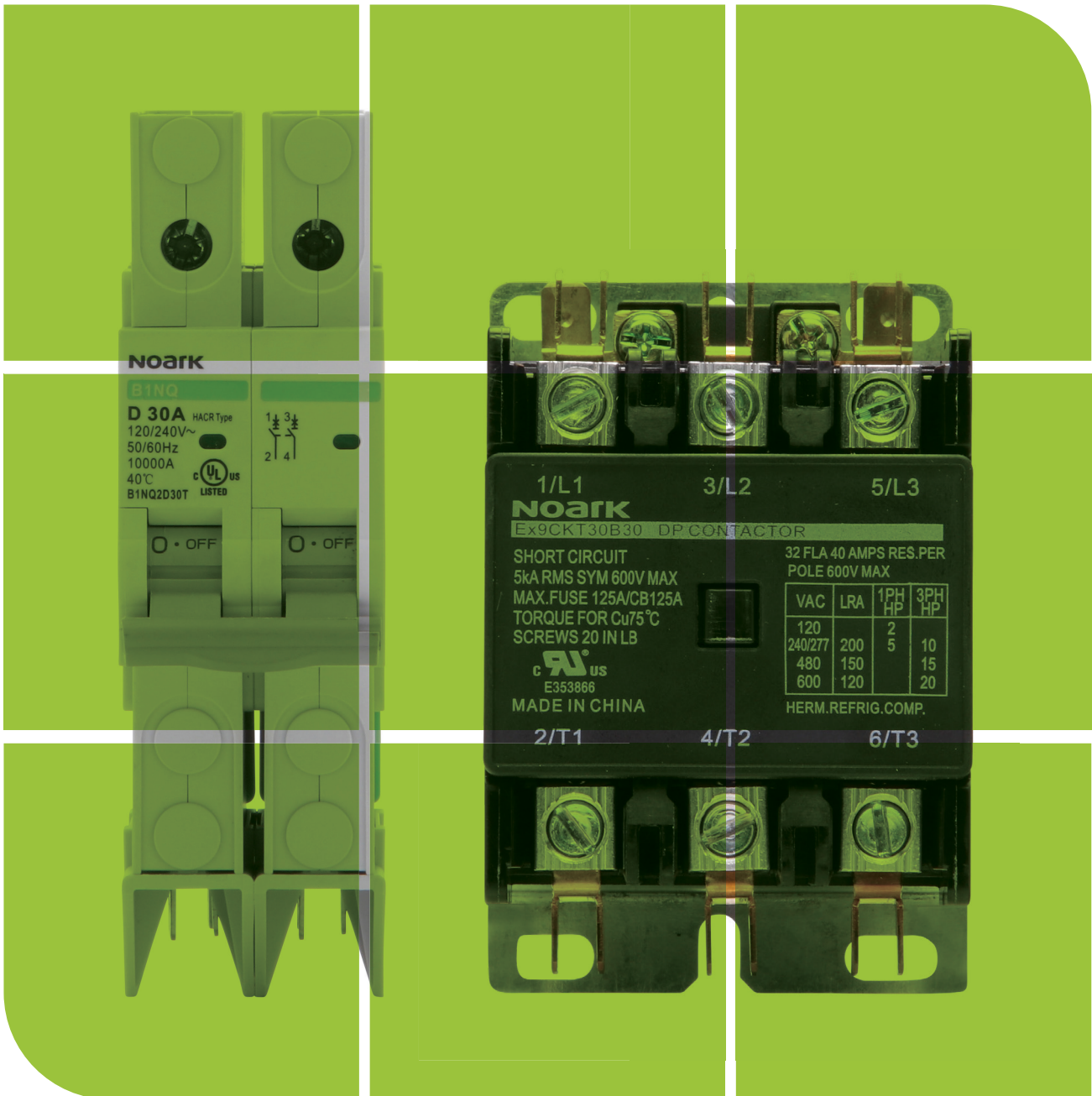


NOARK

Heating, Ventilation, Air Conditioning, and Refrigeration Guide

Definite Purpose Contactors and Miniature Circuit Breakers



Excellent Products. Exceptional Value.

