380V					
		DC (V)	65V						65V				65V			65V					
Rated breaking capacity (kA) UL 1077 KS C 8321 IEC 60934	AC	380 V	-						1.0				-			1.0					
		250 V	1.5						1.5				1.0			1.5					
		220 V	1.5						1.5				1.5			1.5					
	DC	65 V	1.0						1.0				1.5			1.0					
Trip characteristics			Instantaneous, High speed, Middle speed, Low speed type										Instantaneous, High speed, Middle speed, Low speed type								
Life expectancy	Mechanical		4,000 times										4,000 times								
	Electrical		6,000 times										6,000 times								
Dimension (mm) 	A		19	38	57	19	38	57	19	38	57		19	38	57	19	38	57	19	38	57
	B		47			47			47				47			47			47		
	C		63.5			63.5			63.5				63.5			63.5			63.5		
Weight (g)			98	199	300	82	167	253	90	191	275		98	199	300	100	201	303	84	171	259
Overcurrent trip method			Hydraulic Magnetic (HM)										Hydraulic Magnetic (HM)								
Terminal connection method			Screw Type						Bolt Type				Plug - in Type			Screw Type					
Installation method			Front plate screw tightening (flush mounting)										Front plate screw tightening (flush mounting)								
Internal circuits	Series		●			●			●				●			●			●		
	Parallel		-			-			-				-			-			-		
	Dual		-			-			-				-			-			-		
	Relay (Current type)		-			-			●				-			-			-		
	Switch Only		●			●			●				●			●			●		
	Inertia Delay		●			●			●				●			●			●		
Accessories	Aux. switch W		●			●			●				●			●			●		
	Alarm switch E		●			●			●				●			●			●		
	Voltage type		-			-			●				-			-			-		
	DIN-Rail Socket		-			-			-				-			-			-		
Standards acquired	KSC 8321		●			●			●				●			●			●		
	UL 1077		-			-			●				●			-			-		
	CSA		-			-			-				-			-			-		
	CCC		-			-			●				-			-			-		
	CE		-			-			●				-			-			-		
	TÜV		-			-			-				-			-			-		
	PSE(Japan)		●			●			●				-			●			●		

Note 1. For standards acquired, refer to the List of Certification acquired by Model Name. 2. Only 1P and 2P from 70PH Series have UL certification.

List of Standard Series

Frame Size			100AF													100AF		225AF		20AF
Type			DCP 100H Series													DCP 100 B Series		DCP 250 B Series		DCP 21 HI Series
Model			DCP 101 HS	DCP 102 HS	DCP 103 HS	DCP 101 HC	DCP 102 HC	DCP 103 HC	DCP 101 HB	DCP 102 HB	DCP 103 HB	DCP 101 HP	DCP 102 HP	DCP 103 HP		DCP 101 B	DCP 101 P	DCP 251 B	DCP 252 B	DCP 21 HI
Ratings	No. of poles		1	2	3	1	2	3	1	2	3	1	2	3		1		1	2	1
	Rated current (In) A		5, 7, 10, 15, 20, 25, 30, 40, 45, 50						5, 7, 10, 15, 20, 25, 30, 40, 45, 50, 60, 75, 100							60, 75, 100		100, 125, 150, 175, 200, 225, 250		0.3, 0.5, 1, 2, 3, 5, 8, 10, 15
	Rated voltage (Ue)	AC (V)	220V / 250V													220V		-		-
		DC (V)	65V													160V		65V / 160V		32V
Rated breaking capacity (kA) UL 1077 KS C 8321 IEC 60934	AC	380V	-													-		-		-
		250V	5kA													-		-		-
		220V	5kA													5.0		-		-
	DC	65V	10kA													5.0		25.0 / 10.0		0.3 - 5A 6 In(A) / 8 - 15A 10 In(A)
Trip characteristics			Instantaneous, High speed, Middle speed, Low speed type													Instantaneous, High speed, Middle speed, Low speed type				-
Life expectancy		Mechanical	4,000 times													4,000 times				240
		Electrical	6,000 times													6,000 times				100
Dimension (mm) 		A	19	38	57	19	38	57	19	38	57	19	38	57		26		38.2	76.5	19
		B	47						47							74		74.4		19
		C	63.5						63.5							144		181		39
Weight (g)			86	172	258	91	182	273	100	200	300	105	210	315		380		800	1600	13
Overcurrent trip method			Hydraulic Magnetic (HM)													Hydraulic Magnetic (HM)				Thermal Magnetic
Terminal connection method			Screw Type			Clip Type			Bolt Type			Plug-in Type				Bolt, Screw Type				Plug Type
Installation method			Front plate screw tightening (flush mounting)													Front plate screw tightening (flush mounting)				Front mounting
Internal circuits	Series		●			●			●			●				●				●
	Parallel		-			-			●			-				-				-
	Dual		-			-			●			-				-				-
	Relay (Current type)		-			-			●			-				-				-
	Switch Only		●			●			●			●				●				-
	Inertia Delay		●			●			●			●				-				-
Accessories	Aux. switch W		●			●			●			●				●				●
	Alarm switch E		●			●			●			●				-				-
	Voltage type		-			-			●			-				-				-
	DIN-Rail Socket		-			-			-			-				-				-
Standards acquired	KSC 8321		●			●			●			●				●		-		-
	UL 1077		-			-			-			-				-		-		-
	CSA		-			-			-			-				-		-		-
	CCC		-			-			-			-				-		-		-
	CE		-			-			-			-				-		-		-
	TÜV		-			-			-			-				-		-		-
	PSE(Japan)		-			-			-			-				-		-		-

List of Certifications acquired by Model Name

AC

No	Series	Pole	Rated current	Rated voltage	Breaking capacity	KC	PSE	CE	UL	SA	TÜV	CCC
1	DCP 30PS/SS	1-3	1-30A	AC250V	UL:1.0kA PSE:1.5kA CCC:1.5kA	3A or above (Safety Certification for below 3A)	Instantaneous High speed Middle speed Low speed		High speed Middle speed Low speed	High speed Middle speed Low speed	Low speed	Instantaneous High speed Middle speed Low speed
2	DCP 30PR/SR DCP 30PRN/SRN	1-3	1-30A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed		High speed Middle speed Low speed			
3	DCP 50DF	1-2	1-30A	AC220V	1.5kA		Instantaneous High speed Middle speed Low speed					
4	DCP 50DR	1-3	1-30A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed	Instantaneous High speed Middle speed Low speed	Instantaneous High speed Middle speed Low speed		Instantaneous High speed Middle speed Low speed	
5	DCP 50BH	1-3	1-50A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed	Instantaneous High speed Middle speed Low speed	High speed Middle speed Low speed			Instantaneous High speed Middle speed Low speed
6	DCP 70BH	1-3	51-100A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed	Instantaneous High speed Middle speed Low speed	High speed Middle speed Low speed			Instantaneous High speed Middle speed Low speed
7	DCP 50TH,SH	1-3	1-50A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed					
8	DCP 70TH,SH	1-3	1-50A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed					
9	DCP 50BU	1-2	1-50A	AC250V	1.5kA		Instantaneous High speed Middle speed Low speed	Instantaneous High speed Middle speed Low speed	Low speed	Low speed		Instantaneous High speed Middle speed Low speed
10	DCP 70PH	1-2	1-100A	AC250V	1.5kA				High speed Middle speed Low speed			

DC

No	Series	Pole	Rated current	Rated voltage	Breaking capacity	KC	PSE	CE	UL	SA	TÜV	CCC
1	DCP 30PS/SS	1-3	1-30A	DC65V	1.0kA				High speed Middle speed Low speed	High speed Middle speed Low speed		
2	DCP 50DR	1-3	1-30A	DC65V	1.0kA				Instantaneous High speed Middle speed Low speed			
3	DCP 50BH	1-3	1-50A	DC65V	1.0kA				High speed Middle speed Low speed			
4	DCP 70BH	1-3	51-75A	DC65V	1.0kA				High speed Middle speed Low speed			
5	DCP 70PH	1-2	1-100A	DC65V	1.0kA				High speed Middle speed Low speed			

Circuit Protectors

DCP 30DN Series

Features
- Compact design, high performance Circuit Protector
- Protect control circuit devices (semiconductor, LCD equipment)
- AC/DC common use
- Compliant to RoHS
- Certificate Status (CE,UL,CCC,PSE)
- Handle Lock - Prevent electric shock
- Trip indication - Check for trip by over current

Product Specification

Model	DCP30DN
No. of poles	1 Pole / 2 Pole / 3 Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30
Rated breaking capacity	2.5kA(AC250V, DC65V) / 2.5kA(AC250V, DC125V) / 2.5kA(AC250V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Series with Alarm S/W, Switch with Aux. S/W, Switch only
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-10℃~+65℃
Aux. contact capacity	AC250V : 3A / DC30V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-400	15-70	0.1-10	0.004-2.7	0.004-1.5	0.004-0.45
	Middle speed (M)	NO Trip	30-150	5-25	0.4-5	0.004-2	0.004-1	0.004-0.4
	High speed (H)	NO Trip	0.5-15	0.15-3	0.006-0.45	0.004-0.13	0.004-0.05	0.004-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.009	0.005-0.035	0.004-0.025	0.004-0.02	0.004-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-270	15-70	0.1-10	0.004-2.7	0.004-1.5	0.004-0.045
	Middle speed (M)	NO Trip	20-120	5-30	0.4-5	0.004-2	0.004-1	0.004-0.04
	High speed (H)	NO Trip	0.4-7	0.15-3	0.006-0.45	0.004-0.13	0.004-0.05	0.004-0.03
	Instantaneous (I)	NO Trip	0.015-0.3	0.007-0.009	0.005-0.035	0.004-0.025	0.004-0.02	0.004-0.02

Ordering Method

Order method

DCP	31	DN	050	A	M	S
DAERYUK Circuit Protector						

Symbol	No. of poles
31	1P
32	2P
33	3P

Symbol	Mounting type
DN	Din-Rail

Symbol	Rated current
001	0.1A
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A

Symbol	Power used
A	AC/DC common use

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

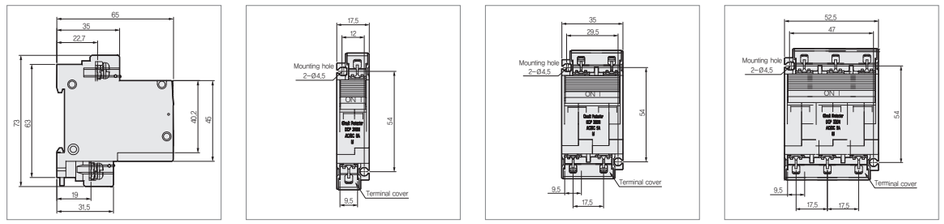
Symbol	Circuit
S	Series
W	Series with Aux. SW
E	Series with Alarm SW
R	Relay

Note 1. If an inrush current protection type is required, add a D on the order sheet (10 times protection of rated current at 8ms of sine wave).

Note 2. When ordering Switch only type and Switch with Aux. S/W type, the operating characteristics is undesignated.

Dimension

Series

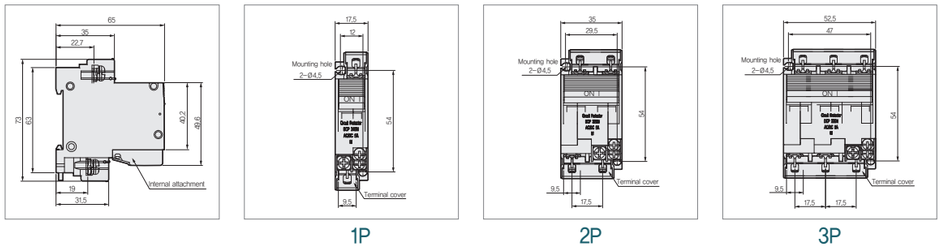


1P 2P 3P

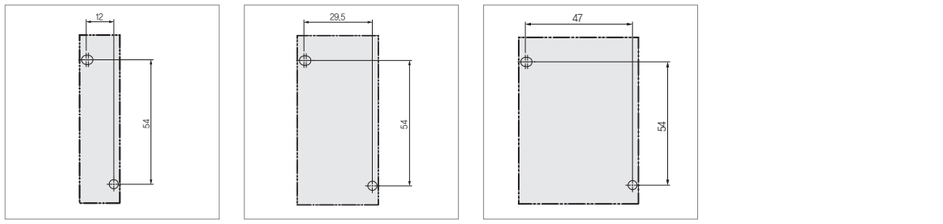
Circuit Protectors

Dimension

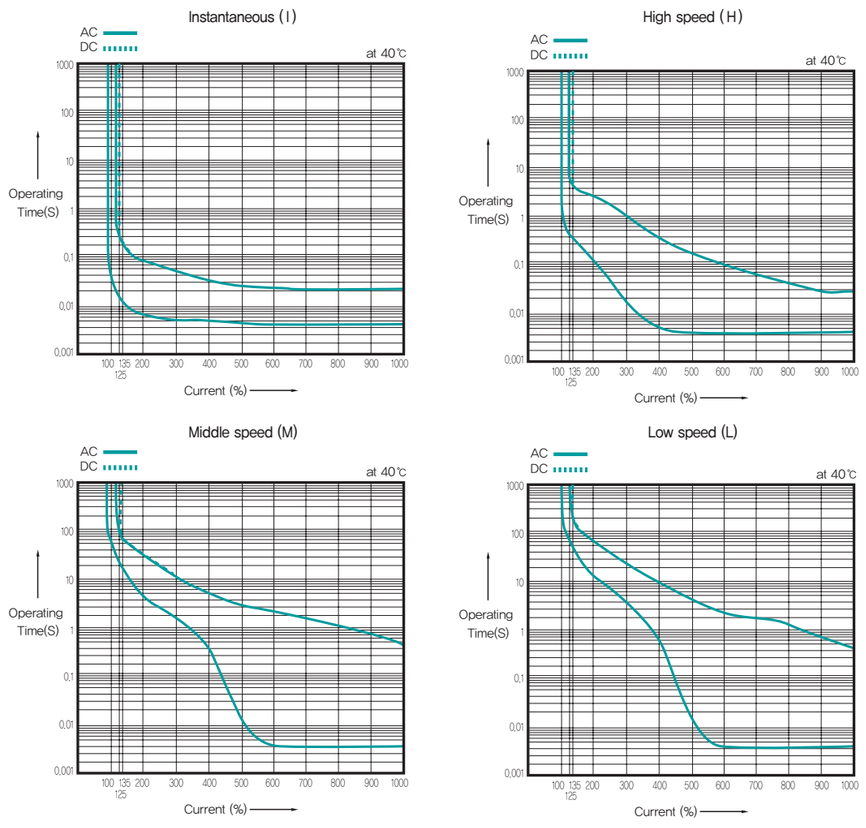
Aux. switch(W) / Alarm switch(E)



Dimension of mounting hole



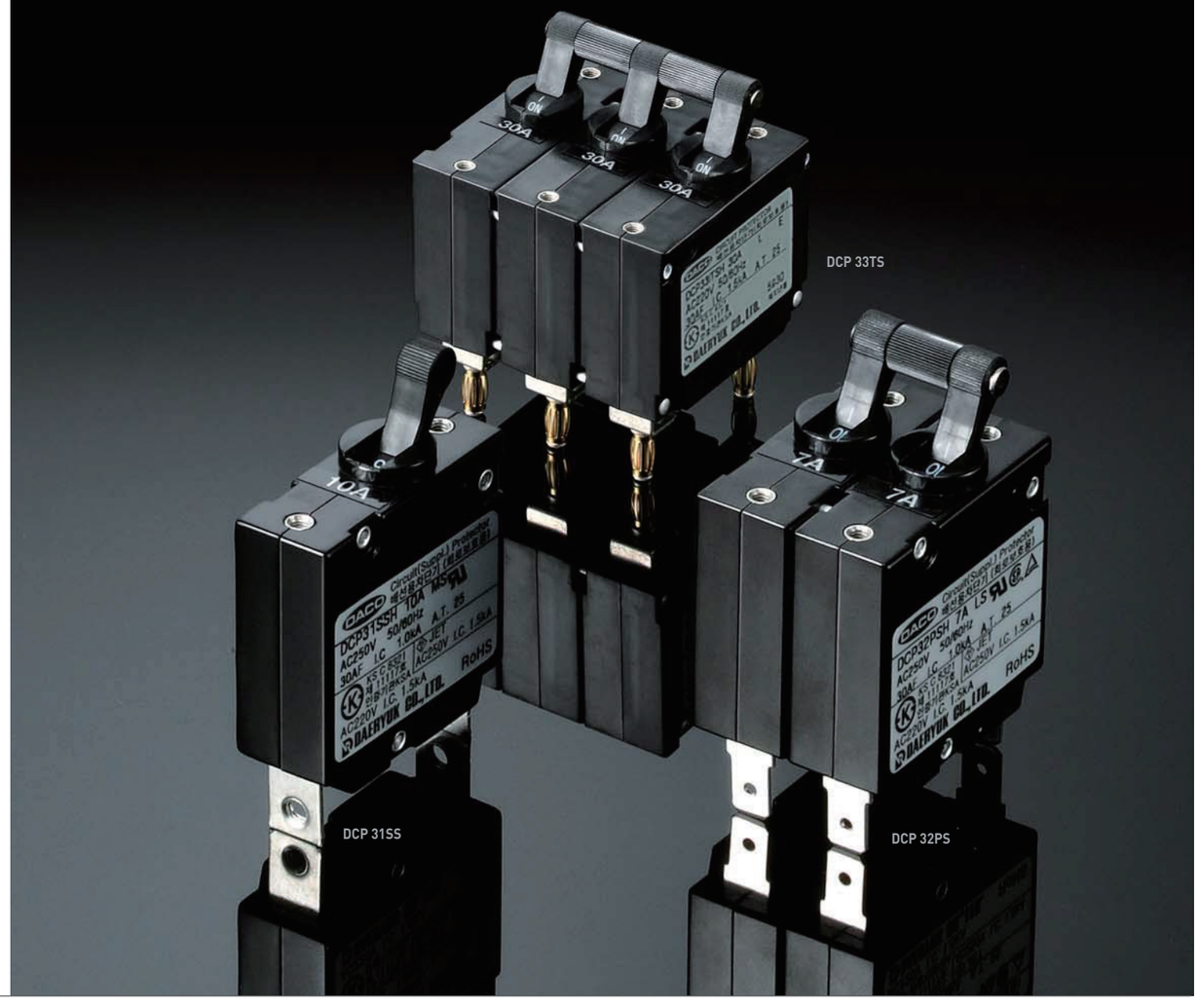
Characteristic Curve



DCP 30PS/SS/TS

Features
- Wide range of rated currents
- 16.2mm of super-slim thickness per pole
- Plug, Side Screw and Plug-in terminal
- 2P/3P with optional N/H-handle
- Inrush current protective function
- Easy ON/OFF with a toggle lever

Use
- Telecommunication equipment, power supply devices
- Computer peripherals, office equipment
- Medical equipment, vending machines power supply, amusement equipment
- Control panels



Circuit Protectors

Product Specification

Model	DCP30PSR, DCP30SSR, DCP30PPR
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, (34).
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V) / 1.0kA (AC 250V / DC 65V)
Internal circuits & Accessories	Series,Series with Aux. S/W,Series with Alarm S/W, Switch with Aux. S/W, Switch only
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Note Rated current represented within a parenthesis is a special order specification (corresponding to DCP 30SS).

