ø30 Switches and Pilot Lights

# TWN TWND Series



Heavy duty switches & pilot lights offer both variety and reliability.



- Pilot light is not approved by EN standards.
- DC-DC convertor unit is not approved by standards.
- See website for details on approvals and standards.



Model	Features	Page
Plastic TWN Series	The all-time bestseller since first developed. Suitable for versatile applications.	B-304
Diecast Zinc TWND Series	Heavy-duty switches for tough industrial usage.	B-326

## ø30 TWN/TWND Selection Guide

Function	Pushbutton						
Catamami	Flu	sh	Ext	ended	Extended wi	th Half Shroud	
Category	Momentary/	Maintained	Momentar	y/Maintained	Momentary	y/Maintained	
Shape		6	<b>*</b>	Diecast Zinc		Diecast Zinc	
Model	ABN1 AON1	ABD1 AOD1	ABN2 AON2	ABD2 AOD2	ABN2G AON2G	ABGD2 AOGD2	
Page	B-310	B-326	B-310	B-326	B-310	B-326	

Function		Pushbutton						
Cotomomi	Extended wit	h Full Shroud	Mush	nroom	Mushroom with Full Shroud			
Category	Momentary.	/Maintained	Momentary	/Maintained	Momentary	/Maintained		
		Diecast Zinc		Diecast Zinc		Diecast Zinc		
Shape								
Model	ABN2F	ABFD2	ABN3	ABD3	ABN3G	ABGD3		
iviodel	AON2F	AOFD2	AON3	AOD3	_	AOGD3		
Page	B-310	B-326	B-311	B-327	B-311	B-327		

Function		Pushbutton						
Cotogony	Jumbo M	lushroom	Jumbo Mushroom v	vith Shallow Shroud	Jumbo Mushroom	with Deep Shroud		
Category	Momo	entary	Mome	entary	Mome	entary		
		Diecast Zinc		Diecast Zinc		Diecast Zinc		
Shape								
Model	ABN4	ABD4	ABN4G	ABGD4	ABN4F	ABFD4		
Page	B-311	B-327	B-311	B-327	B-311	B-327		

Function	Pushbutton						
Category	Mushroom Push	lock Turn Reset (*1)	Mushroom P	ush Turn Lock	Mushi	room Pull	
Shape		Diecast Zinc		Diecast Zinc		Diecast Zinc	
Model	AVN3	AVD3	AJN3	AJD3	AZN3	AZD3	
Page	B-312	B-328	B-312	B-328	B-312	B-328	

Function	Pushbutton					
Category	Mushroom Push-Pull		Pin I	_ock		
Shape	_	Diecast Zinc	_	Diecast Zinc		
Model	_	AYD3	_	ABD8P		
Page	_	B-328	_	B-327		

 $<sup>^{\</sup>star}$  1) Cannot be used as emergency stop switch based on ISO 13850 and IEC 60947-5-5.



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## ø30 TWN/TWND Selection Guide

Function	LED Illuminated Pushbutton						
Catagory	Extended		Extended wit	h Half Shroud	Extended wit	th Full Shroud	
Category	Momentary	/Maintained	Momentary	/Maintained	Momentary	/Maintained	
Shape		Diecast Zinc		Diecast Zinc —		Diecast Zinc	
Model	ALN2 AOLN2	ALD2 AOLD2	ALGN2 AOLGN2	_	ALFN2 AOLFN2	ALFD2 AOLFD2	
Page	B-313	B-329	B-313		B-313	B-329	

Function	LED Illuminated Pushbutton						
Category	Mushroom Momentary/Maintained		Mushroom Pushlock Turn Reset (*1)		Mushroom Push Turn Lock		
Shape		Diecast Zinc		Diecast Zinc	6	Diecast Zinc —	
Model	ALN3 AOLN3	ALD3 AOLD3	AVLN3	AVLD3	AJLN3	_	
Page	B-313	B-330	B-314	B-330	B-313		

Function		Selector Switches						
Category	Kr	nob	Le	ver	K	ey		
Shape		Diecast Zinc		Diecast Zinc		Diecast Zinc		
Model	ASN	ASD	ASN□L	ASD□L	ASN□K	ASD□K		
Page	B-316	B-331	B-317	B-332	B-318	B-333		

Function		Selector Switch	Selector P	ushbutton	
Category	Key	LED Illumir	ated Knob	Ring O <sub>l</sub>	perator
Shape			Diecast Zinc		Diecast Zinc
Model	ASN□K-N024401	ASLN	ASLD	ASBN2	ASBD2
Page	B-319	B-320	B-334	B-323	B-335

Function	LED Illuminated Pilot Light					
Category	Dome		Square Extended (IP40)	Rectangular (Marking) (IP40)		
Shape		Diecast Zinc				
Model	APN1	APD1	UPQN3B	UPQN4		
Page	B-324	B-336	B-324	B-324		

 $<sup>^{\</sup>star}$  1) Cannot be used as emergency stop switch based on ISO 13850 and IEC 60947-5-5.

# ø30 TWN/TWND Ratings/Specifications

# Heavy duty switches & pilot lights offer both variety and reliability. Endures harsh environments.

Equipped with HW-U contact blocks featuring finger-safe (IP20) structure and spring-up terminals.

ø30 TWN Series (plastic)



ø30 TWND Series (Diecast Zinc)



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## **Ratings and Specifications**

#### **Contact ratings**

Pushbuttons	Rated insulation voltage	600V
Illuminated Pushbuttons	Rated continuous current	10A
Selector Switches Illuminated Selector Switches Selector Pushbuttons	IIS 1:82111-5-1	AC-15 (A600) DC-13

## Contact ratings by utilization category

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

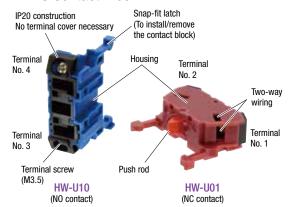
Operating Voltage	e		24V	48V	50V 110V 220V 4			
AC		AC-12 Control of resistive loads and solid state loads	10A	_	10A	10A	6A	2A
Operating	50/60 Hz	AC-15 Control of electromagnetic loads (> 72 VA)	10A	_	7A	5A	3A	1A
Current	DC	DC-12 Control of resistive loads and solid state loads	10A	5A	_	2.2A	1.1A	_
	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	е		24V	48V	48V 50V 110V 220V			
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).
- Silver contacts
- . Minimum applicable load: 3V AC/DC, 5 mA (applicable range may vary with operating conditions and load types)
- For mono-lever switches and cam switches, see the brochures of each product.

#### **HW-U Contact Block**



Part No.	HW-U10	HW-U01	HW-U10R	HW-U01R		
Contact	_/_	7	_/_	7		
Contact	1NO	1NC	EM (NO) (early make)	LB (NC) (late break)		
Terminal No.	3-4	1-2	3-4	1-2		
Housing color	Blue	Reddish purple	Blue	Reddish purple		
Push Rod color	Green	Red	Black	White		
Weight	Approx. 11q					

- Up to 4 contacts in two decks can be mounted onto each operator.
  (AZN, AZD, AYD: Up to 2 contact blocks in one deck)
- Cannot be used on operators in dark gray or light gray color.
- Gold contact available (gold-plated silver)

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**LED Illuminated Part Specifications** 

Unit						amp
UIIIL	Rated Voltage		Operating Voltage		Lamp Base	Part No.
	6V AC/DC		6V AC/DC			LSRD-6
	12V AC/DC		12V AC/DC			LSRD-1
	24V AC/DC		24V AC/DC			LSRD-2
	100/110V AC		100/110V AC		BA9S/13	LODD C
	115/120V AC (*1)		115/120V AC (*1)	100/		
Illuminated pushbutton	120V AC (*2)		120V AC (*2)			
Illuminated selector switch	200/220V AC		200/220V AC	±10%		
Pilot light	230/240V AC (*1)	50/60 Hz	230/240V AC (*1)			
	240V AC (*2)		240V AC (*2)			LSRD-6
	380V AC		380V AC			
	400/440V AC		400/440V AC			
	480V AC		480V AC			
	110V DC		90 to 140V DC			

Illuminated Part Type and Shape

	Illuminated Unit					Pilot	Light
Power Unit	Full voltage adapter	Transfo	ormer	DC-DC converter	Full voltage adapter (unibody)	Transformer	DC-DC converter
Rated Voltage	6V, 12V, 24V AC/DC	100 to 240V AC	380V AC min.	110V DC	6V, 12V, 24V AC/DC	100 to 480V AC	110V DC
Polarity	None	None	None	X1 (+) X2 (-)	None	None	X1 (+) X2 (–)
Shape/Terminal	X1 X2	X1 X2		X1 X2	(APN1)	2-	X1 X2

<sup>•</sup> Note the polarity for wiring when connecting to DC-DC converter unit.

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#### LED Lamn Ratings (LSRD)

LED Lam	p Ratings	(LSRD)	X2	
Part No.		LSRD-6	LSRD-1	LSRD-2
Lamp Base		BA9S/13		
Rated Voltage	e	6V AC/DC	12V AC/DC	24V AC/DC
Voltage Rang	je	6V AC/DC ±10%	12V AC/DC ±10%	24V AC/DC ±10%
Current	DC	10mA	7mA	7mA
Draw	AC	14mA	8mA	8mA
Voltage Mark	king	Die stamped on the base		
Life (reference	ce value)	Approx. 50,000 hours (The luminance is reduced to 50% the initial	intensity when used on complete DC at 25°C.)	
Internal Circu	uit	X1 — Noise	d current circuit protection circuit ier circuit er protection circuit	Example: LSRD-2
Weight		Approx. 2g		

<sup>•</sup> Only one color is available for LSRD so there are no codes to specify the color in the part no.

See LED lamps, see LED Lamp Ratings below.
 \*1) Illuminated pushbutton, illuminated selector switch

<sup>\*2)</sup> Pilot light

Control Boxes
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#### **Specifications**

Specifications						
Operating Temperature			Non-illuminated: -25 to +70°C (no freezing) Illuminated: -25 to +50°C (no freezing)			
Storage Temperature			-40 to +80°C (no freezing)			
Operating Humidity			45 to 85% RH (no condensation)			
Contact Resistance			50 mΩ maximum (initial value)			
Insulation Resistance			100 MΩ minimum (500V DC megger)			
Dielectric Strength	Dielectric Strength		Between live and dead metal parts: 2,500V AC, 1 minute (Full voltage and pilot lights: 2,000V AC, 1 minute) 2000V AC, (pilot lights: 6V AC/DC, 12V, 24V)			
Vibratian Desistance	Damage limits		30 Hz, amplitude 1.5 mm			
Vibration Resistance	Operation extremes		5 to 55 Hz, amplitude 0.5 mm			
Shock Resistance	Damage limits		1000 m/s <sup>2</sup>			
SHOCK RESISTANCE	Operation extremes		100 m/s <sup>2</sup>			
		Momentary	5,000,000			
	Pushbutton	Maintained	500,000 (over 3 contacts: 250,000)			
	rusiibulloii	Push lock turn reset	500,000			
		Pull	500,000			
Mechanical Life	Illianda da da calebratta a	Momentary	2,500,000			
(minimum operations)	Illuminated pushbutton	Maintained	500,000 (over 3 contacts: 250,000)			
	Selector switch		500,000			
	Key selector switch		500,000			
	Illuminated selector switch	ch	500,000			
	Selector pushbutton		250,000			
		Momentary	500,000 Switching frequency 1800 operations/h, duty ratio 40%			
	Pushbutton	Maintained	500,000 (over 3 contacts: 250,000) Switching frequency 900 operations/h, duty ratio 40%			
		Push lock turn reset	500,000 Switching frequency 900 operations/h, duty ratio 40%			
Floridaellifo		Momentary	500,000 Switching frequency 1800 operations/h, duty ratio 40%			
Electrical Life (minimum operations) (*1)	Illuminated pushbutton	Maintained	500,000 (over 3 contacts: 250,000) Switching frequency 900 operations/h, duty ratio 40%			
	Selector switch		500,000 Switching frequency 1200 operations/h, duty ratio 40%			
	Key selector switch		500,000 Switching frequency 1200 operations/h, duty ratio 40%			
	Illuminated selector switch	ch	500,000 Switching frequency 1200 operations/h, duty ratio 40%			
	Selector pushbutton		250,000 Switching frequency 900 operations/h, duty ratio 40%			
		Pushbutton	ABN122: 82g ABN322: 87g			
		Illuminated pushbutton	ALN22222DN: 106g ALN21622DN: 163g			
	TWN series	Selector switch	ASN222N: 83g ASN2K22N: 120g			
		Illuminated selector switch	ASLN22222DN: 106g ASLN21622DN: 163g			
Weight (approx)		Pilot light	APN122DN: 46g APN116DN: 125g			
Weight (approx.)		Pushbutton	ABD122: 108g ABD322: 113g			
		Illuminated pushbutton	ALD22222DN: 132g ALD21622DN: 189g			
	TWND series	Selector switch	ASD222N: 110g ASD2K22N: 147g			
		Illuminated selector switch	ASLD22222DN: 133g ASLD21622DN: 190g			
		Pilot light	APD122DN: 75g APD116DN: 152g			

<sup>\*1)</sup> Load condition 220V AC 3A (AC-15)

#### **Degree of Protection**

Series	Unit	Model	IEC 60529	JIS C 0920
	Pushbutton	ABN, AON, AVN		
	Illuminated pushbutton	ALN, AOLN, AVLN		
	Selector switch	ASN, ASN□L		
TM/N corice	Key selector switch	ASN□K	IP65	Dust-proof/jet-proof
TWN series	Illuminated selector switch	ASLN		
	Selector pushbutton	ASBN		
	Round pilot light	APN		
	Square pilot light	UPQN	IP40	_
	Pushbutton	ABD, AOD, AVD		
	Illuminated pushbutton	ALD, AOLD, AVLD		
	Selector switch	ASD, ASD□L		
TWND series	Key selector switch	ASD□K	IP65	Dustproof/jet-proof
Diecast zinc	Illuminated selector switch	itch ASLD		
	Selector pushbutton	ASBD		
	Round pilot light	APD		

<sup>•</sup> Switches/pilot lights have been tested in a test room in accordance with the degree of protection standards, by installing on an enclosure to valuate the effect on the enclosure or inside the switch or pilot light.

#### For harsh environment such as torrid/frigid area

TWN/TWND series for harsh environment such as tropical/frigid area is also available (not approved by standards). Contact IDEC for details.

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	Circuit Protectors
	Power Supplies
	LED Illumination
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_	Pilot Lights

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Stop Switches

**Explosion Proof** Terminal Blocks

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**Power Supplies** 

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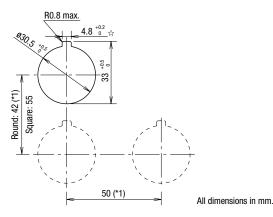
Interfaces

Circuit Protectors

Emergency

Enabling Switches Safety Products

#### Mounting Hole Layout/Mounting Centers



- The minimum mounting centers are applicable to pilot lights with one layer of contact blocks (one to two contact blocks). When two layers of contact blocks (four contact blocks) are mounted, determine the minimum mounting centers in consideration of convenience for wiring.
- \*1) Mushroom with shroud: 50 mm minimum
- \*1) Jumbo mushroom: 67 mm minimum
- \*1) Jumbo mushroom with shroud: 77 mm minimum

When high temperature is expected, take necessary measures such as

securing sufficient mounting centers or using a cooling fan. • The  $4.8^{+0.2}_{-0}$  mm recess is for preventing rotation and is not necessary when the nameplate or anti-rotation ring is not used.

Note: For mounting hole layout of mono-lever switches and cam switches, see IDEC's website.

#### **Notes for Ordering**

#### Standard models

- Specify Ordering No. when ordering.
- Specify a color code in place of \*
- Pilot lights, illuminated pushbuttons, and illuminated selector switches have an LED lamp installed.
- Pilot lights are equipped with a terminal cover.
- 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 TWN/TWND series cannot be guaranteed when a commercially available lamp is used.

- · Terminal covers, nameplates, and accessories for mono-lever swictch and cam switch are ordered separately.
- For terminal cover, nameplate and other accessories of mono-lever switches and cam switches, see IDEC's website.

#### Ordering Information

Pushbutton Flush Silhouette

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Miniature

Pilot Lights

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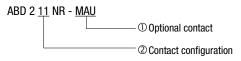
CS

When specifying gold-plated silver contact and contact configuration:

TWN series (B-310 to B-312)



TWND series (B-326 to B-328)



<Codes> ① Optional contact

MAU: Gold-plated silver

2 Contact configuration

10: 1NO 01: 1NC

11: 1NO1NC 20: 2N0

02: 2NC

2N02NC 22: 40: 4N0

04: 4NC

1N03NC 13: 31: 3N01NC

30: 3N0

3NC 03:

12: 1N02NC

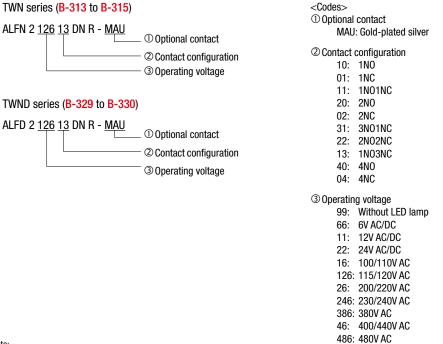
2N01NC

- Pushbutton with one or three contact blocks contains a dummy block.
- Mushroom pull pushbuttons AZN, AZD and mushroom push-pull AYD have up to two contacts in one layer.

#### **Ordering Information**

#### **Illuminated Pushbutton**

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



#### Note

- Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1NC, 1NO-2NC, and 3NC, are not available for models of 100V AC or over.
- ullet Illuminated pushbuttons of 24V AC/DC and below with two or four contact blocks contain a dummy block.
- See B-309 for how to specify 110V DC model (DC-DC converter).
- 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.

#### **Selector Switch**

When specifying gold-plated silver contact and contact configuration:

```
TWND series (B-316 to B-319)

ASN 2 11 N - MAU

Optional contact

Codes>

ASD 2 11 N - MAU

Optional contact

Contact configuration

Optional contact

MAU: Gold-plated silver
```

#### Key removable position code (example)

	Position	Voy removable position	Key removable	Part No. Example				
	POSITION	Key removable position	position code		TWN series	TWND series		
		Removable in all positions	(blank)	ASN2K20N	ASN2K20N-N024401	ASD2K20N		
	Maintained	Removal in left only	В	ASN2K20NB	ASN2K20NB-N024401	ASD2K20NB		
-position		Removable in right only	С	ASN2K20NC	ASN2K20NC-N024401	ASD2K20NC		
	Spring return from right	Removal in left only	(blank)	ASN21K20N	ASN21K20N-N024401	ASD21K20N		
	Spring return from left	Removable in right only	(blank)	ASN22K20N	ASN22K20N-N024401	ASD22K20N		
		Removable in all positions	(blank)	ASN3K20N	ASN3K20N-N024401	ASD3K20N		
		Removable in left and center	В	ASN3K20NB	ASN3K20NB-N024401	ASD3K20NB		
		Removable in right and center	С	ASN3K20NC	ASN3K20NC-N024401	ASD3K20NC		
	Maintained	Removable in center only	D	ASN3K20ND	ASN3K20N <b>D</b> -N024401	ASD3K20ND		
		Removable in right and left	E	ASN3K20NE	ASN3K20NE-N024401	ASD3K20NE		
		Removal in left only	G	ASN3K20NG	ASN3K20NG-N024401	ASD3K20NG		
nosition		Removable in right only	Н	ASN3K20NH	ASN3K20NH-N024401	ASD3K20NH		
-position		Removable in left and center	(blank)	ASN31K20N	ASN31K20N-N024401	ASD31K20N		
	Spring return from right	Removable in center only	D	ASN31K20ND	ASN31K20ND-N024401	ASD31K20ND		
		Removal in left only	G	ASN31K20NG	ASN31K20NG-N024401	ASD31K20NG		
		Removable in right and center	(blank)	ASN32K20N	ASN32K20N-N024401	ASD32K20N		
	Spring return from left	Removable in center only	D	ASN32K20ND	ASN32K20ND-N024401	ASD32K20ND		
		Removable in right only	Н	ASN32K20NH	ASN32K20NH-N024401	ASD32K20NH		
	Spring return two-way	Removable in center only	(blank)	ASN33K20N	ASN33K20N-N024401	ASD33K20N		

 $<sup>\</sup>bullet$  The key cannot be removed in spring return positions.



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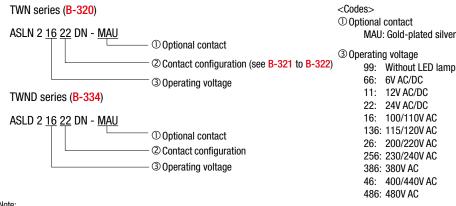
Circuit

Protectors

#### Ordering Information

#### Illuminated Selector Switch

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



- Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1NC, 1NO-2NC, and 3NC, is not available for models of 100V AC or over.
- Illuminated selector switches of 24V AC/DC and below with two or four contact blocks contain a dummy block.
- See below for how to specify 110V DC model (DC-DC converter).
- 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.