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Ex9CKT Product Overview

Features

Ex9CKT, 20~90 Ampres

- 1, 2, 3 and 4 pole configurations
- Available with enclosed coils for protection against particle contamination
- Coil is Class B 266 °F (130 °C)
- Industry standard mounting plate provides easily accessible mounting holes
- More connection options, including screw or lug connections each with optional quick-connect spade terminals
- Double E magnet assembly provides optimal performance with reduced power consumption
- Base assembly is made from high arcresistant polyester
- Coil voltages from 24~600 Vac, 50/60 Hz
- 1NO+1NC auxiliary contact block (600Vac) available as an option

Certifications

- UL Recognized Component, File Number E353866
 - Certified for Canada according to CSA standards
 - IEC/EN 60947-4-1
 - Complies with VDE standards
- * Ex9CKT Series is also compliant to:
UL 60947-1; UL 508; CE Approved; ARI-780 HVAC standards
- Complies with UL 60335-2-40 standard for A2L Refrigerants.



Ex9CKT 20~40A Screw Terminals

Certifications

IEC/EN 60947-4-1



1-Pole



2-Poles



2-Poles



3-Poles



4-Poles



	Coil Voltage Vac	1 Pole, 1NO+1Shunt 50/60 Hz, Quad QCT	2 Poles, 2NO 50/60 Hz, Quad QCT	2 Poles, 2NO 50/60 Hz, No QCT	3 Poles, 3NO 50/60 Hz, No QCT	4 Poles, 4NO 50/60 Hz, No QCT
		Product	Product	Product	Product	Product
20 Amperes	24	Ex9CKT20A10B7Q	Ex9CKT20A20B7Q	Ex9CKT20A20B7N	Ex9CKT20A30B7	Ex9CKT20A40B7
	120	Ex9CKT20A10G7Q	Ex9CKT20A20G7Q	Ex9CKT20A20G7N	Ex9CKT20A30G7	Ex9CKT20A40G7
	208~240	Ex9CKT20A10XU7Q	Ex9CKT20A20XU7Q	Ex9CKT20A20XU7N	Ex9CKT20A30XU7	Ex9CKT20A40XU7
	277	Ex9CKT20A10N7Q	Ex9CKT20A20N7Q	Ex9CKT20A20N7N	Ex9CKT20A30N7	Ex9CKT20A40N7
	480	-	-	-	Ex9CKT20A30T7	Ex9CKT20A40T7
25 Amperes	24	Ex9CKT25A10B7Q	Ex9CKT25A20B7Q	Ex9CKT25A20B7N	Ex9CKT25A30B7	Ex9CKT25A40B7
	120	Ex9CKT25A10G7Q	Ex9CKT25A20G7Q	Ex9CKT25A20G7N	Ex9CKT25A30G7	Ex9CKT25A40G7
	208~240	Ex9CKT25A10XU7Q	Ex9CKT25A20XU7Q	Ex9CKT25A20XU7N	Ex9CKT25A30XU7	Ex9CKT25A40XU7
	277	Ex9CKT25A10N7Q	Ex9CKT25A20N7Q	Ex9CKT25A20N7N	Ex9CKT25A30N7	Ex9CKT25A40N7
	480	-	-	-	Ex9CKT25A30T7	Ex9CKT25A40T7
30 Amperes	24	Ex9CKT30A10B7Q	Ex9CKT30A20B7Q	Ex9CKT30A20B7N	Ex9CKT30A30B7	Ex9CKT30A40B7
	120	Ex9CKT30A10G7Q	Ex9CKT30A20G7Q	Ex9CKT30A20G7N	Ex9CKT30A30G7	Ex9CKT30A40G7
	208~240	Ex9CKT30A10XU7Q	Ex9CKT30A20XU7Q	Ex9CKT30A20XU7N	Ex9CKT30A30XU7	Ex9CKT30A40XU7
	277	Ex9CKT30A10N7Q	Ex9CKT30A20N7Q	Ex9CKT30A20N7N	Ex9CKT30A30N7	Ex9CKT30A40N7
	480	-	-	-	Ex9CKT30A30T7	Ex9CKT30A40T7
32 Amperes	24	Ex9CKT32A10B7Q	Ex9CKT32A20B7Q	Ex9CKT32A20B7N	Ex9CKT32A30B7	Ex9CKT32A40B7
	120	Ex9CKT32A10G7Q	Ex9CKT32A20G7Q	Ex9CKT32A20G7N	Ex9CKT32A30G7	Ex9CKT32A40G7
	208~240	Ex9CKT32A10XU7Q	Ex9CKT32A20XU7Q	Ex9CKT32A20XU7N	Ex9CKT32A30XU7	Ex9CKT32A40XU7
	277	Ex9CKT32A10N7Q	Ex9CKT32A20N7Q	Ex9CKT32A20N7N	Ex9CKT32A30N7	Ex9CKT32A40N7
	480	-	-	-	Ex9CKT32A30T7	Ex9CKT32A40T7
40 Amperes	24	Ex9CKT40A10B7Q	Ex9CKT40A20B7Q	Ex9CKT40A20B7N	Ex9CKT40A30B7	Ex9CKT40A40B7
	120	Ex9CKT40A10G7Q	Ex9CKT40A20G7Q	Ex9CKT40A20G7N	Ex9CKT40A30G7	Ex9CKT40A40G7
	208~240	Ex9CKT40A10XU7Q	Ex9CKT40A20XU7Q	Ex9CKT40A20XU7N	Ex9CKT40A30XU7	Ex9CKT40A40XU7
	277	Ex9CKT40A10N7Q	Ex9CKT40A20N7Q	Ex9CKT40A20N7N	Ex9CKT40A30N7	Ex9CKT40A40N7
	480	-	-	-	Ex9CKT40A30T7	Ex9CKT40A40T7

