

## QUICKLAG — Bolt-On Ground Fault and Equipment Protectors

Bolt-On Types BAB, QBHW,  
HBAX, HBAW

QUICKLAG Type BA 1-Pole

## Product Description

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- Built and listed to UL 489
- All products UL and CSA listed
- All products 15 – 100A are HACR rated
- Switching duty rated for 120V AC fluorescent light applications
- Dimension Sheets — FRED Index 206

## Product Selection

Table 11-6. Breaker Catalog Numbers

| Contin-<br>uous<br>Ampere<br>Rating<br>@ 40°C | 1-Pole            |                  | 2-Pole            |                  | 240V AC           |                  | 3-Pole            |                  |
|-----------------------------------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|
|                                               | 120/240V AC       |                  | 120/240V AC       |                  | 240V AC           |                  | 240V AC           |                  |
|                                               | Catalog<br>Number | Price<br>U.S. \$ | Catalog<br>Number | Price<br>U.S. \$ | Catalog<br>Number | Price<br>U.S. \$ | Catalog<br>Number | Price<br>U.S. \$ |

## QUICKLAG Type: BA 10,000 Ampere I.C. Thermal-Magnetic Breakers

|     |            |       |         |        |          |        |          |        |
|-----|------------|-------|---------|--------|----------|--------|----------|--------|
| 10  | BAB1010    | 27.50 | BAB2010 | 60.50  | BAB2010H | 156.00 | BAB3010H | 193.00 |
| 15  | BAB1015 ①② | 27.50 | BAB2015 | 60.50  | BAB2015H | 156.00 | BAB3015H | 193.00 |
| 20  | BAB1020 ①② | 27.50 | BAB2020 | 60.50  | BAB2020H | 156.00 | BAB3020H | 193.00 |
| 25  | BAB1025    | 27.50 | BAB2025 | 60.50  | BAB2025H | 156.00 | BAB3025H | 193.00 |
| 30  | BAB1030    | 27.50 | BAB2030 | 60.50  | BAB2030H | 156.00 | BAB3030H | 193.00 |
| 35  | BAB1035    | 27.50 | BAB2035 | 60.50  | BAB2035H | 156.00 | BAB3035H | 193.00 |
| 40  | BAB1040    | 27.50 | BAB2040 | 60.50  | BAB2040H | 156.00 | BAB3040H | 193.00 |
| 45  | BAB1045    | 27.50 | BAB2045 | 60.50  | BAB2045H | 156.00 | BAB3045H | 193.00 |
| 50  | BAB1050    | 27.50 | BAB2050 | 60.50  | BAB2050H | 156.00 | BAB3050H | 193.00 |
| 55  | BAB1055    | 27.50 | BAB2055 | 60.50  | BAB2055H | 156.00 | BAB3055H | 193.00 |
| 60  | BAB1060    | 27.50 | BAB2060 | 60.50  | BAB2060H | 156.00 | BAB3060H | 193.00 |
| 70  | BAB1070    | 53.50 | BAB2070 | 115.00 | BAB2070H | 206.00 | BAB3070H | 240.00 |
| 80  | —          | —     | BAB2080 | 156.00 | BAB2080H | 239.00 | BAB3080H | 274.00 |
| 90  | —          | —     | BAB2090 | 156.00 | BAB2090H | 239.00 | BAB3090H | 274.00 |
| 100 | BAB1100    | 91.00 | BAB2100 | 156.00 | BAB2100H | 239.00 | BAB3100H | 274.00 |
| 110 | —          | —     | BAB2110 | 332.00 | —        | —      | —        | —      |
| 125 | —          | —     | BAB2125 | 332.00 | —        | —      | —        | —      |

