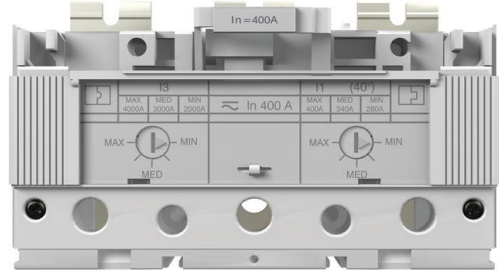


Product Details and Certifications

Cross Reference RA Part Number: PN-D12746

➔ Product: **140G-HTF3-C90**

Description: Molded Case Circuit Breaker Trip Unit, 125A, H - Frame, T/M - Adjustable Thermal/Adjustable Magnetic TMA, Rated Current 90 A



Representative Photo Only (actual product may vary based on configuration selections)

CIRCUIT BREAKER DATA

| | |
|------------------|--|
| Bulletin Number | Bulletin 140G/140MG |
| Number of Poles | 3 Poles |
| Frame Size | H frame |
| Rated Current(A) | 90 A |
| Protection | T/M - Adjustable Thermal / Adjustable Magnetic TMA |

ACCESSORY ITEMS

| | |
|-----------|--|
| Trip Unit | Molded Case Circuit Breaker Trip Unit, 125A, H - Frame, T/M - Adjustable Thermal/Adjustable Magnetic TMA, Rated Current 90 A |
|-----------|--|



| Frame Reference | G-Frame | H-Frame | I-Frame | J-Frame | K-Frame | M-Frame | N-Frame | NS-Frame | R-Frame |
|---|-----------|--------------------|---------|----------------|-----------------|-------------|------------|------------|---------|
| Rated Current I_n | 125 A | 125 A | 225 A | 250 A | 400 A | 800 A | 1200 A | 1200 A | 3000 A |
| No. of Poles | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 |
| Interrupting Rating [kA] | | | | | | | | | |
| 240V | 50 65 100 | 65 100 150 200 200 | 50 65 | 65 100 150 200 | 100 150 200 200 | 100 200 200 | 65 100 150 | 65 100 150 | 125 |
| 480V | 25 35 65 | 25 35 65 100 150 | 25 35 | 25 35 65 100 | 35 65 100 150 | 50 65 100 | 50 65 100 | 50 65 100 | 125 |
| 600Y/347V | 10 14 25 | — | 10 10 | — | — | — | — | — | — |
| 600V | — | 14 18 25 35 | 10 10 | 14 18 25 35 | 25 35 65 100 | 25 35 42 | 25 50 65 | 25 50 65 | 100 |
| Breaking Capacity [I_{cu} (kA)] | | | | | | | | | |
| 220...240V | 65 85 100 | 65 85 100 150 200 | 65 85 | 65 85 100 150 | 85 100 200 200 | 85 100 200 | 85 100 200 | 85 100 200 | 130 |
| 415V | 36 50 70 | 36 50 70 120 150 | 36 50 | 36 50 70 120 | 50 70 120 200 | 36 70 100 | 50 70 120 | 50 70 120 | 80 |
| 440V | 36 50 65 | 36 50 65 100 150 | 25 40 | 36 50 65 100 | 40 65 100 180 | 35 50 65 | 50 65 100 | 50 65 100 | 80 |
| 690V | 6 8 10 | 10 12 15 18 20 | 5 8 | 10 12 15 20 | 25 40 70 80 | 22 25 30 | 30 42 50 | 30 42 50 | 40 |
| 250V DC | 36 50 70 | 36 50 70 85 100 | 36 50 | 36 50 70 85 | — | 36 50 65 | — | — | — |
| 500V DC | 36 50 70 | 36 50 70 85 100 | 36 50 | 36 50 70 85 | 36 50 70 100 | — | — | — | — |
| 750V DC | — | — | — | — | 25 36 70 70 | 16 36 50 | — | — | — |
| Protection Type | | | | | | | | | |
| Thermal Magnetic | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — | — |
| Electronic | — | ✓ | — | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Molded Case Switch | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Internal Accessories | | | | | | | | | |
| Auxiliary Contact | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Alarm Contact | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| AX/AL Combo | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Trip Unit Contact | — | ✓ | — | ✓ | — | — | ✓ | ✓ | ✓ |
| Shunt Trip | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Shunt Close | — | — | — | — | — | — | ✓ | ✓ | ✓ |
| UV Relay | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Field Installable | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| External Accessories | | | | | | | | | |
| End Cap | STD | STD | STD | STD | STD | STD | STD | STD | — |
| 25 mm Phase Barriers | STD | STD | STD | STD | STD | — | — | — | — |
| Insulators | STD | STD | STD | STD | STD | STD | — | — | — |
| Terminal Lugs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Extended Terminal | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Spreader Terminal | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Rear Terminal | — | — | — | — | — | — | ✓ | ✓ | ✓ |
| Phase barriers | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Terminal Cover | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — |
| Direct Rotary | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — |
| Variable Depth (Door) | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — |
| Internal NFPA 79 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — |
| Flange Operator | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — |
| Flange Cable | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | — |
| Motor Operator | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | — | ✓ | ✓ |
| Field Installable | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Molded Case Circuit Breakers