#### Pilot Light (LED)

When specifying LED operating voltage:

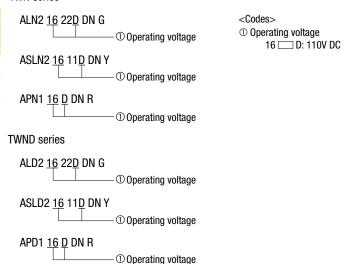
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TWN series (B-324 to B-325)
                                                  <Codes>
                                                  ① Operating voltage
  APN1 26 DN R
                                                       99: Without LED lamp
                                                       66: 6V AC/DC
                       ① Operating voltage
                                                       11: 12V AC/DC
  UPQN3B 22 D R
                                                       22: 24V AC/DC
                                                        16: 100/110V AC
                       ① Operating voltage
                                                        126: 115/120V AC
                                                       26: 200/220V AC
  TWND series (B-336)
                                                        246: 230/240V AC
                                                        386: 380V AC
  APD1 26 DN R
                                                        46: 400/440V AC
                       ① Operating voltage
                                                        486: 480V AC
```

- See below for how to specify 110V DC model (DC-DC converter). Color codes for units without LED lamps: R (red), G (green), A (amber), Y (vellow), 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.

#### DC-DC Convertor Model (110V DC)

When specifying DC-DC convertor type on illuminated pushbuttons, illuminated selector switches, and pilot lights:

#### TWN series



- See 110V DC model (DC-DC converter) is not approved by standards (operating voltage: 90 to 140V DC).
- Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1NC, 1NO-2NC, and 3NC, is not available for 100V DC model (DC-DC converter).

#### Flush/Extended/Extended w/Half Shroud/Extended with Full Shroud

Package Quantity: 1

			1		1	Package Quantity: 1	. ≐
Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)	t Lights
Flush		1NO	ABN110*	В			ડ
ABN1		1NC	ABN101*	Ğ			
AON1		1NO-1NC	ABN111*	R			
	Momentary	2N0	ABN120*	Y S		Panel Thickness 0.8 to 7.5	APEM
		2NC	ABN102*	W			Switches &
		2NO-2NC	ABN122*	Note	4		Pilot Lights
		1NO	A0N110*	В			Control Boxes
		1NC	A0N101*	G	45.4 (1 or 2 blocks)	29.6	Emergency Stop Switches
	Maintained	1NO-1NC	A0N111*	R Y	65.4(3 or 4 blocks)	9 039	Enabling
	Walillalileu	2N0	A0N120*	S			Switches
		2NC	A0N102*	W			Safety Products
		2NO-2NC	A0N122*	Note			
Extended		1NO	ABN210*	В			Explosion Proof
ABN2 AON2		1NC	ABN201*	G			Terminal Blocks
AONZ	Momentary	1NO-1NC	ABN211*	R			Polovo & Cookete
	Womontary	2N0	ABN220*	Y		Panel Thickness 0.8 to 7.5	Relays & Sockets
		2NC	ABN202*	S W			Circuit Protectors
		2NO-2NC	ABN222*		4	9324	Power Supplies
		1NO	A0N210*	В			
		1NC	A0N201*	Ğ	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks)	29.6	LED Illumination
	Maintained	1NO-1NC	A0N211*	R	65.4 (3 or 4 blocks)		Controllers
		2N0	A0N220*	Y S			
		2NC	A0N202*	W			Operator Interfaces
Extended with Helf Chroud		2NO-2NC	A0N222*				Sensors
Extended with Half Shroud ABN2G		1NO	ABN2G10*	В			
AON2G		1NC 1NO-1NC	ABN2G01* ABN2G11*	G			AUTO-ID
	Momentary	2N0	ABN2G11* ABN2G20*	R Y			
		2NC	ABN2G02*	- S S	Pa	Panel Thickness 0.8 to 3.5	
		2NO-2NC	ABN2G22*	W			
		1NO	AON2G10*		4.1	824 835 835	Flush Silhouette
		1NC	AON2G01*	В			ø16
		1NO-1NC	AON2G11*	G		8.5 29.6 20.5 039	-00
	Maintained	2N0	AON2G20*	R Y	23.0 (0 01 1 010010)	+ 1000 →	ø22
		2NC	AON2G02*	S			ø30
		2NO-2NC	AON2G22*	W			Miniature
Extended with Full Shroud		1NO	ABN2F10*				
ABN2F		1NC	ABN2F01*	В			Pilot Lights
AON2F		1NO-1NC	ABN2F11*	– G R			
	Momentary	2N0	ABN2F20*	Ϋ́		Danel Thisleness O.O.to C	
		2NC	ABN2F02*	S		Panel Thickness 0.8 to 6	
		2NO-2NC	ABN2F22*	W			TWN
		1NO	AON2F10*		414	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TWND
		1NC	AON2F01*	B G	45.4 (1 or 2 blocks) 14. 65.4 (3 or 4 blocks) 16.5		
	84-111	1NO-1NC	AON2F11*	R R		14 29.6 16.5 Ø39	ARN
	Maintained	2N0	A0N2F20*	Υ	<u> </u>	H	CS
		2NC	A0N2F02*	S			
		ONIO ONIO	ACNOFOC	- W	I		

A0N2F22\*

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

2NO-2NC

- Round bezel and shroud (metal): Chrome-plated
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- See B-312 for bottom view.
- Terminal screws: M3.5
- · Integrated terminal cover

Note ABN1, AON1 with button color of B (black), G (green), or (R) red Supply of color buttons B, G, R has been discontinued for ABN1/AON1 without color code. When ordering, make sure to specify the required button color code.

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Controllers

Sensors AUTO-ID

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#### Mushroom/Mushroom w/Full Shroud/Jumbo Mushroom/Jumbo Mushroom w/Shallow Shroud/Jumbo Mushroom w/Deep Shroud

Package Quantity: 1

	Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)
Mushro ABN3	oom		1NO	ABN310*	В		
AON3			1NC	ABN301*	G		
		Momentary	1NO-1NC	ABN311*	R		
ıl		,	2N0	ABN320*	Y S	Panel Thickness 0.8	to 7.5
	1		2NC 2NO-2NC	ABN302* ABN322*	W		
			1NO	ADN322* AON310*		4 8 8	(
-			1NC	A0N301*	B G		
-		Maintainad	1NO-1NC	A0N311*	R	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 22	29.6
		Maintained	2N0	A0N320*	Y		
			2NC	A0N302*	S W		
			2NO-2NC	A0N322*			
Mushro ABN3G	oom with Full Shroud		1NO	ABN3G10*		Panel Thickness 0.8	to 6.5 29.6
, JABAGG			1NC	ABN3G01*	В		
		Momentary	1NO-1NC	ABN3G11*	G R	4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4	
•		Womentary	2N0	ABN3G20*	Y S		
			2NC	ABN3G02*	w	43.9 (1 or 2 blocks) 63.9 (3 or 4 blocks) 23.5	
			2NO-2NC	ABN3G22*			
Jumbo ABN4	Mushroom		1NO	ABN410*		Panel Thickness 0.8 to 7.5	_
1,011	The same of the sa		1NC	ABN401*		Tallel Mickiess 0.0 to 7.5	
		Momentory	1NO-1NC	ABN411*	B G	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
		Momentary	2N0	ABN420*	R Y		
			2NC	ABN402*	ı	45.4 (1 or 2 blocks)	
			2NO-2NC	ABN422*		65.4 (3 or 4 blocks) 29	29.6
	Mushroom with w Shroud		1NO	ABN4G10*		Panel Thickness 0.8 to 7.5	
ABN4G			1NC	ABN4G01*			
			1NO-1NC	ABN4G11*	B G		
		Momentary	2N0	ABN4G20*	R	4 4 5 5 5 5	
			2NC	ABN4G02*	Y		
			2NO-2NC	ABN4G22*		45.4 (1 or 2 blocks) 29	29.6
	Mushroom with		1NO	ABN4F10*		Panel Thickness 0.8 to 7.5	
Deep S ABN4F			1NC	ABN4F01*		Tanot Thioritios 6.0 to 7.0	
			1NO-1NC	ABN4F11*	B G		
		Momentary	2N0	ABN4F20*	R Y	4	
			2NC	ABN4F02*	Ţ		
			2NO-2NC	ABN4F22*		45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 33	29.6
					) //-	<u> </u>	

- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)
- Round bezel and shroud (metal): Chrome-plated
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- See B-312 for bottom view.
- Terminal screws: M3.5
- Integrated terminal cover

#### Mushroom Pushlock Turn Reset/Mushroom Push Turn Lock/Mushroom Pull

Package Quantity: 1

Shape	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions (All dimensions in mm.)
Mushroom Pushlock Turn Reset (*1) AVN3	1NO	AVN310N*		
AVINO	1NC	AVN301N*		Panel Thickness 0.8 to 7.5
	1NO-1NC	AVN311N*	R Y	
	2N0	AVN320N*	Y	
	2NC	AVN302N*		45.4 (1 or 2 blocks) 29.6
	2NO-2NC	AVN322N*		65.4 (3 or 4 blocks) 23.6
Mushroom Push Turn Lock AJN3	1NO	AJN310N*		Panel Thickness 0.8 to 7.5
AJNO	1NC	AJN301N*	<u> </u>	
	1NO-1NC	AJN311N*	B G R	
	2N0	AJN320N*	R	
	2NC	AJN302N*	_ '	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 23.6
	2NO-2NC	AJN322N*		
Mushroom Pull AZN3	1NO	AZN310N*		
AZINS	1NC	AZN301N*		Panel Thickness 0.8 to 7.5
	1NO-1NC	AZN311N*	B G R	
	2N0	AZN320N*	R	4 6 4
	2NC	AZN302N*	Υ	45.4 25.1 5.5 stroke 29.6
				H 1910 H

- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow)
- Round bezel (metal): Chrome-plated
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- . Mushroom pull has up to 2 contact blocks.
- Terminal screws: M3.5
- · Integrated terminal cover
- \*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).

#### Pushbutton operation

Pushlock Turn Reset

Button is maintained when pressed and is reset when turned clockwise.

Push Turn Lock

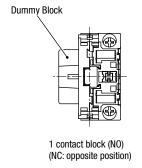
Button is locked when turned clockwise in the depressed position and is reset when turned counterclockwise.

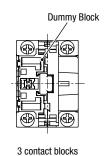
Pulling the button operates the contacts, and releasing the button return the contacts.

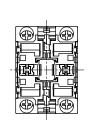
#### Pull contact operation

Contact	AZ	N3
Contact	Normal	Pull
1NO	o <sub>r</sub> o	- - -
2NO-2NC	ტ •1•	0 0 ere
2N0	مړه مړه	00 00 T T
2NC	•••	<b>●</b> 1● <b>●</b> 1●

#### Bottom View (for non-illuminated pushbuttons and selector switches)







2/4 contact blocks

- See B-348 for wiring. • Integrated terminal cover

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#### LED Illuminated Extended/Extended with Half Shroud/Extended with Full Shroud

Package Quantity: 1

Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code	Dimensio Page
Extended				1NO-1NC	ALN22211DN*		
LN2			24V AC/DC	2N0	ALN22220DN*	7	
OLN2				2NC	ALN22202DN*	R	
				1NO-1NC	ALN21611DN*	G	
		Momentary	100/110V AC	2N0	ALN21620DN*	<b>∀</b>	
		,,		2NC	ALN21602DN*	⊢ A S	
				1NO-1NC	ALN22611DN*	PW	
			200/220V AC	2N0	ALN22620DN*	7	
(24VAC/DC)				2NC	ALN22602DN*		
	BA9S			1NO-1NC	AOLN22211DN*		
			24V AC/DC	2N0	AOLN22220DN*		
				2NC	AOLN22202DN*	R	
				1NO-1NC	AOLN21611DN*	G	
		Maintained	100/110V AC	2N0	A0LN21620DN*	- Y	
			100/1107/10	2NC	A0LN21602DN*	⊢ A S	
				1NO-1NC	AOLN22611DN*	PW	
With transformer			200/220V AC	2NO	AOLN22620DN*	┥ '"	
(100/110V AC)			200/220170	2NC	AOLN22602DN*	-	
tended with Half Shroud				1NO-1NC	ALGN22211DN*	+	
GN2			24V AC/DC	2NO	ALGN22211DN* ALGN22220DN*	+	
DLGN2			24V A0/D0	2NC	ALGN2220DN*	R	
				1NO-1NC	ALGN21611DN*	G	
		Momentary	100/110V AC	2NO		Ϋ́	
		ivioinemai y	TOU/TTUV AC	2NC	ALGN21620DN*	— A	
				1NO-1NC	ALGN21602DN*	S PW	
			200/2201/ 40		ALGN22611DN*	- FVV	
(24V AC/DC)			200/220V AC	2NO 2NC	ALGN22620DN*	$\dashv$	
(247 110/20)	BA9S			1NO-1NC	ALGN22602DN*	-	B-31
			24// AC/DC	2NO	AOLGN22211DN*	$\dashv$	
The same of the sa			24V AC/DC	2NC	AOLGN22220DN*	-  <sub>B</sub>	
					AOLGN22202DN*	– R G	
		Maintainad	100/110// 40	1NO-1NC	AOLGN21611DN*	⊢ Ϋ́	
		Maintained	100/110V AC	2N0	AOLGN21620DN*	_ A	
				2NC	AOLGN21602DN*	S	
With transformer			000/0001/ 40	1NO-1NC	AOLGN22611DN*	PW	
(100/110V AC)			200/220V AC	2N0	AOLGN22620DN*	-	
				2NC	AOLGN22602DN*		-
ctended with Full Shroud LFN2			0.41/4.0/200	1NO-1NC	ALFN22211DN*	-	
DLFN2			24V AC/DC	2N0	ALFN22220DN*		
				2NC	ALFN22202DN*	_ R G	
			100/4/20110	1NO-1NC	ALFN21611DN*	γ	
		Momentary	100/110V AC	2N0	ALFN21620DN*	Ä	
				2NC	ALFN21602DN*	S	
				1NO-1NC	ALFN22611DN*	PW	
(24V AC/DC)			200/220V AC	2N0	ALFN22620DN*	4	
(=	BA9S			2NC	ALFN22602DN*		
				1NO-1NC	AOLFN22211DN*	4	
The sales			24V AC/DC	2N0	AOLFN22220DN*	4	
				2NC	AOLFN22202DN*	R	
				1NO-1NC	AOLFN21611DN*	G Y	
		Maintained	100/110V AC	2N0	AOLFN21620DN*	– ř	
				2NC	AOLFN21602DN*	S	
MAPIL 1				1NO-1NC	AOLFN22611DN*	PW	
With transformer (100/110V AC)			200/220V AC	2N0	AOLFN22620DN*	_	
(100/110V AC)	1		1	2NC	AOLFN22602DN*	1	

- 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.

- Round bezel (metal): Chrome-plated

  See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
- Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.
- See B-308 for other contact configurations and gold-plated silver contacts.
   See B-314 for bottom view.
   Terminal screws: M3.5

- · Integrated terminal cover



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#### LED Illuminated Mushroom (ø40)/Mushroom Pushlock Turn Reset/Mushroom Push Turn Lock

Package Quantity: 1

						га	ckage Quantity: 1
Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code	Dimensions Page
Mushroom (ø40)				1NO-1NC	ALN32211DN *		
ALN3 AOLN3			24V AC/DC	2N0	ALN32220DN *		
AULINS				2NC	ALN32202DN *	R	
				1NO-1NC	ALN31611DN *	G	
		Momentary	100/110V AC	2N0	ALN31620DN *	Y	
				2NC	ALN31602DN *	S	
				1NO-1NC	ALN32611DN *	PW	
			200/220V AC	2N0	ALN32620DN *		
(24V AC/DC)	DAGC			2NC	ALN32602DN *		
	BA9S			1NO-1NC	AOLN32211DN *		
			24V AC/DC	2N0	AOLN32220DN *		
				2NC	AOLN32202DN *	R	
				1NO-1NC	AOLN31611DN *	G	
		Maintained	100/110V AC	2N0	AOLN31620DN *	Y A	
				2NC	AOLN31602DN *	S	
				1NO-1NC	AOLN32611DN *	PW	
With tranformer			200/220V AC	2N0	AOLN32620DN *		
(100/110V AC)				2NC	AOLN32602DN *		B-315
Mushroom Pushlock Turn Reset				1NO-1NC	AVLN32211DN *		D-313
AVLN3 (*1)			24V AC/DC	2N0	AVLN32220DN *		
				2NC	AVLN32202DN *		
				1NO-1NC	AVLN31611DN *	]	
	BA9S	_	100/110V AC	2N0	AVLN31620DN *	R	
				2NC	AVLN31602DN *		
				1NO-1NC	AVLN32611DN *		
			200/220V AC	2N0	AVLN32620DN *	]	
(24V AC/DC)				2NC	AVLN32602DN *		
Mushroom Push Turn Lock				1NO-1NC	AJLN32211DN *		
AJLN3			24V AC/DC	2N0	AJLN32220DN *	]	
				2NC	AJLN32202DN *	R	
				1NO-1NC	AJLN31611DN *	G	
	BA9S	_	100/110V AC	2N0	AJLN31620DN *	Ϋ́	
				2NC	AJLN31602DN *	A	
				1NO-1NC	AJLN32611DN *	PW	
			200/220V AC	2N0	AJLN32620DN *		
(24V AC/DC)				2NC	AJLN32602DN *	]	

- 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.
- Round bezel (metal): Chrome-plated
- See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
- See B-308 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.
- \*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN or HN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).
- Terminal screws: M3.5
- · Integrated terminal cover

#### Illuminated pushbutton operation

6V, 12V, 24V AC/DC

Pushlock Turn Reset

• See B-348 for wiring.

Button is maintained when pressed and is reset when turned clockwise.

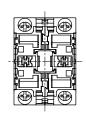
#### Push Turn Lock

Button is locked when turned clockwise in the depressed position and is reset when turned counterclockwise.

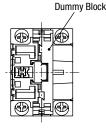
#### Bottom View (for illuminated pushbuttons, selector switches, and pilot lights)

Voltage Adapter

1 contact block



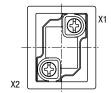
3 contact blocks



2/4 contact blocks



100/110V, 200/220V AC



110V DC, 380V AC or over

DC-DC converter unit Terminal No. X1: positive

Terminal No. X2: negative

IDEC

Control Boxes

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Miniature

Pilot Lights

TWND ARN CS

Emergency Stop Switches

> Enabling Switches

#### **Dimensions (Illuminated Pushbuttons)**

#### Extended, LED illuminated (momentary/maintained)

All dimensions in mm.

Panel Thickness 0.8 to 7.5

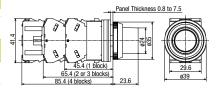
ALN2/AOLN2 (terminal screws M3.5)

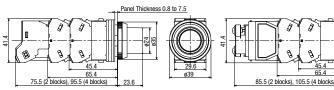
Integrated terminal cover

6, 12, 24V AC/DC · Without LED Lamp

100/110V AC, 200/220V AC (240V AC or below)

110V DC/380V AC or over



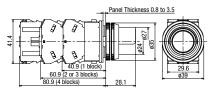


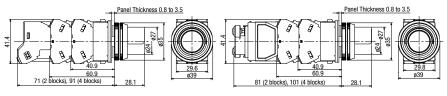
#### Extended with Half Shroud, LED illuminated (momentary/maintained) ALGN2/AOLGN2 (terminal screws M3.5) Integrated terminal cover

6, 12, 24V AC/DC· Without LED Lamp

100/110V AC, 200/220V AC (240V AC or below)

110V DC/380V AC or over



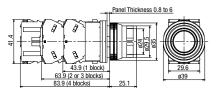


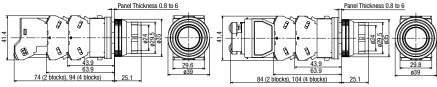
#### Extended with Full Shroud, LED illuminated (momentary/maintained) ALFN2/AOLFN2 (terminal screws M3.5) Integrated terminal cover

6, 12, 24V AC/DC · Without LED Lamp

100/110V AC, 200/220V AC (240V AC or below)

110V DC/380V AC or over



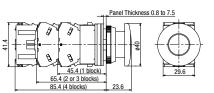


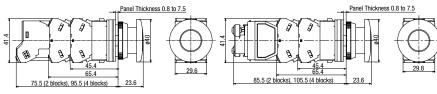
#### Mushroom (ø40), LED illuminated (momentary/maintained) ALN3/AOLN3 (terminal screws M3.5) Integrated terminal cover

6, 12, 24V AC/DC · Without LED Lamp

100/110V AC, 200/220V AC (240V AC or below)

110V DC/380V AC or over





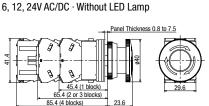
#### Mushroom Pushlock Turn Reset, LED illuminated

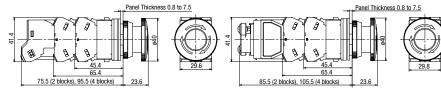
AVLN3 (terminal screws M3.5)

Integrated terminal cover 100/110V AC, 200/220V AC

110V DC/380V AC or over

110V DC/380V AC or over

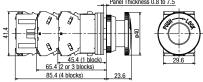




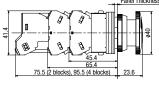
## Mushroom Push Turn Lock, LED illuminated

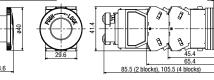
AJLN3 (terminal screws M3.5) 6, 12, 24V AC/DC · Without LED Lamp Integrated terminal cover

100/110V AC, 200/220V AC









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

Miniature
Pilot Lights

TWND

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## ASN Selector Switches (Knob Operator)

Package Quantity: 1

Shape	Knob Opera	tor						Ô					rackage quality.
		Contact C	Configuration	n			Maintained	Spring Return from Right		Spring	Retur	n from	Left
		Contact	Block		perator Position		1 2	1 • 2	Contact	Block		rator ition	1, 2
	Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2	
90°	1NO (10)	① ②	NO —	Dun	● nmy Blo	ock	ASN210N	ASN2110N	① ②	NO —	•		ASN2210N
2-position	1NO-1NC (11)	① ②	NO NC	•	•		ASN211N	ASN2111N	0 2	NO NC	•	•	ASN2211N
	2NO (20)	① ②	NO NO		•		ASN220N	ASN2120N	0 2	NO NO	•		ASN2220N
	2NO-2NC	① ②	NO NC	•	•		ASN222N	ASN2122N	① ②	NO NC	•	•	ASN2222N
	(22)	3 4	NO NC			AGNELLIN		3 4	NO NC	•	•		
		Contact C	Configuration				Maintained	Spring Return from Right	Spring	g Return fro	om Lef	t	Spring Return Two-way
	Contact	Contact	Block		perator Position		1 0 2	1 0 2		1 0 2		1 0 2	
		Mounting Position	Contact	1	0	2	V						
	2N0 (20)	① ②	NO NO	•		•	ASN320N	ASN3120N	ASN3220N				ASN3320N
	2NC (02)	① ②	NC NC				ASN302N	ASN3102N		ASN3202N	V		ASN3302N
	2NO-2NC	① ②	NO NO	•		•							
45° 3-position	(22)	3	NC NC				ASN322N	ASN3122N		ASN3222N	V		ASN3322N
Position	4N0	① ②	NO NO	•		•							
	(40)	3	NO NO	•		•	ASN340N	ASN3140N		ASN3240N	N		ASN3340N
	4NC (04)	4NC ② NC		ASN304N	ASN3104N			ASN3304N					
