ø22 Switches & Pilot Lights

HW Series



Complete with finger-safe contact blocks. Ensure safety and save wiring time.



• DC-DC converter types are not approved by standards. • See website for details on approvals and standards.



HW Series Illuminated Pushbuttons



HW1Z Illuminated Buzzer

HW Series Pilot Lights (short body)











HW Series Selection Guide

Function			Pushbutton		
Category	Flush	Extended	ø29mm Mushroom	ø40mm Mushroom	ø60mm Mushroom
Galeguly	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary
Shape					6
Model	HW1B-M1 HW1B-A1	HW1B-M2 HW1B-A2	HW1B-M3 HW1B-A3	HW1B-M4 HW1B-A4	HW1B-M5
Page	B-187	B-187	B-187	B-187	B-187
Function			Pushbutton		
Category	Square Flush	Square Extended	Round Flush w/Square Bezel	Round Extended w/Square Bezel	ø29mm Mushroom w/Square Bezel
	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained
Shape					
Model	HW2B-M1 HW2B-A1	HW2B-M2 HW2B-A2	HW3B-M1 HW3B-A1	HW3B-M2 HW3B-A2	HW3B-M3 HW3B-A3
Page	B-188	B-188	B-189	B-189	B-189
Function		Pilot	Light		
Category	Flush (Marking)	Extended (Dome)	Square Flush (Marking)	Jumbo Dome	
Shape	1	``	P		
Model	HW1P-1	HW1P-2	HW2P-1	HW1P-5	
Page	B-190	B-190	B-190	B-190	
Function			Illuminated Pushbutton		
Catagory	Flush	Extended	Extended w/Full Shroud	Square Flush	Flush w/Square Bezel
Category	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained

Category			Extended w/Full Shroud	Square Flush	Flush w/Square Bezel
Galegoly			Momentary/Maintained	Momentary/Maintained Momentary/Maintained	
Shape					
Model	HW1L-M1 HW1L-A1	HW1L-M2 HW1L-A2	HW1L-MF2 HW1L-AF2	HW2L-M1 HW2L-A1	HW3L-M1 HW3L-A1
Page	B-192	B-192	B-193	B-194	B-194

Function	Illuminated Pushbutton				
Category	Flush	Extended	Extended w/Full Shroud		
Galegoly	Momentary/Maintained	Momentary/Maintained	Momentary/Maintained		
Shape					
Model	HW1L-M3 HW1L-A3	HW3L-M3 HW3L-A3	HW1L-M4 HW1L-A4		
Page	B-195	B-195	B-196		

	Miniature
zel	Pilot Lights
ned	
)	TW
	YW

Flush Silhouette

ø16

ø30

APEM

Control Boxes Emergency Stop Switches Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets Circuit Protectors Power Supplies LED Illumination Controllers Operator Interfaces Sensors AUTO-ID

HW Series Selection Guide

APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Flush Silhouette

ø16

ø30 Miniature Pilot Lights

> TW YW

Function	Dual Pushbutton						
FUNCTION	w/o Pil	ot Light	w/ Pilo	t Light			
Category	Flush (top) Flush (bottom)	Flush (top) Extended (bottom)	Flush (top) Flush (bottom)	Flush (top) Flush (bottom)			
	Momentary/Interlocking	Momentary/Interlocking	Momentary/Interlocking	Momentary/Interlocking			
Shape							
Model	HW7D-B11 HW7D-B21	HW7D-B12 HW7D-B22	HW7D-L11 HW7D-L21	HW7D-L12 HW7D-L22			
Page	B-199	B-199	B-200	B-200			

Function	Selector Switch			Illuminated Selector		Pushbutton Selector	
Category	Selector	Pin Tumbler Key	Disc Tumbler Key	Knob Operator	Lever Operator		
Shape							
Model	HW1S	HW1K-□P	HW1K	HW1F	HW1F-□L	HW1R	
Page	B-203	B-204	B-206	B-208	B-209	B-214	

Function	Mono-Lever Switch		
Category	Standard	Interlocking	
Shape			
Model	HW1M	HW1M-L	
Page	B-215	B-215	

For more information, visit http://eu.idec.com

Ø22 HW Series Switches & Pilot Lights

Complete with finger-safe contact blocks Ensure safety and save wiring time

- Finger-safe terminal blocks
- Self-cleaning rolling action contacts.
- Degree of protection: IP65 (except dual pushbutton: IP40)
- Dual pushbutton switches available with two pushbuttons and a pilot light integrated into one space-saving unit.
- A wide range of operating voltages for worldwide application.



Application for dual pushbuttons:

Ideal for use as power switches and start/stop switches (available with I/ON and O/OFF markings on the buttons and a pilot light in the center).

Interlock type prevents two pushbuttons from being pressed at the same time, providing the best solution for up/down switches.

Specifications and Ratings

Contact Ratings

Pushbuttons	Rated insulation voltage	600V
Illuminated Pushbuttons Dual Pushbuttons	Rated continuous current	10A
Selector Switches Illuminated Selector Switches Selector Pushbuttons	Contact ratings by utilization category IEC60947-5-1	AC-15 (A600) DC-13

Contact Ratings by Utilization Category

HW-U10 (NO contact), HW-U01 (NC contact)

Operating Voltag	Operating Voltage			48V	50V	110V	220V	440V
	AC	AC-12 Control of resistive loads and solid state loads	10A	_	10A	10A	6A	2A
Operating	50/60 Hz	AC-15 Control of electromagnetic loads (> 72 VA)	10A	—	7A	5A	ЗA	1A
Current	DC	DC-12 Control of resistive loads and solid state loads	10A	5A	—	2.2A	1.1A	—
DC		DC-13 Control of electromagnets	5A	2A	—	1.1A	0.6A	—

HW-U10R (EM contact/NO contact), HW-U01R (LB contact/NC contact)

Operating Voltage			24V	48V	50V	110V	220V	440V
	AC	AC-12 Control of resistive loads and solid state loads	5A	—	5A	5A	3A	1A
Operating	50/60 Hz	AC-15 Control of electromagnetic loads (> 72 VA)	5A	—	3.5A	2.5A	1.5A	0.5A
Current	DC	DC-12 Control of resistive loads and solid state loads	5A	2.5A	—	1.1A	0.55A	—
	DC	DC-13 Control of electromagnets	2.5A	1A	_	0.55A	0.3A	_

• The operating current represents the classification by making and breaking currents (IEC 60947-5-1).

Contact materials: Silver contacts

• Minimum applicable load: 3V AC/DC, 5 mA (applicable range may vary with operating conditions and load types)

Power Supplies

LED Illumination

Controllers

Operator

Interfaces Sensors

Miniature

ø30

Pilot Lights

HW	
TW	
YW	

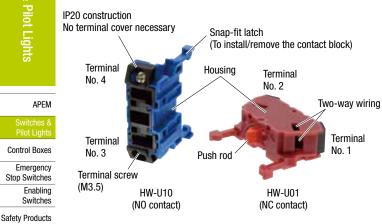
APEM

Control Boxes

Emergency Stop Switches Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets Circuit Protectors

ø22 HW Series Switches & Pilot Lights

HW-U Contact Block



Part No.	HW-U10	HW-U01	HW-U10R	HW-U01R					
Contact		~~							
Contact	1N0	1NC	EM (NO) (early make)	LB (NC) (late break)					
Contact No.	3-4	1-2	3-4	1-2					
Housing	Blue	Purple red	Blue	Purple red					
Push Rod	Green	Red	Black	White					
Weight	Approx. 11g								

• Up to 2 layers (4 blocks) can be attached.

· Gold contacts available (gold-plated silver)

LED Specifications

Terminal Blocks	· ·							
Terminar Diocks	Unit						LED	lamp
Relays & Sockets	Unit	Color	Rated Voltage		Operating Volta	age	Lamp Base	Part No.
Circuit			6V AC/DC		6V AC/DC			LSTD-6*
Protectors			12V AC/DC 24V AC/DC		12V AC/DC			LSTD-1*
Power Supplies					24V AC/DC			LSTD-2*
	Illuminated pushbutton	R (red)	100/110V AC		100/110V AC		BA9S/13	LSTD-6*
LED Illumination	Illuminated selector switch	G (green)	115/120V AC	50/60 Hz	115/120V AC (*1)	±10%		
Controllers	Pilot light	Y (yellow) A (amber)	200/220V AC		200/220V AC			
Operator	Dual pushbutton	S (blue)	230/240V AC		230/240V AC (*1)			
Interfaces	(with pilot light)	PW (pure white)	380V AC		380V AC			L31D-0*
Sensors			400/440V AC		400/440V AC			
	<u> </u>		480V AC		480V AC			
AUTO-ID			110V DC		90 to 140V DC			

• See B-182. for details on LED lamp ratings.

• For the LED lamp used in jumbo dome pilot lights, see B-182.

• Yellow (Y) cannot be used with dual pushbuttons. Flush Silhouette

• Color codes for units without LED lamps: ø16

R (red), G (green), A (amber), Y (yellow), S (blue)

When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of HW series cannot be guaranteed when a commercially available lamp is used.

Power Unit Terminal

ø30

Miniature

Pilot Lights			Illuminated Unit	Pilot Light				
	Power Unit	Full voltage adapter	Transforme	r	DC-DC converter	Full voltage adapter	Transformer	DC-DC converter
	Rated Voltage	6, 12, 24V AC/DC	100 to 240V AC	380V AC min.	110V DC	6, 12, 24V AC/DC	100 to 480V AC	110V DC
HW	Polarity	None	None	None	X1 (+) X2 (–)	None	None	X1 (+) X2 (–)
TW		X1						
YW		6 3	TANK INCOME.					
	Shape/Terminal	X2	x1 X2	t	X1 X2	X1 X2	T	X1 X2

Explosion Proof

LED Lamp Ratings

	ehr Juinne	Dome Plic	Ji Liyins)							
Part No.			LSTD-6*		l	LSTD-1* LSTD-2*				
Lamp Base	amp Base BA9S/13								ilot Lights	
Rated Voltag	ge	6V AC/DC			12V AC/DC		24V AC/DC		<u>نې</u>	Q
Voltage Ran	ige	6V AC/DC	±10%		12V AC/DC ±10%		24V AC/DC ±10%	6		
_	Color	R, A	G, PW	S	R, G, A, PW	S	R, G, A, PW	S	APEM	
Current Draw	DC	7mA	5.5mA	4.5mA	10mA	8mA	10mA	8mA	Switches 8	
Diaw	AC	8mA	8mA	7mA	11mA	9mA	11mA	9mA	Pilot Lights	
Lamp Base	Color	Same as	illumination color	r (PW: gray)					Control Box	xes
Voltage Mar	rking	Die stamp	oed on the base						Emergency	у
Life (referen	nce value)		0,000 hours nance is reduced	I to 50% the ini	tial intensity when use	d on complete DC a	at 25°C.)		Stop Switc Enabling Switches	hes
Internal Circuit		X 1 4	X 1 - Symbols Kample: LSTD-2PW							ducts
			\square	× × Ŕn	LED Chip	LED chip			Explosion F	Explosion Proof
					Zener diode		-		Terminal B	locks
		X 2 4			- Resistor		Base Color		Relays & So	ockets
Weight		Approx. 2	g						Circuit Protectors	

 \bullet Specify a color code in place of *. R (red), G (green), A (amber), S (blue), PW (pure white)

• Use a pure white (PW) LED for yellow (Y) illumination.

LSTDB (For Jumbo Dome Pilot Lights HW1P-5Q4 Only)

Part No.	LSTD)B-2*							
Lamp Base	BA9S/13								
Voltage Range	24V AC/DC±10%								
Current Draw	15mA								
Rated Voltage	24V AC/DC								
Life (reference value)	Approx. 20,000 hours (The luminance is reduced to 50% the initial intensity when used on complete DC at 25°C.)								
	R, A								
Internal Circuit		- H ED chip - H Rectifier diode - H Zener diode - □- Resistor							
	G, S, PW	4							

• Specify a color code in place of *. R (red), G (green), A (amber), S (blue), PW (pure white)

• Use a pure white (PW) LED for yellow (Y) illumination.

Power Supplies

LED Illumination

Flush Silhouette

ø16

ø30 Miniature Pilot Lights

ΤW

YW

Controllers Operator Interfaces Sensors AUTO-ID

Ø22 HW Series Switches and Pilot Lights

Specifications

2 0	opeemeations						
& Pilot Liç	Operating Temperature	Non-illuminated: -25 to +60°C (no freezing) Illuminated: -25 to +50°C (no freezing) Jumbo dome pilot lights: -25 to +55°C (no freezing) 45 to 85% RH (no condensation)					
ght	Operating Humidity						
	Storage Temperature	-40 to +80°C (no freezing)					
	Contact Resistance	50 mΩ maximum (initial value)					
APEM	Insulation Resistance	100 MΩ minimum (500V DC megger)					
Switches & Pilot Lights	Dielectric Strength	Between live and dead metal parts: 2,500V AC, 1 minute (Full voltage and illuminated units: 2,000V AC, 1 minute) (*1)					
ntrol Boxes	Vibration Resistance	Damage limits: 30 Hz, amplitude 1.5 mm					
Emergency	VIDIATION RESISTANCE	Operating extremes: 5 to 55 Hz, amplitude 0.5 mm					
p Switches	Chask Desistance	Damage limits: 1,000m/s ²					
Enabling Switches	Shock Resistance	Operating extremes: 100m/s ²					
ty Products		Pushbutton, Illuminated pushbutton Momentary······5,000,000					
osion Proof		Maintained					
inal Blocks	Mechanical Life (minimum	Dual pushbutton -500,000 Selector switch -500,000 Key selector switch (Disc tumbler) -500,000					
s & Sockets	operations)	Key selector switch (Pin tumbler)					
Circuit Protectors		Pushbutton selector switcher 250,000 Mono-lever switches 250,000					
er Supplies		Pushbutton, Illuminated pushbutton					
llumination		Momentary					
Controllers		Dual pushbutton•••••••••••••••••••••••••••••••••••					
Operator	Electrical Life (*5)	Selector switch					
Interfaces		Key selector switch (Disc tumbler)••••••500,000 (*3) Key selector switch (Pin tumbler)••••••100,000 (*3)					
Sensors		Illuminated selector switch					
AUTO-ID		Pushbutton selector					
		66g (HW1B-M122) 20g (HW1P-1Q4) 84g (HW1L-M122Q4)					
n Silhouette		66g (HW1S-2T22)					
ø16	Weight (Apporox.)	94g (HW1K-2A22) 72g (HW1K-2JPC11)					
ø22		84g (HW1F-222Q4) 71g (HW1R-2A22) 82g (HW1M-2222-22N9)					
ø30		82g (HWTM-2222-22N9) 72g (HW7D-B111111) 90g (HW7D-L111111Q4)					
Miniature							

*1) Dielectric strength for dual pushbuttons are as follows:

Full voltage type: 1,000V AC, 1 minute (between live and dead metal parts) Transformer and DC-DC converter types: 2,000V AC, 1 minute (between live and dead metal parts)

*2) Switching frequency 1,800 operations/h, duty ratio 40%

*3) Switching frequency 1,200 operations/h, duty ratio 40%

*4) Switching frequency 900 operations/h, duty ratio 40%

*5) Load condition 220V AC, 3A (AC-15)

τw YW

Pilot Lights

Ordering Information

Standard models

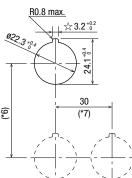
- · Specify Ordering No. when ordering.
- . Specify a button or lens color code in place of *.
- · Pilot lights, illuminated pushbuttons, and illuminated selector switches have an LED lamp installed unless otherwise specified.
- Nameplates and accessories for mono-lever switch are ordered separately. See B-216 to B-218.
- · Color codes for units without LED lamps:
- R (red), G (green), A (amber), Y (yellow), S (blue)

When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of HW series cannot be guaranteed when a commercially available lamp is used.

Mounting Hole Layout

(Dimensions in mm)





- . The minimum mounting centers are applicable to switches with one layer of contact blocks (one to two contact blocks). When two layers of contact blocks are mounted, determine the minimum mounting centers in consideration of convenience for wiring.
- . When high temperature is expected, take necessary measures such as securing sufficient mounting centers or using a cooling fan.

Minimum Mounting Centers

winning contors		
Unit	A (*6)	B (*7)
ø40mm mushroom button	50	40
Pushbutton selector	50	50
Mono-lever switch	72	72
Pilot light	30	30
Jumbo dome pilot light	85	85
Dual pushbutton switch	55	30
Illuminated selector switch	50	50

. When using the safety lever lock, determine the vertical spacing (*6) in consideration of convenience for installing and removing the safety lever lock. (Recommended vertical spacing: 100 mm) The minimum length of vertical spacing (*6) is 45 mm when safety lever lock is not used.

 The 3.2 mm recess is for preventing rotation and is not necessary when the nameplate or anti-rotation ring is not used.

Degree of Protection

Unit	IEC 60529
All units except dual pushbutton switches	IP65 (*8)
Dual pushbutton switches	IP40 (*9)

*8) When using a nameplate with the HW series, IP65 protection degree is achieved only when nameplates shown on B-216 are used. (IP40 when other ø22 namplates such as NWA are used)

*9) IP65 protection degree when HW9Z-D7D button cover is used.

Contr Er Stop

Safety

Explos

Termin

Relays &

Power LED IIIu С

Flush S



Pilot Lights (B-190)

When specifying LED operating voltage:

Ordering Information

HW1B-M1 11 R -MAU

When specifying gold-plated silver contact and contact configuration:

Optional contact

Operating voltage

Contact configuration

Pushbuttons (B-187 to B-189)

HW1P-1 <u>H2</u> R

Without LED lamp QO: Q2: 6V AC/DC 12V AC/DC Q3: 04: 24V AC/DC H2: 100/110V AC H22: 115/120V AC M2: 200/220V AC 230/240V AC M42: S2: 380V AC T2: 400/440V AC T82: 480V AC D2: 110V DC

MAU: Gold contact

1N01NC

2N02NC

1N03NC 3N01NC

1N02NC 2N01NC

1N0 1NC

2N0

2NC

4N0

4NC

3N0

3NC

10:

01:

11: 20:

02:

22:

40:

04:

13:

31:

30:

03:

12:

21:

Note: Color codes for units without LED lamps: R (red), G (green), A (amber), Y (yellow), W (white), S (blue) When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of HW series cannot be guaranteed when a commercially available lamp is used.

Illuminated Pushbuttons (B-192 to B-196)

When specifying gold-plated silver contact, contact configuration, and LED operating voltage:

HW1L-M1 <u>11 H2</u> R - <u>MAU</u> **Optional contact** MAU Gold contact Without LED lamp **Operating Voltage** 00: Q2: 6V AC/DC 12V AC/DC Q3: Q4: 24V AC/DC H2: 100/110V AC H22: 115/120V AC M2: 200/220V AC M42: 230/240V AC 380V AC S2: 400/440V AC T2: T82: 480V AC 110V DC D2: Contact configuration 10: 1N0 01: 1NC 1N01NC 11: 20: 2N0 02: 2NC 22: 2N02NC 40: 4N0 04: 4NC 13: 1N03NC 31: 3N01NC 30: 3N0 03: 3NC 12: 1N02NC 21: 2N01NC

Note:

• Color codes for units without LED lamps: R (red), G (green), A (amber), Y (yellow), S (blue)

When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of HW series cannot be guaranteed when a commercially available lamp is used.

• Odd number of contact blocks, such as 1N0, 1NC, 3N0, 2N0-1NC, 1N0-2NC, and 3NC, is not available for transformer type or DC-DC converter type.

