



# Ready When You Are

NF & NQ Panelboard Selectors  
I-LINE Panelboard Selector  
QO & Homeline Load Centers  
Variable Frequency Drives





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Type NQ 240Vac Max. Main Lug Interiors						
Mains Rating	Max. No. of Poles	Main Lugs				
		Interior		Enclosure		
		Single Phase 3 Wire	Three Phase 4 Wire	NEMA Type 1		NEMA Type 3R, 5, 12
				Box	MONO FLAT Front F=Flush S=Surface	Enclosure and Trim Kit
100A	18	NQ18L1C	NQ418L1C	MH26	NC26( )	MH26WP
	30	NQ30L1C	NQ430L1C	MH32	NC32( )	MH32WP
225A	30	NQ30L2C	NQ430L2C	MH32	NC32( )	MH32WP
	42	NQ42L2C	NQ442L2C	MH38	NC38( )	MH38WP
	84	NQ84L2C	NQ484L2C	MH50	NC50( )	MH50WP
400A	30	NQ30L4C	NQ430L4C	MH50	NC50V( )	MH50WP
	42	NQ42L4C	NQ442L4C	MH50	NC50V( )	MH50WP
	84	NQ84L4C	NQ484L4C	MH68	NC68V( )	MH68WP

Type NQ 240Vac Max. Main Breaker Interiors						
Mains Rating	Max. No. of Poles	Single Phase 3-Wire				
		Interior	Main Breaker Adapter Kit	Enclosure		
				NEMA Type 1		NEMA Type 3R, 5, 12
				Box	MONO FLAT Front F=Flush S=Surface	Enclosure and Trim Kit
100A Backfed	16	NQ18L1C	Select QOB 2-Pole Breaker	MH26	NC26( )	MH26WP
	28	NQ30L1C		MH32	NC32( )	MH32WP
100A Vertical	18	NQ18L1C	NQMB2HJ add HDL Breaker**	MH38	NC38( )	MH38WP
	30	NQ30L1C		MH44	NC44( )	MH44WP
225A Vertical	30	NQ30L2C	NQMB2Q or NQMB2HJ add QBL, QDL or HDL**, JDL Breaker	MH44	NC44( )	MH44WP
	42	NQ42L2C		MH50	NC50( )	MH50WP
	84	NQ84L2C		MH62	NC62( )	MH62WP
400A Vertical	30	NQ30L4C	NQMB4LA add LAL Breaker	MH62	NC62V( )	MH62WP
	42	NQ42L4C		MH62	NC62V( )	MH62WP
	84	NQ84L4C		MH80	NC80V( )	MH80WP

\*\*Use 3 pole breaker for single phase main breaker application

Type NQ 240Vac Max. Main Breaker Interiors						
Mains Rating	Max. No. of Poles	Three Phase 4-Wire				
		Interior	Main Breaker Adapter Kit	Enclosure		
				NEMA Type 1		NEMA Type 3R, 5, 12
				Box	MONO FLAT Front F=Flush S=Surface	Enclosure and Trim Kit
100A Backfed	15	NQ418L1C	Select QOB 3-Pole Breaker	MH26	NC26( )	MH26WP
	27	NQ430L1C		MH32	NC32( )	MH32WP
100A Vertical	18	NQ418L1C	NQMB2HJ add HDL Breaker	MH38	NC38( )	MH38WP
	30	NQ430L1C		MH44	NC44( )	MH44WP
225A Vertical	30	NQ430L2C	NQMB2Q or NQMB2HJ add QBL, QDL or HDL, JDL Breaker	MH44	NC44( )	MH44WP
	42	NQ442L2C		MH50	NC50( )	MH50WP
	84	NQ484L2C		MH62	NC62( )	MH62WP
400A Vertical	30	NQ430L4C	NQMB4LA add LAL Breaker	MH62	NC62V( )	MH62WP
	42	NQ442L4C		MH62	NC62V( )	MH62WP
	84	NQ484L4C		MH80	NC80V( )	MH80WP

## NQ Main Breakers, QOB Branch Circuit Breakers, GFCI and ARC Fault Panelboards

<b>NQ Main Breakers</b>				
Single Phase	Three Phase			
10,000 AIC	25,000 AIC		42,000 AIC	
QBL22125	QBL32125	QDL32200	HDL36100	LAL36250
QBL22150	QBL32150	QDL32225	HDL36125	LAL36300
QBL22200	QBL32175		HDL36150	LAL36350
QBL22225	QBL32200		JDL36200	LAL36400
	QBL32225		JDL36225	

<b>UL Service Entrance Line Side Barrier Kits</b>	
Panels intended for use as service equipment, require a barrier over live field connected line terminals. Please select, based upon the main circuit breaker.	
QBL, QDL, HDL or JDL	NQHJQLLC
LAL	NQLALLC

<b>QOB Bolt-on Branch Breakers</b>			
Ampere Rating	One Pole	Two Pole ***	Three Pole***
10	QOB110	QOB210	QOB310
15	QOB115	QOB215	QOB315
20	QOB120	QOB220	QOB320
25	QOB125	QOB225	QOB325
30	QOB130	QOB230	QOB330
35	QOB135	QOB235	QOB335
40	QOB140	QOB240	QOB340
45	QOB145	QOB245	QOB345
50	QOB150	QOB250	QOB350
60	QOB160	QOB260	QOB360
70	QOB170	QOB270	QOB370
80		QOB280	QOB380
90		QOB290	QOB390
100		QOB2100	QOB3100

\*\*\*2 and 3 Pole Breakers are common trip.

