





Selection Guide










A Series Miniature Switches and Pilot Devices Ø 8mm

Series Model	AL8	AB8
Appearance		
Operator Type	Illuminated Pushbuttons: <ul style="list-style-type: none"> • Momentary • Maintained • Pilot Lights 	Non-Illuminated Pushbuttons: <ul style="list-style-type: none"> • Momentary • Maintained
Lens Shape and Size	Round: Ø 0.351 (9mm) Square: □ 0.351 (9mm) Rectangular: 0.351 x 0.468 (9 x 12mm)	
Light Source	LED	—
Lens/Button Colors	Amber, Green, Red, White, Yellow	Black, Blue, Green, Red, White, Yellow
Contact Configuration	SPDT (Gold-Clad Silver Contact)	
Contact Ratings	120V AC/1A, 24V DC/1A, (Resistive), Minimum applicable load reference value: 5V AC/DC, 1mA	
Electrical Life (at full rated load)	Momentary: 100,000 operations minimum Maintained: 50,000 operations minimum	
Mechanical Life	Momentary: 200,000 operations minimum Maintained: 100,000 operations minimum	
Degree of Protection	Enclosed/Dustproof: IP40	
Termination	Solder Tab Terminal	
Approvals	 UL Recognized File No. E55996  CSA Certified File No. LR21451	



1. LED lamps require an external current limiting resistor.
2. Available as assembled units only (replacement lamps available).







A Series Switches and Pilot Devices 16mm


Series Model	AL6	AB6	AL6	AB6	AB6V/HA1B	AS6	AS6-K
Appearance							
Operator Type	Illuminated Pushbuttons: • Momentary • Maintained • Pilot Lights	Non-Illuminated Pushbuttons: • Momentary • Maintained	Oversize Lens Illuminated Pushbuttons: • Momentary • Maintained	Oversize Button Non-illuminated Pushbuttons: • Momentary • Maintained	Special Function: Pushlock Turn Reset	Selector Switches: • 2 or 3-Position • Maintained or Spring Return	Keylock Switches: • 2 or 3-Position • Maintained or Spring Return • Key removable options
Lens Shape and Size	Round: Ø 0.702" (18mm) Square: 0.702" (18mm) Rectangular: 0.702" x 0.936" (18 x 24mm)		Round: Ø 0.917" (23.5mm) Square: □ 0.917" (23.5mm) Rectangular: 0.683" x 0.917" (17.5 x 23.5mm)		Round: Ø 0.917" (23.5mm)	Bezel Shape: Round: Ø 0.702" (18mm) Square: 0.702" (18mm) Rectangular: 0.702" x 0.936" (18 x 24mm)	
Light Source	LED —		LED	—	—	—	—
Lens/Button Colors	Amber, Green, Red, White, Yellow, Blue	Black, Blue, Green, Red, White, Yellow	Amber, Green, Red, White, Yellow, Blue	Black, Blue, Green, Red, White, Yellow	Red Black		—
Contact Configuration	SPDT or DPDT (Gold-Clad Silver Contact)						
Contact Ratings	120V AC/1A, 24V DC/1A (Resistive) (Minimum applicable load reference value: 5V AC/DC, 1mA)						
Electrical Life	Momentary: 100,000 operations minimum Maintained: 50,000 operations minimum				100,000 operations	100,000 operations minimum (at 1,200 operations/hour)	
Mechanical Life	Momentary: 1,000,000 operations minimum Maintained: 100,000 operations minimum				100,000 operations	250,000 operations minimum	
Degree of Protection	Enclosed/Dustproof: IP40 Waterproof/Oiltight/Corrosion Resistant: IP65						
Termination	.110" Solder/Quick Connect						
Approvals	 UL Recognized File No. E55996  CSA Certified File No. LR48366						



1. LED lamps contain a built-in current-limiting resistor and reverse polarity protection diode.
2. Available as assembled or sub-assembled components.