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-400	15-70	0.1-10	0.004-2.7	0.004-0.35	0.004-0.035
	Middle speed (M)	NO Trip	7-150	2.2-25	0.008-4	0.004-1.3	0.004-0.18	0.004-0.03
	High speed (H)	NO Trip	0.5-10	0.15-3	0.006-0.45	0.004-0.13	0.004-0.053	0.004-0.028
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.009	0.005-0.035	0.004-0.025	0.004-0.02	0.004-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	15-100	0.3-12	0.004-2	0.004-0.33	0.004-0.05
	Middle speed (M)	NO Trip	4-70	1.4-18	0.13-5	0.004-1.8	0.004-0.32	0.004-0.058
	High speed (H)	NO Trip	0.5-25	0.2-4.5	0.011-0.7	0.004-0.23	0.004-0.08	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.085	0.005-0.028	0.004-0.02	0.004-0.019	0.004-0.018

Ordering Method

DCP **33** **P** **S** **N**

Symbol	No. of poles
31	1 Pole
32	2 Pole
33	3 Pole

Symbol	Terminal type
P	Plug
S	Side Screw
T	Plug-In

Symbol	Handle type
N	1 - Handle
H	H - Handle

007 **A** **M** **W** **D**

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A
340	34A

Symbol	Power used
D	DC
A	AC(50/60Hz)

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

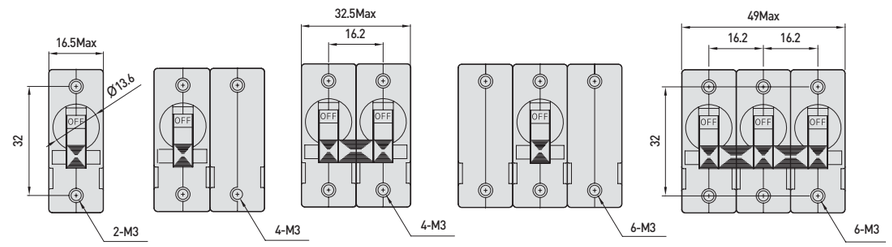
Note 1

Note 1. If an inrush current protection type is required, add a D on the order sheet (10 times protection of rated current at 8ms of sine wave).

DCP 30PRS · SS · TS

Dimension by No. of poles

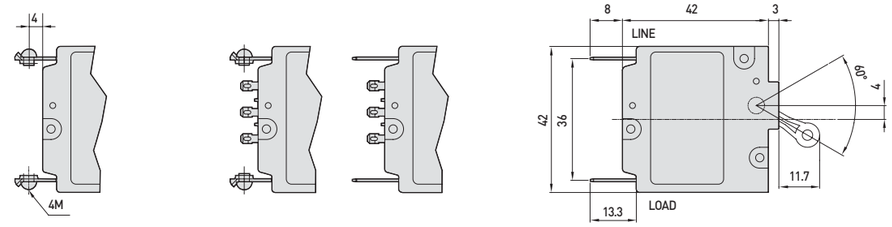
Unit : mm



1 Pole | 2 Pole(1Handle) | 2 Pole(2Handle) | 3 Pole(1Handle) | 3 Pole(3Handle)

Dimension by internal circuit

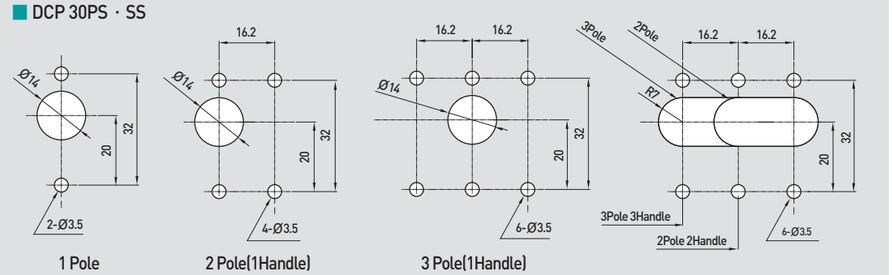
■ Side Screw Type (SS) ■ Plug Type (PS)



Series (S) Aux. & Alarm switch (W)

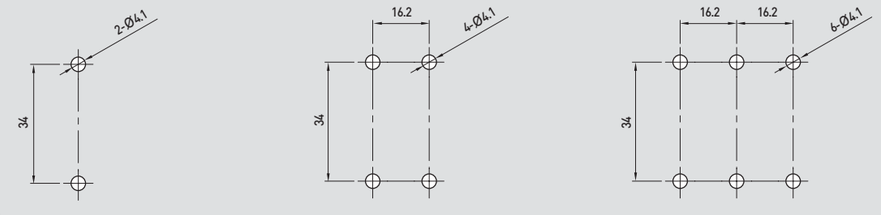
Mounting hole dimension

■ DCP 30PS · SS



1 Pole | 2 Pole(1Handle) | 3 Pole(1Handle)

■ DCP 30TS (Plug Terminal Hole dimension)

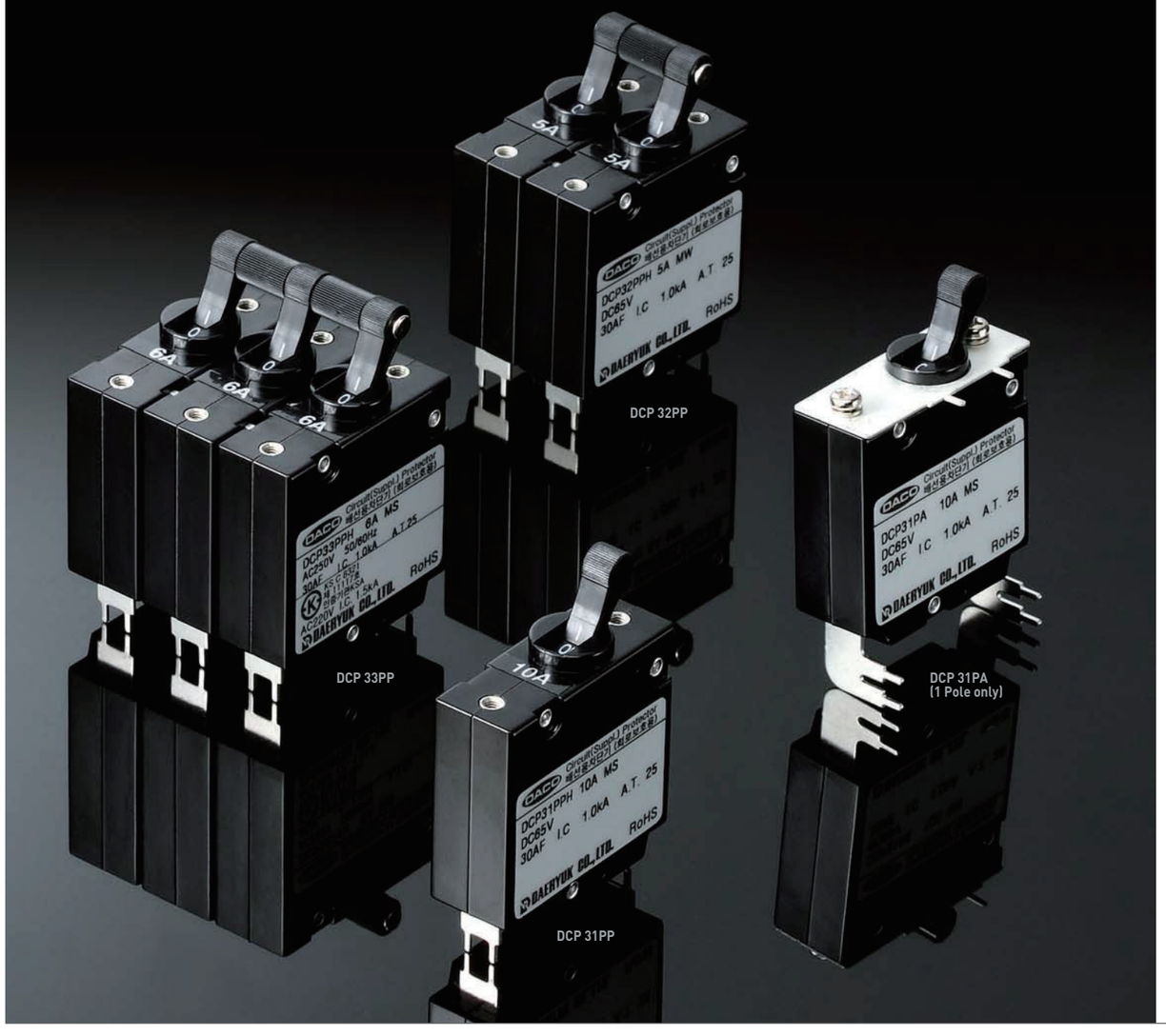


Circuit Protectors

DCP 30PA · PP (PA : Right Angle Type, PP : Print Type)

Features
- Terminal structure can be inserted into a PCB (Printed Circuit Board)
- Diverse rated currents
- 2P/3P with optional N/H-handle
- Inrush current protective function
- Easy ON/OFF with a toggle lever

Use
- Traffic signal controller
- FA, OA equipment
- Electronic switching system, telecommunication equipment
- Power supply devices, medical equipment



DCP 30PA · PP

Product Specification

Model	DCP 30PA, DCP 30PP
No. of poles	1Pole / 1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30.
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Series with Alarm S/W, Switch with Aux. S/W, Switch only
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-400	15-70	0.1-10	0.004-2.7	0.004-0.35	0.004-0.035
	Middle speed (M)	NO Trip	7-150	2.2-25	0.008-4	0.004-1.3	0.004-0.18	0.004-0.03
	High speed (H)	NO Trip	0.5-10	0.15-3	0.006-0.45	0.004-0.13	0.004-0.053	0.004-0.028
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.009	0.005-0.035	0.004-0.025	0.004-0.02	0.004-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	15-100	0.3-12	0.004-2	0.004-0.33	0.004-0.05
	Middle speed (M)	NO Trip	4-70	1.4-18	0.13-5	0.004-1.8	0.004-0.32	0.004-0.058
	High speed (H)	NO Trip	0.5-25	0.2-4.5	0.011-0.7	0.004-0.23	0.004-0.08	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.085	0.005-0.028	0.004-0.02	0.004-0.019	0.004-0.018

Ordering Method

DCP | **31** | **PA** | **H**

Symbol	No. of poles
31	1 Pole
32	2 Pole
33	3 Pole

Symbol	Terminal type
PA	Parallel
PP	Vertical

Symbol	Handle type
N	1 - Handle
H	H - Handle

007 | **A** | **M** | **W** | **D**

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A

Symbol	Power used
D	DC
A	AC(50/60Hz)

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

Note 1

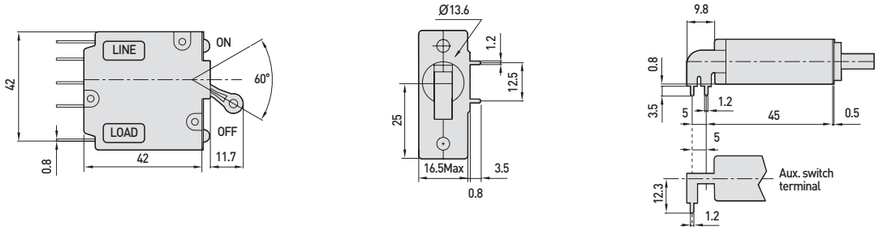
Note 1. If an inrush current protection type is required, add a D on the order sheet (10 times protection of rated current at 8ms of sine wave).

Circuit Protectors

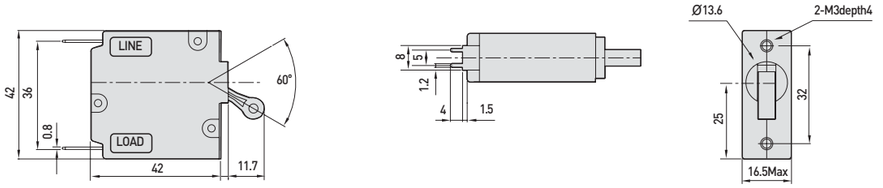
Dimension

Unit : mm

■ DCP 30PA

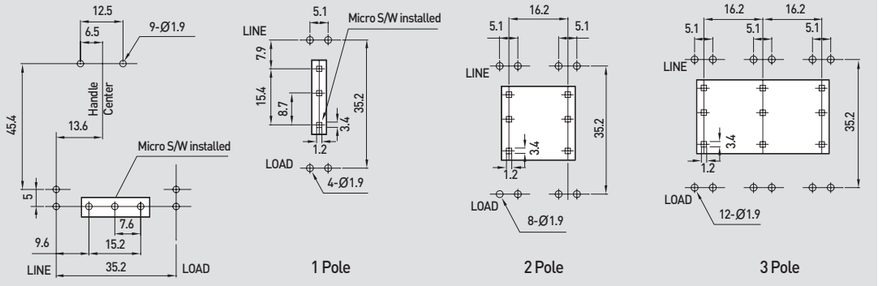


■ DCP 30PP



Print plate mounting dimension

■ DCP 30PA ■ DCP 30PP



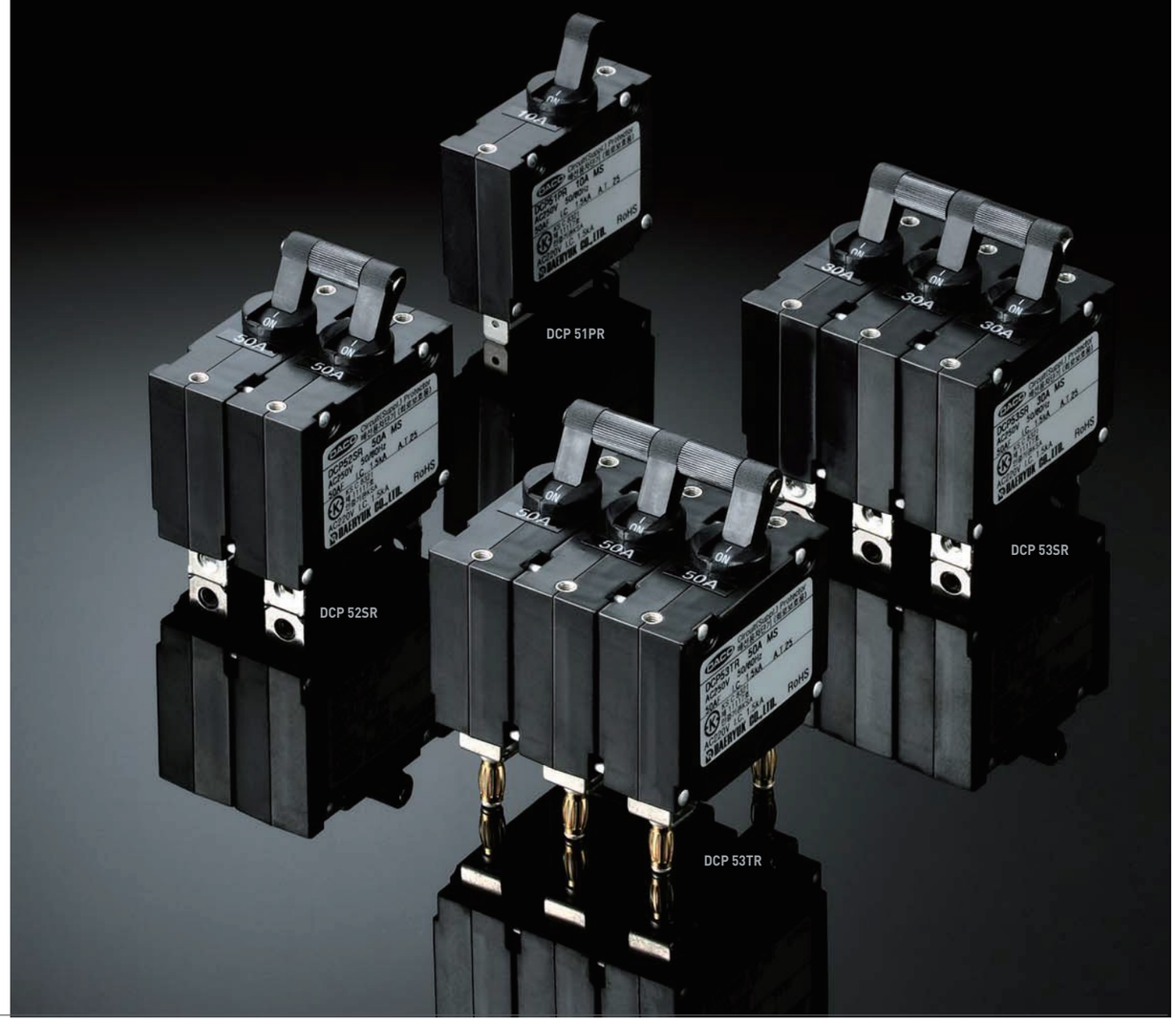
DCP 30PR · SR / 50PR · SR · TR

Features

- Diverse rated currents
- Plug, Side Screw terminal
- Use of DIN-rail mounting socket (30PR, 50PR)
- Easy ON/OFF with a toggle lever
- 2P/3P with optional N/H handle

Use

- Telecommunication equipment, power supply devices
- Computer peripherals, office equipment
- Medical equipment, vending machines, hair-salon equipment
- Power supply devices for power generators
- Control panels



Circuit Protectors

Product Specification

Model	DCP 30PR, DCP 30SR, DCP 50PR, DCP 50SR, DCP 50TR
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30 (40, 45, 50)
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)
Internal circuits & Accessories	Series, Parallel, Relay, Series with Aux. S/W, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Note . Rated current represented within the parenthesis of rated current can only produce 50SR series.

