

# 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, thru-panel drain option and switching compatibility from low level up to 20 amps.

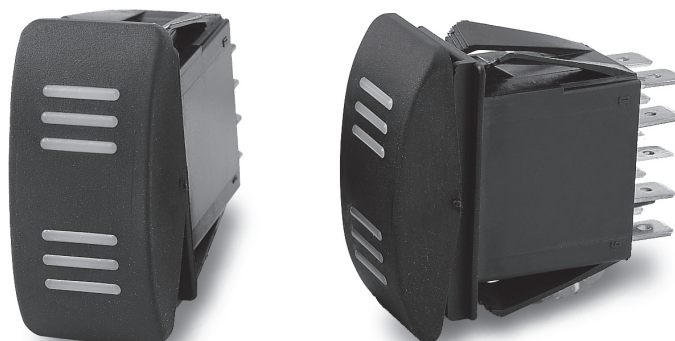
The K5 series offers a choice of LED, incandescent and neon illumination. Legends can be stamped onto a non-illuminated button, stamped onto an illuminated lens or laser etched into the lens and backlit.

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:

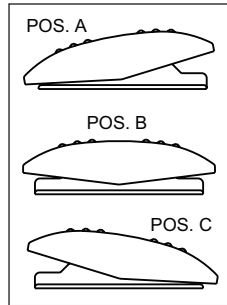
|                           |  |
|---------------------------|--|
| <b>Case:</b>              | Thermoplastic  |
| <b>Button:</b>            | Thermoplastic  |
| <b>Terminals/Contact:</b> | Brass, silver alloy with silver plate, gold flash for low level  |
| <b>Terminal Hardware:</b> | K5 series recommended Quick Connect terminals:<br>AMP 60253-2 for 12-16 AWG<br>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  |                           | XX                     |      | X                 |      | X                          |   |                             |
|---|---|-------------------------------------|-------------------------------------|--|---------------------------|------------------------|------|-------------------|------|----------------------------|---|-----------------------------|
| Base Options  |   | Rocker Color*/Style                 |                                     | Rocker Features  |                           | Switch Action/Circuit  |      | Light Source Type |      | Light Circuit              |   |                             |
| <b>A.</b> With Keying Pin Only<br>Standard Rating<br>Silver Plate           | <b>A.</b> Black Plastic Rocker                    | <b>B.</b> Black "Soft Touch" Rocker | <b>C.</b> Red Plastic Rocker        | <b>1.</b> No Feature   | <b>1.</b> No Feature      | <b>1A.</b> 3-4         | NONE | OFF               | SPST | <b>A.</b> No Illumination  | <b>Circuit</b>                                  | <b>Terminal Connections</b> |
| <b>B.</b> Without Barriers or Pin<br>Standard Rating<br>Silver Plate        | <b>D.</b> Red "Soft Touch" Rocker                 | <b>E.</b> White Plastic Rocker      | <b>F.</b> White "Soft Touch" Rocker | <b>2.</b> Lens   | <b>2.</b> Lens            | <b>2A.</b> 3-4/8-9     | NONE | OFF               | DPST | <b>B.</b> 6V Incandescent  | <b>B.</b> Dep. in "A"                           | 1(-) & 4(+)                 |
| <b>C.</b> With Terminal<br>Barriers Only<br>Standard Rating<br>Silver Plate | <b>H.</b> Green Plastic Rocker                    | <b>J.</b> Orange Plastic Rocker     | <b>M.</b> Gray Plastic Rocker       | <b>3.</b> Raised Bars  | <b>3.</b> Raised Bars     | <b>1B.</b> 3-4         | NONE | 3-2               | SPDT | <b>C.</b> 12V Incandescent | <b>C.</b> Dep. in "C"                           | 2(+) & 5(-)                 |
| <b>D.</b> With Keying Pin Only<br>Low Level Rating<br>Gold Plate            | <b>L.</b> Gray "Soft Touch" Rocker                | <b>M.</b> Gray Plastic Rocker       |                                     | <b>4.</b> Raised Lit Bars  | <b>4.</b> Raised Lit Bars | <b>2B.</b> 3-4/8-9     | NONE | 3-2/8-7           | DPDT | <b>D.</b> 24V Incandescent | <b>D.</b> Ind. in "A"                           | 1(-) & 6(+)                 |
| <b>E.</b> Without Barriers or Pin<br>Low Level Rating<br>Gold Plate         | *Additional colors available.<br>Contact factory. |                                     |                                     | NOTE: Soft Touch rockers<br>require same color lenses/<br>lit bars for both positions. |                           | <b>1C.</b> (3-4)       | NONE | OFF               | SPST | <b>E.</b> 125VAC Neon      | <b>E.</b> Ind. in "C"                           | 5(-) & 10(+)                |
| <b>F.</b> With Terminal<br>Barriers Only<br>Low Level Rating<br>Gold Plate  |   |                                     |                                     |  |                           | <b>2C.</b> (3-4)/(8-9) | NONE | OFF               | DPST | <b>F.</b> 250VAC Neon      | <b>F.</b> Dep. in "A"                           | 1(-) & 4(+)                 |
| <b>G.</b> With Keying Pin Only<br>Standard Rating<br>No Plate               |   |                                     |                                     |  |                           | <b>1D.</b> (3-4)       | NONE | 3-2               | SPDT | <b>G.</b> 2V Red LED       | <b>G.</b> Dep. in "A"                           | 1(-) & 4(+)                 |
| <b>H.</b> Without Barrier or Pin<br>Standard Rating<br>No Plate             |   |                                     |                                     |  |                           | <b>2D.</b> (3-4)/(8-9) | NONE | 3-2/8-7           | DPDT | <b>H.</b> 2V Green LED     | <b>H.</b> Ind. in "C"                           | 5(-) & 10(+)                |
| <b>J.</b> With Terminal<br>Barriers Only<br>Standard Rating<br>No Plate     |   |                                     |                                     |  |                           | <b>1E.</b> (3-4)       | OFF  | (3-2)             | SPDT | <b>J.</b> 2V Amber LED     | <b>J.</b> Dep. in "A"                           | 1(-) & 4(+)                 |
|   |   |                                     |                                     |  |                           | <b>2E.</b> (3-4)/(8-9) | OFF  | (3-2)/(8-7)       | DPDT | <b>K.</b> 6V Red LED       | <b>K.</b> Ind. in "C"                           | 2(+) & 5(-)                 |
|   |   |                                     |                                     |  |                           | <b>1F.</b> 3-4         | OFF  | 3-2               | SPDT | <b>L.</b> 6V Green LED     | <b>L.</b> Ind. in "A"                           | 1(-) & 6(+)                 |
|   |   |                                     |                                     |  |                           | <b>2F.</b> 3-4/8-9     | OFF  | 3-2/8-7           | DPDT | <b>M.</b> 6V Amber LED     | <b>M.</b> Ind. in "C"                           | 2(+) & 5(-)                 |
|   |   |                                     |                                     |  |                           | <b>1G.</b> (3-4)       | OFF  | 3-2               | SPDT | <b>N.</b> 12V Red LED      | <b>N.</b> Ind. in "A"                           | 1(-) & 6(+)                 |
|   |   |                                     |                                     |  |                           | <b>2G.</b> (3-4)/(8-9) | OFF  | 3-2/8-7           | DPDT | <b>P.</b> 12V Green LED    | <b>P.</b> Ind. in "C"                           | 1(-) & 6(+)                 |
|   |   |                                     |                                     |  |                           |                        |      |                   |      | <b>Q.</b> 12V Amber LED    | <b>Q.</b> Ind. in "C"                           | 5(-) & 10(+)                |
|   |   |                                     |                                     |  |                           |                        |      |                   |      | <b>R.</b> 24V Red LED      | NOTE: Polarity only applies<br>to LED circuits. |                             |
|   |   |                                     |                                     |  |                           |                        |      |                   |      | <b>S.</b> 24V Green LED    |   |                             |
|   |   |                                     |                                     |  |                           |                        |      |                   |      | <b>T.</b> 24V Amber LED    |   |                             |



