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.
- 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					
Category	Flush		Extended		Extended with Half Shroud	
	Momentary/Maintained		Momentary/Maintained		Momentary/Maintained	
Shape				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					
Category	Extended with Full Shroud		Mushroom		Mushroom with Full Shroud	
	Momentary/Maintained		Momentary/Maintained		Momentary/Maintained	
Shape		Diecast Zinc 		Diecast Zinc 		Diecast Zinc 
Model	ABN2F AON2F	ABFD2 AOFD2	ABN3 AON3	ABD3 AOD3	ABN3G —	ABGD3 AOGD3
Page	B-310	B-326	B-311	B-327	B-311	B-327

Function	Pushbutton					
Category	Jumbo Mushroom		Jumbo Mushroom with Shallow Shroud		Jumbo Mushroom with Deep Shroud	
	Momentary		Momentary		Momentary	
Shape		Diecast Zinc 		Diecast Zinc 		Diecast Zinc 
Model	ABN4	ABD4	ABN4G	ABGD4	ABN4F	ABFD4
Page	B-311	B-327	B-311	B-327	B-311	B-327

Function	Pushbutton					
Category	Mushroom Pushlock Turn Reset (*1)		Mushroom Push Turn Lock		Mushroom 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 Lock	
Shape	—	Diecast Zinc 	—	Diecast Zinc 
Model	—	AYD3	—	ABD8P
Page	—	B-328	—	B-327

*1) Cannot be used as emergency stop switch based on ISO 13850 and IEC 60947-5-5.

ø30 TWN/TWND Selection Guide

Function	LED Illuminated Pushbutton					
Category	Extended		Extended with Half Shroud		Extended with Full Shroud	
	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		Mushroom Pushlock Turn Reset (*1)		Mushroom Push Turn Lock	
	Momentary/Maintained					
Shape		Diecast Zinc 		Diecast Zinc 		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	Knob		Lever		Key	
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	LED Illuminated Selector Switch		Selector Pushbutton	
Category	Key	LED Illuminated Knob		Ring Operator	
Shape			Diecast Zinc 		Diecast Zinc 
Model	ASN□K-NO24401	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

*1) Cannot be used as emergency stop switch based on ISO 13850 and IEC 60947-5-5.

IDEC

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.
- High-voltage type LED bulbs can now be mounted, and the rated operating voltage of the direct type can be up to 240V.

ø30 TWN Series (plastic)

ø30 TWND Series (Diecast Zinc)

Ratings and Specifications

Contact ratings

Pushbuttons Illuminated Pushbuttons Selector Switches Illuminated Selector Switches Selector Pushbuttons	Rated insulation voltage	600V
	Rated continuous current	10A
	Contact ratings by utilization category JIS C8201-5-1 IEC 60947-5-1	AC-15 (A600) DC-13

Contact ratings by utilization category

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

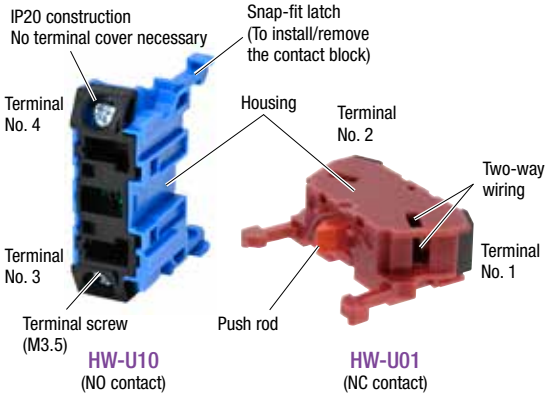
Operating Voltage			24V	48V	50V	110V	220V	440V
Operating Current	AC 50/60 Hz	AC-12 Control of resistive loads and solid state loads	10A	–	10A	10A	6A	2A
		AC-15 Control of electromagnetic loads (> 72 VA)	10A	–	7A	5A	3A	1A
	DC	DC-12 Control of resistive loads and solid state loads	10A	5A	–	2.2A	1.1A	–
		DC-13 Control of electromagnets	5A	2A	–	1.1A	0.6A	–

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

Operating Voltage			24V	48V	50V	110V	220V	440V
Operating Current	AC 50/60 Hz	AC-12 Control of resistive loads and solid state loads	5A	–	5A	5A	3A	1A
		AC-15 Control of electromagnetic loads (> 72 VA)	5A	–	3.5A	2.5A	1.5A	0.5A
	DC	DC-12 Control of resistive loads and solid state loads	5A	2.5A	–	1.1A	0.55A	–
		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	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. 11g			

- 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)

LED Illuminated Part Specifications

Illuminated pushbutton, Illuminated selector switch

Rated Voltage	Operating Voltage		LED lamp	
			Lamp Base	Part No.
6V AC/DC	6V AC/DC	±10%	BA9S/13	LSRD-6
12V AC/DC	12V AC/DC			LSRD-1
24V AC/DC	24V AC/DC			LSRD-2
100/120V AC/DC	100/120V AC/DC			LSRD-H2
200/220V AC	200/220V AC			LSRD-M2
230/240V AC	230/240V AC	207 to 250V		LSRD-M4

Pilot light

Rated Voltage	Operating Voltage		LED lamp	
			Lamp Base	Part No.
6V AC/DC	6V AC/DC	±10%	BA9S/13	LSRD-6
12V AC/DC	12V AC/DC			LSRD-1
24V AC/DC	24V AC/DC			LSRD-2
100/120V AC/DC	100/120V AC/DC			LSRD-H2
200/220V AC	200/220V AC			LSRD-M2
230/240V AC	230/240V AC	207 to 250V		LSRD-M4
380V AC	380V AC	±10%		LSRD-6
400/440V AC	400/440V AC			
480V AC	480V AC			

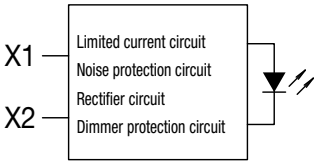
• See below for details on LED lamp ratings.

Illuminated Part Type and Shape

	Illuminated Unit	Pilot Light	
Power Unit	Full voltage adapter	Full voltage adapter (integrated)	Transformer
Rated Voltage	6V AC/DC, 12V AC/DC, 24V AC/DC, 100 to 120V AC/DC, 200 to 240V AC	6V AC/DC, 12V AC/DC, 24V AC/DC, 100 to 120V AC/DC, 200 to 240V AC	380 to 480V AC
Polarity	None	None	None
Shape/Terminal			

LED Lamp Ratings

LSRD

Part No.		LSRD-6	LSRD-1	LSRD-2	LSRD-H2	LSRD-M2	LSRD-M4
Lamp Base		BA9S/13					
Rated Voltage		6V AC/DC	12V AC/DC	24V AC/DC	100/120V AC/DC	200/220V AC	230/240V AC
Voltage Range		6V AC/DC ± 10%	12V AC/DC ± 10%	24V AC/DC ± 10%	100/120V AC/DC ± 10%	200/220V AC ± 10%	207 to 250V
Current Draw	DC	10 mA	7 mA	7 mA	2 mA	–	–
	AC	14 mA	8 mA	8 mA	2 mA	2 mA	2 mA
Life (reference value)		Approx. 50,000 hours (The luminance is reduced to 50% the initial intensity when used on complete DC at 25°C.)					
Internal Circuit		 Example: **LSRD-2** 					
Weight		Approx. 2g					

• Only one color is available for LSRD so there is no need to specify the color in the part no.

Attention: Customers who are using previous models

TWN/TWND series products not listed in this catalog are not compatible with high-voltage lamps. Improper use of these products may cause serious accidents. If you are unsure, please check the part number and contact an IDEC sales representative.

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			30 to 85% RH (no condensation)
Contact Resistance			50 mΩ maximum (initial value)
Insulation Resistance			100 MΩ minimum (500V DC megger)
Overvoltage Category			II
Impulse Withstand coltage			4.0kV, Illuminated Unit: 2.5kV
Dielectric Strength			Between live and dead metal parts: 2500V AC, 1 minute (Full voltage and pilot lights: 2000V AC, 1 minute) 2000V AC, (pilot lights: 6V AC/DC, 12V, 24V)
Vibration Resistance	Damage limits		30 Hz, amplitude 1.5 mm
	Operation extremes		5 to 55 Hz, amplitude 0.5 mm
Shock Resistance	Damage limits		1000 m/s^2
	Operation extremes		100 m/s^2
Recommended Tightening Torque for Locking Ring			3.0 to 3.5N·m
Terminal Style			Screw terminal
Mechanical Life (minimum operations)	Pushbutton	Momentary	5,000,000
		Maintained	500,000 (over 3 contacts: 250,000)
		Push lock turn reset	500,000
		Pull	500,000
	Illuminated pushbutton	Momentary	2,500,000
		Maintained	500,000 (over 3 contacts: 250,000)
	Selector switch		500,000
	Key selector switch		500,000
	Illuminated selector switch		500,000
	Selector pushbutton		250,000
Electrical Life (minimum operations) (*1)	Pushbutton	Momentary	500,000 Switching frequency 1800 operations/h, duty ratio 40%
		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%
	Illuminated pushbutton	Momentary	500,000 Switching frequency 1800 operations/h, duty ratio 40%
		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		500,000 Switching frequency 1200 operations/h, duty ratio 40%
	Selector pushbutton		250,000 Switching frequency 900 operations/h, duty ratio 40%
Weight (approx.)	TWN series	Pushbutton	ABN122: 82g ABN322: 87g
		Illuminated pushbutton	ALN22222DN: 106g
		Selector switch	ASN222N: 83g ASN2K22N: 120g
		Illuminated selector switch	ASLN22222DN: 106g
		Pilot light	APN122DN: 46g APN1386DN: 125g
	TWND series	Pushbutton	ABD122: 108g ABD322: 113g
		Illuminated pushbutton	ALD22222DN: 132g
		Selector switch	ASD222N: 110g ASD2K22N: 147g
		Illuminated selector switch	ASLD22222DN: 133g
		Pilot light	APD122DN: 75g APD116DN: 152g

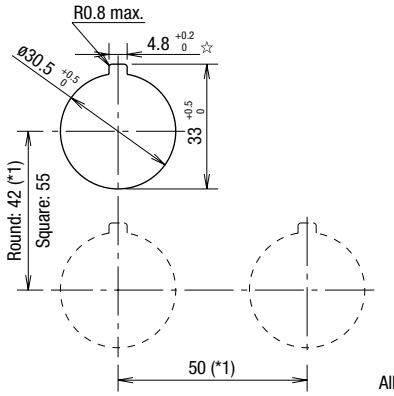
*1) Load condition 220V AC 3A (AC-15)

Degree of Protection

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

- 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.

Mounting Hole Layout/Mounting Centers



All dimensions in mm.

- 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 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.
- Nameplates and accessories are ordered separately. See page B-337 to B-342.
- For terminal cover, nameplate and other accessories of mono-lever switches and cam switches, see IDEC's website.

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.

Ordering Information

Pushbutton

When specifying gold-plated silver contact and contact configuration:

TWN series (B-310 to B-312)

ABN 2 11 R - MAU
- ① Optional contact
- ② Contact configuration

TWND series (B-326 to B-328)

ABD 2 11 NR - MAU
- ① Optional contact
- ② Contact configuration

<Codes>

① Optional contact
MAU: Gold-plated silver

② Contact configuration
10: 1NO
01: 1NC
11: 1NO1NC
20: 2NO
02: 2NC
22: 2NO2NC
40: 4NO
04: 4NC
13: 1NO3NC
31: 3NO1NC
30: 3NO
03: 3NC
12: 1NO2NC
21: 2NO1NC

Note:
- 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:

TWN series (B-313 to B-315)

ALFN 2 QH2 13 DN R - MAU
- ① Optional contact
- ② Contact configuration
- ③ Operating voltage

TWND series (B-329 to B-330)

ALFD 2 QH2 13 DN R - MAU
- ① Optional contact
- ② Contact configuration
- ③ Operating voltage

<Codes>

① Optional contact
MAU: Gold-plated silver

② Contact configuration
10: 1NO
01: 1NC
11: 1NO1NC
20: 2NO
02: 2NC
31: 3NO1NC
22: 2NO2NC
13: 1NO3NC
40: 4NO
04: 4NC

③ Operating voltage
66: 6V AC/DC
11: 12V AC/DC
22: 24V AC/DC
QH2: 100/120V AC/DC
QM: 200/220V AC
QM4: 230/240V AC

Note:
• 2 or 4 contact types have a dummy block.

Selector Switch

When specifying gold-plated silver contact and contact configuration:

TWN series (B-316 to B-319)

ASN 2 11 N - MAU
- ① Optional contact
- ② Contact configuration

TWND series (B-331 to B-333)

ASD 2 11 N - MAU
- ① Optional contact
- ② Contact configuration

<Codes>

① Optional contact
MAU: Gold-plated silver

Key removable position code (example)

Position		Key removable position	Key removable position code	Part No. Example		
				TWN series		TWND series
2-position	Maintained	Removable in all positions	(blank)	ASN2K20N	ASN2K20N-NO24401	ASD2K20N
		Removal in left only	**B**	ASN2K20N**B**	ASN2K20N**B**-NO24401	ASD2K20N**B**
		Removable in right only	**C**	ASN2K20N**C**	ASN2K20N**C**-NO24401	ASD2K20N**C**
	Spring return from right	Removal in left only	(blank)	ASN21K20N	ASN21K20N-NO24401	ASD21K20N
	Spring return from left	Removable in right only	(blank)	ASN22K20N	ASN22K20N-NO24401	ASD22K20N
3-position	Maintained	Removable in all positions	(blank)	ASN3K20N	ASN3K20N-NO24401	ASD3K20N
		Removable in left and center	**B**	ASN3K20N**B**	ASN3K20N**B**-NO24401	ASD3K20N**B**
		Removable in right and center	**C**	ASN3K20N**C**	ASN3K20N**C**-NO24401	ASD3K20N**C**
		Removable in center only	**D**	ASN3K20N**D**	ASN3K20N**D**-NO24401	ASD3K20N**D**
		Removable in right and left	**E**	ASN3K20N**E**	ASN3K20N**E**-NO24401	ASD3K20N**E**
		Removal in left only	**G**	ASN3K20N**G**	ASN3K20N**G**-NO24401	ASD3K20N**G**
		Removable in right only	**H**	ASN3K20N**H**	ASN3K20N**H**-NO24401	ASD3K20N**H**
	Spring return from right	Removable in left and center	(blank)	ASN31K20N	ASN31K20N-NO24401	ASD31K20N
		Removable in center only	**D**	ASN31K20N**D**	ASN31K20N**D**-NO24401	ASD31K20N**D**
		Removal in left only	**G**	ASN31K20N**G**	ASN31K20N**G**-NO24401	ASD31K20N**G**
	Spring return from left	Removable in right and center	(blank)	ASN32K20N	ASN32K20N-NO24401	ASD32K20N
		Removable in center only	**D**	ASN32K20N**D**	ASN32K20N**D**-NO24401	ASD32K20N**D**
		Removable in right only	**H**	ASN32K20N**H**	ASN32K20N**H**-NO24401	ASD32K20N**H**
	Spring return two-way	Removable in center only	(blank)	ASN33K20N	ASN33K20N-NO24401	ASD33K20N

• The key cannot be removed in spring return positions.

Ordering Information

Illuminated Selector Switch

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

TWN series (B-320)

ASLN 2 QH2 22 DN - MAU
- ① Optional contact
- ② Contact configuration (see B-321 to B-322)
- ③ Operating voltage

TWND series (B-334)

ASLD 2 QH2 22 DN - MAU
- ① Optional contact
- ② Contact configuration
- ③ Operating voltage

<Codes>

① Optional contact
- MAU: Gold-plated silver

③ Operating voltage
- 66: 6V AC/DC
- 11: 12V AC/DC
- 22: 24V AC/DC
- QH2: 100/120V AC/DC
- QM: 200/220V AC
- QM4: 230/240V AC

Note:
- 2 or 4 contact types have a dummy block.