		<b>4 0</b>	NC NO	•		•	\$						
	☆ 3S	② ③ ④	NO NC	Dun	● nmy Blo		ASN33SN-243	_		_			_

- Knob: Black
- Round bezel (metal): Chrome-plated
- Selector switches with 1 or 3 contact blocks have a dummy block.
- Knob operator can be installed at 45-degree intervals in addition to the positions shown in the above table.
- See B-321 to B-322 for other contact configurations.
   Turn the operator to each position accurately.

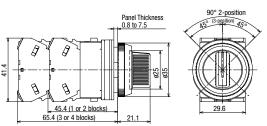
- Selector switches with ☆ have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold-plated silver contacts.
- See B-312 for bottom view.

## Contact Block Mounting Position



#### **Dimensions**

All dimensions in mm.



Terminal Screws: M3.5

Terminal cover: integrated



#### ASN-□ Selector Switches (Lever Operator)

Package Quantity: 1

t Lights	Shape	Lever Opera ASN□L	tor											rackage quantity. I
APEM								-	*					
Switches & Pilot Lights			Contact C	onfiguration	n			Maintained	Spring Return from Right		Spring	Return	from Le	ft
Control Boxes Emergency			Contact	Block		perato Positior		1 2	1 - 2	Contact	Block		rator ition	1 2
Stop Switches Enabling		Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2	
Switches Safety Products	90°	1NO (10)	① ②	NO —	Dun	● nmy Bl	nck	ASN2L10N	ASN21L10N	① ②	NO —	•		ASN22L10N
Explosion Proof	2-position	1NO-1NC (11)	0	NO NC	•	•	OUN	ASN2L11N	ASN21L11N	0 2	NO NC	•	•	ASN22L11N
Terminal Blocks		2N0 (20)	0	NO NO		•		ASN2L20N	ASN21L20N	①	NO NO	•		ASN22L20N
Relays & Sockets  Circuit			1	NO		•				0	NO	•		
Protectors Power Supplies		2NO-2NC (22)	3	NC NO	•	•		ASN2L22N	ASN21L22N	3	NC NO	•	•	ASN22L22N
LED Illumination			④ Contact C	NC Configuration	on •			Maintained	Spring Return	④ Sprin	NC ng Return fi	rom Lef	t	Spring Return
Controllers			Contact	Block		perato		1 0 2	from Right		1, 0	2		Two-way
Operator Interfaces		Contact	Mounting Position	Contact	1	Position 0	2							
Sensors AUTO-ID		2NO	①	NO NO	•			ASN3L20N	ASN31L20N		ASN32L20	ON		ASN33L20N
		(20) 2NC	①	NO NO			•	ASN3L02N	ASN31L02N		ASN32L02	 2N		ASN33L02N
		(02)	② ①	NO NO	•									
Flush Silhouette ø16	45°	2NO-2NC (22)	3	NO NO				ASN3L22N	ASN31L22N		ASN32L22	2N		ASN33L22N
ø22	3-position		<ul><li>4</li><li>1</li></ul>	NO NO										
ø30		4NO (40)	2	NO NO	•		•	ASN3L40N	ASN31L40N		ASN32L40	ON		ASN33L40N
Miniature		(40)	4	NO			•							
Pilot Lights		4NC	① ②	NO NO				ASN3L04N	ASN31L04N		ASN32L04	4N		ASN33L04N
		(04)	3 4	NO NO				AONOLUTIV	AONOTEOTI		, IOHOZEO			AUTOULUTII
TWN		☆ 3S	① ②	NO NO	•		•	☆						
TWND		35	3 4	NO —	Dun	● nmy Bl	ock	ASN3L3SN-243	_		_			_
					Dan	, 51	JUIN							

• Lever: Black

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- Round bezel (metal): Chrome-plated • Selector switches with 1 or 3 contact blocks have a dummy block.
- Knob operator can be installed at 45-degree intervals in addition to the posi-
- tions shown in the above table.
- See B-321 to B-322 for other contact configurations. Turn the operator to each position accurately.

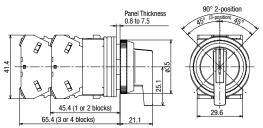
- $\bullet$  Selector switches with  $\leftrightarrows$  have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold contact.
- See B-312 for bottom view.

#### **Contact Block Mounting Position**



#### **Dimensions**

All dimensions in mm.



Terminal Screws: M3.5

Terminal cover: integrated

#### **ASN-**□**K** Key Selector Switches

Key Selector (Key No. 0)

Package Quantity: 1

Shape	ASN□K	i (itoy ivo. 0)											ghts
		Contact C	Configuration	n		Maintained	Spring Return		Spring	 Return	from I	eft	APEM Switches & Pilot Lights
					Operator		from Right				rator	]	Control Boxes
	Contact	Contact		Ì	Position	1 2	1 2	Contact	t Block	Pos	ition	1, 2	Emergency
		Mounting Position	Contact	1	2			Mounting Position	Contact	1	2		Stop Switches Enabling
	1N0	①	NO		•	ASN2K10N	ASN21K10N	0	NO	•		ASN22K10N	Switches
90°	(10)	2	_	Dur	mmy Block	AUNZITION	AONZIKION	2				AONZZICTON	Safety Products
2-position	1NO-1NC	①	NO NO		•	ASN2K11N	ASN21K11N	1	NO NO	•		ASN22K11N	Explosion Proof
	(11)	② ①	NC NO	•	•			② ①	NC NO	•	•		Terminal Blocks
	2N0 (20)	2	NO NO		•	ASN2K20N	ASN21K20N	2	NO NO	•		ASN22K20N	- Ieiiiiiai biocks
	(==)	0	NO		•			0	NO	•			Relays & Sockets
	2NO-2NC	2	NC	•				2	NC		•		Circuit
	(22)	3	NO		•	ASN2K22N	ASN21K22N	3	NO	•		ASN22K22N	Protectors
		4	NC	•				3	NC		•		Power Supplies
		Contact C	Configuratio	n		Maintained	Spring Return from Right	Sprin	g Return fro	om Lef	t	Spring Return Two-way	LED Illumination
		Contact	t Block		Operator								Controllers
	Contact	Mounting	Contact	1	Position 0 2	1 0 2	1 0 2		1 0 2			1, 0, 2	Operator Interfaces
	ONO	Position	NO	•									Sensors
	2N0 (20)	2	NO NO		•	ASN3K20N	ASN31K20N		ASN32K20	N		ASN33K20N	AUTO-ID
	2NC	0	NC										1
	(02)	2	NC			ASN3K02N	ASN31K02N		ASN32K02	N		ASN33K02N	
		①	NO	•									Ì
	2NO-2NC	2	NO		•	ASN3K22N	ASN31K22N		ASN32K22	N		ASN33K22N	Flush Silhouette
45°	(22)	3	NC			ASNSKZZN	ASNSTRZZN		MONOZNZZ	IV		ASNOSKZZN	ø16
3-position		4	NC										
		①	NO NO	•									ø22
	4NO (40)	3	NO NO		•	ASN3K40N	ASN31K40N		ASN32K40	N		ASN33K40N	ø30
	(40)	<u>(4)</u>	NO NO	•	•								
	-	1	NC										Miniature
	4NC	2	NC										Pilot Lights
	(04)	3	NC			ASN3K04N	ASN31K04N		ASN32K04	N		ASN33K04N	
	] ` ′	4	NC										
		0	NO	•	-								1
	☆ 3S	2	NO		•	☆							TWN
	33	3	NC		•	ASN3K3SN-243	_		_				TWND
		4		Dur	mmy Block								]

- Cylinder: Chrome-plated
- Round bezel (metal): Chrome-plated
- Key selector switches with 1 or 3 contact blocks have a dummy block.
- See B-321 to B-322 for other contact configurations.
- On spring-returned types, the key can be released only from the maintained position. On maintained types, the key can be released from every position. See B-308for specifying key retained positions.

#### **Contact Block Mounting Position**



- Key selector switch is supplied with two standard keys.
  (1) Insert the key completely before turning the key, otherwise failure may result.
  (2) Turn the operator to each position accurately.

Different key number is available upon request. Contact IDEC.

- $\bullet$  Selector switches with  $\stackrel{\iota}{\bowtie}$  have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold-plated silver contacts.
  See B-312 for bottom view.

#### **Dimensions**

Panel Thickness 16.5 45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks)

Terminal Screws: M3.5

All dimensions in mm.



Terminal cover: integrated



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#### **ASN-**□**K** Key Selector Switches

Package Quantity: 1

Key Selector (Key No. 24401) ASN□K Shape APEM Spring Return **Contact Configuration** Maintained Spring Return from Left from Right Control Boxes Operator Operator Contact Block Contact Block Position Position Emergency Contact Mounting Mounting Stop Switches Contact 1 2 Contact 1 2 Position Position Enabling Switches 1N0 1 NO lacktriangleASN2K10N-ASN21K10N-1 NO ASN22K10N-Safety Products (10)N024401 N024401 N024401 2 **Dummy Block** 2 90° 1NO-1NC 1 NO ASN2K11N-ASN21K11N-1 NO • ASN22K11N-2-position **Explosion Proof** N024401 (11)2 NC • N024401 N024401 2 NC Terminal Blocks 2N0 1 NO • ASN2K20N-ASN21K20N-1 NO • ASN22K20N-N024401 N024401 (20)2 NO • NO24401 2 NO • Relays & Sockets 1 NO • 1 NO • Circuit 2NO-2NC 2 NC • ASN2K22N-ASN21K22N-2 NC • ASN22K22N-Protectors N024401 N024401 N024401 (22)3 NO 3 NO • **Power Supplies** 4 NC 4 • NC Spring Return Spring Return LED Illumination **Contact Configuration** Maintained Spring Return from Left from Right Two-way **Operator** Controllers Contact Block Position Operator Contact Mounting Interfaces Contact 1 0 2 Position Sensors 2N0 1 NO ASN3K20N-ASN31K20N-ASN32K20N-ASN33K20N-N024401 N024401 N024401 N024401 AUTO-ID (20)2 N0 1 NC 2NC ASN3K02N-ASN31K02N-ASN32K02N-ASN33K02N-N024401 N024401 (02)N024401 N024401 2 NC 1 NO 2 NΩ Flush Silhouette 2NO-2NC ASN3K22N-ASN31K22N-ASN32K22N-ASN33K22N-N024401 N024401 N024401 N024401 (22)NC 3 45° ø16 4 NC 3-position ① N0 ø22 2 N0 • 4N0 ASN3K40N-ASN31K40N-ASN32K40N-ASN33K40N-(40)N024401 N024401 N024401 N024401 3 NO • 4 NO Miniature NC 1 Pilot Lights NC 4NC 2 ASN3K04N-ASN31K04N-ASN32K04N-ASN33K04N-

N024401

ASN3K3SN-

243-N024401

- · Cylinder: Chrome-plated
- · Round bezel (metal): Chrome-plated

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• Key selector switches with 1 or 3 contact blocks have a dummy block.

3

4

1

2

3

4

NC

NC

N0

N0

NC

•

**Dummy Block** 

- See B-321 to B-322 for other contact configurations.
- On spring-returned types, the key can be released only from the maintained position. On maintained types, the key can be released from every position. See B-308 for specifying key retained positions.

#### Contact Block Mounting Position



- · Key selector switch is supplied with two standard keys.
- Insert the key completely before turning the key, otherwise failure may result.

N024401

- (2) Turn the operator to each position accurately.
- Different key number is available upon request. Contact IDEC.
- Selector switches with 
   have a half contact operating current (load switching) current value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold-plated silver contacts.

65.4 (3 or 4 blocks)

See B-312 for bottom view.

#### **Dimensions**

N024401

90° 2-position Panel Thickness 45.4 (1 or 2 blocks)

Terminal Screws: M3.5

All dimensions in mm.

N024401

Terminal cover: integrated

TWND

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#### **ASLN Illuminated Selector Switches (LED)**

Package Quantity: 1

		-1.0-1	0	/DACC	D-	-\							rackage ui	adirecty :	ı ≓ _
Shape	ASLN	ed Selector	Switches	s (RAA2	Ras	e)									t Lights
							(24V AC/DC)								APEM
		Contact C	onfigurati	on			Maintained	Spring Return from Right		Spring	g Retu	ırn fro	m Left		Switches & Pilot Lights
		Contact	Block	Opera Posit		Rated Voltage	1 2	1 * 2	Contact	Block	Ope Pos	rator ition	1 2	Color Code	Control Boxes
	Contact	Mounting Position	Contact	1 2					Mounting Position	Contact	1	2			Emergency Stop Switches
<u>.</u>	4110 4110	①	NO	•	,	24V AC/DC	ASLN22211DN*	ASLN212211DN*	①	NO	•		ASLN222211DN*		Enabling Switches
2-position	1NO-1NC (11)	2	NC	•		100/110V AC	ASLN21611DN*	ASLN211611DN*	2	NC		•	ASLN221611DN*		Safety Products
2-2	(11)					200/220V AC	ASLN22611DN*	ASLN212611DN*					ASLN222611DN*	R	
°06	2N0	0	NO NO	•	_	24V AC/DC	ASLN22220DN*	ASLN212220DN*	0	NO NO	•		ASLN222220DN*	G	Explosion Proof
	(20)	2	NO.	•		100/110V AC	ASLN21620DN*	ASLN211620DN*	2	NO	•		ASLN221620DN*	Y	Terminal Blocks
		0	NO			200/220V AC 24V AC/DC	ASLN22620DN*	ASLN212620DN*	0	NO	•		ASLN222620DN*	A S	
	2NO-2NC	① ②	NC NC	•	<u>'</u>	100/110V AC	ASLN22222DN* ASLN21622DN*	ASLN212222DN* ASLN211622DN*	① ②	NC	•	•	ASLN222222DN* ASLN221622DN*	PW	Relays & Sockets
	(22)	3	NO	•	$\exists$	200/220V AC	ASLN21022DN*	ASLN211022DN*	3	NO	•	_	ASLN221022DN*		Circuit
	()	(4)	NC	• `		_	AOLINZZOZZDIN*	- AOLINZ IZOZZDIV	4	NC		•	- AOLINZZZOZZDIV		Protectors
		Contact C		on			Maintained	Spring Return from Right		Return fr	om L	eft	Spring Return Two-Way		Power Supplies
		Contact	ł Block	Oper		Rated								Color	LED Illumination
	Contact			Posi		Voltage	1 0 2	1 0 2		1 0 2	2		1, 0, 2	Code	Controllers
		Mounting Position	Contact	1 0	2		$\overline{}$	$\bigvee$		$\overline{}$			V		Operator
	2N0	0	NO	•	_	24V AC/DC	ASLN32220DN*	ASLN312220DN*		N322220			ASLN332220DN*		Interfaces
	(20)	2	NO		•		ASLN31620DN*	ASLN311620DN*		.N321620			ASLN331620DN*		Sensors
	. ,		NO		_	200/220V AC	ASLN32620DN*	ASLN312620DN*		.N322620			ASLN332620DN*		AUTO ID
⊆	2NC	① ②	NC NC		T	24V AC/DC 100/110V AC	ASLN32202DN* ASLN31602DN*	ASLN312202DN*	1	N322202			ASLN332202DN*		AUTO-ID
sitio	(02)		INC			200/220V AC	ASLN31602DN*	ASLN311602DN* ASLN312602DN*		.N321602 .N322602			ASLN331602DN* ASLN332602DN*		
3-position		①	NO	•	Т	24V AC/DC	ASLN32002DN*	ASLN312222DN*		N322222			ASLN332222DN*	D I	
45°3	2NO-2NC	2	NO		•		ASLN31622DN*	ASLN311622DN*	1	.N321622			ASLN331622DN*	R G	
														u u	Flush Silhouette
4	(22)	3	NC			200/220V AC	ASLN32622DN*	ASLN312622DN*	ASL	N322622	*NU		ASLN332622DN*	Υ	
45						200/220V AC	ASLN32622DN*	ASLN312622DN*	ASL	.N322622 —	ZDN*		ASLN332622DN*	Α	ø16
4		3 4 0	NC NC NO	•		24V AC/DC	ASLN32240DN*	ASLN312622DN* — ASLN312240DN*		.N322622  .N322240			ASLN332240DN*	A S	ø16
4	(22) 4NO	3 4 1) 2	NC NC NO	•		24V AC/DC 100/110V AC	— ASLN32240DN* ASLN31640DN*	— ASLN312240DN* ASLN311640DN*	ASL ASL	.N322240 .N321640	)DN*		ASLN332240DN* ASLN331640DN*	Α	ø16 ø22
45	(22)	3 4 0 2 3	NC NC NO NO		•	24V AC/DC 100/110V AC 200/220V AC	ASLN32240DN*	ASLN312240DN*	ASL ASL	 .N322240	)DN*		ASLN332240DN*	A S	ø22
44	(22) 4NO	3 4 1 2 3 4	NC NC NO NO NO	•		24V AC/DC 100/110V AC 200/220V AC	ASLN32240DN* ASLN31640DN* ASLN32640DN*	ASLN312240DN* ASLN311640DN* ASLN312640DN*	ASL ASL	N322240 N321640 N322640	)DN* )DN* )DN*		ASLN332240DN* ASLN331640DN* ASLN332640DN*	A S	
45	4NO (40)	3 4 0 2 3 4	NC NC NO NO NO NO	•	•	— 24V AC/DC 100/110V AC 200/220V AC — 24V AC/DC	ASLN32240DN* ASLN31640DN* ASLN32640DN*  — ASLN32204DN*	ASLN312240DN* ASLN311640DN* ASLN312640DN*  — ASLN312204DN*	ASL ASL ASL	 N322240 N321640 N322640  N322204	DN* DN* DN*		ASLN332240DN* ASLN331640DN* ASLN332640DN* — ASLN332204DN*	A S	ø22
44	4NO (40)	3 4 0 2 3 4 0	NC NC NO NO NO NO NC	•	•	— 24V AC/DC 100/110V AC 200/220V AC — 24V AC/DC 100/110V AC 100/110V AC	ASLN32240DN* ASLN31640DN* ASLN32640DN*	ASLN312240DN* ASLN311640DN* ASLN312640DN*	ASL ASL ASL ASL	N322240 N321640 N322640  N322204 N321604	DN* DN* DN* DN*		— ASLN332240DN* ASLN331640DN* ASLN332640DN* — ASLN332204DN* ASLN331604DN*	A S	ø22 ø30 Miniature
44	4NO (40)	3 4 0 2 3 4	NC NC NO NO NO NO	•	•	— 24V AC/DC 100/110V AC 200/220V AC — 24V AC/DC	ASLN32240DN* ASLN31640DN* ASLN32640DN*  — ASLN32204DN*	ASLN312240DN* ASLN311640DN* ASLN312640DN*  — ASLN312204DN*	ASL ASL ASL ASL	 N322240 N321640 N322640  N322204	DN* DN* DN* DN*		ASLN332240DN* ASLN331640DN* ASLN332640DN* — ASLN332204DN*	A S	ø22 ø30

- Specify a color code in place of \* in Part No.
- R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)
- Illuminated selector switches have an LED lamp installed.

**Contact Block Mounting Position** 

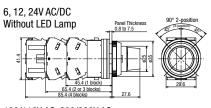
- Round bezel (metal): chrome-plated
- See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
   Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have a
- Illuminated selector switches of 24V AC/DC or below with 2 or 4 contact blocks have dummy block.

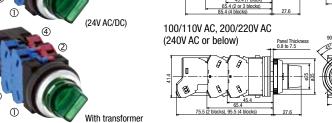
(100/110V AC)

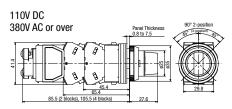
- See B-321 to B-322 other contact configurations.
- Turn the operator to each position accurately.
- See B-309 for gold-plated silver contacts.
- See B-314 for bottom view.

All dimensions in mm.

## Dimensions







Terminal Screws: M3.5 Terminal cover: integrated

IDEC

TWND

ARN

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

Miniature Pilot Lights

> TWND ARN CS

#### Selector Switches Contact Configuration (90° 2-position)

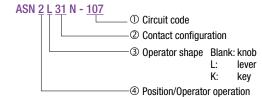
					Op	perator Opera	tion and Circ	uit	
		Cont		Maint	tained 2		Return Right	Spring from	Return Left 2
0		Blo	ck				/		
Contact Configuration	Circuit Code			Knob Lever	Key	Knob Lever	Key	Knob Lever	Key
				Operator	Position	Operato	Position	Operator	Position
		Mounting	Contact	1	2	1	2	1	2
		Position							
10	Not	①	NO		•		•	•	
10	required	2	_	Dumm	y Block	Dumm	y Block	Dumm	y Block
01	Not	①	NC	•		•			•
01	required	2		Dumm	y Block	Dumm	y Block	Dumm	y Block
	☆	①	EM			(			
2R	118	2	LB						
<sup>∠n</sup>	☆	①	EM						
	168	2	LB						

						Op	perator 0	peration	and Circ	uit		
		Cont	act	M	laintaine 1	ed 2	Sp f	ring Retrom Right	urn 1t 2		ring Ret from Lef	
		Bloo			$\searrow$			$\searrow$				
Contact Configuration	Circuit Code			Knob Lever	Key	Illumi- nated	Knob Lever	Key	Illumi- nated	Knob Lever	Key	Illumi- nated
				Opei	ator Po	sition	Ope:	rator Pos	sition	Oper	ator Pos	sition
		Mounting Position	Contact	1		2	1	,	2	1		2
11	Not	1	NO			•			•	•		
11	required	2	NC	•			•					•
20	Not	1	NO			•			•	•		
	required	2	NO			•			•	•		
02	Not	1	NC	•			•					•
<u> </u>	required	2	NC	•			•					•
		①	NO			•			•	•		
22	Not	2	NC	•			•					•
	required	3	NO			•			•	•		
		4	NC	•			•					•
		①	NC	•			•					•
31	107	2	NO			•			•	•		
		3	NO			•			•	•		
		4	NO			•			•	•		
		0	NO			•			•	•		
40	Not	2	NO NO			•			•	•		
40	required	3	NO			•			•	•		
		4	NO NO			•			•			

<sup>•</sup> Selector switches with 🛱 have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.

#### **Contact Block Mounting Position**

#### Part No. Development



- 2: 2-position, maintained
- 21: 2-position, spring return from right 22: 2-position, spring return from left

#### Selector Switches Contact Configuration (45° 3-position)

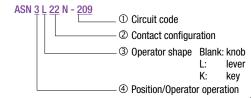
											perato	r Opera	ation an	d Circu	iit				Ę.
Contact	Circuit Code	Cont Blo		Оре	rator Pos	sition	N 1	Maintaine			ing Retom Rig	ht	f	ring Re rom Le	ft	T	ing Reworks	y	t Lights
Configuration		Mounting Position	Contact	1	0	2	Knob/ Lever	Key	Illumi- nated	Knob/ Lever	Key	Illumi- nated	Knob/ Lever	Key	Illumi- nated	Knob/ Lever	Key	Illumi- nated	APEM Switches & Pilot Lights
	202	1)	NO	•		Ť					,			√			,		Control Boxes
	202	2	NC					ν ——			√			ν			√		Emergency
11	203	0	NC					√			√			√			√		Stop Switches Enabling
		2	NO NC			•					•						•		Switches
	303	① ②	NC NO		•	•	1	$\sqrt{}$			$\sqrt{}$			√			$\sqrt{}$		Safety Products
	Not	1	NO NO	•															Explosion Proof
20	required	2	NO	_		•		√			$\sqrt{}$			√			√		Explosion Proof
00	Not	0	NC								,						,		Terminal Blocks
02	required	2	NC					-√			√			√			V		Relays & Sockets
		0	NO	•															Circuit
	Not required	2	NO NC		_	•		√			$\sqrt{}$			√			$\sqrt{}$		Protectors