<b>QOB Ground Fault &amp; Arc Fault Circuit Interrupters</b>				
Ampere Rating	One Pole	Two Pole	Combination Arc Fault	Dual Function (AFCI + GFCI)
15	QOB115GFI	QOB215GFI	QOB115CAFI	QOB115DF
20	QOB120GFI	QOB220GFI	QOB120CAFI	QOB120DF
30	QOB130GFI	QOB230GFI		
60		QOB260GFI		

<b>NQ Accessories</b>	
Sub-feed Lug Kits -- main lugs only:	
100A	NQSFL1*
225A	NQSFL2*
400A	NQSFL4*
3 Pole Bolt-On Subfeed Lugs (125A)	QOB3125SL
Feed through Lug Kits:	
225 amp	NQFTL2L*
400 amp	NQFTL4L*
Equipment ground and neutral bars:	
Aluminum Equipment Ground Bar	PK27GTA
Copper Equipment Ground Bar	PK27GTACU
PK23GTA with #1 to 4/0 Al/Cu lug	PK23GTAL
Ground bar insulator kit	PKGTAB
#10 to #2 Al or #14 to #4 Cu Add on Neutral/Ground Lug	QO70AN
#4 to #1/0 Al/Cu Add on Neutral/Ground Lug	NQ1100AN
#1 to #4/0 Al/Cu Add on Neutral/Ground Lug	Q1150AN
(2) #4 AWG to 300 kcmil Al or Cu Add on Neutral/Ground Lug	Q200AN
Copper Neutral / 225 Amp	NQN2CU
200% Neutral / 225 Amp or 225 Amp Panel w/SFL, FTL or SFB	NQNL2 or NQNL2ACCY
Miscellaneous:	
Handle attachments - branch breakers:	
Handle lock-off	HLO1
Handle-tie - (QO and QOB only)	QO1HT
Handle padlock attachment - 1-Pole	QO1PA
2 - and 3 - Pole	QO1PL
Filler plate (15 per package)	NQFP15
Directory cards (10 per package)	8003115801
Plastic stick-on directory pouch (5 per package)	8003115901
Circuit I.D. number strips 1-102 odd/even	NQ102OE
Lock - for MONO-FLAT fronts	PK22FL
Key for All Locks	LP9618
Touch-up paint USAS #49 Gray (Aerosol can)	PK49SP
Endwall for MH Boxes, NO Knockouts (1/pkg)	MHBE20
Endwall for MH Boxes WITH Knockouts (1/pkg)	MHKE20
Sub feed breaker kit for 225A interiors** #	NQSFB2Q*
** add (1) Q-Frame breaker	
Sub feed breaker kit for 400A interiors*** #	NQSFB4Q*
*** add (2) Q-Frame breakers	
<b>*Note: If Lug or Breaker Kit is needed, please consult with the United Electric Gear Department for proper size back box and cover.</b>	
<b># Do not use with 200% rated neutral</b>	

## NF 480Y / 277 Vac Max

Type NF 480/277V Max. Main Lug Interiors						
Mains Rating	Max. No. of Poles	Main Lugs				
		Interior		Enclosure		
		Single Phase 3 Wire	Three Phase 4 Wire	NEMA Type 1		NEMA Type 3R, 5, 12
				Box	MONO FLAT Front F=Flush S=Surface	Enclosure and Trim Kit
125A	18	Factory Assembled Only	NF418L1C	MH26	NC26( )	MH26WP
	30		NF430L1C	MH32	NC32( )	MH32WP
250A	30		NF430L2C	MH38	NC38( )	MH38WP
	42		NF442L2C	MH44	NC44( )	MH44WP
	66		NF466L2C	MH62	NC62V( )	MH62WP
400A	30		NF430L4C	MH50	NC50V( )	MH50WP
	42		NF442L4C	MH56	NC56V( )	MH56WP
	66		NF466L4C	MH74	NC74V( )	MH74WP
	84		NF484L4C	MH86	NC86V( )	MH86WP

Type NF 480/277V Max. Main Breaker Interiors						
Mains Rating	Max. No. of Poles	Three Phase 4-Wire				
		Interior	Main Breaker Adapter Kit	Enclosure		
				NEMA Type 1		NEMA Type 3R, 5, 12
		Box	MONO FLAT Front F=Flush S=Surface	Enclosure and Trim Kit		
125A Backfed	15	NF418L1C	Select EDB 3-Pole Breaker	MH26	NC26( )	MH26WP
	27	NF430L1C		MH32	NC32( )	MH32WP
125A Vertical	18	NF418L1C	N150MH Add HDL Breaker	MH38	NC38( )	MH38WP
	30	NF430L1C		MH44	NC44( )	MH44WP
250A Vertical	30	NF430L2C	N250MJ Add JDL Breaker	MH50	NC50( )	MH50WP
	42	NF442L2C		MH56	NC56( )	MH56WP
	66	NF466L2C		MH74	NC74( )	MH74WP
400A Vertical	30	NF430L4C	N400M Add LAL Breaker	MH62	NC62V( )	MH62WP
	42	NF442L4C		MH68	NC68V( )	MH68WP
	66	NF466L4C		MH86	NC86V( )	MH86WP

