

HW Series

Switches and Pilot Devices

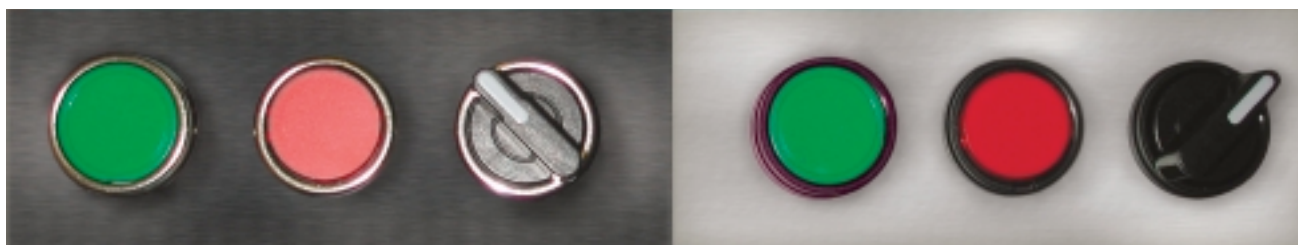


idec

HW Series Pushbuttons

In **basic black or stylish metal**, the HW series of 22mm switches from IDEC are available in several styles to dress up any panel. HW pushbuttons, switches and pilot devices are internationally-rated, designed for use almost anywhere in the world, and have removable contact blocks, fingersafe contacts and tamperproof construction. Choose simple black plastic bezels for clean uniformity, or new chrome-plated metallic bezels for a rugged industrial look.

This catalog is not comprehensive for the HW series; complete product information, including additional available part numbers, can be found in the Industrial Automation Catalog. For more information, contact IDEC Technical Support or Customer Service.



Specifications	Operating Temperature		Operation: −25 to +50°C (without freezing) Storage: −40 to +70°C (without freezing)						
	Degree of Protection (conforming to IEC60529) (conforming to NEMA ICS6-110)		IP65 (from front of the panel) IP20 (contact terminals) NEMA 1, 2, 3, 3R, 3S, 4, 4X, 5, 12, 13 (from front of panel)						
	Mechanical Life		Momentary pushbuttons: 5,000,000 (900 operations per hour) All other switches: 500,000						
	Contact Material		Silver						
	Rated Insulation Voltage		600V						
	Rated Thermal Current		10 Amp						
	Minimum Load Capacity		5mA/3V AC/DC						
	Contact Operation		Slow make/slow break NO / NC self-cleaning						
	Contact Gap		4mm (NO and NC)						
	Horsepower Rating		Reference Value: 1/4 HP @ 120V (1ø non-reversing), 1HP @ 240V (3ø non-reversing)						
	Electrical Reliability		MTBF < 1 fault for 10 million operation cycles (3V DC, 5mA)						
	Lamp Ratings		Incandescent: 1 W LEDs: 6V: 20mA / 12, 24, 120, 240V: 10mA						
	Recommended Locking Ring Torque		7.1 in lb						
Contact Ratings	Rated Operating Current	Break Values				Make Values			
		AC		DC		AC		DC	
		Inductive	Resistive	Inductive	Resistive	Inductive	Resistive	Inductive	Resistive
		120V: 6A 240V: 3A 480V: 1.5A 600V: 1.2 A	120V: 10A 240V: 6A 480V: 2A	120V: 1.1A 240V: 0.6A 12V: 4A 24V: 4A	120V: 2A 240V: 1.1A 480V: 0.4A 12V: 4A 24V: 4A	120V: 60A 240V: 30A 480V: 15A 600V: 12 A	120V: 100A 240V: 60A 480V: 20A	120V: 11A 240V: 6A 12V: 40A 24V: 40A	120V: 20A 240V: 11A 480V: 4A 12V: 40A, 24V: 40A



