

**TCI**

# **KDR™ Optimized Drive Reactors**

**Performance and Protection For Drives**



Proudly Made  
in the USA



## TCI's New KDR Optimized Drive Reactors Deliver Superior Design And Performance

Customers demand quality and performance at a price that translates to "optimum value". TCI, the drive industry's leading provider of value added technology, is proud to introduce the KDR Series of Optimized Drive Reactors. This is the latest addition to a family of reactor products with a reputation for increasing the value and improving the system performance of power inverters.

This KDR product has been designed to provide the same rugged reliability you've come to expect from TCI products in the smallest, lightest product package currently available in the market. Product models, covering the complete range of impedance needs, are available for either the line or load side of a PWM drive. Providing the optimum selection for your application, TCI's KDR Optimized Drive Reactors are your "Superior Design and Performance" solution.

KDR Optimized Drive Reactors are warranted against manufacturer's defect for the life of the drive with which they are installed.

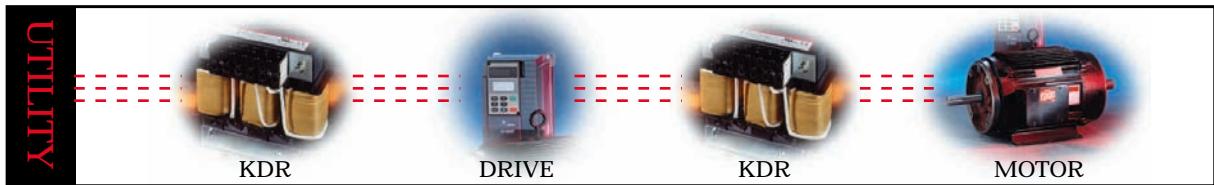
### Performance Guarantee

Properly sized for the application, a KDR reactor is guaranteed to eliminate any AC drive overvoltage tripping problems. If a KDR reactor is installed and the tripping problem remains, TCI will take back the reactor and pay shipping both ways. (Offer valid for 60 days from date of shipment.)



### Drawings/Specifications

Autocad® compatible\*.dxf drawings and Acrobat Reader® compatible\*.pdf drawings of all KDR Optimized Drive Reactors are available at [www.transcoil.com](http://www.transcoil.com) or by contacting TCI at (800) 824-8282.



### KDR At The Input Of The Drive

KDR Optimized Drive Reactors applied to the line side of a PWM drive will greatly improve the overall performance of the drive. The additional circuit inductance will reduce AC voltage waveform line notching, DC bus overvoltage trips, inverter overvoltage, poor total power factor, and cross-talk.

### Typical Problems, Superior Solutions With KDR Reactors:

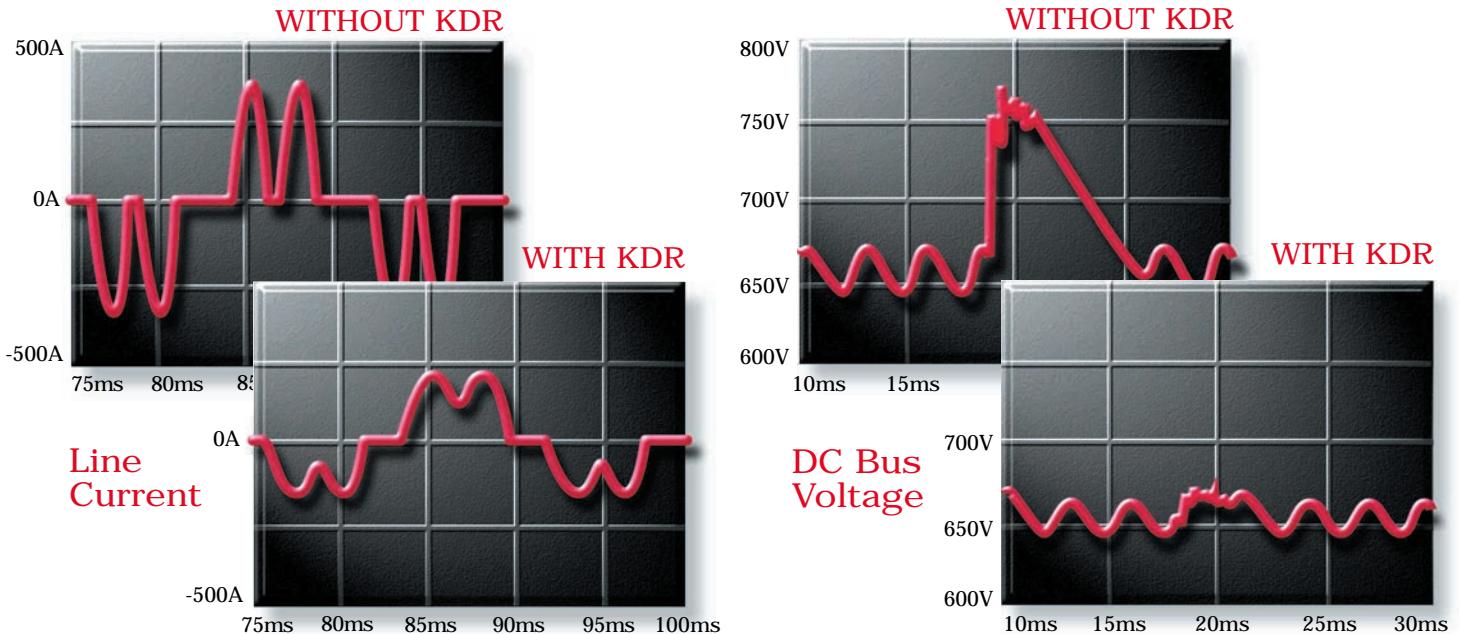
#### KDR On The Input to DC Drives

- Voltage line notching, also known as commutation notching, originates in SCR phase-controlled rectifiers. As the transfer of current takes place, there is a brief period of time where two SCRs connect during the switching process, causing a short between two of the AC lines. Additional impedance will reduce the depth and rounds the edges of the notches. This will eliminate drive cross-talk, interference, and equipment damage.

#### KDR On The Input to AC Drives

- Transient voltages, commonly caused by capacitor switching, or the switching of large load blocks, can result in an overvoltage condition of the DC bus. This overvoltage condition will cause the drive to shut down in order to protect its components. These transients can sometimes be very severe and too quick for the drive to shut down. The addition of a KDR Optimized Drive Reactor can prevent drive shutdown and even protect components from possible damage.

- Input line distortion is caused by the non-linear characteristics of drives. The addition of a KDR Optimized Drive Reactor will limit the inrush current to the rectifier, rounding the waveform, reducing the peak currents and lowering the harmonic current distortion. High peak currents may cause distortion of the voltage waveform. KDR's reduction of those peak currents also reduces total harmonic voltage distortion at the point of common coupling.
- Drive input currents rich in harmonics result in a decrease in total input power factor to the drive. The addition of a KDR Optimized Drive Reactor will reduce the RMS current through the reduction in harmonic content, thereby improving the total power factor.
- Input voltage unbalance may prevent the drive from performing due to subsequent overcurrent conditions which cause the drive to cease operating. Tests have proven that the addition of a KDR Drive Reactor to the input of every drive will help balance the drive input line currents.



## Two Rating Levels, Two Choices, One “Optimized” Answer...the new KDR

Choose TCI's new KDR Optimized Drive Reactors in two ratings versions, Low “Z” (low impedance) and High “Z” (high impedance). Input impedance can significantly improve drive performance; however, it should be noted that as impedance increases, the DC voltage on the VFD's capacitors actually decreases. This decrease can become significant enough to cause either an undervoltage trip or excessive motor current in the VFD. The KDR Optimized Drive Reactors have been designed to provide the best protection for both your drive and your application.

### Use KDR Low “Z” Units For:

These units can be used in any applications where traditionally either a 1.5% or 3% reactor would be applied.

Reduction of nuisance tripping caused by:

- Transient voltages caused by capacitor switching
- Line notching
- DC bus overvoltage tripping
- Inverter overcurrent and overvoltage

Additional benefits include:

- Lowering injected percentage of harmonic current
- Improving true power factor
- Reducing cross-talk between drives

### Use KDR High “Z” Units For:

These units can be used in any rugged application where traditionally a 5% reactor would be applied.

KDR High “Z” offers the same superior benefits as Low “Z” plus additional benefits which include:

- Helping prevent drive component damage
- Providing maximum harmonic mitigation without adding capacitance
- Further improving true power factor
- Adding impedance to drives with or without DC link chokes/reactors when more impedance is desired due to a relatively stiff source.

### KDR Selection

TCI has compiled tables for each drive manufacturer by voltage and HP with the proper KDR selection noted for Low “Z” and High “Z” based on the manufacturer's nameplate input current rating. These charts also include convenient crossover tables between the popular TCI KLR series of reactors as well as crossovers for many other brands of reactors.

