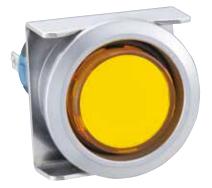
ø16 Switches & Pilot Lights

A6 Series



Light duty in short 22 mm body length. Flush bezel accessories can be used to change A6 series to Flush Silhouette switches.

91 🚯 (E 🔍

• See website for details on approvals and standards.

Standard Bezel

Suitable for a wide variety of office and factory aplications.

Features IDEC's original mechanism for snap-action switching.

The LED lamp contains a current-limiting resistor and a diode for protection against reverse connection.

Degree of protection: IP40 and IP65 (IEC 60529)



Light duty in short 22mm body length.



Specifications and Ratings

Contact Ratings (Contact Block)

	U (
Rated Insulation	n Voltage	250V					
Rated Thermal	3A						
Operating Voltag	ge (AC/DC)	12V	24V	110V	220V		
AC 50/60 Hz	Resistive Load	—	—	1.0A	0.5A		
AC 50/00 HZ	Inductive Load	—	—	0.7A	0.5A		
DC	Resistive Load	1.0A	1.0A	0.2A	—		
DC	Inductive Load	0.7A	0.7A	0.1A	—		
Contact Materia	Gold plat	ed silver					

Minimum applicable load: 5V AC/DC, 1 mA

(applicable range may vary with operating conditions and load types)

Weight (example)

	AL6M-M24: 8g
	AL6M-M221: 46g
	AL6M-P4: 6g
Weight (approx.)	AL6M-P21: 45g
	AB6M-M2: 7g
	AS6M-2Y2: 9g
	AS6M-2KT2A: 21g

Specifications

0000	moutono				
Operating Temperature		-25 to +55°C (no freezing)	LED Illumination		
Storage Temperature		-30 to +80°C (no freezing)			
Opera	ting Humidity	45 to 85% RH (no condensation)	Controllers		
Conta	ct Resistance	50 m Ω maximum (initial value)	Operator Interfaces		
Insulation Resistance		100 M Ω minimum (500V DC megger)			
		Between live and dead metal parts: 2,000V AC, 1 minute	Sensors		
Dielectric Strength	Switch Unit	Between terminals of different poles: 2,000V AC, 1 minute Between terminals of the same pole: 1,000V AC, 1 minute	AUTO-ID		
Diel Stre		Between contact and lamp terminals: 1,500V AC, 1 minute			
	Illumination Unit	Between live part and ground: 2,000V AC, 1 minute			
Vibrati	ion Resistance	Operating extremes: 5 to 55 Hz, amplitude 0.75 mm			
Shock	Resistance	Damage limits: 500 m/s ² (50G)	Flush Silhouette		
Onock	neoiotanee	Operating extremes: 200 m/s ² (20G)	ø16		
		Momentary: 1,000,000 operations			
Mecha	anical Durability	Maintained: 100,000 operations Pushlock Turn Reset: 100,000 operations	ø22		
(minin	num operations)	Selector Switch: 250,000 operations			
		Key Selector Switch: 250,000 operations	ø30		
Flectri	cal Durability	Other than Maintained: 100,000 operations	Miniature		
	num operations)	Maintained: 50,000 operations			
		(Switching frequency 1200 operations/h)	Pilot Lights		
Degre	e of Protection	IP40, IP65 (IEC 60529)			
Termir	nal Style	Solder terminal			

LED Lamp Ratings (LATD)

Part No.		LATD-5 2	LATD-1 (2)	LATD-22			
Lamp Base		Exclusive for A series control units					
Voltage Range		5V DC ±5%	12V AC/DC ±10%	24V AC/DC ±10%			
Rated Voltage		5V DC	12V AC/DC	24V AC/DC			
Current Draw	AC	_	9 mA (A, G, R), 8 mA (JW, S)	9 mA (A, GC, R), 8 mA (JW, SC)			
	DC	8 mA (A, G, R), 7 mA (JW, S)	8 mA (A, G, R), 7 mA (JW, S)	8 mA (A, GC, R), 7 mA (JW, SC)			
Color Code 2		A (amber), G (green), JW (pure white), R (red), S	S (blue)				
Lamp Base Col	or	Same as illumination color (except JW - gray b	ase)				
Voltage Marking	g	Die stamped on the base					
Life (reference	value)	Approx. 50,000 hours (The luminance is reduce	ed to 50% of the initial intensity when used on c	omplete DC.)			
Internal Circuit							

• Specify a color code in place of ② in the Part No.

A (amber), G (green), JW (pure white), R (red), S (blue)

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

APEM

Circuit Protectors

Power Supplies

Control Boxes Emergency Stop Switches Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets

ches & Pilot Lights	Illuminated Pushbut	ttons										
Pie							Package Quantity: 1					
et L			Operating	-	Pa	art No.						
igh	Shape	Operation	Voltage	Contact	IP40	IP65	Color Code					
5	Round			SPDT	AL6M-M11@	AL6M-M11P2						
	AL6M		5V DC	DPDT	AL6M-M21@	AL6M-M21P2						
APEM		Mamantani		SPDT	AL6M-M13@	AL6M-M13P2						
Switches &		Momentary	12V AC/DC	DPDT	AL6M-M232	AL6M-M23P ²						
Pilot Lights			24V AC/DC	SPDT	AL6M-M14@C	AL6M-M14P@C						
Control Boxes			24V A0/D0	DPDT	AL6M-M24@C	AL6M-M24P@C						
Emergency			5V DC	SPDT	AL6M-A112	AL6M-A11P2						
Stop Switches Enabling			JV DC	DPDT	AL6M-A212	AL6M-A21P2						
Switches		Maintained	12V AC/DC	SPDT	AL6M-A132	AL6M-A13P2						
Safety Products		Wantanieu		DPDT	AL6M-A23@	AL6M-A23P2						
Explosion Proof			24V AC/DC	SPDT	AL6M-A14@C	M-A14@C AL6M-A14P@C						
Torminal Blooka			240,000	DPDT	AL6M-A24@C	AL6M-A24P@C						
Terminal Blocks	Square		5V DC	SPDT	AL6Q-M112	AL6Q-M11P2						
Relays & Sockets	AL6Q			DPDT	AL6Q-M21@	AL6Q-M21P2	_					
Circuit Protectors		Momentary	12V AC/DC	SPDT	AL6Q-M132	AL6Q-M13P2	_					
Power Supplies		momonary		DPDT	AL6Q-M232	AL6Q-M23P2	_					
			24V AC/DC	SPDT	AL6Q-M14@C	AL6Q-M14P@C						
LED Illumination			24110/00	DPDT	AL6Q-M24@C	AL6Q-M24P@C						
Controllers			5V DC	SPDT	AL6Q-A112	AL6Q-A11P2	_					
Operator				DPDT	AL6Q-A212	AL6Q-A21P2						
	Interfaces Sensors	Maintained	12V AC/DC	SPDT	AL6Q-A13@	AL6Q-A13P2	21P② 13P② 23P② place of ③ in the Part No.					
Sensors				DPDT	AL6Q-A232	AL6Q-A23P2						
AUTO-ID			24V AC/DC	SPDT	AL6Q-A14@C	AL6Q-A14P@C						
				DPDT	AL6Q-A24@C	AL6Q-A24P@C						
	Rectangular AL6H		5V DC	SPDT	AL6H-M112	AL6H-M11P2	JW: pure white					
Flush Silhouette				DPDT	AL6H-M21@	AL6H-M21P ²						
		Momentary	12V AC/DC	SPDT	AL6H-M13@	AL6H-M13P ²						
ø16	6 <u>6</u>			DPDT	AL6H-M23@	AL6H-M23P ²	_					
ø22			24V AC/DC	SPDT	AL6H-M14@C	AL6H-M14P@C	_					
ø30				DPDT	AL6H-M24@C	AL6H-M24P@C	-					
			5V DC	SPDT	AL6H-A11@	AL6H-A11P2	_					
Miniature				DPDT	AL6H-A21@	AL6H-A21P2	-					
Pilot Lights		Maintained	12V AC/DC	SPDT	AL6H-A13@	AL6H-A13P2	-					
				DPDT	AL6H-A23@	AL6H-A23P2	-					
			24V AC/DC	SPDT	AL6H-A14@C	AL6H-A14P@C	-					
LB	Dectongular			DPDT	AL6H-A24@C	AL6H-A24P@C	-					
	Rectangular w/three-sided barrier		5V DC	SPDT	AL6G-M112	AL6G-M11P@	-					
A6	AL6G			DPDT	AL6G-M212	AL6G-M21P@	-					
		Momentary	12V AC/DC	SPDT	AL6G-M13② AL6G-M23②	AL6G-M13P ² AL6G-M23P ²	Specify a color code in place of @ in the Part No. A: amber G: green JW: pure white R: red S: blue					
				DPDT	AL6G-M123@	AL6G-M14P2	_					
			24V AC/DC	SPDT DPDT	ALOG-W14@	AL6G-M24P2	-					
				SPDT	AL6G-M24@	AL6G-A11P2	-					
			5V DC	DPDT	AL6G-A21@	AL6G-A21P2	-					
				SPDT	AL6G-A13@	AL6G-A13P2	-					
		Maintained	12V AC/DC	DPDT	AL6G-A23@	AL6G-A23P2	-					
				SPDT	AL6G-A14@	AL6G-A14P2	-					
			24V AC/DC	DPDT	AL6G-A24@	AL6G-A24P2						
			L	וטוט	TLUU TLY							