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP **33** **P** **R** **N**

Symbol	No. of poles
31/51	1 Pole
32/52	2 Pole
33/53	3 Pole

Symbol	Terminal type
P	Plug
S	Side Screw
T	Plug-In

Symbo	Handle type
N	1 - Handle
H	H - Handle

007 **A** **M** **W**

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A
400	40A
450	45A
500	50A

Symbol	Power used
D	DC
A	AC(50/60Hz)

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

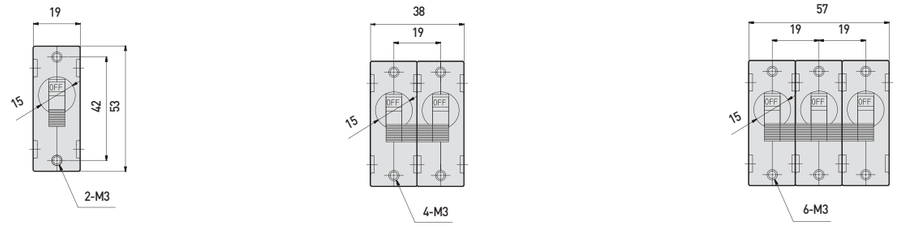
Symbol	Circuit
S	Series
W	Series with Aux. S/W
C	Switch only
P	Parallel
R	Relay
F	Switch with Aux. S/W

Note 1. DCP 50PR/TR series can be produced up to a maximum rating of 30A.
Note 2. Parallel and relay types can be produced up to 30A.

DCP 30PR · SR

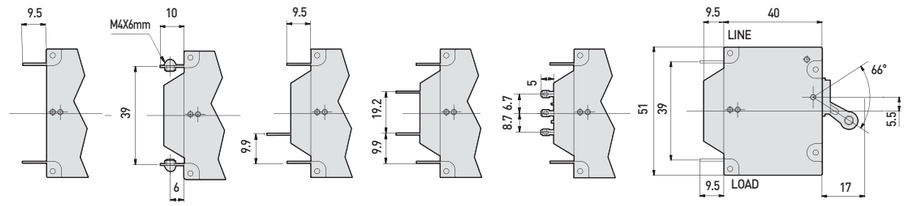
Unit : mm

Dimension by No. of poles



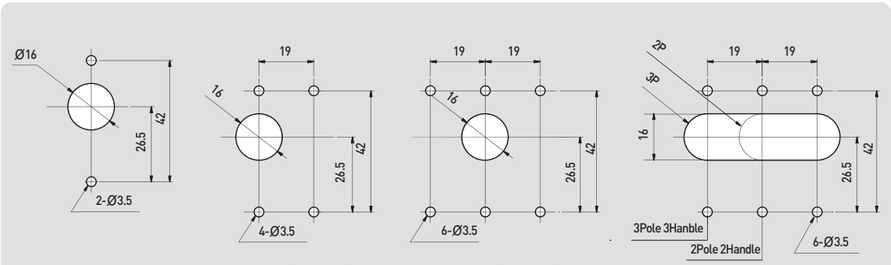
1Pole 2Pole 2Handle 3Pole 3Handle

Dimension by internal circuits



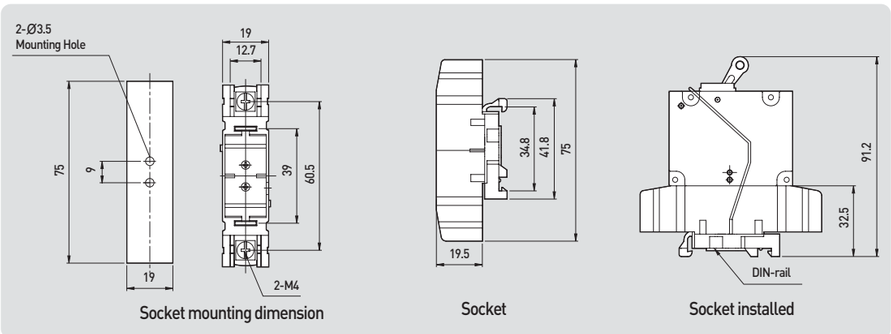
Series (S) Switch (C) | Side Screw Type(SR) | Parallel (P) | Relay (R) | Series Trip with Aux. S/W (W)

Mounting hole dimension



1Pole 2Pole(1Handle) 3Pole(1Handle)

Mounting socket hole dimension



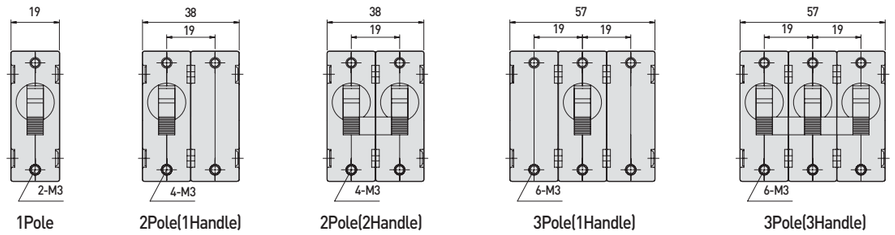
Socket mounting dimension | Socket | Socket installed

Circuit Protectors

50PR · SR · TR

Unit : mm

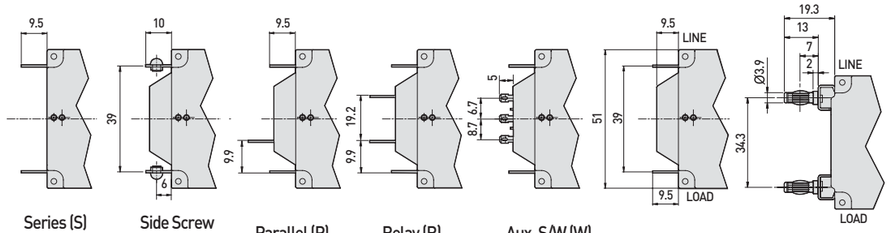
Dimension by No. of poles



1Pole | 2Pole(1Handle) | 2Pole(2Handle) | 3Pole(1Handle) | 3Pole(3Handle)

Dimension by internal circuits

■ DCP 50PR · SR

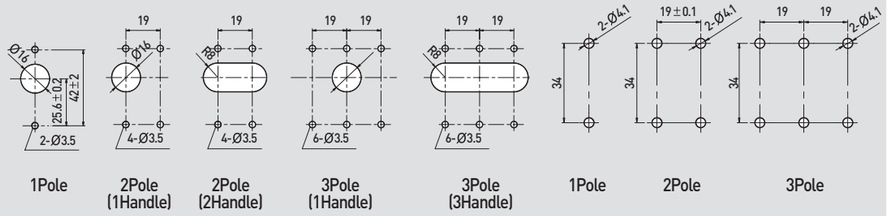


Series (S) Switch (C) | Side Screw Type(SR) | Parallel (P) | Relay (R) | Aux. S/W (W)

■ DCP 50TR

Mounting hole dimension

■ DCP 50PR · SR



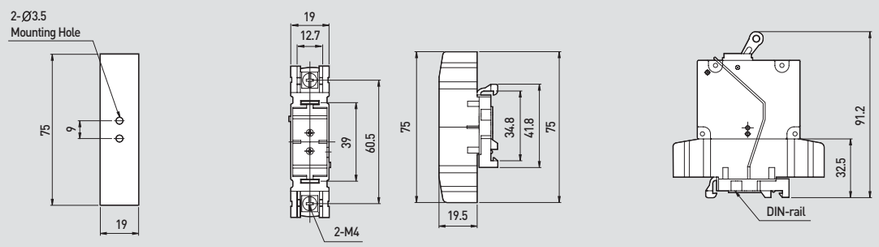
1Pole | 2Pole (1Handle) | 2Pole (2Handle) | 3Pole (1Handle) | 3Pole (3Handle)

■ DCP 50TR (Plug Terminal Hole dimension)

1Pole | 2Pole | 3Pole

Mounting socket hole dimension

■ DCP 50PR · SR (Available below 30A)

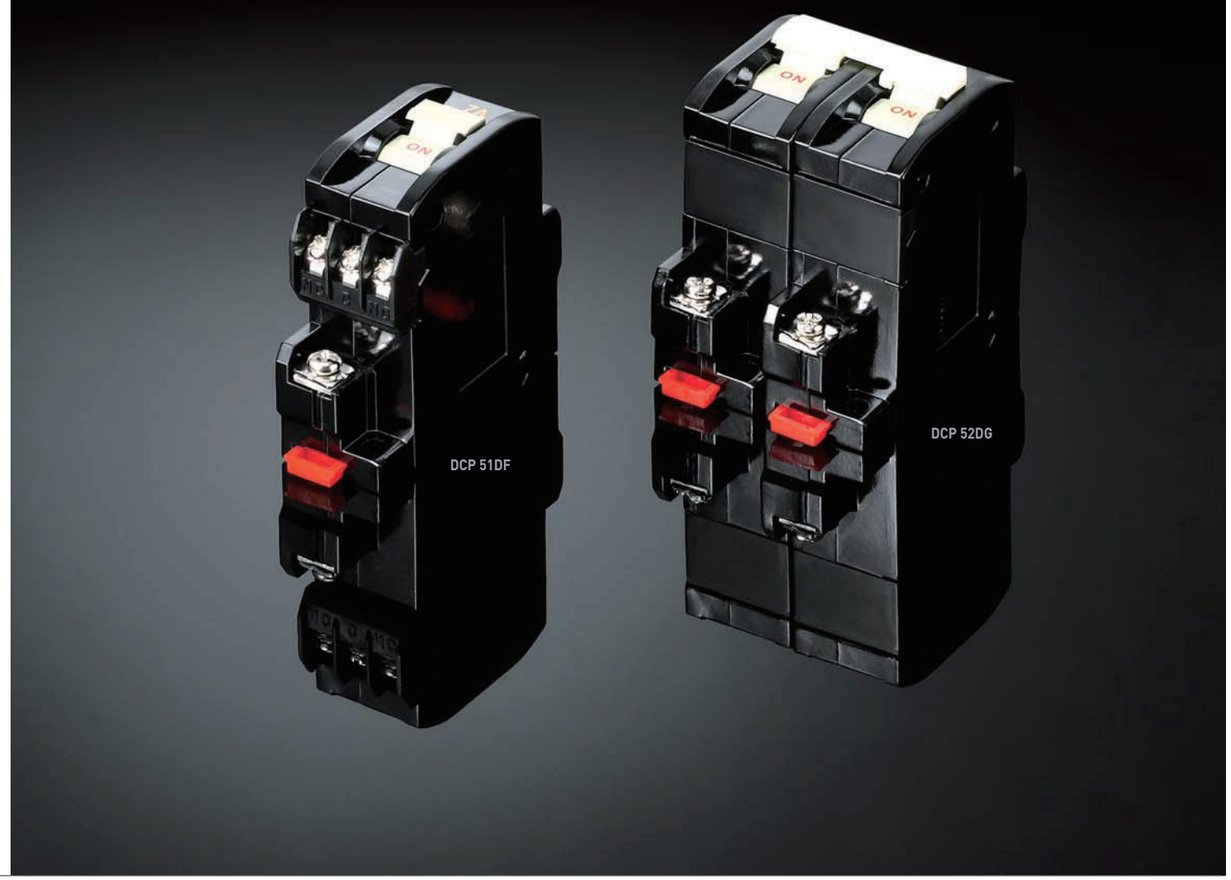


Socket mounting dimension | Socket | Socket installed

DCP 50DF · DG

Features
- Diverse rated currents
- DIN-rail and panel can be mounted.

Use
- Machine tools - Grinding machine, press, drilling machine
- Industrial machines - Printing machine, injection molding machine, weaving machine, elevator
- Chemical and Food processing machines - Packaging machine, dryer, vacuum equipment



Circuit Protectors

Product Specification

Model	DCP 50DF	DCP 50DG
No. of poles	1Pole, 2Pole	
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50	
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)	2.5kA (AC 220V) / 1.5kA (DC 65V)
Internal circuits & Accessories	Series,Series with Aux. S/W, Switch only, Switch with Aux. S/W	
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger	
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V	
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)	
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)	
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)	
Ambient temperature	-40℃~+85℃ (with rated current ON)	
Aux. contact capacity	AC250V : 3A / DC65V : 3A	

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 52 | D | F | 007 | A | M | W

Symbol	No. of poles
51	1 Pole
52	2 Pole

Symbol	Terminal type
D	Side Terminal (for DIN-rail)

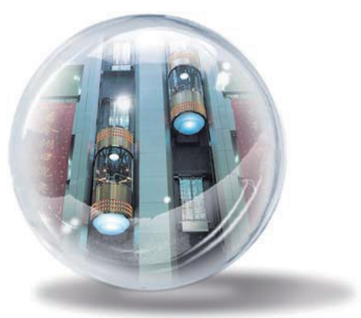
Symbol
F
G

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A
400	40A
450	45A
500	50A

Symbol	Power used
D	DC
A	AC 50/60Hz

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

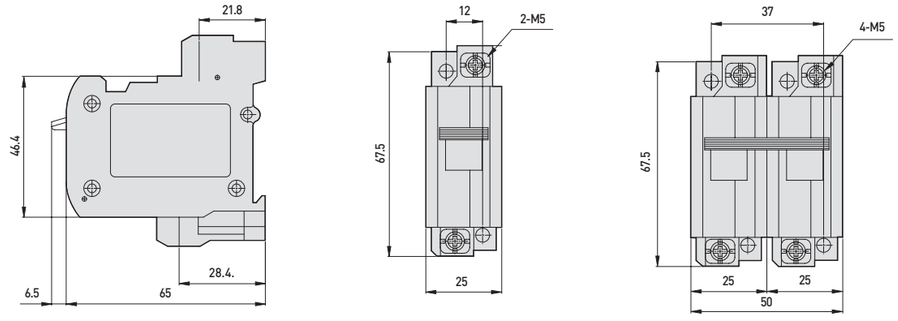
Symbol	Circuit
S	Series
W	Series with Aux. S/W
C	Switch only
F	Switch with Aux. S/W



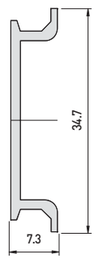
DCP 50DF · DG

Dimension by No. of poles

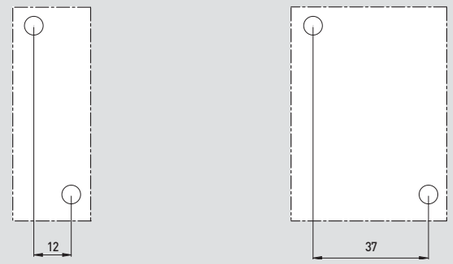
Unit : mm

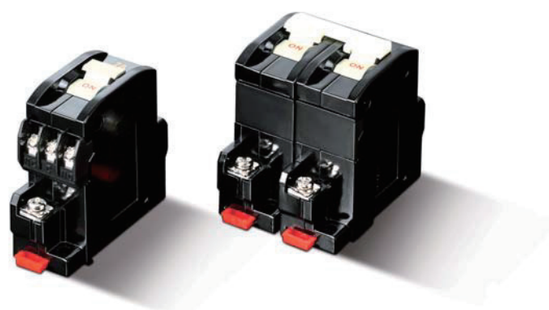


DIN-Rail dimension



Mounting hole dimension



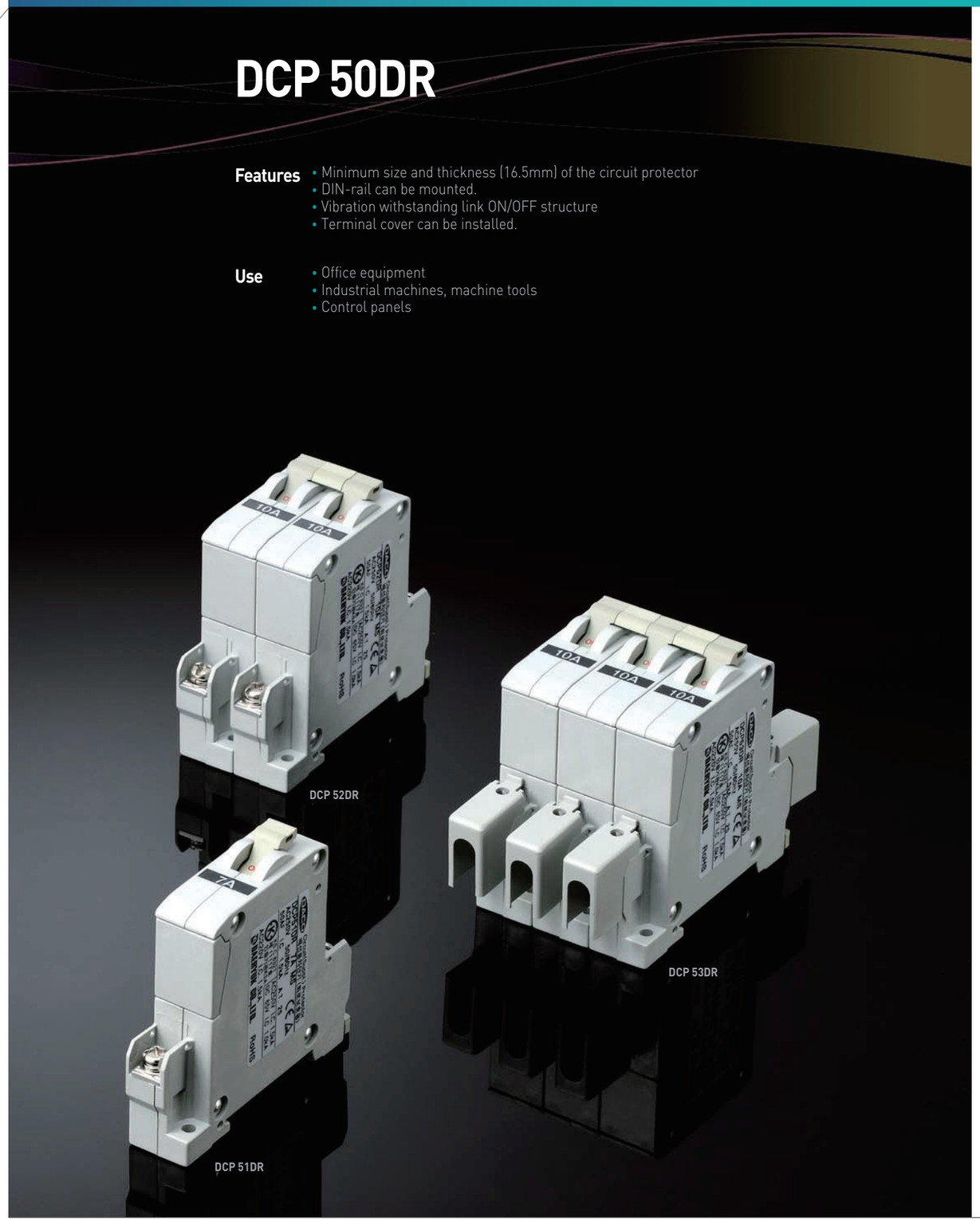


Circuit Protectors

DCP 50DR

Features
- Minimum size and thickness (16.5mm) of the circuit protector
- DIN-rail can be mounted.
- Vibration withstanding link ON/OFF structure
- Terminal cover can be installed.

