# ø30 Switches and Pilot Lights

# TWN TWND Series



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



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



	Model	Features	Page
<b>É É</b>	Plastic TWN Series	The all-time bestseller since first developed. Suitable for versatile applications.	B-304
<u>, 1</u>	Diecast Zinc TWND Series	Heavy-duty switches for tough industrial usage.	B-326

6

# ø30 TWN/TWND Selection Guide

Function	Pushbutton						
Cotogony	Flu	sh	Extended		Extended with Half Shroud		Pilot Li
Category	Momentary/	/Maintained	Momentary/Maintained		Momentary/Maintained		Lights
				Diecast Zinc		Diecast Zinc	S
Shape	Ő	Ċ	Ĩ	ő	Ő	Ő	APEM Switches & Pilot Lights
	ABN1	ABD1	ABN2	ABD2	ABN2G	ABGD2	Control Boxes
Model	AON1	AOD1	AON2	A0D2	AON2G	A0GD2	Emergency Stop Switches
Page	B-310	B-326	B-310	B-326	B-310	B-326	Enabling Switches

Function		Pushbutton						
Catagory	Extended wit	th Full Shroud	Mu	Ishroom	Mushroom w	vith Full Shroud	Explosion Proof	
Category	Momentary	//Maintained	Momenta	ary/Maintained	Momentary	y/Maintained	Terminal Blocks	
		Diecast Zinc		Diecast Zinc		Diecast Zinc		
							Relays & Sockets	
Shape							Circuit Protectors	
							Power Supplies	
							LED Illumination	
Model	ABN2F	ABFD2	ABN3	ABD3	ABN3G	ABGD3		
woder	AON2F	A0FD2	A0N3	A0D3	_	A0GD3	Controllers	
Page	B-310	B-326	B-311	B-327	B-311	B-327	Operator Interfaces	

							Sensors
Function			Push	button			
	Jumbo N	lushroom	Jumbo Mushroom	with Shallow Shroud	Jumbo Mushroom	with Deep Shroud	AUTO-ID
Category	Mome	entary	Momentary		Momentary		
	_	Diecast Zinc		Diecast Zinc		Diecast Zinc	
							Flush Silhouette
Shape							ø16
							ø22
Model	ABN4	ABD4	ABN4G	ABGD4	ABN4F	ABFD4	ø30
Page	B-311	B-327	B-311	B-327	B-311	B-327	Miniature

Function		Pushbutton							
Category	Mushroom Pushlo	Mushroom Pushlock Turn Reset (*1) Mushroom Push Turn Lock			Mushroom Pull				
		Diecast Zinc		Diecast Zinc		Diecast Zinc			
							TWN		
Shape							TWND		
							ARN		
Model	AVN3	AVD3	AJN3	AJD3	AZN3	AZD3	CS		
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

A -							
Pilot	Function			LED Illuminat	ed Pushbutton		
Ē	Cotogony	Extended		Extended wit	Extended with Half Shroud		h Full Shroud
Lights	Category	Momentary	/Maintained	Momentary	/Maintained	Momentary	/Maintained
S			Diecast Zinc		Diecast Zinc	-	Diecast Zinc
				Pro-		Part -	
APEM	Shape				_		
Switches & Pilot Lights							
Control Boxes		ALN2	ALD2	ALGN2		ALFN2	ALFD2
Emergency Stop Switches	Model	AOLN2	AOLD2	AOLGN2	_	AOLFN2	A0LFD2
Enabling	Page	B-313	B-329	B-313		B-313	B-329
Switches					· · · · · · · · · · · · · · · · · · ·		

Safety Products	Function		LED Illuminated Pushbutton					
Explosion Proof	Category	Mus	Muchroom Buchlock Turp Boost (*1) Muchroom Buch		Mushroom Pushlock Turn Reset (*1)		Push Turn Lock	
Terminal Blocks		Momentar	y/Maintained	Mushroom rushi		WuShioonin		
Relays & Sockets			Diecast Zinc		Diecast Zinc		Diecast Zinc	
Circuit Protectors	Shape						_	
Power Supplies								
LED Illumination		ALN3	ALD3					
Controllers	Model			AVLN3	AVLD3	AJLN3	_	
		AOLN3	AOLD3					
Operator Interfaces	Page	B-313	B-330	B-314	B-330	B-313		

Sensors							
	Function			Selector	Switches		
AUTO-ID	Category	Kn	ob	Le	ver	Кеу	
			Diecast Zinc		Diecast Zinc		Diecast Zinc
Flush Silhouette	Shape						
ø16							
ø22							
ø30	Model	ASN	ASD	ASN□L	ASD□L	ASN□K	ASD□K
Miniature	Page	B-316	B-331	B-317	B-332	B-318	B-333

Pilot Lights	Function		Selector Switch		Selector Pushbutton		
	Category	Кеу	LED Illuminated Knob		Ring Operator		
			Diecast Zinc		_	Diecast Zinc	
TWN							
TWND	Shape						
ARN							
CS	Model	ASNDK-N024401	ASLN	ASLD	ASBN2	ASBD2	
	Page	B-319	B-320	B-334	B-323	B-335	

Function	LED Illuminated Pilot Light							
Category	Do	me	Square Extended (IP40)	Rectangular (Marking) (IP40)				
Shape	Diecast Zinc		<b>(</b>	<b>(</b>				
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.

For more information, visit http://apac.idec.com

# ø30 TWN/TWND Ratings/Specifications

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

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

ø30 TWN Series (plastic)



ø30 TWND Series (Diecast Zinc)





# **Ratings and Specifications**

### Contact ratings

-								
Γ	Pushbuttons	Rated insulation voltage	600V					
	Illuminated Pushbuttons	Rated continuous current	10A					
	Selector Switches Illuminated Selector Switches Selector Pushbuttons	Contact ratings by utilization category JIS C8201-5-1 IEC60947-5-1	AC-15 (A600) DC-13					

### Contact ratings by utilization category HW-U10 (NO contact), HW-U01 (NC contact)

									. AUTU-IL
Operating Voltage				48V	50V	110V	220V	440V	
oporating contag			24V						1
	AC	AC-12 Control of resistive loads and solid state loads	10A	-	10A	10A	6A	2A	
Operating	50/60 Hz	AC-15 Control of electromagnetic loads (> 72 VA)	10A	-	7A	5A	ЗA	1A	
Current	DC	DC-12 Control of resistive loads and solid state loads	10A	5A	-	2.2A	1.1A	-	Flush S
	DC	DC-13 Control of electromagnets	5A	2A	-	1.1A	0.6A	-	]
									ø16

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

Operating Voltag	le		24V	48V	50V	110V	220V	440V	ø22
	AC	AC-12 Control of resistive loads and solid state loads	5A	_	5A	5A	3A	1A	ø30
Operating	50/60 Hz	AC-15 Control of electromagnetic loads (> 72 VA)	5A	-	3.5A	2.5A	1.5A	0.5A	Miniature
Current	DC	DC-12 Control of resistive loads and solid state loads	5A	2.5A	-	1.1A	0.55A	-	Pilot Lights
	DC	DC-13 Control of electromagnets	2.5A	1A	-	0.55A	0.3A	-	

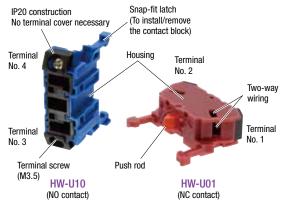
• The operating current represents the classification by making and breaking currents (IEC 60947-5-1).

· Silver contacts

. Minimum applicable load: 3V AC/DC, 5 mA (applicable range may vary with operating conditions and load types)

· For mono-lever switches and cam switches, see the brochures of each product.

# **HW-U Contact Block**



Part No.	HW-U10	HW-U01	HW-U10R	HW-U01R	
Contact					
Contact	1N0	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)



Control Boxes Emergency Stop Switches Enabling Switches

APEM

Terminal Blocks

Relays & Sockets

Protectors Power Supplies

Circuit

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Silhouette



ARN CS

### ø30 TWN/TWND Series

### **LED Illuminated Part Specifications**

20							
말	Unit				LED I	amp	
유	Unit	Rated Volta	ige	Operating Vo	oltage	Lamp Base	Part No.
- Ei		6V AC/DC		6V AC/DC			LSRD-6
Pilot Lights		12V AC/DC		12V AC/DC			LSRD-1
	-	24V AC/DC	24V AC/DC				LSRD-2
		100/110V AC		100/110V AC	1001	BA9S/13	
APEM		115/120V AC (*1)		115/120V AC (*1)			
	Illuminated pushbutton	120V AC (*2)		120V AC (*2)			
Switches & Pilot Lights	Illuminated selector switch	200/220V AC	-	200/220V AC	±10%		
Control Boxes	Pilot light	230/240V AC (*1)	50/60 Hz	230/240V AC (*1)	-		
		240V AC (*2)		240V AC (*2)			LSRD-6
Emergency Stop Switches		380V AC		380V AC	-		
Enabling		400/440V AC		400/440V AC	-		
Switches		480V AC	1	480V AC	1		
Safety Products		110V DC		90 to 140V DC			

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

\*2) Pilot light Terminal Blocks

### Relays & Sockets **Illuminated Part Type and Shape**

Circuit								
Circuit Protectors			Illuminated Unit				Pilot	Light
Power Supplies	Power Unit	Full voltage adapter	Transfo	rmer	DC-DC converter	Full voltage adapter (unibody)	Transformer	DC-DC converter
LED Illumination	Rated Voltage	6V, 12V, 24V AC/DC	100 to 240V AC	380V AC min.	110V DC	6V, 12V, 24V AC/DC	100 to 480V AC	110V DC
Controllers	Polarity	None	None	None	X1 (+) X2 (-)	None	None	X1 (+) X2 (–)
Operator Interfaces		×1				(		X1
Sensors		N S						
AUTO-ID	Shape/Terminal		1 TEC		X1	6		
		<b>X</b> 2	X1 X2	I	X2	(APN1)		X2

Flush Silhouette

ø16

ø22

• Note the polarity for wiring when connecting to DC-DC converter unit.

# LED Lamp Ratings (LSRD)

ø30	Part No.		LSRD-6	LSRD-1	LSRD-2		
Miniature	Lamp Base		BA9S/13				
Winnature	Rated Voltage		6V AC/DC	12V AC/DC	24V AC/DC		
Pilot Lights	Voltage Rang	ge	6V AC/DC ±10%	12V AC/DC ±10%	24V AC/DC ±10%		
	Current	DC	10mA	7mA	7mA		
	Draw	AC	14mA	8mA	8mA		
	Voltage Marl	king	Die stamped on the base				
TWN	Life (referen	ce value)	Approx. 50,000 hours (The luminance is reduced to 50% the initial	intensity when used on complete DC at 25°C.)			
ARN CS			X1 — <sub>Noise</sub> X2 — <sup>Rectif</sup>	d current circuit protection circuit er circuit er protection circuit	Example: LSRD-2		
	Weight		Approx. 2g				

X1

X2

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

Explosion Proof

Switche

Specifications					hes & Pilot Lights	
Operating Temperature			Non-illuminated: -25 to +		Pii	
Storage Temperature			Illuminated: -25 to +50°C -40 to +80°C (no freezing		<u> -   원</u>	
Operating Humidity			· · · · ·	45 to 85% RH (no condensation)		
Contact Resistance			43  to  35%  RH (no conder			
Insulation Resistance			$100 \text{ M}\Omega$ minimum (500V	,		
Dielectric Strength				etal parts: 2,500V AC, 1 minute Its: 2,000V AC, 1 minute)	APEM	
Vibration Resistance	Damage limits		30 Hz, amplitude 1.5 mm		Switches & Pilot Lights	
VIDIATION RESISTANCE	Operation extremes		5 to 55 Hz, amplitude 0.5	mm		
Shock Resistance	Damage limits		1000 m/s <sup>2</sup>		Control Boxes	
SHOCK RESISTANCE	Operation extremes		100 m/s <sup>2</sup>		Emergency Stop Switches	
Momentary		5,000,000		Enabling		
	Pushbutton	Maintained	500,000 (over 3 contacts	: 250,000)	Switches	
	Pushbullon	Push lock turn reset	500,000		Safety Products	
		Pull	500,000			
Mechanical Life	Momentary		2,500,000		Explosion Proof	
(minimum operations)		Maintained	500,000 (over 3 contacts: 250,000)		Terminal Blocks	
	Selector switch		500,000			
Key selector switch Illuminated selector swit			500,000		Relays & Sockets	
		ch	500,000		Circuit	
	Selector pushbutton		250,000		Protectors	
		Momentary	500,000 Switching free	uency 1800 operations/h, duty ratio 40%	Power Supplies	
	Pushbutton	Maintained	500,000 (over 3 contacts Switching free	: 250,000) juency 900 operations/h, duty ratio 40%	LED Illumination	
		Push lock turn reset	500,000 Switching frequency 900 operations/h, duty ratio 40%			
Electrical Life		Momentary		uency 1800 operations/h, duty ratio 40%	Controllers	
(minimum operations) (*1)	Illuminated pushbutton	Maintained	500,000 (over 3 contacts Switching free	: 250,000) juency 900 operations/h, duty ratio 40%	Operator Interfaces	
	Selector switch		500,000 Switching free	Sensors		
	Key selector switch		500,000 Switching free	uency 1200 operations/h, duty ratio 40%		
	Illuminated selector swite	ch		uency 1200 operations/h, duty ratio 40%	AUTO-ID	
	Selector pushbutton	1		uency 900 operations/h, duty ratio 40%		
		Pushbutton	ABN122: 82g	ABN322: 87g		
		Illuminated pushbutton	ALN22222DN: 106g	ALN21622DN: 163g		
	TWN series	Selector switch	ASN222N: 83g	ASN2K22N: 120g	Flush Silhouette	
Weight (approx.)		Illuminated selector switch	ASLN22222DN: 106g	ASLN21622DN: 163g	ø16	
		Pilot light	APN122DN: 46g	APN116DN: 125g		
noight (approx.)		Pushbutton	ABD122: 108g	ABD322: 113g	ø22	
		Illuminated pushbutton	ALD22222DN: 132g	ALD21622DN: 189g	ø30	
	TWND series	Selector switch	ASD222N: 110g	ASD2K22N: 147g	050	
		Illuminated selector switch Pilot light	ASLD22222DN: 133g APD122DN: 75g	ASLD21622DN: 190g APD116DN: 152g	Miniature	
(1) Load condition 220V AC				ALUTIOUN. 1029	Pilot Lights	

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

### **Degree of Protection**

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

### 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.

ARN CS

bownload catalogs and CAD from http://apac.idec.com

APEM

Control Boxes

Emergency

Enabling Switches Safety Products

Stop Switches

Explosion Proof Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers

Operator

Sensors

AUTO-ID

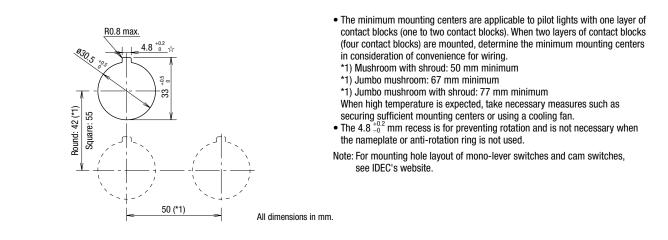
ø16 a00

Minia Pilot Lig

Interfaces

Circuit Protectors

# Mounting Hole Layout/Mounting Centers



### Notes for Ordering

### Standard models

### Specify Ordering No. when ordering.

- Specify a color code in place of \*
- Pilot lights, illuminated pushbuttons, and illuminated selector switches have an LED lamp installed.
- · Pilot lights are equipped with a terminal cover.
- Color codes for units without LED lamps:
- R (red), G (green), A (amber), Y (yellow), S (blue)
- When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape. Make sure of correct operation before installation. The operation of TWN/TWND series cannot be guaranteed when a commercially available lamp is used.

Codor

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

### **Ordering Information**

### Pushbutton Flush Silhouette

When specifying gold-plated silver contact and contact configuration:

Ø22	TWN series (B-310 to B-312)	<codes></codes>
~20	1  WIN SELLES  (D-310  to  D-312)	① Optional contact
ø30	ABN 2 11 R - MAU	MAU: Gold-plated silver
ature	① Optional contact	② Contact configuration
ights	© Contact configuration	10: 1NO
	-	01: 1NC
		11: 1NO1NC
	TWND series (B-326 to B-328)	20: 2NO
TWN	1 WIND SETIES (D-520 to D-520)	02: 2NC
IVVIN	ABD 2 <u>11</u> NR - <u>MAU</u>	22: 2NO2NC
WND	① Optional contact	40: 4NO
		04: 4NC
ARN	© Contact configuration	13: 1NO3NC
00		31: 3NO1NC
CS		30: 3NO
		03: 3NC
		12: 1NO2NC
		21: 2N01NC

### 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:

			0,5
TWN series ( <mark>B-313</mark> to <mark>B-315</mark> )	<codes></codes>		
	① Optional contact		
ALFN 2 <u>126</u> <u>13</u> DN R - <u>MAU</u> ① Optional contact	MAU: Gold-plated silv	<i>/er</i>	APEM
	() Contract configuration		Switches &
Contact configur	10, 110		Pilot Lights
③ Operating voltag	ie 01: 1NC		Control Boxes
	11: 1NO1NC		Emergency
TWND series (B-329 to B-330)	20: 2NO		Stop Switches
ALFD 2 <u>126 13</u> DN R - <u>MAU</u>	02: 2NC		Enabling
ALFD 2 120 13 DN R - $MAO$ ① Optional contact	31: 3N01NC		Switches
@ Contact configu	22: 2NU2NC		Safety Products
•	40 4110		
③ Operating voltag	10 40: 400 04: 4NC		Explosion Proof
	③ Operating voltage		Terminal Blocks
	99: Without LED lar	np	Relays & Sockets
	66: 6V AC/DC		Circuit
	11: 12V AC/DC		Protectors
	22: 24V AC/DC 16: 100/110V AC		Power Supplies
	126: 115/120V AC		
	26: 200/220V AC		LED Illumination
	246: 230/240V AC		Controllers
	386: 380V AC		
	46: 400/440V AC		Operator Interfaces
Note:	486: 480V AC		Interfaces
<ul> <li>Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1N</li> </ul>	IC, 1NO-2NC, and 3NC, are not available for models of 100	V AC or over.	Sensors
<ul> <li>Illuminated pushbuttons of 24V AC/DC and below with two or for s cas P 200 for how to operate 110/ PC model (PC PC converted)</li> </ul>			AUTO-ID
<ul> <li>See B-309 for how to specify 110V DC model (DC-DC converter)</li> <li>Color codes for units without LED lamps:</li> </ul>	l.		
R (red), G (green), A (amber), Y (yellow), S (blue) When using a commercially available lamp, choose a lamp with	rated voltage 5 to 30V AC/DC and 1W maximum, and with	the same base and shape.	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		Flush Silhouette
Selector Switch			
When specifying gold-plated silver contact and con	tact configuration:		ø16
TWN series ( <mark>B-316</mark> to <mark>B-319</mark> )	TWND series (B-331 to B-333)	<codes></codes>	ø22
ASN 2 11 N - MAU	ASD 2 11 N - MAU	① Optional contact	ø30
① Optional contact	① Optional contact	MAU: Gold-plated silver	Miniature
© Contact configuration	© Contact configuration	on	
-	5		Pilot Lights

### Key removable position code (example)

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

• The key cannot be removed in spring return positions.

Download catalogs and CAD from http://apac.idec.com

# ø30 TWN/TWND Series

### **Ordering Information**

### Illuminated Selector Switch

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

0,	TWN series ( <mark>B-320</mark> )		<codes></codes>
APEM Switches & Pilot Lights	ASLN 2 <u>16</u> <u>22</u> DN - <u>MAU</u>	— ① Optional contact — ② Contact configuration (see <mark>B-321</mark> to <mark>B-322</mark> )	55. Without LED lamp
Control Boxes	TWND parion (P. 224)	③ Operating voltage	66: 6V AC/DC 11: 12V AC/DC
Emergency Stop Switches	TWND series ( <mark>B-334</mark> ) ASLD 2 16 22 DN - MAU		22: 24V AC/DC 16: 100/110V AC
Enabling Switches		$ \oplus$ Optional contact	136: 115/120V AC 26: 200/220V AC
Safety Products		© Contact configuration     © Constant configuration	256: 230/240V AC
Explosion Proof		— ③ Operating voltage	386: 380V AC 46: 400/440V AC
Terminal Blocks	Note:		486: 480V AC

Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1NC, 1NO-2NC, and 3NC, is not available for models of 100V AC or over.