Pilot Light (LED)

When specifying LED operating voltage:

TWN series (B-324 to B-325)

APN1 QH2 DN R
- ① Operating voltage

TWND series (B-336)

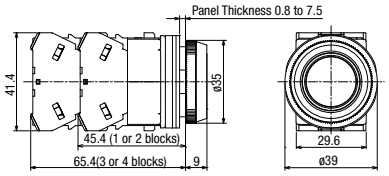
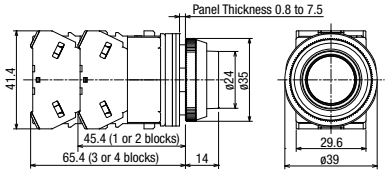
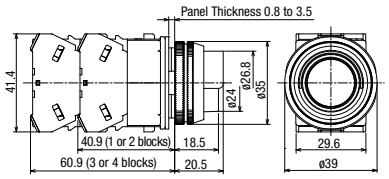
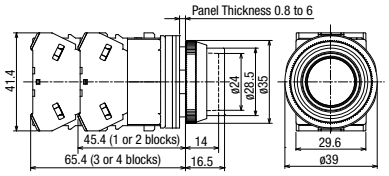
APD1 QH2 DN R
- ① Operating voltage

<Codes>

① Operating voltage
- 66: 6V AC/DC
- 11: 12V AC/DC
- 22: 24V AC/DC
- QH2: 100/120V AC/DC
- QM: 200/220V AC
- QM4: 230/240V AC
- 386: 380V AC
- 46: 400/440V AC
- 486: 480V AC

Pushbutton

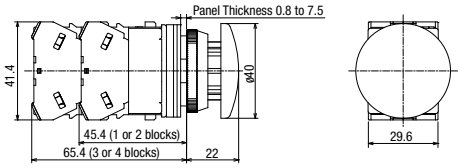
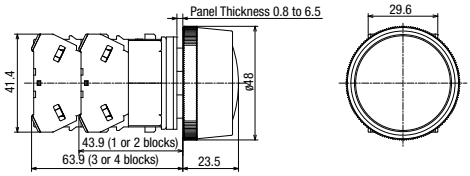
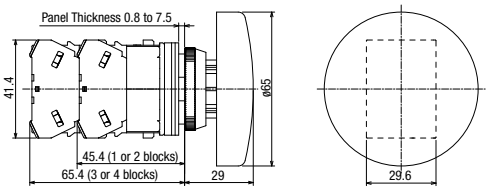
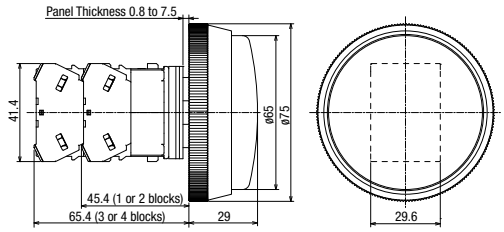
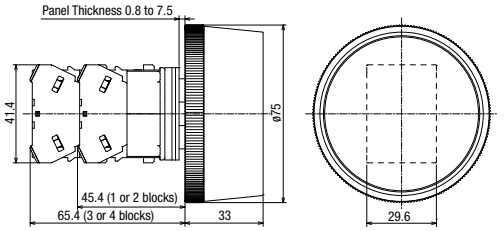
Quantity: 1

Shape	Operation	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
Flush ABN1 AON1 	Momentary	1NO	ABN110∗	B G R Y S W	
		1NC	ABN101∗		
		1NO-1NC	ABN111∗		
		2NO	ABN120∗		
		2NC	ABN102∗		
		2NO-2NC	ABN122∗		
	Maintained	1NO	AON110∗	B G R Y S W	
		1NC	AON101∗		
		1NO-1NC	AON111∗		
		2NO	AON120∗		
		2NC	AON102∗		
		2NO-2NC	AON122∗		
Extended ABN2 AON2 	Momentary	1NO	ABN210∗	B G R Y S W	
		1NC	ABN201∗		
		1NO-1NC	ABN211∗		
		2NO	ABN220∗		
		2NC	ABN202∗		
		2NO-2NC	ABN222∗		
	Maintained	1NO	AON210∗	B G R Y S W	
		1NC	AON201∗		
		1NO-1NC	AON211∗		
		2NO	AON220∗		
		2NC	AON202∗		
		2NO-2NC	AON222∗		
Extended with Half Shroud ABN2G AON2G 	Momentary	1NO	ABN2G10∗	B G R Y S W	
		1NC	ABN2G01∗		
		1NO-1NC	ABN2G11∗		
		2NO	ABN2G20∗		
		2NC	ABN2G02∗		
		2NO-2NC	ABN2G22∗		
	Maintained	1NO	AON2G10∗	B G R Y S W	
		1NC	AON2G01∗		
		1NO-1NC	AON2G11∗		
		2NO	AON2G20∗		
		2NC	AON2G02∗		
		2NO-2NC	AON2G22∗		
Extended with Full Shroud ABN2F AON2F 	Momentary	1NO	ABN2F10∗	B G R Y S W	
		1NC	ABN2F01∗		
		1NO-1NC	ABN2F11∗		
		2NO	ABN2F20∗		
		2NC	ABN2F02∗		
		2NO-2NC	ABN2F22∗		
	Maintained	1NO	AON2F10∗	B G R Y S W	
		1NC	AON2F01∗		
		1NO-1NC	AON2F11∗		
		2NO	AON2F20∗		
		2NC	AON2F02∗		
		2NO-2NC	AON2F22∗		

- 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

Pushbutton

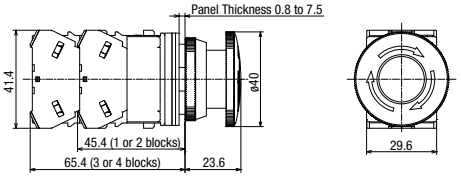
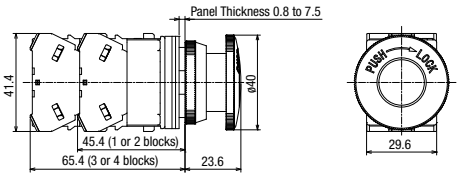
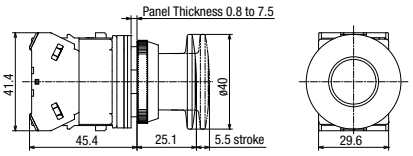
Quantity: 1

Shape	Operation	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
ø40mm Mushroom ABN3 AON3 	Momentary	1NO	ABN310∗	B G R Y S W	
		1NC	ABN301∗		
		1NO-1NC	ABN311∗		
		2NO	ABN320∗		
		2NC	ABN302∗		
		2NO-2NC	ABN322∗		
	Maintained	1NO	AON310∗	B G R Y S W	
		1NC	AON301∗		
		1NO-1NC	AON311∗		
		2NO	AON320∗		
		2NC	AON302∗		
		2NO-2NC	AON322∗		
ø40mm Mushroom with Full Shroud ABN3G 	Momentary	1NO	ABN3G10∗	B G R Y S W	
		1NC	ABN3G01∗		
		1NO-1NC	ABN3G11∗		
		2NO	ABN3G20∗		
		2NC	ABN3G02∗		
		2NO-2NC	ABN3G22∗		
ø65mm Jumbo Mushroom ABN4 	Momentary	1NO	ABN410∗	B G R Y	
		1NC	ABN401∗		
		1NO-1NC	ABN411∗		
		2NO	ABN420∗		
		2NC	ABN402∗		
		2NO-2NC	ABN422∗		
ø65mm Jumbo Mushroom with Shallow Shroud ABN4G 	Momentary	1NO	ABN4G10∗	B G R Y	
		1NC	ABN4G01∗		
		1NO-1NC	ABN4G11∗		
		2NO	ABN4G20∗		
		2NC	ABN4G02∗		
		2NO-2NC	ABN4G22∗		
ø65mm Jumbo Mushroom with Deep Shroud ABN4F 	Momentary	1NO	ABN4F10∗	B G R Y	
		1NC	ABN4F01∗		
		1NO-1NC	ABN4F11∗		
		2NO	ABN4F20∗		
		2NC	ABN4F02∗		
		2NO-2NC	ABN4F22∗		

- 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

Pushbutton

Quantity: 1

Shape	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
ø40mm Mushroom Pushlock Turn Reset (*1) AVN3 	1NO	AVN310N∗	R Y	
	1NC	AVN301N∗		
	1NO-1NC	AVN311N∗		
	2NO	AVN320N∗		
	2NC	AVN302N∗		
	2NO-2NC	AVN322N∗		
ø40mm Mushroom Push Turn Lock AJN3 	1NO	AJN310N∗	B G R Y	
	1NC	AJN301N∗		
	1NO-1NC	AJN311N∗		
	2NO	AJN320N∗		
	2NC	AJN302N∗		
	2NO-2NC	AJN322N∗		
ø40mm Mushroom Pull AZN3 	1NO	AZN310N∗	B G R Y	
	1NC	AZN301N∗		
	1NO-1NC	AZN311N∗		
	2NO	AZN320N∗		
	2NC	AZN302N∗		

- 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

*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.

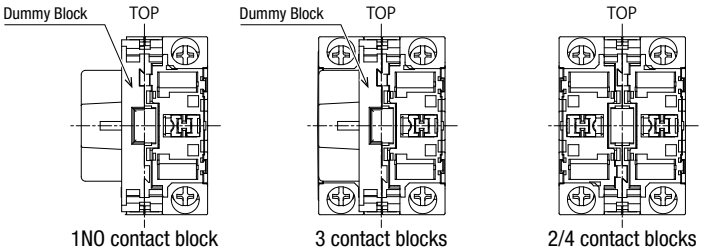
Push Turn Lock
Button is locked when turned clockwise in the depressed position and is reset when turned counterclockwise.

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

Pull contact operation

Contact	AZN3	
	Normal	Pull
1NO		
2NO-2NC		
2NO		
2NC		

Bottom View (for common to non-illuminated switches)



1NO contact block　3 contact blocks　2/4 contact blocks

- For 1-contact (NC) configurations, the position of the contact block is reversed left to right.
- See B-348 for wiring.
- Integrated terminal cover

LED Illuminated Pushbutton

Quantity: 1

Shape	Base	Operation	Operating Voltage	Contact	Part No.	Color Code	Dimensions Page
Extended ALN2 AOLN2 	BA9S	Momentary	24V AC/DC	1NO	ALN22210DN∗	R G Y A S PW	B-315
				1NC	ALN22201DN∗		
				1NO-1NC	ALN22211DN∗		
				2NO	ALN22220DN∗		
			100/120V AC/DC	1NO	ALN2QH210DN∗		
				1NC	ALN2QH201DN∗		
				1NO-1NC	ALN2QH211DN∗		
				2NO	ALN2QH220DN∗		
			200/220V AC	1NO	ALN2QM10DN∗		
				1NC	ALN2QM01DN∗		
				1NO-1NC	ALN2QM11DN∗		
				2NO	ALN2QM20DN∗		
		Maintained	24V AC/DC	1NO	AOLN22210DN∗	R G Y A S PW	
				1NC	AOLN22201DN∗		
				1NO-1NC	AOLN22211DN∗		
				2NO	AOLN22220DN∗		
			100/120V AC/DC	1NO	AOLN2QH210DN∗		
				1NC	AOLN2QH201DN∗		
				1NO-1NC	AOLN2QH211DN∗		
				2NO	AOLN2QH220DN∗		
			200/220V AC	1NO	AOLN2QM10DN∗		
				1NC	AOLN2QM01DN∗		
				1NO-1NC	AOLN2QM11DN∗		
				2NO	AOLN2QM20DN∗		
Extended with Half Shroud ALGN2 AOLGN2 	BA9S	Momentary	24V AC/DC	1NO	ALGN22210DN∗	R G Y A S PW	
				1NC	ALGN22201DN∗		
				1NO-1NC	ALGN22211DN∗		
				2NO	ALGN22220DN∗		
			100/120V AC/DC	1NO	ALGN2QH210DN∗		
				1NC	ALGN2QH201DN∗		
				1NO-1NC	ALGN2QH211DN∗		
				2NO	ALGN2QH220DN∗		
			200/220V AC	1NO	ALGN2QM10DN∗		
				1NC	ALGN2QM01DN∗		
				1NO-1NC	ALGN2QM11DN∗		
				2NO	ALGN2QM20DN∗		
		Maintained	24V AC/DC	1NO	AOLGN22210DN∗	R G Y A S PW	
				1NC	AOLGN22201DN∗		
				1NO-1NC	AOLGN22211DN∗		
				2NO	AOLGN22220DN∗		
			100/120V AC/DC	1NO	AOLGN2QH210DN∗		
				1NC	AOLGN2QH201DN∗		
				1NO-1NC	AOLGN2QH211DN∗		
				2NO	AOLGN2QH220DN∗		
			200/220V AC	1NO	AOLGN2QM10DN∗		
				1NC	AOLGN2QM01DN∗		
				1NO-1NC	AOLGN2QM11DN∗		
				2NO	AOLGN2QM20DN∗		
Extended with Full Shroud ALFN2 AOLFN2 	BA9S	Momentary	24V AC/DC	1NO	ALFN22210DN∗	R G Y A S PW	
				1NC	ALFN22201DN∗		
				1NO-1NC	ALFN22211DN∗		
				2NO	ALFN22220DN∗		
			100/120V AC/DC	1NO	ALFN2QH210DN∗		
				1NC	ALFN2QH201DN∗		
				1NO-1NC	ALFN2QH211DN∗		
				2NO	ALFN2QH220DN∗		
			200/220V AC	1NO	ALFN2QM10DN∗		
				1NC	ALFN2QM01DN∗		
				1NO-1NC	ALFN2QM11DN∗		
				2NO	ALFN2QM20DN∗		
		Maintained	24V AC/DC	1NO	AOLFN22210DN∗	R G Y A S PW	
				1NC	AOLFN22201DN∗		
				1NO-1NC	AOLFN22211DN∗		
				2NO	AOLFN22220DN∗		
			100/120V AC/DC	1NO	AOLFN2QH210DN∗		
				1NC	AOLFN2QH201DN∗		
				1NO-1NC	AOLFN2QH211DN∗		
				2NO	AOLFN2QH220DN∗		
			200/220V AC	1NO	AOLFN2QM10DN∗		
				1NC	AOLFN2QM01DN∗		
				1NO-1NC	AOLFN2QM11DN∗		
				2NO	AOLFN2QM20DN∗		

- 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 and 12V AC/DC.
- Illuminated pushbutttons with 2 or 4 contact blocks have a dummy block.
- See B-308 for other contact configurations and gold-plated silver contacts.

LED Illuminated Pushbutton

Quantity: 1

Shape	Base	Operation	Operating Voltage	Contact	Part No.	Color Code	Dimensions Page
Mushroom (ø40) ALN3 AOLN3 	BA9S	Momentary	24V AC/DC	1NO	ALN32210DN∗	R G Y A S PW	B-315
				1NC	ALN32201DN∗		
				1NO-1NC	ALN32211DN∗		
				2NO	ALN32220DN∗		
			100/120V AC/DC	1NO	ALN3QH210DN∗		
				1NC	ALN3QH201DN∗		
				1NO-1NC	ALN3QH211DN∗		
				2NO	ALN3QH220DN∗		
			200/220V AC	1NO	ALN3QM10DN∗		
				1NC	ALN3QM01DN∗		
				1NO-1NC	ALN3QM11DN∗		
				2NO	ALN3QM20DN∗		
		Maintained	24V AC/DC	1NO	AOLN32210DN∗	R G Y A S PW	
				1NC	AOLN32201DN∗		
				1NO-1NC	AOLN32211DN∗		
				2NO	AOLN32220DN∗		
			100/120V AC/DC	1NO	AOLN3QH210DN∗		
				1NC	AOLN3QH201DN∗		
				1NO-1NC	AOLN3QH211DN∗		
				2NO	AOLN3QH220DN∗		
			200/220V AC	1NO	AOLN3QM10DN∗		
				1NC	AOLN3QM01DN∗		
				1NO-1NC	AOLN3QM11DN∗		
				2NO	AOLN3QM20DN∗		
Mushroom Pushlock Turn Reset (ø40) AVLN3 (*1) 	BA9S	Momentary	24V AC/DC	1NO	AVLN32210DN∗	R	
				1NC	AVLN32201DN∗		
				1NO-1NC	AVLN32211DN∗		
				2NO	AVLN32220DN∗		
			100/120V AC/DC	1NO	AVLN3QH210DN∗		
				1NC	AVLN3QH201DN∗		
				1NO-1NC	AVLN3QH211DN∗		
				2NO	AVLN3QH220DN∗		
			200/220V AC	1NO	AVLN3QM10DN∗		
				1NC	AVLN3QM01DN∗		
				1NO-1NC	AVLN3QM11DN∗		
				2NO	AVLN3QM20DN∗		
Mushroom Push Turn Lock (ø40) AJLN3 	BA9S	Maintained	24V AC/DC	1NO	AJLN32210DN∗	R G Y A PW	
				1NC	AJLN32201DN∗		
				1NO-1NC	AJLN32211DN∗		
				2NO	AJLN32220DN∗		
			100/120V AC/DC	1NO	AJLN3QH210DN∗		
				1NC	AJLN3QH201DN∗		
				1NO-1NC	AJLN3QH211DN∗		
				2NO	AJLN3QH220DN∗		
			200/220V AC	1NO	AJLN3QM10DN∗		
				1NC	AJLN3QM01DN∗		
				1NO-1NC	AJLN3QM11DN∗		
				2NO	AJLN3QM20DN∗		

- 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 and 12V AC/DC.
- See B-308 for other contact configurations and gold-plated silver contacts.
- Illuminated pushbutttons 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).

