

Gladiator MCCB (Molded Case Circuit Breakers)



Gladiator MCCBs thermal-magnetic circuit breakers are designed to protect low voltage electrical systems from damage caused by overloads and short circuits.

Wide Range of Applications

- Branch and feeder circuits
- Industrial control panels
- Industrial machines
- Power distribution

High Performance

- Ultimate breaking capacity (kA rms)
- Max 65kA@480VAC and 50kA@600V
- DC ratings
- Reverse feed capable
- HACR (Heating, Air Conditioning and Refrigeration) rated

Simplified Product Range

- Seven frame sizes
- Three trip unit types
- Ampere range: 15A to 1200A
- Poles: 2P, 3P

Variety of Trip Units

- AA: Adjustable thermal & magnetic unit
- FF: Fixed thermal & magnetic unit
- ES: Electronic self-powered

STANDARDS

- World class with UL489
 - UL489
 - CSA C22.2 No. 5
- IEC60947-2
- Class 1E for Nuclear power plant
 - EQ : Environment Qualification
 - SQ : Seismic Qualification

Seven Frame Sizes Up To 1200A

GCB100 Series 15-100 A
GCB150 Series 125-150 A
GCB250 Series 175-250 A
GCB400 Series 300-400 A
GCB600 Series 500-600 A
GCB800 Series 800 A
GCB1200 Series 1200 A

Wide Range of Accessories

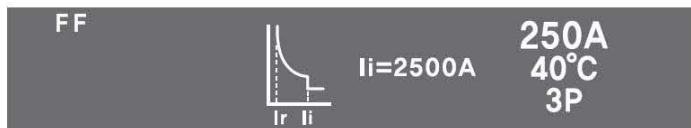
- Electrical auxiliaries (AUX, ALX, ALM, UVT, SHT)
- Extended rotary handle
- Flange handle with flexible cable and linkage
- Locking devices
- LUG for CU/AL cable with UL486



UL file E503708 MCCB
UL file E509077 Accessories

FF

Fixed Thermal: 15A to 600A
Fixed Magnetic: 400A to 6000A



AA

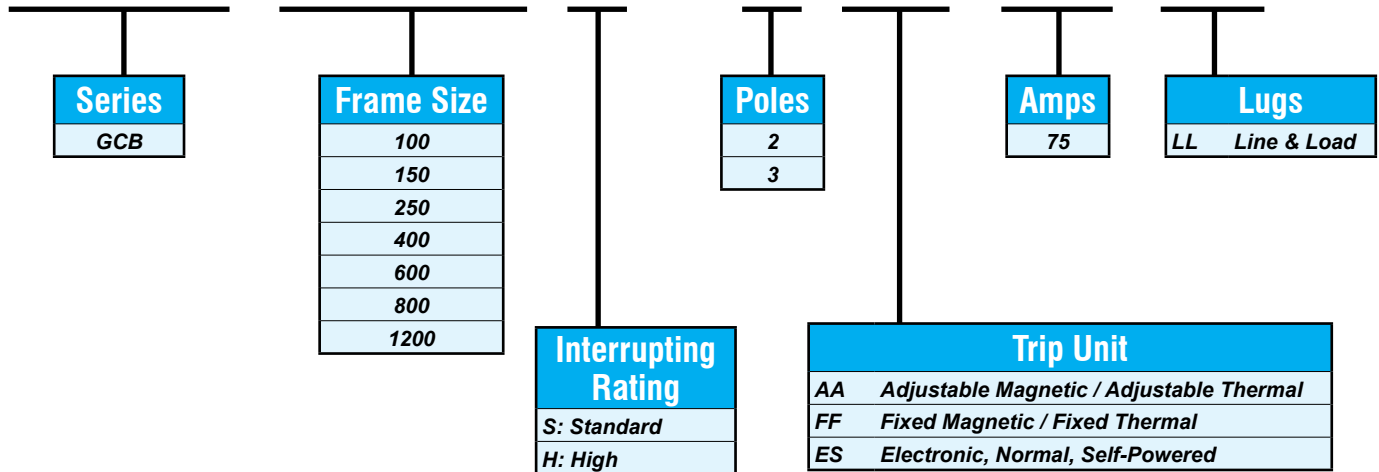
Adjustable Thermal: 100A to 600A
Adjustable Magnetic: 500A to 6000A



Gladiator MCCB Part Number Nomenclature

Gladiator MCCB

GCB 1200 S - 3 FF 75 LL



Gladiator MCCB Accessories

GCBX 1 - AUX - LT - BK

| Series | Frame Size | Type | Product Description/Ratings | |
|--------|---|--------------------------------|---|-----------------------------------|
| GCBX | 1: 100 2: 150-250 3: 400-600 4: 150-800 5: 800-1200 | ALX – Alarm/Auxiliary | LT (left), RT (right), or Blank (either side) | |
| | | AUX – Auxiliary | LT (left), RT (right), or Blank (either side) | |
| | | ALM – Alarm Contact | LT (left), RT (right), or Blank (either side) | |
| | | SHT – Shunt Trip | 24VDC / 110VAC | |
| | | UVT – Trip | 24VDC / 110VAC | |
| | | EHR – Exterior Handle Rotary | NEMA Rating: N12, N3R4, N1, N4X | Color: GY – Gray BK – Black |
| | | SFT – Shaft | Length (12, 16, 24 in) | |
| | | FHC – Flange Handle Cable | NEMA Rating (N12, N3R4, N1, N4X) | M – With operating mechanism |
| | | CBL – Cable | Length (36, 60, or 72 in) | |
| | | LCK – Locking Device | PL – Removable Padlocking | |
| | | PBR – Insulating Phase Barrier | STD – Standard | |

Gladiator MCCB GCB400 (300-400 A) 3-Pole



GCB400S-3FF300LL



GCB400H-3FF300LL

- HACR rated
- 40°C [104°F]
- Reverse feed capable
- Includes line and loadside lugs

Gladiator MCCB GCB400 3-Pole (300-400 A) Selection Guide

| Part Number | Price | Frequency | Ampere Rating | Voltage (AC) | Interrupt Capacity (kA) | Voltage (DC) | Interrupt Capacity (kA) | Dimensional Drawing |
|---|------------|-----------|---------------|-------------------|-------------------------|--------------|-------------------------|----------------------------|
| <u>GCB400S-3FF300LL</u> | \$;058fk: | 50/60 Hz | 300 | 240 480 600 | 65 35 18 | 250 600 | 35 35 | <u>PDF</u> |
| <u>GCB400S-3FF350LL</u> | \$;-058ft: | | 350 | | | | | <u>PDF</u> |
| <u>GCB400S-3FF400LL</u> | \$;058fn: | | 400 | | | | | <u>PDF</u> |
| <u>GCB400H-3FF300LL</u> | \$;058fo: | | 300 | 240 480 600 | 100 65 35 | 250 600 | 50 50 | <u>PDF</u> |
| <u>GCB400H-3FF350LL</u> | \$;058fp: | | 350 | | | | | <u>PDF</u> |
| <u>GCB400H-3FF400LL</u> | \$;058fq: | | 400 | | | | | <u>PDF</u> |
| <u>GCB400H-3AA300LL</u> | \$;0058fs: | | 300 | | | | | <u>PDF</u> |
| <u>GCB400H-3AA400LL</u> | \$;0058ft: | | 400 | | | | | <u>PDF</u> |

Gladiator MCCB GCB400 (300-400 A)