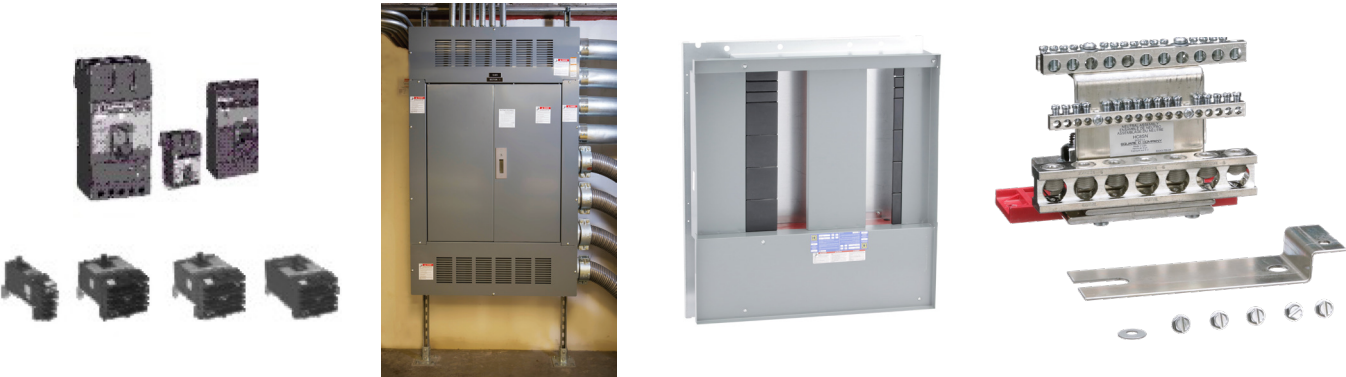
## NF Main and Branch Breakers

NF Main Breakers - 18KAIC			
125A		250A	400A
HDL36100		JDL36150	LAL36250
HDL36125		JDL36200	LAL36300
		JDL36225	LAL36350
			LAL36400

UL Service Entrance Line Side Barrier Kits	
Panels intended for use as service equipment require a barrier over live field connected line terminals. Please select, based upon the main circuit breaker.	
EDB	NFEDBS
HDL or JDL	NFHJLLC
LAL	NFLALLC

<b>E-Frame Bolt-on Branch Breakers - 18KAIC</b>			
Ampere Rating	One Pole 277Vac max	Two Pole 480/277Vac max	Three Pole 480/277Vac max
15	EDB14015	EDB24015	EDB34015
20	EDB14020	EDB24020	EDB34020
25	EDB14025	EDB24025	EDB34025
30	EDB14030	EDB24030	EDB34030
35	EDB14035	EDB24035	EDB34035
40	EDB14040	EDB24040	EDB34040
45		EDB24045	EDB34045
50		EDB24050	EDB34050
60		EDB24060	EDB34060
70			EDB34070
80			EDB34080
90			EDB34090
100			EDB34100
125			EDB34125

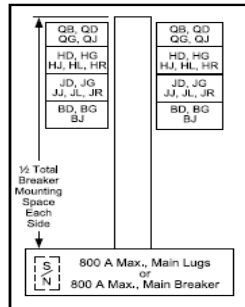
<b>NF Accessories</b>	
<b>Sub-Feed Lug Kits – main lugs only:</b>	
125A	NF125SFL*
250A	NF250SFL*
400A	NF400SFL*
<b>Feed through Lug Kits:</b>	
125A	NF125FTL*
250A	NF250FTL*
400 amp	NF400FTL*
<b>Equipment ground and neutral bars:</b>	
Aluminum Equipment Ground Bar	PK27GTA
Copper Equipment Ground Bar	PK27GTACU
PK23GTA with #1 to 4/0 Al/Cu lug	PK23GTAL
Ground bar insulator kit	PKGTAB
#10 to #2 Al or #14 to #4 Cu Add on Neutral/Ground Lug	QO70AN
#4 to #1/0 Al/Cu Add on Neutral/Ground Lug	Q1100AN
Copper Neutral / 125 Amp	NFN1CU
Copper Neutral / 250 Amp	NFN2CU
Copper Neutral / 400 Amp	NFN6CU
200% Neutral /250A	NFNL2
<b>Miscellaneous:</b>	
Handle padlock attachment (ON/OFF) - 1, 2 or 3 Pole	EDPA
Filler plate (15 per package)	NFFP15
Directory cards (10 per package)	8003115801
Plastic stick-on directory pouch (5 per package)	8003115901
Circuit I.D. number strips 1-102 odd/even	NF102OE
Lock - for MONO-FLAT fronts	PK22FL
Key for All Locks	LP9618
Touch-up paint USAS #49 Gray (Aerosol can)	PK49SP
Endwall for MH Boxes, NO Knockouts (1/pkg)	MHBE20
Endwall for MH Boxes WITH Knockouts (1/pkg)	MHKE20
Sub feed breaker kit for 250A interiors** #	NF250SFBH / NF250SFBJ*
** add (1) H or J-Frame breaker	
Sub feed breaker kit for 400A interiors*** #	NF600SFBH / NF600SFBJ*
*** add (2) H or J-Frame breakers	
<b>*Note: If Lug or Breaker Kit is needed, please consult with the United Electric Gear Department for proper size back box and cover.</b>	
<b># Do not use with 200% rated neutral</b>	



## I-Line Merchandised Panel Selection Procedure

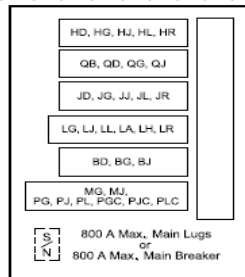
1. Select the appropriate branch circuit breakers and accessories based on the required ampacity and AIR ratings.
2. Determine the total mounting inches required by the branch circuit breakers. Pay close attention to the interior types and any branch mounting restrictions by referring to panel layouts below. Larger frame circuit breakers may mount in only one side of the panel due to physical sizes. Therefore, for larger size branches, you may only be able to consider one half of the total mounting inches available.
3. Select proper main lug or main circuit breaker interior on the mains ampacity and branch requirements from step 2.
4. Select blanks from the Accessories table (page 9) required to cover unused mounting space.

