

ELECTRIFICATION SERVICE

Limitamp® MV motor control center

Spare parts guide

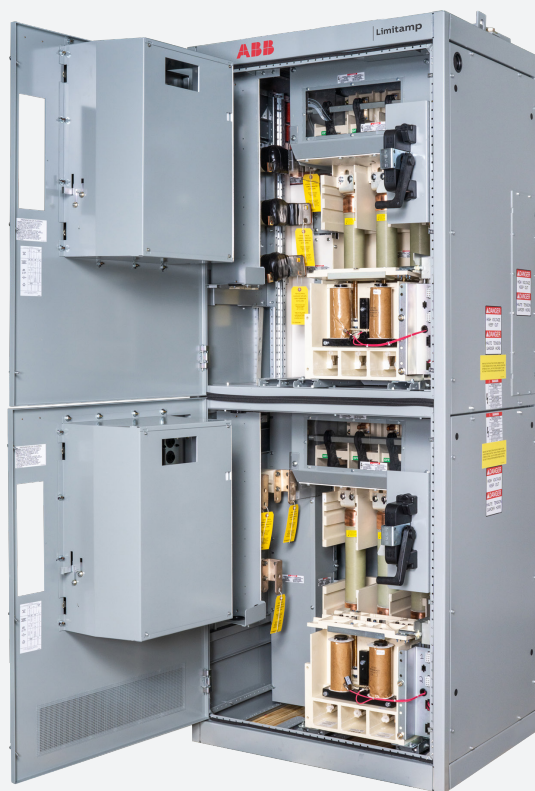
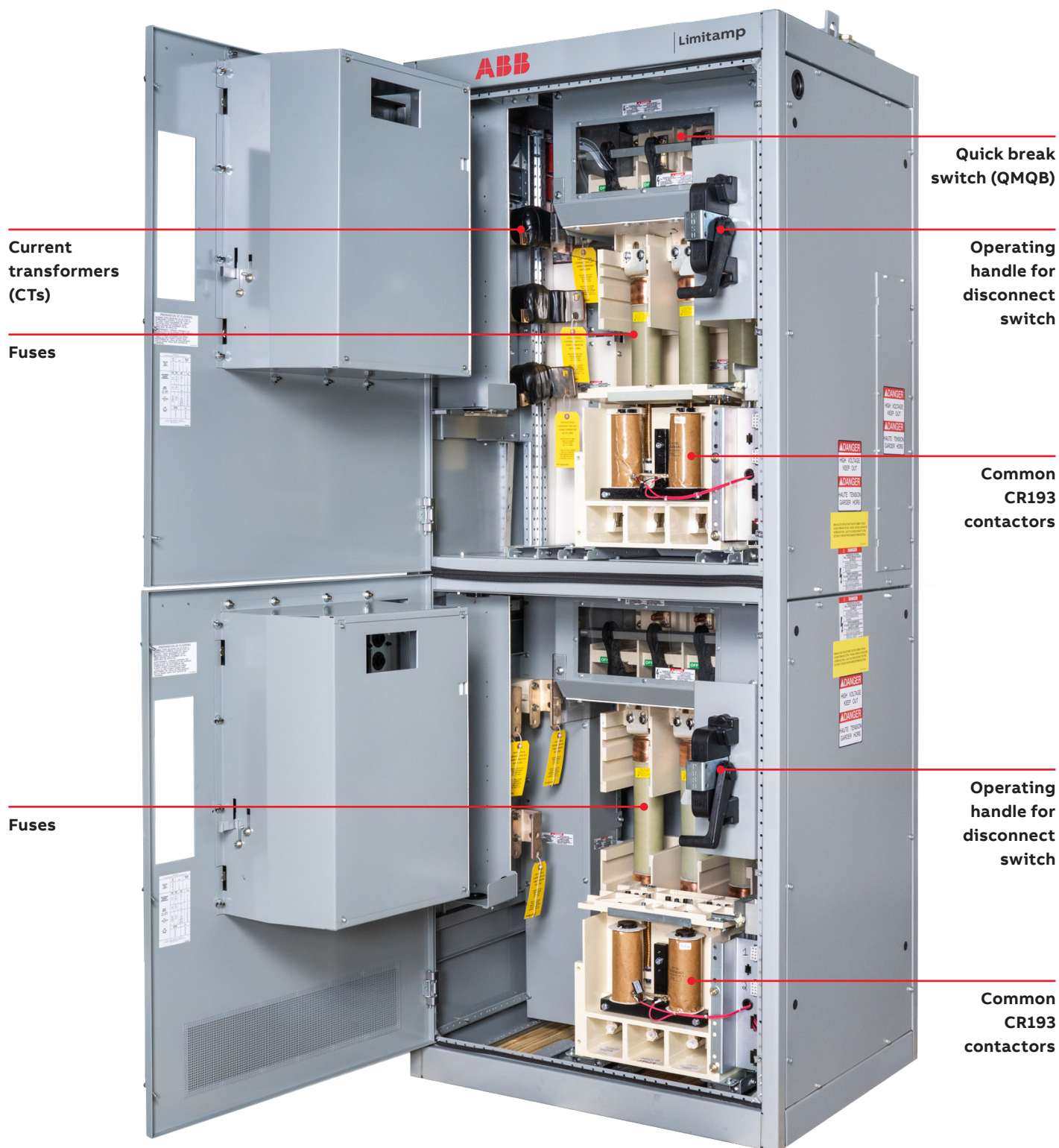


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Limitamp® medium voltage motor control center



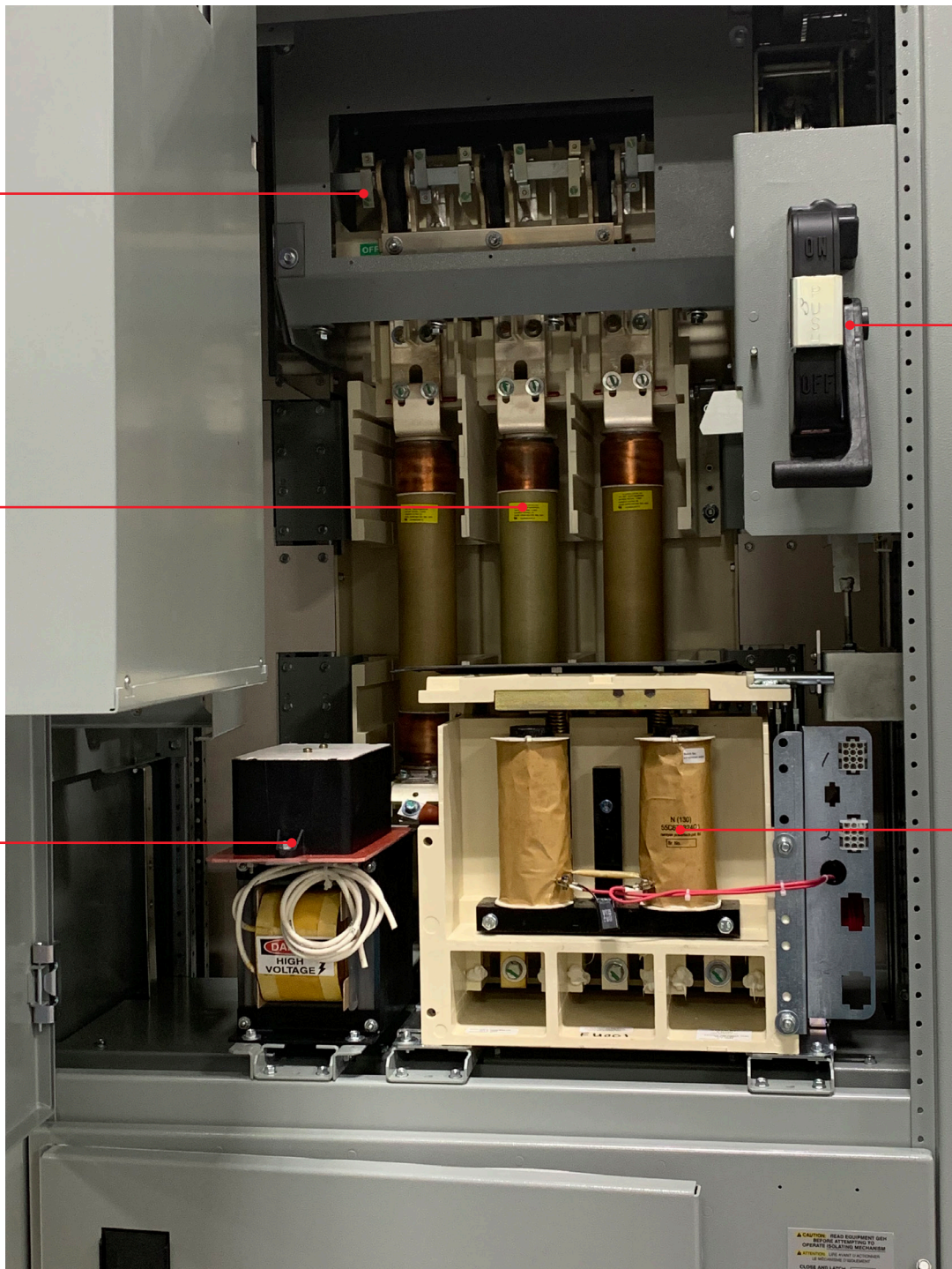
Quick break
switch
(QMQB)

