

A3

Switches & Pilot Devices



TW NEMA Style Switches with snap-on contacts

Key features include:

- Corrosion resistant octagonal chrome plated locking bezel
- Snap-on 10A contact blocks
- Transformer or full voltage
- Incandescent or LED illumination
- Slow make, double break, self cleaning contacts
- Modular construction for maximum flexibility
- NEMA 4X and IP65 watertight/oiltight panel
- Available assembled or as sub-components
- Large M3.5 screw terminals with captive sems plate

IDEC has your 22mm switching needs covered.

Button styles include flush, extended, mushroom, or square and all bodies are crafted from fracture-resistant nylon.

All illuminated units feature two lense styles, one that maximizes light dispersion, the other accommodates direct lense engraving.

Self cleaning contact mechanisms allow for a wide current rating, 5mA to 10A, which reduces the need for various contact materials.

When looking for a 22mm switch that is durable, easy to use, and versatile, then IDEC's TW series is your solution.



UL Listed
File No. E70646



File No. 9561116E01








CSA Certified
File No. LR48366



File No. DK95-01696



Certificate No.
2030010305027380

| | | | | | | | | | |
|--|--|--|--|-----|-----|------------------------------|------|------|------|
| Conforming to Standards | | EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 No.14 | | | | | | | |
| Approvals | | <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  File No. E68961 </div> <div style="text-align: center;">  File No. LR21451 </div> <div style="text-align: center;">  Certificate No. 2030010305027380 </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  TÜV Rheinland Registration No: J9551802 (E-Stops) Registration No: J9551803 (All other switches) Registration No: J9551804 (Pilot Lights) </div> <div style="text-align: center;">  </div> </div> <p>CSA: pushbuttons and selector switches: A600 pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V) UL: pushbuttons and selector switches: A600 pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V) TÜV: pushbuttons and selector switches: A600=P600 (NO, NC)/Q600 (NO-EM, NC-LB) pilot lights and illuminated pushbuttons, direct supply pilot lights and illuminated pushbuttons with integral transformer (100/110, 115, 120, 200/220, 230, 240, 380, 400/440, 480V)</p> | | | | | | | |
| Operating Temperature | | Operation: -25 to +50°C (without freezing) Storage: -40 to +80°C (without freezing) | | | | | | | |
| Vibration Resistance | | 5 to 55Hz, 100m/sec ² (10g) conforming to IEC6068-2-6 | | | | | | | |
| Shock Resistance | | 1000m/sec ² (100g) conforming to IEC6068-2-7 | | | | | | | |
| Electric Shock Protection | | Class 0 conforming to IEC60536 | | | | | | | |
| Degree of Protection (conforming to IEC60529) (conforming to NEMA ICS6-110) | | IP65 from front of the panel; (IP54 for key switches) IP20 (Type HW-F contact block) NEMA 1, 2, 3, 3R, 3S, 4, 4X, 5, 12, 13 (NEMA 1, 2, 3R, 5, 12, 13 for key switches) | | | | | | | |
| Mechanical Life | | Momentary pushbuttons: 5,000,000 (900 operations per hour) All other switches: 500,000 | | | | | | | |
| Pollution Degree (conforming to IEC60947-1) | | 3 for switches not using a transformer 2 for switches using a transformer | | | | | | | |
| Rated Operational Characteristics | | AC-15: A600 or Ue = 250V, Ie = 3A (NO, NC, NO-EM, NC-LB) DC-13: P600 or Ue = 125V, Ie = 1.1A (NO, NC) DC-13: Q600 or Ue = 125V, Ie = 0.9A (NO-EM, NC-LB) | | | | | | | |
| Rated Insulation Voltage | | 600V | | | | | | | |
| Rated Switching Over-Voltage | | Less than 4kV, conforming to IEC60947-1 | | | | | | | |
| Rated Impulse Withstanding Voltage | | 4kV for contact circuit 2.5kV for lamp circuit | | | | | | | |
| Rated Thermal Current | | 10 Amp | | | | | | | |
| Minimum Switching Capacity | | 5 mA at 3V AC/DC | | | | | | | |
| Contact Operation | | Slow break NC or slow make NO, self-cleaning | | | | | | | |
| Recommended Terminal Torque | | 0.8 N m (7.1 in lb.) | | | | | | | |
| External Short-Circuit Protection | | 10A 250V fuse conforming to IEC60269-1 | | | | | | | |
| Applicable Wire Size | | Minimum 1 x 22 AWG, max. 2 x 14 AWG or 1 x 12 AWG | | | | | | | |
| Contact Resistance | | Initial contact resistance of 50mΩ or less | | | | | | | |
| Contact Gap | | 4mm (NO and NC) 2mm (NO-EM and NC-LB) | | | | | | | |
| Electrical Reliability | | MTBF < 1 fault for 10 million operation cycles (3V DC, 5mA) | | | | | | | |
| Lamp Ratings | | Incandescent: 1 W LEDs: 6V: 17mA max, 12/24V: 11mA max, 120/240V: 10mA max | | | | | | | |
| Horsepower Rating | | 1/4 HP @ 120V (single-phase, non-reversing motor); 1 HP @ 240V (3 phase, non-reversing motor) | | | | | | | |
| Maximum Inrush Current | | 40 A (40 ms) | | | | | | | |
| Contact Material | | Silver | | | | | | | |
| Contact Ratings | Pushbuttons Illuminated Pushbuttons Selector Switches Illuminated Selector Switches Pushbutton Selectors | | Contact Block | | | Type HW-C/HW-F | | | |
| | | | Rated Insulation Voltage | | | 600V | | | |
| | | | Rated Continuous Current | | | 10A | | | |
| | | | Contact Ratings by Utilization Category IEC 60947-5-1 | | | AC-15 (A600) DC-13 (P600) | | | |
| Characteristics | Contact Ratings by Utilization Category | | | | | | | | |
| | Operational Voltage | | | 24V | 48V | 50V | 110V | 220V | 440V |
| | Operational Current | AC 50/60 Hz | AC-12 Control of resistive loads & solid state loads | 10A | — | 10A | 10A | 6A | 2A |
| | | | AC-15 Control of electromagnetic loads (> 72VA) | 10A | — | 7A | 5A | 3A | 1A |
| | Operational Current | DC | DC-12 Control of resistive loads & solid state loads | 8A | 5A | — | 2.2A | 1.1A | — |
| DC-13 Control of electromagnets | | | 5A | 2A | — | 1.1A | 0.6A | — | |