File No. E68961



File No. LR92374



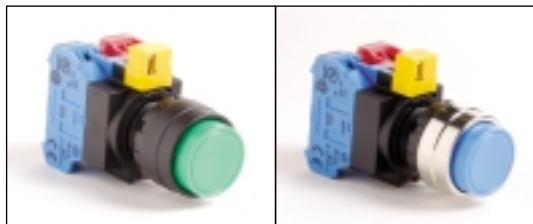
Registration No. R9551089 (E-stops)
Registration No. J9551458 (all other switches)
Registration No. J9650511 (Pilot Lights)

Ordering Information

HW



Momentary Pushbuttons



	Plastic Bezel	Metal Bezel
Flush Button, 1NO	HW1B-M1F10-①	HW4B-M1F10-①
Flush Button, 2NO	HW1B-M1F20-①	HW4B-M1F20-①
Flush Button, 1NO/1NC	HW1B-M1F11-①	HW4B-M1F11-①
Extended Button, 1NO	HW1B-M2F10-①	HW4B-M2F10-①
Extended Button, 2NO	HW1B-M2F20-①	HW4B-M2F20-①
Extended Button, 1NO/1NC	HW1B-M2F11-①	HW4B-M2F11-①
Mushroom Button, 1NO	HW1B-M4F10-①	HW4B-M4F10-①
Mushroom Button, 2NO	HW1B-M4F20-①	HW4B-M4F20-①
Mushroom Button, 1NO/1NC	HW1B-M4F11-①	HW4B-M4F11-①

Momentary models listed; maintained (push-on/push-off) models also available.
Extended button shown.

① Button Color Code

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

Grey not available in mushroom

Pilot Lights



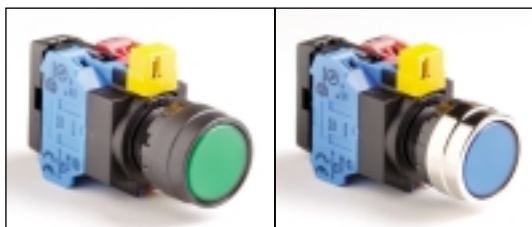
	Plastic Bezel	Metal Bezel
Flat Lens, LED, 24VAC/DC	HW1P-1FQD-②-24V	HW4P-1FQD-②-24V
Flat Lens, LED, 120VAC	HW1P-1FQD-②-120V	HW4P-1FQD-②-120V
Flat Lens, LED, 240VAC	HW1P-1FQD-②-240V	HW4P-1FQD-②-240V
Dome Lens, LED, 24VAC/DC	HW1P-2FQD-②-24V	HW4P-2FQD-②-24V
Dome Lens, LED, 120VAC	HW1P-2FQD-②-120V	HW4P-2FQD-②-120V
Dome Lens, LED, 240VAC	HW1P-2FQD-②-240V	HW4P-2FQD-②-240V

Direct voltage models listed; transformer models also available.
Dome lens shown.