Use
- Office equipment
- Industrial machines, machine tools
- Control panels



DCP 50DR

Product Specification

Model	DCP 50DR
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30,
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)
Internal circuits & Accessories	Series,Series with Aux. S/W, Series with Alarm, Switch only S/W, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-400	15-70	0.1-10	0.004-2.7	0.004-0.35	0.004-0.035
	Middle speed (M)	NO Trip	7-150	2.2-25	0.008-4	0.004-1.3	0.004-0.18	0.004-0.03
	High speed (H)	NO Trip	0.5-10	0.15-3	0.006-0.45	0.004-0.13	0.004-0.053	0.004-0.028
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.009	0.005-0.035	0.004-0.025	0.004-0.02	0.004-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	15-100	0.3-12	0.004-2	0.004-0.33	0.004-0.05
	Middle speed (M)	NO Trip	4-70	1.4-18	0.13-5	0.004-1.8	0.004-0.32	0.004-0.058
	High speed (H)	NO Trip	0.5-25	0.2-4.5	0.011-0.7	0.004-0.23	0.004-0.08	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.085	0.005-0.028	0.004-0.02	0.004-0.019	0.004-0.018

Ordering Method

DCP | 50 | DR | 007 | A | M | W | D

Symbol	No. of poles
51	1 Pole
52	2 Pole
53	3 Pole

Symbol	Mounting type
DR	DIN-Rail

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A

Symbol	Power used
D	DC
A	AC 50/60Hz

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

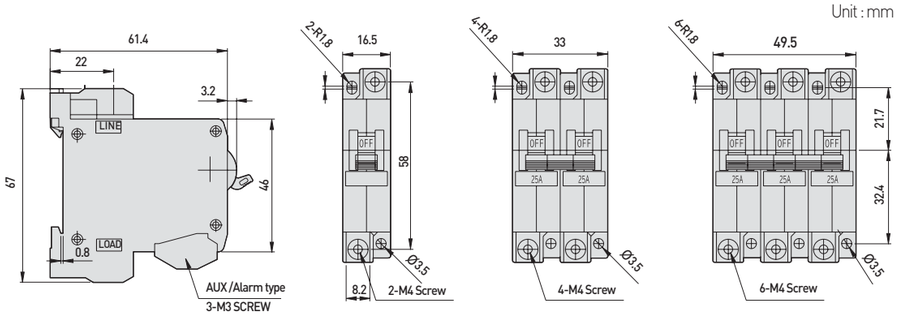
Note 1

Note . Power in use is AC/DC regardless of order symbol (D, A).
1. If an inrush current protection type is required, add a D on the order sheet (10 times protection of rated current at 8ms of sine wave).

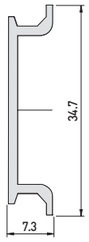
Circuit Protectors

Dimension by No. of poles

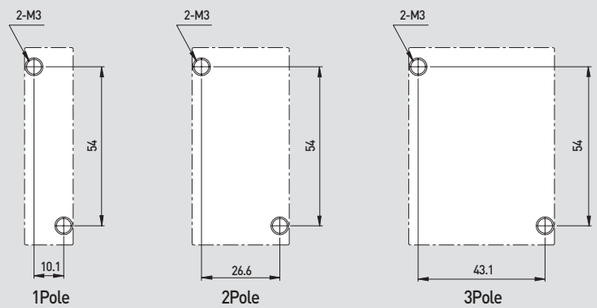
Unit : mm

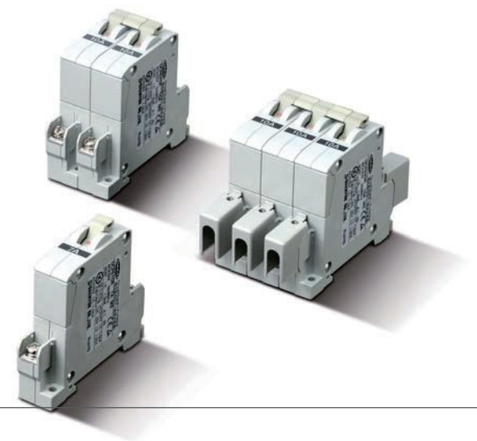


DIN-Rail dimension



Mounting hole dimension

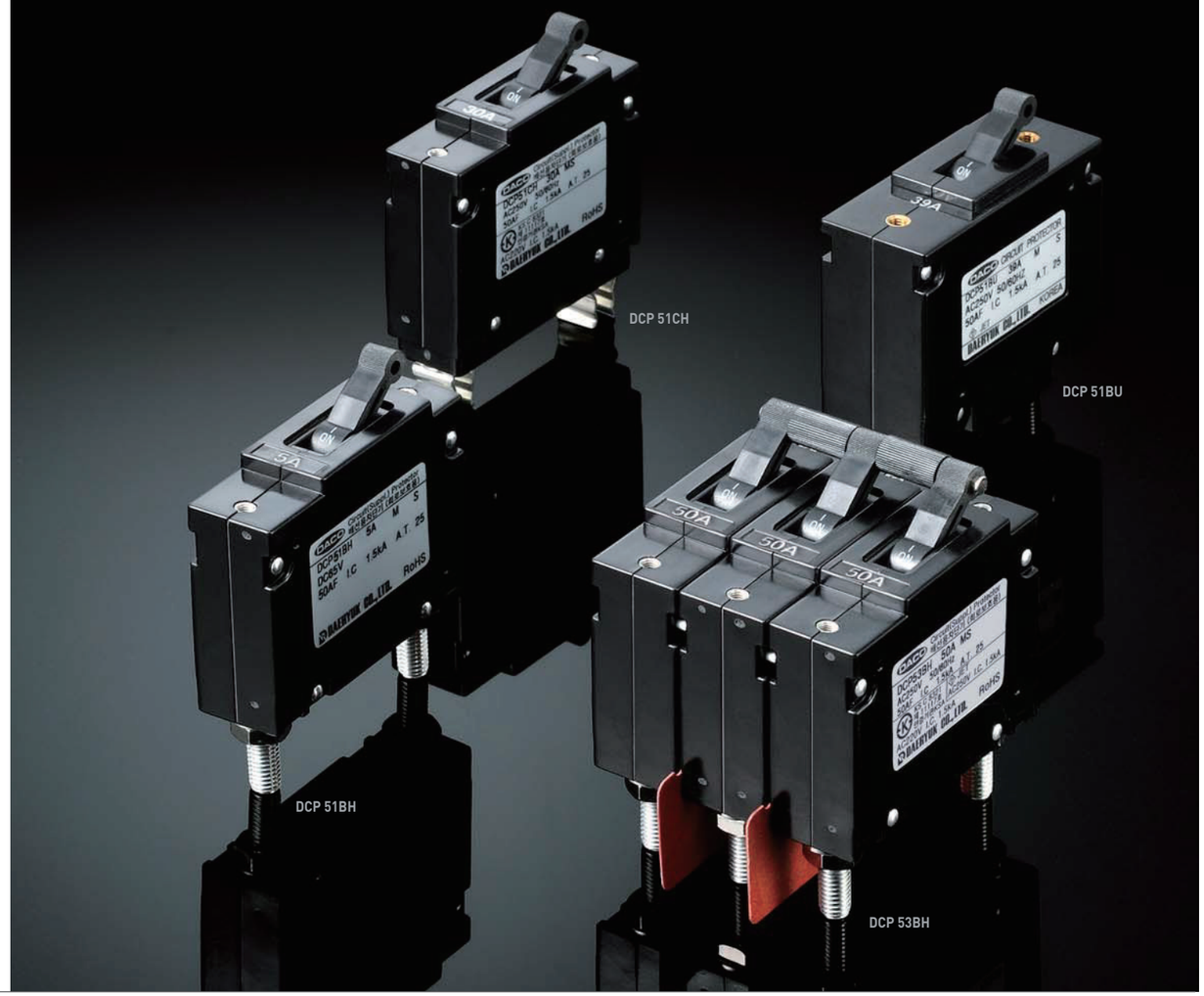




DCP 50BH · CH · BU

Features
- Diverse rated currents
- Bolt terminal
- Easy display of ON/OFF state using a toggle lever
- Clip type terminal (50CH)

Use
- Office equipment, power supply devices, medical equipment
- Telecommunication equipment, computers
- Robots
- Sound systems
- Electronic switching systems (TDX), inverter welders, power generators
- Control panels



Circuit Protectors

Product Specification

Model	DCP 50BH, DCP 50BU, DCP 50CH
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)
Internal circuits & Accessories	Series,Parallel,Relay, Series with Aux. S/W,Series with Alarm, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Note 1. Parallel and relay types are possible only for 50BH.

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 53 | B | H | 007 | A | M | W

Symbol	No. of poles
51	1 Pole
52	2 Pole
53	3 Pole

Symbol	Mounting type
B	Bolt
C	Clip

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A
400	40A
450	45A
500	50A

Symbol	Power used
D	DC
A	AC 50/60Hz

D — Note 1

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W
P	Parallel Note 1
R	Relay Note 2

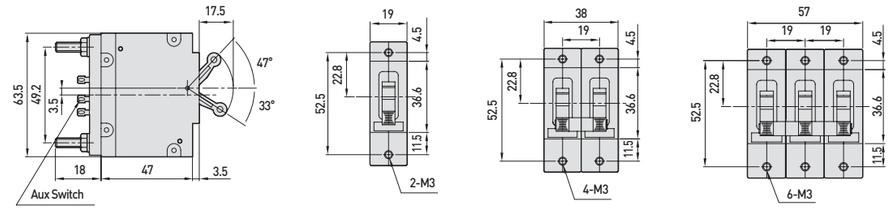
Note 1 . If an inrush current protection type is required, add a D on the order sheet (20 times protection of rated current at 8ms of sine wave).
Note 2 . CH type does not include Parallel and Relay types.

DCP 50BH · CH · BU

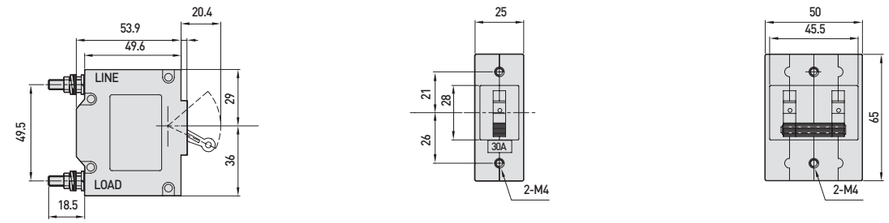
Dimension by No. of poles

Unit : mm

■ DCP 50BH • CH



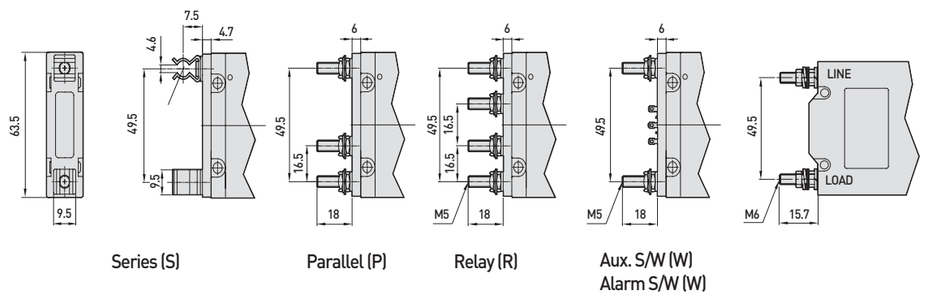
■ DCP 50BU



Dimension by internal circuits

※ Direction of clips can be changed depending on the specifications required.

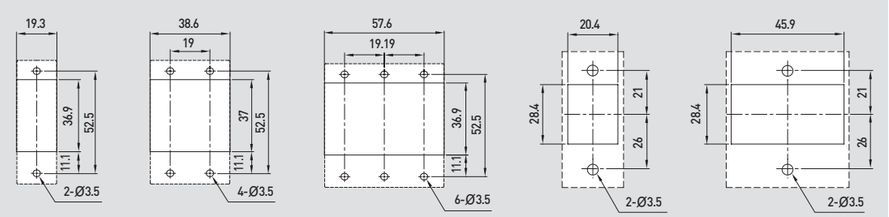
■ DCP 50CH ■ DCP 50BH ■ DCP 50BU



Series (S) | Parallel (P) | Relay (R) | Aux. S/W (W) Alarm S/W (W)

Mounting hole dimension

■ DCP 50BH • CH ■ DCP 50BU



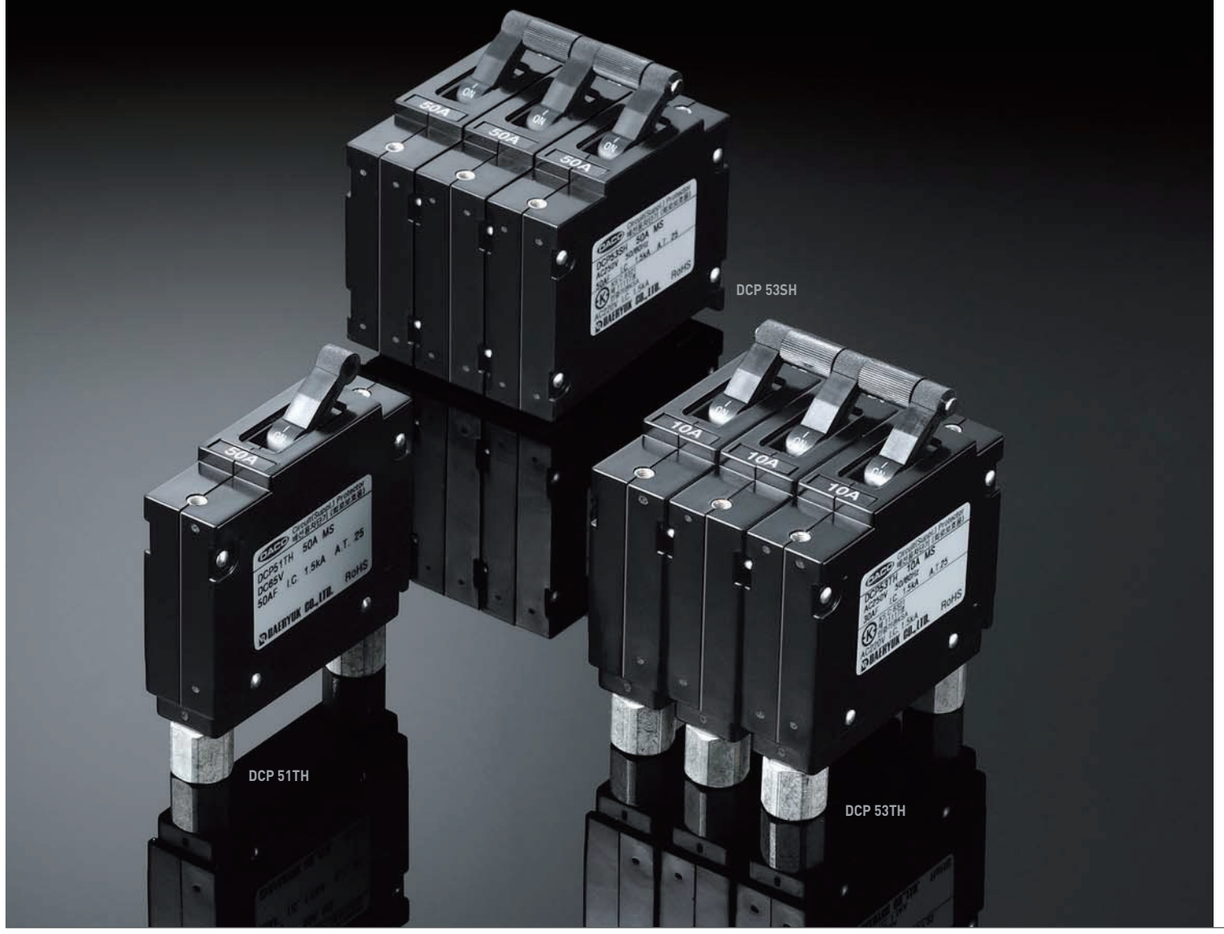
1Pole | 2Pole | 3Pole | 1Pole | 2Pole

Circuit Protectors

DCP 50SH/TH

Features
- Diverse rated currents
- Screw terminal
- Easy display of ON/OFF state using a toggle lever
- Easy standardization work
- Busbar work can be implemented during panel work.

