

BENSHAW®
ADVANCED CONTROLS & DRIVES

A member of UNICO Technologies Group

ENERLINK
CORPORATION



Contactors and Contactor Accessories

Contact EnerLink for application support in
Alberta, British Columbia, Yukon, and NWT
780-912-1020, hello@enerlinkcorp.com
www.enerlinkcorp.com

Contactors — UL / IEC / NEMA

RC / RSC SERIES

690 VAC CONTACTORS

RATINGS

NEMA:	Size 00–7
IEC:	9–800 Amps
UL:	1–600 HP



IEC / NEMA Contactor Highlights

Benshaw contactors are used for controlling single- and three-phase motors and for switching resistive or inductive loads up to 690 VAC.

The RediStart™ contactor line is built and tested to world-leading electrical and mechanical standards.



RoHS compliant
KEPIC compliant

Key Advantages:

- World's longest electrical and mechanical lifespan
- UL/CSA, IEC, NEMA, BS, EN, VDE ratings
- Direct mount thermal overload relays
- Full line of field installable, modularized accessories
- Device marking strip
- AC or DC coil options

Standard Features:

- DIN rail mountable to 150 amps
- Full product family to 800 amps
- Direct mount overload relays
- Draw out cassette coils 180 amps and above
- Integral coil surge suppression 180 amps and above
- Low coil power consumption
- Phase barriers supplied standard
- Uni-directional mounting
- Extremely long lifespan
- Compact size
- Unit identification marker

RC-9 – 150A

- Finger-proof design
- DIN rail or screw mountable
- Top/side mount accessories
- Small physical size
- Dual auxiliary contacts above 22 A
- Integral voltage barriers

RSC-180 – 800

- Draw-out cassette-type coil
- Wide voltage range coils
- Integral coil surge suppression
- Dual auxiliary contacts

* Consult factory for certifications.

Contactor Part Number Assembler

RC / RSC SERIES

RSC - **220** - **U120**

RediStart™ Contactor

RC 9A–150A

RSC 180–800

Contactor Frame & Rating

Contactor	IEC AC3 480 Rating	NEMA Size
9A	9 A	00
12A	12 A	0
18A	18 A	0
22A	22 A	–
32A	32 A	1
40A	40 A	1P
50A	50 A	2
65A	60 A	–
75A	75 A	–
85A	85 A	3
100A	105 A	–
130A	130 A	–
150A	150 A	4
180	185 A	–
220	225 A	–
300	330 A	5
400	400 A	–
600	630 A	6
800	800 A	7

	Frames 9A–150A	Frames 180–400	Frames 600/800
Coil Voltage	Suffix Part # AC 50 & 60 Hz	Suffix Part # AC 50 & 60 Hz	Suffix Part #
24	56AC24	–	–
48	56AC48	–	–
110	56AC110	U120	U120
120	56AC120	U120	U120
208	56AC208	U120	U200
240	56AC240	U120	U200
380	56AC380	–	–
480	56AC500	U500	U500
575	56AC500	U500	U500

RC-9A– RC -150A coil voltages: 85%–110% of rated voltage.

For DC and other coils not listed, consult factory.

U120 coils are universal 100–240 VAC / 100–220 VDC (100–400 amp frames only).

U120 coils are 100–127 VAC only for 600 and 800 amp frames.

U200 coils are 200–240 VAC for 600 and 800 amp frames.

U500 coils are universal 440–600 VAC.