② Lens/LED Color Code

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

Illuminated Momentary Pushbuttons



	Plastic Bezel	Metal Bezel
Flush Lens, LED, 24VAC/DC, 1NO	HW1L-M1F10QD-②-24V	HW4L-M1F10QD-②-24V
Flush Lens, LED, 24VAC/DC, 2NO	HW1L-M1F20QD-②-24V	HW4L-M1F20QD-②-24V
Flush Lens, LED, 24VAC/DC, 1NO/1NC	HW1L-M1F11QD-②-24V	HW4L-M1F11QD-②-24V
Flush Lens, LED, 120VAC, 1NO	HW1L-M1F10QD-②-120V	HW4L-M1F10QD-②-120V
Flush Lens, LED, 120VAC, 2NO	HW1L-M1F20QD-②-120V	HW4L-M1F20QD-②-120V
Flush Lens, LED, 120VAC, 1NO/1NC	HW1L-M1F11QD-②-120V	HW4L-M1F11QD-②-120V
Extended Lens, LED, 24VAC/DC, 1NO	HW1L-M2F10QD-②-24V	HW4L-M2F10QD-②-24V
Extended Lens, LED, 24VAC/DC, 2NO	HW1L-M2F20QD-②-24V	HW4L-M2F20QD-②-24V
Extended Lens, LED, 24VAC/DC, 1NO/1NC	HW1L-M2F11QD-②-24V	HW4L-M2F11QD-②-24V
Extended Lens, LED, 120VAC, 1NO	HW1L-M2F10QD-②-120V	HW4L-M2F10QD-②-120V
Extended Lens, LED, 120VAC, 2NO	HW1L-M2F20QD-②-120V	HW4L-M2F20QD-②-120V
Extended Lens, LED, 120VAC, 1NO/1NC	HW1L-M2F11QD-②-120V	HW4L-M2F11QD-②-120V
Mushroom Lens, LED, 24VAC/DC, 1NO	HW1L-M4F10QD-②-24V	HW4L-M4F10QD-②-24V
Mushroom Lens, LED, 24VAC/DC, 2NO	HW1L-M4F20QD-②-24V	HW4L-M4F20QD-②-24V
Mushroom Lens, LED, 24VAC/DC, 1NO/1NC	HW1L-M4F11QD-②-24V	HW4L-M4F11QD-②-24V
Mushroom Lens, LED, 120VAC, 1NO	HW1L-M4F10QD-②-120V	HW4L-M4F10QD-②-120V
Mushroom Lens, LED, 120VAC, 2NO	HW1L-M4F20QD-②-120V	HW4L-M4F20QD-②-120V
Mushroom Lens, LED, 120VAC, 1NO/1NC	HW1L-M4F11QD-②-120V	HW4L-M4F11QD-②-120V

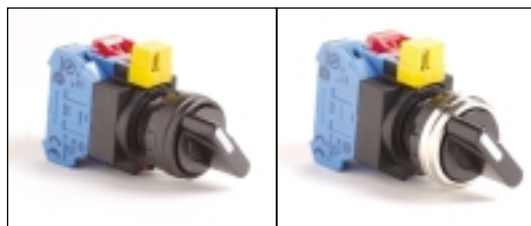
② Lens/LED Color Code

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

Yellow not available
in mushroom

Direct voltage model listed; transformer models also available.
Momentary models listed; maintained (push-on/push-off) models also available.
Flush lens shown.

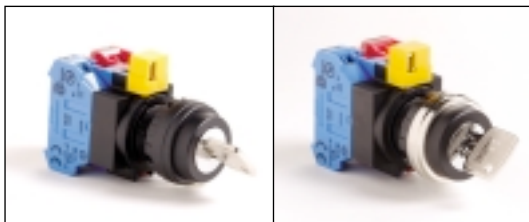
Selector Switches



	Plastic Bezel	Metal Bezel
2 Position, Maintained, 1NO	HW1S-2TF10	HW4S-2TF10
2 Position, Maintained, 2NO	HW1S-2TF20	HW4S-2TF20
2 Position, Maintained, 1NO/1NC	HW1S-2TF11	HW4S-2TF11
2 Position, Spring from Right, 1NO	HW1S-21TF10	HW4S-21TF10
2 Position, Spring from Right, 2NO	HW1S-21TF20	HW4S-21TF20
2 Position, Spring from Right, 1NO/1NC	HW1S-21TF11	HW4S-21TF11
3 Position, Maintained, 2NO	HW1S-3TF20	HW4S-3TF20
3 Position, Maintained, 2NO/2NC	HW1S-3TF22	HW4S-3TF22
3 Position, Spring From Both, 2NO	HW1S-33TF20	HW4S-33TF20
3 Position, Spring From Both, 2NO/2NC	HW1S-33TF22	HW4S-33TF22

3-position with 2NO functions as "Hand-Off-Auto."
4 and 5-position models also available.