Relays & Sockets • Illuminated selector switches of 24V AC/DC and below with two or four contact blocks contain a dummy block.

 See below for how to specify 110V DC model (DC-DC converter). Circuit

• Color codes for units without LED lamps: R (red), G (green), A (amber), Y (yellow), S (blue) When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

# Pilot Light (LED)

When specifying LED operating voltage:

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

See below for how to specify 110V DC model (DC-DC converter).

• Color codes for units without LED lamps: R (red), G (green), A (amber), Y (yellow), S (blue)

When using a commercially available lamp, choose a lamp with rated voltage 5 to 30V AC/DC and 1W maximum, and with the same base and shape.

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

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

### **TWN** series



<Codes> ① Operating voltage 16 🖂 D: 110V DC

### ASLN2 16 11D DN Y

① Operating voltage

### APN1 <u>16 D</u> DN R

① Operating voltage

### **TWND** series

ALD2 16 22D DN G

① Operating voltage

### ASLD2 16 11D DN Y

① Operating voltage

APD1 16 D DN R

① Operating voltage

• See 110V DC model (DC-DC converter) is not approved by standards (operating voltage: 90 to 140V DC).

• Odd number of contact blocks, such as 1NO, 1NC, 3NO, 2NO-1NC, 1NO-2NC, and 3NC, is not available for 100V DC model (DC-DC converter).

Protectors

Power Supplies

LED Illumination

Controllers Operator Interfaces

> Sensors AUTO-ID

Flush Silhouette

ø16 ø22

Miniature

Pilot Lights

ARN

CS

### For more information, visit http://apac.idec.com

Switches & Pil

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

			(			Package Quantity: 1	lot
Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)	ilot Lights
Flush		1N0	ABN110*	В			S.
ABN1 AON1		1NC	ABN101*	GR			
	Momentary	1NO-1NC	ABN111*	- K			APEM
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2N0	ABN120*	S		Panel Thickness 0.8 to 7.5	
1000		2NC	ABN102*	W	I I I I		Switches & Pilot Lights
		2NO-2NC	ABN122*	Note	4. 4.		Control Boxes
		1N0 1NC	A0N110*	B			Emergency
		1NO-1NC	A0N101*	GR	45.4 (1 or 2 blocks)	9 <u>9</u> <u>839</u>	Stop Switches
	Maintained	2N0	AON111* AON120*	- Y		- <del>1</del> 434 14 1600 14	Enabling
		2N0 2NC	AON120*	S			Switches
		2NO-2NC	AON102*	W Note			Safety Products
Extended		1N0	AUN122* ABN210*				Explosion Proof
ABN2		1NC	ABN210*	В			T i i Dissis
AON2		1NO-1NC	ABN201* ABN211*	– G R			Terminal Blocks
	Momentary	2N0	ABN220*	- K Y		Panel Thickness 0.8 to 7.5	Relays & Sockets
		2NC	ABN202*	S			Circuit
		2N0-2NC	ABN222*	W	45.4(1 or 2 blocks) 65.4 (3 or 4 blocks) 14		Protectors
		1N0	A0N210*				Power Supplies
		1NC	A0N201*	B		14 <u>29.6</u> ø39	LED Illumination
		1N0-1NC	A0N211*	– G R			
	Maintained	2N0	A0N220*	Y			Controllers
		2NC	A0N202*	S			Operator
		2N0-2NC	A0N222*	W			Interfaces
Extended with Half Shroud		1N0	ABN2G10*	В		Panel Thickness 0.8 to 3.5	Sensors
ABN2G AON2G		1NC	ABN2G01*	G			AUTO-ID
AUNZU	Momentary	1N0-1NC	ABN2G11*	R			
	Womentary	2N0	ABN2G20*	Y			
		2NC	ABN2G02*	S W			
		2N0-2NC	ABN2G22*				Flush Silhouette
		1N0	AON2G10*	В			ø16
		1NC	AON2G01*	G			
	Maintained	1NO-1NC	AON2G11*	R Y			ø22
		2N0 2NC	AON2G20* AON2G02*	S			ø30
		2NC-2NC	AUNZGUZ* AON2G22*	Ŵ			
Extended with Full Shroud		1N0	ABN2F10*				Miniature
ABN2F		1NC	ABN2F10*	В			Pilot Lights
AON2F		1NO-1NC	ABN2F01*	G			
	Momentary	2N0	ABN2F20*	R Y			
		2NC	ABN2F02*	S		Panel Thickness 0.8 to 6	
		2NO-2NC	ABN2F22*	W	00		TWN
		1N0	AON2F10*		4. 4.		TWND
		1NC	AON2F01*	B	BB		
		1NO-1NC	AON2F11*	G R	45.4 (1 or 2 blocks 65.4 (3 or 4 blocks)	) 14 <u>29.6</u> 16.5 ø39	ARN
	Maintained	2N0	AON2F20*	Y	- 00.4 (3 01 4 DIUCKS)	-++10:0	CS
		2NC	AON2F02*	S			
		2N0-2NC	A0N2F22*	W			

• 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

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

# ø30 TWN Series

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

Pilot Lights						Package Quantity: 1		
Ligh	Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions (All dimensions in mm.)		
ts	Mushroom		1N0	ABN310*				
	ABN3 AON3		1NC	ABN301*	B G			
APEM	AUNS	Momentary	1NO-1NC	ABN311*	R			
Switches &		inonio nai j	2N0	ABN320*	Y S	Panel Thickness 0.8 to 7.5		
Pilot Lights	1		2NC 2N0-2NC	ABN302* ABN322*	Ŵ			
Control Boxes			1N0	A0N310*				
Emergency Stop Switches			1NC	A0N301*	B G	45.4 (1 or 2 blocks)		
Enabling		Maintained	1NO-1NC	A0N311*	R	65.4 (3 or 4 blocks) 22		
Switches			2N0	A0N320*	Y S			
Safety Products			2NC 2NO-2NC	A0N302* A0N322*	Ŵ			
Explosion Proof	Mushroom with Full Shroud		1N0	ABN3G10*				
Terminal Blocks	ABN3G		1NC	ABN3G01*	В	Panel Thickness 0.8 to 6.5		
Relays & Sockets			1NO-1NC	ABN3G11*	GR			
Circuit		Momentary	2N0	ABN3G20*	Y			
Protectors			2NC	ABN3G02*	S W	43.9 (1 or 2 blocks)		
Power Supplies			2N0-2NC	ABN3G22*		63.5 (3 or 4 blocks) 23.5		
LED Illumination	Jumbo Mushroom	Shroom Momentary	1N0	ABN410*	B G R Y			
Controllers	ABN4		1NC	ABN401*		Panel Thickness 0.8 to 7.5		
Operator Interfaces			1NO-1NC	ABN411*				
Sensors	W (		2N0	ABN420*				
AUTO-ID			2NC	ABN402*				
AUTU-ID			2N0-2NC	ABN422*		65.4 (3 or 4 blocks) 29		
	Jumbo Mushroom with Shallow Shroud	w Shroud	1N0	ABN4G10*		Panel Thickness 0.8 to 7.5		
Flush Silhouette	ABN4G		1NC	ABN4G01*				
ø16			1NO-1NC	ABN4G11*	B G			
		Momentary	2N0	ABN4G20*	R			
ø22	Jumbo Mushroom with Deep Shroud ABN4F		2NC	ABN4G02*	Y			
ø30			2NO-2NC	ABN4G22*	-	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 29		
Miniature			1N0	ABN4F10*				
Pilot Lights			1NC	ABN4F01*	-	Panel Thickness 0.8 to 7.5		
			1NO-1NC	ABN4F11*	В			
TWN		Momentary	2N0	ABN4F11* ABN4F20*	G R			
TWND			2N0 2NC	ABN4F20*	Y			
					-	45.4 (1 or 2 blocks)		
ARN	e Chaoifu o color ando in ringe of a in	Dort No. D /bl	2NO-2NC	ABN4F22*				
CS	<ul> <li>Specify a color code in place of * in</li> <li>Bound bezel and shroud (metal): Ch</li> </ul>		к), G (green), R	(red), Y (yellow), S	s (diue), W (wł	nite)		

Specify a color code in place of \* in Part No. B (black), G (green), R (red), Y (yellow), S (blue), W (white)
 Round bezel and shroud (metal): Chrome-plated

• Pushbuttons with 1 or 3 contact blocks have a dummy block.

• See B-307 for other contact configurations and gold-plated silver contacts.

• See B-312 for bottom view.

• Terminal screws: M3.5

· Integrated terminal cover

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

Shape	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	Package Quantity: 1 (All dimensions in mm.)	ilot Lights
Mushroom Pushlock Turn Reset (*1)	1N0	AVN310N*			S.	
AVN3	1NC	AVN301N*		Panel Thic	skness 0.8 to 7.5	
	1NO-1NC	AVN311N*	R			APEM
	2N0	AVN320N*	Y			Switches &
	2NC	AVN302N*		45.4 (1 or 2 blocks)	29.6	Pilot Lights Control Boxes
	2N0-2NC	AVN322N*		65.4 (3 or 4 blocks) 23.6	<mark>n −−−−− si</mark>	Emergency
Mushroom Push Turn Lock	1N0	AJN310N*		Panel Thickness 0.8 to 7.5	kness 0.8 to 7.5	Stop Switches
AJN3	1NC	AJN301N*				Enabling Switches
	1NO-1NC	AJN311N*	B G			Safety Products
	2N0	AJN320N*	R Y			Explosion Proof
	2NC	AJN302N*	T	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 23.6	29.6	Terminal Blocks
	2NO-2NC	AJN322N*		P		
Mushroom Pull	1N0	AZN310N*		Panel Thickness 0.8 to 7.5		Relays & Sockets
AZN3	1NC	AZN301N*			kness 0.8 to 7.5	Circuit Protectors
	1NO-1NC	AZN311N*	B G			Power Supplies
	2N0	AZN320N*	R	41.4		LED Illumination
	2NC	AZN302N*	Y	45.4 25.1	5.5 stroke 29.6	Controllers
Specify a color code in place of * in Part	No. B (black), G (gree	en) B (red) Y (vellow)			· · · · ·	Operator Interfaces
Round bezel (metal): Chrome-plated		, n, n (rou), r (yonow)				Sensors

• Pushbuttons with 1 or 3 contact blocks have a dummy block.

• See B-307 for other contact configurations and gold-plated silver contacts.

. Mushroom pull has up to 2 contact blocks.

• Terminal screws: M3.5

· Integrated terminal cover

\*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).

### Pushbutton operation

Pushlock Turn Reset

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

Push Turn Lock

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

### <u>Pull</u>

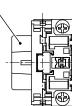
Pulling the button operates the contacts, and releasing the button return the contacts.

Pull contact operation

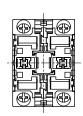
Contact	AZN3				
Contact	Normal	Pull			
1N0	ملم	٥۲			
2N0-2NC	പ്പം 🕂	0 0 1			
2N0	میہ میں	0 0 0 1 0			
2NC	•••	<u></u>			

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

Dummy Block



/
Ð
3



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

1 contact block (NO) (NC: opposite position)

3 contact blocks

**Dummy Block** 

2/4 contact blocks



Miniature Pilot Lights

TWN	
TWND	
ARN	
CS	

# ø30 TWN Series

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

let 1				,			Pac	kage Quantity: 1
Pilot Lights	Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code	Dimensions Page
0,	Extended				1NO-1NC	ALN22211DN*		
	ALN2 AOLN2			24V AC/DC	2N0	ALN22220DN*		
APEM Switches & Pilot Lights Control Boxes					2NC	ALN22202DN*	R	
					1NO-1NC	ALN21611DN*	G Y	
			Momentary	100/110V AC	2N0	ALN21620DN*	– A	
					2NC	ALN21602DN*	S	
Emergency					1N0-1NC	ALN22611DN*	PW	
Stop Switches	(04)(40/D0)			200/220V AC	2N0	ALN22620DN*	_	
Enabling Switches	(24VAC/DC)	BA9S			2NC	ALN22602DN*		
					1NO-1NC	AOLN22211DN*	_	
Safety Products				24V AC/DC	2N0	AOLN22220DN*		
Explosion Proof					2NC	AOLN22202DN*	R G	
Terminal Blocks			Maintainad	100/1101/40	1NO-1NC	AOLN21611DN*	- Y	
			Maintained	100/110V AC	2N0 2NC	AOLN21620DN*	A	
Relays & Sockets					1NO-1NC	A0LN21602DN*	S PW	
Circuit	With transformer			200/220V AC	2N0	AOLN22611DN* AOLN22620DN*	FW	
Protectors	(100/110V AC)			200/220V AG	2NC	A0LN22602DN*	-	
Power Supplies	Extended with Half Shroud				1NO-1NC	ALGN222012DN*		
LED Illumination	ALGN2			24V AC/DC	2N0	ALGN22211DN*	-	
	AOLGN2			24V A0/D0	2NC	ALGN22220DN*	R	
Controllers					1NO-1NC	ALGN21611DN*	G	
Operator	(24V AC/DC)		Momentary	100/110V AC	2N0	ALGN21620DN*	- A - S - PW 	B-315
Interfaces					2NC	ALGN21602DN*		
Sensors		BA9S		200/220V AC	1NO-1NC	ALGN22611DN*		
AUTO-ID					2N0	ALGN22620DN*		
					2NC	ALGN22602DN*		
			BA9S		1NO-1NC	AOLGN22211DN*		
				24V AC/DC	2N0	AOLGN22220DN*		
Flush Silhouette					2NC	AOLGN22202DN*		
ø16				100/110V AC	1N0-1NC	AOLGN21611DN*		
010			Maintained		2N0	AOLGN21620DN*		
ø22					2NC	AOLGN21602DN*		
ø30					1NO-1NC	AOLGN22611DN*		
000	With transformer			200/220V AC	2N0	AOLGN22620DN*		
Miniature	(100/110V AC)				2NC	AOLGN22602DN*		
Pilot Lights	Extended with Full Shroud				1NO-1NC	ALFN22211DN*		
	ALFN2 AOLFN2			24V AC/DC	2N0	ALFN22220DN*	_	
					2NC	ALFN22202DN*	R	
					1NO-1NC	ALFN21611DN*	G Y	
TWN			Momentary	100/110V AC	2N0	ALFN21620DN*	– A	
					2NC	ALFN21602DN*	S	
TWND				000/0001110	1NO-1NC	ALFN22611DN*	PW	
ARN	(24V AC/DC)	BA9S		200/220V AC	2N0	ALFN22620DN*	-	
					2NC	ALFN22602DN*		
CS				0414 00/00	1NO-1NC	AOLFN22211DN*	-	
	1 - J-			24V AC/DC	2N0	AOLEN22220DN*		
					2NC	AOLEN21611DN*	R G	
			Maintained	100/110V AC	1N0-1NC 2N0	AOLFN21611DN* AOLFN21620DN*	G Y	
			Walltalleu	100/110VA0	2N0 2NC	AOLFN21602DN*	- A	
					1NO-1NC	AOLFN21602DN*	_ S _ PW	
	With transformer			200/220V AC	2N0	AOLFN22620DN*		
	(100/110V AC)	1		LOUILLUVAU	2110	TULI NECUCUDIN <sup>®</sup>	1	

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

Specify a Control code in place of a first at No. In (red), or (green), if (genow), A (and be), (blue), PW (pure white)
Illuminated pushbuttons have an LED lamp installed.
Round bezel (metal): Chrome-plated
See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.
Illuminated pushbuttons of 24V AC/DC or below with 2 or 4 contact blocks have a discussion blocks have a discussion of the set of

dummy block.

See B-308 for other contact configurations and gold-plated silver contacts.
See B-314 for bottom view.
Terminal screws: M3.5

· Integrated terminal cover

Switches & P

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

						Pa	ckage Quantity: 1	liot
Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code	Dimensions Page	'ilot Lights
Mushroom (ø40)				1NO-1NC	ALN32211DN *			ία.
ALN3			24V AC/DC	2N0	ALN32220DN *			
AOLN3				2NC	ALN32202DN *	R		
				1NO-1NC	ALN31611DN *	G		APEM
		Momentary	100/110V AC	2N0	ALN31620DN *	Y A		Switches &
				2NC	ALN31602DN *	S		Pilot Lights
				1NO-1NC	ALN32611DN *	PW		Control Boxe
			200/220V AC	2N0	ALN32620DN *			Emergency Stop Switch
(24V AC/DC)	DAOC			2NC	ALN32602DN *			Stop Switche Enabling
	BA9S			1NO-1NC	AOLN32211DN *			Switches
And And			24V AC/DC	2N0	AOLN32220DN *			Safety Produ
		Maintained 1		2NC	AOLN32202DN *	R		
			100/110V AC	1NO-1NC	AOLN31611DN *	G Y A S PW		Explosion Pr
				2N0	AOLN31620DN *			Terminal Blo
				2NC	AOLN31602DN *			
			200/220V AC	1NO-1NC	AOLN32611DN *			Relays & Soc
With tranformer				2N0	AOLN32620DN *			Circuit Protectors
(100/110V AC)				2NC	AOLN32602DN *		B-315	
Mushroom Pushlock Turn Reset		_	24V AC/DC	1NO-1NC	AVLN32211DN *	R	D-313	Power Suppl
AVLN3 (*1)				2N0	AVLN32220DN *			LED Illumina
				2NC	AVLN32202DN *			
			100/110V AC	1NO-1NC	AVLN31611DN *			Controllers
	BA9S			2N0	AVLN31620DN *			Operator Interfaces
				2NC	AVLN31602DN *			
				1NO-1NC	AVLN32611DN *			Sensors
				2N0	AVLN32620DN *			AUTO-ID
(24V AC/DC)				2NC	AVLN32602DN *			
Mushroom Push Turn Lock				1NO-1NC	AJLN32211DN *			
AJLN3			24V AC/DC	2N0	AJLN32220DN *			
				2NC	AJLN32202DN *	R		Flush Silhou
				1NO-1NC	AJLN31611DN *	G		
	BA9S	—	100/110V AC	2N0	AJLN31620DN *	Y A		ø16
				2NC	AJLN31602DN *			ø22
				1NO-1NC	AJLN32611DN *	PW		-00
			200/220V AC	2N0	AJLN32620DN *			ø30
(24V AC/DC)				2NC	AJLN32602DN *			Miniature

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

• Illuminated pushbuttons have an LED lamp installed.

• Round bezel (metal): Chrome-plated

• See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

See B-308 for other contact configurations and gold-plated silver contacts.
 Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a

dummy block.

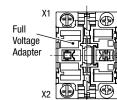
### Illuminated pushbutton operation

Pushlock Turn Reset

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

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

6V, 12V, 24V AC/DC



1 contact block



3 contact blocks

• See B-348 for wiring.

Dummy Block

• Terminal screws: M3.5

Push Turn Lock

• Integrated terminal cover

when turned counterclockwise.



2/4 contact blocks

Æ

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



\*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).

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

110V DC, 380V AC or over



**DC-DC** converter unit Terminal No. X1: positive Terminal No. X2: negative Switches &

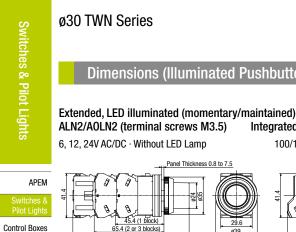
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Flush Silhouette
ø16
ø22
ø30

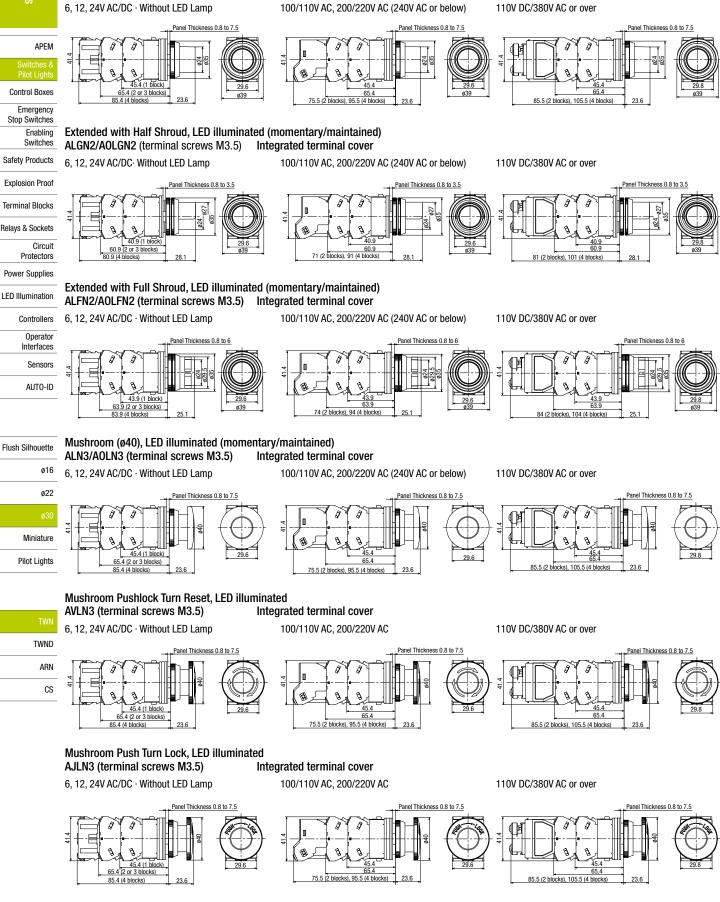
Pilot Lights

TWN	
TWND	
ARN	
CS	

# **Dimensions (Illuminated Pushbuttons)**

Integrated terminal cover





All dimensions in mm.