## QUICKLAG Type: QBHW 22,000 Ampere I.C. Thermal-Magnetic Breakers

|     |            |       |          |        |           |        |           |        |
|-----|------------|-------|----------|--------|-----------|--------|-----------|--------|
| 15  | QBHW1015 ① | 54.50 | QBHW2015 | 117.00 | QBHW2015H | 215.00 | QBHW3015H | 289.00 |
| 20  | QBHW1020 ① | 54.50 | QBHW2020 | 117.00 | QBHW2020H | 215.00 | QBHW3020H | 289.00 |
| 25  | QBHW1025   | 54.50 | QBHW2025 | 117.00 | QBHW2025H | 215.00 | QBHW3025H | 289.00 |
| 30  | QBHW1030   | 54.50 | QBHW2030 | 117.00 | QBHW2030H | 215.00 | QBHW3030H | 289.00 |
| 35  | QBHW1035   | 54.50 | QBHW2035 | 111.00 | QBHW2035H | 215.00 | QBHW3035H | 289.00 |
| 40  | QBHW1040   | 54.50 | QBHW2040 | 117.00 | QBHW2040H | 215.00 | QBHW3040H | 289.00 |
| 45  | QBHW1045   | 54.50 | QBHW2045 | 117.00 | QBHW2045H | 215.00 | QBHW3045H | 289.00 |
| 50  | QBHW1050   | 54.50 | QBHW2050 | 117.00 | QBHW2050H | 215.00 | QBHW3050H | 289.00 |
| 55  | QBHW1055   | 54.50 | QBHW2055 | 117.00 | QBHW2055H | 215.00 | QBHW3055H | 289.00 |
| 60  | QBHW1060   | 54.50 | QBHW2060 | 117.00 | QBHW2060H | 215.00 | QBHW3060H | 289.00 |
| 70  | QBHW1070   | 72.50 | QBHW2070 | 170.00 | QBHW2070H | 257.00 | QBHW3070H | 418.00 |
| 80  | —          | —     | QBHW2080 | 253.00 | QBHW2080H | 290.00 | QBHW3080H | 418.00 |
| 90  | —          | —     | QBHW2090 | 253.00 | QBHW2090H | 290.00 | QBHW3090H | 418.00 |
| 100 | —          | —     | QBHW2100 | 253.00 | QBHW2100H | 290.00 | QBHW3100H | 448.00 |
| 110 | —          | —     | QBHW2110 | 735.00 | —         | —      | —         | —      |
| 125 | —          | —     | QBHW2125 | 735.00 | —         | —      | —         | —      |

## QUICKLAG Type: HBAX 42,000 Ampere I.C. Thermal-Magnetic Breakers

|     |            |        |          |        |   |   |           |        |
|-----|------------|--------|----------|--------|---|---|-----------|--------|
| 15  | HBAX1015 ① | 77.00  | HBAX2015 | 139.00 | — | — | HBAX3015H | 347.00 |
| 20  | HBAX1020 ① | 77.00  | HBAX2020 | 139.00 | — | — | HBAX3020H | 347.00 |
| 25  | HBAX1025   | 77.00  | HBAX2025 | 139.00 | — | — | HBAX3025H | 347.00 |
| 30  | HBAX1030   | 77.00  | HBAX2030 | 139.00 | — | — | HBAX3030H | 347.00 |
| 35  | HBAX1035   | 77.00  | HBAX2035 | 139.00 | — | — | HBAX3035H | 347.00 |
| 40  | HBAX1040   | 77.00  | HBAX2040 | 139.00 | — | — | HBAX3040H | 347.00 |
| 45  | HBAX1045   | 77.00  | HBAX2045 | 139.00 | — | — | HBAX3045H | 347.00 |
| 50  | HBAX1050   | 77.00  | HBAX2050 | 139.00 | — | — | HBAX3050H | 347.00 |
| 55  | HBAX1055   | 77.00  | HBAX2055 | 139.00 | — | — | HBAX3055H | 347.00 |
| 60  | HBAX1060   | 77.00  | HBAX2060 | 139.00 | — | — | HBAX3060H | 347.00 |
| 70  | HBAX1070   | 124.00 | HBAX2070 | 211.00 | — | — | HBAX3070H | 424.00 |
| 80  | —          | —      | HBAX2080 | 295.00 | — | — | HBAX3080H | 590.00 |
| 90  | —          | —      | HBAX2090 | 295.00 | — | — | HBAX3090H | 590.00 |
| 100 | —          | —      | HBAX2100 | 295.00 | — | — | HBAX3100H | 530.00 |

## QUICKLAG Type: HBAW 65,000 Ampere I.C. Thermal-Magnetic Breakers

|    |            |       |          |        |   |   |           |        |
|----|------------|-------|----------|--------|---|---|-----------|--------|
| 15 | HBAW1015 ① | 87.50 | HBAW2015 | 200.00 | — | — | HBAW3015H | 350.00 |
| 20 | HBAW1020 ① | 87.50 | HBAW2020 | 200.00 | — | — | HBAW3020H | 350.00 |
| 25 | HBAW1025   | 87.50 | HBAW2025 | 200.00 | — | — | —         | —      |
| 30 | HBAW1030   | 87.50 | HBAW2030 | 200.00 | — | — | —         | —      |

① Switching duty rated for 120V AC fluorescent light applications.