Fuses

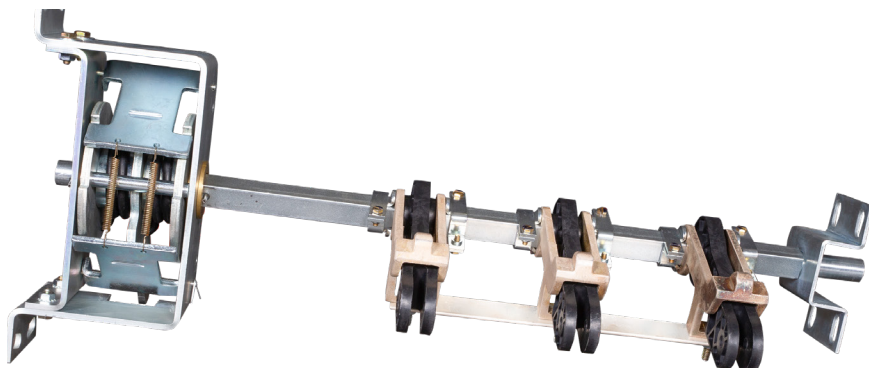
Control
power
transformers
(CPTs)

Operating
handle for
disconnect
switch

Common
CR193
contactors

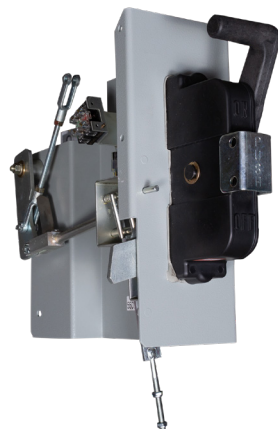


Disconnect switches, quick-make quick-break (QMQB)



Part number	Description
55C682220G1	Quick-make quick-break disconnect switch — 26" 1-high
55C682220G2	Quick-make quick-break disconnect switch — 34" 1-high
55C682220G3	Quick-make quick-break disconnect switch — bolted frame starter
55C682220G4	Quick-make quick-break disconnect switch — 26" 1-high, grounded
55C682220G5	Quick-make quick-break disconnect switch — 34" 1-high, grounded
55C682220G6	Quick-make quick-break disconnect switch — bolted frame starter, grounded

Operating handle for disconnect switch



Part number	Description
55D781353G1	Bolted frame starters — 20 TPI
55D781353G2	Bolted frame starters — with KL kickoff — 20 TPI
55D781353G3	Bolted frame starters — double — 20 TPI
55D781353G7	Bolted frame starters — 20 TPI + 2 NC
55D781353G8	Bolted frame starters — 20 TPI + 2 NC + keylock disc
55D781353G9	Bolted frame starters — 20 TPI, double TPI and double CPI
55D781353G71	Florence NEMA 12 sections
981B128P1	IC7160 Limitamp handle

Upper fuse support and switch assembly

Part number	Description
55D781301G1	Upper fuse and switch assembly — 5000 V, 400 A
55D781301G2	Upper fuse and switch assembly — 7200 V, 400 A
55D781301G3	Upper fuse and switch assembly — 5000 V, 400 A without blown fuse indicator
55D781301G4	Upper fuse and switch assembly — 7200 V, 400 A without blown fuse indicator
55D781301G5	Upper fuse and switch assembly — clip fuse without blown fuse indicator, Hickory fuse, 1 barrel only
55D781301G6	Upper fuse support only, 5000 V
55D781301G7	Upper fuse support only, 7200 V
55D781301G8	Upper fuse and switch assembly — 5000 V, 400 A, with 2 NO contacts
55D781301G9	Upper fuse and switch assembly — 7200 V, 400 A, with 2 NO contacts
55D781301G10	Upper fuse and switch assembly — clip fuse without blown fuse indicator, C-type fuse, 1 barrel only

Lower fuse support assembly

Part number	Description
55B533212G1	Lower fuse support assembly — 5000 V, double barrel
55B533212G2	Lower fuse support assembly — 5000 V, single barrel
55B533212G3	Lower fuse support assembly — 7200 V, double barrel
55B533212G4	Lower fuse support assembly — 7200 V, single barrel
55B533212G5	Lower fuse support assembly — Hickory clip fuse, single barrel only
55B533212G6	Lower fuse support assembly — C-type fuse, single barrel only
55B533212G7	Lower fuse support assembly — Hickory clip fuse, double barrel
55B533212G8	Lower fuse support assembly — draw-out double barrel
55B533212G9	Lower fuse support assembly — draw-out single barrel
55B533212G10	Lower fuse support assembly — draw-out, clip fuses, single or double barrel
55B533212G11	Lower fuse support assembly — draw-out, 7200 V, bolted, single barrel
55B533212G12	Lower fuse support assembly — draw-out, clip fuses, C-type fuses, single barrel

Fuses



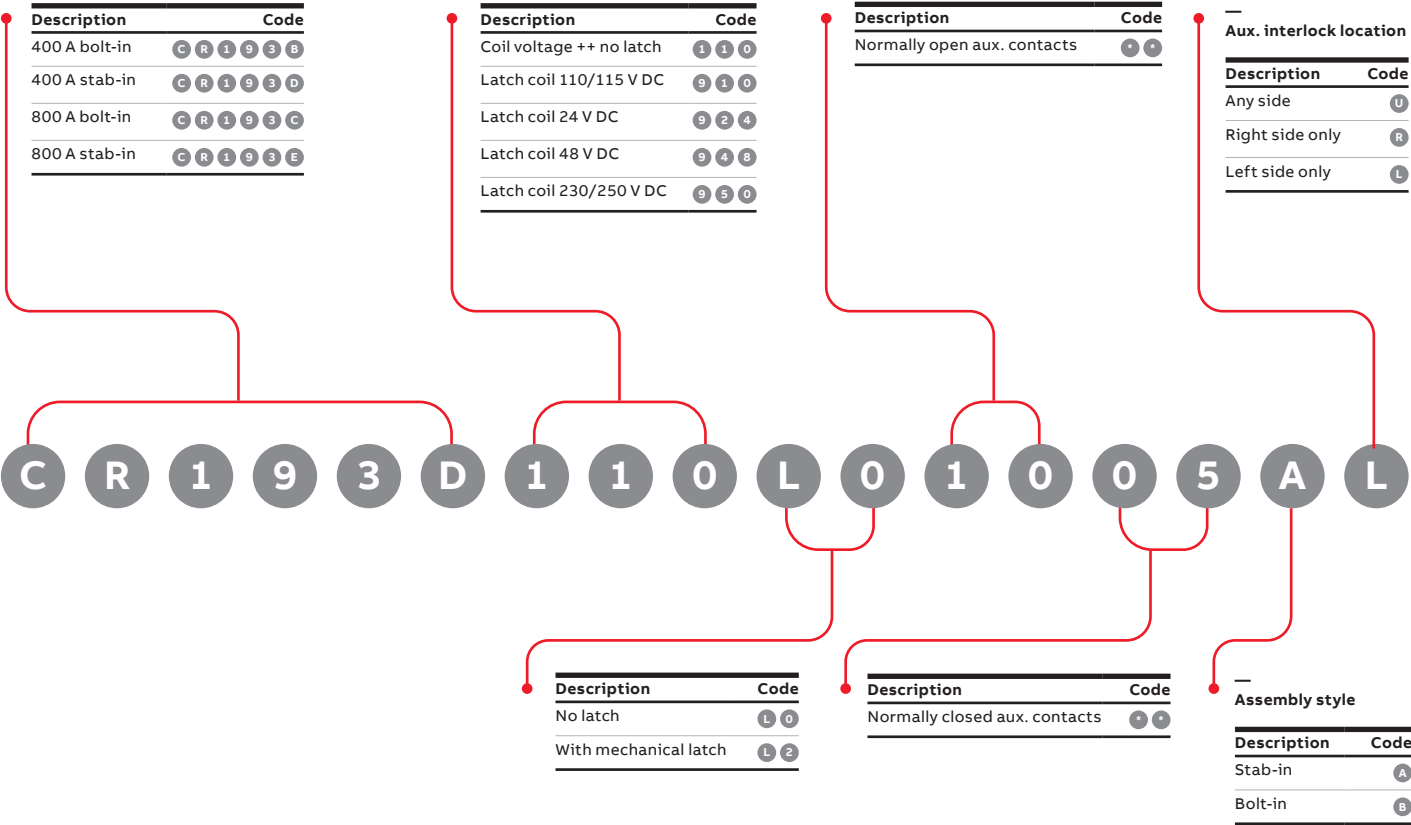
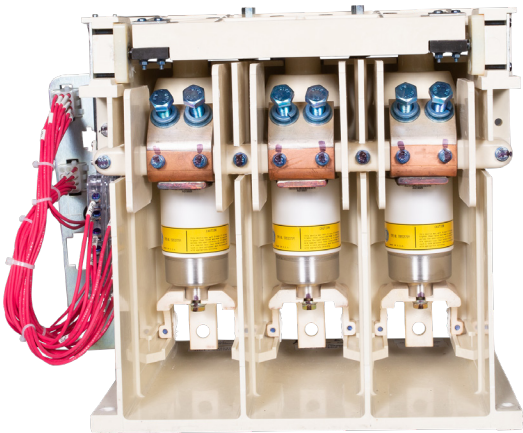
Part number	Description
218A4291P3RA	Fuse, EJ-2, clip, 2.4 kV, 3R, 100 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P4RA	Fuse, EJ-2, clip, 2.4 kV, 4R, 130 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P6RA	Fuse, EJ-2, clip, 2.4 kV, 6R, 170 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P9RA	Fuse, EJ-2, clip, 2.4 kV, 9R, 200 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P12RA	Fuse, EJ-2, clip, 2.4 kV, 12R, 230 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P18RA	Fuse, EJ-2, clip, 2.4 kV, 18R, 390 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P24RA	Fuse, EJ-2, clip, 2.4V, 24R, 450 A, 50 kA, CR194 and IC7160 Limitamp
218A4293P2RA	Fuse, bolt, 2.4 kV, 3R, 70 A — obsolete, replaced by 218A4293P2RB
218A4293P3RA	Fuse, bolt, 2.4 kV, 3R, 100 A — obsolete, replaced by 218A4293P3RB
218A4293P4RA	Fuse, bolt, 2.4 kV, 4R, 130 A — obsolete, replaced by 218A4293P4RB
218A4293P6RA	Fuse, bolt, 2.4 kV, 6R, 170 A — obsolete, replaced by 218A4293P6RB
218A4293P9RA	Fuse, bolt, 2.4 kV, 9R, 200 A — obsolete, replaced by 218A4293P9RB
218A4293P12RA	Fuse, bolt, 2.4 kV, 12R, 230 A — obsolete, replaced by 218A4293P12RB
218A4293P18RA	Fuse, bolt, 2.4 kV, 18R, 390 A — obsolete, replaced by 218A4293P18RB
218A4293P24RA	Fuse, bolt, 2.4 kV, 24R, 450 A — obsolete, replaced by 218A4293P24RB
218A4291P2RB	Fuse, EJ-2, clip, 4.8 kV, 2R, 70 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P3RB	Fuse, EJ-2, clip, 4.8 kV, 3R, 100 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P4RB	Fuse, EJ-2, clip, 4.8 kV, 4R, 130 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P6RB	Fuse, EJ-2, clip, 4.8 kV, 6R, 170 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P9RB	Fuse, EJ-2, clip, 4.8 kV, 9R, 200 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P12RB	Fuse, EJ-2, clip, 4.8 kV, 12R, 230 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P18RB	Fuse, EJ-2, clip, 4.8 kV, 18R, 390 A, 50 kA, CR194 and IC7160 Limitamp
218A4291P24RB	Fuse, EJ-2, clip, 4.8 kV, 24R, 450 A, 50 kA, CR194 and IC7160 Limitamp
218A4293P2RB	Fuse, bolt, 4.8 kV, 3R, 70 A, IC7160 Limitamp
218A4293P3RB	Fuse, bolt, 4.8 kV, 3R, 100 A, IC7160 Limitamp
218A4293P4RB	Fuse, bolt, 4.8 kV, 4R, 130 A, IC7160 Limitamp
218A4293P6RB	Fuse, bolt, 4.8 kV, 6R, 170 A, IC7160 Limitamp
218A4293P9RB	Fuse, bolt, 4.8 kV, 9R, 200 A, IC7160 Limitamp
218A4293P12RB	Fuse, bolt, 4.8 kV, 12R, 230 A, IC7160 Limitamp
218A4293P18RB	Fuse, bolt, 4.8 kV, 18R, 390 A, IC7160 Limitamp
218A4293P24RB	Fuse, bolt, 4.8 kV, 24R, 450 A, IC7160 Limitamp
218A4293P425B	Fuse, bolt, 4.8 kV, 425 A, IC7160 Limitamp and IC1074 LBS
218A4293P550B	Fuse, bolt, 4.8 kV, 550 A, IC7160 Limitamp and IC1074 LBS
218A4293P630B	Fuse, bolt, 4.8 kV, 630 A, IC7160 Limitamp and IC1074 LBS