Non-Illuminated Selector Switches (Assembled)

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Assembled Selector Switches

A S W 3 (1) (L) 20 (N) - 304

Function

S: Selector Switch

Series Designation

W: TW Series

Number of Positions

2: 2-Position

3: 3-Position

4: 4-Position

5: 5-Position

Spring Return Action

Blank: Maintained

1: Spring return from Right (2 or 3 position)

2: Spring return from Left (2 or 3 position)

3: 2-Way spring return from Left and Right (3 position only)

Circuit Number

(Standard circuits shown on following pages and A3-150.)

Contacts Terminal Style

Blank: standard

N: Fingersafe (IP20)

Contact Arrangement Code

10: 1NO 01: 1NC

20: 2NO 02: 2NC

40: 4NO 04: 4NC

11: 1NO-1NC 22: 2NO-2NC

Operator Style Code

Blank: Knob Operator

L: Lever Operator

K: Key Operator



1. Use only when interpreting part numbers. Do not use for developing part numbers.
2. Custom contact configurations available, contact IDEC for details.
3. Portions of part number inside () are optional.

Non-Illuminated Selector Switches (Assembled) con't

Part Numbers: 2-Position Selector Switches

| Contact | Mounting | Operator Position | | | Part Number | Part Number | Part Number |
|------------|------------------|-------------------|---|----------------------|--|---|---|
| | | L | R | | | | |
| 1NO | 1 2 | 0 | X | Knob Lever Key | ASW210 ASW2L10 ASW2K10 | ASW2110 ASW21L10 ASW21K10 | ASW2210 ASW22L10 ASW22K10 |
| | | 0 | 0 | | | | |
| 1NC | 1 2 | X | 0 | Knob Lever Key | ASW201-116 ASW2L01-116 ASW2K01-116 | ASW2101-116 ASW21L01-116 ASW21K01-116 | ASW2201-116 ASW22L01-116 ASW22K01-116 |
| | | 0 | 0 | | | | |
| 1NO 1NC | 1 2 | X | 0 | Knob Lever Key | ASW211 ASW2L11 ASW2K11 | ASW2111 ASW21L11 ASW21K11 | ASW2211 ASW22L11 ASW22K11 |
| | | 0 | X | | | | |
| 2NO | 1 2 | 0 | X | Knob Lever Key | ASW220 ASW2L20 ASW2K20 | ASW2120 ASW21L20 ASW21K20 | ASW2220 ASW22L20 ASW22K20 |
| | | 0 | X | | | | |
| 2NC | 1 2 | X | 0 | Knob Lever Key | ASW202-104 ASW2L02-104 ASW2K02-104 | ASW2102-104 ASW21L02-104 ASW21K02-104 | ASW2202-104 ASW22L02-104 ASW22K02-104 |
| | | X | 0 | | | | |
| 2NO 2NC | 1 2 3 4 | 0 | X | Knob Lever Key | ASW222 ASW2L22 ASW2K22 | ASW2122 ASW21L22 ASW21K22 | ASW2222 ASW22L22 ASW22K22 |
| | | X | 0 | | | | |
| 2NO 2NC | 1 2 3 4 | 0 | X | Knob Lever Key | ASW222-111 ASW2L22-111 ASW2K22-111 | ASW2122-111 ASW21L22-111 ASW21K22-111 | ASW2222-111 ASW22L22-111 ASW22K22-111 |
| | | X | 0 | | | | |



