

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		 File No. E68961  File No. LR21451  Certificate No. 2030010305027380  TÜV Rheinland Registration No: J9551802 (E-Stops) Registration No: J9551803 (All other switches) Registration No: J9551804 (Pilot Lights)  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) TUV: 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)							
	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
		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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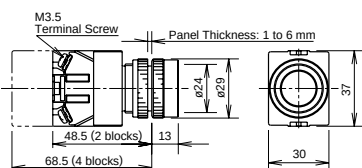


1. In place of ①, specify the Button Color Code from table.
2. For sub-assembled part numbers, see page A3-130.
3. For accessories, see page A3-156.
4. For dimensions, see page A3-158.
5. Keyed switches are supplied with two keys. All units are keyed alike. For custom keys, contact IDEC.

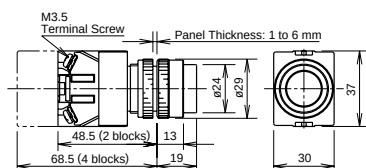
Dimensions — TW Series

Pushbuttons

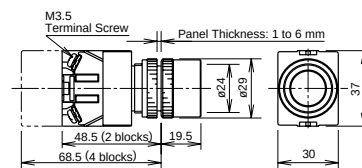
Flush



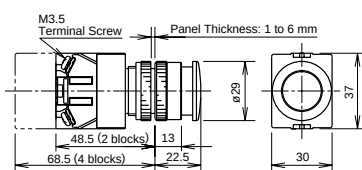
Extended



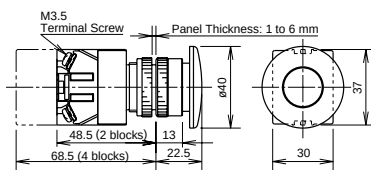
Extended with Full Shroud



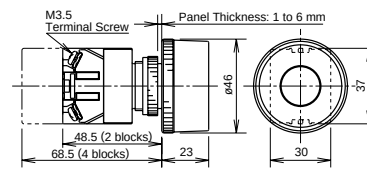
29mm Mushroom



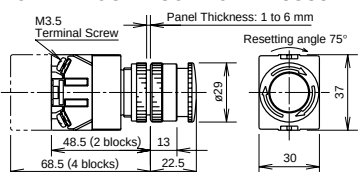
40mm Mushroom



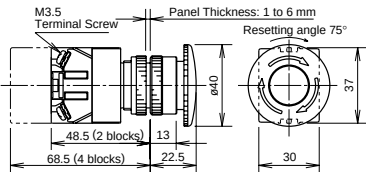
Mushroom with Full Shroud



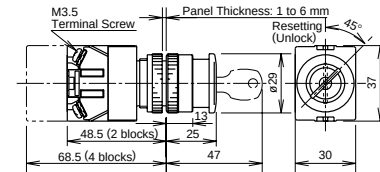
29mm Push-Lock-Turn-Reset



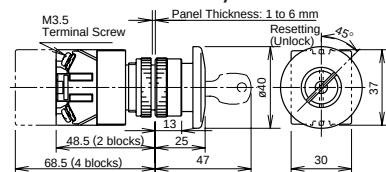
40mm Push-Lock-Turn-Reset



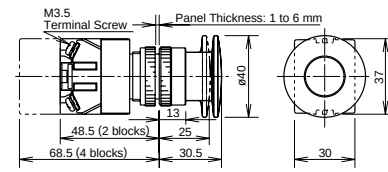
Keylock Push On/Off



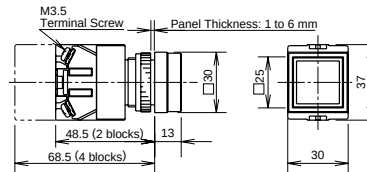
40mm Pushlock Key Reset



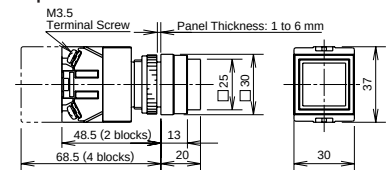
40mm Push-Pull



Square Flush



Square Extended



Selector Switches