② For special low-magnetic breaker order BAB1015L1 or BAB1020L1.

## Technical Data and Specifications

Table 11-7. Shipping Data

| Number<br>of Poles | Carton<br>Quantity | Approximate<br>Weight Lbs. (Kg) | Dimensions in<br>Inches (mm)                | Time/Current<br>Curves |
|--------------------|--------------------|---------------------------------|---------------------------------------------|------------------------|
| 1                  | 24                 | 9.00 (4.1)                      | 12.50 x 7.50 x 5.00 (317.5 x 190.5 x 127.0) | FRED 350077            |
| 2                  | 12                 | 9.00 (4.1)                      | 12.50 x 7.50 x 5.00 (317.5 x 190.5 x 127.0) | FRED 350177            |
| 3                  | 8                  | 9.00 (4.1)                      | 12.50 x 7.50 x 5.00 (317.5 x 190.5 x 127.0) | FRED 350277            |

Note: Dimension Sheets — FRED Index 206

Discount Symbol ..... CB-1

## QUICKLAG®

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## Quick Reference

Table 11-1. QUICKLAG Industrial Circuit Breakers ① Plug-In, Bolt-On, Cable-In/Cable-Out

| Circuit Breaker Type | Circuit Breaker Type Code | Continuous Ampere Rating @ 40°C | Number of Poles | Volts   |              | Federal Spec. W-C-375b | Interrupting Ratings rms Symmetrical Amperes |         |        |       |       |       | Page Number |
|----------------------|---------------------------|---------------------------------|-----------------|---------|--------------|------------------------|----------------------------------------------|---------|--------|-------|-------|-------|-------------|
|                      |                           |                                 |                 | AC      | DC           |                        | AC Ratings Volts                             |         |        | DC ②  |       |       |             |
|                      |                           |                                 |                 |         |              |                        | 120                                          | 120/240 | 240    | 24-48 | 62.5  | 80    |             |
| HQP                  | P                         | 10 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 10a, 11a, 12a          | —                                            | 10,000  | —      | 5,000 | ③     | —     | 11-4        |
| HQP                  |                           | 10 – 125                        | 2               | 120/240 | 24, 48, 80   | 10a, 12a               | —                                            | 10,000  | —      | 5,000 | 5,000 | 5,000 | 11-4        |
| HQP                  |                           | 10 – 100                        | 2, 3            | 240     | —            | 10b, 11b, 12b          | —                                            | —       | 10,000 | —     | —     | —     | 11-4        |
| QPHW                 | P                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 14a                    | —                                            | 22,000  | —      | 5,000 | ③     | —     | 11-4        |
| QPHW                 |                           | 15 – 125                        | 2               | 120/240 | 24, 48, 80   | 14a                    | —                                            | 22,000  | —      | 5,000 | 5,000 | 5,000 | 11-4        |
| QPHW                 |                           | 15 – 100                        | 2, 3            | 240     | —            | 14b                    | —                                            | —       | 22,000 | —     | —     | —     | 11-4        |
| QHPX                 | P                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | —                      | —                                            | 42,000  | —      | 5,000 | ③     | —     | 11-4        |
| QHPX                 |                           | 15 – 100                        | 2               | 120/240 | 24, 48, 80   | —                      | —                                            | 42,000  | —      | 5,000 | 5,000 | 5,000 | 11-4        |
| QHPX                 |                           | 15 – 100                        | 3               | 240     | —            | —                      | —                                            | —       | 42,000 | —     | —     | —     | 11-4        |
| QHPW                 | P                         | 15 – 30                         | 1               | 120/240 | 24, 48, 62.5 | 15a                    | —                                            | 65,000  | —      | 5,000 | ③     | —     | 11-4        |
| QHPW                 |                           | 15 – 30                         | 2               | 120/240 | 24, 48, 80   | 15a                    | —                                            | 65,000  | —      | 5,000 | 5,000 | 5,000 | 11-4        |
| QHPW                 |                           | 15 – 20                         | 3               | 240     | —            | 15b                    | —                                            | —       | 65,000 | —     | —     | —     | 11-4        |
| QPGF                 | P, GF                     | 15 – 40                         | 1               | 120     | —            | 10a, 11a, 12a          | 10,000                                       | —       | —      | —     | —     | —     | 11-5        |
| QPGF                 |                           | 15 – 50                         | 2               | 120/240 | —            | 10a, 11a, 12a          | —                                            | 10,000  | —      | —     | —     | —     | 11-5        |
| QPHGF                | P, GF                     | 15 – 30                         | 1               | 120     | —            | 10a, 11a, 12a          | 22,000                                       | —       | —      | —     | —     | —     | 11-5        |
| QPHGF                |                           | 15 – 50                         | 2               | 120/240 | —            | 10a, 11a, 12a          | —                                            | 22,000  | —      | —     | —     | —     | 11-5        |
| QPGFEP               | P, GFEP                   | 15 – 40                         | 1               | 120     | —            | —                      | 10,000                                       | —       | —      | —     | —     | —     | 11-5        |
| QPGFEP               |                           | 15 – 50                         | 2               | 120/240 | —            | —                      | —                                            | 10,000  | —      | —     | —     | —     | 11-5        |
| QPHGFEP              | P, GFEP                   | 15 – 30                         | 1               | 120     | —            | —                      | 22,000                                       | —       | —      | —     | —     | —     | 11-5        |
| QPHGFEP              |                           | 15 – 30                         | 2               | 120/240 | —            | —                      | —                                            | 22,000  | 22,000 | —     | —     | —     | 11-5        |