Contactor Ratings

RC / RSC SERIES

UL / IEC Rated

Model Number	Amp Ratings					HP Ratings							Aux. Contact	
	AC1	AC3				UL	One-Phase		Three-Phase				NO	NC
	lth	200/240	380/440	500/550	690	lth	115	230	200	230	460	690		
🔌 RC-9A-*	25	11	9	7	6	25	0.5	1.5	2	3	5	7.5	1	1
🔌 RC-12A-*	25	13	12	12	9	25	0.75	2	3	5	7.5	10	1	1
🔌 RC-18A-*	32	18	18	13	9	32	1	3	5	7.5	10	15	1	1
🔌 RC-22A-*	40	22	22	20	18	40	2	3	7.5	10	15	20	1	1
🔌 RC-32A-*	50	32	32	28	20	50	2	5	7.5	10	20	25	2	2
🔌 RC-40A-*	60	40	40	32	23	60	3	7.5	15	15	30	30	2	2
🔌 RC-50A-*	70	55	50	43	28	70	3	10	20	25	40	50	2	2
🔌 RC-65A-*	100	65	65	60	35	100	5	15	25	30	50	60	2	2
🔌 RC-75A-*	110	75	75	64	42	110	5	15	25	30	50	60	2	2
🔌 RC-85A-*	135	85	85	75	45	135	7.5	15	30	40	60	75	2	2
🔌 RC-100A-*	160	105	105	85	65	160	10	20	30	40	75	75	2	2
🔌 RC-130A-*	160	130	130	90	60	160	10	20	40	40	75	75	2	2
🔌 RC-150A-*	210	150	150	100	60	210	15	25	40	50	100	75	2	2
🔌 RSC-180-*	230	180	180	180	120	230	15	30	60	60	125	125	2	2
🔌 RSC-220-*	275	250	250	200	150	275	15	40	60	75	150	150	2	2
🔌 RSC-300-*	350	300	300	250	220	350	-	-	100	100	200	200	2	2
🔌 RSC-400-*	450	400	400	350	300	450	-	-	125	150	300	300	2	2
🔌 RSC-600-*	660	630	630	500	420	660	-	-	150	200	400	400	2	2
🔌 RSC-800-*	900	800	800	720	630	900	-	-	250	300	600	600	2	2

NEMA Rated

Model Number	NEMA Size	NEMA HP Rating Three-Phase				Aux. Contacts	
		200-208 V	220-240 V	440-480 V	550-600 V	NO	NC
🔌 RC-9A-*	00	1.5	1.5	2	2	1	1
🔌 RC-18A-*	0	3	3	5	5	1	1
🔌 RC-32A-*	1	7.5	7.5	10	10	2	2
🔌 RC-50A-*	2	10	15	25	25	2	2
🔌 RC-85A-*	3	25	30	50	50	2	2
🔌 RC-150A-*	4	40	50	100	75	2	2
🔌 RSC-300-*	5	75	100	200	200	2	2
🔌 RSC-600-*	6	150	200	400	400	2	2
🔌 RSC-800-*	7	250	300	600	600	2	2

*Add coil suffix. See page 1-3 for Contactor part number assembler.

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Contactor Technical Information

RC / RSC SERIES

Specification	Contactors Type	RC 9A	RC 12A	RC 18A	RC 22A	RC 32A	RC 40A	RC 50A	RC 65A	RC 75A	RC 85A	RC 100A	RC 130A	RC 150A	RSC 180	RSC 220	RSC 300	RSC 400	RSC 600	RSC 800
Lighting Duty AC 5	120–690 V	11A	13A	18A	22A	32A	40A	50A	65A	75A	85A	105A	120A	150A	180A	250A	300A	400A	630A	800A
Rated Life (million)	Electrical	2.5	2.5	2.5	2.5	2	2	2	2	2	2	1	1	1	1	1	1	0.5	0.5	0.5
	Mechanical	25	25	25	25	15	15	10	10	10	10	5	5	5	5	5	5	5	5	5
Withstand Voltage Rating		6000V																		
Ambient Temperature Range		-5 to 50°C Operation, -40 to 65°C Storage Without Derating																		
Operating Times (AC coil)	Closing (ms)	15–30						15–30				20–40		45–60		45–68		66–70		
	Opening (ms)	4–19						10–30				60–70		41–45		43–52		45–55		
Resistance to Shock		49 m/s2 (<5g)																		
Conductor Size (max.)*Note		#10AWG	#8			#6	#4	#3	#2	1/0	2/0	4/0	Limited Only by Crimp Size							
Switching Frequency (OP/HR) AC3		1800	1800	1800	1800	1800	1800	1800	1800	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Interrupt Curr. @ 460 VAC		5KA	5KA	5KA	5KA	5KA	5KA	5KA	5KA	10KA	10KA	10KA	10KA	10KA	10KA	10KA	18KA	18KA	30KA	30KA
Maximum Make Current (A)	480 V, AC3	90	120	180	220	320	400	500	650	750	950	1050	960	1200	1800	2500	3000	4000	6300	8000
Maximum Break Current (A)	480 V, AC3	72	96	144	176	256	320	400	520	600	650	840	1200	1500	1800	2500	3000	4000	6300	8000
Rated Insulation Voltage		690V				1000V														
Vibration Resistance		19.6 m/s2 (<2g)																		