Ex9CKT 20~40A with Cable Lugs

Certifications

IEC/EN 60947-4-1



1-Pole



2-Poles



2-Poles



3-Poles



4-Poles



	Coil Voltage Vac	1 Pole, 1NO+1Shunt 50/60 Hz, Quad QCT	2 Poles, 2NO 50/60 Hz, Quad QCT	2 Poles, 2NO 50/60 Hz, No QCT	3 Poles, 3NO 50/60 Hz, No QCT	4 Poles, 4NO 50/60 Hz, No QCT
		Product	Product	Product	Product	Product
20 Amperes	24	Ex9CKT20B10B7Q	Ex9CKT20B20B7Q	Ex9CKT20B20B7N	Ex9CKT20B30B7	Ex9CKT20B40B7
	120	Ex9CKT20B10G7Q	Ex9CKT20B20G7Q	Ex9CKT20B20G7N	Ex9CKT20B30G7	Ex9CKT20B40G7
	208~240	Ex9CKT20B10XU7Q	Ex9CKT20B20XU7Q	Ex9CKT20B20XU7N	Ex9CKT20B30XU7	Ex9CKT20B40XU7
	277	Ex9CKT20B10N7Q	Ex9CKT20B20N7Q	Ex9CKT20B20N7N	Ex9CKT20B30N7	Ex9CKT20B40N7
	480	-	-	-	Ex9CKT20B30T7	Ex9CKT20B40T7
25 Amperes	24	Ex9CKT25B10B7Q	Ex9CKT25B20B7Q	Ex9CKT25B20B7N	Ex9CKT25B30B7	Ex9CKT25B40B7
	120	Ex9CKT25B10G7Q	Ex9CKT25B20G7Q	Ex9CKT25B20G7N	Ex9CKT25B30G7	Ex9CKT25B40G7
	208~240	Ex9CKT25B10XU7Q	Ex9CKT25B20XU7Q	Ex9CKT25B20XU7N	Ex9CKT25B30XU7	Ex9CKT25B40XU7
	277	Ex9CKT25B10N7Q	Ex9CKT25B20N7Q	Ex9CKT25B20N7N	Ex9CKT25B30N7	Ex9CKT25B40N7
	480	-	-	-	Ex9CKT25B30T7	Ex9CKT25B40T7
30 Amperes	24	Ex9CKT30B10B7Q	Ex9CKT30B20B7Q	Ex9CKT30B20B7N	Ex9CKT30B30B7	Ex9CKT30B40B7
	120	Ex9CKT30B10G7Q	Ex9CKT30B20G7Q	Ex9CKT30B20G7N	Ex9CKT30B30G7	Ex9CKT30B40G7
	208~240	Ex9CKT30B10XU7Q	Ex9CKT30B20XU7Q	Ex9CKT30B20XU7N	Ex9CKT30B30XU7	Ex9CKT30B40XU7
	277	Ex9CKT30B10N7Q	Ex9CKT30B20N7Q	Ex9CKT30B20N7N	Ex9CKT30B30N7	Ex9CKT30B40N7
	480	-	-	-	Ex9CKT30B30T7	Ex9CKT30B40T7
32 Amperes	24	Ex9CKT32B10B7Q	Ex9CKT32B20B7Q	Ex9CKT32B20B7N	Ex9CKT32B30B7	Ex9CKT32B40B7
	120	Ex9CKT32B10G7Q	Ex9CKT32B20G7Q	Ex9CKT32B20G7N	Ex9CKT32B30G7	Ex9CKT32B40G7
	208~240	Ex9CKT32B10XU7Q	Ex9CKT32B20XU7Q	Ex9CKT32B20XU7N	Ex9CKT32B30XU7	Ex9CKT32B40XU7