Illuminated pushbutton operation

Pushlock Turn Reset
Button is maintained when pressed and is reset when turned clockwise.

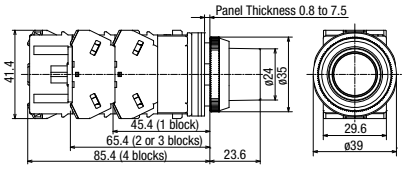
Push Turn Lock
Button is locked when turned clockwise in the depressed position and is reset when turned counterclockwise.

Dimensions (Illuminated Pushbuttons)

All dimensions in mm

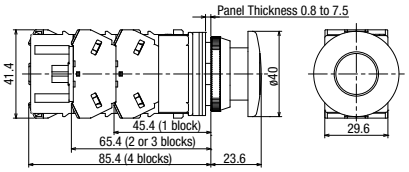
Extended, LED illuminated (momentary/maintained)

ALN2/AOLN2 Terminal screw: M3.5, Integrated terminal cover



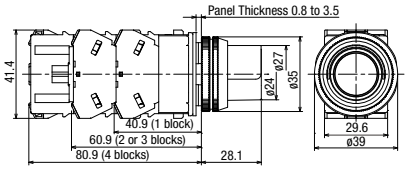
Mushroom (ø40), LED illuminated (momentary/maintained)

ALN3/AOLN3 Terminal screw: M3.5, Integrated terminal cover



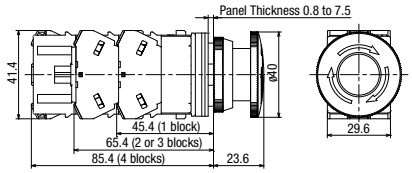
Extended with Half Shroud, LED illuminated (momentary/maintained)

ALGN2/AOLGN2 Terminal screw: M3.5, Integrated terminal cover



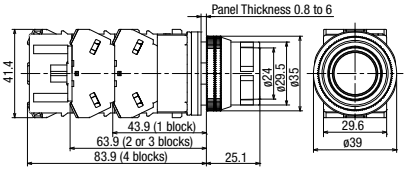
Mushroom Pushlock Turn Reset, LED illuminated

AVLN3 Terminal screw: M3.5, Integrated terminal covera



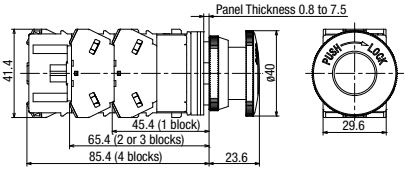
Extended with Full Shroud, LED illuminated (momentary/maintained)

ALFN2/AOLFN2 Terminal screw: M3.5, Integrated terminal cover

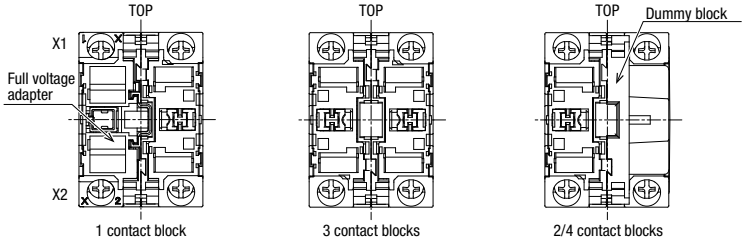


Mushroom Push Turn Lock, LED illuminated

AJLN3 Terminal screw: M3.5, Integrated terminal cover



Bottom View (Common to Illuminated Switches)



• See B-348 for wiring.

Selector Switches (Knob Operator)

Quantity: 1

Shape: Knob Operator ASN

90° 2-position

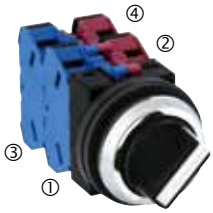
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 2	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position: 1	Spring Return from Left: Operator Position: 2	Spring Return from Left (1 2)
1NO (10)	①	NO		●	ASN210N	ASN2110N	①	NO	●		ASN2210N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASN211N	ASN2111N	①	NO	●		ASN2211N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASN220N	ASN2120N	①	NO	●		ASN2220N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASN222N	ASN2122N	①	NO	●		ASN2222N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 0	Operator Position: 2	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
2NO (20)	①	NO	●			ASN320N	ASN3120N	ASN3220N	ASN3320N
	②	NO			●				
2NC (02)	①	NC		●		ASN302N	ASN3102N	ASN3202N	ASN3302N
	②	NC	●						
2NO-2NC (22)	①	NO	●			ASN322N	ASN3122N	ASN3222N	ASN3322N
	②	NO			●				
	③	NC		●					
	④	NC	●						
4NO (40)	①	NO	●			ASN340N	ASN3140N	ASN3240N	ASN3340N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		●		ASN304N	ASN3104N	ASN3204N	ASN3304N
	②	NC	●						
	③	NC		●					
	④	NC	●						
☆ 3S	①	NO	●			ASN33SN-243 ☆	—	—	—
	②	NO			●				
	③	NC		●					
	④	—	Dummy Block						

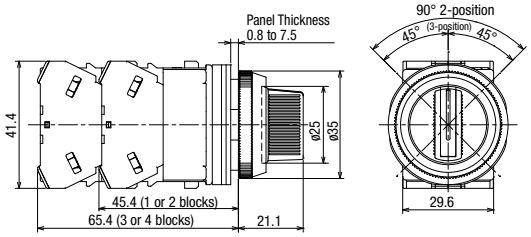
- Knob: Black
- Round bezel (metal): Chrome-plated
- Selector switches with 1 or 3 contact blocks have a dummy block.
- Knob operator can be installed at 45-degree intervals in addition to the positions shown in the above table.
- See B-321 to B-322 for other contact configurations. Turn the operator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

Selector Switches (Lever Operator)

Quantity: 1

Shape: Lever Operator ASN□L

90° 2-position

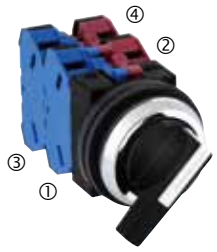
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position 1	Operator Position 2	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position 1	Spring Return from Left: Operator Position 2	Spring Return from Left (1 2)
1NO (10)	①	NO		●	ASN2L10N	ASN21L10N	①	NO	●		ASN22L10N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASN2L11N	ASN21L11N	①	NO	●		ASN22L11N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASN2L20N	ASN21L20N	①	NO	●		ASN22L20N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASN2L22N	ASN21L22N	①	NO	●		ASN22L22N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position 1	Operator Position 0	Operator Position 2	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
2NO (20)	①	NO	●			ASN3L20N	ASN31L20N	ASN32L20N	ASN33L20N
	②	NO			●				
2NC (02)	①	NO		▬		ASN3L02N	ASN31L02N	ASN32L02N	ASN33L02N
	②	NO	▬						
2NO-2NC (22)	①	NO	●			ASN3L22N	ASN31L22N	ASN32L22N	ASN33L22N
	②	NO			●				
	③	NO		▬					
	④	NO	▬						
4NO (40)	①	NO	●			ASN3L40N	ASN31L40N	ASN32L40N	ASN33L40N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NO		▬		ASN3L04N	ASN31L04N	ASN32L04N	ASN33L04N
	②	NO	▬						
	③	NO		▬					
	④	NO	▬						
☆ 3S	①	NO	●			ASN3L3SN-243☆	—	—	—
	②	NO			●				
	③	NO		●					
	④	—	Dummy Block						

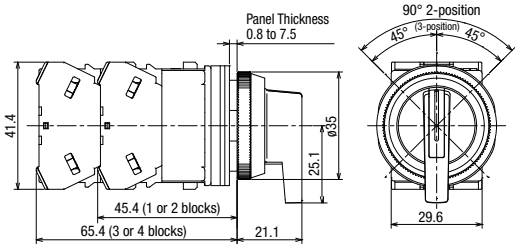
- Lever: Black
- Round bezel (metal): Chrome-plated
- Selector switches with 1 or 3 contact blocks have a dummy block.
- Knob operator can be installed at 45-degree intervals in addition to the positions shown in the above table.
- See B-321 to B-322 for other contact configurations. Turn the operator 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 contact.
- See B-312 for bottom view.

Contact Block Mounting Position



Dimensions

All dimensions in mm.



Terminal Screws: M3.5 Terminal cover: integrated

IDEC

Key Selector Switches

Quantity: 1

Shape: Key Selector (Key No. 0)
ASN☐K

90° 2-position

Contact Configuration					Maintained	Spring Return from Right	Spring Return from Left				
Contact	Contact Block		Operator Position		1 2	1 2	Contact Block		Operator Position		1 2
	Mounting Position	Contact	1	2			Mounting Position	Contact	1	2	
1NO (10)	①	NO		●	ASN2K10N	ASN21K10N	①	NO	●		ASN22K10N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASN2K11N	ASN21K11N	①	NO	●		ASN22K11N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASN2K20N	ASN21K20N	①	NO	●		ASN22K20N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASN2K22N	ASN21K22N	①	NO	●		ASN22K22N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				③	NC		●	

45° 3-position

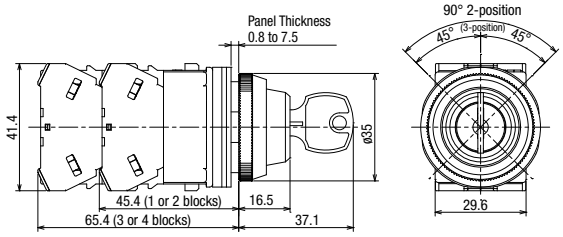
Contact Configuration						Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two-way
Contact	Contact Block		Operator Position			1 0 2	1 0 2	1 0 2	1 0 2
	Mounting Position	Contact	1	0	2				
2NO (20)	①	NO	●			ASN3K20N	ASN31K20N	ASN32K20N	ASN33K20N
	②	NO			●				
2NC (02)	①	NC		▬		ASN3K02N	ASN31K02N	ASN32K02N	ASN33K02N
	②	NC	▬						
2NO-2NC (22)	①	NO	●			ASN3K22N	ASN31K22N	ASN32K22N	ASN33K22N
	②	NO			●				
	③	NC		▬					
	④	NC	▬						
4NO (40)	①	NO	●			ASN3K40N	ASN31K40N	ASN32K40N	ASN33K40N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		▬		ASN3K04N	ASN31K04N	ASN32K04N	ASN33K04N
	②	NC	▬						
	③	NC		▬					
	④	NC	▬						
☆ 3S	①	NO	●			☆ ASN3K3SN-243	—	—	—
	②	NO			●				
	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.
- 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.
- 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.
- 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

Key Selector Switches

Quantity: 1

Shape: Key Selector (Key No. 24401)
ASN☐K

90° 2-position

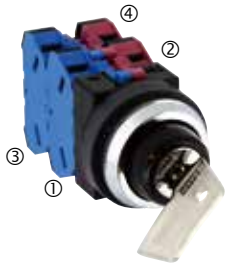
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 2	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position: 1	Spring Return from Left: Operator Position: 2	Spring Return from Left (1 2)
1NO (10)	①	NO		●	ASN2K10N-N024401	ASN21K10N-N024401	①	NO	●		ASN22K10N-N024401
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASN2K11N-N024401	ASN21K11N-N024401	①	NO	●		ASN22K11N-N024401
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASN2K20N-N024401	ASN21K20N-N024401	①	NO	●		ASN22K20N-N024401
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASN2K22N-N024401	ASN21K22N-N024401	①	NO	●		ASN22K22N-N024401
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 0	Operator Position: 2	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
2NO (20)	①	NO	●			ASN3K20N-N024401	ASN31K20N-N024401	ASN32K20N-N024401	ASN33K20N-N024401
	②	NO			●				
2NC (02)	①	NC		▬		ASN3K02N-N024401	ASN31K02N-N024401	ASN32K02N-N024401	ASN33K02N-N024401
	②	NC	▬						
2NO-2NC (22)	①	NO	●			ASN3K22N-N024401	ASN31K22N-N024401	ASN32K22N-N024401	ASN33K22N-N024401
	②	NO			●				
	③	NC		▬					
	④	NC	▬						
4NO (40)	①	NO	●			ASN3K40N-N024401	ASN31K40N-N024401	ASN32K40N-N024401	ASN33K40N-N024401
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		▬		ASN3K04N-N024401	ASN31K04N-N024401	ASN32K04N-N024401	ASN33K04N-N024401
	②	NC	▬						
	③	NC		▬					
	④	NC	▬						
☆ 3S	①	NO	●			ASN3K3SN-243-N024401	—	—	—
	②	NO			●				
	③	NC		●					
	④	—	Dummy Block						

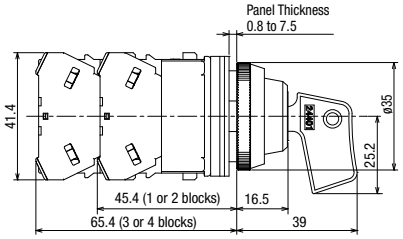
- Cylinder: Chrome-plated
- Round bezel (metal): Chrome-plated
- Key selector switches with 1 or 3 contact blocks have a dummy block.
- See B-321 to B-322 for other contact configurations.
- On spring-returned types, the key can be released only from the maintained position. On maintained types, the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

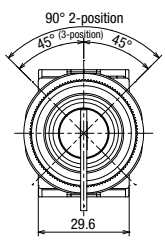


Dimensions

All dimensions in mm.



Terminal Screws: M3.5



Terminal cover: integrated

IDEC

LED Illuminated Selector Switch

Quantity: 1

Shape: Illuminated Selector Switches (BA9S Base)
ASLN

90° 2-position

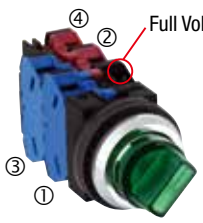
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 2	Rated Voltage	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position: 1	Spring Return from Left: Operator Position: 2	Spring Return from Left (1 2)	Color Code
1NO (10)	①	NO		●	24V AC/DC	ASLN22210DN∗	ASLN212210DN∗	①	NO	●		ASLN222210DN∗	R G Y A S PW
	②	—			100/120V AC/DC	ASLN2QH210DN∗	ASLN21QH210DN∗	②	—			ASLN22QH210DN∗	
					200/220V AC	ASLN2QM10DN∗	ASLN21QM10DN∗					ASLN22QM10DN∗	
1NO-1NC (11)	①	NO		●	24V AC/DC	ASLN22211DN∗	ASLN212211DN∗	①	NO	●		ASLN222211DN∗	
	②	NC	●		100/120V AC/DC	ASLN2QH211DN∗	ASLN21QH211DN∗	②	NC		●	ASLN22QH211DN∗	
					200/220V AC	ASLN2QM11DN∗	ASLN21QM11DN∗					ASLN22QM11DN∗	
2NO (20)	①	NO		●	24V AC/DC	ASLN22220DN∗	ASLN212220DN∗	①	NO	●		ASLN222220DN∗	
	②	NO		●	100/120V AC/DC	ASLN2QH220DN∗	ASLN21QH220DN∗	②	NO	●		ASLN22QH220DN∗	
					200/220V AC	ASLN2QM20DN∗	ASLN21QM20DN∗					ASLN22QM20DN∗	
2NO-2NC (22)	①	NO		●	24V AC/DC	ASLN22222DN∗	ASLN212222DN∗	①	NO	●		ASLN222222DN∗	
	②	NC	●		100/120V AC/DC	ASLN2QH222DN∗	ASLN21QH222DN∗	②	NC		●	ASLN22QH222DN∗	
	③	NO		●				③	NO	●			
	④	NC	●		200/220V AC	ASLN2QM22DN∗	ASLN21QM22DN∗	④	NC		●	ASLN22QM22DN∗	