Part number	Description
218A4293P960B	Fuse, bolt, 4.8 kV, 960 A, IC7160 IC1074 LBS
55A212942P2RB	Fuse, EJ-2, bolted, 4.8 kV, 2R, 70 A, CR194 Limitamp
55A212942P3RB	Fuse, EJ-2, bolted, 4.8 kV, 3R, 100 A, CR194 Limitamp
55A212942P4RB	Fuse, EJ-2, bolted, 4.8 kV, 4R, 130 A, CR194 Limitamp
55A212942P6RB	Fuse, EJ-2, bolted, 4.8 kV, 6R, 170 A, CR194 Limitamp
55A212942P9RB	Fuse, EJ-2, bolted, 4.8 kV, 9R, 200 A, CR194 Limitamp
55A212942P12RB	Fuse, EJ-2, bolted, 4.8 kV, 12R, 230 A, CR194 Limitamp
55A212942P18RB	Fuse, EJ-2, bolted, 4.8 kV, 18R, 390 A, CR194 Limitamp
55A212942P24RB	Fuse, EJ-2, bolted, 4.8 kV, 24R, 450 A, CR194 Limitamp
55A212943P70	Fuse, EJ-2, bolted, 7.2 kV, 70 A, 50 kA, CR194 Limitamp
55A212943P100	Fuse, EJ-2, bolted, 7.2 kV, 100 A, 50 kA, CR194 Limitamp
55A212943P180	Fuse, EJ-2, bolted, 7.2 kV, 180 A, 50 kA, CR194 Limitamp
55A212943P360	Fuse, EJ-2, bolted, 7.2 kV, 360 A, 50 kA, CR194 Limitamp
55A213937P425B	Fuse, EJ-2, bolted, 5.0 kV, 425 A, 50 kA, CR194 Limitamp
55A213937P550B	Fuse, EJ-2, bolted, 5.0 kV, 550 A, 50 kA, CR194 Limitamp
55A213937P630B	Fuse, EJ-2, bolted, 5.0 kV, 630 A, 50 kA, CR194 Limitamp Limitamp
55A213937P800B	Fuse, EJ-2, bolted, 5.0 kV, 800 A, 50 kA, CR194
9F60CCB001	Fuse, EJ-1, clip, 2.75 kV, 1 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB002	Fuse, EJ-1, clip, 2.75 kV, 2 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB003	Fuse, EJ-1, clip, 2.75 kV, 3 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB005	Fuse, EJ-1, clip, 2.75 kV, 5 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB007	Fuse, EJ-1, clip, 2.75 kV, 7 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB010	Fuse, EJ-1, clip, 2.75 kV, 10 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB015	Fuse, EJ-1, clip, 2.75 kV, 15 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB020	Fuse, EJ-1, clip, 2.75 kV, 20 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F60CCB025	Fuse, EJ-1, clip, 2.75 kV, 25 A, 7 centers, 38 kA, Limitamp feed, line-side transformer
9F62DCB080	Fuse, EJO-1, clip, 5.5 kV, 80 A, 3" dia., 50 kA, IC1074 LBS
9F62DCB100	Fuse, EJO-1, clip, 5.5 kV, 100 A, 3" dia., 50 kA, IC1074 LBS
9F62DCB125	Fuse, EJO-1, clip, 5.5 kV, 125 A, 3" dia., 50 kA, IC1074 LBS
9F62DCB150	Fuse, EJO-1, clip, 5.5 kV, 150 A, 3" dia., 50 kA, IC1074 LBS
9F62DCB175	Fuse, EJO-1, clip, 5.5 kV, 175 A, 3" dia., 50 kA, IC1074 LBS
9F62DCB200	Fuse, EJO-1, clip, 5.5 kV, 200 A, 3" dia., 50 kA, IC1074 LBS
9F62FCB250	Fuse, EJO-1, clip, 5.5 kV, 250 A, 3" dia., 50 kA, IC1074 LBS
9F62FCB300	Fuse, EJO-1, clip, 5.5 kV, 300 A, 3" dia., 50 kA, IC1074 LBS
9F62FCB350	Fuse, EJO-1, clip, 5.5 kV, 350 A, 3" dia., 50 kA, IC1074 LBS
9F62FCB400	Fuse, EJO-1, clip, 5.5 kV, 400 A, 3" dia., 50 kA, IC1074 LBS
9F62FCB450	Fuse, EJO-1, clip, 5.5 kV, 450 A, 3" dia., 50 kA, IC1074 LBS
9F62HCB025	Fuse, EJO-1, clip, 5.5 kV, 25 A, 2" dia., 50 kA, IC1074 LBS
9F62HCB030	Fuse, EJO-1, clip, 5.5 kV, 30 A, 2" dia., 50 kA, IC1074 LBS
9F62HCB040	Fuse, EJO-1, clip, 5.5 kV, 40 A, 2" dia., 50 kA, IC1074 LBS
9F62HCB050	Fuse, EJO-1, clip, 5.5 kV, 50 A, 2" dia., 50 kA, IC1074 LBS
9F62HCB065	Fuse, EJO-1, clip, 5.5 kV, 65 A, 2" dia., 50 kA, IC1074 LBS

Stab-in contactor strap assemblies

Part number	Description
55C685945G2	Top stab assembly
55C685941G2	Stab base assembly

Common CR193 contactors (partial part numbers)



++ Voltage for contactor main coil is always 110/115 DC.