① QUICKLAG circuit breakers are suitable for application in relative humidity 0 – 95% non-condensating.

② Two-pole DC interrupting ratings based on 2 poles connected in series.

③ 62.5V AC interrupting rating is 3800 AIC 10 – 50 amperes and 2500 AIC 55 – 100 amperes continuous.

Circuit Breaker Type Codes: **P** Plug-In; **B** Bolt-On; **C** Cable-In/Cable-Out; **GF** Ground Fault, 5 mA; **GFEP** Ground Fault, 30 mA.For Types GHBS, GBHS and BABR Solenoid-Operated, Remote-Controlled Circuit Breakers, see **Pages 11-14 – 11-15**.For Types WMS and SPHM Supplementary Protectors, see **Pages 11-23 and 11-34**.

### Quick Reference

Tables 11-1. QUICKLAG Industrial Circuit Breakers ① Plug-In, Bolt-On, Cable-In/Cable-Out (Continued)

| Circuit Breaker Type | Circuit Breaker Type Code | Continuous Ampere Rating @ 40°C | Number of Poles | Volts   |              | Federal Spec. W-C-375b | Interrupting Ratings rms Symmetrical Amperes |         |        |       |       |       | Page Number |
|----------------------|---------------------------|---------------------------------|-----------------|---------|--------------|------------------------|----------------------------------------------|---------|--------|-------|-------|-------|-------------|
|                      |                           |                                 |                 | AC      | DC           |                        | AC Ratings Volts                             |         |        | DC ②  |       |       |             |
|                      |                           |                                 |                 |         |              |                        | 120                                          | 120/240 | 240    | 24-48 | 62.5  | 80    |             |
| BAB                  | B                         | 10 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 10a, 11a, 12a          | —                                            | 10,000  | —      | 5,000 | ③     | —     | 11-6        |
| BAB                  |                           | 10 – 125                        | 2               | 120/240 | 24, 48, 80   | 10a, 12a               | —                                            | 10,000  | —      | 5,000 | 5,000 | 5,000 | 11-6        |
| BAB                  |                           | 10 – 100                        | 2, 3            | 240     | —            | 10b, 11b, 12b          | —                                            | —       | 10,000 | —     | —     | —     | 11-6        |
| BABR                 | B                         | 15 – 30                         | 1               | 120     | —            | —                      | 10,000                                       | —       | —      | —     | —     | —     | 11-13       |
| BABR                 |                           | 15 – 30                         | 2               | 120/240 | —            | —                      | —                                            | 10,000  | —      | —     | —     | —     | 11-13       |
| QBHW                 | B                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 14a                    | —                                            | 22,000  | —      | 5,000 | ③     | —     | 11-6        |
| QBHW                 |                           | 15 – 125                        | 2               | 120/240 | 24, 48, 80   | 14a                    | —                                            | 22,000  | —      | 5,000 | 5,000 | 5,000 | 11-6        |
| QBHW                 |                           | 15 – 100                        | 2, 3            | 240     | —            | 14b                    | —                                            | —       | 22,000 | —     | —     | —     | 11-6        |
| HBAX                 | B                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | —                      | —                                            | 42,000  | —      | 5,000 | ③     | —     | 11-6        |
| HBAX                 |                           | 15 – 100                        | 2               | 120/240 | 24, 48, 80   | —                      | —                                            | 42,000  | —      | 5,000 | 5,000 | 5,000 | 11-6        |
| HBAX                 |                           | 15 – 100                        | 3               | 240     | —            | —                      | —                                            | —       | 42,000 | —     | —     | —     | 11-6        |
| HBAW                 | B                         | 15 – 30                         | 1               | 120/240 | 24, 48, 62.5 | 15a                    | —                                            | 65,000  | —      | 5,000 | ③     | —     | 11-6        |
