

NiCad Low Maintenance Series

Extreme Low Maintenance Batteries



- Nickel cadmium storage battery
- Exceptionally long life time minimizes maintenance
- 20-year design life
- Low pressure flame arresting vent
- Pocket plate design
- Two battery ranges designed for different discharge ranges:
 - KGL/P:** Low discharge rates over long periods of time
 - KGM/P:** Both high and low discharge rates for combination loads
- 2-year full warranty

Alpha's Nickel Cadmium low maintenance pocket plate batteries are designed for UPS systems, emergency lighting, process control, telecommunication, power and substations, oil and gas refineries and railroad signaling applications.

This series of batteries is suited for situations where the risk of failure is not acceptable and where the system must be completely reliable requiring a minimum of maintenance. The KGL/P batteries are used for low rates of discharge over long periods and the discharge time is 1 to 100 hours.

The KGM/P batteries are ideal for mixed loads including a mixture of high and low rates of discharge and the discharge time is 30 minutes to 10 hours. Each battery is delivered in charged condition filled with electrolyte. Built in accordance with IEC 60 623, EN60 623, and DIN 40 771.

NiCad Low Maintenance Series Specifications

11/2017

Details	KGL	KGM
Standard Warranty:	2 year	2 year
Service Life:	20 year	20 year
Range of Capacity:	12 to 1390Ah	11 to 1250Ah
Recommended Discharge Time:	1 to 100hrs	30 to 120min
Operating Temperature:	-30 to 45°C / -22 to 113°F	-30 to 45°C / -22 to 113°F
Terminal Type:	Threaded nickel plated posts	Threaded nickel plated posts
Float Charge:	1.42V/cell	1.42V/cell
Boost Charge:	1.45V/cell	1.45V/cell
Current Limitation:	0.1 IA	0.1 IA

KGL/P Mechanical	Dimensions (mm)				Total Weight (kg)
Models	L	W	H	H _t	
KGL 12 P:	46	85	167	193	1.0
KGL 20 P:	46	85	237	263	1.4
KGL 25 P:	46	85	237	263	1.5
KGL 35 P:	46	85	237	263	1.6
KGL 45 P:	85	85	237	263	2.7
KGL 50 P:	85	85	237	263	2.8
KGL 60 P:	85	85	237	263	2.9
KGL 70 P:	53	134	364	394	4.9
KGL 80 P:	53	134	364	394	5.0
KGL 100 P:	69	134	364	394	6.0
KGL 120 P:	69	134	364	394	6.3
KGL 135 P:	70	164	364	394	7.7
KGL 155 P:	70	164	364	394	7.8
KGL 175 P:	108	164	364	394	10.4
KGL 205 P:	108	164	364	394	10.8
KGL 225 P:	108	164	364	394	11.1
KGL 245 P:	108	164	364	394	11.6
KGL 275 P:	108	164	364	394	12.2
KGL 300 P:	164	158	364	394	16.2
KGL 330 P:	164	158	364	394	16.5
KGL 350 P:	164	158	364	394	17.0
KGL 375 P:	164	158	364	394	17.5

KGL/P Mechanical (Cont.)	Dimensions (mm)				Total Weight (kg)
Models	L	W	H	H _t	
KGL 390 P:	164	158	364	394	18.0
KGL 420 P:	164	158	364	394	18.5
KGL 440 P:	164	158	364	394	18.9
KGL 500 P:	176	246	382	410	27.3
KGL 555 P:	176	246	382	410	28.3
KGL 585 P:	176	246	382	410	28.7
KGL 610 P:	176	246	382	410	29.3
KGL 645 P:	176	246	382	410	29.8
KGL 665 P:	176	368	382	420	40.7
KGL 705 P:	176	368	382	420	41.4
KGL 750 P:	176	368	382	420	41.9
KGL 795 P:	176	368	382	420	42.6
KGL 835 P:	176	368	382	420	43.1
KGL 890 P:	176	448	382	420	49.2
KGL 990 P:	176	448	382	420	53.7
KGL 1110 P:	176	448	382	420	56.0
KGL 1260 P:	176	558	382	420	63.8
KGL 1320 P:	176	558	382	420	65.8
KGL 1390 P:	176	558	382	420	67.8
KGL 1460 P:	176	558	382	420	69.4
KGL 1570 P:	176	558	382	420	70.6