*Note: ≤ RC-40A have screws with clamp-type washer

Contactor Coil Ratings

RC / RSC SERIES

Type	Coil Consumption AC (VA)		Heat Dissipation (W)	Operational Voltage (% of rated coil voltage)		Operating Time	
	Inrush	Sealed		Min.	Max.	Closing (ms)	Opening (ms)
RC-9A~22A	80	11	2.3	85%	110%	15~30	4~19
RC-32A~40A	80	9	2.7	85%	110%	15~30	4~19
RC-50A~65A	120	11	2.8	85%	110%	15~30	4~19
RC-75A~100A	220	16	5.4	85%	110%	15~30	10~30
RC-130A~150A	110	24	2.7	85%	110%	20~40	60~70
Pick Up (V) U120 Drop Out (V) U120							
RSC-180~220	220	9.1	3.4	77%	48%	60	41
RSC-300~400	393	14	4.4	77%	48%	64~68	43~47
RSC-600~800	1000	17	6.3	77%	48%	66~70	45~49




Type	Coil Consumption DC (W)		Heat Dissipation (W)	Operational Voltage (% of rated coil voltage)		Operating Time	
	Inrush	Sealed		Min.	Max.	Closing (ms)	Opening (ms)
RC-9A~22A	3	5	—	85%	110%	40~60	4~19
RC-32A~40A	2.2	9	—	85%	110%	50~65	4~19
RC-50A~65A	2.2	9	—	85%	110%	50~65	4~19
RC-75A~100A	5.1	18	—	85%	110%	100~120	10~45
RC-130A~150A	213	7.5	—	85%	110%	70~80	60~70

Contactor Accessories

RC / RSC SERIES







Optional Contactor Box Lug Kits








Model Number	Description	Contactor Range	Conductors Per Phase	Wire Size
 RSC-AJ-220	1 Kit = 3 Lugs for Line or Load	180–400	1	1 AWG–350 MCM
 RSC-AJ-400		180–220	2	3/0–500 MCM
 RSC-AJ-800		300–800	2	3/0–600 MCM

No box lug kits for RC-9A–150A.

Auxiliary Contact Blocks

Model Number	Description	Contactor Range	Poles
 RC-AU2-1A1B	Top Mount	RC-9A–150A	2 (1 NO/1 NC)
 RC-AU4-2A2B	Top Mount	RC-9A–150A	4 (2 NO/2 NC)
 RC-UA1	Side Mount	RC-9A–150A	2 (1 NO/1 NC)
 RC-AU100	Side Mount	RSC-180–800	2 (1 NO/1 NC)

Surge Suppressors

Model Number	Description	Coil Voltage	Contactor Range
 RC-US1	RC + Varistor	AC 24–48 V	RC-9A–150A
 RC-US2	RC + Varistor	AC 120 V	RC-9A–150A
 RC-US3	RC + Varistor	AC 200–240 V	RC-9A–150A
 RC-US4	RC + Varistor	DC 24–48 V	RC-9A–150A
 RC-MO125	Varistor	AC 100–125 V	All
 RC-MO240	Varistor	AC 200–240 V	All
 RC-MO48	Varistor	AC 24–48 V	All

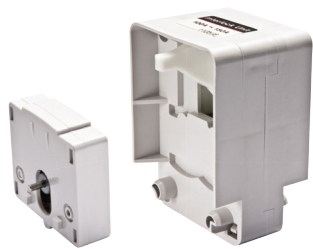
RSC-A100 and RC-AU100 are the same part.

RSC-180–800 contactors have built-in surge suppression.




 Web stocked

Contactor Accessories

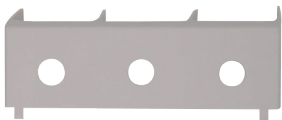
RC / RSC SERIES






Mechanical Interlock Units

Model Number	Description	Contactor Range
 RC-M150*	Mechanical interlock for two contactors. Prevents both contactors from closing simultaneously.	RC-9A-150A
 RSC-M400		RSC-180-400
 RSC-M800		RSC-600-800

*RC-M150A includes (2) NC contacts for electrical interlock.



