

■ Pushbuttons, Selector Switches, Pilot Lights, Buzzers

● Command switches <AR22/DR22/AR30/DR30/AM22/DM22 series>


a. Illuminated pushbutton switches

Bezel	Operator	Type						UL File No.
		AR22		AR30		AM22		
		Momentary	Alternate	Momentary	Alternate	Momentary	Alternate	
Round bezel	Flush round head	AR22F0L	AR22F5L	-	-	AM22F0L	AM22F5L	E44592
	Extended round head	AR22E0L	AR22E5L	AR30E0L	AR30E5L	AM22E0L	AM22E5L	
	Mushroom head (40mm dia.)	AR22M0L	AR22M5L	-	-	AM22M0L	AM22M5L	
	Mushroom head (29mm dia.)	AR22M4L	AR22M9L	-	-	AM22M4L	AM22M9L	
	Extended with transparent full guard (24mm dia.)	AR22G4L	AR22G9L	AR30G4L	AR30G9L	AM22G4L	AM22G9L	
	Extended with full guard (24mm dia.)	AR22G1L	AR22G6L	AR30G3L	AR30G8L	-	-	
	Extended with full guard (24mm dia. with openings)	AR22G2L	AR22G7L	AR30G2L	AR30G7L	AM22G2L	AM22G7L	
	Push-lock, turn-reset (40mm dia. with white arrow)	AR22V5L (Returning method : turn-reset)		AR30V5L (Returning method : turn-reset)		-	-	
Push-pull	-	-	AR30Q7L (Returning method : automatic return)		-	-		
Square bezel	Flush square head	AR22F0M	AR22F5M	-	-	-	-	
	Extended square head	AR22E0M	AR22E5M	-	-	-	-	
	Flush round head	AR22F0P	AR22F5P	-	-	-	-	
	Extended round head	AR22E0P	AR22E5P	-	-	-	-	
	Mushroom head (29mm dia.)	AR22M4P	-	-	-	-	-	


b. Pushbutton switches

Bezel	Operator	Type						UL File No.
		AR22		AR30		AM22		
		Momentary	Alternate	Momentary	Alternate	Momentary	Alternate	
Round bezel	Flush round head	AR22F0R	AR22F5R	AR30F0R	AR30F5R	AM22F0R	AM22F5R	E44592
	Extended round head	AR22E0R	AR22E5R	AR30E0R	AR30E5R	AM22E0R	AM22E5R	
	Mushroom head (40mm dia.)	AR22M0R	AR22M5R	AR30M0R	AR30M5R	AM22M0R	AM22M5R	
	Mushroom head (29mm dia.)	AR22M4R	AR22M9R	AR30M4R	-	AM22M4R	-	
	Flush with full guard (24mm dia.)	AR22G2R	-	-	-	-	-	
	Extended with full guard (24mm dia.)	AR22G3R	AR22G8R	AR30G1R	AR30G6R	AM22G3R	AM22G8R	
	Extended with half guard	AR22G0R	AR22G5R	AR30G0R	AR30G5R	-	-	
	Pin lock	-	-	AR30GPR	-	-	-	
	Mushroom head with full guard (40mm dia.)	AR22M3R	-	AR30M3R	-	AM22M3R	AM22M8R	
	Mushroom head with full guard (35mm dia. metal nut)	-	-	AR30GSR	-	-	-	
	Pushbutton with selector ring(2-position)	AR22S1R	-	AR30S1R	-	-	-	
	Pushbutton with selector ring(2-position)	AR22S2R	-	AR30S2R	-	-	-	
	Pushbutton with selector ring(2-position)	AR22S3R	-	AR30S3R	-	-	-	
	Pushbutton with selector ring(2-position)	AR22S6R	-	AR30S6R	-	-	-	
	Giant head	-	-	AR30B0R	-	-	-	
	Giant head with guard	-	-	AR30B1R	-	-	-	
	Giant head with full guard	-	-	AR30B2R	-	-	-	
	Giant head with full guard	-	-	AR30B3R	-	-	-	
	Push, turn-lock	-	-	AR30N0R	-	-	-	
	Push-lock, turn-reset (40mm dia. with white arrow)	AR22V5R (Returning method : turn-reset)		AR30V5R (Returning method : turn-reset)		-	-	
Pushbutton with emergency operating cap	-	-	AR30FVR	-	-	-		
Square bezel	Flush square head	AR22F0S	AR22F5S	-	-	-	-	
	Extended square head	AR22E0S	AR22E5S	-	-	-	-	
	Flush round head	AR22F0Y	AR22F5Y	-	-	-	-	
	Extended round head	AR22E0Y	AR22E5Y	-	-	-	-	
	Mushroom head (29mm dia.)	AR22M4Y	-	-	-	-	-	