Catalog Number Explanation — 125 A, H-Frame

Complete Circuit Breaker Assemblies — 125 A, H-Frame

Examples given in this section are not intended to be used for product selection. Use ProposalWorks to configure the molded case circuit breaker. Use these configurations only to select all factory-installed options for shunt trips, undervoltage release units, auxiliary contacts, trip units, and alarm contacts. Use the codes from Table g to add on to the molded case circuit breaker cat. no. selected on the previous pages to form a complete cat. no. for a complete assembly with factory-installed options.



140G - H
T
F
3 - C90

a
b
c
d
e
f
g

a

| Bulletin No. | |
|--------------|------------------------------------|
| Code | Description |
| 140G | Global Molded Case Circuit Breaker |

b

| Frame/Rating | |
|--------------|-------------|
| Code | Description |
| H | 125 A |

c

| Interrupting Rating/Breaking Capacity (based on I_c at 480V) | |
|---|-------------|
| Code | Description |
| 2 | 25 kA |
| 3 | 35 kA |
| 6 | 65 kA |
| 0 | 100 kA |
| 15 | 150 kA |
| T | Trip unit |

d

| Protection Type | |
|-----------------|--|
| Code | Description |
| C | Fixed thermal/fixed magnetic |
| F | Adjust thermal/ adjust magnetic |
| H | Electronic LSI- long, short, instant |
| I | Electronic LSIG -Long, short, instant & ground fault |
| X | Breaker frame |
| S | Molded case switch (isolator) |

e

| Poles | |
|-------|-------------|
| Code | Description |
| 3 | 3 poles |
| 4 | 4 poles |

f

| Current Range | |
|---------------|-------------------|
| Code | Description |
| C | e.g., C30 = 30 A |
| D | e.g., D16 = 160 A |
| Blank | Frame only |

g

| Factory-Installed Internal Options♦ | |
|---|--|
| Shunt Trip and Undervoltage Release Units | |
| Code | Description |
| SJ | Shunt Trip, 24...30V AC/DC |
| SK | Shunt Trip, 48...60V AC/DC |
| SD | Shunt Trip, 110...127V AC; 110...125V DC |
| SA | Shunt Trip, 220...240V AC; 220...250V DC |
| SB | Shunt Trip, 380...440V AC |
| SC | Shunt Trip, 480...525V AC |
| UJ | Undervoltage Release, 24...30V AC/DC |
| UR | Undervoltage Release, 48V AC/DC |
| UD | Undervoltage Release, 110...127V AC; 110...125V DC |
| UA | Undervoltage Release, 220...240V AC; 220...250V DC |
| UB | Undervoltage Release, 380...440V AC |
| UC | Undervoltage Release, 480...525V AC |
| No Digit | No Selection |
| Auxiliary and Alarm Contacts, Trip Units | |
| Code | Description |
| KA | 1 Aux. Contact, 250V |
| TA | 1 Alarm Contact, 250V |
| AA | 1 Aux., 1 Alarm Contact, 250V |
| BA | 2 Aux., 1 Alarm Contact, 250V |
| DA | 1 Trip Unit Alarm Contact, 250V |
| FB | 2 Aux. Contacts, 400V |
| AB | 1 Aux., 1 Alarm Contact, 400V |
| AJ | 1 Aux., 1 Alarm Contact, 24V |
| DJ | 1 Trip Unit Alarm Contact, 24V |

♦ Select up to two internal options: 1 for left side mounting (shunt trip or undervoltage release), 1 for right (auxiliary or alarm contact). Consult your local Rockwell automation sales office or Allen-Bradley distributor for further assistance.