Explosion Proof

Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers

Operator

Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø30

ΤW

YW

Miniature

Pilot Lights

Circuit

Protectors

Ordering	Information
oraoring	mormation

~~~	Uluelli	iy i	mu	11110		11				
& Pilot Lights	Dual Pushbut	ton	Swit	ches	s [w	/ithout pi	lot I	ight] ( <mark>B-199</mark> )		
Lig	When specifying	g gol	ld-pla	ated s	silve	er contact a	and	contact configuration:		
Ints	НW7D-В <u>1</u>	11	<u>0 02</u>	<u>GR 1</u>	<u>– M</u>	<u>AU</u>				
					I			Optional contact		Gold-plated silver
								Button legends	Blank:	: Without legend I/ON + 0/OFF
APEM Switches &								Button color code	GR: WB:	Green (top) Red (bottom) White (top) Black (bottom)
Pilot Lights			L					Contact arrangement code	10:	1N0
Control Boxes Emergency Stop Switches								(bottom button)	01: 11: 20:	1NC 1N01NC 2N0
Enabling Switches								Contact arrangement code	02: 10:	2NC 1NO
Safety Products								(top button)	01: 11:	1NC 1NO1NC
Explosion Proof									20: 02:	2NO 2NC
Terminal Blocks								Button style	1: 2:	Flush + Flush Flush + Extended
Relays & Sockets	L							Operation	1:	Momentary
Circuit Protectors									2:	Interlock
Power Supplies	Dual Duabhut	<b>.</b>	o:		. г		l'a la			
LED Illumination	Dual Pushbut				-		-	LJ (D-200) tact configuration, and LE	-D one	rating voltage.
Controllers	HW7D-L <u>1</u>						0011		_D 000	rating voltage.
Operator Interfaces								Optional contact	MAU:	Gold-plated silver
Sensors								Button legends	Blank 1:	: Without legend I/ON + 0/OFF
AUTO-ID								Button color code	GR: WB:	Green (top), Red (bottom) White (top), Black (bottom)
								Lamp color code	G: PW:	Green Pure White
Flush Silhouette								Operating voltage	Q2: Q3:	6V AC/DC 12V AC/DC
ø16									Q4: H2:	24V AC/DC 100/110V AC
ø22									H22: M2:	115/120V AC 200/220V AC
ø30										230/240V AC 380V AC
Miniature									T2:	400/440V AC
Pilot Lights								Contact arrangement code	T82: 10:	480V AC 1NO
Н₩								(bottom button)	01: 11: 20: 02:	1NC 1N01NC 2N0 2NC
TW								Contact arrangement code	10:	1N0
YW								(top button)	01: 11: 20: 02:	1NC 1N01NC 2N0 2NC
								Button style	1: 2:	Flush + Flush Flush + Extended
								Operation	1: 2:	Momentary Interlock

Note: Transformer type cannot have a contact arrangement of 3 contact blocks for the total of top and bottom.

hen specifying gold-plated silver contact, key	. ,	number:	ot Lights
HW1K- <u>2 J</u> P <u>A</u> 01 - <u>501</u> - <u>MAU</u>	romoval poolion, and koy		ight
	— Optional contact	MAU: Gold-plated silver	S
	— Different key number	-501 - 515	
	— Key removal position	2-position A: Removable in all positions B: Removable in the left only	APEM
		C: Removable in the right only 3-position A: Removable in all positions	Switches & Pilot Lights
		B: Removable in the left and center C: Removable in the right and center	Control Boxes
		D: Removable in center only E: Removable in right and left	Emergency Stop Switches
		G: Removable in left only H: Removable in right only	Enabling Switches
	— Cam code	Blank, J, or S	Safety Products
	— Operator position code	2: 2-position, maintained 21: 2-position, spring return from right	Explosion Proo
		3: 3-position, maintained 31: 3-position, spring return from right	Terminal Block
		32: 3-position, spring return from left 33: 3-position, spring return two way	Relays & Socke
Note: • The key cannot be removed in a spring re	turn position.		Circuit Protectors
• The key number is engraved on the key c		raved with a number)	Power Supplie
			LED Illuminati
V Selector Switches (Disc Tumbler Key en specifying gold-plated silver contact, key	, ,	number	Controllers
HW1K- <u>3 J A</u> 22 - <u>1H</u> - <u>MAU</u>			Operator Interfaces
	— Optional contact	MAU: Gold-plated silver	Sensors
	— Different key number	-1H, -2H, -3H	AUTO-ID
	— Key removal position	(same as pin tumbler key shown above)	AUTO-ID
	— Cam code — Operator position code	(same as pin tumbler key shown above) (same as pin tumbler key shown above)	
Note:	Operator position code	(same as pin tumble) key shown above)	
• The key cannot be removed in a spring re	turn position.		Flush Silhoue
• The key number is engraved on the key c	ylinder. (default key is not eng	raved with a number)	ø16
			ø22
minated Selector Switches (B-208 to I	-		ø30
en specifying gold-plated silver contact and HW1F- <u>2 J L</u> 11 <u>H2</u> R - <u>MAU</u>	LED operating voltage:		Miniature
	Optional contact	MAU: Gold-plated silver	
	Operating voltage	QO: Without LED lamp M2: 200/220V AC	Pilot Lights
		Q2: 6V AC/DC M42: 230/240V AC	
		Q3: 12V AC/DC S2: 380V AC Q4: 24V AC/DC T2: 400/440V AC	
		H2: 100/110V AC T82: 480V AC	HW
	Or eventury of	H22: 115/120V AC	TW
	— Operator shape — Cam code	Blank (Knob), L (Lever) Blank, J, or S	YW
	— Operator position code	<ol> <li>2: 2-position, maintained</li> <li>21: 2-position, spring return from right</li> <li>3: 3-position, maintained</li> <li>31: 3-position, spring return from right</li> </ol>	
		<ul> <li>32: 3-position, spring return from left</li> <li>33: 3-position, spring return two way</li> </ul>	

Color codes for units without LED lamps: R (red), G (green), A (amber), Y (yellow), S (blue) Note:

When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of HW series cannot be guaranteed when a commercially available lamp is used.

### Selector Switches (B-203)

When specifying gold-plated silver contact

**Ordering Information** 

Key Selector Switches (Pin Tumbler Key) (B-204 to B-205)

HW1S- 2T11 - MAU

**Optional contact** 

MAU: Gold-plated silver

• See **B-203** for operator position.

bownload catalogs and CAD from http://eu.idec.com/downloads

# ø22 HW Series Pushbuttons

# Flush / Extended / Mushroom Pushbuttons

Pilot Lights						Package Quantity: 1		
t Li	Shape	Operation	Contact	Part No.	Color Code	Dimensions (mm)		
ght	Flush		1N0	HW1B-M110*				
0,	HW1B-M1 HW1B-A1		1NC	HW1B-M101*				
		Momentary	1NO-1NC 2NO	HW1B-M111* HW1B-M120*		Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6		
APEM			2N0 2NC	HW1B-M120*	В			
Switches &			2NO-2NC	HW1B-M122*	G R			
Pilot Lights	1 Marca		1N0	HW1B-A110*	Y			
Control Boxes			1NC	HW1B-A101*	S W			
Emergency Stop Switches		Maintained	1NO-1NC	HW1B-A111*	vv	49.4 (1 or 2 blocks) 69.4 (3 or 4 blocks) 29.4		
Enabling		Mamanou	2N0	HW1B-A120*				
Switches			2NC 2N0-2NC	HW1B-A102*				
Safety Products	Estandad		1N0	HW1B-A122* HW1B-M210*				
Explosion Proof	Extended HW1B-M2		1NC	HW1B-M201*				
Terminal Blocks	HW1B-A2		1NO-1NC	HW1B-M211*		Locking Ring		
		Momentary	2N0	HW1B-M220*	В	Safety Lever Lock Panel Thickness 0.8 to 6		
Relays & Sockets			2NC	HW1B-M202*	G			
Circuit Protectors			2NO-2NC	HW1B-M222*	R			
Power Supplies			1N0 1NC	HW1B-A210* HW1B-A201*	Y S			
			1NO-1NC	HW1B-A201*	W			
LED Illumination		Maintained	2N0	HW1B-A220*		69.4 (3 or 4 blocks)		
Controllers			2NC	HW1B-A202*				
Operator Interfaces			2NO-2NC	HW1B-A222*				
	ø29mm Mushroom	Momentary	1N0	HW1B-M310*	- B - G - R			
Sensors	HW1B-M3 HW1B-A3		1NC	HW1B-M301*				
AUTO-ID	TIW ID-AS		1NO-1NC 2NO	HW1B-M311* HW1B-M320*		Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6		
			2N0 2NC	HW1B-M302*				
			2NO-2NC	HW1B-M322*				
Flush Silhouette			1N0	HW1B-A310*	Y			
			1NC	HW1B-A301*	S W			
ø16		Maintained	1NO-1NC	HW1B-A311*		49.4 (1 or 2 blocks) 13 69.4 (3 or 4 blocks) 23.2		
ø22			2N0	HW1B-A320*				
ø30			2NC 2NO-2NC	HW1B-A302* HW1B-A322*				
Miniatura	ø40mm Mushroom		1N0	HW1B-M410*				
Miniature	HW1B-M4		1NC	HW1B-M401*				
Pilot Lights	HW1B-A4	Momentary	1NO-1NC	HW1B-M411*		Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6		
		WOMENTALY	2N0	HW1B-M420*	В	Safety Lever Lock		
			2NC	HW1B-M402*	G			
HW			2NO-2NC 1NO	HW1B-M422* HW1B-A410*	R Y			
			1NC	HW1B-A410* HW1B-A401*	S			
TW			1NO-1NC	HW1B-A411*	W	49.4 (1 or 2 blocks) 13		
YW		Maintained	2N0	HW1B-A420*		69.4 (3 or 4 blocks) 23.2		
			2NC	HW1B-A402*				
			2N0-2NC	HW1B-A422*				
	ø60mm Mushroom HW1B-M5		1N0	HW1B-M510*		Safety Lever Lock		
			1NC	HW1B-M501*				
		Momentary	1NO-1NC	HW1B-M511*	B G			
			2N0	HW1B-M520*	R			
			2NC	HW1B-M502*		49.4 (1 or 2 blocks) 15		
			2N0-2NC	HW1B-M522*		69.4 (3 or 4 blocks) 30.1		

• Specify a color code in place of * in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)

- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-184 for other contact configurations and gold-plated silver contacts.
- Pushbuttons: M3.5 Terminal screws integrated terminal cover

Switches &

# Square Flush / Square Flush Pushbuttons

					Package Quantity: 1	Pilo
Shape	Operation	Contact	Part No.	Color Code	Dimensions (mm)	1 E
Square Flush HW2B-M1 HW2B-A1		1N0 1NC	HW2B-M110* HW2B-M101*	-		Pilot Lights
TIW2D-AT	Momentary	1N0-1NC	HW2B-M111*	_	Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6	
		2N0 2NC	HW2B-M120* HW2B-M102*	В		APEM
		2NO-2NC	HW2B-M102*	– G R		Switches &
		1N0	HW2B-A110*	Y	╡ <del>┋</del> ╶┅╌┉╴╌╴ <u>┥</u> ╌┝╴╴╴ <u>┥</u>	Pilot Lights
		1NC	HW2B-A101*	S		Control Boxes
	Maintained	1NO-1NC	HW2B-A111*	W	$\begin{array}{c} 49.4 (1 \text{ or } 2 \text{ blocks}) \\ 69.4 (3 \text{ or } 4 \text{ blocks}) \\ 69.4 (3 \text{ or } 4 \text{ blocks}) \\ 13 \end{array}$	Emergency Stop Switches
	Walltalleu	2N0	HW2B-A120*	]		Enabling
		2NC	HW2B-A102*			Switches
		2N0-2NC	HW2B-A122*			Safety Products
Square Extended		1N0	HW2B-M210*			
HW2B-M2		1NC	HW2B-M201*			Explosion Proof
HW2B-A2	Momentary	1NO-1NC	HW2B-M211*		Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6	Terminal Blocks
	literiteriterity	2N0	HW2B-M220*	В	Safety Lever Lock Panel Thickness 0.8 to 6	Relays & Sockets
		2NC	HW2B-M202*	G		
		2N0-2NC	HW2B-M222*	R		Circuit Protectors
		1N0	HW2B-A210*	Y S		Power Supplies
		1NC	HW2B-A201*	- W		Power Supplies
	Maintained	1N0-1NC	HW2B-A211*		49.4 (1 or 2 blocks) 13 69.4 (3 or 4 blocks) 19	LED Illumination
		2N0	HW2B-A220*	_		Controllers
		2NC	HW2B-A202*	_		
		2N0-2NC	HW2B-A222*			Operator Interfaces

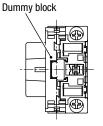
• Specify a color code in place of * in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)

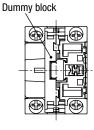
• Pushbuttons with 1 or 3 contact blocks have a dummy block.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Pushbuttons: M3.5 Terminal screws

# **Bottom View**





1NO contact block

3 contact blocks



2/4 contact blocks

Flush Silhouette
ø16
ø30
Miniature
Pilot Lights

Sensors

AUTO-ID

HW	
TW	
YW	

• For 1NC contact, the contact block will mount on the opposite side.

• See B-227 for wiring.

• Integrated terminal cover

# ø22 HW Series Pushbuttons

Switches

# Round Flush / Round Extended /Mushroom with Square Bezel

					Package Quantity: 1			
Shape	Operation	Contact	Part No.	Color Code	Dimensions (mm)			
Round Flush with Square Bezel		1N0	HW3B-M110*					
HW3B-M1		1NC	HW3B-M101*					
HW3B-A1	Momontary	1NO-1NC	HW3B-M111*		Locking Ring			
	WOMENTALY	2N0	HW3B-M120*	р	Safety Lever Lock Panel Thickness 0.8 to 6			
		2NC	HW3B-M102*					
		2N0-2NC	HW3B-M122*	R				
		1N0	HW3B-A110*		Ĩ ⁺			
			HW3B-A101*					
	Maintained	1NO-1NC	HW3B-A111*		49.4 (1 or 2 blocks) 69.4 (3 or 4 blocks) 13			
	Maintaineu	2N0	HW3B-A120*					
		2NC	HW3B-A102*					
		2N0-2NC	HW3B-A122*					
Round Extended			HW3B-M210*					
with Square Bezel		-	HW3B-M201*					
	Momentary Maintained				Locking Ring			
				B G R	Safety Lever Lock Panel Thickness 0.8 to 6			
			-					
		-		W				
					49.4 (1 or 2 blocks) 13 69.4 (3 or 4 blocks) 19			
		-						
ø29mm Mushroom								
		-						
	Momentary				Locking Ring Safety Lever Lock Panel Thickness 0.8 to 6			
				В				
				G				
				Ŵ	49.4 (1 or 2 blocks) 13			
	Maintained				49.4 (1 07 2 000cks) 13 4 69.4 (3 or 4 blocks) 23.2			
		2110-2116	IIWOD-AJZZ*					
	Round Flush with Square Bezel HW3B-M1 HW3B-A1	Round Flush with Square Bezel       Momentary         HW3B-A1       Momentary         Image: Constraint of the second	Round Flush with Square Bezel HW3B-A11N0 1NC 1NO-1NC 2NO 2NO 2NO-2NCImage: Strain Strain With Square Bezel HW3B-A21N0 1NC 1NO-1NC 2NO-2NCRound Extended with Square Bezel HW3B-A21N0 1NC 1NO-1NC 2NO-2NCRound Extended with Square Bezel HW3B-A31N0 1NC 1NO-1NC 2NO-2NCImage: Strain Strain Provided Strain Womentary1N0 1NC 2NO-2NC 2NO-2NC 2NO-2NCImage: Strain Strain Provided Strain Womentary1N0 1NC 	Round Flush with Square Bezel HW3B-A1         1N0         HW3B-M110*           Womentary         1NC         HW3B-M10*           IW3B-A1         Momentary         1N0-1NC         HW3B-M102*           IW3B-A1         IW3B-M102*         2NC         HW3B-M102*           IW3B-M102*         2NC         HW3B-M102*         2NC           IW3B-M102*         2NC         HW3B-M102*         2NC           IW3B-M102*         2NC         HW3B-M102*         2NC           IW0         HW3B-A10*         1NC         HW3B-A10*           IW0         HW3B-A10*         1NC         HW3B-A10*           IW0         HW3B-A10*         1NC         HW3B-A10*           IW3B-M2         Momentary         1NC         HW3B-M210*           IW3B-A2         Momentary         1NC         HW3B-M210*           IW3B-M2         Momentary         1NC         HW3B-M211*           INO         HW3B-M21         1NC         HW3B-M210*           IW3B-M2         Momentary         1NC         HW3B-M210*           IW3B-M2         Momentary         2NC         HW3B-M210*           IW3B-M2         Maintained         1NC         HW3B-M210*           IW3B-M3         Mome	Round Flush with Square Bezel HW3B-M1 HW3B-A1         INO         HW3B-M110* HW3B-M10*           INO         HW3B-M110*         INC         HW3B-M10*           INO         HW3B-M10*         INO         HW3B-M10*           INO         HW3B-M10*         INO         HW3B-M10*           INO         HW3B-M10*         INO         HW3B-M10*           INO         HW3B-A110*         INO         HW3B-A10*           INO         HW3B-A10*         INO         HW3B-A10*           INO         HW3B-M20*         INO         HW3B-M20*           INO         HW3B-M20*         INO         HW3B-M20*           INO         HW3B-M20*         INO         HW3B-A20*         Y           INO         HW3B-M20*         INO         HW3B-A20*         Y           INO         HW3B-A20*         INO         HW3B-M30*         Y			

Miniature • Specify a color code in place of * in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)

Dummy block

• Pushbuttons with 1 or 3 contact blocks have a dummy block.

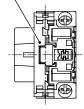
• See B-184 for other contact configurations and gold-plated silver contacts.

• Pushbuttons: M3.5 Terminal screws

# **Bottom View** ΤW

Pilot Lights

Dummy block YW

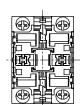


1NO contact block

3 contact blocks



- See B-227 for wiring.
- Integrated terminal cover



2/4 contact blocks

### Ø22 HW Series Pilot Lights



• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

• Pilot lights have an LED lamp installed unless otherwise specified.

• See B-184 for other operating voltages.

• See B-191 for bottom view.

• See **B-191** for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used. *1) Jumbo dome pilot lights contain an exclusive LED. See B-182 and B-221.

📩 Download catalogs and CAD from http://eu.idec.com/downloads

Gasket

Locking Ring

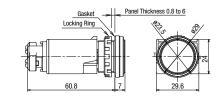
43.3

# Pilot Lights

Round Flush Terminal screws: M3.5, integrated terminal cover

Panel Thickness 0.8 to 6

6, 12, 24V AC/DC, Without LED lamp 100/110V AC, 200/220V AC (240V AC maximum)



100/110V AC, 200/220V AC (240V AC maximum)

17.

Gasket

Locking Ring

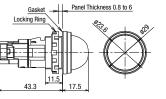
60.8

Panel Thickness 0.8 to 6

£

### Extended Terminal screws: M3.5, integrated terminal cover

6, 12, 24V AC/DC, Without LED lamp



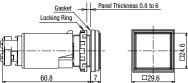
### Square Flush Terminal screws: M3.5, integrated terminal cover

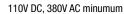
6, 12, 24V AC/DC, Without LED lamp

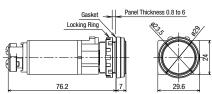
Panel Thickness 0.8 to 6 Gasket Locking Ring 124. _11 43.3

100/110V AC, 200/220V AC (240V AC maximum) Gasket Locking Ring

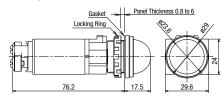
Ē



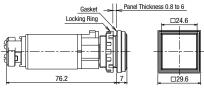




### 110V DC, 380V AC minimum



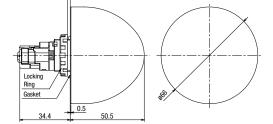
### 110V DC, 380V AC minimum





ø16 ø30 Miniature Pilot Lights

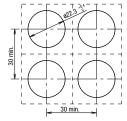
Flush Silhouette



Jumbo Dome Pilot Light Terminal screws: M3.5, integrated terminal cover

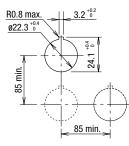
- ΤW YW
  - Panel Cut-Out **Mounting Centers** (Except jumbo dome) Close mounting on 30 mm centers

Panel Thickness 1 to 5



When mounting 100/110V AC, 200/220V AC, 110V DC units on 30mm centers vertically and horizontally, keep the ambient temperature below 40°C.

**Mounting Centers** (Jumbo dome)

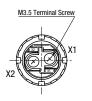


Determine the minimum mounting centers in consideration of convenience for wiring.

# **Pilot Light Bottom View**

6, 12, 24V AC/DC Without LED lamp

# 100/110V AC, 200/220V, 110V DC





 For DC-DC Converter types, terminal X1 is ⊕, X2 is⊖. • See B-228 for wiring.

APEM

Control Boxes

Emergency Stop Switches Enabling

Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

LED Illumination

Controllers

Operator

Interfaces Sensors

AUTO-ID

Circuit

Protectors Power Supplies

Shape	Illumination	Operation	Rated Voltage	Contact	Part No.	Color Code	
опаро	Indifinitedion	oporation	Thatou Voltago	Configuration			k Pilot Lights