c. Emergency stop pushbutton switches

Bezel	Operator	Type						UL File No.
		AR22		AR30		AM22		
		With white arrow	No white arrow	With white arrow	No white arrow	With white arrow	No white arrow	
Round bezel	Push-lock, turn-reset (29mm dia.)	AR22VSR	AR22V4R	-	-	AM22VSE	-	E44592
	Push-lock, turn-reset (40mm dia.)	AR22V0R	AR22V2R	AR30V0R	AR30V2R	AM22V0E	-	
	Push-lock, turn-reset (65mm dia.)	-	-	AR30V1R	-	-	-	
	Key-release push-lock, turn-reset (40mm dia.)	-	AR22V7R	-	-	-	-	
	Push-lock, pull-reset (35mm dia.)	-	AR22Q2R	-	AR30Q2R	-	-	
	Unibody push-lock, turn-reset (40mm dia.)	AR22VGE	-	-	-	-	-	E44592 

d. Emergency stop illuminated pushbutton switches

Bezel	Operator	Type						UL File No.
		AR22		AR30		AM22		
		With white arrow	No white arrow	With white arrow	No white arrow	With white arrow	No white arrow	
Round bezel	Push-lock, turn-reset (29mm dia.)	AR22VSL	-	-	-	AM22VSF	-	E44592
	Push-lock, turn-reset (40mm dia.)	AR22V0L	AR22V2L	AR30V0L	AR30V2L	AM22V0F	-	
	Push-lock, turn-reset (40mm dia. Transparent in all colors)	AR22VDL	AR22VAL	-	-	AM22VDF	-	
	Unibody push-lock, turn-reset (40mm dia.)	AR22VGF	-	-	-	-	-	E44592 

e. Pilot lights

Bezel	Lens	Type			UL File No.
		DR22	DR30	DM22	
Round bezel	Dome	DR22D0L	DR30D0L	DM22D0L	E44592
	Extended round	DR22E3L	DR30E3L	DM22E3L	
	Faceted	DR22K0L	DR30K0L	DM22K0L	
Square bezel	Flush square	DR22F3M	-	-	
	Flush square (Transparent lens)	DR22F4M	DR30F4M*	-	
	Flush square (12mm high frame)	DR22F5M	-	-	
	Extended square	DR22E3M	-	-	
	Flush rectangular	DR22E3N	-	-	
	Flush rectangular (Transparent lens)	-	DR30F4N*	-	
	Flush square large type (Transparent lens)	-	DR30M4M*	-	
Extended round	DR22E3P	-	-		

Note 1. With resistor unit and resistor types : Not approved

Note 2. * LED 12V AC type : Not approved


f. Selector switches

Bezel	Operator	Type						UL File No.
		AR22		AR30		AM22		
		Standard type	Control type	Standard type	Control type	Standard type	Control type	
Round bezel	Knob	AR22PR	AR22PCR	AR30PR	AR30PCR	AM22PR	AM22PCR	E44592
	Lever	AR22WR	AR22WCR	AR30WR	AR30WCR	AM22WR	AM22WCR	
	Cylindrical knob	AR22RR	AR22RCR	-	-	-	-	
	Key	AR22JR	AR22JCR	AR30JR	AR30JCR	AM22JR	AM22JCR	
	Key (long durability)	AR22JAR	-	AR30JAR	-	-	-	
Square bezel	Knob	AR22PY	AR22PCY	-	-	-	-	
	Lever	AR22WY	AR22WCY	-	-	-	-	
	Cylindrical knob	AR22RY	AR22RCY	-	-	-	-	
	Key	AR22JY	AR22JCY	-	-	-	-	