Switches &

ASN Selector Switches	(Knob Operator)
-----------------------	-----------------

Contact Configuration

Contact

NO

NO

NC

NO

NO

NO

NC

NO

NC

Contact

NO

NO

NC

NC NO

NO

NC

NC

NO

NO

NO

NO

NC

NC

NC NC

NO

NO

NC

Contact Configuration

Contact Block

Contact Block

Mounting

Position

1

2

1

2

1

0

1

0

3

4

Mounting

Position

1

2

1

0

1

2

3

4

1

0

3

4 1

2

3

4

1

0

3

4

Knob Operator ASN

Contact

1N0

(10)

1NO-1NC

(11)

2N0

(20)

2NO-2NC

(22)

Contact

2N0

(20)

2NC

(02)

2NO-2NC

(22)

4N0

(40)

4NC (04)

Shape

90°

2-position

								Package Quantity: 1	Pilot
			Ô						<sup>p</sup> ilot Lights
									APEM
n		Maintained	Spring Return from Right		Spring	Returr	n from	Left	Switches & Pilot Lights
	erator osition	1 2	1 2	Contact	Block	Oper Posi		1, 2	Control Boxes
1	2			Mounting Position	Contact	1	2		Emergency Stop Switches Enabling
	•	ACNOTON	ACN2110N	1 0311011	NO			ACN2210N	Switches
Dum	my Block	ASN210N	ASN2110N	2	—		-	ASN2210N	Safety Products
•	•	ASN211N	ASN2111N	 	NO NC	•	•	ASN2211N	Explosion Proof
	•	ASN220N	ASN2120N	① ②	NO NO	•		ASN2220N	Terminal Blocks
	•			0	NO	•			Relays & Sockets
•		ASN222N	ASN2122N	2	NC		•	ASN2222N	Circuit Protectors
•	•			3 (4)	NO NC	•	•		Power Supplies
n		Maintained	Spring Return from Right	Spring	) Return fro	om Left		Spring Return Two-way	LED Illumination
	erator osition	102	1 0 👡 2		1,02			1 - 0 - 2	Controllers
1	0 2	$\searrow$							Operator Interfaces
•		ASN320N	ASN3120N		ASN3220N			ASN3320N	Sensors
	•	ASINSZUN	ASINGTZUN		ASINGZZUN			ASINSSZUN	AUTO-ID
		ASN302N	ASN3102N		ASN3202N	1		ASN3302N	
•	•	ASN322N	ASN3122N		ASN3222N	J		ASN3322N	Flush Silhouette
									ø16
•	•								ø22
•	•	ASN340N	ASN3140N		ASN3240N	1		ASN3340N	ø30
	-								Miniature
		ASN304N	ASN3104N		ASN3204N	1		ASN3304N	Pilot Lights
•									
	•	☆ ASN33SN-243	_		_			_	TWN
Dum	my Block								TWND

Knob: Black

45°

3-position

• Round bezel (metal): Chrome-plated

☆ 3S

• 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.

# **Contact Block Mounting Position**



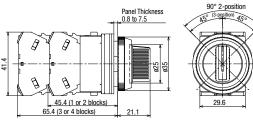
• Selector switches with  $\precsim$  have a half contact operating current (load switching ARN current value). Rated insulation voltage and rated current remain the same. CS

• See B-308 for gold-plated silver contacts.

• See B-312 for bottom view.

### **Dimensions**

All dimensions in mm.



Terminal Screws: M3.5

Terminal cover: integrated

# ø30 TWN Series

Lever Operator

ASN- Selector Switches (Lever Operator)

ghts	Shape	ASN□L							ò					
APEM														
Switches & Pilot Lights			Contact C	configuratio	n			Maintained	Spring Return from Right		Spring	Return	from Le	eft
Control Boxes			Contact	Block		perato Positio		1 2	1 0	Contact	Block		rator ition	
Emergency Stop Switches Enabling		Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2	
Switches		1N0	1 0310011	NO		•				1	NO	•		
Safety Products	90°	(10)	2	—	Dun	nmy B	lock	ASN2L10N	ASN21L10N	2	_	_		ASN22L10N
Explosion Proof	2-position	1NO-1NC	0	NO		•		ASN2L11N	ASN21L11N	0	NO	•		ASN22L11N
Terminal Blocks		(11)	2 1	NC	•	•				2 1	NC	•	•	
		2N0 (20)	 	NO NO		•		ASN2L20N	ASN21L20N	 	NO NO	•		ASN22L20N
Relays & Sockets		(20)	0	NO		•				0	NO	•		
Circuit Protectors		2N0-2NC	2	NC	٠				ACN041.00N	2	NC		•	
Power Supplies		(22)	3	NO				ASN2L22N	ASN21L22N	3	NO	•		ASN22L22N
Fower Supplies			4	NC	•					4	NC			
LED Illumination			Contact C	Configuratio	n			Maintained	Spring Return from Right	Sprin	g Return fr	rom Lef	t	Spring Return Two-way
Controllers			Contact	Block		perato Positio		1 0 2	1 0 - 2		1,0	2		1,0,2
Operator Interfaces		Contact	Mounting	Contact	1		2							
Sensors		0110	Position			Ŭ	-							
AUTO-ID		2N0 (20)	 	NO NO	•		•	ASN3L20N	ASN31L20N		ASN32L20	N		ASN33L20N
		2NC	0	NO			Ď							
		(02)	2	NO				ASN3L02N	ASN31L02N		ASN32L02	2N		ASN33L02N
			0	NO	٠									
Flush Silhouette		2N0-2NC	2	NO				ASN3L22N	ASN31L22N		ASN32L22	ZN		ASN33L22N
ø16	45°	(22)	3	NO				AOHOLLEN	AGNOTELEN		NONOLLL			AUTOULLEN
	3-position		4	NO NO										
ø22		4N0	 	NO	•		•							
ø30		(40)	3	NO	•			ASN3L40N	ASN31L40N		ASN32L40	N		ASN33L40N
Miniature			4	NO	-		•							
			0	NO								_		
Pilot Lights		4NC	2	NO				ASN3L04N	ASN31L04N		ASN32L04	4N		ASN33L04N
		(04)	3 ④	NO NO	_									
			(4) (1)	NO	-									
TWN		☆ 3S	Q Q	NO	-		•	☆						
		35	3	NO		•		ASN3L3SN-243	—		_			
TWND			4	—	Dun	nmy B	lock							

a ten

ARN · Lever: Black

CS

• 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.

### **Contact Block Mounting Position**



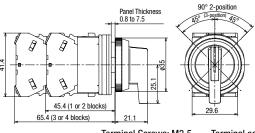
 $\bullet$  Selector switches with  $\precsim$  have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.

• See **B-308** for gold contact. • See B-312 for bottom view.

### **Dimensions**

All dimensions in mm.

Package Quantity: 1



Terminal Screws: M3.5

Terminal cover: integrated

# ASN- K Key Selector Switches

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Lig	
ghts	

													Package Quantity: 1	<u>e</u>
Shape	Key Selector ASN⊡K	r (Key No. O)					1							lot Lights
														APEM
		Contact C	onfiguratio	n			Maintained	Spring Return from Right		Spring	Returr	n from L	.eft	Switches & Pilot Lights
		Contact	Block		Operat Positic		1 2	1 - 2	Contact	Block		rator	1. 2	Control Boxes
	Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2		Emergency Stop Switches
	1N0	1 0311011	NO							NO	•			Enabling Switches
90°	(10)	2		Dui	nmy E	Block	ASN2K10N	ASN21K10N	2		-	_	ASN22K10N	Safety Products
2-position	1N0-1NC	1	NO				ASN2K11N	ASN21K11N	0	NO	٠		ASN22K11N	Explosion Proof
	(11)	2	NC	•			ASINZICITIN	AGINZ TITTIN	2	NC		•	AGNZZKTIN	
	2N0	0	NO		•	-	ASN2K20N	ASN21K20N	0	NO	•		ASN22K20N	Terminal Blocks
	(20)	2	NO NO		•				2 ①	NO NO	•			Relays & Sockets
	2N0-2NC	 	NC	•		-			2	NC	•	•		Circuit
	(22)	3	NO		•	1	ASN2K22N	ASN21K22N	3	NO	•		ASN22K22N	Protectors
		4	NC	•		1			3	NC	-	•		Power Supplies
		Contact C	onfiguratio	n			Maintained	Spring Return from Right	Spring	g Return fro	om Lef	ť	Spring Return Two-way	LED Illumination
		Contact	Block		Operat Positic		102	1 0 👡 2		1, 0 2			1.0.2	Controllers
	Contact	Mounting Position	Contact	1		2								Operator Interfaces
	2N0		NO	•										Sensors
	(20)	Q	NO			•	ASN3K20N	ASN31K20N		ASN32K20	N		ASN33K20N	AUTO-ID
	2NC	0	NC				ASN3K02N	ASN31K02N		ASN32K02	N		ASN33K02N	
	(02)	2	NC				AGHGROZH	Adno mozn	· · · ·				AditoonoLi	
		0	NO	•										
	2NO-2NC (22)	2 3	NO NC				ASN3K22N	ASN31K22N		ASN32K22	N		ASN33K22N	Flush Silhouette
45° 3-position	(22)	 	NC		5									ø16
5-position		0	NO	•										ø22
	4N0	2	NO				ACNOKAON	ACN21//40N			N		ACNOOKAON	
	(40)	3	NO				ASN3K40N	ASN31K40N		ASN32K40	IN		ASN33K40N	ø30
		4	NO			•					-	-		Miniature
		0	NC											Pilot Lights
	4NC (04)	2	NC NC				ASN3K04N	ASN31K04N		ASN32K04	N		ASN33K04N	
	(04)	3 4	NC											
		0	NO	•										
	s SS	2	NO			•	☆							TWN
	35	3	NC				ASN3K3SN-243							TWND
		4		Dui	nmy E	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.

# **Contact Block Mounting Position**



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

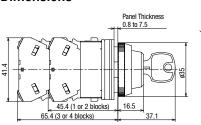
• Different key number is available upon request. Contact IDEC.

Selector switches with \* have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.

Terminal Screws: M3.5

See B-308 for gold-plated silver contacts.
See B-312 for bottom view.

### Dimensions



All dimensions in mm.

90° 2-position ion) 45

Terminal cover: integrated

29.8

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📩 Download catalogs and CAD from http://apac.idec.com

ARN

CS

# ø30 TWN Series

# ASN- K Key Selector Switches

Package Quantity: 1

Key Selector (Key No. 24401) ASN□K

APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Flush Silhouette
ø16
ø22
ø30
Miniature
Pilot Lights
TWN
TWND
401

Shape								C					
		Contact C	onfiguratio	n			Maintained	Spring Return from Right		Spring	) Retur	n from	Left
	Contract	Contact	Block		)perat Positic		1 2	1 2	Contact	Block		rator ition	1 2
	Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2	
	1N0	1	NO				ASN2K10N-	ASN21K10N-	0	NO	•		ASN22K10N-
90°	(10)	2		Dun	nmy E	Block	N024401	N024401	2	—	_		N024401
2-position	1N0-1NC	1	NO		•		ASN2K11N-	ASN21K11N-	0	NO	•		ASN22K11N-
	(11)	2	NC	•			N024401	N024401	2	NC		•	N024401
	2N0	0	NO		•	4	ASN2K20N-	ASN21K20N-	0	NO	•		ASN22K20N-
	(20)	2	NO		•		N024401	N024401	2	NO	•		N024401
		1	NO		•	4			0	NO	•		
	2N0-2NC	2	NC	•			ASN2K22N-	ASN21K22N-	2	NC		•	ASN22K22N-
	(22)	3	NO		•		N024401	N024401	3	NO	•		N024401
		4	NC	•					4	NC			
		Contact C	onfiguratio	n			Maintained	Spring Return from Right	Spring	g Return fro	om Lef	t	Spring Return Two-way
	Contact	Contact	Block		perat Positic		1 0 2	1 0 2					
	CUIIIdGI	Mounting Position	Contact	1	0	2				$\bigvee$			$\bigvee$
	2N0	1	NO	•			ASN3K20N-	ASN31K20N-	ļ	SN32K20I	V-		ASN33K20N-
	(20)	2	NO				N024401	N024401	1	024401			N024401
	2NC	1	NC				ASN3K02N-	ASN31K02N-	4	SN32K02I	V-		ASN33K02N-
	(02)	2	NC				N024401	N024401	1	024401			N024401
		1	NO										
	2N0-2NC	2	NO				ASN3K22N-	ASN31K22N-	4	SN32K22I	V-		ASN33K22N-
45°	(22)	3	NC				N024401	N024401	1	024401			N024401
3-position		4	NC										
		1	NO										
	4N0	2	NO			•	ASN3K40N-	ASN31K40N-	4	SN32K40I	N-		ASN33K40N-
	(40)	3	NO	•			N024401	N024401	1	024401			N024401
		4	NO										
		1	NC										
	4NC	2	NC				ASN3K04N-	ASN31K04N-	<i> </i>	SN32K04I	V-		ASN33K04N-
	(04)	3	NC				N024401	N024401		024401			N024401
		4	NC										
		1	NO	•									
	☆	2	NO			•	ASN3K3SN-						
	× 3S	3	NC				243-N024401	—		_			—
		4	_	Dun	nmy E	Block	210 11021101						

• Cylinder: Chrome-plated

ARN

CS

• 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.

### **Contact Block Mounting Position**

# 4

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

### Dimensions

Panel Thickness 0.8 to 7.5 Ø ģ B B 45.4 (1 or 2 blocks) 16.5 65.4 (3 or 4 blocks)

All dimensions in mm.

90° 2-position

Terminal Screws: M3.5

Terminal cover: integrated

# For more information, visit http://apac.idec.com

Switches &

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

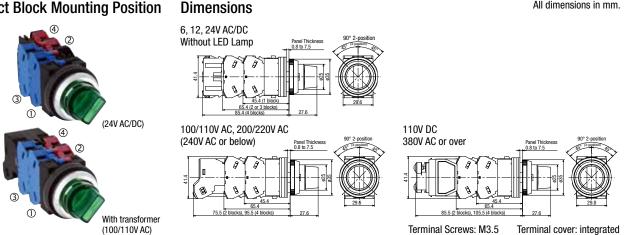
					Base	3)	Ĩ								Pilot Lights
		Contact Co	onfigurati	on			(24V AC/DC)	Spring Return from Right		Spring	g Retu	ırn fro	om Left		APEM Switches & Pilot Lights
		Contact	Block	Oper		Rated		Ŭ	Contact	Block		rator	]	Color	Control Boxes
	Contact	Mounting Position	Contact	Posit		Voltage	1 2		Mounting Position	Contact	Posi 1	ition 2		Code	Emergency Stop Switches
ы		1 0310011	NO			24V AC/DC	ASLN22211DN*	ASLN212211DN*	1 0310011	NO	•	_	ASLN222211DN*		Enabling Switches
2-position	1NO-1NC (11)	2	NC			100/110V AC	ASLN21611DN*	ASLN211611DN*	2	NC			ASLN221611DN*		Safety Products
° 2-p	(11)					200/220V AC	ASLN22611DN*	ASLN212611DN*			_		ASLN222611DN*	R	
°06	2N0	① ②	NO NO		_	24V AC/DC 100/110V AC	ASLN22220DN*	ASLN212220DN*	① ②	NO NO	•		ASLN222220DN*	G Y	Explosion Proof
	(20)	2				200/220V AC	ASLN21620DN* ASLN22620DN*	ASLN211620DN* ASLN212620DN*		NU	•		ASLN221620DN* ASLN222620DN*	A	Terminal Blocks
		1	NO			24V AC/DC	ASLN22222DN*	ASLN212222DN*	0	NO	•		ASLN222222DN*	S	
	2N0-2NC	2	NC			100/110V AC	ASLN21622DN*	ASLN211622DN*	2	NC		۲	ASLN221622DN*	PW	Relays & Sockets
	(22)	3	NO			200/220V AC	ASLN22622DN*	ASLN212622DN*	3	NO	۲		ASLN222622DN*		Circuit Protectors
		4	NC				_		4	NC		•			
		Contact Co	onfigurati	on			Maintained	Spring Return from Right	Spring	Return fr	om Le	eft	Spring Return Two-Way		Power Supplies
	Contrat	Contact	Block	Oper Posi		Rated Voltage	1 0 2	1 0 2		1,0 2	2		1,0,2	Color Code	LED Illumination
	Contact	Mounting Position	Contact	1 0	2		$\checkmark$			$\bigvee$					Controllers Operator
	2N0	1	NO	•		24V AC/DC	ASLN32220DN*	ASLN312220DN*	-	N322220			ASLN332220DN*		Interfaces
	(20)	2	NO				ASLN31620DN*	ASLN311620DN*		N321620			ASLN331620DN*		Sensors
	( -7		NO			200/220V AC	ASLN32620DN*	ASLN312620DN*		N322620			ASLN332620DN*		
5	2NC	 ②	NC NC		T	24V AC/DC 100/110V AC	ASLN32202DN* ASLN31602DN*	ASLN312202DN* ASLN311602DN*		N322202			ASLN332202DN* ASLN331602DN*		AUTO-ID
sitic	(02)	Ċ				200/220V AC	ASLN32602DN*	ASLN312602DN*		N322602			ASLN332602DN*		
3-pc		1	NO			24V AC/DC	ASLN32222DN*	ASLN312222DN*		N322222			ASLN332222DN*	R	
45° 3-position	2N0-2NC	2	NO			100/110V AC	ASLN31622DN*	ASLN311622DN*	1	N321622			ASLN331622DN*	G	Flush Silhouette
Ч	(22)	3	NC		₽	200/220V AC	ASLN32622DN*	ASLN312622DN*	ASL	N322622	2DN*		ASLN332622DN*	Y	Flush Sillouette
		<u>(4)</u>	NC						4.01					A S	ø16
	4N0	 ②	NO NO	•		24V AC/DC 100/110V AC	ASLN32240DN* ASLN31640DN*	ASLN312240DN* ASLN311640DN*		N322240			ASLN332240DN* ASLN331640DN*	PW	ø22
	4NO (40)	3	NO	•		200/220V AC	ASLN31640DN*	ASLN311640DN*		N322640			ASLN331640DN*		WLL
	(,	4	NO		•				AUL						ø30
		0	NC		-	24V AC/DC	ASLN32204DN*	ASLN312204DN*	ASL	N322204	DN*		ASLN332204DN*		Miniature
	4NC	2	NC			100/110V AC	ASLN31604DN*	ASLN311604DN*		N321604			ASLN331604DN*		
	(04)	<u>3</u> (4)	NC NC		₽	200/220V AC	ASLN32604DN*	ASLN312604DN*	ASL	N322604	DN*		ASLN332604DN*		Pilot Lights

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

• Illuminated selector switches have an LED lamp installed.

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

# **Contact Block Mounting Position**



Download catalogs and CAD from http://apac.idec.com

• Turn the operator to each position accurately.

• See **B-309** for gold-plated silver contacts.

• See B-314 for bottom view.

All dimensions in mm.

