



Best Capacitors for Best



Capacitors for motor starting
Capacitors for electrical apparatus
Capacitors for HID lighting

2023



MIRAI CONDENSER

Made in korea

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Company Information

Thank you for using MIRAI's products.

MIRAI was established in 2000 and specializes in manufacturing film capacitor for electric apparatus and electrolytic for motor. We has already been recognized for its excellence in many industries due to accumulated technology, abundant experience, and strict quality control as a manufacturer.

We are not satisfied with this and promise to produce better products to increase your productivity and reduce costs.

We all staff in MIRAI promise to make efforts to be an international and competitive company in world market as well as domestic based on your support and trust.
Thank you very much.

-Person in charge : Mr. Donghun, Lee

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-Homepage : <https://miraicon.kr>

-Instagram @miraicondenser

-Telegram @cloudco76



Line : [@ldonghun](https://line.me/tv/@ldonghun)

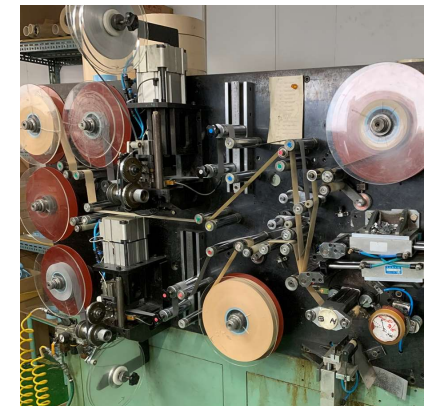


Company history

2000. 03. 13	Established as Mirai condenser.
2000. 06. 12	Started to product capacitors for lighting apparatus.
2001. 09. 29	Started to product capacitors for welding apparatus.
2002. 10. 22	Started to product capacitors for electrical apparatus.
2003. 03. 10	Started to product electrolytic capacitors for motor starting.
2005. 12. 14	Moved for factory expansion(#24dodang-dong)
2009. 12. 14	Moved for factory expansion(#16-2dodang-dong)
2017. 02. 13	Obtained a patent on electrolytic capacitors for motor starting.
2017. 05. 19	Obtained a patent on capacitors for welding apparatus.
2018. 03. 28	Obtained on a patent on film condensers.
2018. 06. 20	Started to product HID condensers.
2021. 02. 26	Acquired a certificate from CE. : AC Motor Running Capacitor in plastic type
2021. 02. 26	Acquired a certificate from CE. : AC Motor Running Capacitor in seaming type
2021. 02. 28	Acquired a certificate of AC Motor Starting Capacitor from CE.
2021. 03. 10	Acquired a certificate of Capacitor for power electronics from CE.
2021. 03. 24	Acquired a certificate from CE. : AC Motor Running Capacitor in curling type
2022. 06. 01	Moved for factory expansion(#Incheon)

Strong points


- CE Certificate / Korean Patent Certificate
- Abundant 23 years history
- Delivery to Big companies in Korea
 - a company specializing in pumps
 - a welder company
- High quality / Wide range
- Accurate delivery time
- Supply capability: 50,000 ea/Month
- We can do it in-house.
- Amazon Sales Start (June 2023)
- Made in korea



a certificate / patent

CE Certificate

CERTIFICATE
of Conformity
Low Voltage Directive 2014/35/EU




Registration No.: AN E0496146 0001
Report No.: KR21N6ZG 001

Holder: **MIRAI CONDENSER**
2nd Floor 15, Pyeongcheon-ro 817beon-gil,
Bucheon-si, Gyeonggi-do, 14520
Republic of Korea

Product: Capacitor
AC Motor Running Capacitor

Identification: Type Designation : HRC-xxyzzzzz
xx = 35, 45 or 63;
y = A, B or C;
zzzz = 0005 - 0100
Serial No. : n.a. (prototype)

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/35/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.


Certification Body

TagSun Park

Date: 28.02.2021

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

CERTIFICATE
of Conformity
Low Voltage Directive 2014/35/EU




Registration No.: AN E0496144 0001
Report No.: KR21L8QK 001

Holder: **MIRAI CONDENSER**
2nd Floor 15, Pyeongcheon-ro 817beon-gil,
Bucheon-si, Gyeonggi-do, 14520
Republic of Korea

Product: Capacitor
AC Motor Running Capacitor

Identification: Type Designation : HRC-xxyzzzzz
xx = 35, 45 or 63;
y = A, B or C;
zzzz = 0005 - 00600
Serial No. : n.a. (prototype)

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/35/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.