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

NOTE: All code combinations are not feasible. Consult factory for product availability.

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  |                     |                     |                     |   |  |   |  |
| <b>Position "A"</b>    | <b>Position "C"</b>    | <b>Position "A"</b> | <b>Position "C"</b> | <b>Position "A"</b>               | <b>Position "C"</b>               | <b>Position "A"</b> | <b>Position "C"</b> | <b>Position "A"</b> | <b>Position "C"</b> |   |  |   |  |
| 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/<br>Daylight White ③ | B. Backlight/<br>Daylight White ③ | 4. 270°             | A                   | C                   |                     |   |  |   |  |
| 5. Translucent White ② | 5. Translucent White ② |                     |                     | D. Backlight/<br>Deadfront ③      | D. Backlight/<br>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.

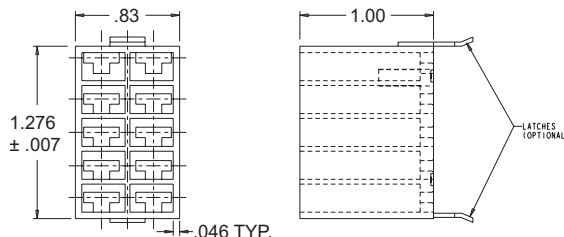
STOP HERE for lighted switches without legends.