** The sum of normally open and normally closed auxiliary contacts must be a multiple of five (5). Each interlock block contains five (5) contacts). A contactor may contain a maximum of four (4) blocks, two (2) being the maximum on either side.

- Typical contactor number: CR193D110L01005AL**
- 400 A contactor
 - Without mechanical latch — 110/115 V DC main coil
 - 10 normally open (NO) auxiliary contacts
 - 5 normally closed (NC) auxiliary contacts
 - Stab-in style contactor
 - Auxiliary blocks mounted on left side of contactor

CR193 contactor components

Part number	Description
55C679819G3RA	Mechanical latch with 110 V DC coil (qty = 1 per latching contactor)
55C679819G3RB	Mechanical latch with 24 V DC coil (qty = 1 per latching contactor)
55C679819G3RC	Mechanical latch with 48 V DC coil (qty = 1 per latching contactor)
55C679819G3RD	Mechanical latch with 220 V DC coil (qty = 1 per latching contactor)
55C679816G1	Aux. contacts 5 NO/0 NC (qty = 1–4 per contactor)
55C679816G2	Aux. contacts 4 NO/1 NC (qty = 1–4 per contactor)
55C679816G3	Aux. contacts 3 NO/2 NC (qty = 1–4 per contactor)
55C679816G4	Aux. contacts 2 NO/3 NC (qty = 1–4 per contactor)
55C679816G5	Aux. contacts 1 NO/4 NC (qty = 1–4 per contactor)
55C679816G6	Aux. contacts 0 NO/5 NC (qty = 1–4 per contactor)
55C679809G1	400 A aux. contact mounting assembly, 1 block on left (qty = 1–2 per 400 A contactor)
55C679809G2	400 A aux. contact mounting assembly, 2 blocks on left (qty = 1–2 per 400 A contactor)
55C679809G3	400 A aux. contact mounting assembly, 1 block on right (qty = 1–2 per 400 A contactor)
55C679809G4	400 A aux. contact mounting assembly, 2 blocks on right (qty = 1–2 per 400 A contactor)
55C679814G1	800 A aux. contact mounting assembly, 1 block on left (qty = 1–2 per 800 A contactor)
55C679814G2	800 A aux. contact mounting assembly, 2 blocks on left (qty = 1–2 per 800 A contactor)
55C679814G3	800 A aux. contact mounting assembly, 1 block on right (qty = 1–2 per 800 A contactor)
55C679814G4	800 A aux. contact mounting assembly, 2 blocks on right (qty = 1–2 per 800 A contactor)
55B533219G1	Bracket — contactor side (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212917P1	Bracket — unit side (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212919P1	19-pin wire connector receptacle — contactor side (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212918P1	19-pin wire connector plug — unit side (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212922P1	Wire pin (male) used with 55A212919P1 (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212923P1	Wire socket (female) used with 55A212918P1 (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
N605P15008C6	Screw, 2 required per 55A212919P1 connector/plug (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
55A212920P1	Screw, 2 required per 55A212919P1 connector/plug (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
L201P12B33	Nut, 2 required per 55A212919P1 connector/plug (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
L401P24C33	Lock washer, 2 required per 55A212919P1 connector/plug (aux. interlock wire plug bracket parts for 19-pin connectors (black plugs))
N236P21B6	Wing nut, 2 required to attach 55A212917P1 to 55B533219G1 (aux. interlock wire plug bracket parts for 19 pin connectors (black plugs))
VCP1	19-pin plug wiring harness, 1 aux. interlock block (qty = 1 per contactor)
VCP2	19-pin plug wiring harness, 2 aux. interlock block (qty = 1 per contactor)
VCP3	19-pin plug wiring harness, 3 aux. interlock block (qty = 1 per contactor)
VCP4	19-pin plug wiring harness, 4 aux. interlock block (qty = 1 per contactor)
55B532586P1	Bracket — contactor side (included in 55D main contactor assembly groups) (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#2-480709-0	12-pin plug female — contactor side (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#2-480708-0	12-pin socket male — unit side (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#1-480698-0	2-pin plug female — contactor side, use for ground wire to mechanical latch (aux. interlock wire plug bracket parts for 12 pin connectors)
AMP#1-480699-0	2-pin socket male (unit side, use for ground wire to equipment ground) (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#350551-1	Wire socket (use with AMP #480709-0 and 480698-0) (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#350552-1	Wire pin (use with AMP #2-480708-0 and 480699-0) (aux. interlock wire plug bracket parts for 12-pin connectors)
AMP#1-640415-1	Blocking/keying pin (aux. interlock wire plug bracket parts for 12-pin connectors)
VCP5	12-pin plug wiring harness, 1 aux. interlock block (qty = 1 per contactor)
VCP6	12-pin plug wiring harness, 2 aux. interlock block (qty = 1 per contactor)
VCP7	12-pin plug wiring harness, 3 aux. interlock block (qty = 1 per contactor)
VCP8	12-pin plug wiring harness, 4 aux. interlock block (qty = 1 per contactor)
55B528941G1	400 A contactor side plates — left (qty = 1 per 400 A contactor)
55B528941G2	400 A contactor side plates — right (qty = 1 per 400 A contactor)
55A213967P1	Draw-out contactor pull handle (qty = 2 per draw-out contactor)

CR193 400 A contactor spare parts

Part number	Description
55A212103P1	Guide moving contact
55A212177P1	Pivot block
55A212184P1	Spring
55D781008G6R	400 A stationary vacuum bottle ASM
55D781008G7R	400 A draw-out vacuum bottle ASM
55D781011G1	Armature carrier ASM
55D781012G2	Coil 400 A vacuum

CR193 800 A contactor spare parts

Part number	Description
55A212103P1	Guide moving contact
55A212177P1	Pivot block
55A212184P1	Spring
55A212179P1	Bearing
55D781020G3	Coil 800 A vacuum

Contactor economizer modules (CEMs)

Part number	Description
DIE#SP-0310	CTM for CR194 Limitamp
DIE#SP-0331	CTM for IC7160 Limitamp

Load break switches (LBS)

Part number	Description
IC1074A101C	LBS, 5 kV, 600 A, 2-high, draw-out, no contacts
IC1074A102C	LBS, 5 kV, 600 A, 1-high, roll-out, no interlocks
IC1074A105A	LBS, 5 kV, 600 A, 12 D-clip fuse, 2-high, draw-out, 3 NO/3 NC
IC1074A105C	LBS, 5 kV, 600 A, 12 D-clip fuse, 2-high, draw-out, no interlocks
IC1074A106B	LBS, 5 kV, 600 A, 12 D-clip fuse, 1-high, roll-out, 2 NO/2 NC
IC1074B200A	LBS, 5 kV, 1200 A, bolt-in, 3 NO/3 NC
IC1074B200B	LBS, 5 kV, 1200 A, bolt-in, 2 NO/2 NC
IC1074B200C	LBS, 5 kV, 1200 A, bolt-in, no contacts
IC1074B201B	LBS, 5 kV, 600 A, bolt-in, 2 NO/2 NC
IC1074B201C	LBS, 5 kV, 600 A, bolt-in, no contacts

Current transformers (CTs)



Part number	Description
177-500	CT, 50:5 ground fault, 2x0000 — 2x500 MCM cable
180SHT-301	CT, 300:5
180SHT-401	CT, 400:5
180SHT500	CT, 50:5 ground fault, #8–0000 wire
180SHT-601	CT, 600:5
183-201	CT, 200:5
19SHT-801	CT, 800:5
19SHT-102	CT, 1000:5
25-500	CT, 50:5 ground fault CT, 350 MCM–500 MCM cable



Control power transformers (CPTs)



Part number	Description
573A350P13	CPT, 2300:115/230, 5 kVA , 60 Hz
573A350P21	CPT, 4160:120/240, 5 kVA , 50/60 Hz
573A350P44	CPT, 2300:115/230, 2 kVA , 50/60 Hz
573A350P45	CPT, 4160:115/230, 2 kVA , 50/60 Hz
573A350P48	CPT, 3300V:115/230, 1 kVA , 50/60 Hz
573A350P53	CPT, 4160:115/230, 3 kVA , 60 Hz
573A350P54	CPT, 2300:115/230, 3 kVA , 60 Hz
573A350P62	CPT, 4800:120, 5 kVA , 60 Hz
573A350P67	CPT, 3300:120, 3 kVA , 60 Hz
573A350P69	CPT, 6000:120, 2 kVA , 50/60 Hz
573A350P74	CPT, 3000:115/230, 3 kVA , 50/60 Hz
573A350P76	CPT, 4800:115/230, 3 kVA , 60 Hz
573A350P83	CPT, 7200:115/230, 3 kVA , 50/60 Hz
573A350P84	CPT, 3000:115/230, 3 kVA , 60 Hz
573A350P85	CPT, 7200:115/230, 2 kVA , 60 Hz
573A350P86	CPT, 2300:115/230, 750 VA, 50/60 Hz
573A350P87	CPT, 4160:115/230, 750 VA, 50/60 Hz