• See B-151 for dimensions.

• See **B-166** for marking plate size and engraving area.

• A pure white (JW) LED lamp is used for yellow illumination.

• Part No. with "C" after the color code uses polycarbonate lens.

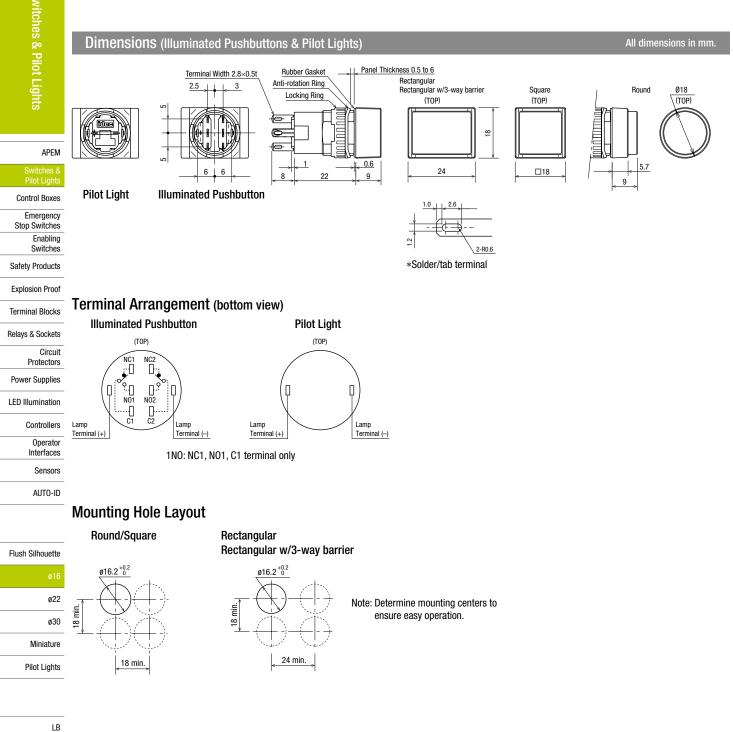
Pilot Lights					hes & Pilot Lights
				Package Quantity: 1	Pilo
Shape	Operating Voltage		Part No.	② Illumination	t Lig
	Operating voltage	IP40	IP65	Color Code	ghts
Round AL6M-P	5V DC	AL6M-P1@	AL6M-P1P2		APEM
					Switches &
	12V AC/DC	AL6M-P3@	AL6M-P3P2		Pilot Lights
					Control Boxes
					Emergency Stop Switches
	24V AC/DC	AL6M-P4@C	AL6M-P4P@C		Enabling
	_	F the terms of the second			Switches
Square					Safety Products
AL6Q-P	5V DC	AL6Q-P1@	AL6Q-P1P2		Explosion Proof
_					Terminal Blocks
					Relays & Sockets
	12V AC/DC	AL6Q-P3@	AL6Q-P3P2		Circuit
					Protectors
				Specify a color code in place of	Power Supplies
	24V AC/DC	AL6Q-P4@C	AL6Q-P4P@C	② in the Part No.	LED Illumination
				A: amber	Controllers
Rectangular				G: green JW: pure white	Operator
AL6H-P	5V DC	AL6H-P1@	AL6H-P1P2	R: red	Interfaces
_				S: blue Y: yellow	Sensors
				·	AUTO-ID
	12V AC/DC	AL6H-P32	AL6H-P3P [®]		
					Flush Silhouette
	24V AC/DC	AL6H-P4@C	AL6H-P4P@C		ø16
Rectangular w/three-sided barrier					ø22
AL6G-P	5V DC	AL6G-P1@	AL6G-P1P2		ø30
					Miniature
					Pilot Lights
	12V AC/DC	AL6G-P32	AL6G-P3P [®]		
					1
					LB
	24V AC/DC	AL6G-P42	AL6G-P4P2		
					A6

• See **B-151** for dimensions.

• See B-166 for marking plate size and engraving area.

 \bullet A pure white (JW) LED lamp is used for yellow illumination.

• Part No. with "C" after the color code uses polycarbonate lens.



	·			·		Pilot Lights	
Shape	Button Style	Operation	Contact		Part No.	Color Code 12	Ē
•	Button otylo	oporation		IP40	IP65		ght
Round AB6M		Momentary -	SPDT	AB6M-M1①C	AB6M-M1P ^① C	B black G: green	S S
ADOM	Button		DPDT	AB6M-M2①C	AB6M-M2P ^① C	R: red	
	Dutton	Maintained	SPDT	AB6M-A11C	AB6M-A1P ^① C	S: blue W: white	APEM
		Maintaineu	DPDT	AB6M-A2①C	AB6M-A2P ^① C	Y: yellow	Switches &
		Momentary	SPDT	AB6M-M1L ²	AB6M-M1PL ²	A: amber	Pilot Lights
	Long	WUTTETILALY	DPDT	AB6M-M2L ²	AB6M-M2PL ²	G: green R: red	Control Boxes
	Lens	Maintainad	SPDT	AB6M-A1L ²	AB6M-A1PL ²	S: blue W: white	Emergency Stop Switches
		Maintained -	DPDT	AB6M-A2L ²	AB6M-A2PL ²	Y: yellow	Enabling Switches
Square		Mercontony	SPDT	AB6Q-M1 ^① C	AB6Q-M1P ^① C	B black	Safety Products
AB6Q	Dutton	Momentary	DPDT	AB6Q-M2 ^① C	AB6Q-M2P ^① C	G: green R: red	
- N	Button	Maintainad	SPDT	AB6Q-A1①C	AB6Q-A1P ^① C	S: blue	Explosion Proof
		Maintained -	DPDT	AB6Q-A21C	AB6Q-A2P ^① C	W: white Y: yellow	V
			SPDT	AB6Q-M1L@	AB6Q-M1PL@	A: amber	Relays & Sockets
		Momentary -	DPDT	AB6Q-M2L ²	AB6Q-M2PL [®]	G: green R: red	Circuit Protectors
	Lens	Maintainad	SPDT	AB6Q-A1L@	AB6Q-A1PL@	S: blue	Power Supplies
		Maintained	DPDT	AB6Q-A2L@	AB6Q-A2PL [®]	W: white Y: yellow	
Rectangular		Momentary -	SPDT	AB6H-M11C	AB6H-M1P ^① C	B black	LED Illumination
AB6H			DPDT	AB6H-M2 ^① C	AB6H-M2P ^① C	G: green R: red	Controllers
	Button	1	SPDT	AB6H-A1 ^① C	AB6H-A1P ^① C	S: blue	Operator Interfaces
		Maintained -	DPDT	AB6H-A2 ^① C	AB6H-A2P ^① C	W: white Y: yellow	Sensors
		1	SPDT	AB6H-M1L ²	AB6H-M1PL ²	A: amber	AUTO-ID
Participant in the second		Momentary -	DPDT	AB6H-M2L ²	AB6H-M2PL ²	G: green R: red	
	Lens		SPDT	AB6H-A1L ²	AB6H-A1PL ²	S: blue	
		Maintained -	DPDT	AB6H-A2L ²	AB6H-A2PL ²	W: white Y: yellow	
Rectangular		++	SPDT	AB6G-M1①	AB6G-M1P①	B black	Flush Silhouette
w/three-sided barrier AB6G		Momentary -	DPDT	AB6G-M2①	AB6G-M2P1	G: green R: red	ø16
ADOG	Button		SPDT	AB6G-A1①	AB6G-A1P①	S: blue	ø22
		Maintained -	DPDT	AB6G-A2①	AB6G-A2P①	W: white Y: yellow	ø30
		+ +	SPDT	AB6G-M1L2	AB6G-M1PL@	A: amber	Miniature
		Momentary	DPDT	AB6G-M2L2	AB6G-M2PL ²	G: green R: red	
	Lens		SPDT	AB6G-A1L2	AB6G-A1PL [®]	S: blue	Pilot Lights
-		Maintained -	DPDT	AB6G-A2L [®]	AB6G-A2PL [®]	W: white Y: yellow	
				hood here	71000712-20	1. 9011044	

