CHEIL
ELECTRIC

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(ISO 14001:2004인증) (ISO 9001 : 2000 인증)

CIRCUIT BREAKER
MAGNETIC CONTACTOR / STARTERS
ELECTRICAL WIRING DEVICES

CHEIL
ELECTRIC

http://www.cheilelec.co.kr

Type Designation & How to Order

Molded Case Circuit Breaker

CBS-103N Rated current Accessories

Model	
E	Economic type
S	Standard type
H	High-Breaking type
L	Limit type
D	Distribution

Ampere Frame	
3	30AF
5	50AF
7	75AF
10	100AF
20	225AF
40	400AF
60	600AF
80	800AF

Number of poles	
2	2 pole
3	3 pole
4	4 pole

Type	
N	NEW type
c	Compact type
ca	Compact type
NZ	ZCT type

Accessories	
AX	Auxiliary switch
AL	Alarm switch
SHT	Shunt trip

Earth Leakage Circuit Breaker

CGS - 1 0 3 N — Rated current — Reisdual current — Accessories

Model	
E	Economic type
S	Standard type
H	High-Breaking type
D	Distribution

Ampere Frame	
3	30AF
5	50AF
7	75AF
10	100AF
20	225AF

Number of poles	
2	2 pole
3	3 pole
4	4 pole

Type	
N	New type
c	Compact type

Accessories	
AX	Auxiliary switch
AL	Alarm switch

Distribution

SG - 3 2 N — Rated current — Reisdual current

Model	
B	Molded case circuit breaker
G	Earth leakage circuit breaker

Ampere Frame	
3	30AF
5	50AF

Number of poles	
2	2 pole
1	1 pole
0	-

Type	
c	Compact type
N	New type
M	Miniature type

Molded Case Circuit Breaker

Economic Type

MCCB

Frame size		30AF		50AF					75AF			
Frame type		CBE-32Nc	CBE-33Nc	CBE-52Nc	CBE-53Nc	CBE-52N	CBE-53N	CBE-54N	CBE-72N	CBE-73N	CBE-74N	CBE-102N
Model Image												
Rated	Number of poles	2	3	2	3	2	3	4	2	3	4	2
	Rated current (In) A	(5.10)15.20.30		15.20.30.40.50		(5.10)15.20.30.40.50			60.75			←
	Rated operational (Ue) AC(V)	460		460		600			600			600
	DC(V)	–		–		250		–	250		–	250
	Rated insulation voltage (Ui)	600		600		690			690			690
Technical data conforming to (KS)(Sym)	Icu AC 600V	–		–		(–) 5			5			(–) 7.5
	480/500V	–		–		(–) 7.5			7.5			(–) 10
	460V	(2.5) 2.5		2.5		(2.5) 10			10			(2.5) 14
	415V	(2.5) 2.5		2.5		(2.5) 10			10			(2.5) 14
	380V	(2.5) 2.5		2.5		(2.5) 14			14			(2.5) 18
	220/240V	(5) 5		5		(5) 25			25			(5) 25
	Ics = ..% × Icu	50		50		50			50			50
	DC 250V	–		–		(2.5) 5		–	5		–	(2.5) 7.5
	125V	–		–		(5) 10		–	10		–	(5) 14
Dimensions (mm)	a	50	75	50	75	50	75	100	50	75	100	50
	b	96		96		130			130			130
	c	60		60		60			60			60
	d	80		80		80			80			80
Weight (kg)		0.3	0.43	0.3	0.43	0.45	0.65	0.85	0.45	0.65	0.85	0.6
Type of trip unit		Hydraulic-magnetic release		Hydraulic-magnetic release		Hydraulic-magnetic release			Hydraulic-magnetic release			Hydraulic-magnetic release
Trip button		O		O		O			O			O
Installation and connection		Bolt		Bolt		Bolt			Bolt			Bolt
Accessories	AUX	–		–		O			O			O
	AL	–		–		O			O			O
	SHT	–		–		O			O			O
KSC 8321		O		O		O			O			O
Lloyd's Register (LR)		–		–		–			–			O
Germanischer Lloyd (GL)		–		–		–			–			O
CE / TÜV		O		O		O			O			O

100AF		225AF			400AF			600AF			800AF		
CBE-103N	CBE-104N	CBE-202N	CBE-203N	CBE-204N	CBE-402N	CBE-403N	CBE-404N	CBE-602	CBE-603	CBE-604	CBE-802	CBE-803	CBE-804
													
3	4	2	3	4	2	3	4	2	3	4	2	3	4
(5,10)15,20,30,40,50,60,75,100		125,150,175,200,225			250,300,350,400			500,600			700,800		
600		600			600			600			600		
250	-	250		-	250		-	250		-	250		-
690		690			690			690			690		
(-) 7.5		10			18			22			22		
(-) 10		10			18			25			25		
(2.5) 14		18			25			35			35		
(2.5) 14		18			25			35			35		
(2.5) 18		18			30			42			42		
(5) 25		35			50			65			65		
50		50			50			50			50		
(2.5) 7.5	-	10		-	10		-	20		-	20		-
(5) 14	-	15		-	20		-	30		-	30		-
75	100	105		140	140		185	210		280	210		280
130		165			257			275			275		
60		60			103			103			103		
80		84			145			158			158		
0.8	1.0	1.1	1.3	1.5	5.2	6.2	7.8	9	10.5	15	11		16
Hydraulic-magnetic release		Thermal -magnetic release			Thermal -magnetic release			Thermal -magnetic release			Thermal -magnetic release		
O		O			O			O			O		
Bolt		Bolt			Bolt			Bolt			Bolt		
O		O			O			O			O		
O		O			O			O			O		
O		O			O			O			O		
O		O			-			-			-		
-	O	-			-			-			-		
-	O	-			-			-			-		
O		O			O			O			O		

Molded Case Circuit Breaker

Standard Type

MCCB

Frame size		30AF				50AF					75AF		
Frame type		CBS-32Nc	CBS-33Nc	CBS-32N	CBS-33N	CBS-52Nc	CBS-53Nc	CBS-52N	CBS-53N	CBS-54N	CBS-72N	CBS-73N	CBS-74N
Model Image													
Rated	Number of poles	2	3	2	3	2	3	2	3	4	2	3	4
	Rated current (In) A	15,20,30		(5,10)15,20,30		15,20,30,40,50		(5,10)15,20,30,40,50			60,75		
	Rated operational (Ue) AC(V)	460		600		460		600			600		
	DC(V)	-		250		-		250		-	250		-
	Rated insulation voltage (Ui)	600		690		600		690			690		
Technical data	Icu AC 600V	2.5		(-) 5		2.5		(-) 7.5			7.5		
conforming to	480/500V	-		(-) 7.5		-		(-) 10			10		
(KS)(Sym)	460V	5		(2.5) 10		5		(2.5) 14			14		
	415V	5		(2.5) 10		5		(2.5) 14			14		
	380V	7.5		(2.5) 14		7.5		(2.5) 18			18		
	220/240V	10		(5) 25		10		(5) 25			25		
	Ics = ...% × Icu	50		50		50		50			50		
	DC 250V	-		5		-		7.5		-	7.5		-
	125V	-		10		-		14		-	14		-
Dimensions (mm)	a	50	75	50	75	50	75	50	75	100	50	75	100
	b	96		130		96		130			130		
	c	60		60		60		60			60		
	d	80		80		80		80			80		
Weight (kg)		0.3	0.43	0.45	0.65	0.3	0.43	0.6	0.8	1.0	0.6	0.8	1.0
Type of trip unit		Hydraulic-magnetic release		Hydraulic-magnetic release		Hydraulic-magnetic release		Hydraulic-magnetic release			Hydraulic-magnetic release		
Trip button		O		O		O		O			O		
Installation and connection		Bolt		Bolt		Bolt		Bolt			Bolt		
Accessories	AUX	-		O		-		O			O		
	AL	-		O		-		O			O		
	SHT	-		O		-		O			O		
KSC 8321		O		O		O		O			O		
Lloyd's Register (LR)		-		-		-		-			-		
Germanischer Lloyd (GL)		-		-		-		-			-		
CE / TÜV		O		O		O		O			O		

100AF			225AF			400AF			600AF			800AF		
CBS-102N	CBS-103N	CBS-104N	CBS-202N	CBS-203N	CBS-204N	CBS-402N	CBS-403N	CBS-404N	CBS-602	CBS-603	CBS-604	CBS-802	CBS-803	CBS-804
														
2	3	4	2	3	4	2	3	4	2	3	4	2	3	4
15,20,30,40,50,60,75,100			125,150,175,200,225			250,300,350,400			500,600			700,800		
600			600			600			600			600		
250		–	250		–	250		–	250		–	250		–
690			690			690			690			690		
10			14			22			35			35		
14			14			25			45			45		
25			25			35			50			50		
25			25			35			50			50		
25			25			42			65			65		
50			50			65			100			100		
50			50			50			50			50		
14		–	14		–	20		–	40		–	40		–
20		–	20		–	30		–	50		–	50		–
60	90	120	105		140	140		185	210		280	210		280
155			165			257			275			275		
60			60			103			103			103		
82			84			145			158			158		
0.7	1.1	1.5	1.2	1.4	1.6	5.2	6.2	7.8	11		16	11.5		18
Therma-magnetic release			Therma-magnetic release			Therma-magnetic release			Therma-magnetic release			Therma-magnetic release		
O			O			O			O			O		
Bolt			Bolt			Bolt			Bolt			Bolt		
O			O			O			O			O		
O			O			O			O			O		
O			O			O			O			O		
O			O			O			–			–		
–	O	–	–			–			–			–		
–	O	–	–			–			–			–		
O			O			O			O			O		

Molded Case Circuit Breaker

High-Breaking Type

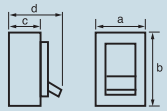
MCCB

Frame size		30AF		50AF			100AF			225AF		
Frame type		CBH-32N	CBH-33N	CBH-52N	CBH-53N	CBH-54N	CBH-102N	CBH-103N	CBH-104N	CBH-202N	CBH-203N	CBH-204N
Model Image												
Rated	Number of poles	2	3	2	3	4	2	3	4	2	3	4
	Rated current (In) A	(5,10)15,20,30		15,20,30,40,50			15,20,30,40,50,60,75,100			125,150,175,200,225		
	Rated operational (Ue) AC(V)	600		600			600			600		
	DC(V)	250		250		–	250		–	250		–
	Rated insulation voltage (Ui)	690		690			690			690		
Technical data conforming to (KS,Sym)	Icu AC 600V	(–)7.5		10			18			18		
	480/500V	(–)10		14			25			25		
	460V	(2.5)14		25			35			35		
	415V	(2.5)14		25			35			35		
	380V	(2.5)18		25			35			35		
	220/240V	(5)25		50			65			65		
	Ics = ...% × Icu	50		50			50			50		
	DC 250V	7.5		14		–	18		–	18		–
	125V	14		20		–	25		–	25		–
Dimensions (mm)	a	50	75	60	90	120	60	90	120	105		140
	b	130		155			155			165		
	c	60		60			60			60		
	d	80		82			82			84		
Weight (kg)		0.6	0.8	0.7	1.1	1.5	0.9	1.3	1.7	1.5	1.7	2.0
Type of trip unit		Hydraulic-magnetic release		Thermal-magnetic release			Thermal-magnetic release			Thermal-magnetic release		
Trip button		O		O			O			O		
Installation and connection		Bolt		Bolt			Bolt			Bolt		
Accessories	AUX	O		O			O			O		
	AL	O		O			O			O		
	SHT	O		O			O			O		
KSC 8321		O		O			O			O		
Lloyd's Register (LR)		–		–			–			–		
Germanischer Lloyd (GL)		–		–			–			–		
CE / TÜV		O		O			O			O		

Limit Type

50AF			100AF			225AF			400AF		
CBL-52N	CBL-53N	CBL-54N	CBL-102N	CBL-103N	CBL-104N	CBL-202N	CBL-203N	CBL-204N	CBL-402N	CBL-403N	CBL-404N
											
2	3	4	2	3	4	2	3	4	2	3	4
15,20,30,40,50			15,20,30,40,50,60,75,100			125,150,175,200,225			250,300,350,400		
600			600			600			600		
250		–	250		–	250		–	250		–
690			690			690			690		
35			35			35			35		
42			42			42			42		
65			65			65			65		
65			65			65			65		
65			65			65			65		
100			100			100			125		
50			50			50			50		
40		–	40		–	40		–	40		–
60		–	60		–	60		–	60		–
105		140	105		140	105		140	140		185
165			165			165			257		
82			82			82			103		
104			104			104			145		
1.63	1.67	1.97	1.63	1.67	1.97	1.65	1.7	2.17	5.2	6.2	7.8
Thermal -magnetic release			Thermal -magnetic release			Thermal -magnetic release			Thermal -magnetic release		
O			O			O			O		
Bolt			Bolt			Bolt			Bolt		
O			O			O			O		
O			O			O			O		
O			O			O			O		
O			O			O			O		
–			–			–			–		
–			–			–			–		
–			–			–			–		

MCCB

Type			Economic Type				Standard Type			
Frame size			50AF		225AF		50AF		100AF	
Frame type			CBE-53NZ	CBE-54NZ	CBE-203NZ	CBE-204NZ	CBS-53NZ	CBS-54NZ	CBS-103NZ	
Model Image										
Rated	Number of poles		3	4	3	4	3	4	3	
	Rated current (In)	A	15,20,30,40,50		125,150,175,200,225		15,20,30,40,50		15,20,30,40,50,60,75,100	
	Rated operational (Ue)	AC(V)	600		600		600		600	
		DC(V)	250	-	250	-	250	-	250	
	Rated insulation voltage (Ui)		690		690		690		690	
Technical data conforming to (KS)(Sym)	Icu AC	600V	5		10		7.5		10	
		480/500V	7.5		10		10		14	
		460V	10		18		14		25	
		415V	10		18		14		25	
		380V	14		18		18		25	
		220/240V	25		35		25		50	
	Ics = ...% × Icu		50		50		50		50	
		DC 250V	5	-	10	-	7.5	-	14	
		125V	10	-	15	-	14	-	20	
Dimensions (mm)		a	75	100	105	140	75	100	90	
		b	130		165		130		155	
		c	60		60		60		60	
		d	80		84		80		82	
Weight (kg)			0.65	0.85	1.3	1.5	0.8	1.0	1.1	
Type of trip unit			Hydraulic-magnetic release		Thermal -magnetic release		Hydraulic-magnetic release		Thermal-magnetic release	
Trip button			O		O		O		O	
Installation and connection			Bolt		Bolt		Bolt		Bolt	
Accessories	AUX		O		O		O		O	
	AL		O		O		O		O	
	SHT		O		O		O		O	
KSC 8321			O		O		O		O	
Lloyd s Register (LR)			-		-		-		-	
Germanischer Lloyd (GL)			-		-		-		-	
CE / TÜV			-		-		-		-	

	Standard Type			High-Breaking Type					
	100AF	225AF		50AF		100AF		225AF	
	CBS-104NZ	CBS-203NZ	CBS-204NZ	CBH-53NZ	CBH-54NZ	CBH-103NZ	CBH-104NZ	CBH-203NZ	CBH-204NZ
									
	4	3	4	3	4	3	4	3	4
	15,20,30,40,50,60,75,100	125,150,175,200,225		15,20,30,40,50		15,20,30,40,50,60,75,100		125,150,175,200,225	
	600	600		600		600		600	
	–	250	–	250	–	250	–	250	–
	690	690		690		690		690	
	10	14		10		18		18	
	14	14		14		25		25	
	25	25		25		35		35	
	25	25		25		35		35	
	25	25		25		35		35	
	50	50		50		65		65	
	50	50		50		50		50	
	–	14	–	14	–	18	–	18	–
	–	20	–	20	–	25	–	25	–
	120	105	140	90	120	90	120	105	140
	155	165		155		155		165	
	60	60		60		60		60	
	82	84		82		82		84	
	1.5	1.4	1.6	1.1	1.5	1.3	1.7	1.7	2.0
	Thermal-magnetic release	Thermal-magnetic release		Thermal-magnetic release		Thermal-magnetic release		Thermal-magnetic release	
	O	O		O		O		O	
	Bolt	Bolt		Bolt		Bolt		Bolt	
	O	O		O		O		O	
	O	O		O		O		O	
	O	O		O		O		O	
	O	O		O		O		O	
	–	–		–		–		–	
	–	–		–		–		–	
	–	–		–		–		–	

Earth Leakage Circuit Breaker

Economic Type

ELCB

Frame size		30AF		50AF						
Frame Type		CGE-32c	CGE-33c	CGE-52c	CGE-52S	CGE-52SL	CGE-53c	CGE-53S	CGE-52N	CGE-53N
Model Image										
Rated	Number of poles	2	3	2	2	2	3	3	2	3
	Types of the protection	Overload, short-circuit and ground fault		Overload, short-circuit and ground fault					Overload, short-circuit and ground fault	
	Rated operational (Ue) AC(V)	220	220/460	220			220/460		220	220/460
	Rated insulation voltage (Ui)	500		500					690	
	Rated current (In) A	15.20.30		(5.10)15.20.30.40.50					(5.10)15.20.30.40.50	
	Residual current (A), I△n	0.03(Fixed)		0.03(Fixed)	0.03(Fixed)	-	0.03(Fixed)		0.03(Fixed)	
		-		0.015(Fixed)	-	0.015(Fixed)	-		0.1/0.2/0.5(Adjustable)	
	Residual current off-time at I△n (sec)	≤0.03		≤0.03					≤0.1	
Technical data	Icu AC460V	-	2.5	-	-	-	2.5	5	10	(5)10
conforming to	220V	5		5	(10)10	(10)10	5	(10)10	(10)25	(10)25
(KS)(Sym)	Ics = ...% × Icu	50		50					50	
Dimensions (mm)	a	50	75	50			75		75	
	b	96		96			96		130	
	c	60		60			60		60	
	d	80		80			80		80	
Weight (kg)		0.34	0.47	0.34			0.47		0.6	0.75
Type of trip unit		Hydraulic-magnetic for overcurrent pick-up Electronic for earthleakage pick-up		Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up					Hydraulic-magnetic for overcurrent pick-up Electronic for earthleakage pick-up	
Trip button		O		O					O	
Installation and connection		Bolt		Bolt					Bolt	
Accessories	AUX	-		-					O	
	AL	-		-					O	
KSC 4613		O		O					O	
CE/ TÜV		-		-					O	

	60AF	75AF			100AF			225AF		
CGE-54N	CGE-62c	CGE-72N	CGE-73N	CGE-74N	CGE-102N	CGE-103N	CGE-104N	CGE-202N	CGE-203N	CGE-204N
										
	2	2	3	4	2	3	4	2	3	4
4	Overload, short-circuit and ground fault	Overload, short-circuit and ground fault			Overload, short-circuit and ground fault			Overload, short-circuit and ground fault		
220/460	220	220	220/460	220/460	220	220/460		220/460		
690	500	690			690			690		
	60	60,75			(10)15,20,30,40,50,50,75,100		15,20,30,40,50,60,75,100	125,150,175,200,225		
0.03(Fixed)	0.03(Fixed)	0.03(Fixed)			0.03(Fixed)			0.03(Fixed)		
	-	0.1/0.2/0.5(Adjustable)			0.1/0.2/0.5(Adjustable)			0.1/0.2/0.5(Adjustable)		
≤0.1	≤0.03	≤0.1			≤0.1			≤0.1		
10	-	10			14	(10)14	14	18		
25	5	25			(25)25	(25)25	25	35		
50	50	50			50			50		
100	50	75		100	75		100	105		140
130	96	130			130			165		
60	60	60			60			60		
80	80	80			80			84		
0.9	0.34	0.6	0.75	0.9	0.6	0.75	0.9	1.1	1.3	1.5
	Hydraulic-magnetic for overcurrent pick-up							Hydraulic-magnetic for overcurrent pick-up		
	Electronic for earth leakage pick-up							Thermal-magnetic release		
O	O	O			O			O		
Bolt	Bolt	Bolt			Bolt			Bolt		
O	-	O			O			O		
O	-	O			O			O		
O	O	O			O			-		
O	-	O			O			-		

Earth Leakage Circuit Breaker

Standard Type & High-Breaking Type

ELCB

Frame size		30AF		50AF			75AF			
Frame Type		CGS-32N	CGS-33N	CGS-52N	CGS-53N	CGS-54N	CGS-72N	CGS-73N	CGS-74N	CGS-102N
Model Image										
Rated	Number of poles	2	3	2	3	4	2	3	4	2
	Types of the protection	Overload, short-circuit and ground fault					Overload, short-circuit and ground fault			
	Rated operational (Ue) AC(V)	220	220/460	220	220/460		220	220/460		220
	Rated insulation voltage(Ui)	690		690			690			
	Rated current (In) A	15,20,30		15,20,30,30,40,50			60,75			40,50,60,75,100
	Residual current (A), I△n	0.03 (Fixed)		0.03 (Fixed)			0.03 (Fixed)			
		0.1/0.2/0.5(Adjustable)		0.1/0.2/0.5(Adjustable)			0.1/0.2/0.5 (Adjustable)			
	Residual current off-time at I△n (sec)	≤0.1		≤0.1			≤0.1			
Technical data conforming to (KS)(Sym)	Icu AC 460V	10		14			14			25
	220V	25		25			25			50
	Ics = ...% × Icu	50		50			50			
Dimensions (mm)	a	75		75		100	75		100	
	b	130		130			130			
	c	60		60			60			
	d	80		80			80			
Weight (kg)		0.6	0.75	0.75	0.75	0.9	0.75	0.75	0.9	
Type of trip unit		Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up					Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up			
Trip button		O		O			O			
Installation and connection		Bolt		Bolt			Bolt			
Accessories	AUX	O		O			O			
	AL	O		O			O			
KSC 4613		O		O			O			
CE / TÜV		O		O			O			