### B-320

# ø30 TWN Series

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

Σt										
Lig						0	perator Opera	tion and Circ	uit	
ot Lights			Cont	act	Maint 1	tained 2		Return Right		Return Left
			Bloo	ck		/	'\	$\geq$		/
APEM Switches &	Contact Configuration	Circuit Code			Knob Lever	Кеу	Knob Lever	Key	Knob Lever	Кеу
Pilot Lights						r Position	Operator	Position		r Position
Control Boxes			Mounting	Contact	1	2	1	2	1	2
Emergency Stop Switches			Position	contact	Ś	Ø	<b>N</b>	Ø	S	Ø
Enabling	10	Not	1	NO		•		•		
Switches	10	required	2	—	Dumm	y Block	Dumm	y Block	Dumm	y Block
Safety Products	01	Not	1	NC	•		•			•
Explosion Proof	01	required	2	_	Dumm	y Block	Dumm	y Block	Dumm	y Block
		☆	0	EM						
Terminal Blocks	0.0	118	2	LB						
Relays & Sockets	2R	☆	0	EM						
Circuit		168	2	LB		-				
Protectors										

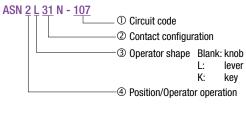
Protectors		1			· · · · ·								
Power Supplies								perator 0			r		
					N	laintain	ied		ring Ret			ring Ret	
LED Illumination							0	fi	rom Righ	nt	1	from Lef	-
Controllers			Cont Bloo				,2			2			2
Operator Interfaces	Contact Configuration	Circuit Code			Knob Lever	Key	Illumi- nated	Knob Lever	Key	Illumi- nated	Knob Lever	Key	Illumi- nated
Sensors													
					Oper	rator Po	sition	Ope	rator Pos	sition	Oper	rator Pos	ition
AUTO-ID			Mounting	Contact	1		2	1		2	1		2
			Position				Ø	۲	,	Ø		,	Ø
	11	Not	1	NO			•			•			
Flush Silhouette	11	required	2	NC	•			•					•
	20	Not	1	NO			•			•	•		
ø16	20	required	2	NO			•			•	•		
ø22	02	Not	1	NC	•			•					•
<u><u></u></u>	02	required	2	NC									•
ø30			1	NO			•			•	•		
Miniature		Not	2	NC	•			•					•
	22	required	3	NO			•			•	•		
Pilot Lights			4	NC									•
			1	NC	•			•					•
	01	107	2	NO			•			•	•		
	31	107	3	NO			•			•	•		
TWN			4	NO			•			•	•		
TWND			1	NO			•			•	•		
	10	Not	0	NO			•			•	•		
ARN	40	required	3	NO			•			•	•		
CS			4	NO			•			•			
00	• Coloctor outito	haa with A ha	vo o holf oon	toot onorol	ing ourro	nt (loo	d ouvitabin	a ourront		Datad ina	ulation w	altaga a	nd rotod o

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

# **Contact Block Mounting Position**



# Part No. Development



2: 2-position, maintained

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

Switches & Pilo

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

										(	Operato	or Opera	ation a	nd Circ	uit				lot Lights
Contact	Circuit Code	Cont Bloo		Оре	erator Pos	sition	N 1	laintaine 0	ed _2	Spr	'ing Re om Rig	turn jht	S	pring R from L 1 < 0	eturn eft	L I	ing Re wo-wa	y	ghts
Configuration				1	0	2		$\vee$			$\bigvee$				/				APEM
		Mounting Position	Contact			2 Ø	Knob/ Lever	Key	Illumi- nated	Knob/ Lever	Key	Illumi- nated	Knob Leve		Illumi- nated		Key	Illumi- nated	Switches & Pilot Lights
		0	NO		U														Control Boxes
	202	2	NC					V			V			V			√		Emergency Stop Switches
11	203	① ②	NC NO					$\checkmark$			$\checkmark$			$\checkmark$			$\checkmark$		Enabling Switches
	303	0	NC NO		•	•		V			V			√			√		Safety Products
20	Not	0	NO	•		•		.1			.1								Explosion Proof
20	required	2	NO			•		V			V			V			V		Terminal Blocks
02	Not required	① ②	NC NC				-	$\checkmark$			$\checkmark$			$\checkmark$			$\checkmark$		Relays & Sockets
		0	NO	•															Circuit
	Not required	2 3	NO NC				-	$\checkmark$			$\checkmark$			$\checkmark$			$\checkmark$		Protectors
	roquirou	() (4)	NC				-												Power Supplies
		0	NO	•															LED Illumination
	209	0	NC				_	$\checkmark$			V			_			_		Controllers
	200	3	NC				-	v			v								
		(4)	NO																Operator Interfaces
		① ②	NC NO																Sensors
22	210	3	NC				-	$\checkmark$			$\checkmark$			$\checkmark$			$\checkmark$		
		4	NO			•	1												AUTO-ID
		0	NC		•														
	310	0	NO			•		V			_			_			_		
	010	3	NC		•		_	v											Flush Silhouette
		4	NO			•													
		① ②	NO NO	•		•													ø16
	311	3	NC		•	-		$\checkmark$			$\checkmark$			$\checkmark$			$\checkmark$		ø22
		4	NC																ø30
		0	NO	•															030
40	Not	2	NO			•	]	./			./			./			./		Miniature
40	required	3	NO	•				V			V			V			V		Pilot Lights
		4	NO			•													
		0	NC				-												
04	Not	2	NC				-	$\checkmark$						$\checkmark$			$\checkmark$		
	required	3 ④	NC NC					-											TWN
		(4) (1)	NO	•															
	☆	Q Q	NO			•	1												TWND
3S	243	3	NC		•		۱ ا	/	—		—			—			—		ARN
		4		Du	ummy Blo	ock													CS

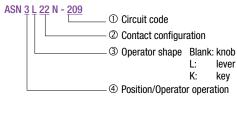
• Selector switches with 🖄 have a half contact operating current (load switching current value). Rated insulation voltage and rated current remain the same.

 $\bullet$  On selector switches with  $\updownarrow$  , the contact blocks may overlap each other while turning the ring or lever operator.

# **Contact Block Mounting Position**



### Part No. Development



- 3: 3-position, maintained
- 31: 3-position, spring return from right
- 32: 3-position, spring return from left
- 33: 3-position, spring return two-way

# **ASBN2 Selector Pushbuttons**

lot Lights				Î							
ligh						<u> </u>	Ring P	osition	D'a la l		
lts	Shape	Contact Configuration	Circuit Code	Con Blo		Left		C	Right	Button Color Code	Ring Operator
APEM				Mounting Position	Contact	Normal	Pushl Push	outton Normal	Push	0000	Part No. (Ordering No.)
Switches &				1 0011011	NO	Normai		ΝΟΠΠαι	•		(ordoning no.)
Pilot Lights	Ring Operator (90°2-position) ASBN2		A03	 ②	NC	•	•		-		ASBN211N-A03*
Control Boxes	AUDINZ	11	☆	0	NC	•				P	<u>ل</u>
Emergency Stop Switches		(1NO-1NC)	К04	2	EM		•			B G	ASBN211N-K04*
Enabling			G03	1	NO		•		Blocked	R Y	ASBN211N-G03*
Switches				2	NC	•		•		ř	NODRETTIT GOO
Safety Products		20	D01	0	NO		•				ASBN220N-D01*
Explosion Proof		(2NO)		2	NO				•		
	1			0	NO	-	•		•		
Terminal Blocks			A08	2	NC	•			•		ASBN222N-A08*
Relays & Sockets				3	NO		•		•		
Circuit	Al (		☆ C10	(4)	NC	•			-		
Protectors				0	NO		•		•		
Power Supplies				2	NO NC	•			•		
LED Illumination			610	3 4	NC						ASBN222N-C10*
				(4) (1)	NO		•				
Controllers				 ②	NO		•		•		
Operator			D10	3	NC	•			-		ASBN222N-D10*
Interfaces				4	NC			•			
Sensors				0	NO		•				
AUTO-ID		22	☆	2	NO				•	B G	\$
		(2NO-2NC)	E10	3	NC					R	ASBN222N-E10*
				4	NC					Y	
				1	NO				•		
Flush Silhouette			\$	2	NO		•				☆
ø16			F10	3	NC						ASBN222N-F10*
010				4	NC						
ø22				0	NO						
ø30			G10	2	NO		•		Blocked		ASBN222N-G10*
				3	NC	•		•	Dioonod		AUDINZZZNEUTUW
Miniature				4	NC	•		•			
Pilot Lights				0	NC	•					
			☆	2	NC	•					$\checkmark$
			K15	3	EM		•				ASBN222N-K15*
	- Crasify a salar anda in place of . it			4	EM						

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

B (black), G (green), R (red), Y (yellow)

• Bezel (metal): Chrome-plated

TWND

ARN

CS

• 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.

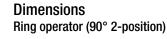
• When using the selector pushbutton, do not turn the ring operator with the pushbutton depressed. Otherwise, damage or failure may be caused.

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

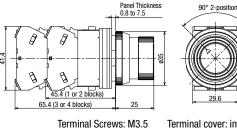
• See B-312 for bottom view.

# **Contact Block Mounting Position**





(All dimensions in mm.)



Terminal cover: integrated

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

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

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

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

• Round bezel (metal): chrome-plated

• Square bezel (metal): chrome-plated

• Pilot lights have an LED lamp installed.

• See B-346 for the marking plate size of rectangular pilot lights.

• See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

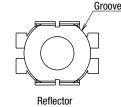
Terminal cover is installed on pilot lights for electric shock prevention.

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

Note: DC-DC converter types are not approved by UL and CSA, and not CE compliant. • See B-314 for bottom view.

### Reflector

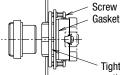
- 1. The lamp housing of the square LED illuminated pilot lights has a built-in reflector.
- Make sure that the reflector does not fall off when removing the lens or making plate.
- 3. When replacing the LED lamp of UPQN4 (rectangular), use a lamp holder tool (0R-55).
- 4. To remove the reflector, insert a flat screwdriver inside the groove of the reflector and lightly push out.



### Panel Mounting of Square Pilot Lights

Tighten the square bezel to the operator and position the bezel correctly.
 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

ø30
Miniature
Pilot Lights
TMN

TWN	
TWND	
ARN	
CS	

**Switches & Pilot Lights** 

xplosion Proof

erminal Blocks

elays & Sockets

ircuit rotectors

ower Supplies

LED Illumination

Controllers

Operator

Interfaces Sensors

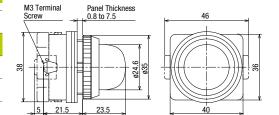
AUTO-ID

Flush Silhouette ø16 ø22

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

### Round APN1





Terminal screws: M3

52.5

Terminal screws: M3

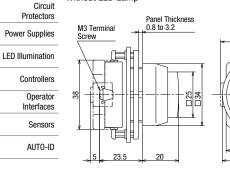
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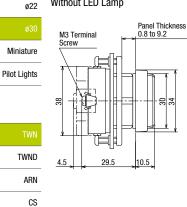
### Square Extended UPQN3B



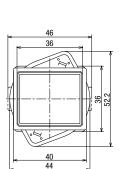


### Rectangular (Marking) UPQN4

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

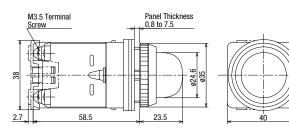


• See B-349 for wiring.



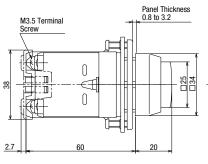
### Terminal screws: M3

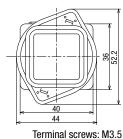
100 to 480V AC, 110V DC (Terminal Cover: N-VL3)



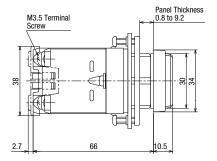
Terminal screws: M3.5

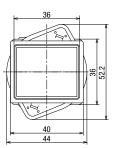
### 100 to 480V AC, 110V DC (Terminal Cover: N-VL3)





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





Terminal screws: M3.5

APEM

Pilot L

Control Boxes

Stop Switches Enabling

Explosion Proof

Terminal Blocks

Flush Silhouette

ø16

Emergency

Switches Safety Products

Switches & Pi

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

						Package Quantity: 1	ē
Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)	Pilot Lights
Flush		1N0	ABD110N*	В			
ABD1 AOD1		1NC	ABD101N*	G			
	Momentary	1NO-1NC	ABD111N*	R Y			APEM
	Womontary	2N0	ABD120N*	S	Pan 	to 7.5 Ø39	Switches &
		2NC	ABD102N*	W			Pilot Lights
		2N0-2NC	ABD122N*	Note		8	Control Boxes
		1N0	AOD110N*	B G			Emergency
		1NC	AOD101N*	R	45.4 (1 or 2 blocks)	29.4	Stop Switches
	Maintained	1NO-1NC	AOD120N+	Y	65.4 (3 or 4 blocks) 9	<u>40</u>	Enabling Switches
		2N0 2NC	AOD120N*	S			Safety Products
		2NC 2NO-2NC	AOD102N* AOD122N*	W Note			
Extended		1N0	ABD210N*				Explosion Proof
ABD2 AOD2		1NC	ABD210N*	В			Terminal Blocks
		1N0-1NC	ABD211N*	G R			
	Momentary	2N0	ABD220N*	Ŷ	Pa	to 7.5 Ø39	Relays & Sockets
		2NC	ABD202N*	S		to 7.5 Ø39	Circuit Protectors
		2N0-2NC	ABD222N*	W			
		1N0	AOD210N*	D		832	Power Supplies
		1NC	A0D201N*	B G			LED Illumination
	Maintained	1NO-1NC	AOD211N*	R	45.4(1 or 2 blocks) 65.4(3 or 4 blocks) 14	29.4	Controllers
	Wallitalleu	2N0	AOD220N*	Y			Operator
		2NC	A0D202N*	S W			Interfaces
		2N0-2NC	A0D222N*				Sensors
Extended with Half Shroud ABGD2		1N0	ABGD210N*	В			
AOGD2		1NC	ABGD201N*	G			AUTO-ID
	Momentary	1NO-1NC	ABGD211N*	R Y			
		2N0	ABGD220N*	S		Panel Thickness 0.8 to 3.5 ø39	
250		2NC	ABGD202N*	W			Flush Silhouette
		2NO-2NC 1NO	ABGD222N* AOGD210N*		4. <b>1</b>		
		1NC	AUGD210N* AOGD201N*	В		0.24	ø16
		1N0-1NC	AOGD201N*	G R	40.9 (1 or 2 blocks) 18.5 60.9 (3 or 4 blocks) 20.5	29.4	ø22
	Maintained	2N0	AOGD220N*	r Y		'⊶ ⊫ <u>40</u> ⊸l	
		2NC	AOGD202N*	S			ø30
		2N0-2NC	A0GD222N*	W			Miniature
Extended with Full Shroud		1N0	ABFD210N*	P			Pilot Lights
ABFD2 AOFD2		1NC	ABFD201N*	B G			
AULUZ	Momentary	1NO-1NC	ABFD211N*	R			
	womentary	2N0	ABFD220N*	Y	Par	to 6 ø39	
		2NC	ABFD202N*	S W			TWN
		2N0-2NC	ABFD222N*				
		1N0	AOFD210N*	В			TWND
		1NC	AOFD201N*	G	45.4 (1 or 2 blocks) 14	29.4	ARN
	Maintained	1NO-1NC	AOFD211N*	R Y	45.4 (1 or 2 blocks) 14 65.4 (3 or 4 blocks) 16.		
		2N0	AOFD220N*	r S			CS
		2NC	AOFD202N*	Ŵ			
		2N0-2NC	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.

• See B-312 for bottom view.

• Terminal screws: M3.5

• Integrated terminal cover

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

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

# ø30 TWND Series

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

ilot						Package Quantity:			
liot Lights	Shape	Operation	Contact	Part No. (Ordering No.)	Button Color Code	Dimensions	(All dimensions in mm.)		
0,	Mushroom		1N0	ABD310N*	В				
	ABD3 AOD3		1NC 1NO-1NC	ABD301N* ABD311N*	G R				
APEM		Momentary	2N0	ABD320N*	n Y	Panel Thickness 0.8	<u>10 7.5</u>		
Switches &			2NC	ABD302N*	S				
Pilot Lights			2NO-2NC	ABD322N*	W		<u> </u>		
Control Boxes			1N0 1NC	AOD310N* AOD301N*	B G				
Emergency Stop Switches		Maintained	1NO-1NC	A0D311N*	R	45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 22	40		
Enabling		wamaneu	2N0	AOD320N*	Y S				
Switches			2NC 2NO-2NC	AOD302N* AOD322N*	W				
Safety Products	Mushroom with Full Shroud		1N0	ABGD310N*	В				
Explosion Proof	ABGD3 AOGD3		1NC	ABGD301N*	G		<u>6.5</u> <u>29.4</u>		
Terminal Blocks	AUGDS	Momentary	1NO-1NC 2NO	ABGD311N* ABGD320N*	R Y				
Delaure & Ocializate			2NC	ABGD302N*	S				
Relays & Sockets			2NO-2NC	ABGD322N*	W				
Circuit Protectors			1N0 1NC	AOGD310N* AOGD301N*	B	43.9 (1 or 2 blocks) 63.9 (3 or 4 blocks) 23.5	40		
Power Supplies		Maintainad	1NO-1NC	AOGD301N*	G R	+			
LED Illumination	-	Maintained	2N0	AOGD320N*	Y				
			2NC 2NO-2NC	AOGD302N* AOGD322N*	S W				
Controllers	Jumbo Mushroom		1N0	ABD410N*			29.4		
Operator Interfaces	ABD4		1NC	ABD401N*		Panel Thickness 0.8 to 7.5			
Sensors	T		1NO-1NC	ABD411N*	B				
		Momentary	2N0	ABD420N*	G R	865	(		
AUTO-ID			2NC	ABD402N*	Y				
			2NO-2NC	ABD422N*		45.4 (1 or 2 blocks) 65.4 (3 or 4 blocks) 29	40		
	Jumbo Mushroom with		1N0	ABGD410N*		Panel Thickness 0.8 to 7.5	29.4		
Flush Silhouette	Shallow Shroud ABGD4		1NC	ABGD401N*					
ø16	Abub4		1NO-1NC		В				
		Momentary		ABGD411N*	G R	8022			
ø22			2N0	ABGD420N*	Y				
ø30			2NC	ABGD402N*		45.4 (1 or 2 blocks)			
Miniature			2N0-2NC	ABGD422N*		65.4 (3 or 4 blocks) 29	40		
Pilot Lights	Jumbo Mushroom with Deep Shroud		1N0	ABFD410N*		Panel Thickness 0.8 to 7.5	29.4		
	ABFD4		1NC	ABFD401N*					
			1NO-1NC	ABFD411N*	B G		// (   h )		
		Momentary	2N0	ABFD420N*	R				
TWN			2NC	ABFD402N*	Y				
TWND			2N0-2NC	ABFD422N*		45.4 (1 or 2 blocks)			
ARN	Pin Lock (On-off Lock Type) (*1)		1N0	ABD8P10N*		P			
CS	ABD8P		1NC	ABD8P01N*	В		10		
ნა	Contraction in the second		1NO-1NC	ABD8P11N*	G				
			2N0	ABD8P20N*	R Y	Panel Thickness 0.8 to 7.5			
	A Company	600	2NC 2NO-2NC	ABD8P02N* ABD8P22N*					
	Pin Lock (On-lock Type) (*1)		1N0	ABD8PN10N*			/ <b>//((C+3)))</b> }		
	ABD8PN		1NC	ABD8PN01N*	В				
	1 2 3		1NO-1NC	ABD8PN11N*	G	45.4 (1 or 2 blocks)	1. V.		
			2N0 2NC	ABD8PN20N* ABD8PN02N*	R Y	65.4 (3 or 4 blocks) 27.5	$\checkmark$		
			2NC 2NO-2NC	ABD8PN02N* ABD8PN22N*					
	• Specify a color code in place of * in					other contact configurations and gold			

• 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 insert-

ing the pin (the button cannot be locked in reset position).

• Pushbuttons with 1 or 3 contact blocks have a dummy block.

• See B-307 for other contact configurations and gold-plated silver contacts. • See B-342 for maintenance parts.