	277	Ex9CKT32B10N7Q	Ex9CKT32B20N7Q	Ex9CKT32B20N7N	Ex9CKT32B30N7	Ex9CKT32B40N7
	480	-	-	-	Ex9CKT32B30T7	Ex9CKT32B40T7
40 Amperes	24	Ex9CKT40B10B7Q	Ex9CKT40B20B7Q	Ex9CKT40B20B7N	Ex9CKT40B30B7	Ex9CKT40B40B7
	120	Ex9CKT40B10G7Q	Ex9CKT40B20B7Q	Ex9CKT40B20G7N	Ex9CKT40B30G7	Ex9CKT40B40G7
	208~240	Ex9CKT40B10XU7Q	Ex9CKT40B20XU7Q	Ex9CKT40B20XU7N	Ex9CKT40B30XU7	Ex9CKT40B40XU7
	277	Ex9CKT40B10N7Q	Ex9CKT40B20N7Q	Ex9CKT40B20N7N	Ex9CKT40B30N7	Ex9CKT40B40N7
	480	-	-	-	Ex9CKT40B30T7	Ex9CKT40B40T7

Ex9CKT Specifications 20~40 A

20~40 FLA

Description	Poles	Full Load Amperage (A)			Resistive @ 600 Vac (A)	Locked Rotor (A)			Horsepower (hp)		
		240/277 V	480 V	600 V		240/277 V	480 V	600 V	Voltage (V)	1-Phase	3-Phase
Ex9CKT20	1&2				35	150	125	100	120	1	-
									240	2	-
									120	2	-
									240	3	-
Ex9CKT25	1&2	25			35	150	125	100	120	1	-
									240	2	-
									120	2	-
									240	3	-
Ex9CKT30	1&2	32			40	200	150	120	120	1	-
									240	2	-
									120	2	-
									240	3	-
Ex9CKT32	1&2				40	200	150	120	120	1	-
									240	2	-
									120	2	-
									240	3	-
Ex9CKT40	1&2	40			50	240	200	160	120	2	-
									240	3	-
									120	2	-
									240	3	-
Ex9CKT20	3 & 4	25			35	150	125	100	120	2	-
									240/277	5	10
									480	-	15
									600	-	20
Ex9CKT25	3 & 4				35	150	125	100	120	2	-
									240/277	5	10
									480	-	15
									600	-	20
Ex9CKT30	3 & 4	32			40	200	150	120	120	2	-
									240/277	5	10
									480	-	15
									600	-	20
Ex9CKT32	3 & 4				40	200	150	120	120	2	-
									240/277	5	10
									480	-	15
									600	-	20
Ex9CKT40	3 & 4	40			50	240	200	160	120	3	-
									240/277	7.5	10
									480	-	20
									600	-	25