**TYPE HCJ**  
250 A max. branch circuit breaker  
BD, BG, BJ, QB, QD, QG, QJ, HD, HG, HJ, HL, HR, JD, JG, JJ, JL, JR



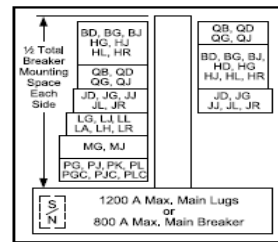
Box Size:  
32 in. Wide, 9.5 in. Deep, NEMA Type 1

**TYPE HCP**  
800 A max. main circuit breaker  
600 A max. branch circuit breaker  
BD, BG, BJ, LA, LG, LJ, LL, LH, LR, MG, MJ, PG, PJ, PL, PGC, PJC, PLC/2, QB, QD, QG, QJ, HD, HG, HJ, HL, JD, JG, JJ, JL



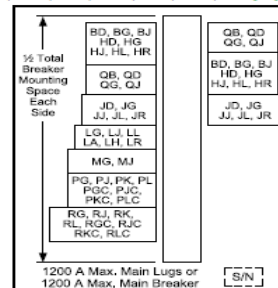
Box Size:  
26 in. Wide, 9.5 in. Deep, NEMA Type 1

**TYPE HCP**  
800 A max. branch circuit breaker  
BD, BG, BJ, QB, QD, QG, QJ, HD, HG, HJ, HL, HR, JD<sup>[11]</sup>, JG, JJ, JL, JR, LA, LH, LG, LJ, LL, LR, MG, MJ, PG, PJ, PL, PGC, PJC, PLC<sup>[12]</sup>



Box Size:  
42 in. Wide, 9.5 in. Deep, NEMA Type 1

**TYPE HCR-U Universal Mains**  
1200 A max. branch circuit breaker  
BD, BG, BJ, QB, QD, QG, QJ, HD, HG, HJ, HL, HR, JD<sup>[13]</sup>, JG, JJ, JL, JR, LA, LH, LG, LJ, LL, LR, MG, MJ, PG, PJ, PK, PL, RG, RJ, RK, RL, PGC, PJC, PKC, PLC, RGC, RJC, RKC, RLC<sup>[14][12]</sup>



Box Size:  
44 in. Wide, 9.5 in. Deep, NEMA Type 1

## Main Lug Interiors - 600V Max.

Can be converted to main breaker with the addition of a back fed main breaker

Total Breaker Mounting Space (in.)	Mains Ampere Rating	Interior Assembly (Less Branch Breakers) Catalog Number	Front Surface Mount with Door Catalog Number	Box NEMA Type 1 Catalog Number	Notes:
45	800	HCP23598 **	HCW59TSD	HC4259DB	** Does Not Include Neutral, Order From Table Below (If needed). #MLO version Requires S33930 Sub Feed Lug Kit. Main Breaker version Requires "P" or "R" Fram Breaker. >If 1000A or higher at 480/277V Main Breaker with GFI.
63	600	HCJ32736 **	HCM73TSD	HC3273DB9	
63	800	HCP32688 **	HCW68TSD	HC4268DB	
99	1200	HCP508612N	HCW86TSD	HC4286DB	
108	1200	HCR548612U ** #>	HCR86TSD	HC4486DB	

## I-Line Accessories

Description	Catalog No.		
<b>Blank Fillers</b>			
1 1/2" (3/pkg)	HNM1BL		
4-1/2" (5/pkg)	HNM4BL		
<b>Solid Neutral Assemblies</b>			
600A (Used on HCJ Interior)	HC6SN		
600A (Used on HCP Interior)	HCW6SN		
800A (Used on HCP Interior)	HCW8SN		
1200A (Used on HCP Interior)	HCW12SN		
1200A (Used on HCR-U interior)	HCWM12SN		
1200 A, including neutral Current Transformer (CT) for 3Ø4W systems	HCR12SNCTW		
<b>Equipment Ground Bar Kits</b>			
H CJ, HCP, HCR-U	PK27DGTA		
<b>Blank Extensions (for replacement purposes)</b>			
Application	Circuit Breaker Mounting Ht.	Catalog Number	Branch Circuit Side
All applications, except PowerPact H/J with MicroLogic trip unit 3, 5 and 6	1.5 Inches	HLW1BL	Wide
All applications, except PowerPact H/J with MicroLogic trip unit 3, 5 and 6	4.5 Inches	HLW4BL	Wide
All applications, except PowerPact H/J with MicroLogic trip unit 3, 5 and 6	4.5 Inches	HLN4BL	Narrow
Only applications, with PowerPact H/J with MicroLogic trip unit 3, 5 and 6	4.5 Inches	HLN4EBL	Narrow
Only applications, with PowerPact H/J with MicroLogic trip unit 3, 5 and 6	4.5 Inches	HLW4EBL	Wide

## Sub-Feed Lug Kits

Plug-on in same manner as a branch circuit breaker

Ampere Rating	Height in. (mm)	Catalog Number	Max Short-circuit System Ratings RMS Symmetrical Ampere			Protected by Circuit Breaker	Use in Interior Type
			240Vac	480Vac	600Vac		
800	9 (229)	SL800M5	125,000	100,000	25,000	H, J, L, M, P and R	H CJ, HCP, HCR-U
1200	15 (381)	S33930	125,000	100,000	50,000		HCR-U

## UL Service Entrance Barriers for I-Line Panelboards with Backfed Main Circuit Breaker

I-Line Panelboard Type	Backfeed Main Circuit Breaker	Catalog Number
HCP	LA, LA, PowerPact L	ILBFMHCPULC
	M, P	ILBFMHCPMPULC
HCR-U	LA, LA, PowerPact L	ILBFMHCRULC
	M	ILBFMHCRMULC
	P	ILBFMHCRPULC

## I-Line Circuit Breakers

SCCR = 25kA (240Vac), 18kA (480Vac & 480/277Vac), 14kA (600Vac & 600Y/347Vac - all except B-Frame)

### PowerPacTB-frame, 125 A max, Thermal Magnetic UL Circuit Breaker

Amps	1-pole - 1.5"	2-pole - 3"	3-pole - 4.5"
15	BDA14015*	BDA24015Y*	BDA34015Y
20	BDA14020*	BDA24020Y*	BDA34020Y
25	BDA14025*	BDA24025Y*	BDA34025Y
30	BDA14030*	BDA24030Y*	BDA34030Y
35	BDA14035*	BDA24035Y*	BDA34035Y
40	BDA14040*	BDA24040Y*	BDA34040Y
45	BDA14045*	BDA24045Y*	BDA34045Y
50	BDA14050*	BDA24050Y*	BDA34050Y
60	BDA14060*	BDA24060Y*	BDA34060Y
70		BDA24070Y*	BDA34070Y
80		BDA24080Y*	BDA34080Y
100		BDA24100Y*	BDA34100Y
125		BDA24125Y*	BDA34125Y