# 480 VOLTS LOW-Z

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA6L	0.5	1.1	5.6	C1	TB	4	4.18	3.75	4	KDRA6LC1
KDRA7L	0.75	1.6	10	C1	TB	4	4.18	3.75	4	KDRA7LC1
KDRA8L	1	2.1	10.4	C1	TB	4	4.18	3.75	4	KDRA8LC1
KDRA9L	1.5	3	17	C1	TB	4	4.18	3.75	4	KDRA9LC1
KDRA1L	2	3.4	19	C1	TB	4	4.18	3.75	4	KDRA1LC1
KDRA2L	3	4.8	23	C1	TB	4	4.18	3.75	4	KDRA2LC1
KDRA3L	5	7.6	49	C1	TB	4	4.18	3.75	4	KDRA3LC1
KDRA4L	7.5	11	40	C1	TB	4	4.18	3.75	4	KDRA4LC1
KDRA5L	10	14	64	C1	TB	4	4.18	3.75	5	KDRA5LC1
KDRB2L	15	21	65	C1	TB	5	6	4	8	KDRB2LC1
KDRB1L	20	27	79	C1	TB	5	6	4	8	KDRB1LC1
KDRD1L	25	34	96	C2	TB	5.75	7.2	4.25	10	KDRD1LC2
KDRD2L	30	40	105	C2	TB	5.75	7.2	4.25	10	KDRD2LC2
KDRC1L	40	52	114	C2	TB	5.75	7.2	5	15	KDRC1LC2
KDRF2L	50	65	114	C3	TB	7	9	6	25	KDRF2LC3
KDRF4L	60	77	169	C3	TB	7	9	6	25	KDRF4LC3
KDRF3L	75	96	193	C4	CB	7	9	7	30	KDRF3LC4
KDRH3L	100	124	225	C4	CB	9	11	7	40	KDRH3LC4
KDRH2L	125	156	254	C4	CB	9	11	7	40	KDRH2LC4
KDRH1L	150	180	299	C4	CB	9	11	7	40	KDRH1LC4
KDRG3L	200	240	280	C4	CB	9	11	8	65	KDRG3LC4
KDRG1L	250	302	337	C4	CB	9	11	8	65	KDRG1LC4
KDRG2L	300	361	381	C4	CB	9	11	8	65	KDRG2LC4
KDRJ2L	350	414	465	C5	CB	9	11	9	70	KDRJ2LC5
KDRJ1L	400	477	470	C5	CB	9	11	9	70	KDRJ1LC5
KDRL1L	450	515	509	C5	CB	11.38	14.5	9.5	110	KDRL1LC5
KDRL2L	500	590	518	C5	CB	11.38	14.5	9.5	110	KDRL2LC5
KDRL3L	600	720	748	C5	CB	11.38	14.5	9.5	155	KDRL3LC5
KDRS1L	700	840	872	C7	CB	11.38	15	12.5	158	KDRS1LC7
KDRX2L	800	960	997	C7	CB	18.5	18.25	12.5	160	KDRX2LC7
KDRX3L	900	1080	1121	C7	CB	18.5	18.25	12.5	275	KDRX3LC7
KDRX1L	1000	1200	1246	C7	CB	18.5	18.25	12.5	290	KDRX1LC7
KDRY1L	1100	1320	1371	C7	CB	20	21	16	475	KDRY1LC7
KDRY2L	1250	1500	1558	C7	CB	20	21	16	500	KDRY2LC7

# 480 VOLTS HIGH-Z

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA6H	0.5	1.1	9	C1	TB	4	4.18	3.75	4	KDRA6HC1
KDRA7H	0.75	1.6	15	C1	TB	4	4.18	3.75	4	KDRA7HC1
KDRA8H	1	2.1	12	C1	TB	4	4.18	3.75	4	KDRA8HC1
KDRA9H	1.5	3	23	C1	TB	4	4.18	3.75	4	KDRA9HC1
KDRA1H	2	3.4	33	C1	TB	4	4.18	3.75	4	KDRA1HC1
KDRA2H	3	4.8	38	C1	TB	4	4.18	3.75	4	KDRA2HC1
KDRA3H	5	7.6	80	C1	TB	4	4.18	3.75	4	KDRA3HC1
KDRA4H	7.5	11	77	C1	TB	4	4.18	3.75	5	KDRA4HC1
KDRA5H	10	14	111	C1	TB	4	4.18	3.75	5	KDRA5HC1
KDRB2H	15	21	133	C1	TB	5	6	4	7	KDRB2HC1
KDRC3H	20	27	108	C2	TB	5.75	7.2	5	15	KDRC3HC2
KDRC1H	25	34	112	C2	TB	5.75	7.2	5	15	KDRC1HC2
KDRE2H	30	40	141	C2	TB	5.75	7.2	5	16	KDRE2HC2
KDRF4H	40	52	169	C3	TB	7	9	6	25	KDRF4HC3
KDRF1H	50	65	191	C3	TB	7	9	6	25	KDRF1HC3
KDRF2H	60	77	226	C3	TB	7	9	6	25	KDRF2HC3
KDRH2H	75	96	212	C4	CB	9	11	7	45	KDRH2HC4
KDR12H	100	124	362	C4	CB	9	11	7	50	KDR12HC4
KDRG3H	125	156	274	C4	CB	9	11	8	55	KDRG3HC4
KDRG1H	150	180	359	C4	CB	9	11	8	55	KDRG1HC4
KDRJ1H	200	240	420	C5	CB	9	11	9	70	KDRJ1HC5
KDRL1H	250	302	548	C5	CB	11.38	14.5	9.5	110	KDRL1HC5
KDRL2H	300	361	786	C5	CB	11.38	14.5	9.31	95	KDRL2HC5
KDRL3H	350	414	750	C5	CB	11.38	14.5	9.31	100	KDRL3HC5
KDRL4H	400	477	730	C5	CB	11.38	14.5	9.5	110	KDRL4HC5
KDRL5H	450	515	774	C5	CB	11.38	14.5	11	120	KDRL5HC5
KDRL6H	500	590	1021	C5	CB	11.38	14.5	11	120	KDRL6HC5
KDRS1H	600	720	1246	C5	CB	11.38	15	13	260	KDRS1HC5
KDRS2H	700	840	1454	C5	CB	11.38	13	13	280	KDRS2HC5
KDRX2H	800	960	1661	C7	CB	18.5	18.25	12.5	290	KDRX2HC7
KDRX3H	900	1080	1869	C7	CB	18.5	18.25	12.5	290	KDRX3HC7
KDRX4H	1000	1200	1337	C7	CB	18.5	18.25	12.5	300	KDRX4HC7
KDRY2H	1100	1320	2284	C7	CB	20	21	16	525	KDRY2HC7
KDRY1H	1250	1500	2596	C7	CB	20	21	16	575	KDRY1HC7

## Currents

Currents are based on Table 430-150 of the 1999 National Electric Code®. These currents are approximate selections, suitable for most installations. NEC motor currents shown in the 208/240 volt charts are based on horse powers at 208 volt, as these are the higher of the two current ratings. In the case of the 575/600 volt charts, the 575 volt current ratings are used. Maximum amp ratings, found on reactor nameplates, are equal to or greater than the NEC motor currents identified and are within the operating limits of the reactor.

# 480 VOLTS LOW-Z

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH	HEIGHT x WIDTH x DEPTH			HEIGHT x WIDTH x DEPTH	HEIGHT x WIDTH x DEPTH	
KDRULA6L	0.5	4	KDRULA6LE01	12.25 X 12.50 X 6.75	14.50	KDRULA6LE3R	11.50 X 10.00 X 12.00	19		
KDRULA7L	0.75	4	KDRULA7LE01	12.25 X 12.50 X 6.75	14.50	KDRULA7LE3R	11.50 X 10.00 X 12.00	19		
KDRULA8L	1	4	KDRULA8LE01	12.25 X 12.50 X 6.75	14.50	KDRULA8LE3R	11.50 X 10.00 X 12.00	19		
KDRULA9L	1.5	4	KDRULA9LE01	12.25 X 12.50 X 6.75	14.50	KDRULA9LE3R	11.50 X 10.00 X 12.00	19		
KDRULA1L	2	4	KDRULA1LE01	12.25 X 12.50 X 6.75	14.50	KDRULA1LE3R	11.50 X 10.00 X 12.00	19		
KDRULA2L	3	4	KDRULA2LE01	12.25 X 12.50 X 6.75	14.50	KDRULA2LE3R	11.50 X 10.00 X 12.00	19		
KDRULA3L	5	4	KDRULA3LE01	12.25 X 12.50 X 6.75	14.50	KDRULA3LE3R	11.50 X 10.00 X 12.00	19		
KDRULA4L	7.5	4	KDRULA4LE01	12.25 X 12.50 X 6.75	14.50	KDRULA4LE3R	11.50 X 10.00 X 12.00	19		
KDRULA5L	10	5	KDRULA5LE01	12.25 X 12.50 X 6.75	14.50	KDRULA5LE3R	11.50 X 10.00 X 12.00	19		
KDRULB2L	15	8	KDRULB2LE01	12.25 X 12.50 X 6.75	18.50	KDRULB2LE3R	11.50 X 10.00 X 12.00	23		
KDRULB1L	20	8	KDRULB1LE01	12.25 X 12.50 X 6.75	18.50	KDRULB1LE3R	11.50 X 10.00 X 12.00	23		
KDRULD1L	25	10	KDRULD1LE01	12.25 X 12.50 X 6.75	20.50	KDRULD1LE3R	11.50 X 10.00 X 12.00	25		
KDRULD2L	30	10	KDRULD2LE01	12.25 X 12.50 X 6.75	20.50	KDRULD2LE3R	11.50 X 10.00 X 12.00	25		
KDRULC1L	40	15	KDRULC1LE01	12.25 X 12.50 X 6.75	25.50	KDRULC1LE3R	11.50 X 10.00 X 12.00	30		
KDRULF2L	50	25	KDRULF2LE01	19.13 X 15.43 X 15.43	67	KDRULF2LE3R	19.18 X 15.62 X 19.50	63		
KDRULF4L	60	25	KDRULF4LE01	19.13 X 15.43 X 15.43	67	KDRULF4LE3R	19.18 X 15.62 X 19.50	63		
KDRULF3L	75	33	KDRULF3LE01	19.13 X 15.43 X 15.43	67	KDRULF3LE3R	19.18 X 15.62 X 19.50	67		
KDRULH3L	100	46	KDRULH3LE01	19.13 X 15.43 X 15.43	78	KDRULH3LE3R	19.18 X 15.62 X 19.50	78		
KDRULH2L	125	46	KDRULH2LE01	19.13 X 15.43 X 15.43	78	KDRULH2LE3R	19.18 X 15.62 X 19.50	78		
KDRULH1L	150	46	KDRULH1LE01	22.12 X 20.43 X 24.37	108	KDRULH1LE3R	22.15 X 20.62 X 28.50	116		
KDRULG3L	200	74	KDRULG3LE01	22.12 X 20.43 X 24.37	131	KDRULG3LE3R	22.15 X 20.62 X 28.50	144		
KDRULG1L	250	74	KDRULG1LE01	22.12 X 20.43 X 24.37	132	KDRULG1LE3R	22.15 X 20.62 X 28.50	145		
KDRULG2L	300	74	KDRULG2LE01	22.12 X 20.43 X 24.37	132	KDRULG2LE3R	22.15 X 20.62 X 28.50	145		
KDRULJ2L	350	80	KDRULJ2LE01	22.12 X 20.43 X 24.37	150	KDRULJ2LE3R	22.15 X 20.62 X 28.50	150		
KDRULJ1L	400	80	KDRULJ1LE01	22.12 X 20.43 X 24.37	150	KDRULJ1LE3R	22.15 X 20.62 X 28.50	150		
KDRULL1L	450	120	KDRULL1LE01	22.12 X 20.43 X 24.37	190	KDRULL1LE3R	22.15 X 20.62 X 28.50	190		
KDRULL2L	500	120	KDRULL2LE01	22.12 X 20.43 X 24.37	190	KDRULL2LE3R	22.15 X 20.62 X 28.50	190		
KDRULL3L	600	164	KDRULL3LE01	48.00 X 36.27 X 36.27	475					
KDRULS1L	700	180	KDRULS1LE01	48.00 X 36.27 X 36.27	490					
KDRULX2L	800	290	KDRULX2LE01	48.00 X 36.27 X 36.27	610					
KDRULX3L	900	305	KDRULX3LE01	48.00 X 36.27 X 36.27	615					
KDRULX1L	1000	317	KDRULX1LE01	48.00 X 36.27 X 36.27	630					
KDRULY1L	1100	502	KDRULY1LE01	48.00 X 36.27 X 36.27	900					
KDRULY2L	1250	524	KDRULY2LE01	48.00 X 36.27 X 36.27	925					