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Part Numbers: 3-Position Selector Switches

| Contact | Mounting | Operator Position | | | | Part Number | Part Number | Part Number | Part Number |
|------------|------------------|-------------------|---|---|----------------------|--|---|---|---|
| | | L | C | R | | | | | |
| 2NO | 1 2 | X | 0 | 0 | Knob Lever Key | ASW320 ASW3L20 ASW3K20 | ASW3120 ASW31L20 ASW31K20 | ASW3220 ASW32L20 ASW32K20 | ASW3320 ASW33L20 ASW33K20 |
| | | 0 | 0 | X | | | | | |
| 2NC | 1 2 | 0 | X | X | Knob Lever Key | ASW302 ASW3L02 ASW3K02 | ASW3102 ASW31L02 ASW31K02 | ASW3202 ASW32L02 ASW32K02 | ASW3302 ASW33L02 ASW33K02 |
| | | X | X | 0 | | | | | |
| 2NO 2NC | 1 2 3 4 | X | 0 | 0 | Knob Lever Key | ASW322 ASW3L22 ASW3K22 | ASW3122 ASW31L22 ASW31K22 | ASW3222 ASW32L22 ASW32K22 | ASW3322 ASW33L22 ASW33K22 |
| | | 0 | X | X | | | | | |
| 2NO 2NC | 1 2 3 4 | X | 0 | X | Knob Lever Key | ASW322-309 ASW3L22-309 ASW3K22-309 | ASW3122-309 ASW31L22-309 ASW31K22-309 | ASW3222-309 ASW32L22-309 ASW32K22-309 | ASW3322-309 ASW33L22-309 ASW33K22-309 |
| | | 0 | X | 0 | | | | | |
| 2NO 2NC | 1 2 3 4 | 0 | X | 0 | Knob Lever Key | ASW322-310 ASW3L22-310 ASW3K22-310 | ASW3122-310 ASW31L22-310 ASW31K22-310 | ASW3222-310 ASW32L22-310 ASW32K22-310 | ASW3322-310 ASW33L22-310 ASW33K22-310 |
| | | 0 | 0 | X | | | | | |
| 4NO | 1 2 3 4 | X | 0 | 0 | Knob Lever Key | ASW340 ASW3L40 ASW3K40 | ASW3140 ASW31L40 ASW31K40 | ASW3240 ASW32L40 ASW32K40 | ASW3340 ASW33L40 ASW33K40 |
| | | 0 | 0 | X | | | | | |
| 4NC | 1 2 3 4 | 0 | X | X | Knob Lever Key | ASW304 ASW3L04 ASW3K04 | ASW3104 ASW31L04 ASW31K04 | ASW3204 ASW32L04 ASW32K04 | ASW3304 ASW33L04 ASW33K04 |
| | | X | X | 0 | | | | | |

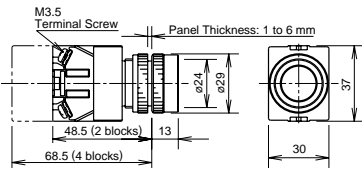


- The truth table indicates the operating position of contact block when the operator is switched to that position.
X = On (closed contacts)
O = Off (open contacts)
X-X = Overlapping Contacts: Remain on (closed contacts) when switch is moved between these two positions.
- All knob and lever selector switches come in black. Other colors are available by ordering the knob or lever separately.
- Every key selector switch uses an identical key. The key is removable in any maintained position. If a different configuration is required, contact an IDEC representative for more information.
- Custom contact configurations are available, see page A3-150 or contact IDEC for details.