3-Pole

| Gladiator MCCB GCB400 3-Pole (300-400 A) Specifications | | | |
|--|---------------------|---------------|---------------|
| Maximum Rated Current | | 400 | 400 |
| Number of Poles | | 3 | 3 |
| Breaker Type | | S | H |
| UL489/CSA C22.2 | | GCB400 | GCB400 |
| Interrupting capacity (kA rms) AC (50/60HZ) UL, CSA | 120/240 V | – | – |
| | 240VAC | 65 | 100 |
| | 480VAC | 35 | 65 |
| | 600VAC | 18 | 35 |
| | 600Y/347 VAC | – | – |
| UL489 DC | | GCB400 | GCB400 |
| Interrupting Capacity (kA) DC UL, CSA | 250V DC-2P | 35 | 50 |
| | 500V DC-3P | – | – |
| | 600V DC-3P | 35 | 50 |
| IEC 60947-2 | | GCB400 | GCB400 |
| Ultimate Breaking Capacity, (kA rms) AC 50/60Hz, Icu | 220/240V | 65 | 100 |
| | 380/415V | 35 | 65 |
| | 480/500V | 18 | 35 |
| Service Breaking Capacity, Ics (%Icu) | | 100% | 100% |
| Insulation Voltage, Ui | | 750VAC | 750VAC |
| Impulse Withstand Voltage, Uimp | | 8KVAC | 8KVAC |
| Rated Short-Time Withstand Current (Icw) | | – | – |
| Utilization Category | | A | A |
| TRIP UNITS F : Fixed A : Adjustable T : Thermal E : Electronics | Amperes | 300/350/400 A | 300/350/400 A |
| | ATU | – | ✓ |
| | FTU | ✓ | ✓ |
| | ETS | – | – |
| Trip Unit Mounted | | ✓ | ✓ |
| Mechanical Lugs | | ✓ | ✓ |
| Terminal Shields | | ✓ | ✓ |
| Interphase Barriers | | ✓ | ✓ |
| Shunt Trip | | ✓ | ✓ |
| Undervoltage Trip | | ✓ | ✓ |
| Auxiliary Switch | | ✓ | ✓ |
| Alarm Switch | | ✓ | ✓ |
| Flange Cable Handle | | ✓ | ✓ |
| NEMA-Door-Mounted Operating Mechanisms | | ✓ | ✓ |
| Handle Padlock Attachment | | ✓ | ✓ |
| Weight (lb [kg]) | | 13.89 [6.30] | 13.89 [6.30] |

Gladiator MCCB GCB400 (300-400 A)

3-Pole – Accessories

| Gladiator MCCB GCB400 3-Pole (300-400 A) Accessories | | | |
|--|---------|--|---------------------|
| Part Number | Price | Description | Dimensional Drawing |
| GCBX3-LCK-PL | \$58he: | Gladiator lockout attachment, 5-8mm (3/16-5/16in) diameter. For locking in the OFF position only. Accepts up to 3 locks. | PDF |
| GCBX3-PBR-STD | \$58hh: | Gladiator phase barrier, package of 2. | PDF |
| GCBX4-ALM | \$58g7: | Gladiator field installable alarm contact, left or right side mount, (1) SPDT contact(s), 3A @ 250VAC/0.2A @ 250VDC, 20in 26AWG lead wires, Alarm contacts indicate when the MCCB is tripped. | NA |
| GCBX4-AUX | \$58g2: | Gladiator field installable auxiliary contact, left or right side mount, (1) SPDT contact(s), 3A @ 250VAC/0.2A @ 250VDC, screw terminals, Auxiliary contact indicates if the MCCB is closed or open/tripped. | NA |
| GCBX4-SHT-110VAC | \$58g9: | Gladiator field installable shunt trip, left side mount, 110-130 VAC/VDC coil voltage, screw terminals. | NA |
| GCBX4-SHT-24VDC | \$58g6: | Gladiator field installable shunt trip, left side mount, 24 VAC/VDC coil voltage, screw terminals. | NA |
| GCBX4-UVT-110VAC | \$58gg: | Gladiator field installable undervoltage trip, left side mount, 110-130 VAC/VDC sensing range, screw terminals. | NA |
| GCBX4-UVT-24VDC | \$58gf: | Gladiator field installable undervoltage trip, left side mount, 24 VAC/VDC sensing range, screw terminals. | NA |

| Gladiator MCCB GCB400 3-Pole (300-400 A) Flange Handles and Cables | | | |
|--|----------|---|---------------------|
| Part Number | Price | Description | Dimensional Drawing |
| GCBX3-FHC-N3R4-M | \$058h3: | Gladiator flange handle, lever, gray/chrome, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 3/3R/4. Operating mechanism included. | PDF |
| GCBX3-FHC-N4X-M | \$058h4: | Gladiator flange handle, lever, chrome, external front mount, 2-position, lockable in OFF only, defeatable, NEMA 3/4/4X. Operating mechanism included. | PDF |
| GCBX3-CBL-36 | \$58h9: | Gladiator cable assembly, 36in [0.91 m] | PDF |
| GCBX3-CBL-60 | \$58ha: | Gladiator cable assembly, 60in [1.52 m] | PDF |

[GCBX3-FHC-N3R4-M](#)[GCBX3-CBL-36](#)

| Gladiator MCCB GCB400 3-Pole (300-400A) Rotary Handles and Shafts | | | |
|---|----------|--|---------------------|
| Part Number | Price | Description | Dimensional Drawing |
| GCBX3-EHR-N12-GY | \$58gp: | Gladiator rotary handle, pistol, gray, external front mount, 2-position, lockable in ON-OFF, defeatable, NEMA 1/12. Operating mechanism included. | PDF |
| GCBX3-EHR-N3R4-BK | \$058gq: | Gladiator rotary handle, pistol, black, external front mount, 2-position, lockable in ON-OFF, defeatable, NEMA 3/3R/4. Operating mechanism included. | PDF |
| GCBX3-EHR-N4X-BK | \$058gs: | Gladiator rotary handle, pistol, black, external front mount, 2-position, lockable in ON-OFF, defeatable, NEMA 3/4/4X. Operating mechanism included. | PDF |
| GCBX4-SFT-12 | \$58gj: | Gladiator shaft, 12in [0.30 m] length. | PDF |
| GCBX4-SFT-16 | \$58gj: | Gladiator shaft, 16in [0.41 m] length. | PDF |
| GCBX4-SFT-24 | \$58gj: | Gladiator shaft, 24in [0.61 m] length. | PDF |

[GCBX4-SFT-12](#)[GCBX3-EHR-N12-GY](#)[GCBX4-AUX](#)[GCBX4-SHT-24VDC](#)[GCBX4-UVT-24VDC](#)[GCBX4-ALM](#)[GCBX3-PBR-STD](#)[GCBX3-LCK-PL](#)

Gladiator MCCB Derating Tables (80% Rating)

| Gladiator MCCB GCB100 (15-100 A) | | | | | | | | |
|----------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Temperature | 50°F [10°C] | 68°F [20°C] | 77°F [25°C] | 86°F [30°C] | 104°F [40°C] | 122°F [50°C] | 140°F [60°C] | 158°F [70°C] |
| Rating (A) | Modification of Current (A) | | | | | | | |
| 15 | 13.1 | 12.7 | 12.5 | 12.4 | 12.0 | 11.2 | 10.3 | 9.5 |
| 20 | 17.4 | 17.0 | 16.7 | 16.5 | 16.0 | 14.9 | 13.8 | 12.6 |
| 25 | 21.8 | 21.2 | 20.9 | 20.6 | 20.0 | 18.6 | 17.2 | 15.8 |
| 30 | 26.2 | 25.4 | 25.1 | 24.7 | 24.0 | 22.3 | 20.6 | 19.0 |
| 35 | 30.5 | 29.7 | 29.3 | 28.8 | 28.0 | 26.0 | 24.1 | 22.1 |
| 40 | 34.9 | 33.9 | 33.4 | 33.0 | 32.0 | 29.8 | 27.5 | 25.3 |
| 45 | 39.2 | 38.2 | 37.6 | 37.1 | 36.0 | 33.5 | 31.0 | 28.4 |
| 50 | 43.6 | 42.4 | 41.8 | 41.2 | 40.0 | 37.2 | 34.4 | 31.6 |
| 60 | 52.3 | 50.9 | 50.2 | 49.4 | 48.0 | 44.6 | 41.3 | 37.9 |
| 70 | 61.0 | 59.4 | 58.5 | 57.7 | 56.0 | 52.1 | 48.2 | 44.2 |
| 80 | 69.8 | 67.8 | 66.9 | 65.9 | 64.0 | 59.5 | 55.0 | 50.6 |
| 90 | 78.5 | 76.3 | 75.2 | 74.2 | 72.0 | 67.0 | 61.9 | 56.9 |
| 100 | 87.2 | 84.8 | 83.6 | 82.4 | 80.0 | 74.4 | 68.8 | 63.2 |