CPT primary fuses

Part number	Description
CSC#A480T1E-1	1 amp fuse 4.8 kV
CSC#A480T2E-1	2 amp fuse 4.8 kV
CSC#A480T3E-1	3 amp fuse 4.8 kV
CSC#A480T4E-1	4 amp fuse 4.8 kV
CSC#A480T5E-1	5 amp fuse 4.8 kV
9F60CCB007	7 amp fuse 2.4 kV
9F60CCB010	10 amp fuse 2.4 kV
9F60CCB015	15 amp fuse 2.4 kV

CPT secondary fuses

Part number	Description
CSC#OT1	1 amp fuse 250 V
CSC#OT3	3 amp fuse 250 V
CSC#OT5	5 amp fuse 250 V
CSC#OT6	6 amp fuse 250 V
CSC#OT10	10 amp fuse 250 V
CSC#OT12	12 amp fuse 250 V
CSC#OT15	15 amp fuse 250 V
CSC#OT20	20 amp fuse 250 V

Pilot devices and control components

Part number	Description
CR104PLG22R	120 V oiltight LED pilot light — Red
CR104PLG22G	120 V oiltight LED pilot light — Green
CR104PLG22L	120 V oiltight LED pilot light — Blue
CR104PLG22M	120 V oiltight LED pilot light — Amber
CR104PLT22R	120 V oiltight LED PPT pilot light — Red
CR104PLT22G	120 V oiltight LED PPT pilot light — Green
CR104PLT22L	120 V oiltight LED PPT pilot light — Blue
CR104PLT22M	120 V oiltight LED PPT pilot light — Amber
MCR104PLG32RLED	120 V oiltight LED pilot light — Red
MCR104PLG32GLED	120 V oiltight LED pilot light — Green
MCR104PLG32LLED	120 V oiltight LED pilot light — Blue
MCR104PLG32MLED	120 V oiltight LED pilot light — Amber
MCR104PLT32RLED	120 V oiltight LED PPT pilot light — Red
MCR104PLT32GLED	120 V oiltight LED PPT pilot light — Green
MCR104PLT32LLED	120 V oiltight LED PPT pilot light — Blue
MCR104PLT32MLED	120 V oiltight LED PPT pilot light — Amber
104PBG01U1A1	Pushbutton, momentary, oiltight, flush, 1 NC
104PBG10U1A1	Pushbutton, momentary, oiltight, flush, 1 NO
CR104PSG34Y1	H-O-A selector switch, 1 NO and 1 NC

GE Wind Limitamp spare parts

GE Part Number	ABB Part Number	Description
109W8272P001	104B9322P6	Handle, swing out, low voltage panel
109W8271P001	171B4726P1	Cover, wire clamp, stator switch cabinet
109W8266P001	190B1663G1	Support assembly, spade terminal
109W8269P001	193B110L00505BU	Contactor assembly, 400 A, vacuum, STA
109W8263P001	1SBH137001R1331	Relay, 240 V AC, 3 NO/1 NC
109W7849P001	282B1000AAP811	Bus bar, load connection, SSC
109W8313P001	302A3645NVG1	Keylock, ground switch, stator switch cabinet
109W8279P001	302A3900DCG1	Kit, tool, maintenance, stator switch cabinet
109W8262P001	328A1141P1	Switch, selector, 600 V AC, 20 A
108W9473P001	328A1200RPTP177	Relay, multifunction, MIF II
109W8274P001	55A212651BDP1	Bracket, earth switch barrier
109W9490P001	55A212651FBP1	Toe plate, stator switch, Limitamp
109W8276P001	55B528943ATP1	Barrier, LA, stator switch cabinet
109W8277P001	55B528943AYG1	Plate, mounting, lightning arrester
445W5820P001	55B533388P1	400 A contactor line cable
109W8278P001	55C682151ANG1	Earth switch, 7.2 kV, stator switch cabinet
109W8311P001	55C682151AQG1	Operator handle, assembly, stator switch cabinet
109W8268P001	55C682220G2	Switch, quick-make quick-break
109W5598P001	7.2AMWNA2.0E	Fuse, 2 A, 7.2 kV, 142.2 mm
109W8257P001	9T58K2930	Transformer, 0.5 kVA, core-and-coil SM power
109W8273P001	A072F2D0R0-18R	Fuse, 390 A, 8300 V AC, 7200 V DC, JCR-A
109W8256P001	1SQA009099R0001	Light, LED, 10 A, 240 V AC/DC, green
109W8255P001	1SQA009096R0001	Light, LED, 10 A, 240 V AC/DC, red
109W8152P001	BMC#KTK-R-10	Fuse, 10 A, 600 V AC, fast-acting
109W8264P001	BMC#KTK-R3-1/2	Fuse, 3.5 A, 600 V AC, fast-acting
109W8259P001	BMC#KTK-R5	Fuse, 5 A, 600 V AC, fast-acting
109W8265P001	DIE#SP-0310	Module, contactor economizer
n/a	328A1199CWG2	Control wire harness instruction sheet
n/a	328A1199CXP1	HV cable cont LD to motor
n/a	328A1199CXP2	LA wind harness CXP2
n/a	328A1199CXP3	LA wind harness CXP3
n/a	328A1199CXP4	LA wind harness CXP4
n/a	55A212651EFG1	Lower fuse strap pre
n/a	55B528943BMP1	Bus bar lower fuse cont
n/a	55B528943EPP1	Swing-out support
n/a	55C682151AMP1	Ground stab

Hardware kits

(see following pages for BOM of hardware kits)

Hardware kit number	Description
273A7729GEG1	1000 A main bus splice hardware kit
273A7729GEG2	2000 A main bus splice hardware kit
273A7729GEG3	Limitamp case bolt hardware kit
273A7729GEG4	MCC section bolt hardware kit
273A7729GEG5	1000 A main bus splice hardware kit (C194 two high)
273A7729GEG6	2000 A main bus splice hardware kit (C194 two high)
273A7729GEG7	(1) Donut CT per phase hardware kit
273A7729GEG8	(2) Donut CTs per phase hardware kit
273A7729GEG9	(1) Bar CT per phase hardware kit
273A7729GEG10	GCT hardware kit
273A7729GEG11	CPT and FU (2FU) hardware kit
273A7729GEG12	Space heater hardware kit
273A7729GEG13	Terminal boards hardware kit
273A7729GEG14	Cable to CPT fuses hardware kit
273A7729GEG15	Lower fuse support assembly hardware kit
273A7729GEG16	MTR termination donut assembly (top or bottom) hardware kit
273A7729GEG17	CONT mounting HDWE (stationary) hardware kit
273A7729GEG18	CONT mounting HDWE (draw-out) hardware kit
273A7729GEG19	3000 A main bus splice hardware kit
273A7729GEG20	2000 A to 1000 A main splice hardware kit
273A7729GEG21	New Limitamp 3000 A main to switchgear direct coupled hardware kit
273A7729GEG22	Special hardware package for field use
273A7729GEG23	Splice to C/H equipment hardware kit
273A7729GEG24	2000 A Cu to 2000 A Al ACB/GRD hardware kit
218A6390G1	Hardware kit for customer field connection of AC bus and enclosures
218A6390G2	Switchgear bus duct hardware kit
218A6390G3	Rome transformer (flange type with bus terminations)
218A6390G4	Switchgear bus and enclosure 1000 A without ground hardware kit
218A6390G5	Switchgear bus and enclosure 2000 A hardware kit
262B9026	Captive hardware kit (use with cotter pin)
1VAF203877A0554	2 high to 2 high 1200 A bus splice hardware kit
1VAF203877A0555	2 high to 2 high 1200 A bus splice hardware kit