Use
- Telecommunication equipment, power supply devices
- Computer peripherals
- Office equipment, medical equipment, vending machines
- Sound systems
- Electronic switching systems (TDX), inverter welders
- Control panels



DCP 50SH · TH

Product Specification

Model	DCP 50SH, DCP 50TH
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50
Rated breaking capacity	1.5kA(AC 220V) / 1.0kA(DC 65V)
Internal circuits & Accessories	Series,Series with Aux. S/W,Series with Alarm, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃~+85℃ (with rated current ON)
Aux. contact capacity	AC250V : 3A / DC65V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP **53** **SH** **007** **A** **M** **W**

Symbol	No. of poles
51	1 Pole
52	2 Pole
53	3 Pole

Symbol	Terminal type
SH	Tightening screw M5
TH	Hexagonal M5 nut

Symbol	Rated current
003	0.3A
005	0.5A
007	0.75A
010	1A
020	2A
030	3A
040	4A
050	5A
070	7A
100	10A
150	15A
200	20A
250	25A
300	30A
400	40A
450	45A
500	50A

Symbol	Power used
D	DC
A	AC 50/60Hz

D
Note 1

Symbol	Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

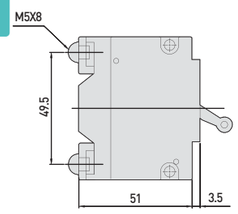
Note 1. If an inrush current protection type is required, add a D on the order sheet (20 times protection of rated current at 8ms of sine wave).

Circuit Protectors

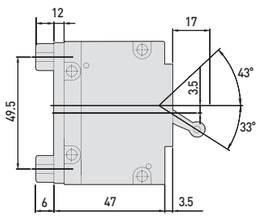
Dimension by No. of poles

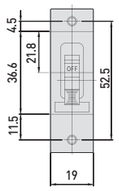
Unit : mm

■ DCP 50SH

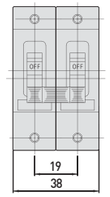


■ DCP 50TH

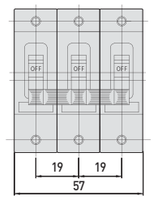




1 Pole



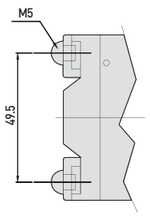
2 Pole



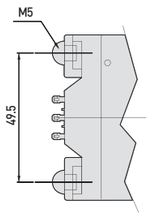
3 Pole

Dimension by internal circuits

■ DCP 50SH

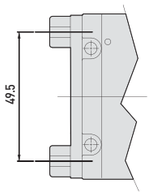


Series (S)

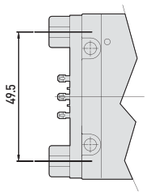


Aux. S/W (W)

■ DCP 50TH

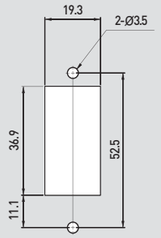


Series (S)

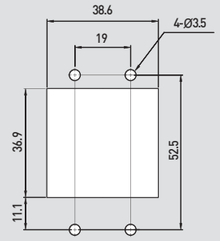


Aux. S/W (W)
Alarm S/W (E)

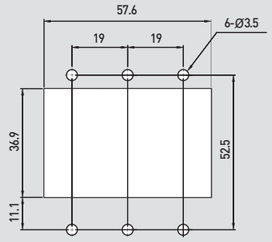
Mounting hole dimension



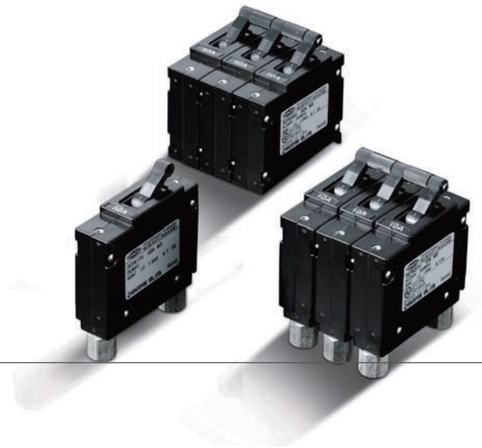
1 Pole



2 Pole



3 Pole



DCP 70BH

Features
- Bolt terminal
- Toggle lever method

Use
- Telecommunication equipment, power supply devices
- Computer peripherals
- Office equipment, medical equipment, vending machines
- Machine tools, industrial machines
- Control panels

Circuit Protectors

Product Specification

Model	DCP 70BH
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	60, 75, 100A
Rated breaking capacity	1.5kA(AC 220V) / 1.0kA(DC 65V) / 1.0kA(AC 380V)
Internal circuits & Accessories	Series, Series with Aux.S/W, Series with Alarm S/W, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃ ~ + 85℃ (with rated current ON)
Aux. contact capacity	AC 250V : 3A / DC 65V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed(L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed(M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed(H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous(I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed(L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed(M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed(H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous(I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 73 | B | H | 750 | A | M | W

Symbol	No. of poles
71	1 Pole
72	2 Pole
73	3 Pole

Symbol	Terminal type
B	Bolt

Symbol	Rated current
600	60A
750	75A
1xx	100A

Symbol	Power used
D	DC
A	AC 50/60Hz

Symbol	Character-istic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

D

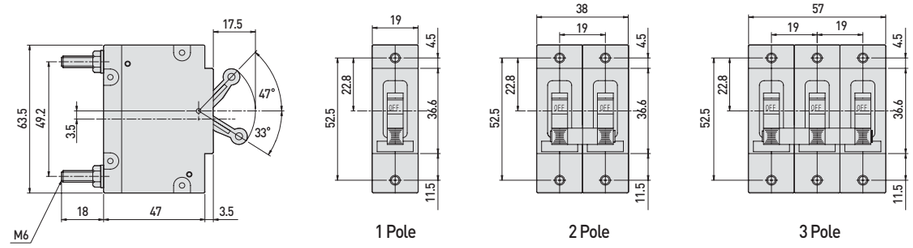
Note 1

Note 1. If an inrush current protection type is required, add a D on the order sheet (20 times protection of rated current at 8ms of sine wave).

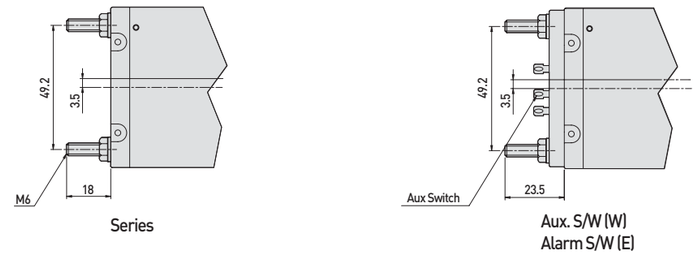
DCP 70BH

Unit : mm

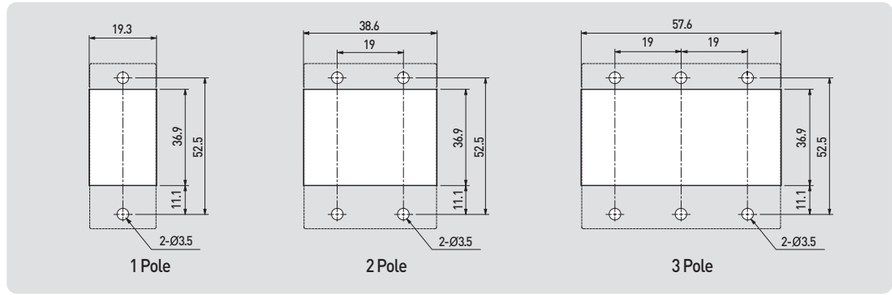
Dimension by No. of poles



Dimension by internal circuits



Mounting hole dimension

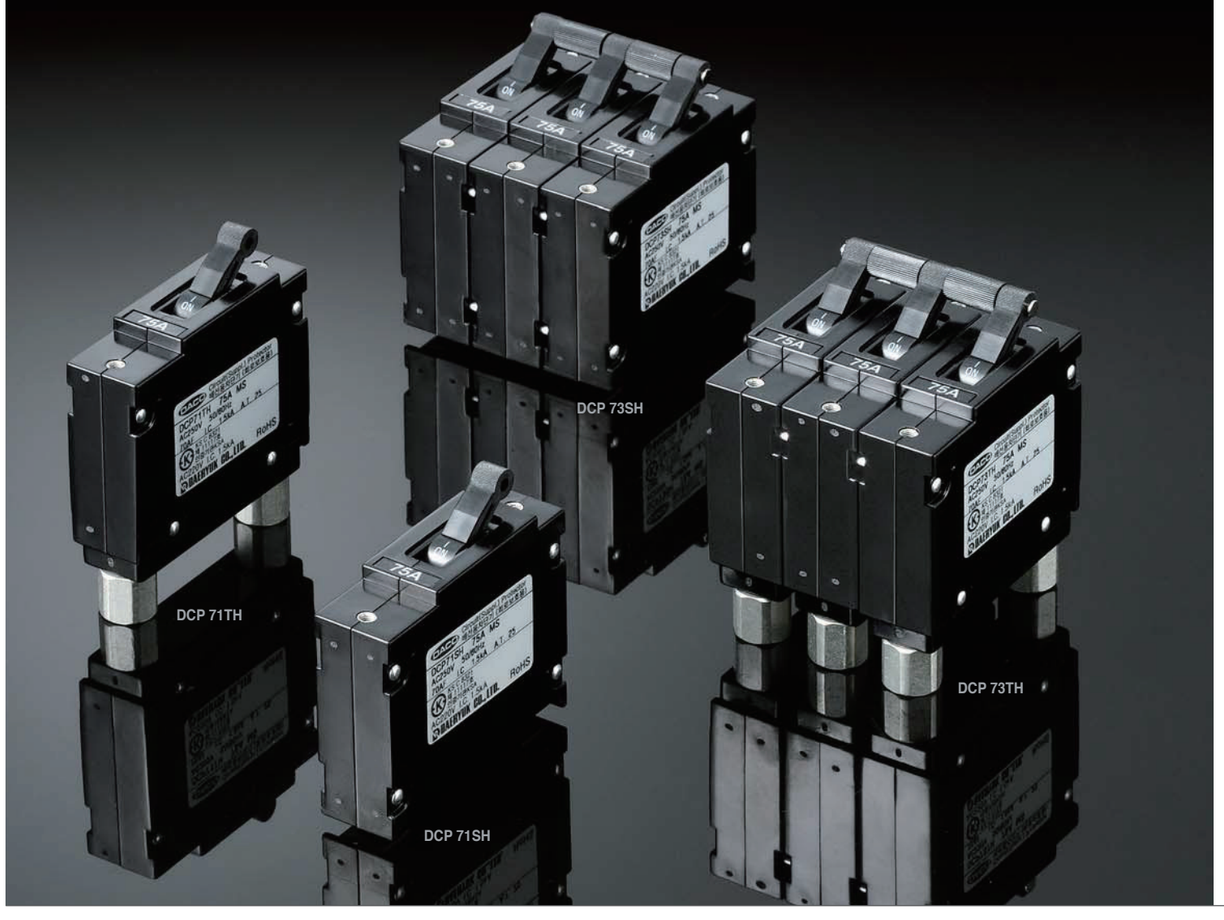


Circuit Protectors

DCP 70SH / TH

Features
- Screw terminal
- Easy to display ON/OFF state using a toggle lever
- Easy standardization work
- Busbar work can be implemented during panel work

Use
- Switchboard equipment
- Telecommunication equipment, computers
- Robots
- Sound systems
- Inverter welders
- Office equipment, power supply devices, medical equipment
- Control panels



DCP 70SH • TH

Product Specification

Model	DCP 70SH, DCP 70TH
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	60, 75A
Rated breaking capacity	1.5kA(AC 220V) / 1.0kA(DC 65V) / 1.0kA(AC 380V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Series with Alarm S/W, Switch only
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃ ~ + 85℃ (with rated current ON)
Aux. contact capacity	AC 250V : 3A / DC 65V : 3A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed(L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed(M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed(H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous(I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed(L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed(M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed(H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous(I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 73 | SH | 750 | A | M | W | D

Symbol	No. of poles
71	1 Pole
72	2 Pole
73	3 Pole

Symbol	Terminal type
SH	Terminal (Tightening screwM6)
TH	Hexagonal M6 Nut

Symbol	Rated current
600	60A
750	75A

Symbol	Power used
D	DC
A	AC 50/60Hz

Symbol	Characte-ristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only

Note 1

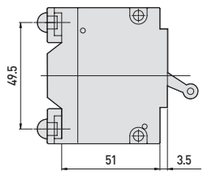
Note 1. If an inrush current protection type is required, add a D on the order sheet (20 times protection of rated current at 8ms of sine wave).

Circuit Protectors

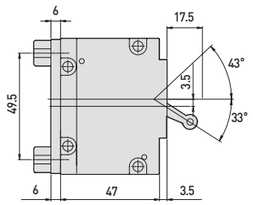
Dimension by No. of poles

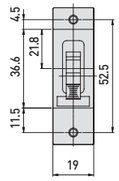
Unit : mm

■ DCP 70SH

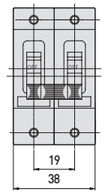


■ DCP 70TH

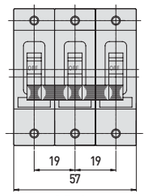




1 Pole



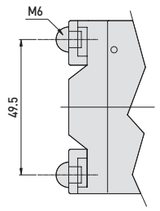
2 Pole



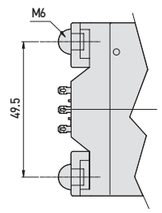
3 Pole

Dimension by internal circuits

■ DCP 70SH

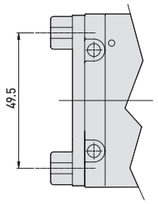


Series (S)

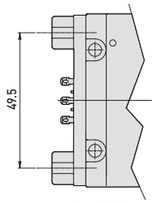


Aux. S/W (W)
Alarm S/W (E)

■ DCP 70TH

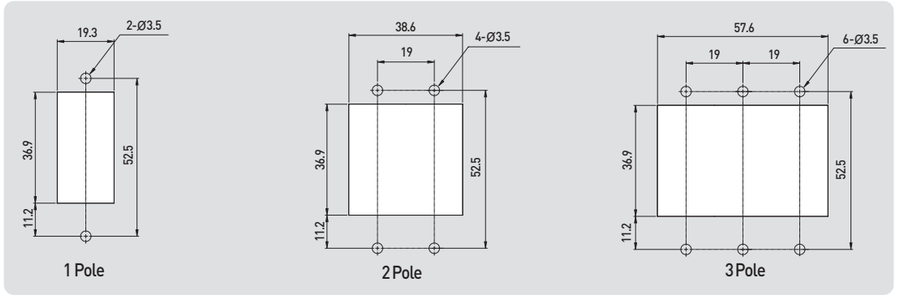


Series (S)



Aux. S/W (W)
Alarm S/W (E)

Mounting hole dimension



DCP 70PH

Features
- Plug-in terminal
- Toggle lever method
- Reduced time for assembly process
- Saving on product replacement time

Use
- Telecommunication equipment, computers
- Robots
- Sound systems
- Office equipment, power supply devices
- Medical equipment

Circuit Protectors

Product Specification

Model	DCP 70PH
No. of poles	1Pole, 2Pole, 3Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50, 60. 75. 100
Rated breaking capacity	1.5kA (AC 220V) / 1.0kA (DC 65V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Series with Alarm S/W, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40℃ ~ + 85℃ (with rated current ON)
Aux. contact capacity	AC 250V : 3A / DC 65V : 3A

Note . UL certification is only available with 1P, 2P.

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed(L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed(M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed(H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous(I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed(L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed(M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed(H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous(I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 73 | P | H | 750 | A | M | W | D

Symbol	No. of poles
71	1 Pole
72	2 Pole
73	3 Pole

Symbol	Terminal type
P	Plug

Symbol	Rated current
600	60A
750	75A
1xx	100A

Symbol	Power used
D	DC
A	AC 50/60Hz

Symbol	Character-istic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
E	Series with Alarm S/W
C	Switch only
F	Switch with Aux. S/W

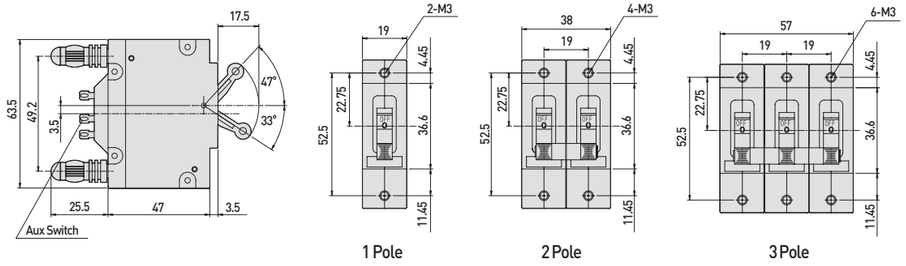
Note 1

Note 1. If an inrush current protection type is required, add a D on the order sheet (20 times protection of rated current at 8ms of sine wave).