Breaker Frames & Trip Units



Breaker Frames, 125 A Rated Current

| Interrupting Rating (50/60 Hz), UL 489/CSA C22.2-5, No. 5-02 [kA] | | | Breaking Capacity (50/60 Hz), IEC 60947-2 | | | | | | | | Breaking Capacity (DC), IEC 60947-2 ‡ | | | | Cat. No. | |
|---|------|------|---|------------------------|---------------|------------------------|---------------|------------------------|---------------|------------------------|--|------------------------|--------------------------------|------------------------|------------|------------|
| 240V | 480V | 600V | 220V★ | | 415V | | 440V★ | | 690V | | 250V DC (2- pole in series) | | 500V DC (3- pole in series) | | 3 Poles | 4 Poles |
| | | | I_{cu} [kA] | I_{cs} [% I_{cu}] | I_{cu} [kA] | I_{cs} [% I_{cu}] | I_{cu} [kA] | I_{cs} [% I_{cu}] | I_{cu} [kA] | I_{cs} [% I_{cu}] | I_{cu} [kA] | I_{cs} [% I_{cu}] | I_{cu} [kA] | I_{cs} [% I_{cu}] | | |
| 65 | 25 | 14 | 65 | 100 | 36 | 100 | 36 | 100 | 10 | 100 | 36 | 100 | 36 | 100 | 140G-H2X3 | 140G-H2X4 |
| 100 | 35 | 18 | 85 | 100 | 50 | 100 | 50 | 100 | 12 | 100 | 50 | 100 | 50 | 100 | 140G-H3X3 | 140G-H3X4 |
| 150 | 65 | 25 | 100 | 100 | 70 | 100 | 65 | 100 | 15 | 100 | 70 | 100 | 70 | 100 | 140G-H6X3 | 140G-H6X4 |
| 200 | 100 | 35 | 150 | 100 | 120 | 100 | 100 | 100 | 18 | 75 | 85 | 100 | 85 | 100 | 140G-H0X3 | 140G-H0X4 |
| 200 | 150 | — | 200 | 100 | 150 | 100 | 150 | 100 | 20 | 75 | 100 | 100 | 100 | 100 | 140G-H15X3 | 140G-H15X4 |

★ These ratings have not been tested for the CCC listing.
 ‡ DC rating is applicable for thermal-magnetic trip unit only.

Trip Units, Thermal-Magnetic

| Rated Current I_n [A] | Thermal Trip [A] $I_r = I_n$ | Magnetic Trip [A] I_m | Protection Type | Cat. No. | |
|----------------------------|---------------------------------|----------------------------|-----------------|---------------|---------------|
| | | | | 3 Poles | 4 Poles |
| 50 | 50 | 500 | C (Fixed) | 140G-HTC3-C50 | 140G-HTC4-C50 |
| 60 | 60 | 600 | C (Fixed) | 140G-HTC3-C60 | 140G-HTC4-C60 |
| 63 | 63 | 630 | C (Fixed) | 140G-HTC3-C63 | 140G-HTC4-C63 |
| 70 | 70 | 700 | C (Fixed) | 140G-HTC3-C70 | 140G-HTC4-C70 |
| 80 | 56...80 | 400...800 | F (Adjustable) | 140G-HTF3-C80 | 140G-HTF4-C80 |
| 90 | 63...90 | 450...900 | F (Adjustable) | 140G-HTF3-C90 | 140G-HTF4-C90 |
| 100 | 70...100 | 500...1000 | F (Adjustable) | 140G-HTF3-D10 | 140G-HTF4-D10 |
| 110 | 77...110 | 550...1100 | F (Adjustable) | 140G-HTF3-D11 | 140G-HTF4-D11 |
| 125 | 87...125 | 625...1250 | F (Adjustable) | 140G-HTF3-D12 | 140G-HTF4-D12 |