AP Series Miniature Pilot Lights

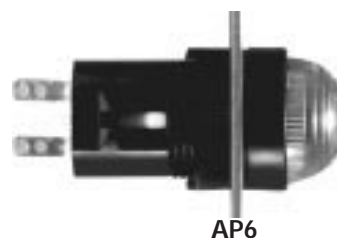
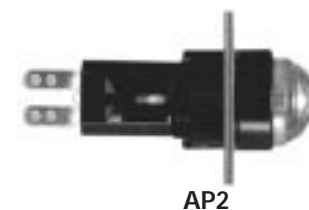
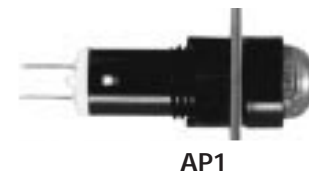
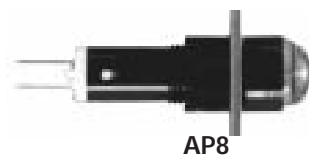
Series Model	AP6	AP2	AP1	AP8
Mounting Hole Diameter	Ø 16mm	Ø 12mm	Ø 10mm	Ø 8mm
Appearance				
Operator Type	Pilot Lights			
Lens Shape and Size	Flat & Dome Ø 18mm	Flat & Dome Ø 14mm	Flat & Dome Ø 12mm	Flat & Dome Ø 9.8mm
Light Source	LED (with built-in current limiting resistor)			
Lens Colors	Amber, Green, Red, White, Yellow			
Voltages	6, 12, 24V AC/DC (full voltage); 120, 240V AC (with transformer); 110V DC (with DC-DC converter).		6, 12, 24V AC/DC (full voltage)	
Rated Current	6V DC/33mA 12V DC/11mA 24V DC/11mA	6V DC/33mA 12V DC/22mA 24V DC/11mA	6V DC/18mA 12V DC/11mA 24V DC/12mA	6V DC/18mA 12V DC/11mA 24V DC/12mA
Degree of Protection	Waterproof/Oiltight/Corrosion Resistant: IP65			Enclosed/ Dustproof: IP40
Termination	.110" Solder/Quick Connect	Solder Tab		
Approvals	 UL Recognized File No. E68961		 CSA Certified File No. LR48366	

-  1. Only AP6 accepts .110" quick-connect.
 2. AP2 and AP6 compatible with snap-on transformers.
 3. All units are one-piece pilot lights with non-replaceable LED lamp.
 4. All units include built-in current limiting resistor and reverse polarity protection diode.

Miniature Pilot Lights with Super Bright LEDs

Key features of AP series include:

- » Long service life, low maintenance
- » Space saving miniature style
- » Dome or Bat lens models
- » Built-in current-limiting resistor and reverse polarity protection diode
- » Five illumination colors: red, green, amber, yellow, and white
- » AC adaptor (120V AC and 240V AC) and DC-DC Converter (110V DC) options on 12mm and 16mm units



Specifications	Lamp	Built-in LED with current limiting resistor
	Operational Voltage	6, 12, 24VDC (full voltage), 110/120, 220/240VAC, (transformer) 110VDC (with converter)
	Current Ratings	AP8: 6VDC/18mA, 12VDC/11mA, 24VDC/12mA AP1: 6VDC/18mA, 12VDC/11mA, 24VDC/12mA AP2: 6VDC/33mA, 12VDC/22mA, 24VDC/11mA AP6: 6VDC/33mA, 12VDC/11mA, 24VDC/11mA
	Operating Temp.	-20 C to +50 C
	Operating Humidity	45 to 85% RH
	Insul. Resistance	100Mw min. (500V DC megger) Between live and dead parts
	Rev. Withstand Voltage	AP2: 100V Other Series: 200V
	Solder Terminal	Soldering 260 C maximum (5 sec.)
	Degree of Protection	AP8: IP40 (dusttight) Other Series: IP65 (oiltight)

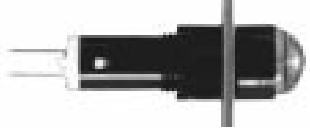

Optional Adaptors/Converters		AC Adaptor	DC-DC Converter
	Applicable Units	AP2 & AP6 (with 6V LED only)	
	Operating Voltage	110/120VAC 50/60 Hz 220/240VAC 50/60 Hz	110V DC (90 to 140V DC)
	Power Consumption	1.6 VA maximum	1W maximum
	Insulation Voltage	250 V AC	140V DC
	Insulation Resistance	10Mw min. (500V DC megger) Between live and dead parts	
	Dielectric Strength	2,000V AC, 1 minute Between live/dead parts 2,000V AC, 1 minute Between terminals	2,000V AC, 1 minute Between live/dead parts 1,500V AC, 1 minute Between terminals



Available as one piece only (replacement lenses and LEDs are not available).