 \bullet Specify a color code in place of or in the Part No.

• See **B-151** for dimensions.

Pushbuttons

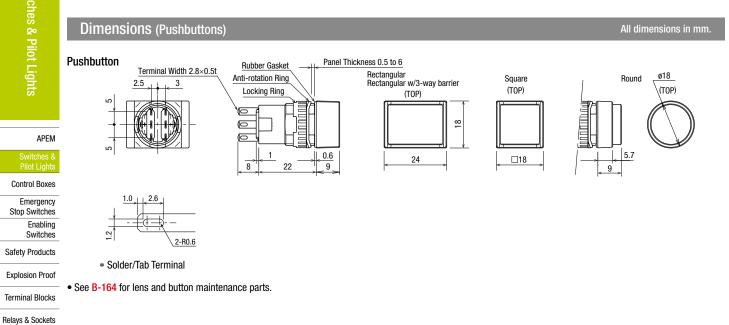
• See **B-166** for marking plate size and engraving area.

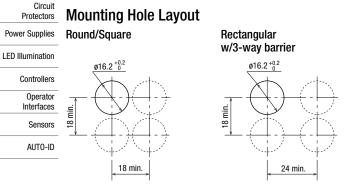
• Black is available for lens style buttons. Black lens consists of a clear lens and a black marking plate. Specify "B" in place of 2 in the Part No.

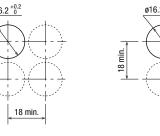
Example:AB6H-M2LB

• Part No. with "C" after the color code uses polycarbonate lens.

LB

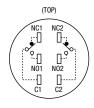






Note: Determine mounting centers to ensure easy operation.

Terminal Arrangement (bottom view) Pushbutton



Note: SPDT has only NC1, NO1, and C1 terminals.

Flush Silhouette
ø22
ø30
Miniature
Pilot Lights

APEM

Control Boxes

Selector Switches

Operator position can be changed by IDEC's original bezel rotating and locking system. The bezel can be locked at every 45° and bezel rotation is prevented while mounting on a panel.

Example: 3-position

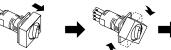


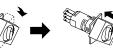




Normal Operator Position

How to change the operator position





Pull out the bezel to release the lock. Rotate the bezel, and push it in at 45° intervals to lock the bezel.

				Pack	age Quantity: 1					Pack	age Quantity: 1	Emergency
Chana		Position	Orighted	Par	t No.] [Contact Opera	ation		Stop Switches Enabling
Shape		Position	Contact	IP40	IP65		Position	Operation	▶ Left	↑ Center	🗡 Right	Switches
Round AS6M-□Y		Maintained	SPDT	AS6M-2Y1C	AS6M-2Y1PC				Lon		/ Hight	Safety Products
	0° isitio		DPDT	AS6M-2Y2C	AS6M-2Y2PC					SPDT		
	90° 2-position	Spring return from right to left	SPDT	AS6M-21Y1C	AS6M-21Y1PC				NO NC		NO NC	Explosion Proof
		opring rotain nomingin to fort	DPDT	AS6M-21Y2C	AS6M-21Y2PC		E	Maintained	c	_	c	Terminal Blocks
	_	Maintained	DPDT	AS6M-3Y2C	AS6M-3Y2PC		ositic		CI		CI	
	45° 3-position	Spring return from right to center	DPDT	AS6M-31Y2C	AS6M-31Y2PC		2-position			DPDT		Relays & Sockets
	3-po	Spring return from left to center	DPDT	AS6M-32Y2C	AS6M-32Y2PC		.06		Left Right Contact Contact		Left Right Contact Contact	Circuit
		Spring return two-way	DPDT	AS6M-33Y2C	AS6M-33Y2PC			\sim	NO NC NO NC	_	NO NC NO NC	Protectors
Square AS6Q-□Y	_	Maintained	SPDT	AS6Q-2Y1C	AS6Q-2Y1PC			Spring return from right				Power Supplies
	90° 2-position		DPDT	AS6Q-2Y2C	AS6Q-2Y2PC				C' C'		C' C'	LED Illumination
-	-po	Spring return from right to left	SPDT	AS6Q-21Y1C	AS6Q-21Y1PC					DPDT		
		oping retain noningrit to left	DPDT	AS6Q-21Y2C	AS6Q-21Y2PC			\bigvee				Controllers
	_	Maintained	DPDT	AS6Q-3Y2C	AS6Q-3Y2PC			Maintained				Operator
1940	45° 3-position	Spring return from right to center	DPDT	AS6Q-31Y2C	AS6Q-31Y2PC			LCR				Interfaces
	3-po	Spring return from left to center	DPDT	AS6Q-32Y2C	AS6Q-32Y2PC			\bigvee				Sensors
		Spring return two-way	DPDT	AS6Q-33Y2C	AS6Q-33Y2PC		ion	Spring return	Left Right Contact Contact	Left Right	Left Right	AUTO-ID
Rectangular		Maintained	SPDT	AS6H-2Y1C	AS6H-2Y1PC		posit	from right	Contact Contact NO NC NO NC	Contact Contact NO NC NO NC	Contact Contact NO NC NO NC	
AS6H-□Y	sitio		DPDT	AS6H-2Y2C	AS6H-2Y2PC		45° 3-position		$\langle \bullet \circ \phi \rangle$	<u>م</u> ه م ه	°∕• ५ •	
	90° 2-position	Spring return from right to left	SPDT	AS6H-21Y1C	AS6H-21Y1PC		45	\bigvee	$\dot{\gamma}_{2}$		$\dot{\gamma}_{2}$	
SP			DPDT	AS6H-21Y2C	AS6H-21Y2PC			Spring return from left				Flush Silhouette
		Maintained	DPDT	AS6H-3Y2C	AS6H-3Y2PC							
	45° ositior	Spring return from right to center	DPDT	AS6H-31Y2C	AS6H-31Y2PC			^L ≤ Ĭ ≥ ^R				ø16
	45° 3-position	Spring return from left to center	DPDT	AS6H-32Y2C	AS6H-32Y2PC			√ Two-way				ø22
		Spring return two-way	DPDT	AS6H-33Y2C	AS6H-33Y2PC			return				<i>VLL</i>
 Bezel: black 		 Knob: black 										ø30

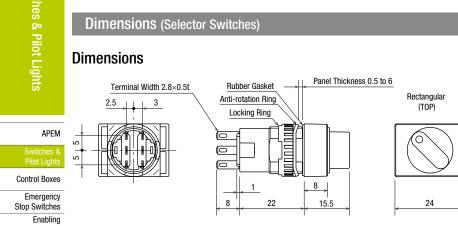
Bezel: black

Knob: black

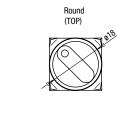
Miniature

Pilot Lights

B-154



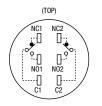
Square (TOP) \cap 18 □18



All dimensions in mm.