| HBAW                 |                           | 15 – 30                         | 2               | 120/240 | 24, 48, 80   | 15a                    | —                                            | 65,000  | —      | 5,000 | 5,000 | 5,000 | 11-6        |
| HBAW                 |                           | 15 – 20                         | 3               | 240     | —            | 15b                    | —                                            | —       | 65,000 | —     | —     | —     | 11-6        |
| QBGf                 | B, GF                     | 15 – 40                         | 1               | 120     | —            | 10a, 11a, 12a          | 10,000                                       | —       | —      | —     | —     | —     | 11-7        |
| QBGf                 |                           | 15 – 50                         | 2               | 120/240 | —            | 10a, 11a, 12a          | —                                            | 10,000  | —      | —     | —     | —     | 11-7        |
| QBHGf                | B, GF                     | 15 – 30                         | 1               | 120     | —            | 10a, 11a, 12a          | 22,000                                       | —       | —      | —     | —     | —     | 11-7        |
| QBHGf                |                           | 15 – 30                         | 2               | 120/240 | —            | 10a, 11a, 12a          | —                                            | 22,000  | —      | —     | —     | —     | 11-7        |
| QBGfEP               | B, GFEP                   | 15 – 40                         | 1               | 120     | —            | —                      | 10,000                                       | —       | —      | —     | —     | —     | 11-7        |
| QBGfEP               |                           | 15 – 50                         | 2               | 120/240 | —            | —                      | —                                            | 10,000  | —      | —     | —     | —     | 11-7        |
| QBHGfEP              | B, GFEP                   | 15 – 30                         | 1               | 120     | —            | —                      | 22,000                                       | —       | —      | —     | —     | —     | 11-7        |
| QBHGfEP              |                           | 15 – 30                         | 2               | 120/240 | —            | —                      | 22,000                                       | 22,000  | —      | —     | —     | —     | 11-7        |
| QC                   | C                         | 10 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 10a, 11a, 12a          | —                                            | 10,000  | —      | 5,000 | ③     | —     | 11-9        |
| QC                   |                           | 10 – 100                        | 2               | 120/240 | 24, 48, 80   | 10a, 12a               | —                                            | 10,000  | —      | 5,000 | 5,000 | 5,000 | 11-9        |
| QC                   |                           | 10 – 100                        | 2, 3, 4         | 240     | —            | 10b, 11b, 12b          | —                                            | —       | 10,000 | —     | —     | —     | 11-9        |
| QCF                  | C                         | 10 – 60                         | 1, 2            | 120/240 | 24, 48, 62.5 | —                      | 10,000                                       | 10,000  | —      | 3,000 | ③     | —     | 11-10       |
| QCF                  |                           | 15 – 20                         | 1, 2            | 120/240 | 24, 48, 62.5 | —                      | 22,000                                       | —       | —      | 3,000 | 3,000 | —     | 11-10       |
| QCF                  |                           | 15 – 30                         | 2, 3            | 240     | 24, 48, 62.5 | —                      | —                                            | 10,000  | —      | 3,000 | 3,000 | —     | 11-10       |
| QCR                  |                           | 10 – 60                         | 1, 2            | 120/240 | 24, 48, 62.5 | —                      | 10,000                                       | 10,000  | —      | 3,000 | 2,000 | —     | 11-10       |
| QCR                  |                           | 15 – 20                         | 1, 2            | 120/240 | 24, 48, 62.5 | —                      | 22,000                                       | —       | —      | 3,000 | 3,000 | —     | 11-10       |
