

QUICKLAG — Bolt-On Ground Fault and Equipment Protectors

Bolt-On Types BAB, QBHW, HBAX, HBAW



QUICKLAG Type BA 1-Pole

Product Description

- 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- uous Ampere Rating @ 40°C	1-Pole		2-Pole				3-Pole	
	120/240V AC		120/240V AC		240V AC		240V AC	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price 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 of Poles	Carton Quantity	Approximate Weight Lbs. (Kg)	Dimensions in Inches (mm)	Time/Current 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**



For more information contact Cutler-Hammer at: www.ch.cutler-hammer.com/catalog

CAT.200.01.T.E

QUICKLAG®

Contents

Description	Page	Description	Page
Quick Reference	11-2	Cable-In/Cable-Out, 1/2 Wide	
Plug-On		Types QCR, QCF, QCRH,	
Types HQP, QPHW, QHPX,		QCFH	11-10
QHPW	11-4	Cable-In/Cable-Out Ground	
Plug-On Ground Fault and		Fault and Equipment Protectors	
Equipment Protectors		Types QCGF, QCHGF, QCGFEP,	
Types QPGF, QPHGF,		QCHGFEP	11-13
QPGFEP, QPHGFEP	11-5	Solenoid-Operated, Remote-	
Bolt-On		Controlled	
Types BAB, BABR, QBHW,		Types GHBS, GBHS, BABR .	11-14
HBAX, HBAW	11-6	International Rated	
Bolt-On Ground Fault and		Types HQP, BA, QC, GFXB,	
Equipment Protectors		GFXBB, GFXBC	11-16
Types QBGF, QBHGF,		Special Application Breakers	
QBGFEP, QBHGFEP	11-7	Types HQP, BA, QC	11-18
Cable-In/Cable-Out		Options and Accessories	11-20
Types QC, QCHW, QHCX,		Factory Modifications and	
QHCW	11-8	Installed Terminals	11-22

11

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-condensing.

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		Special 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 BAB BAB	B	10 – 70 10 – 125 10 – 100	1 2 2, 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	10a, 11a, 12a 10a, 12a 10b, 11b, 12b	— — —	10,000 10,000 —	— — 10,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-6 11-6 11-6
BABR BABR	B	15 – 30 15 – 30	1 2	120 120/240	— —	— —	10,000 —	— 10,000	— —	— —	— —	— —	11-13 11-13
QBHW QBHW QBHW	B	15 – 70 15 – 125 15 – 100	1 2 2, 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	14a 14a 14b	— — —	22,000 22,000 —	— — 22,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-6 11-6 11-6
HBAX HBAX HBAX	B	15 – 70 15 – 100 15 – 100	1 2 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	— — —	— — —	42,000 42,000 —	— — 42,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-6 11-6 11-6
HBAW HBAW HBAW	B	15 – 30 15 – 30 15 – 20	1 2 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	15a 15a 15b	— — —	65,000 65,000 —	— — 65,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-6 11-6 11-6
QBGf QBGf	B, GF	15 – 40 15 – 50	1 2	120 120/240	— —	10a, 11a, 12a 10a, 11a, 12a	10,000 —	— 10,000	— —	— —	— —	— —	11-7 11-7
QBHGf QBHGf	B, GF	15 – 30 15 – 30	1 2	120 120/240	— —	10a, 11a, 12a 10a, 11a, 12a	22,000 —	— 22,000	— —	— —	— —	— —	11-7 11-7
QBGfEP QBGfEP	B, GFEP	15 – 40 15 – 50	1 2	120 120/240	— —	— —	10,000 —	— 10,000	— —	— —	— —	— —	11-7 11-7
QBHGfEP QBHGfEP	B, GFEP	15 – 30 15 – 30	1 2	120 120/240	— —	— —	22,000 22,000	— 22,000	— —	— —	— —	— —	11-7 11-7
QC QC QC	C	10 – 70 10 – 100 10 – 100	1 2 2, 3, 4	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	10a, 11a, 12a 10a, 12a 10b, 11b, 12b	— — —	10,000 10,000 —	— — 10,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-9 11-9 11-9
QCF QCF QCF QCR QCR QCR	C	10 – 60 15 – 20 15 – 30 10 – 60 15 – 20 15 – 30	1, 2 1, 2 2, 3 1, 2 1, 2 2, 3	120/240 120/240 240 120/240 120/240 240	24, 48, 62.5 24, 48, 62.5 24, 48, 62.5 24, 48, 62.5 24, 48, 62.5 24, 48, 62.5	— — — — — —	10,000 22,000 — 10,000 22,000 —	10,000 — 10,000 10,000 — 10,000	— — — — — —	3,000 3,000 3,000 3,000 3,000 3,000	③ 3,000 — 2,000 3,000 3,000	— — — — — —	11-10 11-10 11-10 11-10 11-10 11-10
QCHW QCHW QCHW	C	15 – 70 15 – 100 15 – 100	1 2 2, 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	14a 14a 14b	— — —	22,000 22,000 —	— — 22,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-9 11-9 11-9
QHCX QHCX QHCX	C	15 – 70 15 – 100 15 – 100	1 2 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	— — —	— — —	42,000 42,000 —	— — 42,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-9 11-9 11-9
QHCW QHCW QHCW	C	15 – 30 15 – 30 15 – 20	1 2 3	120/240 120/240 240	24, 48, 62.5 24, 48, 80 —	15a 15a 15b	— — —	65,000 65,000 —	— — 65,000	5,000 5,000 —	③ 5,000 —	— 5,000 —	11-9 11-9 11-9
QCGf QCGf	C, GF	15 – 40 15 – 50	1 2	120 120/240	— —	— —	10,000 —	— 10,000	— —	— —	— —	— —	11-13 11-13
QCHGf QCHGf	C, GF	15 – 30 15 – 30	1 2	120 120/240	— —	— —	22,000 —	— 22,000	— —	— —	— —	— —	11-13 11-13
QCGfEP QCGfEP	C, GFEP	15 – 40 15 – 50	1 2	120 120/240	— —	— —	10,000 —	— 10,000	— —	— —	— —	— —	11-13 11-13
QCHGfEP QCHGfEP	C, GFEP	15 – 30 15 – 30	1 2	120 120/240	— —	— —	22,000 —	— 22,000	— —	— —	— —	— —	11-13 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

