## SEALED, ILLUMINATED ROCKER SWITCHES

#### ATTRACTIVE & RUGGED FOR WET & DUSTY ENVIRONMENTS

The OTTO K5 series is a quality, precision switch designed to comply with standards established for appliance, marine (ignition protection) and off-road vehicles along with other demanding applications where rugged rocker switches are required.

K5 series sealed rocker switches snap into industry-standard panel cutouts. Choose illuminated and printed legends, thrupanel drain option and switching compatibility from logic level up to 20 amps.

The K5 series offers a choice of LED, incandescent and neon illumination. Legends can be stamped onto a non-illuminated button, stamped onto an illuminated lens or laser etched into the lens and backlit.

Available in standard and logic level contact ratings, the K5 rockers will fit a wide range of applications. Expect a minimum of 25,000 cycles at a full rated load of 20 amps resistive or 15 amps inductive. 100,000 cycles mechanical. A full complement of switch operation is available including momentary and maintained action in 2 or 3-position switches in SPST, SPDT, SPTT, DPST and DPDT circuit arrangements.

OTTO can provide custom colors upon request. Value-added assemblies with wire leads are also available. Please consult the factory for assistance.

#### Features:

- Sealed watertight per IP68S and IP69K
- Snap-in panel mounting into industry standard panel cutout
- Optional panel seal gasket
- LED, neon & incandescent lighting
- 0.250" Quick Connect terminals
- Optional one-piece connector
- **Optional terminal barriers**
- Logic level up to 20 amp switch
- **Configurable Single Pole Triple Throw (SPTT)** with external jumpers
- Soft Touch button available
- **RoHS** compliant



FLECTRICAL RATINGS:		
Load	Sea Level @ 28VDC	Sea Level @ 125VAC, 60/400Hz
Resistive	20A	16A
Inductive	15A	15A
Lamp	5A	5A
Motor	0.5HP @ 110VAC	
DWV	1000Vrms except acro	oss light terminals
Logic Level	10mA @ 5VDC, max D (void if logic level load	.C. logic level ratings d(s) exceeded at any time)
Electrical Life:	25,000 cycles	
LIGHTING:		
Light Source	Rating	
Incandescent	(VDC) 6V, 12V, 24V	
Neon	(VAC) 125V, 250V	
LED	(VDC) 2V, 6V, 12V, 24V	1
Mechanical Life:	100,000 cycles	
Seal:	IP68S and IP69K	
Operating Temp Range:	-40°C to +85°C	
MATERIALS:		
Case:	Thermoplastic	
Button:	Thermoplastic	
Terminals/Contact:	Brass, silver alloy wit	h silver plate, gold flash for logic leve
Terminal Hardware:	K5 series recommend AMP 60253-2 for 12-1 AMP 42100-2 for 14-1	
Mounting Hardware:	None provided	