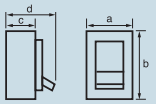
	100AF		225AF			30AF		50AF			225AF		
	CGS-103N	CGS-104N	CGS-202N	CGS-203N	CGS-204N	CGH-32N	CGH-33N	CGH-52N	CGH-53N	CGH-54N	CGH-202N	CGH-203N	CGH-204N
													
	3	4	2	3	4	2	3	2	3	4	2	3	4
	Overload, short-circuit and ground fault							Overload, short-circuit and ground fault					
	220/460		220/460			220	220/460	220/460			220/460		
	690		690			690		690			690		
	40,50,60,75,100	15,20,30,40,50,60,75,100	125,150,175,200,225			15,20,30		40,50		15,20,30,40,50	125,150,175,200,225		
	0.03 (Fixed)		0.03 (Fixed)			0.03 (Fixed)		0.03 (Fixed)			0.03 (Fixed)		
	0.1/0.2/0.5 (Adjustable)		0.1/0.2/0.5 (Adjustable)			0.1/0.2/0.5 (Adjustable)		0.1/0.2/0.5 (Adjustable)			0.1/0.2/0.5 (Adjustable)		
	≤0.1		≤0.1			≤0.1		≤0.1			≤0.1		
	25		25			14		25			35		
	50		50			25		50			65		
	50		50			50		50			50		
	90	120	105		140	75		90		120	105		140
	155	175	165			130		155		175	165		
	60		60			60		60			60		
	82		84			80		82			84		
	1.0	1.4	1.2	1.4	1.6	0.6	0.75	1.0	1.0	1.4	1.5	1.7	2.0
	Thermal-magnetic release Bolt or attached flat bar					Hydraulic-magnetic release Bolt or attached flat bar		Thermal-magnetic release Bolt or attached flat bar					
	O		O			O		O			O		
	Bolt		Bolt			Bolt		Bolt			Bolt		
	O		O			O		O			O		
	O		O			O		O			O		
	O		–			O		O			–		
	–		–			O		–			–		

MCCB

Frame size		30AF										50AF		
Frame Type		SB-32M	SB-32Nc	SB-32N	SB-32NH	SB-32NHB	SB-32NS	SB-32NSB	CBD-31	CBD-32	CBD-33	SB-52NH	SB-52NHB	SB-52NS
Model Image														
Rated	Number of poles	2			2				1	2	3	2		
	Rated operational (Ue) AC(V)	220			220				220/460			220		
	Rated insulation voltage (Vi)	250			250				500			250		
	Rated current A	15,20,30			(5,10)15,20,30		(10)15,20,30		15,20,30			(5,10)15,20,30,40,50		(10)15,20, 30,40,50
Technical data conforming to (KS)(Sym)	Icu AC 460V	-			-		-		2.5			-		-
	220V	2.5			5		10		5			(5) 5		(10) 10
	110V	2.5			-				-			-		
Dimensions (mm)	a	21	67	32	35				25	50	75	35		
	b	95.4	70	70	80				95			80		
	c	60	42.5(60)	42.5(60)	60				60			60		
	d	77.1	56.2	56.2	77				75			77		
Weight (kg)		0.1	0.13	0.1	0.13				0.15	0.3	0.45	0.13		
Type of trip unit		Thermal			Hydraulic-magnetic release				Thermal-magnetic release			Hydraulic-magnetic release		
Installation and connection		Bolt	Bolt or attached flat bar		Bolt or attached flat bar				Bolt or attached flat bar			Bolt or attached flat bar		
KSC 8321		O			O				O			O		
CE / TÜV		-			O	-	O	-	-			O	-	O

	50AF														100AF			
	SB-52NSB	SB-53NH	SB-54NH	SB-53NS	SB-54NS	CBE-52Nc	CBE-53Nc	CBD-51c	CBD-52c	CBD-53c	CBD-51	CBD-52	CBD-53	CBD-53A	CBD-101	CBD-102	CBD-103	CBD-103A
																		
극수	2	3	4	3	4	2	3	1	2	3	1	2	3	3	1	2	3	3
정격절연전압 (V)	220	220/460				220/460		220		220/460	220/460				220/460			
정격사용전압 (V)	250	500				600		250		500	500				500			
정격전류 (A)	(10)15,20,30,40,50	15,20,30,40,50				(5)10,15,20,30,40,50		15,20,30,40,50			15,20,30,40,50				15,20,30,40,50,60,75,100			
과전류 트립 감도 전류 (A)	-	2.5		5		(2.5) 2.5	2.5	-		1.5	2.5/5			5	5			
누전 트립 감도 전류 (A)	(10) 10	5		10		(5) 5	5	2.5			5/10			10	10			
누전 트립 시간 (초)	-	-				-		-			-				-			
차단용량 (kA)	35	54.4	73.6	54.4	73.6	50	75	19	39	58	25	50	75	75	25	50	75	75
가로 (mm)	80	80				96		80			97				97			
세로 (mm)	60	60				60		60			60				60			
폭 (mm)	77	77				80		76			77				77			
중량 (kg)	0.13	0.27	0.34	0.27	0.34	0.3	0.5	0.13	0.23	0.33	0.23	0.3	0.35	0.35	0.23	0.3	0.35	0.35
트립 방식	Hydraulic-magnetic release					Hydraulic-magnetic release		Thermal-magnetic release			Thermal-magnetic release				Thermal-magnetic release			
단자 방식	Bolt or attached flat bar					Bolt or attached flat bar		Bolt or attached flat bar			Bolt or attached flat bar				Bolt or attached flat bar			
부착 가능	O					O		O			O				O			
보조 스위치	-	O				O		-			-				-			

ELCB

Frame size		30AF							
Frame Type		SG-32M	SG-32Nc	SG-32Na	SG-32N	SG-32NH	SG-32NHB	SG-32NS	
Model Image									
Rated	Number of poles	2				2			
	Types of the protection	Overload, short-circuit and ground fault				Overload, short-circuit and ground fault			
	Rated operational (Ue) AC(V)	220				220			
	Rated current (In) A	15,20,30				(5,10)15,20,30			
	Residual current (A), I△n	15,30				15,30			
	Residual current off-time at I△n (sec)	≤0.03				≤0.03			
Technical data conforming to (KS)(Sym)	Icu AC 460V	-				-			
	220V	2,5				(5) 5		(10) 10	
Dimensions (mm) 	a	21	32	67	67	35			
	b	95.4	70	80	70	80			
	c	60	42.5(60)	42.5(60)	42.5(60)	60			
	d	77.1	56.2	56.2	56.2	77			
Weight (kg)		0.11	0.14	0.15	0.18	0.15			
Type of trip unit		Termal for overcurrent pick-up Electronic for earth leakage pick-up				Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up			
Installation and connection		Bolt or attached flat bar				Bolt or attached flat bar			
KSC 4613		O				O			
CE / TÜV		-	O			O	-	O	

30AF	50AF							
SG-32NSB	SG-52NH	SG-52NHB	SG-52NS	SG-52NSB	SG-53NH	SG-54NH	SG-53NS	SG-54NS
								
2	2				3	4	3	4
Overload, short-circuit and ground fault	Overload, short-circuit and ground fault				Overload, short-circuit and ground fault			
220	220				220			
(5,10)15,20,30	(5,10)15,20,30,40,50		(10)15,20,30,40,50		15,20,30,40,50			
15,30	15,30				15,30,100			
≤0.03	≤0.03				≤0.03			
–	–				2.5		5	
(10) 10	(5)5		(10) 10		5		10	
35	35				54.4	73.6	54.4	73.6
80	80				80			
60	60				60			
77	77				77			
0.15	0.15				0.3	0.37	0.3	0.37
Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up	Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up				Hydraulic-magnetic for overcurrent pick-up Electronic for earth leakage pick-up			
Bolt or attached flat bar	Bolt or attached flat bar				Bolt or attached flat bar			
O	O				O			
–	O	–	O	–	O			

Dimensions

SIZE

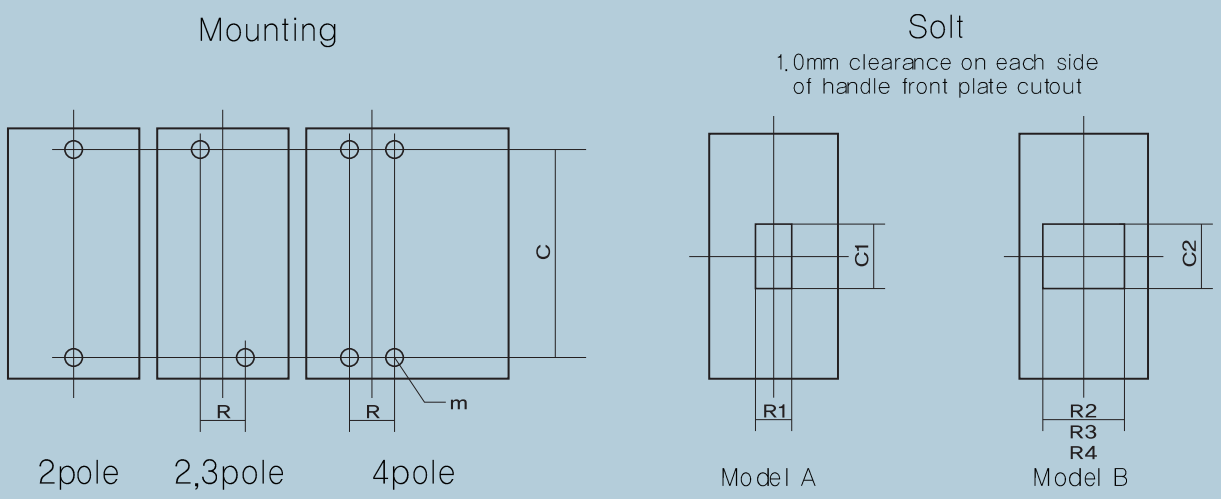
Earth Leakage Circuit Breaker

TYPE	C	C1	C2	R	R1	R2	R3	R4	m
CGE-52c	84		52			52			M4
CGE-53c	84		52	25			77		M4
CGE-52N	111		52	25		74			M4
CGE-53N	111		52	25			74		M4
CGE-54N	111		52	25				99	M4
CGE-62c	84		52			52			M4
CGE-72N	111		52	25		74			M4
CGE-73N	111		52	25			74		M4
CGE-74N	111		52	25				99	M4
CGE-102N	111		52	25		74			M4
CGE-103N	111		52	25			74		M4
CGE-104N	111		52	25				99	M4
CGE-202N	126		52	35		101			M6
CGE-203N	126		52	35			101		M6
CGE-204N	126		52	35				136	M6
CGS-32N	111		52	25		74			M4
CGS-33N	111		52	25			74		M4
CGS-52N	111		52	25		74			M4
CGS-53N	111		52	25			74		M4
CGS-54N	111		52	25				99	M4
CGS-72N	111		52	25		74			M4
CGS-73N	111		52	25			74		M4
CGS-74N	111		52	25				99	M4
CGS-103N	132		52	30			88		M4
CGS-104N	152		52	30				118	M4
CGS-202N	126		52			101			M6
CGS-203N	126		52	35			101		M6
CGS-204N	126		52	35				136	M6
CGH-32N	111		52	25		74			M4
CGH-33N	111		52	25			74		M4
CGH-53N	132		52	30			88		M4
CGH-54N	152		52	30				118	M4
CGH-202N	126		52			101			M6
CGH-203N	126		52	35			101		M6
CGH-204N	126		52	35				136	M6

Distribution

TYPE	C	C1	C2	R	R1	R2	R3	R4	m
SB-32M	88		52	13.8		23			M4
SB-32N	61	29	38		13	34			M4
SB-32Nc	61	29	38	35	13	69			M4
SB-52NH	70		52			37			M4
SB-53NH	70		52	19.2			56.4		M4
SB-54NH	70		52	38.4				75.6	M4
SB-52NHB	70		52			37			M4
SG-32M	88		52	13.8		23			M4
SG-32N	61	29	38	35	13	69			M4
SG-32Na	61	29	52		13	62			M4
SG-32Nc	61	29	38		13	34			M4
SG-52NH	70		52			37			M4
SG-53NH	70		52	19.2			56.4		M4
SG-54NH	70		52	38.4				75.6	M4
SG-52NHB	70		52			37			M4
CBE-32Nc	84		52			52			M4
CBE-33Nc	84		52	25			77		M4
CBE-52Nc	84		52			52			M4
CBE-53Nc	84		52	25			77		M4
CBS-32Nc	84		52			52			M4
CBS-33Nc	84		52	25			77		M4
CBS-52Nc	84		52			52			M4
CBS-53Nc	84		52	25			77		M4
CGE-52c	84		52			52			M4
CGE-53c	84		52	25			77		M4
CGE-62c	84		52			52			M4

Dimensions



Molded Case Circuit Breaker

TYPE	C	C1	C2	R	R1	R2	R3	R4	m
CBE-52N	111	52	52		24	48.5			M4
CBE-53N	111	52	52	25	24		70		M4
CBE-54N	111	52	52	25	24			95	M4
CBE-72N	111	52	52		24	48.5			M4
CBE-73N	111	52	52	25	24		70		M4
CBE-74N	111	52	52	25	24			95	M4
CBE-102N	111	52	52		24	48.5			M4
CBE-103N	111	52	52	25	24		70		M4
CBE-104N	111	52	52	25	24			95	M4
CBE-202N	126	100	52	35	24	101			M6
CBE-203N	126	100	52	35	24		101		M6
CBE-204N	126	100	52	35	24			136	M6
CBE-402	194	52	104	44	64	142			M4
CBE-403	194	52	104	44	64		142		M4
CBE-404	194	52	104	88	64			187	M4
CBE-402N	215	100	100	44	51	142			M6
CBE-403N	215	100	100	44	51		142		M6
CBE-404N	215	100	100	44	51			186	M6
CBE-602	243	92	104	70	64	212			M6
CBE-603	243	92	104	70	64		212		M6
CBE-604	243	92	104	140	64			282	M6
CBE-803	243	92	104	70	64		212		M6
CBE-804	243	92	104	140	64			282	M6
CBS-32N	111	52	52		24	48.5			M4
CBS-33N	111	52	52	25	24		70		M4
CBS-52N	111	52	52		24	48.5			M4
CBS-53N	111	52	52	25	24		70		M4
CBS-54N	111	52	52	25	24			95	M4
CBS-72N	111	52	52		24	48.5			M4
CBS-73N	111	52	52	25	24		70		M4
CBS-74N	111	52	52	25	24			95	M4
CBS-102N	132	52	52		24	59			M4
CBS-103N	132	52	52	30	24		86		M4
CBS-104N	132	52	52	30	24			116	M4
CBS-202N	126	52	52		24	101			M4

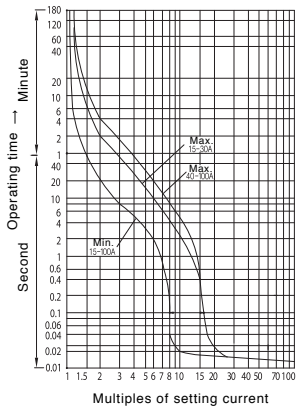
TYPE	C	C1	C2	R	R1	R2	R3	R4	m
CBS-203N	126	52	52	35	24		101		M4
CBS-204N	126	52	52	35	24			136	M4
CBS-402	194	92	104	44	64	142			M6
CBS-403	194	92	104	44	64		142		M6
CBS-404	194	92	104	88	64			187	M6
CBS-402N	215	100	100	44	51	142			M6
CBS-403N	215	100	100	44	51		142		M6
CBS-404N	215	100	100	44	51			186	M6
CBS-603	243	92	104	70	64		212	282	M6
CBS-604	243	92	104	140	64				M6
CBS-803	243	92	104	70	64		212	282	M6
CBS-804	243	92	104	140	64				M6
CBH-32N	111	52	52		24	48.5			M4
CBH-33N	111	52	52	25	24		70		M4
CBH-52N	132	52	52		24	59			M4
CBH-53N	132	92	52	30	24		86		M4
CBH-54N	132	92	52	30	24			116	M4
CBH-102N	132	92	52		24	59			M4
CBH-103N	132	92	52	30	24		86		M4
CBH-104N	132	92	52	30	24			116	M4
CBH-202N	126	92	52	35	24	101			M4
CBH-203N	126	92	52	35	24		101		M4
CBH-204N	126	92	52	35	24			136	M4
CBL-52N	126	52	52	35	24	101			M4
CBL-53N	126	52	52	35	24		101		M4
CBL-54N	126	52	52	35	24			137	M4
CBL-102N	126	52	52	35	24	101			M4
CBL-103N	126	52	52	35	24		101		M4
CBL-104N	126	52	52	35	24			137	M4
CBL-202N	126	52	52	35	24	101			M4
CBL-203N	126	52	52	35	24		101		M4
CBL-204N	126	52	52	35	24			137	M4
CBL-402N	215	100	100	44	51	142			M6
CBL-403N	215	100	100	44	51		142		M6
CBL-404N	215	100	100	44	51			186	M6

Circuit Breaker

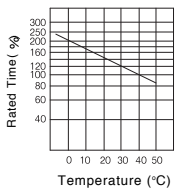
Operating Characteristics

SG-52NH, SG-53NH, SG-54NH
SG-52NS, SG-53NS, SG-54NS
SB-52NH, SB-53NH, SG-54NH
SB-52NS, SB-53NS, SB-54NS

Operating characteristics

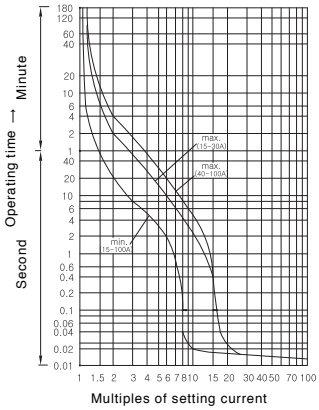


Ambient characteristics

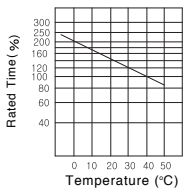


CBE-52N, CBE-53N, CBE-54N, CBE-72N, CBE-73N,
CBE-74N, CBE-102N, CBE-103N, CBE-104N
CBS-52N, CBS-53N, CBS-54N, CBS-72N, CBS-73N, CBS-74N
CBH-32N, CBH-33N, CGS-32N, CGS-33N, CGH-32N, CGH-33N

Operating characteristics

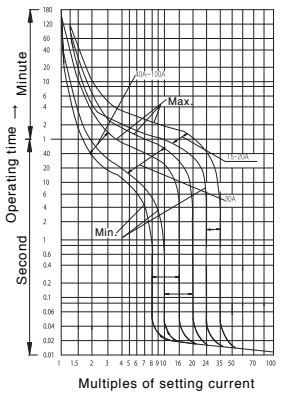


Ambient characteristics

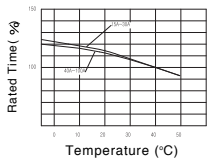


CBS-102N, CBS-103N, CBS-104N, CBH-52N,
CBH-53N, CBH-54N, CBH-102N, CBH-103N, CBH-104N,
CGS-103N, CGS-104N
CBL-52N, CBL-53N, CBL-54N,
CBL-102N,CBL-103N, CBL-104N

Operating characteristics

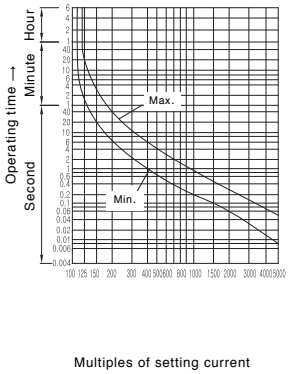


Ambient characteristics

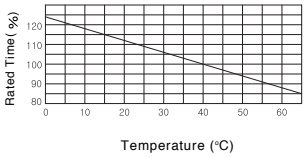


SG-32M, SB-32M

Operating characteristics

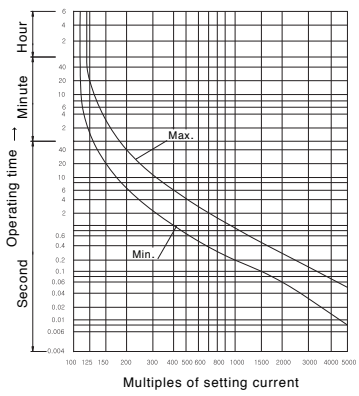


Ambient characteristics

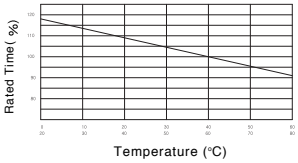


SG-32N, SG-32Na, SG-32Nc, SB-32N

Operating characteristics

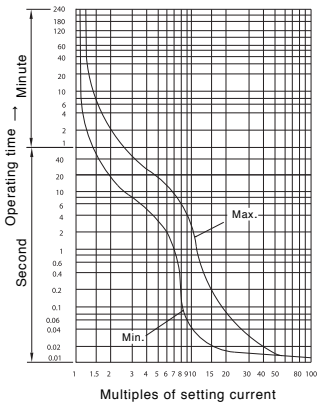


Ambient characteristics

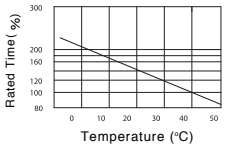


CBE-32Nc, CBE-33Nc, CBE-52Nc, CBE-53Nc
CBS-32Nc, CBS-33Nc, CBS-52Nc, CBS-53Nc
CGE-32c, CGE-33c, CGE-52c, CGE-53c, CGE-62c, CGE-63c

