

**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

<b>Conforming to Standards</b>		EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 No.14							
<b>Approvals</b>		<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><b>CSA:</b> 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)  <b>UL:</b> 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)  <b>TÜV:</b> 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>							
<b>Operating Temperature</b>		Operation: -25 to +50°C (without freezing) Storage: -40 to +80°C (without freezing)							
<b>Vibration Resistance</b>		5 to 55Hz, 100m/sec <sup>2</sup> (10g) conforming to IEC6068-2-6							
<b>Shock Resistance</b>		1000m/sec <sup>2</sup> (100g) conforming to IEC6068-2-7							
<b>Electric Shock Protection</b>		Class 0 conforming to IEC60536							
<b>Degree of Protection</b> (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)							
<b>Mechanical Life</b>		Momentary pushbuttons: 5,000,000 (900 operations per hour) All other switches: 500,000							
<b>Pollution Degree (conforming to IEC60947-1)</b>		3 for switches not using a transformer 2 for switches using a transformer							
<b>Rated Operational Characteristics</b>		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)							
<b>Rated Insulation Voltage</b>		600V							
<b>Rated Switching Over-Voltage</b>		Less than 4kV, conforming to IEC60947-1							
<b>Rated Impulse Withstanding Voltage</b>		4kV for contact circuit 2.5kV for lamp circuit							
<b>Rated Thermal Current</b>		10 Amp							
<b>Minimum Switching Capacity</b>		5 mA at 3V AC/DC							
<b>Contact Operation</b>		Slow break NC or slow make NO, self-cleaning							
<b>Recommended Terminal Torque</b>		0.8 N m (7.1 in lb.)							
<b>External Short-Circuit Protection</b>		10A 250V fuse conforming to IEC60269-1							
<b>Applicable Wire Size</b>		Minimum 1 x 22 AWG, max. 2 x 14 AWG or 1 x 12 AWG							
<b>Contact Resistance</b>		Initial contact resistance of 50mΩ or less							
<b>Contact Gap</b>		4mm (NO and NC) 2mm (NO-EM and NC-LB)							
<b>Electrical Reliability</b>		MTBF < 1 fault for 10 million operation cycles (3V DC, 5mA)							
<b>Lamp Ratings</b>		Incandescent: 1 W LEDs: 6V: 17mA max, 12/24V: 11mA max, 120/240V: 10mA max							
<b>Horsepower Rating</b>		1/4 HP @ 120V (single-phase, non-reversing motor); 1 HP @ 240V (3 phase, non-reversing motor)							
<b>Maximum Inrush Current</b>		40 A (40 ms)							
<b>Contact Material</b>		Silver							
<b>Contact Ratings</b>	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)			
<b>Characteristics</b>	<b>Contact Ratings by Utilization Category</b>								
	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
		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	—	

## E-Stops (Assembled)



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### Assembled E-Stops

**A V (L) W 4 (B) (99) 11 (D) (N) - R - (24V)**

<p><b>Function</b></p> <p>V: Pushlock Turn Reset Y: Push-Pull X: Pushlock Key Reset</p> <p><b>Illumination</b></p> <p>Blank: None L: Illuminated</p> <p><b>Series Designation</b></p> <p>W: TW Series</p> <p><b>Button/Lens Size</b></p> <p>3: 29mm Mushroom 4: 40mm Mushroom</p> <p><b>Lens Type (illuminated units only)</b></p> <p>Blank: Standard (ribbed) B: Engravable (smooth with insert)</p> <p><b>Illuminated Circuit (illuminated unit only)</b></p> <p>99: Full Voltage (lamp determines voltage) 126: 120V AC Step Down Transformer 246: 240V AC Step Down Transformer 486: 480V AC Step Down Transformer</p>	<p><b>Lamp Voltage</b> (full voltage illuminated units only)</p> <p>6V: 6V AC/DC 12V: 12V AC/DC 24V: 24V AC/DC 120V: 120V AC (LED only) 240V: 240V AC (LED only)</p> <p><b>Button/Lens Color</b></p> <p>A: Amber    R: Red    W: White G: Green    S: Blue    Y: Yellow B: Black</p> <p><b>Contact Terminal Style</b></p> <p>Blank: Standard N: Fingersafe (IP20)</p> <p><b>Lamp Type</b> (illuminated units only)</p> <p>Blank: Incandescent D: LED</p> <p><b>Contact Arrangement</b></p> <p>10: 1NO            01: 1NC 20: 2NO            02: 2NC 11: 1NO/1NC      22: 2NO/2NC</p>
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Use only for interpreting part numbers. Do not use for developing part numbers.