# 480 VOLTS HIGH-Z

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH	HEIGHT x WIDTH x DEPTH			HEIGHT x WIDTH x DEPTH	HEIGHT x WIDTH x DEPTH	
KDRULA6H	0.5	4	KDRULA6HE01	12.25 X 12.50 X 6.75	13.50	KDRULA6HE3R	11.50 X 10.00 X 12.00	19		
KDRULA7H	0.75	4	KDRULA7HE01	12.25 X 12.50 X 6.75	14.50	KDRULA7HE3R	11.50 X 10.00 X 12.00	19		
KDRULA8H	1	4	KDRULA8HE01	12.25 X 12.50 X 6.75	14.50	KDRULA8HE3R	11.50 X 10.00 X 12.00	19		
KDRULA9H	1.5	4	KDRULA9HE01	12.25 X 12.50 X 6.75	14.50	KDRULA9HE3R	11.50 X 10.00 X 12.00	19		
KDRULA1H	2	4	KDRULA1HE01	12.25 X 12.50 X 6.75	14.50	KDRULA1HE3R	11.50 X 10.00 X 12.00	19		
KDRULA2H	3	4	KDRULA2HE01	12.25 X 12.50 X 6.75	14.50	KDRULA2HE3R	11.50 X 10.00 X 12.00	19		
KDRULA3H	5	4	KDRULA3HE01	12.25 X 12.50 X 6.75	14.50	KDRULA3HE3R	11.50 X 10.00 X 12.00	19		
KDRULA4H	7.5	5	KDRULA4HE01	12.25 X 12.50 X 6.75	15.50	KDRULA4HE3R	11.50 X 10.00 X 12.00	20		
KDRULA5H	10	5	KDRULA5HE01	12.25 X 12.50 X 6.75	15.50	KDRULA5HE3R	11.50 X 10.00 X 12.00	20		
KDRULB2H	15	7	KDRULB2HE01	12.25 X 12.50 X 6.75	17.50	KDRULB2HE3R	11.50 X 10.00 X 12.00	22		
KDRULC3H	20	15	KDRULC3HE01	12.25 X 12.50 X 6.75	25.50	KDRULC3HE3R	11.50 X 10.00 X 12.00	30		
KDRULC1H	25	15	KDRULC1HE01	12.25 X 12.50 X 6.75	25.50	KDRULC1HE3R	11.50 X 10.00 X 12.00	30		
KDRULE2H	30	16	KDRULE2HE01	12.25 X 12.50 X 6.75	26.50	KDRULE2HE3R	11.50 X 10.00 X 12.00	31		
KDRULF4H	40	25	KDRULF4HE01	19.13 X 15.43 X 15.43	67	KDRULF4HE3R	19.18 X 15.62 X 19.50	63		
KDRULF1H	50	25	KDRULF1HE01	19.13 X 15.43 X 15.43	67	KDRULF1HE3R	19.18 X 15.62 X 19.50	63		
KDRULF2H	60	25	KDRULF2HE01	19.13 X 15.43 X 15.43	67	KDRULF2HE3R	19.18 X 15.62 X 19.50	63		
KDRULH2H	75	52	KDRULH2HE01	19.13 X 15.43 X 15.43	82	KDRULH2HE3R	19.18 X 15.62 X 19.50	82		
KDRULH1H	100	52	KDRULH1HE01	19.13 X 15.43 X 15.43	82	KDRULH1HE3R	19.18 X 15.62 X 19.50	82		
KDRULG3H	125	57	KDRULG3HE01	22.12 X 20.43 X 24.37	122	KDRULG3HE3R	22.15 X 20.62 X 28.50	127		
KDRULG1H	150	60	KDRULG1HE01	22.12 X 20.43 X 24.37	127	KDRULG1HE3R	22.15 X 20.62 X 28.50	127		
KDRULJ1H	200	75	KDRULJ1HE01	22.12 X 20.43 X 24.37	136	KDRULJ1HE3R	22.15 X 20.62 X 28.50	145		
KDRULL1H	250	105	KDRULL1HE01	22.12 X 20.43 X 24.37	162	KDRULL1HE3R	22.12 X 20.43 X 24.37	175		
KDRULL2H	300	105	KDRULL2HE01	22.12 X 20.43 X 24.37	162	KDRULL2HE3R	22.12 X 20.43 X 24.37	175		
KDRULL3H	350	109	KDRULL3HE01	22.12 X 20.43 X 24.37	166	KDRULL3HE3R	22.15 X 20.62 X 28.50	180		
KDRULL4H	400	135	KDRULL4HE01	22.12 X 20.43 X 24.37	176	KDRULL4HE3R	22.15 X 20.62 X 28.50	205		
KDRULL5H	450	135	KDRULL5HE01	36.00 X 28.39 X 30.19	295	KDRULL5HE3R	36.00 X 28.39 X 36.86	305		
KDRULL6H	500	135	KDRULL6HE01	36.00 X 28.39 X 30.19	295	KDRULL6HE3R	36.00 X 28.39 X 36.86	305		
KDRULS1H	600	272	KDRULS1HE01	48.00 X 36.27 X 36.27	685					
KDRULL7H	700	295	KDRULL7HE01	48.00 X 36.27 X 36.27	705					
KDRULL8H	800	305	KDRULL8HE01	48.00 X 36.27 X 36.27	715					
KDRULX2H	900	308	KDRULX3HE01	48.00 X 36.27 X 36.27	715					
KDRULX4H	1000	317	KDRULX4HE01	48.00 X 36.27 X 36.27	725					
KDRULY2H	1100	550	KDRULY2HE01	48.00 X 36.27 X 36.27	950					
KDRULY1H	1250	695	KDRULY1HE01	48.00 X 36.27 X 36.27	1000					

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA55L	0.5	0.9	6	C1	TB	4	4.18	3.75	4	KDRA55LC1
KDRA56L	0.75	1.3	9.3	C1	TB	4	4.18	3.75	4	KDRA56LC1
KDRA50L	1	1.7	12	C1	TB	4	4.18	3.75	4	KDRA50LC1
KDRA51L	1.5	2.4	19	C1	TB	4	4.18	3.75	4	KDRA51LC1
KDRA46L	2	2.7	22	C1	TB	4	4.18	3.75	4	KDRA46LC1
KDRA52L	3	3.9	23.3	C1	TB	4	4.18	3.75	4	KDRA52LC1
KDRA47L	5	6.1	34.7	C1	TB	4	4.18	3.75	4	KDRA47LC1
KDRA48L	7.5	9	42.9	C1	TB	4	4.18	3.75	4	KDRA48LC1
KDRA49L	10	11	43.8	C1	TB	4	4.18	3.75	5	KDRA49LC1
KDRB45L	15	17	66.2	C1	TB	5	6	4	8	KDRB45LC1
KDRB44L	20	22	71.2	C1	TB	5	6	4	8	KDRB44LC1
KDRB43L	25	27	76.7	C1	TB	5	6	4	8	KDRB43LC1
KDRD42L	30	32	106	C2	TB	5.75	7.2	4.25	12	KDRD42LC2
KDRC43L	40	41	109	C2	TB	5.75	7.2	5	15	KDRC43LC2
KDRC44L	50	52	123	C2	TB	5.75	7.2	5	15	KDRC44LC2
KDRF46L	60	62	181	C3	TB	7	9	6	30	KDRF46LC3
KDRF47L	75	77	194	C3	TB	7	9	6	30	KDRF47LC3
KDRF45L	100	99	194	C4	CB	7	9	6	30	KDRF45LC4
KDRH43L	125	125	261	C4	CB	9	11	7	45	KDRH43LC4
KDRH44L	150	144	253	C4	CB	9	11	7	45	KDRH44LC4
KDRI42L	200	192	342	C4	CB	9	11	7	50	KDRI42LC4
KDRG47L	250	242	394	C4	CB	9	11	8	65	KDRG47LC4
KDRG45L	300	289	374	C4	CB	9	11	8	65	KDRG45LC4
KDRJ45L	350	336	474	C5	CB	9	11	9	70	KDRJ45LC5
KDRJ43L	400	382	463	C5	CB	9	11	9	70	KDRJ43LC5
KDRJ44L	450	412	473	C5	CB	9	11	9	70	KDRJ44LC5
KDRL45L	500	472	587	C5	CB	11.38	15	11	110	KDRL45LC5
KDRL42L	600	576	716	C5	CB	11.38	15	11	150	KDRL42LC5
KDRL43L	700	672	836	C5	CB	11.38	15	11	270	KDRL43LC5
KDRL44L	800	768	955	C5	CB	11.38	15	11	275	KDRL44LC5
KDRX41L	900	864	1075	C7	CB	18.5	18.25	12.5	280	KDRX41LC7
KDRX42L	1000	960	1194	C7	CB	18.5	18.25	12.5	290	KDRX42LC7
KDRX43L	1100	1056	1313	C7	CB	18.5	18.25	12.5	315	KDRX43LC7
KDRX44L	1250	1200	1493	C7	CB	18.5	18.25	12.5	325	KDRX44LC7
KDRY41L	1500	1440	1791	C7	CB	20	21	16	465	KDRY41LC7

