

TW Series – 22mm NEMA Style Pushbuttons



TW NEMA Style Switches with snap-on contacts

Key features include:

- Corrosion resistant octagonal chrome plated locking bezel
- Snap-on 10A contact blocks
- 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 lens 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



TÜV Rheinland



CSA Approved
File No. LR21451



File No. DK95-01696

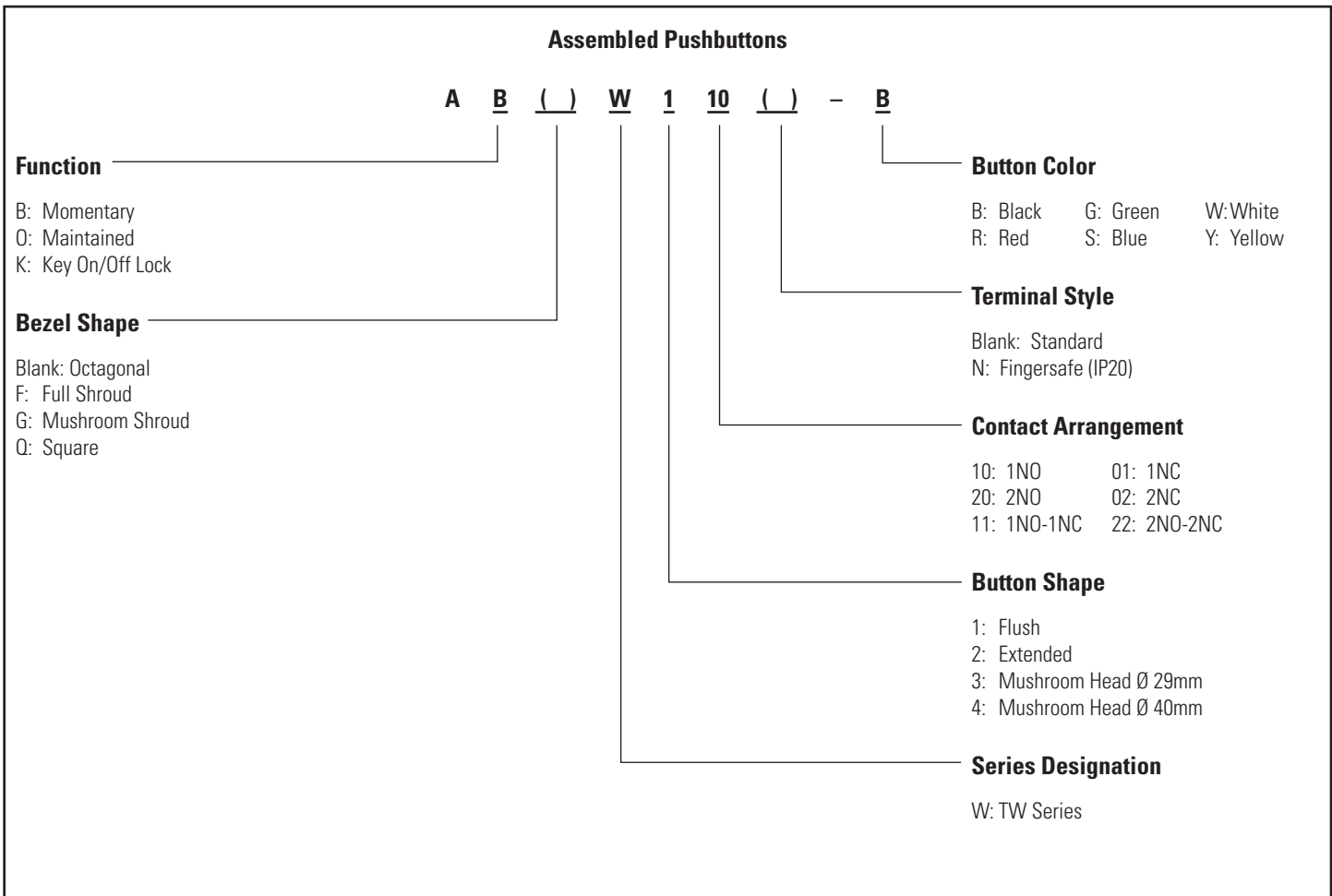


Conforming to Standards	EN60947-1, EN60947-5-1, VDE0660-200, UL508, CSA C22-2 No.14
Approvals	   File No. E70646 File No. LR21451 Certificate No. 2030010305027380   TÜV Rheinland Registration No: J9551802 (E-Stops) Registration No: J9551803 (All other switches) Registration No: J9551804 (Pilot Lights)
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	Contact Block	Type HW-C/HW-F
	Illuminated Pushbuttons	Rated Insulation Voltage	600V
	Selector Switches	Rated Continuous Current	10A
	Illuminated Selector Switches	Contact Ratings by Utilization Category	AC-15 (A600) DC-13 (P600)
	Pushbutton Selectors	IEC 60947-5-1	