## E-Stops (Assembled) con't

### Part Numbers: Non-Illuminated E-Stops

Style	Contacts	Part Number
Ø 40mm Pushlock Turn Reset* 	1NO 1NC 1NO-1NC 2NO 2NC	AVW410-R* AVW401-R* AVW411-R* AVW420-R* AVW402-R*
Ø 29mm Pushlock Turn Reset* 	1NO 1NC 1NO-1NC 2NO 2NC	AVW310-R* AVW301-R* AVW311-R* AVW320-R* AVW302-R*
Ø 40mm Push-Pull 	1NO 1NC 1NO-1NC 2NO 2NC	AYW410-① AYW401-① AYW411-① AYW420-① AYW402-①
Ø 40mm Pushlock Key Reset * 	1NO 1NC 1NO-1NC 2NO 2NC	AXW410- R* AXW401- R* AXW411- R* AXW420- R* AXW402- R*

- 1. \*Available in Red only.
- 2. In place of ①, specify the Button Color Code from table.
- 3. For sub-assembled part numbers, see page A3-130.
- 4. For accessories, see page A3-156.
- 5. For dimensions, see page A3-158.

### Part Numbers: Illuminated E-Stops

Style	Type	Contacts	Part Number
Ø 40mm Pushlock Turn Reset Type 	Transformer	1NO-1NC 2NO 2NC	AVLW4 ④ 11⑤-R* AVLW4 ④ 20⑤-R* AVLW4 ④ 02⑤-R*
	Full Voltage	1NO-1NC 2NO 2NC	AVLW49911⑤-R*-③ AVLW49920⑤-R*-③ AVLW49902⑤-R*-③
Ø 29mm Pushlock Turn Reset 	Transformer	1NO-1NC 2NO 2NC	AVLW3④11⑤-R* AVLW3④20⑤-R* AVLW3④02⑤-R*
	Full Voltage	1NO-1NC 2NO 2NC	AVLW39911⑤-R*-③ AVLW39920⑤-R*-③ AVLW39902⑤-R*-③
Ø 40mm Push-Pull 	Transformer	1NO-1NC 2NO 2NC	AYLW4 ④ 11⑤-② AYLW4 ④ 20⑤-② AYLW4 ④ 02⑤-②
	Full Voltage	1NO-1NC 2NO 2NC	AYLW49911⑤-②-③ AYLW49920⑤-②-③ AYLW49902⑤-②-③

- 1. \*Available in red only.
- 2. In place of ②, specify the Lens Color Code (see table above).
- 3. In place of ③, specify the Full Voltage Code (lamp voltage) (see table above).
- 4. In place of ④, specify the Transformer Voltage Code (see table above).
- 5. In place of ⑤, specify the Lamp Type Code from table above.
- 6. For sub-assembly part numbers, see page A3-134.
- 7. For accessories, see page A3-156.
- 8. For dimensions, see page A3-158.

#### ① Button Color Code

Color	Code
Black	B
Green	G
Red	R
Blue	S
White	W
Yellow	Y

#### ② LED/Lens Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W

#### ③ Full Voltage Code

Voltage	Code
6V AC/DC	6V
12V AC/DC	12V
24V AC/DC	24V
120V AC	120V (LED only)
240V AC	240V (LED only)

#### ④ Transformer Voltage Codes

Voltage	Code
120VAC	126
240VAC	246
480VAC	486

#### ⑤ Lamp Type Code

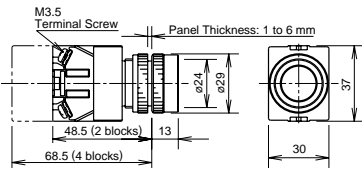
Lamp	Code
Incandescent	Blank
LED	D

Transformers step down to 6V.