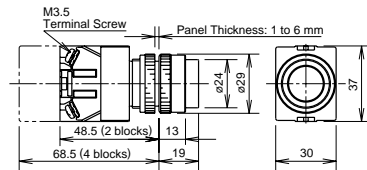
Dimensions — TW Series

Pushbuttons

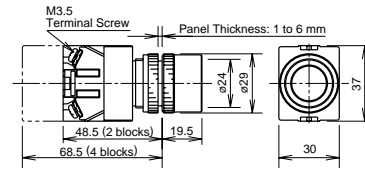
Flush



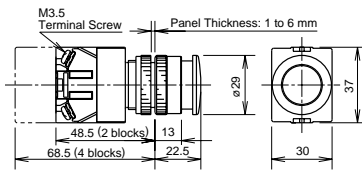
Extended



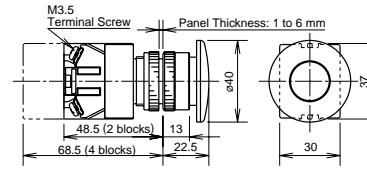
Extended with Full Shroud



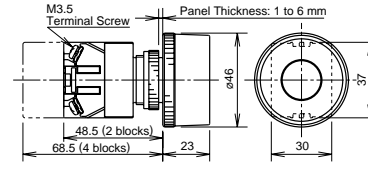
29mm Mushroom



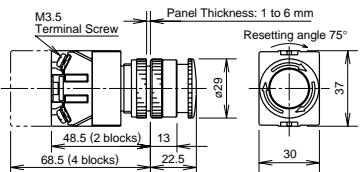
40mm Mushroom



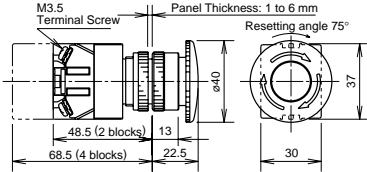
Mushroom with Full Shroud



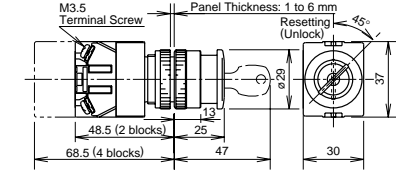
29mm Push-Lock-Turn-Reset



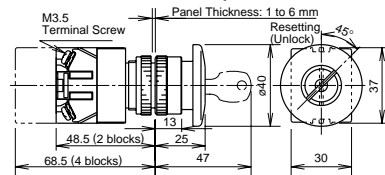
40mm Push-Lock-Turn-Reset



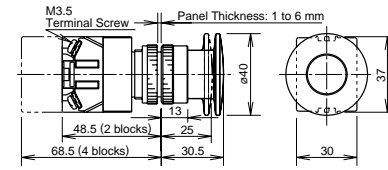
Keylock Push On/Off



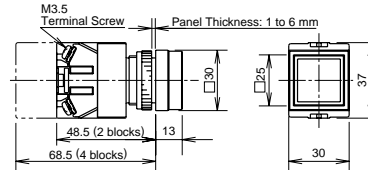
40mm Pushlock Key Reset



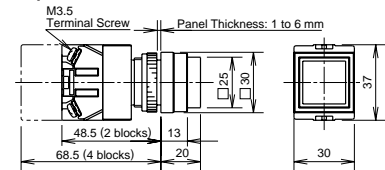
40mm Push-Pull



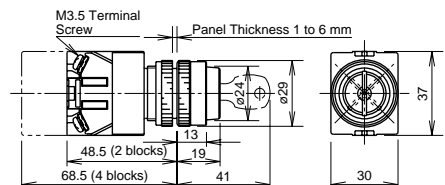
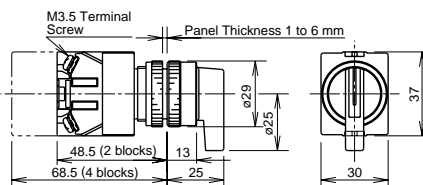
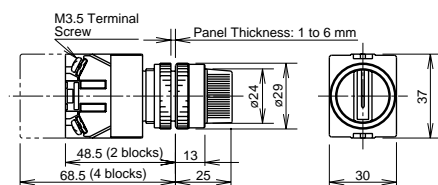
Square Flush



Square Extended



Selector Switches



Switches & Pilot Devices