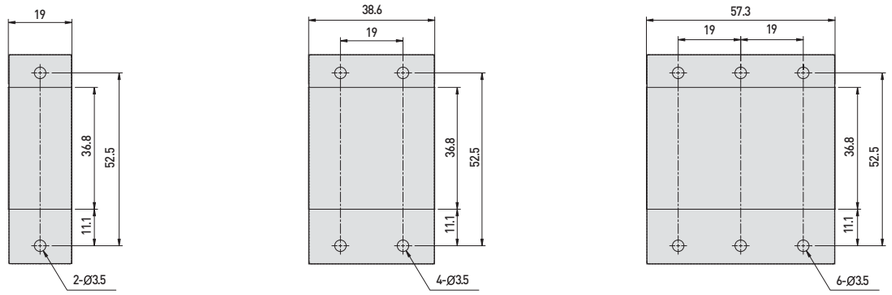
DCP 70PH

Dimension

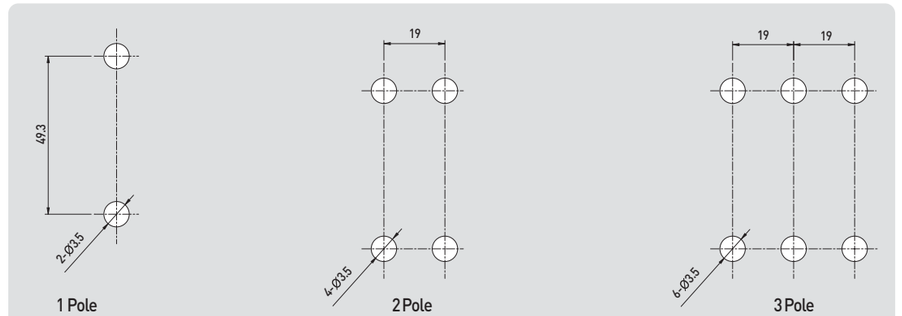
Unit : mm



Mounting hole dimension



Plug hole processing dimension

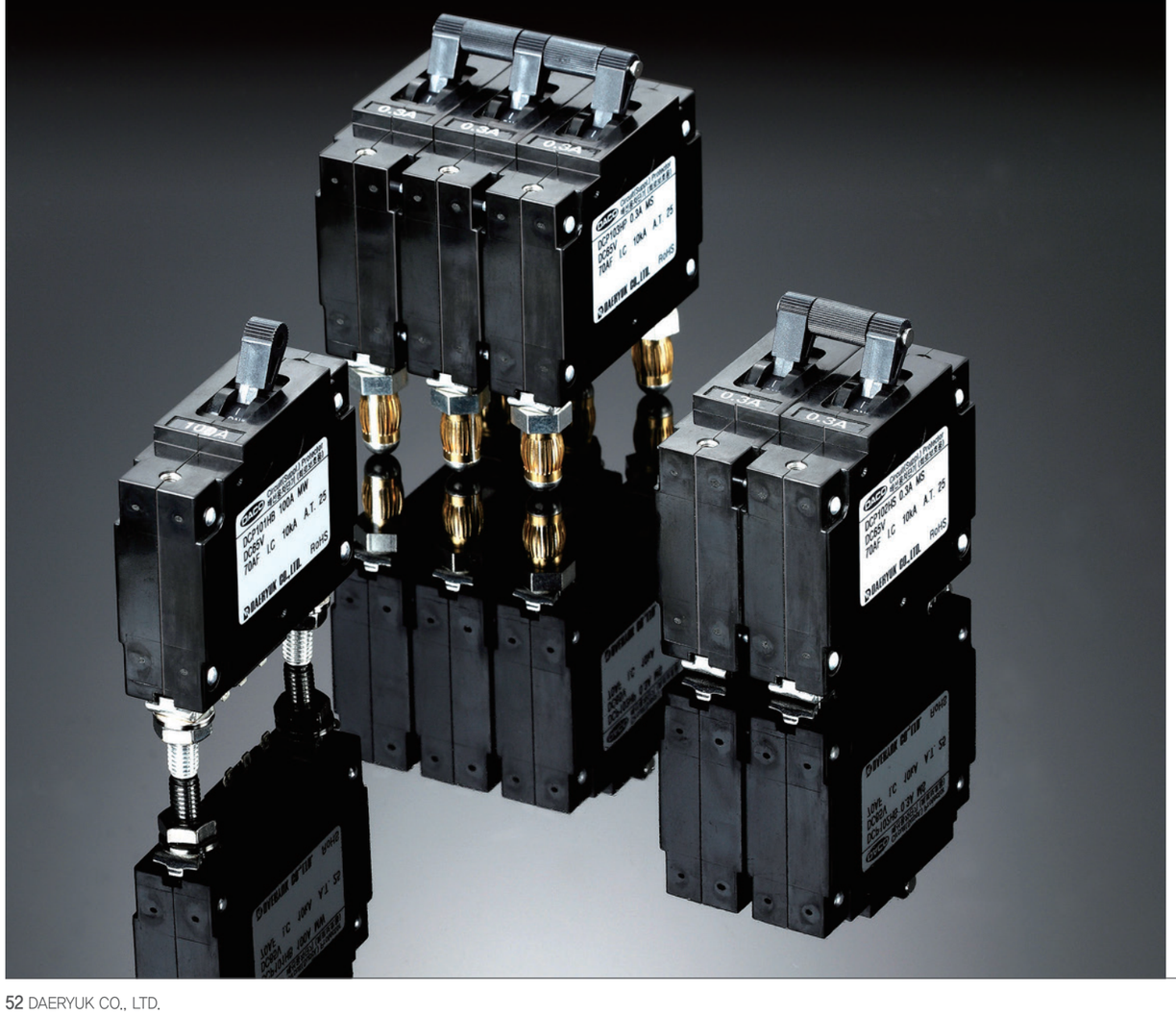


Circuit Protectors

DCP 100H

Features
- Plug-in terminal
- Toggle lever method
- Reduced time for assembly process
- Saving on product replacement time

Use
- Telecommunication equipment, computers
- Robots
- Sound systems
- Office equipment, power supply devices
- Medical equipment



CP 100H

Circuit Protectors

Model	DCP100HS, DCP100HB, DCP100HP, DCP100HC
No. of poles	1 Pole, 2 Pole, 3 Pole
Rated current (A)	0.3, 0.5, 0.75, 1, 2, 3, 4, 5, 7, 10, 15, 20, 25, 30, 40, 45, 50, 60, 75, 100A
Rated voltage	220V, DC65V
Rated breaking capacity	5000A (220V), 10000A (DC65V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Series with Alarm S/W, Parallel, Dual Parallel, Relay(current)(voltage), Dual, Switch only, Switch with Aux. S/W
Insulation resistance(Ω)	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 3000V. For 1 minute at AC 50/60Hz 2000V, between relay coil & main circuit of Dual Parallel, Relay, Dual type
Vibration resistance	98㎨(MIL-STD-202F-201A) / at rated current (instantaneous type : 80% of rated current)
Shock resistance	490㎨(MIL-STD-202F-213B-A) / at rated current (instantaneous type : 81% of rated current)
Life expectancy	More than 10,000 times (Electrical 6,000 times + Mechanical 4,000times) / Switching frequency (6 times per minute)
Ambient temperature	-40℃ ~ +85℃ (with rated current ON)
Permissible relative humidity	45 ~ 85%
Aux. contact capacity	Standard-AC 250V 3A / DC 30V 3A, Gold contact- AC250V 0.1A / DC30V 0.1A

Time delay data by characteristics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed(L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed(M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed(H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous(I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed(L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed(M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed(H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous(I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

■ **In case of 1 pole**
Ex) DCP101HS- 50A M S
(1 pole, Side Screw type, 50A, AC, Middle speed, Series)

Note 1. Up to 3 poles and 50A available
Note 2. Below 50A : M5 / 51~100A: M6 screw
Note 3. In case of 1 handle, it is located at left side with 2 poles, center with 3 poles from front of product

DCP | **10** | **H** | **S** | **-**

Symbol	No. of poles
1	1 Pole
2	2 Pole
3	3 Pole

Symbol	Terminal type
S	Side Screw Note 1)
B	Bolt Note 2)
P	Plug
C	Clip Note 1)

Symbol	Handle type
Void	H-Handle
N	1-Handle Note 3)

50 | **A** | **M** | **S** | **-** | **-**

Rated current
0.3A~100A

Symbol	Power used
A	AC
D	DC

Symbol	Char-acteristic Note 8)
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit		
S	Series	RC	Relay(current) Note 4)
W	Series with Aux. S/W Note 5)	RV	Relay(voltage) Note 6)
E	Series with Alarm S/W Note 5)7)	T	Dual Note 6)
P	Parallel Note 6)	C	Switch only
PT	Dual Parallel Note 6)	F	Switch with Aux. S/W

Symbol	Operating voltage
1	DC12V
2	DC24V
4	DC48V
6	DC65V
11	AC110V
22	AC220V

Inertia
D

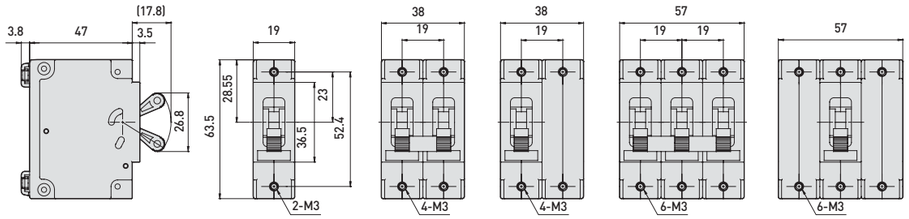
Note 4. Below 10A available on HB type
Note 5. In case of gold contact, add a symbol #1 at the end
Note 6. Below 50A available on HB type
Note 7. Middle trip function added on Series with Alarm S/W type
Note 8. Switch only & Relay (voltage) types are not designated.

■ **Series with Aux. S/W type with 1 pole, ex) DCP101HB-50A M W-D** (1Pole, Bolt type, 50A, AC, Middle speed, Aux. S/W, Inertia)
■ **Relay type with 1 pole, ex) DCP101HB-50A RV-1** (1Pole, Bolt type, 50A, AC, Relay, DC12V)
■ **Dual type with 1pole, ex) DCP101HB-50A H T** (1Pole, Bolt type, 50A, AC, Middle speed, Dual, DC24V)
■ **Every pole has same trip characteristic and rated current.**
ex) DCP103HSN-50D H SSS (3Pole, Screw type, 1 handle, R series phase, S series phase, T series phase, High speed, 50A, DC)
■ **Every pole has same trip characteristic and rated current.** (Aux. S/W for R phase installed),
ex) DCP10HS-50D H WSS (3Pole, Screw type, 1 handle, Aux. switch for R phase, S series phase, T series phase, High speed, 50A, DC)
■ **Combination type (Series and Dual), ex) DCP103HB-50A L SWT-22**
(3Pole, R series phase, Series with Aux. S/W for S phase, Dual for T phase, Low speed, 50A, AC, AC220V)

Circuit Protectors

Dimension by No. of poles

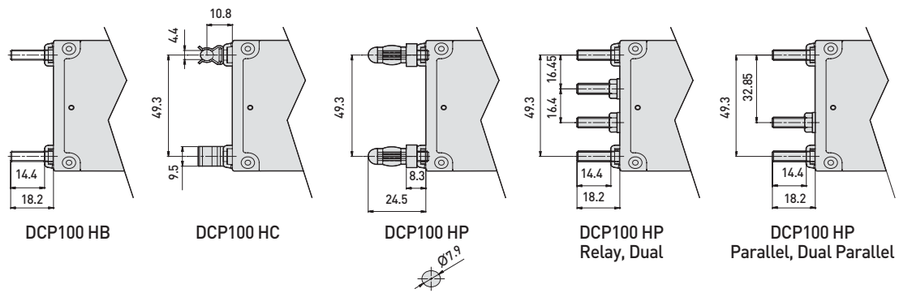
Unit : mm



DCP100 HS | 1Pole | 2Pole | 2Pole (1handle) | 3Pole | 3Pole (1handle)

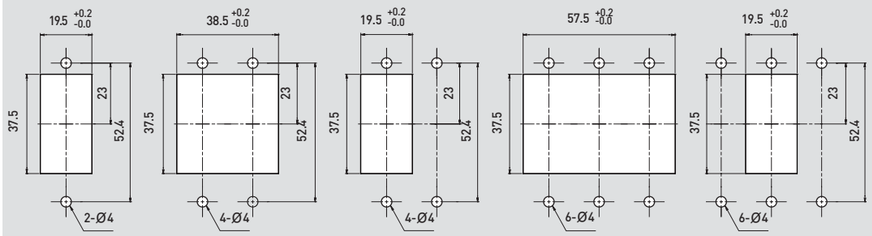
Dimension by terminals

■ DCP100 HP Terminal Hole processing dimension



DCP100 HB | DCP100 HC | DCP100 HP | DCP100 HP Relay, Dual | DCP100 HP Parallel, Dual Parallel

Mounting hole Dimension



1Pole | 2Pole | 2Pole (1handle) | 3Pole | 3Pole (1handle)

Accessories diagram

Model	W			E			W + E			W or E+SHT			W+E+SHT
	1P	2P	3P	1P	2P	3P	2P	3P	3P	1P	2P	3P	3P
CP 100H	○	○	○	●	●	●	○ ●	○ ●	○ ○ ●	■	◑	◑ ■	○ ● ■
	○	○	○ ○ ○										

○ W (Series with Aux. S/W) ● E (Series with Alarm S/W)
◑ W (Series with Aux. S/W) or E (Series with Alarm S/W,) ■ SHT(Parallel, Dual Parallel, Relay, Dual)

DCP 101B/101P

Features
- Bolt terminal
- Easy to display ON/OFF state using a toggle lever

Use
- Telecommunication equipment - Electronic switching systems, broadcasting equipment, super computers
- Transportation equipment - Elevators, conveyors, cranes, auto power supplies
- Others - Air conditioners, rectifiers, Uninterrupted Power Supplies, primary condenser power supplies

Circuit Protectors

DCP 101B 101P

Product Specification

Model	DCP 101B, DCP 101P
No. of poles	1Pole
Rated current (A)	60, 75, 100A
Rated breaking capacity	50kA(AC 220V) / 5.0kA(DC 160V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Switch only
Insulation resistance	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40°C ~ +85°C (with rated current ON)
Aux. contact capacity	AC 250V: 3A / DC 65V: 3A

Time delay data by character-istics

Unit : sec

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 101 | B | 600 | D | M | W

Symbol	No. of poles
101	1 Pole

Symbol	Terminal type
B	Bolt
P	Screw

Symbol	Rated current
600	60A
750	75A
1xx	100A

Symbol	Power used
D	DC
A	AC 50/60Hz

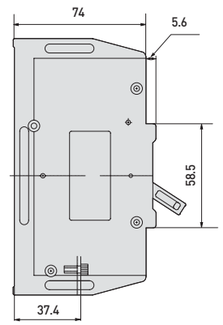
Symbol	Trip Characteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

Symbol	Circuit
S	Series
W	Series with Aux. S/W
C	Switch only

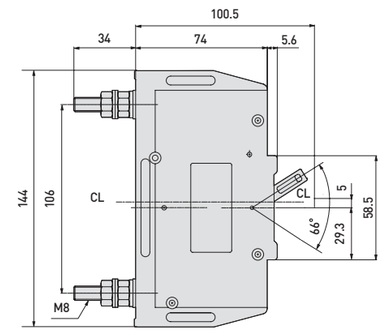
Dimension by No. of poles

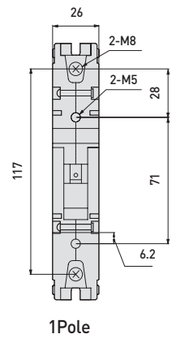
Unit : mm

DCP 101P



DCP 101B

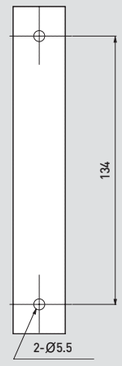




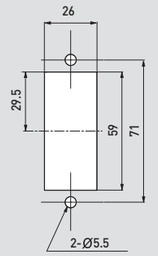
1Pole

Mounting hole dimension

DCP 101P



DCP 101B



Circuit Protectors

DCP 250B

Features
- Bolt terminal
- Toggle lever method

Use
- Telecommunication equipment - Electronic switching systems, broadcasting equipment, super computers
- Transportation equipment - Elevators, conveyors, cranes, auto power supplies
- Industrial machines
- Machine tools

Product Specification

Model	DCP 250B
No. of poles	1Pole, 2Pole
Rated current (A)	100, 125, 150, 175, 200, 225, 250
Rated breaking capacity	25kA (DC 65V) / 10kA (DC 160V)
Internal circuits & Accessories	Series, Series with Aux. S/W, Switch only
Insulation resistance	More than 100MΩ at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1500V
Vibration resistance	Double amplitude 1mm 10~100 Hz (About 10G)
Life expectancy	More than 10,000 times (6,000 times of ON-OFF 6 times per minute at rated current / No current 4,000 times)
Overcurrent trip characteristics	Instantaneous (I), High speed (H), Middle speed (M), Low speed (L)
Ambient temperature	-40°C ~ +85°C (with rated current ON)
Aux. contact capacity	AC 250V: 3A / DC 65V: 3A

Time delay data by characteristics

Unit : mm

Characteristics		100%	125%	200%	400%	600%	800%	1000%
AC	Low speed (L)	NO Trip	80-500	20-100	0.07-19	0.007-4	0.006-0.6	0.006-0.17
	Middle speed (M)	NO Trip	10-200	2.2-25	0.018-4.4	0.006-1.7	0.006-0.52	0.006-0.16
	High speed (H)	NO Trip	0.5-20	0.15-2.7	0.013-0.5	0.006-0.17	0.006-0.07	0.006-0.03
	Instantaneous (I)	NO Trip	0.02-0.4	0.007-0.12	0.006-0.037	0.006-0.026	0.006-0.022	0.006-0.02