Round Flush (Marking type)				1N0	HW1L-M110Q4*		ŝ
HW1L-M1				1NC	HW1L-M101Q4*		
IW1L-A1			24V AC/DC	1NO-1NC	HW1L-M111Q4*		
				2N0	HW1L-M120Q4*		APEM
				2NC	HW1L-M102Q4*	R	Switches
E.				2NO-2NC	HW1L-M122Q4*	G	Pilot Light
		Momentary		1NO-1NC	HW1L-M111H2*	Y	Control B
		-	100/110V AC	2N0	HW1L-M120H2*	A S	Emergen
				2NC	HW1L-M102H2*	- PW	Stop Swit
				2NO-2NC 1NO-1NC	HW1L-M122H2*		Enabling
				2N0	HW1L-M111M2*		Switches
(24V AC/DC)			200/220V AC	2N0 2NC	HW1L-M120M2*		Safety Pr
				2NC 2NO-2NC	HW1L-M102M2*		Funlasia
	LED -				HW1L-M122M2*		Explosion
				1N0 1NC	HW1L-A10104*		Terminal
				1NO-1NC	HW1L-A101Q4* HW1L-A111Q4*		
			24V AC/DC	2N0			Relays &
A CONTRACT				2N0 2NC	HW1L-A120Q4*	I	Circuit
				2NC 2NO-2NC	HW1L-A102Q4* HW1L-A122Q4*	R	Protector
				2NO-2NC 1NO-1NC	HW1L-A122Q4* HW1L-A111H2*	G Y	Power Si
		Maintained		2N0	HW1L-A111H2*	YA	
			100/110V AC	2N0 2NC	HW1L-A120H2*	S	LED Illun
				2NC 2NO-2NC	HW1L-A102H2*	PW	Controlle
With transformer			200/220V AC	1NO-1NC	HW1L-A111M2*		Operator
(100/110V AC)				2N0	HW1L-A120M2*	_	Interface
				2NC	HW1L-A102M2*		Sensors
				2N0-2NC	HW1L-A122M2*		0013013
				1N0	HW1L-M210Q4*		AUTO-ID
ound Extended (Marking type) W1L-M2				1NC	HW1L-M201Q4*		
W1L-M2 W1L-A2				1NO-1NC	HW1L-M211Q4*		
			24V AC/DC	2N0	HW1L-M220Q4*		
				2NC	HW1L-M202Q4*		Flush Sil
				2N0-2NC	HW1L-M222Q4*	R	
JET H				1NO-1NC	HW1L-M211H2*	G Y	ø16
		Momentary		2N0	HW1L-M220H2*	Y	ø22
			100/110V AC	2NC	HW1L-M202H2*	S	022
				2N0-2NC	HW1L-M222H2*	PW	ø30
				1NO-1NC	HW1L-M211M2*	—	
				2N0	HW1L-M220M2*	—	Miniature
(24V AC/DC)			200/220V AC	2NC	HW1L-M202M2*	—	Pilot Ligh
				2N0-2NC	HW1L-M222M2*	—	
	LED –			1N0	HW1L-A210Q4*		
				1NC	HW1L-A201Q4*	—	
				1NO-1NC	HW1L-A211Q4*	—	10.0
			24V AC/DC	2N0	HW1L-A220Q4*		HW
				2NC	HW1L-A202Q4*		TW
With transformer (100/110V AC)				2N0-2NC	HW1L-A222Q4*	R G	·
		•• • • • •		1NO-1NC	HW1L-A211H2*	Y Y	YW
		Maintained	100/1100	2N0	HW1L-A220H2*	Å	
			100/110V AC	2NC	HW1L-A202H2*	S	
				2N0-2NC	HW1L-A222H2*	PW	
				1NO-1NC	HW1L-A211M2*	—	
				2N0	HW1L-A220M2*	—	
			200/220VAC	2NC	HW1L-A202M2*	—	
				2N0-2NC	HW1L-A222M2*		

• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

Round Flush / Round Extended (Marking Type)

• Illuminated pushbuttons have an LED lamp installed unless otherwise specified.

• See B-184 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See **B-198** for bottom view.

LED

• See **B-184** for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

# ø22 HW Series Illluminated Pushbuttons

APEM

Switches Pilot Ligi Control Boxes Emergency Stop Switches Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets Circuit Protectors Power Supplies LED Illumination Controllers Operator Interfaces Sensors AUTO-ID

						Package Quanti
Shape	Illumination	Operation	Rated Voltage	Contact	Part No.	Color Code
Round Extended with Full Shroud				1N0	HW1L-MF210Q4*	
(Marking type)				1NC	HW1L-MF201Q4*	
W1L-MF2			24V AC/DC	1NO-1NC	HW1L-MF211Q4*	
IW1L-AF2			24V AC/DC	2N0	HW1L-MF220Q4*	
				2NC	HW1L-MF202Q4*	
				2N0-2NC	HW1L-MF222Q4*	R G
		Momentary		1NO-1NC	HW1L-MF211H2*	Ŷ
		Momentary	100/110V AC	2N0	HW1L-MF220H2*	A
			100/110V AC	2NC	HW1L-MF202H2*	S PW
				2N0-2NC	HW1L-MF222H2*	
(24V AC/DC )	LED			1NO-1NC	HW1L-MF211M2*	
			200/220V AC	2N0	HW1L-MF220M2*	
			200/220V AG	2NC	HW1L-MF202M2*	
				2N0-2NC	HW1L-MF222M2*	
			-	1N0	HW1L-AF210Q4*	
				1NC	HW1L-AF201Q4*	
			24V AC/DC	1NO-1NC	HW1L-AF211Q4*	
			24V AC/DC	2N0	HW1L-AF220Q4*	
				2NC	HW1L-AF202Q4*	
				2N0-2NC	HW1L-AF222Q4*	R G
		Maintained		1NO-1NC	HW1L-AF211H2*	Ŷ
		Walllaneu	100/110V AC	2N0	HW1L-AF220H2*	A
			TUU/TTUV AC	2NC	HW1L-AF202H2*	S PW
With transformer				2N0-2NC	HW1L-AF222H2*	- PW
(100/110V AC)				1NO-1NC	HW1L-AF211M2*	
			200/220V AC	2N0	HW1L-AF220M2*	
			200/220V AU	2NC	HW1L-AF202M2*	
				2NO-2NC	HW1L-AF222M2*	

• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

• Illuminated pushbuttons have an LED lamp installed unless otherwise specified.

• See B-184 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-198 for bottom view.

• See **B-184** for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used. Miniature

Pilot Lights

Flush Silhouette

ø16

ø30

τw	
YW	

### ø22 HW Series Illluminated Pushbuttons

# Switches

Shape	1					-	
	Illumination	Operation	Illumination	Contact	Part No.	Color Code	nes & Pilot Lights
quare Flush (Marking type)		•		1N0	HW2L-M110Q4*		igh
W2L-M1				1NC	HW2L-M101Q4*		5
W2L-A1			0.01/1.0/100	1NO-1NC	HW2L-M111Q4*		
			24V AC/DC	2N0	HW2L-M120Q4*		
				2NC	HW2L-M102Q4*	R	APEM
				2N0-2NC	HW2L-M122Q4*	G	Switches 8
		Momentery		1NO-1NC	HW2L-M111H2*	Ŷ	Pilot Light
		Momentary	100/110V AC	2N0	HW2L-M120H2*	A	Control Bo
			100/110V AC	2NC	HW2L-M102H2*	S	
				2N0-2NC	HW2L-M122H2*	PW	Emergeno Stop Swit
				1NO-1NC	HW2L-M111M2*		Enabling
			200/220V AC	2N0	HW2L-M120M2*		Switches
(24V AC/DC)			200/220V AC	2NC	HW2L-M102M2*		Safety Pro
	LED			2N0-2NC	HW2L-M122M2*		
	LLD			1N0	HW2L-A110Q4*		Explosion
				1NC	HW2L-A101Q4*		Terminal
and the second			24V AC/DC	1NO-1NC	HW2L-A111Q4*		
			24V A0/D0	2N0	HW2L-A120Q4*		Relays &
				2NC	HW2L-A102Q4*	R	Circuit
				2N0-2NC	HW2L-A122Q4*	G	Protector
		Maintained	100/110V AC	1NO-1NC	HW2L-A111H2*	Y A	Power Su
				2N0	HW2L-A120H2*	- S - PW	
				2NC	HW2L-A102H2*		LED Illum
With transformer			200/220V AC	2N0-2NC	HW2L-A122H2*		Controlle
(100/110V AC)				1NO-1NC	HW2L-A111M2*		Operator
				2N0	HW2L-A120M2*		Interface
				2NC	HW2L-A102M2*		Sensors
				2N0-2NC	HW2L-A122M2*		
und Flush with Square Bezel				1N0	HW3L-M110Q4*	_	AUTO-ID
arking type)				1NC	HW3L-M101Q4*		
V3L-M1			24V AC/DC	1NO-1NC	HW3L-M111Q4*		
V3L-A1				2N0	HW3L-M120Q4*	R G Y A	
				2NC	HW3L-M102Q4*		Flush Sill
				2N0-2NC	HW3L-M122Q4*		
A CONTRACTOR OF THE OWNER OWNER OF THE OWNER OWNE		Momentary		1N0-1NC	HW3L-M111H2*		ø16
		· ······ ,	100/110V AC	2N0	HW3L-M120H2*	S	ø22
				2NC	HW3L-M102H2*	PW	
				2N0-2NC	HW3L-M122H2*		ø30
				1NO-1NC	HW3L-M111M2*		Miniature
			200/220V AC	2N0	HW3L-M120M2*		
(24V AC/DC)				2NC	HW3L-M102M2*		Pilot Ligh
,	LED			2NO-2NC	HW3L-M122M2*		———
				1N0	HW3L-A110Q4*		
				1NC	HW3L-A101Q4*		
			24V AC/DC	1NO-1NC	HW3L-A111Q4*		HW
With transformer				2N0	HW3L-A120Q4*		
				2NC	HW3L-A102Q4*	R	TW
				2NO-2NC	HW3L-A122Q4*	G	YW
		Maintained		1NO-1NC	HW3L-A111H2*	Y	
			100/110V AC	2N0	HW3L-A120H2*	A S	
				2NC	HW3L-A102H2*	PW	
				2N0-2NC	HW3L-A122H2*		
(100/110V AC)				1NO-1NC	HW3L-A111M2*		
(100,110,10)			200/220V AC	2N0 2NC	HW3L-A120M2*		
					HW3L-A102M2*		

• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

• Illuminated pushbuttons have an LED lamp installed unless otherwise specified.

 $\bullet$  See B-184 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-198 for bottom view.

• See **B-184** for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

# ø22 HW Series Illluminated Pushbuttons

# Mushroom (ø29mm) / Mushroom (ø29mm) with Square Bezel (Marking Type)

Bogs         Bunnetion         Operation         Bunnetion         Contect         Part No.         Ooler Co.           42004         Control (Marcon)         Contect         Part No.         Ooler Co.         Ooler Co.           42004         Marcon	es &	LED Mushr	oom (ø29mi	m) / Mushroon	n (ø29mm) wi	th Square B	ezel (Marking Type	e)
Import 1. 43 (3) (M11. 43 (3) (M11	Pilot		,,					Package Quantity
Mini-Likal         With Likal         With L	E.	Shape	Illumination	Operation	Illumination	Contact	Part No.	Color Code
Mini-Like         Mini-Like <t< td=""><td>ght</td><td>ø29mm Mushroom</td><td></td><td></td><td></td><td>-</td><td>HW1L-M310Q4*</td><td></td></t<>	ght	ø29mm Mushroom				-	HW1L-M310Q4*	
HVIL A3         HVIL A3         PVIL P200         PV	S.							
AFN Exected Sector Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsection Survey Subsec					241/ 40/00			
Number         Numeriany		HW1L-A3			241710/00			
Extrant Satisf Bases         Image: Construction (Construction Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies Satisfies S	APEM					2NC	HW1L-M302Q4*	В
Control         Interface         Interface         Interface         Interface         A Security           Control         Care	Switches &						HW1L-M322Q4*	
Constrational International Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch Switch				Momentary				
Encreption Biological Section Intervalues Section Intervalues Section Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalues Intervalu	Control Boxes			momontary	100/110V AC		HW1L-M320H2*	
Builting Switchs Besteing Switchs Re Products Besteing Switchs Re Products Besteing Switchs Re Products Re Products Sesceta Dimination Controlers Particular Sesceta Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Controlers Binaniation Binaniation Controlers Binaniation Binaniation Binaniation Binaniation Binaniati Binani Binani Binaniation Binaniation Binaniation Binaniation B	Emergency				100,1101,10			
Switchs (bp Products presson Proof minimal Blocks wp & 5 scoles Drawinstein Optimation Sensors         (24V AC/DC) (24V AC/DC)         LED         200/220V AC 200/220V AC         2NO         HW11-H30204- 2NO-2NC         HW11-H30224- HW11-A31004- 1NO         HW11-H30224- HW11-A32004- 2NO         Feature HW11-H30204- 2NO         Feature HW11-H302								
Important         (24V AC/DC)         LED         200/220V AC         200/20V AC         200/220V AC         200/200/200         200/200/200         200/								
http://reductia         2N0         HV11-M322M2+           pelacin Prod         24V AC/DC         200-20C         HV11-M322M2+           pelacin Prod         100         HV11-A31004+         100         HV11-A31004+           pelacin Prod         100         HV11-A3204+         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200         200<	Switches				200/220V AC			
please Pool mining Blocks sys & Sockats were Supplies Digenatorial Digenatorial Summination Controlling Productions Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatorial Digenatori Digenatori Digenatorial Digenatorial Digenatori Digenatorial D	fety Products	(24V AC/DC)			200,2201110	-		
upwash         IN0         HW1L-A3004*           minal Blocks         HW1L-A3004*           ws & Socks         IN0         HW1L-A3004*           Circuit         IN0         HW1L-A3004*           Diministran         W11-A3004*         2NO           With transformer         IN0         HW1L-A3004*           Diministran         W11-A3004*         2NO           W11-A3004*         2NO         HW1L-A3004*           2NO         HW1L-A3004*         2NO           W11-A3004*         2NO         HW1L-A3004*           2NO         HW1L-A3004*         2NO           W11-A3004*         2NO         HW1L-A3004*           2NO         HW1L-A3004*         2NO           W11-100         ZNO         HW1L-A3004*           2NO         HW1L-A3004*         2NO           2NO         HW1L-A3004*         2NO           2NO         HW1L-A3004*         2NO           W11-A322W2*         2NO         HW1L-A3004*           W11-A322W2*         2NO         HW1L-A3004*           W11-A322W2*         2NO         HW1L-A3004*           HW31-M3004*         HW1L-A3004*         1NO           HW31-M3004*         HW1-A3004*	mission Dreaf		I FD -					
Immunications wer Supplies Diminutations Productions Productions Productions Productions Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Diminutations Di	CPIOSION Proof							
age & Sockets Circuits Protectors         Image: Sockets Circuits With transformer (100/110V AC)         Image: Sockets Circuits With transformer (100/110V AC)         Image: Sockets Protectors         Image: Sockets Protect	rminal Blocks					-		
Byse 8.005 (Truit Protection Prescapiles 200         PRO (W111-A32014- 200-20C         PRO (W111-A32014- 20C         PRO (W111-A32004- 20C         PRO (W111-A32004- 20C         PR					24V AC/DC			
Protections wer Supples         Projections         Projectio	ays & Sockets	A COLORED OF THE OWNER OWNER OF THE OWNER OWNE OWNER						
NWE Supplies Dilumination Controlles Operator Interfaces         Maintained         Maintained         1N0-1NC         HW1L-A311H2- 2NO         A HW1L-A320H2- 2NO         A HW1L-A322H2- 2NO         A HW1L-A322H2- 2NO         See Servers           Querator Interfaces         With transformer (100/110V AC)         Into-1NC         HW1L-A32H2- 2NO-2NC         HW1L-A32H2- 2NO-2NC         See Servers         HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See Servers         Into-1NC         HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H3- A32H2- 2NO-2NC         HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW1L-A32H2- 2NO-2NC         See HW3L-M32H2- 2NO-2NC         See HW3L-M32H2- 2NO-2NC         See HW3L-M32H2- 2NO-2NC         HW1L-M32H2- 2NO-2NC         See HW3L-M32H2- 2NO-2NC								R
Maintained         Maintained         100/110VAC         2NO         HW1L-A320H2-*         A           Controllers         With transformer         100/110VAC         2NO         HW1L-A320H2-*         SPW           Operator         With transformer         100/110VAC         2NO         HW1L-A320H2-*         SPW           Operator         TW0         HW1L-A320H2-*         2NO         HW1L-A320H2-*         SPW           Operator         TW0         HW1L-A320H2-*         2NO         HW1L-A320H2-*         SPW           Outmination         UNO         HW1L-A320H2-*         2NO         HW1L-A320H2-*         SPW           AUTO-D         Based (Marking type)         HW3L-M3         HW1L-A320H2-*         2NO         HW1L-A320H2-*         SPW           AUTO-D         Based (Marking type)         HW3L-M3         H	Protectors							
Dimmination Controllers Operator (100/110V AC)         100/110V AC         2NC         HW1L-A302H2* 2NO-2NC         S HW1L-A3122H2* HW1L-A322H2* 2NO-2NC         S HW1L-A3122H2* 2NO-2NC         S HW1L-A3122H2* 2NO-2NC         S HW1L-A3122H2* 2NO-2NC         S HW1L-A3120H2* 2NO         S HW3L-M3104*         S HW1L-A3120H2* 2NO         S HW3L-M3104*         S HW1L-A3120H2* 2NO         S HW3L-M3104*         S HW1L-A3120H2* 2NO         S HW3L-M3104*         S HW3L-M3104*         S HW3L-M3104*         S HW3L-M3104*         S HW3L-M3104*         S HW3L-M3204*         S HW3L-M3204* <td>ower Supplies</td> <td></td> <td></td> <td>Maintained</td> <td>_</td> <td></td> <td></td> <td></td>	ower Supplies			Maintained	_			
Controllers Operator Interfaces         With transformer (100/110V AC)         With transformer (100/110V AC)         PW           With transformer (100/110V AC)         With transformer (100/110V AC)         PW         200/220V AC         2NO-2NC         HWIL-A322M2*         PW           200/220V AC         2NO-2NC         HWIL-A322M2*         2NO         HWIL-A322M2*         2NO         HWIL-A322M2*         PW           4/170-10         29mm Mushroom with Square Bezel (Marking type)         PV         1NO         HW3L-M310d4*         NM         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         <	D Illumination				100/110V AC			
Controllers Operation Interfaces         With transformer (100/110V AC)         UN         HW1L-A322H2**         HW1L-A320M2*           Sensors         200/220V AC         200         2NC         HW1L-A320M2*         2NC         HW1L-A320M2*           AUT0-ID         629mm Mushroom with Square Bezel (Marking type)         No         HW3L-M31004*         1NC         HW3L-M31004*           MW3L-A3         1N0         HW3L-M31004*         1NC         HW3L-M31004*         R           sh Silnouteti         200-2NC         HW3L-M32004*         2NC         R         R           sh Silnouteti         100/110V AC         2NO         2NC         HW3L-M32004*         A           sport         (24V AC/DC)         LED         Into         HW3L-M32004*         No         HW3L-M32004*         A           1N0         HW3L-M32004*         2NO         HW3L-M32004*         2NO         HW3L-M32004*         No         A						-		
Operator Interfaces         (100/110V AC)         INO         IN	Controllers							
Interfaces Sensors         200/220V AC         2NO         HW1L-A320M2*           AUTO-10 Bezel (Marking type) HW3L-M3         a29mm Mushroom with Square Bezel (Marking type) HW3L-M3104*         a200/220VAC         1NO         HW3L-M3104*         a200/2204*         a200/220VAC         a200/220V	Operator							
Sensors         2NO-2NC         HW1L-A322M2*           AUTO-10 Bezel (Marking type) HW3L-M3         a29mm Mushroom with Square Bezel (Marking type) HW3L-M32004*         a200 - 200 - 200 - 200 - 200 - 200 - HW3L-M31004*         HW3L-M31004*         HW3L-M32004*         a 9 - 200 - 200 - 200 - 200 - HW3L-M32014*         R 9 - 200 - 200 - 200 - 200 - HW3L-M32014*         R 9 - 200 - 200 - 200 - 200 - HW3L-M32014*         A 9 - 200 - 200 - HW3L-M32014*         A 9 - 200 - 200 - HW3L-M32014*         A 9 - 200 - 200 - 200 - HW3L-M32004*         A 9 - 200					200/220V AC			
AUTO-ID B29mm Mushroom with Square Bezel (Marking type) HW3L-M3 HW3L-A3         Participation         Non-INC         HW3L-M30104*         F           ash Sihouette of 6 022 030 Miniature Pilot Lights         ash Sihouette of 6 020/220V AC         Momentary         100/110V AC 2NO-2NC         1NO-1NC         HW3L-M320Q4* 2NO-2NC         A 2NO-2NC         A 2NO-	Sensors					-		