Operating characteristics

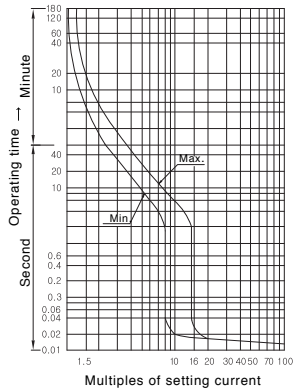


Ambient characteristics

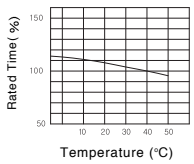


CBE-202N, CBE-203N, CBE-204N, CBS-202N, CBS-203N, CBS-204N, CBH-202N, CBH-203N, CBH-204N, CBL-202N, CBL-203N, CBL-204N

Operating characteristics

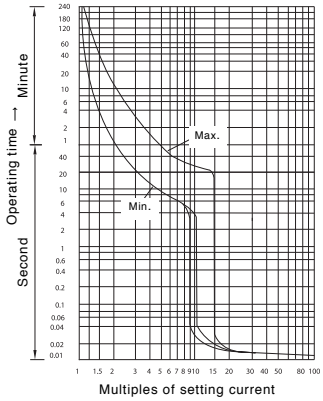


Ambient characteristics

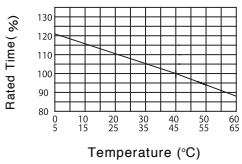


CBE-402N, CBE-403N, CBE-404N CBS-402N, CBS-403N, CBS-404N CBL-402N, CBL-403N, CBL-404N

Operating characteristics

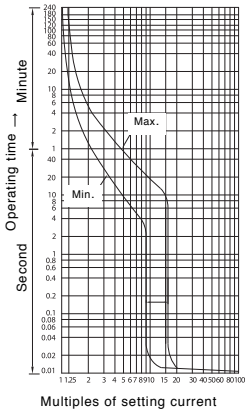


Ambient characteristics

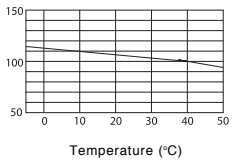


CBE-602, CBE-603, CBE-604 CBS-602, CBS-603, CBS-604 CBE-802, CBE-803, CBE-804 CBS-802, CBS-803, CBS-804

Operating characteristics

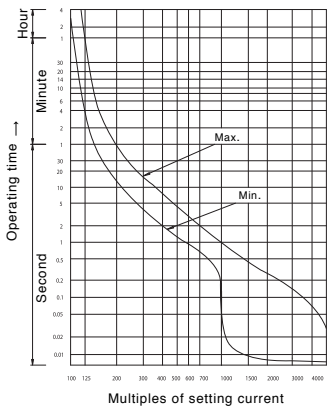


Ambient characteristics

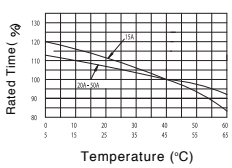


CBD-31,CBD-32,CBD-33 CBD-51,CBD-52,CBD-53

Operating characteristics

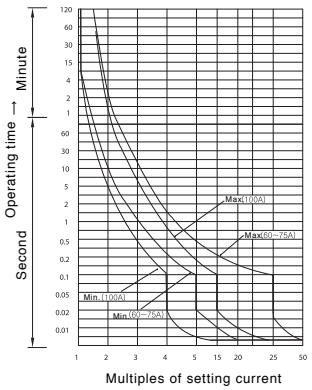


Ambient characteristics

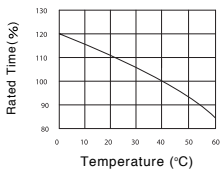


CBD-51, CBD-52, CBD-53,CBD-53A, CBD-101, CBD-102,CBD-103,CBD-103A

Operating characteristics

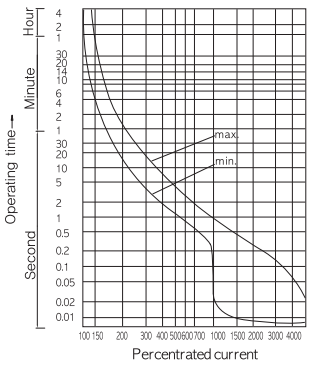


Ambient characteristics

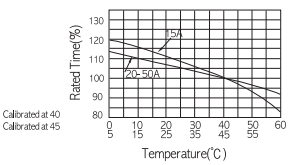


CBD-51c, CBD-52c, CBD-53c

Operating characteristics



Ambient characteristics

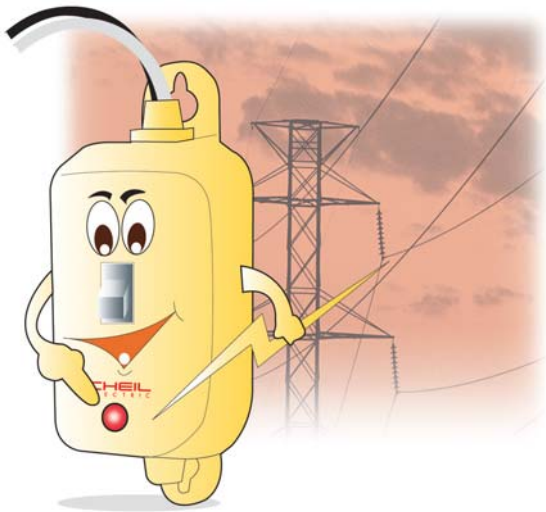


Watertight Earth Leakage Circuit Breaker

Features and Benefits

Suitabe for outdoor use, area of high humidity and region having a long period of rainy season.

▶ Excellent watertight feature (IP-67)



▶ Easy indicater
- Red light on indicates fault and malfunction of device.
- Green light on indicates power on and work in normal.
- Easily Checked by pressing test button.

▶ Housing case is of flame fetardant materal (V0 grade)

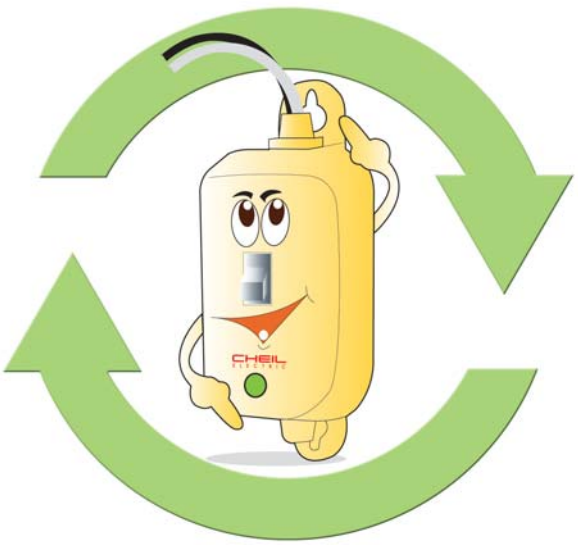
Example Use


Street light


Outdoor cabinet panel

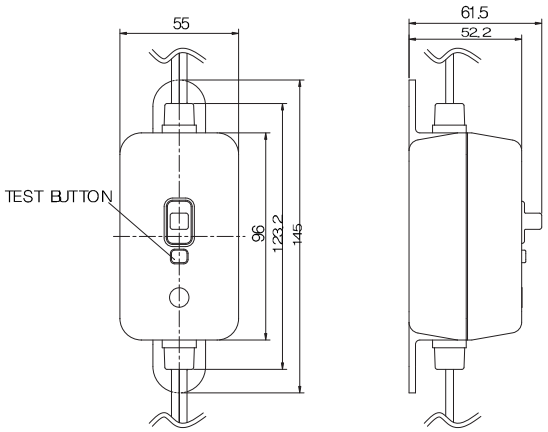

Traffic signal


Others



▶ Easy installation with hook

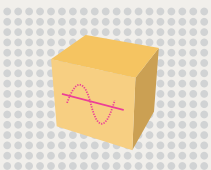
Technical specification & dimension



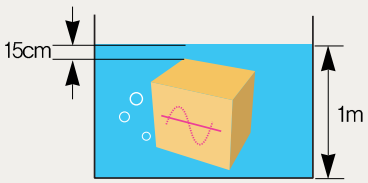
Description		CGP-32(E)
Rated current(A)		15, 20, 30
Rated voltage(V)		AC220
Icu AC(kA)		1.5/2.5
Trip current(mA)		15, 30
Trip time(sec)		0.03
Dimension(mm)	W	55
	L	145
	H	61.5
Weight(Kg)		0.23

IP-67

6-Totally profected aginst dust.



7-Protected aginst the affects of immersion between 15cm and 1m.



Type Designation & How to Order

Magnetic Contactor & Motor Starters

CM C 10 - R

Cheil Magnetic Contactor and Switch

Type	
C	Contactors(AC Control)
D	Contactors(DC Control)
S	Starter, Open
B	Starter, Enclosed

Frame Size
9~220

Combination	
-	Without additional device
R	Reversing
L	With latch unit
K	Differential current protection
P	With enclosure & button
C	Definite purpose

Contactor Relays

CMR 4 - D AC220V

Cheil Control Relay

Auxiliary Contact Number	
4	4 contact
6	6 contact
8	8 contact

Applicable Voltage	
-	AC Control
D	DC Control

Coil Designation	
-	AC 220V
	AC 24~ 600V
	DC 12~ 250

Asingle Type Reversing Contactors

CMH 10 AC 220V

Asingle Type Reversing Contactors	
	Frame Size
	10
	20

Definite Purpose Relay

CMR 20 AC 220V

Definite Purpose Relay	
	Frame Size
	20

Thermal Overload Relay

COR 10 - 3 L 5A

Cheil Thermal Over Load Relay	Type		Nominal Rating	Number of bimetal Element	Class	Setting Ranges
	R	Non-differential	10~220	- 2 Elements	- Standard	0.14~200A
	K	Differential current protection		3 3 Elements	L Differential	

Reversing Unit

RU-10

Reversing Unit	
	Type
	10 CMC 9N~85N
	CMC 10~80

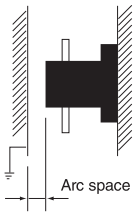
Auxiliary Unit

CAU - 100

Cheil Auxiliary Unit	Type	Contact Number	Mounting Location	Application
	1	2 Contact	Side	CMC 9N~85N
	2	2 Contact	Head	CMC 9N~85N, CMC 10~80
	4	4 Contact	Head	CMC 9N~85N, CMC 10~80
	100	2 Contact	Side	CMC 100~220

The arc blowoff direction has been changed to further improve safety and space conservation

A new extinguishing structure, which eliminates the blow off of hot gas (arc) to the front (direction to door of control panel) when the current is cutoff has been incorporated.



Frame	Arc space
CMC 9N~85N	10
CMC100~220	30

In addition to improved safety, the freedom of panel design has been increased allowing space to be saved.

DC Electromagnet with AC Operation (Patented)

Lower Power Consumption

Coil power consumption is greatly low so CMC Series contactors can be controlled by almost any type of relay, even small output relays of programmable controllers.

Less Noise nor Surge from Coil

When switching a coil, the energy will be desipated within internal circuit of electromagnet.

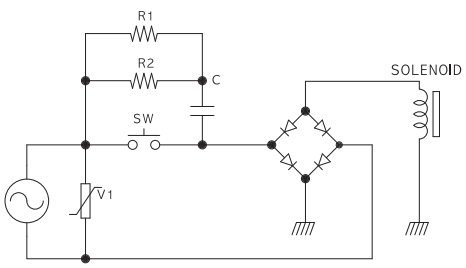
Humming Completely Eliminated

DC excitation does not cause humming so operation is quiet.

Contactor Coils Have Ultra-Wide Range of Ratings

The number of coil types has been cut by two-thirds and there is no need to re-wire for different frequencies. The coil also withstands large voltage drops.

Internal circuit of the electromagnet



Simple inspections

The contactor can be inspected easily by removing the arc cover.

Built-in surge absorber

The model with built-in surge absorber for coils is obtainable as an option.

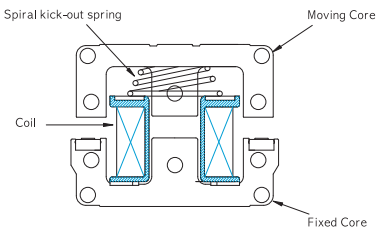
CAN terminal realizes safety and speedy

The models with finger protection are safer and speedier even if the lug of a closed type eyelet(ring) terminal plate is used.
CMC9N~CMC85N, CMD9N~CMD48N

Stronger barrier strength is improved with the thermoplastic mold.

Improved magnet

By using a spiral kick-out spring, the dynamic balance of the moving parts is improved, bouncing is reduced, and the core life is extended. Furthermore, the core movement is generally stabilized. The efficient magnet has been achieved through modern technology of the magnet section using a computer. The contactor has a performance to withstand a voltage drop to 35% with the closed contact.



Frame Name				CMC 10	CMC 15	CMC 20	CMC 21	CMC 25	
Model Image									
Ratings KSC 4504	Three-phase motor	AC3 ratings	200~220V	2.2kW 13A	3.7kW 18A	4kW 20A	4kW 20A	5.5kW 26A	
			380~440V	4kW 9A	5.5kW 16A	7.5kW 20A	7.5kW 20A	11kW 25A	
			500~550V	5.5kW 9A	5.5kW 13A	7.5kW 17A	7.5kW 17A	11kW 20A	
		AC4 ratings	200~220V	2.2kW 11A	3.7kW 18A	3.7kW 18A	3.7kW 18A	4.5kW 20A	
			380~440V	4kW 9A	4kW 9A	5.5kW 13A	5.5kW 13A	7.5kW 17A	
	1phase motor		110V	0.5kW 13A	0.75kW 18A	0.9kW 20A	0.9kW 20A	1.2kW 26A	
			220V	1kW 13A	1.5kW 18A	1.8kW 20A	1.8kW 20A	-	
	Resistive load DC1 ratings	2 pole series	110V	10A	13A	15A	15A	25A	
			220V	7A	8A	12A	12A	12A	
		3pole series	110V	12A	18A	20A	20A	25A	
			220V	12A	18A	20A	20A	22A	
Continuous current Ith(A)				20A	25A	32A	32A	50A	
IEC 60947	Three-phase motor	AC3 ratings	220~240V	3.5kW 13A	4.5kW 18A	5.5kW 22A	5.5kW 22A	7.5kW 32A	
			380~440V	5.5kW 12A	7.5kW 18A	11kW 22A	11kW 22A	15kW 32A	
			500~550V	7.5kW 12A	7.5kW 13A	15kW 22A	15kW 22A	18.5kW 28A	
			690V	7.5kW 9A	7.5kW 9A	15kW 18A	15kW 18A	18.5kW 21A	
Endurance (×10000operations)	Electrical			100	100	100	100	100	
	Mechanical			1000	1000	1000	1000	1000	
Additional auxiliary (standard)				1a	1a1b	1a1b	2a2b	2a2b	
Additional auxiliary (front mount)				CAU	CAU	CAU	CAU	CAU	
Mounting type				bin rail or screw mountable					
Outline dimension (W × H × D)				44×76.5×88.5	63×76.5×81	63×76.5×81	63×76.5×91.6	75.6×94×98.3	
Mounting dimension(mm) (W × D)				30~35×48~60	34~54×48~60	34~54×48~60	34~54×48~60	60~65×65~70	
Applied model	Magnetic contactor	DC control		CMD 10	CMD 15	CMD 20	CMD 21	CMD 25	
	Motor starters	Standard		CMS 10	CMS 15	CMS 20	CMS 21	CMS 25	
		Reversing		CMS 10-R	CMS 15-R	CMS 20-R	CMS 21-R	CMS 25-R	
		Differential current protection		CMS 10-K	CMS 15-K	CMS 20-K	CMS 21-K	CMS 25-K	
Thermal overload relay		Standard		COR 10	COR 20	COR 20	COR 20	COR 35	
		Differential current protection		COK 10	COK 20	COK 20	COK 20	COK 35	
		3 elements		COR 10-3	COR 20-3	COR 20-3	COR 20-3	COR 35-3	

	CMC 35	CMC 48	CMC 50	CMC 65	CMC 80	CMC 100	CMC 125	CMC 150	CMC 180	CMC 220
										
	7.5kW 35A	11kW 48A	11kW 50A	15kW 65A	19kW 80A	25kW 100A	30kW 125A	37kW 150A	45kW 180A	55kW 220A
	15kW 32A	15kW 35A	22kW 48A	30kW 65A	37kW 80A	50kW 100A	60kW 120A	75kW 150A	90kW 180A	110kW 220A
	15kW 26A	15kW 28A	22kW 38A	37kW 60A	45kW 75A	55kW 80A	60kW 90A	90kW 140A	110kW 180A	132kW 200A
	5.5kW 25A	7.5kW 30A	7.5kW 35A	11kW 50A	15kW 65A	19kW 80A	22kW 93A	30kW 125A	37kW 150A	45kW 180A
	11kW 24A	11kW 28A	15kW 32A	22kW 47A	30kW 62A	37kW 75A	45kW 90A	55kW 110A	75kW 150A	90kW 180A
	1.7kW 35A	1.7kW 35A	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–
	25A	35A	35A	35A	50A	80A	80A	100A	150A	150A
	12A	15A	15A	15A	20A	50A	50A	100A	150A	150A
	35A	50A	50A	65A	80A	100A	100A	150A	180A	220A
	30A	40A	40A	50A	60A	80A	80A	150A	180A	220A
	60A	70A	80A	100A	135A	150A	150A	200A	230A	260A
	11kW 40A	11kW 48A	15kW 55A	18.5kW 65A	25kW 85A	30kW 105A	37kW 125A	45kW 150A	55kW 180A	75kW 250A
	18.5kW 40A	18.5kW 45A	22kW 50A	30kW 65A	45kW 85A	55kW 105A	60kW 120A	75kW 150A	90kW 180A	132kW 250A
	22kW 32A	22kW 40A	30kW 43A	33kW 60A	45kW 75A	55kW 85A	60kW 90A	90kW 140A	110kW 180A	132kW 200A
	22kW 23A	22kW 25A	30kW 28A	33kW 35A	45kW 45A	55kW 65A	60kW 70A	90kW 100A	110kW 120A	132kW 150A
	100	100	100	100	100	100	100	100	100	100
	1000	1000	1000	1000	1000	500	500	500	500	500
	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b
	CAU	CAU	CAU	CAU	CAU	–	–	–	–	–
	bin rail or screw mountable									
	75.6×94×98.3	75.6×94×98.3	92×117.5×115	92×117.5×115	92×117.5×115	100×157×146	100×157×146	120×166×157	138×203×175	138×203×175
	60~65×65~70	60~65×65~70	65~84×75~90	65~84×75~90	65~84×75~90	90×125	90×125	100×125~130	45×190, 120×190	45×190, 120×190
	CMD 35	CMD 48	–	–	–	–	–	–	–	–
	CMS 35	CMS 48	CMS 50	CMS 65	CMS 80	CMS 100	CMS 125	CMS 150	CMS 180	CMS 220
	CMS 35-R	CMS 48-R	CMS 50-R	CMS 65-R	CMS 80-R	CMS 100-R	CMS 125-R	CMS 150-R	CMS 180-R	CMS 220-R
	CMS 35-K	CMS 48-K	CMS 50-K	CMS 65-K	CMS 80-K	CMS 100-K	CMS 125-K	CMS 150-K	CMS 180-K	CMS 220-K
	COR 35	COR 35	COR 80	COR 80	COR 80	COR 100	COR 100	COR 150	COR 220	COR 220
	COK 35	COK 35	COK 80	COK 80	COK 80	COK 100	COK 100	COK 150	COK 220	COK 220
	COR 35-3	COR 35-3	COR 80-3	COR 80-3	COR 80-3	COR 100-3	COR 100	COR 150-3	COR 220-3	COR 220-3

Frame Name				CMC 9N	CMC 12N	CMC 18N	CMC 22N	
Model Image								
Ratings KSC 4504	Three-phase motor	AC3 ratings	200~220V	2.2kW 11A	2.7kW 13A	3.7kW 18A	4kW 20A	
			380~440V	2.7kW 11A	4kW 12A	5.5kW 18A	7.5kW 20A	
			500~550V	2.7kW 6A	5.5kW 12A	5.5kW 13A	7.5kW 17A	
		AC4 ratings	200~220V	1.5kW 8A	2.2kW 11A	3.7kW 18A	3.7kW 18A	
			380~440V	2.2kW 6A	4kW 9A	4kW 9A	5.5kW 13A	
	1phase motor		110V	0.4kW 11A	0.5kW 13A	0.75kW 18A	0.9kW 20A	
			220V	0.8kW 11A	1kW 13A	1.5kW 18A	1.8kW 20A	
	Resistive load DC1 ratings	2 pole series	110V	6A	10A	13A	15A	
			220V	3A	7A	8A	12A	
		3pole series	110V	8A	12A	18A	20A	
			220V	8A	12A	18A	20A	
Continuous current Ith(A)				25A	25A	40A	40A	
IEC 60947	Three-phase motor	AC3 ratings	220~240V	2.5kW 11A	3.5kW 13A	4.5kW 18A	5.5kW 20A	
			380~440V	4kW 7A	5.5kW 9A	7.5kW 18A	11kW 20A	
			500~550V	4kW 7A	7.5kW 12A	7.5kW 13A	15kW 22A	
			690V	4kW 5A	7.5kW 9A	7.5kW 9A	15kW 18A	
Endurance (×10000operations)	Electrical			250	250	250	250	
	Mechanical			2500	2500	2500	2500	
Additional auxiliary (standard)				1a1b	1a1b	1a1b	1a1b	
Additional auxiliary (front mount)				CAU	CAU	CAU	CAU	
Mounting type				bin rail or screw mountable				
Outline dimension (W × H × D)				44×76.6×89.2	44×76.6×89.2	44×76.6×89.2	44×76.6×89.2	
Mounting dimension(mm) (W × D)				30~35×48~59	30~35×48~59	30~35×48~59	30~35×48~59	
Applied model	Magnetic contactor	DC control		CMD 9N	CMD 12N	CMD 18N	CMD 22N	
	Motor starters	Standard		CMS 9N	CMS 12N	CMS 18N	CMS 22N	
		Reversing		CMS 9N-R	CMS 12N-R	CMS 18N-R	CMS 22N-R	
		Differential current protection		CMS 9N-K	CMS 12N-K	CMS 18N-K	CMS 22N-K	
Thermal overload relay		Standard		COR 22	COR 22	COR 22	COR 22	
		Differential current protection		COK 22	COK 22	COK 22	COK 22	
		3 elements		COR 22-3	COR 22-3	COR 22-3	COR 22-3	