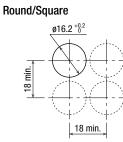
All dimensions in mm.

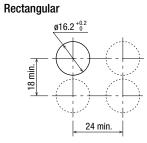
Terminal Arrangement (bottom view) (Selector Switch)



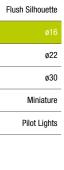
SPDT has NC1, NO1, and C1 only.

Mounting Hole Layout





Note: Determine mounting centers to ensure easy operation.





Switches Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers

Operator

Interfaces Sensors AUTO-ID

Circuit Protectors

Key Selector Sw	Key Selector Switches Package Quantity								
				Key Retained		P	les & Pilot Lights		
Shape	Position	Operation		at •	Contact	IP40	IP65	igh	
Round				L R	SPDT	AS6M-2KT1AC	AS6M-2KT1PAC	نې د	
AS6M			A	\sim	DPDT	AS6M-2KT2AC	AS6M-2KT2PAC		
		Maintained	В	Q Ø	SPDT	AS6M-2KT1BC	AS6M-2KT1PBC	APEM	
	90°			\bigvee	DPDT	AS6M-2KT2BC	AS6M-2KT2PBC	Switches &	
	2-position		С	0 ®	SPDT	AS6M-2KT1CC	AS6M-2KT1PCC	Pilot Lights	
					DPDT	AS6M-2KT2CC	AS6M-2KT2PCC	Control Boxes	
		Opring roturn from right		L .0	SPDT	AS6M-21KT1BC	AS6M-21KT1PBC	Emergency	
		Spring return from right	В	\sim	DPDT	AS6M-21KT2BC	AS6M-21KT2PBC	Enabling	
			A	Q B	DPDT	AS6M-3KT2AC	AS6M-3KT2PAC	Switches Safety Products	
			В	C C B	DPDT	AS6M-3KT2BC	AS6M-3KT2PBC	Explosion Proof	
			С	Q [©] ®	DPDT	AS6M-3KT2CC	AS6M-3KT2PCC	Terminal Blocks	
							Relays &	Relays & Sockets	
*		Maintained	D	D DPDT	AS6M-3KT2DC	AS6M-3KT2PDC	Circuit Protectors		
			E	L G R	DPDT	AS6M-3KT2EC	AS6M-3KT2PEC	Power Supplies	
			G	Q Ø B	DPDT	AS6M-3KT2GC	AS6M-3KT2PGC	LED Illumination	
				Ų ♥ ₽ ♥ ®				Controllers	
	45°		H		DPDT	AS6M-3KT2HC	AS6M-3KT2PHC	Operator Interfaces	
	3-position		В		DPDT	AS6M-31KT2BC	AS6M-31KT2PBC	Sensors	
		Spring return from right	D	O C B	DPDT	AS6M-31KT2DC	AS6M-31KT2PDC	AUTO-ID	
			G		DPDT	AS6M-31KT2GC	AS6M-31KT2PGC	Emergency Stop Switches Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets Circuit Protectors Power Supplies LED Illumination Controllers Operator Interfaces Sensors	
			С		DPDT	AS6M-32KT2CC	AS6M-32KT2PCC	Flush Silhouette	
				\sim				ø16	
		Spring return from left	D		DPDT	AS6M-32KT2DC	AS6M-32KT2PDC	ø22	
			н	O B R	DPDT	AS6M-32KT2HC	AS6M-32KT2PHC	ø30	
			D		DPDT	AS6M-33KT2DC	AS6M-33KT2PDC		
		Spring return two-way			ועיזע	ASOINI-SSK12DC	ASOMI-SSKIZKDU	Pilot Lights	

 \bullet Key is retained at \bullet positions and removable at \bigcirc positions.

• Two keys are supplied.

• The front of key cylinder is made of metal.

• Only one type of key is available

Contact Operation

	Operator Position & Contact Operation (Top View)										
		Positions		Contact	🔨 Left	↑ Center	🗡 Right				
90° 2-position	L, R L, AR				SPDT		_				
	Maint	ained	Spring return from rig	pht	DPDT	Left Right Contact Contact NO NC NO NC C C C	—	Left Right Contact Contact NO NC NO NC C C			
45° 3-position		Spring return	Spring return from left	Spring return two-way	DPDT	Left Right Contact Contact NO NC NO NC O C C	Left Right Contact Contact NO NC NO NC C C C	Left Right Contact Contact NO NC NO NC C C C			

les & Pilot Lights	Key Selector Swi	tches						Package Quantity:	
et E					Key Retained		P	art No.	
igh	Shape	Position	Operation		at	Contact	IP40	IP65	
ស	Square				Q ß	SPDT	AS6Q-2KT1AC	AS6Q-2KT1PAC	
	AS6Q			A	\sim	DPDT	AS6Q-2KT2AC	AS6Q-2KT2PAC	
APEM			Maintained		Q Ø	SPDT	AS6Q-2KT1BC	AS6Q-2KT1PBC	
Switches &		90°	Maintained	В	\sim	DPDT	AS6Q-2KT2BC	AS6Q-2KT2PBC	
Pilot Lights		2-position		С	0 ®	SPDT	AS6Q-2KT1CC	AS6Q-2KT1PCC	
Control Boxes					\sim	DPDT	AS6Q-2KT2CC	AS6Q-2KT2PCC	
Emergency			Spring return from right	В	Ū, Į	SPDT	AS6Q-21KT1BC	AS6Q-21KT1PBC	
Stop Switches Enabling			Spring return nom ngnt	В		DPDT	AS6Q-21KT2BC	AS6Q-21KT2PBC	
Switches Safety Products				A	Q B	DPDT	AS6Q-3KT2AC	AS6Q-3KT2PAC	
Explosion Proof				В	C C B	DPDT	AS6Q-3KT2BC	AS6Q-3KT2PBC	
Terminal Blocks				С	Q C R	DPDT	AS6Q-3KT2CC	AS6Q-3KT2PCC	
Relays & Sockets			Maintained	D	Q O	DPDT	AS6Q-3KT2DC	AS6Q-3KT2PDC	
Protectors Power Supplies				E	Q O B	DPDT	AS6Q-3KT2EC	AS6Q-3KT2PEC	
LED Illumination	(To)			G		DPDT	AS6Q-3KT2GC	AS6Q-3KT2PGC	
Controllers									
Operator Interfaces		45°		Н		DPDT	AS6Q-3KT2HC	AS6Q-3KT2PHC	
Sensors		3-position		В		DPDT	AS6Q-31KT2BC	AS6Q-31KT2PBC	
AUTO-ID			Spring return from right	D	0 0 0 0	DPDT	AS6Q-31KT2DC	AS6Q-31KT2PDC	
				G	L O O	DPDT	AS6Q-31KT2GC	AS6Q-31KT2PGC	
Flush Silhouette ø16					C	Q C R	DPDT	AS6Q-32KT2CC	AS6Q-32KT2PCC
ø22			Spring return from left	D		DPDT	AS6Q-32KT2DC	AS6Q-32KT2PDC	
ø30				н	Q B	DPDT	AS6Q-32KT2HC	AS6Q-32KT2PHC	
Miniature			Spring return two-way	D		DPDT	AS6Q-33KT2DC	AS6Q-33KT2PDC	
Pilot Lights	• Kay is retained at • positions a	<u> </u>			\vee				

 \bullet Key is retained at \bullet positions and removable at \bigcirc positions.