Basel (Marking type) HW3L-M3         INC         HW3L-M301Q4*         R           ush Sihouette         eif6         220         HW3L-M311Q4*         1NO-1NC         HW3L-M311Q4*         1NO-1NC         HW3L-M310Q4*         R         R         G           ush Sihouette         eif6         220         HW3L-M320Q4*         2NO         HW3L-M320Q4*         R         G         2NO         HW3L-M320Q4*         A         S         P         2NO         HW3L-M302D4*         A         S         P         2NO         HW3L-M302D4*         A         S         P         No         HW3L-M302D4*         A         S         P         P         2NO         HW3L-M302D4*         A         S         PW         2NO         HW3L-M302D4*         A         S         PW         PW         2NO         HW3L-M302D4*         A         S         PW         2NO         HW3L-M302M2*         ZNO         HW3L-M302M2*         ZNO         HW3L-M302M2*         S         PW         2NO         HW3L-M302M2*         ZNO         ZNO         ZNO								
HW3L-M3         HW3L-M311Q4*         24V AC/DC         1100-11NC         HW3L-M311Q4*         R           ish Silhouette         ish Silhouette         2NC         HW3L-M302Q4*         R         Y           ish Silhouette         ish Silhouette         2NC         HW3L-M302Q4*         Y         A           ish Silhouette         ish Silhouette         100/110V AC         100/110V AC         100/110V AC         HW3L-M311H2*         A           ish Silhouette         ish Silhouette         ish Silhouette         100/110V AC         100/110V AC         2NC         HW3L-M311H2*         A           ish Silhouette         ish Silhouette         ish Silhouette         100/110V AC         2NC         HW3L-M302H2*         S           ish Silhouette         ish Silhouette         ish Silhouette         2NC         HW3L-M302H2*         S           ish Silhouette         ish Silhouette         ish Silhouette         2NC         HW3L-M302H2*         S           ish Silhouette         ish Silhouette         ish Silhouette         ish Silhouette         2NC         HW3L-M302H2*         S           ish Silhouette         ish Silhouette         ish Silhouette         2NC         HW3L-M302H2*         S           ish Silhouette         ish Silhouette	AUTO-ID				-			
HW3L-A3         24V AC/DC         2N0         HW3L-M32004*         R         R         R         R         R         R         R         2NC         HW3L-M32024*         PR					-	-		
Sihouette         Bis Sihouette         Momentary         Momentary         Momentary         Momentary         Momentary         Momentary         R g Y A A S PW         R g Y A					24V AC/DC			
Bin Sinductive         Image: Sinductive for the second secon		TWSE-AS						
e16         102         100-110C         HW3L-M311H2*         A         A           e30         100/110VAC         2NC         HW3L-M302H2*         B         B           ininiature         (24V AC/DC)         100/110VAC         2NO         HW3L-M302H2*         B         B           Pilot Lights         (24V AC/DC)         LED         100/110VAC         2NO         HW3L-M302M2*         B         B           WW         WW         LED         LED         2NO         HW3L-M320M2*         2NO         HW3L-M32004*         1NO         HW3L-M32004*         2NO         2NO         HW3L-M32004*         2NO         2NO </td <td>sh Silhouette</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	sh Silhouette							
022         030         100/110V AC         2N0         HW3L-M320H2*         A         S           030         0         100/110V AC         2N0         HW3L-M320H2*         P           0         0         0         2N0         2N0         HW3L-M320H2*         P           0         0         0         2N0         2N0         HW3L-M322H2*         P           0         0         200/220V AC         2N0         HW3L-M320M2*         2N0         HW3L-M320M2*           1         0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <td></td> <td></td> <td></td> <td></td> <td rowspan="4">100/110V AC</td> <td></td> <td></td> <td></td>					100/110V AC			
022 830         100/110V AC         2NC         HW3L-M302H2*         S 2NO-2NC         S HW3L-M302M2*           Pilot Lights         (24V AC/DC)         LED         LED         200/220V AC         2NO         HW3L-M302M2*         2NO         HW3L-M302M2*         2NO         2NO         2NO         HW3L-M302M2*         2NO	Ø16			Momentary				
a30         2N0         1N0         1M32LM322H2*         PW           Miniature         (24V AC/DC)         1N0	ø22							
Not         IN0         HW3L-M311M2*           Miniature         (24V AC/DC)         LED         200/220V AC         2NO         HW3L-M320M2*           Pilot Lights         (24V AC/DC)         LED         1NO         HW3L-M320M2*         2NO-2NC         HW3L-M320M2*           WW         TW         LED         LED         400/220V AC         1NO         HW3L-A310Q4*         1NO         HW3L-A320Q4*           TW         W         Maintained         24V AC/DC         1NO-1NC         HW3L-A32QQ4*         2NO         HW3L-A32QQ4*         1NO-1NC         HW3L-A32QQ4*         R         G           YW         W         With transformer (100/110V AC)         Maintained         100/110V AC         2NO         HW3L-A32QH2*         A         S           200/220V AC         2NO         HW3L-A32QH2*         2NO         2NO         HW3L-A32QH2*         A         S           YW         With transformer (100/110V AC)         With transformer         1NO-1NC         HW3L-A32H2*         A         S           With transformer         UN         200/220V AC         2NO         HW3L-A320M2*         A         S           200/220V AC         2NO         HW3L-A320M2*         2NO         2NO         HW3L-A320M2*								
Miniature Pilot Lights         (24V AC/DC)         LED         200/220V AC         200/220V AC         2NO         HW3L-M320M2*           WW         LED         LED         LED         1NO         HW3L-M320M2*         1NO         HW3L-M320M2*           WW         TW         INO         HW3L-M310Q4*         1NO         HW3L-A310Q4*         1NO         HW3L-A310Q4*           TW         WW         WW         Maintained         2NO         HW3L-A32QQ4*         2NO         HW3L-A32QQ4*         8         9           WW         WW         WW         Maintained         100/110V AC         100/110V AC         2NO         HW3L-A32QH2*         8         9W           WW         WW th transformer (100/110V AC)         WW th transformer         100/110V AC         2NO         HW3L-A32QH2*         A         S         9W           200/220V AC         2NO         HW3L-A32QH2*         A         S         PW	ø30							
Pilot Lights         (24V AC/DC)         LED         200/220V AC         2NC         HW3L-M302M2*           1N0         HW3L-A310Q4*         1N0         HW3L-A310Q4*         1NC         HW3L-A300Q4*           1W         1N0         HW3L-A301Q4*         1NC         HW3L-A301Q4*         1NC         HW3L-A301Q4*           1W         1W         1N0         HW3L-A302Q4*         2NC         HW3L-A311Q4*         2NC         HW3L-A320Q4*         R         R         R         S         S         2NC         HW3L-A320Q4*         S         PW         NW         100/110V AC)         100/110V AC)         100/110V AC)         100/110V AC)         2NO         HW3L-A320H2*         A         S         S         PW           200/220V AC         2NO         HW3L-A320H2*         A         S         PW         S         PW	Miniature				-			
Pilot Lights         LED         2N0-2NC         HW3L-M322M2*           HW         INO         HW3L-A310Q4*         1NC         HW3L-A310Q4*           TW         INO         HW3L-A310Q4*         1NC         HW3L-A310Q4*           TW         INO         HW3L-A320Q4*         2NO         HW3L-A32Q4*         R           WW         WW         INO-1NC         HW3L-A32Q4*         1NO-1NC         HW3L-A32Q4*         PW           WW         WW         INO-1NC         HW3L-A32Q4*         S         PW           With transformer (100/110V AC)         With transformer (100/110V AC)         INO-1NC         HW3L-A322H2*         A           200/220V AC         2NO-2NC         HW3L-A320H2*         PW					200/220V AC			
Image: Normal System       Image: Normal System <td< td=""><td>Pilot Lights</td><td>(24V AC/DC)</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Pilot Lights	(24V AC/DC)						
Image: Non-Inc         Image: Ima			LED –		+			
HW         INO-1NC         HW3L-A31104*         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R         R								
HW         24V AC/DC         2NO         HW3L-A32004*         R         R         R         R         R         R         S         PW         2NO-2NC         HW3L-A32004*         R         R         R         R         R         R         S         PW         1N0-1NC         HW3L-A32004*         R         R         G         Y         PW         1N0-1NC         HW3L-A32004*         R         G         Y         PW         PW         1N0-1NC         HW3L-A32004*         A32204*         A35204*         A35204					-			
TW         2NC         HW3L-A30204*         R         R         R         R         Y         Y         2NO-2NC         HW3L-A3204*         R         R         Y         R         Y         Y         1N0-1NC         HW3L-A3204*         R         Y         Y         1N0-1NC         HW3L-A3204*         Y         A         Y         Y         100/110V AC         2NO         HW3L-A320H2*         A         S         Y         A         S         Y         Y         Y         INO-1NC         HW3L-A320H2*         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y         A         S         Y<	HW				24V AC/DC			
Iw         Im         Im<								
YW         Maintained         1N0-1NC         HW3L-A311H2*         YA           With transformer (100/110V AC)         With transformer (100/110V AC)         100/110V AC	TW							
Maintained         Maintai	YW							
With transformer (100/110V AC)         100/110V AC         2NC         HW3L-A302H2*         S PW           200/220V AC         1NO-1NC         HW3L-A321M2*         S PW				Maintained				
With transformer (100/110V AC)         2NO-2NC         HW3L-A322H2*         PW           200/220V AC         1NO-1NC         HW3L-A311M2*         200/220V AC         2NO         HW3L-A320M2*         2NO         HW3L-A302M2*         2NO         HW3L-A302M2*<					100/110V AC			
With transformer (100/110V AC)         1N0-1NC         HW3L-A311M2*           200/220V AC         2NO         HW3L-A320M2*           2NC         HW3L-A302M2*								
200/220V AC 2NO HW3L-A320M2* 200/220V AC 2NC HW3L-A302M2*								
200/220V AC 2NC HW3L-A302M2*		(100/110V AC)						
					200/220V AC			
2NO-2NC HW3L-A322M2*								

• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

• Illuminated pushbuttons have an LED lamp installed unless otherwise specified.

• See B-184 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-198 for bottom view.

- See **B-184** for how to specify units without LED lamps.
- When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

For more information, visit http://eu.idec.com

						Package Quantity: 1	i
Shape	Illumination	Operation	Illumination	Contact	Part No.	Color Code	Pilot Lights
ø40mm Mushroom				1N0	HW1L-M410Q4*		ghi
(Marking type)				1NC	HW1L-M401Q4*		<u>5</u>
HW1L-M4			24V AC/DC	1NO-1NC	HW1L-M411Q4*		
HW1L-A4			24V A0/D0	2N0	HW1L-M420Q4*		
				2NC	HW1L-M402Q4*	р	APEM
				2N0-2NC	HW1L-M422Q4*	R G	Switches &
		Momentary		1NO-1NC	HW1L-M411H2*	Ŷ	Pilot Lights
W/P		WOMENTALY	100/110V AC	2N0	HW1L-M420H2*	A	Control Boxes
			100/110V AC	2NC	HW1L-M402H2*	S PW	Emergency
				2N0-2NC	HW1L-M422H2*	F VV	Stop Switches Enabling
The state of the s				1NO-1NC	HW1L-M411M2*		Switches
			200/220V AC	2N0	HW1L-M420M2*		Safety Products
(24V AC/DC)			200/2200 AG	2NC	HW1L-M402M2*		
	LED			2N0-2NC	HW1L-M422M2*		Explosion Proof
			-	1N0	HW1L-A410Q4*		Terminal Blocks
				1NC	HW1L-A401Q4*		
			24V AC/DC	1NO-1NC	HW1L-A411Q4*		Relays & Sockets
The second se			24V A0/D0	2N0	HW1L-A420Q4*		Circuit
				2NC	HW1L-A402Q4*	— R	Protectors
				2N0-2NC	HW1L-A422Q4*	G	Power Supplies
		Maintained		1NO-1NC	HW1L-A411H2*	Y	LED Illumination
		Maintainea	100/110V AC	2N0	HW1L-A420H2*	A	
			100/110VAC	2NC	HW1L-A402H2*	S PW	Controllers
With transformer (100/110V AC)				2N0-2NC	HW1L-A422H2*		Operator
				1NO-1NC	HW1L-A411M2*		Interfaces
			200/220V AC	2N0	HW1L-A420M2*		Sensors
			200/220V A0	2NC	HW1L-A402M2*		AUTO-ID
				2N0-2NC	HW1L-A422M2*		

• Specify a color code in place of * in Part No. R (red), G (green), Y (yellow), A (Amber), S (blue), PW (pure white)

Mushroom (ø40mm) (Marking Type)

• Illuminated pushbuttons have an LED lamp installed unless otherwise specified.

• See B-184 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-184 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-198 for bottom view.

LED

• See **B-184** for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

ø16	
ø30	
Miniatur	е
Pilot Lig	hts

Flush Silhouette

нพ	
TW	
YW	



Panel Th

0.8 to 6

Panel Thickness 0.8 to 6

13

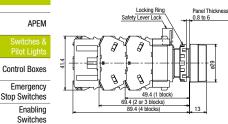
18.5

### **Dimensions**

### Illuminated Pushbuttons (Momentary / Maintained)

Round Flush Terminal screws: M3.5, integrated terminal cover

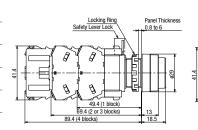
6, 12, 24V AC/DC, Without LED lamp 100/110V AC, 200/220V AC (240V maximum)



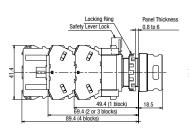
Round Extended Terminal screws: M3.5, integrated terminal cover

Ø

6, 12, 24V AC/DC, Without LED lamp



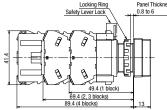
### **Round Extended with Full Shroud** 6, 12, 24V AC/DC, Without LED lamp



### Square Flush Terminal screws: M3.5, integrated terminal cover

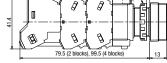
B

6, 12, 24V AC/DC, Without LED lamp

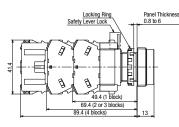


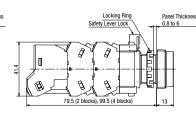
Safety L

100/110V AC, 200/220V AC (240V maximum)



Flush with Square Bezel Terminal screws: M3.5, integrated terminal cover 6, 12, 24V AC/DC, Without LED lamp 100/110V AC, 200/220V AC (240V maximum)



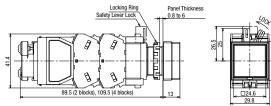




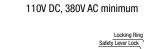




### 110V DC, 380V AC minimum







110V DC, 380V AC minimum

Safety Lever

ģ

Locking Bin

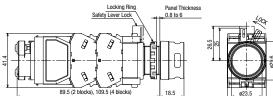
Safety Le

89.5 (2 blocks), 109.5 (4 blocks)

ĝ

89.5 (2 blocks), 109.5 (4 blocks)

110V DC, 380V AC minimum



Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets Circuit

LED Illumination

Controllers Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø30 Miniature

ΤW

YW

Pilot Lights

Protectors Power Supplies

0.8 to 6 ĝ B 13 79.5 (2 blocks), 99.5 (4 blocks) 18.5

Terminal screws: M3.5, integrated terminal cover

100/110V AC, 200/220V AC (240V maximum)

0.8 to 6

0.8 to 6

Safety I

ð

100/110V AC, 200/220V AC (240V maximum)

Locking Ring

Safety Lev

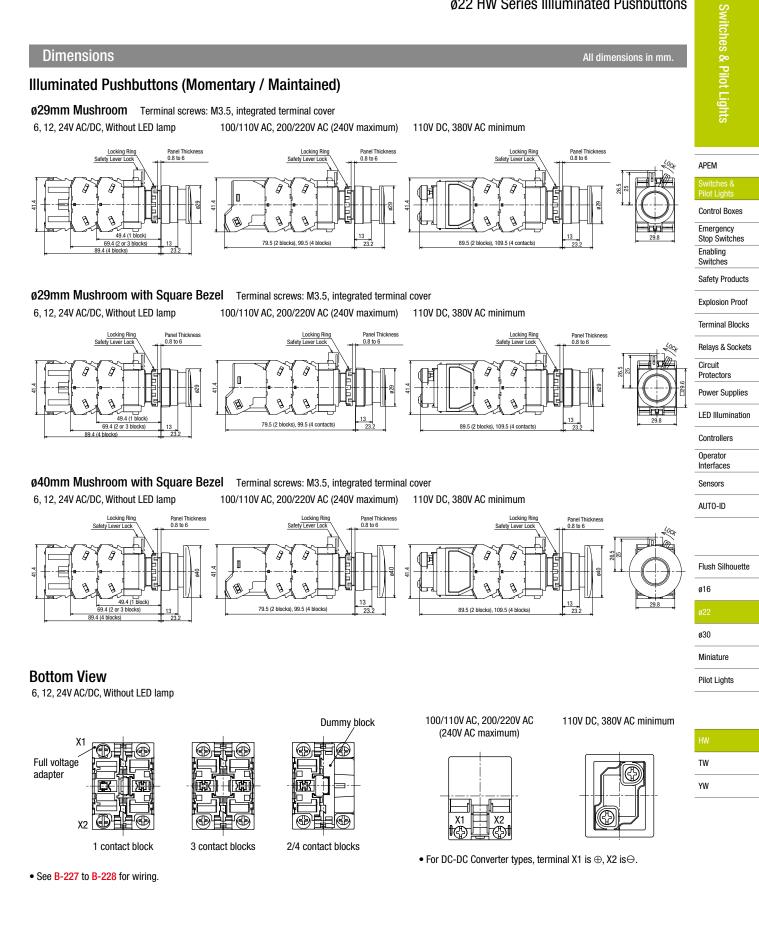
Safety Level

ĝ

79.5(2 blocks), 99.5 (4 blocks)

Panel Thi

0.8 to 6



# ø22 HW Series Dual Pushbuttons

Shape

Dual Pushbuttons (without Pilot Light)

 Specify a button color code in place of 2 and legend code in place of 3 in the Part No.
 Package Quantity: 1

 HW7D



APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit
Protectors
Power Supplies
LED Illumination
Controllers
Operator
Interfaces
Sensors

Emergency op Switches					-		
Enabling	Operation	Button Style	Cor	ntact	Part No.	2 Button Color Code	3 Legend Code
Switches	Operation	Dutton Style	Top Button	Bottom Button	rait NU.		
ety Products			1N0	1NC	HW7D-B111001 2 3		
losion Proof		Flush (top)	1N0	1N0	HW7D-B111010 2 3	]	
		Flush (bottom)	1NO-1NC	1NO-1NC	HW7D-B111111 2 3		
ninal Blocks	Momentary		2N0	2NC	HW7D-B112002 2 3		
vs & Sockets	Womentary		1N0	1NC	HW7D-B121001 2 3		
		Flush (top)	1N0	1N0	HW7D-B121010 2 3	]	
Circuit Protectors		Extended (bottom)	1NO-1NC	1NO-1NC	HW7D-B121111 2 3	GR: Green (top)	Blank: Without legend
ver Supplies			2N0	2NC	HW7D-B122002 2 3	Red (bottom)	1: I / ON (top)
			1N0	1NC	HW7D-B211001 2 3	WB: White (top)	0 / OFF (bottom)
Illumination		Flush (top)	1N0	1N0	HW7D-B211010 2 3	Black (bottom)	
Controllers		Flush (bottom)	1NO-1NC	1NO-1NC	HW7D-B211111 2 3	]	
	Interlook (*1)		2N0	2NC	HW7D-B212002 2 3	]	
Operator Interfaces	Interlock (*1)		1N0	1NC	HW7D-B221001 2 3	]	
Sensors		Flush (top)	1N0	1N0	HW7D-B221010 2 3	]	
00110013		Extended (bottom)	1NO-1NC	1NO-1NC	HW7D-B221111 2 3	]	
AUTO-ID			2N0	2NC	HW7D-B222002 2 3	]	

• For other contact arrangements, see Ordering Information on B-185 and Contact Arrangement Chart on B-202.

• Dual pushbuttons with 3 contact blocks have a dummy block.

• See B-202 for top and bottom button contact mounting positions.

¹ 1) Interlock: Momentary operation. When one of the buttons is pressed, the other button cannot be operated.

Do not operate top and bottom buttons at the same time. Operating the buttons at the same time may lead to malfunctions.

Flush Silhouette
ø16
ø30
Miniature
Pilot Lights

Package Quantity: 1

LED

### **Dual Pushbuttons (with Pilot Light)**

Specify a LED color code in place of 1, button color code in place of 2, and legend code in place of 3 in the Part No.

	HW7D LED: LSTD-2* (24V)	AC/DC)							t Lights
Shape				1	du la	ON			APEM Switches &
									Pilot Lights
					OFF	O			Control Boxes
	<u> </u>		-						Emergency Stop Switches
Operation	Button Style	Illumination	Con		Dort No.		Dutton Color Code		Enabling
Operation	Button Style	Illumination	Top Button	Bottom Button	Part No.	LED	2 Button Color Code	3 Legend Code	Switches Safety Products
			1N0	1NC	HW7D-L111001Q4 1 2 3				