273A7729GE

Item no.	Part number	Description	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20	G21	G22	G23	G24
1	N22P29024B6	Bolt, ½-13 x 1.50	12		6																					
2	N22P29032B6	Bolt, ½-13 x 2.00		12																			6			12
3	N22P21012B6	Bolt, ¼-20 x 0.75				6										2										
4	N22P29028B6	Bolt, ½-13 x 1.75					12															6				
5	N22P29036B6	Bolt, ½-13 x 2.25						12														6		6		
6	N22P25052B6	Bolt, ⅝-16 x 3.25							2			2														24
7	N22P25020B6	Bolt, ⅝-16 x 1.25																	3				2			
8	N22P29052B6	Bolt, ½-13 x 3.25																			12					
9	N22P23024B6	Bolt, ⅝-13 x 1.50																						2		
10	55A213998P2	Bolt plate, splice std. joint																								
11	577A289P2	Carriage bolt, ⅝-16 x 1.375															4									
12	75A105503P103	Belleville washer																								12
13	75A105503P102	Belleville washer																								2
14	N402P45B6	Flat washer, ½	24	24	12		24	24													24	24		12		24
15	N402P41B6	Flat washer, ¼ reg.								2	4		6	2				4		2						
16	N402P43B6	Flat washer, ⅝ reg.							2			2					4		3				16		48	2
17	N402P11B6	Flat washer, ¼ narrow													2											
18	N402P42B6	Flat washer, ⅝ reg.																	2					2		
19	N402P15B6	Flat washer, ½ narrow																					12			
20	N405P45C6	Lock washer, ½	12	12	6		12	12													12	12	6	6		
21	N405P43C6	Lock washer, ⅝ reg.							2			2					4		3				14		24	
22	N405P41C6	Lock washer, ¼ reg.													2											
23	N405P42C6	Lock washer, ⅝ reg.																	2					2		
24	N405P15B6	Lock washer, light steel spring ½																								
25	N245P29B6	Nut, ½-13	12	12	6		12	12													12	12	6	6		12
26	N245P23B6	Nut, ⅝-18																	2							
27	N245P25B6	Nut, ⅝-16							2			2					4						14		24	2
28	N238P21C6	Sems nut, ¼-20				6				2	4		6	2				4								
29	N57P21096B6	Screw, ¼-20 x 6								2																
30	N722DP21010B6	THD R-screw, ¼-20 x 0.625											4							2						
31	N605P15018C6	THD C-screw, #8 x 1.125													2											
32	302A3747P3	Grease																								1
33	See note	Packing details	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
34	273A7729GEF1	Kit labeling, see note	X																							
35	273A7729GEF2	Kit labeling, see note		X																						
36	273A7729GEF3	Kit labeling, see note			X																					
37	273A7729GEF4	Kit labeling, see note				X																				
38	273A7729GEF5	Kit labeling, see note					X																			
39	273A7729GEF6	Kit labeling, see note						X																		
40	273A7729GEF7	Kit labeling, see note							X																	
41	273A7729GEF8	Kit labeling, see note								X																
42	273A7729GEF9	Kit labeling, see note									X															
43	273A7729GEF10	Kit labeling, see note										X														
44	273A7729GEF11	Kit labeling, see note											X													
45	273A7729GEF12	Kit labeling, see note												X												
46	273A7729GEF13	Kit labeling, see note													X											
47	273A7729GEF14	Kit labeling, see note														X										
48	273A7729GEF15	Kit labeling, see note															X									
49	273A7729GEF16	Kit labeling, see note																X								
50	273A7729GEF17	Kit labeling, see note																	X							
51	273A7729GEF18	Kit labeling, see note																		X						
52	273A7729GEF19	Kit labeling, see note																			X					
53	273A7729GEF20	Kit labeling, see note																				X				
54	273A7729GEF21	Kit labeling, see note																					X			
55	273A7729GEF22	Kit labeling, see note																						X		
56	273A7729GEF23	Kit labeling, see note																							X	
57	273A7729GEF24	Kit labeling, see note																								X

Packing details note

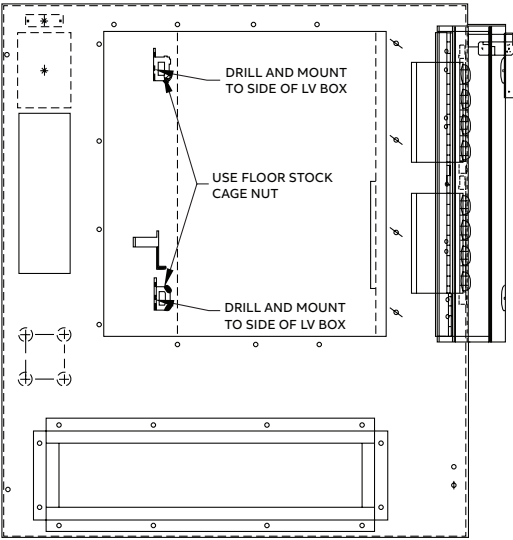
Parts to be packed in polybag, envelope, box, etc., of vendor's choice. Packaging should have suitable strength to withstand normal handling without tearing or splitting. Kit labeling on package should include kit description and part number.

218A6390

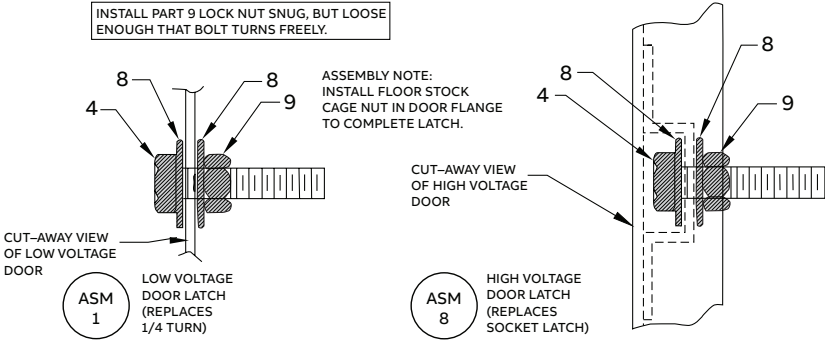
Item no	Part number	Description	G1	G2	G3	G4	G5	G6	G7	G8
1	N22P2902886	Bolt, ½-13 x 1.75 (for 2000 A Al bus, use N22P2903286)	12	8	8	8		14	6	
2	N22P2903686	Bolt, ½-13 x 2.25					8			6
3	N22P29016B6	Bolt, ½-13 x 1.00	6					44	8	15
4	N22P25016B6	Bolt, ¾-16 x 1.00		3			3			2
5	N22P23016B6	Bolt, ⅝-18 x 1.00							12	
6	N402P45B6	Flat washer, ½	24	8	8	8	8	28	28	27
7	N402P42B6	Flat washer, ⅝ reg.							24	
8	N402P15B6	Flat washer, ½ narrow	12		30			44		
9	N402P13B6	Flat washer, ¾	2	3			3	2		4
10	N405P45C6	Lock washer, ½	18	8	8	8	8	60	14	11
11	N405P43C6	Lock washer, ¾ reg.	2	3			3	2		2
12	N405P42C6	Lock washer, ⅝ reg.							12	
13	N245P29B6	Nut, ½-13	18	8	8	8	8	60	14	21
14	N245P23B6	Nut, ⅝-18							12	
15	N245P25B6	Nut, ¾-16	2	3			3	2		2
16	273A7729GEG3	Hardware kit		4	3	4	4			

262B9026

Item no	Part number	Description	G1	G2	G3	G4
1		ASM 1	X	X		X
2		ASM 5		X		
3		ASM 8			X	
4	286A113P27	Bolt	1	2		
5	N22P2302086	Bolt			1	
6	N722EP21024B6	Slotted bolt, 1/ 4 20 x 1 1/2				1
7	N402P4286	Flat washer, 5/16 reg.			2	
8	N402P1286	Flat washer, 3/8	2	4		
9	577A104P7	Nut with insert, 3/8-16	1	2	1	
10	N230P23P	Cage nut		2		
11	577A428P4	Crown-lock nut, 1/ 4-20				1
12	68J122229MPOOOOAAAY	Top bracket		2		



ASM 5 BOLTED FRAME 2HI LOW VOLTAGE DOOR LATCH (REPLACES 1/4 TURN)

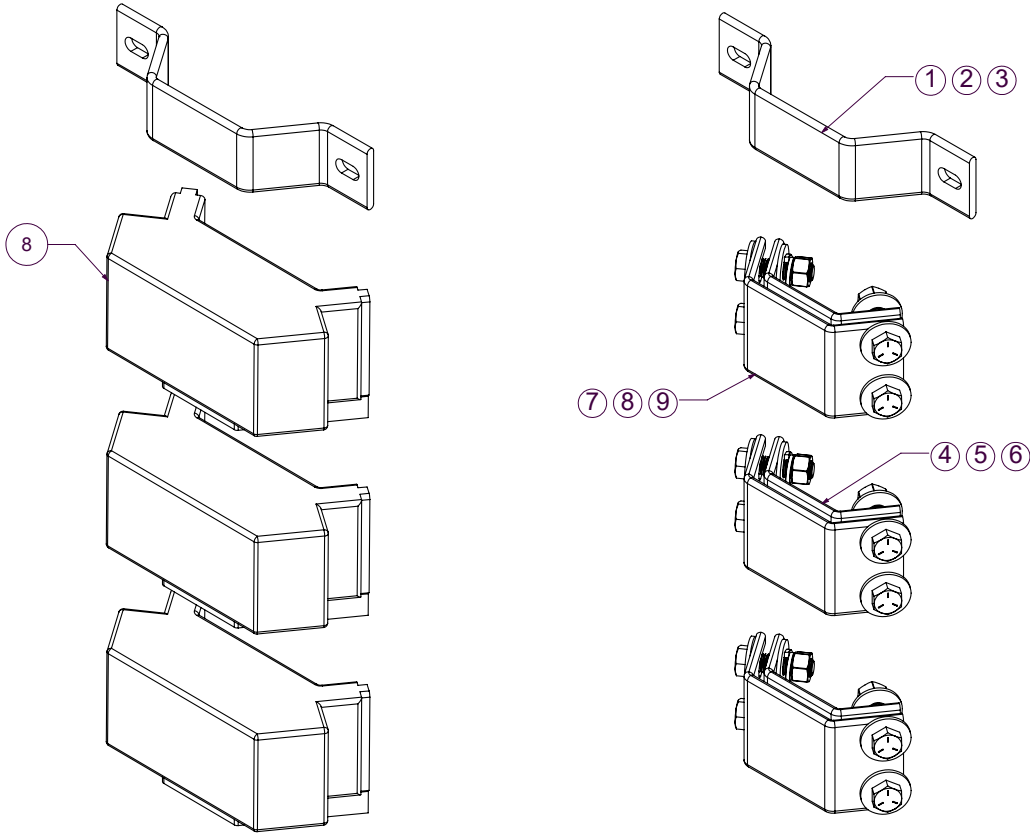


1VAF203877A0554

Item no	Part number	Description	A1	A2	A3
1	1VAF203878P0075P01	Ground bus splice, 1000 A, unplated	1		
2	1VAF203878P0075P02	Ground bus splice, 1000 A, tin plated		1	
3	1VAr203070P0075P03	Ground bus splice, 1000 A, silver plated			1
4	1VAF203878P0632P01	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, unplated	3		
5	1VAF203878P0632P02	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, tin plated		3	
6	1VAF203878P0632P03	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, silver plated			3
7	1VAF203878P0633P01	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, unplated	3		
8	1VAF203878P0633P02	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, tin plated		3	
9	1VAF203878P0633P03	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, silver plated			3
10	169B7634P104	2 high to 2 high boot, 1200 A	3	3	3
11	90108A174	½ steel flat washer	24	24	24
12	91102A770	½ steel lock washer	12	12	12
13	92865A718	½–13 hex steel bolt	12	12	12
14	95462A033	½–13 steel hex nut	12	12	12

