

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

Specifications	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)

		Contact Ratings by Utilization Category							
Operational Voltage		24V	48V	50V	110V	220V	440V		
Characteristics	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	—	

Non-Illuminated Pushbuttons (Assembled)

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Assembled Pushbuttons

A B () W 1 10 () - B

Function

- B: Momentary
- O: Maintained
- K: Key On/Off Lock

Bezel Shape

- Blank: Octagonal
- F: Full Shroud
- G: Mushroom Shroud
- Q: Square

Button Color

- B: Black G: Green W: White
- R: Red S: Blue Y: Yellow

Terminal Style

- Blank: Standard
- N: Fingersafe (IP20)

Contact Arrangement

- 10: 1NO 01: 1NC
- 20: 2NO 02: 2NC
- 11: 1NO-1NC 22: 2NO-2NC

Button Shape

- 1: Flush
- 2: Extended
- 3: Mushroom Head Ø 29mm
- 4: Mushroom Head Ø 40mm

Series Designation

- W: TW Series



To be used for interpreting part numbers only, not for part number development.

Non-Illuminated Pushbuttons (Assembled) con't

Part Numbers: Non-illuminated Pushbuttons

Style	Contacts	Momentary Action	Maintained Action
Flush	1NO 1NC 1NO-1NC 2NO 2NC	ABW110-① ABW101-① ABW111-① ABW120-① ABW102-①	AOW110-① AOW101-① AOW111-① AOW120-① AOW102-①
Extended	1NO 1NC 1NO-1NC 2NO 2NC	ABW210-① ABW201-① ABW211-① ABW220-① ABW202-①	AOW210-① AOW201-① AOW211-① AOW220-① AOW202-①
Recessed	1NO 1NC 1NO-1NC 2NO 2NC	ABFW110-① ABFW101-① ABFW111-① ABFW120-① ABFW102-①	AOFW110-① AOFW101-① AOFW111-① AOFW120-① AOFW102-①
Extended with Full Shroud	1NO 1NC 1NO-1NC 2NO 2NC	ABFW210-① ABFW201-① ABFW211-① ABFW220-① ABFW202-①	AOFW210-① AOFW201-① AOFW211-① AOFW220-① AOFW202-①
Ø 29mm Mushroom Head	1NO 1NC 1NO-1NC 2NO 2NC	ABW310-① ABW301-① ABW311-① ABW320-① ABW302-①	AOW310-① AOW301-① AOW311-① AOW320-① AOW302-①
Ø 40mm Mushroom Head	1NO 1NC 1NO-1NC 2NO 2NC	ABW410-① ABW401-① ABW411-① ABW420-① ABW402-①	AOW410-① AOW401-① AOW411-① AOW420-① AOW402-①
Ø 40mm Mushroom Head with Full Shroud	1NO 1NC 1NO-1NC 2NO 2NC	ABGW410-① ABGW401-① ABGW411-① ABGW420-① ABGW402-①	AOGW410-① AOGW401-① AOGW411-① AOGW420-① AOGW402-①
Square Flush	1NO 1NC 1NO-1NC 2NO 2NC	ABQW110-① ABQW101-① ABQW111-① ABQW120-① ABQW102-①	AQQW110-① AQQW101-① AQQW111-① AQQW120-① AQQW102-①
Square Extended	1NO 1NC 1NO-1NC 2NO 2NC	ABQW210-① ABQW201-① ABQW211-① ABQW220-① ABQW202-①	AQQW210-① AQQW201-① AQQW211-① AQQW220-① AQQW202-①
Keylock Push On/Off	1NO 1NC 1NO-1NC 2NO 2NC	AKW210 AKW201 AKW211 AKW220 AKW202	—

① Button Color Code

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

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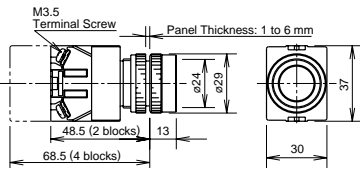


1. In place of ①, specify the Button Color Code from table.
2. For sub-assembled part numbers, see page A3-130.
3. For accessories, see page A3-156.
4. For dimensions, see page A3-158.
5. Keyed switches are supplied with two keys. All units are keyed alike. For custom keys, contact IDEC.