Terminal Cover Kits*



Model Number	Contactor Range
 RSC-AP220	RSC-180-220
 RSC-AP400	RSC-300-400
 RSC-AP600	RSC-600-800

*Terminal cover kits included with RC-9A-RC-150A.


Kits include line and load terminal covers.



CAPACITOR UNIT

Model Number	Description	Configuration	Contactor Range
 RSC-AC-9	Capacitor Unit	—	RC-9A-RC-40A
 RSC-AC-50	Capacitor Unit	—	RC-50A-RC-100A

Use when connecting PFCCs, reduces inrush current.

 Web stocked







Contactors

Replacement Parts

RC / RSC SERIES






Replacement Contact Kits

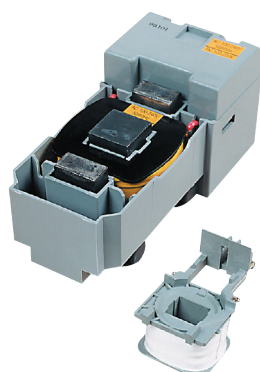
Model Number	Description	Contactors Range
 RSC-T180	Each kit includes: 3 stationary and 3 movable contacts (Replaces all three phases of one contactor)	RSC-180
 RSC-T220		RSC-220
 RSC-T300		RSC-300
 RSC-T400		RSC-400
 RSC-T600		RSC-600
 RSC-T800		RSC-800

No contact kits are available for RC-9A-150A.











Replacement Phase Barrier Kits

Model Number	Description	Contactors Range
 RSC-B220	Each kit includes: 2 phase barriers for line or load side of one contactor	RSC-180-220
 RSC-B400		RSC-300-400
 RSC-B800		RSC-600-800



Contactors Coils

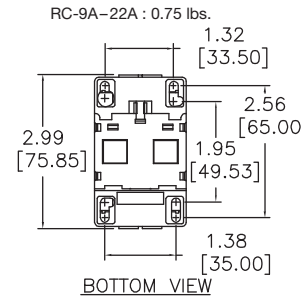
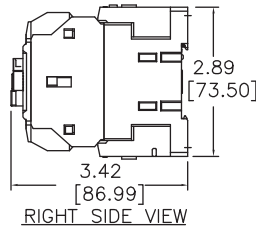
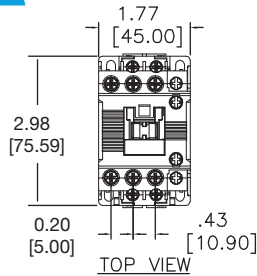
Model Number	Coil Voltage	Contactors Range
 RSC-C220U120	100 V-240 V	RSC-180-220
 RSC-C220U500	440 V-575 V	RSC-180-220
 RSC-C400U120	100 V-240 V	RSC-300-400
 RSC-C400U400	380 V-450 V	RSC-300-400
 RSC-C400U500	440 V-575 V	RSC-300-400
 RSC-C800U120	100 V-127 V	RSC-600-800
 RSC-C800U200	200 V-240 V	RSC-600-800
 RSC-C800U500	440 V-575 V	RSC-600-800

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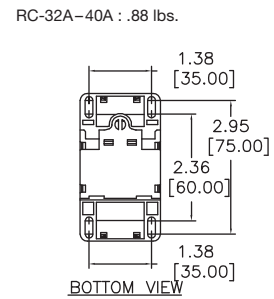
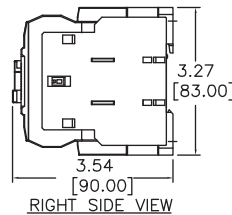
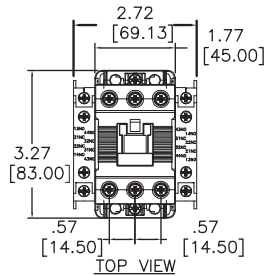
Contactor Mounting Dimensions