Trip Units, Electronic LSI (Long, Short, Instantaneous)

| Rated Current I_n [A] | Protection Type | | | | | Cat. No. | |
|----------------------------|--------------------------|---------------|-------------------------|---------------------|-------------------------|---------------|---------------|
| | L | | S | | I | 3 Poles | 4 Poles |
| | $I_1=0.4...1 \times I_n$ | $t_1=sec.$ | $I_2=1...10 \times I_n$ | $t_2=sec.$ | $I_3=1...10 \times I_n$ | | |
| 60 | 24...60 | 3, 12, 36, 60 | 60...600 | 0.05, 0.1, 0.2, 0.4 | 60...600 | 140G-HTH3-C60 | 140G-HTH4-C60 |
| 100 | 40...100 | 3, 12, 36, 60 | 100...1000 | 0.05, 0.1, 0.2, 0.4 | 100...1000 | 140G-HTH3-D10 | 140G-HTH4-D10 |
| 125 | 50...125 | 3, 12, 36, 60 | 125...1250 | 0.05, 0.1, 0.2, 0.4 | 125...1250 | 140G-HTH3-D12 | 140G-HTH4-D12 |

Trip Units, Electronic LSIG (Long, Short, Instantaneous, Ground Fault)

| Rated Current I_n [A] | Protection Type | | | | | | | Cat. No. | |
|----------------------------|--------------------------|---------------|-------------------------|---------------------|-------------------------|--------------------------|--------------------|---------------|---------------|
| | L | | S | | I | G | | 3 Poles | 4 Poles |
| | $I_1=0.4...1 \times I_n$ | $t_1=sec.$ | $I_2=1...10 \times I_n$ | $t_2=sec.$ | $I_3=1...10 \times I_n$ | $I_4=0.2...1 \times I_n$ | $t_4=sec.$ | | |
| 60 | 24...60 | 3, 12, 36, 60 | 60...600 | 0.05, 0.1, 0.2, 0.4 | 60...600 | 12...60 | 0.1, 0.2, 0.4, 0.8 | 140G-HTI3-C60 | 140G-HTI4-C60 |
| 100 | 40...100 | 3, 12, 36, 60 | 100...1000 | 0.05, 0.1, 0.2, 0.4 | 100...1000 | 20...100 | 0.1, 0.2, 0.4, 0.8 | 140G-HTI3-D10 | 140G-HTI4-D10 |
| 125 | 50...125 | 3, 12, 36, 60 | 125...1250 | 0.05, 0.1, 0.2, 0.4 | 125...1250 | 25...125 | 0.1, 0.2, 0.4, 0.8 | 140G-HTI3-D12 | 140G-HTI4-D12 |