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA55H	0.5	0.9	9	C1	TB	4	4.18	3.75	4	KDRA55HC1
KDRA52H	0.75	1.3	13	C1	TB	4	4.18	3.75	4	KDRA52HC1
KDRA50H	1	1.7	17	C1	TB	4	4.18	3.75	4	KDRA50HC1
KDRA51H	1.5	2.4	26	C1	TB	4	4.18	3.75	4	KDRA51HC1
KDRA43H	2	2.7	24	C1	TB	4	4.18	3.75	4	KDRA43HC1
KDRA44H	3	3.9	35	C1	TB	4	4.18	3.75	4	KDRA44HC1
KDRA45H	5	6.1	48	C1	TB	4	4.18	3.75	4	KDRA45HC1
KDRB42H	7.5	9	61	C2	TB	5	6	4	8	KDRB42HC2
KDRB43H	10	11	71	C2	TB	5	6	4	8	KDRB43HC2
KDRB44H	15	17	73	C2	TB	5	6	4	8	KDRB44HC2
KDRD41H	20	22	106	C2	TB	5.75	7.2	4.25	12	KDRD41HC2
KDRC43H	25	27	107	C2	TB	5.75	7.2	5	15	KDRC43HC2
KDRE42H	30	32	140	C2	TB	5.75	7.2	5	16	KDRE42HC2
KDRF44H	40	41	172	C3	TB	7	9	6	30	KDRF44HC3
KDRF45H	50	52	166	C3	TB	7	9	6	30	KDRF45HC3
KDRH43H	60	62	205	C4	TB	9	11	6	45	KDRH43HC4
KDRH42H	75	77	251	C4	TB	9	11	6	45	KDRH42HC4
KDRI41H	100	99	268	C4	CB	9	11	7	50	KDRI41HC4
KDRG44H	125	125	381	C4	CB	9	11	7.5	65	KDRG44HC4
KDRG45H	150	144	406	C4	CB	9	11	8	65	KDRG45HC4
KDRJ41H	200	192	466	C5	CB	9	11	9	70	KDRJ41HC5
KDRL46H	250	242	472	C5	CB	11.38	15	11	110	KDRL46HC5
KDRL47H	300	289	490	C5	CB	11.38	15	11	110	KDRL47HC5
KDRL48H	350	336	539	C5	CB	11.38	15	11	110	KDRL48HC5
KDRL49H	400	382	603	C5	CB	11.38	15	11	110	KDRL49HC5
KDRS47H	450	412	521	C5	CB	11.38	15	13	165	KDRS47HC5
KDRS46H	500	472	661	C5	CB	11.38	15	13	165	KDRS46HC5
KDRS49H	600	576	1194	C5	CB	11.38	15	13	175	KDRS49HC5
KDRS48H	700	672	1393	C5	CB	11.38	15	13	200	KDRS48HC5
KDRX44H	800	768	1592	C7	CB	18.5	18.25	12.5	280	KDRX44HC7
KDRX41H	900	864	1791	C7	CB	18.5	18.25	12.5	290	KDRX41HC7
KDRX42H	1000	960	1990	C7	CB	18.5	18.25	12.5	375	KDRX42HC7
KDRX43H	1100	1056	2189	C7	CB	18.5	18.25	12.5	450	KDRX43HC7
KDRY41H	1250	1200	2488	C7	CB	20	21	16	475	KDRY41HC7
KDRY42H	1500	1440	2985	C7	CB	20	21	16	575	KDRY42HC7

**Watts Loss**

The watts loss shown above are based on the effects of increased losses in both the core steel laminations and wire due to the presence of harmonic currents. Consideration of eddy currents in the watts loss calculation is important. The watt losses in the reactor core caused by eddy currents are proportional to the harmonic frequency squared. The harmonic current levels were derived from a typical 6 pulse converter as follows:

Harmonic	Current Distortion
5th	17%
7th	11%
11th	4.5%

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH				HEIGHT x WIDTH x DEPTH		
KDRULA55L	0.5	4	KDRULA55LE01	12.25 X 12.50 X 6.75		14.50	KDRULA55LE3R	11.50 X 10.00 X 12.00		19
KDRULA56L	0.75	4	KDRULA56LE01	12.25 X 12.50 X 6.75		14.50	KDRULA56LE3R	11.50 X 10.00 X 12.00		19
KDRULA50L	1	4	KDRULA50LE01	12.25 X 12.50 X 6.75		14.50	KDRULA50LE3R	11.50 X 10.00 X 12.00		19
KDRULA51L	1.5	4	KDRULA51LE01	12.25 X 12.50 X 6.75		14.50	KDRULA51LE3R	11.50 X 10.00 X 12.00		19
KDRULA46L	2	4	KDRULA46LE01	12.25 X 12.50 X 6.75		14.50	KDRULA46LE3R	11.50 X 10.00 X 12.00		19
KDRULA52L	3	4	KDRULA52LE01	12.25 X 12.50 X 6.75		14.50	KDRULA52LE3R	11.50 X 10.00 X 12.00		19
KDRULA47L	5	4	KDRULA47LE01	12.25 X 12.50 X 6.75		14.50	KDRULA47LE3R	11.50 X 10.00 X 12.00		19
KDRULA48L	7.5	4	KDRULA48LE01	12.25 X 12.50 X 6.75		14.50	KDRULA48LE3R	11.50 X 10.00 X 12.00		19
KDRULA49L	10	5	KDRULA49LE01	12.25 X 12.50 X 6.75		14.50	KDRULA49LE3R	11.50 X 10.00 X 12.00		19
KDRULB45L	15	8	KDRULB45LE01	12.25 X 12.50 X 6.75		18.50	KDRULB45LE3R	11.50 X 10.00 X 12.00		23
KDRULB44L	20	8	KDRULB44LE01	12.25 X 12.50 X 6.75		18.50	KDRULB44LE3R	11.50 X 10.00 X 12.00		23
KDRULB43L	25	8	KDRULB43LE01	12.25 X 12.50 X 6.75		18.50	KDRULB43LE3R	11.50 X 10.00 X 12.00		23
KDRULD42L	30	12	KDRULD42LE01	12.25 X 12.50 X 6.75		22.50	KDRULD42LE3R	11.50 X 10.00 X 12.00		27
KDRULC43L	40	15	KDRULC43LE01	12.25 X 12.50 X 6.75		25.50	KDRULC43LE3R	11.50 X 10.00 X 12.00		30
KDRULC44L	50	15	KDRULC44LE01	12.25 X 12.50 X 6.75		25.50	KDRULC44LE3R	11.50 X 10.00 X 12.00		30
KDRULF46L	60	30	KDRULF46LE01	19.13 X 15.43 X 15.43		67	KDRULF46LE3R	19.18 X 15.62 X 19.50		68
KDRULF47L	75	30	KDRULF47LE01	19.13 X 15.43 X 15.43		67	KDRULF47LE3R	19.18 X 15.62 X 19.50		68
KDRULF45L	100	33	KDRULF45LE01	19.13 X 15.43 X 15.43		67	KDRULF45LE3R	19.18 X 15.62 X 19.50		67
KDRULH43L	125	48	KDRULH43LE01	19.13 X 15.43 X 15.43		82	KDRULH43LE3R	19.18 X 15.62 X 19.50		82
KDRULH44L	150	51	KDRULH44LE01	19.13 X 15.43 X 15.43		82	KDRULH44LE3R	19.18 X 15.62 X 19.50		82
KDRULI42L	200	56	KDRULI42LE01	22.12 X 20.43 X 24.37		117	KDRULI42LE3R	22.15 X 20.62 X 28.50		126
KDRULG47L	250	74	KDRULG47LE01	22.12 X 20.43 X 24.37		131	KDRULG47LE3R	22.15 X 20.62 X 28.50		144
KDRULG45L	300	74	KDRULG45LE01	22.12 X 20.43 X 24.37		131	KDRULG45LE3R	22.15 X 20.62 X 28.50		144
KDRULJ45L	350	79	KDRULJ45LE01	22.12 X 20.43 X 24.37		136	KDRULJ45LE3R	22.15 X 20.62 X 28.50		150
KDRULJ43L	400	79	KDRULJ43LE01	22.12 X 20.43 X 24.37		136	KDRULJ43LE3R	22.15 X 20.62 X 28.50		150
KDRULJ44L	450	79	KDRULJ44LE01	22.12 X 20.43 X 24.37		136	KDRULJ44LE3R	22.15 X 20.62 X 28.50		150
KDRULL45L	500	125	KDRULL45LE01	36.00 X 28.39 X 30.19		285	KDRULL45LE3R	36.00 X 28.39 X 36.86		295
KDRULL42L	600	165	KDRULL42LE01	36.00 X 28.39 X 30.19		325	KDRULL42LE3R	36.00 X 28.39 X 36.86		335
KDRULL43L	700	288	KDRULL43LE01	48.00 X 36.27 X 36.27		598				
KDRULL44L	800	293	KDRULL44LE01	48.00 X 36.27 X 36.27		600				
KDRULX41L	900	304	KDRULX41LE01	48.00 X 36.27 X 36.27		615				
KDRULX42L	1000	314	KDRULX42LE01	48.00 X 36.27 X 36.27		625				
KDRULX43L	1100	340	KDRULX43LE01	48.00 X 36.27 X 36.27		650				
KDRULX44L	1250	350	KDRULX44LE01	48.00 X 36.27 X 36.27		660				
KDRULY41L	1500	525	KDRULY41LE01	48.00 X 36.27 X 36.27		835				