Mechanical & Electrical Life

Mechanical	1,000,000 cycles
Electrical	250,000 cycle (AC Resistance Air Heating Load)

Ex9CKT Specifications 20~40A

20~40 FLA Coil Data

	1 Pole Contactors				2 Pole Contactors			
	24V	120V	208-240V	277V	24V	120V	208-240V	277V
Nominal Coil Resistance 50Hz	18	470	1358	2860	10	250	880	1478
Nominal Coil Resistance 60Hz	15	315	1188	1875	9	198	715	1075
Nominal Coil Voltage (Vac)	24	120	208-240	277	24V	120V	208-240V	277V
Pick-up Voltage (Max.)	20.4	102	177	236	20.4	102	177	236
Drop-out Voltage (Min) 4	.8	24	48	56	4.8	24	48	56
Nominal Inrush (VA)	-							
50Hz	25	25	25	25	39	39	39	39
60Hz	27	27	27	27	44	44	44	44
Nominal Seal (VA)	-							
50Hz	7.57	.5	7.57	.5	9.5	9.5	9.5	9.5
60Hz	99		99		11	11	11	11

	3 Pole Contactors					4 Pole Contactors				
	24V	120V	208-240V	277V	480V	24V	120V	208-240V	277V	480V
Nominal Coil Resistance (Ω)	8.5	178	715	1180	3370	6	152.5	527	790	2530
Nominal Coil Voltage (Vac)	24	120	208-240	277	480	24	120	208-240	277	480
Pick-up Voltage (Max.)	18	80	158	200	345	16	88	157	200	320
Drop-out Voltage (Min) 4	6-15	20-70	40-140	50-165	120-285	6-15	20-70	40-140	65-185	110-280
Nominal Inrush (VA)	-									
50Hz	60	60	60	60	60	70	70	70	70	70
60Hz	50	50	50	50	50	62	62	62	62	62
Nominal Seal (VA)	-									
50Hz	8	8	8	8	8	8	8	8	8	8
60Hz	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5

Ex9CKT Specifications 20~40A

20~40 Terminal

		1 and 2 Poles									
Terminal Connection		20	25	30	32	40					
Line and Load Terminals		#10-32 Screw / Box Lug									
Copper Cable		-									
Solid Wire with Single Core	Screw (Ring Terminal)	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#12 ~ #8 AWG	6~10 mm ²	#12 ~ #8 AWG	6~10 mm ²	#10 ~ #8 AWG	4~10 mm ²
	Lug	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#12 ~ #8 AWG	6~10 mm ²	#12 ~ #8 AWG	6~10 mm ²	#10 ~ #8 AWG	4~10 mm ²
Flexible Stranded Wire	Screw (Ring Terminal)	#14 ~ #12 AWG	2.5~4 mm ²	#14 ~ #12 AWG	2.5~4 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²
	Lug	#14 ~ #12 AWG	2.5~4 mm ²	#14 ~ #12 AWG	2.5~4 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²
Tightening Torque		-									
Coil		-	-	-	-	-	-	-	-	-	-
Main Circuit Screw		20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	
Main Circuit Lug		40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	
Quick Connects	Coil Terminals	Dual 0.250 QC (2)									
	Power Terminals (0.250 Standard)	0.250 QC (4)									
Insulation System		Class B 266 °F (130 °C)									

