

YW Series Switches & Pilot Lights

Space-saving, 10-mm-thick contact blocks. Removable operator.



Contact Ratings (Contact Block)

Rated Insulation Voltage		600V			
Rated Thermal Current		10A			
Operating Voltage		24V	120V	240V	380V
AC 50/60 Hz	Resistive Load (AC-12)	10A	10A	6A	2A
	Inductive Load (AC-15)	10A	6A	3A	1.9A
DC	Resistive Load (DC-12)	8A	2.2A	1.1A	—
	Inductive Load (DC-13)	4A	1.1A	0.55A	—

LED Illuminated Unit Specifications

Pilot Light (removable lamp terminal type)

Illuminated Pushbutton

		Unit				LED Lamp				
Unit Type	Input Type	Rated Voltage	Operating Voltage	Color Code	Lamp Base	Part No.	Rated Voltage	Current Draw	Color Code	
Pilot Light (removable lamp terminal type)	Full Voltage	6V AC/DC	6V AC/DC	±10%	A: amber G: green PW: pure white R: red S: blue W: white Y: yellow	BA9S/13	LSED-6□□	6V AC/DC	8mA (A, R, Y) 6mA (G, PW, S)	A: amber G: green PW: pure white R: red S: blue Y: yellow
		12V AC/DC	12V AC/DC				LSED-1□□	12V AC/DC	7mA (A, R, Y) 6mA (G, PW, S)	
		24V AC/DC	24V AC/DC				LSED-2□□	24V AC/DC	4mA (A, R, Y) 4mA (G, PW, S)	
		110V AC/DC	110V AC/DC				LSED-H□□	110V AC/DC	3mA	
		230/240V AC/DC	207 to 250V AC/DC				LSED-M3□□	230/240V AC/DC	3mA	
Illuminated Pushbutton	Transformer (pilot light only) 50/60 Hz	100/110V AC	100/110V AC	±10%			LSED-6□□	6V AC/DC	8mA (A, R, Y) 6mA (G, PW, S)	Specify a color code in place of □ in the Part No.
		200/220V AC	200/220V AC							
		115/120V AC	115/120V AC							
		230/240V AC	207 to 250V AC							

Pilot Light (unibody type)

Unit Type	Rated Voltage	Operating Voltage	Current Draw	Color Code	
Pilot Light (unibody type)	6V AC/DC	6V AC/DC	±10%	A: amber G: green PW: pure white R: red S: blue W: white Y: yellow	
	12V AC/DC	12V AC/DC			16mA (A, R, W, Y) 13mA (G, PW, S)
	24V AC/DC	24V AC/DC			20mA
	100/110V AC (50/60 Hz sine wave)	100/110V AC			20mA
	230/240V AC (50/60 Hz sine wave)	230/240V AC			207 to 250V AC

Incandescent Illuminated Unit Specifications

Pilot Light (removable lamp terminal type)

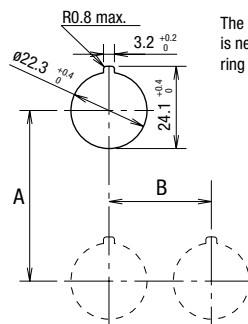
Illuminated Pushbutton

Unit					Incandescent Lamp		
Unit Type	Input Type	Rated Voltage	Operating Voltage	Color Code	Lamp Base	Part No.	Rating
Pilot Light (removable lamp terminal type)	Full Voltage	6V AC/DC	6V AC/DC	±10%	BA9S/13	LS-T6	1W (6.3V)
		12V AC/DC	12V AC/DC			LS-T8	1W (18V)
		24V AC/DC	24V AC/DC			LS-T3	1W (30V)
Illuminated Pushbutton	Transformer (pilot light only) 50/60 Hz	100/110V AC	100/110V AC			LS-T6	1W (6.3V)
		200/220V AC	200/220V AC				
		115/120V AC	115/120V AC				
		230/240V AC	207 to 250V AC				

Specifications

Operating Conditions	Operating temperature: -20 to +55°C (no freezing) Operating humidity: 45 to 85% RH (no condensation) Storage temperature: -45 to +80°C Storage humidity: 95% RH maximum
Degree of Protection	From panel front: IP65 (IEC 60529) Terminal: IP20 (IEC 60529)
Insulation Resistance	100 MΩ
Dielectric Strength	Contact block: 2,500V, 1 minute Pilot light: 2,000V, 1 minute
Vibration Resistance	<Emergency stop switch> Operating extremes / Damage limits: 10 to 500 Hz, amplitude 0.35 mm, acceleration 50 m/s ² (5G) <Pushbutton, pilot light, illuminated pushbutton, selector switch, and key selector switch> Operating extremes: 5 to 55 Hz, amplitude 0.5 mm Damage limits: 30 Hz, amplitude 1.5 mm
Shock Resistance	<Emergency stop switch> Operating extremes: 150 m/s ² (10G) Damage limits: 1,000 m/s ² (100G) <Pushbutton, pilot light, illuminated pushbutton, selector switch, and key selector switch> Operating extremes: 100 m/s ² (10G) Damage limits: 1,000 m/s ² (100G)
Mechanical Life (minimum operations)	<Emergency stop switch> 250,000 (single contact block) <Pushbutton and illuminated pushbutton> Momentary: 5,000,000 (single contact block) 1,000,000 (double contact block) Maintained: 250,000 (single contact block) 100,000 (double contact block) <Selector switch and key selector switch> 250,000 (single contact block) 100,000 (double contact block)
Electrical Life (minimum operations)	<Emergency stop switch> 100,000 (single contact block) <Pushbutton, selector switch, and key selector switch> 100,000 (single contact block) 50,000 (double contact block)

Mounting Hole Layout



The 3.2-mm-wide key recess is necessary when the anti-rotation ring is used.