| QCR                  |                           | 15 – 30                         | 2, 3            | 240     | 24, 48, 62.5 | —                      | —                                            | 10,000  | —      | 3,000 | 3,000 | —     | 11-10       |
| QCHW                 | C                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | 14a                    | —                                            | 22,000  | —      | 5,000 | ③     | —     | 11-9        |
| QCHW                 |                           | 15 – 100                        | 2               | 120/240 | 24, 48, 80   | 14a                    | —                                            | 22,000  | —      | 5,000 | 5,000 | 5,000 | 11-9        |
| QCHW                 |                           | 15 – 100                        | 2, 3            | 240     | —            | 14b                    | —                                            | —       | 22,000 | —     | —     | —     | 11-9        |
| QHCX                 | C                         | 15 – 70                         | 1               | 120/240 | 24, 48, 62.5 | —                      | —                                            | 42,000  | —      | 5,000 | ③     | —     | 11-9        |
| QHCX                 |                           | 15 – 100                        | 2               | 120/240 | 24, 48, 80   | —                      | —                                            | 42,000  | —      | 5,000 | 5,000 | 5,000 | 11-9        |
| QHCX                 |                           | 15 – 100                        | 3               | 240     | —            | —                      | —                                            | —       | 42,000 | —     | —     | —     | 11-9        |
| QHCW                 | C                         | 15 – 30                         | 1               | 120/240 | 24, 48, 62.5 | 15a                    | —                                            | 65,000  | —      | 5,000 | ③     | —     | 11-9        |
| QHCW                 |                           | 15 – 30                         | 2               | 120/240 | 24, 48, 80   | 15a                    | —                                            | 65,000  | —      | 5,000 | 5,000 | 5,000 | 11-9        |
| QHCW                 |                           | 15 – 20                         | 3               | 240     | —            | 15b                    | —                                            | —       | 65,000 | —     | —     | —     | 11-9        |
| QCGf                 | C, GF                     | 15 – 40                         | 1               | 120     | —            | —                      | 10,000                                       | —       | —      | —     | —     | —     | 11-13       |
| QCGf                 |                           | 15 – 50                         | 2               | 120/240 | —            | —                      | —                                            | 10,000  | —      | —     | —     | —     | 11-13       |
| QCHGf                | C, GF                     | 15 – 30                         | 1               | 120     | —            | —                      | 22,000                                       | —       | —      | —     | —     | —     | 11-13       |
| QCHGf                |                           | 15 – 30                         | 2               | 120/240 | —            | —                      | —                                            | 22,000  | —      | —     | —     | —     | 11-13       |
| QCGfEP               | C, GFEP                   | 15 – 40                         | 1               | 120     | —            | —                      | 10,000                                       | —       | —      | —     | —     | —     | 11-13       |
| QCGfEP               |                           | 15 – 50                         | 2               | 120/240 | —            | —                      | —                                            | 10,000  | —      | —     | —     | —     | 11-13       |
| QCHGfEP              | C, GFEP                   | 15 – 30                         | 1               | 120     | —            | —                      | 22,000                                       | —       | —      | —     | —     | —     | 11-13       |
| QCHGfEP              |                           | 15 – 30                         | 2               | 120/240 | —            | —                      | —                                            | 22,000  | —      | —     | —     | —     | 11-13       |