45° 3-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 0	Operator Position: 2	Rated Voltage	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-Way (1 0 2)	Color Code
2NO (20)	①	NO	●			24V AC/DC	ASLN32220DN∗	ASLN312220DN∗	ASLN322220DN∗	ASLN332220DN∗	R G Y A S PW
	②	NO			●	100/120V AC/DC	ASLN3QH220DN∗	ASLN31QH220DN∗	ASLN32QH220DN∗	ASLN33QH220DN∗	
						200/220V AC	ASLN3QM20DN∗	ASLN31QM20DN∗	ASLN32QM20DN∗	ASLN33QM20DN∗	
2NC (02)	①	NC		●		24V AC/DC	ASLN32202DN∗	ASLN312202DN∗	ASLN322202DN∗	ASLN332202DN∗	
	②	NC	●			100/120V AC/DC	ASLN3QH202DN∗	ASLN31QH202DN∗	ASLN32QH202DN∗	ASLN33QH202DN∗	
						200/220V AC	ASLN3QM02DN∗	ASLN31QM02DN∗	ASLN32QM02DN∗	ASLN33QM02DN∗	
2NO-2NC (22)	①	NO	●			24V AC/DC	ASLN32222DN∗	ASLN312222DN∗	ASLN322222DN∗	ASLN332222DN∗	
	②	NO			●	100/120V AC/DC	ASLN3QH222DN∗	ASLN31QH222DN∗	ASLN32QH222DN∗	ASLN33QH222DN∗	
	③	NC		●							
	④	NC	●			200/220V AC	ASLN3QM22DN∗	ASLN31QM22DN∗	ASLN32QM22DN∗	ASLN33QM22DN∗	
4NO (40)	①	NO	●			24V AC/DC	ASLN32240DN∗	ASLN312240DN∗	ASLN322240DN∗	ASLN332240DN∗	
	②	NO			●	100/120V AC/DC	ASLN3QH240DN∗	ASLN31QH240DN∗	ASLN32QH240DN∗	ASLN33QH240DN∗	
	③	NO	●								
	④	NO			●	200/220V AC	ASLN3QM40DN∗	ASLN31QM40DN∗	ASLN32QM40DN∗	ASLN33QM40DN∗	
4NC (04)	①	NC		●		24V AC/DC	ASLN32204DN∗	ASLN312204DN∗	ASLN322204DN∗	ASLN332204DN∗	
	②	NC	●			100/120V AC/DC	ASLN3QH204DN∗	ASLN31QH204DN∗	ASLN32QH204DN∗	ASLN33QH204DN∗	
	③	NC		●							
	④	NC	●			200/220V AC	ASLN3QM04DN∗	ASLN31QM04DN∗	ASLN32QM04DN∗	ASLN33QM04DN∗	

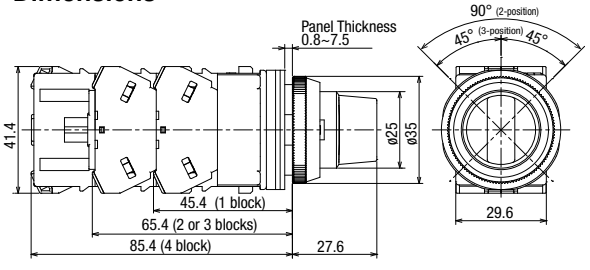
- Specify a color code in place of ∗ in Part No. R (red), G (green), Y (yellow), A (amber), S (blue), PW (pure white)
- Illuminated selector switches include a built-in LED lamp.
- Round bezel (metal): Chrome-plated
- For voltages such as 6V AC/DC and 12V AC/DC, etc., not listed, See page B-309.
- Dummy blocks are built into 2-contact and 4-contact.
- Other contact configurations are also available. See pages B-321 to B-322.
- Make sure to operate the handle firmly to each notch position.
- For gold-plated silver contacts, see page B-309.

Contact Block Mounting Position



Dimensions

All dimensions in mm.



Terminal screw: M3.5, Integrated terminal cover

For switch rear view, see page B-315.

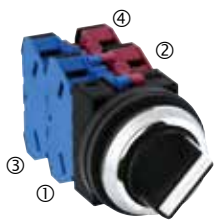
Selector Switches Contact Configuration (90° 2-position)

Contact Configuration	Circuit Code	Contact Block: Mounting Position	Contact Block: Contact	Operator Operation and Circuit: Maintained (1 2) — Knob Lever	Maintained — Key	Maintained — Illuminated	Spring Return from Right (1 2) — Knob Lever	Spring Return from Right — Key	Spring Return from Right — Illuminated	Spring Return from Left (1 2) — Knob Lever	Spring Return from Left — Key	Spring Return from Left — Illuminated
				Operator Position 1	Operator Position 2		Operator Position 1	Operator Position 2		Operator Position 1	Operator Position 2	
10	Not required	①	NO		●			●		●		
		②	—	Dummy Block			Dummy Block			Dummy Block		
01	Not required	①	NC	●			●				●	
		②	—	Dummy Block			Dummy Block			Dummy Block		
2R	☆ 118	①	EM									
		②	LB									
	☆ 168	①	EM									
		②	LB									

Contact Configuration	Circuit Code	Contact Block: Mounting Position	Contact Block: Contact	Operator Operation and Circuit: Maintained (1 2) — Knob Lever	Maintained — Key	Maintained — Illuminated	Spring Return from Right (1 2) — Knob Lever	Spring Return from Right — Key	Spring Return from Right — Illuminated	Spring Return from Left (1 2) — Knob Lever	Spring Return from Left — Key	Spring Return from Left — Illuminated
				Operator Position 1	Operator Position 2		Operator Position 1	Operator Position 2		Operator Position 1	Operator Position 2	
11	Not required	①	NO		●			●		●		
		②	NC	●			●				●	
20	Not required	①	NO		●			●		●		
		②	NO		●			●		●		
02	Not required	①	NC	●			●				●	
		②	NC	●			●				●	
22	Not required	①	NO		●			●		●		
		②	NC	●			●				●	
		③	NO		●			●		●		
		④	NC	●			●				●	
31	107	①	NC	●			●				●	
		②	NO		●			●		●		
		③	NO		●			●		●		
		④	NO		●			●		●		
40	Not required	①	NO		●			●		●		
		②	NO		●			●		●		
		③	NO		●			●		●		
		④	NO		●			●		●		

- Selector switches with ☆ have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- Prices may vary by circuit configuration, even for the same number of contacts.

Contact Block Mounting Position



Part No. Development

ASN 2 L 31 N - 107

① Circuit code
② Contact configuration
③ Operator shape Blank: knob
L: lever
K: key
④ Position/Operator operation 2: 2-position, maintained
21: 2-position, spring return from right
22: 2-position, spring return from left

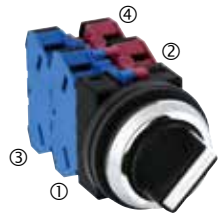
IDEC

Selector Switches Contact Configuration (45° 3-position)

Contact Configuration	Circuit Code	Contact Block		Operator Position			Operator Operation and Circuit											
							Maintained 1 0 2			Spring Return from Right 1 0 2			Spring Return from Left 1 0 2			Spring Return Two-way 1 0 2		
		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
11	202	①	NO	●				√			√			√			√	
		②	NC	▬	▬													
	203	①	NC		▬	▬		√			√			√			√	
		②	NO			●												
	303	①	NC		●			√			√			√			√	
		②	NO			●												
20	Not required	①	NO	●				√			√			√			√	
		②	NO			●												
02	Not required	①	NC		▬	▬		√			√			√			√	
		②	NC	▬	▬													
22	Not required	①	NO	●				√			√			√			√	
		②	NO			●												
		③	NC		▬	▬												
		④	NC	▬	▬													
	209	①	NO	●				√			√			—			—	
		②	NC	▬	▬													
		③	NC		▬	▬												
		④	NO			●												
	210	①	NC		▬	▬		√			√			√			√	
		②	NO			●												
		③	NC		▬	▬												
		④	NO			●												
	310	①	NC		●			√			—			—			—	
		②	NO			●												
		③	NC		●													
		④	NO			●												
	311	①	NO	●		●		√			√			√			√	
		②	NO			●												
		③	NC		●													
		④	NC	▬	▬													
40	Not required	①	NO	●				√			√			√			√	
		②	NO			●												
		③	NO	●														
		④	NO			●												
04	Not required	①	NC		▬	▬		√			√			√			√	
		②	NC	▬	▬													
		③	NC		▬	▬												
		④	NC	▬	▬													
3S	☆ 243	①	NO	●				√			—			—			—	
		②	NO			●												
		③	NC		●													
		④		Dummy Block														

- Selector switches with ☆ have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.
- On selector switches with ☆, the contact blocks may overlap each other while turning the ring or lever operator.
- Prices may vary by circuit configuration, even for the same number of contacts.

Contact Block Mounting Position



Part No. Development

ASN 3 L 22 N - 209

- ① Circuit code
- ② Contact configuration
- ③ Operator shape Blank: knob, L: lever, K: key
- ④ Position/Operator operation 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

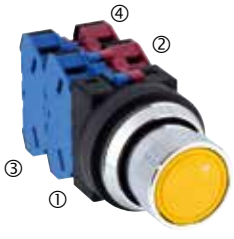
Selector Pushbuttons

Quantity: 1

Shape	Contact Configuration	Circuit Code	Contact Block: Mounting Position	Contact Block: Contact	Ring Position: Left – Pushbutton: Normal	Ring Position: Left – Pushbutton: Push	Ring Position: Right – Pushbutton: Normal	Ring Position: Right – Pushbutton: Push	Button Color Code	Ring Operator: Part No.
Ring Operator (90°2-position) ASBN2 	11 (1NO-1NC)	A03	①	NO		●		●	B G R Y	ASBN211N-A03∗
			②	NC	●					
		☆ K04	①	NC	●					☆ ASBN211N-K04∗
			②	EM		●	■			
		G03	①	NO		●		Blocked		ASBN211N-G03∗
			②	NC	●		●			
	20 (2NO)	D01	①	NO		●				ASBN220N-D01∗
			②	NO				●		
	22 (2NO-2NC)	A08	①	NO		●		●		ASBN222N-A08∗
			②	NC	●					
			③	NO		●		●		
			④	NC	●					
		☆ C10	①	NO		●		●		☆ ASBN222N-C10∗
			②	NO				●		
			③	NC	●					
			④	NC	■					
		D10	①	NO		●				ASBN222N-D10∗
			②	NO				●		
			③	NC	●		■			
			④	NC	■		●			
		☆ E10	①	NO		●				☆ ASBN222N-E10∗
			②	NO				●		
			③	NC			■			
			④	NC	■					
		☆ F10	①	NO				●		☆ ASBN222N-F10∗
			②	NO		●				
			③	NC			●			
			④	NC	●					
		G10	①	NO		●		Blocked		ASBN222N-G10∗
			②	NO		●				
			③	NC	●		●			
			④	NC	●		●			
		☆ K15	①	NC	●					☆ ASBN222N-K15∗
			②	NC	●					
			③	EM		●	■			
			④	EM		●	■			

- 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.

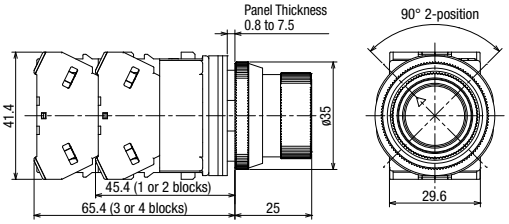
Contact Block Mounting Position



Dimensions

Ring operator (90° 2-position)

(All dimensions in mm.)



Terminal Screws: M3.5 Terminal cover: integrated

IDEC

LED Illuminated Pilot Light

Quantity: 1

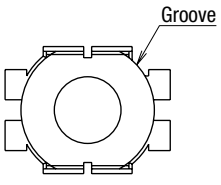
Shape	Illumination	Base	Rated Voltage	Part No.	Color Code	LED Lamp Part No.	Dimensions Page
Round APN1 	LED	BA9S	24V AC/DC	APN122DN∗	R, G, Y, A, S, PW	LSRD-2	B-325
			100/120V AC/DC	APN1QH2DN∗	R, G, Y, A, S, PW	LSRD-H2	
			200/220V AC	APN1QMDN∗	R, G, Y, A, S, PW	LSRD-M2	
Square Extended UPQN3B 	LED	BA9S	24V AC/DC	UPQN3B22D∗	R, G, Y, A, S, PW	LSRD-2	
			100/120V AC/DC	UPQN3BQH2D∗	R, G, Y, A, S, PW	LSRD-H2	
			200/220V AC	UPQN3BQMD∗	R, G, Y, A, S, PW	LSRD-M2	
Rectangular (Marking) UPQN4 	LED	BA9S	24V AC/DC	UPQN422D∗	R, G, Y, A, S, PW	LSRD-2	
			100/120V AC/DC	UPQN4QH2D∗	R, G, Y, A, S, PW	LSRD-H2	
			200/220V AC	UPQN4QMD∗	R, G, Y, A, S, PW	LSRD-M2	

- 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 and 12V AC/DC.
- Terminal cover is installed on pilot lights for electric shock prevention.

Type	Terminal Cover	Quantity
6V AC/DC, 12V AC/DC, 24V AC/DC, 100/120V AC/DC, 200/220V AC, 230/240V AC	APN-PVL	1
380V AC and above	N-VL3	1

Reflector

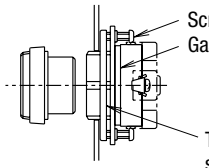
1. The lamp housing of the square LED illuminated pilot lights has a built-in reflector.
2. Make sure that the reflector does not fall off when removing the lens or making plate.
3. When replacing the LED lamp of UPQN4 (rectangular), use a lamp holder tool (OR-55).
4. To remove the reflector, insert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



Reflector

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

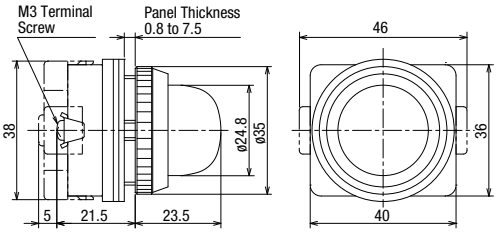
Dimensions (Pilot Light)

All dimensions in mm

Round

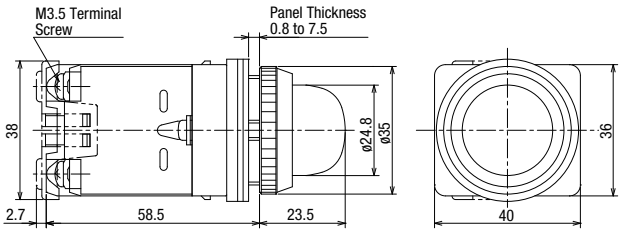
APN1

6 to 120V AC/DC, 200 to 240V AC (Terminal Cover: APN-PVL)
Without LED Lamp



Terminal screws: M3

380V AC and above (Terminal Cover: N-VL3)

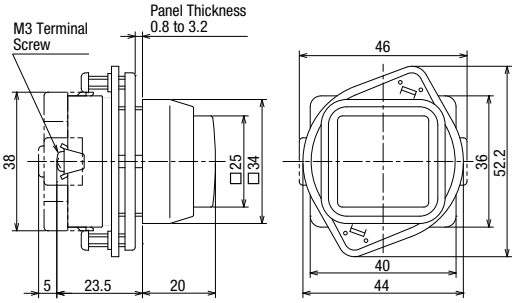


Terminal screws: M3.5

Square Extended

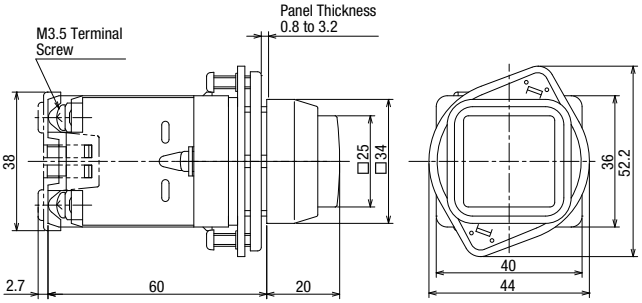
UPQN3B

6 to 120V AC/DC, 200 to 240V AC (Terminal Cover: APN-PVL)
Without LED Lamp



Terminal screws: M3

380V AC and above (Terminal Cover: N-VL3)

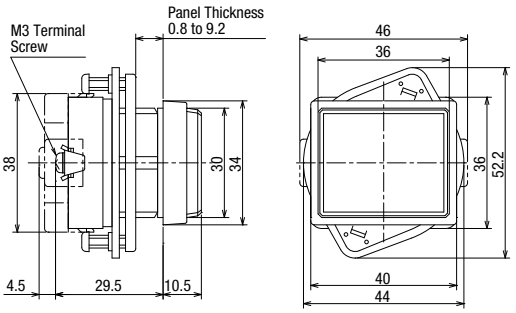


Terminal screws: M3.5

Rectangular (Marking)

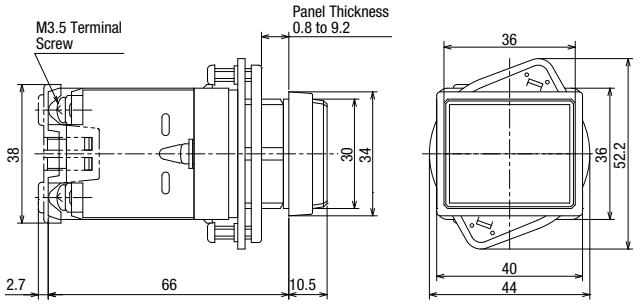
UPQN4

6 to 120V AC/DC, 200 to 240V AC (Terminal Cover: APN-PVL)
Without LED Lamp



Terminal screws: M3

380V AC and above (Terminal Cover: N-VL3)

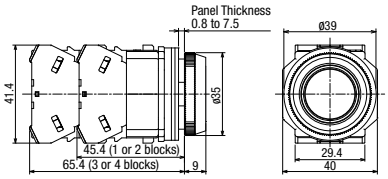
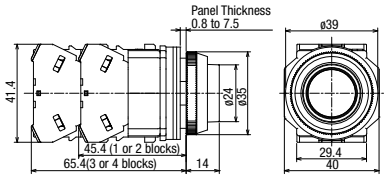
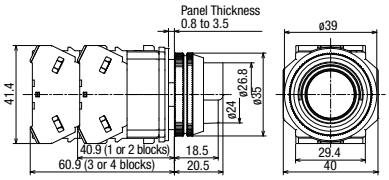
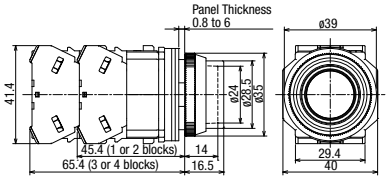


Terminal screws: M3.5

• See B-349 for wiring.