	CMC 32N	CMC 40N	CMC 48N	CMC 50N	CMC 65N	CMC 75N	CMC 85N
							
	5.5kW 26A	7.5KW 35A	11kW 48A	11kW 50A	15kW 65A	18.5kW 75A	19kW 80A
	11kW 25A	15KW 32A	15kW 35A	22kW 48A	30kW 65A	37kW 75A	37kW 80A
	11kW 20A	15KW 26A	15kW 28A	22kW 38A	37kW 60A	37kW 64A	45kW 75A
	4.5kW 20A	5.5kW 25A	7.5KW 30A	7.5kW 35A	11kW 50A	13kW 55A	15kW 65A
	7.5kW 17A	11kW 24A	11KW 28A	15kW 32A	22kW 47A	25kW 52A	30kW 62A
	1.2kW 26A	1.7KW 35A	1.7kW 35A	–	–	–	–
	–	–	–	–	–	–	–
	25A	25A	35A	35A	35A	50A	50A
	12A	12A	15A	15A	15A	20A	20A
	25A	35A	50A	50A	65A	70A	80A
	22A	30A	40A	40A	50A	55A	60A
	50A	60A	70A	80A	100A	110A	135A
	7.5kW 32A	11kW 40A	11kW 48A	15kW 55A	18.5kW 65A	22kW 75A	25kW 85A
	15kW 32A	18.5kW 40A	18.5kW 45A	22kW 50A	30kW 65A	37kW 75A	45kW 85A
	18.5kW 28A	22kW 32A	22kW 40A	30kW 43A	33kW 60A	37kW 64A	45kW 75A
	18.5kW 20A	22kW 23A	22kW 25A	30kW 28A	33kW 35A	37kW 42A	45kW 45A
	200	200	200	200	200	200	200
	1500	1500	1500	1000	1000	1000	1000
	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b	2a2b
	CAU	CAU	CAU	CAU	CAU	CAU	CAU
	bin rail or screw mountable						
	68×86×94.5	68×86×94.5	68×86×94.5	94×123.5×117.4	94×123.5×117.4	94×123.5×117.4	94×123.5×117.4
	30~35×48~59, 35×60	30~35×48~59×35×60	30~35×48~59, 35×60	100×50~60, 100×60	100×50~60, 100×60	100×50~60, 100×60	100×50~60, 100×60
	–	–	–	–	–	–	–
	CMS 32N	CMS 40N	CMS 48N	CMS 50N	CMS 65N	CMS 75N	CMS 85N
	CMS 32N-R	CMS 40N-R	CMS 48N-R	CMS 50N-R	CMS 65N-R	CMS 75N-R	CMS 85N-R
	CMS 32N-K	CMS 40N-K	CMS 48N-K	CMS 50N-K	CMS 65N-K	CMS 75N-K	CMS 85N-K
	COR 40	COR 40	COR 40	COR 85	COR 85	COR 85	COR 85
	COK 40	COR 40	COK 40	COK 85	COK 85	COK 85	COK 85
	COR 40-3	COR 40-3	COR 40-3	COR 85-3	COR 85-3	COR 85-3	COR 85-3

Definite Purpose Contactors

Frame Name			CMC 20-C	CMC 25-C
Model Image				
AC3 ratings	100~110V		20	25
	200~220V		20	25
	380~440V		17	21
	500~550V		14	17
AC4 ratings	100~110V		18	20
	200~220V		18	20
	380~440V		13	14
	500~550V		10	12
Continuous current Ith (A)			30	35
Endurance (x10,000 operations)	Mechanical		250	250
	Electrical	AC3 ratings	25	25
		AC4 ratings	1.5	1.5
Outline dimension (W × H × D)			42×65.8×74.1	42×65.8×74.1
Mounting dimension(mm) (W × D)			30~34×48~63	30~34×48~63

■ Magnetic Contactor + Motor Starter

Type		Rating											
Magnetic Contactor	Motor Starters	AC3 Rating						AC2B Rating					
		200~220V		380~440V		500~550V		200~220V		380~440V		500~550V	
		kW	A	kW	A	kW	A	kW	A	kW	A	kW	A
CMC 10-R	CMS 10-R	2.7	13	4	9	5.5	9	2.7	13	4	9	5.5	9
CMC 15-R	CMS 15-R	3.7	18	5.5	13	5.5	13	3.7	18	5.5	13	5.5	13
CMC 20-R	CMS 20-R	4	20	7.5	20	7.5	17	4	20	7.5	20	7.5	17
CMC 21-R	CMS 21-R	4	20	7.5	20	7.5	17	4	20	7.5	20	7.5	17
CMC 25-R	CMS 25-R	5.5	26	11	25	11	20	5.5	26	11	25	11	20
CMC 35-R	CMS 35-R	7.5	35	15	32	15	26	7.5	35	15	32	15	26
CMC 50-R	CMS 50-R	11	50	22	48	22	38	11	50	22	48	22	38
CMC 65-R	CMS 65-R	15	65	30	65	37	60	15	65	30	65	37	60
CMC 80-R	CMS 80-R	19	80	37	80	45	75	19	80	37	80	45	75
CMC 9N-R	CMS 9N-R	2.2	11	2.7	11	2.7	6	2.2	11	2.7	7	2.7	6
CMC 12N-R	CMS 12N-R	2.7	13	4	12	5.5	12	2.7	13	4	9	5.5	9
CMC 18N-R	CMS 18N-R	3.7	18	5.5	18	5.5	13	3.7	18	5.5	13	5.5	13
CMC 22N-R	CMS 22N-R	4	20	7.5	20	7.5	17	4	20	7.5	20	7.5	17
CMC 32N-R	CMS 32N-R	5.5	26	11	25	11	20	5.5	26	11	25	11	20
CMC 40N-R	CMS 40N-R	7.5	35	15	32	15	26	7.5	35	15	32	15	26
CMC 50N-R	CMS 50N-R	11	50	22	48	22	38	11	50	22	48	22	38
CMC 65N-R	CMS 65N-R	15	65	30	65	37	60	15	65	30	65	37	60
CMC 75N-R	CMS 75N-R	18.5	75	37	75	37	64	18.5	75	37	75	37	64
CMC 85N-R	CMS 85N-R	19	80	37	80	45	75	19	80	37	80	45	75

Reversing Contactors / Starters

Model Image		
		

Type	Rating						Continuous Current AC1 Rating
Magnetic Contactor	AC3 ranting						
	200~220V		380~440V		500~550V		
	kW	A	kW	A	kW	A	A
CMH 10	2.7	13	4	11	5.5	9	20
CMH 20	4	20	7.5	20	7.5	17	25

Rating				Continuous Current AC1 Rating	Auxiliary Contcts		Thermal Overload Relay Combined	
AC4 Rating								
200~220V		380~440V						
kW	A	kW	A	A	Standard	Additional	Type	Setting Ranges
2.2	11	4	9	20	1a	CAU-2 or CAU-4	COR 10	0.1~13
3.8	18	4	9	25	1a1b		COR 20	0.1~18
3.7	18	5.5	13	32	1a1b			
3.7	18	5.5	13	32	2a2b			
4.5	20	7.5	17	50			COR 35	4~40
5.5	25	11	24	60				
7.5	35	15	32	80			COR 80	12~100
11	50	22	47	100				
15	65	30	62	135				
1.5	8	2.2	6	25	1a1b×2	CAU-2 or CAU-4	COR 22	0.1~22
2.2	11	4	9	25				
3.7	18	4	9	40				
3.7	18	5.5	13	40				
4.5	20	7.5	17	50	2a2b×2		COR 40	4~40
5.5	25	11	24	60				
7.5	35	15	32	80			COR 85	7~85
11	50	22	47	100				
13	55	25	52	110				
15	65	30	62	135				

Thermal Over Load Relay

■ Model Name and Ratings

Model Image										
Section	Model Name	COR 10			COR 20			COR 35		
	Heater Designation	Setting Range			Setting Range			Setting Range		
		MIN	MID	MAX	MIN	MID	MAX	MIN	MID	MAX
Rated Current (A)	0.125	0.1	0.125	0.15	0.1	0.125	0.15			
	0.2	0.15	0.2	0.24	0.15	0.2	0.24			
	0.3	0.24	0.3	0.36	0.24	0.3	0.36			
	0.45	0.36	0.45	0.54	0.36	0.45	0.54			
	0.6	0.48	0.6	0.72	0.48	0.6	0.72			
	1	0.8	1	1.2	0.8	1	1.2			
	1.2	0.95	1.2	1.45	0.95	1.2	1.45			
	1.8	1.4	1.8	2.2	1.4	1.8	2.2			
	2.2	1.7	2.2	2.6	1.7	2.2	2.6			
	2.8	2.2	2.8	3.4	2.2	2.8	3.4			
	3.5	2.9	3.7	4.2	2.8	3.5	4.2			
	5	4	5	6	4	5	6	4	5	6
	6.5	5	6.5	8	5	6.5	8	5	6.5	8
	9	7	9	11	7	9	11	7	9	11
	11	9	121	13	9	11	13	9	11	13
	15				12	15	18	12	15	18
	22							18	22	26
	29							24	29	34
	35							30	35	40
	40									
	56									
	67									
	83									
Number of Poles	2poles		Standard			Standard			Standard	
	3poles		Optional			Optional			Optional	
Auxiliary Contact			1a1b			1a1b			1a1b	
Reset Type			Manual/Automatic			Manual/Automatic			Manual/Automatic	
Power Capacity(VA)			1.8VA/pole			1.8VA/pole			2.0VA/pole	
Applied Model	Phase Failure		COK 10			COK 20			COK 35	
	Magnetic Contactor Combined		CMC 10/15			CMC 20/21			CMC 25/35	
	Motor Starters Combined		CMS 10/15			CMS 20/21			CMS 25/35	

Model Name		COR 80		
Heater Designation		Setting Range		
		MIN	MID	MAX
0.125				
0.2				
0.3				
0.45				
0.6				
1				
1.2				
1.8				
2.2				
2.8				
3.5				
5				
6.5				
9				
11				
15		12	15	18
22		18	22	26
29		24	29	34
35		30	35	40
40		34	40	50
56		43	56	65
67		54	67	80
83		65	83	100
2poles			Standard	
3poles			Optional	
			1a1b	
			Manual/Automatic	
			3.5VA/pole	
			COK 80	
			CMC 50/65/80	
			CMS 50/65/80	

■ Selection Guile

Three phase motor max-power				COR 10	COR 20	COR 35	COR 80
4P 440V 60Hz		4P 220V 60Hz					
P(kW)	In(A)	P(kW)	In(A)				
				0.1~0.15	0.1~0.15		
0.1	0.36			0.15~0.24	0.15~0.24		
				0.24~0.36	0.24~0.36		
0.2	0.7	0.1	0.71	0.36~0.54	0.36~0.54		
				0.48~0.72	0.48~0.72		
		0.2	1.4	0.64~0.96	0.64~0.96		
				0.8~1.2	0.8~1.2		
0.75	1.8			0.95~1.45	0.95~1.45		
		0.4	2.3	1.4~2.2	1.4~2.2		
				1.7~2.6	1.7~2.6		
1.5	3.3	0.75	3.6	2.2~3.4	2.2~3.4		
				2.8~4.2	2.8~4.2		
		1.5	6.5	4~6	4~6	4~6	
3.7	7.5			5~8	5~8	5~8	
		2.2	9.2	6~9	6~9	6~9	
5.5	11			7~11	7~11	7~11	
7.5	15	3.7	15	9~13	9~13	9~13	
					12~18	12~18	12~18
15	28	7.5	29			18~26	18~26
18.5	34					24~34	24~34
22	39	11	42			30~40	30~40
30	54	15	55				34~50
							39~57
37	66	18.5	67				43~65
45	80	22	78				54~80
55	99	30	107				65~100
75	135	37	132				
90	160	45	160				
110	192	55	198				

Section	Model Name	COR 100			COR 150			COR 220		
	Heater Desigation	Setting Range			Setting Range			Setting Range		
		MIN	MID	MAX	MIN	MID	MAX	MIN	MID	MAX
Rated Current (A)	41	34	41	50	34	41	50			
	48	39	48	57	39	48	57			
	56	43	56	65	43	56	65			
	67	54	67	80	54	67	80			
	80	65	80	100	65	80	100	65	80	100
	107	85	107	125	85	107	125	85	107	125
	130				100	130	150	100	130	160
	150							120	150	180
	200							160	200	240
Number of Poles	2poles	Standard			Standard			Standard		
	3poles	Optional			Optional			Optional		
Auxiliary Contact		1a1b			1a1b			1a1b		
Reset Type		Manual/Automatic			Manual/Automatic			Manual/Automatic		
Power Capacity(VA)		2.3VA/pole			2.3VA/pole			2.3VA/pole		
Applied model	3poles	COR 100/3			COR 150/3			COR 220/3		
	Phase Failure	COK 100			COK 150			COK 220		
Magnetic Contactor Combined		CMC 100/125			CMC 150			CMC 180/220		
Motor Starters Combined		CMS 100/125			CMS 150			CMS 180/220		

	COR 100	COR 150	COR 220
	34~50	34~50	
	39~57	39~57	
	43~65	43~65	
	54~80	54~80	
	65~100	65~100	65~100
	85~125	85~125	85~125
		100~150	100~160
			120~180
			160~240

Thermal Over Load Relay

■ Model Name and Ratings

Model Image										
Section	Model Name	COR 22			COR 40			COR 85		
	Heater Designation	Setting Range			Setting Range			Setting Range		
		MIN	MID	MAX	MIN	MID	MAX	MIN	MID	MAX
Rated Current (A)	0.14	0.1	0.14	0.16						
	0.21	0.16	0.21	0.25						
	0.33	0.25	0.33	0.4						
	0.52	0.4	0.52	0.63						
	0.82	0.63	0.82	1						
	1.3	1	1.3	1.6						
	2.1	1.6	2.1	2.5						
	3.3	2.5	3.3	4						
	5	4	5	6	4	5	6			
	6.5	5	6.5	8	5	6.5	8			
	7.5	6	7.5	9	6	7.5	9			
	8.5	7	8.5	10	7	8.5	10	7	8.5	10
	11	9	11	13	9	11	13	9	11	13
	15	12	15	18	12	15	18	12	15	18
	19	16	19	22	16	19	22	16	19	22
	22				18	22	26	18	22	26
	30				24	30	36	24	30	36
	34				28	34	40	28	34	40
	42							34	42	50
	55							45	55	65
	65							54	65	75
	74							63	74	85
Number of Poles	2 poles	Standard			Standard			Standard		
	3 poles	Optional			Optional			Optional		
Auxiliary Contact		1a1b			1a1b			1a1b		
Reset Type		Manual / Automatic			Manual / Automatic			Manual / Automatic		
Power Capacity(VA)		1.8VA/pole			2.0VA/pole			3.5VA/pole		
Separate mounting unit		IU-22			IU-40			IU-85		
Applied Model	3 pole	COR 22/3			COR 40/3			COR 85/3		
	Phase Failure	COK 22			COK 40			COK 85		
Magnetic Contador combined		CMC 9N / 12N / 18N / 22N			CMC 32N / 40N / 48N			CMC 50N / 65N / 75N / 85N		
Motor Starters Combined		CMS 9N / 12N / 18N / 22N			CMS 32N / 40N / 48N			CMS 50N / 65N / 75N / 85N		

■ Selection Guile

Three phase motor max-power				COR 22	COR 40	COR 85
4P 440V 60Hz		4P 220V 60Hz				
P(kW)	In(A)	P(kW)	In(A)			
				0.1~0.16		
				0.16~0.25		
0.1	0.36			0.25~0.4		
				0.4~0.63		
0.2	0.7	0.1	0.71	0.63~1		
		0.2	1.4	1~1.6		
0.75	1.8	0.4	2.3	1.6~2.5		
1.5	3.3	0.75	3.6	2.5~4		
2.2	4.6			4~6	4~6	
		1.5	6.5	5~8	5~8	
3.7	7.5			6~9	6~9	
		2.2	9.2	7~10	7~10	7~10
5.5	11			9~13	9~13	9~13
7.5	15	3.7	15	12~18	12~18	12~18
				16~22	16~22	16~22
11	21	5.5	22		18~26	18~26
15	28	7.5	29		24~36	24~36
18.5	34				28~40	28~40
22	39	11	42			34~50
30	54	15	55			45~65
37	66	18.5	67			54~75
						63~85

Definite Purpose Relay

Model	Continuous Current(A) Ith(A)	Rated Operational Current(A)		Performance			Standard coil voltage(V)	Contact Componet
		110V	220V	Switching Frequency	Electrical x10000	Mechanical x10000		
CMR 20	30	25	25	1800	20	100	AC 24V AC 110V AC 220V DC 12V	2a

Auxiliary Contact Unit

Model	Pole	Contact Componet	Application Contactor
CAU-2	2	2a, 1a1b, 2b	CMC 9N~85N
CAU-4	4	4a, 3a1b, 2a2b, 1a3b, 4b	CMC 10~80

Model	Pole	Contact Componet	Application Contactor
CAU-1	2	1a1b	CMC 9N~85N
CAU-100	2	1a1b	CMC 100~220

Rating

Type		Rated Operational Current(A)																Continuous Current (Ith)
		AC15(11)				DC13(11)				AC12(11)				DC12(14)				
		110V	220V	440V	550V	24V	48V	110V	220V	110V	220V	440V	550V	24V	48V	110V	220V	
Head-on	CAU-2	6	3	1.5	1.2	3	1.5	0.55	0.27	10	8	5	5	5	3	2.5	1	16
	CAU-4	6	3	1.5	1.2	3	1.5	0.55	0.27	10	8	5	5	5	3	2.5	1	16
Side-on	CAU-1	6	3	1.5	1.2	3	1.5	0.55	0.27	10	8	5	5	5	3	2.5	1	16
	CAU-100	6	5	1.5	1.2	6	1.5	0.55	0.27	10	8	5	5	5	5	2.5	1	16

Perormance

Type	Switching Frequency (Operation/Hour)	Mechanical Endurance (x10000)	Electrical Endurance(x10000)				
			AC15(11)		AC12(13)		DC13(11), 125(14)
			220V	440V	220V	440V	24~220V
CAU-2	1800	2000	50	50	25	25	50
CAU-4	1800	2000	50	50	25	25	50
CAU-1	1800	2500	50	50	25	25	50
CAU-100	1800	1000	50	50	25	25	50

Conformity to International Standards

Cheil magnetic motor and contactors are designed to conform to the relevant IEC recommendations and to the standards of as many countries as possible. Specifically, they conform to the following.

IEC60947-4-1 International / EN60947-4-1 Europe

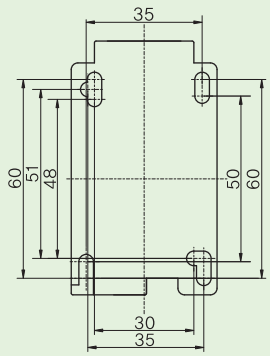
TYPE	MODEL	Europe		U.S.A / UL	
		CE MARK	TÜV	Recognition	
				U.S.A	Canada
Magnetic contact (AC control)	CMC 20-C	■	■	■	■
	CMC 25-C				
	CMC 9N	■	■	-	-
	CMC 12N				
	CMC 18N	■	■	■	■
	CMC 22N				
	CMC 32N	■	■	-	-
	CMC 40N				
	CMC 48N				
	CMC 50N				
	CMC 65N				
	CMC 75N				
	CMC 85N				
	CMC 10	■	■	-	-
	CMC 15				
	CMC 20				
	CMC 21				
	CMC 25	■	■	■	■
	CMC 35				
	CMC 48	■	■	-	-
	CMC 50				
	CMC 65				
	CMC 80				
	CMC 100				
	CMC 125				
	CMC 150				
	CMC 180				
	CMC 220				
	CMH 10				
	CMH 20				
Magnetic contact (DC control)	CMD 9N	-	-	-	-
	CMD 12N				
	CMD 18N				
	CMD 22N				
	CMD 10	■	■	-	-
	CMD 15				
	CMD 20				
	CMD 21				
	CMD 25				
	CMD 35				
Thermal overload relay	COR 22	■	■	-	-
	COR 40				
	COR 10				
	COR 20				
	COR 35				
	COR 80				
Contactor relay	CMR 4	-	-	-	-

Notes

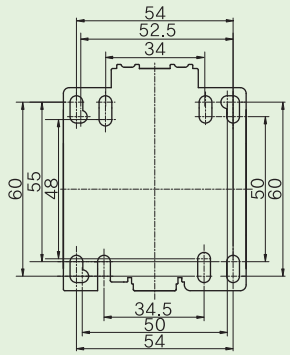
■ : CE Mark(Manufacturer's Declaration)=Standard model applicable, marking on the product.
UL. TÜV=Standard model applicable, marking on the product.