	Flush (top)	24V AC/DC	1N0	1N0	HW7D-L111010Q4 1 2 3	1			Explosion Proof
	Flush (bottom)	24V AU/DU	1N0-1NC	1N0-1NC	HW7D-L111111Q4 1 2 3	1			Terminal Blocks
Momentary			2N0	2NC	HW7D-L112002Q4 1 2 3	]			
VIUITEITAI y			1N0	1NC	HW7D-L121001Q4 1 2 3	]			Relays & Sockets
	Flush (top)	24V AC/DC	1N0	1N0	HW7D-L121010Q4 1 2 3	]			Circuit Protectors
	Extended (bottom)	24V AU/00	1N0-1NC	1N0-1NC	HW7D-L121111Q4 1 2 3	R	GR: Green (top)	Blank: Without	
			2N0	2NC	HW7D-L122002Q4 1 2 3	G	Red (bottom)	legend	Power Supplies
	T		1N0	1NC	HW7D-L211001Q4 1 2 3	S	WB: White (top)	1: I / ON (top)	LED Illumination
	Flush (top)	24V AC/DC	1N0	1N0	HW7D-L211010Q4 1 2 3	PW	Black (bottom)	0 / OFF (bottom)	0
	Flush (bottom)	LTTINGES	1N0-1NC	1N0-1NC	HW7D-L211111Q4 1 2 3				Controllers
Interlock (*1)		ļ	2N0	2NC	HW7D-L212002Q4 1 2 3	-			Operator Interfaces
,			1N0	1NC	HW7D-L221001Q4 1 2 3	-			Sensors
	Flush (top)	24V AC/DC	1N0	1N0	HW7D-L221010Q4 1 2 3				56115015
	Extended (bottom)		1NO-1NC	1NO-1NC	HW7D-L221111Q4 1 2 3	-			AUTO-ID
			2N0	2NC	HW7D-L222002Q4 1 2 3				

• LED lamp code: G (green), PW (pure white)

• Only W (white) lens is available.

• See B-185 for other operating voltage such as 100/110V AC and 200/220V AC.

See B-202 for other contact configurations

• See **B-185** for gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-202 for top and bottom button contact mounting positions.

*1) Interlock: Momentary operation. When one of the buttons is pressed, the other button cannot be operated.

Do not operate top and bottom buttons at the same time. Operating the buttons at the same time may lead to malfunctions.

Switches & Pilo

ΤW YW

Flush Silhouette

ø16

ø30

Miniature Pilot Lights



Switches & Pilot Lights

APEM

Control Boxes Emergency Stop Switches

Enabling

Switches Safety Products

Controllers

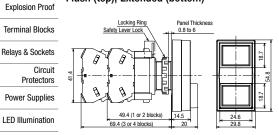
Operator

# **Dual Pushbuttons**

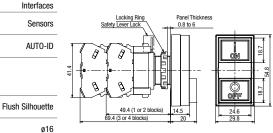
Without Pilot Light Terminal screws: M3.5, integrated terminal cover Flush (top), Flush (bottom)

LOCKING Ri Safety Lever Loc ģ 49.4 (1 or 2 blocks 24.6 29.8 69.4 (3 or 4 blo

Flush (top), Extended (bottom)



Flush (top), Extended (bottom) (with legend)



# **Bottom View**

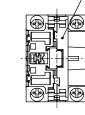
ø30 Without Pilot Light Miniature

ΤW

YW

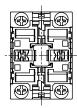
Pilot Lights

**Dummy Block** 



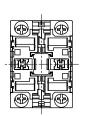
3 contact bocks

With Pilot Light 6, 12, 24V AC/DC



3 contact bocks

• See B-227 to B-228 for wiring.



2/4 contact blocks

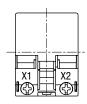
Dummy Block



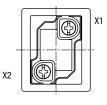
2/4 contact blocks

. Mounting position of the dummy block may change according to the contact configuration of the top and bottom buttons.

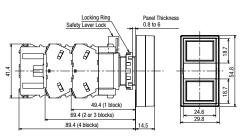
100/110V AC, 200/220V AC (240V maximum)



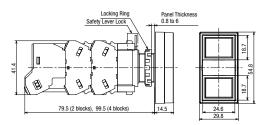
380V AC minimum



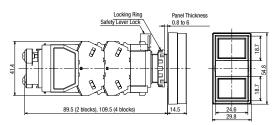
All dimensions in mm.



### Flush (top), Flush (bottom) (240V AC maximum)



### Flush (top), Flush (bottom) (380V AC minimum)



# **Contact Arrangement Chart**

	Contact		Contac	t Block	Top B	utton	Bottom	Button
Top Button	Bottom Button	Contact Code	Mounting Position	Contact	Normal	Push	Normal	Push
1N0	1N0	1010	1	NO		•		
	INO	1010	2	NO				•
1N0	1NC	1001	1	NO		•		
		1001	2	NC				
			1	NO		•		
2N0	2NC	2002	2	NC			•	
	2100	2002	3	NO		•		
			4	NC				
			1	NO		•		
1NO-1NC	1NO-1NC	1111	2	NO				•
	TNU-TNU	1111	3	NC	•			
			4	NC				

• Transformer types cannot mount 3 contact blocks.

 $\bullet$  Contact blocks  $\odot$  and  $\circledast$  are actuated by the top button. Contact blocks  $\circledast$  and  $\circledast$  are actuated by the bottom button.

Contac	t Block	Тор В	utton	Bottom	Button	← Button Position
Mounting Position	Contact	Normal	Push	Normal	Push	← Pushbutton Operation
1	NO		•			]
2	NO				•	
3	NC	•				
4	NC			•		]

**Contact Block Mounting Position** 



With Pilot Light (Full Voltage Type)



With Pilot Light (Transformer Type)

Part No. Example HW7D-B121111GR Contact Code **Switches & Pilot Lights** 

### APEM

Control Boxes

Emergency Stop Switches

Enabling Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets Circuit

Protectors Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette ø16 ø30 Miniature Pilot Lights

HW	
TW	
YW	

# ø22 HW Series Selector Switches

# Selector Switches (Knob Operator)

Package Quantity: 1

Pilot Ligi	Γ
lts	
APEM	
Switches & Pilot Lights	
Control Boxes	
Emergency Stop Switches	
Enabling Switches	
Safety Products	0
Explosion Proof	2
Terminal Blocks	2
Relays & Sockets	
Circuit Protectors	
Power Supplies	
LED Illumination	F
Controllers	
Operator Interfaces	
Sensors	
AUTO-ID	
Flush Silhouette	
ø16	4
ø22	3
ø30	
Miniature	
Pilot Lights	

Shape	Knob Opera HW1S	ator										
	Contact	Contact	Block	(	pera	tor Po	sition	Maintained (90°)	Spring Return from Right (60°)		_	
		Mounting Position	Contact	1	2							
	1N0	0	NO		•			HW1S-2T10	HW1S-21T10			
90°	(10)	2			Dum	nmy Bl	ock	11W13-2110	11W13-21110			
2-position/ 60° 2-position 2-position 2NO (11)		0	NO		•			HW1S-2T11	HW1S-21T11			
	2	NC	•									
		1	NO		•			HW1S-2T20	HW1S-21T20			
	(20)	2	NO		•							
		0	NO		•							
	2NO-2NC	2	NC	•				HW1S-2T22	HW1S-21T22			
	(22)	3	NO		•							
		4	NC	•		L				/		
Co	Contact	Contact Block		Operator Position		sition	Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two-way		
		Mounting Position	Contact	1	0	2						
	2N0	0	NO	•				HW1S-3T20	HW1S-31T20	HW1S-32T20	HW1S-33T20	
	(20)	2	NO			•		11110 0120			11110 00120	
	2NC	0	NC					HW1S-3T02	HW1S-31T02	HW1S-32T02	HW1S-33T02	
	(02)	2	NC								11010-00102	
		0	NO	•								
	2NO-2NC	2	NO			•		HW1S-3T22N1	HW1S-31T22N1	HW1S-32T22N1	HW1S-33T22N1	
	(22N1)	3	NC									
45° 3-position		4	NC									
o position		0	NO	•								
	4N0	2	NO	-		•		HW1S-3T40	HW1S-31T40	HW1S-32T40	HW1S-33T40	
	(40)	3	NO	•								
		4	NO			•						
		0	NC									
	4NC (04)	2 3	NC NC					HW1S-3T04	HW1S-31T04	HW1S-32T04	HW1S-33T04	
	(דט)	4	NC	_								
		(4) (1)	NO	•		$\vdash$						
	2NO-1NC	 	NO	-		•						
	(21N1)	3	NC		•			HW1S-3JT21N1	-	—	—	
	★☆	4			-	ımy Bl	ock	-				
					Dan			1				

• Knob operator: white indicator on black body

• On the contact arrangement marked with 🖈 in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

 $\bullet$  For models with  $\precsim$  , contacts may overlap when the operator position is changed.

• Other contact arrangements are also available. See B-211 to B-213.

• Selector switches with one or three contact blocks contain a dummy block.

• See **B-186** for gold-plated silver contacts.

• Turn the operator to each position accurately.

### **Contact Block Mounting Position**



TW YW

### Key Selector Switches (Pin Tumbler Key)

									Package Quantity: 1	, pio
	No. of		Contact Block		Operator Position				Maintained	Pilot Lights
Shape	Positions	Contact	Mounting Position	Contact	1	2		Cam Code		Ints
in Tumbler Key		1NC	1	NC	•				HW1K-2PA01	
W1K		(01)	2	—	Dur	nmy Bl	ock	_		APEM
		1NO-1NC	0	NO		•			HW1K-2PA11	Switches &
		(11)	2	NC	•					Pilot Lights
		2NC	0	NC	•				HW1K-2PA02	Control Box
		(02)	2	NC	•					Emergency
			0	NO		•				Stop Switcl
			2	NO		•			HW1K-2PA21	Enabling
	90°		3	NC	•					Switches
	2-position		4	—	Dur	nmy Bl	ock			Safety Proc
			0	NC	•					Explosion P
		3NC	2	NC	•			_	HW1K-2PA03	
(NC contact only)		(03)	3	NC	•					Terminal Bl
			4	—	Dur	nmy Bl	ock			Relays & So
			0	NO		•				Circuit
		2NO-2NC	2	NC	•			_	HW1K-2PA22	Protectors
		(22)	3	NO		•				Power Supp
		<u> </u>	4	NC	•					LED Illumin

• Each selector key switch is supplied with two keys.

• 15 types of key numbers are available in addition to standard (500) key. See below for details.

• Spring-return type is also available. See below for details.

• Key retained position can be selected. See below for details.

### **Ordering Information**

Example: HW1K-2JPA01-501

 Image: Not specified: 500 (default key)

 501-515: The key number is engraved on the key cylinder.

 Cam code: Blank or J

 Operator position code:

 2: 2-position, maintained

21: 2-position, maintained 21: 2-position, spring return from right

Maintained (9	Maintained (90° 2-position)						
1 2	2 1	Spring return from right $1 \rightarrow 2$					
Cam code: blank	Cam code: J	Cam code: blank					

• For more contact arrangement, see **B-211** to **B-213**.

• Key selector switches with one or three contact blocks contain a dummy block.

• See B-186 for gold-plated silver contacts.

• Turn the operator to each position accurately.

### **Contact Block Mounting Position**



right only) all positions) left only) 0 ി Cam code: blank Key Retained Position B (removable in C (removable in A (removable in left only) all positions) right only) 0 1 2 1 2 Cam code: J

Key Retained Position

B (removable in

①②: Key removal position

A (removable in

• Contract the second s

Note: The key cannot be removed in a spring return position.

Controllers

Operator

Interfaces Sensors

AUTO-ID

Flush Silhouette

ø16

ø30

ΤW

YW

C (removable in

Miniature

Pilot Lights

Controllers

Operator

Sensors

AUTO-ID

ø16

Flush Silhouette

### Key Selector Switches (Pin Tumbler Key)

Pilot Lights		No. of	Conta	Operator Position			Cam	Maintained		
hts	Shape	Positions	Contact Code	Mounting Position			1 0		Code	
	Pin Tumbler Key		2NC	1	NC					HW1K-3PA02
APEM	HW1K		(02)	2	NC					TIWTR-5FA02
Switches &				1	NO	•				HW1K-3PA22N1
Pilot Lights			2N0-2NC	2	NO			•		
ontrol Boxes			(22N1)	3	NC					
Emergency				4	NC					
op Switches			4NC (04)	1	NC					HW1K-3PA04
Enabling				2	NC					
Switches		45°		3	NC					
ety Products		3-position		4	NC					
losion Proof				1	NO	•				
			2NO-1NC (21N1)	2	NO			•	J	HW1K-3JPA21N1
ninal Blocks			(ZINI) ★☆	3	NC		•		5	TWIN-3JPAZINI
vs & Sockets				4	_	Du	ummy Blo	ck		
Circuit			4NC	1	NC			•		
Protectors				2	NC	•			s	HW1K-3SPA04
ver Supplies	(NC contact only)		(04)	3	NC			•		11W11X 331 A04
				4	NC	•				

• On the contact arrangement marked with 🖈 in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

• For models with  $rac{1}{\sim}$ , contacts may overlap when the operator is changed.

• For contact block mounting position, see the figure on the right. Interfaces

· Each key selector switch is supplied with two keys.

• 15 types of key numbers are available in addition to standard (500) key. See below for details.

- Spring-return type is also available. See below for details.
- Key retained position can be selected. See table below details.

**Contact Block Mounting Position** 

# **Ordering Information**



Example: HW1K - 3 S P A 04 - 501

Not specified: 500 (default key) 501-515: The key number is engraved on the key cylinder.

### Cam code: Blank, J, or S

- Operator position code:
- 3: 3-position, maintained
- 31: 3-position, spring return from right
- 32: 3-position, spring return from left
- 33: 3-position, spring return two way
- ΤW YW

Maintained (45° 3-position)	Sprir	ig Return (45° 3-pos	ition)
Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two-way
Cam code: blank, J, or S		Cam code: blank	

• For more contact arrangement, see B-211 to B-213.

. Key selector switches with one or three contact blocks contain a dummy block.

- See B-186 for gold-plated silver contacts.
- Turn the operator to each position accurately.

Key removal/retained positions

- A: Removable in all positions
- B: Removable in left and center
- C: Removable in right and center
- D: Removable in center only
- E: Removable in right and left G: Removable in left only
- H: Removable in right only

Note: The key cannot be removed in a spring return position.

	Key Retained Position (45° 3-position)													
A (removable in all positions)	B (removable in left and center)	C (removable in right and center)	D (removable in center only)											
			000											
E (removable in right and left only)	G (removable in left only)	H (removable in right only)												
	0 0													

①①②: Key removal position

OOO: Key retained position

Note: The key cannot be removed in a spring return position.

### Key Selector Switches (Disc Tumbler Key)

								Package Quantity: 1	Pio
	Disc Tumbler K HW1K	ey							Pilot Lights
No. of Positions	(NC cont	act only)				<u> </u>			APEM
									Switches & Pilot Lights
	Conta	act Configurat	ion	Operator	Position		Maintained (90°)	Spring Return from Right (60°)	Control Boxes
	Contact Code	Mounting Position	Contact	1	2	Cam Code			Emergency Stop Switches
	1N0	0	NO		٠		HW1K-2A10	HW1K-21B10	Enabling Switches
	(10)	2	—	Dummy	y Block		HWIK-ZAIU	HWIK-ZIBIU	Safety Products
	1NC	0	NC	•			HW1K-2A01	HW1K-21B01	Explosion Proof
	(01)	2		Dummy	y Block				
	1NO-1NC	0	NO		•		HW1K-2A11	HW1K-21B11	Terminal Blocks
	(11)	0	NC	•					Relays & Sockets
	2N0	0	NO		•		HW1K-2A20	HW1K-21B20	Circuit Protectors
	(20)	2	NO		•				Protectors Power Supplies
	2NC (02)	0	NC	•			HW1K-2A02	HW1K-21B02	
90°	(02)	0	NC NO	•					LED Illumination
2-position/ 60°		① ②	NO		•	-			Controllers
2-position	2NO-1NC (21)	3	NC	•	•		HW1K-2A21	HW1K-21B21	Operator
	()	 		Dummy	v Block	-			Interfaces
		0	NC	•	y Dioolt				Sensors
	3NC	 	NC	•		-			AUTO-ID
	(03)	3	NC	•			HW1K-2A03	HW1K-21B03	
		4		Dummy	y Block	-			
		0	NO		•				Flush Silhouette
	2N0-2NC	2	NC	•					ø16
	(22)	3	NO		•		HW1K-2A22	HW1K-21B22	
		4	NC						ø22

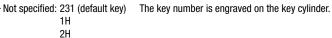
• Each key selector switch is supplied with two keys.

• 3 types of key numbers are available in addition to standard key.

• Key retained position can be selected. See table below for key retained positions.

### **Ordering Information**

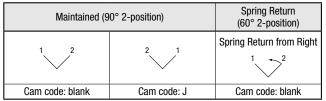
Example: HW1K - 2JA01 - 1H







- Cam code: Blank or J
- Operator position code:
- 2: 2-position, maintained
- 21: 2-position, spring return from right

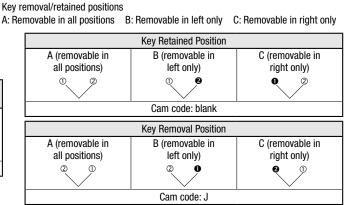


[•] For more contact arrangement, see B-211 to B-213.

. Key selector switches with one or three contact blocks contain a dummy block.

• See B-186 for gold-plated silver contacts.

• Turn the operator to each position accurately.



O : Key removal position

Download catalogs and CAD from http://eu.idec.com/downloads

● ②: Key retained position

Note: The key cannot be removed in a spring return position.



**Contact Block Mounting Position** 

Pilot Lights

Miniature

ø30

ΤW

YW

# ø22 HW Series Key Selector Switches

## Key Selector Switches (Disc Tumbler Key)

Pilot												Package Quantity: 1	
Pilot Lights		Disc Tumbler HW1K	Кеу										
APEM	No. of Positions	(NC cor	ntact only)										
Switches & Pilot Lights		Contact	t Configurat	ion		perato Positio			Maintained	Spring Return	Spring Return	Spring Return	
Control Boxes				I	r	USILIU		Cam	0	from Right	from Left	Two-way	
Emergency Stop Switches		Contact Code	Mounting Position	Contact	1	0	2	Code					
Enabling Switches		2N0	0	NO	•								
		(20)	2	NO			•	_	HW1K-3A20	HW1K-31B20	HW1K-32C20	HW1K-33D20	
Safety Products		2NC	0	NC					HW1K-3A02	HW1K-31B02	HW1K-32C02	HW1K-33D02	
Explosion Proof		(02)	2	NC NO									
		2N0-2NC	① ②	NO	•		•						
Terminal Blocks		(22N1)	3	NC			_	—	HW1K-3A22N1	HW1K-31B22N1	HW1K-32C22N1	HW1K-33D22N1	
Relays & Sockets		()	4	NC									
			0	NO	•								
Circuit Protectors		4N0	2	NO			•		HW1K-3A40	HW1K-31B40	HW1K-32C40	HW1K-33D40	
		(40)	3	NO					HW1K-3A40	HWIK-31D40	HWIK-32640	HW1K-33D40	
Power Supplies	45°		4	NO			•						
LED Illumination	3-position		0	NC									
		4NC	2	NC NC				—	HW1K-3A04	HW1K-31B04	HW1K-32C04	HW1K-33D04	
Controllers		(04)	3 4	NC									
Operator			0	NC			•						
Interfaces		4NC	 	NC	•		•						
Sensors		(04) ★	3	NC			•	S	HW1K-3SA04	-	—	—	
36115015			4	NC	•								
AUTO-ID		2NO-1NC	0	NO	•								
		(21N1)	0	NO			٠	J	HW1K-3JA21N1	_	_	_	
		(∠INI) ★☆	3	NC			L		HATTY OUTLET AT				
			4		Dun	1my B	lock						

• On the contact arrangement marked with 🖈 in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact Flush Silhouette block. The rated insulation voltage and the rated thermal current remain unchanged.

Not specified: 231 (default key) The key number is engraved on the key cylinder.

• For models with *, contacts may overlap when the operator is changed. Each key selector switch is supplied with two keys.

3 types of key numbers are available in addition to standard key.

• Key retained position can be selected. See table below for key retained positions.

### **Contact Block Mounting Position**

### **Ordering Information**

Example: HW1K - <u>3</u> <u>5</u> <u>4</u> 04 - <u>1</u> H



Pilot Lights

ø16

ø30 Miniature

> 2H 3H Cam code: Blank, J, or S

Operator position code:

1H

- 3: 3-position, maintained
- 31: 3-position, spring return from right
- 32: 3-position, spring return from left
- 33: 3-position, spring return two way

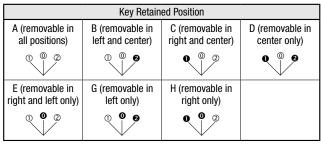
Maintained (45° 3-position)	Sprir	ng Return (45° 3-pos	ition)
Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two-way
Cam code: blank, J, or S		Cam code: blank	

- For more contact arrangement, see B-211 to B-213.
- . Key selector switches with one or three contact blocks contain a dummy block.
- See B-186 for gold-plated silver contacts.
- Turn the operator to each position accurately.



- A: Removable in all positions
- B: Removable in left and center
- C: Removable in right and center
- D: Removable in center only
- E: Removable in right and left G: Removable in left only H: Removable in right only

Note: The key cannot be removed in a spring return position.



①①②: Key removal position