	requireu	<u>3</u> <u>4</u>	NC NC		_														Power Supplies
		1	NO NO	•															LED Illumination
	000	2	NC					,			,								
	209	3	NC					V			√			_			_		Controllers
		4	NO			•													Operator Interfaces
		0	NC				-												Sensors
22	210	3	NO NC			_					$\sqrt{}$			$\sqrt{}$			$\sqrt{}$		
		<u> </u>	NO NO																AUTO-ID
		0	NC		•										-				
	04.0	2	NO			•		,											
	310	3	NC		•			√			_			_			_		Flush Cilhauatta
		4	NO			•													Flush Silhouette
		0	NO	•		•													ø16
	311	2	NO NO			•		√			√			√			√		ø22
		<u>3</u>	NC NC		-			•			-						•		
		1	NO NO	-															ø30
	Not	2	NO			•	1												Miniature
40	required	3	NO	•				√			√			√			√		Dilat Liebta
		4	NO			•													Pilot Lights
		①	NC																
04	Not	2	NC				-	√			<b>V</b>			√			√		
•	required	3	NC				-	٧			٧			٧			٧		TWN
		4	NC NO											-					
	☆	① ②	NO NO	•		•													TWND
3S	243	3	NC		•		١	/	-		_			_			_		ARN
		4		Du	ımmy Blo	ock													CS
Selector switch	hoo with ⊀ ho	-	toot opera	_				t volue	) Dotod	Lingulat	ion vol	togo on	d rotod	OURTON	t romaiı	the ee	ma		UJ

• Selector switches with  $\stackrel{1}{>}$  have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.

#### **Contact Block Mounting Position**

# 3

#### Part No. Development



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



<sup>•</sup> On selector switches with x, the contact blocks may overlap each other while turning the ring or lever operator.

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

#### **ASBN2 Selector Pushbuttons**

Shape	Contact Configuration	Circuit Code	Con Blo	tact ock	Left	<u> </u>	Position	Right	Button Color Code	Ring Operator
			Mounting Position	Contact	Normal	Push!	button Normal	Push	Jour	Part No. (Ordering No.)
Ring Operator (90°2-position)		A03	①	NO		•		•		ASBN211N-A03*
ASBN2			2	NC	•					AODILITI AOO
	11	☆	①	NC	•				В	☆
	(1NO-1NC)	K04	2	EM		•			G R	ASBN211N-K04*
		G03	①	NO NO		•		Blocked	Y	ASBN211N-G03*
			② ①	NC NO	•	•	•		·	
	20 (2NO)	D01	2	NO NO		•		•		ASBN220N-D01*
	(ZNO)		①	NO NO		•		•		
			2	NC	•					
		A08	3	NO NO		•		•		ASBN222N-A08*
			4	NC	•					
			①	NO		•		•		
		☆	2	NO				•		☆
		C10	3	NC	•					ASBN222N-C10*
			4	NC						
			①	NO		•				
		D10	2	NO				•		ASBN222N-D10*
			3	NC	•					AJDIVZZZIV-DTO*
			4	NC			•			
			①	NO		•			В	
	22	☆	2	NO				•	B G R	☆
	(2NO-2NC)	E10	3	NC					K Y	ASBN222N-E10*
			4	NC						
			①	NO NO				•		
		☆ F10	3	NO NC		•	•			☆ ASBN222N-F10*
		FIU	4	NC NC	•					ASDINZZZIN-F1U*
			①	NO NO		•				
			2	NO NO		÷				
		G10	3	NC	•		•	Blocked		ASBN222N-G10*
			4	NC	•		•			
			0	NC	•		<u> </u>			
		☆	2	NC	•					☆
		K15	3	EM		•				ASBN222N-K15*
			4	EM		•				

TWND

Miniature Pilot Lights

ARN

Flush Silhouette

ø16 ø22

CS

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

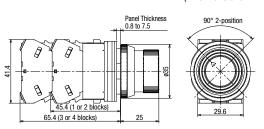
- Bezel (metal): Chrome-plated
- Circuit code G: The pushbutton does not operate when the ring operator is turned to the right position.
- Circuit codes E and F: The right and left NC contact blocks on circuit code E or F may overlap each other while turning the ring operator. The NO and NC contact blocks on circuit code F may overlap each other while pressing the button.
- When using the selector pushbutton, do not turn the ring operator with the pushbutton depressed. Otherwise, damage or failure may be caused.
- Selector switches with 🛱 have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-312 for bottom view.

### **Contact Block Mounting Position**



#### **Dimensions** Ring operator (90° 2-position)

(All dimensions in mm.)



Terminal Screws: M3.5

Terminal cover: integrated

#### Pilot Lights Round, Square Extended, Rectangular (Marking)

Package Quantity: 1

					_	1 0	ckage quantity: 1
Shape	Illumination	Base	Rated Voltage	Part No. (Ordering No.)	Color Code	LED Lamp Part No.	Dimensions Page
Round APN1			24V AC/DC	APN122DN*	R, G, Y, A, S, PW	LSRD-2	
AFNI			100/110V AC	APN116DN*	R, G, Y, A, S, PW		
(24V AC/DC)	LED	BA9S	200/220V AC	APN126DN*	R, G, Y, A, S, PW	LSRD-6	
Square Extended UPQN3B			24V AC/DC	UPQN3B22D*	R, G, Y, A, S, PW	LSRD-2	
	LED	BA9S	100/110V AC	UPQN3B16D*	R, G, Y, A, S, PW	LSRD-6	B-325
(24V AC/DC)			200/220V AC	UPQN3B26D*	R, G, Y, A, S, PW	LOND 0	
Rectangular (Marking) UPQN4			24V AC/DC	UPQN422D*	R, G, Y, A, S, PW	LSRD-2	
	LED	BA9S	100/110V AC	UPQN416D*	R, G, Y, A, S, PW	LCDD.C	
(24V AC/DC)			200/220V AC	UPQN426D*	R, G, Y, A, S, PW	LSRD-6	

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

- Round bezel (metal): chrome-plated
- Square bezel (metal): chrome-plated
- Pilot lights have an LED lamp installed.
- See B-346 for the marking plate size of rectangular pilot lights.
- See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
- Terminal cover is installed on pilot lights for electric shock prevention.

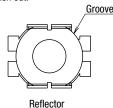
Type	Terminal Cover	Quantity
6V, 12V, 24V AC/DC	APN-PVL	1
100V/110V AC, 200/220V AC	N-VL3	1
110V DC	N-VL3	1

Note: DC-DC converter types are not approved by UL and CSA, and not CE compliant.

• See B-314 for bottom view.

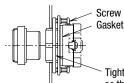
#### Reflector

- The lamp housing of the square LED illuminated pilot lights has a built-in reflector.
- Make sure that the reflector does not fall off when removing the lens or making plate.
- 3. When replacing the LED lamp of UPQN4 (rectangular), use a lamp holder tool (OR-55).
- 4. To remove the reflector, insert a flat screwdriver inside the groove of the reflector and lightly push out.



#### **Panel Mounting of Square Pilot Lights**

- 1. Tighten the square bezel to the operator and position the bezel correctly.
- 2. Lightly tighten the screw to secure the pilot light on the panel.
- 3. After tightening, do not turn the square bezel, otherwise it may fall off.



Tighten the screw lightly so that the panel does not bend. Recommended tightening torque: 0.15 Nm APEM

Switches &

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

Miniature

Pilot Lights

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TWN

TWND

ARN CS

Control Boxes

Emergency Stop Switches Enabling

Switches
Safety Products

**Explosion Proof** 

Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers

Circuit

Protectors

Operator

Interfaces

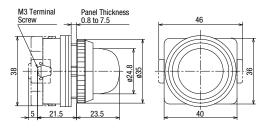
Sensors AUTO-ID

#### **Dimensions (Pilot Light)**

All dimensions in mr

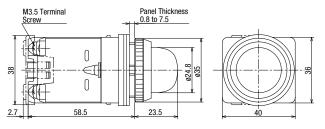
#### Round APN1

6V, 12V, 24V AC/DC (Terminal Cover: APN-PVL) Without LED Lamp



Terminal screws: M3

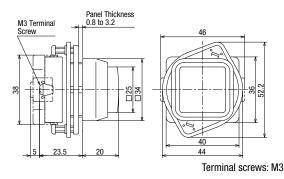
100 to 480V AC, 110V DC (Terminal Cover: N-VL3)



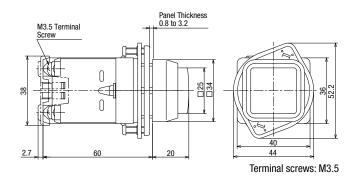
Terminal screws: M3.5

# Square Extended UPQN3B

6V, 12V, 24V AC/DC (Terminal Cover: APN-PVL) Without LED Lamp



100 to 480V AC, 110V DC (Terminal Cover: N-VL3)



Flush Silhouette

ø16 6V, ø22 Wit

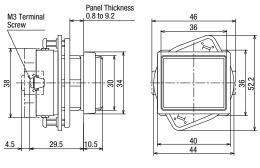
Miniature

Pilot Lights

TWND
ARN
CS

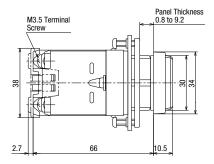
#### Rectangular (Marking) UPQN4

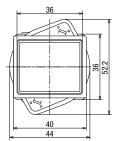
6V, 12V, 24V AC/DC (Terminal Cover: APN-PVL) Without LED Lamp



Terminal screws: M3

100 to 480V AC, 110V DC (Terminal Cover: N-VL3)





Terminal screws: M3.5

• See B-349 for wiring.

#### Flush/Extended/Extended with Half Shroud/Extended with Full Shroud

Package Quantity: 1

Shape				D	5		Package Quantity: 1	ı ≓ _	
TNO   ABD110N+   B   G   ABD110N+   B   G   ABD12N+   B   C   ABD110N+   B   C   ABD110N+   B   C   ABD110N+   B   C   ABD102N+   B   C   ABD102		Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)	ights	
Momentary   Mome			1NO	ABD110N*					
Momentary			1NC	ABD101N*					
2NO   ABD122N+   2NO   ABD122N+   2NO   ABD122N+   2NO   ABD122N+   2NO   ADD12N+   2NO   AD	AODI	Momentary	1NO-1NC	ABD111N*				APEM	
2NO-2NC   ABD102N+   No		Wiorrichtary			S	Pai 0.8	nel Thickness t to 7.5 ø39		
ABDU   ABBU   ABDU   ABDU   ABBU   ABDU   ABBU   ABDU   ABBU									
Maintained   1NO-1NC						4 4		Control Boxes	
Maintained   100-1NC   A00111N-   R								Emergency	
Maintained						45.4 (1 or 2 blocks)	29.4	Stop Switches	
ADDIZUN-   ADDIZUN-		Maintained			Y	65.4 (3 or 4 blocks) 9	40 -		
Extended   ABD2   ABD220N+   AB					S				
Thick								Salety Products	
ADD2   1NC   ABD201N	Extended				Note			Explosion Proof	
NO-1NC								Torminal Placks	
ABD220N									
No.		Momentary				Po	and Thinkman	Relays & Sockets	
2NO-2NC						- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1 to 7.5 039		
NO   AOD210N*   B   Controllers   NO   AOD211N*   B   Controllers   NO   AOD211N*   B   Controllers   NO   AOD220N*   NO   A				<del> </del>				Protectors	
1NC   AOD2201N+   No				<u> </u>		4		Power Supplies	
Maintained   1NO-1NC   A0D221N+   Y   Y   Y   Y   Y   Y   Y   Y   Y								LED Illumination	
Maintained   2NO						45.4 (1 or 2 blocks) 65.4(3 or 4 blocks)	29.4		
2NC		Maintained			Υ	* ***	<del>-1</del> <del>-1</del>		
Extended with Half Shroud ABG022   No			2NC						
Momentary			2NO-2NC	A0D222N*	W				
AGGD2  Momentary    1NO-1NC   ABGD220N*   2NO   AGGD210N*   2NO   AGGD220N*   2NO			1NO	ABGD210N*	В				
Momentary   1NO-1NC   ABGD211N*   R   Y   S   W   2NO   ABGD220N*   S   W   2NO-2NC   ABGD222N*   W   2NO-2NC   ABGD222N*   S   W   2NO-2NC   AGGD220N*   S   W   2NO   AOGD221N*   S   W   2NO   AOGD220N*   S   W   2NO   ABFD210N*   A BFD210N*   A BFD220N*   2NO   ABFD220N*   2NO   ABFD220N*   S   W   2NO   ABFD220N*   S   W   2NO   ABFD220N*   S   W   2NO   ABFD220N*   S   W   2NO   AOFD220N*   S   W   AFFD220N*   AFFD220N*   AFFD220N*   AFFD220N*   AFFD220N*   AFFD220N*   AFFD220N*   AF			1NC	ABGD201N*				AUTO-ID	
ABGD220N*   2NO	AOUDZ	Momentary	1NO-1NC	ABGD211N*	R	R			
ABGD222N*   W     2NO-2NC   ABGD222N*   W		Womontary		ABGD220N*		Pane 0.8 tr	Thickness		
Maintained   2NO-2NC   ABGD222N*									
Maintained								Flush Silhouette	
Maintained   1NC   A0GD22N1   A0GD22N1   A0GD22N2   A				1	В	4 a a		ø16	
Maintained   AUGD21N*   AUGD22N*   AUGD22N				1	G	40.9 (1 or 2 blocks) 18.5	204	-00	
S		Maintained						022	
Extended with Full Shroud ABFD2   1NO ABFD210N*   1NC ABFD201N*   2NO ABFD220N*   2NO ABFD220N*   2NO ABFD220N*   2NO ABFD22N*   1NO AOFD210N*   1NO AOFD210N*   1NO AOFD210N*   1NO AOFD21N*   1NO AOFD21N*   1NO AOFD20N*   2NO AOFD220N*   2NO AOFD220N*								ø30	
Extended with Full Shroud  ABFD210N*  ABFD21N*  1NC								Minjature	
ABFD2 AOFD2  Momentary  Momentary  INC	Extended with Full Shroud								
AOFD2  Momentary    1NO-1NC   ABFD211N*   Panel Thickness   0.8 to 6	ABFD2			<del> </del>				Pilot Lights	
No	AOFD2			1					
2NC   ABFD202N*   NV   2NO-2NC   ABFD222N*   NV   2NO-2NC   ABFD222N*   NO   AOFD210N*   NC   AOFD21N*   ARN   CS   NC   AOFD202N*   NV   AOFD220N*   NV   AOFD202N*   NV   AOFD202N*   NV   AOFD202N*   NV   AOFD202N*   NV   NV   AOFD202N*   AOFD	_	Momentary				P <sub>2</sub>	nel Thickness		
2NO-2NC   ABFD222N*   W   TWND   TW					S	- <sub>11</sub> 0.8			
1NO   AOFD210N*   B   G   AOFD201N*   INO-1NC   AOFD211N*   2NO   AOFD220N*   2NC   AOFD202N*   S   W   TWND   ARN   CS   TWND   TWND   ARN   CS   TWND   TWND   ARN   CS   TWND   TWN					W			TWN	
Maintained    NC   A0FD201N*   B   G   A0FD211N*   R   AND   A0FD211N*   B   AND   A0FD220N*   CS   CS   CS   CS   CS   CS   CS   C					_	4		TWND	
Maintained								ADM	
Maintained   2NO   A0FD220N*   Y   S   W     CS     CS     CS     CS     CS   C			1NO-1NC			45.4 (1 or 2 blocks) 14 65.4 (3 or 4 blocks) 16		AKN	
2NC A0FD202N* S W		Maintained			Υ	k	<del></del>	CS	
2NO-2NC AOFD222N*				A0FD202N*					
			2NO-2NC	AOFD222N*	VV				

- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)
- Round bezel (metal): Chrome-plated
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- See B-312 for bottom view.
- Terminal screws: M3.5
- Integrated terminal cover

#### ABD1, AOD1 with button color of B (black), G (green), or (R) red

Supply of color buttons B, G, R has been discontinued for ABD1/AOD1 without color code. When ordering, make sure to specify the required button color code.

Control Boxes Emergency Stop Switches Enabling Switches Safety Products **Explosion Proof** Terminal Blocks Relays & Sockets Circuit Protectors **Power Supplies** LED Illumination Controllers Operator

> Sensors AUTO-ID

Flush Silhouette

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Miniature Pilot Lights

TWN

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#### Mushroom/Mushroom with Full Shroud/Jumbo Mushroom/Jumbo Mushrooms with Shallow/Deep Shroud/Pin Lock

						Package Quantity:
Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)
Mushroom ABD3		1NO	ABD310N*	В		
AOD3		1NC 1NO-1NC	ABD301N* ABD311N*	. G R		
	Momentary	2N0	ABD311N*	Y	Panel Thickness 0.8	3 to 7.5 29.4
		2NC	ABD302N*	S		
		2NO-2NC	ABD322N*	W	4 4	
		1NO	A0D310N*	В		
		1NC 1NO-1NC	AOD301N* AOD311N*	. G R	45.4 (1 or 2 blocks)	
	Maintained	2N0	A0D311N*	Y	65.4 (3 or 4 blocks) 22	40
		2NC	A0D302N*	S		
		2NO-2NC	A0D322N*	W		
Mushroom with Full Shroud ABGD3		1NO 1NC	ABGD310N*	В		
AOGD3		1NO-1NC	ABGD301N* ABGD311N*	. G R	Panel Thickness 0.8	to 6.5 29.4
	Momentary	2NO	ABGD320N*	Ϋ́		
		2NC	ABGD302N*	S	4.14	<b>(</b>
		2NO-2NC	ABGD322N*	W		
		1NO 1NC	AOGD310N* AOGD301N*	В	43.9 (1 or 2 blocks) 63.9 (3 or 4 blocks) 23.5	
		1NO-1NC	AOGD311N*	. G R	H 2010 (2 21 1 2010) H 2010 H	-
	Maintained	2N0	AOGD320N*	Υ		
		2NC	AOGD302N*	S W		
Jumbo Mushroom		2NO-2NC	ADDA10N	VV		29.4
ABD4		1NO	ABD410N*	-	Panel Thickness 0.8 to 7.5	
		1NC	ABD401N*	В		
	Momentary	1NO-1NC	ABD411N*	G	4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1	+ + + + + + + + + + + + + + + + + + +
		2N0	ABD420N*	R Y		
		2NC	ABD402N*	-	45.4 (1 or 2 blocks)	
		2NO-2NC	ABD422N*		65.4 (3 or 4 blocks) 29	40
Jumbo Mushroom with Shallow Shroud		1NO	ABGD410N*		Panel Thickness 0.8 to 7.5	29.4
ABGD4		1NC	ABGD401N*			
		1NO-1NC	ABGD411N*	B G		
	Momentary	2N0	ABGD420N*	R	# # # # # # # # # # # # # # # # # # #	
		2NC	ABGD402N*	Y		1
				-	45.4 (1 or 2 blocks)	
Lumba Mushusana wiikh		2NO-2NC	ABGD422N*		65.4 (3 or 4 blocks) 29  Panel Thickness 0.8 to 7.5	40
Jumbo Mushroom with Deep Shroud		1NO	ABFD410N*	_	Tallel Michiess 0.0 to 7.3	23.4
ABFD4		1NC	ABFD401N*			
	M t	1NO-1NC	ABFD411N*	B G	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
	Momentary	2N0	ABFD420N*	R		_ \\
		2NC	ABFD402N*	Y		
		2NO-2NC	ABFD422N*		45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 33	40
Pin Lock (On-off Lock Type) (*1)		1NO	ABD8P10N*			
ABD8P		1NC	ABD8P01N*	В		40
		1NO-1NC	ABD8P11N*	G	_	29.4
		2N0 2NC	ABD8P20N*	R Y	Panel Thickness 0.8 to 7.5	
and the same	P.09	2NO-2NC	ABD8P02N* ABD8P22N*			
Pin Lock (On-lock Type) (*1)		1NO	ABD8PN10N*		4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	/ <b>//((C.\2001)</b>
ABD8PN		1NC	ABD8PN01N*	В		
TO A S		1NO-1NC	ABD8PN11N*	G	45.4 (1 or 2 blocks)	
		2N0	ABD8PN20N*	R	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 27.5	
		2NC	ABD8PN02N*	Υ		•
		2NO-2NC	ABD8PN22N*			

- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)
- Round bezel (metal): Chrome-plated
- Pin Lock (On-lock type): Button can be locked in depressed position by inserting the pin (the button cannot be locked in reset position).
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- See B-342 for maintenance parts.
- \*1) The pin for ABD8P is ø4.6 mm and is not compatible with ABN8P (old series).
- See B-312 for bottom view.
- Terminal screws: M3.5
- · Integrated terminal cover

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#### Pushlock Turn Reset/Push Turn Lock/Pull/Push-Pull

Package Quantity: 1

					rackage Qualitity. I	
Shape	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)	t Lights
Mushroom Pushlock Turn Reset (*1) AVD3	1NO	AVD310N*				0,
AVDS	1NC	AVD301N*		Panel Ti	hickness 0.8 to 7.5	
	1NO-1NC	AVD311N*	R			APEM
	2N0	AVD320N*	Υ			Switches & Pilot Lights
	2NC	AVD302N*		45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 23.6	29.4	Control Boxes
	2NO-2NC	AVD322N*		65.4 (3 of 4 blocks) 1, 25.0		Emergency Stop Switches
Mushroom Push Turn Lock AJD3	1NO	AJD310N*				Enabling Switches
AUDU	1NC	AJD301N*		Panel Ti	nickness 0.8 to 7.5	Safety Products
	1NO-1NC	AJD311N*	B G			Explosion Proof
	2N0	AJD320N*	R Y			l — ·
	2NC	AJD302N*		45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 23.6	29.4	Terminal Blocks
	2NO-2NC	AJD322N*		23.0	-l   40   l	Relays & Sockets
Mushroom Pull AZD3	1NO	AZD310N*				Circuit Protectors
	1NO-1NC	AZD311N*	B G	Panel TI	nickness 0.8 to 7.5	Power Supplies LED Illumination
	2N0	AZD320N*	R Y	4 4		Controllers
	2NC	AZD302N*		45.4 25.1	5.5 stroke 29.4 40	Operator Interfaces
Mushroom Push-Pull (*2)						Sensors
AYD31	1NO-1NC	AYD3111N*		Panel Th	ickness 0.8 to 7.5	AUTO-ID
	2N0	AYD3120N*	B G R	B		
			Y	5.5 strok	29.4	Flush Silhouette
	2NC	AYD3102N*		45.4 5.5 strok	<del>29.4</del>   40	ø16

- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow)
- Round bezel (metal): Chrome-plated
- Pushbuttons with 1 or 3 contact blocks have a dummy block.
- See B-307 for other contact configurations and gold-plated silver contacts.
- Mushroom pull has up to 2 contact blocks.
- \*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).
- \*2) Push-Pull switches with red button cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).
- See B-312 for bottom view.
- Terminal screws: M3.5
- Integrated terminal cover

#### **Pushbutton operation**

#### Pushlock Turn Reset

Button is maintained when pressed and is reset when turned clockwise.

Button is locked when turned clockwise in the depressed position and is reset when turned counterclockwise.

Pulling the button operates the contacts, and releasing the button return the contacts.