Key Switches



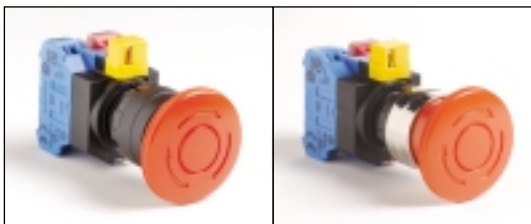
	Plastic Bezel	Metal Bezel
2 Position, Maintained, 1NO	HW1K-2AF10	HW4K-2AF10
2 Position, Maintained, 2NO	HW1K-2AF20	HW4K-2AF20
2 Position, Maintained, 1NO/1NC	HW1K-2AF11	HW4K-2AF11
2 Position, Spring from Right, 1NO	HW1K-21BF10	HW4K-21BF10
2 Position, Spring from Right, 2NO	HW1K-21BF20	HW4K-21BF20
2 Position, Spring from Right, 1NO/1NC	HW1K-21BF11	HW4K-21BF11
3 Position, Maintained, 2NO	HW1K-3AF20	HW4K-3AF20
3 Position, Maintained, 2NO/2NC	HW1K-3AF22	HW4K-3AF22
3 Position, Spring From Both, 2NO	HW1K-33DF20	HW4K-33DF20
3 Position, Spring From Both, 2NO/2NC	HW1K-33DF22	HW4K-33DF22

3-position with 2NO functions as "Hand-Off-Auto."

Keys are removable in all maintained positions for models listed, other key removable options available.

Two keys supplied with each switch.

E-Stops



	Plastic Bezel	Metal Bezel
Push/Pull, 1NC	HW1B-Y2F01-R	HW4B-Y2F01-R
Push/Pull, 2NC	HW1B-Y2F02-R	HW4B-Y2F02-R
Push/Pull, 1NO/1NC	HW1B-Y2F11-R	HW4B-Y2F11-R
Push/Twist, 1NC	HW1B-V4F01-R	HW4B-V4F01-R
Push/Twist, 2NC	HW1B-V4F02-R	HW4B-V4F02-R
Push/Twist, 1NO/1NC	HW1B-V4F11-R	HW4B-V4F11-R
Push/Key, 1NC	HW1B-X4F01-R	HW4B-X4F01-R
Push/Key, 2NC	HW1B-X4F02-R	HW4B-X4F02-R
Push/Key, 1NO/1NC	HW1B-X4F11-R	HW4B-X4F11-R

Only common models have been listed.

Many more options in both plastic and metal bezel switches are available.

For details, please refer to Section A in the Industrial Automation Catalog.

Contact IDEC to order a catalog, or download it from www.idec.com

HW Accessories

	Appearance	Description/Usage	Part Number	
Locking Ring Wrench		Metallic tool used to tighten the plastic locking ring when installing the HW series unit in a panel	MW9Z-T1	
Lamp/LED Removal Tool		Rubber tool makes lamp removal and replacement easier.	OR-55	
Metallic Mounting Hole Plug		For plugging unused mounting holes in the panel. Tighten the attached locking ring to a torque of 12 kfg-cm maximum. Degree of protection: IP66	LW9Z-BM	
Replacement Contacts		Stackable contacts, two per level. Maximum 6 contacts per switch. Odd numbers of contacts should be accompanied by TW-DB or HW-DA1FB dummy block. Degree of protection: IP20	Normally open	HW-F10
			Normally closed	HW-F01
Replacement Lamps		Incandescent or LED lamps with BA9S/13 bayonet bases. Color (*) must be specified for LEDs; other voltages available.	LED: 24V AC/DC	LSTD-2*
			LED: 120V AC	LSTD-H2*
			LED: 240V AC	LSTD-M4*
			* A = amber, G = green, R = red, S = blue, W = white, Y = yellow	
			Incandescent 24V AC/DC	IS-24
E-Stop Shroud		Plastic shroud intended for use with E-stop switches to prevent inadvertent activation.	HW9Z-KG1-TK2120	

