

SEALED, ILLUMINATED ROCKER SWITCHES

K5
SEALED
ROCKERS

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, 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:

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

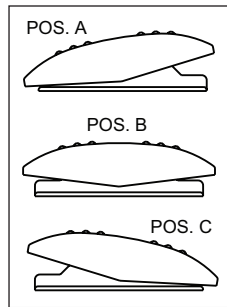
SEALED, ILLUMINATED ROCKER SWITCHES

SNAP-IN PANEL MOUNTING

K5 SERIES PART NUMBER CODE

Part Number Code Continued Below

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



| 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" | 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.

- ① Recommended for neon lamps.
- ② Special Order: Ultra bright green LEDs to be used with translucent white lens.

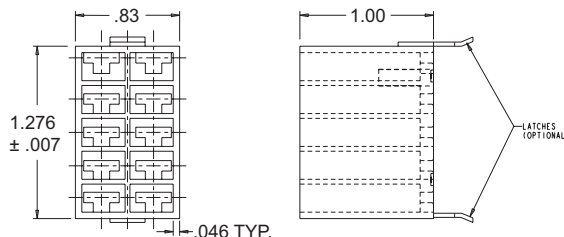
STOP HERE for lighted switches without legends.

Example:
K5AA331FNH-44

③ Only available on Rocker Style "A" & Rocker Features "1" and lens color "Z" for each position.

STOP HERE for unlighted switches without legends.

Example:
K5AA331BAA



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

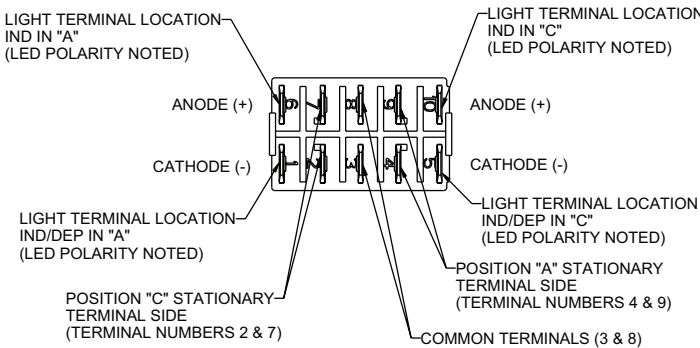
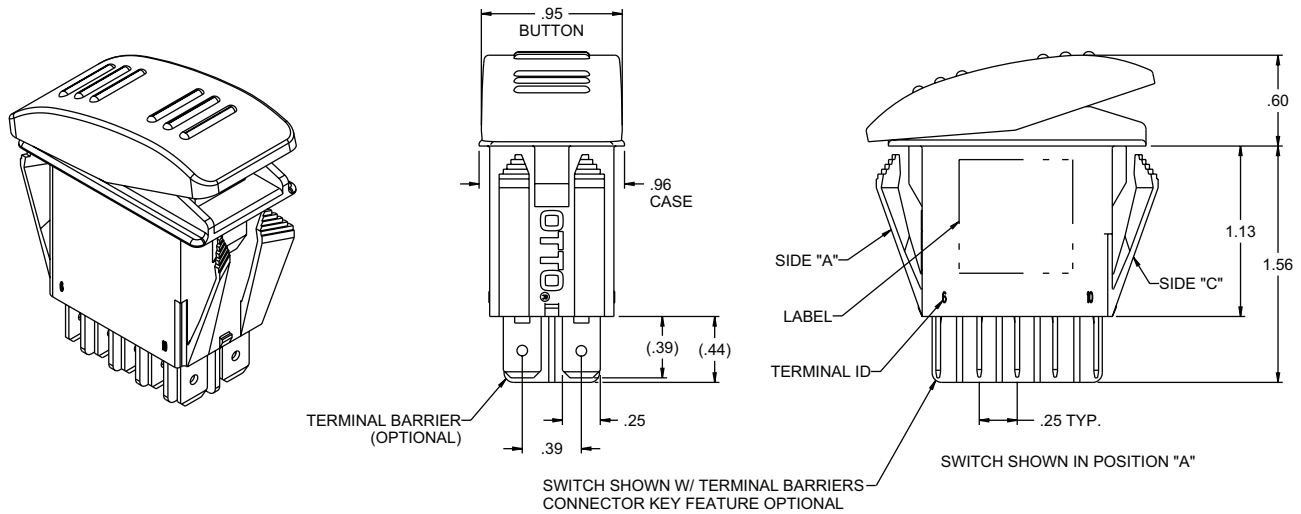
Recommended Quick Connect Terminals
AMP 60253-2 for 12-16 AWG
AMP 42100-2 for 14-18 AWG

Panel Seal Gasket
P/N 807109

• K5 panel plugs available as shown on page 160.

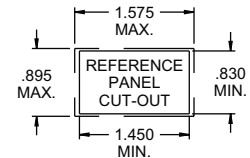
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TERMINAL LOCATIONS AS VIEWED FROM BOTTOM OF SWITCH
(CASE REMOVED FOR CLARITY)
CONTACT MADE IN OPPOSITE DIRECTION OF ROCKER TRAVEL

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



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

ROCKER SWITCHES

SNAP-IN PANEL MOUNTING

Standard Legends Per SAE Specifications

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

For legends not shown, please consult an OTTO representative.