

Fast Bus Busbar Adapter System

60 mm system – Circuit breaker assemblies and kits

Selection and ordering data

Description

FBCB Fast Bus circuit breakers

Offer a full range of feeder circuit breakers from 15A to 500A. All Sentron kits 125A and under are pre-assembled on 60 mm Fast Bus adaptor shoes and ready to place on the busbar. All other circuit breaker kits are pre-packaged for fast user

assembly and must be torqued down to the busbar prior to assembly. For VL breakers, adaptors are available for up to 500A breakers (both main and feeder orientation). See page 5/8.

3VA and GG Feeder Circuit Breakers

Bus bar system for 3VA circuit breakers are available from 15A up to 500A.

| Type | Part Number |
|--|----------------------|
| Busbar adapter system with 60 mm busbar center-to-center spacing, 3-pole | 8US1211-4SS00 |
| | 8US1213-4AP03 |
| | 8US1213-4AH04 |

For molded case circuit breakers / SCCR Rating


| 3VA5 & GG 125A 65KA @ 480VAC | 3VA5 250A 100KA @ 480VAC | 3VA6 150A-250A 150KA @ 480VAC | 3VA5 400A-500A 100KA @ 480VAC | 3VA6 400A-500A 150KA @ 480VAC |
|---------------------------------|-----------------------------|----------------------------------|----------------------------------|----------------------------------|
|---------------------------------|-----------------------------|----------------------------------|----------------------------------|----------------------------------|


| | | | | |
|---|---|---|---|---|
| ✓ | — | — | — | — |
| — | ✓ | ✓ | — | — |
| — | — | — | ✓ | ✓ |

3VA and GG Main Circuit Breakers

| | |
|---|----------------------|
| Busbar adapter system with 60 mm busbar center-to-center spacing, top-fed, 15A to 500A 3-pole | 8US1215-4SS00 |
| | 8US1213-4AP03 |
| | 8US1213-4AH04 |

| | | | | |
|---|---|---|---|---|
| ✓ | — | — | — | — |
| — | ✓ | ✓ | — | — |
| — | — | — | ✓ | ✓ |

| Design | UL Current Rating | Breaker Frame (SCCR Rating ¹⁾) | | |
|--|--|--|-----------------|----------------|
| | | ED (25kA) | HHED (65kA) | FXD (35kA) |
| Sentron and GG Feeder Circuit Breakers | | | | |
|  <p>3 pole/600V fully assembled breakers and adaptors that quickly snap onto the Busbar.</p> <p>FBCB100</p> | 15A | FBCB015 | — | — |
| | 20A | FBCB020 | FBCB020H | — |
| | 25A | FBCB025 | FBCB025H | — |
| | 30A | FBCB030 | FBCB030H | — |
| | 35A | FBCB035 | FBCB035H | — |
| | 40A | FBCB040 | FBCB040H | — |
| | 45A | FBCB045 | FBCB045H | — |
| | 50A | FBCB050 | FBCB050H | — |
| | 60A | FBCB060 | — | — |
| | 70A | FBCB070 | — | — |
| | 80A | FBCB080 | — | — |
| | 90A | FBCB090 | — | — |
| | 100A | FBCB100 | — | — |
| | 110A | FBCB110 | — | — |
| | 125A | FBCB125 | — | — |
| | <p>3 pole/600V kitted components for customer assembly that require the adaptor to be torqued down to the Busbars prior to assembly.</p> | 150A | — | — |
| 175A | | — | — | FBCB175 |
| 200A | | — | — | FBCB200 |
| 225A | | — | — | FBCB225 |
| 250A | | — | — | FBCB250 |

| Design | UL Current Rating | Breaker Frame (SCCR Rating) | | |
|--|-------------------|-----------------------------|--------------------|---|
| | | FXD (25kA) ²⁾ | HFXD (65kA) | |
| Sentron Main Circuit Breakers | | | | |
|  <p>3 pole/600V kitted components for customer assembly that require the adaptor to be torqued down to the Busbars prior to assembly.</p> <p>FBCB250M</p> | 100A | FBCB100M | FBCB100M-HB | — |
| | 125A | FBCB125M | FBCB125M-HB | — |
| | 150A | FBCB150M | FBCB150M-HB | — |
| | 175A | FBCB175M | FBCB175M-HB | — |
| | 200A | FBCB200M | FBCB200M-HB | — |
| | 225A | FBCB225M | FBCB225M-HB | — |
| | 250A | FBCB250M | FBCB250M-HB | — |

1) UL Short Circuit Current ratings are based on 480V. Contact Siemens for 600 V ratings.