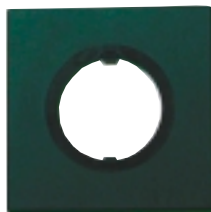
Nameplates



HWAM-0B



HWAQ-0B

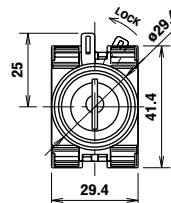
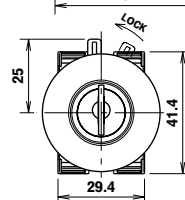


HWAS-0B



HWAV-27

*HWAM and HWAQ use snap-in engraving insert (HWNP-O).
All nameplates available blank or engraved.*



Panel Thickness 0.8-6mm

M3.5

Gasket

Locking Ring

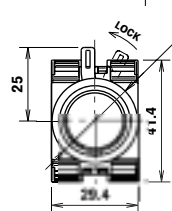
23.6

49.4

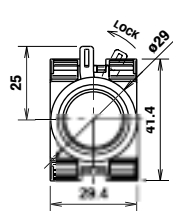
69.4

89.4

13



Technical drawing of a shaft-hub assembly. The drawing shows a shaft with a keyway and a hub with a key. Dimensions are indicated: 13 (width of the keyway), 18.5 (width of the hub), and 23.5 (width of the shaft).



Technical drawing of a ball bearing. The drawing shows a cross-section of the bearing with the following dimensions: 25 (height of the outer ring), 41.4 (total height), 29.4 (width of the bearing), and a 'LOCK' label indicating the locking mechanism.

A: Switches:
 50mm recommended,
 45mm minimum
Pilot Lights:
 30mm minimum

**B: 30mm minimum (unless
 button head is larger)**

IDEC CORPORATION

1175 Elko Drive
Sunnyvale, CA 94089-2209, USA
Tel (408) 747-0550
Toll Free (800) 262-IDEC
Fax (408) 744-9055
Fax (800) 635-6246
E-mail: opencontact@idec.com
www.idec.com

IDEC CANADA LIMITED

Unit 22-151 Brunel Road
Mississauga, Ontario, L4Z 1X3, Canada
Tel (905) 890-8561
Toll Free (888) 317-IDEC
Fax (905) 890-8562

IDEC AUSTRALIA PTY. LTD.

2/3 Macro Court
Rowville, Victoria 3178, Australia
Toll Free 1-800-68-4332
Fax +61-3-9763-3255
E-mail: sales@au.idec.com

IDEC IZUMI CORPORATION

7-31, Nishi-Miyahara
1-Chome, Yodogawa-ku
Osaka 532-8550, Japan
Tel +81-6-6398-2571
Fax +81-6-6392-9731
www.izumi.com

IDEC EUROPEAN HEADQUARTERS

Unit 2 Beechwood
Chineham Business Park
Basingstoke
Hampshire RG24 8WA, United Kingdom
Tel +44-1256-321000
Fax +44-1256-327755
E-mail: idec@uk.idec.com

IDEC ELEKTROTECHNIK GmbH

Wendenstraße 331
D-20537 Hamburg, Germany
Tel +49-40-251191
Fax +49-40-2543361
E-mail: service@idec.de

IDEC IZUMI (H.K.) CO., LTD.

Room No.1409, Tower 1 Silvercord
30 Canton Road, Tsimshatsui
Kowloon, Hong Kong
Tel +852-2-376-2823
Fax +852-2-376-0790

IDEC IZUMI ASIA PTE. LTD.

No. 31, Tannery Lane #05-01
Dragon Land Building,
Singapore 347788
Tel +65-6746-1155
Fax +65-6844-5995

IDEC TAIWAN CORPORATION

8F-1, No.79, Hsin Tai Wu Road, Sec. 1
Hsi-Chih, Taipei County, Taiwan, (ROC)
Tel +886-2-2698-3929
Fax +886-2-2698-3931
E-mail: idectpe@idectwn.hinet.net

www.idec.com

© 2002 IDEC Corporation. All Rights Reserved.
Catalog No. EP829-0 07/02 10K