Pushbuttons (Diecast Zinc)

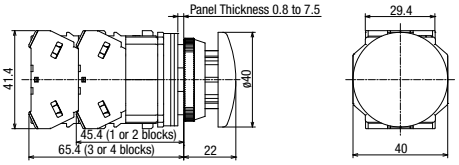
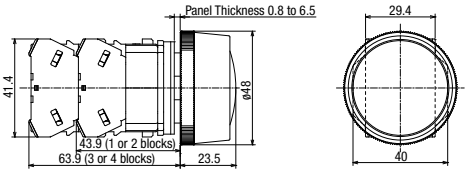
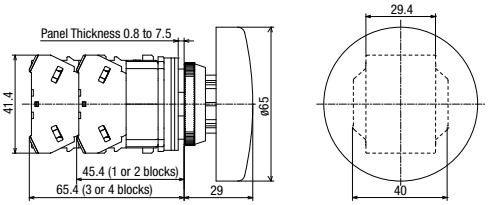
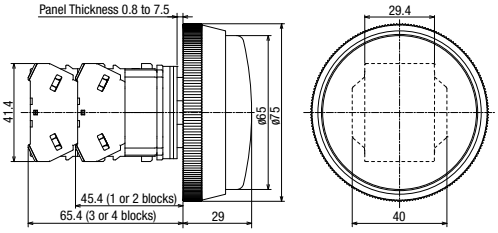
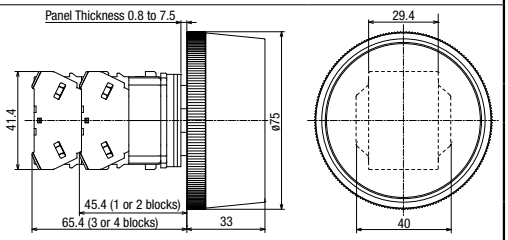
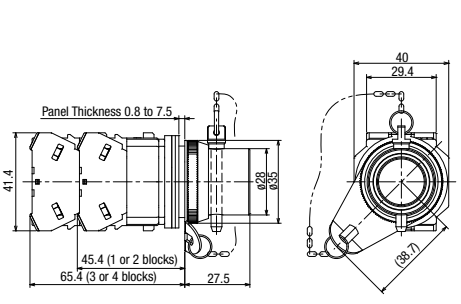
Quantity: 1

Shape	Operation	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
Flush ABD1 AOD1 	Momentary	1NO	ABD110N∗	B G R Y S W	
		1NC	ABD101N∗		
		1NO-1NC	ABD111N∗		
		2NO	ABD120N∗		
		2NC	ABD102N∗		
		2NO-2NC	ABD122N∗		
	Maintained	1NO	AOD110N∗	B G R Y S W	
		1NC	AOD101N∗		
		1NO-1NC	AOD111N∗		
		2NO	AOD120N∗		
		2NC	AOD102N∗		
		2NO-2NC	AOD122N∗		
Extended ABD2 AOD2 	Momentary	1NO	ABD210N∗	B G R Y S W	
		1NC	ABD201N∗		
		1NO-1NC	ABD211N∗		
		2NO	ABD220N∗		
		2NC	ABD202N∗		
		2NO-2NC	ABD222N∗		
	Maintained	1NO	AOD210N∗	B G R Y S W	
		1NC	AOD201N∗		
		1NO-1NC	AOD211N∗		
		2NO	AOD220N∗		
		2NC	AOD202N∗		
		2NO-2NC	AOD222N∗		
Extended with Half Shroud ABGD2 AOGD2 	Momentary	1NO	ABGD210N∗	B G R Y S W	
		1NC	ABGD201N∗		
		1NO-1NC	ABGD211N∗		
		2NO	ABGD220N∗		
		2NC	ABGD202N∗		
		2NO-2NC	ABGD222N∗		
	Maintained	1NO	AOGD210N∗	B G R Y S W	
		1NC	AOGD201N∗		
		1NO-1NC	AOGD211N∗		
		2NO	AOGD220N∗		
		2NC	AOGD202N∗		
		2NO-2NC	AOGD222N∗		
Extended with Full Shroud ABFD2 AOFD2 	Momentary	1NO	ABFD210N∗	B G R Y S W	
		1NC	ABFD201N∗		
		1NO-1NC	ABFD211N∗		
		2NO	ABFD220N∗		
		2NC	ABFD202N∗		
		2NO-2NC	ABFD222N∗		
	Maintained	1NO	AOFD210N∗	B G R Y S W	
		1NC	AOFD201N∗		
		1NO-1NC	AOFD211N∗		
		2NO	AOFD220N∗		
		2NC	AOFD202N∗		
		2NO-2NC	AOFD222N∗		

- 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.
- Terminal screw: M3.5, Terminal cover: Integrated
- See B-312 for bottom view.

Pushbuttons (Diecast Zinc)

Quantity: 1

Shape	Operation	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
ø40mm Mushroom ABD3 AOD3 	Momentary	1NO	ABD310N∗	B G R Y S W	
		1NC	ABD301N∗		
		1NO-1NC	ABD311N∗		
		2NO	ABD320N∗		
		2NC	ABD302N∗		
		2NO-2NC	ABD322N∗		
	Maintained	1NO	AOD310N∗	B G R Y S W	
		1NC	AOD301N∗		
		1NO-1NC	AOD311N∗		
		2NO	AOD320N∗		
		2NC	AOD302N∗		
		2NO-2NC	AOD322N∗		
ø40mm Mushroom with Full Shroud ABGD3 AOGD3 	Momentary	1NO	ABGD310N∗	B G R Y S W	
		1NC	ABGD301N∗		
		1NO-1NC	ABGD311N∗		
		2NO	ABGD320N∗		
		2NC	ABGD302N∗		
		2NO-2NC	ABGD322N∗		
	Maintained	1NO	AOGD310N∗	B G R Y S W	
		1NC	AOGD301N∗		
		1NO-1NC	AOGD311N∗		
		2NO	AOGD320N∗		
		2NC	AOGD302N∗		
		2NO-2NC	AOGD322N∗		
ø65mm Jumbo Mushroom ABD4 	Momentary	1NO	ABD410N∗	B G R Y	
		1NC	ABD401N∗		
		1NO-1NC	ABD411N∗		
		2NO	ABD420N∗		
		2NC	ABD402N∗		
		2NO-2NC	ABD422N∗		
ø65mm Jumbo Mushroom with Shallow Shroud ABGD4 	Momentary	1NO	ABGD410N∗	B G R Y	
		1NC	ABGD401N∗		
		1NO-1NC	ABGD411N∗		
		2NO	ABGD420N∗		
		2NC	ABGD402N∗		
		2NO-2NC	ABGD422N∗		
ø65mm Jumbo Mushroom with Deep Shroud ABFD4 	Momentary	1NO	ABFD410N∗	B G R Y	
		1NC	ABFD401N∗		
		1NO-1NC	ABFD411N∗		
		2NO	ABFD420N∗		
		2NC	ABFD402N∗		
		2NO-2NC	ABFD422N∗		
Pin Lock (On-off Lock Type) (*1) ABD8P 		1NO	ABD8P10N∗	B G R Y	
		1NC	ABD8P01N∗		
		1NO-1NC	ABD8P11N∗		
		2NO	ABD8P20N∗		
		2NC	ABD8P02N∗		
		2NO-2NC	ABD8P22N∗		
Pin Lock (On-lock Type) (*1) ABD8PN 		1NO	ABD8PN10N∗	B G R Y	
		1NC	ABD8PN01N∗		
		1NO-1NC	ABD8PN11N∗		
		2NO	ABD8PN20N∗		
		2NC	ABD8PN02N∗		
		2NO-2NC	ABD8PN22N∗		

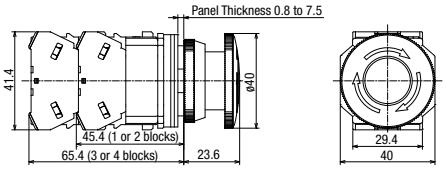
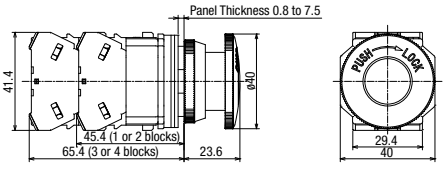
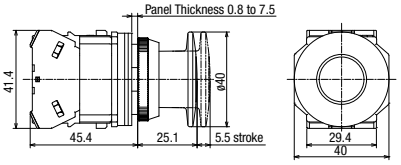
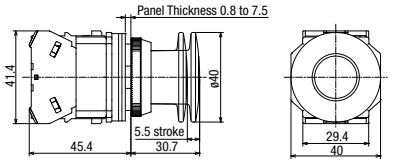
- Specify a color code in place of ∗ in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)
- Round bezel (metal): Chrome-plated
- Pin Lock (On-lock type): Button can be locked in depressed position by inserting the pin (the button cannot be locked in reset position).
- Pushbuttons 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.
- Terminal screw: M3.5, Terminal cover: Integrated
- See B-312 for bottom view.

*1) The pin for ABD8P is ø4.6 mm and is not compatible with ABN8P (old series).

IDEC

Pushbuttons (Diecast Zinc)

Quantity: 1

Shape	Contact	Part No.	Button Color Code	Dimensions (All dimensions in mm.)
ø40mm Mushroom Pushlock Turn Reset (*1) AVD3 	1NO	AVD310N∗	R Y	
	1NC	AVD301N∗		
	1NO-1NC	AVD311N∗		
	2NO	AVD320N∗		
	2NC	AVD302N∗		
	2NO-2NC	AVD322N∗		
ø40mm Mushroom Push Turn Lock AJD3 	1NO	AJD310N∗	B G R Y	
	1NC	AJD301N∗		
	1NO-1NC	AJD311N∗		
	2NO	AJD320N∗		
	2NC	AJD302N∗		
	2NO-2NC	AJD322N∗		
ø40mm Mushroom Pull AZD3 	1NO	AZD310N∗	B G R Y	
	1NO-1NC	AZD311N∗		
	2NO	AZD320N∗		
	2NC	AZD302N∗		
ø40mm Mushroom Push-Pull (*2) AYD31 	1NO-1NC	AYD3111N∗	B G R Y	
	2NO	AYD3120N∗		
	2NC	AYD3102N∗		

- 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 screw: M3.5, Terminal cover: Integrated
- See B-312 for bottom view.

*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).

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.

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

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

Pull contact operation

Contact	AZD3	
	Normal	Pull
1NO		
2NO-2NC		
2NO		
2NC		

Push-Pull contact operation

Contact	AYD31	
	Push	Pull
1NO		
2NO		
2NC		

LED Illuminated Pushbuttons (Diecast Zinc)

Quantity: 1

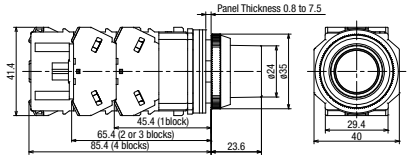
Shape	Base	Operation	Operating Voltage	Contact	Part No.	Color Code
Extended ALD2 A0LD2 	BA9S	Momentary	24V AC/DC	1NO	ALD22210DN∗	R G Y A S PW
				1NC	ALD22201DN∗	
				1NO-1NC	ALD22211DN∗	
				2NO	ALD22220DN∗	
			100/120V AC/DC	1NO	ALD2QH210DN∗	
				1NC	ALD2QH201DN∗	
				1NO-1NC	ALD2QH211DN∗	
				2NO	ALD2QH220DN∗	
			200/220V AC	1NO	ALD2QM10DN∗	
				1NC	ALD2QM01DN∗	
				1NO-1NC	ALD2QM11DN∗	
				2NO	ALD2QM20DN∗	
		Maintained	24V AC/DC	1NO	A0LD22210DN∗	R G Y A S PW
				1NC	A0LD22201DN∗	
				1NO-1NC	A0LD22211DN∗	
				2NO	A0LD22220DN∗	
			100/120V AC/DC	1NO	A0LD2QH210DN∗	
				1NC	A0LD2QH201DN∗	
				1NO-1NC	A0LD2QH211DN∗	
				2NO	A0LD2QH220DN∗	
			200/220V AC	1NO	A0LD2QM10DN∗	
				1NC	A0LD2QM01DN∗	
				1NO-1NC	A0LD2QM11DN∗	
				2NO	A0LD2QM20DN∗	
Extended with Full Shroud ALFD2 A0LFD2 	BA9S	Momentary	24V AC/DC	1NO	ALFD22210DN∗	R G Y A S PW
				1NC	ALFD22201DN∗	
				1NO-1NC	ALFD22211DN∗	
				2NO	ALFD22220DN∗	
			100/120V AC/DC	1NO	ALFD2QH210DN∗	
				1NC	ALFD2QH201DN∗	
				1NO-1NC	ALFD2QH211DN∗	
				2NO	ALFD2QH220DN∗	
			200/220V AC	1NO	ALFD2QM10DN∗	
				1NC	ALFD2QM01DN∗	
				1NO-1NC	ALFD2QM11DN∗	
				2NO	ALFD2QM20DN∗	
		Maintained	24V AC/DC	1NO	A0LFD22210DN∗	R G Y A S PW
				1NC	A0LFD22201DN∗	
				1NO-1NC	A0LFD22211DN∗	
				2NO	A0LFD22220DN∗	
			100/120V AC/DC	1NO	A0LFD2QH210DN∗	
				1NC	A0LFD2QH201DN∗	
				1NO-1NC	A0LFD2QH211DN∗	
				2NO	A0LFD2QH220DN∗	
			200/220V AC	1NO	A0LFD2QM10DN∗	
				1NC	A0LFD2QM01DN∗	
				1NO-1NC	A0LFD2QM11DN∗	
				2NO	A0LFD2QM20DN∗	

- 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 and12V AC/DC.
- See B-308 for other contact configurations and gold-plated silver contacts.
- Dummy blocks are built into 2-contact and 4-contact.

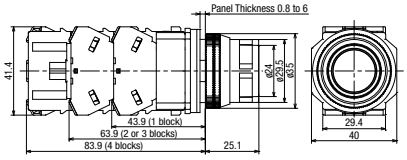
Dimensions

All dimensions in mm

Extended, LED illuminated (momentary/maintained)
ALD2/A0LD2 (Terminal Screw: M3.5, integrated terminal)



Extended with Full Shroud, LED illuminated (momentary/maintained)
ALFD2/A0LFD2 (Terminal Screw: M3.5, integrated terminal)



- See B-315 for bottom view.

LED Illuminated Pushbuttons (Diecast Zinc)

Quantity: 1

Shape	Base	Operation	Operating Voltage	Contact	Part No.	Color Code
Mushroom (ø40) ALD3 AOLD3 	BA9S	Momentary	24V AC/DC	1NO	ALD32210DN∗	R G Y A S PW
				1NC	ALD32201DN∗	
				1NO-1NC	ALD32211DN∗	
				2NO	ALD32220DN∗	
			100/120V AC/DC	1NO	ALD3QH210DN∗	
				1NC	ALD3QH201DN∗	
				1NO-1NC	ALD3QH211DN∗	
				2NO	ALD3QH220DN∗	
			200/220V AC	1NO	ALD3QM10DN∗	
				1NC	ALD3QM01DN∗	
				1NO-1NC	ALD3QM11DN∗	
				2NO	ALD3QM20DN∗	
		Maintained	24V AC/DC	1NO	AOLD32210DN∗	R G Y A S PW
				1NC	AOLD32201DN∗	
				1NO-1NC	AOLD32211DN∗	
				2NO	AOLD32220DN∗	
			100/120V AC/DC	1NO	AOLD3QH210DN∗	
				1NC	AOLD3QH201DN∗	
				1NO-1NC	AOLD3QH211DN∗	
				2NO	AOLD3QH220DN∗	
			200/220V AC	1NO	AOLD3QM10DN∗	
				1NC	AOLD3QM01DN∗	
				1NO-1NC	AOLD3QM11DN∗	
				2NO	AOLD3QM20DN∗	
Mushroom Pushlock Turn Reset (ø40) (*1) AVLD3 	BA9S	—	24V AC/DC	1NO	AVLD32210DN∗	R
				1NC	AVLD32201DN∗	
				1NO-1NC	AVLD32211DN∗	
				2NO	AVLD32220DN∗	
			100/120V AC/DC	1NO	AVLD3QH210DN∗	
				1NC	AVLD3QH201DN∗	
				1NO-1NC	AVLD3QH211DN∗	
				2NO	AVLD3QH220DN∗	
			200/220V AC	1NO	AVLD3QM10DN∗	
				1NC	AVLD3QM01DN∗	
				1NO-1NC	AVLD3QM11DN∗	
				2NO	AVLD3QM20DN∗	

- 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 and 12V AC/DC.
- See B-308 for other contact configurations and gold-plated silver contacts.
- Dummy blocks are built into 2-contact and 4-contact.