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CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

CERTIFICATE
of Conformity
Low Voltage Directive 2014/35/EU




Registration No.: AN E0498524 0001
Report No.: KR21H7SD 001

Holder: **MIRAI CONDENSER**
2nd Floor 15, Pyeongcheon-ro 817beon-gil,
Bucheon-si, Gyeonggi-do, 14520
Republic of Korea

Product: Capacitor
AC Motor Running Capacitor

Identification: Type Designation : HRC-xxyzzzzz
xx = 35, 45 or 63;
y = A, B or C;
zzzz = 0005 - 0100
Serial No. : n.a. (prototype)

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the Licence Holder's disposal. This is to certify that the tested sample is in conformity with Annex I of Council Directive 2014/35/EU, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex IV of the Directive.

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TagSun Park

Date: 28.02.2021

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE

Korean Patent Certificate

특허증
CERTIFICATE OF PATENT



특허 제 10-1844886 호
Patent Number

출원번호 제 10-2015-0173763 호
Application Number

출원일 2015년 12월 08일
Filing Date

공표일 2018년 03월 28일
Publication Date

발명의 명칭 Title of the Invention
발동 콘덴서

특허권자 Inventor
이상규
장기도

발명자 Inventor
이상규
장기도

위의 발명은 「특허법」에 따라 특허등록원부에 등록되었음을 증명합니다.
This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.

2018년 03월 28일

 특허청장
KOREAN INTELLECTUAL PROPERTY OFFICE
성준모

 2018년 03월 28일
공표등록 확인여부

특허증
CERTIFICATE OF PATENT



특허 제 10-1707886 호
Patent Number

출원번호 제 10-2015-0106130 호
Application Number

출원일 2015년 07월 27일
Filing Date

공표일 2017년 02월 13일
Publication Date

발명의 명칭 Title of the Invention
모터 기동용 전해콘덴서

특허권자 Inventor
이상규
장기도

발명자 Inventor
이상규
장기도

위의 발명은 「특허법」에 따라 특허등록원부에 등록되었음을 증명합니다.
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2017년 02월 13일

 특허청장
KOREAN INTELLECTUAL PROPERTY OFFICE
최동욱

특허증
CERTIFICATE OF PATENT



특허 제 10-1739761 호
Patent Number

출원번호 제 10-2015-0091347 호
Application Number

출원일 2015년 06월 26일
Filing Date

공표일 2017년 05월 19일
Publication Date

발명의 명칭 Title of the Invention
용량용 콘덴서 장치

특허권자 Inventor
이상규
장기도

발명자 Inventor
이상규
장기도

위의 발명은 「특허법」에 따라 특허등록원부에 등록되었음을 증명합니다.
This is to certify that, in accordance with the Patent Act, a patent for the invention has been registered at the Korean Intellectual Property Office.

2017년 05월 19일

 특허청장
KOREAN INTELLECTUAL PROPERTY OFFICE



Electrolytic Capacitor for Motor Starting

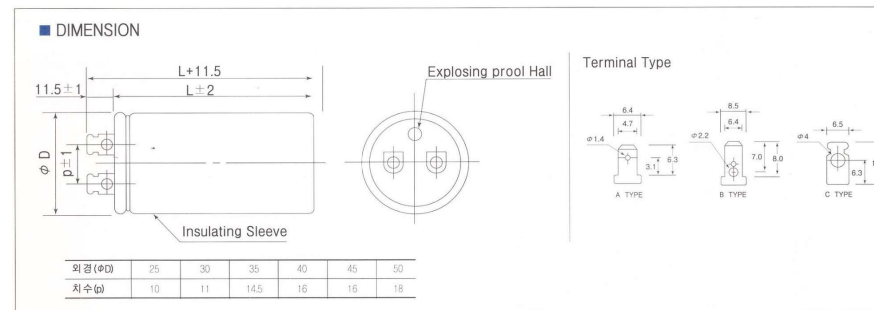
■ SPECIFICATIONS

- The AC motor Starting electrolytic capacitor is used connect to the starting winding of the motor, and the magnetic flux generated by the starting winding is provided by about 90 degrees ahead of the magnetic flux of the main motor
- After starting, the motor operates alone
- Therefore, it is a capacitor used in a motor of a load that requires a large starting torque. Because the large starting torque is generated despite the small starting current by the action of the capacitor