2-position switches with button maintained in both depressed and reset positions.

#### Pull contact operation

- un contact operation											
Contact	AZD3										
Contact	Normal	Pull									
1NO	<del>о'</del> о	9.									
2NO-2NC	ი-ი ••	<u> </u>									
2N0	9,0 9,0	1° 1° 1°									
2NC	•••	<b>616 616</b>									

Push-Pull contact operation

Contact	AYD31								
Contact	Push	Pull							
1NO	ტ •_•	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							
2N0	9,9 9,9	00 00 T 00							
2NC	<u>.</u>	<b>aia aia</b>							

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Miniature

Pilot Lights

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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

#### LED Illuminated Extended/Extended with Full Shroud

Package Quantity: 1

	Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Button Color Code
	Extended				1NO-1NC	ALD22211DN*	
	ALD2			24V AC/DC	2N0	ALD22220DN*	1
-	AOLD2				2NC	ALD22202DN*	R
					1NO-1NC	ALD21611DN*	G
			Momentary	100/110V AC	2N0	ALD21620DN*	Υ
					2NC	ALD21602DN*	A S
•					1NO-1NC	ALD22611DN*	PW
,				200/220V AC	2N0	ALD22620DN*	
_	(24V AC/DC)	DAGC			2NC	ALD22602DN*	1
:	(247 10/00)	BA9S			1NO-1NC	AOLD22211DN*	
_				24V AC/DC	2N0	AOLD22220DN*	
_					2NC	A0LD22202DN*	R
					1NO-1NC	AOLD21611DN*	G
-			Maintained	100/110V AC	2N0	AOLD21620DN*	Y
•					2NC	A0LD21602DN*	S
_				200/220V AC	1NO-1NC	A0LD22611DN*	PW
-	With transformer				2N0	A0LD22620DN*	1
	(100/110V AC)				2NC	A0LD22602DN*	1
_	Extended with Full Shroud				1NO-1NC	ALFD22211DN*	
_	ALFD2			24V AC/DC	2N0	ALFD22220DN*	1
1	AOLFD2				2NC	ALFD22202DN*	R
-					1NO-1NC	ALFD21611DN*	G
-			Momentary	100/110V AC	2N0	ALFD21620DN*	Y
					2NC	ALFD21602DN*	A S
-					1NO-1NC	ALFD22611DN*	PW
•				200/220V AC	2N0	ALFD22620DN*	1
_	(24V AC/DC)	D400			2NC	ALFD22602DN*	1
_	(24V AG/DG)	BA9S			1NO-1NC	AOLFD22211DN*	
	The state of the s			24V AC/DC	2N0	AOLFD22220DN*	1
					2NC	AOLFD22202DN*	R
-					1NO-1NC	AOLFD21611DN*	G
			Maintained	100/110V AC	2N0	AOLFD21620DN*	Y
;					2NC	AOLFD21602DN*	A S
-					1NO-1NC	AOLFD22611DN*	PW
2	With transformer			200/220V AC	2N0	AOLFD22620DN*	1
	(100/110V AC)				2NC	AOLFD22602DN*	1
•	Specify a color code in place of * in Part No. B (red).	2 ( ) // (		- Coo D 200 fo		ifigurations and gold-plated silver	

- 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.
- · Round bezel (metal): Chrome-plated
- See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
- See B-308 for other contact configurations and gold-plated silver contacts.

110V DC, 380V AC or over

110V DC, 380V AC or over

- Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.
- See B-314 for bottom view.

**Dimensions** 

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Sensors AUTO-ID

Flush Silhouette

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Miniature

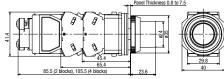
Pilot Lights

Extended, LED illuminated (momentary/maintained) ALD2/AOLD2 (terminal screws M3.5) 6, 12, 24V AC/DC · Without LED Lamp ARN

CS

100/110V AC, 200/220V AC (240V AC or below)

Integrated terminal cover



#### Extended with Full Shroud, LED illuminated (momentary/maintained) ALFD2/AOLFD2 (terminal screws M3.5) Integrated terminal cover

6, 12, 24V AC/DC · Without LED Lamp

Panel Thickness 0.8 to 6

100/110V AC, 200/220V AC (240V AC or below)

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

#### LED Illuminated Mushroom (ø40)/Mushroom Pushlock Turn Reset

Package Quantity: 1

Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code
Mushroom (ø40)				1NO-1NC	ALD32211DN*	
ALD3			24V AC/DC	2N0	ALD32220DN*	7
AOLD3				2NC	ALD32202DN*	7 _
				1NO-1NC	ALD31611DN*	R G Y A S
(24V AC/DC)		Momentary	100/110V AC	2N0	ALD31620DN*	Ϋ́
		•		2NC	ALD31602DN*	A
				1NO-1NC	ALD32611DN*	ე ა
			200/220V AC	2N0	ALD32620DN*	
	DAGC			2NC	ALD32602DN*	
	BA9S			1NO-1NC	A0LD32211DN*	
			24V AC/DC	2N0	AOLD32220DN*	
				2NC	AOLD32202DN*	R
		Maintained		1NO-1NC	AOLD31611DN*	R G Y A W
			100/110V AC	2N0	AOLD31620DN*	Y
				2NC	AOLD31602DN*	Ŵ
				1NO-1NC	AOLD32611DN*	S
With transformer			200/220V AC	2N0	AOLD32620DN*	
(100/110V AC)				2NC	AOLD32602DN*	
Mushroom Pushlock Turn Reset (*1)				1NO-1NC	AVLD32211DN*	
AVLD3			24V AC/DC	2N0	AVLD32220DN*	
				2NC	AVLD32202DN*	
				1NO-1NC	AVLD31611DN*	
	BA9S	_	100/110V AC	2N0	AVLD31620DN*	R
				2NC	AVLD31602DN*	
				1NO-1NC	AVLD32611DN*	
(24V AC/DC)			200/220V AC	2N0	AVLD32620DN*	
(2 )				2NC	AVLD32602DN*	

- Specify a color code in place of \* in Part No. R (red), G (green), Y (yellow), A (amber), S (blue)
- Illuminated pushbuttons have an LED lamp installed.
- Round bezel (metal): Chrome-plated
- See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
- See B-308 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.
- \*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).
- See B-314 for bottom view.

#### Illuminated pushbutton operation

**Pushlock Turn Reset** 

**Dimensions** 

Button is maintained when pressed and is reset when turned clockwise.

Flush Silhouette

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ø22

Miniature

Pilot Lights

TWN

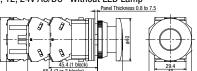
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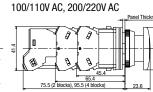
CS

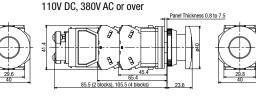
#### Mushroom, LED illuminated (momentary/maintained)

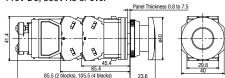
#### ALD3/AOLD3 (terminal screws M3.5) 6, 12, 24V AC/DC · Without LED Lamp

#### Integrated terminal cover









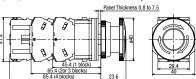
#### Mushroom Pushlock Turn Reset, LED illuminated

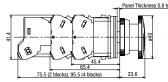
AVLD (terminal screws M3.5)

Integrated terminal cover

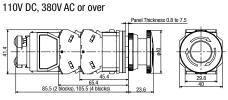
100/110V AC, 200/220V AC

6, 12, 24V AC/DC · Without LED Lamp









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#### ASD Selector Switches (Knob Operator)

Package Quantity: 1

**Knob Operator** ASD Shape APEM Spring Return **Contact Configuration** Spring Return from Left Maintained from Right Operator Operator Contact Block Contact Block Control Boxes Position Position Contact Emergency Mounting Mounting Contact 1 2 Stop Switches Contact Position Position Enabling 1 NO NO 1N0 1 . Switches **ASD2110N** ASD210N ASD2210N (10)2 2 **Dummy Block** Safety Products 90° NO NO 1NO-1NC 1 1 2-position ASD211N ASD2111N ASD2211N **Explosion Proof** (11)2 NC 2 NC 1 NO 1 NO 2N0 Terminal Blocks ASD220N **ASD2120N** ASD2220N (20)2 NO 2 NO . Relays & Sockets 1 NO 1 NO Circuit 2 NC 2 NC 2NO-2NC ASD222N ASD2122N ASD2222N Protectors (22)3 NO 3 NO **Power Supplies** 4 NC 4 NC Spring Return Spring Return Spring Return LED Illumination **Contact Configuration** Maintained from Right Two-way Controllers Operator Contact Block Operator Position Contact Interfaces Mounting Contact 2 1 0 Position Sensors 1 N0 • 2N0 ASD320N ASD3120N ASD3220N ASD3320N AUTO-ID (20)2 N0 • 1 NC 2NC ASD302N ASD3102N ASD3202N ASD3302N (02)2 NC 1 NO Flush Silhouette NO 2 • 2NO-2NC ASD322N **ASD3122N** ASD3222N ASD3322N (22)3 NC ø16 45° 4 NC 3-position ø22 1 NO 2 NO • 4N0 ASD340N ASD3140N ASD3240N ASD3340N (40)3 NO • Miniature 4 N0 • 1 NC Pilot Lights 2 NC 4NC ASD304N ASD3104N ASD3204N ASD3304N (04)3 NC 4 NC 1 N0 TWN

- Round bezel (metal): Chrome-plated

☆ 3S

Selector switches with 1 or 3 contact blocks have a dummy block.

2

3

4

• Knob operator can be installed at every 45 degrees intervals in addition to the positions shown in the above table.

N0

NC

**Dummy Block** 

See B-321 to B-322 for other contact configurations.

- . Turn the operator to each position accurately.
- Selector switches with \$\alpha\$ have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold-plated silver contacts.
- See B-312 for bottom view.

ASD33SN-243

#### **Contact Block Mounting Position**



All dimensions in mm. **Dimensions** 90° 2-position Panel Thickness 45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks)

> Terminal Screws: M3.5 Terminal cover: integrated

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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

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Miniature Pilot Lights

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#### ASD□L Selector Switches (Lever Operator)

Package Quantity: 1

Shape	Lever Opera ASD□L	ator											ratkaye quanuty. I
		Contact C	Configuration				Maintained	Spring Return from Right		Sprir	urn fro	m Left	
	Contact	Contact	Block		perato Position		1 2	1 2	Contact Block Operator Position			1 2	
	Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2	
	1N0	0	NO		•		ASD2L10N	ASD21L10N	1	NO	•		ASD22L10N
90°	(10)	2		Dur	nmy Bl	ock	AUDZETUN	AUDZILIUN	2	_	_		AODEELION
2-position	1NO-1NC	0	NO		•		ASD2L11N	ASD21L11N	①	NO	•		ASD22L11N
	(11)	2	NC	•			AGDZLITN	7,00212111	2	NC		•	7100EEET 111
	2N0	0	NO		•		ASD2L20N	ASD21L20N	①	NO	•		ASD22L20N
	(20)	2	NO		•				2	NO	•		
		0	NO	_	•				①	NO	•	_	
	2NO-2NC	2	NC	•			ASD2L22N	ASD21L22N	2	NC		•	ASD22L22N
	(22)	3	NO NO	_					3	NO	•	_	
		4	NC	•	Ш			One size a D. I	4	NC		•	0
_	Contact Configuration						Maintained	Spring Return from Right	Sprin	g Return fr	om Le	eft	Spring Return Two-way
	Contact	Contact	Block	Operator Position		or 1	1 0 2	1 0 2		1 - 0	2		1 0 2
	Contact	Mounting Position	Contact	1	2								
	2N0	1	NO	•			ASD3L20N	ASD31L20N		ASD32L20		ASD33L20N	
	(20)	2	NO			•	HODOLEUM	AODOTEZON			-11		AODOULEUM
	2NC	0	NC				ASD3L02N	ASD31L02N		ASD32L02	2N		ASD33L02N
	(02)	2	NC										
		0	NO	•									
	2NO-2NC	2	NO NO				ASD3L22N	ASD31L22N		ASD32L22	2N		ASD33L22N
45°	(22)	3	NC										
3-position		4	NC										
		0	NO NO	•									
	4NO	2	NO NO			•	ASD3L40N	ASD31L40N		ASD32L40	ON		ASD33L40N
	(40)	3	NO NO	•									
		4	NO NC			•							
	4110	① ②	NC NC										
	4NC (04)	3	NC NC				ASD3L04N	ASD31L04N		ASD32L04	1N		ASD33L04N
	(04)	4	NC NC										
		0	NO	•									
		2	NO NO				☆						
	☆ 3S	3	NC			● ASD3L3SN-243	_	_				_	
	33	4	- NC	Dur	nmy Bl	ock							
		L 49		וטעו	iiiiiy Bi	UUK							l .

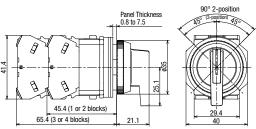
- Lever: Black

- Round bezel (metal): Chrome-plated
   Selector switches with 1 or 3 contact blocks have a dummy block.
   Knob operator can be installed at every 45 degrees intervals in addition to the positions shown in the above table.
- Turn the operator to each position accurately.
   Selector switches with ☆ have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
   See B-308 for gold-plated silver contacts.
- See B-312 for bottom view.

## **Contact Block Mounting Position**

#### **Dimensions**

All dimensions in mm.



Terminal Screws: M3.5

Terminal cover: integrated



Control Boxes

Stop Switches

Safety Products

**Explosion Proof** 

Terminal Blocks

Relays & Sockets

**Power Supplies** 

LED Illumination

Controllers

Operator

Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

Miniature

Pilot Lights

TWN

ARN

CS

Circuit

Protectors

Emergency

Enabling

Switches

#### **ASD**□K Key Selector Switches

Package Quantity: 1

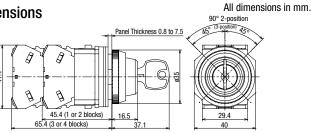
Key Selector (Key No. 0) ASD□K Shape Spring Return Spring Return from Left **Contact Configuration** Maintained from Right Operator Operator Contact Block Contact Block Position Position Contact Mounting Mounting Contact 2 2 Contact 1 Position Position 1 NO • 1 N0 • 1N0 ASD2K10N ASD21K10N ASD22K10N (10)**Dummy Block** 2 (2) 900 1 NO 1 N0 • • 1NO-1NC 2-position ASD2K11N ASD21K11N ASD22K11N (11)2 2 NC • NC • 1 NO 1 • N<sub>0</sub> 2N0 • ASD2K20N ASD21K20N ASD22K20N (20)NΩ N0 2 2 NΩ • 1 1 N<sub>0</sub> • NC 2 2 • NC • 2NO-2NC ASD2K22N ASD21K22N ASD22K22N (22)3 3 NO • NO 4 4 NC • NC • Spring Return Spring Return **Contact Configuration** Maintained Spring Return from Left Two-way from Right Contact Block Operator Position Mounting Contact Contact 2 1 Position 1 NO • 2N0 ASD3K20N ASD31K20N ASD32K20N ASD33K20N (20)N0 2 1 NC 2NC ASD3K02N ASD31K02N ASD32K02N ASD33K02N (02)2 NC 1 NO • 2NO-2NC 2 NO ASD3K22N ASD31K22N ASD32K22N ASD33K22N (22)3 NC 45° 4 NC 3-position 1 NO 2 NO • 4N0 ASD3K40N ASD31K40N ASD32K40N ASD33K40N (40)3 NO lacktriangle4 NO 1 NC 2 NC 4NC ASD3K04N ASD31K04N ASD32K04N ASD33K04N (04)3 NC NC 4 1 N0 2 N0 • ☆ 3S ASD3K3SN-243 3 NC 4 **Dummy Block** 

- · Cylinder: Chrome-plated
- · Round bezel (metal): Chrome-plated Key selector switches with 1 or 3 contact blocks have a dummy block.
- . On spring-returned types, the key can be released only from the maintained position. On maintained types, the key can be released from every position. See B-308 for specifying key retained positions.
- · Key selector switch is supplied with two standard keys.
- (1) Insert the key completely before turning the key, otherwise failure will result.
- (2) Turn the operator to each position accurately.
   Different key number is available upon request. Contact IDEC.
   Selector switches with A have a half contact operating current (load switching current)
- value). Rated insulation voltage and rated current remain the same.
- See B-308 for gold-plated silver contacts.
   See B-312 for bottom view.

#### **Contact Block Mounting Position**







Terminal Screws: M3.5

Terminal cover: integrated

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

#### **ASLD Illuminated Selector Switches (LED)**

Illuminated Selector Switches (BA9S Base)

Package Quantity: 1

Shape	ASLD	.00	or owner	100 (1	DI TOC	, Buo	<b>0</b> )								
								(24V AC/DC)							
		Contact	Configura	_				Maintained	Spring Return from Right		Spri	_		rom Left	
		Contac	t Block		)pera Positio		Operating Voltage	1 2	1 👡 2	Contact Block			erator sition	1, 2	Color Code
	Contact	Mounting Position	Contact	1	2		voltage			Mounting Position	Contact	1	2		Code
		①	NO		•		24V AC/DC	ASLD22211DN*	ASLD212211DN*	①	NO	•		ASLD222211DN*	
	1NO-1NC (11)	2	NC	•			100/110V AC	ASLD21611DN*	ASLD211611DN*	2	NC		•	ASLD221611DN*	
90°	(11)						200/220V AC	ASLD22611DN*	ASLD212611DN*					ASLD222611DN*	
2-position	0110	①	NO		•		24V AC/DC	ASLD22220DN*	ASLD212220DN*	1	NO	•		ASLD222220DN*	RG
	2N0 (20)	2	NO		•		100/110V AC	ASLD21620DN*	ASLD211620DN*	2	NO	•		ASLD221620DN*	Υ
	(20)						200/220V AC	ASLD22620DN*	ASLD212620DN*					ASLD222620DN*	A S
		①	NO		•		24V AC/DC	ASLD22222DN*	ASLD212222DN*	①	NO	•		ASLD222222DN*	PW
	2NO-2NC	2	NC	•			100/110V AC	ASLD21622DN*	ASLD211622DN*	2	NC		•	ASLD221622DN*	
	(22)	3	NO		•		200/220V AC	ASLD22622DN*	ASLD212622DN*	3	NO	•		ASLD222622DN*	
		4	NC	•			_	_	_	4	NC		•	_	
		Contact Configuration		0	Maintained	Spring Return from Right	Spring	Return fr	om L	eft	Spring Return Two-way	0.1			
		Contact Block Operator Position Operating Voltage			1 0 2	1 0 2		1,0 2	2		1,0,2	Color Code			
	Contact	Mounting Position	Contact	1	0	2	- Tanaga				$\bigvee$				
		1	NO	•			24V AC/DC	ASLD32220DN*	ASLD312220DN*	ASLI	0322220	DN*		ASLD332220DN*	
	2N0 (20)	2	NO			•	100/110V AC	ASLD31620DN*	ASLD311620DN*	ASLI	0321620	DN*	:	ASLD331620DN*	] [
	(20)						200/220V AC	ASLD32620DN*	ASLD312620DN*	ASLI	0322620	DN*	:	ASLD332620DN*	] [
		1	NC				24V AC/DC	ASLD32202DN*	ASLD312202DN*	ASLI	0322202	DN*	:	ASLD332202DN*	] [
	2NC (02)	2	NC				100/110V AC	ASLD31602DN*	ASLD311602DN*	ASLI	0321602	2DN*	:	ASLD331602DN*	] [
	(02)						200/220V AC	ASLD32602DN*	ASLD312602DN*	ASLI	0322602	2DN*	:	ASLD332602DN*	
45°		①	NO	•			24V AC/DC	ASLD32222DN*	ASLD312222DN*	ASLI	0322222	2DN*	:	ASLD332222DN*	] _ [
3-position	2NO-2NC	2	NO			•	100/110V AC	ASLD31622DN*	ASLD311622DN*	ASLI	0321622	PDN*	:	ASLD331622DN*	RG
	(22)	3	NC				200/220V AC	ASLD32622DN*	ASLD312622DN*	ASLI	0322622	2DN*	:	ASLD332622DN*	]
		4	NC				_	_	_					_	A
		①	NO	•			24V AC/DC	ASLD32240DN*	ASLD312240DN*	ASLI	0322240	DN*		ASLD332240DN*	S PW
	4N0	2	NO			•	100/110V AC	ASLD31640DN*	ASLD311640DN*	ASLI	0321640	DN*		ASLD331640DN*	'''
	(40)	3	NO	•			200/220V AC	ASLD32640DN*	ASLD312640DN*	ASLI	0322640	DN*		ASLD332640DN*	]
		4	NO			•	_		_					_	]
	① NC						24V AC/DC	ASLD32204DN*	ASLD312204DN*	ASLI	0322204	IDN*		ASLD332204DN*	]
	4NC ② NC						100/110V AC	ASLD31604DN*	ASLD311604DN*	ASLI	ASLD321604DN* ASLD331604DN*				
	(04)	3	NC				200/220V AC	ASLD32604DN*	ASLD312604DN*	ASLI	0322604	ŀDN∗		ASLD332604DN*	]
	I	4)	NC		_		_	_							i

- Specify a color code in place of \* in Part No.
- R (red), G (green), Y (yellow), A (amber), S (blue). PW (pure white)
  Round bezel (metal): Chrome-plated
- Illuminated selector switches have an LED lamp installed.
- Use a pure white (PW) LED for yellow (Y) illumination.
   See B-309 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.
- Turn the operator to each position accurately.
- See B-309 for gold-plated silver contacts. • See B-314 for bottom view.

TWN

All dimensions in mm.

ARN

Flush Silhouette

ø16 ø22

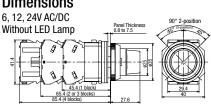
Miniature Pilot Lights

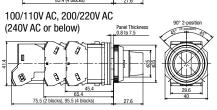
CS

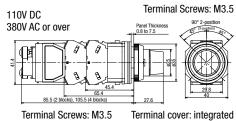
#### **Contact Block Mounting Position Dimensions**











IDEC

#### **ASBD2 Selector Pushbuttons**

Package Quantity: 1

Shape	Contact Configuration	Circuit Code	Contact Block		Ring Pos		Right		Button Color Code	Ring Operator	
			Mounting Position	Contact	Normal	Pushl Push	button Normal	Push	oouo	Part No. (Ordering No.)	
Ring Operator (90°2-position) ASBD2	11 (1NO-1NC)	A03	0	NO		•		•	B G	ASBD211N-A03*	
			2	NC	•				R Y		
		A08	0	NO		•		•		ASBD222N-A08*	
	22 (2NO-2NC)		2	NC	•						
			<u>3</u>	NO NC	•	•		•			
			①	NO NO		•		•	B G R Y		
		☆ C10	2	NO				•		☆ ASBD222N-C10*	
			3	NC	•						
			4	NC							
		D10	①	NO		•				ASBD222N-D10*	
			2	NO				•			
			3	NC	•					AODDELEN DIO	
			4	NC			•				
		☆ E10	① ②	NO NO		_		•		☆ ASBD222N-E10*	
			3	NC				<u> </u>			