g. Illuminated selector switches

Bezel	Operator	Type			UL File No.
		AR22	AR30	AM22	
		Standard type	Standard type	Standard type	
Round bezel	Knob	AR22PL	AR30PL	AM22PL	E44592
Square bezel	Knob	AR22PP	-	-	

h. Joy stick selector switches (Lever switches)

Bezel	Handle	Type						UL File No.
		AR22		AR30		AM22		
		Manual return	Spring return	Manual return	Spring return	Manual return	Spring return	
Round bezel	Ball type (without lock)	AR22A0□	AR22A5□	AR30A0□	AR30A5□	-	-	E44592 
	Ball type (with lock)	AR22A1□	AR22A6□	AR30A1□	AR30A6□	-	-	
	Rubber cap type (without lock)	AR22A2□	AR22A7□	AR30A2□	AR30A7□	-	-	

i. Buzzers

Bezel	Sound	Type			UL File No.
		DR22	DR30	DM22	
		Standard type	Standard type	Standard type	
Round bezel	Electronic sound	DR22B5	DR30B5	-	E44592
	Electronic sound (economy)	-	DR30B6	-	
	Electronic sound (IP54)	DR22B8	DR30B8	-	

Note: 6V AC, 110V DC types : Not approved

j. Contact ratings

AC (COS $\phi=0.35$)

Contact rated code	120V		240V		480V		600V	
	Making current	Breaking current	Making current	Breaking current	Making current	Breaking current	Making current	Breaking current
A600	60A	6.0A	30A	3.0A	15A	1.5A	12A	1.2A
B300 (AR22VG)	30A	3.0A	15A	1.5A	-	-	-	-

DC $T_{0.95} = 6P$ (Max. 300ms)

Description	Contact rated code	Making current · Breaking current		
		125V	250V	301V – 600V
Illuminated pushbutton switch Pushbutton (With selector ring type: AR22S2R, AR30S2R only) Emergency stop pushbutton switch	P600	1.1A	0.55A	0.2A
Emergency stop illuminated pushbutton switch (Except the overlap contact types)	Q300 (AR22VG)	0.55A	0.27A	-
Overlap contact types of products shown above Pushbutton (With selector ring type: AR22S1R, AR22S6R, AR30S1R and AR30S6R only) Selector switch (2-position only, except the overlap contact types) Illuminated selector switch (2-position only, except the overlap contact types)	Q600	0.55A	0.27A	0.1A
Pushbutton (With selector ring type: AR22S3R, AR30S3R only) Selector switch (2-pos./overlap contact type, 3-, 4-, 5-pos. Type) Illuminated selector switch (2-pos./overlap contact type, 3-pos. Type)	R300	0.22A	0.11A	-

Note : Joy stick selector switches (Lever switches): 250V AC, 5A (Res. load) 125V DC, 0.2A 24V DC, 1A (Res. load)

k. Lamp ratings

	LED lamp	Incandescent lamp	Neon lamp (AR22VGF type)
Full-voltage (without transformer)	Max. 24V AC/DC	Max. 30V AC/DC	Max. 240V AC
With transformer	Max. 550V AC (Short-body type: Max. 220V AC)		-