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH				HEIGHT x WIDTH x DEPTH		
KDRULA55H	0.5	4	KDRULA55HE01	12.25 X 12.50 X 6.75		14.50	KDRULA55HE3R	11.50 X 10.00 X 12.00		19
KDRULA52H	0.75	4	KDRULA52HE01	12.25 X 12.50 X 6.75		14.50	KDRULA52HE3R	11.50 X 10.00 X 12.00		19
KDRULA50H	1	4	KDRULA50HE01	12.25 X 12.50 X 6.75		14.50	KDRULA50HE3R	11.50 X 10.00 X 12.00		19
KDRULA51H	1.5	4	KDRULA51HE01	12.25 X 12.50 X 6.75		14.50	KDRULA51HE3R	11.50 X 10.00 X 12.00		19
KDRULA43H	2	4	KDRULA43HE01	12.25 X 12.50 X 6.75		14.50	KDRULA43HE3R	11.50 X 10.00 X 12.00		19
KDRULA44H	3	4	KDRULA44HE01	12.25 X 12.50 X 6.75		14.50	KDRULA44HE3R	11.50 X 10.00 X 12.00		19
KDRULA45H	5	4	KDRULA45HE01	12.25 X 12.50 X 6.75		14.50	KDRULA45HE3R	11.50 X 10.00 X 12.00		19
KDRULB42H	7.5	8	KDRULB42HE01	12.25 X 12.50 X 6.75		18.50	KDRULB42HE3R	11.50 X 10.00 X 12.00		23
KDRULB43H	10	8	KDRULB43HE01	12.25 X 12.50 X 6.75		18.50	KDRULB43HE3R	11.50 X 10.00 X 12.00		23
KDRULB44H	15	8	KDRULB44HE01	12.25 X 12.50 X 6.75		18.50	KDRULB44HE3R	11.50 X 10.00 X 12.00		23
KDRULD41H	20	12	KDRULD41HE01	12.25 X 12.50 X 6.75		22.50	KDRULD41HE3R	11.50 X 10.00 X 12.00		27
KDRULC43H	25	15	KDRULC43HE01	12.25 X 12.50 X 6.75		25.50	KDRULC43HE3R	11.50 X 10.00 X 12.00		30
KDRULE42H	30	16	KDRULE42HE01	12.25 X 12.50 X 6.75		26.50	KDRULE42HE3R	11.50 X 10.00 X 12.00		31
KDRULF44H	40	30	KDRULF44HE01	19.13 X 15.43 X 15.43		67	KDRULF44HE3R	19.18 X 15.62 X 19.50		68
KDRULF45H	50	30	KDRULF45HE01	19.13 X 15.43 X 15.43		67	KDRULF45HE3R	19.18 X 15.62 X 19.50		68
KDRULH43H	60	45	KDRULH43HE01	19.13 X 15.43 X 15.43		82	KDRULH43HE3R	19.18 X 15.62 X 19.50		85
KDRULH42H	75	45	KDRULH42HE01	19.13 X 15.43 X 15.43		82	KDRULH42HE3R	19.18 X 15.62 X 19.50		85
KDRULI41H	100	53	KDRULI41HE01	19.13 X 15.43 X 15.43		87	KDRULI41HE3R	19.18 X 15.62 X 19.50		90
KDRULG44H	125	68	KDRULG44HE01	19.13 X 15.43 X 15.43		102	KDRULG44HE3R	19.18 X 15.62 X 19.50		106
KDRULG45H	150	71	KDRULG45HE01	22.12 X 20.43 X 24.37		135	KDRULG45HE3R	22.15 X 20.62 X 28.50		135
KDRULJ41H	200	76	KDRULJ41HE01	22.12 X 20.43 X 24.37		137	KDRULJ41HE3R	22.15 X 20.62 X 28.50		145
KDRULL46H	250	120	KDRULL46HE01	22.12 X 20.43 X 24.37		176	KDRULL46HE3R	22.15 X 20.62 X 28.50		190
KDRULL47H	300	120	KDRULL47HE01	22.12 X 20.43 X 24.37		177	KDRULL47HE3R	22.15 X 20.62 X 28.50		190
KDRULL48H	350	120	KDRULL48HE01	22.12 X 20.43 X 24.37		177	KDRULL48HE3R	22.15 X 20.62 X 28.50		190
KDRULL49H	400	120	KDRULL49HE01	22.12 X 20.43 X 24.37		177	KDRULL49HE3R	22.15 X 20.62 X 28.50		190
KDRULS47H	450	175	KDRULS47HE01	36.00 X 28.39 X 30.19		335	KDRULS47HE3R	36.00 X 28.39 X 36.86		345
KDRULS46H	500	175	KDRULS46HE01	36.00 X 28.39 X 30.19		335	KDRULS46HE3R	36.00 X 28.39 X 36.86		345
KDRULS49H	600	187	KDRULS49HE01	36.00 X 28.39 X 30.19		350	KDRULS49HE3R	36.00 X 28.39 X 36.86		360
KDRULS48H	700	215	KDRULS48HE01	48.00 X 36.27 X 36.27		525				
KDRULX44H	800	298	KDRULX44HE01	48.00 X 36.27 X 36.27		600				
KDRULX41H	900	308	KDRULX41HE01	48.00 X 36.27 X 36.27		615				
KDRULX42H	1000	393	KDRULX42HE01	48.00 X 36.27 X 36.27		700				
KDRULX43H	1100	468	KDRULX43HE01	48.00 X 36.27 X 36.27		775				
KDRULY41H	1250	505	KDRULY41HE01	48.00 X 36.27 X 36.27		815				
KDRULY42H	1500	600	KDRULY42HE01	48.00 X 36.27 X 36.27		915				

# 208 / 240 VOLTS LOW-Z

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA54L	0.5	2.4	7	C1	TB	4	4.18	3.75	4	KDRA54LC1
KDRA53L	0.75	3.5	12	C1	TB	4	4.18	3.75	4	KDRA53LC1
KDRA25L	1	4.6	11	C1	TB	4	4.18	3.75	4	KDRA25LC1
KDRA26L	1.5	6.6	18	C1	TB	4	4.18	3.75	4	KDRA26LC1
KDRA27L	2	7.5	21	C1	TB	4	4.18	3.75	4	KDRA27LC1
KDRA28L	3	10.6	29	C1	TB	4	4.18	3.75	4	KDRA28LC1
KDRB22L	5	16.7	38	C1	TB	5	6	4	8	KDRB22LC1
KDRB23L	7.5	24.2	48	C2	TB	5	6	4	8	KDRB23LC2
KDRD25L	10	30.8	64	C2	TB	5.75	7.2	4.25	12	KDRD25LC2
KDRD24L	15	46.2	85	C2	TB	5.75	7.2	4.25	12	KDRD24LC2
KDRD26L	20	59.4	94	C2	TB	5.75	7.2	4.25	12	KDRD26LC2
KDRC22L	25	74.8	114	C2	CB	5.75	7.2	5	15	KDRC22LC2
KDRF24L	30	88	135	C4	CB	7	9	6	30	KDRF24LC4
KDRF25L	40	114	149	C4	CB	7	9	6	30	KDRF25LC4
KDRF26L	50	143	154	C4	CB	7	9	6	30	KDRF26LC4
KDRH22L	60	169	209	C4	CB	9	11	7	45	KDRH22LC4
KDRI23L	75	211	294	C4	CB	9	11	7	50	KDRI23LC4
KDRI24L	100	273	276	C4	CB	9	11	7	50	KDRI24LC4
KDRG22L	125	343	370	C4	CB	9	11	8	65	KDRG22LC4
KDRJ23L	150	396	401	C5	CB	9	11	9	70	KDRJ23LC5
KDRJ24L	200	528	442	C5	CB	9	11	9	70	KDRJ24LC5

# 208 / 240 VOLTS HIGH-Z

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	WATTS LOSS	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	ENCLOSED PART NUMBER
						HEIGHT	WIDTH	DEPTH		
KDRA54H	0.5	2.4	14	C1	TB	4	4.18	3.75	4	KDRA54HC1
KDRA53H	0.75	3.5	16.8	C1	TB	4	4.18	3.75	4	KDRA53HC1
KDRA25H	1	4.6	23.6	C1	TB	4	4.18	3.75	4	KDRA25HC1
KDRA27H	1.5	6.6	30.6	C1	TB	4	4.18	3.75	4	KDRA27HC1
KDRA26H	2	7.5	30.5	C1	TB	4	4.18	3.75	4	KDRA26HC1
KDRA28H	3	10.6	43.1	C1	TB	4	4.18	3.75	4	KDRA28HC1
KDRB25H	5	16.7	53.1	C1	TB	5	6	4	8	KDRB25HC1
KDRB26H	7.5	24.2	66.5	C1	TB	5	6	4	8	KDRB26HC1
KDRD21H	10	30.8	91.8	C2	TB	5.75	7.2	4.25	12	KDRD21HC2
KDRD22H	15	46.2	108	C2	TB	5.75	7.2	4.25	12	KDRD22HC2
KDRC22H	20	59.4	113	C2	TB	5.75	7.2	5	15	KDRC22HC2
KDRF28H	25	74.8	151	C3	TB	7	9	6	30	KDRF28HC3
KDRF25H	30	88	179	C4	CB	7	9	6	30	KDRF25HC4
KDRF26H	40	114	193	C4	CB	7	9	6	30	KDRF26HC4
KDRH24H	50	143	201	C4	CB	9	11	7	38	KDRH24HC4
KDRH23H	60	169	220	C4	CB	9	11	7	45	KDRH23HC4
KDRI22H	75	211	312	C4	CB	9	11	7	50	KDRI22HC4
KDRI21H	100	273	296	C4	CB	9	11	7	50	KDRI21HC4
KDRG25H	125	343	347	C4	CB	9	11	8	65	KDRG25HC4
KDRJ22H	150	396	465	C5	CB	9	11	9	70	KDRJ22HC5
KDRJ21H	200	528	516	C5	CB	9	11	9	70	KDRJ21HC5