#### SNAP-IN PANEL MOUNTING

#### **K5 SERIES PART NUMBER CODE Part Number Code Continued Below K5** X **Rocker Features** Switch Action/Circuit Rocker Color\*/Style **Light Circuit Base Options** Light Source Type\* A. With Keving Pin Only A. Black Plastic Rocker Position Position Position Position Position A. No Illumination Circuit Terminal Standard Rating B. Black "Soft Touch" Rocker "A" "C" "C" B. 6V Incandescent Connections "A' "B" Silver Plate C. Red Plastic Rocker 1. No Feature 1. No Feature 1A. 3-4 NONE OFF SPST C. 12V Incandescent A. NONE NONE B. Without Barriers or Pin D. Red "Soft Touch" Rocker 2. Lens 2. Lens 2A. 3-4/8-9 NONE 0FF DPST D. 24V Incandescent B. Dep. in "A" 1(-) & 4(+) Standard Rating E. White Plastic Rocker 3. Raised Bars 3. Raised Bars 1B. 3-4 NONE 3-2 SPDT E. 125VAC Neon C. Dep. in "C" 2(+) & 5(-) Silver Plate F. White "Soft Touch" Rocker 4. Raised Lit Bars 4. Raised Lit Bars 3-4/8-9 3-2/8-7 DPDT F. 250VAC Neon **D.** Ind. in "A" 1(-) & 6(+) 2B. NONE C. With Terminal H. Green Plastic Rocker 1C. (3-4)NONE SPST G. 2V Red LED E. Ind. in "C" 5(-) & 10(+) **OFF** J. Orange Plastic Rocker NOTE: Soft Touch rockers H. 2V Green LED Barriers Only 2C. (3-4)/(8-9) NONE DPST F. Dep. in "A" 1(-) & 4(+) K. Blue Plastic Rocker require same color lenses/ SPDT J. 2V Amber LED Standard Rating 1D. (3-4)NONE Dep. in "C" 2(+) & 5(-) L. Gray "Soft Touch" Rocker lit bars for both positions. 2D. (3-4)/(8-9) DPDT K. 6V Red LED **G.** Dep. in "A" Silver Plate NONE 3-2/8-7 1(-) & 4(+) M.Gray Plastic Rocker D. With Keying Pin Only 1E. (3-4)(3-2)SPDT L. 6V Green LED Ind. in "C" 5(-) & 10(+) (3-4)/(8-9) Logic Level Rating 2E. OFF (3-2)/(8-7) DPDT M.6V Amber LED H. Ind. in "A" 1(-) & 6(+) Gold Plate 1F. 3-4 0FF 3-2 SPDT N. 12V Red LED Dep. in "C" 2(+) & 5(-) E. Without Barriers or Pin 2F. 3-4/8-9 OFF 3-2/8-7 דחפת P. 12V Green LED J. Ind. in "A" 1(-) & 6(+) \*Additional colors available. Logic Level Rating 1G. (3-4)OFF SPDT O. 12V Amber LED 5(-) & 10(+) 3-2 Ind. in "C" Contact factory. Gold Plate 2G. (3-4)/(8-9) 3-2/8-7 DPDT R. 24V Red LED POS. A NOTE: Polarity only applies F. With Terminal S. 24V Green LED to LED circuits. **Special Circuits** T. 24V Amber LED Barriers Only Logic Level Rating **Position** Position Position **Special** \*See appendix for complete voltage/ratings table Gold Plate "A' "B" "C" Circuits POS B G. With Keving Pin Only ON/ON/OFF 1H. 3-4/8-9 8-9 0FF Standard Rating ON/ON/NONE 1J. 3-4/8-9 8-9 NONE No Plate 1K. (3-4)/(8-9) 8-9 OFF (0N)/0N/0FF H. Without Barrier or Pin 1L. (3-4)/(8-9) 8-9 NONE (ON)/ON/NONE Standard Rating 1M. 3-4/8-9 3-2/8-9 3-2/8-7 ON/ON/ON POS. C No Plate (3-4)/(8-9) 3-2/8-9 3-2/8-7 (ON)/ON/ON 1N. J. With Terminal 1P. (3-4)/(8-9) 3-2/8-9 (3-2)/(8-7) (ON)/ON/(ON)

### **K5 PART NUMBER CODE - CONTINUED FROM ABOVE**

(3-4)/8-9

OFF/8-9

OFF/8-9

NOTE: () denotes momentary action.

OFF/OFF

OFF/OFF

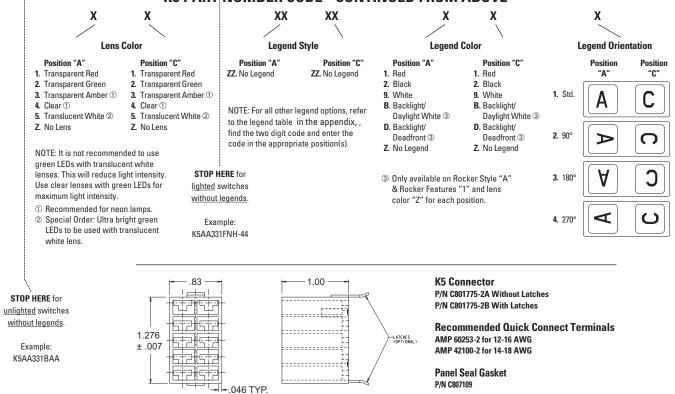
ON/OFF/OFF

ON/ON/OFF

(ON)/OFF/OFF ON/ON/OFF

2R. 3-4/8-9

2S.



• K5 panel plugs available as shown in Panel Plugs (PP) section.