Kit	Description
A01	Unplated
A02	Tin plated
A03	Silver plated

Note: Items 11 through 14 are McMaster-Carr or equivalent

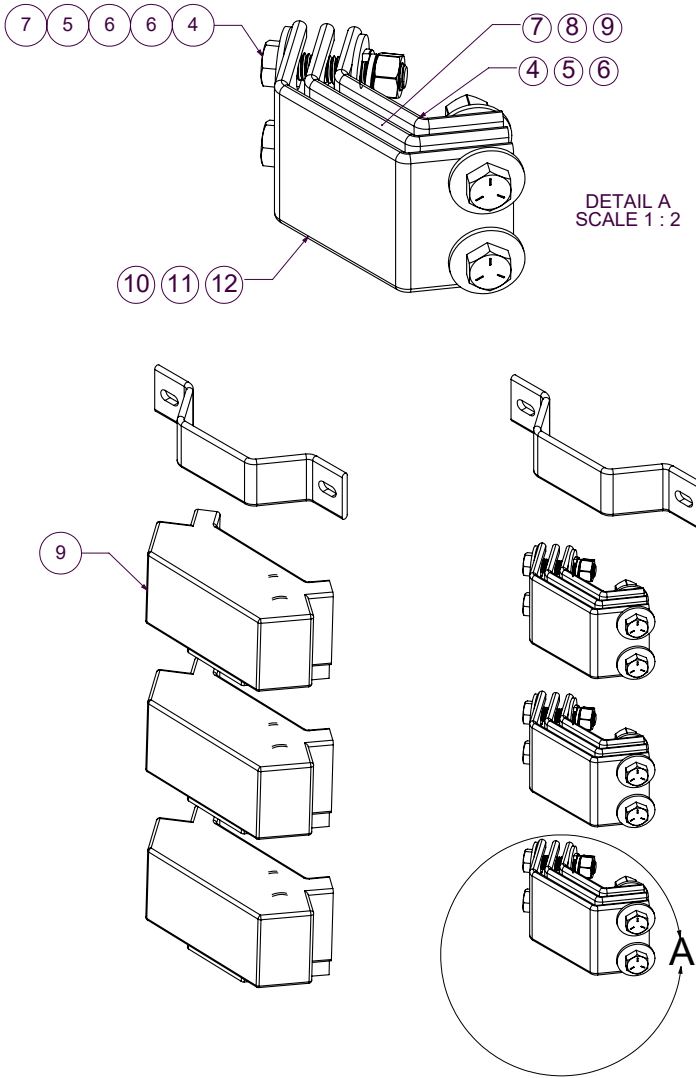


1VAF203877A0555

Item no	Part number	Description	A1	A2	A3
1	1VAF203878P0075P01	Ground bus splice, 1000 A, unplated	1		
2	1VAF203878P0075P02	Ground bus splice, 1000 A, tin plated		1	
3	1VAF203878P0075P03	Ground bus splice, 1000 A, silver plated			1
4	1VAF203878P0631P01	Main bus splice, 2 high to 2 high, 1200 A, 3.35" long, unplated	3		
5	1VAF203878P0631P02	Main bus splice, 2 high to 2 high, 1200 A, 3.95" long, tin plated		3	
6	1VAF203878P0612P03	Main bus splice, 2 high to 2 high, 1200 A, 3.95" long, silver plated			3
7	1VAF203878P0632P01	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, unplated	3		
8	1VAF203878P0632P02	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, tin plated		3	
9	1VAF203878P0632P03	Main bus splice, 2 high to 2 high, 1200 A, 4.76" long, silver plated			3
10	1VAF203878P0633P01	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, unplated	3		
11	1VAF203878P0633P02	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, tin plated		3	
12	1VAF203878P0633P03	Main bus splice, 2 high to 2 high, 1200 A, 5.58" long, silver plated			3
13	16987634P105	Not specified	3	3	3
14	90108A174	½ steel flat washer	24	24	24
15	91102A770	½ steel lock washer	12	12	12
16	92865A721	½–13 x 2¼ steel hex bolt	12	12	12
17	95462A033	½–13 steel hex nut	12	12	12

Kit	Description
A01	Unplated
A02	Tin plated
A03	Silver plated

Note: Items 13 through 17 are McMaster-Carr or equivalent



Soft starters

Entirely solid-state soft starters

Part number	Voltage	Frame size	Frequency
MVC4-23200ABB6#\$\$%	2300 V	200 A	60 Hz
MVC4-23200ABB5#\$\$%	2300 V	200 A	50 Hz
MVC4-23400ABB6#\$\$%	2300 V	400 A	60 Hz
MVC4-23400ABB5#\$\$%	2300 V	400 A	50 Hz
MVC4-23650ABB6#\$\$%	2300 V	650 A	60 Hz
MVC4-23650ABB5#\$\$%	2300 V	650 A	50 Hz
MVC4-23750ABB6#\$\$%	2300 V	750 A	60 Hz
MVC4-23750ABB5#\$\$%	2300 V	750 A	50 Hz
MVC4-33200ABB6#\$\$%	3300 V	200 A	60 Hz
MVC4-33200ABB5#\$\$%	3300 V	200 A	50 Hz
MVC4-33400ABB6#\$\$%	3300 V	400 A	60 Hz
MVC4-33400ABB5#\$\$%	3300 V	400 A	50 Hz
MVC4-33650ABB6#\$\$%	3300 V	650 A	60 Hz
MVC4-33650ABB5#\$\$%	3300 V	650 A	50 Hz
MVC4-33750ABB6#\$\$%	3300 V	750 A	60 Hz
MVC4-33750ABB5#\$\$%	3300 V	750 A	50 Hz
MVC4-41200ABB6#\$\$%	4160 V	200 A	60 Hz
MVC4-41200ABB5#\$\$%	4160 V	200 A	50 Hz
MVC4-41400ABB6#\$\$%	4160 V	400 A	60 Hz
MVC4-41400ABB5#\$\$%	4160 V	400 A	50 Hz
MVC4-41650ABB6#\$\$%	4160 V	650 A	60 Hz
MVC4-41650ABB5#\$\$%	4160 V	650 A	50 Hz
MVC4-41750ABB6#\$\$%	4160 V	750 A	60 Hz
MVC4-41750ABB5#\$\$%	4160 V	750 A	50 Hz

- Notes:
- Substitute # symbol with R if RTD option is required or X if not required.
 - Substitute \$ symbol with G if ground fault option is required or X if not required.
 - Substitute & symbol with I if Inductor option is required or X if not required.
 - Substitute % symbol with letter suffix for appropriate continuous current range per Table 1 on following page.
 - All kits are supplied with M-SMART display option.

Table 1 Current range suffix

A = 25–40 A
B = 41–60 A
C = 61–80 A
D = 81–120 A
E = 121–160 A
F = 161–200 A
G = 201–255 A
H = 256–355 A
J = 356–400 A
K = 401–480 A
L = 481–600 A
M = 601–670 A
N = 671–800 A