			4	NC							
		☆ F10	①	NO				•		<b>*</b>	
			2	NO		•					
			3	NC			•			ASBD222N-F10*	
			4	NC	•						

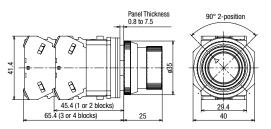
- Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow)
- Bezel (metal): Chrome-plated
- Circuit codes E and F: The right and left NC contact blocks on circuit code E or F may overlap each other while turning the ring operator. The NO and NC contact blocks on circuit code F may overlap each other while pressing the button.
- When using the selector pushbutton, do not turn the ring operator with the pushbutton depressed. Otherwise, damage or failure may be caused.
- Selector switches with 🛱 have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- See B-312 for bottom view.

#### **Contact Block Mounting Position**



Dimensions Ring operator (90° 2-position)

All dimensions in mm.



Terminal Screws: M3.5 Terminal cover: integrated

APEM

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ø30

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#### Pilot Lights (Round)

Package Quantity: 1

Shape	Illumination	Base	Operating Voltage	Part No. (Ordering No.)	Color Code	LED Lamp Part No.
Round APD1 (24V AC/DC)	LED	BA9S	24V AC/DC	APD122DN* R, G, Y, A, S, PW		LSRD-2
			100/110V AC	APD116DN*	R, G, Y, A, S, PW	I CDD G
			200/220V AC	APD126DN*	R, G, Y, A, S, PW	LSRD-6

• Specify a color code in place of \* in Part No.

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

Round bezel (metal): Chrome-plated

• Pilot lights have an LED lamp installed.

See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
See B-309 for how to specify units without LED lamps.
Terminal cover is installed on pilot lights for electric shock prevention.

Type	Terminal Cover	Quantity
6V, 12V, 24V AC/DC	APN-PVL	1
100V/110V AC, 200/220V AC	N-VL3	1
110V DC	N-VL3	1

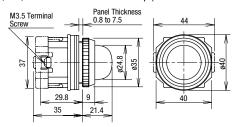
Note: DC-DC converter types are not approved by UL and CSA, and not CE compliant.

• See B-314 for bottom view.

#### **Dimensions**

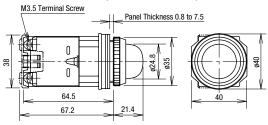
#### Round, LED illuminated

6V, 12V, 24V AC/DC · Without LED Lamp (Terminal Cover: APD-PVL)



Terminal Screws: M3.5

100 to 480V AC, 110V DC (Terminal Cover: N-VL3)



Terminal Screws: M3.5

All dimensions in mm.

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• See B-349 for wiring.

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## Nameplates

	Model	Legend	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)
	NA	Dlank		NA O	NA-0	1	401.2
1		Blank	Aluminium 1.2 mm thick White letters on black With background	NA-0	NA-OPN10	10	
3		black		NA-□	NA-□	1	930.5
, 	For TWN/TWND	Legend		NA-□	NA-□PN10	10	1 200.3
	NALO	Blank	Aluminium	NALO	NALO	1	40 1.2
	For TWN/TWND		Black	NALO	NALOPN10	10	630.5
_	FOI TWIN/TWIND						

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

## Legends

□: Code	Legend
1	ON
2	0FF
3	START
4	STOP
31	OFF ON
35	HAND AUTO
53	HAND OFF AUTO

Flush Silhouette

ø16

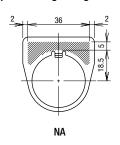
ø22

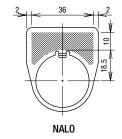
Miniature

Pilot Lights

TWN
TWND

ARN CS **Shape and Engraving Area** 





All dimensions in mm.

Example (when the legend height is 4 mm)

Shape		ng Area m)	Max. No. of Lines	No. of Letters on	
	Height Width		OI LINES	1 Line	
NA	5	36	1	14	
NALO	10	36	2	14	

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## Accessories

01	10.	D- 111	Ordering	Package	
Shape	Material	Part No.	No.	Quantity	Remarks
Locking Ring Wrench  B  A  For TWN/TWND	Nitril rubber (black)	OR-12	OR-12	1	Used to tighten the round bezel when installing the ø30 or ø25 switch onto a panel from the front.  A: TWS series (ø25)  B: TWN/TWND series (ø30)  A  B  B  B  B  B  B  B  B  B  B  B  B
Lamp Holder Tool  A  For TWN/TWND	Nitril rubber (black)	OR-55	OR-55	1	Used to install and remove the LED/incandescent lamps.  See B-345. A: For BA9S base B: For E12 base  A  OR-55  B  B  B  B  B  B  B  B  B  B  B  B
Contact Block Removal Tool  For TWN	Metal (zinc-plated) Rubber (nitryl)	TW-KC1	TW-KC1	1	Used to remove transformer units.  See B-347 for how to use.  130  8
Contact Rubber Boot For momentary 1 layer of contact blocks (2 contact blocks)  For TWN	Nitril rubber (black)	0C-99	OC-99	1	Rubber boot used to prevent oil and dirt from entering into the contact block.     Temperature range:     —5 to +60°C      When inserting a cable, cut the projection on the cover to match the cable size.
Anti-rotation Ring  For TWN/TWND	Metal (diecast) (zinc-plated)	0GL-11	OGL-11PN10	10	Used to prevent the operator from turning. Generally used when using no nameplates on selector switches and selector pushbuttons.     See B-345 for installation.     Cannot be used for pin lock.
Rubber Mounting Hole Plug	Nitril rubber (black)	0B-13B	0B-13BPN05	5	Used to plug unused ø30.5 mm mounting holes.     Degree of protection: IP40
For TWN/TWND	(gray)	0B-13	0B-13PN05		034
Plastic Mounting Hole Plug  For TWN/TWND	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	0BP-11	0BP-11	1	Tightening torque: 1.2 N·m.     Degree of protection: IP65 (when there is no anti-rotation ring hole)     Supplied with a locking ring.      Gasket     M30 <sup>P1.5</sup> Screw     Locking Ring
Metallic Mounting Hole Plug  For TWN/TWND	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	0B-11	0B-11	1	Tightening torque: 1.2 N·m.     Degree of protection: IP65 (when there is no anti-rotation ring hole)     Supplied with a locking ring.      Gasket     M30 <sup>P1.5</sup> Screw     Locking Ring

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Accessories All dimensions in mm.

Ordering Package Shape Material Part No. Remarks Quantity No. **Button Cover for Extended**  Metallic bezels covered with a Black 0C-11B 0C-11B **Pushbuttons** rubber boot to enhance waterproof characteristics. • Button is not included. Applicable Nitril rubber Red 0C-11R 0C-11R to extended pushbuttons only. • Oil-proof 1 Operating temperature: Bezel: −5 to +60°C. diecast zinc **0C-11G** 0C-11G Green Yellow **0C-11Y 0C-11Y** For TWN/TWND · Used to cover and protect push-For flush buttons where units are subject 0C-121 0C-121 1 to water splash. Not suitable for pushbuttons outdoor use or where the units are EPDM rubber subject to oil splash. Part No. Α B For extended 0C-122 0C-122 1 37 0C-121 16 pushbuttons OC-122 37 22 For TWN/TWND Used for ABN4G and ABGD4 **Dust-proof Rubber Cover** Panel Thickness for Jumbo Mushrooms pushbuttons. Nitril rubber OC-4GN OC-4GN 1 (black) For TWN/TWND Padlock Cover · Used to protect pushbuttons and illuminated pushbuttons (momentary/maintained) with 24 mm max. height from the panel, and selector switches (knob operator). . Not used for the following models. **Pushbuttons** 82.5 Mushroom with full shroud Mushroom Polyarylate Jumbo mushroom with shroud 0L-KL1 0L-KL1 (gasket: 1 **Illuminated** Outside diameter: ø50 nitryl rubber) **Pushbuttons** With half shroud With full shroud Selector Switches Lever operator Rubber Key Hole ø8 Key selector switch with For TWN/TWND key installed Padlock Cover for Applicable model **Key Selector Switches** Key selector switches ASN□K/ASD□K See padlock cover catalog for operating instruction. Metal Paint: red HS9Z-PC30 HS9Z-PC30 1 (zinc-plated brass) For TWN/TWND For Flush Pushbuttons Used to protect flush pushbuttons from inadvertent operation. · Can be easily attached using the locking ring. Metal (zinc-plated 0L-C OL-C 1 brass) For TWN/TWND

Accessories All dimensions in mm.

Shape	Material	Part No.	Ordering No.	Package	Remarks	ilot Lights
·	Iviaterial	rait No.	Ordering No.	Quantity	nemans	hts
Metallic Bezel						
	Metal				Cannot be used with pin lock,	APEM
	(diecast zinc:	0G-11	OG-11PN02	2	selector pushbuttons, and monolever	Switches &
	chrome-plated)				units.	Pilot Lights  Control Boxes
ø35/ø26, height 9 For TWN/TWND						Emergency
Plastic Bezel						Stop Switches Enabling
					<ul> <li>Specify a color code in place of *.</li> </ul>	Switches
	Polycarbonate	0GP-11*	0GP-11*PN02	2	B (black), G (green), R (red), W (white), Y (yellow)	Safety Products
	1 diyearbonate	Our -11*	001-11-1102		<ul> <li>Cannot be used with pin lock, selector</li> </ul>	Explosion Proof
					pushbuttons, and monolever units.	Terminal Blocks
ø35/ø26, height 9 For TWN						Relays & Sockets
Octagonal Metal Bezel						Circuit Protectors
① Flush W35		0G-81	0G-81PN02	2		Power Supplies
(37.6) H9			0.0.0	_		LED Illumination
	Metal (diecast zinc:				Use with TWDN series diecast zinc switches and pilot lights.	Controllers
	chrome-plated)				Cannot be used with half-shrouds.	Operator Interfaces
© Extended W35		0G-82	0G-82	1		Sensors
(37.6) H16						AUTO-ID
For TWDN						
Clear Plastic Shroud for Flush Pushbuttons						
						Flush Silhouette
	Acrylic (clear)	0GP-13	0GP-13PN02	2		ø16
						ø22
ø35, height 14 For TWN					Clear plastic full shroud.	ø30
Clear Plastic Shroud for Extended Pushbuttons					o ciedi piastic full stilloud.	Miniature
						Pilot Lights
	Acrylic (clear)	0GP-14	0GP-14PN02	2		- I not Lights
ø35, height 20.6 For TWN						TWN
Clear Plastic Shroud for Illuminated Pushbuttons						TWND
						ARN
					• Duttono mou protrudo eligibilio depending	CS
	Acrylic (clear)	0GP-1411	0GP-1411	1	Buttons may protrude slightly depending on the panel thickness.	
Shroud: ø35, height 20.6 Metal Nut Ring: height 4 For TWN						
Metal Nut Ring for Illuminated Pushbuttons						
	Metal	0L-11	0L-11PN05	5	Metal nut ring for OGP-1411 only.	
	(diecast zinc)	OL II	5E 1111103		mountaing to our 1411 only.	
ø35, height 4 For TWN						



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## Accessories

All dimensions in mm.

		S	hape	Material	Part No.	Ordering No.	Package Quantity	Color Code *
	Button for Pushbuttons		① Flush ø24.6, height 4		ABN1BN-*	ABN1BN-*PN05	5	
A S	©		② Extended ø24.6, height 9		ABN2BN-*	ABN2BN-*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
s — y	3		③ Mushroom ø40, height 16.2	Polyacetal	ABN3BN-*	ABN3BN-*PN02	2	
y s g s	4		④ Jumbo Mushroom ø65, height 23.2		ABN4BN-*	ABN4BN-*	1	B (black), G (green), R (red), Y (yellow), S (blue)
s — f	\$		© Button for Pin Lock (ABD8P) ø23.6, height 3		ABW1B-*	ABW1B-*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
s s t	©		© ø40 Pushlock Turn Reset (AVN3, AVD3) ø40, height 18.5	AS resin	AVN3B-*	AVN3B-*	1	R (red),Y (yellow)
s 	For TWN	N/TWND	⑦ ø40 Push Turn Lock (AJN3, AJD3) ø40, height 18.5	AS TESTI	AJN3B-*	AJN3B-*	1	B (black), G (green), R (red), Y (yellow)
s r s	Lens for Illumir Pushbuttons	nated	① Extended (ALN2, ALD2) ø24, height 18.5	AC ragin	ALN2LD-*-K	ALN2LD-*-KPN05	5	R (red), G (green), S (blue), Y (yellow), A (amber), W (white) Specify W for PW (pure white) illumination.
	② For TWN	N/TWND	② ø40 Pushlock turn reset (AVLN3, AVLD3) ø40, height 18.5	AS resin	AVLN3L-R-K	AVLN3L-R-KPN02	2	R (red) only
e — 6	Selector Opera	ator	① Knob operator ø25, height 20.5		ASNHT-*	ASNHT-*PN02	2	D (blook) C (groop) D (rod)
2			② Lever operator ø25, height 20.5, length 37.5	Polyacetal	ASNHL-*	ASNHL-*PN02	2	B (black), G (green), R (red)
S	<ul><li>3</li><li>4</li></ul>	1	③ Color insert Width 21, depth 5, height 18		TW-HC1*	TW-HC1*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
N D	For TWN	N/TWND	4 Knob for illuminated selector switch (ASLN, ASLD) ø25, height 28	AS resin	ASLNHD-*-K	ASLNHD-*-K	1	G (green), R (red), S (blue), A (amber), W (white), Y (yellow) Specify W for PW (pure white) illumination.
N —	Lens for Pilot	Lights	① Round (APN1, APD1) ø24.8, height 28, M20		APN106LN-*-K	APN106LN-*-KPN05	5	R (red), G (green), Y (yellow) A (amber), W (white), S (blue) Specify W for PW (pure white) illumination.
_	2		For TWN/TWND  ② Rectangular (UPQN4) Width 36, depth 30, height 8.5	AS resin	UPQN406LD-*-K	UPQN406LD-*-KPN05	5	R (red), G (green), Y (yellow), A (amber), C (clear), S (blue) Specify C for PW (pure white) illumination.
	3		For TWN  ③ Square extended (UPQN3B) □25, height 26.5 For TWN		UPQN06LD-*-K	UPQN06LD-*-KPN05	5	R (red), G (green), S (blue), Y (yellow), A (amber), W (white) Specify W for PW (pure white) illumination.
	Marking Plate	For TWN	Rectangular pilot lights (UPQN4) Width 29.8, depth 23.8, thickness 2	Acrylic	UPQN406N-W	UPQN406N-WPN05	5	W (white) only See B-346 for engraving area.

**Maintenance Parts** 

All dimensions in mm.

	T					o <del>t</del>
Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks	ilot Lights
Rubber Washer (1.5 mm-thick)  For TWN/TWND	Rubber (synthetic soft vinyl) ø39/ø29.5, height 1.5	0W-11	OW-11PN10	10	To tighten mounting panels	APEM
Rubber Washer (3.0 mm-thick) For TWN/TWND	Rubber (synthetic soft vinyl) ø39/ø29.5, height 3	0W-12	OW-12PN10	10	To tighten mounting panels	Switches & Pilot Lights  Control Boxes  Emergency Stop Switches  Enabling
Shroud for Pushbuttons  ①	① Half shroud ø35/ø27, height 20.5	ABN2G	ABN2G	1	• With nut ring (ø35, height 4)	Switches Safety Products Explosion Proof
3	② Full shroud ø35/ø28.5, height 16.5	ABN2F	ABN2F	1		Relays & Sockets  Circuit Protectors
4	③ Full shroud (for mushroom pushbuttons) ø48, height 20	ABN3G	ABN3G	1		Power Supplies  LED Illumination  Controllers
\$	④ Shallow shroud (for jumbo mushroom) ø75, height 18	ABN4G	ABN4G	1		Operator Interfaces Sensors
For TWN/TWND	© Deep shroud (for jumbo mushroom) ø75/ø69, height 33	ABN4F	ABN4F	1		Flush Silhouette
Shroud for Illuminated Pushbuttons  ① ② ②	① Half shroud (For BA9S base) ø35/ø27, height 25	ALN2GL	ALN2GL	1	• With nut ring (ø35, height 4)	ø16 ø22
For TWN/TWND	© Full shroud (For BA9S base) ø35/ø29.5, height 22.5	ALN2FL	ALN2FL	1	• With nut ring (ø35, height 4)	Miniature Pilot Lights
Spare Key For Key Selector Switches For TWN/TWND	Metal Nickel plated brass Length 3, width 19.7, thickness 1.8	TW-SK-0	TW-SK-0PN02	2	ASN□K□N     ASD□K□N	TWN TWND
Spare Key For Key Selector Switches For TWN	Metal Nickel plated brass Length 37.5, thickness 2	ASN-SK-24401	ASN-SK-24401PN02	2	◆ ASN□K□-N024401	CS
Pin/Chain Kit For ABD8P	Pin: Nickel plated brass	ABD8P-PIN	ABD8P-PIN	1	• Pin, chain, and plate for ABN8P • Pin (ø4.6)	
Contact Block Plug  For TWN/TWND	Polyamide	HW9Z-CBPL	HW9Z-CBPLPN10	10	Used to plug the hole in the center of a contact block.	

Control Boxes

Emergency
Stop Switches

Enabling
Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Circuit
Protectors

Power Supplies

LED Illumination

Controllers

Sensors AUTO-ID

Flush Silhouette

ø16 ø22

Miniature Pilot Lights

## Maintenance Parts

All dimensions in mm

	Shape	Description	Part No.	Ordering No.	Package Quantity	Remarks
	Contact block	NO 1 1	HW-U10	HW-U10		Housing color: Blue
	HW-U	NO contact	HW-U10-MAU	HW-U10-MAU	1	Push rod color: Green MAU has gold contacts
	from from	NOtt	HW-U01	HW-U01		Housing color: Reddish purple
		NC contact	HW-U01-MAU	HW-U01-MAU	1	Push rod color: Red MAU has gold contacts
		EM contact	HW-U10R	HW-U10R		Housing color: Blue
_		(early make)	HW-U10R-MAU	HW-U10R-MAU	1	Push rod color: Black MAU has gold contacts
		LB contact	HW-U01R	HW-U01R		Housing color: Reddish purple
_	For TWN/TWND, 11g approx.	(late break)	HW-U01R-MAU	HW-U01R-MAU	1	Push rod color: White MAU has gold contacts
_	Dummy Block For TWN/TWND 3.5g approx.	Polyamide	HW-DB	HW-DBPN10	10	For HW-U contact blocks     Used when the number of contact blocks and full voltage adapters is 1 or 3.
-	Full Voltage Adapter For Illuminated Switches (*1) For TWN/TWND 12g approx.	Polyamide	HW-GA1N	HW-GA1NPN02	2	Applicable model:     Illuminated pushbuttons     Illuminated selector switches     Applicable load (LED lamp)     LSRD-6, LSTD-6 (6V AC/DC)     LSRD-1, LSTD-1 (12V AC/DC)     LSRD-2, LSTD-2 (24V AC/DC)
-	Transformer Unit For Illuminated Switches (*1)	100/110V AC	HW-T16	HW-T16	1	Applicable model:     Illuminated pushbuttons
-	For TWN/TWND 66g approx.	200/220V AC	HW-T26	HW-T26	1	Illuminated selector switches • Applicable load (LED lamp) LSRD-6, LSTD-6 (6V AC/DC)
-	Transformer Unit For Pilot Lights (*1)	100/110V AC	TWR-016B	TWR-016B	1	Mounting screws are not included.     See B-347 for mounting screws.
_	For TWN/TWND 69g approx.	200/220V AC	TWR-026B	TWR-026B	1	Applicable load (LED lamp)     LSRD-6, LSTD-6 (6V AC/DC)

<sup>\*1)</sup> For use as maintenance parts. Do not use for expansion or remodelling purposes.

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

Model	Operating	Currei	nt Draw	Part No.	Ordering No.	Color Code	Package	Base
Model	Voltage	DC	DC	Part No.	Ordering No.	Color Code	Quantity	Dase
LSRD	6V AC/DC	10mA	14mA	LSRD-6	LSRD-6		1	
	6V AC/DC	TUITIA	14IIIA	LOND-0	LSRD-6PN10		10	
100	12V AC/DC	7mA	8mA	LSRD-1	LSRD-1		1	BA9S
0	12V AU/DU	/ IIIA	OIIIA	LOND-1	LSRD-1PN10	_	10	/13
	24V AC/DC	7mA	8mA	LSRD-2	LSRD-2		1	
	24V AU/DU	/ IIIA	OIIIA	Lonu-2	LSRD-2PN10		10	
LSTD	6V AC/DC	7mA (R, A) 5.5mA (G, PW)	8mA (except S)	LSTD-6*	LSTD-6*		1	
	OV AG/DG	4.5mA (S)	7mA (S)	F910-0*	LSTD-6*PN10		10	D.4.0.0
1	12V AC/DC	10mA (except S)	11mA (except S)	LSTD-1*	LSTD-1*	R, G, A, S, PW	1	BA9S /13
	12V AC/DC	8mA (S)	9mA (S)	L910-1*	LSTD-1*PN10		10	/13
	24V AC/DC	10mA (except S)	11mA (except S)	LSTD-2*	LSTD-2*		1	
	24V AU/DU	8mA (S)	9mA (S)	LSTD-Z*	LSTD-2*PN10		10	
LETD	6V AC/DC	14mA (R, A)	17mA (R, A)	LETD-6*	LETD-6*		1	
	OV AC/DC	5.5mA (G, S, PW)	8mA (G, S, PW)	LEID-0*	LETD-6*PN10		10	
	12V AC/DC	6.5mA	7mA	LETD-8*	LETD-8*	R, G, A, S, PW	1	E12
M.	12V AU/DU	(10mA: at 15V)	(11mA: at 15V)	LEID-0*	LETD-8*PN10	n, u, A, S, FW	10	/15
	24V AC/DC	10mA	11mA	LETD-2*	LETD-2*		1	[
	24V AU/DU	TOTILA	TITIIA	LCIU-Z*	LETD-2*PN10		10	

- $\bullet$  Only one color is available for LSRD so there are no codes to specify the color in the part no.
- Specify a color code in place of \* in Part No. R (red), G (green), A (amber), S (blue), PW (pure white)