ITEMS	PERFORMANCE
OPERATING TEMPERATURE RANGE	-20°C ~ +65°C
CAPACITANCE TOLERANCE	0 ~ +20% (20/2 °C)
POWER FACTOR MAX	8% MAX (20/2 °C)
ENDURABLE VOLTAGE	1,500VAC 1MINUTE MIN.
INSULATING RESISTANCE	500VDC 10 MΩ MIN
OVERVOLTAGE TEST	The Capacitor should withstand of 1.4time of the rated voltage applied for 30sec The Capacitor should withstand of 1.2time of the rated voltage applied for 120sec
LIFE TEST AT65+2°C AND RATED VOLTAGE	110/125 W.V : 1 sec ON,29 sec OFF CHARGE CYCLE, 75,000 IN A ROW TIMES. 160/220 W.V : 1 sec ON,59 sec OFF CHARGE CYCLE, 30,000 IN A ROW TIMES.
OPERATING FREQUENCY	75,000 times in a row 30,000 times in a row 50/60 Hz
REFERENCE STANDARD	KSC - 4805 , JIS - 4905



■ DIMENSION



■ RATINGS (Resistor for discharge will be made by special order.)

- The measurement is changeable for quality improvement.
- Other voltage and capacity will be made by special order.

W.V	110vac	125vac	160vac	220vac	250vac	330vac
40µF	25X45mm	25X45mm	30X45mm	30X55mm	35X55mm	35X75mm
50µF	25X45mm	25X45mm	30X55mm	35X55mm	35X55mm	35X75mm
80µF	25X45mm	30X45mm	35X55mm	35X65mm	35X65mm	45X75mm
100µF	30X45mm	35X55mm	35X65mm	35X65mm	40X75mm	40X85mm
125µF	30X45mm	35X55mm	35X65mm	35X65mm	40X75mm	45X100mm
150µF	30X45mm	35X55mm	35X65mm	35X75mm	40X85mm	50X100mm
180µF	30X65mm	30X65mm	35X75mm	40X75mm	40X85mm	50X100mm
200µF	30X50mm	35X55mm	35X75mm	40X85mm	40X85mm	50X100mm
250µF	30X65mm	35X65mm	40X75mm	45X85mm		

W.V	110vac	125vac	160vac	220vac	250vac
300µF	35X65mm	35X75mm	40X75mm	45X85mm	45X85mm
350µF	35X65mm	35X75mm	40X85mm	45X85mm	45X85mm
400µF	35X65mm	40X75mm	40X85mm	45X85mm	45X85mm
500µF	40X75mm	40X75mm	45X85mm		
600µF	40X85mm	40X85mm			
800µF	45X85mm	45X85mm			
1000µF	45X100mm				
1200µF	45X100mm				
1500µF	50X100mm				

Capacitors for Electrical Apparatus

■ SPECIFICATIONS

1. Capacitance : See table
2. Capacitance tolerance

Capacitance tolerance	Symbol
-5 ~ +20%	W
-10 ~ +10%	K
-5 ~ +10%	U
-5 ~ +5%	J

3. Rated frequency : 50/60Hz
4. Insulation resistance : Between the collected terminals and the case, 2000 M Ω or greater.
5. Ambient temperature

Ambient temperature	Symbol
-25°C ~ +60°C	N
-25°C ~ +65°C	X
-25°C ~ +75°C	M
-25°C ~ +75°C	Y
-25°C ~ +80°C	H
-25°C ~ +85°C	Z

6. Withstanding voltage test

Test position	Test voltage	Applying time(see)
Between terminals	Rated voltage X 1.75	10 or 60
Between terminals (tied together and case)	Rated voltage x 2 + 1000(minimum2,000)	10 or 60