Unit	A (mm)	B (mm)
Emergency stop switch	50 min.	50 min.
Pushbutton	50 min.	30 min.
Selector switch		
Key selector switch		
Mushroom pushbutton	50 min.	40 min.
Pilot light (with removable lamp terminal)	30 min.*	30 min.
Pilot light (unibody)	50 min.	30 min.

* Keep a minimum spacing of 50 mm when using a lamp of over 1W.

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

ø22

ø30

Miniature

Pilot Lights




HW

TW

YW

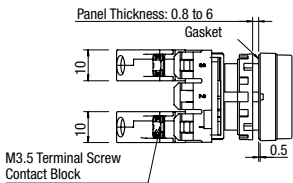
Pushbuttons with Plastic Bezel (Pushlock Pull/Turn Reset)

Package Quantity: 1

Shape	Operation	Contact	Contact Block Mounting Position			Part No.	① Button Color Code			
			1	2	3					
	Momentary	1NO	NO	—	—	YW1B-M1E10①	B: black G: green R: red S: blue W: white Y: yellow			
		1NC	—	—	NC	YW1B-M1E01①				
		2NO	NO	—	NO	YW1B-M1E20①				
		2NC	NC	—	NC	YW1B-M1E02①				
		1NO-1NC	NO	—	NC	YW1B-M1E11①				
		3NO	NO	NO	NO	YW1B-M1E30①				
		3NC	NC	NC	NC	YW1B-M1E03①				
	Maintained	2NO-1NC	NO	NC	NO	YW1B-M1E21①				
		1NO-2NC	NO	NC	NC	YW1B-M1E12①				
		1NO	NO	—	—	YW1B-A1E10①				
		1NC	—	—	NC	YW1B-A1E01①				
		2NO	NO	—	NO	YW1B-A1E20①				
		2NC	NC	—	NC	YW1B-A1E02①				
		1NO-1NC	NO	—	NC	YW1B-A1E11①				
	Momentary	1NO	NO	—	—	YW1B-M2E10①	B: black G: green R: red S: blue W: white Y: yellow			
		1NC	—	—	NC	YW1B-M2E01①				
		2NO	NO	—	NO	YW1B-M2E20①				
		2NC	NC	—	NC	YW1B-M2E02①				
	Maintained	1NO-1NC	NO	—	NC	YW1B-M2E11①				
		1NO	NO	—	—	YW1B-A2E10①				
		1NC	—	—	NC	YW1B-A2E01①				
		2NO	NO	—	NO	YW1B-A2E20①				
		2NC	NC	—	NC	YW1B-A2E02①				
		1NO-1NC	NO	—	NC	YW1B-A2E11①				
			Momentary	1NO	NO	—		—	YW1B-M4E10①	B: black G: green R: red S: blue W: white Y: yellow
				1NC	—	—		NC	YW1B-M4E01①	
				2NO	NO	—		NO	YW1B-M4E20①	
				2NC	NC	—		NC	YW1B-M4E02①	
Maintained	1NO-1NC		NO	—	NC	YW1B-M4E11①				
	1NO		NO	—	—	YW1B-A4E10①				
	1NC		—	—	NC	YW1B-A4E01①				
	2NO		NO	—	NO	YW1B-A4E20①				
	2NC		NC	—	NC	YW1B-A4E02①				
	1NO-1NC		NO	—	NC	YW1B-A4E11①				

Note: Specify a button color code in place of ① in the Part No.

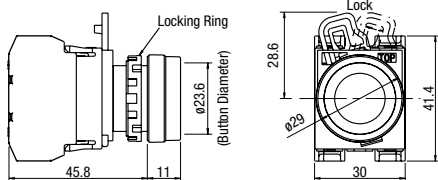
Dimensions



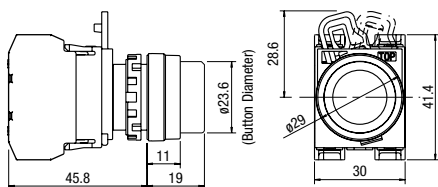
Contact Block Mounting Position



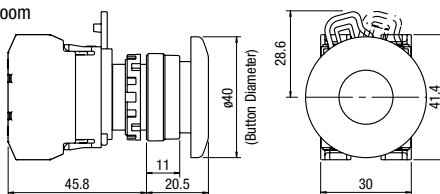
Flush



Extended



Mushroom



All dimensions in mm.

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- 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
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- Miniature
- Pilot Lights
- HW
- TW
- YW