Magnetic Contactor

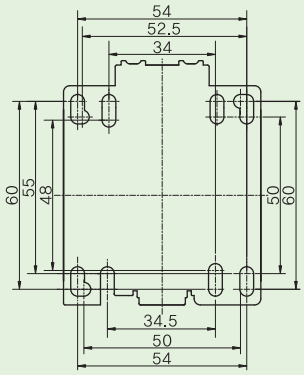
CMC(D) 10



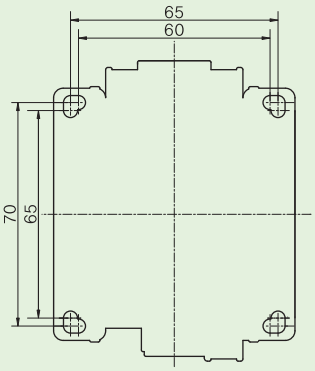
CMC(D) 15
CMC(D) 20



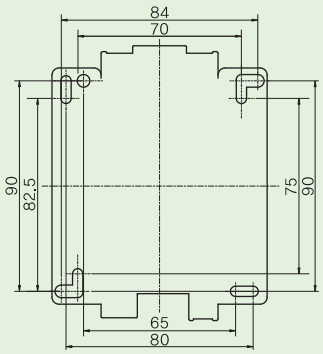
CMC(D) 21



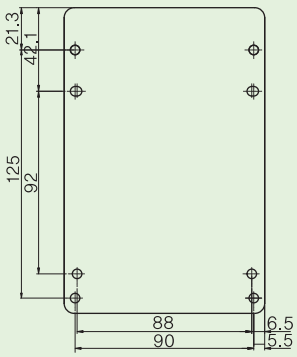
CMC(D) 25
CMC(D) 35
CMC(D) 48



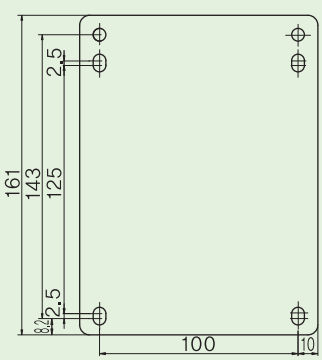
CMC 50
CMC 65
CMC 80



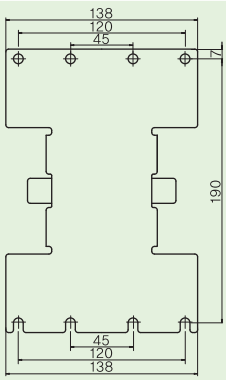
CMC 100
CMC 125



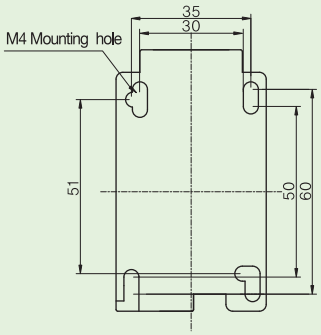
CMC 150



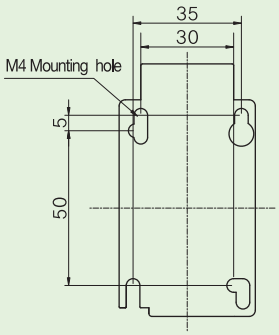
CMC 180
CMC 220



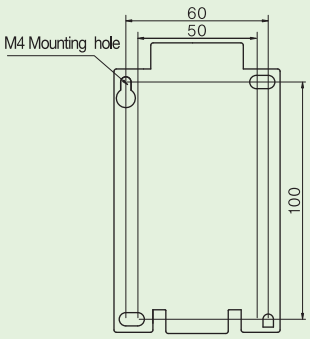
CMC 9N
CMC 12N
CMC 18N
CMC 22N



CMC 32N
CMC 40N
CMC 48N

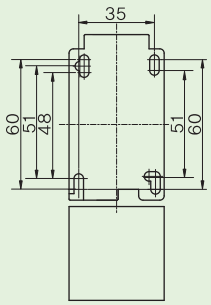


CMC 50N
CMC 65N
CMC 75N
CMC 85N

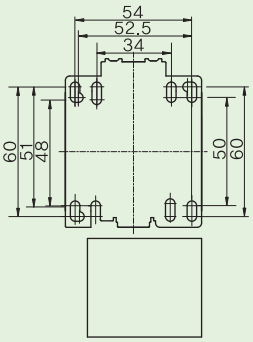


Motor Starters

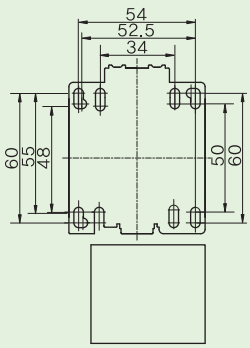
CMS 10



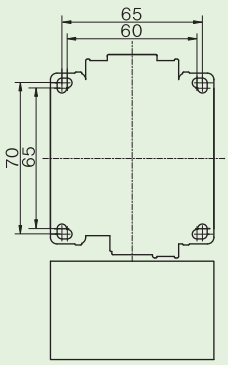
CMS 15
CMS 20



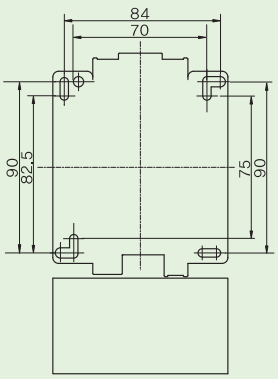
CMS 21



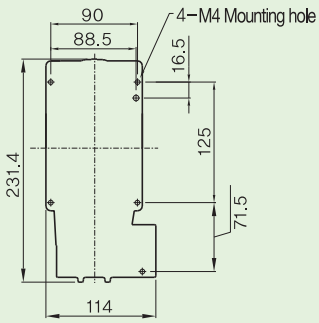
CMS 25
CMS 35
CMS 48



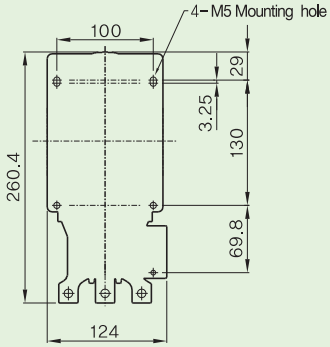
CMS 50
CMS 65
CMS 80



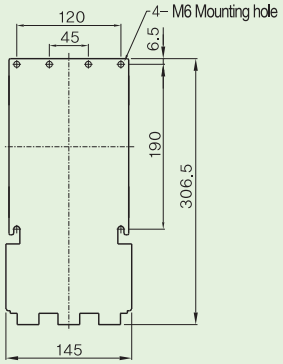
CMS 100
CMS 125



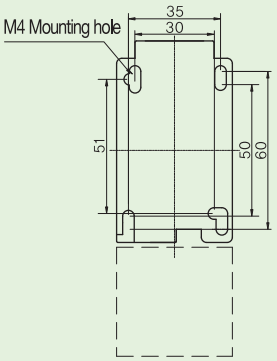
CMS 150



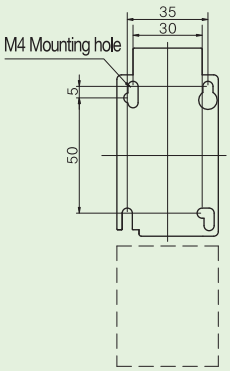
CMS 180
CMS 220



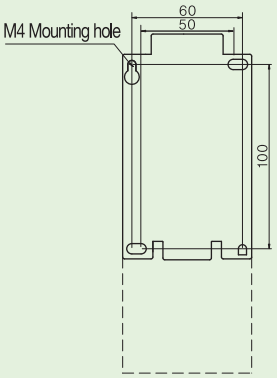
CMS 9N
CMS 12N
CMS 18N
CMS 22N



CMS 32N
CMS 40N
CMS 48N

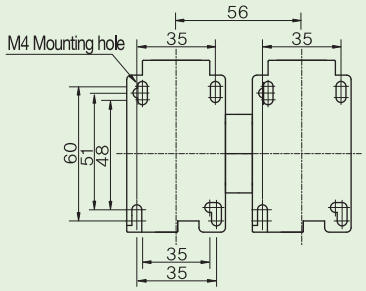


CMS 50N
CMS 65N
CMS 75N
CMS 85N

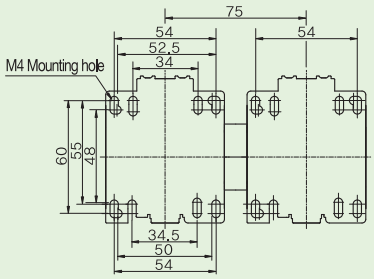


Reversing Comtactors

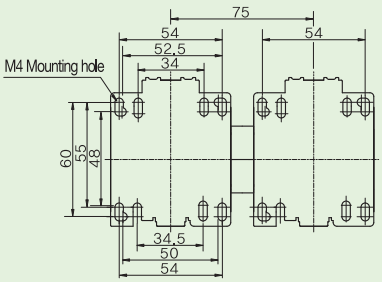
CMC 10–R



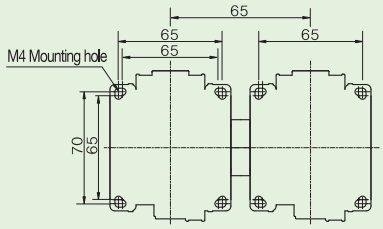
CMC 15–R
CMC 20–R



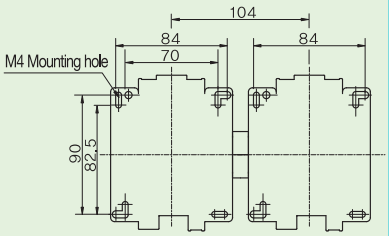
CMC 21–R



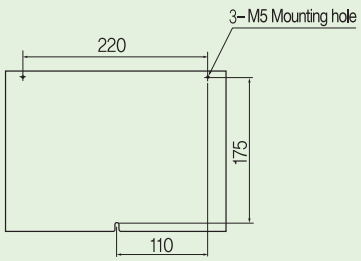
CMC 25–R
CMC 35–R



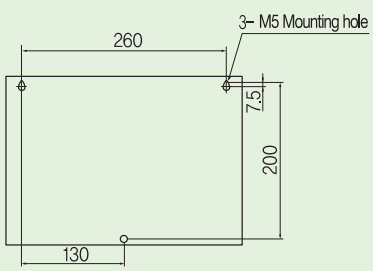
CMC 50–R
CMC 65–R
CMC 80–R



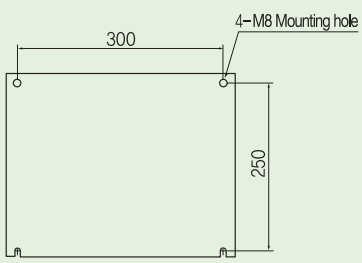
CMC 100–R
CMC 125–R



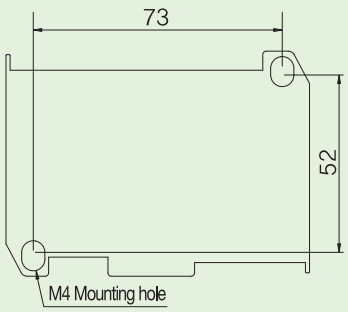
CMC 150–R



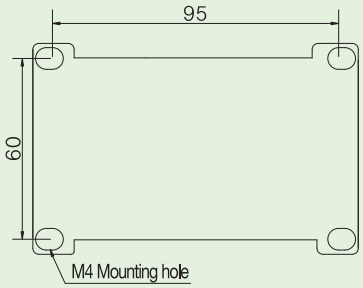
CMC 180–R
CMC 220–R



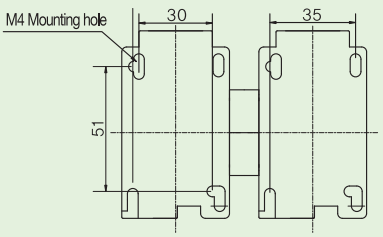
CMH 10



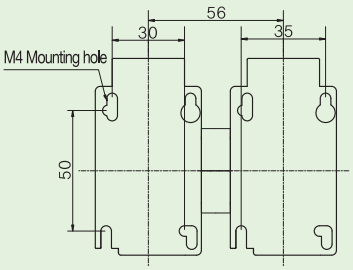
CMH 20



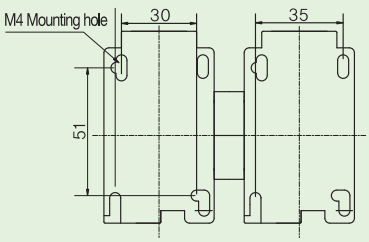
CMC 9N-R
CMC 12N-R
CMC 18N-R
CMC 22N-R



CMC 32N-R
CMC 40N-R
CMC 48N-R

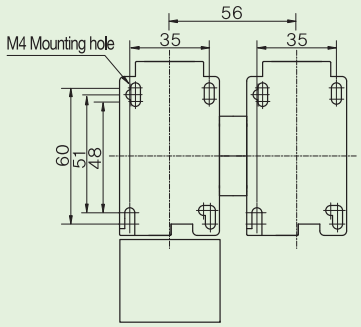


CMC 50N-R
CMC 65N-R
CMC 75N-R
CMC 85N-R

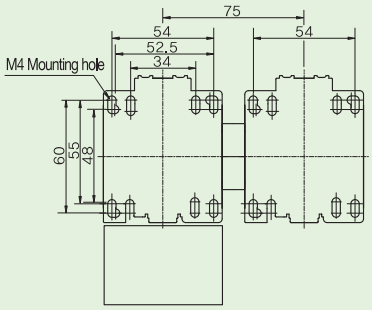


Reversing Contactors

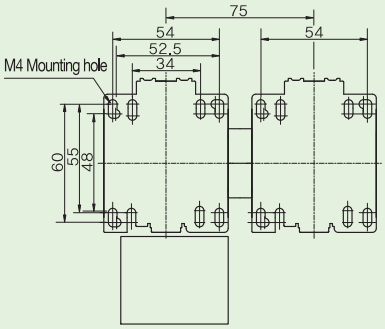
CMS 10-R



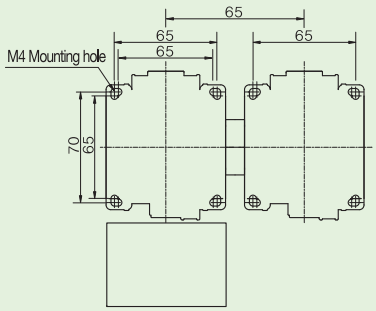
CMS 15-R
CMS 20-R



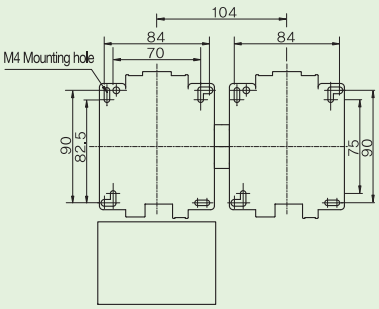
CMS 21-R



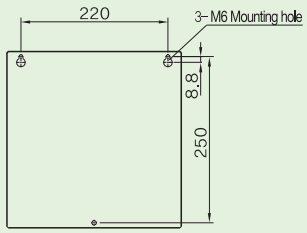
CMS 25-R
CMS 35-R



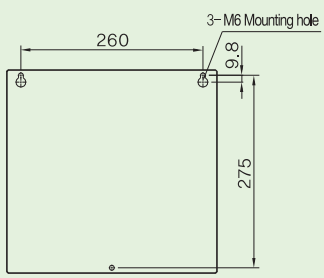
CMS 50-R
CMS 65-R
CMS 80-R



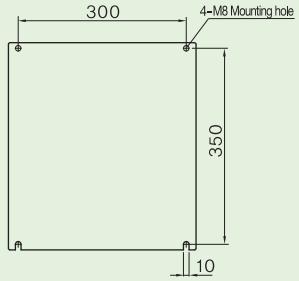
CMS 100-R
CMS 125-R



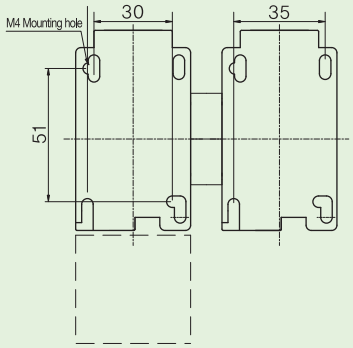
CMS 150-R



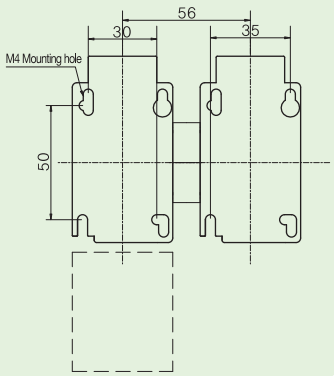
CMS 180-R
CMS 220-R



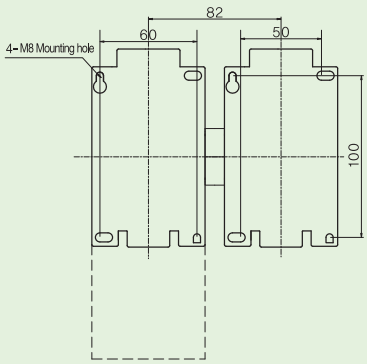
CMS 9N-R
CMS 12N-R
CMS 18N-R
CMS 22N-R



CMS 32N-R
CMS 40N-R
CMS 48N-R



CMS 50N-R
CMS 65N-R
CMS 75N-R
CMS 85N-R

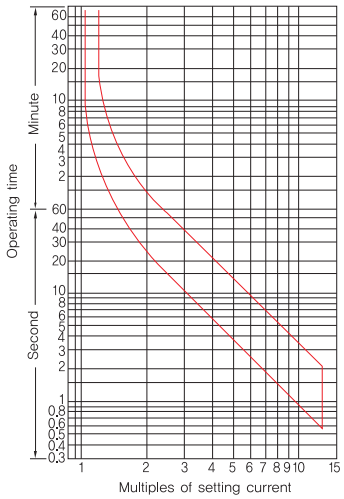


Overload relay

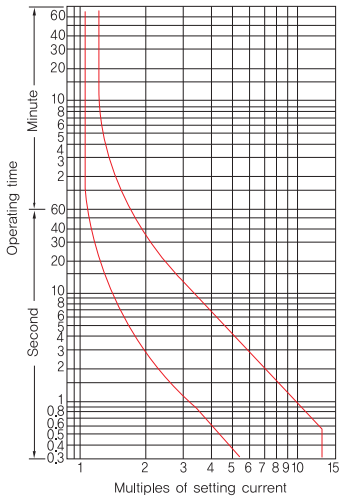
Characteristics Cuves

COR 10

Cold Start

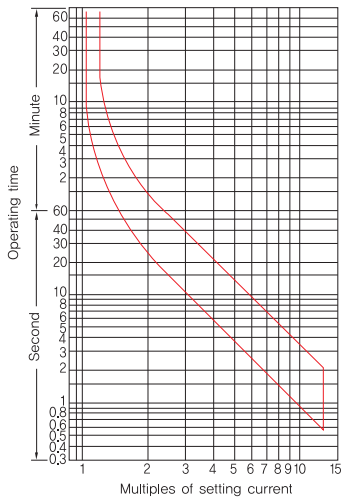


Hot Start

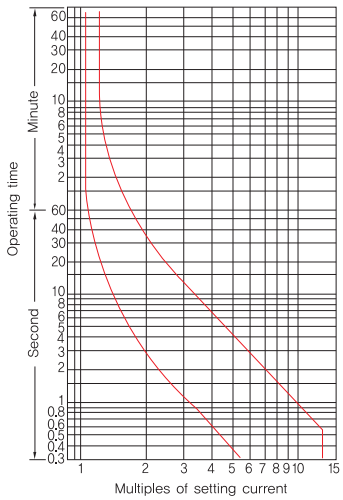


COR 20

Cold Start

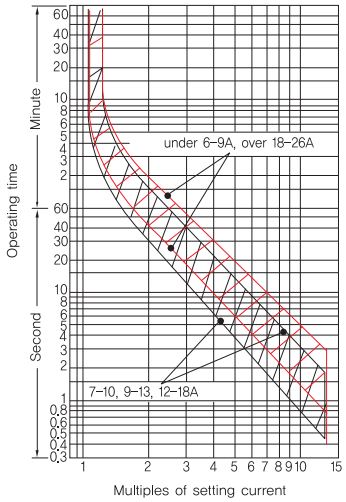


Hot Start

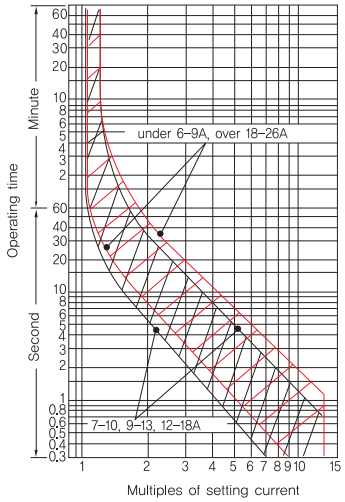


COR 35

Cold Start

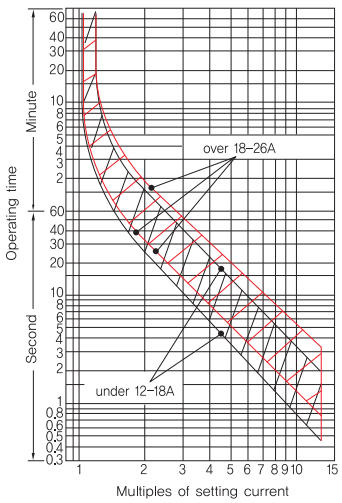


Hot Start

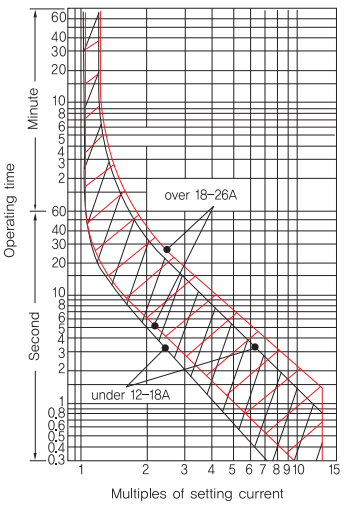


COR 80

Cold Start



Hot Start

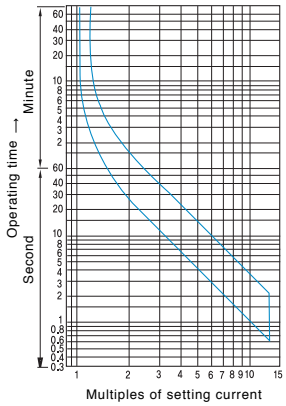


Overload relay

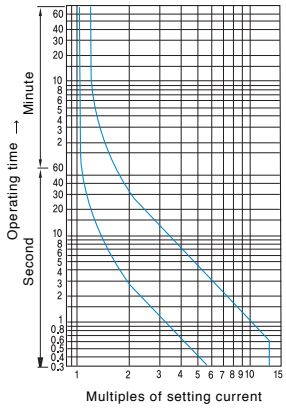
Characteristics Cuves

COR 22

Cold Start

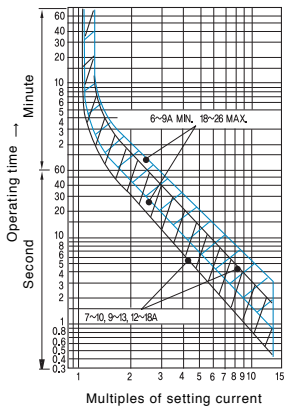


Hot Start

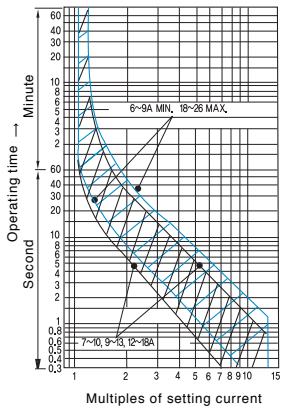


COR 40

Cold Start

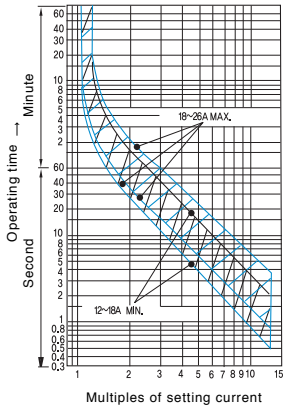


Hot Start

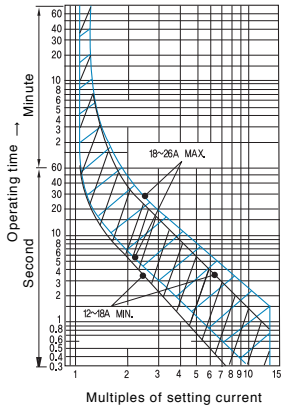


COR 85

Cold Start



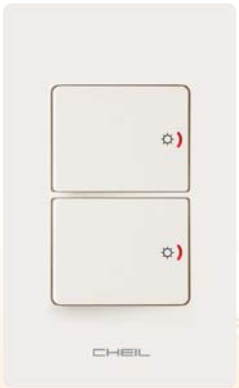
Hot Start



World best Quality, CHEIL

To be trusted is greater compliment
than to be loved.

D-INNO SERIES



■ Color Guide

• Acrylic Color

• D-Inno Ivory

• D-Inno Bronze

• D-Inno Red

• D-Inno Gold

• D-Inno Mirror

• Paint Color

• Pearl

• Silver

• Bronze

Switch

CHEIL ELECTRIC

20A

Single Pole Switch 1

CSDPH100011W
20A 250V AC
Single Pole

Single Pole Switch 2

CSDPH200011W
20A 250V AC
Single Pole

Single Pole Switch 3

CSDPH300011W
20A 250V AC
Single Pole

16A

Single Pole Switch 1

CSDPR100011W
16A 250V AC
Single Pole

Single Pole Switch 2

CSDPR200011W
16A 250V AC
Single Pole

Single Pole Switch 3

CSDPR300011W
16A 250V AC
Single Pole

Single Pole Switch 4 (Double)

CSDPR400021W
16A 250V AC
Single Pole

Single Pole Switch 5 (Double)

CSDPR500021W
16A 250V AC
Single Pole

Single Pole Switch 6 (Double)

CSDPR600021W
16A 250V AC
Single Pole

Single Pole, Lighted 1

CSDPR010011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 2

CSDPR020011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 3

CSDPR030011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 4 (Double)

CSDPR040021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 5 (Double)

CSDPR050021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 6 (Double)

CSDPR060021W
16A 250V AC
Single Pole, Lighted

3-WAY Switch 1

CSDPR001011W
16A 250V AC
3-WAY

3-WAY Switch 2

CSDPR002011W
16A 250V AC
3-WAY

3-WAY Switch 3

CSDPR003011W
16A 250V AC
3-WAY

CHEIL ELECTRIC

3-WAY, Lighted Switch 1

CSDPR000111W
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 2

CSDPR000211W
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 3

CSDPR000311W
16A 250V AC
3-WAY, Lighted

Time Switch(Touch Type)

CSDPT000011W
ADJUSTABLE TIME OUT.
INCANDESCENT LAMP ONLY.
1A 110/220V AC
Time Switch(Touch Type)

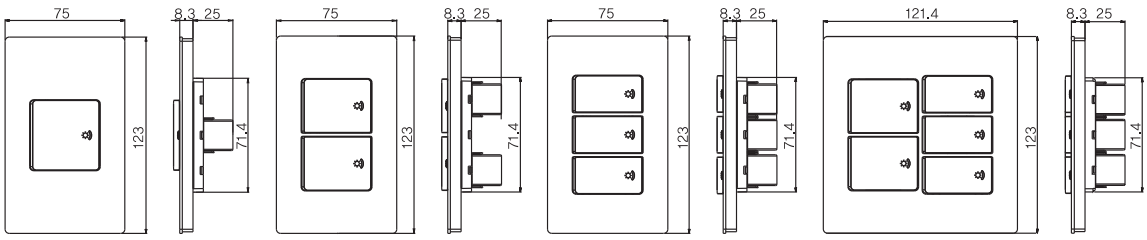
Rotary Dimmer

CSDPD100011W

Rotary Dimmer + Switch 2

CSDPD100012W

●External Dimensions



Switch Lighted 1 | Switch Lighted 2 | Switch Lighted 3 | Switch Lighted 5 (Double)

D-INNO SERIES

Safety Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDP RP21213W
16A 250V AC

Safety Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCDP RP21413W
16A 250V AC

Receptacle-Switched
Ground, 2Pole,
Duplex Receptacle, Switched

CCDP RE21213W
16A 250V AC

Receptacle(Horizontal Type)
Ground, 2Pole,
Duplex Receptacle(Horizontal)

CCDP RH21213W
16A 250V AC

Receptacle
Ground, 2Pole,
Single Receptacle

CCDP R021113W
16A 250V AC

Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDP R021213W
16A 250V AC

45° Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDP RF21213W
16A 250V AC

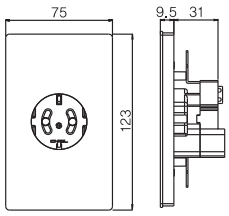
45° Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCDP RF21413W
16A 250V AC

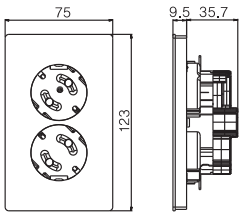
Receptacle
2Pole,
Duplex Receptacle

CCDNR011211W
AC 110~220V

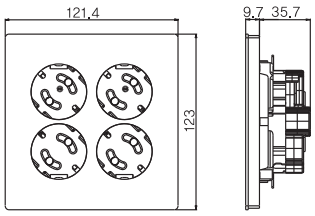
●External Dimensions



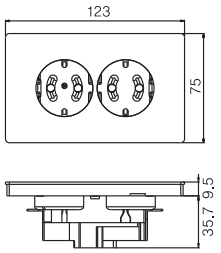
Receptacle 1



Receptacle 2



Receptacle 4(Double)



Receptacle(Horizontal Type)

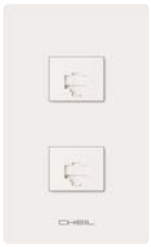
Others

CHEIL ELECTRIC

Telephone Jack (Modular Type)
8P (ISDN Type)

Receptacle for Telephone (Modular Type)
CTTA9M1000X1
CPPDN11011W0
(SWITCH 1 PLATE)

Telephone Jack (Modular Type2)
8P (ISDN Type)

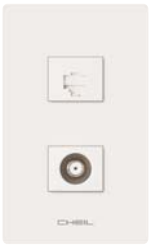


Receptacle for Telephone (Modular Type)
CTTA9M2000X1
CPPDN11021W0
(SWITCH 2 PLATE)

CATV UNIT