7. Dissipation

Below 0.1% or 0.35% under rated voltage at 60Hz, 20°C or 75°C

8. Reference standard

KSC 4805, JIS C4908, IEC Pub.252



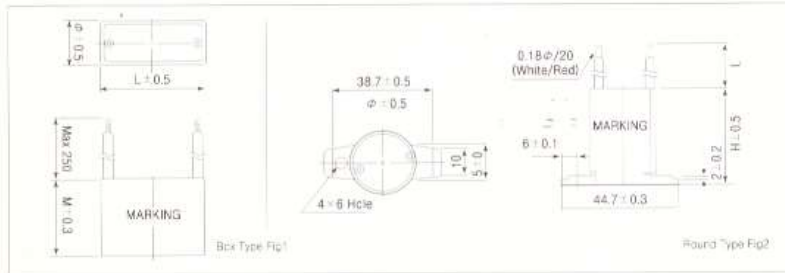
Capacitor for electrical apparatus

– Plastic BOX & Round type -

■ Plastic BOX & Round type



■ DIMENSION



■ SPECIFICATIONS

Capacitance : See Table
 Capacitance Tolerance : -5 /+10% or $\pm 5\%$
 Rated Frequency : 50Hz / 60Hz
 Rated Voltage : See Table
 Permissible Temperature : Metallized polypropylene film :-25/85°C Max
 Metallized polyester film: -25/70°C Max
 Class of safety protection : PO
 Class of life duration : B-Class (10000Hr) VDE: C-Class(3000Hr)
 Withstanding Voltage

Test Item	Test Method	
	Type Test	Routine Test
Between terminals(EU,Asia,etc)	Rated VoltageX2VAC,60 sec	Rated VoltageX2VAC,2sec
Between terminals (USA,Japan,Canada)	Rated VoltageX1.75VAC,10sec	Rated VoltageX1.75VAC,1sec
Between terminals and Case	Rated VoltageX2+1000 VAC (min 2000V),60 sec	Rated VoltageX2+1000VAC (min 2000V),1sec

■ BOX & ROUND TYPE RATINGS

- 1) The measurement is changeable for quality improvement.
- 2) Other voltage and capacity will be made by special order

RatedCapacity (MFD)	250VAC			300VAC			350VAC			400VAC			450VAC			450VAC		
	Dimension (mm)			Dimension (mm)			Dimension (mm)			Dimension (mm)			Dimension (mm)			Dimension (mm)		
	L	W	H	L	W	H	L	W	H	L	W	H	L	W	H	L	W	H
1				39	11	27	39	14	27	39	14	23	39	14	27			
1.5	38	14	23	38	14	23	38	17	29	38	17	29	38	17	29			
2	38	14	23	38	17	29	38	17	29	38	17	29	38	21	31			
2.5	38	14	23	38	17	29	38	21	31	38	21	31	38	21	31			
3	38	17	29	38	17	29	48	17	28	48	17	28	48	17	28			
3.5	38	17	29	38	17	29	48	21	33	48	21	33	48	21	33	22	38	210
4	38	17	29	38	21	31	48	21	33	48	21	33	48	21	33	22	38	210
4.5	38	17	29	38	21	31	48	21	33	48	21	33	48	25	40	23	38	210
5	38	17	29	48	17	28	48	25	40	48	25	40	48	25	40	23	38	210
6	38	21	31	48	21	33	48	25	40	48	25	40	58	28	37			
7	48	17	28	48	21	33	58	28	37	58	28	37	58	28	37			
8	48	21	33	48	25	40	58	28	37	58	28	37	58	28	37			
9	48	21	33	48	25	40	58	28	37	58	28	37	58	28	37			
10	48	21	33	48	25	40	58	28	37	58	28	37	58	33	45			
12	48	25	40	58	28	37	58	33	45	58	33	45	58	33	45			
14	48	25	40	58	28	37	58	33	45									
16	58	28	37	58	28	37												
18	58	28	37	58	33	45												
20																		
40																		

Capacitor for electrical apparatus

- Aluminium can type -

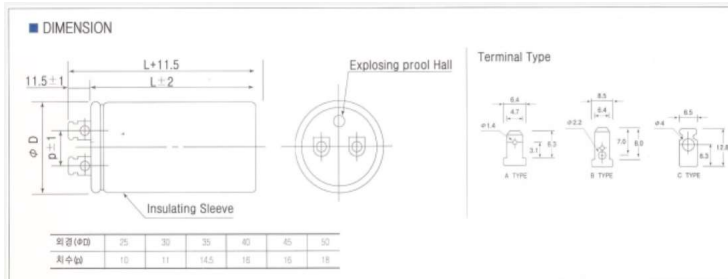
ALUMINIUM CAN TYPE



SPECIFICATIONS

- Capacitance : See Table
- Capacitance Tolerance : U(-5~+10%), J($\pm 5\%$), K($\pm 10\%$)
- Rated Frequency : 50Hz / 60Hz
- Rated Voltage: See Table
- Permissible Temperature : -25°C to +85°C Max
- Class of safety protection : Po
- Withstanding Voltage