KGL/L Discharge Current (A) to End Voltage 1.00V per Cell @ 25°C / 77°F (Fully Charged)															
Discharge Time:	5 min	10 min	20 min	30 min	1 hr	1.5 hrs	2 hrs	3 hrs	4 hrs	5 hrs	6 hrs	7 hrs	8 hrs	9 Hrs	10 hrs
KGL 12 P:	12.70	12.20	10.80	9.70	7.30	5.80	4.68	3.39	2.73	2.40	2.00	1.72	1.51	1.34	1.21
KGL 20 P:	20.80	19.90	17.70	16.20	12.30	9.50	7.70	5.54	4.56	4.00	3.34	2.87	2.52	2.24	2.02
KGL 25 P:	27.80	26.50	23.60	21.60	16.50	12.60	10.20	7.39	5.69	5.00	4.18	3.59	3.14	2.80	2.53
KGL 35 P:	34.70	33.20	29.50	27.10	20.70	15.80	12.80	9.24	7.97	7.00	5.85	5.02	4.40	3.92	3.54
KGL 45 P:	41.60	38.60	34.00	32.90	27.50	21.10	17.10	12.32	10.25	9.00	7.52	6.45	5.66	5.04	4.55
KGL 50 P:	54.50	50.70	43.80	40.90	32.10	26.20	20.90	14.90	11.50	10.00	8.35	7.17	6.29	5.60	5.05
KGL 60 P:	68.00	63.00	54.00	49.60	37.80	31.30	24.60	17.60	13.80	12.00	10.02	8.61	7.55	6.72	6.06
KGL 70 P:	74.00	70.00	64.00	61.00	46.00	35.20	28.20	20.00	16.00	14.00	11.69	10.04	8.80	7.84	7.07
KGL 80 P:	85.00	80.00	74.00	70.00	53.00	40.60	32.50	23.10	18.20	16.00	13.36	11.47	10.06	8.96	8.08
KGL 100 P:	101.00	96.00	89.00	84.00	63.00	48.70	39.00	27.70	22.70	20.00	16.70	14.34	12.58	11.20	10.10
KGL 120 P:	124.00	118.00	109.00	103.00	77.00	59.50	47.60	33.90	27.30	24.00	20.04	17.21	15.09	13.44	12.12
KGL 135 P:	137.00	129.00	121.00	114.00	86.00	68.00	53.70	38.50	30.80	27.00	22.55	19.36	16.98	15.12	13.64
KGL 155 P:	161.00	151.00	142.00	134.00	102.00	77.00	60.10	43.10	35.30	31.00	25.89	22.23	19.49	17.36	15.66
KGL 175 P:	185.00	173.00	162.00	153.00	116.00	87.00	69.00	49.30	39.90	35.00	29.23	25.10	22.01	19.60	17.68
KGL 205 P:	213.00	200.00	188.00	178.00	134.00	101.00	79.00	57.00	46.70	41.00	34.20	29.40	25.80	23.00	20.70
KGL 225 P:	236.00	222.00	208.00	197.00	149.00	112.00	88.00	63.10	51.30	45.00	37.60	32.30	28.30	25.20	22.70
KGL 245 P:	249.00	234.00	219.00	207.00	158.00	124.00	97.00	69.30	55.80	49.00	40.90	35.10	30.80	27.40	24.70
KGL 275 P:	277.00	260.00	243.00	230.00	174.00	138.00	107.00	77.00	62.30	55.00	45.90	39.40	34.60	30.80	27.80
KGL 300 P:	299.00	281.00	263.00	248.00	190.00	148.00	116.00	83.20	68.30	60.00	50.10	43.00	37.70	33.60	30.30
KGL 330 P:	345.00	317.00	296.00	275.00	213.00	162.00	127.00	89.90	74.10	66.00	55.10	47.30	41.50	37.00	33.30
KGL 350 P:	368.00	339.00	316.00	294.00	227.00	172.00	135.00	96.00	78.80	70.00	58.50	50.20	44.00	39.20	35.40
KGL 375 P:	391.00	360.00	335.00	312.00	241.00	183.00	143.00	102.00	84.20	75.00	62.60	53.80	47.20	42.00	37.90
KGL 390 P:	408.00	376.00	350.00	326.00	252.00	191.00	150.00	106.00	87.60	78.00	65.10	55.90	49.00	43.70	39.40
KGL 420 P:	437.00	402.00	375.00	349.00	269.00	205.00	160.00	113.00	94.30	84.00	70.10	60.20	52.80	47.00	42.40
KGL 440 P:	449.00	413.00	385.00	358.00	276.00	210.00	165.00	120.00	98.80	88.00	73.50	63.10	55.30	49.30	44.40
KGL 500 P:	664.00	612.00	547.00	495.00	365.00	297.00	229.00	158.00	122.00	100.00	83.40	71.60	62.80	55.90	50.40
KGL 555 P:	738.00	680.00	608.00	550.00	406.00	330.00	254.00	176.00	136.00	111.00	92.70	79.60	69.80	62.10	56.00
KGL 585 P:	776.00	715.00	639.00	579.00	427.00	347.00	268.00	185.00	142.00	117.00	97.70	83.90	73.60	65.50	59.10
KGL 610 P:	812.00	748.00	669.00	605.00	446.00	363.00	280.00	193.00	149.00	122.00	101.90	87.50	76.80	68.30	61.60
KGL 645 P:	856.00	789.00	705.00	638.00	471.00	383.00	295.00	204.00	156.00	129.00	107.70	92.50	81.10	72.20	65.10
KGL 665 P:	885.00	816.00	729.00	660.00	487.00	396.00	305.00	211.00	162.00	133.00	111.10	95.40	83.60	74.50	67.20
KGL 705 P:	935.00	862.00	770.00	697.00	514.00	418.00	323.00	223.00	171.00	141.00	117.70	101.10	88.70	79.00	71.20
KGL 750 P:	996.00	918.00	821.00	743.00	548.00	446.00	344.00	237.00	183.00	150.00	125.30	107.60	94.30	84.00	75.80
KGL 795 P:	1055.00	972.00	869.00	786.00	580.00	472.00	364.00	251.00	193.00	159.00	132.70	114.00	100.00	89.10	80.30
KGL 835 P:	1107.00	1020.00	912.00	825.00	608.00	485.00	382.00	263.00	203.00	167.00	139.40	119.80	105.00	93.50	84.30
KGL 890 P:	1181.00	1088.00	973.00	880.00	649.00	528.00	407.00	281.00	216.00	178.00	148.60	127.70	111.90	99.70	89.90
KGL 990 P:	1313.00	1211.00	1082.00	979.00	722.00	588.00	453.00	313.00	240.00	198.00	165.30	142.00	124.50	110.90	100.00
KGL 1110 P:	1476.00	1360.00	1216.00	1100.00	811.00	660.00	508.00	351.00	270.00	222.00	185.40	159.20	139.60	124.30	112.10
KGL 1260 P:	1672.00	1541.00	1377.00	1246.00	919.00	748.00	577.00	398.00	305.00	252.00	210.40	180.80	158.50	141.10	127.30
KGL 1320 P:	1751.00	1614.00	1443.00	1306.00	963.00	783.00	604.00	417.00	320.00	264.00	220.40	189.40	166.00	147.90	133.30
KGL 1390 P:	1844.00	1700.00	1519.00	1375.00	1014.00	825.00	638.00	439.00	337.00	278.00	232.10	199.40	174.80	155.70	140.40
KGL 1460 P:	1937.00	1786.00	1595.00	1444.00	1065.00	867.00	668.00	461.00	354.00	292.00	243.80	209.40	183.60	163.50	147.50
KGL 1570 P:	2083.00	1920.00	1716.00	1553.00	1145.00	932.00	718.00	496.00	381.00	314.00	262.20	225.20	197.40	175.90	158.60