• Two keys are supplied.

• The front of key cylinder is made of metal.

LB • Only one type of key is available.

Contact Operation

	Operator Position & Contact Operation (Top View)							
	Positions					🥆 Left	↑ Center	🗡 Right
90° 2-position	L_R L, [▲] →R				SPDT		_	
	Ma	Maintained Spring return from right				Left Right Contact Contact NO NC NO NC C C C	_	Left Right Contact Contact NO NC NO NC C C C
45° 3-position	L C R Maintained	Spring return from right	Spring return from left	L Spring return two-way	DPDT	Left Right Contact Contact NO NC NO NC C C	Left Right Contact Contact NO NC NO NC	Left Right Contact Contact NO NC NO NC C C C

	1	Ϊ					Package Quantity: 1	2
Shape Posit		on Operation		Key Retained Contact		F	es & Pilot Lights	
υπαρε	rosition	operation		at ●	Unitact	IP40	IP65	ght
ctangular			A	Q ®	SPDT	AS6H-2KT1AC	AS6H-2KT1PAC	S
6H					DPDT	AS6H-2KT2AC	AS6H-2KT2PAC	
		Maintained	В	Q Ø	SPDT	AS6H-2KT1BC	AS6H-2KT1PBC	APEM
	90°				DPDT	AS6H-2KT2BC	AS6H-2KT2PBC	Switches &
	2-position		C	Q ®	SPDT	AS6H-2KT1CC	AS6H-2KT1PCC	Pilot Lights
					DPDT	AS6H-2KT2CC	AS6H-2KT2PCC	Control Box
		Spring return from right	В	Ū, Į	SPDT	AS6H-21KT1BC	AS6H-21KT1PBC	Emergency
		oping return nom nght			DPDT	AS6H-21KT2BC	AS6H-21KT2PBC	Stop Switch Enabling
			A	Q B	DPDT	AS6H-3KT2AC	AS6H-3KT2PAC	Switches
		Maintained	В	Q [©] Ø	DPDT	AS6H-3KT2BC	AS6H-3KT2PBC	Safety Prod
			С	Q [©] R	DPDT	AS6H-3KT2CC	AS6H-3KT2PCC	Terminal Bl
				Q © Q	DDDT			Relays & So
			D		DPDT	AS6H-3KT2DC	AS6H-3KT2PDC	Circuit Protectors Power Supplies
			E	L O R	DPDT	AS6H-3KT2EC	AS6H-3KT2PEC	
and and			G	C C C	DPDT	AS6H-3KT2GC	AS6H-3KT2PGC	
	45°		Н	D O B	DPDT	AS6H-3KT2HC	AS6H-3KT2PHC	Controllers Operator Interfaces
	3-position		В	0 0 0	DPDT	AS6H-31KT2BC	AS6H-31KT2PBC	Sensors
		Spring return from right	D	O C O	DPDT	AS6H-31KT2DC	AS6H-31KT2PDC	AUTO-ID
			G	0 0 0	DPDT	AS6H-31KT2GC	AS6H-31KT2PGC	
			С	O B	DPDT	AS6H-32KT2CC	AS6H-32KT2PCC	Flush Silho
		Spring return from left	D	0 [©]	DPDT	AS6H-32KT2DC	AS6H-32KT2PDC	ø22
			н	Q Q R	DPDT	AS6H-32KT2HC	AS6H-32KT2PHC	ø30
		Spring return two-way	D		DPDT	AS6H-33KT2DC	AS6H-33KT2PDC	Miniature

 \bullet Key is retained at \bullet positions and removable at \bigcirc positions.

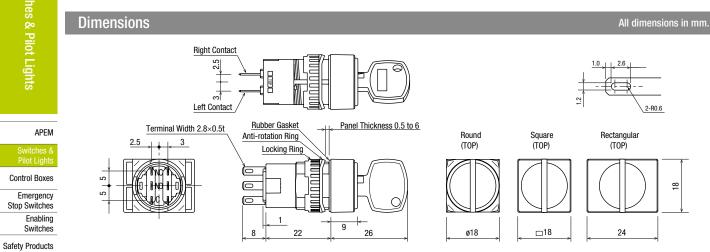
Two keys are supplied. The front of key cylinder is made of metal.

• Only one type of key is available.

Contact Operation

	Operator Position & Contact Operation (Top View)								
	Positions				Contact	🔨 Left	↑ Center	🗡 Right	
90° 2-position	L, R L, SR				SPDT		_		
	Maintained Spring return from right				DPDT	Left Right Contact Contact NO NC NO NC C C	_	Left Right Contact Contact NO NC NO NC C C	
45° 3-position	L C R Maintained	C Spring return from right	Spring return from left	Spring return two-way	DPDT	Left Right Contact Contact NO NC NO NC C C C	Left Right Contact Contact NO NC NO NC	Left Right Contact Contact NO NC NO NC O NC NO NC C C	

Pilot Lig



Mounting Hole Layout

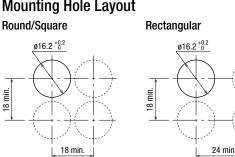
Relays & Sockets Circuit Protectors Power Supplies LED Illumination Controllers Operator Interfaces Sensors

AUTO-ID

18 min.

Explosion Proof

Terminal Blocks

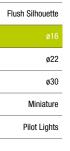


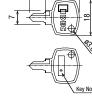
Note: Determine mounting centers to ensure easy operation.

t =1.8

Spare Key

8.1

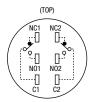




17

LB

Terminal Arrangement (bottom view) (Key Selector Switch)



SPDT has NC1, NO1, and C1 only.

Switches & Pilot Lights Accessories All dimensions in mm. Package Material Part No. Ordering No. Remarks Shape Quantity Locking Ring Wrench Metal • Used to tighten the locking ring when (nickel-plated MT-001 MT-001 1 installing A6 control units into a panel. brass) APEM Lamp Holder Tool Ø9 Rubber 0R-77 **OR-77** • Used to install and remove the LED lamps. 1 ø10 Î Control Boxes Emergency Lens Removal Tool Stop Switches · Used to install and remove lenses and Stainless Steel MT-101 MT-101 1 Enabling buttons. 60 Switches [Remains open] Safety Products • Degree of protection: IP40 For round/ For pushbuttons, LB9Z-K2 I B97-K2 square units 1 · Used to protect pushbuttons from Explosion Proof illuminated (110°, 180°) inadvertent operation. pushbuttons Terminal Blocks • Degree of protection: IP65 For rectangular Relays & Sockets LB9Z-K3P LB9Z-K3P units (remains 1 · Used to protect pushbuttons from Circuit 110°, 180°) inadvertent operation. Protectors Power Supplies [Spring return] • Degree of protection: IP40 Guard For pushbuttons, (polyacetal) • Used to protect pushbuttons from AL-K6S AL-K6S 1 Switch Guard LED Illumination illuminated Cover inadvertent operation. For round/ pushbuttons (polyarylate) square units • Degree of protection: IP65 (when used Controllers (180°) with IP65 control units) See B-161 for Operator AL-K6SP AL-K6SP 1 · Used to protect pushbuttons from Interfaces dimensions. inadvertent operation. Sensors • Degree of protection: IP40 AUTO-ID AL-KH6S AL-KH6S 1 · Used to protect pushbuttons from inadvertent operation. For rectangular • Degree of protection: IP65 (when used units (180°) with IP65 control units) AL-KH6SP AL-KH6SP 1 Flush Silhouette · Used to protect pushbuttons from inadvertent operation. **Dust Cover** ①For round AL-D6 AL-D6 1 units ø22 • When mounting the control units with the Translucent cover: 1 ②For square elastomer dust covers installed, refer to mounting AL-DQ6 AL-DQ6 1 ø30 hole layout on B-162. Black part: units polypropylene • Operating temperature: -10 to +55°C Miniature ③For rectangular AL-DH6 AL-DH6 1 units Pilot Lights **Terminal Cover** • When wiring the terminals, insert the lead wires into the terminal cover holes before Polyamide (white) See B-162 for AL-V6 AL-V6PN10 10 soldering. dimensions. · Terminal cover is not attached and must LB be ordered separately. Socket 1)Solder AL-C6 AL-C6 1 Terminal See B-162 for • Plugs on the rear of the A series control dimensions. units ②PC Board AL-C6V AL-C6V 1 Terminal Mounting Hole Plug • Degree of protection: IP65 116 Nitryl rubber Mounting Hole Rubber AL-B6 AL-B6PN05 5 (black) 016.5 018 Mounting Hole Plug • Degree of protection: IP65 • Tightening torque: 0.1 to 0.29 N·m. Plug: metal (diecast) 2.5 1.12 Mounting Hole Metal Locking ring: AL-BM6 AL-BM6 1 017.8 polyacetal Gasket: nitrile Gask Locking Ring Panel Thickness 0.5 to 6