2) FBCB100M -125M SCCR = 25kA @ 480V
FBCB150M -250M SCCR = 65kA @ 480V

Molded Case Circuit Breakers

Industrial Control Product Catalog 2021

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240V Circuit Breakers



BQ Breakers

Selection and ordering data

| | 240V |
|-----|--------|
| BQ | 10KAIC |
| BQH | 22KAIC |
| HBQ | 65KAIC |

1-, 2- & 3-pole up to 125A for circuit protection up to 240 volt circuits (UL)

| Information | Page |
|--------------|-----------------|
| General Data | 17/7 – 17/8 |
| Accessories | 17/121 – 17/123 |



QR Breakers

Selection and ordering data

| | 240V |
|--------|---------|
| QR2 | 10KAIC |
| QRH-2 | 25KAIC |
| QR2-H | 65KAIC |
| HQR2-H | 100KAIC |

2- & 3-pole up to 225A for circuit protection up to 240 volt circuits (UL)

| Information | Page |
|--------------|-----------------|
| General Data | 17/9 |
| Accessories | 17/121 – 17/123 |

600/347V Circuit Breakers



CQD Breakers

Selection and ordering data

| | 480/277V | 600/347V |
|-------|----------|----------|
| CQD | 14KAIC | — |
| CQD-6 | — | 10KAIC |

1-, 2- & 3-pole up to 100A for circuit protection up to 600/347V (CSA) & 480/277V (UL) circuits

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|----------------------|-----------------|
| General Data | 17/11 |
| Internal Accessories | 17/121 – 17/123 |
| External Accessories | 17/124 – 17/129 |

600/347V Circuit Breakers



GG Breakers

Selection and ordering data

| | 480V | 600/347V |
|-----|--------|----------|
| NGG | 25KAIC | 14KAIC |
| HGG | 35KAIC | 22KAIC |
| LGG | 65KAIC | 25KAIC |

1-, 2- & 3-pole up to 125A for circuit protection up to 600/347 volt circuits (UL/CSA/IEC)

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|----------------------|-----------------|
| General Data | 17/12 |
| Internal Accessories | 17/13 |
| External Accessories | 17/124 – 17/129 |

600V Circuit Breakers



3VA51 Breakers

Selection and ordering data

| UL Type | 480V | 600Y/347V |
|---------|--------|-----------|
| SEAS | 25KAIC | 14KAIC |
| MEAS | 35KAIC | 18KAIC |
| HEAS | 65KAIC | 25KAIC |

1-, 2-, 3- & 4-pole up to 125A for circuit protection up to 600/347 volt circuits (UL/CSA/IEC)

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|----------------------|---------------|
| Breakers | 17/16 – 17/19 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |



3VA61 Breakers

Selection and ordering data

| UL Type | 480V [Ⓟ] | 600V |
|---------|-------------------|---------|
| MDAE | 35KAIC | 18KAIC |
| HDAE | 65KAIC | 22KAIC |
| CDAE | 100KAIC | 35KAIC |
| LDAE | 150KAIC | 50KAIC |
| EDAE | 200KAIC | 100KAIC |

3- & 4-pole up to 150A for circuit protection up to 600Y/347 volt circuits (UL/CSA/IEC)

| Information | Page |
|----------------------|---------------|
| Breakers | 17/20 – 17/23 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |

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600V Circuit Breakers



3VA52 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|--------|
| MFAS | 35KAIC | 18KAIC |
| HFAS | 65KAIC | 25KAIC |
| CFAS | 100KAIC | 35KAIC |

2(3)-, 3- & 4-pole up to 250A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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| Breakers | 17/24 – 17/27 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |



3VA62 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|---------|
| MFAE | 35KAIC | 18KAIC |
| HFAE | 65KAIC | 22KAIC |
| CFAE | 100KAIC | 35KAIC |
| LFAE | 150KAIC | 50KAIC |
| EFAE | 200KAIC | 100KAIC |

3- & 4-pole up to 250A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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|----------------------|---------------|
| Breakers | 17/28 – 17/31 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |



3VA53 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|--------|
| MJAS | 35KAIC | 18KAIC |
| HJAS | 65KAIC | 25KAIC |
| CJAS | 100KAIC | 35KAIC |

2(3)-, 3- & 4-pole up to 400A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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|----------------------|---------------|
| Breakers | 17/32 – 17/33 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |

600V Circuit Breakers



3VA63 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|---------|
| MJAE | 35KAIC | 18KAIC |
| HJAE | 65KAIC | 22KAIC |
| CJAE | 100KAIC | 35KAIC |
| LJAE | 150KAIC | 50KAIC |
| EJAE | 200KAIC | 100KAIC |