| Gladiator MCCB GCB150 (40-150 A) | | | | | | | | |
|----------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Temperature | 50°F [10°C] | 68°F [20°C] | 77°F [25°C] | 86°F [30°C] | 104°F [40°C] | 122°F [50°C] | 140°F [60°C] | 158°F [70°C] |
| Rating (A) | Modification of Current (A) | | | | | | | |
| 40 | 36.8 | 35.2 | 34.4 | 33.6 | 32.0 | 30.1 | 28.2 | 26.2 |
| 50 | 46.0 | 44.0 | 43.0 | 42.0 | 40.0 | 37.6 | 35.2 | 32.8 |
| 60 | 55.2 | 52.8 | 51.6 | 50.4 | 48.0 | 45.1 | 42.2 | 39.4 |
| 70 | 64.4 | 61.6 | 60.2 | 58.8 | 56.0 | 52.6 | 49.3 | 45.9 |
| 80 | 73.6 | 70.4 | 68.8 | 67.2 | 64.0 | 60.2 | 56.3 | 52.5 |
| 90 | 82.8 | 79.2 | 77.4 | 75.6 | 72.0 | 67.7 | 63.4 | 59.0 |
| 100 | 92.0 | 88.0 | 86.0 | 84.0 | 80.0 | 75.2 | 70.4 | 65.6 |
| 110 | 101.2 | 96.8 | 94.6 | 92.4 | 88.0 | 82.7 | 77.4 | 72.2 |
| 125 | 115.0 | 110.0 | 107.5 | 105.0 | 100.0 | 94.0 | 88.0 | 82.0 |
| 150 | 138.0 | 132.0 | 129.0 | 126.0 | 120.0 | 112.8 | 105.6 | 98.4 |

| Gladiator MCCB GCB250 (150-250 A) | | | | | | | | |
|-----------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Temperature | 50°F [10°C] | 68°F [20°C] | 77°F [25°C] | 86°F [30°C] | 104°F [40°C] | 122°F [50°C] | 140°F [60°C] | 158°F [70°C] |
| Rating (A) | Modification of Current (A) | | | | | | | |
| 150 | 138.0 | 132.0 | 129.0 | 126.0 | 120.0 | 106.8 | 93.6 | 80.4 |
| 160 | 147.2 | 140.8 | 137.6 | 134.4 | 128.0 | 113.9 | 99.8 | 85.8 |
| 175 | 161.0 | 154.0 | 150.5 | 147.0 | 140.0 | 124.6 | 109.2 | 93.8 |
| 200 | 184.0 | 176.0 | 172.0 | 168.0 | 160.0 | 142.4 | 124.8 | 107.2 |
| 225 | 207.0 | 198.0 | 193.5 | 189.0 | 180.0 | 160.2 | 140.4 | 120.6 |
| 250 | 230.0 | 220.0 | 215.0 | 210.0 | 200.0 | 178.0 | 156.0 | 134.0 |

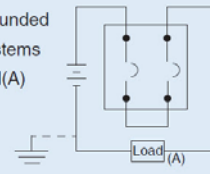
| Gladiator MCCB GCB400 (250-400 A) | | | | | | | | |
|-----------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Temperature | 50°F [10°C] | 68°F [20°C] | 77°F [25°C] | 86°F [30°C] | 104°F [40°C] | 122°F [50°C] | 140°F [60°C] | 158°F [70°C] |
| Rating (A) | Modification of Current (A) | | | | | | | |
| 250 | 218.0 | 212.0 | 209.0 | 206.0 | 200.0 | 172.0 | 144.0 | 116.0 |
| 300 | 261.6 | 254.4 | 250.8 | 247.2 | 240.0 | 206.4 | 172.8 | 139.2 |
| 350 | 305.2 | 296.8 | 292.6 | 288.4 | 280.0 | 240.8 | 201.6 | 162.4 |
| 400 | 348.8 | 339.2 | 334.4 | 329.6 | 320.0 | 275.2 | 230.4 | 185.6 |

| Gladiator MCCB GCB600 (500-600 A) | | | | | | | | |
|-----------------------------------|-----------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| Temperature | 50°F [10°C] | 68°F [20°C] | 77°F [25°C] | 86°F [30°C] | 104°F [40°C] | 122°F [50°C] | 140°F [60°C] | 158°F [70°C] |
| Rating (A) | Modification of Current (A) | | | | | | | |
| 500 | 436.0 | 424.0 | 418.0 | 412.0 | 400.0 | 344.0 | 288.0 | 232.0 |
| 600 | 523.2 | 508.8 | 501.6 | 494.4 | 480.0 | 412.8 | 345.6 | 278.4 |

Circuit Diagrams For DC Applications

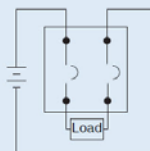
250VDC, 2P in Series

Suitable for use on ungrounded systems, or grounded systems that have one end of load(A) connected to grounded terminal, opposite poles in series connection.



A. Grounded System

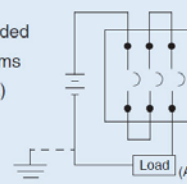
Suitable for use on ungrounded systems only



B. Ungrounded System

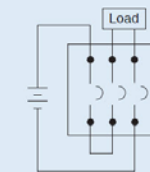
500VDC or 600VDC, 3P in Series

Suitable for use on ungrounded systems, or grounded systems that have one end of load(A) connected to grounded terminal, opposite poles in series connection.



A. Grounded System

Suitable for use on ungrounded systems only



B. Ungrounded System

Ambient Air Temperature Considerations

| | |
|-----------|-------------------------------|
| Operation | -20 to 70°C [-4 to 158°F] |
| Storage | -40 to 70°C [-40 to 158°F] |

NOTE: MCCB can be used without derating up to -20°C [-4°F]. However, if the ambient temperature exceeds 40°C [104°F], then the rated current must be derated.

NOTE: GCB800 and GCB1200 models have an electronic trip unit, so derating is not necessary.

Gladiator MCCB Mechanical Lugs

Gladiator MCCB circuit breakers come standard with mechanical line and load side lugs. All lugs are UL/cUL Listed Certified for their proper application and marked for use with aluminum and copper (Al/Cu) or copper only (Cu) conductors. Lugs suitable for copper and aluminum conductors are made of tin-plated aluminum. Mechanical lugs are sold factory-installed only. Lugs are rated for 60/75°C [140/167°F] wire.



- Lug type (catalog number)
- Cable size
- Standard mark

Mechanical Lug Kits For GCB100 Circuit Breakers

| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N•m [lb•in]) |
|----------|------------------------|-----------|-----------------------|------------|----------------------|
| 100TE-L | Aluminum | Cu | 15 | 14-10 | 3.6 [31.9] |
| | | | 20 | | |
| | | | 25 | | |
| | | | 30 | | |
| 100TE | Aluminum | Cu | 40 | 8 | 4.5 [39.8] |
| | | | | | |
| | | | | | |
| | | | | | |
| | | Cu | 50 | 14-10 | 3.6 [31.9] |
| | | | 60 | | |
| | | | 70 | | |
| | | | 80 | | |
| | | Cu/Al | 90 | 6-3 | 5.4 [47.8] |
| | | | 100 | | |
| | | Al | | 2-1 | 6.3 [55.8] |
| | | | | | |
| | | Al | | 1/0 | 6.3 [55.8] |
| | | | | | |



Mechanical Lug Kits For GCB150 Circuit Breakers

| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N•m [lb•in]) |
|----------|------------------------|-----------|-----------------------|------------|----------------------|
| 150TS | Aluminum | Cu | 1.6-15 | 14 | 4.1 [36.2] |
| | | | 20-30 | 12-10 | 5.4 [47.8] |
| | | | 40-175 | 8-2/0 | 15.1 [133.6] |
| | | Al | 50-70 | 6-3 | 5.4 [47.8] |
| | | | 90-150 | 2-3/0 | 15.7 [138.6] |
| | | | | | |