Barriers Only

No Plate

Standard Rating

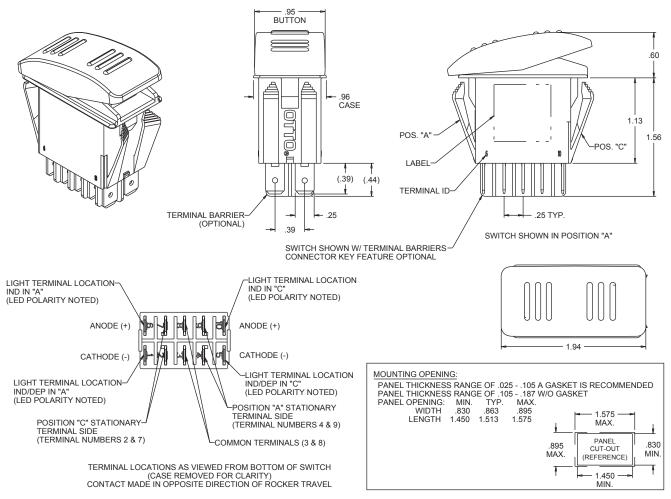
NOTE: All code combinations are not feasible.

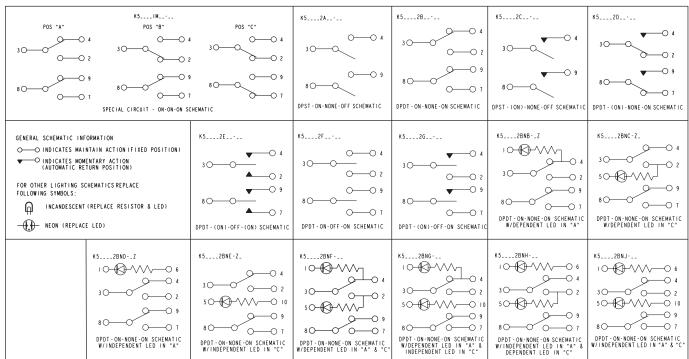
Consult factory for product availability.

ROCKER SWITCHES

# SEALED, ILLUMINATED ROCKER SWITCHES

#### ATTRACTIVE & RUGGED FOR WET & DUSTY ENVIRONMENTS





#### SNAP-IN PANEL MOUNTING

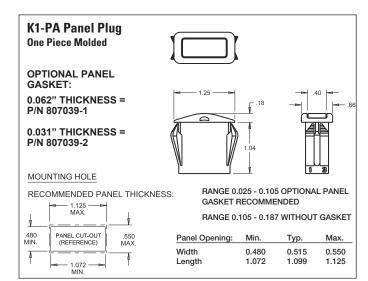
### **Standard Legends Per SAE Specifications**

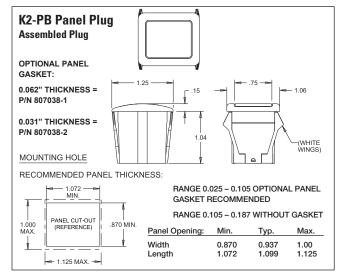
	STANDARD LEGENDS PER SAE SPECIFICATIONS							
A1	ţ	ANCHOR	K2	<b>1</b>	UNLOCK	P5	<b>S</b>	BILGE BLOWER
В1	- +	BATTERY	L1	٩	LIGHT	R1	1	LIFT
B2	1	ELECTRIC POWER	L2	-\̈́C-	MASTER LIGHTING SWITCH	R2	<u></u>	LOWER
C1	**	AC/COOLING SYSTEMS	L3	<b>■</b> D	HEADLIGHTS	R3	t	UP
C2	4	DEHUMIDIFIER	L4		HEADLIGHTS-LOW / DIPPED BEAM	R4	ţ	DOWN
СЗ	<u>}}}</u>	HEATER/INTERIOR HEATING	L5	ΞO	HEADLIGHTS-HIGH / UPPER BEAM	R5	<b>→</b>	RIGHT
D1	<b>P</b>	WINDSHIELD DEFROSTER	L6	P≒	PARKING LIGHT	R6	+	LEFT
D2	( <del>   </del>	REAR WINDOW DEFROSTER	L7	A	WORK LAMP	R7	FWD	FORWARD
D3		MIRROR DEFROSTER	L8	M	WORK LAMP	R8	REV	REVERSE
E1	$\bigcirc$	ENGINE/START	L9	深	INTERIOR DOME LIGHT	S1	<b>1</b>	RADIO
E2	Q	ENGINE/STOP	M1	江	BEACON	S2	13	MUTE
E3		ON/START	M2		HAZARD/POSITION LIGHTS	T1	4	FAST
E4	0	OFF/STOP	М3	∌€	CLEARANCE LIGHTS	T2	4	SLOW
E5	ON	ON	M4	∌D	SIDE MARKER LIGHT	Т3	<u>†</u>	TRIM TAB / TRIMMING OPERATION
E6	OFF	OFF	M5	- <u>Ö</u> -	RUNNING LIGHTS (UNDER POWER)	T4	0	TRANSMISSION
E7	<b>⊕</b>	ENGINE ELECTRIC PREHEAT	M6	- <b>\</b>	ANCHOR LIGHT	V1	38	VENTILATING / AC FAN
E8	<b>®</b>	ENGINE-GAS INJECTION	M7	<b>₹</b> /	RUNNING/ANCHOR LIGHTS	W1	P	WINDSHIELD WIPER
F1	却	FRONT FOG LIGHTS	M8	乳	SEARCH LIGHT	W2	₩	WINDSHIELD-WASHER
F2	()≩	REAR FOG LIGHTS	М9	<b>4</b>	LEFT TURN SIGNAL	W3	\$	WINDSHIELD-WASHER/WIPER
G1	团	FUEL	MA	<b>\$</b>	RIGHT TURN SIGNAL	W4	Ç	REAR WINDOW WIPER
H1	d	HORN	P1	<b>P</b> i	BILGE PUMP #1	W5	4	REAR WINDOW-WASHER
H2	⊌R	HORN REAR	P2	<b>₩</b> 2	BILGE PUMP #2	W6	\$	REAR WINDOW-WASHER/WIPER
K1		LOCK	P3	<b>₩</b> 3	BILGE PUMP #3	ZZ		NO LEGEND
			P4	(C)	BILGE PUMP			