```
O O O: Key retained position
```

Note: The key cannot be removed in a spring return position.

LED

No. of Positions         Contact Configuration         Operation Position         Multifiered (90°)         Spring return (10°)	LED		00100									Package Qu	antity: 1	Pilo
Alternative         Contact Configuration         Operating Voltage         Maintained (90°)         Spring return from right (90°)			rator											& Pilot Lights
Contact Configuration         Operation Position         Maintained Operation Position         Maintained (90°)         Spring return from right (80°)														
Solution         Contact         Mounting Code         Contact         No         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2 <th2< th="">         2         2         &lt;</th2<>		Contac	ct Configura	ation				Operating	Maintained (90°)				Color	Pilot Lights
go- sposition         INO-INC         INO				Contact	1	2			1 2	1 2	_	—		
90° 2-position       110°-110° (11)       Q       NC       100/110VAC       HW1F-2111H2*       HW1F-211H2*       HW1F-2111H2*       HW1F-2111H2*       HW1F-2111H2*       HW1F-2111H2*       HW1F-2111H2*       HW1F-2111H2*       HW1F-211H2*       HW			1	NO		•		24V AC/DC	HW1F-211Q4*	HW1F-2111Q4*				Enabling
Contact         Online         24VAC/DC         HW1F-211M2+         HW1F-211M2+         HW1F-211M2+         HW1F-210M2+         HW1F-310M2+         HW1F-310M2+         HW1F-310M2+         HW1F-320M2+         HW1F-	۹Uo													
B0° 2-position         D         O         AC         24V AC/DC         HWIF-220Q4+ HWIF-2120H2+ DO/220V AC         HWIF-2120Q4+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2120M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-2122M2+ HWIF-222M2+ HWIF-222M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-320M2+ HWIF-3220M2+ HWIF-3220M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-320M2+ HWIF-3	2-position/	(11)											_	Safety Produc
2:position         2NO         Q         NO         100/110V AC         HW1F-220H2*         HW1F-2120H2*         HW1F-3120H2*         HW1F-320H2*         <	60°		0	NO										Explosion Pro
45° 3-position         NO         200/220V AC         HW1F-22204+ HW1F-22224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224+ HW1F-21224	2-position								-					
45°         3.         0.0         24V AC/DC         HWIF-222/4*         HWIF-2122/4*         HWIF-3220/4*         HWIF-3220/4* <td></td> <td>(20)</td> <td></td> <td>Α</td> <td>Terminal Bloc</td>		(20)											Α	Terminal Bloc
2NO-2NC         2         NC         100/110V AC         HW1F-222H2*         HW1F-2122H2*         PW         PW           (2)         0         NC         0         200/220V AC         HW1F-222H2*         HW1F-2122H2*         PW         PW         PW         PW         PW         PW         Poston			0	NO					-				S	Relays & Sock
Image: specify a color code in place of + in the Part No. R red), G (green), Y (pellow), A (amber), S (plue), PW (pure white)         Spring return from right from ri		2N0-2NC											PW	
Image: Second control contenter contratin contrel control contrel control conte						•								
Contact Configuration         Operator Position         Operating Voltage         Maintained voltage         Spring return from right		l							-	-				Power Suppli
Contact Code         Mounting Position         Contact 0         1         0         2         Voltage		Contac	ct Configura	ation				Operating	Maintained				Color	LED Illuminati
45° 3-position         0         0         24V AC/DC         HW1F-32004*         HW1F-322004*         HW1F-332004*         HW1F-330020*         HW1F-330020*         HW1F-330020*         HW1F-330020*         HW1F-3320014*				Contact	1	0	2							
45° 3-position         0         NO         0         100/110V AC         HW1F-320H2*         HW1F-3120H2*         HW1F-3220H2*         HW1F-3320H2*         HW1F-3320H2*         HW1F-320M2*         HW1F-320QA*         HW1F-3322N1Q*         HW1F-3322N1Q*         HW1F-3322N1Q*         HW1F-3322N1Q*         HW1F-3322N1Q*         HW1F-332QAA*         HW1F-332QAA*         HW1F-332QAA*         HW1F-332QAA*         HW1F-332QAA*         HW1F-332QAA* <th< td=""><td></td><td></td><td></td><td>NO</td><td></td><td></td><td></td><td>24V AC/DC</td><td>HW1F-32004*</td><td>HW/1F-312004*</td><td>HW/1F-322004*</td><td>HW1E-332004*</td><td></td><td></td></th<>				NO				24V AC/DC	HW1F-32004*	HW/1F-312004*	HW/1F-322004*	HW1E-332004*		
45°       3. Position       0       NC       200/220V AC       HW1F-320M2*       HW1F-3120M2*       HW1F-3202M2*       HW1F-3302M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-33400A2*       HW1F-33400A2*       HW1F-33400A2*       HW1F-33400A2*       HW1F-33400A2*       HW1F-3340M2*       MO       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0							•							Sensors
45° 3-position         0         NC         24V AC/DC         HWIF-302Q4*         HWIF-3102Q4*         HWIF-3302Q4*         HWIF-3304Q4*         HWIF-3304Q4*         HWIF-3304Q4*         HWIF-3304Q4*         HWIF-3304Q4*         HWIF-3304Q4*         HWIF-3		(20)					~							
45°       2NC       2       NC       100/110V AC       HW1F-302H2*       HW1F-3202H2*       HW1F-3302H2*       HW1F-3302H2*       HW1F-3302M2*       HW1F-3302M12*       HW1F-3302M12*       HW1F-3302M12*       HW1F-3302M1*       HW1F-3302M2*       HW1F-3304M2*       HW1F-3304		 	0	NC			-							AUTO-ID
45°       3-position       0       N0       200/220V AC       HW1F-302M2*       HW1F-3102M2*       HW1F-3302M2*       HW1F-3322N104*       HW1F-3322N104*       HW1F-3322N104*       HW1F-3322N104*       HW1F-3322N104*       HW1F-3322N104*       HW1F-3322N112*       HW1F-3322N112														
45°       3-position       0       N0       24V AC/DC       HW1F-322N1Q4*       HW1F-3222N1Q4*       HW1F-3322N1Q4*       HW1F-3322N1Q4*       HW1F-3322N1Q4*       HW1F-3322N1Q4*       HW1F-3322N1Q4*       HW1F-3322N1H2*       HW1F-3324DQ4*       HW1F-3324DQ4*       HW1F-3324DQ4*       HW1F-3324DQ2*       HW1F-3324DQ2* <td></td> <td>(02)</td> <td>~</td> <td></td> <td><u> </u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		(02)	~		<u> </u>									
3-position       2N0-2NC [©] ^O ^{NO} ^O	45°		0	NO										Flush Cilbou
(22N1)       3       NC       200/220V AC       HW1F-322N1M2*       HW1F-3222N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3322N1M2*       HW1F-3320N1M2*       HW1F-3320N1M2*       HW1F-3320N1M2*       HW1F-3320N1M2*       HW1F-3320N1M2*       HW1F-3320N1M2*       HW1F-3340Q4*       HW1F-33240Q4*       HW1F-3340Q4*       HW1F-3340Q4*       HW1F-3340Q4*       HW1F-3340Q4*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3340H2*       HW1F-3304Q4*       HW1F-3304H2*	-	2NO-2NC					•							HUSH SIIIIOU
Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Second construction of the part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white														ø16
Image: No         Image: No <thimage: no<="" th="">         Image: No         <th< td=""><td></td><td>l</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td> </td><td></td><td>A</td><td></td></th<></thimage:>		l											A	
4N0       2       N0       0       100/110V AC       HW1F-340H2*       HW1F-3140H2*       HW1F-3340H2*       HW1F-3304H2*       HW1F-3304H2*       HW1F-3304Q4*       HW1F-3304Q4*       HW1F-3304Q4*       HW1F-3304H2*       HW1F-3304H2* </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>24V AC/DC</td> <td>HW1F-340Q4*</td> <td>HW1F-3140Q4*</td> <td>HW1F-3240Q4*</td> <td>HW1F-3340Q4*</td> <td></td> <td>022</td>								24V AC/DC	HW1F-340Q4*	HW1F-3140Q4*	HW1F-3240Q4*	HW1F-3340Q4*		022
Image: No		4N0					•						PW	ø30
Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       Image: Specify a color code												HW1F-3340M2*		Miniature
Image: Prior Lights         4NC         (04)         Image: Prior Lights		l					•							ΜΙΠιαιωτε
4NC (04) ⁽²⁾ NC ⁽⁰⁴⁾ ⁽⁰⁴⁾		i						24V AC/DC	HW1F-304Q4*	HW1F-3104Q4*	HW1F-3204Q4*	HW1F-3304Q4*		Pilot Lights
(04)       ③       NC       ●       200/220V AC       HW1F-304M2*       HW1F-3104M2*       HW1F-3204M2*       HW1F-3304M2*         • Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •       •		4NC												
Image: Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)         • Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)         • See B-186 for other operating voltage such as 6V AC/DC and 12V AC/DC.         • Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.														
Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)     See B-186 for other operating voltage such as 6V AC/DC and 12V AC/DC.     Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.		l												
See B-186 for other operating voltage such as 6V AC/DC and 12V AC/DC.     Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.	Specify a C				vrt Nr	. ⊑	rod)	C (green) Y (yel	low) A (amher) S (hl	ua) PW (nure white)	<u>.                                    </u>	,		HW
•	See B-186	for other o	perating vo	ltage sucl	h as (	6V A0	C/DC	and 12V AC/DC						
	, IIIUMInateu	Selecion Sy	VITCHES UI 4	24V Au/Di	υ OΓ ι	Delow	1 \\\\\\	n 2 or /i comara	blocke nave a menu					

• See B-186 for gold-plated silver contacts.

• Turn the operator to each position accurately.

• See B-186 for how to specify units without LED lamps.

• When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

### **Contact Block Mounting Position**

Full Voltage 4 Adapter 3 1 1

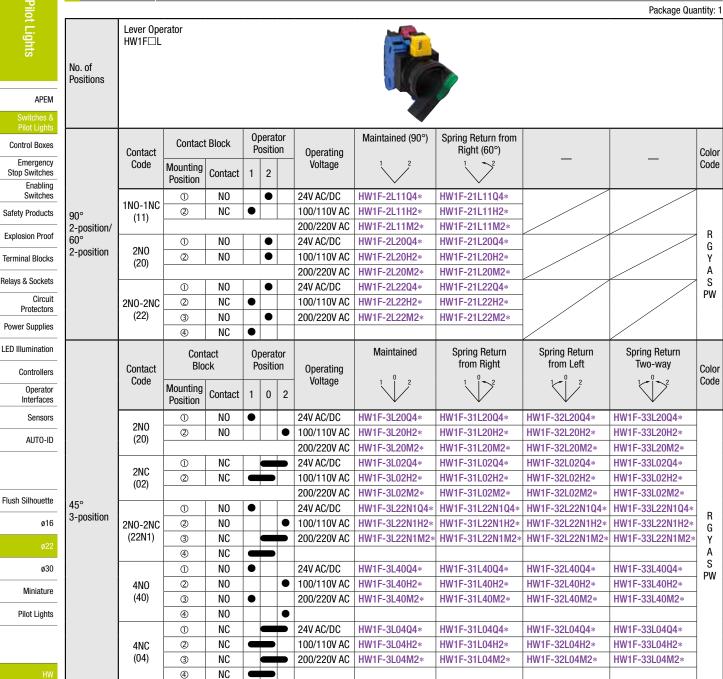
Illuminated (full voltage) Illuminated (transformer)

Switches

▲ Download catalogs and CAD from http://eu.idec.com/downloads

LED Selector Sw

Selector Switches (Lever Operator)



• Specify a color code in place of * in the Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)

• See B-186 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

• See B-211 to B-213 for other contact arrangements.

• See B-186 for gold-plated silver contacts.

. Turn the operator to each position accurately.

• See B-186 for how to specify units without LED lamps.

 When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.
 Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

### **Contact Block Mounting Position**

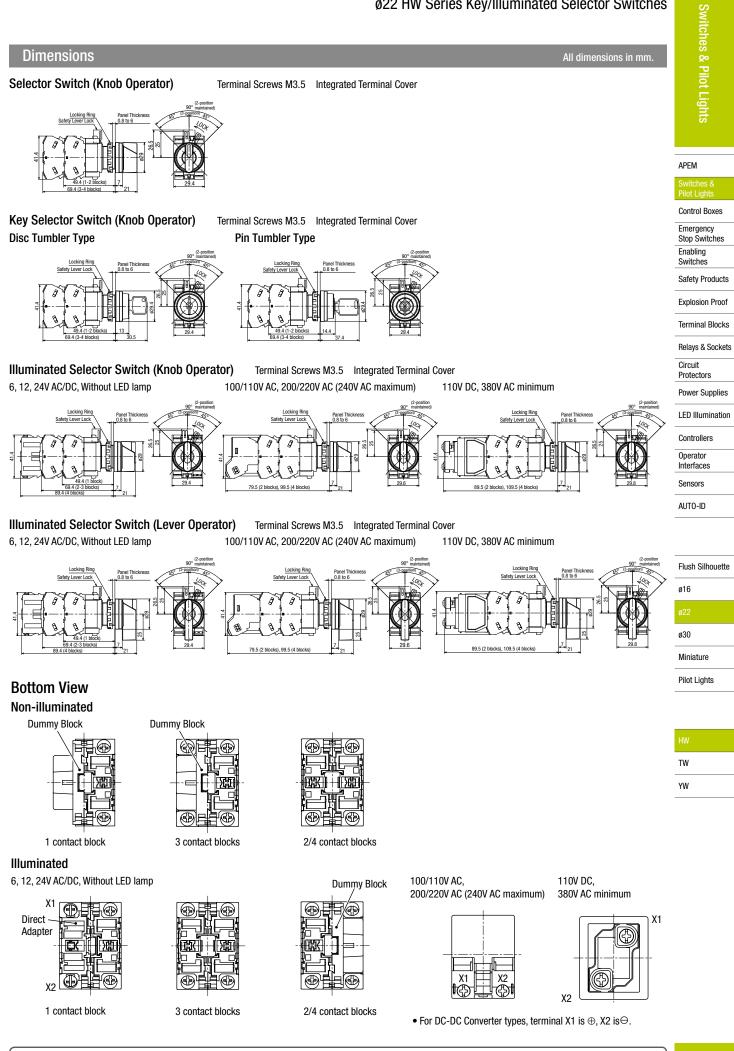


Illuminated (full voltage)

Illuminated (transformer)

ΤW

YW



# Selector Switch Contact Arrangement

90° 2-position (Spring Return 60° 2-position) < Maintained/Spring Return from Right>

ilot Lights		(oping)		Operator Operation and Circuit Availability											
Ligh					Mainta				from Right				Oper	ator Availability	
Its		Contact	Block			2		1	>2				Open		
	Contact			Knob/ Key Illuminated			Knob/ Lever	Key Illuminated		Cam				Illuminated	
APEM	Code			Lever			Lever			Code	., .,				
Switches & Pilot Lights		Mounting	Contact		Opera Positi	on		Opera Positi	ion		Knob/ Lever	Pin Tumbler	Disc Tumbler	6, 12, 24V AC/DC	100, 200V AC
Control Boxes		Position	CUIIIACI			2 Ø			2 Ø					0, 12, 24V A0/D0	100, 200V AG
Emergency Stop Switches	1N0	1	NO		`		<u> </u>								
Enabling	(10)	2		D	ummy	Block	D	ummy	Block	-	×	×	×	×	-
Switches	1NC	1	NC	•			•				×	×	×	×	
Safety Products	(01)	2		D	ummy		D	ummy			~	~	~	~	
Explosion Proof	1NO-1NC	1 2	NO NC	•		•	•		•		×	×	×	×	×
Tamainal Dia dia	(11) 2N0	1	NO	-		•	•		•						
Terminal Blocks	(20)	2	NO			•			•	-	×	×	×	×	×
Relays & Sockets	2NC	1	NC	•			•		1		×	×	×	×	×
Circuit	(02)	2	NC	•			•						<u>^</u>	^	^
Protectors		1	NO			•	-		•						
Power Supplies	2NO-2NC (22)	2	NC NO	•		•	•		•		×	×	×	×	×
LED Illumination	(22)	(4)	NC	•		•	•		•						
		1	NC	•		-	•								
Controllers	3N0-1NC	2	NO			•			•		x	×	×	×	×
Operator	(31N1)	3	NO			•			•						
Interfaces		(4) (1)	NO NO			-									
Sensors	4N0	2	NO			•									
AUTO-ID	(40)	3	NO			•			•	—	×	×	×	×	×
		4	NO			٠			•						
	1NO-1NC ★	1	EM		-						×	×	×	×	×
	(7S)	2	LB			-									
Flush Silhouette	2010	1 2	NC NC	•			•								
	3NC (03)	3	NC	•			•			—	×	×	×	×	-
ø16	(00)	4		D	ummy	Block	D	ummy	Block						
ø22		1	NO			•			•						
ø30	2NO-1NC	2	NC	•		_	•		_	_	x	×	×	×	_
000	(21)	3 4	NO		ummir	Plook		ummy	Plook						
Miniature		4			ummy	DIUCK		unny	DIUCK						

Pilot Lights

TW YW

### 90° 2-position Cam Reversed (Maintained)

ſ					nd Circuit Availability		Operator Availability						
				Maint	ained								
	Contact	Contact	Block	2	Cam								
'	Code			Knob/Key/I	Knob/Key/Illuminated					Illumii	nated		
_				Operator	Position		Knob/	Pin	Disc				
_		Mounting Position	Contact	2 1			Lever	Tumbler	Tumbler	6, 12, 24V AC/DC	100, 200V AC		
		roonton			Ø								
- [	2NC	1	NC		•		×	×	×	×	×		
	(02)	2	NC		•	J	^		^	^	^		
		1	NC		•								
	3NC	2	NC		•		×	×	×	×			
	(03)	3	NC		•	J			~	~			
		4	—	Dumm	y Block								

• On the contact arrangement marked with  $\star$  in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

### 45° 3-position <Maintained>

		itact ock		Operato Positior		Cir	cuit Ava	ilability				ilot Lights			
Contact Code	Manualian		1	0	2	Karah (			Cam	Karah (	Dia	Diag	Illumi	nated	Inte
Code	Mounting Position	Contact			Ø	Knob/ Lever	Кеу	Illuminated	Code	Knob/ Lever	Pin Tumbler	Disc Tumbler	6, 12, 24V AC/DC	100, 200V AC	
1N0-1NC ★	1	NC				×	×	×		×	×	×	×	×	APEM
(11N1) [☆]	2	NO			•		~	~	J	^			~		
*	1	NC			•										Switches &
4NC	2	NC				×	×	×	S	×	×	×	×	×	Pilot Lights
(04)	3	NC			•	1 ^	~	^	3	^		^	~	^	Control Boxes
	4	NC													Emergency
2NO-1NC	1	NO													Stop Switches
	2	NO			•	×	×	×		×	×	×	×		Enabling
(21N1)	3	NC		•			^	^	J	^		^	^		Switches
	4	—	Dur	nmy Bl	ock										Safety Products

### 45° 3-position

### <Maintained/Spring Return from Right/Spring Return from Left/Spring Return Two-way>

	Con Blo			)perato Positior		Cir	cuit Ava	ilability				Opera	ator Availability		Relays & Sock
Contact									Cam				Illumi	nated	
Code	Mounting	Contact	1	0	2	Knob/	Key	Illuminated	Code	Knob/	Pin	Disc			Power Suppli
	Position	oonaor			Ø	Lever	noy			Lever	Tumbler	Tumbler	6, 12, 24V AC/DC	100, 200V AC	LED Illuminati
1NO-1NC	1	NO	•			×	×	×		×	×	×	×	×	Controllers
(11)	2	NC					^	^	_	^	^	^	^	^	Operator Interfaces
1NO-1NC (11N1)	1	NC NO				×	×	×	—	×	×	×	×	×	Sensors
2N0	1	NO	•			×	×	×		×	×	x	×	×	
(20)	2	NO			•		~	^		^	^	^	~	~	AUTO-ID
2NC	1	NC NC				×	×	×	_	×	×	×	×	×	
(02)	1	NO													
2N0-2NC	2	NO	-		•										Fluck Oilleau
(22N1)	3	NC				×	×	×	—	×	×	×	×	×	Flush Silhoue
	4	NC													ø16
	1	NC													-00
2NO-2NC	2	NO			•	×	×	×	_	×	×	×	×	×	ø22
(22N2)	3 4	NC NO													ø30
	(†)	NO			-										Miniature
4N0	2	NO	-		•										Williature
(40)	3	NO	•			×	×	×	_	×	×	×	×	×	Pilot Lights
	4	NO													
	1	NC			Î										
4NC	2	NC				×	×	×		×	×	×	×	×	
(04)	3	NC													HW
	4	NC													HW

• On the contact arrangement marked with ★ in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

 $\bullet$  For models with  $\precsim,$  contacts may overlap when the operator is changed.

YW

Explosion Proof

Terminal Blocks

## Ø22 HW Series Selector Switch Contact Arrangement Chart

Safety Explosi Terminal Blocks

AUTO-ID

Flush Silhouette

## 45° 4-position

<u> 20</u>									
<u>.</u>					Operator	Position		Maintained	
& Pilot Lights	Contact Code	Codo		1	2	3	4		Cam Code
5		Mounting Position	Contact	8		Ø	۹	Knob Operator	
	*	1	NO	•					
APEM	1N0-2NC 🛱	2	NC					×	_
Switches &	(12)	3	NC			•			_
Pilot Lights	. ,	4	_		Dumm	y Block			
Control Boxes		1	LB						
	1N0-3NC	2	NC		•			×	
Emergency Stop Switches	(13N6)	3	NC					~	_
Enabling		4	NO				•		
Switches	*	1	NO						
Safety Products	2N0-2NC 🛱	2	NC		•			×	_
	(22N3)	3	NC			•		<u>^</u>	_
Explosion Proof	, , ,	4	NO				•		

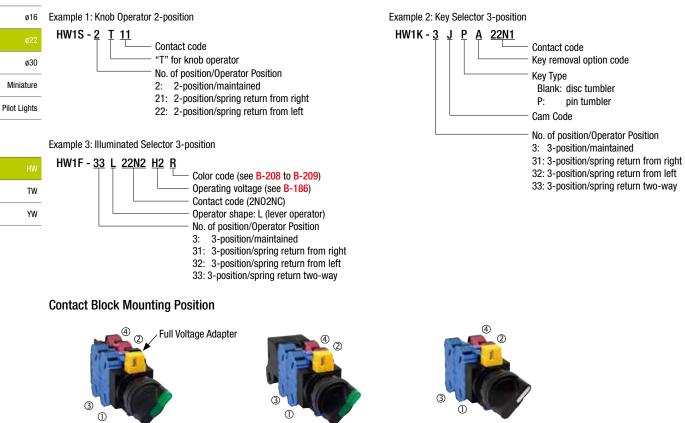
#### 30° 5-position

Relays & Sockets	00	J-position									
						Ор		Maintained			
Circuit Protectors		Contact	Contac	t Block	1	2	0	4	5	2 4	Cam
Power Supplies		Code				®	3	4 Ø	3	15	Code
LED Illumination			Mounting Position	Contact	0		Ŵ	Ø	Ø	Knob Operator	
Controllers		*	1	NO							
Operator		2NO-2NC ☆	2	NC						×	
Interfaces		(22N3)	3	NC				•		^	_
Sensors		. ,	4	NO					•		

• On the contact arrangement marked with 🖈 in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

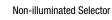
• For models with  $rac{l}{\sim}$ , contacts may overlap when the operator is changed.

## Part No. Development



Illuminated Selector (Full Voltage)

Illuminated Selector (Transformer)



**Switches & Pilot Lights** 

#### **Pushbutton Selectors** Package Quantity: 1 $\bigcirc$ Contact Block **Ring Operator** Circuit Contact Button Shape Category Code Color Code Mounting Contact Normal Depressed Normal Depressed Part No. Position 1 NO • • 1N0-1NC HW1R HW1R-2A11* (11)2 NC • APEM 1 NO • • 2N0 HW1R-2A20* (20) 2 NO • А 1 NO • • Control Boxes 2 NC • 2NO-2NC Emergency HW1R-2A22* (22) 3 NO • • Stop Switches Enabling (4) NC . Switches 1 NO • 2N0 HW1R-2D20* Safety Products (20) 2 NO 1 NO Explosion Proof D 2 NO 2N0-2NC • HW1R-2D22N1* Terminal Blocks (22N1) 3 NC В 4 NC Relays & Sockets . G * 1 NO R Circuit Y S Protectors 2N0-2NC 2 NO Е HW1R-2E22N1* (22N1) 3 NC Power Supplies W 4 NC LED Illumination 1 NO • ★ ☆ 2NO-2NC 2 NO • Controllers F HW1R-2F22N1* (22N1) 3 NC • Operator 4 • Interfaces NC 1 ★ ☆ NC . Sensors 2 2N0-2NC NO • • Ν HW1R-2N22N2* AUTO-ID (22N2) 3 NC • 4 NO • • 1 NO • . 2NO-2NC 2 NO • • Т HW1R-2T22N1* Blocked Flush Silhouette (22N1) 3 NC • 4 NC • ø16

• Specify a button color code in place of * in the Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)