Mechanical Lug Kits For GCB250 Circuit Breakers

| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N • m [lb • in]) |
|----------|------------------------|----------------|-----------------------|------------------|--------------------------|
| 250TS | Aluminum | Cu | 150-175 | 1/0-2/0 | 32 [283.2] |
| | | Cu/Al Cu/Al | 150-175 | 3/0-4/0 | |
| | | | 200-225 | | |
| | | Cu/Al | 200-225 | 250-300 kcmil | 44 [389.4] |
| | | | 250 (Cu) | | |
| | | Al | 250 | 350 kcmil | |



Mechanical Lug Kits For GCB400 Circuit Breakers

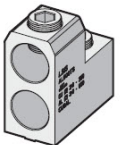
| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N•m [lb•in]) |
|----------|------------------------|-----------|-----------------------|--------------------|----------------------|
| 400TS | Aluminum | Cu/Al | 250 | 1/0 AWG - 300kcmil | 40.5 [358.5] |
| | | | 300 | 350-600 kcmil | |
| | | Al | 350 | 700-750 kcmil | 54 [478] |
| | | | 400 | | |



Mechanical Lug Kits For GCB600 Circuit Breakers

| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N•m [lb•in]) |
|----------|------------------------|-----------|-----------------------|----------------|----------------------|
| 600TS | Aluminum | Cu | 500 | 2/0 - 350kcmil | 40.5 [358.5] |
| | | | 600 | 3/0 - 500kcmil | 40.5 [358.5] |
| | | Al* | | | |
| | | | | | |

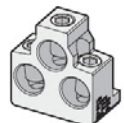
* Compact wire only (400-500 kcmil)



Mechanical Lug Kits For GCB800 Circuit Breakers

| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N • m [lb • in]) |
|----------|------------------------|-----------|--------------------------|----------------|--------------------------|
| 800TS | Aluminum | Cu | 400 600 630 800 | 3/0 - 300kcmil | 45 [398.3] |
| | | Al* | | 3/0 - 400kcmil | 45 [398.3] |

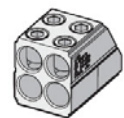
* Compact wire only (350-400 kcmil)



Mechanical Lug Kits For GCB1200 Circuit Breakers

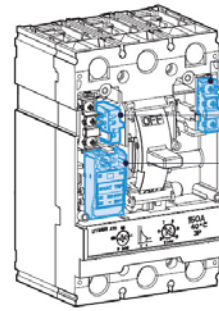
| Lug Type | Terminal Body Material | Wire Type | Breaker Amp Range (A) | Wire (AWG) | Torque (N•m [lb•in]) |
|----------|------------------------|-----------|-----------------------|----------------|----------------------|
| 1200TS | Aluminum | Cu | 800 1000 1200 | 3/0 - 350kcmil | 45 [398.3] |
| | | Al* | | 3/0 - 500kcmil | 45 [398.3] |

* Compact wire only (400-500 kcmil)



Gladiator MCCB Internal Accessories

Field-installable accessories provide flexibility for installation at the point of use. Auxiliary switches, alarm switches, shunt trip, and undervoltage release accessories are easy to install, reliable, and common to all Gladiator molded case circuit breakers. The internal accessories comply with requirements of Underwriters Laboratories® Inc. UL 489 Standards.



- Auxiliary Switch (AX)
- Alarm Switch (AL)
- Undervoltage trip (UVT) or Shunt Trip (SHT)

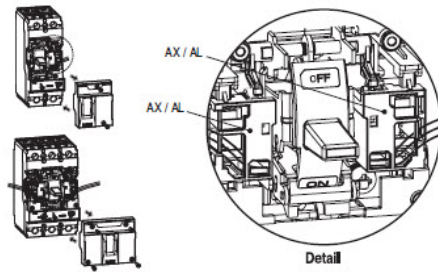
| Gladiator MCCB Internal Accessories | | | | |
|-------------------------------------|---|-------|----------|-----------|
| Frame | Internal Accessories Locations | Type | Left (R) | Right (T) |
| GCB100 | <p>* 2P : Right only</p> <ul style="list-style-type: none"> • AX or AL or AX+AL • UVT or SHT or AX or AL or AX+AL | AX | 1* | 1* |
| | | AL | 1* | 1* |
| | | AX+AL | 1* | 1* |
| | | SHT | – | 1* |
| | | UVT | – | 1* |
| GCB150 GCB250 | <ul style="list-style-type: none"> • AX • AX • AL • UVT or SHT | AX | 1 | 1 |
| | | AL | 1 | – |
| | | SHT | 1* | – |
| | | UVT | 1* | – |
| GCB400 GCB600 | <ul style="list-style-type: none"> • AX • AL • UVT or SHT | AX | 3 | – |
| | | AL | – | 1 |
| | | SHT | 1* | – |
| | | UVT | 1* | – |
| GCB800 GCB1200 | <ul style="list-style-type: none"> • AX • AL • UVT or SHT | AX | – | 3 |
| | | AL | – | 1 |
| | | SHT | – | 1* |
| | | UVT | – | 1* |

* Only one part can be installed in a designated place.

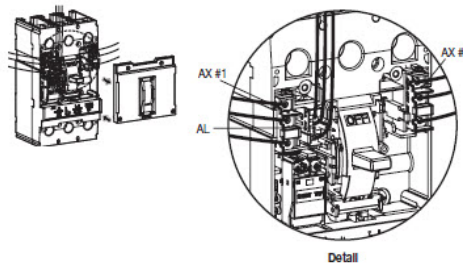
Gladiator MCCB Internal Accessories

Electrical accessories are fitted with numbered terminal blocks for wires. Auxiliary circuit wiring exits fixed mounted devices through a knock-out in the front cover. The internal accessories comply with requirements of Underwriters Laboratories® Inc.

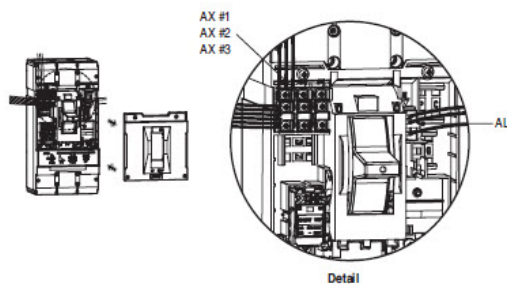
UL 489 Standards



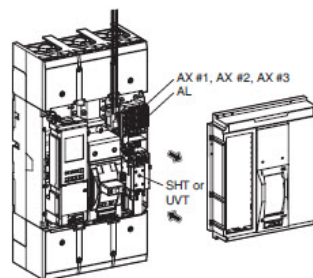
GCB100



GCB150 / 250



GCB400 / 600



GCB800 / 1200



GCBX1-AUX-LT



GCBX4-AUX



GCBX4-ALM



GCBX5-ALM

Auxiliary Switch (AX) and Alarm Switch (AL)

Auxiliary switches provide remote information of the circuit breaker status and can be used for indications, electrical locking, relays, etc. Includes both an Auxiliary switch (AX) and an Alarm Switch (AL). See definitions of each below.

Auxiliary Switch (AX)

Indicates the position of the circuit breaker contacts (Open/Closed Auxiliary switch is for applications requiring remote "ON" and "OFF" indication). Each switch contains two contacts having a common connection. One is open and the other closed when the circuit breaker is open, and vice-versa.