- Use a PW (pure white) LED for Y (yellow) illumination.
- When replacing the LED with LSRD, the lens must also be replaced (see B-341).

ARN



**Maintenance Parts** 

## LED lamps for replacing incandescent lamps

	I	ncandesce	nt Lamp					Repla
N	Model (mm)	Part No.	Operating Voltage	Lamp Rating	Base		Part No.	Colo
LS		LS-6	6V AC/DC	1W (6V)			LSRD-6	
(	1	LS-8	12V AC/DC	1W (18V)	BA9S		LSRD-1	
6	Bulb: ø11	LS-2	18V AC/DC	1W (24V)	/13		LSRD-2	
	Length: 23	LS-3	24V AC/DC	1W (30V)			LSRD-2	
LE		LE-6	6V AC/DC	2W (6V)			LETD-6*	
6		LE-8	12V AC/DC	2W (18V)	E12		LETD-8*	R
(3	Bulb: ø13	LE-2	18V AC/DC	2W (24V)	/15		LETD-2*	S
	Length: 34	LE-3	24V AC/DC	2W (30V)			LETD-2*	
• Only o	one color is availa	ble for LSF	RD so there ar	e no codes	to speci	fy the cold	r in the par	t no.

	I	Replacement	LED Lamp	
	Part No.	Color Code	Operating Voltage	Base
	LSRD-6		6V AC/DC	
-	LSRD-1		12V AC/DC	BA9S
	LSRD-2		24V AC/DC	/13
	LSRD-2		24V AC/DC	
	LETD-6*		6V AC/DC	
	LETD-8*	R, G, A,	12V AC/DC	E12
	LETD-2*	S, PW	24V AC/DC	/15
	LETD-2*		24V AC/DC	

- When using a commercially available incandescent lamp, choose a lamp with the same dimensions, operating voltage, and base.
- Specify a color code in place of \* in Part No. R (red), G (green), A (amber), S (blue), PW (pure white)
- Use a PW (pure white) LED lamp for Y (yellow) illumination.
- For O (orange) and C (clear) color code of incandescent lamp, use A (amber) LED lamp.

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Protectors Power Supplies

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Transformer

• When replacing incandescent lamps to LSRD, the lens must also be replaced (see B-341).

Shape	Operating Voltage	Voltage Range	Part No. (Ordering No.)	Applicable Load
For 6V	100/110V AC	±10%	TWR516	LSRD-6, LSTD-6* (6V AC/DC, LED lamp)
	200/220V AC	±10%	TWR526	Specify a color code in place of * in Part No. R (red), G (green), A (amber), S (blue),
	400/4440V AC	±10%	TWR546	PW (pure white)
For 24V	100/110V AC	±10%	TWR512	LSRD-2, LSTD-2* (24V AC/DC, LED lamp)
	200/220V AC	±10%	TWR522	Specify a color code in place of * in Part No. R (red), G (green), A (amber), S (blue),
	400/4440V AC	±10%	TWR542	PW (pure white)

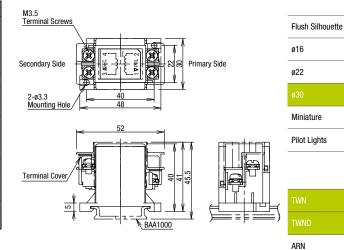
• Terminal cover (TWR-VL3) is installed on transformers as standard.

## **Specifications**

Part No.	TWR5□6	TWR5□2	
Rated Voltage	100/110V AC, 200/220V AC,	400/440V AC (50/60 Hz)	
Current Draw	2.4VA		
Rated Insulation Voltage	600V		
Insulation Resistance	100MΩ minimum (500V DC	megger)	
Operating Temperature	-30 to 60°C (no freezing)		
Operating Humidity	35 to 85% RH (no condensation)		
Storage Temperature	-40 to +80°C (no freezing)		
Vibration Resistance	Damage limits: 30 Hz, amplitude 1.5 mm		
VIDIATION RESISTANCE	Operating extremes: 5 to 55 Hz, amplitude 0.5 mm		
Charle Basistanas	1000 m/s <sup>2</sup>		
Shock Resistance	100 m/s <sup>2</sup>		
Dielectric Strength	2500V AC, 1 minute		
Terminal Screw	M3.5		
Applicable Wire 2 mm² maximum, 2 wires maximum			
Weight	87g		

## **Dimensions**

All dimensions in mm.



## **Accessories**

Shape	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)
DIN 35 mm Rail  Weight: 200g approx.	Aluminum Length: 1000 mm	BAA1000	BAA1000PN10	10	12.5 1.7 12.5 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7
End Clip  Weight: 15g approx.	Metal (zinc-plated steel) Applicable rail: BAA1000 BAP1000	BNL6	BNL6PN10	10	M4 screw

<sup>•</sup> See H-071 for DIN rail products.

CS

## $\triangle$

## **Safety Precautions**

- Turn off the power to the TWN/TWND 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-349). 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.

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LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

Miniature

Pilot Lights

TWN

ARN

## **Operating Instructions**

## **Panel Mounting**

- Remove the locking ring from the operator and check that the rubber gasket is in place. For mushroom and jumbo mushroom switches, remove the button before removing the locking ring.
- 2. Adjust the thickness of the rubber washers according to the panel thickness.
- 3. Insert the switch into the panel from the back of the panel.
- On the panel front, install the nameplate and locking ring. For mushroom and jumbo mushroom switches, install the button before installing the locking ring.

Rubber Gasket

Locking Ring

Panel

Nameplate

## Panel Thickness and Rubber Washer

Adjust the thickness of the rubber washers according to the panel thickness as shown in the tables below. Also, make sure to include the nameplate thickness when using a nameplate.



Illuminated pushbutton (extended w/full shroud)

Rubber Washer

1.5 mm-thick 3.0 mm-thick

1

) mm-thick

#### Applicable Model

#### TWN/TWND series

ushbutton

(flush/extended/mushroom/jumbo mushroom) Illuminated pushbutton (extended/mushroom) Pilot light (except for square type)

Panel	Rubber Washer		
Thickness (mm)	1.5 mm-thick	3.0 mm-thick	
Supplied	2 pieces	1	
0.8 to 3.5	2 pieces	1	
3.5 to 5.0	1	1	
5.0 to 6.5	_	1	
6.5 to 7.5	1	_	

5.0 to 6.0 (6.5)\*1 1 — \*1: (6.5) is for mushroom pushbuttons with full shroud

2 pieces

2 pieces

1

## TWND series

Pin lock pushbutton

TWN/TWND series

Panel Thickness (mm)

Supplied

0.8 to 3.5

2.0 to 3.5

3.5 to 5.0

Mushroom with full shroud

	Panel	Rubber Washer		
	Thickness (mm)	1.5 mm-thick	3.0 mm	
	Supplied	2 pieces	1	
nick	0.8 to 3.0	2 pieces	1	
	3.0 to 4.5	1	1	
	4.5 to 6.0	-	1	
	6.0 to 7.5	1	_	

#### TWN/TWND series

TWN/TWND series

Illuminated pushbutton

Panel

Thickness (mm)

Supplied 0.8 to 1.8 1.8 to 3.5

(extended with half shroud)

Pushbutton (extended with full shroud)

Pushbutton (extended with half shroud)

Rubber Washer

1.5 mm-thick 3.0 mm-th

•		,	
Panel	Rubber Washer		
Thickness (mm)	1.5 mm-thick	3.0 mm-thick	
Supplied	2 pieces	1	
0.8 to 2.5	2 pieces	1	
2.5 to 4.0	1	1	
4.0 to 5.5	_	1	
5.5 to 6.0	1		

#### TWN/TWND series

Other models (excluding square)

Panel	Rubber Washer			
Thickness (mm)	1.5 mm-thick	3.0 mm-thick		
Supplied	2 pieces	1		
0.8 to 3.5	2 pieces	1		
3.5 to 5.0	1	1		
5.0 to 6.5	ı	1		
6.5 to 7.5	1	-		

- See B-324 for square pilot lights about installing on the panel and replacing LED lamps.
- The number of rubber washers shown in the dimensions of TWN/TWND series may differ from the number of rubber washers supplied.

## **Notes for Panel Mounting**

Locking ring wrench recommended torque

Tighten the bezel to a tightening torque of 3.0 to 3.5 N·m.

Locking ring wrench

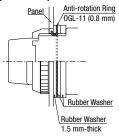
Locking ring wrench (OR-12) can be used to tighten the bezel. Use side B to tighten. Side B: For TWN/TWND series



## Installing the Anti-rotation Ring (OGL-11)

Anti-rotation rings are used on selector switches or pushbuttons which rotate and used when using no nameplates. Insert a 1.5 mm-thick rubber washer between the panel and the anti-rotation ring as shown on the right.

To install, adjust the panel thickness by taking the thickness of anti-rotation ring (OGL-11) into consideration.



## Replacement of LED Lamps

Lamps can be replaced by using the lamp holder tool (OR-55) from the front of the panel. (See B-338 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.



#### How to Install

To install, insert the lamp head into the lamp holder tool. Place the two pins on the lamp base to the grooves in the lamp socket. Inset the lamp and turn it clockwise.



## **Operating Instructions**

## 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 (see below for details).

To remove

ver ss).

<Notches>

#### Notches on the operating shaft

The operating shaft has four notches as shown at right. Insert a flat screwdriver (3 mm max.) into one of the notches, and tilt the screwdriver to remove the button.



 $\triangle$ 

Make sure to insert a flat screwdriver into one of the notches, otherwise the pushbutton may be damaged.

## Notes on button removal

To avoid damaging the bezel or the button, remove the bezel from the pushbutton before inserting a flat screwdriver.

## Mushroom/ Jumbo Mushroom

Button has threads. Turn clockwise to install the button.



Turn the button counterclockwise to remove.



#### **Illuminated Pushbutton Lens**

#### Extended/Mushroom

Lens has threads. Turn clockwise to install the lens.



Turn the lens counterclockwise to remove.



Pilot Light Lens Round

Lens has threads. Turn clockwise to install the lens.



Turn the lens counterclockwise to remove.



 $\Lambda$ 

A rubber gasket is installed between the lens and operator on pilot lights. Make sure that the rubber gasket is in place when installing the lens.

## Marking Plate on Pilot Lights

#### Rectangular Marking Plates (for UPQN4)

## Removing

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



#### **Engraving Area**

Material: Acrylic resin Size:

29.8 W  $\times$  23.8 D, thickness 2.0 mm Engraving area:

28 W  $\times$  22 D  $\times$  1.0 mm height max.

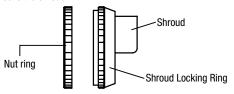
② A white marking plate is installed in the lens which can be removed easily.



## Installing the Half Shroud on Extended Pushbuttons/ Illuminated Pushbuttons

#### **Half Shroud Parts**

A shroud is installed in the shroud locking ring. Tightening the shroud locking ring in the switch locks the shroud.



## Installing the Half Shroud

- ① Adjust the thickness of the rubber washers according to the panel thickness (see B-345).
- ② Insert the switch into the panel from the back of the panel.
- ③ Install the nut ring from the panel front to tighten the switch.
- Install the half shroud on the upper side of the switch, and tighten the shroud locking ring.
- (5) Make sure that the shroud is securely fastened inside the shroud locking ring.

## Tightening the Half Shroud

Align the three projections on the shroud with the groove on the switch, and tighten the shroud on the upper side of the switch. Tighten the shroud locking ring.





- Shrouds may rattle depending on the panel thickness.
- A gap may appear between the nut ring and the shroud locking ring depending on the panel thickness.

APEM

Switches & Pilot Lights

Control Boxes

Emergency Stop Switches Enabling Switches

Safety Products

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Power Supplies

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Controllers Operator

Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

Miniature

Pilot Lights

TWN

ARN CS

## **Operating Instructions**

#### 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.

APEM

Switches & Pilot Lights

Control Boxes

Emergency
Stop Switches

Enabling

Switches
Safety Products

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Flush Silhouette

ø16 —————

ø30

Miniature

Pilot Lights

TWN TWND

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## **Key Selector Switches**

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

## Installing the Operator on Selector Switches

① Install the switch with TOP marking facing upward, so that the operator can be installed on the switch in the correct direction.



② On non-illuminated models, install the color insert in the middle of operator. The color insert also serves to retain the operator.

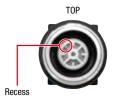


③ On illuminated models, align the operator with the switch by confirming the TOP marking on the switch and also the switch operation. Then press in the operator into the switch.



## Installation of Selector Operators

The shaft of each non-illuminated selector switch has a recess to identify in which direction to install the operator. Align the operator with the recess and press in the operator. Press a color insert (non-illuminated) into the operator (illuminated selector switches do not have a recess on the shaft).





90° 2-position



45° 3-position

The non-illuminated operators can be installed in positions other than the standard position shown above.







Standard positions

#### Removal

## Removing the Operator from Selector Switches



① Insert a flat screwdriver into the recess under the color insert. Turn the screwdriver to push out the insert from the operator.



② Pull out the operator sideways as shown in the left photo to remove the operator

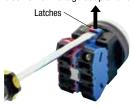
## Removing the Operator from Illuminated Selector Switches



- ① Insert a flat screwdriver (4 to 5 mm) into the recess at right or left under the operator and tilt. The operator is displaced slightly.
- ② Insert the flat screwdriver into the other recess and tilt. The operator can be removed.

## 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.



- 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 or full voltage adapters.



When 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.

# Transformer Units and DC-DC Converters for Pilot Lights

Unfasten the two mounting screws on the back to remove the transformer unit/ DC-DC converter.



Mounting screws

APN: M3 × 6 (screw diameter ø5.5 or below)

APD: M3.5 × 6 (screw diameter ø5.5 or below)

## **Operating Instructions**

## **Applicable Wiring**

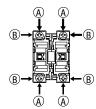
(1) Contact Block 0.3 to 3.5 mm<sup>2</sup> (solid wire 0.5 to 2.0 mm)

Pushbutton/illuminated pushbutton/selector switch/ illuminated selector switch/selector pushbutton

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

<Contact Block>

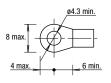
Terminal screws M3.5 (spring-up)

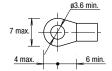


#### **Applicable Crimping Terminal**

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)

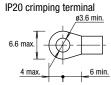




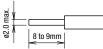
#### IP20 crimping terminal



# Crimping terminal for (B)







- 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.

#### (2) Power Unit

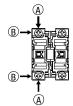
0.3 to 2 mm<sup>2</sup> (solid wire 0.5 to 1.6 mm)

## Illuminated pushbutton/illuminated selector switch

A and B show the wiring direction to the terminals.

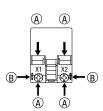
#### <Full Voltage Adapter>

Terminal screws M3.5 (spring-up)



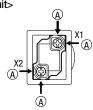
#### <Transformer Unit>

100/110V AC, 200/220V (240V AC or below) Terminal screws M3.5 (spring-up)



#### <DC-DC Conver Unit/Transformer Unit>

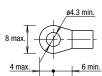
110V DC, 380V Terminal screws M3.5 (spring-up)

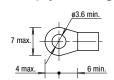


## **Applicable Crimping Terminal**

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

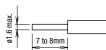
Crimping terminal for  ${\Bbb A}$ 





Crimping terminal for (B)

#### Solid wire



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

#### 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

TWN

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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

Operator Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16 ø22

## ø30 TWN/TWND Series

## **Operating Instructions**

(3) Pilot Light 0.3 to 2 mm<sup>2</sup> (solid wire 0.5 to 1.6 mm)

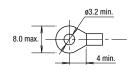
#### Applicable crimping terminal

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

#### APN1, UPQN3B, UPQN4 (6, 12, 24V AC/DC)

Terminal screws M3 (self-lifting)

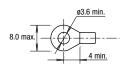
(Arrows show the wiring direction)





#### APD1 (6, 12V, 24V AC/DC)

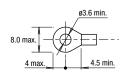
Terminal screws M3.5 (self-lifting)





## APN1, UPQN3B, UPQN4, APD1 (100 to 480V AC or below, 110V DC)

Terminal screws M3.5 (self-lifting)





- Install the terminal cover supplied with the pilot light. The connection terminal is not IP20.
- When selecting mounting centers and crimping terminals, take sufficient insulation distance into consideration.

## **Cautions for Wiring**

## About using 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.
- 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 (Nm)	Terminal Screw	
	Crimp	oing Terminal	2	1.0 to 1.3		
	Solid	Ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3		
HW-U Contact	Wire	ø1.7 to 2.0 mm (AWG12)	1	1.2 to 1.3	M3.5	
Block	Stranded	0.3 to 2.0 mm <sup>2</sup> (AWG14 to 22)	2	1.0 to 1.3		
	Wire	2.1 to 3.5 mm <sup>2</sup> (AWG12)	1	1.2 to 1.3		
	Crimp	oing Terminal				
Illuminated	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3	M3.5	
Unit (*1)	Stranded Wire					
	Crimping Terminal					
Pilot Light	Solid Ø0.5 to 1.6 mm Wire (AWG14 to 22)		2	0.6 to 1.0 (M3.0)		
	Stranded Wire	0.3 to 2.0 mm <sup>2</sup> (AWG14 to 22)		1.0 to 1.3 (	M3.5)	

<sup>\*1)</sup> Lamp terminal of illuminated pushbuttons and illuminated selector switches

# TWN

Miniature Pilot Lights

ARN

CS

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

Miniature Pilot Lights

ARN CS

## ø30 Selector Switches / Pushbuttons Part Number Replacement List

	Old Series	3	New Part No. (*3)	Remarks
Model	Operator	Old Part No.	` ′	Homains
		ASN310	ASN210N	
		ASN311	ASN211N	
		ASN320	ASN220N	
		ASN322	ASN222N	
		ASN37S ASN410	ASN22RN-118	
		ASN410 ASN411	ASN2110N ASN2111N	
		ASN411	ASN2111N ASN2120N	
		ASN420	ASN2122N	
	90°	ASN47S	ASN212RN-118	
	2-position	ASN3010	ASN201N	(*2)
		ASN3011	ASN211N	(*1)
		ASN3020	ASN202N	(*2)
		ASN3022	ASN222N	(*1)
		ASN307S	ASN22RN-118	(*1)
		ASN4010	ASN2210N	
		ASN4011	ASN2211N	
		ASN4020	ASN2220N	
ASN		ASN4022	ASN2222N	
Knob		ASN407S	ASN222RN-168	
Operator		ASN111	ASN320N	(*2)
		ASN122	ASN340N	(*2)
		ASN15S	ASN322N	(4.4)
		ASN17S	ASN302N	(*1)
		ASN18S	ASN304N	(*1)
	45° 3-position	ASN211 ASN222	ASN3220N ASN3240N	(*2) (*2)