		3 and 4 Poles									
Terminal Connection		20	25	30	32	40					
Line and Load Terminals		#10-32 Screw / Box Lug									
Copper Cable		-									
Solid Wire with Single Core	Screw (Ring Terminal)	#14 ~ #10 AWG	2.5~6 mm ²	#14 ~ #10 AWG	2.5~6 mm ²	#12 ~ #8 AWG	4~10 mm ²	#2 ~ #8 AWG	4~10 mm ²	#2 ~ #8 AWG	4~10 mm ²
	Lug	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²
Flexible Stranded Wire	Screw (Ring Terminal)	#14 ~ #12 AWG	2.5~6 mm ²	#14 ~ #12 AWG	2.5~6 mm ²	#14 ~ #12 AWG	2.5~6 mm ²	#14 ~ #12 AWG	2.5~6 mm ²	#14 ~ #12 AWG	2.5~6 mm ²
	Lug	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²	#14 ~ #8 AWG	2.5~10 mm ²
Tightening Torque		-									
Coil		-	-	-	-	-	-	-	-	-	-
Main Circuit Screw		20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	20 Torque in-lb: 1.8-2.3 N.m	
Main Circuit Lug		40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	40 Torque in-lb: 4-5 N.m	
Quick Connects	Coil Terminals	Dual 0.250 QC (2)									
	Power Terminals (0.250 Standard)	3/4P Quad									
Insulation System		Class B 266 °F (130 °C)									

B1NQ UL 489 Product Overview

The B1NQ is compliant with UL / CSA / IEC IEC standards for branch circuit protection in commercial and residential applications. The current limiting B1NQ is thermal-magnetic and protects against short circuit and overload conditions. The breaker provides optimum and efficient protection for branch and control circuits. Additional new optional quick-connect terminal plugs on load side.

The B1NQ breaker provides optimum and efficient protection for branch and control circuits. Most common for HVAC applications is our B1NQ_T, (T) is our Quick Connect connection for easy installation. Most Common Amperages are 10A, 15A, 20A, 25A, 30A, & 40A.

Features

- Available in 1 pole and 2 pole configurations
- Rated current from 10A, 15A, 20A, 25A, 30A and 40A
- Available as surface, flush or DIN rail mounted
- 1 pole and 2 pole breakers are UL Listed for use on 120/240 Vac single-phase, three-wire electrical systems
- Flexible terminals with less physical demand

Certifications

- UL 489 Listed, File No. 355392
- Compliant for Canada according to CSA 22.2 No. 5-02
- IEC/EN 60947-2 Compliant
- CE Approved
- RoHS Compliant



B1NQ UL 489 120/240 Vac 10 kA - Quick Connection, Load Side

Certifications

IEC/EN 60947-2



Rated Amperage (A)	1 Pole		2 Poles		
	Product	Part Number	Product	Part Number	
C Curve (5~10 In)	10	B1NQ1C10T	1001679	B1NQ2C10T	1001702
	15	B1NQ1C15T	1001681	B1NQ2C15T	1001704
	20	B1NQ1C20T	1001683	B1NQ2C20T	1001706
	25	B1NQ1C25T	1001684	B1NQ2C25T	1001707
	30	B1NQ1C30T	1001685	B1NQ2C30T	1001708
	40	B1NQ1C40T	1001688	B1NQ2C40T	1001711

Type C trip curves are the most common form of circuit protection used for general purpose applications like resistive loads, receptacles and lighting. To avoid nuisance tripping, its magnetic trip is set to withstand moderate inrush currents at 5 to 10 times the breaker's rated value.


Rated Amperage (A)	1 Pole		2 Poles		
	Product	Part Number	Product	Part Number	
D Curve (7~15 x In)	10	B1NQ1D10T	1001335	B1NQ2D10T	1001358
	15	B1NQ1D15T	1001337	B1NQ2D15T	1001360
	20	B1NQ1D20T	1001339	B1NQ2D20T	1001362
	25	B1NQ1D25T	1001340	B1NQ2D25T	1001363
	30	B1NQ1D30T	1001341	B1NQ2D30T	1001364
	40	B1NQ1D40T	1001344	B1NQ2D40T	1001367

Type D trip curves are used where the connected load has a higher inrush current on initial energization, such as motors, transformers and solenoids. To avoid nuisance tripping, these breakers have a magnetic trip that is set to withstand larger inrush currents of 7 to 15 times the rated trip value.