RC-9A — RC-65A CONTACTORS

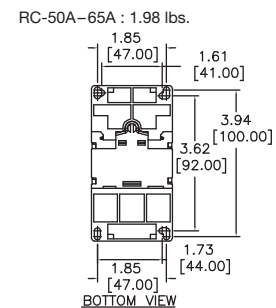
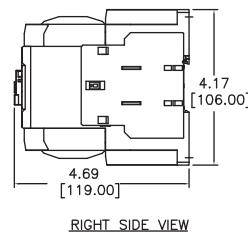
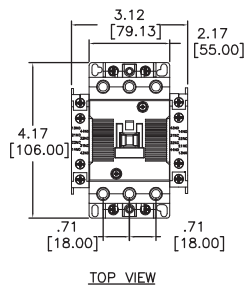
RC-9A, RC-12A, RC-18A, RC-22A



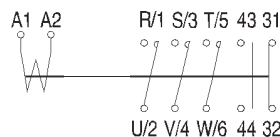
RC-32A, RC-40A



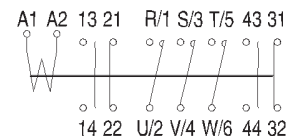
RC-50, RC-65A



Circuit Diagram



RC-9 A-22A —
With one aux.contact block



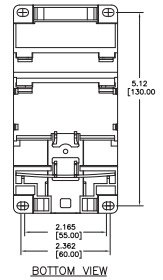
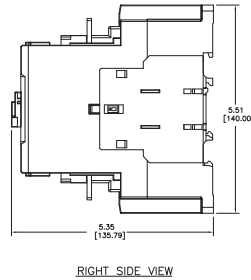
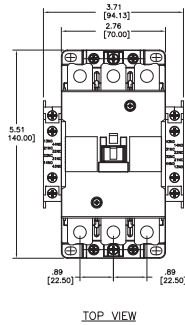
RC-32A-150A —
With two aux.contact blocks

Contactor Mounting Dimensions

*RC-75A — 150A CONTACTORS
AND RSC-180 — 220 CONTACTORS*

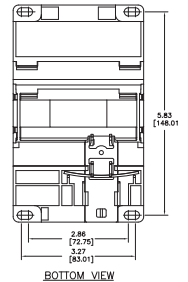
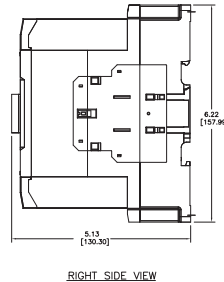
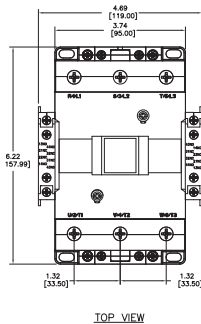
RC-75A, RC-85A, RC-100A

RC-75A–100A : 3.52 lbs.



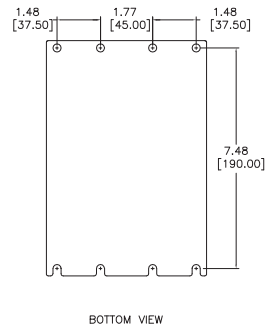
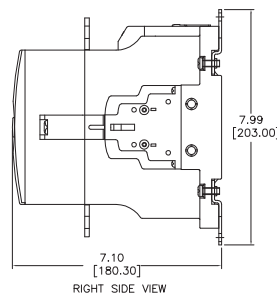
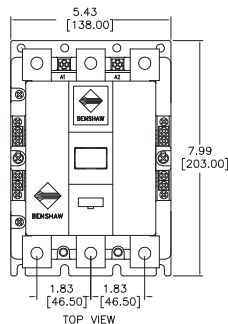
RC-130A, RC-150A

RC-130A – 150A : 5.3 lbs.

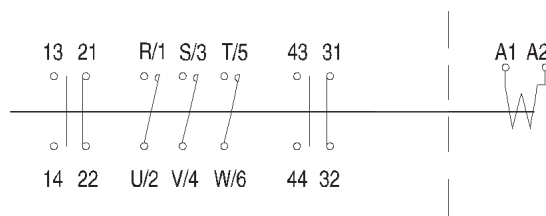


RSC-180, RSC-220

RSC-180–220 : 11.9 lbs.