Assembled molded case circuit breakers found on pages 8...10

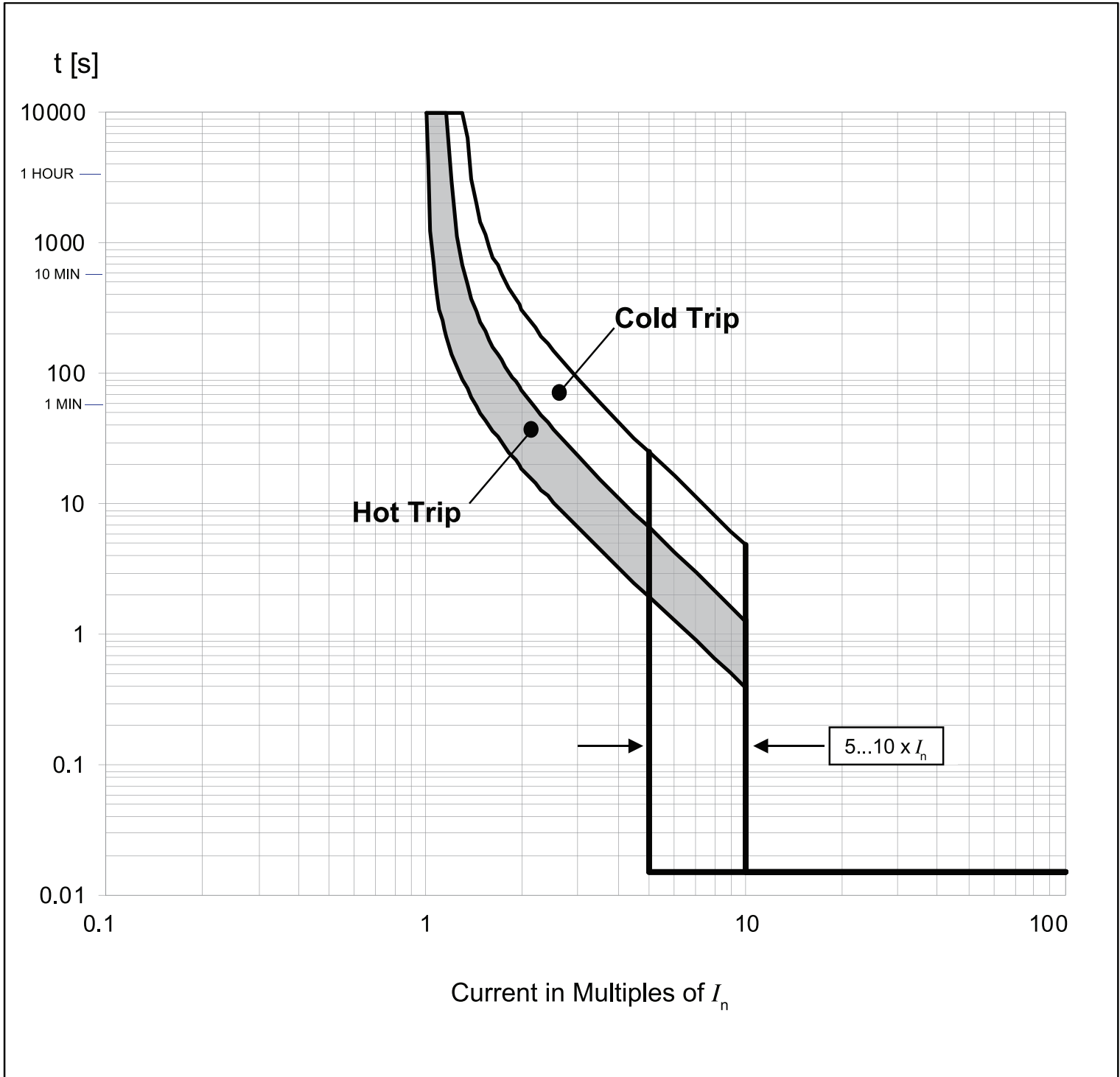
Bulletin 140G
Molded Case Circuit Breakers
Specifications — G- and H-Frame