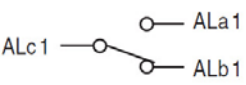
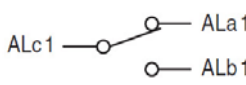

Gladiator MCCB Auxiliary Switch AX Connections

| AX | Frame | Wire Size | On | Off / Trip |
|----|--------------------------------------|---|----|------------|
| | GCB100 | 24 AWG (0.2 mm ²) | | |
| | GCB150 GCB250 GCB400 GCB600 | 20 AWG (0.52 mm ²) | | |
| | GCB800 GCB1200 | 19-16 AWG (0.65 - 1.31 mm ²) | | |

Gladiator MCCB Internal Accessories

Alarm Switch (AL)

Alarm switches indicate that the circuit breaker has tripped due to an overload, short circuit, shunt trip, undervoltage trip, or the “push-to-trip” button. They are particularly useful in automated plants where operators must be signaled about changes in the electrical distribution system. This switch features a closed contact when the circuit breaker is tripped automatically. In other words, this switch does not function when the breaker is operated manually. Its contact is open when the circuit breaker is reset.

| Gladiator MCCB Alarm Switch (AL) Connections | | | | |
|--|--------------------------------------|---|--|---|
| AL | Frame | Wire Size | On / Off | Trip |
|  | GCB100 | 24 AWG (0.2 mm ²) 75°C [167°F] | | |
|  | GCB150 GCB250 GCB400 GCB600 | 26 AWG (0.13 mm ²) 75°C [167°F] |  |  |
|  | GCB800 GCB1200 | 19-16 AWG (0.65 - 1.31 mm ²) 90°C [194°F] | | |

| UL Technical Specs | | | | |
|------------------------------|-----------------|----------------|---------------------|---|
| Part Number | UL Max. Voltage | Frequency (Hz) | UL Max Current (DC) | UL Max Current (AC) |
| GCBX1-AUX-LT | 250V | 60 | 0.2 A | 3A (resistive load) / 2A (inductive load) |
| GCBX1-AUX-RT | | | | |
| GCBX1-ALX-LT | | | | |
| GCBX1-ALX-RT | | | | |
| GCBX4-AUX | | | | |
| GCBX4-ALM | | | | |
| GCBX5-AUX | | | | |
| GCBX5-ALM | | | | |

Trip Unit Replacement Battery

| Gladiator Trip Unit Replacement Battery | | | |
|---|----------|--|---------|
| Part Number | Price | Description | Drawing |
| GCBX5-BATT | \$;5p13: | Gladiator trip unit replacement battery, for use with GCB800 and GCB1200 molded case circuit breakers. | NA |



[GCBX5-BATT](#)

| Gladiator Trip Unit Replacement Battery | |
|---|-----------------------------|
| Nominal Capacity (at 1mA, 20°C [68°F], 2.0 V cut-off) | 1.2 Ah |
| Nominal Voltage | 3.6 V |
| Maximum Recommended Continuous Current | 30mA |
| Maximum Pulse Current Capability | 60mA |
| Operating Temperature Range | -55 to +85°C [-67 to 185°F] |
| Lithium Metal Content | Approx. 0.3 g |
| Weight | 9g [0.32 oz] |
| Volume | 4.3 cm ³ |

Note: Maximum Pulse Capability reading over 3.0 V at 60mA: 0.1 sec every 2 min at 20°C [68°F], 10uA/cm² base current with fresh batteries. The pulse capability can be different depending on the cell status and environment. For maximum pulse coverage, capacitor support is recommended.

Gladiator MCCB Internal Accessories

Shunt Trip (SHT) and Undervoltage Trip (UVT) Switches

A voltage release can be used to trip the circuit breaker via a control signal.

Shunt Trip (SHT)

The shunt trip opens the mechanism in response to an externally applied voltage signal. The releases include coil clearing contacts that automatically clear the signal circuit when the mechanism has tripped.

| Gladiator MCCB GCB100 SHT Technical Specifications | | | | |
|--|----------------|--|--------|-----|
| Control Voltage U_e | | Power Consumption | | |
| | | AC (VA) | DC (W) | mA |
| Voltage | AC/DC 12V | 0.35 | 0.36 | 30 |
| | AC/DC 24V | 0.64 | 0.65 | 27 |
| | AC/DC 48V | 1.09 | 1.1 | 23 |
| | AC/DC 60V | 1.2 | 1.22 | 20 |
| | AC/DC 100-130V | 0.73 | 0.75 | 5.8 |
| | AC/DC 200-250V | 1.21 | 1.35 | 5.4 |
| | AC 380-450V | 1.67 | — | 3.8 |
| | AC 440-500V | 1.68 | — | 3.5 |
| Maximum Opening Time | | 50ms maximum | | |
| Terminal Screw Tightening Torque | | 7.12 lb•in [0.8 N•m] | | |
| Operating Voltage Range | | AC : 0.7-1.1 (rated voltage), DC : 0.8-1.1 (rated voltage) | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 20 AWG (0.52 mm ²) | | |



| Gladiator MCCB GCB150/250/400/600 SHT Technical Specifications | | | | |
|--|----------------|--|--------|------|
| Control Voltage U_e | | Power Consumption | | |
| | | AC (VA) | DC (W) | mA |
| Voltage | DC 12V | — | 0.36 | 30 |
| | AC/DC 24V | 0.58 | 0.58 | 24 |
| | AC/DC 48V | 1.22 | 1.23 | 25 |
| | AC/DC 100-130V | 1.36 | 1.37 | 10.5 |
| | AC 220-240 V | 1.8 | 1.88 | 7.5 |
| | DC 250V | — | — | — |
| | AC 380-500 V | 1.15 | — | 2.3 |
| | AC 440-500 V | — | — | — |
| Maximum Opening Time | | 50ms maximum | | |
| Terminal Screw Tightening Torque | | 7.12 lb•in [0.8 N•m] | | |
| Operating Voltage Range | | AC : 0.7-1.1 (rated voltage), DC : 0.8-1.1 (rated voltage) | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 20 AWG (0.52 mm ²) | | |



| Gladiator MCCB GCB800/1200 SHT Technical Specifications | | | | |
|---|-----------------|---|-----------------------------|--------------|
| Control Voltage U_e | | Operating Voltage Range | Power Consumption (VA or W) | |
| | | | Inrush | Steady-State |
| Voltage | DC 24-30 V | 0.6 - 1.1 V_n | 200 | 5 |
| | AC 48V | 0.6 - 1.1 V_n | | |
| | DC 48-60 V | 0.6 - 1.1 V_n | | |
| | AC/DC 100-130 V | 0.56 - 1.1 V_n | | |
| | AC/DC 200-250 V | 0.56 - 1.1 V_n | | |
| Voltage | AC 380-480V | 0.56 - 1.1 V_n | | |
| | AC 440-500 V | — | — | — |
| Maximum Opening Time | | 40ms maximum | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 16 AWG (1.31mm ²) – 14 AWG (2.08mm ²) | | |



Gladiator MCCB Internal Accessories

Undervoltage Trip (UVT)

The undervoltage release automatically opens a circuit breaker when voltage drops to a value less than the line voltage. The operation is instantaneous, and after tripping, the circuit breaker cannot be re-closed again until the voltage returns to a recover value of line voltage. Continuously energized, the undervoltage release must be operating before the circuit breaker can be closed.