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

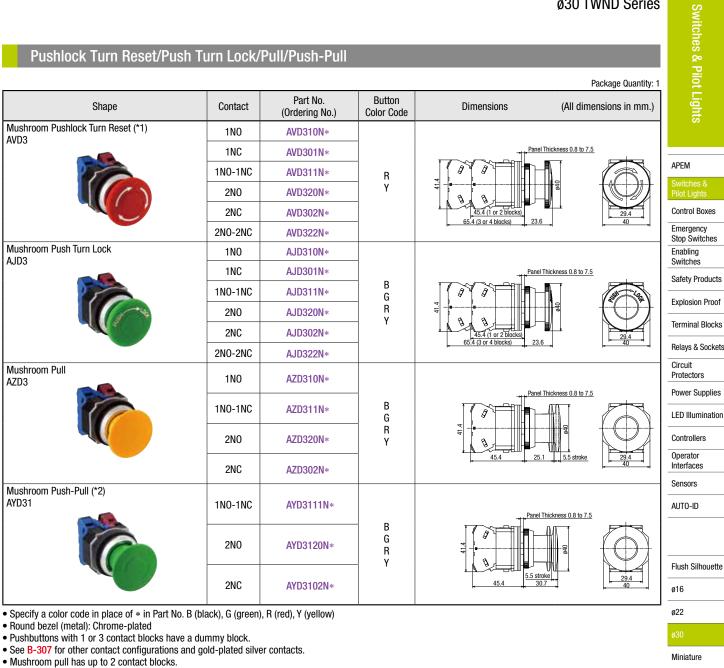
• See B-312 for bottom view.

• Terminal screws: M3.5

· Integrated terminal cover

Switches & Pilot Lights

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



\*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).

\*2) Push-Pull switches with red button cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).

• See B-312 for bottom view.

• Terminal screws: M3.5

Integrated terminal cover

Pushbutton operation

### Pushlock Turn Reset

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

Push Turn Lock

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

### <u>Pull</u>

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					
Contact	Normal	Pull				
1N0	ملم	٥F				
2N0-2NC	o <sup>⊥</sup> o •⊥•	• •				
2N0	میں میں	0 0 0 1 0				
2NC	•-	<u></u>				

Push-Pull contact operation							
Contact	AYD31 Push Pull						
1N0	⊸ •_•						
2N0	میہ میں						
2NC	•_•	919 919					



Pilot Lights

TWN

ARN

CS

# LED Illuminated Extended/Extended with Full Shroud

유 _							Package Quantity:
Pilot Lights	Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Button Color Code
0	Extended				1NO-1NC	ALD22211DN*	
	ALD2			24V AC/DC	2N0	ALD22220DN*	7
	AOLD2				2NC	ALD22202DN*	R
APEM					1NO-1NC	ALD21611DN*	G
Switches &			Momentary	100/110V AC	2N0	ALD21620DN*	- Υ
Pilot Lights					2NC	ALD21602DN*	— A S
Control Boxes					1NO-1NC	ALD22611DN*	PW
Emergency				200/220V AC	2N0	ALD22620DN*	
Stop Switches	(24V AC/DC)	5400			2NC	ALD22602DN*	
Enabling Switches	(24V A0/DC)	BA9S			1NO-1NC	AOLD22211DN*	
				24V AC/DC	2N0	AOLD22220DN*	
Safety Products					2NC	AOLD22202DN*	R
Explosion Proof					1NO-1NC	AOLD21611DN*	G
·			Maintained	100/110V AC	2N0	AOLD21620DN*	Y Y
Ferminal Blocks					2NC	AOLD21602DN*	— A S
elays & Sockets	With transformer (100/110V AC)			200/220V AC	1NO-1NC	AOLD22611DN*	PW
					2N0	AOLD22620DN*	
Circuit Protectors					2NC	AOLD22602DN*	
Power Supplies	Extended with Full Shroud			24V AC/DC	1NO-1NC	ALFD22211DN*	
Power Supplies	ALFD2				2N0	ALFD22220DN*	
ED Illumination	A0LFD2				2NC	ALFD22202DN*	R
				100/110V AC	1NO-1NC	ALFD21611DN*	G
Controllers			Momentary		2N0	ALFD21620DN*	Y Y
Operator			-		2NC	ALFD21602DN*	— A S
Interfaces					1NO-1NC	ALFD22611DN*	PW
Sensors				200/220V AC	2N0	ALFD22620DN*	
AUTO-ID	(24V AC/DC)	5400			2NC	ALFD22602DN*	
		BA9S			1NO-1NC	AOLFD22211DN*	
				24V AC/DC	2N0	AOLFD22220DN*	
					2NC	AOLFD22202DN*	R
					1NO-1NC	AOLFD21611DN*	G
Iush Silhouette			Maintained	100/110V AC	2N0	AOLFD21620DN*	Y
ø16	With transformer				2NC	AOLFD21602DN*	— A S
					1NO-1NC	AOLFD22611DN*	PW
ø22				200/220V AC	2N0	AOLFD22620DN*	
ø30	(100/110V AC)				2NC	AOLFD22602DN*	

· Illuminated pushbuttons have an LED lamp installed. Pilot Lights

• Round bezel (metal): Chrome-plated • See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC. dummy block.

See B-314 for bottom view.

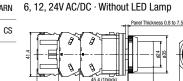
### Dimensions

### Extended, LED illuminated (momentary/maintained) ALD2/AOLD2 (terminal screws M3.5) Integrated terminal cover

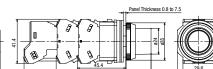
23

ARN

TWN



65.4 (2 or 3 bl 35.4 (4 blocks)

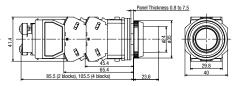


olocks), 95.5 (4

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

110V DC, 380V AC or over

110V DC, 380V AC or over



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







locks) 94 (4

Panel Thickness 0.8 to 6



Panel Thickness 0.8 to 6

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

						Package Quantity: 1	로
Shape	Base	Operation	Operating Voltage	Contact	Part No. (Ordering No.)	Color Code	llot Lights
Mushroom (ø40)				1NO-1NC	ALD32211DN*		0,7
ALD3			24V AC/DC	2N0	ALD32220DN*		
AOLD3				2NC	ALD32202DN*	D.	APEM
				1NO-1NC	ALD31611DN*	R G	
		Momentary	100/110V AC	2N0	ALD31620DN*	Y	Switches & Pilot Lights
				2NC	ALD31602DN*	A S	Control Boxes
				1NO-1NC	ALD32611DN*	5	
			200/220V AC	2N0	ALD32620DN*		Emergency Stop Switches
(24V AC/DC)	BA9S			2NC	ALD32602DN*		Enabling
	DA95	Maintained	24V AC/DC	1NO-1NC	AOLD32211DN*		Switches
				2N0	AOLD32220DN*		Safety Products
				2NC	AOLD32202DN*	R	Explosion Proof
			100/110V AC	1NO-1NC	AOLD31611DN*	G	
				2N0	AOLD31620DN*	Y A	Terminal Blocks
				2NC	AOLD31602DN*	W	Relays & Sockets
			200/220V AC	1NO-1NC	AOLD32611DN*	S	
With transformer				2N0	AOLD32620DN*		Circuit Protectors
(100/110V AC)				2NC	AOLD32602DN*		Power Supplies
Mushroom Pushlock Turn Reset (*1)				1NO-1NC	AVLD32211DN*		
AVLD3			24V AC/DC	2N0	AVLD32220DN*		LED Illumination
				2NC	AVLD32202DN*		Controllers
				1NO-1NC	AVLD31611DN*		
	BA9S	_	100/110V AC	2N0	AVLD31620DN*	R	Operator Interfaces
				2NC	AVLD31602DN*		Sensors
				1NO-1NC	AVLD32611DN*		
(24V AC/DC)			200/220V AC	2N0	AVLD32620DN*		AUTO-ID
				2NC	AVLD32602DN*		

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

• Illuminated pushbuttons have an LED lamp installed.

• Round bezel (metal): Chrome-plated

• See B-308 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

• See B-308 for other contact configurations and gold-plated silver contacts.

• Illuminated pushbutttons of 24V AC/DC or below with 2 or 4 contact blocks have a dummy block.

\*1) Pushlock turn reset switches cannot be used as emergency stop switches. When emergency stop switches are required, use XN series emergency stop switches (ISO 13850 and IEC 60947-5-5 compliant).

• See B-314 for bottom view.

### Illuminated pushbutton operation

Pushlock Turn Reset

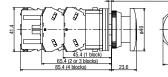
Button is maintained when pressed and is reset when turned clockwise.

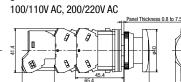


### Mushroom, LED illuminated (momentary/maintained)

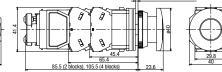
ALD3/AOLD3 (terminal screws M3.5) Integrated terminal cover

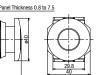
6, 12, 24V AC/DC · Without LED Lamp





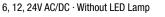
110V DC, 380V AC or over



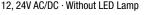


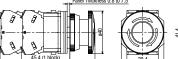
Mushroom Pushlock Turn Reset, LED illuminated AVLD (terminal screws M3.5)

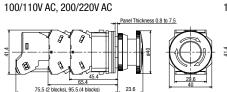
Integrated terminal cover



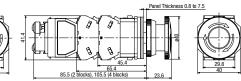








110V DC, 380V AC or over



CS

# ø30 TWND Series

# ASD Selector Switches (Knob Operator)



90° 2-p

APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Flush Silhouette
ø16
ø22
Miniature
Pilot Lights
TWN
TWN

Knob: Black

CS

45° 3-р

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.

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

### **Contact Block Mounting Position**



21	

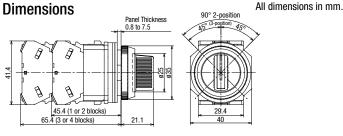
		Contact C	onfiguratio	n			Maintained	Spring Return from Right		Spring Return from Left			eft
		Contact Block			Operator Position		1 2	1 2	Contact	Block	Oper Posi	rator ition	1 2
	Contact	Mounting Position	Contact	1	2			$\sim$	Mounting Position	Contact	1	2	$\sim$
	1N0	1	NO		•		1000101	10004400	0	NO	•		10000100
0	(10)	2	_	Dun	וmy Blo	ck	ASD210N	ASD2110N	2		_	_	ASD2210N
position	1N0-1NC	1	NO		$\bullet$		ASD211N	ASD2111N	0	NO	٠		ASD2211N
	(11)	2	NC	۲			ASDZTIN	ASDZTTTN	2	NC			ASDZZTIN
	2N0	1	NO		$\bullet$		ASD220N	ASD2120N	1	NO	٠		ASD2220N
	(20)	2	NO		$\bullet$		ASDZZUN	ASDZTZUN	2	NO	۲		ASDZZZUN
		1	NO		$\bullet$				1	NO	٠		
	2N0-2NC	2	NC	۲			ASD222N	ASD2122N	2	NC			ASD2222N
	(22)	3	NO		●		AGDZZZN	ASDZIZZN	3	NO	•		ASDZZZZN
	(4) NC								4	NC			
		Contact Configuration					Maintained	Spring Return from Right	S	Spring Return from Left			Spring Return Two-way
	Contact	Contact	Block		perator Position		1 0 2	1  0  2					
	Contact	Mounting Position	Contact	1	0	2		$\bigvee$				$\bigvee$	
	2N0	1	NO	٠			ASD320N	ASD3120N	ASD3220N			ASD3320N	
	(20)	2	NO			•	ASDSZUN	ASDSTZUN					
	2NC	1	NC				ASD302N	ASD3102N	ASD3202N				V6D3303N
	(02)	2	NC				ASDSUZN	ASDSTOZN				ASD3302N	
		1	NO	●					ASD3222N				
	2N0-2NC	2	NO			•	ASD322N	ASD3122N				ACD2222N	
0	(22)	3	NC				AODOZZIN	AODUTZEN		RODULLEN	•		ASD3322N
position		4	NC										
		1	NO	•									
	4N0	2	NO			•	ASD340N	ASD3140N		ASD3240N	1		ASD3340N
	(40)	3	NO	۲			ADDOHUN	ACCOLLAN		RODOLADIN	•		A3D3340N
		4	NO			•							
		1	NC										
	4NC	2	NC				ASD304N	ASD3104N		ASD3204N			ASD3304N
	(04)	3	NC				ADDOUTIN	Abborom		NODOLOHN	•		A3D3304N
		4	NC										
		1	NO	•									
	☆ 3S	2	NO			•	☆	_		_			
	3S	3	NC		•		ASD33SN-243						—
		4	—	Dun	1my Blo	ck							

• Turn the operator to each position accurately.

• Selector switches with 1/2 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.



Terminal Screws: M3.5

Terminal cover: integrated

Package Quantity: 1

# ASD L Selector Switches (Lever Operator)

	r											Package Quantity: 1	liot
Shape	Lever Opera ASD⊡L	ator				1	2						Pilot Lights
													APEM Switches &
		Contact C	Configurati	ion		Maintained	Spring Return		Spri	ina Ret	turn fro	m l eft	Pilot Lights
					perator	_	from Right	0		-	rator		Control Boxes Emergency
	Contact	Contact Mounting		F	Position			Contact	[	Position			Stop Switches Enabling
		Position	Contact	1	2		×	Mounting Position	Contact	1	2	×	Switches
	1N0 (10)	0	NO			ASD2L10N	ASD21L10N	0	NO	•		ASD22L10N	Safety Products
90°	(10)	2	— NO	Dummy Block		CK		2	— NO	-			Explosion Proof
2-position	1NO-1NC (11)	① ②	NO NC	•		ASD2L11N	ASD21L11N	0	NO NC	•	•	ASD22L11N	Terminal Blocks
	2N0	0	NO	-	•			0	NO	•	-		
	(20)	 	NO		•	ASD2L20N	ASD21L20N	 	NO	•		ASD22L20N	Relays & Sockets
	,	0	NO		•			0	NO	•			Circuit
	2NO-2NC	2	NC	•		4000L00N	40001L00N	2	NC		•		Protectors
	(22)	3	NO			ASD2L22N	ASD21L22N	3	NO	•		ASD22L22N	Power Supplies
		4	NC					4	NC				LED Illumination
		Contact C	Configurati	ion		Maintained	Spring Return from Right	Sprin	g Return f	rom Le	eft	Spring Return Two-way	Controllers
		Contact Block		Operator Position		1 0 2	1 0,2	0 2 هـ 1				1, 0, 2	Operator Interfaces
	Contact	Mounting Position	Contact	1	2								Sensors
	2N0	0	NO	•									AUTO-ID
	(20)	2	NO			ASD3L20N	ASD31L20N		ASD32L2	ON		ASD33L20N	
	2NC	0	NC				ACD211.02N		4002010	201		V6D35I 05N	
	(02)	2	NC			ASD3L02N	ASD31L02N		ASD32L0	211		ASD33L02N	
		0	NO	•									Flush Silhouette
	2NO-2NC	2	NO			ASD3L22N	ASD31L22N		ASD32L2	2N		ASD33L22N	ø16
45°	(22)	3	NC				1000.		1000-1-	2		100000	
3-position		(4)	NC		$\mathbf{P}$								ø22
		0	NO	•									ø30
	4NO (40)	2	NO NO			ASD3L40N	ASD31L40N		ASD32L4	ON		ASD33L40N	Miniature
	(40)	3 ④	NO	•		•							
		0	NC										Pilot Lights
	4NC	 	NC										
	(04)	3	NC			ASD3L04N	ASD31L04N		ASD32L0	4N		ASD33L04N	
	. ,	4	NC										TMAL
		0	NO	•									TWN
	τ <sub>λ</sub> τ	2	NO										TWND
	☆ 3S	3	NC			ASD3L3SN-243			_			·	ARN
		4			nmy Blo								

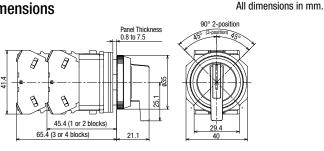
Lever: Black
Round bezel (metal): Chrome-plated
Selector switches with 1 or 3 contact blocks have a dummy block.
Knob operator can be installed at every 45 degrees intervals in addition to the positions shown in the above table.

**Contact Block Mounting Position** 



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.

### Dimensions



Terminal Screws: M3.5

Terminal cover: integrated

# ASD K Key Selector Switches

Package Quantity: 1

Key Selector (Key No. 0) ASD⊡K



	Shape														
APEM															
Switches & Pilot Lights									Carrian Datum						
Control Boxes			Contact C	Configurat	ion			Maintained	Spring Return from Right		Spri	ng Ret	urn fro	m Left	
Emergency Stop Switches		Contact	Contact	Contact Block		Operator Position		1 2	1 2	Contact Block		Operator Position		1. 2	
Enabling Switches		Contact	Mounting Position	Contact	1	2				Mounting Position	Contact	1	2		
Safety Products		1N0	0	NO		•		1000//101	10001/(101)	0	NO	•		A0D00//40N	
Explosion Proof	90°	(10)	2	-	Dummy Block		Block	ASD2K10N	ASD21K10N	2			_	ASD22K10N	
Terminal Blocks	2-position	1NO-1NC	0	NO		•		ASD2K11N	ASD21K11N	0	NO	•		ASD22K11N	
		(11)	2	NC	•		<u> </u>	AODERTIN	AUDEINTIN	2	NC		•	RODLERTIN	
Relays & Sockets		2N0	0	NO		•	-	ASD2K20N	ASD21K20N	0	NO	•		ASD22K20N	
Circuit		(20)	2	NO		•				2	NO	•			
Protectors			0	NO		•	-			0	NO	•	-		
Power Supplies		2NO-2NC	2	NC	•		-	ASD2K22N	ASD21K22N	2	NC		•	ASD22K22N	
LED Illumination		(22)	3 (4)	NO NC	•	•	-			3 ④	NO NC	•	•		
Controllers				Configurat	-			Maintained	Spring Return	Spring Return from Left		Spring Return			
Operator		Contact Block Operator Position							from Right		-	Two-way			
Interfaces Sensors		Contact	Mounting Position	Contact	1	2									
AUTO-ID		2N0	2NO ① NO ●												
		(20)	2	NO				ASD3K20N	ASD31K20N		ASD32K2	ASD33K20N			
		2NC	1	NC				ASD3K02N	ASD31K02N	ASD32K02N				ASD33K02N	
		(02)	2 1)	NC				AODOROZI	AODOTROZI		RODOLIKO	AUDUGINUZI			
Flush Silhouette				NO	•		-	-					ASD33K22N		
ø16		2NO-2NC	2 3	NO				ASD3K22N	ASD31K22N	ASD32K22N					
	45°	(22)		NC NC			P	-							
ø22	3-position		(4) (1)	NO	•	F									
ø30		4NO	 	NO			•	-							
Miniature		(40)	3	NO	•		-	ASD3K40N	ASD31K40N		ASD32K4	ON		ASD33K40N	
			4	NO	-		•	-							
Pilot Lights			0	NC											
		4NC	2	NC											
		(04)	3	NC				ASD3K04N	ASD31K04N		ASD32K0	4N		ASD33K04N	
			4	NC											
TWN			1	NO	•										
TWND		~	2	NO											
		☆ 3S	3	NC		•		ASD3K3SN-243	_						
ARN			4	_	Dun	nmy E	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.

**Contact Block Mounting Position** 



• 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 X 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.