Dimensions

Switch Guard

[Remains open]

AL-K6S

For round/square units (Degree of protection: IP40) LB9Z-K2



Control Boxes Emergency

Stop Switches Enabling Switches

Safety Products

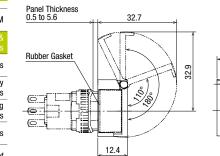
Explosion Proof

Terminal Blocks [Spring return] Relays & Sockets

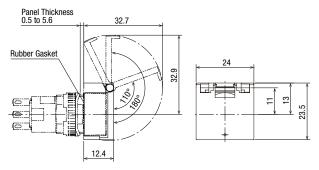
Circuit Protectors

Power Supplies

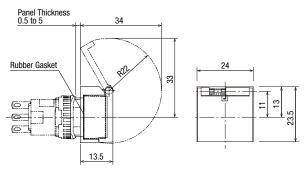
LED Illumination Controllers Operator Interfaces



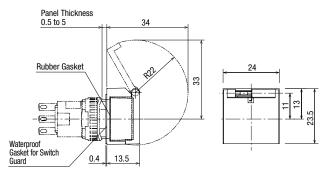
18 THE STREET ÷ 13 23.5 For rectangular units (Degree of protection: IP65) LB9Z-K3P

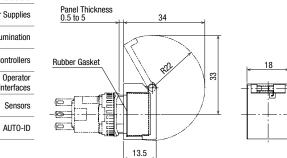


For rectangular units (Degree of protection: IP40) AL-KH6S

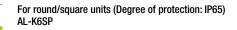


For rectangular units (Degree of protection: IP65) AL-KH6SP





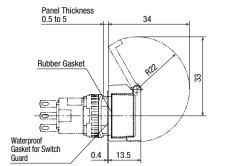
For round/square units (Degree of protection: IP40)

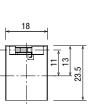


ø22 ø30 Miniature Pilot Lights

LB

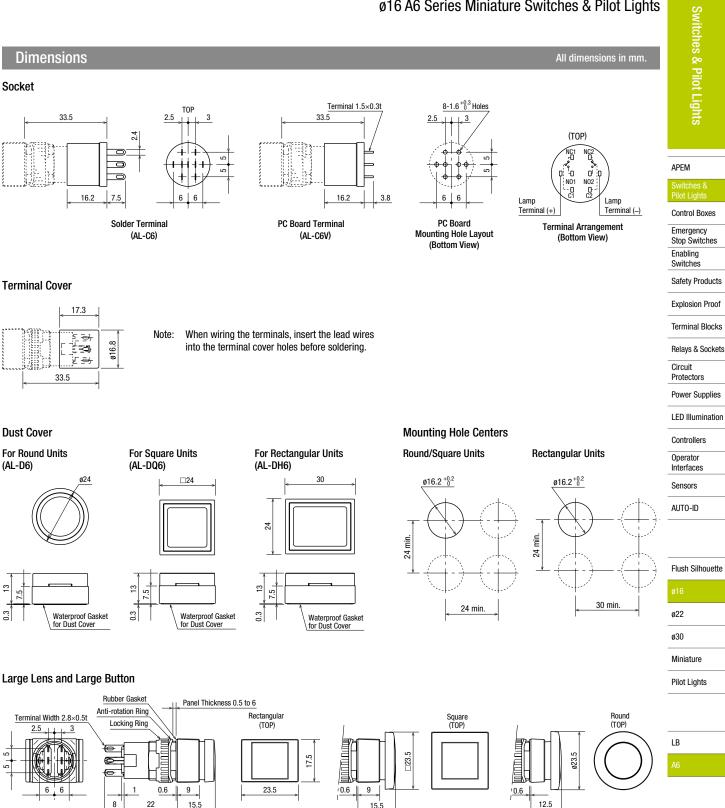
Flush Silhouette



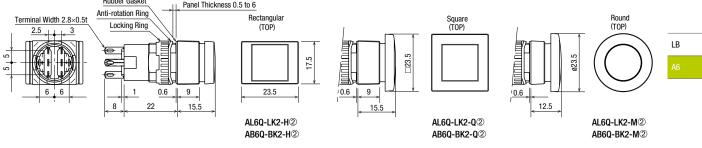


:13

23.5



Large Lens and Large Button



Grip Switch Housing

Grip Style Enabling Switch Housing

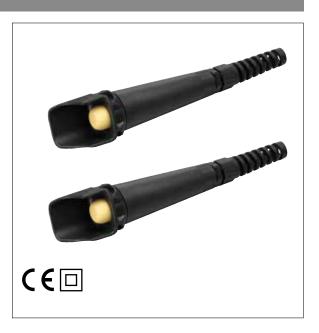
The following switches can be installed on the grip style enabling switch housing to be used as hand-held switches.

- AB6M pushbuttons (IP65, except for AB6M-V)
- AS6M selector switches (IP65)
- AS6M key selector switches (IP65)

Note: Illuminated pushbuttons and pilot lights cannot be used. When using HE9Z-GSH51, be sure to used IP65 switches.

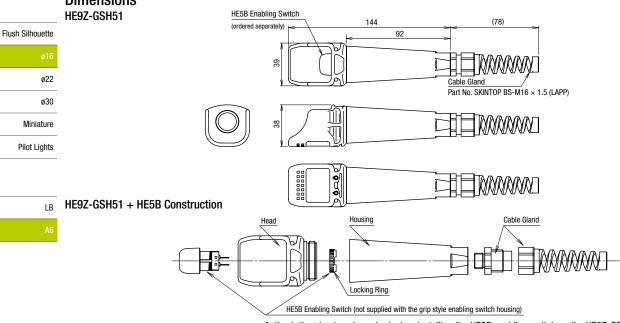
Control Boxes		111 00 0	Switches.			
Emergency	Part No.		Ordering No.	Package Quantity		
Stop Switches Enabling	HE9Z-GSH51		HE9Z-GSH51 1			
Switches	Specifications					
Safety Products	Applicable Standards		IEC/EN 60529			
Eurologian Draaf	Operating Temperature		–25 to 60°C (no freezing	g)		
Explosion Proof	Relative Humidity		45 to 85% RH (no conde	ensation)		
Terminal Blocks	Storage Temperature		-40 to 80°C (no freezing)			
	Pollution Degree		3			
Relays & Sockets	Shock Resistance		Damage limits: 500 m/s ²			
Circuit	Vibration Resistance		Damage limits: 5 to 55 Hz, amplitude 0.5 mm			
Protectors	Electric Shock Protection Cla	ass	Class II (when using HE5B-M2P*)			
Power Supplies	Applicable Cable		Outside diameter ø4.5 t	o 10 mm		
LED Illumination	Conduit Port Size		M16 (cable gland is sup enabling switch housing	plied with the grip style		
			IP65 (with HE5B-M2P*)			
Controllers	Degree of Protection		NEMA type 4X indoor us	se only		
Operator			(with HE5B-M2P*)	-		
Interfaces	Weight (approx.)		65g (grip style enabling	switch housing only)		
Sensors	• The above specifications are	e for th	ne grip style enabling swi	tch housing only.		