Gladiator MCCB GCB100 UVT Technical Specifications

| Control Voltage U_e | | Power Consumption | | |
|----------------------------------|-----------------|--------------------------------|--------|-----|
| | | AC (VA) | DC (W) | mA |
| Voltage | AC/DC 24V | 0.64 | 0.65 | 27 |
| | AC/DC 48V | 1.09 | 1.1 | 23 |
| | AC/DC 100-110 V | 0.73 | 0.75 | 5.8 |
| | AC/DC 200-220 V | 1.21 | 1.35 | 5.4 |
| | AC 380-440 V | 1.67 | — | 3.8 |
| | AC 440-480 V | 1.68 | — | 3.5 |
| Maximum Opening Time | | 50ms maximum | | |
| Terminal Screw Tightening Torque | | 7.12 lb•in [0.8 N•m] | | |
| Operating Voltage Range | Trip | 0.2 - 0.7 (rated voltage) | | |
| | Reset/Closing | ≥ 0.85 (rated voltage) | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 20 AWG (0.52 mm ²) | | |



Gladiator MCCB GCB150/250/400/600 UVT Technical Specifications

| Control Voltage U_e | | Power Consumption | | |
|----------------------------------|-------------------------|--------------------------------|--------|-----|
| | | AC (VA) | DC (W) | mA |
| Voltage | AC/DC 24V | 0.64 | 0.65 | 27 |
| | AC/DC 48V | 1.09 | 1.1 | 23 |
| | AC/DC 110-130 V | 0.73 | 0.75 | 5.8 |
| | AC 220-240 V DC 250V | 1.21 | 1.35 | 5.4 |
| | AC 380-440 V | 1.67 | — | 3.8 |
| | AC 440-480 V | 1.68 | — | 3.5 |
| Maximum Opening Time | | 50ms maximum | | |
| Terminal Screw Tightening Torque | | 7.12 lb•in [0.8 N•m] | | |
| Operating Voltage Range | Trip | 0.35 - 0.7 (rated voltage) | | |
| | Reset/Closing | ≥ 0.85 (rated voltage) | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 20 AWG (0.52 mm ²) | | |



Gladiator MCCB GCB800/1200 UVT Technical Specifications

| Control Voltage U_e | | Power Consumption (VA or W) | | |
|-------------------------|----------------------|---|--------------|----------------------|
| | | Inrush | Steady-State | Maximum Opening Time |
| Voltage | DC 24-30 V | 200 | 5 | 50ms |
| | AC 48V DC 48-60 V | | | |
| | AC/DC 100-130 V | | | |
| | AC/DC 200-250 V | | | |
| | AC 380-480 V | | | |
| Operating Voltage Range | Trip | 0.44-0.6 (rated voltage) | | |
| | Reset/Closing | 0.65-0.85 (rated voltage) | | |
| Frequency | | 45Hz - 65 Hz (AC only) | | |
| Wire Size | | 16 AWG (1.31 mm ²) - 14 AWG (2.08 mm ²) | | |

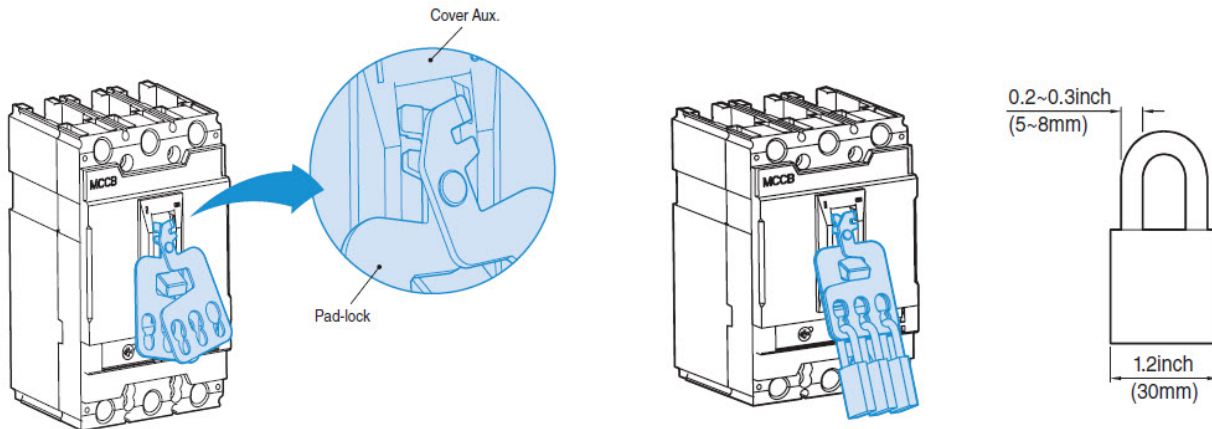


Gladiator MCCB Locking Systems Overview

Padlocking Device

A padlocking device is available for GCB100 to GCB1200 circuit breakers. The locking device is designed to be easily attached to the circuit breaker. This device allows the handle to be locked in the "OFF" position. A maximum of three (3) padlocks with shackle diameters of 0.19 to 0.31 in (5 to 8mm) may be used. Padlocks are not included.

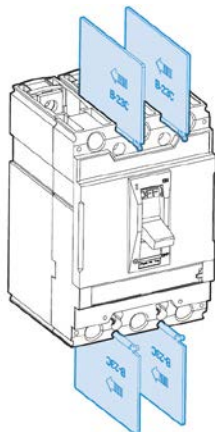
| Gladiator MCCB Padlocking Device Technical Specifications | | |
|---|-------------|------------------------|
| Description | Use With | Function |
| <u>GCBX1-LCK-PL</u> | GCB100 | Lock in "OFF" position |
| <u>GCBX2-LCK-PL</u> | GCB150/250 | |
| <u>GCBX3-LCK-PL</u> | GCB400/600 | |
| <u>GCBX5-LCK-PL</u> | GCB800/1200 | |



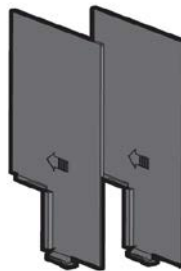
Insulation Barrier

These barriers are insulated between the phases for an increased insulation level. The barriers can be easily installed, even on breakers that are already mounted, by inserting them into the corresponding slots. They are incompatible with the insulating terminal covers. It is possible to mount the phase separating partitions between two side-by-side circuit breakers.

| Gladiator MCCB Insulation Barrier Technical Specifications | | |
|--|-------------|-------|
| Description | Use With | Poles |
| <u>GCBX2-PBR-STD</u> | GCB150/250 | 3P |
| <u>GCBX3-PBR-STD</u> | GCB400/600 | 3P |
| <u>GCBX5-PBR-STD</u> | GCB800/1200 | 3P |



Standard Type



Standard Type GCBX5-PBR-STD

Gladiator MCCB Door-Mounted Rotary Handles

NEMA Door-Mounted Rotary Handles

The extended rotary operating handle consists of the following:

- A mounting plate that provides a rotary actuator for a standard toggle circuit breaker
- Handle assemblies available for NEMA Type 1, 12, 3, 3R, 4, 4X
- Available in standard or long (12-24 in) handle assemblies

The door mounted operating handle makes it possible to operate circuit breakers installed in enclosure from the front.

- Indication of three positions: I (ON), Tripped and O (OFF): NEMA Type 1, 12
- Provides ON (I) and OFF (O) indication : NEMA Type 3, 3R, 4, 4X
- The circuit breaker may be locked in either the ON or OFF position

Models

- Standard with dark gray handle (NEMA Type 1, 12)
- Outdoor with black handle (NEMA Type 3, 3R, 4, 4X)
- Field-installable (secured by screws)

| GCB100 | GCB150/250 | GCB400/600 | GCB800/1200 |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| GCBX1-EHR-N12-GY | GCBX2-EHR-N12-GY | GCBX3-EHR-N12-GY | GCBX5-EHR-N12-GY |
| GCBX1-EHR-N3R4-BK | GCBX2-EHR-N3R4-BK | GCBX3-EHR-N3R4-BK | GCBX5-EHR-N3R4-BK |
| GCBX1-EHR-N4X-BK | GCBX2-EHR-N4X-BK | GCBX3-EHR-N4X-BK | GCBX5-EHR-N4X-BK |

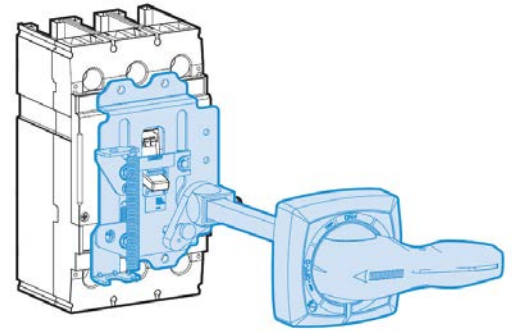
The shaft length is the distance between the back of the circuit breaker and door:

- Minimum mounting depth is 5.51 in [140mm] in GCB100
- Minimum shaft length is 12 in. [305mm] with long shaft
- Minimum shaft length is 24 in. [600mm] with long shaft
- Extended shaft length must be adjusted

Note: Rotary handles (EHR) include external operating handle and internal operating mechanism. Shafts (SFT) are sold separately.