### PowerPacTH-frame, 150 A max, Thermal Magnetic UL Current Limiting Circuit Breaker

Amps	2-pole - 3"	3-pole - 4.5"
15	HDA26015*	HDA36015
20	HDA26020*	HDA36020
25	HDA26025*	HDA36025
30	HDA26030*	HDA36030
35	HDA26035*	HDA36035
40	HDA26040*	HDA36040
45	HDA26045*	HDA36045
50	HDA26050*	HDA36050
60	HDA26060*	HDA36060
70	HDA26070*	HDA36070
80	HDA26080*	HDA36080
100	HDA26100*	HDA36100
125	HDA26125*	HDA36125
150	HDA26150*	HDA36150

### PowerPacTJ-frame, 250 A max, Thermal Magnetic UL Current Limiting Circuit Breaker

Amps	2-pole - 4.5"	3-pole - 4.5"
150	JDA26150*	JDA36150
175	JDA26175*	JDA36175
200	JDA26200*	JDA36200
225	JDA26225*	JDA36225
250	JDA26250*	JDA36250

### PowerPacTQ-frame, 225A, **240Vac Max**, Thermal Magnetic UL Circuit Breaker

Amps	3-pole - 4.5" <b>10KAIC</b>	3-pole - 4.5" <b>25KAIC</b>
125	QBA32125	QDA32125
150	QBA32150	QDA32150
175	QBA32175	QDA32175
200	QBA32200	QDA32200
225	QBA32225	QDA32225

### Legacy L Frame, 400A Max, Thermal Magnetic UL Circuit Breaker

240V/42KAIC, 480V/30KAIC, 600V/22KAIC	
Amps	3 - Pole - 6"
300 A	LA36300
350 A	LA36350
400 A	LA36400

### PowerPacTH & J-frame, 150A & 250 A max, MicroLogic Electronic Trip UL Current Limiting Circuit Breaker

Sensor Rating	Trip Unit/Function	Trip Settings (A)	3-pole - 4.5"
150A	Standard LSI	50-60-70-80-90-	HDA36150U33X
		100-110-125-150	
250A	Standard LSI	70-80-100-125-	JDA36250U33X
		150-175-200-225-250	

\* 1 & 2 pole breaker phase connection must be selected from table below and added to the end of the catalog number.

Phase	1 - Pole Phase	2 - Pole Phase	3 - Pole Phase
1	A	AB	-
2	-	AC	-
3	B	BA	-
4	-	BC	-
5	C	CA	-
-	-	-	ABC
6	-	CB	CBA

PowerPacT L (600A Max), M (800A Max), P (1200A Max) and R (1200A Max) Fixed and Adjustable Trip Circuit Breakers					
Sensor Rating	Trip Unit/ Function	Trip Settings (A)	3 Pole	Interrupt Ratings	Mounting Height
600A	Standard LSI	200-225-250-300-350-400-450-500-600	LGA36600U33X	65kA (240Vac), 35kA (480Vac), 18kA (600Vac)	6"
600A	Standard LSI	200-225-250-300-350-400-450-500-600	LJA36600U33X	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	6"
800A	Basic LI	300 thru 800	MGA36800E10	65kA (240Vac), 35kA (480Vac), 18kA (600Vac)	9"
800A	Basic LI	300 thru 800	MJA36800E10	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	9"
1000A	Basic Fixed Long Time, Adjustable Instantaneous	1000A	PGA36100	65kA (240Vac), 35kA (480Vac), 18kA (600Vac)	9"
1000A	Basic Fixed Long Time, Adjustable Instantaneous	1000A	PJA36100	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	9"
1000A	Ammeter LSI	400-450-500-600-630-700-800-900-1000	PJA36100U44A**	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	9"
1200A	Ammeter LSI	480-540-600-720-756-840-960-1080-1200	PJA36120U43A#	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	9"
1200A	Ammeter LSI	480-540-600-720-756-840-960-1080-1200	PJA36100U44A**#	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	9"
1200A	Ammeter LSI	480-540-600-720-756-840-960-1080-1200	RJA36120CU43A#	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	15"
1200A	Ammeter LSI	480-540-600-720-756-840-960-1080-1200	RJA36100CU44A**#	100kA (240Vac), 65kA (480Vac), 25kA (600Vac)	15"

\*\*Order HCR12SNCTW (solid neutral with CT) separately for ground fault functionality  
#2014 NEC requires a maintenance switch for ALL breakers 1200A (and larger). Consult the United Electric Gear Dept. prior to purchase.  
Additional products necessary to comply.

Note that all transformers are DOE 2016 Compliant

Dry Type Transformers							
DOE 2016 Energy Efficient							
kVA	Single Phase		Three Phase		Deg C Temp Rise	Enlosure Style	Weather Shield
	Primary 240x480V	Secondary 120/240V	Primary 480V Delta	Secondary 208Y/120V			
3	3S1F				115	N/A	N/A
5	5S1F						
10	10S1F						
15	EE15S3H		EXN15T3H		150	17D / 17M	WS363 / 7400WS17M
25	EE25S3H					17H	WS363
30			EXN30T3H			18M	7400WS18M19M
37.5	EE37S3H					18H	WS363
45			EXN45T3H			19M	7400WS18M19M
50	EE50S3H					18H	WS363
75	EE75S3H		EXN75T3H			21D / 20M	WS364 / 7400WS20M
112.5			EXN112T3H			21M	7400WS21M
150			EXN150T3H			22M	7400WS22M