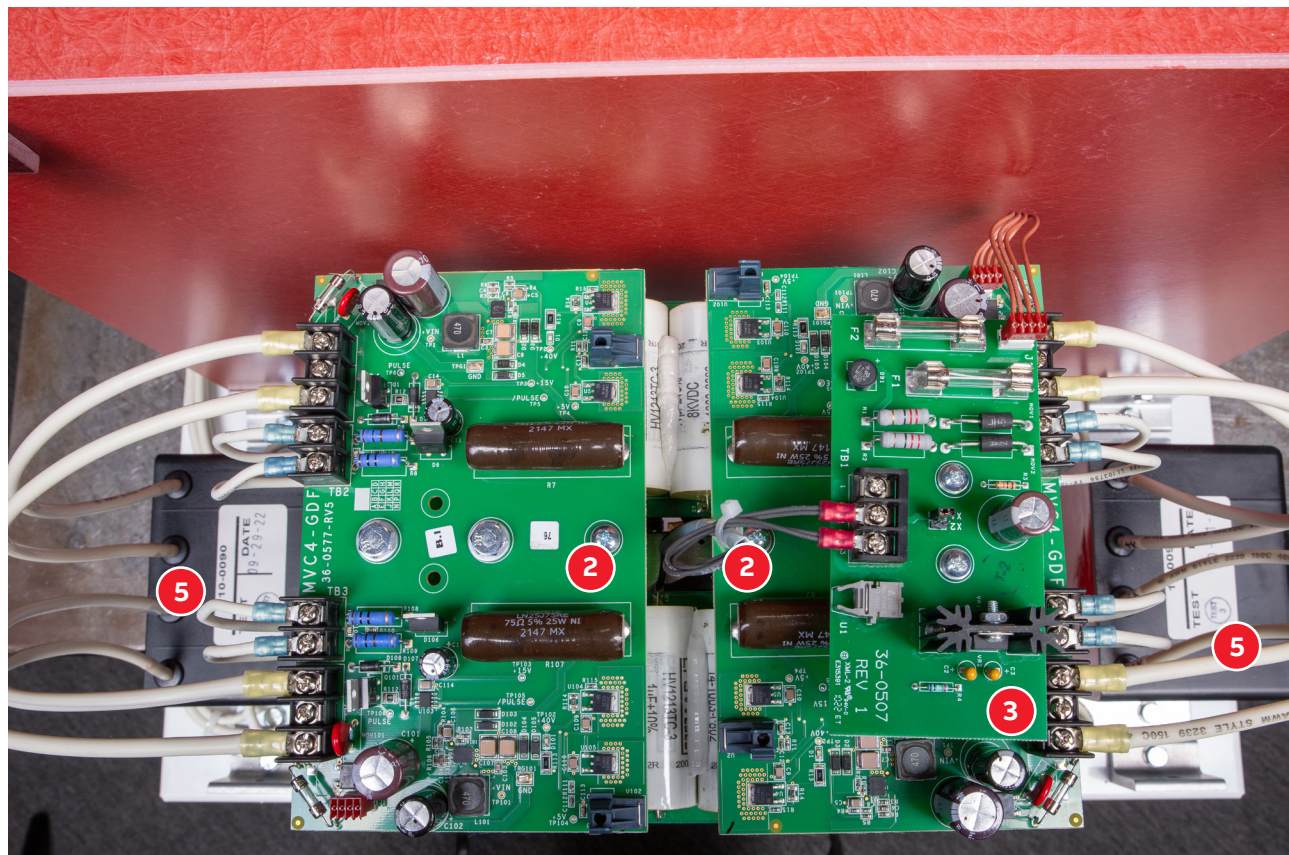
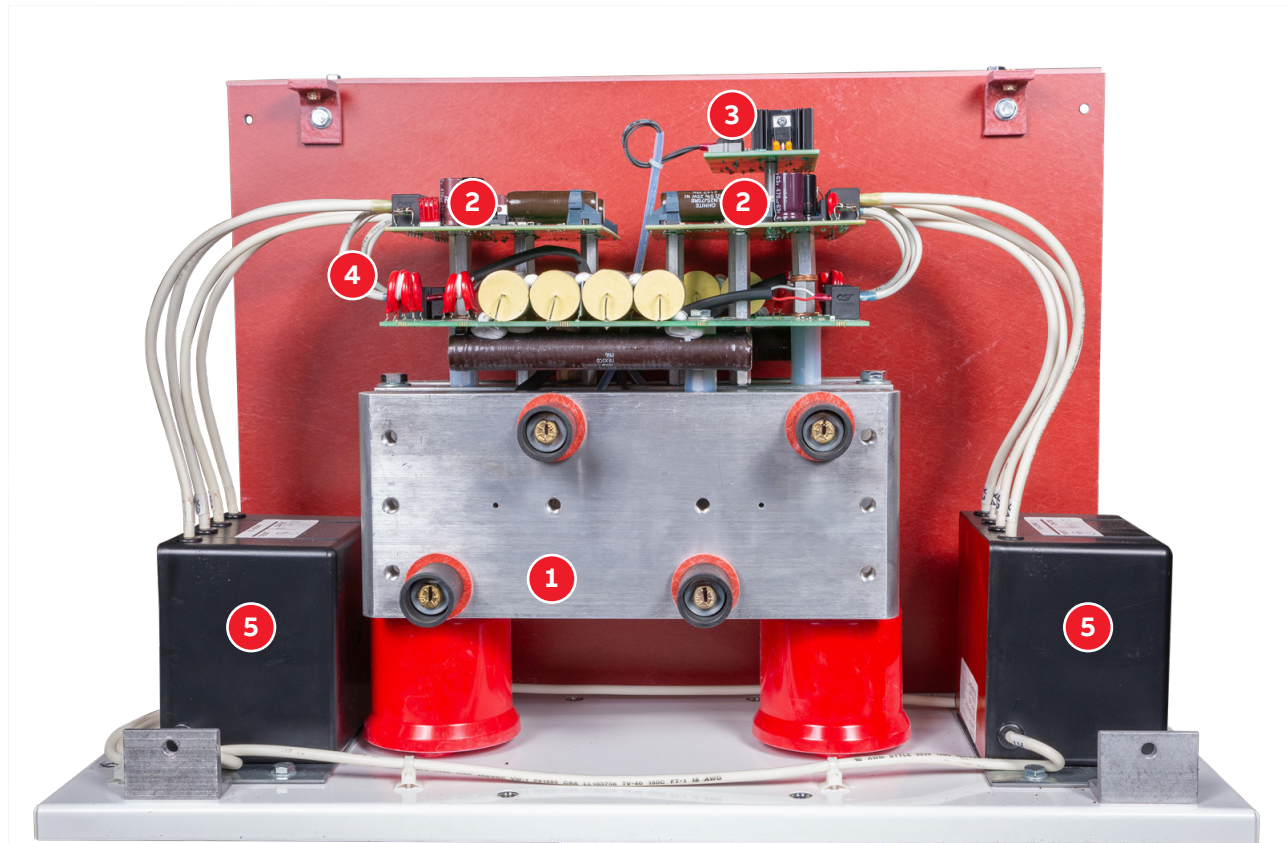
- Application notes:
- If expected start time is less than 30 seconds, select SSS size based on motor continuous current.
 - If expected start time is 30 to 45 seconds, multiply motor continuous current x 1.18 to select SSS size (15% derating).
 - If expected start time is greater than 45 seconds, multiply motor continuous current x 1.25 to select SSS size (20% derating).

Control parts

Hardware kit number	Item no	Description	Quantity per unit
MVC4-CPU	1	CPU board	1
MVC4-Main board	2	Main board (firing board)	1
MVC4-TCB	3	Terminal control board (TCB)	1
71-0318-ABB	4	ABB MS smart display	1
MVC4-3CT-GF-5	5	3 CT board for 1 A CTs (only one CT board per soft starter)	1
MVC4-3CT-GF	6	3 CT board for 5 A CTs (only one CT board per soft starter)	1
DSS1000-RTD	7	RTD board (optional)	0 or 1
64-HMI-POWER	8	5 V display power supply	1

Power section parts

Item number	Description	Part number	Unit type	Qty/unit
0	Entire power section subpanel	MVC4-2-200-THERM	2300 V, 200 A	1
		MVC4-2-400-THERM	2300 V, 400 A	1
		MVC4-2-650-THERM	2300 V, 650 A	1
		MVC4-2-750-THERM	2300 V, 750 A	1
		MVC4-3-200-THERM	3300 V, 200 A	1
		MVC4-3-400-THERM	3300 V, 400 A	1
		MVC4-3-650-THERM	3300 V, 650 A	1
		MVC4-3-750-THERM	3300 V, 750 A	1
		MVC4-4-200-THERM	4160 V, 200 A	1
		MVC4-4-400-THERM	4160 V, 400 A	1
		MVC4-4-650-THERM	4160 V, 650 A	1
		MVC4-4-750-THERM	4160 V, 750 A	1
1	SCR stack	MVC4-STK-23200	2300 V, 200 A	3
		MVC4-STK-23400	2300 V, 400 A	3
		MVC4-STK-23650	2300 V, 650 A	3
		MVC4-STK-23750	2300 V, 750 A	3
		MVC4-STK-33200	3300 V, 200 A	3
		MVC4-STK-33400	3300 V, 400 A	3
		MVC4-STK-33650	3300 V, 650 A	3
		MVC4-STK-33750	3300 V, 750 A	3
		MVC4-STK-41200	4160 V, 200 A	3
		MVC4-STK-41400	4160 V, 400 A	3
		MVC4-STK-41650	4160 V, 650 A	3
		MVC4-STK-41750	4160 V, 750 A	3
2	Gater driver board to 400 A	MVC4-GDF	2300 V, to 400 A	3
		MVC4-GDFP	2300 V, > 400 A	6
		MVC4-GDF	3300 or 4160 V, to 400 A	6
		MVC4-GDFP	3300 or 4160 V, > 400 A,	12
3	Temperature board	MVC3-TEMP	All voltages up to 4160 V and all currents	3
4	MOV and DV/DT board	MVC4-DVDT-MOV	2300 V, to 400 A	3
		MVC4-DVDT-MOV	2300 V, > 400 A	6
		MVC4-DVDT-MOV	3300 or 4160 V, to 400 A	6
		MVC4-DVDT-MOV	3300 or 4160 V, > 400 A	12
5	Gater driver transformer	10-0090	2300 V, to 400 A	3
		10-0090	2300 V, > 400 A	6
		10-0090	3300 or 4160 V, to 400 A	6
		10-0090	3300 or 4160 V, > 400 A	12



Notes

Additional information

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