

## SEALED, ILLUMINATED ROCKER SWITCHES

ATTRACTIVE &amp; RUGGED FOR WET &amp; 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, thru-panel drain option and switching compatibility from low 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 low 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
- 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
- Low level up to 20 amp switch
- Configurable Single Pole Triple Throw (SPTT) with external jumpers
- Soft Touch button available
- RoHS/WEEE/Reach compliant



Raised Bars Shown

### Standard Characteristics/Ratings:

#### ELECTRICAL RATINGS:

Load	Sea Level @ 28VDC	Sea Level @ 115VAC, 60/400Hz
Resistive	20A	16A
Inductive	15A	15A
Lamp	5A	5A
Motor	0.5HP @ 110VAC	
DWV	1050Vrms except across light terminals	
Low Level	10mA @ 30mV	

**Electrical Life:** 25,000 cycles

#### LIGHTING:

Light Source	Rating
Incandescent	(VDC) 6V, 12V, 24V
Neon	(VAC) 125V, 250V
LED	(VDC) 2V, 6V, 12V, 24V

**Mechanical Life:** 100,000 cycles

**Seal:** IP68S

**Operating Temp Range:** -40°C to +85°C

#### MATERIALS:

<b>Case:</b>	Thermoplastic
<b>Button:</b>	Thermoplastic
<b>Terminals/Contact:</b>	Brass, silver alloy with silver plate, gold flash for low level
<b>Terminal Hardware:</b>	K5 series recommended Quick Connect terminals: AMP 60253-2 for 12-16 AWG AMP 42100-2 for 14-18 AWG
<b>Mounting Hardware:</b>	None provided

## SNAP-IN PANEL MOUNTING

### K5 SERIES PART NUMBER CODE

Part Number Code Continued Below

K5		X	X	X	XX	X	X					
Base Options		Rocker Color*/Style		Rocker Features		Switch Action/Circuit		Light Source Type		Light Circuit		
A. With Keying Pin Only Standard Rating Silver Plate		A. Black Plastic Rocker		Position "A"	Position "C"	Position "A"	Position "B"	Position "C"	Circuit	A. No Illumination	Circuit	Terminal
B. Without Barriers or Pin Standard Rating Silver Plate		B. Black "Soft Touch" Rocker		1. No Feature	1. No Feature	1A. 3-4	NONE	OFF	SPST	B. 6V Incandescent	A. NONE	Connections
C. With Terminal Barriers Only Standard Rating Silver Plate		C. Red Plastic Rocker		2. Lens	2. Lens	2A. 3-4/8-9	NONE	OFF	DPST	C. 12V Incandescent	B. Dep. in "A"	1(-) & 4(+)
D. With Keying Pin Only Low Level Rating Gold Plate		D. Red "Soft Touch" Rocker		3. Raised Bars	3. Raised Bars	1B. 3-4	NONE	3-2	SPDT	E. 125VAC Neon	C. Dep. in "C"	2(+) & 5(-)
E. Without Barriers or Pin Low Level Rating Gold Plate		E. White Plastic Rocker		4. Raised Lit Bars	4. Raised Lit Bars	2B. 3-4/8-9	NONE	3-2/8-7	DPDT	F. 250VAC Neon	D. Ind. in "A"	1(-) & 6(+)
F. With Terminal Barriers Only Low Level Rating Gold Plate		F. White "Soft Touch" Rocker		NOTE: Soft Touch rockers require same color lenses/ lit bars for both positions.		1C. (3-4)	NONE	OFF	SPST	G. 2V Red LED	E. Ind. in "C"	5(-) & 10(+)
G. With Keying Pin Only Standard Rating No Plate		H. Green Plastic Rocker				2C. (3-4)/(8-9)	NONE	OFF	DPST	H. 2V Green LED	F. Dep. in "A"	1(-) & 4(+)
H. Without Barrier or Pin Standard Rating No Plate		J. Orange Plastic Rocker				1D. (3-4)	NONE	3-2	SPDT	J. 2V Amber LED	Dep. in "C"	2(+) & 5(-)
J. With Terminal Barriers Only Standard Rating No Plate		K. Blue Plastic Rocker				2D. (3-4)/(8-9)	NONE	3-2/8-7	DPDT	K. 6V Red LED	G. Dep. in "A"	1(-) & 4(+)
		L. Gray "Soft Touch" Rocker				1E. (3-4)	OFF	(3-2)	SPDT	L. 6V Green LED	Ind. in "C"	5(-) & 10(+)
		M.Gray Plastic Rocker				2E. (3-4)/(8-9)	OFF	(3-2)/(8-7)	DPDT	M.6V Amber LED	H. Ind. in "A"	1(-) & 6(+)
						1F. 3-4	OFF	3-2	SPDT	N. 12V Red LED	Dep. in "C"	2(+) & 5(-)
						2F. 3-4/8-9	OFF	3-2/8-7	DPDT	P. 12V Green LED	J. Ind. in "A"	1(-) & 6(+)
						1G. (3-4)	OFF	3-2	SPDT	Q. 12V Amber LED	Ind. in "C"	5(-) & 10(+)
						2G. (3-4)/(8-9)	OFF	3-2/8-7	DPDT	R. 24V Red LED	NOTE: Polarity only applies to LED circuits.	
										S. 24V Green LED		
										T. 24V Amber LED		