① QUICKLAG circuit breakers are suitable for application in relative humidity 0 – 95% non-condensating.

② Two-pole DC interrupting ratings based on 2 poles connected in series.

③ 62.5V AC interrupting rating is 3800 AIC 10 – 50 amperes and 2500 AIC 55 – 100 amperes continuous.

Circuit Breaker Type Codes: **P** Plug-In; **B** Bolt-On; **C** Cable-In/Cable-Out; **GF** Ground Fault, 5 mA; **GFEP** Ground Fault, 30 mA.

For Types GHBS, GBHS and BABR Solenoid-Operated, Remote-Controlled Circuit Breakers, see **Pages 11-14 – 11-15**.

For Types WMS and SPHM Supplementary Protectors, see **Pages 11-23 and 11-34**.

## QUICKLAG — Factory Modifications and Installed Terminals

## Factory Modifications and Installed Terminals

Table 11-29. Factory Modifications ①

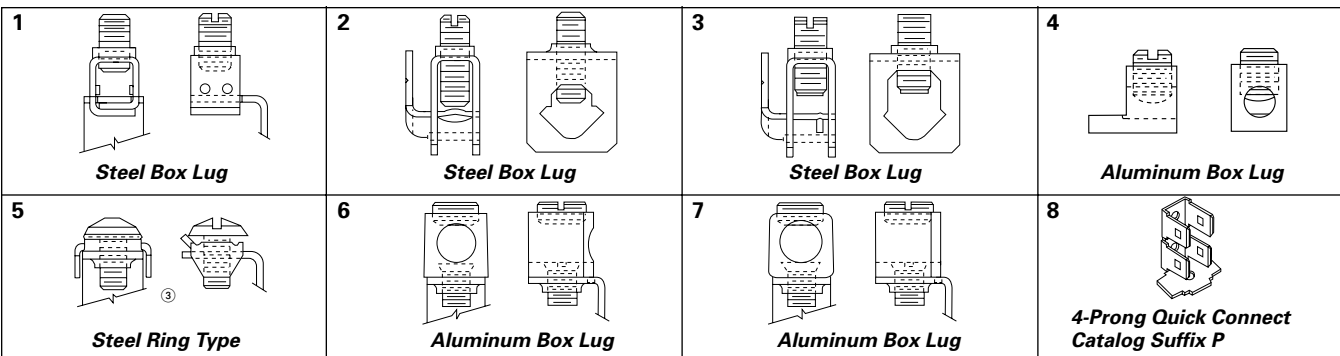
| Type of Modification                                                                                                                          | Breaker Types                                                                                                                                   | Catalog Suffix                                                         | Adder U.S. \$                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------|
| Shunt Trip (Requires 1 extra pole space on right side)<br>120, 208, 240V AC<br>12, 24, 48V AC/DC<br>Draws 2.6A at 120V<br>Draws 11A at 24V DC | QUICKLAG Types P, B and C<br>QUICKLAG Types P, B and C                                                                                          | <b>S</b><br><b>S1</b>                                                  | 138.00                            |
| Special Calibration (50°C)<br>Shock Testing<br>Freeze Testing                                                                                 | QUICKLAG Types P, B and C<br>QUICKLAG Types P, B and C<br>QUICKLAG Types P, B and C                                                             | <b>V</b><br><b>L</b><br><b>Y</b>                                       | 20%<br>30%<br>30%                 |
| Moisture-Fungus Treatment<br>Marine Duty<br>Naval Duty<br>400 Hz Calibration<br>Specific DC Ratings (Breaker marked with a Max VDC rating)    | QUICKLAG Types P, B, C and Ground Fault<br>QUICKLAG Types P, B, C<br>QUICKLAG Types P, B, C<br>QUICKLAG Types P, B, C<br>QUICKLAG Types P, B, C | <b>F</b><br><b>H08</b><br><b>H09</b><br><b>G</b><br><b>Q thru Q9</b> ② | 15.00<br>10%<br>10%<br>20%<br>20% |

① Contact Cutler-Hammer for factory modifications available for QCR and QCF breakers.

② Q = 32V DC; Q1 = 32 – 40V DC; Q2 = 37.5V DC; Q3 = 45V DC; Q4 = 48V DC; Q5 = 50V DC; Q6 = 62V DC; Q7 = 75V DC (2P); Q8 = 80V DC (2P); Q9 = 125V DC (QCR 2P)