• When operating the pushbutton selector, do not turn the operator ring or the lock lever while the button is depressed. Otherwise the pushbutton selector may be damaged.

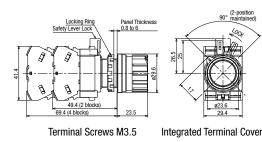
• On the contact arrangement marked page with 🖈 in the table above, the rated current (load switching current) is reduced to a half of the related current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

• For models with  $\dot{m}$ , contacts may overlap when the operator is changed.

## Dimensions

#### All dimensions in mm.





• See B-210 for the bottom view.

							HW
	⁽⁴⁾						TW
	1						YW
3		)					
v		Le	ft	Rig	ht	← Ring Position	
Mounting Position	Contact	Normal	Push	Normal	Push	← Button	
1	NO				•		
2	NO		•				
3	NC			•			
4	NC	•				]	

ø30

Miniature

Pilot Lights

Protectors Power Supplies

LED Illumination

Controllers Operator Interfaces Sensors AUTO-ID

& &	Mono-Lever	Switches		
Pilot Lights				Package Quantity: 1
Ē		Shape	Positions	Part No. (Ordering No.)
igh	HW1M			HW1M-1010-20
s.	Standard Lever			HW1M-2020-20
			0 position	HW1M-0101-20
			2-position	HW1M-0202-20
APEM				HW1M-0101-40
Switches &				HW1M-0202-40
Pilot Lights			4 position	HW1M-1111-22N9
Control Boxes			4-position	HW1M-2222-22N9
Emergency	HW1M-L			HW1M-L1010-20
Stop Switches	Interlocking Lever			HW1M-L2020-20
Enabling Switches			0 position	HW1M-L0101-20
Safety Products			2-position	HW1M-L0202-20
				HW1M-L0101-40
Explosion Proof				HW1M-L0202-40
Terminal Blocks			4-position	HW1M-L1111-22N9
				HW1M-L2222-22N9
Relays & Sockets	• On all mana lawar awitab	as the roted current (lead quitching our	cont) is reduced to a half of the rated current of th	a contact block

• On all mono-lever switches, the rated current (load switching current) is reduced to a half of the rated current of the contact block. Circuit The rated insulation voltage and the rated thermal current remain unchanged.

## **Contact Arrangement Chart**

2-position (Right/Left)								
Contact	Cont Bloc		Lever Operator Position					
Code	Mounting Position	Contact	Left	Center	Right			
00	1	NO	•					
20	2	NO			•			
	1	NO	٠					
40	2	NO			•			
	3	NO	•					
	(4)	NO			•			

#### 2-position (Up/Down)

= peeilieli (ep. 2011.)							
Contact	Cont Blo		Lever Operator Position				
Code	Mounting Position	Contact	Left	Center	Right		
20	1	NO	•				
20	2	NO			•		
	1	NO	•				
40	2	NO			•		
40	3	NO	•				
	4	NO			•		

#### 4-position

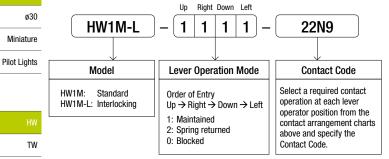
	Contact	Cont Blo	Lever Operator Position						
	Code	Mounting Position	Contact	Down	Left	Center	Up	Right	
ſ		1	NC					•	
I	2210	2	NC	•					
	22N9	3	NO		•				
		4	NO				•		

Flush Silhouette

ø16

YW

## Part No. Development



• The lever operator of the interlocking type HW1M-L is locked only in the center position. Pull on the interlocking lever before operating the lever up/down/right/left.

## **Contact Block Mounting Position and** Lever Operation Position

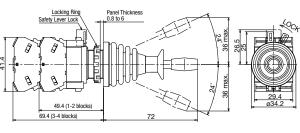


## Dimensions Standard Lever

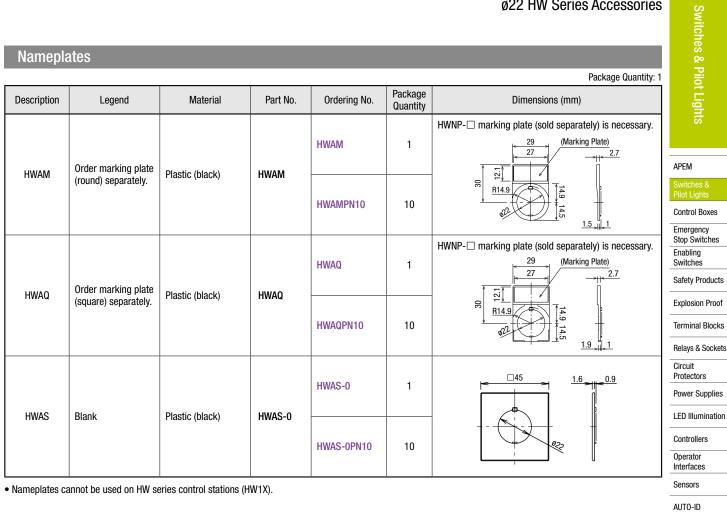
# Safe 49.4 (1-2 blocks 69.4 (3-4 blocks)

#### Interlocking Lever

All dimensions in mm.



**Terminal Screws M3.5** Integrated Terminal Cover See B-210 for the bottom view.



#### Marking Plates for HWAM/HWAQ

Description	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)	]
			HWNP-	1	White legend on black background. Engraving area: W25×H7	Flush Silhouette
HWNP	Aluminum (black)	HWNP-				ø16
	Thickness = 1.0mm		HWNP-□PN10	10	2↓	ø22
						ø30

 $\bullet$  Specify a legend code in place of  $\Box$  in the Ordering No.

#### Legends

Code	Legend
0	(blank)
1	ON
2	OFF
3	START
4	STOP
31	OFF-ON
35	HAND-AUTO
53	HAND-OFF-AUTO

• See B-226 for how to install nameplates/marking plates, and how to remove marking plates.

HW	
TW	
YW	

## ø22 HW Series Accessories

nes & Pilot Lights	A	ccessories					All dimensions in mm.
'ilot L			<b></b>	5.11		Package	When ordering, specify the Ordering No.
ights		Shape	Material	Part No.	Ordering No.	Quantity	Dimensions (mm)
APEM Switches & Pilot Lights		Locking Ring Wrench	Metal (brass) (weight: approx. 150g)	MW9Z-T1	MW9Z-T1	1	Used to tighten the locking ring when installing the HW switch onto a panel.
Control Boxes Emergency Stop Switches Enabling Switches Safety Products Explosion Proof	Tool	Lamp Holder Tool	Nitrile rubber (black)	0R-55	0R-55	1	• Used to install and remove the LED lamps. See B-223 to B-224 for how to install. (A) : BA9S (B)
Terminal Blocks Relays & Sockets Circuit Protectors Power Supplies LED Illumination Controllers		Contact Block Removal Tool	Zinc-plated metal Nitril rubber	TW-KC1	TW-KC1	1	Used to remove the contact block and transformer, and also to install/remove the pilot light and illuminated pushbutton lens. See B-224.
Operator Interfaces Sensors AUTO-ID	Anti	-rotation Ring	Ring: polyamide Gasket: nitril rubber	HW9Z-RL	HW9Z-RLPN10	10	Used to prevent the operator from turning. Generally used when using no nameplates on selector switches and pushbutton selectors.
Flush Silhouette ø16 ø22 ø30 Miniature	Rub	ber Mounting Hole Plug	Nitril rubber (black)	0B-31	0B-31PN05	5	Used to plug the unused ø22.2 mm mounting holes. Degree of protection: IP65 (round hole) IP40 (with anti-rotation function)
Pilot Lights HW TW YW	Rubber Mounting Hole Plug		Plug: chrome-plated zinc diecast Locking ring: polyamide Gasket: nitril rubber	LW9Z-BM	LW9Z-BM	1	Used to plug the unused ø22.2 mm mounting holes. Degree of protection: IP66 (round hole) IP40 (with anti-rotation function) Tightening torque: 1.2 N·m <u>Gasket</u> <u>Cocking Ring</u> <u>Cocking Ring</u> <u>Cocking Ring</u> <u>M22 P:1</u> <u>Panel Thickness</u> <u>0.8 to 6</u>
TVV	Met	allic Mounting Hole Plug	Polyamide	LW9Z-BP1	LW9Z-BP1	1	• Used to plug the unused ø22.2 mm mounting holes. Degree of protection: IP65 Tightening torque: 2.0 N·m Ø29.0 Panel Thickness 0.8 to 6 Rubber Gasket Locking Ring M22 P: 1
	Barr	rier	Polyamide	HW-VU1	HW-VU1PN10	10	Used to prevent contact between adjacent lead wires when units are mounted closely (see B-227 for details). Barriers should always be used in close mounting.

## **Ø22 HW Series Accessories**



## **Maintenance Parts**

ot Lights	Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks
ts.	Contact Block	NO contact	HW-U10	HW-U10	- 1	Housing color: blue/Push rod color: green
	HW-U	NO COMACE	HW-U10-MAU	HW-U10-MAU		MAU has gold contacts
APEM		NC contact	HW-U01	HW-U01	1	Housing color: reddish purple/Push rod color: red
Switches &		NG COMaci	HW-U01-MAU	HW-U01-MAU	I	MAU has gold contacts
Pilot Lights		EM (early make)	HW-U10R	HW-U10R	-	Housing color: blue/Push rod color: black
Control Boxes		contact	HW-U10R-MAU	HW-U10R-MAU		MAU has gold contacts
Emergency		LB (late break)	HW-U01R	HW-U01R	1	Housing color: reddish purple/Push rod color: white
Stop Switches	Weight: 11g (approx.)	contact	HW-U01R-MAU	HW-U01R-MAU		MAU has gold contacts
Enabling Switches	Dummy Block					For HW-U contact blocks
Safety Products		Polyamide <b>HW-DB</b>		HW-DBPN10	10	<ul> <li>Used when the number of contact blocks and full voltage adapters is odd number.</li> </ul>
Explosion Proof	Weight: 3.5g (approx.)					
Terminal Blocks	Full Voltage Adapter 🖉					Applicable model:
Relays & Sockets	for Illuminated (*1)	Debremide	HW-GA1N		2	Illuminated pushbuttons Illuminated selector switches
Circuit Protectors		Polyamide	HW-GAIN	HW-GA1NPN02	2	Applicable load (LED lamp)     LSTD-6 (6V AC/DC)/LSTD-1 (12V AC/DC)
Power Supplies	Weight: 12g (approx.)					LSTD-2 (24V AC/DC)
LED Illumination	Transformer Unit (*1)	100/110V AC	HW-T16	HW-T16	1	Applicable model:     Illuminated pushbuttons
Controllers						Illuminated selector switches
Operator Interfaces	Weight: 12g (approx.)	200/220V AC	HW-T26	HW-T26	1	Applicable load (LED lamp)     LSTD-6 (6V AC/DC)

Sensors *1) Maintenance parts are used for maintenance parts only. Do not use these parts for expansion or remodeling purpose.

AUTO-ID							When ordering, specify the Ordering No.
	Sh	ape	Material/Dimensions	Part No.	Ordering No.	Package Quantity	Color Code *
Flush Silhouette	Lens	①Round flush	Polyarylate ø23.5 H4.2	HW9Z-L11*-K	HW9Z-L11*-KPN05	5	
ø16		②Square flush	Polyarylate ø24.6 H4	HW9Z-L21*-K	HW9Z-L21*-KPN05	5	R (red), G (green), Y (yellow), A (amber), C (clear), S (blue) (*2)
ø22	3 🥮 👍	③Round extended	Polyarylate ø23.3 H10	HW9Z-L12*-K	HW9Z-L12*-KPN05	5	
ø30 Miniature	5	<b>⊕ø29 mushroom</b>	AS, marking type ø29 H12.7	ALW31LD-*-K	ALW31LD-*-KPN02	2	R (red), G (green),Y (yellow), A (amber), S (blue), C (clear) (*2)
Pilot Lights							
	6	⑤ø40 mushroom	AS, marking type ø40 H12.7	ALW41LD-*-K	ALW41LD-*-K	1	R (red), G (green), Y (yellow), A (amber), S (blue), C (clear) (*2)
HW	0	©Jumbo dome	Polycarbonate ø66 H50	HW1A-P5*	HW1A-P5*	1	R (red), G (green), Y (yellow), A (amber), W (white), S (blue)
YW		⑦Dome for pilot light	AS ø23.5 H15.1	HW1A-P2*-K	HW1A-P2*-KPN05	5	R (red), G (green), Y (yellow), A (amber), W (white), S (blue) (*3)
	Button ① ②	①Round flush with round or square bezel	Polyacetal ø23.6 H3	HW1A-B1*	HW1A-B1*PN05	5	
		②Round extended with round or square bezel	Polyacetal ø23.6 H9.2	HW1A-B2*	HW1A-B2*PN05	5	
	3	③Square flush	Polyacetal □24.8 H3	HW2A-B1*	HW2A-B1*PN05	5	Use ${\mathbb O}$ for pushbutton selectors.
	5	④Square extended	Polyacetal □24.5 H9.2	HW2A-B2*	HW2A-B2*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
	6	©ø29 mushroom	Polyacetal ø29 H12.7(M18P1.0)	HW1A-B3*	HW1A-B3*PN02	2	
		©ø40 mushroom	Polyacetal ø40 H12.7(M18P1.0)	HW1A-B4*	HW1A-B4*PN02	2	

When ordering analify the 0 I · II

All dimensions in mm. When ordering, specify the Ordering No.

## ø22 HW Series Maintenance Parts

Maintenance Parts All dimensions in mm.						les &		
<u>ن الم</u>	lamonanoo -	arto					When ordering, specify the Ordering No.	Pilo
	Shape		Material/Dimensions	Part No.	Ordering No.	Package Quantity	Remarks	hes & Pilot Lights
	Round flush		Acrylic ø21.5 Thickness = 1	HW9Z-P11	HW9Z-P11PN05	5	White     See B-225 for dimensions and     engraving area.	lts
J Plate	Round extended		Acrylic ø21.3 Thickness = 6.5	HW9Z-P12	HW9Z-P12PN05	5	eliyiaviliy area.	APEM Switches &
Marking Plate	Square flush		Acrylic 22.7 Thickness = 1	HW9Z-P21	HW9Z-P21PN05	5	1	Pilot Lights Control Boxes
	ø29/40 mm mushroom		Acrylic ø15.7 H3.4	ALW3B	ALW3BPN05	5		Emergency Stop Switches Enabling Switches
	erator Knob for Illumina	ated					• Specify a color code in place of *. R (red), G (green), Y (yellow), A (amber),	Safety Products
				HW9Z-FDY*-K	HW9Z-FDY*-K	1	W (white), S (blue) • Use W (white) knob/lever for pure white illumination.	Explosion Proof Terminal Blocks
	erator Lever for Illumin ector Switch	nated	– AS resin	HW9Z-FDL*-K	HW9Z-FDL*-K	1		Relays & Socket Circuit Protectors Power Supplies
	are Key sc Tumber Key)	$\cap$						LED Illumination
(נייר			Metal (nickel-plated brass)	HW9Z-SK-231	HW9Z-SK-231PN02	2		Controllers Operator
	are Key			LW9Z-SK-500	LW9Z-SK-500PN02		Standard key number	Interfaces
	n Tumber Key)		Metal			-	Key number	AUTO-ID
	Constant of the second s	3	(nickel-plated brass)	LW9Z-SK-	LW9Z-SK- PN02	2	: 501 to 503	
				LW9Z-SK-	LW9Z-SK- PN02		• Key number .: 504 to 515	Flush Silhouet
Lock	kig Ring		Polyamide (black) ø28.4 H5 M22P1	HW9Z-LN	HW9Z-LNPN05	5		ø16 ø22 ø30
Cap Swit	o for Mono-lever							ø30 Miniature
0000		Standard	Nitryl rubber ø10 L20	HW9Z-CPM	HW9Z-CPM	1		Pilot Lights
Boot Mon	ot for no-lever							
Swit		Standard	Nitryl rubber ø29.2 L34.4	HW9Z-BLM	HW9Z-BLM	1		HW TW
Diffu	Tusing Lens		Polycarbonate ø22.2 H21	HW9Z-PP5C	HW9Z-PP5C	1	Used for LED type jumbo dome pilot lights only. Do not use for incandescent lamp illumination	YW
		Ø22.2 ПZI				lamp illumination.		
Sale	ety Lever Lock		Polyacetal (yellow)	HW9Z-LS	HW9Z-LSPN10	10	• A safety lever lock is supplied with a standard HW series switch/pilot light.	
Gasł	cet	>	Nitryl rubber (black)	HW9Z-WM	HW9Z-WMPN10	10	Thickness = 0.5 028.0 ±0.15	
Cont Plug	g	2	Polyamide	HW9Z-CBPL	HW9Z-CBPLPN10	10	Used to plug the hole in the center of contact block.	
	-			′	<u> </u>			



#### **Maintenance Parts**

HW Series LED Lamps (except for HW Jumbo Dome Pilot Lights)

All dimensions in mm.

#### When ordering, specify the Ordering No. Current Draw Operating Illumination Package Shape/Dimensions Part No. Ordering No. Base Voltage Color Code Quantity DC AC 7mA (R, A, W) LSTD-6* 1 8mA (except S) LSTD-6* 6V AC/DC 5.5mA (G, PW) 7mA (S) LSTD-6*PN10 10 APEM 4.5mA (S) LSTD-1* 1 10mA (except S) 11mA (except S) (20.8)12V AC/DC LSTD-1* BA9S/13 R, G , A, W, S, PW Control Boxes 18.4 8mA (S) 9mA (S) LSTD-1*PN10 10 Emergency Stop Switches Eyelet (X1) LSTD-2* 1 10mA (except S) 11mA (except S) Base (X2) BA9S/13 Enabling 24V AC/DC LSTD-2* Voltage Switches 8mA (S) 9mA (S) LSTD-2*PN10 10 Safety Products

Explosion Proof

• Use a PW (pure white) LED lamp for Y (yellow) illumination. Terminal Blocks

## Relays & Sockets

AUTO-ID

Flush Silhouette

ø16

## HW Series LED Lamps (used for HW Jumbo Dome Pilot Lights)

• Specify a color code in place of *. R (red), G (green), A (amber), W (white), S (blue), PW (pure white)

Ticitaya a obciteta							
Circuit	Shape/Operating Voltage	Current Draw		Ordering No.	Illumination Color Code	Dimensions	
Protectors	Shape/Operating voltage	DC	AC			Diffensions	
Power Supplies	24V AC/DC					Light blue: <u>Base BA9S/13</u> LSTDB Illumination color	
LED Illumination	and the second s	15mA	15mA	LSTDB-2*	R, G , A, W, S, PW		
Controllers		TOMA	TJIIA	LOIDD-2*	n, u , A, W, S, FW		
Operator Interfaces						20.4	

Sensors

• Specify a color code in place of *. R (red), G (green), A (amber), W (white), S (blue), PW (pure white)

• Use a PW (pure white) LED lamp for Y (yellow) illumination.

## LED Lamps (LED Lamps for replacing incandescent lamps)

• Use the following replacement LED lamps to replace incandescent lamps.

· See HW series LED lamps shown above for ordering.

• LED lamps may have different brightness/color hue compared with incandescent lamps.

Incandescent Lamp						
Model (dimensions in mm)	Part No.	Rated Voltage	Lamp Ratings	Base		
LS	LS-6	6V AC/DC	1W(6V)			
3	LS-8	12V AC/DC	1W(18V)	<b>D1</b> 00/40		
	LS-2	AC/DC18V	1W(24V)	BA9S/13		
Glass bulb: ø11 Length: 23	LS-3	24V AC/DC	1W(30V)			
LSB (For Jumbo Dome Pilot Lights)	LSB-2	24V AC/DC	28V/0.17A	BA9S/13		
Glass bulb: ø10 Length: 27						

Replacement LED Lamp					
Ordering No.	Illumination Color Code	Rated Voltage	Base		
LSTD-6*		6V AC/DC			
LSTD-1*		12V AC/DC	BA9S/13		
LSTD-2*	R, G , A, S, PW	24V AC/DC	DA95/15		
LSTD-2*		24V AC/DC			
LSTDB-2*	R, G , A, S, PW	24V AC/DC	BA9S/13		

• Specify a color code in place of *. R (red), G (green), A (amber), S (blue), PW (pure white)

• Use a PW (pure white) LED lamp for Y (yellow) illumination.

Package Quantity 1

#### Transformer

				Package Quantity: 1	Pilot
Shape	Operating Voltage	Operating Voltage Range	Ordering No.	Applicable Load	Ê
6V	100/110V AC	100/110V AC ±10%	TWR516	LSTD-6* (6V AC/DC, LED lamp)	Lights
	200/220V AC	200/220V AC ±10%	TWR526	Specify a color code in place of * in Part No.	
	400/440V AC	400/440V AC ±10%	TWR546	R (red), G (green), A (amber), S (blue), PW (pure white)	APEM
24V	100/110V AC	100/110V AC ±10%	TWR512	LSTD-2* (24V AC/DC, LED lamp) or	Switches & Pilot Lights
1	200/220V AC	200/220V AC ±10%	TWR522	LSTDB-2* (24V AC/DC, LED lamp) Specify a color code in place of * in Part No.	Control Boxes Emergency
	400/440V AC	400/440V AC ±10%	TWR542	R (red), G (green), A (amber), S (blue), PW (pure white)	Stop Switches Enabling Switches

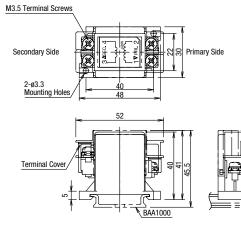
• Terminal cover (TWR-VL3) is installed on transformers as standard.

• Transformer is installed to one HW series unit.

## **Specifications**

Part No.	TWR5□6	TWR5□2	
Operating Voltage	100/110V AC, 200/220V AC 400/440V AC (50/60Hz)		
Current Draw	2.4VA		
Rated Insulation Voltage	600V		
Insulation Resistance	100MΩ minimum (500V I	DC megger)	
Operating Temperature	-30 to +60°C (no freezing	g)	
Operating Humidity	35 to 85% RH (no conder	nsation)	
Storage Temperature	-40 to +80°C (no freezing	g)	
Vibration Resistance	Damage limits: 30Hz, am Operating extremes: 5 to		
Shock Resistance	Damage limits: 1,000 m/s Operating extremes: 100		
Dielectric Strength	2500V AC, 1 minute		
Terminal Screw	M3.5		
Applicable Wire	2mm ² maximum, 2 wires	maximum	
Weight (approx.)	87g		

## **Dimensions**



14/1-

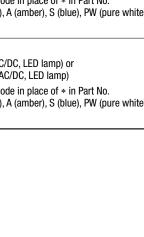
n ordoring

aifer the Ord

Accessories

Accessories					When ordering, specify the Ordering No.	ø30
Shape	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)	Miniature
DIN 35 mm Rail Weight: 200g approx.	Aluminum Length: 1000 mm	BAA1000	BAA1000PN10	10		Pilot Lights HW TW
DIN 35 mm Rail Weight: 320g approx.	Steel Length: 1000 mm	BAP1000	BAP1000PN10	10		YW
End Clip Weight: 15g approx.	Metal (zinc-plated steel) Applicable rail: AA1000 BAP1000	BNL6	BNL6PN10	10		

• See H-071 for DIN rail products.



Circuit Protectors Power Supplies LED Illumination

Safety Products

Explosion Proof Terminal Blocks

Relays & Sockets

Controllers Operator

Interfaces

AUTO-ID

Flush Silhouette

All dimensions in mm. ø16

No

Sensors

APEM

Control Boxes

Explosion Proof

Terminal Blocks

Relavs & Sockets

Power Supplies

LED Illumination

Circuit

Protectors

Operator

Interfaces

Sensors

AUTO-ID

ø16

ΤW

YW

Emergency Stop Switches

Enabling Switches Safety Products

## Safety Precautions

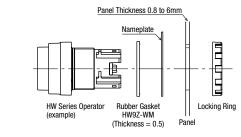