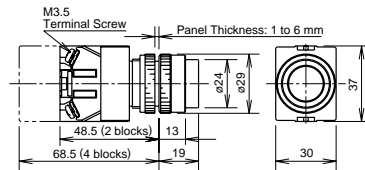
## Dimensions — TW Series

### Pushbuttons

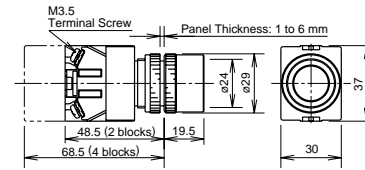
#### Flush



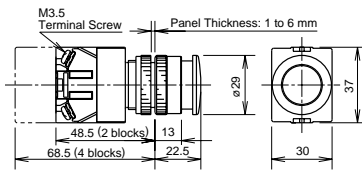
#### Extended



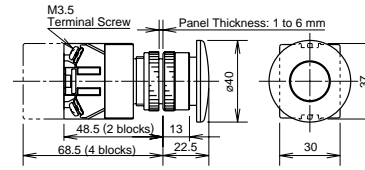
#### Extended with Full Shroud



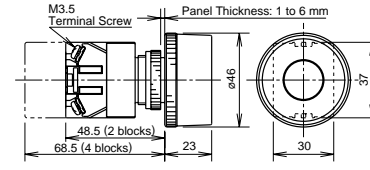
#### 29mm Mushroom



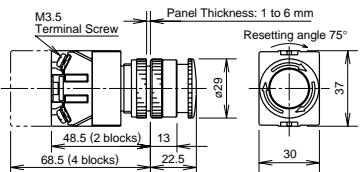
#### 40mm Mushroom



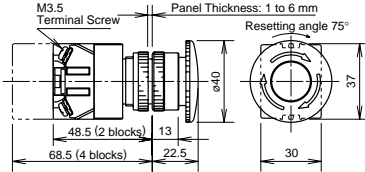
#### Mushroom with Full Shroud



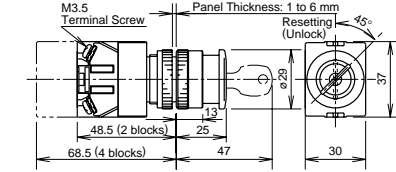
#### 29mm Push-Lock-Turn-Reset



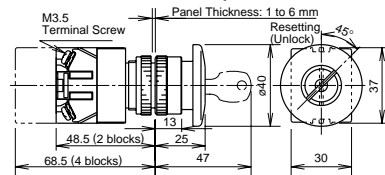
#### 40mm Push-Lock-Turn-Reset



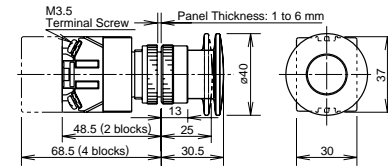
#### Keylock Push On/Off



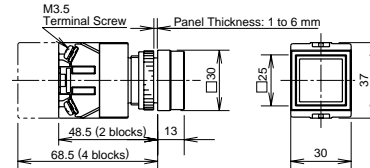
#### 40mm Pushlock Key Reset



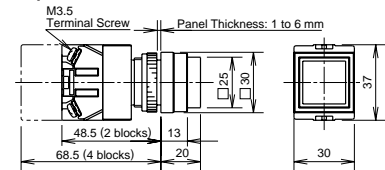
#### 40mm Push-Pull



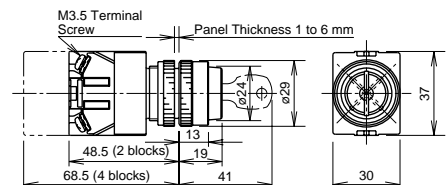
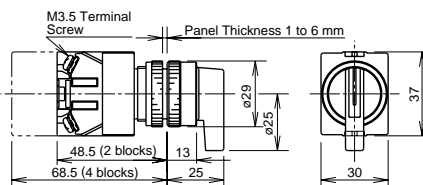
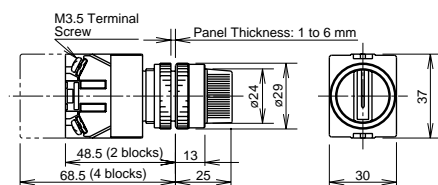
#### Square Flush



#### Square Extended



### Selector Switches



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