45.4 (1 or 2 blocks)

65.4 (3 or 4 blocks)

### All dimensions in mm. Dimensions 90° 2-position Panel Thickness 0.8 to 7.5 Ĵ Ĺ ß ß

16.5

Terminal Screws: M3.5

Terminal cover: integrated

29.4

B-333

CS

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

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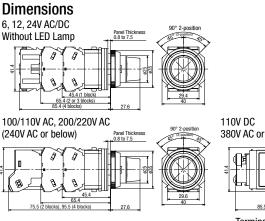
Switches & Pi

<u> </u>				<u> </u>			<u> </u>						Package	Quantity: 1	_ ≇ .
	Illuminate ASLD	ed Selecto	or Switch	nes (E	3A9S	Base	e)	1							lot Lights
								(24V AC/DC)							APEM
		Contact	Configura	ation				Maintained	Spring Return from Right		Spri	ing Retur	n from Left		Switches & Pilot Lights
		Contact	t Block		Operator Position		Operating	1 0	1 2	Contact	t Block	Operato Position		Color	Control Boxes
C		Mounting Position	Contact	+ 1	2		– Voltage			Mounting Position	Contact	1 2		Code	Emergency
			NO	-	•	-	24V AC/DC	ASLD22211DN*	ASLD212211DN*	1 OSITION	NO	•	ASLD222211DN*		Stop Switches Enabling
	1NO-1NC	2	NC	•	1	1	100/110V AC	ASLD21611DN*	ASLD211611DN*	2	NC			1	Switches
	(11)	<del></del> .			L	1	200/220V AC	ASLD22611DN*	ASLD212611DN*		Ĺ	L	ASLD222611DN*	1	Safety Products
ition		0	NO				24V AC/DC	ASLD22220DN*	ASLD212220DN*	0	NO		ASLD222220DN*	RG	Evaluation Proof
	2N0 (20)	2	NO				100/110V AC	ASLD21620DN*	ASLD211620DN*	2	NO		ASLD221620DN*	Y	Explosion Proof
	(20)						200/220V AC	ASLD22620DN*	ASLD212620DN*				ASLD222620DN*	A	Terminal Blocks
	-	1	NO			'	24V AC/DC	ASLD22222DN*	ASLD212222DN*	0	NO		ASLD222222DN*	S PW	Relays & Sockets
	2NO-2NC	2	NC			1 '	100/110V AC	ASLD21622DN*	ASLD211622DN*	2	NC		HOLDEETOLEDH		
	(22)	3	NO	'		1 1	200/220V AC	ASLD22622DN*	ASLD212622DN*	3	NO	•	ASLD222622DN*		Circuit Protectors
4		4	NC						!	4	NC		-		Power Supplies
			Configura				Quanting	Maintained	Spring Return from Right	Spring	g Return fro	om Left	Spring Return Two-way	Onlar	LED Illumination
		Contact		Opera	rator Po	sition	n Operating Voltage	1 0 2	1 0 2		1,0 2	2	1,0,2	Color Code	
		Mounting Position	Contact	t 1	0	2					$\searrow$		$\bigvee$		Controllers
	0110	1	NO				24V AC/DC	ASLD32220DN*	ASLD312220DN*	ASL	D322220	)DN*	ASLD332220DN*		Operator Interfaces
	2N0 (20)	2	NO	<u> </u>			100/110V AC	ASLD31620DN*	ASLD311620DN*	ASL	D321620	JDN*	ASLD331620DN*	] [	
	(20)						200/220V AC	ASLD32620DN*	ASLD312620DN*	ASL	D322620	JDN*	ASLD332620DN*	]	Sensors
	2NC	1	NC			Ĺ	24V AC/DC	ASLD32202DN*	ASLD312202DN*	-	D322202		ASLD332202DN*		AUTO-ID
	2NC (02)	2	NC				100/110V AC	ASLD31602DN*	ASLD311602DN*		D321602		ASLD331602DN*		
		·				ا ا	200/220V AC	ASLD32602DN*	ASLD312602DN*	-	D322602		ASLD332602DN*		
		0	NO	•	<u>   </u>	<u>⊢</u> '	24V AC/DC	ASLD32222DN*	ASLD312222DN*		D322222		ASLD332222DN*	R	
	2NO-2NC	2	NO	<u> </u> '		•	100/110V AC	ASLD31622DN*	ASLD311622DN*		D321622		ASLD331622DN*	G	Flush Silhouette
	(22)	3	NC	<u> _'</u>		₽	200/220V AC	ASLD32622DN*	ASLD312622DN*	ASLI	D322622	2DN*	ASLD332622DN*	Y	ø16
		4	NC		₽	<u>                                     </u>								A S	Ø10
	.	0	NO	•	$\vdash$		24V AC/DC	ASLD32240DN*	ASLD312240DN*	-	D322240		ASLD332240DN*	- PW	ø22
	4NO (40)	2	NO		$\vdash$	•	100/110V AC	ASLD31640DN*	ASLD311640DN*		D321640		ASLD331640DN*	-	ø30
	(40)	3	NO NO	•	$\vdash$		200/220V AC	ASLD32640DN*	ASLD312640DN*	ASLI	D322640	IDN*	ASLD332640DN*	-	000
			-	+		Ľ						4DMas		-	Miniature
	1110				╘╴		++							-	Pilot Lights
			-		F		++							-	1 IIUt Ligna
	(די)	(3) (4)	NC					H9FD95004DW.	A9ED912004D14*	HOLL	J322004	DIN*	A9FD995004DIA		
	4NC (04)		) ) )	NCNCNCNCNCNC	NC       NC       NC       NC       NC	NC     Image: Constraint of the second	NC     Image: Constraint of the second	NC         24V AC/DC           NC         100/110V AC           NC         200/220V AC	NC         24V AC/DC         ASLD32204DN*           NC         100/110V AC         ASLD31604DN*           NC         200/220V AC         ASLD32604DN*	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*           NC         100/110V AC         ASLD31604DN*         ASLD311604DN*           NC         200/220V AC         ASLD32604DN*         ASLD312604DN*	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*         ASLD           NC         Image: constraint of the second se	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*         ASLD322204           NC         100/110V AC         ASLD31604DN*         ASLD311604DN*         ASLD321604           NC         200/220V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604           NC         100/110V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604           NC         100/110V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604           NC         100/110V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*         ASLD32204DN*           NC         100/110V AC         ASLD31604DN*         ASLD311604DN*         ASLD321604DN*           NC         200/220V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604DN*           NC         100/110V AC         ASLD32604DN*         ASLD311604DN*         ASLD321604DN*           NC         100/110V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604DN*           NC         100/110V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604DN*	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*         ASLD322204DN*         ASLD332204DN*           NC         100/110V AC         ASLD31604DN*         ASLD311604DN*         ASLD321604DN*         ASLD331604DN*           NC         200/220V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604DN*         ASLD332604DN*           NC         -         -         -         -         -         -	NC         24V AC/DC         ASLD32204DN*         ASLD312204DN*         ASLD322204DN*         ASLD332204DN*           NC         100/110V AC         ASLD31604DN*         ASLD311604DN*         ASLD321604DN*         ASLD331604DN*           NC         200/220V AC         ASLD32604DN*         ASLD312604DN*         ASLD322604DN*         ASLD332604DN*           NC         -         -         -         -         -         -

R (red), G (green), Y (yellow), A (amber), S (blue). PW (pure white)
Round bezel (metal): Chrome-plated
Illuminated selector switches have an LED lamp installed.
Use a pure white (PW) LED for yellow (Y) illumination.
See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

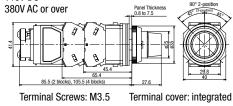
# **Contact Block Mounting Position Dimensions**





- dummy block. Turn the operator to each position accurately. See B-309 for gold-plated silver contacts. See B-314 for bottom view.





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# **ASBD2 Selector Pushbuttons**

Pilot											Package Quantity: 1
Pilot Lights	Shape	Contact Configuration	Circuit Code	Contact Block		Left	Ring Position			Button Color Code	Ring Operator
APEM				Mounting Position	Contact	Pushbutton Normal Push Normal Push		Push	Coue	Part No. (Ordering No.)	
Switches & Pilot Lights	Ring Operator (90°2-position) ASBD2			0	NO		•		•	В	
Control Boxes	ASDUZ	11 (1NO-1NC)	A03	0	NC	•				G R Y	ASBD211N-A03*
Stop Switches Enabling				0	NO		•		•	1	
Switches			A08	2	NC						
Safety Products				3	NO		٠				ASBD222N-A08*
Explosion Proof				4	NC						
			☆ C10	0	NO		•		•	В	
Terminal Blocks	<u> </u>			2	NO				•		☆
Relays & Sockets			C10	3	NC	•					ASBD222N-C10*
Circuit				(4)	NC						
Protectors				0	NO NO		•				
Power Supplies		22 (2NO-2NC)	D10	2 3	NC	•				B G R	ASBD222N-D10*
LED Illumination				(j) (4)	NC			•		Ŷ	
				0	NO		-				
Controllers				Q	NO		-		•		٨
Operator Interfaces			☆ E10	3	NC						☆ ASBD222N-E10∗
				4	NC						
Sensors				0	NO						
AUTO-ID			54	2	NO		•				\$
			☆ F10	3	NC			•			ASBD222N-F10*
				4	NC						

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

• Bezel (metal): Chrome-plated Flush Silhouette

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Miniature

Pilot Lights

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• 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. ø16

• When using the selector pushbutton, do not turn the ring operator with the pushbutton depressed. Otherwise, damage or failure may be caused.

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

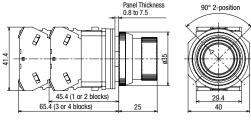
• See B-312 for bottom view.

### **Contact Block Mounting Position**



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

All dimensions in mm.



Terminal Screws: M3.5

Terminal cover: integrated

### Pilot Lights (Round)

						Package Quantity: 1	et	
Shape	Illumination	Base	Operating Voltage	Part No. (Ordering No.)	Color Code	LED Lamp Part No.	Lights	
Round APD1			24V AC/DC	APD122DN*	R, G, Y, A, S, PW	LSRD-2		
	LED	BA9S	100/110V AC	APD116DN*	R, G, Y, A, S, PW		APEM	
(24V AC/DC)			200/220V AC	APD126DN*	LSRD-6 R, G, Y, A, S, PW		Switches & Pilot Lights	
(241 A0/D0)					,,.,.,.,		Control Boxes	

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

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

Round bezel (metal): Chrome-plated

• Pilot lights have an LED lamp installed.

• See B-309 for other operating voltage such as 6V AC/DC, 12V AC/DC, and 110V DC.

See B-309 for how to specify units without LED lamps.
Terminal cover is installed on pilot lights for electric shock prevention.

Туре **Terminal Cover** Quantity 6V, 12V, 24V AC/DC APN-PVL 1

100V/110V AC, 200/220V AC N-VL3 1 110V DC N-VL3 1

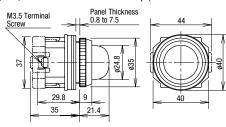
Note: DC-DC converter types are not approved by UL and CSA, and not CE compliant. • See B-314 for bottom view.

### **Dimensions**

• See B-349 for wiring.

### Round, LED illuminated

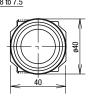
6V, 12V, 24V AC/DC · Without LED Lamp (Terminal Cover: APD-PVL)



Terminal Screws: M3.5

All dimensions in mm.

100 to 480V AC, 110V DC (Terminal Cover: N-VL3) M3.5 Terminal Screw Panel Thickness 0.8 to 7.5 0 8 葶  $\epsilon$ 035 024 0 64.5 67.2 21.4



Terminal Screws: M3.5

Miniature Pilot Lights

Flush Silhouette

ø16

ø22

TWN
TWND
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CS





Emergency

Enabling Switches

Stop Switches

Safety Products Explosion Proof

Terminal Blocks

Relays & Sockets

Power Supplies LED Illumination

Circuit

Protectors

Controllers

Operator

Sensors

AUTO-ID

Interfaces

# **Nameplates**

Lights	Model	Legend	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)
	NA				NA-0	1	. 40 .
APEM Switches &		Blank	Aluminium 1.2 mm thick	mm thick	NA-0PN10	10	
Pilot Lights Control Boxes		With			NA-□	1	≈
Emergency Stop Switches Enabling	For TWN/TWND	Legend	, i i i i i i i i i i i i i i i i i i i	NA-□	NA-□PN10	10	ø30.5
Switches	NALO						
Safety Products Explosion Proof					NALO	1	
		Blank	Aluminium 1.2 mm thick	NALO			30
Terminal Blocks		Diam	Black				
Relays & Sockets					NALOPN10	10	ø30.5
Circuit	For TWN/TWND						

1.2

1.2

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

#### Legends

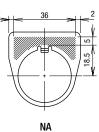
□: Code	Legend
1	ON
2	0FF
3	START
4	STOP
31	OFF ON
35	HAND AUTO
53	Hand Off Auto
	AUTO

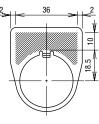
#### Shape and Engraving Area ø16



ARN CS

Flush Silhouette





NALO

All dimensions in mm.

Example (when the legend height is 4 mm)

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

Safety Pro Explosion Terminal B Relays & So Circuit Protectors Power Supplies LED Illumination

> Controllers Operator Interfaces Sensors AUTO-ID

	Ĩ		(	,		e e
Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks	ilot Lights
Locking Ring Wrench	Nitril rubber (black)	0R-12	0R-12	1	<ul> <li>Used to tighten the round bezel when installing the ø30 or ø25 switch onto a panel from the front.</li> <li>A: TWS series (ø25) B: TWN/TWND series (ø30)</li> <li>A generative ge</li></ul>	APEM Switches & Pilot Lights Control Boxes Emergency Stop Switches
Lamp Holder Tool A B For TWN/TWND	Nitril rubber (black)	OR-55	0R-55	1	• Used to install and remove the LED/incandescent lamps. See B-345. A: For BA9S base B: For E12 base A 	Enabling Switches Safety Products Explosion Proof Terminal Blocks Relays & Sockets
Contact Block Removal Tool	Metal (zinc-plated) Rubber (nitryl)	TW-KC1	TW-KC1	1	Used to remove transformer units. See B-347 for how to use.	Circuit Protectors Power Supplies LED Illumination Controllers Operator Interfaces
Contact Rubber Boot For momentary 1 layer of contact blocks (2 contact blocks)	Nitril rubber (black)	0C-99	0C-99	1	<ul> <li>Rubber boot used to prevent oil and dirt from entering into the contact block.</li> <li>Temperature range:         <ul> <li>5 to +60°C</li> <li>When inserting a cable, cut the projection on the cover to match the cover to match</li> </ul> </li> </ul>	Sensors AUTO-ID Flush Silhouette Ø16 Ø22
Anti-rotation Ring For TWN/TWND	Metal (diecast) (zinc-plated)	0GL-11	OGL-11PN10	10	<ul> <li>the cable size.</li> <li>Used to prevent the operator from turning. Generally used when using no nameplates on selector switches and selector pushbuttons.</li> <li>See B-345 for installation.</li> <li>Cannot be used for pin lock.</li> </ul>	e30 Miniature Pilot Lights
Rubber Mounting Hole Plug	Nitril rubber (black) Nitril rubber (gray)	0B-13B 0B-13	0B-13BPN05 0B-13PN05	_ 5	<ul> <li>Used to plug unused ø30.5 mm mounting holes.</li> <li>Degree of protection: IP40</li> </ul>	TWN TWND ARN
Plastic Mounting Hole Plug	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	0BP-11	0BP-11	1	<ul> <li>Tightening torque: 1.2 N·m.</li> <li>Degree of protection: IP65 (when there is no anti-rotation ring hole)</li> <li>Supplied with a locking ring.</li> </ul>	CS
Metallic Mounting Hole Plug	Plug: ABS plastic (gray) Gasket: Chloroprene rubber Locking ring: diecast zinc	0B-11	0B-11	1	<ul> <li>Tightening torque: 1.2 N·m.</li> <li>Degree of protection: IP65 (when there is no anti-rotation ring hole)</li> <li>Supplied with a locking ring.</li> </ul>	

# Download catalogs and CAD from http://apac.idec.com

# Accessories

liot							
Pilot Lights	Shape	Material	Pai	rt No.	Ordering No.	Package Quantity	Remarks
	Button Cover for Extended Pushbuttons		Black	0C-11B	0C-11B		Metallic bezels covered with a     rubber boot to enhance waterproof     absorbition
APEM Switches &		Nitril rubber	Red	0C-11R	0C-11R		<ul> <li>button is not included. Applicable to extended pushbuttons only.</li> </ul>
Pilot Lights Control Boxes		Bezel:				1	Oil-proof     Operating temperature:     _5 to +60°C.
Emergency Stop Switches	<b>e</b>	diecast zinc	Green	0C-11G	0C-11G		-5 t0 +60 C.
Enabling Switches	For TWN	I/TWND	Yellow	0C-11Y	0C-11Y		<u>/ INSU F1.3</u>
Safety Products Explosion Proof	For fl		0C-121	1	0C-121	1	Used to cover and protect push- buttons where units are subject to water splash. Not suitable for
Terminal Blocks	pusni	EPDM rubber					outdoor use or where the units are subject to oil splash.
Relays & Sockets Circuit Protectors	For exten push	ided buttons	0C-122	2	0C-122	1	Part No.         A         B           0C-121         37         16           0C-122         37         22
Power Supplies	For TWN/TWND						Used for ABN4G and ABGD4     pushbuttons.     Panel Thickness     1.2 to 5.5
LED Illumination		Nitril rubber	0C-4G	N	OC-4GN	1	
Operator Interfaces		(black)	00 40	•		•	
Sensors	For TWN	I/TWND					
AUTO-ID	Padlock Cover						<ul> <li>Used to protect pushbuttons and illuminated pushbuttons (momentary/maintained) with 24 mm max. height from the panel, and selector switches (knob operator).</li> <li>Not used for the following models. Pushbuttons</li> </ul>
Flush Silhouette Ø16 Ø22 Ø30 Miniature Pilot Lights	For TWN	Polyarylate (gasket: nitryl rubber)	OL-KL1		OL-KL1	1	Mushroom with full shroud Mushroom Jumbo mushroom with shroud <u>Illuminated</u> <u>Outside diameter: ø40</u> With half shroud With full shroud <u>Selector Switches</u> Lever operator Key selector switch with key installed <u>Selector Switches</u> Lever operator
TWN TWND ARN CS	Padlock Cover for Key Selector Switches	Metal Paint: red (zinc-plated brass)	HS9Z-F	PC30	HS9Z-PC30	1	• Applicable model <u>Key selector switches ASN□K/ASD□K</u> See padlock cover catalog for operating instruction. <sup>1.5</sup> mm-bick <u>Netrains Steel</u> <u>Steries Steel</u> <u>American Struct</u> <u>Steries Steel</u> <u>Steries Steel</u> <u>Steries Steel</u> <u>American Struct</u> <u>Steries Steel</u> <u>Steries Steries Sterie</u>
	For Flush Pushbuttons	Metal (zinc-plated brass)	OL-C		OL-C	1	<ul> <li>Used to protect flush pushbuttons from inadvertent operation.</li> <li>Can be easily attached using the locking ring.</li> </ul>

# All dimensions in mm.

						lot L
Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks	lot Lights
Metallic Bezel						
	Metal				Ormat he used with his look	APEM
	(diecast zinc: chrome-plated)	0G-11	0G-11PN02	2	Cannot be used with pin lock, selector pushbuttons, and monolever units	Switches &
					units.	Pilot Lights Control Boxes
ø35/ø26, height 9 For TWN/	TWND					Emergency
Plastic Bezel						Stop Switches Enabling
					<ul> <li>Specify a color code in place of *.</li> <li>B (black), G (green), R (red), W (white),</li> </ul>	Switches Safety Products
	Polycarbonate	0GP-11*	0GP-11*PN02	2	Y (yellow)	Explosion Proof
					• Cannot be used with pin lock, selector pushbuttons, and monolever units.	Terminal Blocks
ø35/ø26, height 9 Fo	r TWN					Relays & Sockets
Octagonal Metal Bezel						Circuit
0 Flu	sh					Protectors Power Supplies
1 W3 (37	7.6)	0G-81	0G-81PN02	2		LED Illumination
Н9	Metal (diecast zinc:				<ul> <li>Use with TWDN series diecast zinc switches and pilot lights.</li> </ul>	Controllers
2	chrome-plated)				<ul> <li>Cannot be used with half-shrouds.</li> </ul>	Operator
② Ext W3	tended 35	0G-82	0G-82	1		Interfaces Sensors
(37	7.6)					AUTO-ID
For TWDN For TWDN	-					
	nis -					
						Flush Silhouette
	Acrylic (clear)	0GP-13	0GP-13PN02	2		ø16
						ø22
, 0	r TWN				Clear plastic full shroud.	ø30
Clear Plastic Shroud for Extended Pushb	DUTTONS					Miniature
						Pilot Lights
	Acrylic (clear)	0GP-14	0GP-14PN02	2		
	r TWN					TWN
Clear Plastic Shroud for Illuminated Pushbu	ittons					TWND
						ARN
	Acrylic (clear)	0GP-1411	0GP-1411	1	<ul> <li>Buttons may protrude slightly depending on the panel thickness.</li> </ul>	CS
					טה עום אמוסו עווטאווססט.	
Shroud: ø35, height 20.6	- 734/01					
Metal Nut Ring: height 4 For Metal Nut Ring for Illuminated Pushbutto	r TWN					
5 5 5 6 7 7 7 7 7 7 7 7 7						
$\bigcirc$	Metal (diecast zinc)	0L-11	OL-11PN05	5	Metal nut ring for OGP-1411 only.	
ø35, height 4 For	r TWN					