## KDR At The Output of The Drive

PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	NEMA 1 ENCLOSED PART NUMBER
					HEIGHT	WIDTH	DEPTH		
KDRA1P	2	3.4	C1	TB	4	4.18	3.75	4	KDRA1PC1
KDRA2P	3	4.8	C1	TB	4	4.18	3.75	4	KDRA2PC1
KDRA3P	5	7.6	C1	TB	4	4.18	3.75	4	KDRA3PC1
KDRA4P	7.5	11	C1	TB	4	4.18	3.75	5	KDRA4PC1
KDRB1P	10	14	C1	TB	5	6	4	7	KDRB1PC1
KDRD1P	15	21	C2	TB	6	7.20	4.25	10	KDRD1PC2
KDRD2P	20	27	C2	TB	6	7.20	4.25	10	KDRD2PC2
KDRD3P	25	34	C2	TB	6	7.20	4.25	12	KDRD3PC2
KDRD4P	30	40	C2	TB	6	7.20	4.25	12	KDRD4PC2
KDRC1P	40	52	C2	TB	5.75	7.20	5	15	KDRC1PC2
KDRF1P	50	65	C3	TB	7	9	6	25	KDRF1PC3
KDRF2P	60	77	C3	TB	7	9	6	25	KDRF2PC3
KDRF3P	75	96	C4	CB	7	9	6	30	KDRF3PC4
KDRH1P	100	124	C4	CB	9	11	7	40	KDRH1PC4
KDR1P	125	156	C4	CB	9	11	7	50	KDR1PC4
KDR2P	150	180	C4	CB	9	11	7	45	KDR2PC4
KDRG1P	200	240	C4	CB	9	11	8	60	KDRG1PC4
KDRJ1P	250	302	C5	CB	9	11	9	70	KDRJ1PC5
KDRJ2P	300	361	C5	CB	9	11	9	70	KDRJ2PC5
KDRL1P	350	414	C5	CB	11.38	14.50	9.31	85	KDRL1PC5
KDRL2P	400	477	C5	CB	11.38	14.50	9.31	95	KDRL2PC5
KDRL3P	450	515	C5	CB	11.38	14.50	9.31	100	KDRL3PC5
KDRL4P	500	590	C5	CB	11.38	14.50	9.31	100	KDRL4PC5

# 480 VOLTS OUTPUT

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH				HEIGHT x WIDTH x DEPTH		
KDRULA54L	0.5	4	KDRULA54LE01	12.25 X 12.50 X 6.75		14.50	KDRULA54LE3R	11.50 X 10.00 X 12.00		19
KDRULA53L	0.75	4	KDRULA53LE01	12.25 X 12.50 X 6.75		14.50	KDRULA53LE3R	11.50 X 10.00 X 12.00		19
KDRULA25L	1	4	KDRULA25LE01	12.25 X 12.50 X 6.75		14.50	KDRULA25LE3R	11.50 X 10.00 X 12.00		19
KDRULA26L	1.5	4	KDRULA26LE01	12.25 X 12.50 X 6.75		14.50	KDRULA26LE3R	11.50 X 10.00 X 12.00		19
KDRULA27L	2	4	KDRULA27LE01	12.25 X 12.50 X 6.75		14.50	KDRULA27LE3R	11.50 X 10.00 X 12.00		19
KDRULA28L	3	4	KDRULA28LE01	12.25 X 12.50 X 6.75		14.50	KDRULA28LE3R	11.50 X 10.00 X 12.00		19
KDRULB22L	5	8	KDRULB22LE01	12.25 X 12.50 X 6.75		18.50	KDRULB22LE3R	11.50 X 10.00 X 12.00		23
KDRULB23L	7.5	8	KDRULB23LE01	12.25 X 12.50 X 6.75		18.50	KDRULB23LE3R	11.50 X 10.00 X 12.00		23
KDRULD25L	10	12	KDRULD25LE01	12.25 X 12.50 X 6.75		22.50	KDRULD25LE3R	11.50 X 10.00 X 12.00		27
KDRULD24L	15	12	KDRULD24LE01	12.25 X 12.50 X 6.75		22.50	KDRULD24LE3R	11.50 X 10.00 X 12.00		27
KDRULD26L	20	12	KDRULD26LE01	12.25 X 12.50 X 6.75		22.50	KDRULD26LE3R	11.50 X 10.00 X 12.00		27
KDRULC22L	25	15	KDRULC22LE01	12.25 X 12.50 X 6.75		25.50	KDRULC22LE3R	11.50 X 10.00 X 12.00		30
KDRULF24L	30	33	KDRULF24LE01	19.13 X 15.43 X 15.43		67	KDRULF24LE3R	19.18 X 15.62 X 19.50		67
KDRULF25L	40	33	KDRULF25LE01	19.13 X 15.43 X 15.43		67	KDRULF25LE3R	19.18 X 15.62 X 19.50		67
KDRULF26L	50	36	KDRULF26LE01	19.13 X 15.43 X 15.43		67	KDRULF26LE3R	19.18 X 15.62 X 19.50		67
KDRULH22L	60	51	KDRULH22LE01	22.12 X 20.43 X 24.37		113	KDRULH22LE3R	22.15 X 20.62 X 28.50		116
KDRULI23L	75	56	KDRULI23LE01	22.12 X 20.43 X 24.37		117	KDRULI23LE3R	22.15 X 20.62 X 28.50		126
KDRULI24L	100	56	KDRULI24LE01	22.12 X 20.43 X 24.37		117	KDRULI24LE3R	22.15 X 20.62 X 28.50		126
KDRULG22L	125	74	KDRULG22LE01	22.12 X 20.43 X 24.37		132	KDRULG22LE3R	22.15 X 20.62 X 28.50		145
KDRULJ23L	150	80	KDRULJ23LE01	22.12 X 20.43 X 24.37		137	KDRULJ23LE3R	22.15 X 20.62 X 28.50		150
KDRULJ24L	200	80	KDRULJ24LE01	22.12 X 20.43 X 24.37		150	KDRULJ24LE3R	22.15 X 20.62 X 28.50		150

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH				HEIGHT x WIDTH x DEPTH		
KDRULA54H	0.5	4	KDRULA54HE01	12.25 X 12.50 X 6.75		14.50	KDRULA54HE3R	11.50 X 10.00 X 12.00		19
KDRULA53H	0.75	4	KDRULA53HE01	12.25 X 12.50 X 6.75		14.50	KDRULA53HE3R	11.50 X 10.00 X 12.00		19
KDRULA25H	1	4	KDRULA25HE01	12.25 X 12.50 X 6.75		14.50	KDRULA25HE3R	11.50 X 10.00 X 12.00		19
KDRULA27H	1.5	4	KDRULA27HE01	12.25 X 12.50 X 6.75		14.50	KDRULA27HE3R	11.50 X 10.00 X 12.00		19
KDRULA26H	2	4	KDRULA26HE01	12.25 X 12.50 X 6.75		14.50	KDRULA26HE3R	11.50 X 10.00 X 12.00		19
KDRULA28H	3	4	KDRULA28HE01	12.25 X 12.50 X 6.75		14.50	KDRULA28HE3R	11.50 X 10.00 X 12.00		19
KDRULB25H	5	8	KDRULB25HE01	12.25 X 12.50 X 6.75		18.50	KDRULB25HE3R	11.50 X 10.00 X 12.00		23
KDRULB26H	7.5	8	KDRULB26HE01	12.25 X 12.50 X 6.75		18.50	KDRULB26HE3R	11.50 X 10.00 X 12.00		23
KDRULD21H	10	12	KDRULD21HE01	12.25 X 12.50 X 6.75		22.50	KDRULD21HE3R	11.50 X 10.00 X 12.00		27
KDRULD22H	15	12	KDRULD22HE01	12.25 X 12.50 X 6.75		22.50	KDRULD22HE3R	11.50 X 10.00 X 12.00		27
KDRULC22H	20	15	KDRULC22HE01	12.25 X 12.50 X 6.75		25.50	KDRULC22HE3R	11.50 X 10.00 X 12.00		30
KDRULF28H	25	30	KDRULF28HE01	19.13 X 15.43 X 15.43		67	KDRULF28HE3R	19.18 X 15.62 X 19.50		67
KDRULF25H	30	33	KDRULF25HE01	19.13 X 15.43 X 15.43		67	KDRULF25HE3R	19.18 X 15.62 X 19.50		67
KDRULF26H	40	33	KDRULF26HE01	19.13 X 15.43 X 15.43		67	KDRULF26HE3R	19.18 X 15.62 X 19.50		67
KDRULH24H	50	40	KDRULH24HE01	19.13 X 15.43 X 15.43		70	KDRULH24HE3R	19.18 X 15.62 X 19.50		72
KDRULH23H	60	51	KDRULH23HE01	19.13 X 15.43 X 15.43		81	KDRULH23HE3R	19.18 X 15.62 X 19.50		81
KDRULI22H	75	56	KDRULI22HE01	22.12 X 20.43 X 24.37		117	KDRULI22HE3R	22.15 X 20.62 X 28.50		126
KDRULI21H	100	56	KDRULI21HE01	22.12 X 20.43 X 24.37		117	KDRULI21HE3R	22.15 X 20.62 X 28.50		126
KDRULG25H	125	74	KDRULG25HE01	22.12 X 20.43 X 24.37		132	KDRULG25HE3R	22.15 X 20.62 X 28.50		145
KDRULJ22H	150	79	KDRULJ22HE01	22.12 X 20.43 X 24.37		136	KDRULJ22HE3R	22.15 X 20.62 X 28.50		150
KDRULJ21H	200	80	KDRULJ21HE01	22.12 X 20.43 X 24.37		150	KDRULJ21HE3R	22.15 X 20.62 X 28.50		150

OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS		UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS		UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH				HEIGHT x WIDTH x DEPTH		
KDRULA1P	2	4	KDRULA1PE01	12.25 X 12.50 X 6.75		14.50	KDRULA1PE3R	11.50 X 10.00 X 12.00		19
KDRULA2P	3	4	KDRULA2PE01	12.25 X 12.50 X 6.75		14.50	KDRULA2PE3R	11.50 X 10.00 X 12.00		19
KDRULA3P	5	4	KDRULA3PE01	12.25 X 12.50 X 6.75		14.50	KDRULA3PE3R	11.50 X 10.00 X 12.00		19
KDRULA4P	7.5	5	KDRULA4PE01	12.25 X 12.50 X 6.75		14.50	KDRULA4PE3R	11.50 X 10.00 X 12.00		20
KDRULB1P	10	7	KDRULB1PE01	12.25 X 12.50 X 6.75		17.50	KDRULB1PE3R	11.50 X 10.00 X 12.00		22
KDRULD1P	15	10	KDRULD1PE01	12.25 X 12.50 X 6.75		20.50	KDRULD1PE3R	11.50 X 10.00 X 12.00		25
KDRULD2P	20	10	KDRULD2PE01	12.25 X 12.50 X 6.75		20.50	KDRULD2PE3R	11.50 X 10.00 X 12.00		25
KDRULD3P	25	12	KDRULD3PE01	12.25 X 12.50 X 6.75		20.50	KDRULD3PE3R	11.50 X 10.00 X 12.00		27
KDRULD4P	30	12	KDRULD4PE01	12.25 X 12.50 X 6.75		20.50	KDRULD4PE3R	11.50 X 10.00 X 12.00		27
KDRULC1P	40	15	KDRULC1PE01	12.25 X 12.50 X 6.75		25.50	KDRULC1PE3R	11.50 X 10.00 X 12.00		30
KDRULF1P	50	25	KDRULF1PE01	19.13 X 15.43 X 15.43		67	KDRULF1PE3R	19.18 X 15.62 X 19.50		63
KDRULF2P	60	25	KDRULF2PE01	19.13 X 15.43 X 15.43		67	KDRULF2PE3R	19.18 X 15.62 X 19.50		63
KDRULF3P	75	33	KDRULF3PE01	19.13 X 15.43 X 15.43		67	KDRULF3PE3R	19.18 X 15.62 X 19.50		67
KDRULH1P	100	43	KDRULH1PE01	19.13 X 15.43 X 15.43		77	KDRULH1PE3R	19.18 X 15.62 X 19.50		77
KDRULI1P	125	56	KDRULI1PE01	19.13 X 15.43 X 15.43		86	KDRULI1PE3R	19.18 X 15.62 X 19.50		95
KDRULI2P	150	56	KDRULI2PE01	22.12 X 20.43 X 24.37		111	KDRULI2PE3R	22.15 X 20.62 X 28.50		125
KDRULG1P	200	69	KDRULG1PE01	22.12 X 20.43 X 24.37		131	KDRULG1PE3R	22.15 X 20.62 X 28.50		140
KDRULJ1P	250	79	KDRULJ1PE01	22.12 X 20.43 X 24.37		136	KDRULJ1PE3R	22.15 X 20.62 X 28.50		150
KDRULJ2P	300	79	KDRULJ2PE01	22.12 X 20.43 X 24.37		136	KDRULJ2PE3R	22.15 X 20.62 X 28.50		150
KDRULL1P	350	95	KDRULL1PE01	22.12 X 20.43 X 24.37		151	KDRULL1PE3R	22.15 X 20.62 X 28.50		165
KDRULL2P	400	104	KDRULL2PE01	22.12 X 20.43 X 24.37		161	KDRULL2PE3R	22.15 X 20.62 X 28.50		175
KDRULL3P	450	109	KDRULL3PE01	22.12 X 20.43 X 24.37		166	KDRULL3PE3R	22.15 X 20.62 X 28.50		180
KDRULL4P	500	109	KDRULL4PE01	22.12 X 20.43 X 24.37		166	KDRULL4PE3R	22.15 X 20.62 X 28.50		180

# 575 VOLTS OUTPUT

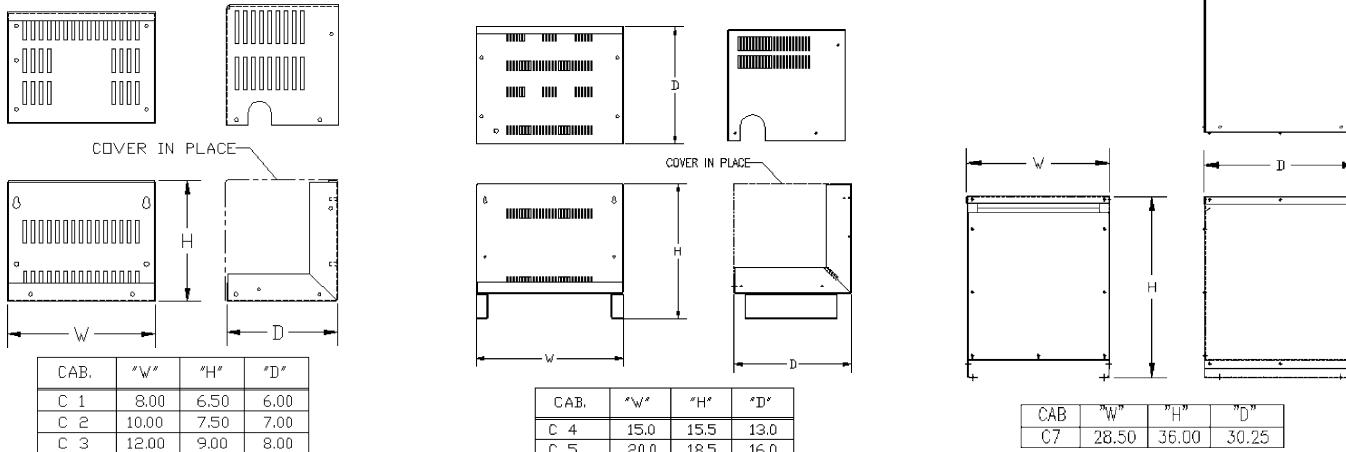
PART NUMBER	NEC MOTOR HP	NEC MOTOR CURRENT	MINIMUM CAB SIZE	STANDARD TERMS	DIMENSIONS			WEIGHT	NEMA 1 ENCLOSED PART NUMBER
					HEIGHT	WIDTH	DEPTH		
KDRA31P	2	2.7	C1	TB	4	4.18	3.75	4	KDRA31PC1
KDRA35P	3	3.9	C1	TB	4	4.18	3.75	4	KDRA35PC1
KDRA33P	5	6.1	C1	TB	4	4.18	3.75	4	KDRA33PC1
KDRA34P	7.5	9	C1	TB	4	4.18	3.75	5	KDRA34PC1
KDRA36P	10	11	C1	TB	4	4.18	3.75	5	KDRA36PC1
KDRD31P	15	17	C2	TB	5.75	7.2	4.25	10	KDRD31PC2
KDRD32P	20	22	C2	TB	5.75	7.2	4.25	10	KDRD32PC2
KDRD35P	25	27	C2	TB	5.75	7.2	4.25	10	KDRD35PC2
KDRD33P	30	32	C2	TB	5.75	7.2	4.25	12	KDRD33PC2
KDRD34P	40	41	C2	TB	5.75	7.2	4.25	12	KDRD34PC2
KDRC31P	50	52	C2	TB	5.75	7.2	5	15	KDRC31PC2
KDRF31P	60	62	C3	TB	7	9	6	25	KDRF31PC3
KDRF32P	75	77	C3	TB	7	9	6	25	KDRF32PC3
KDRF33P	100	99	C4	CB	7	9	6	30	KDRF33PC4
KDRH31P	125	125	C4	CB	9	11	7	40	KDRH31PC4
KDRI31P	150	144	C4	CB	9	11	7	50	KDRI31PC4
KDRI32P	200	192	C4	CB	9	11	7	45	KDRI32PC4
KDRG31P	250	242	C4	CB	9	11	8	60	KDRG31PC4
KDRJ31P	300	289	C5	CB	9	11	9	70	KDRJ31PC5
KDRJ32P	350	336	C5	CB	9	11	9	70	KDRJ32PC5
KDRL31P	400	382	C5	CB	11.38	14.5	9.31	85	KDRL31PC5
KDRL35P	450	412	C5	CB	11.38	14.5	9.31	85	KDRL35PC5
KDRL32P	500	472	C5	CB	11.38	14.5	9.31	95	KDRL32PC5

Watt loss will vary due to fundamental frequency, carrier frequency and other system characteristics. KDR Drive Reactors comply with the thermal and altitude standards set forth by NEMA's Standard ST20-1992.

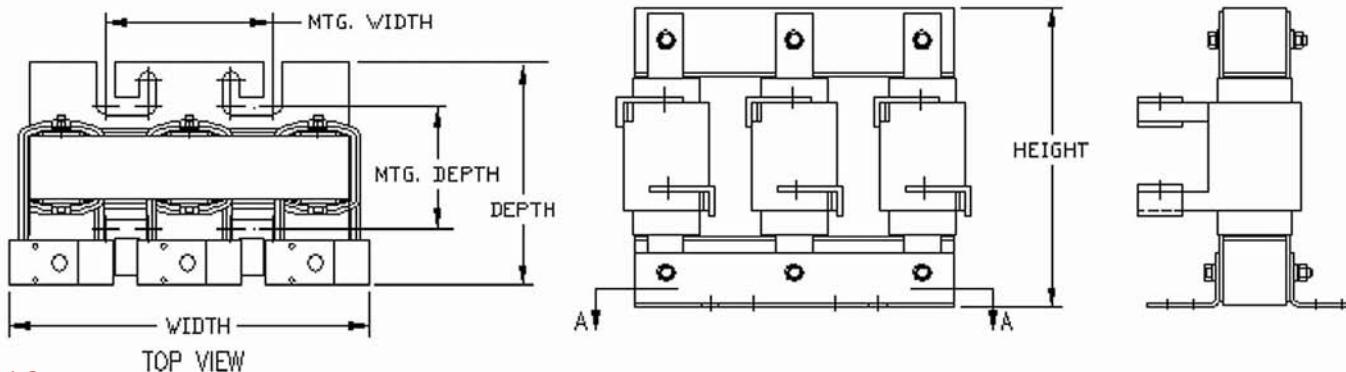
KDR Optimized Drive Reactors may be used at the output of AC-PWM variable frequency drives where the motor lead lengths are less than 100 feet. The addition of a KDR unit to the output of a drive will dampen overshoot peak voltage, reduce motor heating and audible noise, helping to extend the life of the motor. The units will also help prevent inverter instantaneous overcurrent trips because they provide needed inductance when the load on an inverter has an abnormally high capacitance. The 100 foot guideline has been recommended because as motor leads become longer, the resonant frequency is lowered, and the magnitude and duration of the voltage spikes increases. The addition of a reactor on lead lengths exceeding 100 feet may be ineffective and potentially detrimental to system performance.

For lead lengths exceeding 100 feet, TCI offers KLC/KLCUL Output Filters and KMG MotorGuard High Performance Output Filters for long lead motor protection needs.