DIMENSION



Test Item	apply	Test Method	
		Type Test	Routine Test
Between terminals	Motor capacitor	Rated Voltage $\times 1.75$ VAC, 10sec	Rated Voltage $\times 1.75$ VAC, 1sec
	Lighting Capacitor	Rated Voltage $\times 1.5$ VAC, 60sec	Rated Voltage $\times 1.5$ VAC, 10sec
Between terminals and case	Motor capacitor	Rated Voltage $\times 2+1000$ (min2000VAC), 60sec	Rated Voltage $\times 2+1000$ (min2000VAC), 1sec
	Lighting Capacitor	Rated Voltage $\times 2+1000$ (min2000VAC), 60sec	Rated Voltage $\times 2+1000$ (min2000VAC), 60sec

ALUMINIUM CAN TYPE RATINGS

- The measurement is changeable for quality improvement.
- Other voltage and capacity will be made by special order

Rated Capacity (MFD)	250vac		300vac		350vac		400vac		450vac		500vac	
	Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)	
	Ø	H	Ø	H	Ø	H	Ø	H	Ø	H	Ø	H
3.5	25	45	25	45	30	45	30	45	30	45	35	45
4.5	25	45	30	45	30	45	30	45	30	55	35	55
5	25	45	30	45	30	55	30	65	30	65	35	55
8	30	45	30	55	30	65	30	65	35	65	40	65
10	30	55	35	55	35	65	35	75	40	65	40	75
15	35	55	35	65	35	75	35	75	40	75	45	75
20	35	65	35	75	40	75	40	75	45	75	50	75
25	40	65	40	75	45	75	45	85	50	75	50	90
30	40	65	40	90	45	85	45	85	50	85		
35	40	85	40	90	50	85	50	85	50	115		
40	40	85	45	90	50	85	50	90	50	115		
45	45	85	45	90	50	90	50	115	50	115		
50	45	85	50	90	50	115	50	115				
55	45	85	50	90	50	115	50	115				
60	45	85	50	90	50	115	50	130				
65	50	85	50	115	50	130	50	130				
70	50	85	50	115	50	130	50	130				
75	50	85	50									
80	50	85	50									
100	50	115										

Capacitors for HID Lighting

1. Case dimension : minimum 40 \emptyset to maximum 63 \emptyset diameter, minimum 50mm to maximum 190mm Height is determined by users requirement.
2. Earth terminal : Faston #187 or 250, 1blade) and terminal blade (faston #250 series, 1blade to 4blades) is determined by users requirement.

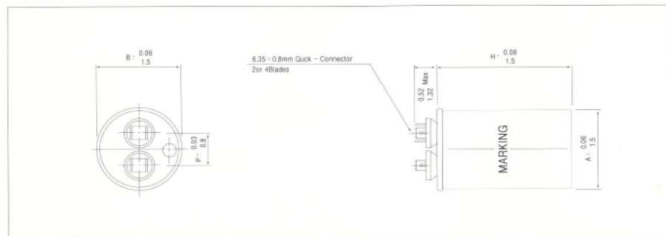
SEAMING TYPE



SPECIFICATIONS

Capacitance : See Table
 Capacitance Tolerance : U(-5~+10%), J(\pm 5%), K(\pm 10%)
 Rated Frequency : 50Hz / 60Hz
 Rated Voltage: See Table
 Permissible Temperature : -25 $^{\circ}$ C to +85 $^{\circ}$ C Max
 Class of safety protection : Po
 Withstanding Voltage

DIMENSION



ALUMINIUM CAN TYPE RATINGS

Rated Capacity (MFD)	300vac		320vac		400vac		450vac		650vac		660vac	
	Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)		Dimension(mm)	
	\emptyset	H	\emptyset	H	\emptyset	H	\emptyset	H	\emptyset	H	\emptyset	H
10							40	65				
15							50	65				
17									50	85		
19									50	105		
20							50	75				
23									63	105		
25							50	75				
30					50	95	50	85	63	105	63	140
32									63	105		
34											63	120
35					50	95	50	85				
40					50	95	50	100	63	155		
45					50	100	50	110				
50					50	125	50	125	63	155		
55							50	125				
60					50	125	50	110				
65							63	100				
70							50	125				
80							63	100				
100							63	100				
120	63	125	63	125			63	100				