*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).

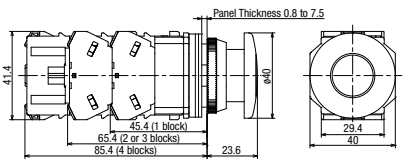
Illuminated pushbutton operation

Pushlock Turn Reset
Button is maintained when pressed and is reset when turned clockwise.

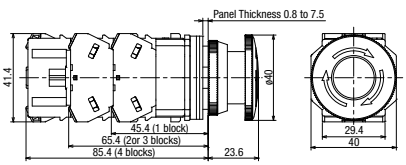
Dimensions

All dimensions in mm

Mushroom, LED illuminated (momentary/maintained)
ALD3/AOLD3 (Terminal Screw: M3.5, integrated terminal)



Mushroom, LED illuminated (momentary/maintained)
AVLD3 (Terminal Screw: M3.5, integrated terminal)



- See B-315 for bottom view.

Selector Switches (Diecast Zinc) (Knob Operator)

Quantity: 1

Shape: Knob Operator ASD

90° 2-position

Contact	Mounting Position	Contact	Operator Position 1	Operator Position 2	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Mounting Position	Spring Return from Left: Contact	Spring Return from Left: Operator Position 1	Spring Return from Left: Operator Position 2	Spring Return from Left (1 2)
1NO (10)	①	NO		●	ASD210N	ASD2110N	①	NO	●		ASD2210N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASD211N	ASD2111N	①	NO	●		ASD2211N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASD220N	ASD2120N	①	NO	●		ASD2220N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASD222N	ASD2122N	①	NO	●		ASD2222N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

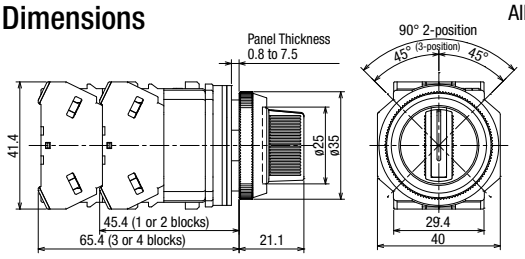
Contact	Mounting Position	Contact	Operator Position 1	Operator Position 0	Operator Position 2	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
2NO (20)	①	NO	●			ASD320N	ASD3120N	ASD3220N	ASD3320N
	②	NO			●				
2NC (02)	①	NC		▬		ASD302N	ASD3102N	ASD3202N	ASD3302N
	②	NC	▬						
2NO-2NC (22)	①	NO	●			ASD322N	ASD3122N	ASD3222N	ASD3322N
	②	NO			●				
	③	NC		▬					
	④	NC	▬						
4NO (40)	①	NO	●			ASD340N	ASD3140N	ASD3240N	ASD3340N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		▬		ASD304N	ASD3104N	ASD3204N	ASD3304N
	②	NC	▬						
	③	NC		▬					
	④	NC	▬						
☆ 3S	①	NO	●			ASD33SN-243 ☆	—	—	—
	②	NO			●				
	③	NC		●					
	④	—	Dummy Block						

- 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 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

Selector Switches (Diecast Zinc) (Lever Operator)

Quantity: 1

Shape: Lever Operator
ASD□L

90° 2-position

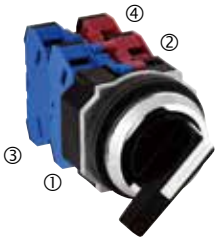
Contact Configuration					Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left				Spring Return from Left (1 2)
Contact	Contact Block		Operator Position				Contact Block		Operator Position		
	Mounting Position	Contact	1	2			Mounting Position	Contact	1	2	
1NO (10)	①	NO		●	ASD2L10N	ASD21L10N	①	NO	●		ASD22L10N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASD2L11N	ASD21L11N	①	NO	●		ASD22L11N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASD2L20N	ASD21L20N	①	NO	●		ASD22L20N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASD2L22N	ASD21L22N	①	NO	●		ASD22L22N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

Contact Configuration						Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
Contact	Contact Block		Operator Position						
	Mounting Position	Contact	1	0	2				
2NO (20)	①	NO	●			ASD3L20N	ASD31L20N	ASD32L20N	ASD33L20N
	②	NO			●				
2NC (02)	①	NC		▬		ASD3L02N	ASD31L02N	ASD32L02N	ASD33L02N
	②	NC	▬						
2NO-2NC (22)	①	NO	●			ASD3L22N	ASD31L22N	ASD32L22N	ASD33L22N
	②	NO			●				
	③	NC		▬					
	④	NC	▬						
4NO (40)	①	NO	●			ASD3L40N	ASD31L40N	ASD32L40N	ASD33L40N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		▬		ASD3L04N	ASD31L04N	ASD32L04N	ASD33L04N
	②	NC	▬						
	③	NC		▬					
	④	NC	▬						
☆ 3S	①	NO	●			ASD3L3SN-243 ☆	—	—	—
	②	NO			●				
	③	NC		●					
	④	—	Dummy Block						

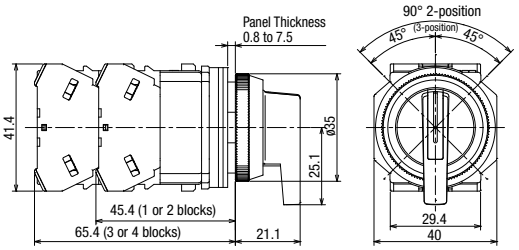
- Lever: Black
- Round bezel (metal): Chrome-plated
- Selector switches with 1 or 3 contact blocks have a dummy block.
- Knob operator can be installed at every 45 degrees intervals in addition to the positions shown in the above table.
- Turn the operator to each position accurately.
- Selector switches 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

Key Selector Switches (Diecast Zinc)

Quantity: 1

Shape: Key Selector (Key No. 0)
ASD☐K

90° 2-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 2	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position: 1	Spring Return from Left: Operator Position: 2	Spring Return from Left (1 2)
1NO (10)	①	NO		●	ASD2K10N	ASD21K10N	①	NO	●		ASD22K10N
	②	—	Dummy Block				②	—	—		
1NO-1NC (11)	①	NO		●	ASD2K11N	ASD21K11N	①	NO	●		ASD22K11N
	②	NC	●				②	NC		●	
2NO (20)	①	NO		●	ASD2K20N	ASD21K20N	①	NO	●		ASD22K20N
	②	NO		●			②	NO	●		
2NO-2NC (22)	①	NO		●	ASD2K22N	ASD21K22N	①	NO	●		ASD22K22N
	②	NC	●				②	NC		●	
	③	NO		●			③	NO	●		
	④	NC	●				④	NC		●	

45° 3-position

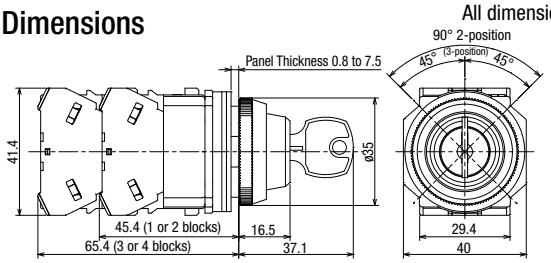
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position: 1	Operator Position: 0	Operator Position: 2	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Left (1 0 2)	Spring Return Two-way (1 0 2)
2NO (20)	①	NO	●			ASD3K20N	ASD31K20N	ASD32K20N	ASD33K20N
	②	NO			●				
2NC (02)	①	NC		▬		ASD3K02N	ASD31K02N	ASD32K02N	ASD33K02N
	②	NC	▬						
2NO-2NC (22)	①	NO	●			ASD3K22N	ASD31K22N	ASD32K22N	ASD33K22N
	②	NO			●				
	③	NC		▬					
	④	NC	▬						
4NO (40)	①	NO	●			ASD3K40N	ASD31K40N	ASD32K40N	ASD33K40N
	②	NO			●				
	③	NO	●						
	④	NO			●				
4NC (04)	①	NC		▬		ASD3K04N	ASD31K04N	ASD32K04N	ASD33K04N
	②	NC	▬						
	③	NC		▬					
	④	NC	▬						
☆ 3S	①	NO	●			ASD3K3SN-243 ☆	—	—	—
	②	NO			●				
	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 ☆ 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 screw: M3.5, Integrated terminal cover

IDEC

Illuminated Selector Switches (Diecast Zinc)

Quantity: 1

Shape: Illuminated Selector Switches (BA9S Base)
ASLD

90° 2-position

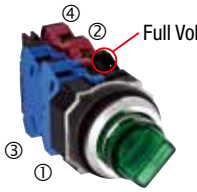
Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position 1	Operator Position 2	Operating Voltage	Maintained (1 2)	Spring Return from Right (1 2)	Spring Return from Left: Contact Block: Mounting Position	Spring Return from Left: Contact Block: Contact	Spring Return from Left: Operator Position 1	Spring Return from Left: Operator Position 2	Spring Return from Left (1 2)	Color Code
1NO (10)	①	NO		●	24V AC/DC	ASLD22210DN∗	ASLD212210DN∗	①	NO	●		ASLD222210DN∗	R G Y A S PW
					100/120V AC/DC	ASLD2QH210DN∗	ASLD21QH210DN∗					ASLD22QH210DN∗	
	②	—			200/220V AC	ASLD2QM10DN∗	ASLD21QM10DN∗	②	—			ASLD22QM10DN∗	
1NO-1NC (11)	①	NO		●	24V AC/DC	ASLD22211DN∗	ASLD212211DN∗	①	NO	●		ASLD222211DN∗	
					100/120V AC/DC	ASLD2QH211DN∗	ASLD21QH211DN∗					ASLD22QH211DN∗	
	②	NC	●		200/220V AC	ASLD2QM11DN∗	ASLD21QM11DN∗	②	NC		●	ASLD22QM11DN∗	
2NO (20)	①	NO		●	24V AC/DC	ASLD22220DN∗	ASLD212220DN∗	①	NO	●		ASLD222220DN∗	
					100/120V AC/DC	ASLD2QH220DN∗	ASLD21QH220DN∗					ASLD22QH220DN∗	
	②	NO		●	200/220V AC	ASLD2QM20DN∗	ASLD21QM20DN∗	②	NO	●		ASLD22QM20DN∗	
2NO-2NC (22)	①	NO		●	24V AC/DC	ASLD22222DN∗	ASLD212222DN∗	①	NO	●		ASLD222222DN∗	
	②	NC	●		100/120V AC/DC	ASLD2QH222DN∗	ASLD21QH222DN∗	②	NC		●	ASLD22QH222DN∗	
	③	NO		●				③	NO	●			
	④	NC	●		200/220V AC	ASLD2QM22DN∗	ASLD21QM22DN∗	④	NC		●	ASLD22QM22DN∗	

45° 3-position

Contact	Contact Block: Mounting Position	Contact Block: Contact	Operator Position 1	Operator Position 0	Operator Position 2	Operating Voltage	Maintained (1 0 2)	Spring Return from Right (1 0 2)	Spring Return from Right (1 0 2)	Spring Return Two-way (1 0 2)	Color Code
2NO (20)	①	NO	●			24V AC/DC	ASLD32220DN∗	ASLD312220DN∗	ASLD322220DN∗	ASLD332220DN∗	R G Y A S PW
						100/120V AC/DC	ASLD3QH220DN∗	ASLD31QH220DN∗	ASLD32QH220DN∗	ASLD33QH220DN∗	
	②	NO			●	200/220V AC	ASLD3QM20DN∗	ASLD31QM20DN∗	ASLD32QM20DN∗	ASLD33QM20DN∗	
2NC (02)	①	NC	▬			24V AC/DC	ASLD32202DN∗	ASLD312202DN∗	ASLD322202DN∗	ASLD332202DN∗	
						100/120V AC/DC	ASLD3QH202DN∗	ASLD31QH202DN∗	ASLD32QH202DN∗	ASLD33QH202DN∗	
	②	NC	▬			200/220V AC	ASLD3QM02DN∗	ASLD31QM02DN∗	ASLD32QM02DN∗	ASLD33QM02DN∗	
2NO-2NC (22)	①	NO	●			24V AC/DC	ASLD32222DN∗	ASLD312222DN∗	ASLD322222DN∗	ASLD332222DN∗	
	②	NO			●	100/120V AC/DC	ASLD3QH222DN∗	ASLD31QH222DN∗	ASLD32QH222DN∗	ASLD33QH222DN∗	
	③	NC		▬							
	④	NC	▬			200/220V AC	ASLD3QM22DN∗	ASLD31QM22DN∗	ASLD32QM22DN∗	ASLD33QM22DN∗	
4NO (40)	①	NO	●			24V AC/DC	ASLD32240DN∗	ASLD312240DN∗	ASLD322240DN∗	ASLD332240DN∗	
	②	NO			●	100/120V AC/DC	ASLD3QH240DN∗	ASLD31QH240DN∗	ASLD32QH240DN∗	ASLD33QH240DN∗	
	③	NO	●								
	④	NO			●	200/220V AC	ASLD3QM40DN∗	ASLD31QM40DN∗	ASLD32QM40DN∗	ASLD33QM40DN∗	
4NC (04)	①	NC		▬		24V AC/DC	ASLD32204DN∗	ASLD312204DN∗	ASLD322204DN∗	ASLD332204DN∗	
	②	NC	▬			100/120V AC/DC	ASLD3QH204DN∗	ASLD31QH204DN∗	ASLD32QH204DN∗	ASLD33QH204DN∗	
	③	NC		▬							
	④	NC	▬			200/220V AC	ASLD3QM04DN∗	ASLD31QM04DN∗	ASLD32QM04DN∗	ASLD33QM04DN∗	

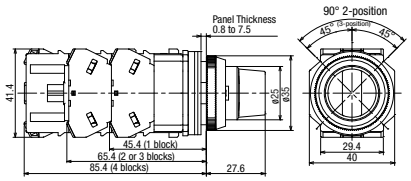
- Specify a color code in place of ∗ in Part No. R (red), G (green), Y (yellow), A (amber), S (blue). PW (pure white)
- Round bezel (metal): Chrome-plated
- Illuminated selector switches have an LED lamp installed.
- See B-309 for other operating voltage such as 6V AC/DC and 12V AC/DC.
- Dummy blocks are built into 2-contact and 4-contact.
- Make sure to operate the handle firmly to each notch position.
- See B-309 for gold-plated silver contacts.

Contact Block Mounting Position



Dimensions

All dimensions in mm.



Terminal screw: M3.5, Integrated terminal cover

For switch bottom view, see page B-315.

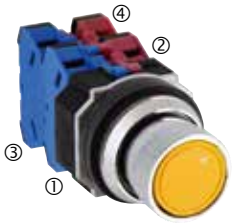
Selector Pushbuttons (Diecast Zinc)

Quantity: 1

Shape	Contact Configuration	Circuit Code	Contact Block: Mounting Position	Contact Block: Contact	Ring Position: Left / Right — Pushbutton: Normal	Pushbutton: Push	Pushbutton: Normal	Pushbutton: Push	Button Color Code	Ring Operator: Part No.
Ring Operator (90°2-position) ASBD2 	11 (1NO-1NC)	A03	①	NO		●		●	B G R Y	ASBD211N-A03∗
			②	NC	●					
	22 (2NO-2NC)	A08	①	NO		●		●		ASBD222N-A08∗
			②	NC	●					
			③	NO		●		●		
			④	NC	●					
		☆ C10	①	NO		●		●		☆ ASBD222N-C10∗
			②	NO				●		
			③	NC	●					
			④	NC	▬					
		D10	①	NO		●				ASBD222N-D10∗
			②	NO				●		
			③	NC	●		▬			
			④	NC	▬		●			
		☆ E10	①	NO		●				☆ ASBD222N-E10∗
			②	NO				●		
			③	NC			▬			
			④	NC	▬					
		☆ F10	①	NO				●		☆ ASBD222N-F10∗
			②	NO		●				
			③	NC			●			
			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.