Standards

- The door-mounted rotary operating handle is UL Listed under file E509077
- Degree of protection NEMA Type 1, 12, 3, 3R, 4, 4X

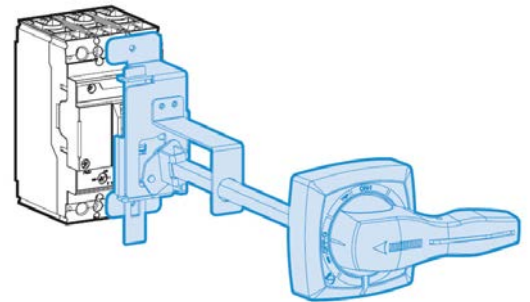


Door-Mounted Rotary Operating Handle

[GCBX2-EHR-N12-GY](#)
[GCBX2-EHR-N3R4-BK](#)
[GCBX2-EHR-N4X-BK](#)

[GCBX3-EHR-N12-GY](#)
[GCBX3-EHR-N3R4-BK](#)
[GCBX3-EHR-N4X-BK](#)

[GCBX5-EHR-N12-GY](#)
[GCBX5-EHR-N3R4-BK](#)
[GCBX5-EHR-N4X-BK](#)



Door-Mounted Rotary Operating Handle

[GCBX1-EHR-N12-GY](#)
[GCBX1-EHR-N3R4-BK](#)
[GCBX1-EHR-N4X-BK](#)

Gladiator MCCB Flange Handles With Sliding Operating Mechanism

Flange Handle With Sliding Operating Mechanism

Flange handle with sliding operating mechanism is for use with a cable assembly.

The cable operator maintains:

- Suitability for isolation
- Indication of two positions: O (OFF) and I (ON)
- The circuit breaker can be locked in the off position by one to three padlocks
- Door can be locked closed due to interlocking features of the handle operator

Handle is mounted on flange of enclosure using specified mounting dimensions while circuit breaker and operating mechanism are mounted to inside of enclosure using screws.

- Handles are available in NEMA Type 1, 12, 3, 3R, 4 and NEMA Type 4, 4x
- All circuit breaker operating mechanisms are suitable for right-hand flange mounting on the job

Models

- Standard with painted handle (NEMA Type 1, 12, 3, 3R, 4)
- Outdoor with nickel-plated handle (NEMA Type 4, 4X)
- Field installable (secured by screws)

| GCB100 | GCB150/250 | GCB400/600 | GCB800/1200 |
|--------|---|---|-------------|
| - | GCBX2-FHC-N3R4-M GCBX2-FHC-N4X-M | GCBX3-FHC-N3R4-M GCBX3-FHC-N4X-M | - |

Standard type handle (NEMA Type 1, 12, 3, 3R, 4) with sliding mechanism and without cable

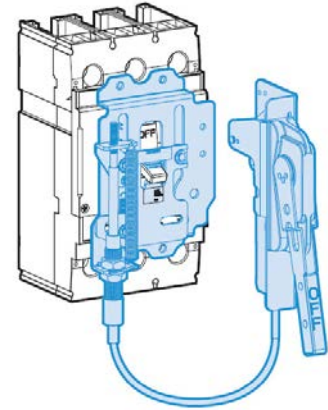
Outdoor type handle (NEMA Type 4, 4X) with sliding mechanism and without cable

- Cable lengths available in 36in to 60in

Note: Flange handles (FHC) include external operating handle and internal operating mechanism. Cables (CBL) are sold separately.

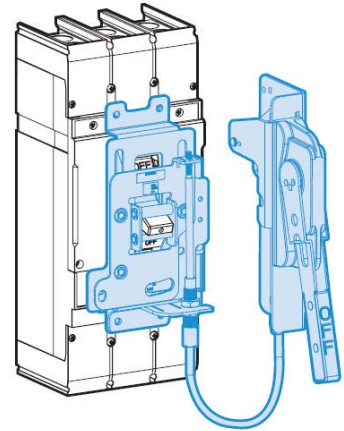
Standards

- Flange cable operating handle is UL Listed under file E509077
- Degree of protection NEMA Type 1, 12, 3, 3R, 4, 4X



Flange Handle With Sliding Operating Mechanism

[GCBX2-FHC-N3R4-M](#)
[GCBX2-FHC-N4X-M](#)



Flange Handle With Sliding Operating Mechanism

[GCBX3-FHC-N3R4-M](#)
[GCBX3-FHC-N4X-M](#)

Gladiator MCCB Flange Handles With Flange-Mounted Cable Operating Mechanism

Flange-Mounted Cable Operating Mechanism

Flange-mounted handle cable operating mechanism is for use with FH or COM Type handle operators especially designed for tall, deep enclosures where placement flexibility is required.

The cable operator maintains:

- Suitability for isolation
- Indication of two positions: O (OFF) and I (ON)
- The circuit breaker may be locked in the off position by one to three padlocks
- Door can be locked closed due to interlocking features of the handle operator

Handle is mounted on flange of enclosure using specified mounting dimensions while circuit breaker and operating mechanism are mounted to inside of enclosure using screws.

- Handles are available in COM and FHU NEMA Type 1,12, 3, 3R, 4 and FHX NEMA Type 4, 4x
- All circuit breaker operating mechanisms are suitable for right-hand flange mounting on the job.

Models

- Standard with painted handle (NEMA Type 1,12, 3, 3R, 4): FHU
- Outdoor with nickel-plated handle (NEMA Type 4, 4X): FHX
- Field installable (secured by screws)

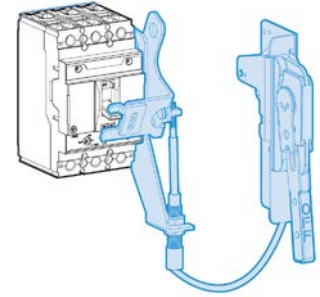
| GCB100 | GCB150/250 | GCB400/600 | GCB800/1200 |
|---|---|---|---|
| GCBX1-FHC-N3R4-M GCBX1-FHC-N4X-M | GCBX1-FHC-N3R4-M GCBX1-FHC-N4X-M | GCBX5-FHC-N3R4-M GCBX5-FHC-N4X-M | GCBX5-FHC-N3R4-M GCBX5-FHC-N4X-M |

| Cable Length (in [m]) | GCB100/150/250 | GCB400/600 | GCB800/1200 |
|-----------------------|------------------------------|------------------------------|------------------------------|
| 36 [0.91] | GCBX2-CBL-36 | GCBX3-CBL-36 | — |
| 60 [1.52] | GCBX2-CBL-60 | GCBX3-CBL-60 | GCBX5-CBL-60 |

Note: Flange handles (FHC) include external operating handle and internal operating mechanism. Cables (CBL) are sold separately.

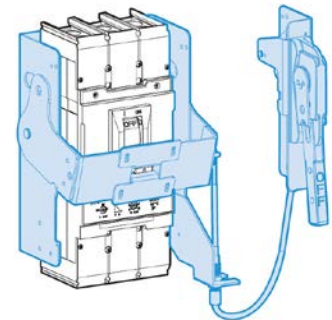
Standards

- Flange cable operating handle is UL Listed under file E509077
- NEMA Type 1, 12, 3, 3R, 4, 4X



Flange Handle With Cable Operating Mechanism

[GCBX1-FHC-N3R4-M](#)
[GCBX1-FHC-N4X-M](#)



Handle With Cable and Cable Operating Mechanism

[GCBX5-FHC-N3R4-M](#)
[GCBX5-FHC-N4X-M](#)