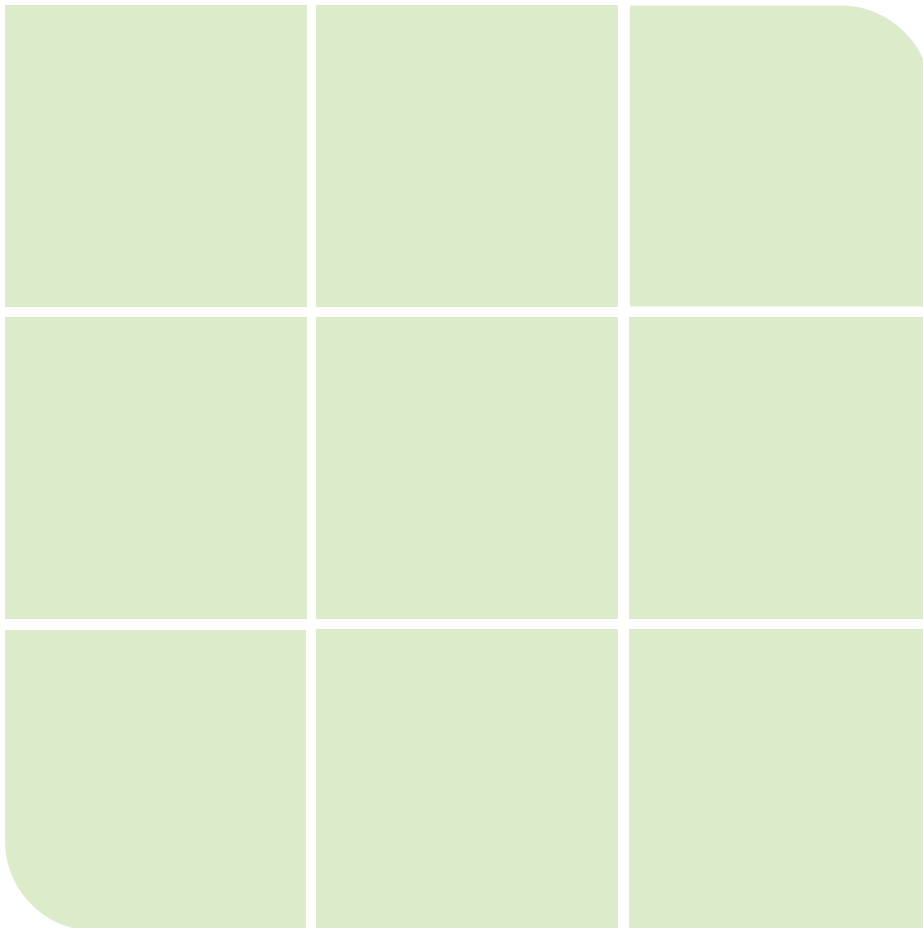
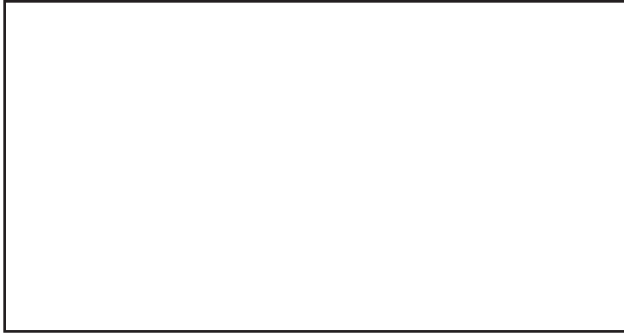
*Standard mount is DIN rail. Order FMC31N clips for flush mount; order SMC31N for surface mount.

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