Mechanical Lug Kits									
Single-Phase Primary, Single-Phase Secondary, Three-Phase Delta Primary, Three-Phase Delta Secondary									
Catalog Number	Lugs Per Kit	Wire Range	Cap Screws	Current Range	Ground Lugs/Kit	Wire Range	Bonding Lugs per Kit	Wire Range	
DASKP100	3	1/0–14 STR	1/4 x 1 in.	Up to 100A	N/A	N/A	N/A	N/A	
DASKP250	3	350 kcmil–6 STR	3/8 x 2 in.	101 to 250A					
DASKP400	3	600 kcmil–4 STR		201 to 400A					
DASKP600	6	(2) 250 kcmil–1/0 STR		601 to 800A					
DASKP1000	9	600 kcmil–2 STR							
Single-Phase Primary and Secondary, Three-Phase Wye Secondary, Three-Phase Delta with Center Tap									
Catalog Number	Lugs Per Kit	Wire Range	Cap Screws	Current Range	Ground Lugs/Kit	Wire Range	Bonding Lugs per Kit	Wire Range	
DASKGS100	5	1/0–14 STR	1/4 x 1 in.	Up to 100 A	1	(4) 2/0 to 14 STR	1	2 to 14 STR	
DASKGS250	5	350 kcmil–6 STR	3/8 x 2 in.	101 to 250 A	1		1		
DASKGS400	5	600 kcmil–4 STR (2) 250 kcmil–1/0 STR		201 to 400 A	1		1	1/0 to 14 STR	
DASKGS600	10	600 kcmil–2 STR		601 to 800 A	1		(4) 350 kcmil to 6 STR	1	250 kcmil to 6 STR
DASKGS1000	15						1	1	

## NEMA Starters

NEMA Size	Cont. Current Rating	Motor Voltage	Max. HP	Coil Voltage	Open Type	NEMA 1 Enclosure
0	9	208-240	1.5	120	8536SAO12V02H30S	8536SAG12V02H30S
0	9	480-600	2	120	8536SAO12V02H30S	8536SAG12V02H30S
0	18	208-240	3	120	8536SBO2V02H30S	8536SBG2V02H30S
0	18	480-600	5	120	8536SBO2V02H30S	8536SBG2V02H30S
1	27	208-240	7.5	120	8536SCO3V02H30S	8536SCG3V02H30S
1	27	480-600	10	120	8536SCO3V02H30S	8536SCG3V02H30S
2	45	208	10	120	8536SDO1V02H30S	8536SDG1V02H30S
2	45	240	15	120	8536SDO1V02H30S	8536SDG1V02H30S
2	45	480-600	25	120	8536SDO1V02H30S	8536SDG1V02H30S
3	90	208	25	120	8536SEO1V02H30S	8536SEG1V02H30S
3	90	240	30	120	8536SEO1V02H30S	8536SEG1V02H30S
3	90	480-600	50	120	8536SEO1V02H30S	8536SEG1V02H30S

## NEMA Combination Starters

Fusible Disconnect Switch (fuses not included)

NEMA Size	Fuse Clip Size (A)	Voltage (Vac)	HP	Coil Voltage	Solid State Overload Range (FLA)	NEMA 1/3R/12 Enclosure
0 or 1	30	208/240	0.75-2	120	3-9	8538SCASP4
1	60	208/240	3-7.5	120	9-27	8538SCASP5
0 or 1	30	480/600	5-10	120	6-18	8538SCASP6
1 or 2	60	208/240	5-10 (208) 5-15 (240)	120	15-45	8538SDASP4
2	60	480/600	15-25	120	15-45	8538SDASP6

## Lighting Contactors

30 A fluorescent lighting rating, 20 A tungsten lighting rating.

Conforms to NEMA -410 -2015 and UL508: Table 46.1 and Section 61C test procedures for LED loads up to 16 A at 120 V. Devices were tested to 20 A at 120 V and conform to the test requirements.

No of Poles	Coil Voltage	NEMA 1 Enclosure
Electrically Held		
2	120	8903LG20V02
3	120	8903LG30V02
4	120	8903LG40V02
6	120	8903LG60V02
8	120	8903LG80V02
10	120	8903LG1000V02
12	120	8903LG1200V02
Mechanically Held		
2	120	8903LXG20V02
4	120	8903LXG40V02
8	120	8903LXG80V02
10	120	8903LXG1000V02
12	120	8903LXG1200V02

General Duty						
Amps	NEMA 1 Enclosure		NEMA 3R Enclosure		Ground Bar	SE Line Side Barrier
	3 Wire 2 Blade, 1 S/N	4 Wire 3 Blade, 1 S/N	3 Wire 2 Blade, 1 S/N	4 Wire 3 Blade, 1 S/N		
Fusible, 240V Max, Single Throw						
30	D221N	D321N	D221NRB	D321NRB	PK3GTA1	Incl.
60	D222N	D322N	D222NRB	D322NRB	GTK03	Incl.
100	D223N	D323N	D223NRB	D323NRB	GTK0610	Incl.
200	D224N	D324N	D224NRB	D324NRB	PKOGTA2	Incl.
400		D325N		D325NR	PKOGTA2	LSBI02
	3 Wire 3 Blades		3 Wire 3 Blades		Ground Bar	SE Line Side Barrier
Non-Fusible, 240V Max, Single Throw						
30	DU321		DU321RB		PK3GTA1	Incl.
60	DU322		DU322RB		GTK03	Incl.
100	DU323		DU323RB		GTK0610	Incl.
200	DU324		DU324RB		PKOGTA2	Incl.