(75Ω, Cable TV Unit)

CTUAA10511W1 (TV Terminal Unit)
CTUAA20811W1 (TV Series Unit)
CTUAA31111W1 (TV Parallel Unit)
CPPDN11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT



8P 1EA + CATV UNIT
CTTA9M21V1X1–TV Terminal Unit
CTTA9M22V1X1–TV Series Unit
CPPDN11021W0
(SWITCH 2 PLATE)

Telephone Jack/ CATV UNIT

8P 2EA + CATV UNIT
CTTA9M21V1X1–TV Terminal Unit
CTTA9M22V1X1–TV Series Unit
CPPDN11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT(2GANG)

CTTA9M2000X1
CTUAA20811W1
Telephone Jack
(Modular Type/Cable TV Unit)
CPPDN11232W0
(SWITCH 5 PLATE)

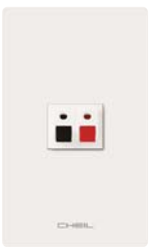
Banana Jack 2P

C-BANANA-1W1
Binding Post 2P
(Banana Jack)
CPWDP00001W0
(Plate)

Banana Jack 4P

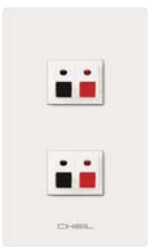
C-BANANA-2W1
Binding Post 4P
(Banana Jack)
CPWDP00001W0
(Plate)

Speaker Jack1



Speaker Jack
C-WIRING-1XO
CPPDN11011W0
(SWITCH 1 PLATE)

Speaker Jack2



Speaker Jack
C-WIRING-2XO
CPPDN11021W0
(SWITCH 2 PLATE)

ACRO CLASS

■ Color Guide

• Pearl

• Bronze

• Silver

• Gold Wood

• Wood

Switch

CHEIL ELECTRIC

20A

Single Pole Switch 1

CSACH100011W
20A 250V AC
Single Pole

Single Pole Switch 2

CSACH200011W
20A 250V AC
Single Pole

Single Pole Switch 3

CSACH300011W
20A 250V AC
Single Pole

16A

Single Pole Switch 1

CSACR100011W
16A 250V AC
Single Pole

Single Pole Switch 2

CSACR200011W
16A 250V AC
Single Pole

Single Pole Switch 3

CSACR300011W
16A 250V AC
Single Pole

Single Pole Switch 4 (Double)

CSACR400021W
16A 250V AC
Single Pole

Single Pole Switch 5 (Double)

CSACR500021W
16A 250V AC
Single Pole

Single Pole Switch 6 (Double)

CSACR600021W
16A 250V AC
Single Pole

Single Pole, Lighted 1

CSACR010011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 2

CSACR020011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 3

CSACR030011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 4 (Double)

CSACR040021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 5 (Double)

CSACR050021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 6 (Double)

CSACR060021W
16A 250V AC
Single Pole, Lighted

3-WAY Switch 1

CSACR001011W
16A 250V AC
3-WAY

3-WAY Switch 2

CSACR002011W
16A 250V AC
3-WAY

3-WAY Switch 3

CSACR003011W
16A 250V AC
3-WAY

CHEIL ELECTRIC

3-WAY, Lighted Switch 1

CSACR000111W
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 2

CSACR000211W
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 3

CSACR000311W
16A 250V AC
3-WAY, Lighted

Time Switch(Touch Type)

CSACT000011W
ADJUSTABLE TIME OUT.
INCANDESCENT LAMP ONLY.
1A 110/220V AC
Time Switch(Touch Type)

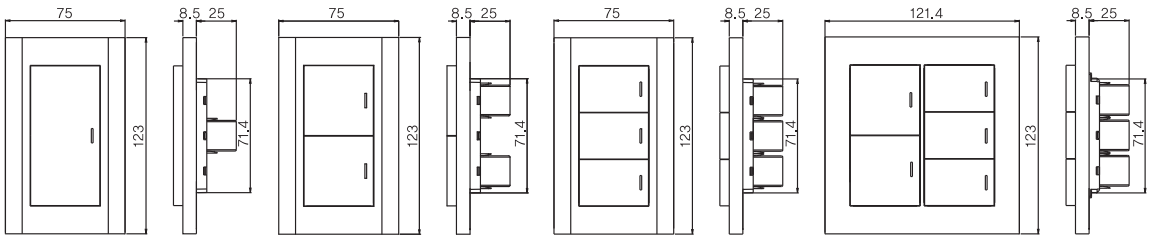
Rotary Dimmer

CSACD100011W

Rotary Dimmer + Switch 2

CSACD100021W

●External Dimensions



Switch Lighted 1 | Switch Lighted 2 | Switch Lighted 3 | Switch Lighted 5 (Double)

Safety Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDNRP21213W
16A 250V AC

Safety Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCDNRP21413W
16A 250V AC

Receptacle-Switched
Ground, 2Pole,
Duplex Receptacle, Switched

CCACRE21213W
16A 250V AC

Receptacle(Horizontal Type)
Ground, 2Pole,
Duplex Receptacle(Horizontal)

CCACRH21213W
16A 250V AC

Receptacle
Ground, 2Pole,
Single Receptacle

CCACR021113W
16A 250V AC

Receptacle
Ground, 2Pole,
Duplex Receptacle

CCACR021213W
16A 250V AC

45° Receptacle
Ground, 2Pole,
Duplex Receptacle

CCACRF21213W
16A 250V AC

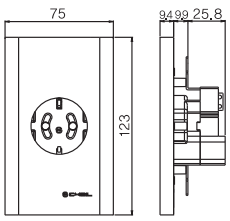
45° Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCACRF21413W
16A 250V AC

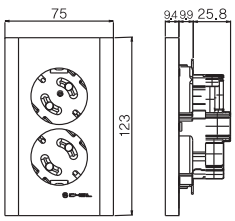
Receptacle
2Pole,
Duplex Receptacle

CCACR011211W
AC 110~220V

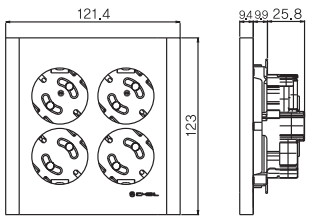
●External Dimensions



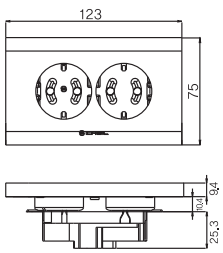
Receptacle 1



Receptacle 2



Receptacle 4(Double)



Receptacle(Horizontal Type)

Others

CHEIL ELECTRIC

Telephone Jack (Modular Type)
8P (ISDN Type)

Receptacle for Telephone (Modular Type)
CTTA9M1000X1
CPRAC11011W0
(SWITCH 1 PLATE)

Telephone Jack (Modular Type2)
8P (ISDN Type)

Receptacle for Telephone (Modular Type)
CTTA9M2000X1
CPRAC11021W0
(SWITCH 2 PLATE)

CATV UNIT
(75Ω, Cable TV Unit)

CTUAA10511W1 (TV Terminal Unit)
CTUAA20811W1 (TV Series Unit)
CTUAA31111W1 (TV Parallel Unit)
CPRAC11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT

8P1EA + CATV UNIT
CTTA9M21V1X1–TV Terminal Unit
CTTA9M22V1X1–TV Series Unit
CPRAC11021W0
(SWITCH 2 PLATE)

Telephone Jack/ CATV UNIT

8P2EA + CATV UNIT
CTTA9M21V1X1 –TV Terminal Unit
CTTA9M22V1X1 –TV Series Unit
CPRAC11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT(2GANG)

CTTA9M2000X1
CTUAA20811W1
Telephone Jack (Modular Type/Cable TV Unit)
CPRAC11052W0
(SWITCH 5 PLATE)

Banana Jack 2P

C-BANANA-1W1
Binding Post 2P (Banana Jack)
CPWAC00001X0
(Plate)

Banana Jack 4P

C-BANANA-2W1
Binding Post 4P (Banana Jack)
CPWAC00001X0
(Plate)

Speaker Jack1

Speaker Jack
C-WIRING-1XO
CPRAC11011W0
(SWITCH 1 PLATE)

Speaker Jack2

Speaker Jack
C-WIRING-2XO
CPRAC11021W0
(SWITCH 2 PLATE)

DECO ROYAL Ⅱ SERIES

Switch

CHEIL ELECTRIC

20A

Single Pole Switch 1

CSDCH100011W
20A 250V AC
Single Pole

Single Pole Switch 2

CSDCH200011W
20A 250V AC
Single Pole

Single Pole Switch 3

CSDCH300011W
20A 250V AC
Single Pole

16A

Single Pole Switch 1

CSDCR100011W
16A 250V AC
Single Pole

Single Pole Switch 2

CSDCR200011W
16A 250V AC
Single Pole

Single Pole Switch 3

CSDCR300011W
16A 250V AC
Single Pole

Single Pole Switch 4 (Double)

CSDCR400021W
16A 250V AC
Single Pole

Single Pole Switch 5 (Double)

CSDCR500021W
16A 250V AC
Single Pole

Single Pole Switch 6 (Double)

CSDCR600021W
16A 250V AC
Single Pole

Single Pole, Lighted 1

CSDCR010011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 2

CSDCR020011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 3

CSDCR030011W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 4 (Double)

CSDCR040021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 5 (Double)

CSDCR050021W
16A 250V AC
Single Pole, Lighted

Single Pole, Lighted 6 (Double)

CSDCR060021W
16A 250V AC
Single Pole, Lighted

3-WAY Switch 1

CSDCR001011X
16A 250V AC
3-WAY

3-WAY Switch 2

CSDCR002011X
16A 250V AC
3-WAY

3-WAY Switch 3

CSDCR003011X
16A 250V AC
3-WAY

CHEIL ELECTRIC

3-WAY, Lighted Switch 1

CSDCR000111X
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 2

CSDCR000211X
16A 250V AC
3-WAY, Lighted

3-WAY, Lighted Switch 3

CSDCR000311X
16A 250V AC
3-WAY, Lighted

Time Switch(Touch Type)

CSDCT000011X
ADJUSTABLE TIME OUT.
INCANDE SCENT LAMP ONLY.
1A 110/220V AC
Time Switch(Touch Type)

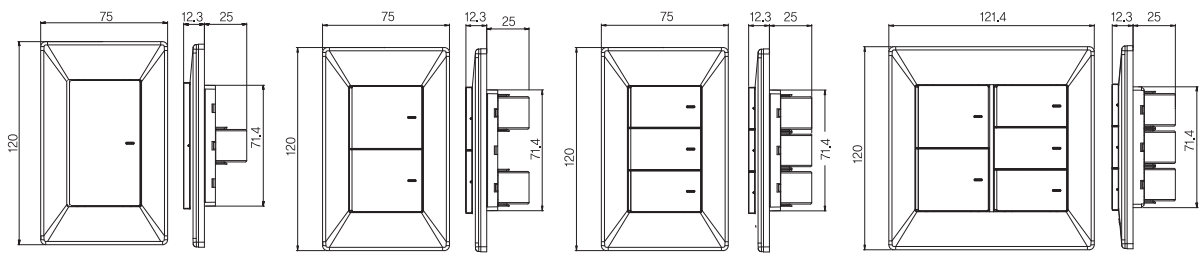
Rotary Dimmer

CSDCD100011X

Rotary Dimmer + Switch 2

CSDCD100021X

●External Dimensions



Switch Lighted 1 | Switch Lighted 2 | Switch Lighted 3 | Switch Lighted 5 (Double)

Safety Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDCRP21213W
16A 250V AC

Safety Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCDCRP21413W
16A 250V AC

Receptacle(Horizontal Type)
Ground, 2Pole,
Duplex Receptacle(Horizontal)

CCDCRH21213W
16A 250V AC

Receptacle
Ground, 2Pole,
Single Receptacle

CCDCR021113W
16A 250V AC

Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDCR021213W
16A 250V AC

45° Receptacle
Ground, 2Pole,
Duplex Receptacle

CCDCRF21213W
16A 250V AC

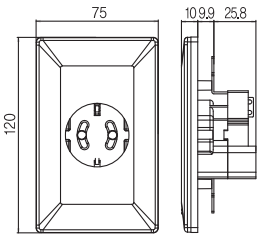
45° Receptacle
Ground, 2Pole,
2Duplex Receptacle