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

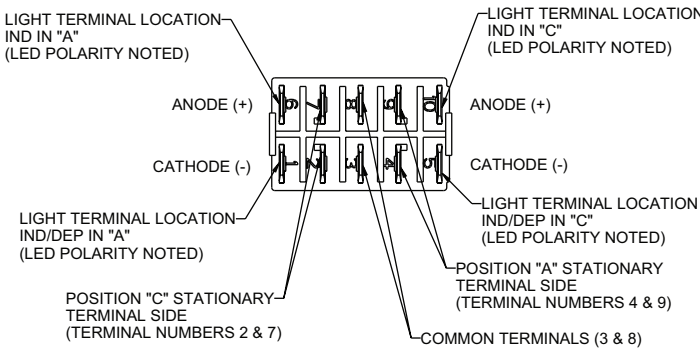
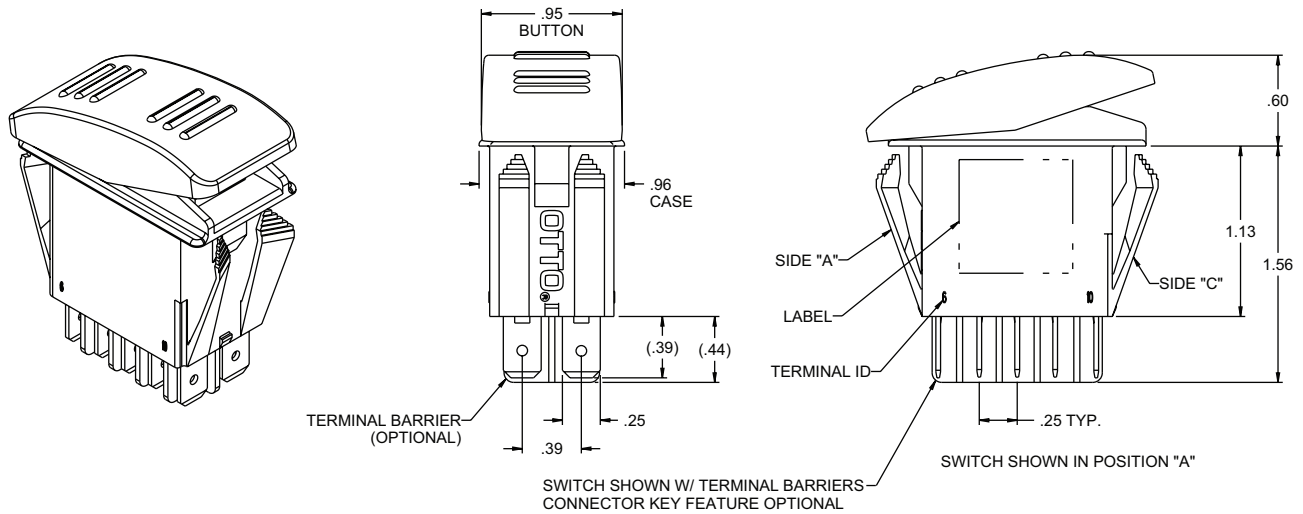
**Recommended Quick Connect Terminals**  
AMP 60253-2 for 12-16 AWG  
AMP 42100-2 for 14-18 AWG

**Panel Seal Gasket**  
P/N 807109

• K5 panel plugs available as shown on page 160.

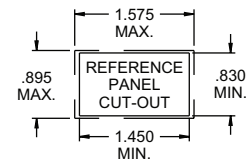
# SEALED, ILLUMINATED ROCKER SWITCHES

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



|  |   |  |   |   |  |
|--|---|--|---|---|--|
| POS "A"<br>POS "B"<br>POS "C"<br>SPECIAL CIRCUIT - ON-ON-ON SCHEMATIC  | K5...2A...<br>DPST - ON-NONE-OFF SCHEMATIC                          | K5...2B...<br>DPDT - ON-NONE-ON SCHEMATIC                                | K5...2C...<br>DPST - (ON)-NONE-OFF SCHEMATIC  | K5...2D...<br>DPDT - (ON)-NONE-ON SCHEMATIC   |  |
| GENERAL SCHEMATIC INFORMATION<br>○—○ INDICATES MAINTAIN ACTION (FIXED POSITION)<br>▼—○ INDICATES MOMENTARY ACTION (AUTOMATIC RETURN POSITION)<br>FOR OTHER LIGHTING SCHEMATICS REPLACE FOLLOWING SYMBOLS:<br>INCANDESCENT (REPLACE RESISTOR & LED)<br>NEON (REPLACE LED) | K5...2E...<br>DPDT - (ON)-OFF-(ON) SCHEMATIC                        | K5...2F...<br>DPDT - ON-OFF-ON SCHEMATIC                                 | K5...2G...<br>DPDT - (ON)-OFF-ON SCHEMATIC  | K5...2BNC-Z<br>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A"                           |  |
| K5...2BND-Z<br>DPDT - ON-NONE-ON SCHEMATIC W/INDEPENDENT LED IN "A"  | K5...2BNE-Z<br>DPDT - ON-NONE-ON SCHEMATIC W/INDEPENDENT LED IN "C" | K5...2BNF...<br>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A" & "C" | K5...2BNG...<br>DPDT - ON-NONE-ON SCHEMATIC W/DEPENDENT LED IN "A" & INDEPENDENT LED IN "C" | K5...2BNH...<br>DPDT - ON-NONE-ON SCHEMATIC W/INDEPENDENT LED IN "A" & DEPENDENT LED IN "C" |  |
| K5...2BNJ...<br>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 /<br>DIPPED BEAM | R4 |    | DOWN                             |
| C3                                      |    | HEATER/INTERIOR HEATING | L5 |    | HEADLIGHTS-HIGH /<br>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 /<br>TRIMMING OPERATION |
| E6                                      | OFF   | OFF                     | M5 |  | RUNNING LIGHTS<br>(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.