Dimensions



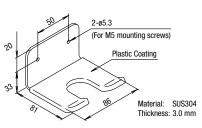
Notes:

- The HE9Z-GSH51 grip style enabling switch housing does not include the HE5B enabling switch. The enabling switch must be ordered separately.
- The HE5B enabling switch must be installed and wired to the HE9Z-GSH51 grip style enabling switch housing by the user. For information on wiring, see the instruction sheet supplied with the HE9Z-GSH51.



• Anti-rotation ring is not required when installing the HE5B enabling switch on the HE9Z-GSH51 grip style enabling switch housing. Use the locking ring only.

Mounting Bracket Part No: HE9Z-GH1



All dimensions in mm.

APEM

Ε S١ Safety P Explosio Terminal

Relays &

LED Illum

AUTO-ID

Maintenance P	arts							& Pilo
Shap	ie	Specific	cation	Part No.	Ordering No.	Package Quantity	Remarks	thes & Pilot Lights
Lens	Round			AL6M-L@	AL6M-L@PN05		Specify a color code in place of $@$ in the	hts
	Square	Polyarylate	е	AL6Q-L@	AL6Q-L@PN05		Part No. A (amber), C (clear), G (green) R (red), S (blue), Y (yellow)	APEM
	Rectangular			AL6H-L@	AL6H-L@PN05		• Use a C (clear) lens for JW (pure white) illumination.	Switches & Pilot Lights
Button	Round			AB6M-B ①	AB6M-B①PN05		Specify a color code in place of \oplus in the	Control Boxes Emergency Stop Switches
	Square	Polyarylate	late AB6Q-B①		AB6Q-B①PN05	5	Part No. B (black), G (green), R (red)	Enabling Switches
	Rectangular			AB6H-B ①	AB6H-B①PN05		S (blue), W (white), Y (yellow)	Safety Produc
Marking Plate	Round		White	AL6M-W	AL6M-WPN05			Terminal Bloc
	Kounu		Black	AL6M-B	AL6M-BPN05			Relays & Sock
	Square	Acrylic	White	AL6Q-W	AL6Q-WPN05			Circuit
	Square	ACLANC	Black	AL6Q-B	AL6Q-BPN05			Protectors Power Suppli
	Rectangular		White	AL6H-W	AL6H-WPN05			Power Supplie
	Kectanyulai		Black	AL6H-B	AL6H-BPN05			LED Illuminati
arge Lens Unit	Round (installed	Translucen color lens		AL6M-LK2-M@	AL6M-LK2-M@		• Specify a color code in place of (2) in the Part No.	Controllers Operator Interfaces
	on round units)	Opaque button		AB6M-BK2-M@	AB6M-BK2-M@		Degree of protection: IP65 Color Code	Sensors
Sa Sa	Square (installed	Translucent color lens Opaque button		AL6Q-LK2-Q@	AL6Q-LK2-Q@	- 1	Translucent Color Lens Opaque Button A (amber) B (black)	AUTO-ID
	on square units)			AB6Q-BK2-Q@	AB6Q-BK2-Q@		G (green) G (green) R (red) R (red) S (blue) S (blue)	
2	Rectangular (installed on	Translucen color lens		AL6Q-LK2-H2	AL6Q-LK2-H2		W (white) W (white) Y (yellow) Y (yellow) Note: Use a white (W) translucent color lens for	Flush Silhou ø16
	square units)	Opaque button		AB6Q-BK2-H2	AB6Q-BK2-H@		pure white (JW) illumination. • See B-162 for dimensions.	ø22
Locking Ring				ļ ,				ø30
0		Polyacetal		HA9Z-LN	HA9Z-LNPN10		• Black	Miniature
Anti-rotation Ring						- 10		Pilot Lights
		Stainless S	Steel	LB9Z-LP1	LB9Z-LP1PN10			
	!	L		<u>ا</u> ا				LB
Spare key	Key selector (disc tumbler key)	Brass with nickel plat		AS6-SK-132	AS6-SK-132PN02	2	Thickness 1.8 mm	A6
Spare Key					 			
200							 Specify a key number in place of □ in the Part No. 	
Reversible	Key selector (wave key)	Diecast zir (nickel-pla		LA9Z-SK-	LA9Z-SK-□PN02	2	0H: Standard key (reversible) 1H to 2H: Reversible key 3H to 6H: Non-reversible key	
Non-reversible		ĺ						
Gasket		Rubber		AP6M-WM	AP6M-WMPN10	10		

LED Lamps

Γ	Dimensions	Operating	Curren	t Draw	Part No.	Ordering No.	2 Illumination	Package	Base
	Voltage	Voltage	AC	DC	Turtivo.		Color Code	Quantity	Duot
	5V DC ±5%	5V DC +5%		8 mA (A, G, R, W)		LATD-52		1	
		JV DC ±370		7 mA (JW, S)	LAID-J@	LATD-5@PN10	Specify a color code	10	Exclusive for
			8 mA (A, R, W) 7 mA (G) 6 mA (JW, S)	6 mA (A, R, W) 5 mA (G)	LATD-6@	LATD-62	in place of ② in the Ordering No.	1	
		0V DC ±3 //		4 mA (JW, S)	LAID-02	LATD-6@PN10		10	
	→4 ←	12V AC/DC ±10%	9 mA (A, G, R, W)	8 mA (A, G, R, W)	LATD-1@	LATD-12	G: green	1	A6 series
	Voltage Electrode	8 mA (JW, S)	7 mA (JW, S)	LAID-I@	LATD-1@PN10	JW: pure white R: red	10		
.		24V AC/DC ±10%	9 mA (A, G, R, W)	8 mA (A, G, R, W)	LATD-22	LATD-22	S: blue	1	
		$\begin{array}{c} 24\text{V AC/DC} \pm 10\% \\ 8 \text{ mA (JW, S)} \end{array}$	8 mA (JW, S) 7 mA (JW, S)		LAID-20	LATD-2@PN10		10	

• Use a pure white (JW) LED lamp for yellow illumination

Transformer

				Package Quantity: 1
Transformer	Primary Voltage	Secondary Voltage	Part No. (Ordering No.)	Applicable LED
For 24V	100/110V AC	±10%	TWR512	
	200/220V AC	±10%	TWR522	LATD-22
	400/440V AC	±10%	TWR542	

• Terminal cover is supplied as standard.

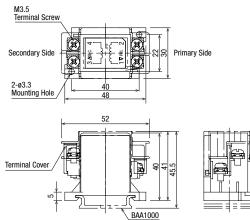
• Connect only one LATD to a transformer.

Specifications

	•	
	Operating Voltage	100/110V AC, 200/220V AC, 400/440V AC (50/60Hz)
Flush Silhouette	Current Draw	2.4VA
	Rated Insulation Voltage	600V
ø16	Insulation Resistance	100 M Ω minimum (500V DC megger)
ø22	Operating Temperature	-30 to +60°C (no freezing)
Ø22	Storage Temperature	-40 to +80°C (no freezing)
ø30	Operating Humidity	35 to 85% RH (no condensation)
Miniature	Vibration Resistance	Damage limits: 30Hz, amplitude 1.5 mm Operating extremes: 5 to 55Hz, amplitude 0.5 mm
Pilot Lights	Shock Resistance	Damage limits: 1,000 m/s ² Operating extremes: 100 m/s ²
	Dielectric Strength	2,500V AC, 1 minute
	Terminal Screw	M3.5
LB	Applicable Wire	2 mm ² maximum, 2 wires maximum
LB	Weight (approx.)	87g

Dimensions

All dimensions in mm.