Characteristics		100%	150%	200%	400%	600%	800%	1000%
DC	Low speed (L)	NO Trip	50-300	17-70	0.2-16	0.008-4.8	0.006-0.45	0.006-0.05
	Middle speed (M)	NO Trip	4-70	1.5-15	0.06-2.8	0.006-0.8	0.004-0.25	0.004-0.06
	High speed (H)	NO Trip	0.5-25	0.15-2.7	0.012-0.5	0.005-0.22	0.004-0.09	0.004-0.03
	Instantaneous (I)	NO Trip	0.009-0.3	0.007-0.15	0.005-0.035	0.005-0.02	0.004-0.018	0.004-0.015

Ordering Method

DCP | 251 | B | 150 | D | M | W

251 Sym bol	No. of poles
251	1 Pole
252	2 Pole

B Sym bol	Terminal type
B	Bolt

150 Sym bol	Rated current
100	100A
125	125A
150	150A
175	175A
200	200A
225	225A
250	250A

D Sym bol	Power used
D	DC

M Sym bol	Char-acteristic
I	Instantaneous
H	High speed
M	Middle speed
L	Low speed

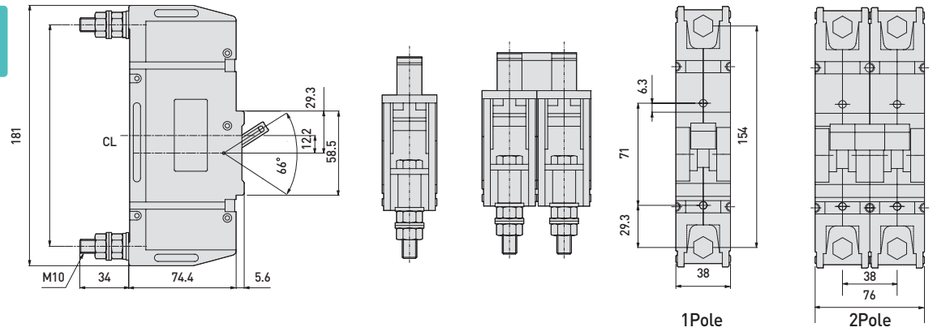
W Sym bol	Circuit
S	Series
W	Series with Aux. S/W
C	Switch only

Circuit Protectors

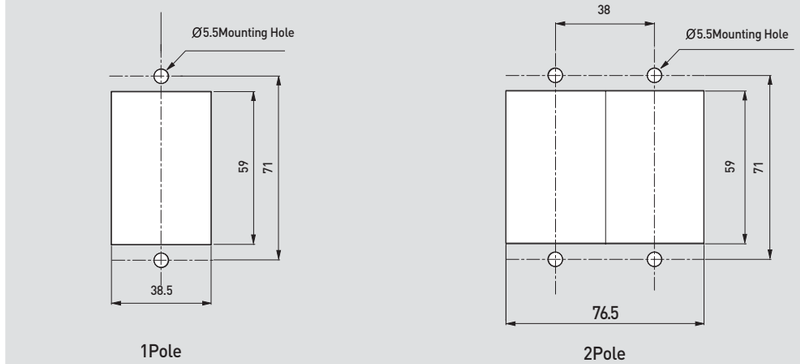
DCP 250B

Dimension by No. of poles

Unit : mm



Mounting hole dimension



DCP 21HI

Features

- Realizing high reliability with a simple structure
- Ø16 mounting specification
- Excellent design, diverse colors
- Diverse rated currents
- Control circuit can be configured as an additional aux. contact.

Use

- OA equipment - Copiers, PCs, faxes, printers
- Measuring instruments - Electrical measuring instruments, engineering instruments, analyzers, recorders, data processors, testers
- Industrial machines - NC equipment, robots, presses, processors, packaging machines
- Business equipment - Medical equipment, vending machines, printers, game machines
- Electrical control and measuring instruments - Auto control equipment, electronic appliances

Circuit Protectors

Product Specification

Model	DCP 21HI
Trip method	Bi-metal trip
No. of poles	1Pole
Maximum voltage used	DC 32V
Trip time	Does not trip up to the rated current; trips in 1 hour when the power is applied at 135% of the rated current
Rated current (A)	0.3, 0.5, 1, 2, 3, 5, 8, 10, 15
Rated breaking capacity	0.3~5A: rated current x 6 times / 8, 10, 15: rated current x 10 times
Internal circuits & Accessories	Series, Series with Aux. S/W
Insulation resistance	More than 100M Ω at DC 500V Megger
Insulation withstand voltage (V)	For 1 minute at AC 50/60Hz 1,500V
Life expectancy	Overcurrent durability: more than 100 times (tripping at 200% of the rated current), mechanical durability of additional manual OFF type: more than 240 times
Reset time	Longer than 60 seconds (Based on a 25°C ambient temperature)
Ambient temperature	-40℃ ~ +60℃
Aux. contact capacity	1a (contact output) DC 32V, 0.05A

Ordering Method

DCP | 21 | H | I | 003 | H | B | SW

Symbol	No. of poles
21	1 Pole

Symbol	Terminal type
H	Hole

Symbol	Rated current	Symbol	Rated current
003	0.3A	040	4A
005	0.5A	050	5A
007	0.75A	070	7A
010	1A	100	10A
020	2A	150	15A
030	3A		

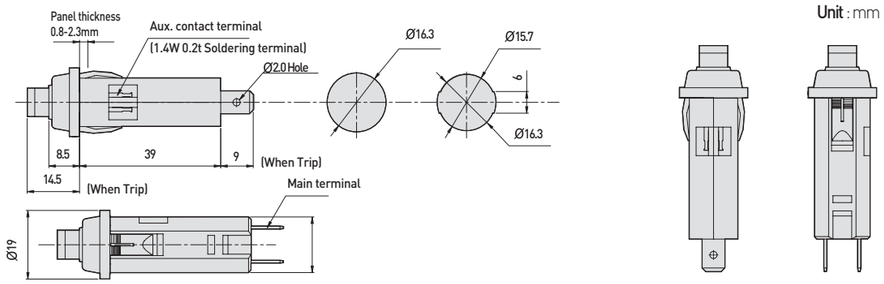
Symbol	Mounting method
H	for hold
D	for DIN rail
P	for panel

Symbol	Cover color
B	Black
R	Red
G	Green
Y	Yellow
S	Blue
W	White

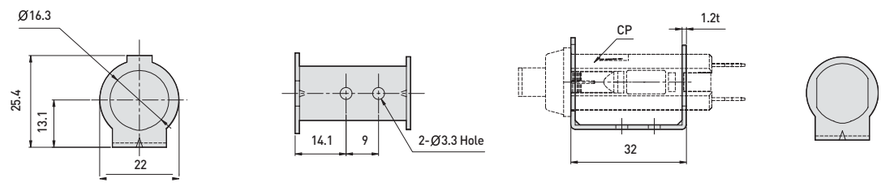
Symbol	Circuit
S	Standard
SW	Standard Aux. contact
P	Manual ON/OFF
PW	Manual ON/OFF Aux. contact

Dimension

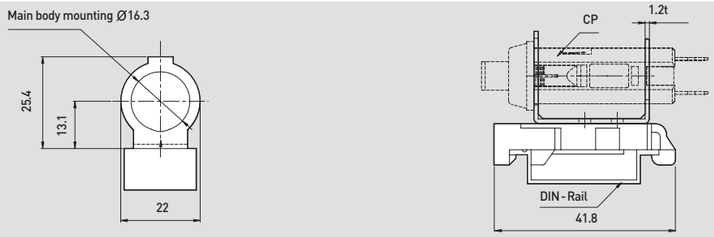
Unit : mm



Dimension of panel



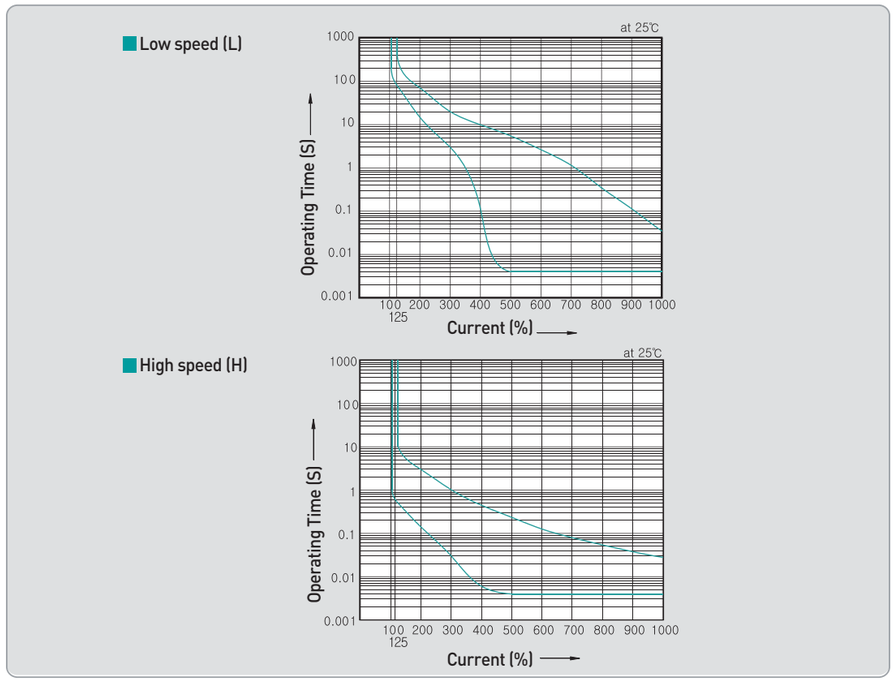
Dimension for DIN-rail mounting



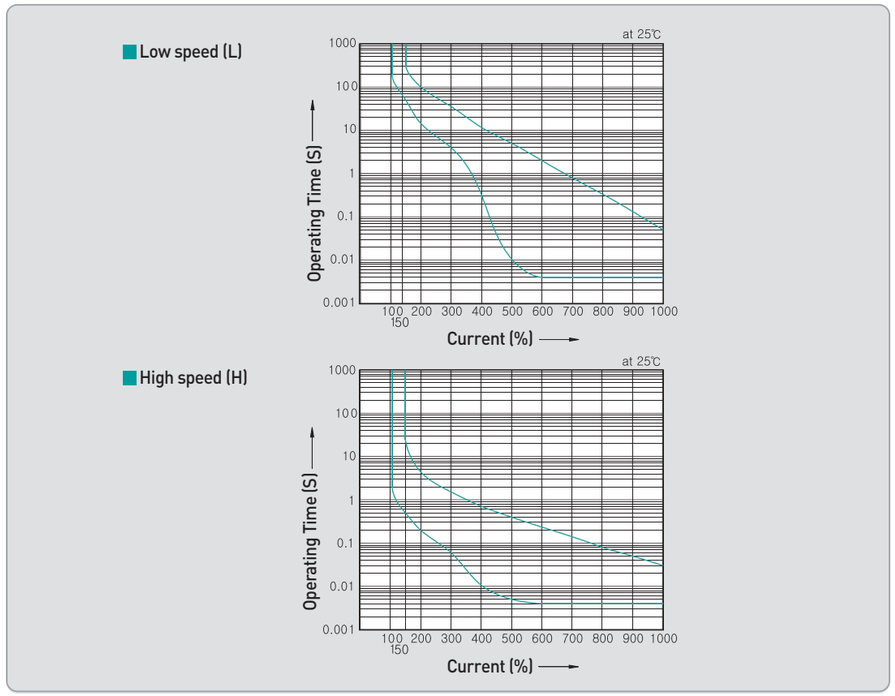
Trip Characteristics Curve

Applicable models : 30PS · SS · TS · PA · PP/50DR

AC



DC

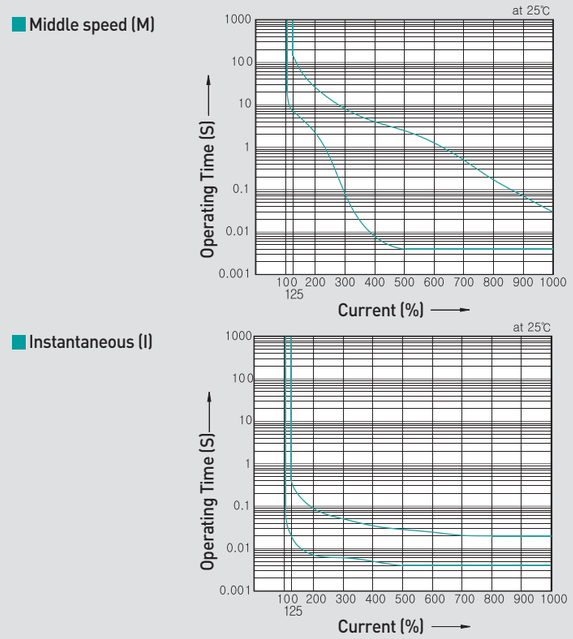


Circuit Protectors

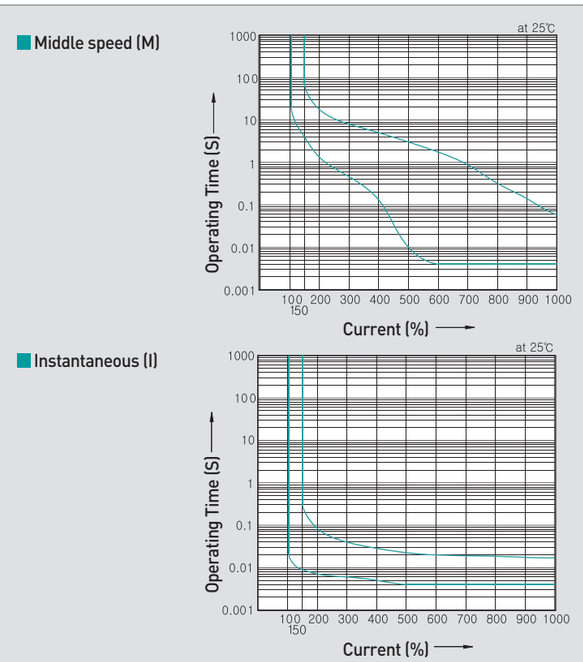
Trip Characteristics Curve

Applicable series : 30PS · SS · TS · PA · PP/50DR

AC

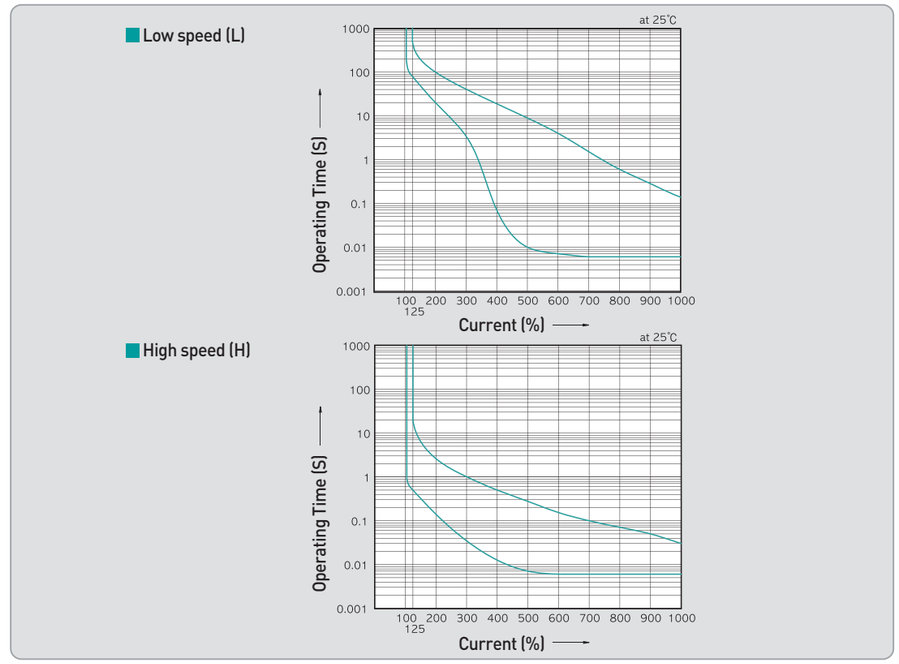


DC

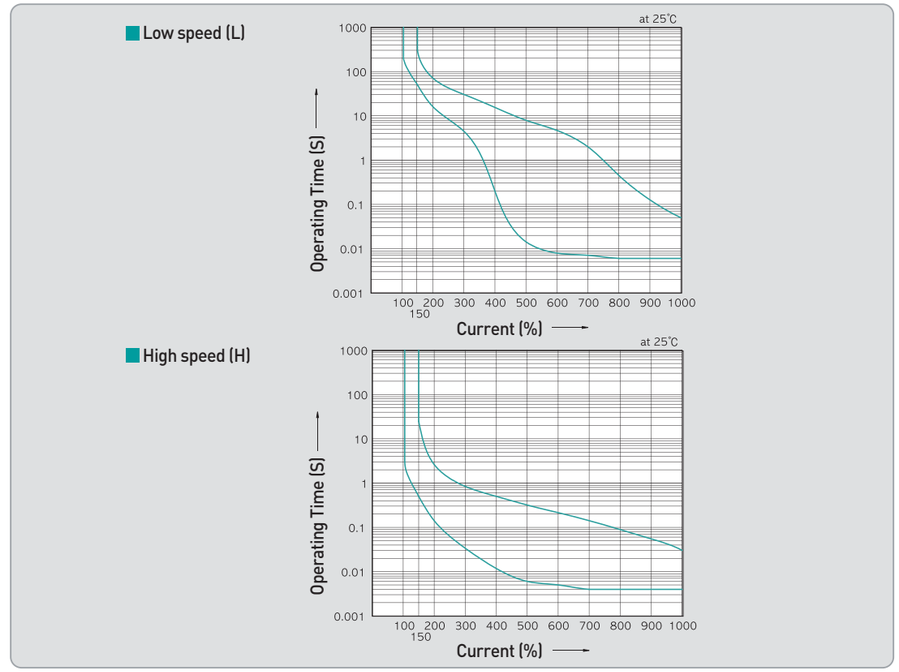


Applicable models : 30PR · SR/50SR · TR/50DF · DG/50BH · CH · BU · SH · TH/70BH · SH · TH · PH/100B · 100P/250B