# Accessories

Lights	S	hape	Material	Part No.	Ordering No.	Package Quantity	Color Code *
	Button for Pushbuttons	① Flush ø24.6, height 4		ABN1BN-*	ABN1BN-*PN05	5	
APEM Switches &		© Extended ø24.6, height 9		ABN2BN-*	ABN2BN-*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
Pilot Lights Control Boxes	3	③ Mushroom	Delveestel	ABN3BN-*	ABN3BN-*PN02	2	
Emergency Stop Switches		ø40, height 16.2	Polyacetal			-	
Enabling Switches	4	④ Jumbo Mushroom ø65, height 23.2		ABN4BN-*	ABN4BN-*	1	B (black), G (green), R (red), Y (yellow), S (blue)
Safety Products Explosion Proof	5	⑤ Button for Pin Lock (ABD8P) ø23.6, height 3		ABW1B-*	ABW1B-*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
Terminal Blocks	6	© ø40					
Relays & Sockets Circuit		Pushlock Turn Reset (AVN3, AVD3) ø40, height 18.5		AVN3B-*	AVN3B-*	1	R (red),Y (yellow)
Protectors		⑦ ø40	AS resin				
Power Supplies	For TWN/TWND	Push Turn Lock (AJN3, AJD3) ø40, height 18.5		AJN3B-*	AJN3B-*	1	B (black), G (green), R (red), Y (yellow)
Controllers	Lens for Illuminated						
Operator Interfaces	Pushbuttons	① Extended (ALN2, ALD2)		ALN2LD-*-K	ALN2LD-*-KPN05	5	R (red), G (green), S (blue), Y (yellow), A (amber), W (white)
Sensors		ø24, height 18.5	AS resin				Specify W for PW (pure white) illumination.
AUTO-ID		② ø40	ASTESII				
		Pushlock turn reset (AVLN3, AVLD3) ø40, height 18.5		AVLN3L-R-K	AVLN3L-R-KPN02	2	R (red) only
Flush Silhouette	For TWN/TWND Selector Operator						
ø16		① Knob operator ø25, height 20.5		ASNHT-*	ASNHT-*PN02		
ø22 ø30		© Lever operator ø25, height 20.5, length 37.5	Polyacetal	ASNHL-*	ASNHL-*PN02	2	B (black), G (green), R (red)
Miniature Pilot Lights	3	③ Color insert Width 21, depth 5, height 18		TW-HC1*	TW-HC1*PN05	5	B (black), G (green), R (red), Y (yellow), S (blue), W (white)
TWN	For TWN/TWND	<ul> <li>(4) Knob for illuminated selector switch (ASLN, ASLD)</li> <li>(4) Ø25, height 28</li> </ul>	AS resin	ASLNHD-*-K	ASLNHD-*-K	1	G (green), R (red), S (blue), A (amber), W (white), Y (yellow) Specify W for PW (pure white) illumination.
ARN	Lens for Pilot Lights	① Round (APN1, APD1)					R (red), G (green), Y (yellow)
CS		ø24.6, height 28, M20		APN106LN-*-K	APN106LN-*-KPN05	5	A (amber), W (white), S (blue) Specify W for PW (pure white) illumination.
		For TWN/TWND ② Rectangular (UPQN4)					
	© 🥠	Width 36, depth 30, height 8.5	AS resin	UPQN406LD-*-K	UPQN406LD-*-KPN05	5	R (red), G (green), Y (yellow), A (amber), C (clear), S (blue) Specify C for PW (pure white) illumination.
	3	③ Square extended					
	0	(UPQN3B) D25, height 26.5 For TWN		UPQN06LD-*-K	UPQN06LD-*-KPN05	5	R (red), G (green), S (blue), Y (yellow), A (amber), W (white) Specify W for PW (pure white) illumination.
	Marking Plate For TWN	Rectangular pilot lights (UPQN4) Width 29.8, depth 23.8, thickness 2	Acrylic	UPQN406N-W	UPQN406N-WPN05	5	W (white) only See <mark>B-346</mark> for engraving area.

# Maintenance Parts

All dimensions in mm.

						ilot
Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks	Pilot Lights
Rubber Washer (1.5 mm-thick)	Dukhar					
$\bigcirc$	Rubber (synthetic soft vinyl)	OW-11	OW-11PN10	10	• To tighten mounting panels	APEM
For TWN/TWND	ø39/ø29.5, height 1.5					APEM Switches &
Rubber Washer (3.0 mm-thick)						Pilot Lights
	Rubber (synthetic soft vinyl)	0W-12	OW-12PN10	10	• To tighten mounting panels	Control Boxes Emergency
For TWN/TWND	ø39/ø29.5, height 3					Stop Switches Enabling
Shroud for Pushbuttons						Switches
0	① Half shroud	ABN2G	ABN2G	1	With nut ring (ø35, height 4)	Safety Products
9	ø35/ø27, height 20.5					Explosion Proof
0						Terminal Blocks
	② Full shroud	ABN2F	ABN2F	1		Relays & Sockets
3	ø35/ø28.5, height 16.5					Circuit Protectors
	③ Full shroud					Power Supplies
4	(for mushroom	ABN3G	ABN3G	1		LED Illumination
6	pushbuttons) ø48, height 20					Controllers
						Operator Interfaces
5	④ Shallow shroud (for jumbo mushroom)	ABN4G	ABN4G	1		Sensors
	ø75, height 18					AUTO-ID
	<ul> <li>Deep shroud</li> <li>(for jumbo mushroom)</li> </ul>	ABN4F	ABN4F	1		
For TWN/TWND	ø75/ø69, height 33					Flush Silhouette
Shroud for Illuminated Pushbuttons						ø16
	① Half shroud (For BA9S base)	ALN2GL	ALN2GL	1	• With nut ring (ø35, height 4)	ø22
	ø35/ø27, height 25					ø30
	② Full shroud					Miniature
For TWN/TWND	(For BA9S base) ø35/ø29.5, height 22.5	ALN2FL	ALN2FL	1	With nut ring (ø35, height 4)	Pilot Lights
<b>0</b> <i>K</i>	055/029.5, neight 22.5					
Spare Key For Key Selector Switches	Metal					
	Nickel plated brass Length 3, width 19.7,	TW-SK-0	TW-SK-0PN02	2	• ASN□K□N ASD□K□N	TWN
For TWN/TWND	thickness 1.8					TWND
Spare Key						ARN
For Key Selector Switches	Metal					CS
Contraction of the second	Nickel plated brass Length 37.5,	ASN-SK-24401	ASN-SK-24401PN02	2	● ASN□K□-N024401	
For TWN	thickness 2					
Pin/Chain Kit						
For ABD8P	Pin:	ABD8P-PIN		1	• Pin, chain, and plate for ABN8P	
	Nickel plated brass	ADDOC-LIN	ABD8P-PIN	1	• Pin (ø4.6)	
For TWND						ļ
Contact Block Plug						
	Polyamide	HW9Z-CBPL	HW9Z-CBPLPN10	10	• Used to plug the hole in the center of a contact block.	
For TWN/TWND					טפוונסו טו מ טטוומטו אוטטא.	

Switches & Pilo

# Maintenance Parts

→						
t Lights	Shape	Description	Part No.	Ordering No.	Package Quantity	Remarks
0,	Contact block	NO contest	HW-U10	HW-U10	1	Housing color: Blue
	HW-U	NO contact	HW-U10-MAU	HW-U10-MAU	1	Push rod color: Green MAU has gold contacts
APEM		NC contact	HW-U01	HW-U01	1	Housing color: Reddish purple Push rod color: Red
Switches &		NG COMACI	HW-U01-MAU	HW-U01-MAU	I	MAU has gold contacts
Pilot Lights		EM contact	HW-U10R	HW-U10R		Housing color: Blue
Control Boxes		(early make)	HW-U10R-MAU	HW-U10R-MAU	1	Push rod color: Black MAU has gold contacts
Emergency Stop Switches		LB contact	HW-U01R	HW-U01R	- 1	Housing color: Reddish purple Push rod color: White
Enabling Switches	For TWN/TWND, 11g approx.	(late break)	HW-U01R-MAU	HW-U01R-MAU	'	MAU has gold contacts
Safety Products	Dummy Block					<ul> <li>For HW-U contact blocks</li> </ul>
Explosion Proof	For TWN/TWND	Polyamide	HW-DB	HW-DBPN10	10	• Used when the number of contact blocks and full voltage adapters is 1 or 3.
Terminal Blocks	3.5g approx.					
Relays & Sockets Circuit	Full Voltage Adapter For Illuminated Switches (*1)					Applicable model: Illuminated pushbuttons Illuminated selector switches
Protectors Power Supplies	For TWN/TWND	Polyamide	HW-GA1N	HW-GA1NPN02	2	Applicable load (LED lamp) LSRD-6, LSTD-6 (6V AC/DC) LSRD-1, LSTD-1 (12V AC/DC) LSRD-2, LSTD-2 (2014 A2/DC)
LED Illumination	12g approx.					LSRD-2, LSTD-2 (24V AC/DC)
Controllers	Transformer Unit For Illuminated Switches (*1)	100/110V AC	HW-T16	HW-T16	1	Applicable model: Illuminated pushbuttons
Operator Interfaces	For TWN/TWND	200/220V AC	HW-T26	HW-T26	1	Illuminated selector switches • Applicable load (LED lamp)
Sensors	66g approx.	200/2201110	1111 120			LSRD-6, LSTD-6 (6V AC/DC)
AUTO-ID	Transformer Unit For Pilot Lights (*1)	100/110V AC	TWR-016B	TWR-016B	1	<ul> <li>Mounting screws are not included.</li> <li>See B-347 for mounting screws.</li> </ul>
	For TWN/TWND 69g approx.	200/220V AC	TWR-026B	TWR-026B	1	Applicable load (LED lamp) LSRD-6, LSTD-6 (6V AC/DC)

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

LED Lamps (Use LED lamps for replacing incandescent lamps)

ø16	LED Lainps (	USE LED IAII	ips for replace	ing incanuesu	ent lamps	»)			Ĩ
ø22	Model	Operating Voltage	Currer DC	nt Draw DC	Part No.	Ordering No.	Color Code	Package Quantity	Base
ø30	LSRD	01/ 10/20	10.0		1.000.0	LSRD-6		1	
		6V AC/DC	10mA	14mA	LSRD-6	LSRD-6PN10		10	
Miniature	22	101/ 10/00	7.00 4	0		LSRD-1		1	BA9S
Pilot Lights	6	12V AC/DC	7mA	8mA	LSRD-1	LSRD-1PN10		10	/13
		24V AC/DC	7mA	8mA	LSRD-2	LSRD-2		1	
		24V AC/DC	7111A	oma	LOND-2	LSRD-2PN10		10	
TWN	LSTD	6V AC/DC	7mA (R, A) 5.5mA (G, PW)	8mA (except S)	LSTD-6*	LSTD-6*		1	
		OV AC/DC	4.5mA (S)	7mA (S)	LOID-0*	LSTD-6*PN10		10	<b>B</b> 4 6 6
TWND		12V AC/DC	10mA (except S)	11mA (except S)	LSTD-1*	LSTD-1*	R, G, A, S, PW	1	BA9S /13
ARN		12V A0/D0	8mA (S)	9mA (S)	LOID-I*	LSTD-1*PN10		10	,10
CS		24V AC/DC	10mA (except S)	11mA (except S)	LSTD-2*	LSTD-2*		1	_
		24V A0/D0	8mA (S)	9mA (S)	1010-2*	LSTD-2*PN10		10	
	LETD	6V AC/DC	14mA (R, A)	17mA (R, A)	LETD-6*	LETD-6*		1	
		OV AC/DC	5.5mA (G, S, PW)	8mA (G, S, PW)	LEID-0*	LETD-6*PN10		10	
		12V AC/DC	6.5mA	7mA	LETD-8*	LETD-8*	R, G, A, S, PW	1	E12
		12V A0/D0	(10mA: at 15V)	(11mA: at 15V)	LETD-0*	LETD-8*PN10	n, u, A, S, i w	10	/15
		24V AC/DC	10mA	11mA	LETD-2*	LETD-2*		1	
						LETD-2*PN10		10	

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

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

• Use a PW (pure white) LED for Y (yellow) illumination.

• When replacing the LED with LSRD, the lens must also be replaced (see B-341).

### **Maintenance Parts**

# LED lamps for replacing incandescent lamps

		ncandesce	nt Lamp			
Model	(mm)	Part No.	Operating Voltage	Lamp Rating	Base	
LS	<	LS-6	6V AC/DC	1W (6V)		
1	0	LS-8	12V AC/DC	1W (18V)	BA9S	
-	Bulb: ø11	LS-2	18V AC/DC	1W (24V)	/13	
	Length: 23	LS-3	24V AC/DC	1W (30V)		
LE	3	LE-6	6V AC/DC	2W (6V)		
(E)	111	LE-8	12V AC/DC	2W (18V)	E12	
0	Bulb: ø13	LE-2	18V AC/DC	2W (24V)	/15	
	Length: 34	LE-3	24V AC/DC	2W (30V)		

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

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

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

#### Transformer

Chang	Operating Voltage	Voltago Dongo	Part No.	Applicable Load	Terminal Blocks	
Shape	Operating Voltage	Voltage Range	(Ordering No.)	Applicable Load	Relays & Sockets	
For 6V	100/110V AC	±10%	TWR516	LSRD-6, LSTD-6* (6V AC/DC, LED lamp)	Circuit Protectors	
	200/220V AC	200/220V AC ±10%	±10%	TWR526	Specify a color code in place of * in Part No. R (red), G (green), A (amber), S (blue),	Power Supplies
	400/4440V AC	±10%	TWR546	PW (pure white)	LED Illumination	
For 24V	100/110V AC	±10%	TWR512	LSRD-2, LSTD-2* (24V AC/DC, LED lamp)	Controllers	
	200/220V AC	±10%	TWR522	- Specify a color code in place of * in Part No. - R (red), G (green), A (amber), S (blue), - PW (pure white)	Operator Interfaces	
	400/4440V AC	±10%	TWR542		Sensors	
Terminal cover (TWR-VI 3) is installed on transformers as standard		AUTO-ID				

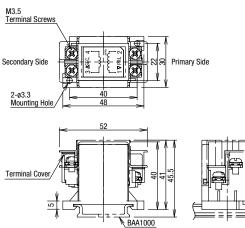
• Terminal cover (TWR-VL3) is installed on transformers as standard.

# **Specifications**

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

# **Dimensions**

All dimensions in mm.





Pilot Lights

)	

ARN

CS

Accessories

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

• See H-071 for DIN rail products.

#### Download catalogs and CAD from http://apac.idec.com

Control Boxes

Emergency Stop Switches

Safety Products

Explosion Proof

Enabling Switches

 When using a commercially available incandescent lamp, choose a lamp with the same dimensions, operating voltage, and base. • Specify a color code in place of \* in APEM

Part No. R (red), G (green), A (amber), S (blue), PW (pure white)

Use a PW (pure white) LED lamp for Y (yellow) illumination.

• For 0 (orange) and C (clear) color code of incandescent lamp, use A (amber) LED lamp.

Operator

Interfaces

Sensors

AUTO-ID

ø16

ø22

Miniature

Pilot Lights

Flush Silhouette



**ø30 TWN/TWND Series** 

- 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

#### **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.
- Rubber Gasket





Rubber Gasket

Illuminated pushbutton (extended w/full shroud)

2 pieces

2 pieces

1

1

2 pieces

2 pieces

1

1

2 pieces

2 pieces

1

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

Rubber Washer

1.5 mm-thick 3.0 mm-thick

Rubber Washer

1.5 mm-thick 3.0 mm-thick

Rubber Washer

.5 mm-thick 3.0 mm-thick

1

1

1

1

1

1

1

**TWN/TWND** series

Panel Thickness (mm)

Supplied

0.8 to 3.5

2.0 to 3.5

3.5 to 5.0

5.0 to 6.0 (6.5)\*

**TWND** series

Pin lock pushbutton

Panel

Thickness (mm)

Supplied

0.8 to 3.0

3.0 to 4.5

4.5 to 6.0

6.0 to 7.5

Panel Thickness (mm)

Supplied

0.8 to 3.5

3.5 to 5.0

5.0 to 6.5

6.5 to 7.5

TWN/TWND series

Other models (excluding square)

Mushroom with full shroud

# 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	Rubber Washer		
Thickness (mm)	1.5 mm-thick	3.0 mm-thick	
Supplied	2 pieces	1	
0.8 to 3.5	2 pieces	1	
3.5 to 5.0	1	1	
5.0 to 6.5	-	1	
6 5 to 7 5	1	_	



CS

TWN/TWND series Pushbutton (extended with half shroud)

Illuminated pushbutton (extended with half shroud) ARN

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

#### TWN/TWND series

Pushbutton (extended with full shroud)

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

• 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

lamp is used.

Locking ring wrench recommended torque

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

When using a commercially available lamp, choose a lamp with rated voltage

pushbutton switches cannot be guaranteed when a commercially available

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

Locking ring wrench (OR-12)

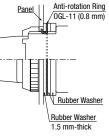
Locking ring wrench (OR-12) can be used to tighten the bezel. Use side B to tighten. Side B: For TWN/TWND series Side A: TWS series



# 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.



APEM

Control Boxes

Stop Switches

Safety Products

Explosion Proof

Terminal Blocks

**Relavs & Sockets** 

LED Illumination

Circuit

Protectors Power Supplies

Emergency

Enabling

Switches

# **Operating Instructions**

# Installing/Removing the Buttons and Lenses

To install

**Pushbutton button** 

Flush/Extended Push in the button to install. Insert a fl between and the b



To remove

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.



-Notches

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

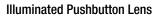
#### Notes on button removal

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.



Extended/Mushroom Lens has threads. Turn clockwise to install the lens.





Pilot Light Lens Round

Lens has threads. Turn clockwise to install the lens.





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.



#### **Engraving Area**

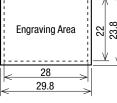
Material: Acrylic resin Size: 29.8 W × 23.8 D, thickness 2.0 mm Engraving area: 28 W × 22 D × 1.0 mm height max.



② A white marking plate is installed

easily

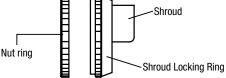
in the lens which can be removed



# Installing the Half Shroud on Extended Pushbuttons/ Illuminated Pushbuttons

#### Half Shroud Parts





Installing the Half Shroud

- ① Adjust the thickness of the rubber washers according to the panel thickness (see B-345).
- $\ensuremath{\mathbbmath$\mathbbmath$\mathbbmath$}$  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.
- S Make sure that the shroud is securely fastened inside the shroud locking ring.

#### **Tightening the Half Shroud**

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



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



	Controllers
 	Operator

Interfaces
Sensors

Flush Silhouette
ø16
ø22

Miniature Pilot Lights

TWN	
TWND	
ARN	
CS	

# **Operating Instructions**

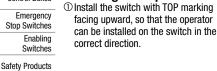
#### Selector Switches

Turn the operator such as knob, lever, and key to each position accurately. Releasing halfway may cause the operator to return to the former position, or to get stuck between. On spring return two-way types, the center of operators may be misaligned slightly.

#### **Key Selector Switches**

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

#### Installing the Operator on Selector Switches Control Boxes



"TOP" marking

Color Insert

TOP" marking

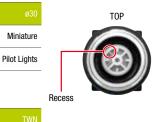
2 On non-illuminated models, install the Terminal Blocks color insert in the middle of operator. The color insert also serves to retain Relavs & Sockets the operator. Circuit Protectors

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



Installation of Selector Operators

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





90° 2-position

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





45° 3-position

Standard positions

# Removal

#### Removing the Operator from Selector Switches



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



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

#### Removing the Operator from Illuminated Selector Switches



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

#### **Removing the Contact Blocks/Full Voltage Adapters**

Insert a flat screwdriver (4 to 6 mm) into the snap-fit latches of the contact block or full voltage adapter and lift to remove.



- Make sure to lift both latches. Contact blocks cannot be removed by lifting one latch only.
- · Do not apply excessive force to the latches, otherwise damage maybe caused.

#### **Transformer Units and DC-DC Converters**

Insert the end of the contact block removal tool (TW-KC1) into the snap-fit latch of the transformer units or DC-DC converter and pull the tool forward. The contact block removable tool cannot be used to remove the HW-U contact blocks or full voltage adapters.



🗥 When replacing parts (contact block, dummy block, full voltage adapter, transformer) for maintenance, make sure to install the parts to the original position. Otherwise proper operation cannot be guaranteed

#### Transformer Units and DC-DC Converters for Pilot Lights

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



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

APEM

Explosion Proof

Power Supplies

LED Illumination

Controllers

Operator

Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

ARN

CS

APEM

Control Boxes Emergency Stop Switches

Enabling Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers Operator

Interfaces

Sensors

AUTO-ID

Flush Silhouette

ø16

ø22

Circuit

Protectors

# **Operating Instructions**

# **Applicable Wiring**

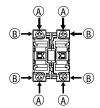
(1) Contact Block 0.3 to 3.5 mm<sup>2</sup> (solid wire 0.5 to 2.0 mm)

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

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

<Contact Block>

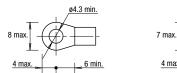
Terminal screws M3.5 (spring-up)



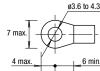
#### **Applicable Crimping Terminal**

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

Crimping terminal for (A)

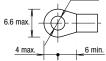


#### IP20 crimping terminal



# Crimping terminal for (B)

IP20 crimping terminal ø3.6 min.