CCDCRF21413W
16A 250V AC

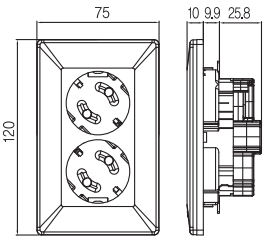
Receptacle
2Pole,
Duplex Receptacle

CCDCR011211W
AC 110~220V

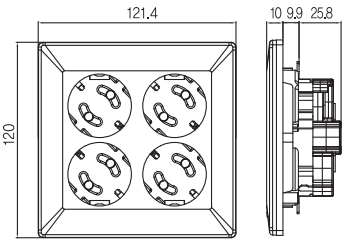
●External Dimensions



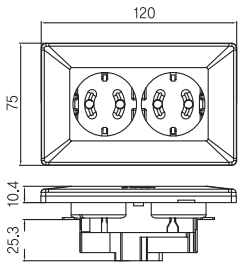
Receptacle 1



Receptacle 2



Receptacle 4(Double)



Receptacle(Horizontal Type)

Others

CHEIL ELECTRIC

Telephone Jack (Modular Type)
8P (ISDN Type)

Receptacle for Telephone (Modular Type)
CTTA9M1000X1
CPRDC11011W0
(SWITCH 1 PLATE)

Telephone Jack (Modular Type2)
8P (ISDN Type)

Receptacle for Telephone (Modular Type)
CTTA9M2000X1
CPRDC11021W0
(SWITCH 2 PLATE)

CATV UNIT
(75Ω, Cable TV Unit)

CTUAA10511W1 (TV Terminal Unit)
CTUAA20811W1 (TV Series Unit)
CTUAA31111W1 (TV Parallel Unit))
CPRDC11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT

8P1EA + CATV UNIT
CTTA9M21V1X1-TV Terminal Unit
CTTA9M22V1X1-TV Series Unit
CPRDC11021W0
(SWITCH 2 PLATE)

Telephone Jack/ CATV UNIT

8P2EA + CATV UNIT
CTTA9M21V1X1-TV Terminal Unit
CTTA9M22V1X1-TV Series Unit
CPRDC11031W0
(SWITCH 3 PLATE)

Telephone Jack/ CATV UNIT(2GANG)

CTTA9M2000X1
CTUAA20811W1
Telephone Jack
(Modular Type/Cable TV Unit)
CPRDC11052W0
(SWITCH 5 PLATE)

Banana Jack 2P

C-BANANA-1W1
Binding Post 2P
(Banana Jack)
CPWDC00001X0
(Plate)

Banana Jack 4P

C-BANANA-2W1
Binding Post 4P
(Banana Jack)
CPWDC00001X0
(Plate)

Speaker Jack1

Speaker Jack
C-WIRING-1XO
CPWDC00001W0
(SWITCH 1 PLATE)

Speaker Jack2

Speaker Jack
C-WIRING-2XO
CPWDC00001W0
(SWITCH 2 PLATE)

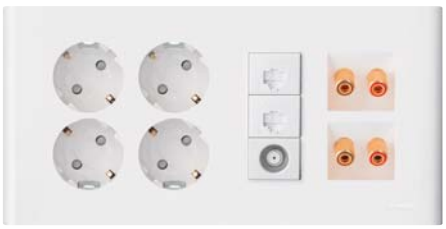
Multy System

Multy System

• ACRO

Bedroom type CUACBH21313W Plate : CPRAC33132X0 / Body : CUACBH21314W

Living room type CUACLF21513W Plate : CPRAC33052X0 / Body : CUACLF21514W

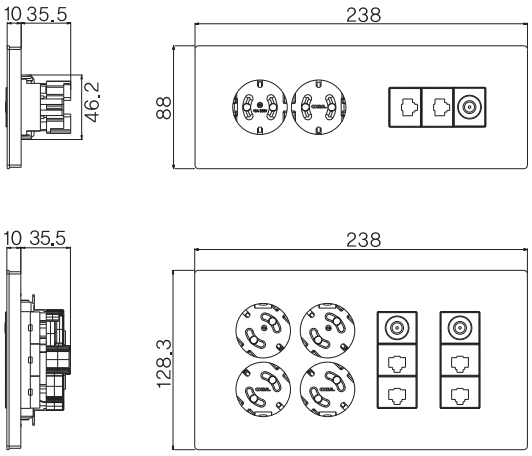


• D-INNO

Bedroom type CUDNBH21313W Plate : CPRDN33132X0 / Body : CUDNBH21314W

Living room type CUDNLF21513W Plate : CPRDN33052X0 / Body : CUDNLF21514W

●External Dimensions



■ Features

- All-in-one type of receptacle and communicat terminal
- Convenient to use
- Easy to install
- Simple and elegant design
- Clear and simple balance with interior image

Switch type receptacle

CHEIL ELECTRIC

Switch type receptacle

• ACRO

Switch Type Receptacle 1 Socket

CCACM021113X

Switch Type Receptacle 2 Socket (Double)

CCACM021213X

• D-INNO

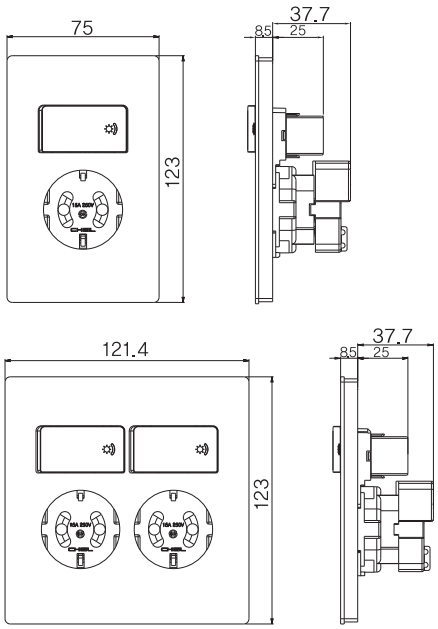
Switch Type Receptacle 1 Socket

CCDNM021113X

Switch Type Receptacle 2 Socket (Double)

CCDNM021213X

●External Dimensions



■ Upon external electrical construction

1. External power when connecting switch part & receptacle part..
- connect or disconnect to the power supply without unplugging receptacle plug
2. When individual power is supplied through external connection cable(power cable)
- Switch controls lamp
- Usable as receptacle
- Multi-functional
3. Incombustible material
4. In case of lamp- function of front lamp type switch
- checking external power supply or on/off
- Easy to recognize the location of receptacle

Receptacle Type Ground Fault Circuit Interrupter

❖ Protect lives from electric shock.

- Safely usable in bathroom, kitchen, and utility room where have high possibility of electrical short because of humidity, etc.
- Socket type circuit breaker of cheil protects children who have no concept for electricity from electrical shock accidents.
- Safely usable when you are not sure if it is grounded, or not.

❖ Usage

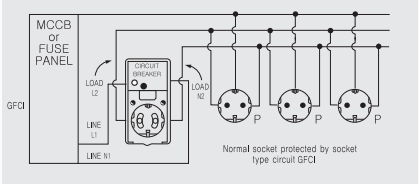
- Available for various places with high possibility of electrical short.
- Bedroom, kitchen, bathroom, and under eaves
- Underwater lightning in hotel, and swimming pool, or vessel

《SPECIFICATIONS FOR PRODUCT》

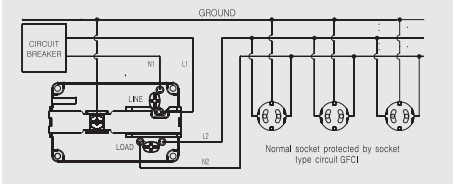
PRODUCT NAME	GF114 / GF114-2
RATED CURRENT(A)	15
RATED VOLTAGE(V)	220V
RATED RESIDUAL OPERATING CURRENT(mA)	15
RATED RESIDUAL NON-OPERATING CURRENT(mA)	7.5
RESIDUAL ORERATING TIME(msec)	30

《SCHEMATIC》

• GF114



• GF114-2



If installation is combined with our circuit breaker for cabinet panel, protective collaboration with the method of selective cut off is available, and therefore, branch circuit without electrical short can keep applying electric current.

CHEIL ELECTRIC

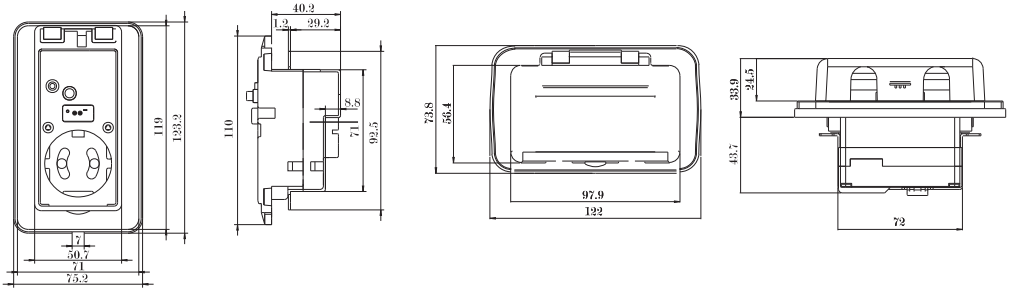
GF114
GFCI, Single Receptacle

CGFCI-114R-W

GF114-2
GFCI, Duplex Receptacle, Horizontal Type

CGFCI-114R-H

《DETAIL DRAWING》



Water Proof Plate

Water Proof Switch Type Receptacle
Ground, 2Pole, Single Receptacle

16A 250V AC
(WATER PROOF PLATE)
CCACWM21113W

Water Proof Receptacle(45°)
Ground, 2Pole, Duplex Receptacle

16A 250V AC
(WATER PROOF PLATE)
CCACWF21213W

Water Proof Receptacle
Ground, 2Pole, Single Receptacle

16A 250V AC
(WATER PROOF PLATE)
CCDRW02111 3W

Water Proof Receptacle (Horizontal Type)
Ground, 2Pole, Duplex Receptacle

16A 250V AC
RECEPTACLE, GROUNDING
(WATER PROOF PLATE)
CCDRWH21213W

Receptacle Type Ground Fault Circuit Interrupter

Multifunctional Remote Control Switch

Multifunctional Remote Control Switch

CHEIL ELECTRIC

Multifunctional Remote Control Switch

Acro cyber Multifunctional Remote Control Switch

1 SWITCH 2 WIRE

CRMAC120011S
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

2 SWITCH 3 WIRE

CRMAC230011S
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

Deco royal II cyber Multifunctional Remote Control Switch

1 SWITCH 2 WIRE

CRMDC120011S
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

2 SWITCH 3 WIRE

CRMDC230011S
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

Remote Control Switch

Multifunctional Remote Control Switch

1 SWITCH 2 WIRE

CRMCM120011W
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

2 SWITCH 3 WIRE

CRMCM230011W
SELF POWER SUPPLY TYPE
1.8A 220V AC Max 20~400W
NO ANTI-BLACKOUT CHARGING

Remote Control Switch

2 SWITCH 3 WIRE

CRMCH230011W
SELF POWER SUPPLY TYPE
1.8A 220V AC
Max 20~400W

Remote Control Switch + 3 Switch

2 SWITCH 3 WIRE

CRMCH560021W
SELF POWER SUPPLY TYPE
1.8A 220V AC
Max 20~400W

《 Please pay special attention for the followings 》

Anti-blackout charging (Max.7 Days) to be launched-Differential price from present products.

Capacitor for power factor correction which is supplied by us should be connected when...

1. Using light bulb of 15W or less
2. Using general fluorescent light without capacitor for power factor correction
3. Using magnentic fluorescent light (with internal trans) or magnetic three wave lamp
4. Using electronic fluorescent light with the problem of lighting
5. Using electronic three wave lamp with the problem of lighting
6. If you are already using electronic fluorescent light with capacitor for power factor correction you should remove it and connect the capacitor for power factor correction supplied by Cheil as per schematic

Please pay special attention for the followings

1. In case of 1switch/2wire, and 2switch 3wire, the sum of current (please do not use more than 1,2A of the sum of current)
2. Please connect to switch1 schematic, and use when 2switch 3wire is used only for 1switch 2wire
3. Please do not use under conditions of high humidity and dew
4. Please do not perform dielectric voltage with standing test between terminals, and insulation resistance test because this may cause malfunction.
5. Please do not use U-Type three wave lamp because its function is incomplete, and reception distance is short.
6. When using electronic stabilizer, please keep distance between stabilizer and receiver more than 1.5M

Speaker Phone

Speaker Phone

D-INNO Speaker Phone
EMERGENCY CALL DOOR FUNCTION

CSP - DO000000
SPEAKER PHONE (EMERGENCY CALL)
TELEPHONE, VOLUME CONTROL,
CONNECTED LINE IDENTIFICATION,
CALL WAITING, EMERGENCY CALL

D-INNO Speaker Phone
(Home network interlock)
EMERGENCY CALL DOOR FUNCTION

CSP - DH000000
TELEPHONE, VOLUME CONTROL, CONNECTED
LINE IDENTIFICATION, CALL WAITING, EMERGENCY
CALL, DOOR FUNCTION, INTERCOM(HOME
NETWORK INTERLOCK PRODUCT)

One Emergency Call Switch
EMERGENCY CALL DOOR FUNCTION

CSP - ES000000
EMERGENCY CALL SWITCH

Speaker Phone
EMERGENCY CALL DOOR FUNCTION

CSP - NO000005
SPEAKER PHONE (EMERGENCY CALL)
TELEPHONE, VOLUME CONTROL,
CONNECTED LINE IDENTIFICATION,
CALL WAITING, EMERGENCY CALL

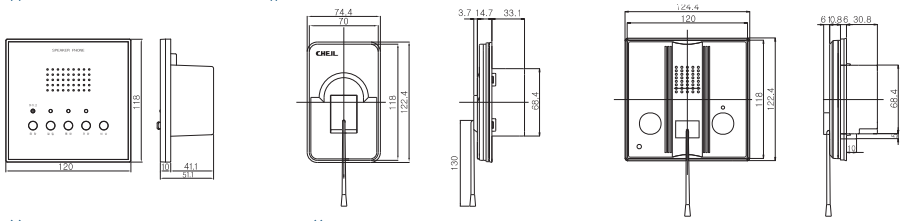
Speaker Phone
EMERGENCY CALL DOOR FUNCTION

CSP - NO000000
SPEAKER PHONE (EMERGENCY CALL)
TELEPHONE, VOLUME CONTROL,
CONNECTED LINE IDENTIFICATION,
CALL WAITING, EMERGENCY CALL

Speaker Phone

CSP - NX000000
SPEAKER PHONE
TELEPHONE, VOLUME CONTROL,
CONNECTED LINE IDENTIFICATION,
CALL WAITING

《EXTERNAL DIMENSIONS》



《INSTRNCTIONS & CANTIONS》

CALL BUTTON : Press "call button" to make a call.
"call" lamp will be turned on.
press "call button" again to hang up, and
check whether the lamp is turned off.

VOLUME CONTROL : Adjust volume

CALL WAITING : If you press "call button", lamp will
be turned on while talking to the other.

CONNECTED LIND IDENTIFICATION : Lamp blinks when receiving
calls with ringing(Call Receiving Indicator)

EMERGENCY CALL FUNCTION(PRODUCTS WITH EMERGENCY CALL BUTTON)
Press emergency call button for more than 2 Sec, or pull emergency call string down for more than 2 Sec.
This will make a call to home automated equipment, or security office.
(May be different according to planners, or constructor)
- Totally separated circuit from embeded reaiving telephone.

★ Easy wiring, and easy installtion becase extra power is not required and functions only with telephone cable.

- Please avoide moisture, dust, or corrosive gas.
- Body of telephone will be docolorized or transformed if cleaned by inflammables such as alcohol, benzol, and acetone.
- Immoderate impact or vibration may cause damage.
- Installation should be done by professional constructors, and please do not apply immoderat force.
  Moduler plugs are required for the connection of telephone lines, and the connection line for emergency call should be protected by taping to prevent short circuit, or for waterproofig.
- Please do not disassemble products arbitrarily except by our A/S staffs of Cheil.

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Other Devices / General Use Switch

CCZZR022111M
Ground, 2Pole, 1Receptacle
16A 250V AC
RECEPTACLE, GROUNDING
(EXPOSURE TYPE)

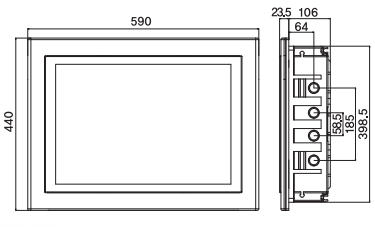
CCZZR022211M
Ground, 2Pole, 2Receptacle
16A 250V AC
RECEPTACLE, GROUNDING
(EXPOSURE TYPE)

CCZZQ022211W
Ground, 2Pole, 2Receptacle
16A 250V AC
RECEPTACLE, GROUNDING
(EXPOSURE TYPE)

CCELRD41112B
30A 480V
RECEPTACLE, GROUNDING
(LOCK TYPE)

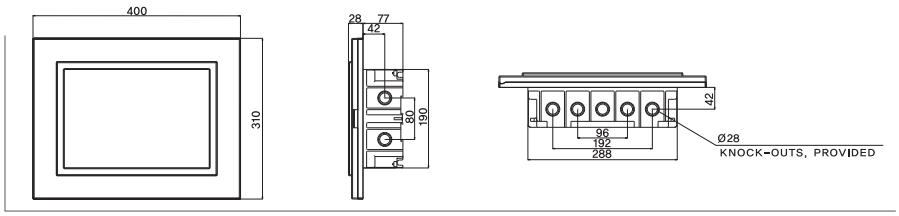
Home Panel Board(Customer Device Box)

New Picture Home Panel Board(Branch 20)

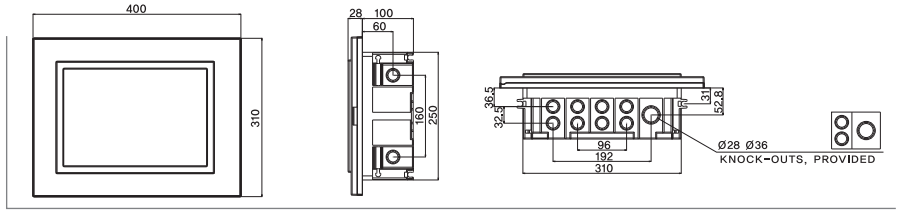


CHEIL ELECTRIC

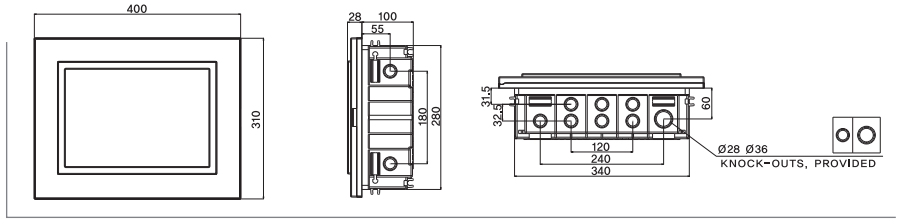
New Picture Home Panel Board (Branch 6)



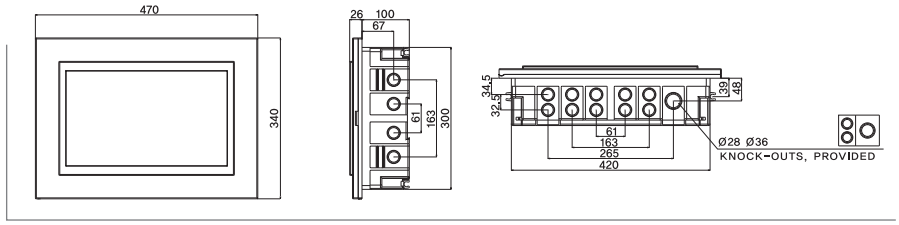
New Picture Home Panel Board (Branch 10)



New Picture Home Panel Board (Branch 12)



New Picture Home Panel Board (Branch 14)



Home Panel Board

CHEIL ELECTRIC

New Picture Home Panel Board (Branch 4)

New Picture Home Panel Board (Branch 5,6)

New Picture Home Panel Board-Slim Type (Branch 5,6)

New Picture Home Panel Board (Branch 10)

New Picture Home Panel Board-Slim Type (Branch 10)

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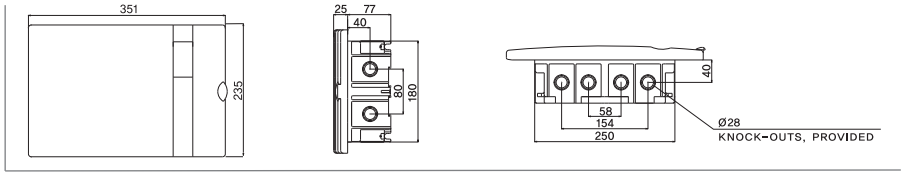
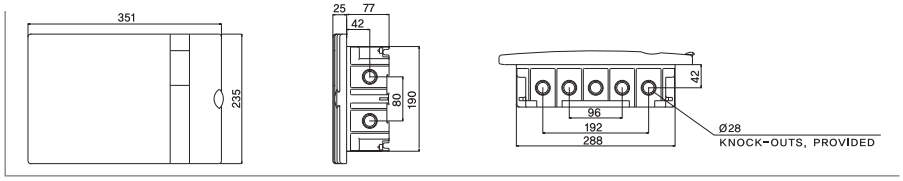
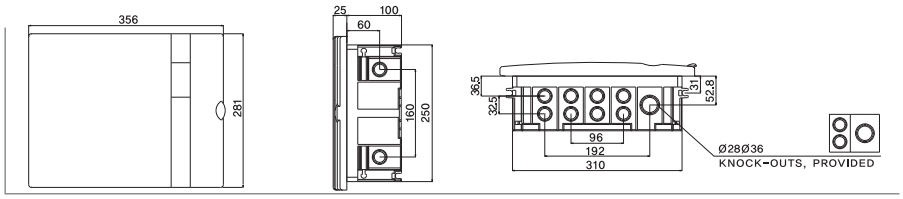
Cyber Home Panel Board (Branch 4)