● Command switches <AH25 series>

a. Pushbutton switches

Name	Type	Specification		UL File No.
	AH25	Contact arrangement	Color	
Pushbutton switches	E	1NO	Green	E44592
	E5	1NC	Red	
	F	1NO+1NC	Black	
	F5	2NO	Dark green	
	G	2NC	Yellow	
	G1	2NO+2NC	White	
	G5	3NO, 3NC	Orange	
	G6	3NO+3NC	Blue	
	M	4NO, 4NC		
	M5	4NO+4NC		
	SE	(1NO+1NC or 2NO+2NC for E5,		
	SE5	F5, G5, G6, M5,		
	SF	SF5 and SE5 types)		
	SF5			
Wobble stick switch	U			
Pushbutton with selector ring (2-position)	S1	2NO+2NC		
	S2			
	S3			
	S4			
	S5			
	S6			
Mechanically interlocked pushbutton switches	F5/F□	1NO+1NC + 1NO+1NC		
	F5/E□			
	F5/M□			
	E5/E□			
	E5/M□			
M5/M□				

b. Selector switches

Name	Type	Specification		UL File No.
	AH25	Contact arrangement	Color	
Selector switches (2-position)	J0	1NO, 1NC	(For P type)	E44592
	J2	1NO+1NC		
	P0	2NO, 2NC		
	P2	2NO+2NC		
	SJ2	3NO, 3NC		
	SP2	3NO+3NC		
Selector switches (3-position)	J3	4NO, 4NC		
	J5	4NO+4NC		
	P1	(2NO+2NC for P1 and PC types)		
	P3			
	P5			
	P6			
	J6			
	PC			
	SJ3			
	SP3			

c. Illuminated pushbutton switches

Name	Type	Specification		UL File No.
	AH25	Contact arrangement	Color	
Illuminated pushbutton switches	L	·Without transformer	Green	E44592
	L1	1NO, 1NC, 1NO+1NC	Red	
	L2	2NO, 2NC, 2NO+2NC	White	
	L3	3NO, 3NC, 3NO+3NC	Blue (except LED)	
	L4	4NO, 4NC, 4NO+4NC	Yellow	
	L5	·With transformer	Orange	
	L6	1NO, 1NC, 1NO+1NC		
	L7	2NO, 2NC, 2NO+2NC		
	L8	(1NO+1NC or 2NO+2NC for L5, L6,		
	SL	L7, L8, SL5 and SL6 types)		
	SL1			
	SL5			
	SL6			

d. Pilot lights

Name	Type	Specification		UL File No.
	AH25	Lamp voltage	Color	
Pilot lights	ZK	·Without transformer Incandescent	Green	E44592
	ZM		Red	
	ZN	Max. 30V AC/DC	White	
	ZS	LED Max. 24V AC/DC ·With transformer Max. 600V AC	Blue (except LED) Yellow Orange	

e. Contact ratings

Voltage [V]	Application		Continuous current [A]	AC		
	UL	CSA		Make [A]	Break [A]	
110-120	●		10	60	6.0	
120		●				
220-240	●				30	3.0
240		●				
440-480	●				15	1.5
480		●				
550-600	●				12	1.2
600		●				

Voltage [V]	Application		DC Make and break currents [A]
	UL	CSA	
115-125	●		1.1
115		●	
125			
230-250	●		0.55

Note: AH25-J3, -J5, -P3 and -P1 types cannot be used in DC circuit.

● Command switches <AH164/AH165/AH165-2/AH225/AG225/AH16P/AH22P/AH16P-2/AG22 and AG23 series>