Contact Ratings by Utilization Category								
Characteristics	Operational Voltage		24V	48V	50V	110V	220V	440V
	Operational Current	AC50/60Hz	AC-12 Control of resistive loads and solid state loads	10A	—	10A	10A	6A
AC-15 Control of electromagnetic loads (> 72VA)			10A	—	7A	5A	3A	1A
DC		DC-12 Control of resistive loads and solid state loads	8A	5A	—	2.2A	1.1A	—
		DC-13 Control of electromagnets	5A	2A	—	1.1A	0.6A	—

Non-Illuminated Pushbuttons (Assembled)



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

Non-Illuminated Pushbuttons (Assembled) continued

Non-Illuminated Pushbuttons

① Button Color Codes

	Style	Contacts	Momentary Action	Maintained Action
Switches & Pilot Lights		1NO	ABW110-①	AOW110-①
		1NC	ABW101-①	AOW101-①
		1NO-1NC	ABW111-①	AOW111-①
		2NO	ABW120-①	AOW120-①
		2NC	ABW102-①	AOW102-①
Display Lights		1NO	ABW210-①	AOW210-①
		1NC	ABW201-①	AOW201-①
		1NO-1NC	ABW211-①	AOW211-①
		2NO	ABW220-①	AOW220-①
		2NC	ABW202-①	AOW202-①
Relays & Sockets		1NO	ABFW110-①	AOFW110-①
		1NC	ABFW101-①	AOFW101-①
		1NO-1NC	ABFW111-①	AOFW111-①
		2NO	ABFW120-①	AOFW120-①
		2NC	ABFW102-①	AOFW102-①
Timers		1NO	ABFW210-①	AOFW210-①
		1NC	ABFW201-①	AOFW201-①
		1NO-1NC	ABFW211-①	AOFW211-①
		2NO	ABFW220-①	AOFW220-①
		2NC	ABFW202-①	AOFW202-①
Terminal Blocks		1NO	ABW310-①	AOW310-①
		1NC	ABW301-①	AOW301-①
		1NO-1NC	ABW311-①	AOW311-①
		2NO	ABW320-①	AOW320-①
		2NC	ABW302-①	AOW302-①
Circuit Breakers		1NO	ABW410-①	AOW410-①
		1NC	ABW401-①	AOW401-①
		1NO-1NC	ABW411-①	AOW411-①
		2NO	ABW420-①	AOW420-①
		2NC	ABW402-①	AOW402-①
		1NO	ABGW410-①	AOGW410-①
		1NC	ABGW401-①	AOGW401-①
		1NO-1NC	ABGW411-①	AOGW411-①
		2NO	ABGW420-①	AOGW420-①
		2NC	ABGW402-①	AOGW402-①
		1NO	ABQW110-①	AQW110-①
		1NC	ABQW101-①	AQW101-①
		1NO-1NC	ABQW111-①	AQW111-①
		2NO	ABQW120-①	AQW120-①
		2NC	ABQW102-①	AQW102-①
		1NO	ABQW210-①	AQW210-①
		1NC	ABQW201-①	AQW201-①
		1NO-1NC	ABQW211-①	AQW211-①
		2NO	ABQW220-①	AQW220-①
		2NC	ABQW202-①	AQW202-①
		1NO	AKW210	—
		1NC	AKW201	
		1NO-1NC	AKW211	
		2NO	AKW220	
		2NC	AKW202	

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

1. In place of ①, specify the Button Color Code from table.
 2. For sub-assembled part numbers, see next page.
 3. For accessories, see page 593.
 4. For dimensions, see page 595.
 5. Keyed switches are supplied with two keys. All units are keyed alike.

Switches & Pilot Lights

Display Lights

Relays & Sockets

Timers

Terminal Blocks

Circuit Breakers