| | | G-Frame | | | | H-Frame† | | | | | |
|---|-----------|------------------------------|------|------|---------------|------------------------------|-----------|------|------|------|--------------------------|
| Max. Rated Current | [A] | 125 | | 160★ | | 125 | | | 160★ | | |
| Rated insulation voltage, U _i , IEC | [V] | 800 | | | | 1000 | | | | | |
| NEMA, UL, CSA | | | | | | | | | | | |
| Interrupting Rating Code | | G2 | G3 | G6 | G2 G3 G6 | H2 | H3 | H6 | H0 | H15 | H2 H3 H6 H0 H15 |
| 240V AC, 50/60Hz | [kA] | 50 | 65 | 100 | 50 65 100 | 65 | 100 | 150 | 200 | 200 | 65 100 150 200 200 |
| 480V AC, 50/60Hz | [kA] | 25 | 35 | 65 | 25 35 65 | 25 | 35 | 65 | 100 | 150 | 25 35 65 100 150 |
| 600Y/347V AC, 50/60Hz | [kA] | 10 | 14 | 25 | 10 14 25 | — | — | — | — | — | — |
| 600V AC, 50/60 Hz | [kA] | — | — | — | — | 14 | 18 | 25 | 35 | 42 | 14 18 35 35 42 |
| IEC 60947-2 | | | | | | | | | | | |
| Rated ultimate short-circuit breaking capacity, I _{cu} | | | | | | | | | | | |
| 220/230/240V AC, 50/60Hz | [kA] | 65 | 85 | 100 | 65 85 100 | 65 | 85 | 100 | 150 | 200 | 65 85 100 150 200 |
| 380V AC, 50/60Hz | [kA] | 36 | 50 | 70 | 36 60 70 | 36 | 50 | 70 | 120 | 150 | 26 50 70 120 150 |
| 415V AC, 50/60Hz | [kA] | 36 | 50 | 70 | 36 50 70 | 36 | 50 | 70 | 120 | 150 | 36 50 70 120 150 |
| 440V AC, 50/60Hz | [kA] | 36 | 50 | 65 | 36 50 65 | 36 | 50 | 65 | 100 | 150 | 36 50 65 100 150 |
| 500V AC, 50/60Hz | [kA] | 30 | 36 | 50 | 36 50 65 | 30 | 36 | 50 | 60 | 70 | 30 36 50 60 70 |
| 525V AC, 50/60Hz | [kA] | 22 | 35 | 35 | 22 35 35 | 20 | 25 | 30 | 36 | 50 | 20 25 30 36 50 |
| 690V AC, 50/60Hz | [kA] | 6 | 8 | 10 | 6 8 10 | 10 | 12 | 15 | 18 | 20 | 10 12 15 18 20 |
| 250V DC, 2 Poles in Series | [kA] | 36 | 50 | 70 | 36 50 70 | 36 | 50 | 70 | 85 | 100 | 36 50 70 85 100 |
| 500V DC, 2 Poles in Series | [kA] | — | — | — | — | — | — | — | — | — | — |
| 500V DC, 3 Poles in Series | [kA] | 36 | 50 | 70 | 36 50 70 | 36 | 50 | 70 | 85 | 100 | 36 50 70 85 100 |
| 750V DC, 3 Poles in Series | [kA] | — | — | — | — | — | — | — | — | — | — |
| Rated service short-circuit breaking capacity, I _{cs} | | | | | | | | | | | |
| 220/230/240V AC, 50/60Hz | [kA] | 75% (50) | 75% | 75% | 75% 75% 75% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 380V AC, 50/60Hz | [kA] | 100% | 100% | 75% | 100% 100% 75% | 100% | 100% 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 415V AC, 50/60Hz | [kA] | 100% | 75% | 50% | 100% 75% 50% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 440V AC, 50/60Hz | [kA] | 50% | 50% | 50% | 50% 50% 50% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 500V AC, 50/60Hz | [kA] | 50% | 50% | 50% | 50% 50% 50% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 525V AC, 50/60Hz | [kA] | 50% | 50% | 50% | 50% 50% 50% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 690V AC, 50/60Hz | [kA] | 75% | 50% | 50% | 75 50 50% | 100% | 100% | 100% | 75% | 75% | 100% 100% 100% 75% 75% |
| 250V DC, 2 Poles in Series | [kA] | 100% | 100% | 75% | 100% 100% 75% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 500V DC, 2 Poles in Series | [kA] | — | — | — | — | — | — | — | — | — | — |
| 500V DC, 3 Poles in Series | [kA] | 100% | 100% | 75% | 100% 100% 75% | 100% | 100% | 100% | 100% | 100% | 100% 100% 100% 100% 100% |
| 750V DC, 3 Poles in Series | [kA] | — | — | — | — | — | — | — | — | — | — |
| Mechanical Life | [No. Ops] | 25 000 | | | | 25 000 | | | | | |
| | [Ops/hr] | 240 | | | | 240 | | | | | |
| Electrical Life @ 415V AC | [No. Ops] | 8000 | | | | 8000 | | | | | |
| | [Ops/hr] | 120 | | | | 120 | | | | | |
| Ambient Temp. w/out derating | °F [°C] | 104 °F [40 °C] | | | | 104 °F [40 °C] | | | | | |
| Storage Temperature | °F [°C] | -40...+176 °F [-40...+80 °C] | | | | -40...+176 °F [-40...+80 °C] | | | | | |
| Dimensions | [mm] | 3 poles: 76.2x70x130 | | | | 3 poles: 90x82.5x130 | | | | | |
| [Width/Depth/Height] | [mm] | 4 poles: 101.6x70x130 | | | | 4 poles: 120x82.5x130 | | | | | |

★ IEC version with a 160 A I_{cu} rating

† Cannot be reverse fed above 480V



Instantaneous (Magnetic) Trip tolerance: -20% / +30%