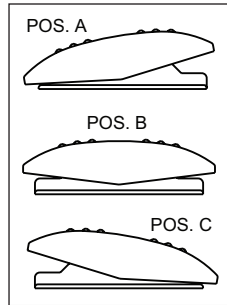
POS. A

POS. B

POS. C

Position "A"	Position "B"	Position "C"	Special Circuits
1H. 3-4/8-9	8-9	OFF	ON/ON/OFF
1J. 3-4/8-9	8-9	NONE	ON/ON/NONE
1K. (3-4)/(8-9)	8-9	OFF	(ON)/ON/OFF
1L. (3-4)/(8-9)	8-9	NONE	(ON)/ON/NONE
1M. 3-4/8-9	3-2/8-9	3-2/8-7	ON/ON/ON
1N. (3-4)/(8-9)	3-2/8-9	3-2/8-7	(ON)/ON/ON
1P. (3-4)/(8-9)	3-2/8-9	(3-2)/(8-7)	(ON)/ON/(ON)
2R. 3-4/8-9	OFF/8-9	OFF/OFF	ON/OFF/OFF
2S. (3-4)/8-9	OFF/8-9	OFF/OFF	ON/OFF/OFF

NOTE: ( ) denotes momentary action.



Special Circuits				
	Position "A"	Position "B"	Position "C"	Special Circuits
1H.	3-4/8-9	8-9	OFF	ON/ON/OFF
1J.	3-4/8-9	8-9	NONE	ON/ON/NONE
1K.	(3-4)/(8-9)	8-9	OFF	(ON)/ON/OFF
1L.	(3-4)/(8-9)	8-9	NONE	(ON)/ON/NONE
1M.	3-4/8-9	3-2/8-9	3-2/8-7	ON/ON/ON
1N.	(3-4)/(8-9)	3-2/8-9	3-2/8-7	(ON)/ON/ON
1P.	(3-4)/(8-9)	3-2/8-9	(3-2)/(8-7)	(ON)/ON/(ON)
2R.	3-4/8-9	OFF/8-9	OFF/OFF	ON/OFF/OFF
				ON/ON/OFF
2S.	(3-4)/8-9	OFF/8-9	OFF/OFF	(ON)/OFF/OFF
				ON/ON/OFF

NOTE: ( ) denotes momentary action.

### K5 PART NUMBER CODE - CONTINUED FROM ABOVE

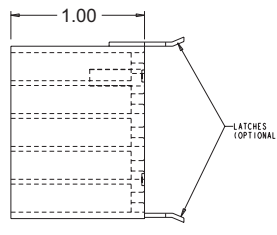
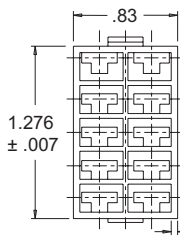
X		X		XX		XX		X		X		X		
Lens Color				Legend Style				Legend Color				Legend Orientation		
Position "A"	Position "C"			Position "A"	Position "C"			Position "A"	Position "C"			Position "A"	Position "C"	
1. Transparent Red	1. Transparent Red			ZZ. No Legend	ZZ. No Legend			1. Red	1. Red			1. Std.	A	C
2. Transparent Green	2. Transparent Green							2. Black	2. Black			2. 90°	A	C
3. Transparent Amber ①	3. Transparent Amber ①							9. White	9. White			3. 180°	A	C
4. Clear ①	4. Clear ①							B. Backlight/ Daylight White ③	B. Backlight/ Daylight White ③			4. 270°	A	C
5. Translucent White ②	5. Translucent White ②							D. Backlight/ Deadfront ③	D. Backlight/ Deadfront ③					
Z. No Lens	Z. No Lens							Z. No Legend	Z. No Legend					
NOTE: It is not recommended to use green LEDs with translucent white lenses. This will reduce light intensity. Use clear lenses with green LEDs for maximum light intensity.				NOTE: For all other legend options, refer to the legend table on page 155, find the two digit code and enter the code in the appropriate position(s).				③ Only available on Rocker Style "A" & Rocker Features "1" and lens color "Z" for each position.						
① Recommended for neon lamps.														
② Special Order: Ultra bright green LEDs to be used with translucent white lens.														
				STOP HERE for lighted switches without legends.										
				Example: K5AA331FNN-44										

STOP HERE for lighted switches without legends.