3- & 4-pole up to 400A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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| Breakers | 17/34 – 17/36 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |



3VA54 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|--------|
| MLAS | 35KAIC | 18KAIC |
| HLAS | 65KAIC | 25KAIC |
| CLAS | 100KAIC | 35KAIC |

2(3)-, 3- & 4-pole up to 600A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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|----------------------|---------------|
| Breakers | 17/37 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |



3VA64 Breakers

Selection and ordering data

| UL Type | 480V | 600V |
|---------|---------|---------|
| MLAE | 35KAIC | 18KAIC |
| HLAE | 65KAIC | 22KAIC |
| CLAE | 100KAIC | 35KAIC |
| LLAE | 150KAIC | 50KAIC |
| ELAE | 200KAIC | 100KAIC |

3- & 4-pole up to 600A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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| Breakers | 17/38 – 17/40 |
| Internal Accessories | 17/49 |
| External Accessories | 17/50 – 17/74 |

3VA Molded Case Circuit Breakers

3VA UL Breakers

Catalog Numbering System

Catalog Numbering Logic



| Breaker Designation | |
|--|---|
| Thermal magnetic panelboard breakers | 4 |
| Thermal magnetic (Cable-in Cable-out) breakers | 5 |
| Electronic trip breakers | 6 |

| Frame Size | |
|------------|---|
| 125/150A | 1 |
| 250A | 2 |
| 400A | 3 |
| 600A | 4 |
| 800A | 5 |
| 1000A | 6 |

| Rated Current | | | | | | | | | | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 3VA41/ 3VA51 | 3VA52 | 3VA53 | 3VA54 | 3VA55 | 3VA61 | 3VA62 | 3VA63 | 3VA64 | 3VA65 | 3VA66 | |
| 15A | | | | | | | | | | | 95 |
| 20A | 200A | 200A | | | | | | | | | 20 |
| | 225A | 225A | | | | | | | | | 22 |
| 25A | 250A | 250A | | | | 250A | 250A | | | | 25 |
| 30A | | 300A | | | | | | | | | 30 |
| 35A | | 350A | | | | | | | | | 35 |
| 40A | 40A | 400A | | | 40A | | 400A | 400A | | | 40 |
| 45A | 45A | | 450A | | | | | | | | 45 |
| 50A | 50A | | 500A | | | | | | | | 50 |
| 60A | 60A | | 600A | 600A | | | | 600A | 600A | | 60 |
| 70A | 70A | | | 700A | | | | | | | 70 |
| 80A | 80A | | | 800A | | | | | 800A | | 80 |
| 90A | 90A | | | | | | | | | | 90 |
| 100A | 100A | | | | 100A | 100A | | | | 1000A | 10 |
| 110A | 110A | | | | | | | | | | 11 |
| 125A | 125A | | | | | | | | | | 12 |
| | 150A | | | | 150A | | | | | | 15 |
| | 175A | | | | | | | | | | 17 |

| Interrupting Capacity @ 480V | | |
|------------------------------|---------|---|
| 3VA4/3VA5 | 3VA6 | |
| MCP/MCS | 200K | 0 |
| MCP/MCS | MCP/MCS | 1 |
| 25K | | 4 |
| 35K | 35K | 5 |
| 65K | 65K | 6 |
| 100K | 100K | 7 |
| | 150K | 8 |

- Trip Unit Protection Functions (see next page for details)
- Number of Poles (see next page for details)
- Connection Technology (see next page for details)
- Regional Specifics (as applicable) (see next page for details)
- Auxiliary Releases (see next page for details)
- Auxiliary/Alarm Switches (see next page for details)

Catalog Numbering Logic (cont.)



(see previous page for details)