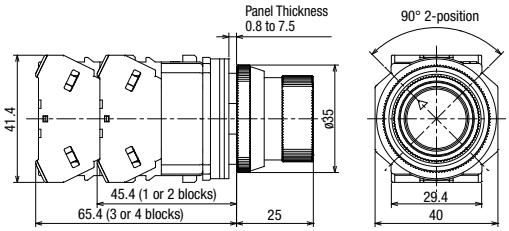
Contact Block Mounting Position



Dimensions

Ring operator (90° 2-position)

All dimensions in mm.



Terminal screw: M3.5, Integrated terminal cover

IDEC

Pilot Lights (Diecast Zinc) (Round)

Quantity: 1

Shape	Illumination	Base	Operating Voltage	Part 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
			100/120V AC/DC	APD1QH2DN∗	R, G, Y, A, S, PW	LSRD-H2
			200/220V AC	APD1QMDN∗	R, G, Y, A, S, PW	LSRD-M2

- 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 and 12V AC/DC.
- See B-309 for how to specify units without LED lamps.
- Terminal cover is installed on pilot lights for electric shock prevention.

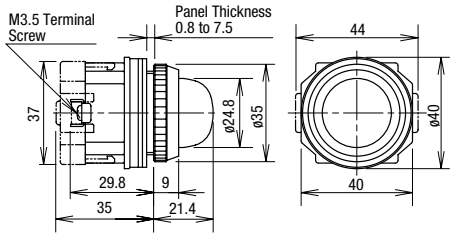
Type	Terminal Cover	Quantity
6V AC/DC, 12V AC/DC, 24V AC/DC, 100/120V AC/DC, 200/220V AC, 230/240V AC	APD-PVL	1
380V AC and above	N-VL3	1

Dimensions

All dimensions in mm.

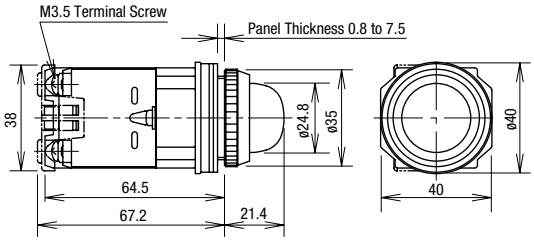
Round, LED illuminated

6 to 120V AC/DC, 200 to 240V AC (Terminal Cover: APD-PVL)



Terminal Screws: M3.5

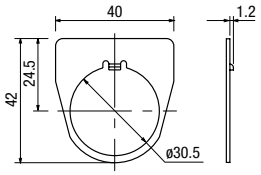
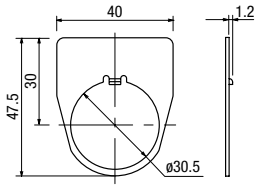
380V AC and above (Terminal Cover: N-VL3)



Terminal Screws: M3.5

- See B-349 for wiring.

Nameplates

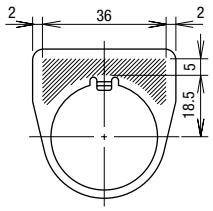
Model	Legend	Material	Part No.	Quantity	Dimensions (mm)
NA  For TWN/TWND	Blank	Aluminium 1.2 mm thick White letters on black background	NA-0	10	
	With Legend		NA-□	10	
NALO  For TWN/TWND	Blank	Aluminium 1.2 mm thick Black	NALO	10	

Specify a legend code in place of □ in the Part No.

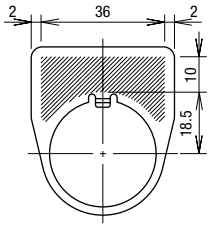
Legends

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

Shape and Engraving Area



NA



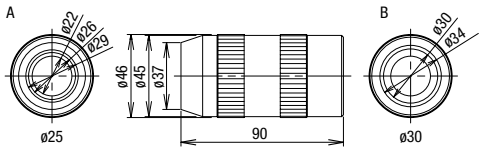
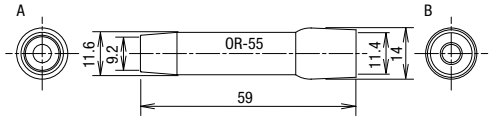
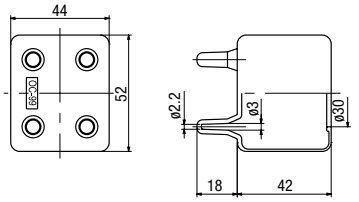
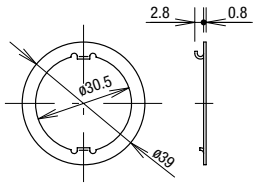
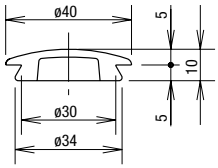
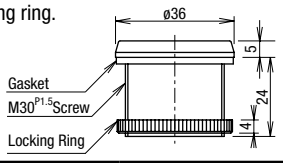
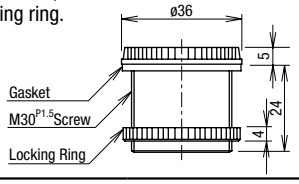
NALO

All dimensions in mm.

Example (when the legend height is 4 mm)

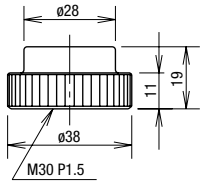
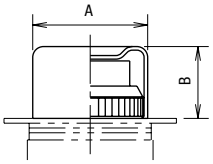
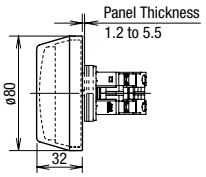
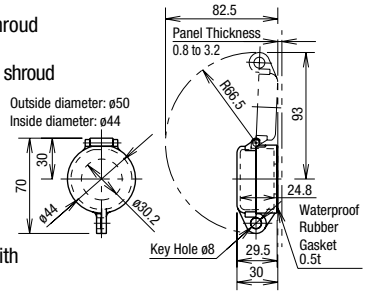
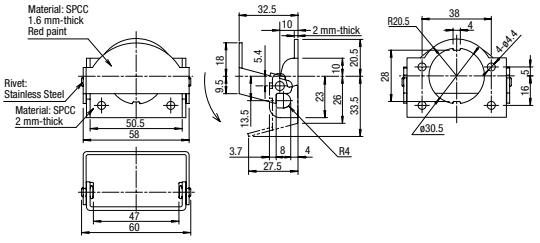
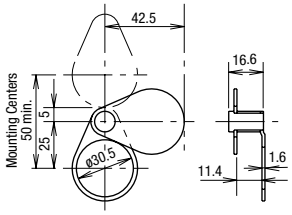
Shape	Maximum Number of Lines	Characters per Line	
		Alphabetic Characters	Japanese Characters
NA	1	14	8
NALO	2	14	8

Accessories

Shape	Material	Part No.	Quantity	Remarks
Locking Ring Wrench  For TWN/TWND	Nitril rubber (black)	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) 
Lamp Holder Tool  For TWN/TWND	Nitril rubber (black)	OR-55	1	• Used to install and remove the LED/incandescent lamps. See B-345. A: For BA9S base B: For E12 base 
Contact Rubber Boot For momentary 1 layer of contact blocks (2 contact blocks)  For TWN	Nitril rubber (black)	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)	OGL-11	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  For TWN/TWND	Nitril rubber (black)	OB-13B	5	• Used to plug unused ø30.5 mm mounting holes. • Degree of protection: IP40 
	Nitril rubber (gray)	OB-13		
Plastic Mounting Hole Plug  For TWN/TWND	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	OBP-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. 
Metallic Mounting Hole Plug  For TWN/TWND	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	OB-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. 

Accessories

All dimensions in mm.

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

IDEC

Accessories

All dimensions in mm.

Shape	Material	Part No.	Quantity	Remarks
Metallic Bezel  ø35/ø26, height 9 For TWN/TWND	Metal (diecast zinc: chrome-plated)	OG-11	2	• Cannot be used with pin lock, selector pushbuttons, and monolever units.
Plastic Bezel  ø35/ø26, height 9 For TWN	Polycarbonate	OGP-11∗	2	• Specify a color code in place of ∗. B (black), G (green), R (red), W (white), Y (yellow) • Cannot be used with pin lock, selector pushbuttons, and monolever units.
Octagonal Metal Bezel ①  ②  For TWDN	Metal (diecast zinc: chrome-plated)	① OG-81 ② OG-82	① 2 ② 1	• Use with TWDN series diecast zinc switches and pilot lights. • Cannot be used with half-shrouds.
Clear Plastic Shroud for Flush Pushbuttons  ø35, height 14 For TWN	Acrylic (clear)	OGP-13	2	• Clear plastic full shroud.
Clear Plastic Shroud for Extended Pushbuttons  ø35, height 20.6 For TWN	Acrylic (clear)	OGP-14	2	
Clear Plastic Shroud for Illuminated Pushbuttons  Shroud: ø35, height 20.6 Metal Nut Ring: height 4 For TWN	Acrylic (clear)	OGP-1411	1	• Buttons may protrude slightly depending on the panel thickness.
Metal Nut Ring for Illuminated Pushbuttons  ø35, height 4 For TWN	Metal (diecast zinc)	OL-11	5	• Metal nut ring for OGP-1411 only.

ø30 TWN/TWND Series

Maintenance Parts

All dimensions in mm.

Shape		Material	Part No.	Quantity	Color Code ∗
Button for Pushbuttons ① ② ③ ④ ⑤ ⑥ ⑦ Series Compatible	① Flush ø24.6, height 4	Polyacetal	ABN1BN-∗	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
	② Extended ø24.6, height 9		ABN2BN-∗	5	
	③ ø40 Mushroom ø40, height 16.2		ABN3BN-∗	2	
	④ ø65 Jumbo Mushroom ø65, height 23.2		ABN4BN-∗	1	B (black), G (green), R (red), Y (yellow), S (blue)
	⑤ Button for Pin Lock ø23.6, height 3		ABW1B-∗	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
	⑥ ø40 Mushroom Pushlock Turn Reset ø40, height 18.5	AS resin	AVN3B-∗	1	R (red),Y (yellow)
	⑦ ø40 Mushroom Push Turn Lock ø40, height 18.5		AJN3B-∗	1	B (black), G (green), R (red), Y (yellow)
Lens for Illuminated Pushbuttons ① ② ③ ④ Series Compatible	① Extended ø24, height 18.5	AS resin	ALN2LD-∗-K	5	R (red), G (green), S (blue), Y (yellow), A (amber), W (white) Specify W for PW (pure white) illumination.
	② ø40 Mushroom ø40, height 18.5		ALN3LD-∗-K	1	
	③ ø40 Mushroom Push-Lock Turn-Reset ø40, height 18.5		AVLN3L-R-K	2	R (red) only
	④ ø40 Mushroom Push-Turn Lock ø40, height 18.5		AJLN3LD-∗-K	1	R (red), G (green), S (blue), Y (yellow), A (amber), W (white) Specify W for PW (pure white) illumination.
Selector Operator ① ② ③ ④ Series Compatible	① Knob operator ø25, height 20.5	Polyacetal	ASNHT-∗	2	B (black), G (green), R (red)
	② Lever operator ø25, height 20.5, length 37.5		ASNHL-∗		
	③ Color insert Width 21, depth 5, height 18		TW-HC1∗	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
	④ Knob for illuminated selector ø25, height 28	AS resin	ASLNHD-∗-K	1	G (green), R (red), S (blue), A (amber), W (white), Y (yellow) Specify W for PW (pure white) illumination.
Lens for Pilot Lights ① ② ③	① Round ø24.8, height 28, M20 Series Compatible	AS resin	APN106LN-∗-K	5	R (red), G (green), Y (yellow) A (amber), W (white), S (blue) Specify W for PW (pure white) illumination.
	② Rectangular Width 36, depth 30, height 8.5 For TWN		UPQN406LD-∗-K	5	R (red), G (green), Y (yellow), A (amber), C (clear), S (blue) Specify C for PW (pure white) illumination.
	③ Square extended □25, height 26.5 For TWN		UPQN06LD-∗-K	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 Width 29.8, depth 23.8, thickness 2	Acrylic	UPQN406N-W	5	W (white) only See B-346 for engraving area.

IDEC

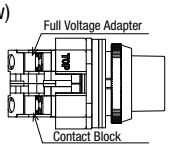
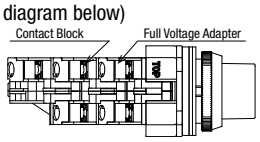
Maintenance Parts

All dimensions in mm.

Shape	Material	Part No.	Quantity	Remarks
Rubber Washer (1.5 mm-thick)  For TWN/TWND	Rubber (synthetic soft vinyl) ø39/ø29.5, height 1.5	OW-11	10	• To tighten mounting panels
Rubber Washer (3.0 mm-thick)  For TWN/TWND	Rubber (synthetic soft vinyl) ø39/ø29.5, height 3	OW-12	10	• To tighten mounting panels
Shroud for Pushbuttons ①  ②  ③  ④  ⑤  For TWN/TWND	① Half shroud ø35/ø27, height 20.5	ABN2G	1	• With nut ring (ø35, height 4)
	② Full shroud ø35/ø28.5, height 16.5	ABN2F	1	
	③ Full shroud (for mushroom pushbuttons) ø48, height 20	ABN3G	1	
	④ Shallow shroud (for jumbo mushroom) ø75, height 18	ABN4G	1	
	⑤ Deep shroud (for jumbo mushroom) ø75/ø69, height 33	ABN4F	1	
Shroud for Illuminated Pushbuttons ①  ②  For TWN/TWND	① Half shroud (For BA9S base) ø35/ø27, height 25	ALN2GL	1	• With nut ring (ø35, height 4)
	② Full shroud (For BA9S base) ø35/ø29.5, height 22.5	ALN2FL	1	• With nut ring (ø35, height 4)
Spare Key For Key Selector Switches  For TWN/TWND	Metal Nickel plated brass Length 3, width 19.7, thickness 1.8	TW-SK-0	2	• ASN□K□N ASD□K□N
Spare Key For Key Selector Switches  For TWN	Metal Nickel plated brass Length 37.5, thickness 2	ASN-SK-24401	2	• ASN□K□-N024401
Pin/Chain Kit For ABD8P  For TWND	Pin: Nickel plated brass	ABD8P-PIN	1	• Pin, chain, and plate for ABN8P • Pin (ø4.6)
Contact Block Plug  For TWN/TWND	Polyamide	HW9Z-CBPL	10	• Used to plug the hole in the center of a contact block.

Maintenance Parts

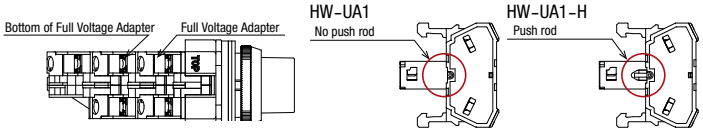
All dimensions in mm.

Shape	Specification	Part No.	Quantity	Remarks
Contact Block HW-U  Weight: 11g (approx.)	1NO	HW-U10	1	Housing color: Blue, Push rod color: Green MAU has gold contacts
		HW-U10-MAU		
	1NC	HW-U01	1	Housing color: Reddish purple, Push rod color: Red MAU has gold contacts
		HW-U01-MAU		
	EM contact (early make contact)	HW-U10R	1	Housing color: Blue, Push rod color: Black MAU has gold contacts
		HW-U10R-MAU		
	LB (late break contact)	HW-U01R	1	Housing color: Reddish purple, Push rod color: White MAU has gold contacts
		HW-U01R-MAU		
Dummy Block  Weight: 3.5g (approx.)	Polyamide	HW-DB	10	For HW-U contact blocks Used when the total number of contact blocks and full voltage adapters is odd.
Full Voltage Adapter For illuminated unit (*1) (*2) HW-UA1 	For 1 contact only (see diagram below) 	HW-UA1	1	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) LSRD-H2 (100/120V AC/DC) LSRD-M2 (200/220V AC) LSRD-M4 (230/240V AC)
HW-UA1-H  Weight: 11g (approx.)	For 2 or more contacts (see diagram below) 	HW-UA1-H	1	

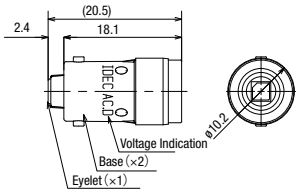
*1) For use as maintenance parts. Do not use for expansion or remodelling purposes.

*2) There are two types of full voltage adapter specifications. Please confirm your current contact configuration before placing an order.

- **For configurations without a contact block mounted beneath the full voltage adapter (1 contact):** Order model HW-UA1.
- **For contact configurations with contact blocks mounted under the full voltage adapter (2 to 4 contacts):** Order model HW-UA1-H.