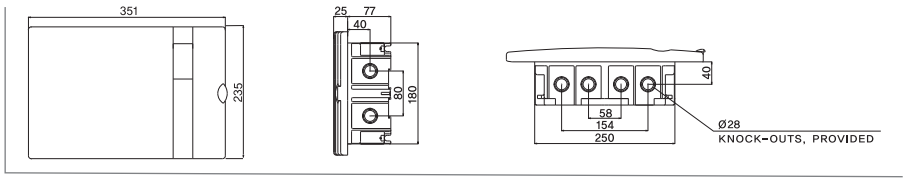
Cyber Home Panel Board (Branch 5,6)



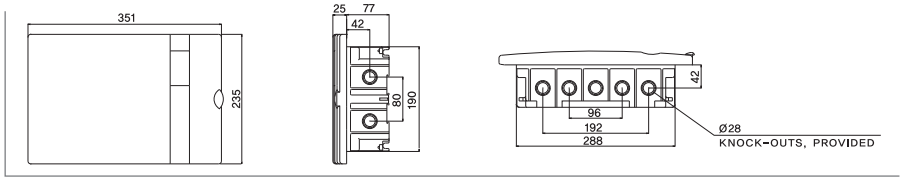
Cyber Home Panel Board (Branch 10)



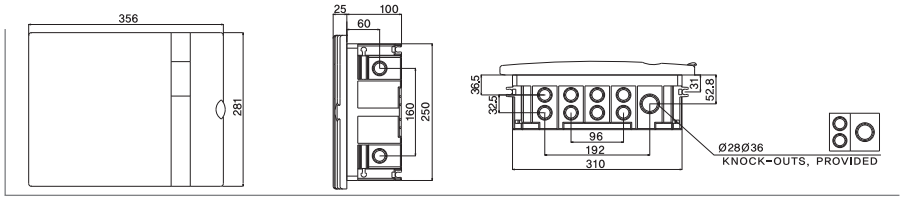
Cyber White Home Panel Board (Branch 4)



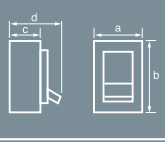
Cyber White Home Panel Board (Branch 5,6)



Cyber White Home Panel Board (Branch 10)



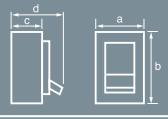
Molded Case Circuit Breaker

Frame size		100AF	50AF			
Frame type		CBD-102	CBD-52	CBE-52Nc	SB-52NH	SB-52NS
Model Image						
Rated	Number of poles	2P2E	2P2E	2P2E	2P2E	
	Rated operational(Ue) AC(V)	220/460	220/460	220/460	220	
	Rated insulation voltage (Ui)	500	500	600	250	
	Rated current(In) A	15, 20, 30, 40, 50, 60, 75, 100	15, 20, 30, 40, 50	(5, 10) 15, 20, 30, 40, 50	(5,10)15,20,30,40,50	(10)15,20,30,40,50
Technical data conforming to (kA)(S/m) KS C 8321	460V	5	2.5 / 5	(2.5)2.5	-	-
	220V	10	5 / 10	(5)5	(5)5	(10)10
Endurance (Number of operaions)	Electrical	6000	6000	6000	6000	
	Mechanical	4000	4000	4000	4000	
Dimensions(mm)	a	50	50	50	35	
	b	97	97	96	80	
	c	60	60	60	60	
	d	77	77	80	77	
Weight (kg)		0.3	0.3	0.3	0.13	
Overcurrent pick-up		Thermal-magnetic release	Thermal-magnetic release	Hydraulic-magnetic release	Hydraulic-magnetic release	
Installation and connection		Bolt or attached flat bar	Bolt or attached flat bar	Bolt or attached flat bar	Bolt or attached flat bar	
Accessories	Safety certificate	○	○	○	-	
	KS C 8321	○	○	○	○	

CHEIL ELECTRIC

50AF						30AF
SB-52NHB	SB-52NSB	SB-53NH	SB-53NS	SB-54NH	SB-54NS	SB-32N
						
2P2E		3P3E		4P3E		2P2E
220		220/460		220/460		220
250		500		500		250
(5, 10)15, 20, 30, 40, 50	(10)15, 20, 30, 40, 50	15, 20, 30, 40, 50		15, 20, 30, 40, 50		15, 20, 30
–	–	2.5	5	2.5	5	–
(5)5	(10)10	5	10	5	10	2.5
6000		6000		6000		6000
4000		4000		4000		4000
35		54.4		73.6		32
80		80		80		70
60		60		60		42.5
77		77		77		57
0.13		0.27		0.34		0.1
Hydraulic-magnetic release		Hydraulic-magnetic release		Hydraulic-magnetic release		Thermal-magnetic release
Bolt or attached flat bar		Bolt or attached flat bar		Bolt or attached flat bar		Bolt or attached flat bar
-		-		-		○
○		○		○		○

Earth Leakage Circuit Breaker

Frame size		100AF	50AF			
Frame type		CGE-102c	SG-52NH	SG-52NS	SG-52NHB	SG-52NSB
Model Image						
Rated	Number of poles	2P2E	2P2E		2P2E	
	Type of the protection	Overload, short-circuit and ground fault	Overload, short-circuit and ground fault		Overload, short-circuit and ground fault	
	Rated operational(Ue) AC(V)	220	220		220	
	Rated current(In) A	60, 75, 100	(5, 10)15, 20, 30, 40, 50	(10)15, 20, 30, 40, 50	(5, 10)15, 20, 30, 40, 50	
	Rated current sensitivity mA	30	15 / 30	15 / 30	15	30
	Residual current of f-time at Δn (sec)	≤0.03	≤0.03		≤0.03	
Technical data conforming to (kA)(Sym) KS C 4613	460V	–	–		–	
	220V	10	(5)5	(10)10	(5)5	
Endurance (Number of operaions)	Electrical	6000	6000		6000	
	Mechanical	4000	4000		4000	
Dimensions(mm)	a	75	35		35	
	b	96	80		80	
	c	60	60		60	
	d	80	77		77	
Weight (kg)		0.5	0.15		0.15	
Type of trip unit		Termal for overcurrent pick-up Electronic for earth leakage pick-up	Termal for overcurrent pick-up Electronic for earth leakage pick-up		Termal for overcurrent pick-up Electronic for earth leakage pick-up	
Overcurrent pick-up		Hydraulic-magnetic release	Hydraulic-magnetic release		Hydraulic-magnetic release	
Installation and connection		Bolt or attached flat bar	Bolt or attached flat bar		Bolt or attached flat bar	
Accessories	Safety certificate	○	○		○	
	KS C 8321	○	○		○	

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	50AF							30AF	
	SG-53NH	SG-53NS	SG-54NH	SG-54NS	CGE-52c	CGE-52SL	CGE-52S	SG-32N	SG-32Nc
									
	3P3E		4P3E		2P2E			2P2E	2P2E
	Overload, short-circuit and ground fault		Overload, short-circuit and ground fault		Overload, short-circuit and ground fault			Overload, short-circuit and ground fault	Overload, short-circuit and ground fault
	220/460		220/460		220			220	220
	15, 20, 30, 40, 50		15, 20, 30, 40, 50		(10)15, 20, 30, 40, 50			15, 20, 30	15, 20, 30
	15	30 100	15	30 100	15, 30	15	30	15, 30	15, 30
	≤0.03		≤0.03		≤0.03			≤0.03	≤0.03
	2.5	5	2.5	5	–			–	–
	5	10	5	10	5	(10)10		2.5	2.5
	6000		6000		6000			6000	6000
	4000		4000		4000			4000	4000
	54.4		73.6		50			67	32
	80		80		96			70	70
	60		60		60			42.5	42.5
	77		77		80			57	59
	0.3		0.37		0.32			0.18	0.14
	Termal for overcurrent pick-up Electronic for earth leakage pick-up		Termal for overcurrent pick-up Electronic for earth leakage pick-up		Termal for overcurrent pick-up Electronic for earth leakage pick-up			Termal for overcurrent pick-up Electronic for earth leakage pick-up	Termal for overcurrent pick-up Electronic for earth leakage pick-up
	Hydraulic-magnetic release		Hydraulic-magnetic release		Hydraulic-magnetic release			Hydraulic-magnetic release	Hydraulic-magnetic release
	Bolt or attached flat bar		Bolt or attached flat bar		Bolt or attached flat bar			Bolt or attached flat bar	Bolt or attached flat bar
	–		–		○			○	–
	○		○		○			○	○

Earth Leakage Circuit Breaker

Application Table of Main & Branch Circuit Breaker

DIVISION	BRANCH 4	BRANCH 5	BRANCH 6	NOTE
MAIN CIRCUIT BREAKER	CGE-52c CBD-52 SG-32N SB-32N	SG-32N SB-32N	CGE-52c CBD-52 SB-32N SG-52NH SG-32NH SB-52NH SB-32NH	
BRANCH CIRCUIT BREAKER	SG-32Nc SB-32N			

DIVISION	BRANCH 10	BRANCH 12	BRANCH 14,20	NOTE
MAIN CIRCUIT BREAKER	CGE-102c CBE-102N CBE-52N CGE-52c CBD-52 SG-52NH SG-53NH SG-54NH SG-32NH SB-52NH SB-53NH SB-54NH SB-32NH SG-32N	CGE-102c CBE-102N CBE-52N CGE-52c CBD-52 SG-52NH SG-53NH SG-54NH SG-32NH SB-52NH SB-53NH SB-54NH SB-32NH	CGE-102c CBE-102N CBE-52N CGE-52c CBD-52 SG-52NH SG-53NH SG-54NH SG-32NH SB-52NH SB-53NH SB-54NH SB-32NH CBE-52Nc CBD-102	
BRANCH CIRCUIT BREAKER	SG-52NHB SG-32NHB SG-32Nc SB-32N SB-52NHB SB-32NHB			

APU

Earth Leakage Circuit Breaker (Automatic Power Switching Unit)

Please do not worry about power on blackout~!!

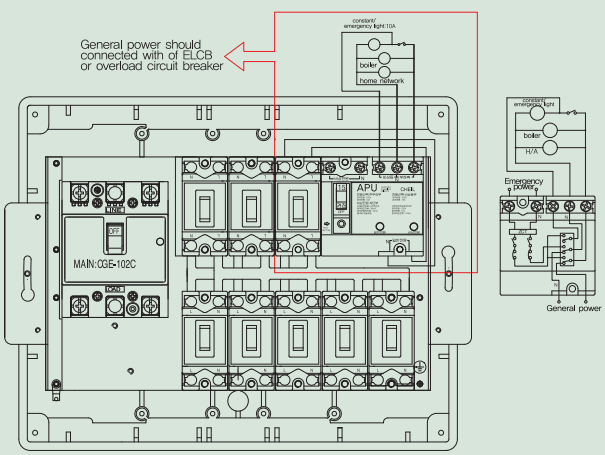
《FEATURES》

Home automation is available on blackout.
Identification for visitors, and security service.
Emergency call service, gas detection service.

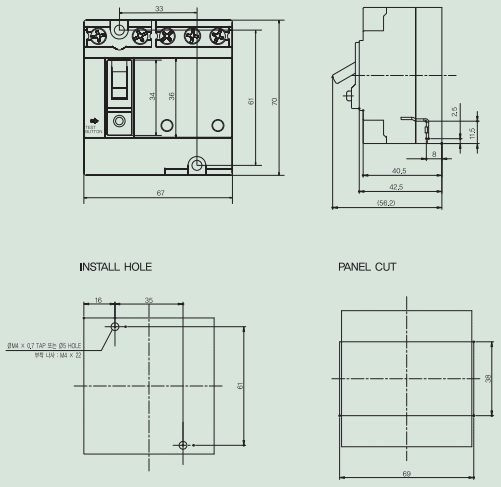
General lights can be used as emergency lights on blackout.

Supply power for heating on black out.
Supply emergency power to hot water distributor or boiler on blackout.

《WIRING DIAGRAM SCHEMATIC》



《EXTERNAL DIMENSIONS》



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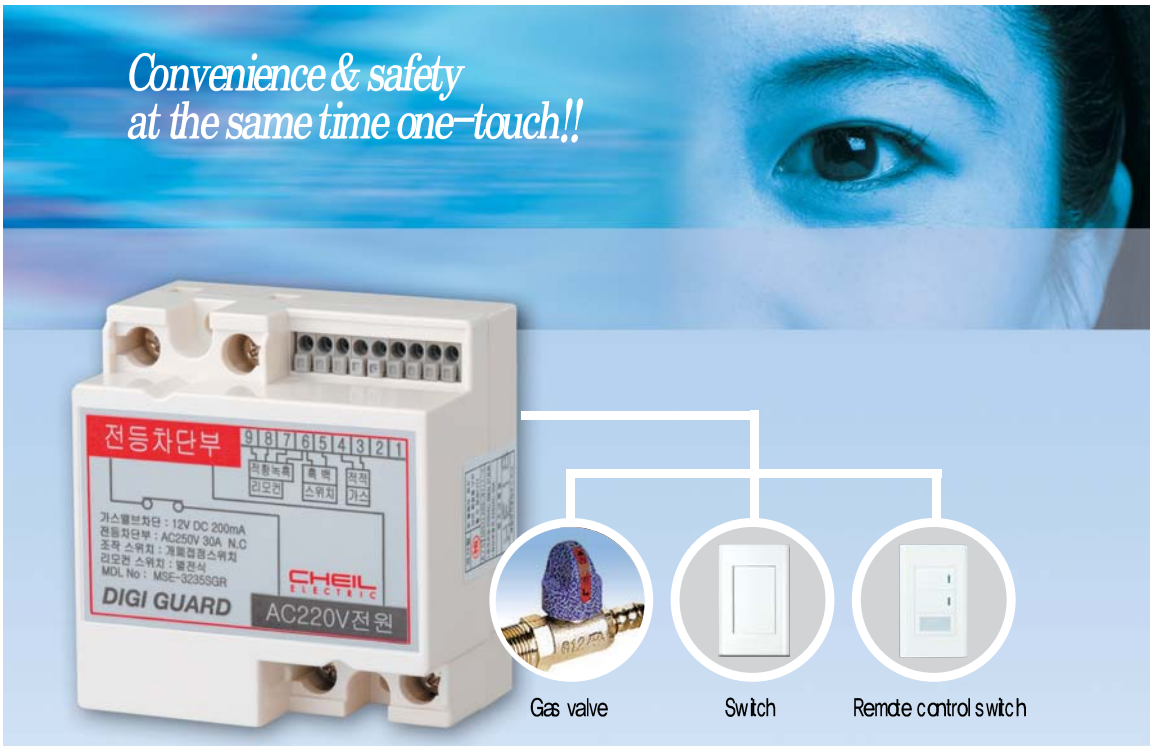
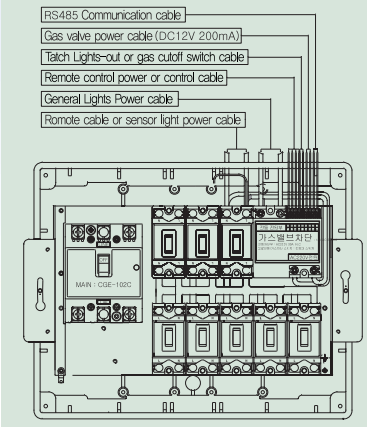
Batch Lights-out Controller

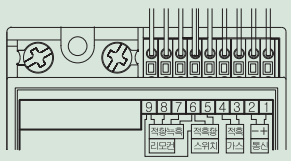


《SPECIFICATIOS》

Function \ Model	MSE-3235S	MSE-3235T	MSE-3235ST	MSE-3235SG	MSE-3235SRT	MSE-3235SGR	MSE-3235SGRT	Spec.
Switch	O	-	O	O	O	O	O	-
Gas	-	-	-	O	-	O	O	12V DC, 200mA
Remote control swith	-	-	-	-	O	O	O	-
Communication	-	O	O	-	O	-	O	-

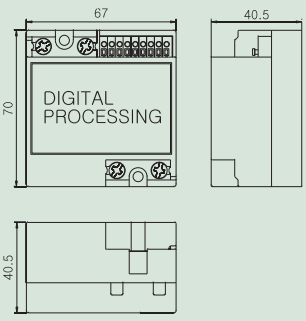
《WIRING DIAGRAM SCHEMATIC》





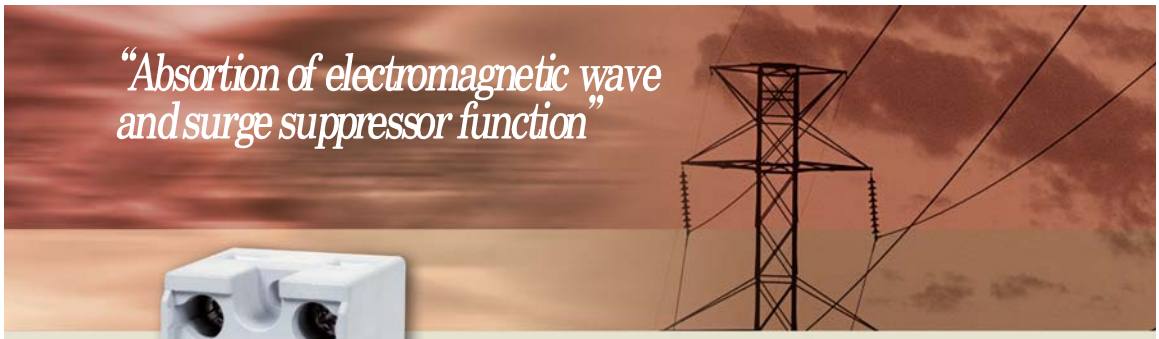
1. 1Socket 2pole or 2Socket3pole, which control newly cleveloped extra power supply or switch, are to be used for remote control.
2. Estalished cable installation is availble between switch box and home panel board In case of using established switch, it works without lamp and use without connecting red wire.
3. Condensers (capatitors) are not required for lighting equipments because remote control is extra power supply type.
4. Gas breaker is designed based on HKS-4000 OM of hankook fire equipment,and please consult with us to use other products.
5. Gas cut off can be canceled by operating gas switch under condition of batch turn-off.
6. Lamp power is designed as N.C (Normally Closed Contact) terminal to remove any inconvemence on using during failure.
7. RS485 communication is available with home network by given protocol, and turn-on/off, and batch trun-off of remote control are available by telephone through home network.

《EXTERNAL DIMENSIONS》



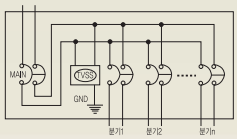
※ In case of installation combining with ELCB for cabinet panel protective cooperation of selective cut-off type is available which branch circuit without electric leakage keeps applying power.
※ specifications for gas valve, remote control, communication an so on can be changed upon customer's requirements.

T.V.S.S.(Transient Voltage Surge Suppressor)



- ●POWER INDICATOR : Green LED is while power is supplied.
- ●LIFE LIMIT INDICATOR : Red LED is on for replacement alert when reaches to the life limit by surge or overvoltage.
- ● BUZZER : Red LED is on with buzzer for replacement alert when reaches to the life limit by surge or overvoltage.

《WIRING DIAGRAM》



《FEATURES》

- ●Easy to install to indoor household cabinet panel or industrial panel.
- ● Effective to prevent negligent accidents such as malfunction of breaber cansed by surge or overvoltage inflow damage of electrical equipment,and fire.
- ●When TVSS reaches to the life limit because of frequent overvoltage, or surge, it will be detected, and indicated(lamp, buzzer), then replacement timing will be noticed.
- ●Improves power quality by decreasing noise inflow effectively, and prevents malfunction of electrical equipments, or extends life time.

《SPECIFICATIONS》

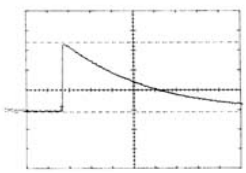
Classification		TVSS-2DL	TVSS-2DB	Note
Power voltage		220V / 60Hz	220V / 60Hz	
Breaking Current	L-N	6.5kA (1 Time)	6.5kA (1 Time)	
	N-G, L-G	6.5kA (1 Time)	6.5kA (1 Time)	
Effect of suppression	CONDUCTED NOISE	Max 35.6dB	Max 35.6dB	Load : SMPS for PC applied
	SURGE	Over 80%	Over 80%	
Appearance		32×70×44	32×70×44	Available for home panel board
Power Indication		Green LED	Green LED	(1.2/50μs) Voltage wave form(No load)
Life limit	LAMP	Red LED	Red LED	
	SOUND	-	BUZZER	

- Production according to power voltage spec is available.

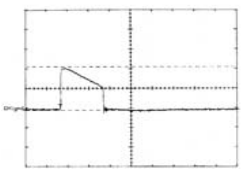
《APPLICATION EFFECFS》

SURGE WAVE FORM 6kV(1.2/50μs, 8/20μs)
(150KHz~30KHz)

Before Installed

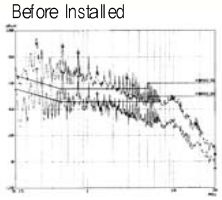


After Installed

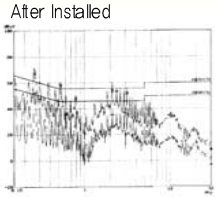


NOISE REDUCTION CHARACTERISTIC : Min.20dB

Before Installed



After Installed



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