a. AH164/AH165 series

Name	Type		Specification		Contact	Indicator	UL File No.
	AH164	AH165	Contact arrangement	Color			
Pushbutton switches	E SF TF TGF M SM TM	E SF TF TGF M SM TM ¹ V ¹ V1 ¹	1NO+1NC 2NO+2NC 3NO+3NC	Green Red Black Yellow White Orange Blue	250V AC5A max, 24V DC1A 125V DC0.2A, Resistive load (Cannot be used when potential differs in the same contact or unit)		E44592
	E5 SF5 TF5 TGF5 M5 SM5 TM5	E5 SF5 TF5 TGF5 M5 SM5 TM5					
Illuminated pushbutton switches	L SL TL TGL	L SL TL TGL	1NO+1NC 2NO+2NC 3NO+3NC	Green Red White Yellow Orange Blue		- Without transformer For incandescent lamps (120V AC/DC max 1.2W) 6V, 14V, 28V, 48V, AC/DC For LED lamps ³ 5V, 6V, 12V, 24V DC For neon lamps 110V, 120V, 220V AC - With transformer For incandescent/LED lamps: 110V, 220V AC	
	L5 SL5 TL5 TGL5	L5 SL5 TL5 TGL5					
Emergency stop pushbutton switches	-	V5 V6	NC NC	Red			
Selector switches	P0 P1 P2 P3 P6 P7 SP0 SP1 SP2 SP3 SP6 SP7 J0 J1 J2 J3 J6 J7 SJ0 SJ1 SJ2 SJ3 SJ6 SJ7	P0 P1 P2 P3 P6 P7 SP0 SP1 SP2 SP3 SP6 SP7 J0 J1 J2 J3 J6 J7 SJ0 SJ1 SJ2 SJ3 SJ6 SJ7 RJM2 ² JM2 ²	1NO+1NC 2NO+2NC 3NO+3NC	Knob color: black; key type: A, B, C, D, E and F			
Pilot lights	Z ZS ZT	Z ZS ZT ZM ZT1	-	Green Red White Yellow Orange Blue	-	- Without transformer For incandescent lamps (except ZM types) (120V AC-DC max 1.2W) 6V, 14V, 28V, 48V, AC/DC 6.3V, 18V, 24V, 30V AC/DC (ZT1 types) For LED lamps ³ 5V, 6V, 12V 24V DC 6V DC, 12V, 15V, 24V AC/DC (ZT1 types) 12V, 24V DC (ZM types) For neon lamps 110V, 120V, 220V AC - With transformer For incandescent/LED lamps: 110V, 220V AC	
Buzzers	TX2	X	-	Black	-	6V, 12 - 24V, 35 - 48V AC/DC	
Numerical indicators	TC4	TC4	-	-	-	24V DC	

¹ Contact arrangement is 1NC or 2NC; button color is red.

² Contact arrangement is 1NO+1NC or 2NO+2NC.

³ The spot LED type and 2-color LED type have not been approved.

b. AH165-2/AH225/AG225/AH16P/AH22P/AH16P-2 series

Name	Type						Specification		Contact	Indicator	UL File No.
	AH165-2	AH225	AG225	AH16P	AH16P-2	AH22P	Contact arrangement	Color			
Pushbutton switches	F, E, SF, SE, SCE, M, YM, S2, YS2, V, YV, SG ^{*1}	F, E, M, S2, V	F, E, CE, M, S2, V	TF, SF, E, TGF, M, SM, TM	F, E, SF, SE, SCE, M, YM, S2, YS2, V, YV	F, E, M, S2, V	1NO+1NC 2NO+2NC 3NO+3NC (Items for P board: 3NO + 3NC not included)	Green Red Black Yellow White Orange Blue	250V AC5A max 24V DC1A 125V DC0.2A Resistive load (Cannot be used when potential differs within the same contact or unit)	-	E44592
	F5, E5, SF5, SE5, SCE5, SG5 ^{*1}	F5, E5	F5, E5, CE5	TF5, SF5, E5, TGF5, M5, SM5, TM5	F5, E5, SF5, SE5, SCE5	F5, E5					
Illuminated pushbutton switches	FL, EL, SFL, SEL, SCL, ML, YML, VL, YVL, SGL ^{*1}	FL, EL, ML, VL	FL, EL, CL, ML, VL	TL, SL, L, TGL	FL, EL, SFL, SEL, SCL, ML, YML, VL, YVL	FL, EL, ML, VL	1NO+1NC 2NO+2NC 3NO+3NC (Items for P board: 3NO + 3NC not included)	Green Red White Yellow Orange Blue (LED lamps are for AH165-2, AH16P and AH16P-2 types only.)	-	For incandescent lamps 120V AC/DC max 1.2W 6V, 14V, 28V, 48V AC/DC For LED lamps 5V, 6V, 12V, 24V DC For neon lamps (Except for items for P board) 110V, 120V, 220V AC	
	FL5, EL5, SFL5, SEL5, SCL5, SGL5 ^{*1}	FL5, EL5	FL5, EL5, CL5	TL5, SL5, L5, TGL5	FL5, EL5, SFL5, SEL5, SCL5	FL5, EL5					
Selector switches	P, YP, H, SH, J, YJ, SP ^{*1} , SJ ^{*1}	P, H, J	P, H, J	P, SP, H, SH, J, SJ	P, YP, H, SH, J, YJ	P, H, J	1NO+1NC 2NO+2NC 3NO+3NC (Items for P board: 3NO + 3NC not included)	Knob color: black; key type: A, B, C, D, E and F			
Illuminated selector switches	PL	PL	PL	-	-	-	1NO+1NC 2NO+2NC	Green Red White Yellow Orange Blue (LED lamps are for AH-165-2 type only.)		For incandescent lamps 120V AC/DC max 1.2W 6V, 14V, 28V, 48V AC/DC For LED lamps 5V, 6V, 12V, 24V DC	
Pilot lights	Z, ZE, SZ, SZE	-	-	ZT, ZS, Z	Z, ZE, SZ, SZE	-	-	Green Red White Yellow Orange Blue		For incandescent lamps 120V AC/DC max 1.2W 6V, 14V, 28V, 48V AC/DC For LED lamps 5V, 6V, 12V, 24V DC For neon lamps (Except for items for P board) 110V, 120V, 220V AC	