| Trip Unit Protection Functions | | | | | | | | | | |
|--------------------------------|------|-----|-----|------|-------|-------------------|-----|------|--------------------|----|
| 3VA4/3VA5 | | L | I | N | | | | | | |
| TM230 | MCCB | fix | adj | | | | | | | EC |
| TM210 | MCCB | fix | fix | | | | | | | ED |
| TM240 | MCCB | adj | adj | | | | | | | EF |
| TM230 | MCCB | fix | adj | 100% | | | | | | GC |
| TM210 | MCCB | fix | fix | 100% | | | | | | GD |
| TM240 | MCCB | adj | adj | 100% | | | | | | GF |
| TM110M | MSP | | fix | | | | | | | MG |
| TM120M | MSP | | adj | | | | | | | MH |
| TM120M | MSP | | adj | | | | | | | MU |
| MCS110 | MSC | | fix | | | | | | | BB |
| 3VA6 | | L | S | I | G | N | LCD | com. | measurement values | |
| ETU320 LI | MCCB | adj | | adj | | 0%/50%/100% | | | | HL |
| ETU330 LIG | MCCB | adj | | adj | adj | 0%/50%/100% | | | | HM |
| ETU350 LSI | MCCB | adj | adj | fix | | 0%/50%/100% | | | | HN |
| ETU550 LSI | MCCB | adj | adj | adj | | 20/40%...100/160% | yes | yes | standard | JP |
| ETU556 LSI(G) | MCCB | adj | adj | adj | alarm | 20/40%...100/160% | yes | yes | standard | JT |
| ETU560 LSIG | MCCB | adj | adj | adj | adj | 20/40%...100/160% | yes | yes | standard | JQ |
| ETU820 LI | MCCB | adj | | adj | | 20/40%...100/160% | yes | yes | advanced | KL |
| ETU830 LIG | MCCB | adj | | adj | adj | 20/40%...100/160% | yes | yes | advanced | KM |
| ETU850LSI | MCCB | adj | adj | adj | | 20/40%...100/160% | yes | yes | advanced | KP |
| ETU856 LSI(G) | MCCB | adj | adj | adj | alarm | 20/40%...100/160% | yes | yes | advanced | KT |
| ETU860 LSIG | MCCB | adj | adj | adj | adj | 20/40%...100/160% | yes | yes | advanced | KQ |
| ETU310M | MCP | | | adj | | | | | | MS |
| MCS110 | MCS | | | fix | | | | | | BB |

| Number of Poles | |
|-----------------|---|
| 1 pole | 1 |
| 2 pole | 2 |
| 3 pole | 3 |
| 4 pole | 4 |
| 1-in-2 pole | 5 |
| 2-in-3 pole | 6 |

| Connection Technology | |
|--|---|
| No wire connector | 1 |
| Nut keeper kit, line and load | 2 |
| Nut keeper kit, load end only | 3 |
| Aluminum wire connector, load end only | 4 |
| Wire connector, line end only | 5 |
| Wire connector, line and load | 6 |

| Regional Specifics (as applicable) | |
|------------------------------------|---|
| Standard | 0 |
| NAVAL/50C | 1 |
| 100% Rated (3VA6) | 2 |

| Auxiliary Releases | |
|--------------------|---|
| Without | A |

| Auxiliary/Alarm Switches | |
|--------------------------|----|
| Without | A0 |