Heavy Duty						
Amps	NEMA 1 Enclosure		NEMA 3R Enclosure		Ground Bar	SE Line Side Barrier
	3 Wire 2 Blade, 1 S/N	4 Wire 3 Blade, 1 S/N	3 Wire 2 Blade, 1 S/N	4 Wire 3 Blade, 1 S/N		
Fusible, 240V Max, Single Throw						
30	VH221N	VH321N	VH221NRB	VH321NRB	GTK03	Incl.
60	VH222N	VH322N	VH222NRB	VH322NRB	GTK03	Incl.
100	VH223N	VH323N	VH223NRB	VH323NRB	GTK0610	Incl.
200		VH324N		VH324NRB	PKOGTA2	Incl.
400		H325N		H325NR	PKOGTA2	LSBG202
Amps	3 Wire 3 Blades	4 Wire 3 Blade, 1 S/N	3 Wire 3 Blades	4 Wire 3 Blade, 1 S/N	Ground Bar	SE Line Side Barrier
Fusible, 600V Max, Single Throw						
30	VH361	VH361N	VH361RB	VH361NRB	GTK03	Incl.
60	VH362	VH362N	VH362RB	VH362NRB	GTK03	Incl.
100	VH363	VH363N	VH363RB	VH363NRB	GTK0610	Incl.
200	VH364	VH364N	VH364RB	VH364NRB	PKOGTA2	Incl.
400		H365N		H365NR	PKOGTA2	LSBG602
600		H366N		H366NR	PKOGTA2	LSBG602
	3 Wire 3 Blades		3 Wire 3 Blades		Ground Bar	SE Line Side Barrier
Non-Fusible, 600V Max, Single Throw						
30	VHU361		VHU361RB		GTK03	Incl.
60	VHU362		VHU362RB		GTK03	Incl.
100	VHU363		VHU363RB		GTK0610	Incl.
200	VHU364		VHU364RB		PKOGTA2	Incl.
400	HU365		HU365R		PKOGTA2	LSBG602

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FlexSeT™ offers unparalleled flexibility to adapt to projects, requirements, and needs. Featuring exclusive I-Line stack for quick and familiar assembly, installation, & maintenance.



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- Updated design features that simplify installation and maintenance
- Digital assembly tools for authorized assemblers deliver UL quality confidence and unrivaled traceability

### FlexSeT™

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- Is designed based on customer input and value
- Delivers enhanced quality, safety, and reliability with I-Line based design
- Is UL/cUL approved, with first in the industry UL digital mark
- Is a flexible, modular design that easily accepts connected offers and digitization capabilities
- Makes change orders easy without impacting product schedules
- Has distributed neutral, simplifying wiring of neutral load connections by providing neutral access closer to the load that needs it

### Technical Specifications

- Fixed main breaker up to 2000A @ 80% rated
- Group mounted main breaker up to 1600A @ 80% rated
- Main lug application up to 1600A
- Silver plated copper busbar material on all phases and ground
- System voltage up to:
  - 208Y/120V 3Ph 4W 60 Hz
  - 480Y/227V 3Ph 4W 60 Hz
  - 240V 3Ph 3W 60 Hz
  - 480V 3Ph 3W 60 Hz
- Maximum fault current rating 65kAIC
- Instrument compartment mounted devices (up to 490V):
  - Maintenance mode switch
  - 240kA surge protection
  - PM5563 meter
- I-Line with plug-on neutral
- 100% rated neutral throughout switchboard
- Left incoming only
- NEMA-1, NEMA-2, and NEMA-3R enclosures
- Seismic Qualification: IBC 2012-2015 (ACE 7-10), NBCC 2015
- eCertifications: UL, CSA, NOM, IEC, CCC, and CE marked for global acceptance



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## ATV12

Our lowest cost nano VFD for simple .25 to 5 HP for simple speed control:

### Typical Applications:

- Positive Displacement Pumps
- Conveyors
- Machine Movement
- Mixers

### Keypad Display:

7 Segment

### Communication Networks:

Modbus RS485 Integrated

### Control I/O:

- 1 Analog Input
- 1 Analog Output
- 4 Digital Inputs
- 1 Relay Output



### ATV12 VFD Stocked Components

Input Voltage	Motor HP	Continuous Output Amps	ATV12 with Including Keypad	ATV12 Dimensions (inches) W x H x D
208/240 three phase	3	10	ATV12HO75M3	4.6 X 5.6 X 6.1

## ATV320

A cost effective VFD for applications from 1 to 20HP

### Typical Applications:

- Simple Machines
- Conveyors
- HVAC Systems
- Small Pumps and Fans
- Mixers

### Integrated Communication Networks:

Modbus Serial  
CANOpen



### Option Card:

Communication Module, CANopen  
Communication Module, EtherCAT  
Communication Module, Profibus DP V1  
Communication Module, PROFINET  
Communication Module, Ethernet Powerlink  
Communication Module, EtherNet/IP  
Communication Module, DeviceNet

### Control I/O:

6 Digital Inputs  
2 Analog Inputs  
2 Relay Outputs  
1 Analog Output

### ATV320 Stocked Components

Input Voltage	Motor HP	Continuous Output Amps	ATV320	ATV320 Dimensions W x H x D
208/230 Vac Three Phase	1	4.8	ATV320U07M3C	2.8 X 5.6 X 5.4
	2	8	ATV320U15M3C	4.1 X 5.6 X 5.4
	3	11	ATV320U22M3C	4.1 X 5.6 X 5.4
	5	17.5	ATV320U40M3C	5.51 X 7.24 X 6.22
	7.5	27.5	ATV320U55M3C	5.91 X 9.13 X 7.01
400/480 Vac Three Phase	1	2.3	ATV320U07N4C	4.13 X 5.59 X 6.22
	2	4.1	ATV320U15N4C	4.13 X 5.59 X 6.22
	3	5.5	ATV320U22N4C	5.51 X 7.24 X 6.22
	5	9.5	ATV320U40N4C	5.51 X 7.24 X 6.22
	7.5	14.3	ATV320U55N4C	5.91 X 9.13 X 7.01in
	10	17	ATV320U75N4C	5.91 X 9.13 X 7.01in
	15	27.7	ATV320D11N4C	7.09 X 12.99 X 7.80
	20	33	ATV320D15N4C	7.09 X 12.99 X 7.80