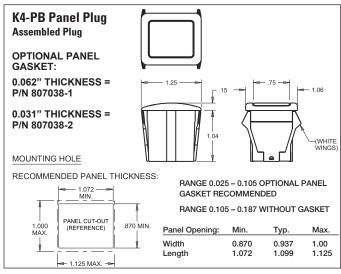
For legends not shown, please consult an OTTO representative.

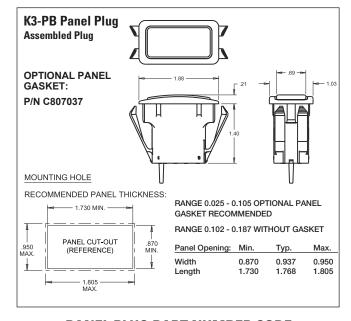
### PANEL PLUGS FOR ROCKER & R2 SERIES

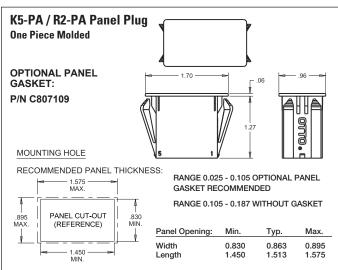
#### K1 THROUGH K5 & R2 PANEL PLUGS

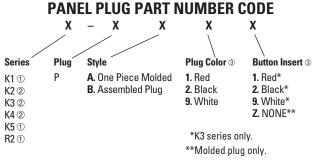












- ① Available in Style A only.
- 2 Available in Style B only.
- 3 Additional colors available. Contact factory.