Example: K5AA331FNH-44

STOP HERE for unlighted switches without legends.

Example: K5AA331BAA



**K5 Connector**  
P/N 801775-2A Without Latches  
P/N 801775-2B With Latches

**Recommended Quick Connect Terminals**  
AMP 60253-2 for 12-16 AWG  
AMP 42100-2 for 14-18 AWG

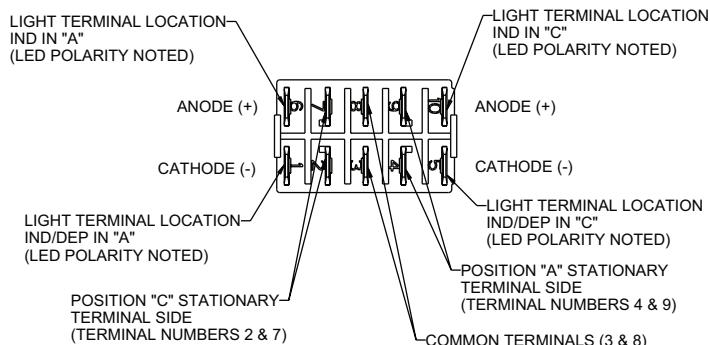
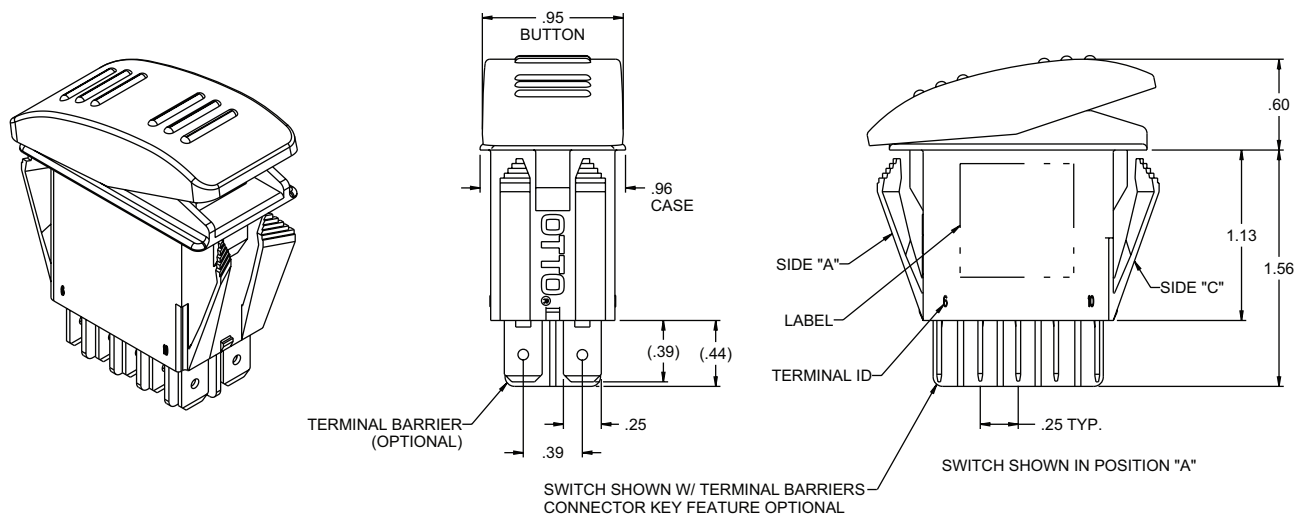
**Panel Seal Gasket**  
P/N 807109

• K5 panel plugs available as shown on page 160.

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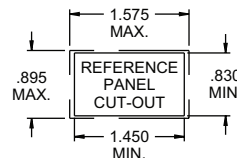
**K5**  
SEALED  
ROCKERS

ATTRACTIVE & RUGGED FOR WET & DUSTY ENVIRONMENTS



TERMINAL LOCATIONS AS VIEWED FROM BOTTOM OF SWITCH  
(CASE REMOVED FOR CLARITY)  
CONTACT MADE IN OPPOSITE DIRECTION OF ROCKER TRAVEL

MOUNTING OPENING:  
PANEL THICKNESS RANGE OF .025 - .105 A GASKET IS RECOMMENDED  
PANEL THICKNESS RANGE OF .105 - .187 W/O GASKET  
PANEL OPENING: MIN. TYP. MAX.  
WIDTH .830 .863 .895  
LENGTH 1.450 1.513 1.575