Miniature Pilot Lights (Assembled)

Part Numbers: AP Miniature Pilot Lights

Appearance	Lens Style	Operating Voltage	Part Numbers
AP8 Series - 8mm 	Dome	6V DC 12V DC 24V DC	AP8M266-② AP8M211-② AP8M222-②
	Flat	6V DC 12V DC 24V DC	AP8M166-② AP8M111-② AP8M122-②
AP1 Series - 10mm 	Dome	6V DC 12V DC 24V DC	AP1M266-② AP1M211-② AP1M222-②
	Flat	6V DC 12V DC 24V DC	AP1M166-② AP1M111-② AP1M122-②
AP2 Series - 12mm 	Dome	6V DC 12V DC 24V DC	AP2M266-② AP2M211-② AP2M222-②
	Flat	6V DC 12V DC 24V DC	AP2M166-② AP2M111-② AP2M122-②
AP6 Series - 16mm 	Dome	6V DC 12V DC 24V DC	AP6M266-② AP6M211-② AP6M222-②
	Flat	6V DC 12V DC 24V DC	AP6M166-② AP6M111-② AP6M122-②

② Color Code

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



1. In place of ②, specify the color code.

Part Numbers: Optional AC Adaptors and DC-DC Converters (for AP2 and AP6 only)

Appearance	Style	Voltage	Part Numbers	
			Used with AP2 Series	Used with AP6 Series
	AC Adaptor	110/120V AC 220/240V AC	AP2-0126D AP2-0246D	AP6-0126D AP6-0246D
	DC-DC Converter	110V DC (90D140V DC)	AP2-016DD	AP6-016DD



Secondary Voltage = 6V



1. Optional AC adaptors and DC-DC converters snap onto the back of AP2 or AP6 pilot lights.

2. AC Adaptors and DC-DC Converters step down to 6V.

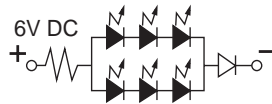
Accessories AP Series

Appearance	Description	Used With	Part Number
Locking Ring Wrench 	Made of metal. Used for tightening plastic locking ring during installation. Tightening torque should not exceed 3kgf-cm	16mm units	MT-001
		12mm units	MT-002
		10mm units	MT-003
		8mm units	MT-004
Mounting Hole Plug 	Made of rubber. Fills unused mounting holes to provide IP65 protection	Unused 8mm panel cutouts	AL-B8
		16mm panel cutouts	AL-B6

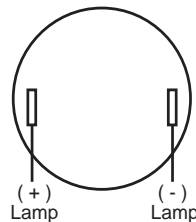
Schematics AP Series

IDEC's Superbright LED

Equivalent Circuit



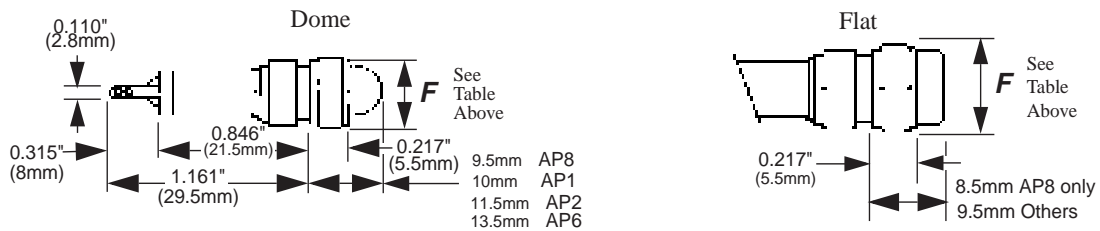
Pilot Lights



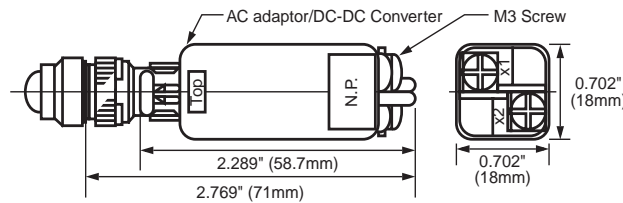
Dimensions AP Series

Pilot Lights (AP Series)

Style	AP8		AP1		AP2			AP6		
	Flat	Dome	Flat	Dome	Flat	Dome	w/ Adaptor or Converter	Flat	Dome	w/ Adaptor or Converter
Panel Cut-out	0.319" (+0.0118) 8.1mm (+0.3)		0.398" (+0.0118) 10.1mm (+0.3)		0.480" (+0.0118) 12.2mm (+0.3)			0.638" (+0.0118) 16.2mm (+0.3)		
F Outside Dimension	9.8mm		12mm		14mm			18mm		



AP2 Series with AC adaptor or DC-DC Converter



AP6 Series with AC adaptor or DC-DC Converter