## ENCLOSURES

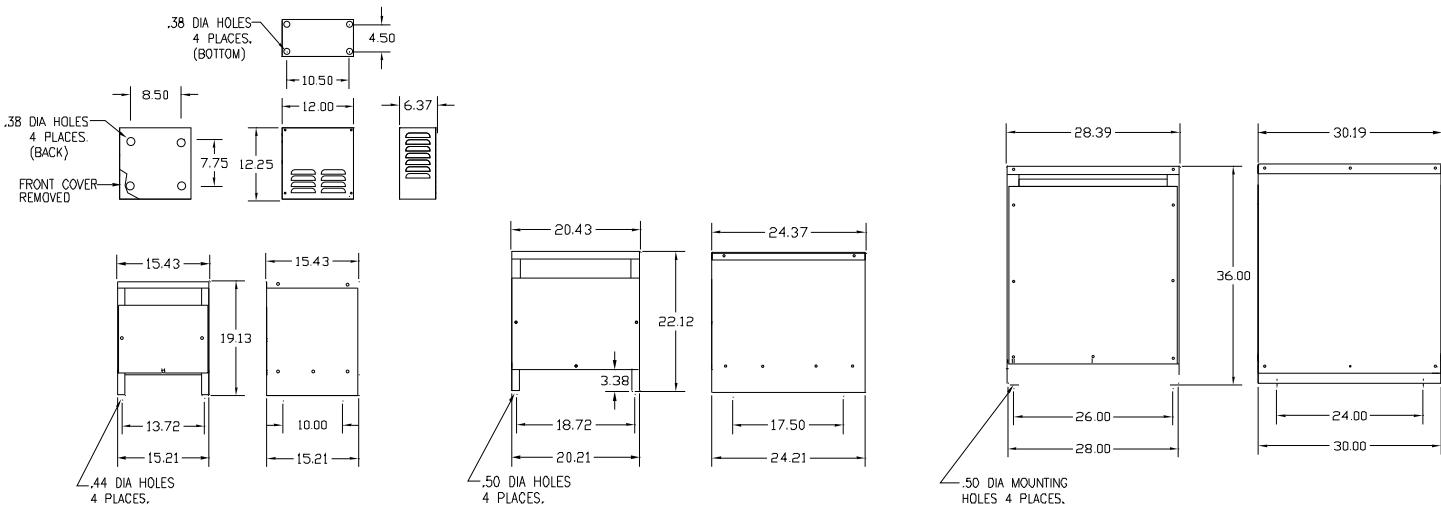


## KDR

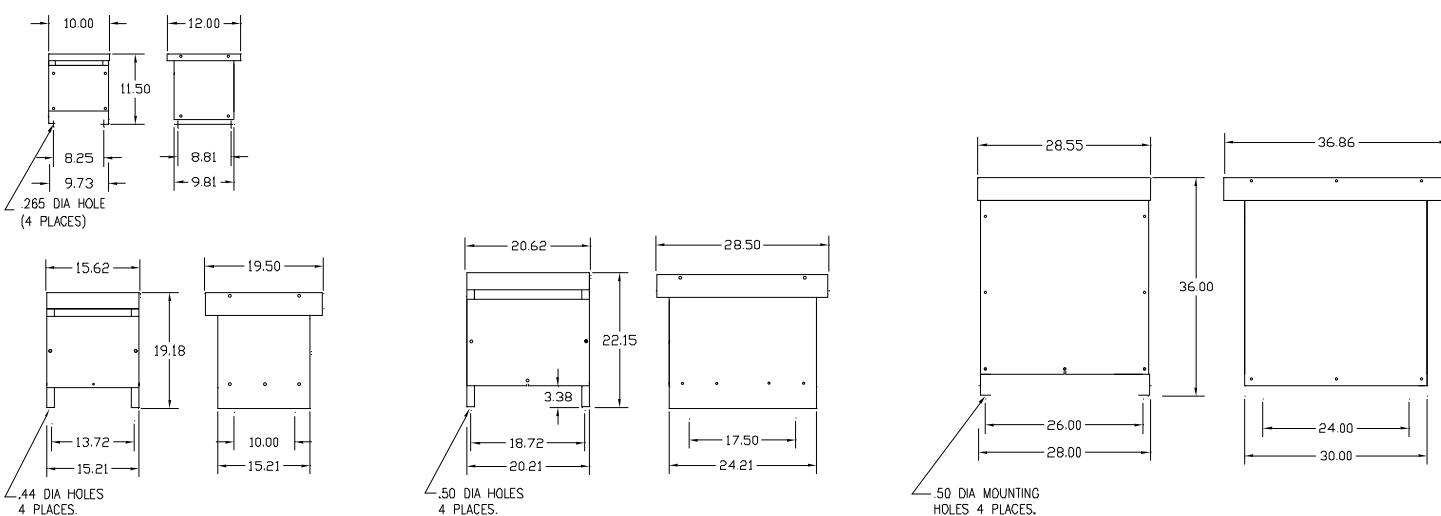


OPEN UL PART NUMBER	NEC MOTOR HP	OPEN UL WEIGHT	UL TYPE 1 Enclosed Part Number	DIMENSIONS	UL TYPE 1 WEIGHT	UL TYPE 3R Enclosed Part Number	DIMENSIONS	UL TYPE 3R WEIGHT
				HEIGHT x WIDTH x DEPTH			HEIGHT x WIDTH x DEPTH	
KDRULA31P	2	4	KDRULA31PE01	12.25 X 12.50 X 6.75	14.50	KDRULA31PE3R	11.50 X 10.00 X 12.00	19
KDRULA35P	3	4	KDRULA35PE01	12.25 X 12.50 X 6.75	14.50	KDRULA35PE3R	11.50 X 10.00 X 12.00	19
KDRULA33P	5	4	KDRULA33PE01	12.25 X 12.50 X 6.75	14.50	KDRULA33PE3R	11.50 X 10.00 X 12.00	19
KDRULA34P	7.5	4	KDRULA34PE01	12.25 X 12.50 X 6.75	15.50	KDRULA34PE3R	11.50 X 10.00 X 12.00	20
KDRULA36P	10	5	KDRULA36PE01	12.25 X 12.50 X 6.75	15.50	KDRULA36PE3R	11.50 X 10.00 X 12.00	20
KDRULD31P	15	10	KDRULD31PE01	12.25 X 12.50 X 6.75	20.50	KDRULD31PE3R	11.50 X 10.00 X 12.00	25
KDRULD32P	20	10	KDRULD32PE01	12.25 X 12.50 X 6.75	20.50	KDRULD32PE3R	11.50 X 10.00 X 12.00	25
KDRULD35P	25	10	KDRULD35PE01	12.25 X 12.50 X 6.75	20.50	KDRULD35PE3R	11.50 X 10.00 X 12.00	25
KDRULD33P	30	12	KDRULD33PE01	12.25 X 12.50 X 6.75	22.50	KDRULD33PE3R	11.50 X 10.00 X 12.00	27
KDRULD34P	40	12	KDRULD34PE01	12.25 X 12.50 X 6.75	22.50	KDRULD34PE3R	11.50 X 10.00 X 12.00	27
KDRULC31P	50	15	KDRULC31PE01	12.25 X 12.50 X 6.75	25.50	KDRULC31PE3R	11.50 X 10.00 X 12.00	30
KDRULF31P	60	25	KDRULF31PE01	19.13 X 15.43 X 15.43	67	KDRULF31PE3R	19.18 X 15.62 X 19.50	63
KDRULF32P	75	25	KDRULF32PE01	19.13 X 15.43 X 15.43	67	KDRULF32PE3R	19.18 X 15.62 X 19.50	63
KDRULF33P	100	33	KDRULF33PE01	19.13 X 15.43 X 15.43	67	KDRULF33PE3R	19.18 X 15.62 X 19.50	67
KDRULH31P	125	43	KDRULH31PE01	19.13 X 15.43 X 15.43	77	KDRULH31PE3R	19.18 X 15.62 X 19.50	77
KDRULI31P	150	56	KDRULI31PE01	19.13 X 15.43 X 15.43	86	KDRULI31PE3R	19.18 X 15.62 X 19.50	95
KDRULI32P	200	51	KDRULI32PE01	22.12 X 20.43 X 24.37	111	KDRULI32PE3R	22.15 X 20.62 X 28.50	120
KDRULG31P	250	69	KDRULG31PE01	22.12 X 20.43 X 24.37	131	KDRULG31PE3R	22.15 X 20.62 X 28.50	140
KDRULJ31P	300	75	KDRULJ31PE01	22.12 X 20.43 X 24.37	136	KDRULJ31PE3R	22.15 X 20.62 X 28.50	145
KDRULJ32P	350	79	KDRULJ32PE01	22.12 X 20.43 X 24.37	136	KDRULJ32PE3R	22.15 X 20.62 X 28.50	150
KDRULL31P	400	104	KDRULL31PE01	22.12 X 20.43 X 24.37	151	KDRULL31PE3R	22.15 X 20.62 X 28.50	165
KDRULL35P	450	109	KDRULL35PE01	22.12 X 20.43 X 24.37	151	KDRULL35PE3R	22.15 X 20.62 X 28.50	165
KDRULL32P	500	109	KDRULL32PE01	22.12 X 20.43 X 24.37	161	KDRULL32PE3R	22.15 X 20.62 X 28.50	165

## UL TYPE 1 ENCLOSURES



## UL TYPE 3R ENCLOSURES



## **KDR Product Specifications**

- Universal mounting Footprint
- 3 Phase, 600V Class
- UL and CUL Recognized; UL or CUL Listing Available
- CE Marked
- High Performance
- Compact Design
- Available in Low Impedance (Low Z) and High Impedance (High Z)
- Available in 240, 480 and 575 VAC
- Patented High Quality Bobbin Construction (Units 85 amps and below)
- Distributed Gap Technology
- NEMA 1 enclosures available
- Input and Output Specified
- 40 Degrees C Ambient Temperature
- Minimum 95%L at 110% Load
- Minimum 80%L at 150% Load
- Tolerate 200% rated I for a minimum of 3 minutes



**Performance and Protection For Drives**

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