### LED VOLTAGE/CURRENT RATINGS TABLE

ROCKER AND ROTARY SWITCH VOLTAGE/CURRENT RATINGS TABLES

#### K1, K2, K3P and K4 LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE	FORWARD	TYPICAL FORWARD/	MAX. FORWARD
COLOR	CURRENT	NOMINAL VOLTAGE	VOLTAGE
WHITE	.2 AMPS	6 VDC	8 VDC
WHITE	.08 AMPS	12 VDC	14 VDC
WHITE	.04 AMPS	24 VDC	28 VDC
AMBER	1.9 mA	125 VAC	125 VAC
AMBER	1.9 mA	250 VAC	250 VAC
RED	20 mA	1.9 VDC	2.5 VDC
GREEN	20 mA	2.15 VDC	2.5 VDC
AMBER	20 mA	1.95 VDC	2.5 VDC
BLUE	20 mA	3.5 VDC	4.0 VDC
SEE CHART	20 mA	6 VDC	8 VDC
SEE CHART	20 mA	12 VDC	14 VDC
SEE CHART	20 mA	24 VDC	28 VDC
	COLOR WHITE WHITE WHITE AMBER AMBER RED GREEN AMBER BLUE SEE CHART SEE CHART	COLOR CURRENT WHITE .2 AMPS WHITE .08 AMPS WHITE .04 AMPS AMBER 1.9 mA AMBER 1.9 mA RED 20 mA GREEN 20 mA AMBER 20 mA BLUE 20 mA SEE CHART 20 mA	COLOR         CURRENT         NOMINAL VOLTAGE           WHITE         .2 AMPS         6 VDC           WHITE         .08 AMPS         12 VDC           WHITE         .04 AMPS         24 VDC           AMBER         1.9 mA         125 VAC           AMBER         1.9 mA         250 VAC           RED         20 mA         1.9 VDC           GREEN         20 mA         2.15 VDC           AMBER         20 mA         1.95 VDC           BLUE         20 mA         3.5 VDC           SEE CHART         20 mA         6 VDC           SEE CHART         20 mA         12 VDC

#### K3/K5 LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE VOLTAGE	LIGHT SOURCE	FORWARD	TYPICAL FORWARD/	MAX. FORWARD
CATEGORY	COLOR	CURRENT	NOMINAL VOLTAGE	VOLTAGE
6 VDC INCANDESCENT	WHITE	.2 AMPS	6 VDC	8 VDC
12 VDC INCANDESCENT	WHITE	.08 AMPS	12 VDC	14 VDC
24 VDC INCANDESCENT	WHITE	.04 AMPS	24 VDC	28 VDC
125 VAC NEON	AMBER	1.9 mA	125 VAC	125 VAC
250 VAC NEON	AMBER	1.9 mA	250 VAC	250 VAC
	RED	20 mA	2.0 VDC	2.5 VDC
2 V LED PRODUCTS*	GREEN	20 mA	2.2 VDC	2.6 VDC
	AMBER	20 mA	2.1 VDC	2.5 VDC
6 V LED PRODUCTS	SEE CHART	20 mA	6 VDC	8 VDC
12 V LED PRODUCTS	SEE CHART	20 mA	12 VDC	14 VDC
24 V LED PRODUCTS	SEE CHART	20 mA	24 VDC	28 VDC

#### **R2 LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS**

LIGHT SOURCE VOLTAGE	LIGHT SOURCE	FORWARD	TYPICAL FORWARD/	MAX. FORWARD
CATEGORY	COLOR	CURRENT	NOMINAL VOLTAGE	VOLTAGE
	RED	20 mA	2.0 VDC	2.5 VDC
2 V LED PRODUCTS*	GREEN	20 mA	2.2 VDC	2.6 VDC
	AMBER	20 mA	2.1 VDC	2.5 VDC
6 V LED PRODUCTS	SEE CHART	20 mA	6 VDC	8 VDC
12 V LED PRODUCTS	SEE CHART	20 mA	12 VDC	14 VDC
24 V LED PRODUCTS	SEE CHART	20 mA	24 VDC	28 VDC

#### RESISTOR SIZE = POWER SUPPLY VOLTAGE - LED FORWARD VOLTAGE LED FORWARD CURRENT

<sup>\*</sup>Intended for use with external resistor. The "2 volt" switches are intended to have a resistor added in series into the lighting circuit by the customer. To determine the approximate value of the resistor, use the equation below:

# LED VOLTAGE/CURRENT RATINGS TABLE

ILLUMINATED PUSHBUTTON SWITCH & INDICATOR LIGHTS VOLTAGE/CURRENT RATINGS TABLES

#### LP3, LP5 AND LPL SERIES LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR	FORWARD CURRENT	TYP. FORWARD VOLTAGE (DC)	MAX. FORWARD VOLTAGE DC
	RED	20 mA	1.9V	2.5V
2V*	GREEN	20 mA	2.2V	2.6V
PRODUCTS	AMBER	20 IIIA		
	BLUE	20 mA	3.3V	4V
	DEEP GREEN			
6V PRODUCTS	ALL COLORS	20 mA	6V	8V
12V PRODUCTS	ALL COLORS	20 mA	12V	14.5V
24V PRODUCTS	ALL COLORS	20 mA	24 V	28.6 V