NiCad Low Maintenance Series Specifications

11/2017

KGM/P Mechanical	Dimensions (mm)				Total Weight (kg)
Models	L	W	H	H ₁	
KGM 11 P:	46	85	167	193	1.0
KGM 18 P:	46	85	237	263	1.5
KGM 24 P:	46	85	237	263	1.6
KGM 30 P:	46	85	237	263	1.7
KGM 40 P:	85	85	237	263	2.7
KGM 48 P:	85	85	237	263	2.8
KGM 55 P:	85	85	237	263	2.9
KGM 65 P:	53	134	364	394	4.9
KGM 75 P:	53	134	364	394	5.0
KGM 90 P:	69	134	364	394	6.0
KGM 110 P:	69	134	364	394	6.3
KGM 125 P:	70	164	364	394	7.7
KGM 140 P:	70	164	364	394	7.8
KGM 160 P:	108	164	364	394	10.4
KGM 185 P:	108	164	364	394	10.8
KGM 205 P:	108	164	364	394	11.1
KGM 225 P:	108	164	364	394	11.6
KGM 250 P:	108	164	364	394	12.2
KGM 270 P:	164	158	364	394	15.8
KGM 300 P:	164	158	364	394	16.5
KGM 320 P:	164	158	364	394	17.0
KGM 340 P:	164	158	364	394	17.5
KGM 355 P:	164	158	364	394	18.0