LEDs

Shape/Dimensions	Operating Voltage	Current Draw DC	Current Draw AC	Part No.	Quantity	Base
 	6V AC/DC	10mA	14mA	LSRD-6	10	BA9S/13
	12V AC/DC	7mA	8mA	LSRD-1	10	
	24V AC/DC	7mA	8mA	LSRD-2	10	
	100/120V AC/DC	2mA	2mA	LSRD-H2	10	
	200/220V AC	–	2mA	LSRD-M2	10	
	230/240V AC	–	2mA	LSRD-M4	10	

- Only one color is available for LSRD so there are no codes to specify the color in the part no.
- Also available for purchase individually. Standard pricing differs in this case.
- When replacing the LED lamp, please check the part no. and voltage of the product currently in use.

Transformer

Quantity: 1

Shape	Operating Voltage	Voltage Range	Part No.	Applicable Load
For 6V 	100/110V AC	100/110V AC ±10%	TWR516	LSRD-6 (6V AC/DC, LED lamp)
	200/220V AC	200/220V AC ±10%	TWR526	
	380V AC	380V AC ±10%	TWR5386	
	400/440V AC	400/440V AC ±10%	TWR546	
	460/480V AC	460/480V AC ±10%	TWR5486	
For 24V 	100/110V AC	100/110V AC ±10%	TWR512	LSRD-2 (24V AC/DC, LED lamp)
	200/220V AC	200/220V AC ±10%	TWR522	
	400/440V AC	400/440V AC ±10%	TWR542	

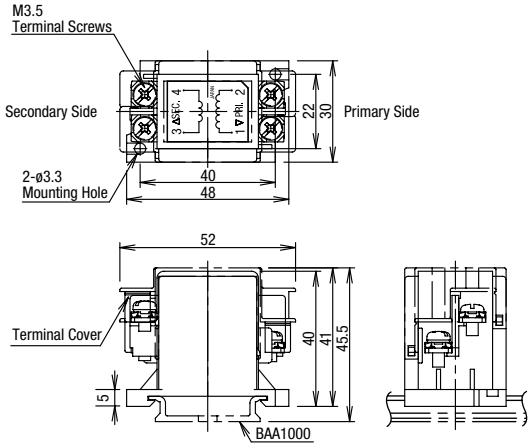
- The terminal cover (TWR-VL3 type) is included as standard with the separate transformer.
- Only one illuminated unit can be connected.

Specifications

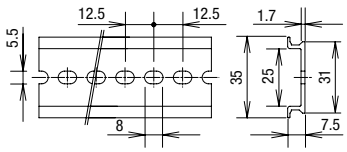
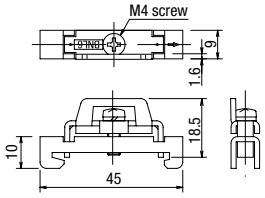
Part No.	TWR5☐6	TWR5☐2
Rated Voltage	100/110V AC 200/220V AC 380V AC 400/440V AC 460/480V AC (50/60Hz)	100/110V AC 200/220V AC 400/440V AC (50/60Hz)
Current Draw	2.4VA	
Rated Insulation Voltage	600V	
Insulation Resistance	100MΩ minimum (500V DC megger)	
Operating Temperature	–30 to 60°C (no freezing)	
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	
	Operating extremes: 5 to 55 Hz, amplitude 0.5 mm	
Shock Resistance	1000 m/s^2	
	100 m/s^2	
Dielectric Strength	2500V AC, 1 minute	
Terminal Screw	M3.5	
Applicable Wire	2 mm^2 maximum, 2 wires maximum	
Weight	87g	

Dimensions

All dimensions in mm.



Accessories

Shape	Material	Part No.	Quantity	Dimensions (mm)
DIN 35 mm Rail  Weight: 200g approx.	Aluminum Length: 1000 mm	BAA1000	10	
End Clip  Weight: 15g approx.	Metal (zinc-plated steel) Applicable rail: BAA1000	BNL6	10	

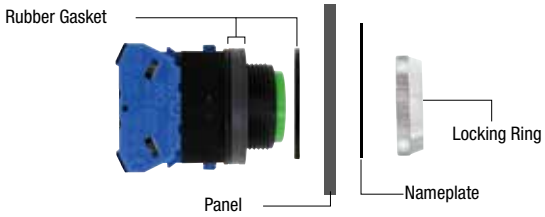
Safety Precautions

- 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.

Operating Instructions

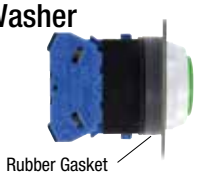
Panel Mounting

1. 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.
4. On the panel front, install the nameplate and locking ring. For mushroom and jumbo mushroom switches, install the button before installing the locking ring.



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.



Applicable Model

TWN/TWND series
Pushbutton
(flush/extended/mushroom/jumbo mushroom)
Illuminated pushbutton (extended/mushroom)
Pilot light (except for square type)

Panel Thickness (mm)	Rubber Washer	
	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	–

TWN/TWND series
Illuminated pushbutton (extended w/full shroud)
Mushroom with full shroud

Panel Thickness (mm)	Rubber Washer	
	1.5 mm-thick	3.0 mm-thick
Supplied	2 pieces	1
0.8 to 3.5	2 pieces	1
2.0 to 3.5	1	1
3.5 to 5.0	–	1
5.0 to 6.0 (6.5)*1	1	–

*1: (6.5) is for mushroom pushbuttons with full shroud

TWN/TWND series
Pushbutton (extended with half shroud)
Illuminated pushbutton
(extended with half shroud)

Panel Thickness (mm)	Rubber Washer	
	1.5 mm-thick	3.0 mm-thick
Supplied	1	1
0.8 to 1.8	–	1
1.8 to 3.5	1	–

TWND series
Pin lock pushbutton

Panel Thickness (mm)	Rubber Washer	
	1.5 mm-thick	3.0 mm-thick
Supplied	2 pieces	1
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
Pushbutton (extended with full shroud)

Panel Thickness (mm)	Rubber Washer	
	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 Thickness (mm)	Rubber Washer	
	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	–

- 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

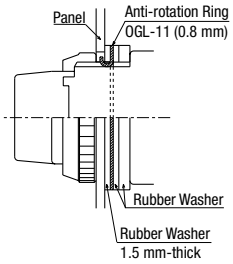
Locking ring wrench (OR-12) can be used to tighten the bezel. Use side B to tighten.
Side B: For TWN/TWND series
Side A: TWS series

Locking ring wrench (OR-12)

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 | To remove

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).

<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.

⚠ 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.

⚠ 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)

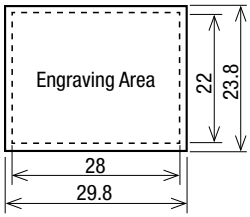
Removing

① Insert a flat screwdriver between the lens and bezel, and tilt the screwdriver to remove the lens.

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

Engraving Area

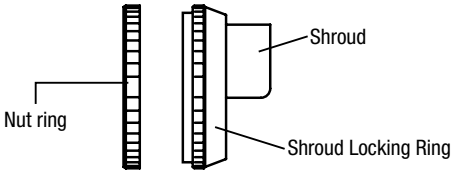
Material: Acrylic resin
Size:
29.8 W × 23.8 D, thickness 2.0 mm
Engraving area:
28 W × 22 D × 1.0 mm height max.



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.



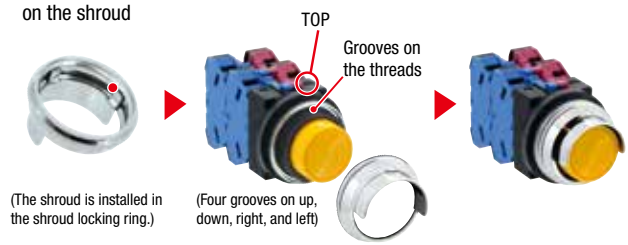
Installing the Half Shroud

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.
④ 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.

(1) Three projections on the shroud | (2) Grooves on the threads | (3) Complete



(The shroud is installed in the shroud locking ring.)

(Four grooves on up, down, right, and left)

⚠
- 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.

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.

Key Selector Switches

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

Installing the Operator on Selector Switches

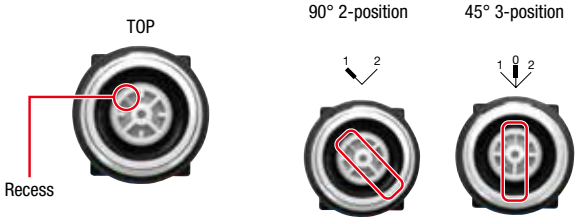
① Install the switch with TOP marking facing upward, so that the operator can be installed on the switch in the correct direction.

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

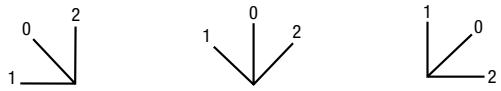
③ On illuminated models, align the operator with the switch by confirming the TOP marking on the switch and also the switch operation. Then press in the operator into the switch.

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).



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.

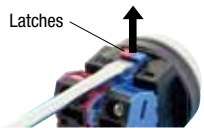
Removing the Operator from Illuminated Selector Switches

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.

⚠ Caution When Replacing Units

When replacing parts during maintenance (contact block, dummy block, full voltage adapter), be sure to install them in their original positions. If changed, the product will not be covered under warranty.

Operating Instructions

Applicable Wiring

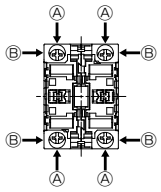
(1) Contact Block 0.3 to 3.5 mm² (solid wire 0.5 to 2.0 mm)

Pushbutton Switch, Illuminated Pushbutton Switch, Selector Switch, Key Selector Switch, Illuminated Selector Switch, Selector Pushbutton Switch

Ⓐ and Ⓑ show the wiring direction to the terminals.

<Contact Block>

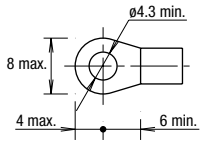
Terminal screws M3.5 (spring-up)

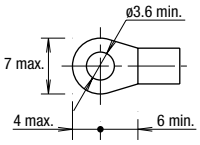


Applicable Crimping Terminal

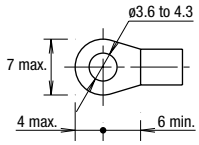
Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.

Crimping terminal for Ⓐ



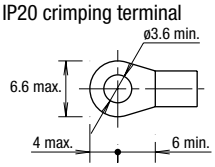


IP20 crimping terminal

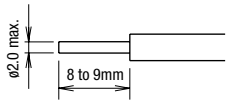


Crimping terminal for Ⓑ

IP20 crimping terminal



Solid wire



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

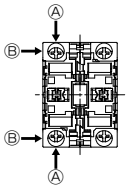
(2) Full Voltage Adapter 0.3 to 3.5 mm² (solid wire 0.5 to 2.0 mm)

Illuminated pushbutton, Illuminated selector switch

Ⓐ and Ⓑ show the wiring direction to the terminals.

<Full Voltage Adapter>

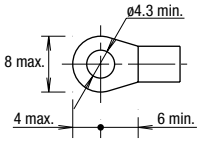
Terminal screws M3.5 (spring-up)

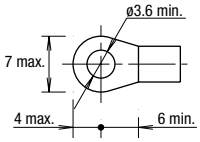


Applicable Crimping Terminal

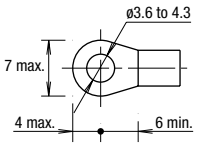
Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.

Crimping terminal for Ⓐ



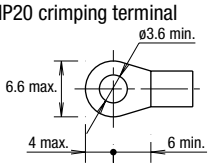


IP20 crimping terminal

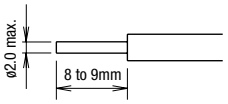


Crimping terminal for Ⓑ

IP20 crimping terminal



Solid wire



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

(2)-1 IP20 Degree of Protection

The terminal of HW-U contact block and full voltage adapter 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

Please use IP20-compliant crimp terminals as specified in the above contact block and full voltage adapter section.

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.

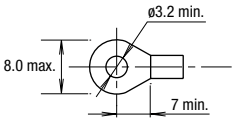
Operating Instructions

(3) Pilot Light 0.3 to 2 mm² (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.

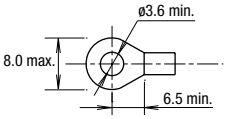
APN1, UPQN3B, UPQN4
(6 to 120V AC/DC, 200 to 240V AC)
Terminal screws M3 (self-lifting)



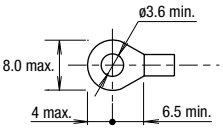
(Arrows show the wiring direction)

- When wiring two wires to the same terminal, do not route them in the same direction. One wire can be routed upward and one downward. Sideways routing is not possible.

APD1
(6 to 120V AC/DC, 200 to 240V AC)
Terminal screws M3.5 (self-lifting)



APN1, UPQN3B, UPQN4, APD1
(380V AC and above)
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.

Recommended Tightening Torque Number of Wires

Unit	Wire		Number of Wires	Recommended Tightening Torque (N·m)	Terminal Screw
HW-U Contact Block Full Voltage Adapter(*1)	Crimping Terminal		2	1.0 to 1.3	M3.5
	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)	2	1.0 to 1.3	
		ø1.7 to 2.0 mm (AWG12)	1	1.2 to 1.3	
	Stranded Wire	0.3 to 2.0 mm² (AWG14 to 22)	2	1.0 to 1.3	
		2.1 to 3.5 mm² (AWG12)	1	1.2 to 1.3	
Pilot Light	Crimping Terminal		2	0.6 to 1.0 (M3.0) 1.0 to 1.3 (M3.5)	
	Solid Wire	ø0.5 to 1.6 mm (AWG14 to 22)			
	Stranded Wire	0.3 to 2.0 mm² (AWG14 to 22)			

*1) Lamp terminal of illuminated pushbuttons and illuminated selector switches

ø30 TWN/TWND Series

Ordering Terms and Conditions

Thank you for using IDEC Products.

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

1. Notes on contents of Catalogs

(1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined conditions.
Also, durability varies depending on the usage environment and usage conditions.

(2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.

(3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.

(4) The content of Catalogs is subject to change without notice.

2. Note on applications

(1) If using IDEC products in combination with other products, confirm the applicable laws / regulations and standards.
Also, confirm that IDEC products are compatible with your systems, machines, devices, and the like by using under the actual conditions. IDEC shall bear no liability whatsoever regarding the compatibility with IDEC products.

(2) The usage examples and application examples listed in Catalogs are for reference purposes only. Therefore, when introducing a product, confirm the performance and safety of the instruments, devices, and the like before use. Furthermore, regarding these examples, IDEC does not grant license to use IDEC products to you, and IDEC offers no warranties regarding the ownership of intellectual property rights or non-infringement upon the intellectual property rights of third parties.

(3) When using IDEC products, be cautious when implementing the following.

i. Use of IDEC products with sufficient allowance for rating and performance

ii. Safety design, including redundant design and malfunction prevention design that prevents other danger and damage even in the event that an IDEC product fails

iii. Wiring and installation that ensures the IDEC product used in your system, machine, device, or the like can perform and function according to its specifications

(4) Continuing to use an IDEC product even after the performance has deteriorated can result in abnormal heat, smoke, fires, and the like due to insulation deterioration or the like. Perform periodic maintenance for IDEC products and the systems, machines, devices, and the like in which they are used.

(5) IDEC products are developed and manufactured as general-purpose products for general industrial products. They are not intended for use in the following applications, and in the event that you use an IDEC product for these applications, unless otherwise agreed upon between you and IDEC, IDEC shall provide no guarantees whatsoever regarding IDEC products.

i. Use in applications that require a high degree of safety, including nuclear power control equipment, transportation equipment (railroads / airplanes / ships / vehicles / vehicle instruments, etc.), equipment for use in outer space, elevating equipment, medical instruments, safety devices, or any other equipment, instruments, or the like that could endanger life or human health

ii. Use in applications that require a high degree of reliability, such as provision systems for gas / waterworks / electricity, etc., systems that operate continuously for 24 hours, and settlement systems

iii. Use in applications where the product may be handled or used deviating from the specifications or conditions / environment listed in the Catalogs, such as equipment used outdoors or applications in environments subject to chemical pollution or electromagnetic interference
If you would like to use IDEC products in the above applications, be sure to consult with an IDEC sales representative.

3. Inspections

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

4. Warranty

(1) Warranty period

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

(2) Warranty scope

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

i. The product was handled or used deviating from the conditions / environment listed in the Catalogs

ii. The failure was caused by reasons other than an IDEC product

iii. Modification or repair was performed by a party other than IDEC

iv. The failure was caused by a software program of a party other than IDEC

v. The product was used outside of its original purpose

vi. Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and Catalogs

vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from IDEC

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

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

5. Limitation of liability

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

6. Service scope

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

(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

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

IDEC CORPORATION

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