Cable

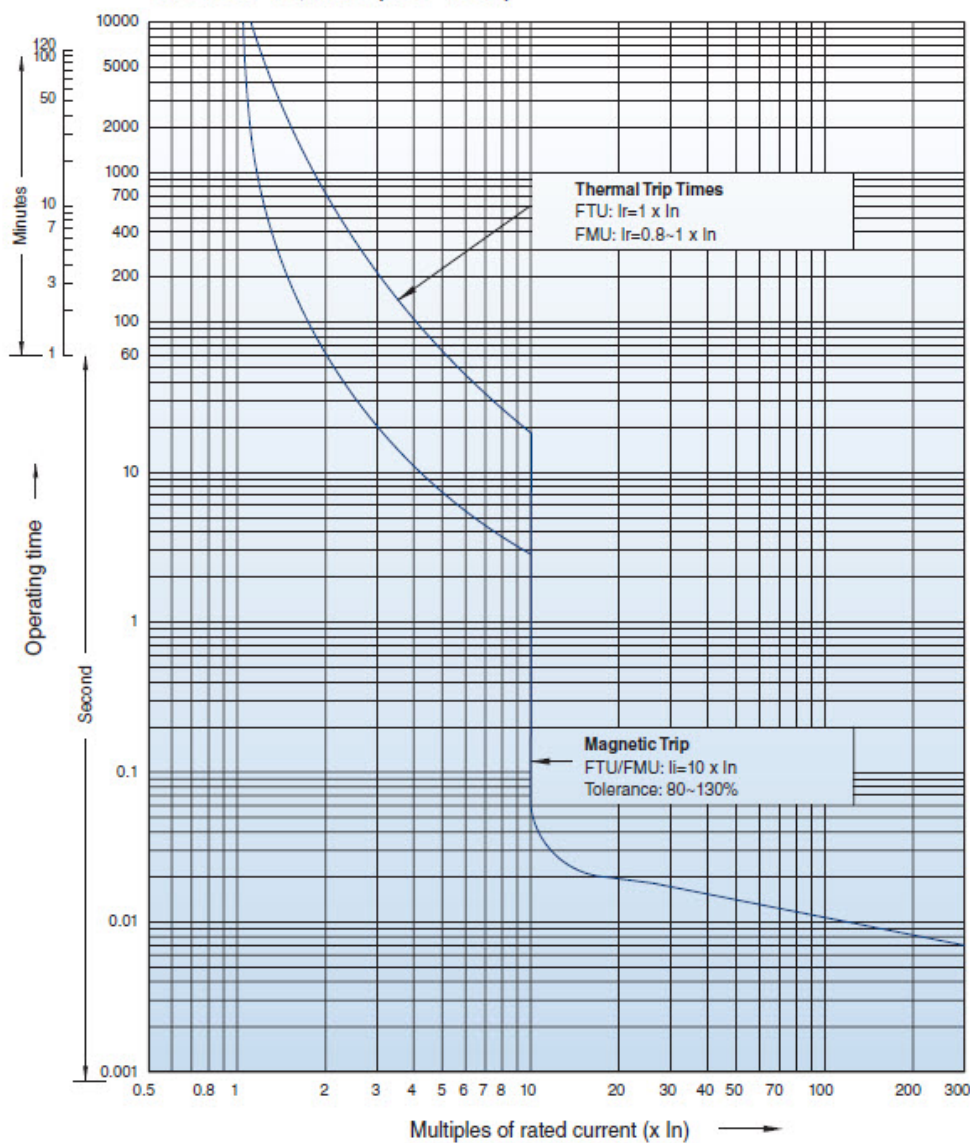


[GCBX2-CBL-36](#)
[GCBX2-CBL-60](#)
[GCBX3-CBL-36](#)
[GCBX3-CBL-60](#)
[GCBX5-CBL-60](#)

Gladiator MCCB Characteristic Curves

GCB400 (FTU – Fixed Trip Units)

All time/current characteristic curve data is based on 40°C ambient cold start.

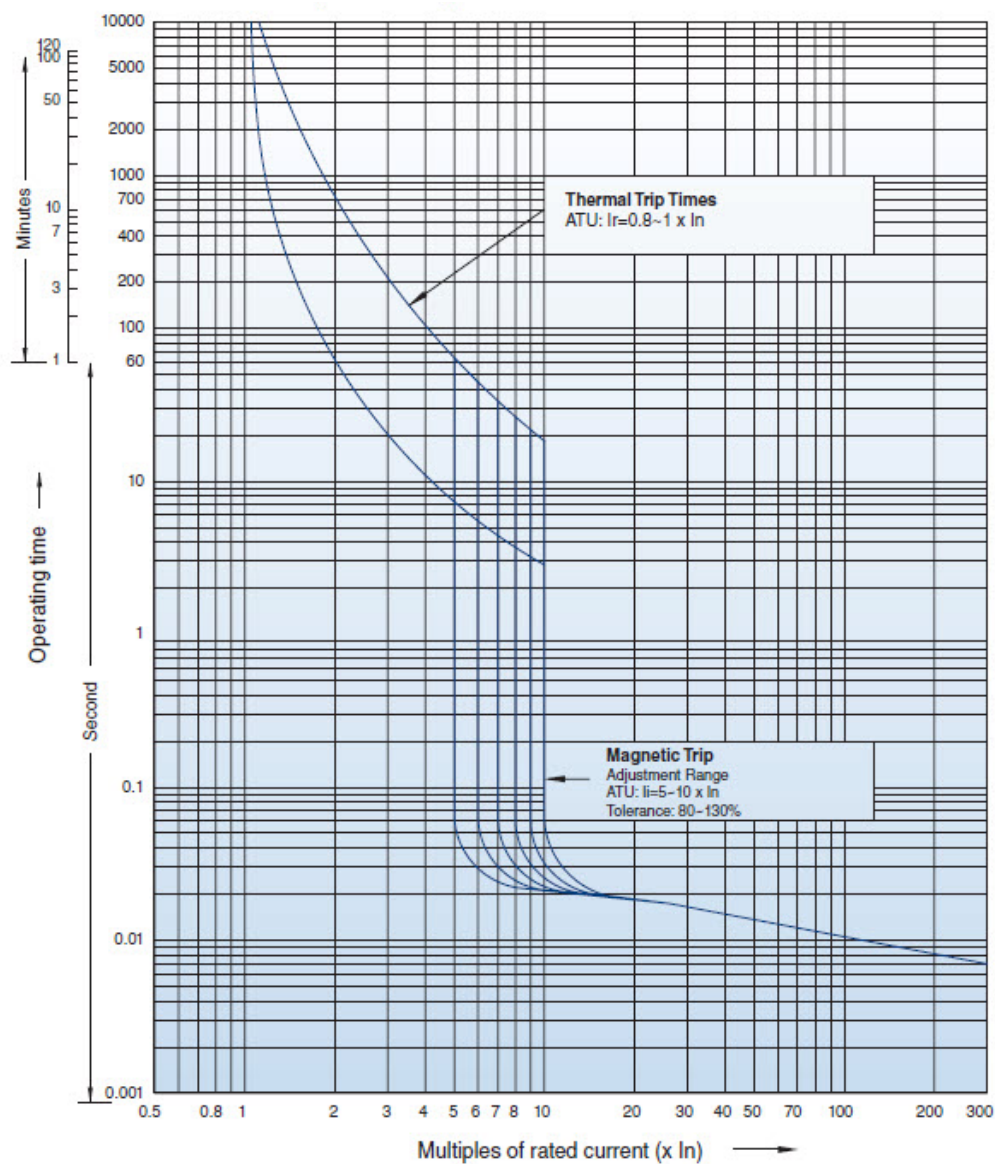


| Rating | FTU | |
|--------|-------|---------------------------|
| | 2P/3P | Mag Trip (80% - 130%) (A) |
| 250 | ✓ / ✓ | 2500 |
| 300 | ✓ / ✓ | 3000 |
| 350 | ✓ / ✓ | 3500 |
| 400 | ✓ / ✓ | 4000 |

Gladiator MCCB Characteristic Curves

GCB400 (ATU – Adjustable Trip Units)

All time/current characteristic curve data is based on 40°C ambient cold start.



| Rating | ATU | | |
|--------|-------|--|--|
| | 2P/3P | Rating Range (A) ($0.8-1 \times I_n$) | Mag Trip (80% - 130%) (A) ($5-10 \times I_n$) |
| 300 | ✓ / ✓ | 240-300 | 1500-3000 |
| 400 | ✓ / ✓ | 320-400 | 2000-4000 |