Test Item	apply	Test Method	
		Type Test	Routine Test
Between terminals	Motor capacitor	Rated Voltage \times 1.75VAC, 10sec	Rated Voltage \times 1.75VAC, 1sec
	Lighting Capacitor	Rated Voltage \times 1.5VAC, 60sec	Rated Voltage \times 1.5VAC, 10sec
Between terminals and case	Motor capacitor	Rated Voltage \times 2+1000 (min2000VAC), 60sec	Rated Voltage \times 2+1000 (min2000VAC), 1sec
	Lighting Capacitor	Rated Voltage \times 2+1000 (min2000VAC), 60sec	Rated Voltage \times 2+1000 (min2000VAC), 60sec

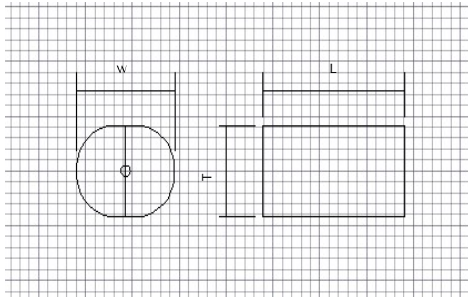
- 1) The measurement is changeable for quality improvement.
- 2) Other voltage and capacity will be made by special order

Capacitors for Welding

■ AXIAL & BOX TYPE



■ DIMENSION



■ AXIAL TYPE RATINGS

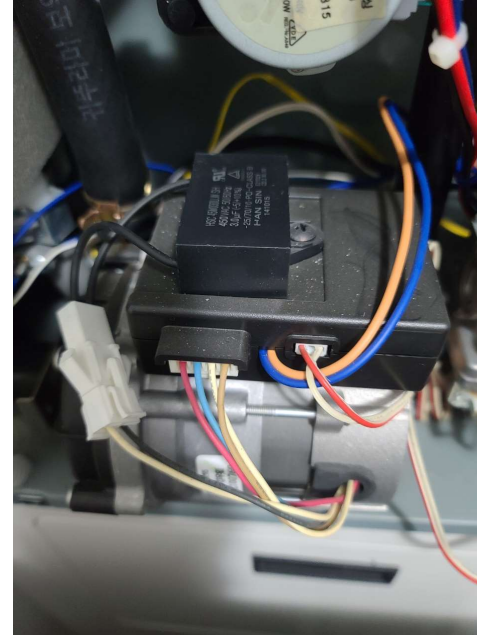
Capacitance μF	Rated voltage	Max withstand Voltage DCV	Wire specification	Capacitor size			Wire length (mm)
				Thickness (T)	Width (W)	Length (L)	
60	630	900	KIV10	61	72	90	230,320
40	630	900	KIV10	49	60	90	230,320
30	630	1,000	WL6	52	62	70	290,360
				61	69	60	290,360
		900	KIV10	47	58	70	290,290
			KIV6	53	64	60	170,320
20	630	1000	GLS6	47	58	60	450,450
			WL6	42	53	70	290,360
			KIV6	47	58	60	230,320
		900		47	58	60	320,320
			KIV6	42	53	60	290,290
			KIV6	37	48	60	210,210
15	1000	1000	KIV6	40	510	50	290,360
10	800	500	AWG14	21	28	40	90,90
				21	28	40	60,60
	1000	1000	KIV6	32	43	60	310,310
			KIV4	32	43	60	190,190
	630	900		32	43	60	160,280
			KIV6	28	39	60	290,290
		KIV4	28	39	60	190,190	
		800	KIV6	24	35	60	160,160
			KIV4	24	35	60	160,160
		700	AWG14	26	34	50	90,90
	600	AWG14	21	29	50	60,60	
	500	500	1000		21	29	50
KIV4				21	28	40	160,160
500			AWG14	21	28	40	60,60
				21	28	40	90,90
4.7	250	400	AWG16	13	22	50	100,100
	250	500	TPCS0.8	15	23	35	40,40
	350	600	TCA1.2	19	27	35	40,40
4	630	700	AWG16	14	24	48	90,90
3.3	630	900	AWG16	18	26	50	60,60
			AWG14	22	30	40	90,90