*1 Certified contact configuration: 1NO + 1NC only

c. AG22/AG23 series

Name	Type		Specification		Contact	Indicator	UL File No.
	AG22	AG23	Contact arrangement	Color			
Illuminated pushbutton switches	Incandescent	LA, LB, L5A, L5B	LA, LB, LC, LD, LE, LF, L5A, L5B, L5C, L5D, L5E, L5F	AG22; 1NO+1NC 2NO+2NC	Green Red White Yellow Orange Blue (except LED)	250V AC5A max 24V DC 1A 125V DC 0.2A Resistive load (Cannot be used when potential differs within the same contact or unit)	E44592
		Contact portion L1, L2, L51, L52	Contact portion L1, L2, L3, L4, L51, L52, L53, L54	AG23; 1NO+1NC 2NO+2NC 3NO+3NC 4NO+4NC			
	LED	Illuminating portion LA□3, LB□3	Illuminating portion LA□3, LB□3, LC□3, LD□3, LE□3, LF□3				
Pilot lights	Incandescent	ZA, ZB	ZA, ZB, ZC, ZD, ZE, ZF	-			
		LED	Case Z6	Case Z6			
	LED	Illuminating portion ZA□3, ZB□3	Illuminating portion ZA□3, ZB□3, ZC□3, ZD□3, ZE□3, ZF□3				

● Command switches <AG28/DG28 series>

a. Illuminated pushbutton switch, Pushbutton switch

Bezel	Operator	Type				UL File No.
		Illuminated pushbutton switch		Pushbutton switch		
		Momentary	Alternate	Momentary	Alternate	
Square bezel	Flush square head	AG28F0M	AG28F5M	AG28F0S	AG28F5S	E44592
	Flush with full guard	AG28G2M	AG28G7M	AG29G2S	AG28G7S	
	Pushbutton with selector ring (2-position, 24mm dia.)	-	-	AG28S2Y	-	

b. Selector switch, Illuminated pushbutton switch, Pilot light

Bezel	Operator	Type			UL File No.
		Selector switch		Pilot light	
		Non-illuminated type	Illuminated type		
Square bezel	Knob	AG28PY	AG28PP	-	E44592
	Flush square head	-	-	DG28F3M	

c. Ratings

Please refer to “j. Contact ratings” and “k. Lamp ratings” for command switches (AR22, DR22, AR30, and DR30 series) in the table above.