 Strip the wire insulation 8 to 9 mm from the end. Insert the wire until the insulation comes into contact

3.6 min.

6 min

with the terminal metal part.

#### (1)-1 IP20 Degree of Protection

The terminal of HW-U contact block has IP20 degree of protection. When IP20 is required for wiring, observe the followings.

Make sure to insert the crimping terminal or wire to the terminal straight and fully.

# When using a crimping terminal

Use IP20 crimping terminals.

When using a solid wire

Strip the wire insulation 8 to 9 mm from the end and insert the wire to the terminal fully.

#### When using a stranded wire

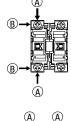
Strip the wire insulation 8 to 9 mm from the end and insert the wire to the terminal fully. Make sure that the wires are not loosened.

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

# Illuminated pushbutton/illuminated selector switch $\textcircled{\sc B}$ and $\textcircled{\sc B}$ show the wiring direction to the terminals.

<Full Voltage Adapter>

Terminal screws M3.5 (spring-up)

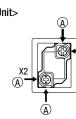


<Transformer Unit> 100/110V AC, 200/220V (240V AC or below) Terminal screws M3.5 (spring-up)



<DC-DC Conver Unit/Transformer Unit>

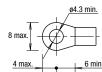
110V DC. 380V Terminal screws M3.5 (spring-up)



#### **Applicable Crimping Terminal**

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

Crimping terminal for (A)



ø3.6 min



Solid wire



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

 Insert the wire until the insulation comes into contact with the terminal metal part.

· Terminal cover is integrated in the full voltage adapter and transformer unit. Note that the connection terminal is not IP20.

Miniature
Pilot Lights

TWN	
ARN	
CS	

Crimping terminal for (B)

#### **Operating Instructions**

#### (3) Pilot Light

Switches & Pilot Lights

Control Boxes

Emergency

Enabling

Switches

Stop Switches

Safety Products

Explosion Proof

Terminal Blocks

Relays & Sockets

Power Supplies

LED Illumination

Controllers

Operator Interfaces

Sensors

AUTO-ID

Circuit

Protectors

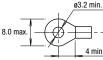
nt 0.3 to 2 mm<sup>2</sup> (solid wire 0.5 to 1.6 mm)

#### Applicable crimping terminal

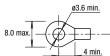
Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.

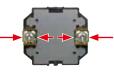
APEM APN1, UPQN3B, UPQN4 (6, 12, 24V AC/DC) Terminal screws M3 (self-lifting)

(Arrows show the wiring direction)

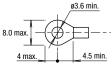


APD1 (6, 12V, 24V AC/DC) Terminal screws M3.5 (self-lifting)





APN1, UPQN3B, UPQN4, APD1 (100 to 480V AC or below, 110V DC) Terminal screws M3.5 (self-lifting)



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

# **Cautions for Wiring**

#### About using DC-DC Converter Unit

1. Note the polarity for wiring when connecting to the DC-DC converter.

Terminal No.	Polarity
X1	Positive
X2	Negative

2. Incandescent lamps cannot be used in DC-DC converter unit.

 DC-DC converters are equipped with an electric circuit and noise may be heard inside the unit, which does not affect the performance of DC-DC converters.

# Recommended Tightening Torque Number of Wires

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

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

ot Lights
APEM
Switches & Pilot Lights
Control Boxes
Emergency Stop Switches
Enabling Switches
Safety Products
Explosion Proof
Terminal Blocks
Relays & Sockets
Circuit Protectors
Power Supplies
LED Illumination
Controllers
Operator Interfaces
Sensors
AUTO-ID
Flush Silhouette
ø16
ø22
ø30
Miniature
Pilot Lights
TWN

# ø30 Selector Switches / Pushbuttons Part Number Replacement List

Old Series

Old Series			Now Port No. (*2) Pomor	
Model	Operator	Old Part No.	New Part No. (*3)	Remarks
		ASN310	ASN210N	
		ASN311	ASN211N	
		ASN320	ASN220N	
		ASN322	ASN222N	
		ASN37S	ASN22RN-118	
		ASN410	ASN2110N	
		ASN411	ASN2111N	
		ASN420	ASN2120N	
		ASN422	ASN2122N	
	90°	ASN47S	ASN212RN-118	
	2-position	ASN3010	ASN201N	(*2)
		ASN3011	ASN211N	(*1)
		ASN3020	ASN202N	(*2)
		ASN3022	ASN222N	(*1)
		ASN307S	ASN22RN-118	(*1)
		ASN4010	ASN2210N	
			ASN2210N ASN2211N	
		ASN4011		
		ASN4020	ASN2220N	
ASN		ASN4022	ASN2222N	
Knob		ASN407S	ASN222RN-168	(1. <b></b> )
Operator		ASN111	ASN320N	(*2)
		ASN122	ASN340N	(*2)
		ASN15S	ASN322N	
		ASN17S	ASN302N	(*1)
		ASN18S	ASN304N	(*1)
		ASN211	ASN3220N	(*2)
		ASN222	ASN3240N	(*2)
		ASN25S	ASN3222N	
		ASN27S	ASN3202N	(*1)
	45°	ASN28S	ASN3204N	(*1)
	3-position	ASN1011	ASN320N	(*1) (*2)
		ASN1022	ASN340N	(*1) (*2)
		ASN105S	ASN322N	(*1)
		ASN107S	ASN302N	
		ASN1073	ASN304N	
				(*1) (*0)
		ASN2011	ASN3120N	(*1) (*2)
		ASN2022	ASN3140N	(*1) (*2)
		ASN205S	ASN3122N	(*1)
		ASN207S	ASN3102N	
		ASN208S	ASN3104N	
		ASN3L10	ASN2L10N	
		ASN3L11	ASN2L11N	
		ASN3L20	ASN2L20N	
		ASN3L22	ASN2L22N	
		ASN3L7S	ASN2L2RN-118	
		ASN4L10	ASN21L10N	
		ASN4L11	ASN21L11N	
		ASN4L20	ASN21L20N	
		ASN4L22	ASN21L22N	
	90°	ASN4L7S	ASN21L2RN-118	
	2-position	ASN30L10	ASN2L01N	(*2)
		ASN30L11	ASN2L11N	(*1)
		ASN30L20	ASN2L02N	(*2)
ASN-L		ASN30L22	ASN2L22N	(*1)
Lever		ASN30L22 ASN30L7S	ASN2L22N ASN2L2RN-118	(*1)
Operator		ASN40L10	ASN22L2NN-110	
			ASN22L10N ASN22L11N	
		ASN40L11		
		ASN40L20	ASN22L20N	
		ASN40L22	ASN22L22N	
		ASN40L7S	ASN22L2RN-168	4.0
		ASN1L11	ASN3L20N	(*2)
		ASN1L22	ASN3L40N	(*2)
		ASN1L5S	ASN3L22N	
	45°	ASN1L7S	ASN3L02N	(*1)
	3-position	ASN1L8S	ASN3L04N	(*1)
		ASN2L11	ASN32L20N	(*2)
		ASN2L22	ASN32L40N	(*2)
		ASN2L5S	ASN32L22N	
			w the same and as the	

Model	Old Series Operator	Old Part No.	New Part No. (*3)	Remarks	Ē
WIDUCI	oporator	ASN2L7S	ASN32L02N	(*1)	ght
		ASN2L8S	ASN32L04N	(*1)	ŝ
		ASN10L11	ASN3L20N	(*1) (*2)	
		ASN10L22	ASN3L40N	(*1) (*2)	
ASN-L		ASN10L5S	ASN3L22N	(*1)	APEM
Lever	45°	ASN10L7S	ASN3L02N		Switches &
Operator	3-position	ASN10L8S ASN20L11	ASN3L04N ASN31L20N	(*1) (*2)	Pilot Lights
		ASN20L11 ASN20L22	ASN31L40N	(*1) (*2)	Control Box
		ASN20L5S	ASN31L22N	(*1)	Emergency
		ASN20L7S	ASN31L02N		Stop Switch
		ASN20L8S	ASN31L04N		Enabling Switches
		ASN3K10□	ASN2K10N□-N024401		
		ASN3K11	ASN2K11N		Safety Proc
		ASN3K20	ASN2K20N		Explosion P
		ASN3K22□ ASN3K7S□	ASN2K22N□-N024401 ASN2K2RN□-118-N024401		
		ASN4K10	ASN21K10N-N024401		Terminal Bl
		ASN4K11	ASN21K11N-N024401		Relays & So
		ASN4K20	ASN21K20N-N024401		Circuit
		ASN4K22	ASN21K22N-N024401		Protectors
	90°	ASN4K7S	ASN21K2RN-118-N024401		Power Sup
	2-position	ASN30K10	ASN2K01N□-N024401	(*2)	
			ASN2K11N	(*1)	LED Illumin
		ASN30K20 ASN30K22	ASN2K02N□-N024401 ASN2K22N□-N024401	(*2) (*1)	
		ASN30K7S	ASN2K2RN□-118-N024401	(*1)	Controllers
		ASN40K10	ASN22K10N-N024401		Operator Interfaces
		ASN40K11	ASN22K11N-N024401		
		ASN40K20	ASN22K20N-N024401		Sensors
ASN-K		ASN40K22	ASN22K22N-N024401		AUTO-ID
Key			ASN22K2RN-168-N024401	(*0)	
Selector		ASN1K11□ ASN1K22□	ASN3K20N□-N024401 ASN3K40N□-N024401	(*2) (*2)	
		ASN1K5S	ASN3K22N -N024401	(*1) (*2)	
		ASN1K7S	ASN3K02N	(*1) (*2)	Flush Silho
	45°	ASN1K8S	ASN3K04N - N024401	(*1) (*2)	
		ASN2K11□	ASN32K20N□-N024401	(*2)	ø16
		ASN2K22	ASN32K40N□-N024401	(*2)	ø22
		ASN2K5S	ASN32K22N	(*1) (*2)	ØZZ
		ASN2K7S□ ASN2K8S□	ASN32K02N□-N024401 ASN32K04N□-N024401	(*1) (*2) (*1) (*2)	ø30
	45 <sup>-</sup> 3-position	ASN10K11	ASN3K20N -N024401	(*1) (*2)	Minister
		ASN10K22	ASN3K40N□-N024401	(*1) (*2)	Miniature
		ASN10K5S	ASN3K22N - N024401	(*1) (*2)	Pilot Lights
		ASN10K7S□	ASN3K02N□-N024401	(*2)	
		ASN10K8S	ASN3K04N - N024401	(*2)	
		ASN20K11	ASN31K20N	(*1) (*2)	
		ASN20K22	ASN31K40N□-N024401 ASN31K22N□-N024401	(*1) (*2)	TWN
		ASN20K35	ASN31K02N□-N024401	(*1) (*2) (*2)	
		ASN20K8S	ASN31K04N□-N024401	(*2)	TWND
		ASTN3211	ASN211N		ARN
	90°	ASTN3222	ASN222N	(*1)	
	2-position	ASTN4211	ASN2111N		CS
		ASTN4222	ASN2122N	(*1)	
		ASTN1122 ASTN1222	ASN322N		
		ASTN1222 ASTN1340	ASN322N-311 ASN340N		
ASTN		ASTN1340 ASTN1422	ASN322N-209		
Knob		ASTN1520	ASN320N		
Operator	45°	ASTN1540	ASN340N	(*1)	
	3-position	ASTN1611	ASN311N-303		
		ASTN1622	ASN322N-310		
		ASTN2122	ASN3222N		
		ASTN2222 ASTN20122	ASN3222N-311 ASN3122N		
		ASTN20122 ASTN20222	ASN3122N ASN3122N-311		
oko ouro of	contact anor	ation boforo wir	ina		

□: Key removable position code. Specify the same code as the old series.
 \*1) The location of contacts is different. In application for maintenance purpose, make sure of contact operation before wiring.

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



📩 Download catalogs and CAD from http://apac.idec.com

# Switches & Pil

# ø30 Selector Switches / Pushbuttons Part Number Replacement List

호		Old Se	ries		
Li	Model	Operator	Old Part No.	New Part No. (*3)	Remarks
			ASTN20422	ASN3122N-209	
S			ASTN20520	ASN3120N	(*1)
	ASTN	45°	ASTN20540	ASN3140N	(*1)
	Knob	3-position	ASTN5120	ASN3320N	
APEM	Operator		ASTN5122	ASN3322N	
Switches &			ASTN5222 ASTN5111	ASN3322N-311 ASN3311N-202	
Pilot Lights			ASTN32L11	ASN2L11N	
Control Boxes		90°	ASTN32L22	ASN2L22N	(*1)
Emergency		2-position	ASTN42L11	ASN21L11N	
Stop Switches			ASTN42L22	ASN21L22N	(*1)
Enabling			ASTN11L22	ASN3L22N	
Switches			ASTN12L22	ASN3L22N-311	
Safety Products			ASTN13L40 ASTN14L22	ASN3L40N ASN3L22N-209	
Explosion Proof			ASTN14L22 ASTN15L20	ASN3L20N	(*1)
Explosion Floor			ASTN15L40	ASN3L40N	(*1)
Terminal Blocks	ASTN∎L		ASTN16L11	ASN3L11N-303	
	Lever		ASTN16L22	ASN3L22N-310	
Relays & Sockets	Operator	45°	ASTN21L22	ASN32L22N	
Circuit		3-position	ASTN22L22	ASN32L22N-311	
Protectors			ASTN201L22	ASN31L22N	
Power Supplies			ASTN202L22 ASTN204L22	ASN31L22N-311 ASN31L22N-209	
			ASTN204L22 ASTN205L20	ASN31L22N-209	(*1)
LED Illumination			ASTN205L20	ASN31L40N	(*1)
Controllers			ASTN51L20	ASN33L20N	
Operator			ASTN51L22	ASN33L22N	
Interfaces			ASTN52L22	ASN33L22N-311	
Sensors			ASTN51L11	ASN33L11N-202	
0013013	AUTO-ID	90° 2-position			(*1)
AUTO-ID			ASTN32K22	ASN2K22N ASN21K11N	(1)
	2 position	ASTN42K11	ASN21K11N ASN21K22N	(*1)	
			ASTN11K22	ASN3K22N	
			ASTN12K22	ASN3K22N□-311	
Flush Silhouette			ASTN13K40	ASN3K40N	
			ASTN14K22	ASN3K22N -209	
ø16			ASTN15K20	ASN3K20N	(*1)
ø22	ASTN∎K			ASN3K40N□ ASN3K11N□-303	(*1)
Ø22	Key		ASTN16K11	ASN3K11N□-303 ASN3K22N□-310	
ø30	Selector		ASTN21K22	ASN32K22N	
		45°	ASTN22K22	ASN32K22N□-311	
Miniature		3-position	ASTN201K22	ASN31K22N	
Pilot Lights			ASTN202K22	ASN31K22N□-311	
			ASTN204K22	ASN31K22N□-209	(+-1)
				ASN31K20N ASN31K40N	(*1) (*1)
			ASTN205K40	ASN31K40N	(1)
734/81			ASTN51K20	ASN33K22N	
TWN			ASTN52K22	ASN33K22N-311	
TWND			ASTN51K11	ASN33K11N-202	
			ASN120-T	ASN320N	
ARN	ASN-T		ASN140-T	ASN340N	
CS	Knob	45°	ASN220-T	ASN3220N	
	Operator	3-position	ASN240-T ASN2020-T	ASN3240N ASN3120N	(*1)
			ASN2020-1 ASN2040-T	ASN3120N ASN3140N	(*1)
			ASN1L20-T	ASN3L20N	/
			ASN1L40-T	ASN3L40N	
	ASN-T Lever	45°	ASN2L20-T	ASN32L20N	
	Operator	3-position	ASN2L40-T	ASN32L40N	
	- por ator		ASN20L20-T	ASN31L20N	(*1)
			ASN20L40-T	ASN31L40N	(*1)

	Old Serie	es	New Part No. (*3)	Remarks
Model	Operator	Old Part No.		nemarks
		ASN3K10□-T	ASN2K10N	
		ASN3K11 -T		
		ASN3K20 T		
		ASN3K22□-T ASN3K7S□-T	ASN2K22N□ ASN2K2RN□-118	
		ASN4K10-T	ASN21K10N	
		ASN4K11-T	ASN21K11N	
	90°	ASN4K20-T	ASN21K20N	
	2-position	ASN4K22-T	ASN21K22N	
		ASN4K7S-T	ASN21K2RN-118	
		ASN40K10-T	ASN22K10N	
		ASN40K11-T	ASN22K11N	
		ASN40K20-T	ASN22K20N	
ASN K-T		ASN40K22-T	ASN22K22N	
Key		ASN40K7S-T	ASN22K2RN-168	
Selector		ASN1K20□-T ASN1K40□-T	ASN3K20N ASN3K40N	
		ASN1K5S□-T	ASN3K22N	
		ASN1K7S□-T	ASN3K02N	(*1)
		ASN1K8S□-T	ASN3K04N	(*1)
		ASN2K20□-T	ASN32K20N	
	45°	ASN2K40□-T	ASN32K40N	
	45° 3-position	ASN2K5S□-T	ASN32K22N	
		ASN2K7S□-T	ASN32K02N	(*1)
		ASN2K8S -T	ASN32K04N	(*1)
		ASN20K20 -T	ASN31K20N	(*1)
		ASN20K40 -T		(*1)
		ASN20K5SD-T	ASN31K22N	(*1)
		ASN20K7SD-T		
		ASN20K8S□-T ABN6111□	ASN31K04N ASBN211N-A03	
		ABN6411	ASBN211N-A03	(*2)
		ABN9111	N/A	( _ /
		ABN7120	ASBN220N-D01	
Selector		ABN6122	ASBN222N-A08	(*1)
Pushbuttons		ABN6222	ASBN222N-C10	(*1)
Ring		ABN6422	ASBN222N-K15	(*2)
Operator		ABN7122	ASBN222N-D10	(*1)
		ABN7222	ASBN222N-E10	(*1)
	90°	ABN7322	ASBN222N-F10	(*1)
	2-position	ABN9122	N/A	(1.4)
		ABN6L111	ASBN211N-A03	(*4)
			ASBN211N-K04	(*2) (*4)
		ABN9L111	ASBN222N-A08	(*1) (*4)
Selector		ABN6L222	ASBN222N-A00	(*1) (*4)
Pushbuttons Lever		ABN6L422	ASBN222N-K15	(*2) (*4)
Operator		ABN7L122	ASBN222N-D10	(*1) (*4)
oporator		ABN7L222	ASBN222N-E10	(*1) (*4)
		ABN7L322	ASBN222N-F10	(*1) (*4)
		ABN9L122	N/A	
		ABN8P10	ABD8P10N	(*5)
		ABN8P01		(*5)
	Pin Lock	ABN8P11		(*5)
		ABN8P20	ABD8P20N ABD8P02N	(*5)
Pushbuttons		ABN8P02 ABN8P22	ABD8P02N	(*5) (*5)
		ABN8P10-TK231-1	ABD8PN10N	(*5)
		ABN8P01-TK231-1	ABD8PN01N	(*5)
	ON Lock	ABN8P11-TK231-1	ABD8PN11N	(*5)
	Type Pin	ABN8P20-TK231-1	ABD8PN20N	(*5)
	Lock	ABN8P02-TK231-1	ABD8PN02N	(*5)
		ABN8P22-TK231-1	ABD8PN22N	(*5)
		ATN2310	AZN310N	
	Mushroom	ATN2311	AZN311N	
	Pull	ATN2320	AZN320N AZN302N	

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

Contact operation is same as the old series, but contact type is different.
\*2) Contact operation is same as the old series, but contact type is different.

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knob operator is d st zinc and in new shape. The knob operator can be insta 3) 45 degrees intervals.

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

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

# **Ordering Terms and Conditions**

#### Thank you for using IDEC Products.

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

#### 1. Notes on contents of Catalogs

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

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

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

#### 2. Note on applications

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

# **IDEC CORPORATION**

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

#### 3. Inspections

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

#### 4. Warranty

#### (1) Warranty period

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

(2) Warranty scope

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

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

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

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

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

#### 5. Limitation of liability

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

#### 6. Service scope

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

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

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

IDEC (Shanghai) Corporation

Beiiing Branch

**IDEC Corporation** 

Guangzhou Branch

Kona

(4) Product tests or inspections specified by you

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

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