Table 11-30. Factory Installed Breaker Terminals

| Breaker Type                                             | Continuous Ampere Rating          | Standard Line Terminal                             |                         |                               | Standard Load Terminal               |                         |                              | Optional Terminals (20% List Price Adder) |                                  |
|----------------------------------------------------------|-----------------------------------|----------------------------------------------------|-------------------------|-------------------------------|--------------------------------------|-------------------------|------------------------------|-------------------------------------------|----------------------------------|
|                                                          |                                   | Term Type                                          | Wire Type               | Wire Range (AWG)              | Term Type                            | Wire Type               | Wire Range (AWG)             | Line                                      | Load                             |
| QUICKLAG Type P<br>HQP, QPHW,<br>QHPX, QHPW              | 10 to 30<br>35 to 50<br>55 to 125 | Plug-on female clips which mate with the bus stabs |                         |                               | 1<br>2<br>3                          | Cu/Al<br>Cu/Al<br>Cu/Al | 14 – 4<br>14 – 4<br>8 – 1/0  | N/A                                       | 3<br>3<br>—                      |
| QUICKLAG Ground Fault<br>QPGF, QPHGF,<br>QPGFEP, QPHGFEP | 10 to 30<br>40                    | Plug-on female clips which mate with the bus stabs |                         |                               | 1 (1-pole)<br>4 (2-pole)<br>4        | Cu/Al<br>Cu/Al<br>Cu    | 14 – 4<br>14 – 8<br>14 – 8   | N/A                                       | 3<br>3<br>—                      |
| QUICKLAG Type B<br>BAB, QBHW,<br>HBAX, HBAW              | 10 to 30<br>35 to 50<br>55 to 125 | Extended tangs which bolt directly to the bus      |                         |                               | 1 (1- and 2-pole)<br>2 (3-pole)<br>3 | Cu/Al<br>Cu/Al<br>Cu/Al | 14 – 4<br>14 – 4<br>8 – 1/0  | N/A                                       | 3<br>3<br>—                      |
| QUICKLAG Ground Fault<br>QBGF, QBHGF,<br>QBGFEP, QBHGFEP | 10 to 30<br>40                    | Extended tangs which bolt directly to the bus      |                         |                               | 1 (1-pole)<br>4 (2-pole)<br>4        | Cu/Al<br>Cu/Al<br>Cu    | 14 – 4<br>14 – 8<br>14 – 8   | N/A                                       | N/A                              |
| QUICKLAG Type C<br>QC, QCHW,<br>QHCX, QHCW               | 10 to 20<br>25 to 60<br>70 to 100 | 5<br>6<br>7                                        | Cu/Al<br>Cu/Al<br>Cu/Al | 14 – 10<br>14 – 10<br>14 – 10 | 5<br>2<br>3                          | Cu/Al<br>Cu/Al<br>Cu/Al | 14 – 10<br>14 – 4<br>8 – 1/0 | 6, 7<br>5, 7<br>5                         | 6, 7, 8<br>5, 6, 7, 8<br>5, 7, 8 |
| QUICKLAG<br>QCR, QCF                                     | 10 to 55<br>60                    | 1<br>1                                             | Cu/Al<br>Cu             | 14 – 4<br>14 – 4              | 1<br>1                               | Cu/Al<br>Cu             | 14 – 4<br>14 – 4             | N/A                                       | N/A                              |
| QUICKLAG Ground Fault<br>QCGF, QCHGF, QCGFEP, QCHGFEP    | 10 to 20<br>25 to 50              | 5<br>6                                             | Cu/Al<br>Cu/Al          | 14 – 10<br>14 – 10            | 1<br>1                               | Cu/Al<br>Cu/Al          | 14 – 4<br>14 – 4             | 6, 7<br>5, 7                              | 5<br>5                           |



③ Clamp on line side only.

Table 11-31. Spare Terminal Hardware Screws (Lugs not Included)

| Terminal Type | Description                                    | Order in Multiples of | Catalog Number | Price U.S. \$ |
|---------------|------------------------------------------------|-----------------------|----------------|---------------|
| 1             | QUICKLAG Terminal Screw                        | 10                    | QLDTS A        | .21           |
| 2             | QUICKLAG Terminal Screw                        | 10                    | QLDTS B        | .21           |
| 3             | QUICKLAG Terminal Screw                        | 10                    | QLDTS C        | 2.80          |
| 5             | QUICKLAG Binding Head Terminal Screw and Clamp | 10                    | QLBHTSE        | 2.80          |
| 6 and 7       | QUICKLAG Terminal Screw                        | 10                    | QLLNTSFG       | 2.80          |

Discount Symbol ..... **CB-1**