<p>POS "A"</p> <p>POS "B"</p> <p>POS "C"</p> <p>SPECIAL CIRCUIT - ON-ON-ON SCHEMATIC</p>	<p>K5....2A....</p> <p>DPST - ON-NONE-OFF SCHEMATIC</p>	<p>K5....2B....</p> <p>DPDT - ON-NONE-ON SCHEMATIC</p>	<p>K5....2C....</p> <p>DPST - (ON) - NONE-OFF SCHEMATIC</p>	<p>K5....2D....</p> <p>DPDT - (ON) - NONE-ON SCHEMATIC</p>	<p>GENERAL SCHEMATIC INFORMATION</p> <p>○—○ INDICATES MAINTAIN ACTION (FIXED POSITION)</p> <p>▼—○ INDICATES MOMENTARY ACTION (AUTOMATIC RETURN POSITION)</p> <p>FOR OTHER LIGHTING SCHEMATICS REPLACE FOLLOWING SYMBOLS:</p> <p>⬡ INCANDESCENT (REPLACE RESISTOR &amp; LED)</p> <p>⬢ NEON (REPLACE LED)</p>
<p>K5....2E....</p> <p>DPDT - (ON) - OFF - (ON) SCHEMATIC</p>	<p>K5....2F....</p> <p>DPDT - ON-OFF-ON SCHEMATIC</p>	<p>K5....2G....</p> <p>DPDT - (ON) - OFF-ON SCHEMATIC</p>	<p>K5....2BND...Z</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A"</p>	<p>K5....2BNC...Z</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "C"</p>	
<p>K5....2BND...Z</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A"</p>	<p>K5....2BNE...Z</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "C"</p>	<p>K5....2BNF...</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A" &amp; "C"</p>	<p>K5....2BNG...</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A" &amp; INDEPENDENT LED IN "C"</p>	<p>K5....2BNH...</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/INDEPENDENT LED IN "A" &amp; DEPENDENT LED IN "C"</p>	<p>K5....2BNJ...</p> <p>DPDT - ON-NONE-ON SCHEMATIC W/INDEPENDENT LED IN "A" &amp; "C"</p>



## SNAP-IN PANEL MOUNTING

## Standard Legends Per SAE Specifications

STANDARD LEGENDS PER SAE SPECIFICATIONS					
A1		ANCHOR	K2		UNLOCK
B1		BATTERY	L1		LIGHT
B2		ELECTRIC POWER	L2		MASTER LIGHTING SWITCH
C1		AC/COOLING SYSTEMS	L3		HEADLIGHTS
C2		DEHUMIDIFIER	L4		HEADLIGHTS-LOW / DIPPED BEAM
C3		HEATER/INTERIOR HEATING	L5		HEADLIGHTS-HIGH / UPPER BEAM
D1		WINDSHIELD DEFROSTER	L6		PARKING LIGHT
D2		REAR WINDOW DEFROSTER	L7		WORK LAMP
D3		MIRROR DEFROSTER	L8		WORK LAMP
E1		ENGINE/START	L9		INTERIOR DOME LIGHT
E2		ENGINE/STOP	M1		BEACON
E3		ON/START	M2		HAZARD/POSITION LIGHTS
E4		OFF/STOP	M3		CLEARANCE LIGHTS
E5	ON	ON	M4		SIDE MARKER LIGHT
E6	OFF	OFF	M5		RUNNING LIGHTS (UNDER POWER)
E7		ENGINE ELECTRIC PREHEAT	M6		ANCHOR LIGHT
E8		ENGINE-GAS INJECTION	M7		RUNNING/ANCHOR LIGHTS
F1		FRONT FOG LIGHTS	M8		SEARCH LIGHT
F2		REAR FOG LIGHTS	M9		LEFT TURN SIGNAL
G1		FUEL	MA		RIGHT TURN SIGNAL
H1		HORN	P1		BILGE PUMP #1
H2		HORN REAR	P2		BILGE PUMP #2
K1		LOCK	P3		BILGE PUMP #3
			P4		BILGE PUMP
P5		BILGE BLOWER	R1		LIFT
R2		LOWER	R3		UP
R4		DOWN	R5		RIGHT
R6		LEFT	R7	FWD	FORWARD
R8	REV	REVERSE	S1		RADIO
S2		MUTE	T1		FAST
T2		SLOW	T3		TRIM TAB / TRIMMING OPERATION
T4		TRANSMISSION	V1		VENTILATING / AC FAN
W1		WINDSHIELD WIPER	W2		WINDSHIELD-WASHER
W3		WINDSHIELD-WASHER/WIPER	W4		REAR WINDOW WIPER
W5		REAR WINDOW-WASHER	W6		REAR WINDOW-WASHER/WIPER
ZZ		NO LEGEND			

For legends not shown, please consult an OTTO representative.