- Turn off the power to the HW series switches & pilot lights before starting installation, removal, wiring, maintenance, and starting installation, removing, wiring, maintenance, and inspection of the products. Failure to turn power off may cause electrical shocks or fire hazard.
- To avoid a burn on your hand, use the lamp holder tool when replacing lamps.
- For wiring, use wires of a proper size to meet the voltage and current requirements. Tighten the terminal screws to the recommended tightening torque (see B-228). Failure to tighten terminal screws may cause overheat and fire.
- When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

Make sure of correct operation before installation. The operation of illuminated pushbutton switches cannot be guaranteed when a commercially available lamp is used.

## **Operating Instructions**

## Panel Mounting

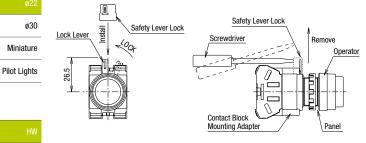
• Remove the contact block from the operator (for transformer type pilot lights, remove the transformer from the illumination unit). Remove the locking ring from the operator (for pilot lights, remove the locking ring from the illuminated unit). Insert the operator into the panel cut-out from the front. Tighten the locking ring from the back to install the contact block to the operator.



Mounting panel thickness is reduced by 1.5 mm when using a nameplate.

## Flush Silhouette Removing the Contact Block

• Remove the safety lever lock (yellow) from the lock lever by inserting a flat screwdriver into the safety lever lock and push upwards.



• Remove the operator from the contact block by turning the locking lever in the direction of the arrow shown below. Then the operator can be pulled out.





- To reinstall, place the TOP marking on the operator and the lock lever in the same direction, and insert the operator into the contact block mounting adapter. Then turn the locking lever in the opposite direction.
- Install the safety lever lock (yellow) on the lock lever. The safety lever lock cannot be installed when the lock lever is not upright.

## Safety Lever Lock

IDEC strongly recommends using the safety lever lock (HW9Z-LS, yellow) to ensure that lock lever is locked, or to prevent maintenance personnel from unlocking contacts during wiring.



#### How to install

 Mount the HW series onto the panel, lock the lever, and push in the safety lever lock.

#### **Spacing in Vertical Direction**

• HW series can be installed with a minimum of 50 mm spacing in vertical direction (mono-lever switch: 70 mm minimum). Be sure to take the space required for installing/removing the safety lever lock into consideration. When the spacing is narrower than the recommended value, install the HW series units in the order of low to high. When removing, do so in the opposite direction.

## **Notes for Panel Mounting**

Locking ring wrench recommended torque

Tighten the bezel to a tightening torque of 2.0 N·m.

#### Locking ring wrench

Locking ring wrench (MW9Z-T1) can be used to tighten the bezel. Do not use pliers. Excessive tightening will damage the locking ring.



Locking ring wrench (MW9Z-T1)

#### Panel Thickness

HW series can be mounted on a panel with thickness of 0.8 to 6.0 mm. Take the thickness of nameplate and/or switch guard into consideration.

## **Replacement of LED Lamps**

LED lamps can be replaced by using the lamp holder tool (OR-55) from the front of the panel, or by removing the contact block from the operator unit. (See B-217 for lamp holder tool.)

#### How to Remove

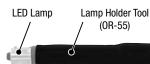
To remove, slip the lamp holder tool onto the lamp head lightly. Then push slightly, and turn the lamp holder tool counterclockwise.



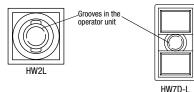
## **Operating Instructions**

#### How to Install

Insert the lamp head into the lamp holder tool.



Place the pins on the lamp base to the grooves in the lamp socket. Insert the lamp and turn it clockwise.



Installing/Removing the Buttons and Lenses

<To install>

Pushbutton Button

Flush/Extended

Push in the button to install.



Insert a flat screwdriver between the button and the bezel to remove the button.



<To remove>

#### Mushroom/Jumbo Mushroom

Button has threads. Turn clockwise to install the button.

Turn the button remove. Note: Jumbo mushroom button





## Illuminated Pushbutton Lens

• Flush/Extended Push in the lens holder into the operator unit.

Insert a flat screwdriver between the button and the bezel to remove the lens holder.



Lens has threads. Turn clockwise to install the lens.







• Round Flush/Square Flush



#### Insert a flat screwdriver between the lens and the bezel to remove.



# Control Boxes

Emergency

Switches

Stop Switches Enabling

Safety Products

Explosion Proof

Terminal Blocks

**Relavs & Sockets** 

Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Circuit

Protectors

APEM

**Removing the Contact Blocks/Full Voltage Adapters** Insert a flat screwdriver (4 to 6 mm) into the snap-fit latches of the

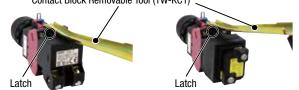
contact block or full voltage adapter and lift to remove. Latches

- Make sure to lift both latches. Contact blocks cannot be removed by lifting one latch only.
- Do not apply excessive force to the latches, otherwise damage maybe caused.

#### **Transformer Units and DC-DC Converters**

Insert the end of the contact block removal tool (TW-KC1) into the snap-fit latch of the transformer units or DC-DC converter and pull the tool forward.

The contact block removable tool cannot be used to remove the HW-U contact blocks (HW-U), full voltage adapters (HW-GA1N), or dummy blocks (HW-DB).



# Transformer Units and DC-DC Converters for Pilot Lights

Insert a flat screwdriver into the snap-fit latch on the contact block and lift to remove.



Mhen replacing parts (contact block, dummy block, full voltage adapter, transformer) for maintenance, make sure to install the parts to the original position. Otherwise proper operation cannot be guaranteed.

Flush Silhouette
ø16
ø30
Miniature
Pilot Lights

HW
TW
YW

**Pilot Light Lens** Extended/Mushroom

Lens has threads. Turn clockwise to install the lens.





Contact Block Removable Tool (TW-KC1)



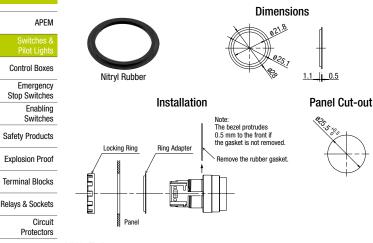


#### **Operating Instructions**

## Using a Ring Adapter

#### HW9Z-A25

Install the ring adapter between the HW series unit and panel. Make sure that the side with ridges face the panel.



#### Power Supplies HW9Z-A30

LED Illumination Controllers Controllers



Operator (example)

Washer Panel



ΤW

YW

Flush Silhouette

Operator

Interfaces

Sensors

AUTO-ID

## Replacement of Lens and Marking Plate

Adapter

#### Removing the Lens Unit

Locking Ring

Remove the lens unit (color lens, marking plate, and lens holder) by inserting a small flat screwdriver into the recess of the lens through the bezel. Knob on illuminated selector switches can be removed by tilting sideways. No tool is required.



#### **Removing the Lens**

Remove the lens by pushing the lens from the rear to disengage the latches between the lens and the lens holder, using a flat screwdriver as shown below. Marking plate can be removed after the lens is removed from the lens holder.



Note: The translucent filter in the lens holder cannot be removed because this filter is sealed to make the unit waterproof and oiltight.

Lens

Lens

Marking Plate

Marking Plate

Lens Holde

#### Installing

[For Round Lens]

#### Lens Marking Plate Lens Holder

- Place the marking plate on the lens holder with the anti-rotation projection engaged and press the lens onto the lens holder to engage the latches.
- 2. Place the marking plate in the correct orientation.

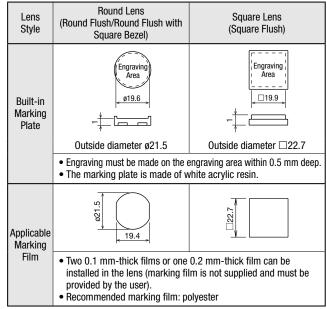
#### [For Square Lens]

#### Lens Marking Plate Lens Holder

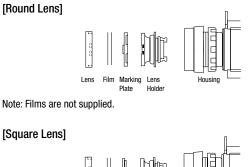
- 1. Place the marking plate on the lens holder and press the lens onto the lens holder to engage the latches.
- Place the marking plate in the correct orientation (note the directionality of marking plate).

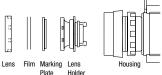
## Marking

For HW series illuminated pushbuttons and pilot lights, legends and symbols can be engraved on the built-in marking plates, or printed film can be inserted under the lens for labeling purposes. Films are not supplied with illuminated pushbuttons, and may be provided by the user.



## Insertion Order of Marking Plate and Film





Note: Films are not supplied. When inserting a film, make sure that the marking plate is installed with its uneven side facing the lens holder.

## Nameplate

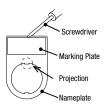
Mounting panel thickness is reduced by 1.5 mm when using a nameplate.

## Installing a Marking Plate

Insert a marking plate tin the direction of the arrow (1), and press in as shown 2.

## **Removing a Marking Plate**

Insert a flat screwdriver into the upper middle part of the marking plate and remove. When anti-rotation is not required, remove the projection from the nameplate using pliers.



Aarking Plate

Nameplate

0

#### **Replacing the Lens of Dual Pushbuttons** Removing

Remove the lens by inserting a small flat screwdriver into the recess of the lens through the bezel.



#### Installing

Install the lens in the recess between the buttons by pressing against the bezel.

## Selector Switches

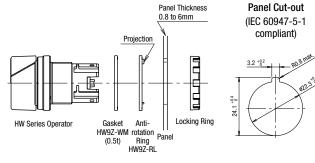
Turn the operator such as knob, lever, and key to each position accurately. Releasing halfway may cause the operator to return to the former position, or to get stuck between. On spring return two-way types, the center of operators may be misaligned slightly.

## **Kev Selector Switches**

Insert the key completely before turning. Failure to do so may cause failures.

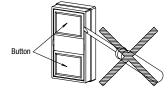
## Anti-rotation Ring and Panel Cut-out

Align the TOP marking on the operator, TOP marking on the antirotation ring with the recess in the mounting panel.



## **Dual Pushbutton Switches**

The pushbuttons cannot be removed or replaced. Do not attempt to remove using a flat screwdriver or pincers, otherwise the pushbuttons may be damaged.



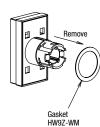
## Installing the Rubber Boot for Dual Pushbuttons

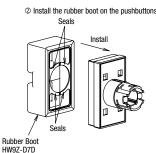
When using the HW7D pushbuttons in places where the pushbuttons are subject to water splash or an excessive amount of dust, make sure to use the HW9Z-D7D rubber boot (IP65) which is ordered separately. Recombs the rubber gasket pre-installed on the operator, and install the rubber boot from the front of buttons.

#### Notes for Installing the Rubber Boot

Remove the gasket from the operator, and install the rubber boot on the operator. Pull out the seals of the rubber boot and place them around the operator sleeve as shown. Make sure that the seals are not twisted or tucked inside and that the gasket does not remain. otherwise the normal waterproof and dustproof characteristics are not ensured.

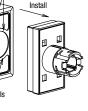
① Remove the gasket





Rubber Boot Installed









Emergency Stop Switches Enabling Switches

Safety Products

Explosion Proof

Terminal Blocks

Relavs & Sockets

Protectors

Circuit

Power Supplies LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette ø16 ø30 Miniature

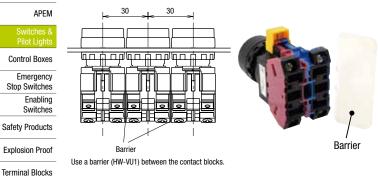
Pilot Lights

TW	
YW	

#### **Operating Instructions**

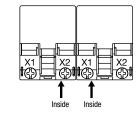
#### **Close Mounting**

When mounting the units closely in a horizontal row on 30 mm centers, use optional barriers to prevent interconnection between adjoining terminals, and to increase the creepage distance. The barriers can be attached simply by pressing them onto the sides of contact blocks.

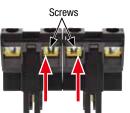


Note: Sufficient insulation distance cannot be obtained if barriers are not installed, or when other barriers such as HW-VG1 is used.

When using transformer type illuminated HW series of 240V AC maximum closely in a horizontal row on 30 mm centers, insert straight the solid wires or stranded wires into inside of the terminal screw on the transformer (see figure below) to prevent short circuit between adjoining terminals.



Enlarged View of Terminal Part



When using transformer type pilot lights closely mounted in horizontal
 and vertical rows on 30 mm centers, keep the ambient temperature
 below 40°C.



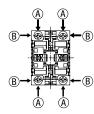
(1) Contact Block 0.3 to 3.5 mm² (solid wire Ø0.5 to 2.0 mm)

Pushbutton/illuminated pushbutton/dual pushbuttons (without pilot light), selector switch, illuminated selector switch, pushbutton selector, mono-lever switch

(A) and (B) show the wiring direction to the terminals.

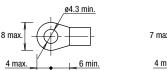
<Contact Block>

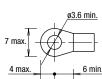
Terminal screws M3.5 (spring-up)



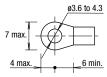
#### Applicable Crimping Terminal

Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks. Crimping terminal for (A)

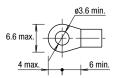




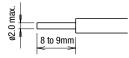
#### IP20 crimping terminal



#### Crimping terminal for (B) (IP20)



#### Solid wire



- Strip the wire insulation 8 to 9 mm from the end.
- Insert the wire until the insulation comes into contact with the terminal metal part.

#### (1)-1 IP20 Degree of Protection

The terminal of HW-U contact block has IP20 degree of protection. When IP20 is required for wiring, observe the followings. Make sure to insert the crimping terminal or wire to the terminal straight and fully.

When using a crimping terminal Use IP20 crimping terminals.

#### When using a solid wire

Strip the wire insulation 8 to 9 mm from the end and insert the wire to the terminal fully.

#### When using a stranded wire

Strip the wire insulation 8 to 9 mm from the end and insert the wire to the terminal fully. Make sure that the wires are not loosened.

Relavs & Sockets

Circuit

Protectors

Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø30

ΤW

YW

Miniature Pilot Lights

8 to 9mm

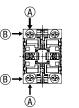
#### **Operating Instructions**

(2) Power Unit 0.3 to 2 mm² (solid wire Ø0.5 to 1.6 mm)

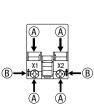
Illuminated pushbutton/illuminated selector switch (A) and (B) show the wiring direction to the terminals.

#### <Full Voltage Adapter>

Terminal screws M3.5 (spring-up)

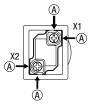


<Transformer Unit> 100/110V AC. 200/220V AC Terminal screws M3.5 (spring-up)



<DC-DC Convertor Unit/Transformer Unit>

110V DC, 380V AC minimum Terminal screws M3.5 (spring-up)



#### **Applicable Crimping Terminal**

Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.

Crimping terminal for (A)

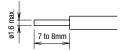
Crimping terminal for (B)



3.6 min.



## Solid wire



 Strip the wire insulation 7 to 8 mm from the end.

6 min.

 Insert the wire until the insulation comes into contact with the terminal metal part.

Terminal cover is integrated in the full voltage adapter and transformer unit. Note that the connection terminal is not IP20.

(2) Pilot Light 0.3 to 2 mm² (solid wire Ø0.5 to 1.6 mm)

(Arrows show the wiring direction)

<Full Voltage Adapter> 6, 12, 24V AC/DC

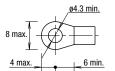
Terminal screws M3.5 (spring-up)



<Transformer, DC-DC Converter> 100/110V AC. 200/220V AC 110V DC, 380V AC minimum Terminal screws M3.5 (spring-up)

#### Applicable Crimping Terminal

Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.



#### Solid Wire

- Strip the wire insulation 8 to 9 mm from the end.
- Inset the wire until the insulation comes into contact with the terminal metal part.
- · Terminal cover is integrated but not IP20.
- · When selecting mounting centers and crimping terminals, take sufficient insulation distance into consideration.

## Cautions for Wiring

About DC-DC Converter Unit 1. Note the polarity for wiring when connecting to the DC-DC converter.

Terminal No. Polarity X1 Positive

- X2 Negative
- 2. Incandescent lamps cannot be used in DC-DC converter unit.
- 3. DC-DC converters are equipped with an electric circuit and noise may be heard inside the unit, which does not affect the performance of DC-DC converters.

#### **Recommended Tightening Torque** Number of Wires

Unit	Wire		Number of Wires	Recommended Tightening Torque	Terminal Screw	Flush Silhouette
						ø16
HW-U Contact Block	Crimping Terminal		2	1.0 to 1.3		
	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3	M3.5	ø22
		ø1.7 to 2.0 mm (AWG12)	1	1.2 to 1.3		ø30 Miniature
	Stranded Wire	0.3 to 2.0 mm ² (AWG14 to 22)	2	1.0 to 1.3		Pilot Lights
		2.1 to 3.5 mm ² (AWG12)	1	1.2 to 1.3		
Illuminated Unit (*1)	Crimping Terminal					
	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3	M3.5	HW
	Stranded Wire	0.3 to 2.0 mm ² (AWG14 to 22)				YW
Pilot Light	Crimping Terminal					
	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3 (M3.5)	M3.5	
	Stranded Wire	0.3 to 2.0 mm ² (AWG14 to 22)				

*1) Lamp terminal of illuminated pushbuttons, illuminated selector switches, dual pushbuttons with pilot lights

SEUEN01A_B HW February 2020

APEM

Control Boxes

Emergency

Enabling

Switches

Stop Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets Circuit

Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Protectors