Accessories

Accessories			When ord	lering, specify the Ordering No.
Shape	Material	Part No.	Ordering No.	Package Quantity
DIN 35 mm Rail Weight: 200g approx	Aluminum Length: 1000 mm	BAA1000	BAA1000PN10	10
End Clip Weight: 15g approx	Metal (zinc-plated steel) Applicable rail: BAA1000, BAP1000	BNL6	BNL6PN10	10

• See H-071 for DIN rail products.

APEM

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

<u> A</u> Safety Precautions

- Turn off the power to A series control units before starting installation, removal, wiring, maintenance, and inspection of the control units. 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.

Operating Instructions

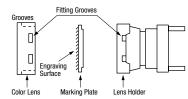
Replacement of Lens and Marking Plate

Removal

Remove the lens assembly (color lens, marking plate, lens holder, and spring) by holding the color lens recesses with the Lens Removal Tool (MT-101) and pulling it out. Remove the marking plate by disengaging the latches between the color lens and lens holder.

The marking plate must be engraved on the front side as shown at right.

When using a color film, insert it between the color lens and marking plate.



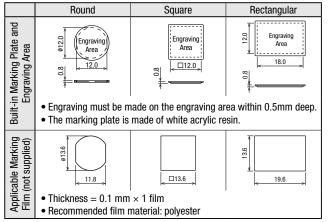
Installation

Place the marking plate on the lens holder in the correct direction, and press the color lens onto the lens holder to engage the latches. Put the spring on the lens holder and insert the lens holder into the housing in the correct direction.

Marking

For A series illuminated pushbuttons, legends and symbols can be engraved on the built-in marking plates, or printed film can be inserted under the lens for labelling purposes.

Marking Plate & Engraving Area



• For wiring, use wires of a proper size to meet the voltage and current requirements. Failure to tighten terminal screws may cause overheating and create a fire hazard.

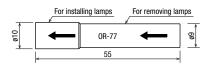
All ulmensions in h

Replacing the LED Lamp

Removal

Use the lamp holder tool (OR-77) to remove lamps. Do not use pliers. Installation

Use the lamp holder tool (OR-77) to install lamps. Note the correct side of the tool for removal or installation.





Control Boxes

Stop Switches Enabling

Emergency

Switches

Relays & Sockets

Circuit Protectors

Power Supplies

Controllers

Operator Interfaces

Sensors

AUTO-ID

Panel Mounting

When mounting the control units into a panel, use the optional locking ring wrench (MT-001) to tighten the locking ring. Do not use pliers. Tightening torque must not exceed $0.88 \text{ N}\cdot\text{m}$. Excessive tightening will damage the locking ring.

Wiring

Solder the terminal at 350°C within 3 seconds using a 60W soldering iron. Sn-Ag-Cu is recommended when using lead-free solder. When soldering, do not touch the control unit with the soldering iron. Also ensure that no tensile force is applied to the terminal. Do not bend the terminal or apply excessive force to the terminal. Use a non-corrosive rosin flux.

Installing the Socket

Install the socket on the control unit with the TOP markings on the control unit and the socket placed in the same direction.

Switch Guard

IP65 (IEC 60529) switch guards must be used with IP65 (IEC 60529) control units only. Even if IP65 type switch guards are installed, enclosed type (IP40) control units are not made waterproof.

Item		Switch Guard				
		IP65 (IEC 60529)	IP40 (IEC 60529)			
Control Unit	IP65	IP65	IP40	A6		
Control Unit	IP40	IP40	IP40			

ØTO
ø22
ø30
Miniature
Pilot Lights

LB		
46		

APEM

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Control Boxes Emergency Stop Switches Enabling Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets Circuit

LED Illumination

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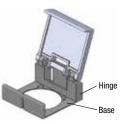
Flush Silhouette

Protectors Power Supplies

Operating Instructions

Opening/closing the Switch Guard (LB9Z-K2, LB9Z-K3P)

When opening/closing the switch guard while the switch guard is not installed on a panel, make sure to hold the hinge. Holding the base might result in damage. Also do not apply force on the guard in other than open/close directions, otherwise the hinge may be damaged.



Operating Voltage of LED Lamps

The operating voltage of 5V DC is measured at complete DC.

Other Notes

Close Proximity Mounting

When mounting pilot lights or illuminated pushbuttons collectively or lighting them continuously, heat may cause the ambient temperature to rise above the rated operating temperature. When the mounting panel is not made of metal or when the control units are mounted in an enclosed panel, provide for ventilation or lower the operating voltage.

Replacement of Buttons (Illuminated/Non-illuminated)

Do not replace buttons of maintained action units while the button is in the locked position. Replacing the button in the locked position may damage the internal mechanism. Be sure to release the button before replacing.

Operating and Storage Environment

- 1. Make sure that the operating/storage temperature and humidity are within the ratings.
- Do not use enclosed type units in an environment subject to oil, water or dust accumulation. In such an area, use the waterproof/ oiltight units (IP65).

Microswitch Contacts

Do not connect NO and NC contacts of a microswitch to different voltages or different power sources to prevent a dead short-circuit.

IP65 Units

IP65 units are evaluated by conventional cutting and cooling oils, and can not be used with some special oils. Contact IDEC for resistance against specific oils.

All dimensions in mm.

Selector Switches with Key

Observe the following instructions to prevent malfunction or damage.

- Insert the key to the bottom of the key hole.
- Do not remove the key from any key retained position.
- Besides the standard key (key number 0H), six other key numbers are available. Use a key of the matching number with the key cylinder. The standard key does not have a key number indication.

Ordering Terms and Conditions

Thank you for using IDEC Products.

By purchasing products listed in our catalogs, datasheets, and the like (hereinafter referred to as "Catalogs") you agree to be bound by these terms and conditions. Please read and agree to the terms and conditions before placing your order.

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.

Also, durability varies depending on the usage environment and usage conditions.

- (2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (4) The content of Catalogs is subject to change without notice.

2. Note on applications

- (1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards. Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.
- (2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.
- (3) When using IDEC products, be cautious when implementing the following.
 i. Use of IDEC products with sufficient allowance for rating and performance
 - Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails
 - Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications
- (4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.
- (5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.
 - i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health
 - ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems
 - iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

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Specifications and other descriptions in this brochure are subject to change without notice.

3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

4. Warranty

(1) Warranty period

The warranty period for IDEC products shall be one (1) year after purchase or delivery to the specified location. However, this shall not apply in cases where there is a different specification in the Catalogs or there is another agreement in place between you and IDEC.

(2) Warranty scope

Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

- i. The product was handled or used deviating from the conditions / $\ensuremath{\mathsf{environment}}$ listed in the Catalogs
- ii. The failure was caused by reasons other than an IDEC product
- iii. Modification or repair was performed by a party other than IDEC
- iv. The failure was caused by a software program of a party other than $\ensuremath{\mathsf{IDEC}}$
- v. The product was used outside of its original purpose
- vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs

vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from $\ensuremath{\mathsf{IDEC}}$

viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters)

Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

6. Service scope

The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

- Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
- (2) Maintenance inspections, adjustments, and repairs
- (3) Technical instructions and technical training

IDEC Izumi (H.K.) Co., Ltd.

IDEC (Shanghai) Corporation

Beiiing Branch

IDEC Corporation

Guangzhou Branch

Kona

(4) Product tests or inspections specified by you

The above content assumes transactions and usage within your region. Please consult with an IDEC sales representative regarding transactions and usage outside of your region. Also, IDEC provides no guarantees whatsoever regarding IDEC products sold outside your region.

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CÔNG TY TNHH THƯƠNG MẠI KỸ THUẬT ĐIỆN CITY

Nhà phân phối thiết bị điện công nghiệp hàng đầu Việt Nam











TE TAIWAN METERS





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