3VA Molded Case Circuit Breakers

3VA52 250A Thermal-magnetic Trip Circuit Breakers

Selection

3VA52 250 A Frame, 3-Pole Thermal-Magnetic Trip Unit

| Cont. Ampere Rating | M-Interrupting Class (MFAS) | H-Interrupting Class (HFAS) | C-Interrupting Class (CFAS) |
|-------------------------------|-----------------------------|-----------------------------|-----------------------------|
| | Catalog Number | Catalog Number | Catalog Number |
| TM210 FTFM[Ⓞ] | | | |
| 40 | 3VA5240-5ED31-0AA0 | 3VA5240-6ED31-0AA0 | 3VA5240-7ED31-0AA0 |
| 45 | 3VA5245-5ED31-0AA0 | 3VA5245-6ED31-0AA0 | 3VA5245-7ED31-0AA0 |
| 50 | 3VA5250-5ED31-0AA0 | 3VA5250-6ED31-0AA0 | 3VA5250-7ED31-0AA0 |
| 60 | 3VA5260-5ED31-0AA0 | 3VA5260-6ED31-0AA0 | 3VA5260-7ED31-0AA0 |
| 70 | 3VA5270-5ED31-0AA0 | 3VA5270-6ED31-0AA0 | 3VA5270-7ED31-0AA0 |
| 80 | 3VA5280-5ED31-0AA0 | 3VA5280-6ED31-0AA0 | 3VA5280-7ED31-0AA0 |
| 90 | 3VA5290-5ED31-0AA0 | 3VA5290-6ED31-0AA0 | 3VA5290-7ED31-0AA0 |
| 100 | 3VA5210-5ED31-0AA0 | 3VA5210-6ED31-0AA0 | 3VA5210-7ED31-0AA0 |
| 110 | 3VA5211-5ED31-0AA0 | 3VA5211-6ED31-0AA0 | 3VA5211-7ED31-0AA0 |
| 125 | 3VA5212-5ED31-0AA0 | 3VA5212-6ED31-0AA0 | 3VA5212-7ED31-0AA0 |
| 150 | 3VA5215-5ED31-0AA0 | 3VA5215-6ED31-0AA0 | 3VA5215-7ED31-0AA0 |
| 175 | 3VA5217-5ED31-0AA0 | 3VA5217-6ED31-0AA0 | 3VA5217-7ED31-0AA0 |
| 200 | 3VA5220-5ED31-0AA0 | 3VA5220-6ED31-0AA0 | 3VA5220-7ED31-0AA0 |
| 225 | 3VA5222-5ED31-0AA0 | 3VA5222-6ED31-0AA0 | 3VA5222-7ED31-0AA0 |
| 250 | 3VA5225-5ED31-0AA0 | 3VA5225-6ED31-0AA0 | 3VA5225-7ED31-0AA0 |
| TM230 FTAM[Ⓞ] | | | |
| 70 | 3VA5270-5EC31-0AA0 | 3VA5270-6EC31-0AA0 | 3VA5270-7EC31-0AA0 |
| 80 | 3VA5280-5EC31-0AA0 | 3VA5280-6EC31-0AA0 | 3VA5280-7EC31-0AA0 |
| 90 | 3VA5290-5EC31-0AA0 | 3VA5290-6EC31-0AA0 | 3VA5290-7EC31-0AA0 |
| 100 | 3VA5210-5EC31-0AA0 | 3VA5210-6EC31-0AA0 | 3VA5210-7EC31-0AA0 |
| 110 | 3VA5211-5EC31-0AA0 | 3VA5211-6EC31-0AA0 | 3VA5211-7EC31-0AA0 |
| 125 | 3VA5212-5EC31-0AA0 | 3VA5212-6EC31-0AA0 | 3VA5212-7EC31-0AA0 |
| 150 | 3VA5215-5EC31-0AA0 | 3VA5215-6EC31-0AA0 | 3VA5215-7EC31-0AA0 |
| 175 | 3VA5217-5EC31-0AA0 | 3VA5217-6EC31-0AA0 | 3VA5217-7EC31-0AA0 |
| 200 | 3VA5220-5EC31-0AA0 | 3VA5220-6EC31-0AA0 | 3VA5220-7EC31-0AA0 |
| 225 | 3VA5222-5EC31-0AA0 | 3VA5222-6EC31-0AA0 | 3VA5222-7EC31-0AA0 |
| 250 | 3VA5225-5EC31-0AA0 | 3VA5225-6EC31-0AA0 | 3VA5225-7EC31-0AA0 |
| TM240 ATAM | | | |
| 70 | 3VA5270-5EF31-0AA0 | 3VA5270-6EF31-0AA0 | 3VA5270-7EF31-0AA0 |
| 80 | 3VA5280-5EF31-0AA0 | 3VA5280-6EF31-0AA0 | 3VA5280-7EF31-0AA0 |
| 100 | 3VA5210-5EF31-0AA0 | 3VA5210-6EF31-0AA0 | 3VA5210-7EF31-0AA0 |
| 125 | 3VA5212-5EF31-0AA0 | 3VA5212-6EF31-0AA0 | 3VA5212-7EF31-0AA0 |
| 150 | 3VA5215-5EF31-0AA0 | 3VA5215-6EF31-0AA0 | 3VA5215-7EF31-0AA0 |
| 175 | 3VA5217-5EF31-0AA0 | 3VA5217-6EF31-0AA0 | 3VA5217-7EF31-0AA0 |
| 200 | 3VA5220-5EF31-0AA0 | 3VA5220-6EF31-0AA0 | 3VA5220-7EF31-0AA0 |
| 250 | 3VA5225-5EF31-0AA0 | 3VA5225-6EF31-0AA0 | 3VA5225-7EF31-0AA0 |

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

Order required lugs or connection technology separately for field installation.

All 3VA52 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 150A, 3-pole, NAVAL rated 3VA52 would be catalog number 3VA5215-5ED31-**1**AA0)

Enclosures (3-pole only)

| Nema Type | Catalog Number |
|--------------|----------------|
| 1 surface | 3VAE250N1S |
| 1 flush | 3VAE250N1F |
| 3R | 3VAE250N3R |
| 12 | 3VAE250N12 |
| 4X (304) | 3VAE250N4X |
| 4X (316) | 3VAE250N4X316 |
| Neutral | N250X |
| 200% Neutral | N2250X |

Dimensions

| Breaker | Poles | W in. (mm) | H in. (mm) | D in. (mm) | lbs. | kg |
|---------|------------|------------|------------|------------|------|-----|
| 3VA52 | 2(3-) pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.1 | 1.9 |
| 3VA52 | 3-pole | 4.1 (105) | 7.3 (185) | 3.3 (83) | 4.5 | 2.1 |

Shipping Weight

Ⓞ Available with NAVAL/50C ratings.