#### LP3S LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR	FORWARD CURRENT	TYP. FORWARD VOLTAGE	MAX. FORWARD VOLTAGE
	RED			2.5 V
	GREEN	20 mA	2 V	
2V*	AMBER			
PRODUCTS	BLUE		3.2 V	4 V
	DEEP GREEN	20 mA		
	WHITE			
12V PRODUCTS	ALL COLORS	20 mA	12V	14V
24V PRODUCTS	ALL COLORS	20 mA	24 V	28.6 V

#### LP7-D and LP9 SERIES LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR, WAVELENGTH (nm)	FORWARD CURRENT	TYP. FORWARD VOLTAGE	MAX. FORWARD VOLTAGE
2V LIGHTPIPE STYLE	RED (631) GREEN (525) AMBER (591) BLUE (470) WHITE	20 mA 20 mA 20 mA 20 mA 5 mA	2V 3.2V 2.1V 3.3V 2.9V	2.4V 3.6V 2.4V 3.8V 3.15V
2V, TRANSLUCENT FULLY ILLUMINATED STYLE	RED (630) GREEN (525) AMBER (601) BLUE (465) WHITE	20 mA 20 mA 20 mA 20 mA 5 mA	1.95V 3.3V 2.1V 3.3V 2.85V	2.5V 4.1V 2.5V 4V 3.1V
12V ALL PRODUCTS	ALL COLORS, SAME AS 2V	(20 mA)	12.0V	14.0V

#### **LP9L SERIES** LIGHTING VOLTAGE/CURRENT COMPONENTS RATINGS

LIGHT SOURCE VOLTAGE CATEGORY	LED COLOR, WAVELENGTH (nm)	FORWARD CURRENT	TYP. FORWARD VOLTAGE	MAX. FORWARD VOLTAGE
2V PRODUCTS	RED (631) GREEN (525) AMBER (591) BLUE (470) WHITE	20 mA 20 mA 20 mA 20 mA 5 mA	2V 3.2V 2.1V 3.3V 2.9V	2.4V 3.6V 2.4V 3.8V 3.15V
12V PRODUCTS	ALL COLORS, SAME AS 2V	(20 mA)	12.0V	14.0V

<sup>\*</sup>Intended for use with external resistor. The "2 volt" switches are intended to have a resistor added in series into the lighting circuit by the customer. To determine the approximate value of the resistor, use the equation below:

#### RESISTOR SIZE = POWER SUPPLY VOLTAGE - LED FORWARD VOLTAGE LED FORWARD CURRENT

### **Mouser Electronics**

**Authorized Distributor** 

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

#### OTTO:

K5DA111EAA-ZZR6R5991 K5JA111PAA K5AA112FRJ-ZZR6R5BB1 K5AB112BAA K5AB112FAA K5AB231ANB-4ZL6ZZ9Z2 K5AB331AAA-ZZC3E4994 K5AB331AAA-ZZT1T2994 K5JA232BPD-2ZF2ZZ9Z4 K5JA232BPH-2ZF2ZZ9Z4 K500000010 K5AA111CRD-ZZH1ZZBZ4 K5AA112BRJ-ZZL5L4BB2 K5AA112FPF-ZZR7R8BB4 K5CB222AMJ-33E5B1991 K5DB232BSB-2Z K5GA111EAA-ZZR6R5994 K5GA221ESD-22R6R5994 K5HA111EAA-ZZR3R4991 K5HA111EAA-ZZR5R6994 K5AB232AQB-3Z K5AB331GAA K5AB342GNE-Z1 K5BB241BNF-44 K5BB441ENJ-44 K5CB222ABJ-22E5B1991 K5AB221EPJ-22R6R5991 K5AB221MPJ-22R6R5992 K5AB222BPJ-22R3R4991 K5AB222EPJ-22T1T2992 K5AB222EPJ-22T4M9994 K5AB222EPJ-22T4MA994 K5AA211ASB-2Z K5AA212SSD-2Z K5AA311BNC-ZZZZM2ZB4 K5AA332GAA-ZZW2W1992 K5AA332GNE-Z1 K5AB141BNC-Z1 K500000135-3 K500000137 K500000139 K500000147 K5AA111ESF-ZZR7R8BB1 K500000087 K500000133 K500000134-1 K500000134-2 K5AA231CCD-2Z K5AA231ACD-2Z K5AA231CCD-1Z K5AA231CCD-2Z K5AA231ACD-1Z