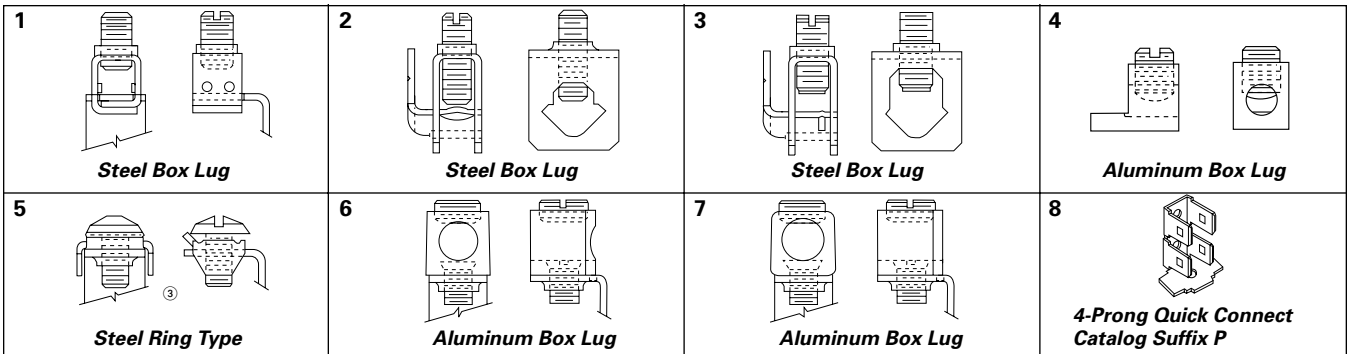
Type of Modification	Breaker Types	Catalog Suffix	Adder U.S. \$
Shunt Trip (Requires 1 extra pole space on right side) 120, 208, 240V AC 12, 24, 48V AC/DC Draws 2.6A at 120V Draws 11A at 24V DC	QUICKLAG Types P, B and C QUICKLAG Types P, B and C	S S1	138.00
Special Calibration (50°C) Shock Testing Freeze Testing	QUICKLAG Types P, B and C QUICKLAG Types P, B and C QUICKLAG Types P, B and C	V L Y	20% 30% 30%
Moisture-Fungus Treatment Marine Duty Naval Duty 400 Hz Calibration Specific DC Ratings (Breaker marked with a Max VDC rating)	QUICKLAG Types P, B, C and Ground Fault QUICKLAG Types P, B, C QUICKLAG Types P, B, C QUICKLAG Types P, B, C QUICKLAG Types P, B, C	F H08 H09 G Q thru Q9 ②	15.00 10% 10% 20% 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 HQP, QPHW, QHPX, QHPW	10 to 30 35 to 50 55 to 125	Plug-on female clips which mate with the bus stabs			1 2 3	Cu/Al Cu/Al Cu/Al	14 – 4 14 – 4 8 – 1/0	N/A	3 3 —
QUICKLAG Ground Fault QPGF, QPHGF, QPGFEP, QPHGFEP	10 to 30 40	Plug-on female clips which mate with the bus stabs			1 (1-pole) 4 (2-pole) 4	Cu/Al Cu/Al Cu	14 – 4 14 – 8 14 – 8	N/A	3 3 —
QUICKLAG Type B BAB, QBHW, HBAX, HBAW	10 to 30 35 to 50 55 to 125	Extended tangs which bolt directly to the bus			1 (1- and 2-pole) 2 (3-pole) 3	Cu/Al Cu/Al Cu/Al	14 – 4 14 – 4 8 – 1/0	N/A	3 3 —
QUICKLAG Ground Fault QBGF, QBHGF, QBGFEP, QBHGFEP	10 to 30 40	Extended tangs which bolt directly to the bus			1 (1-pole) 4 (2-pole) 4	Cu/Al Cu/Al Cu	14 – 4 14 – 8 14 – 8	N/A	N/A
QUICKLAG Type C QC, QCHW, QHCX, QHCW	10 to 20 25 to 60 70 to 100	5 6 7	Cu/Al Cu/Al Cu/Al	14 – 10 14 – 10 14 – 10	5 2 3	Cu/Al Cu/Al Cu/Al	14 – 10 14 – 4 8 – 1/0	6, 7 5, 7 5	6, 7, 8 5, 6, 7, 8 5, 7, 8
QUICKLAG QCR, QCF	10 to 55 60	1 1	Cu/Al Cu	14 – 4 14 – 4	1 1	Cu/Al Cu	14 – 4 14 – 4	N/A	N/A
QUICKLAG Ground Fault QCGF, QCHGF, QCGFEP, QCHGFEP	10 to 20 25 to 50	5 6	Cu/Al Cu/Al	14 – 10 14 – 10	1 1	Cu/Al Cu/Al	14 – 4 14 – 4	6, 7 5, 7	5 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	QLLDTSA	.21
2	QUICKLAG Terminal Screw	10	QLLDTSB	.21
3	QUICKLAG Terminal Screw	10	QLLDTSC	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**