KGM/P Mechanical (Cont.)	Dimensions (mm)				Total Weight (kg)
Models	L	W	H	H ₁	
KGM 380 P:	164	158	364	394	18.5
KGM 400 P:	164	158	364	394	18.9
KGM 450 P:	176	246	382	410	27.3
KGM 470 P:	176	246	382	410	27.8
KGM 500 P:	176	246	382	410	28.3
KGM 520 P:	176	246	382	410	28.9
KGM 550 P:	176	246	382	410	29.3
KGM 570 P:	176	246	382	410	29.7
KGM 600 P:	176	368	382	420	40.7
KGM 630 P:	176	368	382	420	41.2
KGM 675 P:	176	368	382	420	41.9
KGM 690 P:	176	368	382	420	42.3
KGM 750 P:	176	368	382	420	43.1
KGM 770 P:	176	368	382	420	43.8
KGM 800 P:	176	448	382	420	49.1
KGM 850 P:	176	448	382	420	51.4
KGM 950 P:	176	448	382	420	53.7
KGM 1000 P:	176	448	382	420	57.6
KGM 1030 P:	176	448	382	420	58.9
KGM 1130 P:	176	448	382	420	61.9
KGM 1250 P:	176	558	382	420	68.9
KGM 1350 P:	176	558	382	420	70.1