NOTE: For Ethernet IP order TWO components: VW3A3616, VW3A3600

## ATV930

A full featured high performance VFD for industrial machines requiring advanced torque and precision control

### Typical Applications:

- Material Handling
- High Performance Movement and Regulation
- Lifts, Cranes, Hoists
- Extruders, Shredders
- Presses

### Keypad Display:

Full English Text  
Integrated Dynamic QR Code

### Integrated Communication Networks:

Modbus RS485  
CANOpen



### Options:

#### Encoder Interface Modules

- Resolver Interface Module
- Digital Interface Encoder Module 5/12 V
- Analog Interface Encoder Module

#### Safety Function Module

#### Additional Module Support

#### I/O Extension Modules

- Digital and Analog I/O Module
- Relay Output Module

#### Communication modules

- CANopen
- PROFINIT
- PROFIBUS DP V1
- DeviceNet
- EtherCAT

#### Braking Units

Braking Resistors

## ATV930 Stocked Components

Input Voltage	Motor HP	Continuous Output Amps	ATV930 Including Keypad	ATV930 Dimensions (inches) W x H x D
400/480 Vac Three Phase	5	9.3	ATV930U40N4	5.67 X 13.8 X 8.1
	10	16.5	ATV930U75N4	6.8 X 16.1 X 9.3
	20	31.7	ATV930D15N4	8.3 X 21.5 X 9.25
	40	61.5	ATV930D30N4	8.9 X 26.5 X 10.8

NOTE: For Remote Keypad Mount Kit order **BOTH** components: VW3A1112, VW3A1104R30  
EtherNet/IP comms module: VW3A721

\*The starred items under "Control I/O" are only available with the I/O extension cards.

## ATV212

A cost effective VFD from 1-100Hp for HVAC, fan, and pump speed control

### Typical Applications:

- Pumps
- Fans

### Keypad Display:

7 Segment, Full Display Optional



### Integrated Communication Networks:

Modbus RS485  
Apogee P1  
BACnet  
Metasys N2

### Options:

LonWorks

### Control I/O:

2 Analog Inputs  
1 Analog Output  
3 Logic Inputs  
2 Relay Outputs

### ATV212 Stocked Components

Input Voltage	Motor HP	Continuous Output Amps	ATV212	ATV212 Dimensions W x H x D	NEMA 1 Wall Mount Conduit Entry Kit
400/480 Vac Three Phase	10	16	ATV212HU75N4	7.09 X 9.13 X 6.69	VW3A31816
	15	22.5	ATV212HD11N4	7.09 X 9.13 X 6.69	VW3A31816
	30	22	ATV212HD22N4	9.45 X 16.54 X 8.39	VW3A9206

NOTE: For Remote Keypad Mount Kit order all **FOUR** components: VW3A1101, VW3A1102, VW3A1103, VW3A1104R30

## ATV630

A full featured, high performance VFD for process control from 1-500HP

### Typical Applications:

- Centrifugal Fans
- Centrifugal Pumps

### Control I/O:

3-5 Analog Inputs  
6-12 Logic Inputs  
3-6 Relay Outputs  
I/O Extension Cards Available

### Keypad Display:

Full English Text  
Removable Backlit LCD  
Integrated Dynamic QR Code



### Integrated Communication Networks:

Modbus RS485  
CANOpen

### Communication Cards:

CANopen Daisy Chain Card w/2 RJ45 Connectors  
CANopen SUB-D Card  
CANopen Card w/1x5-Way Screw Terminal Block  
EtherNet/IP and Modbus TCP Dual Port Card  
ProfiNet Card w/2 RJ45 Connectors  
PROFIBUS DP V1 Card  
DeviceNet Card  
Modbus TCP/IP  
EtherNet/IP  
Profibus DP [V1]  
Devicenet

## ATV630 Stocked Components

Input Voltage	Motor HP	Continuous Output Amps	ATV630 Including Keypad	ATV630 Dimensions W x H x D
208/230 Vac Three Phase	10	32.7	ATV630U75M3	8.31 X 21.50 X 9.13
	15	46.8	ATV630D11M3	8.31 X 21.50 X 9.13
	30	92.6	ATV630D22M3	8.90 X 26.50 X 10.67
	40	123	ATV630D30M3	11.42 X 36.30 X 12.72
	60	176	ATV630D45M3	11.42 X 36.30 X 12.72
	75	211	ATV630D55M3	12.60 X 33.54 X 15.35
400/480 Vac Three Phase	1	2.2	ATV630U07N4	5.67 X 13.78 X 7.99
	5	9.3	ATV630U40N4	5.67 X 13.78 X 7.99
	7.5	12.7	ATV630U55N4	5.67 X 12.58 X 7.98
	10	16.5	ATV630U75N4	6.8 X 15.93 X 9.1
	15	23.5	ATV630D11N4	6.8 X 15.93 X 9.1
	20	31.7	ATV630D15N4	8.3 X 21.5 X 9.13
	25	39.2	ATV630D18N4	8.3 X 21.5 X 9.13
	30	46.3	ATV630D22N4	8.3 X 21.5 X 9.13
	40	61.5	ATV630D30N4	8.6 X 26.5 X 10.7
	60	88	ATV630D45N4	8.6 X 26.5 X 10.7
	75	106	ATV630D55N4	11.42 X 36.3 X 12.7
	100	145	ATV630D75N4	11.42 X 36.3 X 12.7

NOTE: For Remote Keypad Mount Kit order **BOTH** components: VW3A1112, VW3A1104R30  
EtherNet/IP comms module: VW3A721

## Save Time



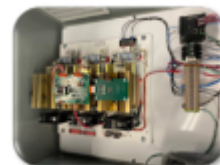
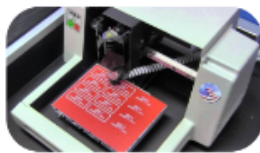
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