		ASN25S	ASN3222N	(2)
		ASN27S	ASN3202N	(*1)
		ASN28S	ASN3204N	(*1)
		ASN1011	ASN320N	(*1) (*2)
		ASN1022	ASN340N	(*1) (*2)
		ASN105S	ASN322N	(*1)
		ASN107S	ASN302N	
		ASN108S	ASN304N	
		ASN2011	ASN3120N	(*1) (*2)
		ASN2022	ASN3140N	(*1) (*2)
		ASN205S	ASN3122N	(*1)
		ASN207S	ASN3102N	
		ASN208S	ASN3104N	
		ASN3L10	ASN2L10N	
		ASN3L11	ASN2L11N	
		ASN3L20	ASN2L20N	
		ASN3L22	ASN2L22N	
		ASN3L7S	ASN2L2RN-118	
		ASN4L10 ASN4L11	ASN21L10N ASN21L11N	
		ASN4L11	ASN21L20N	
		ASN4L22	ASN21L22N	
	90°	ASN4L7S	ASN21L2RN-118	
	2-position	ASN30L10	ASN2L01N	(*2)
		ASN30L11	ASN2L11N	(*1)
		ASN30L20	ASN2L02N	(*2)
ASN-L		ASN30L22	ASN2L22N	(*1)
Lever		ASN30L7S	ASN2L2RN-118	(*1)
Operator		ASN40L10	ASN22L10N	
		ASN40L11	ASN22L11N	
		ASN40L20	ASN22L20N	
		ASN40L22	ASN22L22N	
		ASN40L7S	ASN22L2RN-168	
		ASN1L11	ASN3L20N	(*2)
		ASN1L22	ASN3L40N	(*2)
		ASN1L5S	ASN3L22N	
	45°	ASN1L7S	ASN3L02N	(*1)
	3-position	ASN1L8S	ASN3L04N	(*1)
	o position			
	o position	ASN2L11	ASN32L20N	(*2)
	o poolaon	ASN2L11 ASN2L22 ASN2L5S	ASN32L20N ASN32L40N ASN32L22N	(*2) (*2)

	Old Carios			
Model	Old Series Operator	Old Part No.	New Part No. (*3)	Remarks
	0 00.000	ASN2L7S	ASN32L02N	(*1)
		ASN2L8S	ASN32L04N	(*1)
		ASN10L11	ASN3L20N	(*1) (*2)
		ASN10L22	ASN3L40N	(*1) (*2)
ASN-L		ASN10L5S	ASN3L22N	(*1)
Lever	45°	ASN10L7S	ASN3L02N	
Operator	3-position	ASN10L8S	ASN3L04N	(*1) (*0)
		ASN20L11 ASN20L22	ASN31L20N ASN31L40N	(*1) (*2) (*1) (*2)
		ASN20L22 ASN20L5S	ASN31L22N	(*1) (2)
		ASN20L7S	ASN31L02N	( 1)
		ASN20L8S	ASN31L04N	
		ASN3K10□	ASN2K10N□-N024401	
		ASN3K11□	ASN2K11N□-N024401	
		ASN3K20□	ASN2K20N□-N024401	
		ASN3K22□	ASN2K22N□-N024401	
		ASN3K7S□	ASN2K2RN□-118-N024401	
		ASN4K10	ASN21K10N-N024401	
		ASN4K11	ASN21K11N-N024401	
		ASN4K20	ASN21K20N-N024401	
		ASN4K22	ASN21K22N-N024401	
	90°	ASN4K7S	ASN21K2RN-118-N024401	
	2-position	ASN30K10□	ASN2K01N□-N024401	(*2)
		ASN30K11□	ASN2K11N□-N024401	(*1)
		ASN30K20□	ASN2K02N - N024401	(*2)
		ASN30K22□	ASN2K22N□-N024401 ASN2K2RN□-118-N024401	(*1)
		ASN30K7S□ ASN40K10	ASN22K10N-N024401	(*1)
		ASN40K10 ASN40K11	ASN22K11N-N024401	
		ASN40K20	ASN22K20N-N024401	
		ASN40K22	ASN22K22N-N024401	
ASN-K Key		ASN40K7S	ASN22K2RN-168-N024401	
		ASN1K11□	ASN3K20N□-N024401	(*2)
Selector		ASN1K22□	ASN3K40N□-N024401	(*2)
		ASN1K5S□	ASN3K22N□-N024401	(*1) (*2)
		ASN1K7S□	ASN3K02N□-N024401	(*1) (*2)
		ASN1K8S□	ASN3K04N□-N024401	(*1) (*2)
		ASN2K11□	ASN32K20N□-N024401	(*2)
		ASN2K22□	ASN32K40N□-N024401	(*2)
		ASN2K5S□	ASN32K22N□-N024401	(*1) (*2)
		ASN2K7S□	ASN32K02N - N024401	(*1) (*2)
	45°	ASN2K8S	ASN32K04N□-N024401	(*1) (*2)
	3-position	ASN10K11  ASN10K22	ASN3K20N□-N024401	(*1) (*2)
		ASN10K22□ ASN10K5S□	ASN3K40N□-N024401 ASN3K22N□-N024401	(*1) (*2) (*1) (*2)
		ASN10K7S□	ASN3K22N□-N024401 ASN3K02N□-N024401	(*2)
		ASN10K7S□ ASN10K8S□	ASN3K04N -N024401	(*2)
		ASN20K11□	ASN31K20N□-N024401	(*1) (*2)
		ASN20K22□	ASN31K40N□-N024401	(*1) (*2)
		ASN20K5S□	ASN31K22N□-N024401	(*1) (*2)
		ASN20K7S□	ASN31K02N□-N024401	(*2)
		ASN20K8S□	ASN31K04N□-N024401	(*2)
		ASTN3211	ASN211N	
	90°	ASTN3222	ASN222N	(*1)
	2-position	ASTN4211	ASN2111N	
		ASTN4222	ASN2122N	(*1)
		ASTN1122	ASN322N	
		ASTN1222	ASN322N-311	
ASTN		ASTN1340	ASN340N	
Knob		ASTN1422	ASN322N-209	
Operator	45°	ASTN1520	ASN320N ASN340N	(*1)
	3-position	ASTN1540 ASTN1611	ASN311N-303	( ')
	o position	ASTN1611 ASTN1622	ASN322N-310	
		1.01111022		
		ASTN2122	I ASN3222N	
		ASTN2122 ASTN2222	ASN3222N ASN3222N-311	
		ASTN2122 ASTN2222 ASTN20122	ASN3222N ASN3222N-311 ASN3122N	

<sup>•</sup>  $\square$ : Key removable position code. Specify the same code as the old series.

<sup>\*1)</sup> The location of contacts is different. In application for maintenance purpose, make sure of contact operation before wiring.

<sup>\*2)</sup> Contact operation is same as the old series, but contact type is different.
\*3) The knob operator is diecast zinc and has new shape. The knob operator can be installed at 45 degrees intervals.

## ø30 Selector Switches / Pushbuttons Part Number Replacement List

ᅙ	Old Series				
	Model	Operator	Old Part No.	New Part No. (*3)	Remarks
gh:	IVIOGOI	Οροιαιοι	ASTN20422	ASN3122N-209	
ळ			ASTN20520	ASN3120N	(*1)
	ASTN		ASTN20540	ASN3140N	(*1)
	Knob	45°	ASTN5120	ASN3320N	
APEM	Operator	3-position	ASTN5122	ASN3322N	
			ASTN5222	ASN3322N-311	
Switches & Pilot Lights			ASTN5111	ASN3311N-202	
		90°	ASTN32L11	ASN2L11N	
Control Boxes			ASTN32L22	ASN2L22N	(*1)
Emergency		2-position	ASTN42L11	ASN21L11N	(1.4)
Stop Switches			ASTN42L22	ASN21L22N	(*1)
Enabling Switches			ASTN11L22	ASN3L22N	
			ASTN12L22	ASN3L22N-311	
Safety Products			ASTN13L40 ASTN14L22	ASN3L40N ASN3L22N-209	
Fundacion Ducof			ASTN15L20	ASN3L20N	(*1)
Explosion Proof			ASTN15L20	ASN3L40N	(*1)
Terminal Blocks	ASTN■L		ASTN16L11	ASN3L11N-303	( ' ' /
	Lever		ASTN16L22	ASN3L22N-310	
Relays & Sockets	Operator	450	ASTN21L22	ASN32L22N	
Circuit		45° 3-position	ASTN22L22	ASN32L22N-311	
Protectors		3-408111011	ASTN201L22	ASN31L22N	
Power Supplies			ASTN202L22	ASN31L22N-311	
			ASTN204L22	ASN31L22N-209	
LED Illumination			ASTN205L20	ASN31L20N	(*1)
			ASTN205L40	ASN31L40N	(*1)
Controllers			ASTN51L20	ASN33L20N	
Operator			ASTN51L22 ASTN52L22	ASN33L22N ASN33L22N-311	
Interfaces			ASTN52L22 ASTN51L11	ASN33L11N-202	
Sensors		90° 2-position	ASTN31E11  ASTN32K11□	ASN2K11N□	
			ASTN32K22□	ASN2K22N□	(*1)
AUTO-ID			ASTN42K11	ASN21K11N	
			ASTN42K22	ASN21K22N	(*1)
			ASTN11K22□	ASN3K22N□	
			ASTN12K22□	ASN3K22N□-311	
Flush Silhouette			ASTN13K40□	ASN3K40N□	
			ASTN14K22	ASN3K22N□-209	(+4)
ø16			ASTN15K20□	ASN3K20N□	(*1)
ø22	ASTN■K		ASTN15K40□ ASTN16K11□	ASN3K40N□ ASN3K11N□-303	(*1)
922	Key		ASTN16K12□	ASN3K22N□-310	
ø30	Selector		ASTN10K22□ ASTN21K22□	ASN32K22N□-310	
	00100101	45°	ASTN22K22□	ASN32K22N□-311	
Miniature		3-position	ASTN201K22□	ASN31K22N□	
Dilot I inhto			ASTN202K22□	ASN31K22N□-311	
Pilot Lights			ASTN204K22□	ASN31K22N□-209	
			ASTN205K20□	ASN31K20N□	(*1)
			ASTN205K40□	ASN31K40N□	(*1)
			ASTN51K20	ASN33K20N	
TWN			ASTN51K22	ASN33K22N	
			ASTN52K22	ASN33K22N-311	
TWND			ASTN51K11	ASN33K11N-202	
ARN			ASN120-T ASN140-T	ASN320N ASN340N	
7004	ASN-T	45°	ASN220-T	ASN3220N	
CS	Knob	3-position	ASN240-T	ASN3240N	
	Operator	,	ASN2020-T	ASN3120N	(*1)
			ASN2040-T	ASN3140N	(*1)
			ASN1L20-T	ASN3L20N	
	ASN-T		ASN1L40-T	ASN3L40N	
	Lever	45°	ASN2L20-T	ASN32L20N	
	Operator	3-position	ASN2L40-T	ASN32L40N	4.41
	.,		ASN20L20-T	ASN31L20N	(*1)
			ASN20L40-T	ASN31L40N	(*1)

•	Specify a color	code in place of :	· in Part No. B (black), G	(green), R (red), Y (yellow).
			0 17 11	

 $<sup>\</sup>square$ : Key removable position code. Specify the same code as the old series.

Model   Operator   Operator   ASN2K10   T   ASN2K10   T   ASN2K10   T   ASN2K10   T   ASN3K10   T   ASN2K10   T   ASN2K10   T   ASN3K20   T   ASN2K20   T   ASN3K20   T   ASN2K20   T   ASN3K20   T   ASN3K20   T   ASN3K20   T   ASN2K20   T		Old Seri	es	Nov. Post No. (#0)	Damanda
ASNUSTID=T	Model	1		New Part No. (*3)	Remarks
ASN3K20  T					
ASNBACED					
ASNAK75  -1					
ASNAK10-T					
ASNIBIK-T   ASNAK11-T   ASNAZIK11N   ASNAK20-T   ASNZ1K2N   ASNAK7S-T   ASNZ1K2RN-118   ASNAK7S-T   ASNZ1K2RN-118   ASNAK7S-T   ASNZ1K2RN-118   ASNAK7S-T   ASNZ2K11N   ASNAK0K10-T   ASNZ2K11N   ASNAK0K10-T   ASNZ2K11N   ASNAK0K10-T   ASNZ2K2N   ASNAK0K20-T   ASNZ2K2N   ASNAK0K20-T   ASNZ2K2RN-168   ASNAK7S-T   ASNZ2K2RN-168   ASNAK7S-T   ASNZ2K2RN-168   ASNAK7S-T   ASNZX2RD-168   ASNIKS0-T   ASNXX2ND-   ASNIKS0-T   ASNXX2ND-   ASNIKS0-T   ASNXX2ND-   ASNIKSS-T   ASNXX2ND-   ASNIKSS-T   ASNXX2ND-   ASNIXXSD-T   ASNXX2ND-   ASNZXXSD-T   ASNZXXDND-   ASNZXXSD-T   ASNZXXDND-   (*1)   ASNZXXSD-T   ASNZXXXDND-   (*1)   ASNZXXSD-T   ASNZXXXDND-   (*1)   ASNZXXSD-T   ASNZXXXDND-   (*1)   ASNZXXSD-T   ASNZXXXDND-   (*1)   ASNZXXDD-   (*1)   ASNZXDD-   (*1)   ASNZXDD-   (*1)   ASNZXDD-   (*1)   (*1)   ASNZXDD-   (*1)   (*1)   ASNZXDD-   (*1)					
ASNIBLATE   ASNIBLATION   AS					
ASNIBLE   ASNI					
ASNIBLE   ASNAKTS-T   ASN21K2RN-118   ASNAMOK10-T   ASN22K11N   ASNAMOK11-T   ASN22K11N   ASNAMOK11-T   ASN22K2N   ASNAMOK20-T   ASN22K20N   ASNAMOK20-T   ASN22K2RN-168   ASNAMOK7S-T   ASN22K2RN-168   ASNAMOK7S-T   ASN3K20N   ASNAMOK7S-T   ASN3K20N   ASNAMOK7S-T   ASN3K20N   ASNAMOK7S-T   ASN3K20N   ASNIK50   TASNAMOK7S-T   ASN3K0AN   (*1)   ASN1K50   TASNAMOK7S-T   ASN3K0AN   ASNIK5S   TASN3K0AN   ASNIK5S   TASN3K0AN   ASN2K5S   TASN32K20N   ASN2K5S   TASN32K20N   ASN2K5S   TASN32K00N   (*1)   ASN2K0S   TASN32K00N   (*1)   ASN2K0S   TASN32K0AN   (*1)   ASN2K0S   TASN32K0AN   (*1)   ASN2K0S   TASN31K2N   TASNAMOK   (*1)   ASN2K0S   TASN31K2N   TASNAMOK   TASNAM					
ASNIBLE   ASN40K10-T					
ASN■K-T Key Selector  ASN40K20-T ASN22K2RN-168  ASN40K7S-T ASN3K20N□  ASN40K7S-T ASN3K20N□  ASN1K40□-T ASN3K20N□  ASN1K50□-T ASN3K04N□  (*1)  ASN2K60□-T ASN32K20N□  ASN2K65□-T ASN32K20N□  ASN2K65□-T ASN32K20N□  ASN2K65□-T ASN32K20N□  ASN20K50□-T ASN31K20N□  (*1)  ABN8111□  ASN22N□-D  (*1)  ABN8111□  ASN22N□-D  (*1)  ABN8111□  ASN22N□-D  (*1)  ABN8111N□  ABN811N□  ASN20K50□-T  ASN2K20□  ASN22N□-D  (*1)  ABN811N□  ABN811N□  ASN20K50□-T  ASN31K20□  ASN2K20N□  (*1)  ABN811N□  ASN20K50□-T  ASN31K20□  (*1)  ABN811N□  ASN20K50□-T  ASN31K20□  (*1)  ABN811N□  ASN20K50□-T  ASN31K20□  ASN20K50□-T  ASN31K20□  (*1)  ASN2K20□  ASN22N□					
ASN■K-T Key Selector  ASN40K20-T ASN22K22N ASN40K75-T ASN22K22N ASN40K75-T ASN22K22N ASN40K75-T ASN22K2RN-168  ASN1K50-T ASN3K20N□ ASN1K50-T ASN3K20N□ ASN1K5S-T ASN3K22N□ ASN1K5S-T ASN3K20N□ ASN2K620-T ASN32K20N□ ASN2K620-T ASN32K20N□ ASN2K63□-T ASN32K20N□ ASN2K65□-T ASN32K20N□ ASN2K65□-T ASN32K20N□ ASN20K50-T ASN31K20N□ (*1) ASN20K50-T ASN32K20N□ (*1) ASN20K50-T					
ASNINCOL - T					
ASNAWAR/S-  ASNAS/ACON-    ASNIKAD-  -T ASNAS/ACON-    ASNIKAD-  -T ASNAS/ACON-    ASNIKSS-  -T ASNAS/ACON-    ASNIKAD-  -T ASNAS/ACON-    A	ACNITIV T		ASN40K22-T	ASN22K22N	
ASNIK20    ASNIK20    ASNIK20    ASNIK20    ASNIK5S    T ASNIK20	_		ASN40K7S-T	ASN22K2RN-168	
ASN1K40U  ASN3K42NU			ASN1K20□-T	ASN3K20N□	
ASN1K7S□-T   ASN3K02N□   (*1)   ASN1K8S□-T   ASN3K04N□   (*1)   ASN2K20□-T   ASN3K04N□   (*1)   ASN2K20□-T   ASN3ZK40N□   ASN2K5□-T   ASN3ZK02N□   (*1)   ASN2K5□-T   ASN3ZK02N□   (*1)   ASN2K5□-T   ASN3ZK02N□   (*1)   ASN2K5□-T   ASN31K20N□   (*1)   ASN2K5□-T   ASN31K20N□   (*1)   ASN2K5□-T   ASN31K20N□   (*1)   ASN2K5□-T   ASN31K2N□   (*1)   ASN2K5□-T   ASN31K02N□   ASN20K5□-T   ASN31K02N□   ASN22N□   (*1)   ASN20K5□-T   ASN31K02N□   ASN22N□   (*1)   ASN211N□   (*2)   ASN22N□   ASN22N□   (*1)   ASN211N□   (*1)   ASN211N□   (*1)   ASN211N□   (*1)   ASN211N□   (*1)   ASN22N□   ASN22N□   (*1)   (*1)   ASN22N□   ASN22N□   (*1)   (*1)   ASN22N□   ASN22N□   (*1)	Selector		ASN1K40□-T	ASN3K40N□	
ASN1K8S -T   ASN3K04N					
ASN2K20					
ASN2K40					(*1)
ASN2K5S -T   ASN32K22N					
ASN2K7ST   ASN32K02N_					
ASN2K8S   T   ASN32K04N   (*1)					(*1)
ASN20K20					
ASN20K40					
ASN20K5S\$\ -T   ASN31K22N\					
ASN20K7ST   ASN31K02N_   ASN20K8ST   ASN31K04N_   ASN21LN_K04_   (*2)					
ABN6111					
ABN6411			ASN20K8S□-T	ASN31K04N□	
ABN9111			ABN6111□	ASBN211N-A03□	
Selector   Pushbuttons   Ring   Operator   ABN6122			ABN6411□	ASBN211N-K04□	(*2)
ABN6122			ABN9111□	-	
Pushbuttons Ring Operator         ABN6222□ ASBN222N-C10□ (*1)         (*1)           ABN6422□ ASBN222N-K15□ (*2)         ABN7122□ ASBN222N-D10□ (*1)         (*1)           ABN7122□ ASBN222N-E10□ (*1)         (*1)           ABN7322□ ASBN222N-F10□ (*1)         (*1)           ABN6122□ ASBN222N-F10□ (*1)         (*1)           ABN6L111□ ASBN211N-A03□ (*4)         (*2) (*2)           ABN6L411□ ASBN211N-K04□ (*2) (*2)         (*2) (*2)           ABN6L122□ ASBN222N-A08□ (*1) (*2)         (*1) (*2)           ABN6L122□ ASBN222N-C10□ (*1) (*2)         (*3)           ABN6L22□ ASBN222N-K15□ (*2) (*2)         (*2) (*4)           ABN7L122□ ASBN222N-B10□ (*1) (*2)         (*3)           ABN7L122□ ASBN222N-F10□ (*1) (*2)         (*3)           ABN7L322□ ASBN222N-F10□ (*1) (*2)         (*4)           ABN7L322□ ASBN222N-F10□ (*1) (*2)         (*4)           ABN7L322□ ASBN222N-F10□ (*1) (*2)         (*5)           ABN8P10 ABD8P10N□ (*5)         (*5)           ABN8P10 ABD8P11N□ (*5)         (*5)           ABN8P20 ABD8P2N□ (*5)         (*5)           ABN8P20 ABD8P2N□ (*5)         (*5)           ABN8P11 ABD8PN10N□ (*5)         (*5)           ABN8P02 ABD8P2N□ (*5)         (*5)           ABN8P01 TK231-1 ABD8PN10N□ (*5)         (*5)					
Ring   Operator   ABN6422					
Operator         ABN7122□         ASBN222N-D10□         (*1)           ABN7222□         ASBN222N-E10□         (*1)           ABN7222□         ASBN222N-F10□         (*1)           ABN6111□         ASBN211N-A03□         (*4)           ABN6L411□         ASBN211N-K04□         (*2)           ABN6L111□         ASBN222N-A08□         (*1)           ABN6L122□         ASBN222N-A08□         (*1)           ABN6L122□         ASBN222N-C10□         (*1)           ABN6L22□         ASBN222N-K15□         (*2)           ABN7L122□         ASBN222N-E10□         (*1)           ABN7L22□         ASBN222N-F10□         (*1)           ABN9P122□         ASBN222N-F10□         (*1)           ABN9P122□         ASBN222N-F10□         (*5)           ABN8P10         ABD8P10N□         (*5)           ABN8P11         ABD8P1N0□         (*5)           ABN8P20         ABD8P2N□         (*5)           ABN8P20         ABD8P2N□         (*5)           ABN8P10-TK231-1         ABD8PN10N□         (*5)           ABN8P10-TK231-1         ABD8PN10N□         (*5)           ABN8P10-TK231-1         ABD8PN10N□         (*5)           ABN8P10-TK231-1         ABD8PN	i				
ABN7222					
ABN7322	i Operator				
ABN9122					
ABN6L111					( 1)
ABN6L411					(*A)
ABN9L111   N/A					_ ` '
ABN6L122					\
Pushbuttons Lever Operator         ABN6L222□ ASBN222N-C10□ (*1) (*2 ABN6L422□ ASBN222N-K15□ (*2) (*2 ABN7L122□ ASBN222N-D10□ (*1) (*2 ABN7L222□ ASBN222N-E10□ (*1) (*2 ABN7L322□ ASBN222N-F10□ (*1) (*2 ABN9L122□ N/A           ABN9L122□ N/A         ABN8P10 ABD8P10N□ (*5) ABN8P01 ABD8P1N□ (*5) ABN8P11 ABD8P1N□ (*5) ABN8P20 ABD8P20N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P11-TK231-1 ABD8PN10N□ (*5) ABN8P11-TK231-1 ABD8PN10N□ (*5) ABN8P11-TK231-1 ABD8PN10N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN20N□ (*5) ABN8P2-TK231-1 ABD8PN22N□ (*5)	Selector				(*1) (*4)
ABN6L422					(*1) (*4)
Operator         ABN7L122□ ASBN222N-D10□ (*1) (*4 ABN7L222□ ASBN222N-E10□ (*1) (*4 ABN7L222□ ASBN222N-F10□ (*1) (*4 ABN9L122□ N/A         (*1) (*4 ABN9L122□ N/A           ABN9L122□ N/A         ABN8P10 ABD8P10N□ (*5) ABN8P01 ABD8P1N□ (*5) ABN8P01 ABD8P11N□ (*5) ABN8P11 ABD8P11N□ (*5) ABN8P20 ABD8P20N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P22 ABD8P22N□ (*5) ABN8P11-TK231-1 ABD8PN10N□ (*5) ABN8P11-TK231-1 ABD8PN11N□ (*5) ABN8P11-TK231-1 ABD8PN2N□ (*5) ABN8P22-TK231-1 AB				ASBN222N-K15□	(*2) (*4)
ABN7L222			ABN7L122□	ASBN222N-D10□	(*1) (*4)
ABN9L122□ N/A   ABN8P10					(*1) (*4)
Pin Lock					(*1) (*4)
Pin Lock					(4E)
Pin Lock		Pin Lock			
Pushbuttons  Pushbuttons  ON Lock Type Pin Lock  MBN8P02  ABN8P10-TK231-1  ABN8P02  ABN8P10-TK231-1  ABN8P01-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P02-TK231-1  ABN8P01-TK231-1  ABN8P0					
ABN8P02   ABD8P02N					
ABN8P22   ABD8P22N					
Pushbuttons  ON Lock Type Pin Lock  ABN8P10-TK231-1 ABD8PN10N□ (*5)  ABN8P01-TK231-1 ABD8PN01N□ (*5)  ABN8P11-TK231-1 ABD8PN1N□ (*5)  ABN8P20-TK231-1 ABD8PN20N□ (*5)  ABN8P02-TK231-1 ABD8PN02N□ (*5)  ABN8P22-TK231-1 ABD8PN22N□ (*5)  ABN8P22-TK231-1 ABD8PN22N□ (*5)  ATN2311□ AZN311N□					
Pushbuttons		Type Pin			
ABN8P11-TK231-1   ABD8PN11N					
ABN8P20-TK231-1   ABD8PN20N   (*5)	Pushbuttons				
ABN8P02-TK231-1   ABD8PN02N□ (*5)   ABN8P22-TK231-1   ABD8PN22N□ (*5)   ATN2310□   AZN310N□     Mushroom   ATN2311□   AZN311N□					
ATN2310□   AZN310N□   ATN2311□   AZN311N□					
Mushroom ATN2311□ AZN311N□			ABN8P22-TK231-1	ABD8PN22N□	(*5)
		1	ATN2310□	AZN310N□	
Pull ATN2320□ AZN320N□					
4T110000					
ATN2302□ AZN302N□			AſN2302□	A∠N302N□	

<sup>\*3)</sup> The knob operator is diecast zinc and in new shape. The knob operator can be installed at 45 degrees intervals.

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<sup>\*1)</sup> The location of contacts is different. In application for maintenance purpose, make sure of contact operation before wiring.
\*2) Contact operation is same as the old series, but contact type is different.

<sup>\*4)</sup> The new knob operator of selector pushbuttons is ring operator. The old series is lever operator.

<sup>\*5)</sup> Button material New series: plastic / Old series: metal

## **Ordering Terms and Conditions**

Thank you for using IDEC Products.

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- (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.
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  - 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.

#### 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.

- The product was handled or used deviating from the conditions / environment listed in the Catalogs
- The failure was caused by reasons other than an IDEC product
- Modification or repair was performed by a party other than IDEC
- The failure was caused by a software program of a party other than iv **IDEC**
- v. The product was used outside of its original purpose
- Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and
- vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from
- 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.

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- (1) 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
- (4) Product tests or inspections specified by you

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