AC



DC



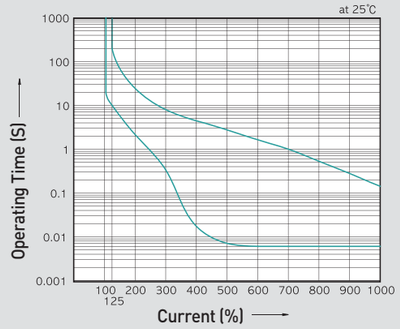
Circuit Protectors

Trip Characteristics Curve

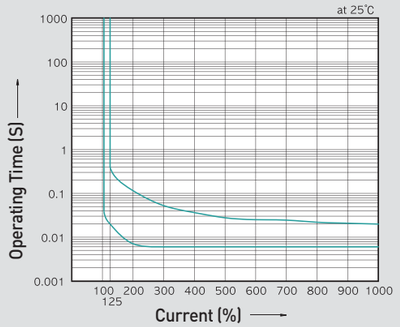
Applicable models : 30PR · SR/50SR · TR/50DF · DG/50BH · CH · BU · SH · TH/70BH · SH · TH · PH/100B · 100P/250B

AC

■ Middle speed (M)

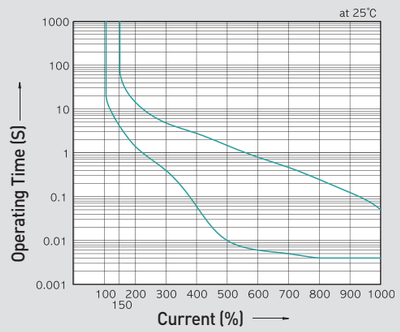


■ Instantaneous (I)

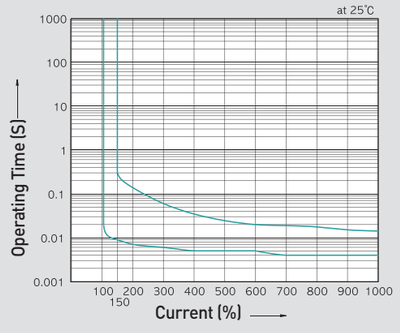


DC

■ Middle speed (M)



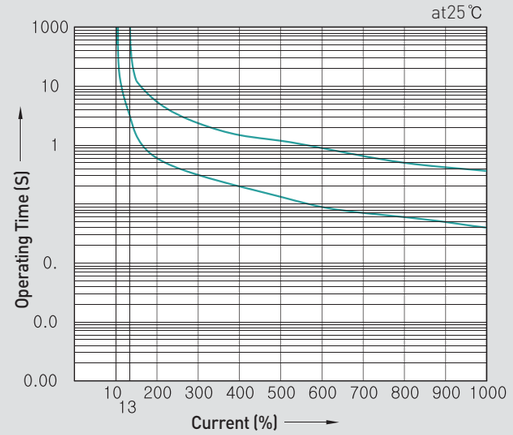
■ Instantaneous (I)



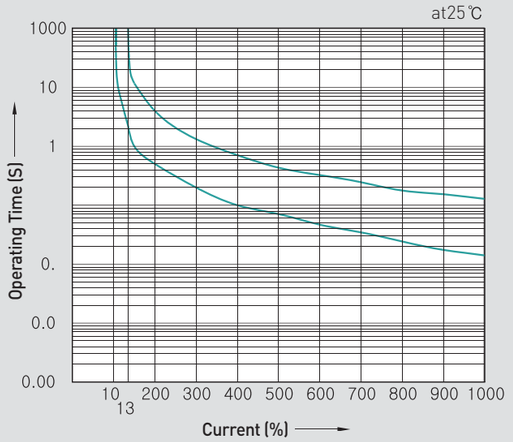
Applicable models : 21HI

Rated Current

■ Rated current 0.3A~5A

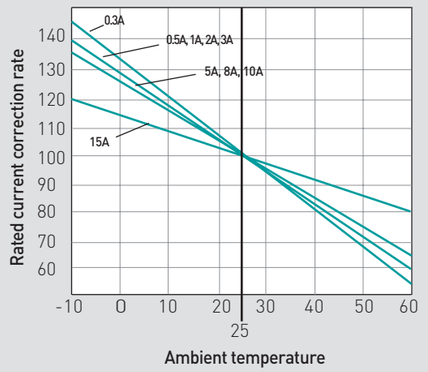


■ Rated current 8A, 10A, 15A



Operating time based on ambient temperature

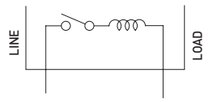
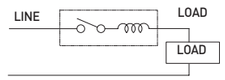
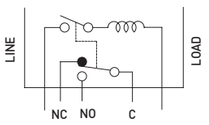
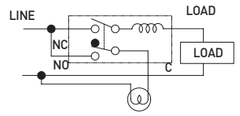
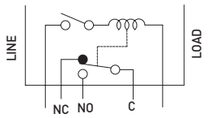
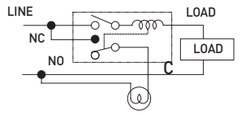
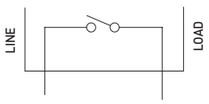
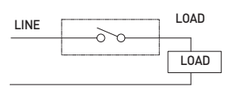
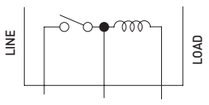
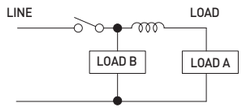
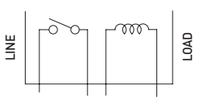
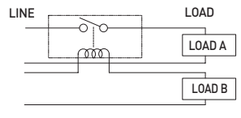
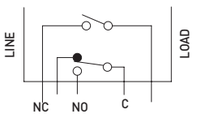
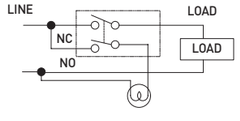
Operating time is based on an ambient temperature of 25° C. Operating time at other temperatures shall be corrected according to ambient temperature correction curves.



Circuit Protectors / Technical Data

Circuit Methods and Aux. Switches

Types of Circuit Methods & Aux. Switches

Symbol	Type	Internal circuit	Circuit diagram	Function & Use
S	Series type			• Most common circuit • In case of overcurrent or short-circuit current, contact point is off, breaking the circuit.
W	Series type with auxiliary switch			• Aux. switch operates in conjunction with the handle movement.
E	Series type with alarm switch			• Alarm switch does not operate in conjunction with the handle movement but operates only for overcurrent trip.
C	Switch type			• Only switch function without overcurrent breaking function.
P	Parallel type			• Main contact point and the current coil are connected in parallel. • Load A and B are broken at the same time by sensing Load A.
R	Relay type			• Applying time of the operating voltage that flows on voltage-operated electronic coil is within 2 sec. • It breaks the circuit of Load A by detecting overcurrent from Load B.
F	Switch type with auxiliary switch			• Aux S/W operates in conjunction with the handle movement.

S, E, C, P, R: Handle Position | NO Contact | NC Contact

Handle Position	NO Contact	NC Contact
ON	Closed	Open
TRIP	Open	Closed
OFF	Open	Closed

W, F: Handle Position | NO Contact | NC Contact

Handle Position	NO Contact	NC Contact
ON	Closed	Open
OFF	Open	Closed

Difference between the Circuit Protector (CP) and Molded Case Circuit Breaker (MCCB)

The CP and MCCB, as a protector, have an identical objective but the target, characteristics and form of protection are different.

Target for Protection

The MCCB was designed to protect lines from internal heat of currents, meanwhile the CP is capable of protecting the lines of electronic circuits with small internal heat or a single device such as a solenoid, semi-conductor or motor.

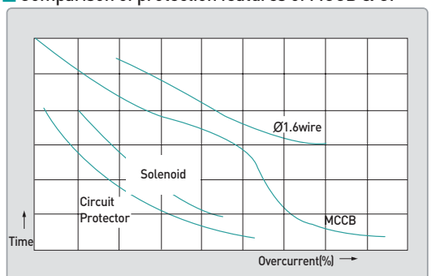
Form

While the MCCB is aimed at protecting lines, the CP is to protect the entirety of an element or a device, thus requiring various breaking features such as instantaneous, high speed, middle speed and low speed.

Division	MCCB	CP
Target of protection	Electrical lines	Solenoid, electronic circuit, motor, semi-conductor circuit
Location of use	Building & facility	Element, device
Use (Electrical Product)	Molded Case Circuit Breaker	Circuit Protector
Rating	0 ~ 5,000A	0.3~250A

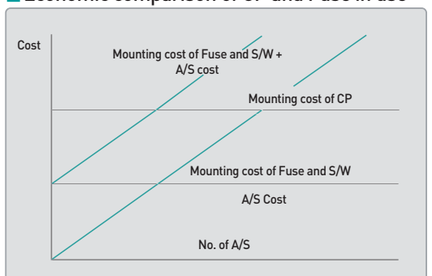
Comparison of protection features of MCCB & CP / Economic comparison of CP and Fuse in use

Comparison of protection features of MCCB & CP



Protection area of CP and MCCB

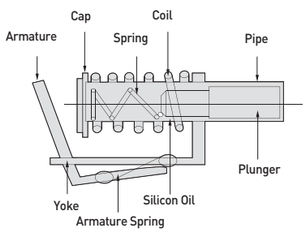
Economic comparison of CP and Fuse in use



Economic comparison of CP and Fuse in use

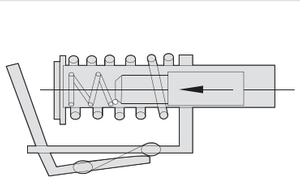
Operating principle of ODP

Within rated current, the magnetomotive force working on a plunger is smaller than the load of a plunger spring, enabling maintenance of a stable state.



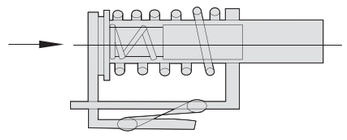
State of Normal Load

When a current larger than the rated current begins to flow, the magnetomotive force that flows in the coil becomes bigger than the load of the plunger spring, causing the plunger to move toward the plug.



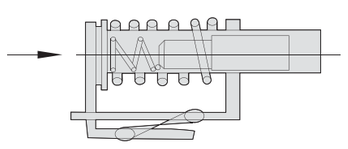
Initial State of overload

The plunger reaches the limit by the magnetomotive force pulling the armature, and cuts the power of the circuit.



State of broken overload

When a short-circuit current flows in the coil, a strong magnetic force is generated momentarily absorbing the armature before the plunger moves, causing the circuit power to be cutoff.



State of cutoff short-circuit

Technical Data

Selection and Protection Characteristics

Selection Check Points

Basic selection method of CP is similar to that of MCCB. Major check points of CP are as follows

Target circuit \ CP	Rated Voltage and Frequency	No. of Poles	Rated Current	Trip charac-teristics	Rated Breaking Capacity	Mounting Method Accessories
Circuit Voltage and Frequency	●					
Circuit Method		●				
Maximum Load Current			●			
Types and Characteristics of Load			●	●		
Target for Protection			●	●	●	
Others						●

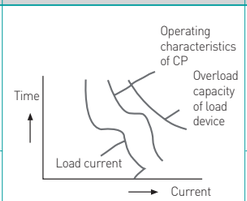
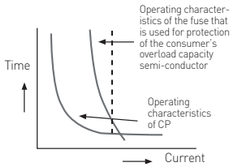
Special attention is required when selecting rated current and trip characteristics from the chart. Be sure to select those that satisfy the following conditions:
- Avoid unnecessary operation when attempting loaded operation (including starting).
- In case of an accident, certainly cut off overcurrent and ensure required protection.

Selection of Protection Characteristics

Select the most appropriate characteristics depending on the target circuit and the equipment protected by CP.

Protection Characteristics	Characteristics of applied Load	Target Load
Instantaneous	Protection of devices for which load currents should be cutoff within a short period of time due to small overload capacity	Semi-conductor circuit, SCR, Triac
High speed	Protection of loads requiring as fast a cutoff time as possible, as the loads have little inrush currents when starting	Semi-conductor circuit
Middle speed	Protection of loads requiring 5~6 times of inrush currents or protection in a proposed area	Common sequence circuit, solenoid valve
Low speed	Protection of loads with bigger inrush currents during starting	Heater, motor

Selecting operating characteristics by target of protection

Classification		Target Circuit: Circuit	Target Circuit: Special Features	Matters requiring attention when selecting product	Operating characteristics of applied CP: Instanta-neous	High speed	Middle speed	Low speed
Overload capacity of the protection target is relatively large.	In case the overcurrent that far exceeds the rated current of the normal state flows.	• Motor circuit	• Starting current that is 1~7 times of the rated current. • Operating time varies depending on mechanical inertia of the load. • Damage may occur even at 120~130% of the rating.	 Ascertain the overload capacity of the load device, values of normal current and inrush current, and their duration before selecting a protector that has the cooperative characteristics as shown in the above figure.				★
		• Solenoid circuit	• Large inrush current amounting to tens of times of the rated load flows during starting, and the duration of the inrush current is long due to the load of a solenoid.				★	★
		• Power supply circuit (Trans circuit)	• During starting, the magne-tizing inrush current is several tens of times larger than that of the rated load.				★	★
	A circuit without generating excessive overcurrent	• Sequence control circuit by way of relay, etc. • Heater circuit • Control circuit		Main objective is to protect a relatively larger current of short wiring or a short-circuit of the relay.	★	★	★	
Overload capacity of the protection target is small.		• SCR • Triac • Semi-conductor circuit	• As overload capacity is small, damage could result unless excess current is cutoff in a short period of time.	 The main objective of a CP is to protect against overloading as the protection of more than 10 times of average current of a semi-conductor element is often difficult. Full protection of an element is possible by combining with a fuse for semi-conductor protection.	★	★		

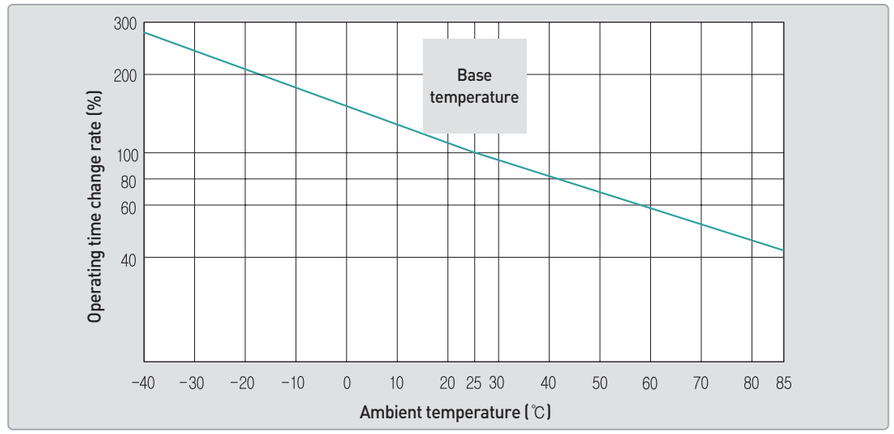
Performance of Circuit Protector

Trip characteristics

Trip device of a CP is affected by ambient temperature and mounting posture.

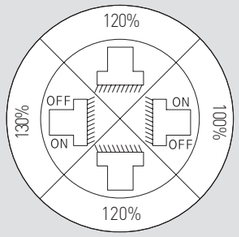
Change in operating time based on the change of ambient temperature

Operating time undergoes change as oil viscosity in ODP (Oil Dash Pot) is affected by ambient temperature. The trip characteristics curve is based on an ambient temperature of 25°C. When used at a different ambient temperature, the operating time needs to be corrected according to the correction curve of the ambient temperature. However, the operating time of the instantaneous type is not affected by ambient temperature since it does not use oil.

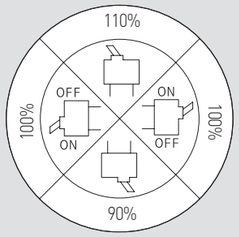


Change in operating characteristics based on mounting posture

When the mounting posture changes, the operating characteristics are also affected as it is affected by the weight of the iron core in the ODP (Oil Dash Pot). In the case of a CP, the standard position for 'ON' on a vertical plane is upward mounting. When it is used in a special mounting posture, the rated current needs to be corrected according to the rated current correction curve.



DCP 50DF, DG



DCP 50BH, 50DR, 50PR
DCP 30PR, 30PS, 70BH, 70PH
DCP 100B, 250B

Matters requiring attention when using a CP

① CP shall be mounted according to the normal mounting direction (ON direction when the handle is lifted upward), fastening it to the panel using CP fastening screws. When the mounting direction is changed, breaking characteristics also change.

② The length of a fastening screw on the CP side is 5 mm. Determine the length of a screw in consideration of the thickness of the panel. If it is too long, it can damage the case.

③ For a CP of low current rating, be sure to check the coil resistance, impedance, and voltage used. When applying rated current to a CP of low current rating, a drop of approximately 5V in voltage could result.

④ Use an instantaneous type CP in conditions where there is no inrush current. (When using the product at a load where there is inrush current, use a circuit breaker with current rating that is more than twice the normal current.)

⑤ The device should be located in an area free of dust and well ventilated. Make sure the terminal is well connected and, for wiring, use lines that have sufficient current capacity.

⑥ The instantaneous type makes noise at about 80% of the rated current, although its performance is in no way compromised.

⑦ If a terminal lacks tightening torque, it can cause overheating and fire. Hence, be sure to fasten a terminal in consideration of the following torques.

Screw(M4) : 12.2(kgf · ㎝), Screw(M5) : 20.4(kgf · ㎝), Screw(M6) : 25.5(kgf · ㎝)