KGM/P Discharge Current (A) to End Voltage 1.00V per Cell @ 25°C / 77°F (Fully Charged)															
Discharge Time	5 min	10 min	20 min	30 min	1 hr	1.5 hrs	2 hrs	3 hrs	5 hrs	6 hrs	7 hrs	8 hrs	9 Hrs	10 hrs	
KGM 11 P:	16.20	15.30	13.00	11.40	8.30	6.52	5.19	3.63	2.42	2.02	1.74	1.52	1.36	1.22	
KGM 18 P:	26.60	25.00	21.30	19.20	14.10	10.69	8.48	5.94	3.96	3.31	2.84	2.49	2.22	2.00	
KGM 24 P:	35.50	33.40	28.50	25.60	18.80	14.19	11.31	7.92	5.28	4.41	3.79	3.32	2.96	2.67	
KGM 30 P:	44.40	41.80	35.60	31.90	23.60	17.80	14.10	9.90	6.60	5.51	4.73	4.15	3.70	3.33	
KGM 40 P:	53.20	48.60	41.00	39.90	31.40	23.70	18.90	13.20	8.80	7.35	6.31	5.53	4.93	4.44	
KGM 48 P:	69.80	63.80	52.90	50.60	36.70	29.50	23.10	16.00	10.50	8.77	7.53	6.60	5.88	5.30	
KGM 55 P:	86.40	78.90	64.70	58.60	43.20	35.20	27.20	18.80	12.20	10.19	8.75	7.67	6.83	6.16	
KGM 65 P:	94.10	87.50	77.20	71.60	52.40	39.60	31.20	21.50	14.30	11.94	10.26	8.99	8.01	7.22	
KGM 75 P:	108.50	101.00	89.70	82.30	60.10	45.60	36.00	24.70	16.50	13.78	11.83	10.37	9.24	8.33	
KGM 90 P:	129.60	121.20	107.10	98.70	71.80	54.70	43.20	29.70	19.80	16.53	14.20	12.45	11.09	10.00	
KGM 110 P:	158.40	148.10	131.20	121.00	88.30	66.90	52.70	36.30	24.20	20.21	17.35	15.22	13.55	12.22	
KGM 125 P:	174.70	161.60	145.70	134.60	98.00	76.80	59.50	41.30	27.50	22.96	19.72	17.29	15.40	13.89	
KGM 140 P:	206.40	190.50	171.80	158.80	116.40	86.50	66.60	46.20	30.80	25.72	22.09	19.37	17.25	15.55	
KGM 160 P:	236.20	217.40	195.90	181.00	132.90	98.20	76.10	52.80	35.20	29.39	25.24	22.13	19.71	17.78	
KGM 185 P:	272.60	252.00	226.80	210.10	153.30	113.70	87.80	61.10	40.70	34.00	29.20	25.60	22.80	20.60	
KGM 205 P:	302.40	279.00	250.90	232.30	169.80	126.40	97.50	67.60	45.10	37.70	32.30	28.40	25.30	22.80	
KGM 225 P:	318.70	294.40	264.40	244.90	180.40	139.00	107.30	74.20	49.50	41.30	35.50	31.10	27.70	25.00	
KGM 250 P:	354.20	327.10	293.40	272.00	198.90	154.50	119.00	82.40	55.00	45.90	39.40	34.60	30.80	27.80	
KGM 270 P:	382.10	353.10	317.50	293.30	216.30	166.20	128.70	89.10	59.40	49.60	42.60	37.30	33.30	30.00	
KGM 300 P:	441.60	399.20	357.10	324.30	242.50	181.80	140.40	96.30	66.00	55.10	47.30	41.50	37.00	33.30	
KGM 320 P:	471.40	426.20	381.20	346.50	259.00	193.40	149.20	102.90	70.40	58.80	50.50	44.30	39.40	35.60	
KGM 340 P:	500.20	453.10	404.30	367.80	274.50	206.10	158.90	108.80	74.80	62.50	53.60	47.00	41.90	37.80	
KGM 355 P:	522.20	473.30	422.70	384.30	287.10	214.80	165.80	113.70	78.10	65.20	56.00	49.10	43.70	39.40	
KGM 380 P:	559.70	506.00	452.60	411.40	307.50	230.40	177.50	121.50	83.60	69.80	60.00	52.60	46.80	42.20	
KGM 400 P:	574.10	519.50	464.20	422.00	315.30	236.20	182.30	128.40	88.00	73.50	63.10	55.30	49.30	44.40	
KGM 450 P:	637.00	589.00	528.00	479.00	354.00	289.00	223.00	155.00	99.90	83.40	71.60	62.80	55.90	50.40	
KGM 470 P:	666.00	615.00	551.00	500.00	370.00	302.00	233.00	162.00	104.50	87.30	75.00	65.70	58.50	52.80	
KGM 500 P:	708.00	654.00	587.00	532.00	394.00	321.00	248.00	172.00	111.00	92.70	79.60	69.80	62.10	56.00	
KGM 520 P:	736.00	680.00	610.00	554.00	409.00	334.00	258.00	179.00	115.60	96.60	83.00	72.70	64.80	58.40	
KGM 550 P:	780.00	720.00	646.00	586.00	433.00	353.00	273.00	189.00	122.00	101.90	87.50	76.80	68.30	61.60	
KGM 570 P:	807.00	746.00	668.00	607.00	449.00	366.00	283.00	196.00	126.80	105.80	90.90	79.70	71.00	64.00	
KGM 600 P:	850.00	785.00	703.00	639.00	472.00	385.00	297.00	207.00	133.00	111.10	95.40	83.60	74.50	67.20	
KGM 630 P:	892.00	824.00	739.00	671.00	496.00	404.00	312.00	217.00	140.10	117.00	100.50	88.10	78.50	70.80	
KGM 675 P:	956.00	883.00	792.00	719.00	532.00	434.00	335.00	232.00	150.00	125.30	107.60	94.30	84.00	75.80	
KGM 690 P:	977.00	903.00	809.00	735.00	543.00	443.00	342.00	237.00	153.50	128.10	110.10	96.50	85.90	77.50	
KGM 750 P:	1063.00	981.00	880.00	799.00	590.00	481.00	372.00	258.00	167.00	139.40	119.80	105.00	93.50	84.30	
KGM 770 P:	1090.00	1007.00	903.00	820.00	606.00	494.00	382.00	265.00	171.20	143.00	122.80	107.70	95.90	86.50	
KGM 800 P:	1133.00	1046.00	938.00	852.00	630.00	513.00	397.00	275.00	177.90	148.50	127.60	111.90	99.60	89.90	
KGM 850 P:	1204.00	1112.00	997.00	905.00	669.00	545.00	422.00	292.00	189.00	157.80	135.60	118.90	105.90	95.50	
KGM 950 P:	1345.00	1243.00	1114.00	1012.00	748.00	610.00	471.00	327.00	211.30	176.40	151.50	132.80	118.30	106.70	
KGM 1000 P:	1417.00	1308.00	1173.00	1065.00	787.00	642.00	496.00	344.00	222.00	185.40	159.20	139.60	124.30	112.10	
KGM 1030 P:	1458.00	1347.00	1208.00	1097.00	811.00	661.00	511.00	354.00	229.10	191.30	164.30	144.00	128.30	115.70	
KGM 1130 P:	1600.00	1478.00	1325.00	1203.00	890.00	725.00	560.00	389.00	251.30	209.80	180.30	158.00	140.80	126.90	
KGM 1250 P:	1770.00	1635.00	1466.00	1331.00	984.00	802.00	620.00	430.00	278.00	232.10	199.40	174.80	155.70	140.40	
KGM 1350 P:	1912.00	1766.00	1583.00	1437.00	1063.00	866.00	670.00	464.00	300.20	250.70	215.40	188.80	168.20	151.60	



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