fan, electric fan



a compressor



Boiler



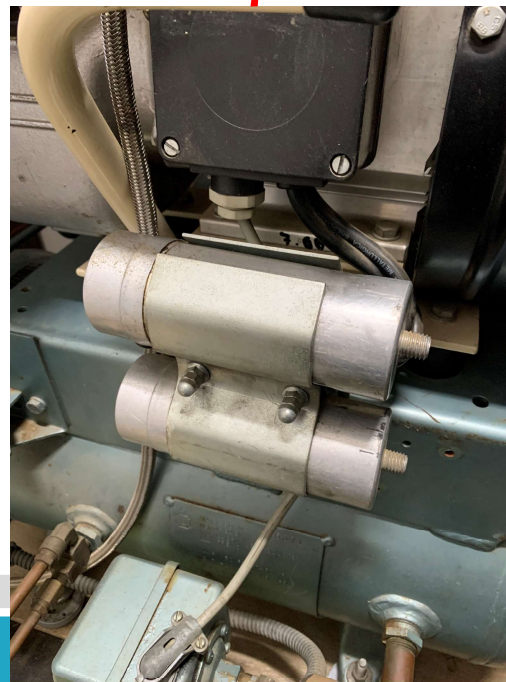
motor manoeuvre

Example of use #1

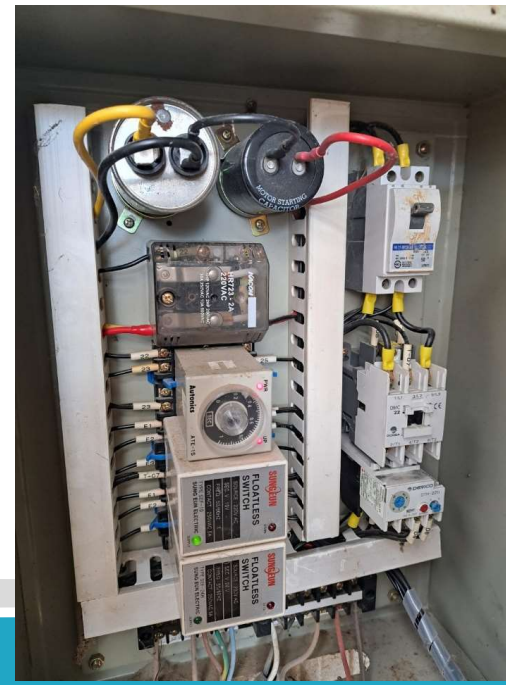
an indoor cleaning car



a compressor



a switchboard



Motor Controller





refrigerator



drying machine/washer



ventilation fan



electric fan

Example of use #2

Coffee grinder machine



Blender



Air conditioner

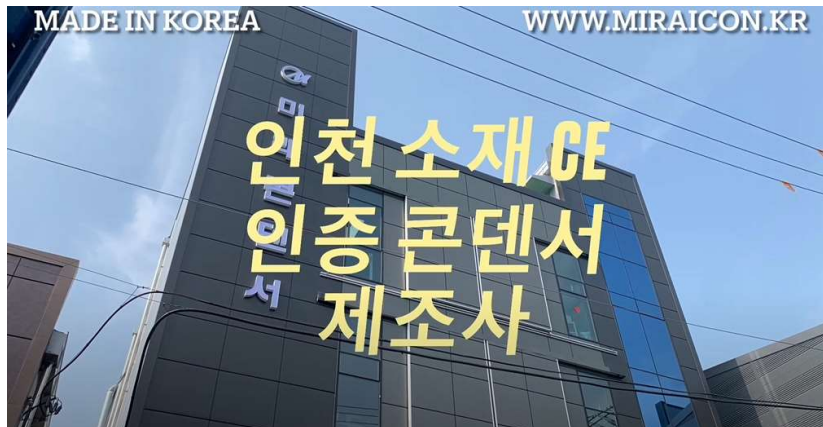


drying machine



Product introduction video

▶ <https://youtu.be/HBIZIn-4JkU>



▶ https://youtu.be/HR_FahyKFlo



Shopping mall

▶ <https://shop.easymall.kr/>