Circuit Diagram

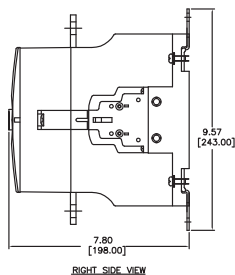
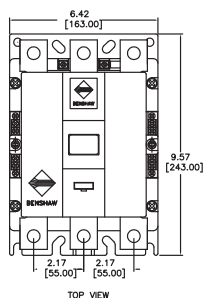


RSC-180 – 220 — With two Aux.contact blocks

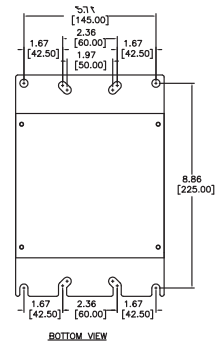
Contactor Mounting Dimensions

RSC-300 — 800 CONTACTORS

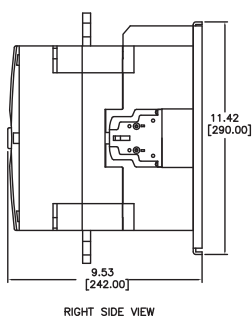
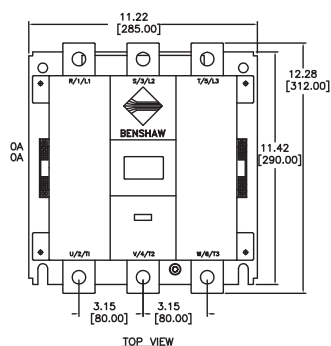
RSC-300, RSC-400



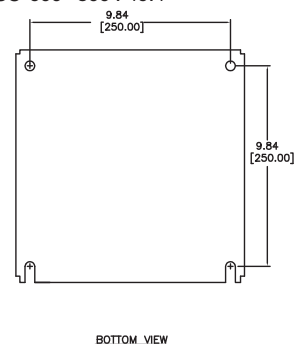
RSC-300-400 : 20.3 lbs.



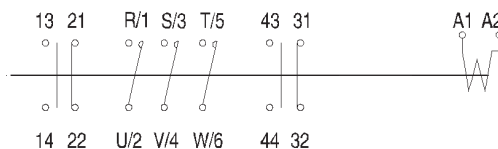
RSC-600, RSC-800



RSC-600-800 : 49.4



Circuit Diagram



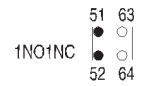
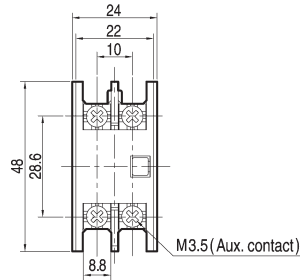
RSC-300 – 800

Contactor Mounting Dimensions

AUXILIARY CONTACTS

RC-AU2-1A1B

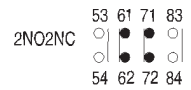
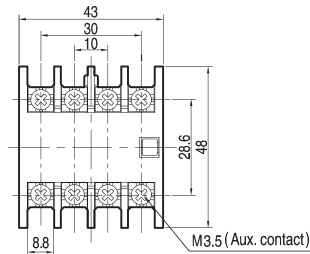
Weight: 28 g



Wiring Diagram

RC-AU4-2A2B

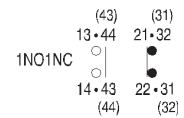
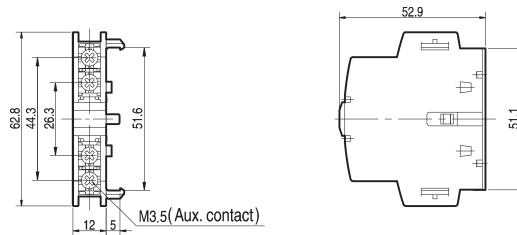
Weight: 50 g



Wiring Diagram

RC-UA1

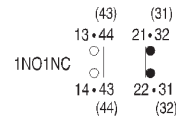
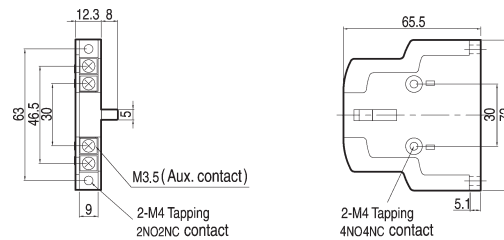
Weight: 33 g



Wiring Diagram

RC-AU100

Weight: 45 g



Wiring Diagram

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Medium Voltage Controls

Medium Voltage Switchgear

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