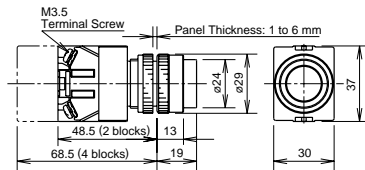
Dimensions — TW Series

Pushbuttons

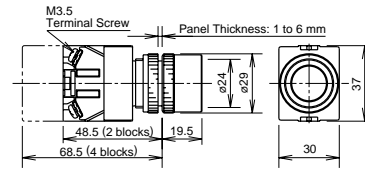
Flush



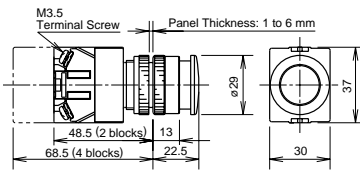
Extended



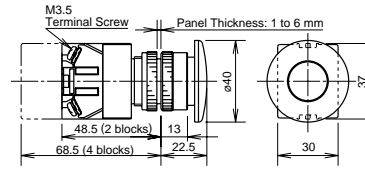
Extended with Full Shroud



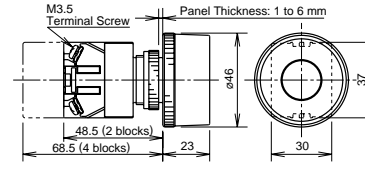
29mm Mushroom



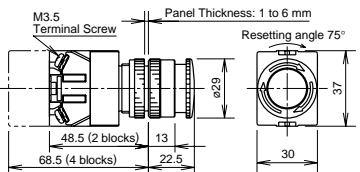
40mm Mushroom



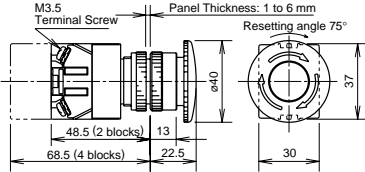
Mushroom with Full Shroud



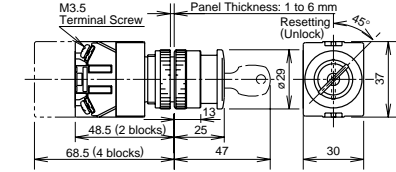
29mm Push-Lock-Turn-Reset



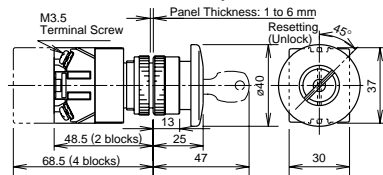
40mm Push-Lock-Turn-Reset



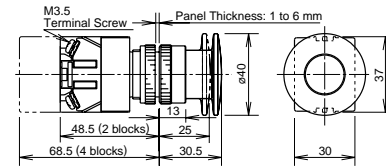
Keylock Push On/Off



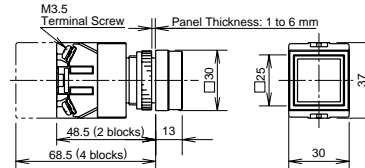
40mm Pushlock Key Reset



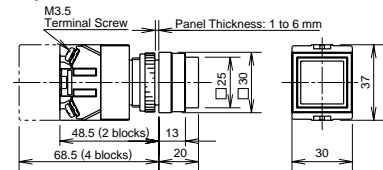
40mm Push-Pull



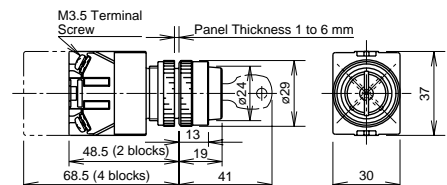
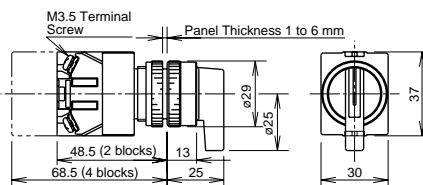
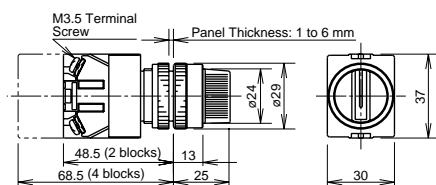
Square Flush



Square Extended



Selector Switches



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