

Pushbuttons/Selectors/Pilot Lights/Buzzers

AR22 and DR22

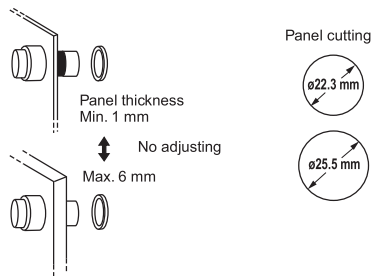
General information

The AR22 now uses a release arm with a wedge mechanism developed by Fuji Electric FA. This enables you to mount or remove the operator and contact block without using any tools. When fitting the switch to a panel, you can ignore the panel thickness. You have only to secure the operator with a locking nut from behind the panel without any need for adjustment. The improved locking nut is capable of mounting the operator in both 22.3mm and 25.5mm dia. panel cutout holes.

■ Features

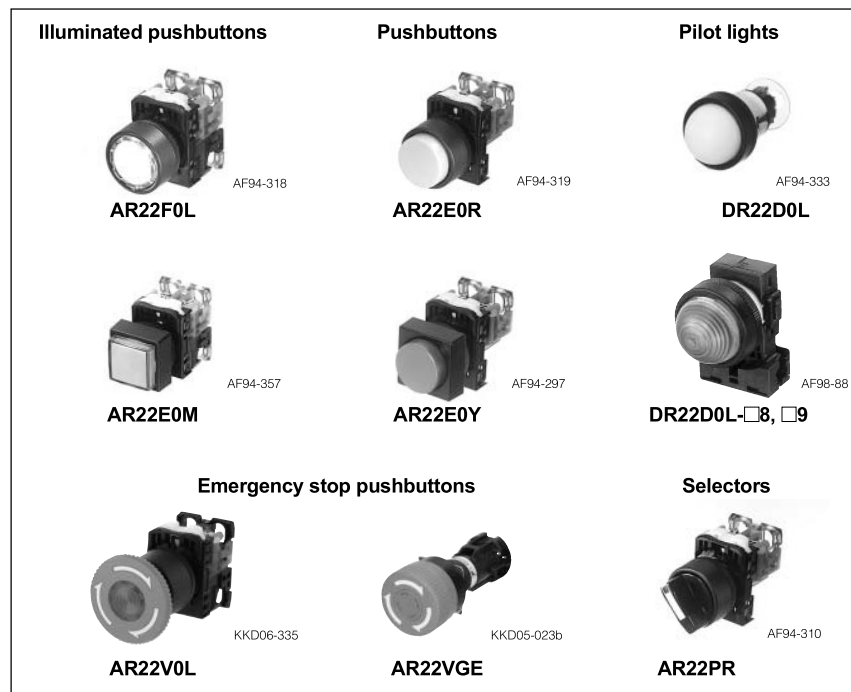
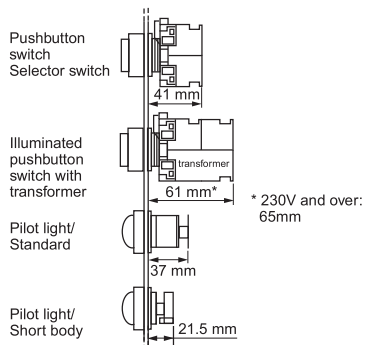
Facilitated mounting

- No adjusting of panel thickness is necessary.
- The button and lens can be mounted on a panel while the operator is engaged.
- Mountable even on a panel cutout 25.5mm in diameter.



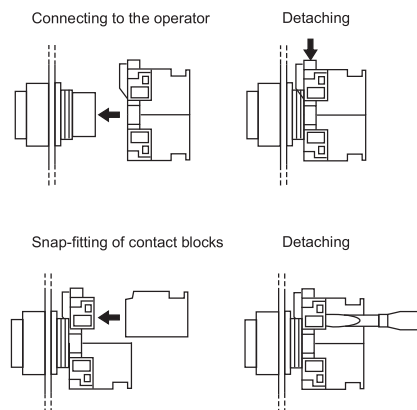
Miniaturization

- Pushbuttons and selector switches with 1NO+1NC: 41mm deep
- Pilot lights: 37mm deep
- The transformer now occupies far less space.



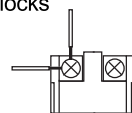
Easy replacing contact block and transformer

- Because of a snap-on mounting, replacement or addition of the contact block and transformer unit is very simple.
- The contact block is common to all the pushbuttons of this series.
- Contact block is easily replaced even when the pushbuttons are mounted closely together.
- Replacement of the contact block can be done with a screwdriver, without the need for any special tool.



Wiring

- Wiring from two directions is possible.
- Wiring in both vertical and lateral directions facilitates wiring in narrow spaces.
- Color coding of contact blocks makes wiring easy.
1NO: Blue, 1NC: Red
Lamp terminal and transformer unit: Black



Safety

- A terminal cover is provided, assuring safety and security.
- FUJI's original Trigger Action mechanism is used in the emergency stop pushbuttons. They are suitable for emergency stop and safety. This mechanism prevents the contacts from moving until the button is pushed and locked.
- Reliability of safety functions increased by integrated operator and contact block construction. (AR22VG)

Protection

- Excellent oil-tight construction (IP65) of the operator.
- Closure of the contact block has been improved.

■ Approvals



For further information related to approved type, see page 04/3 to 04/06.

Pushbuttons/Selectors/Pilot Lights/Buzzers

AR22 and DR22







Quick reference guide

■ Pilot lights







Lens	Type	Lens	Type	Lens	Type
Dome	DR22D0L  AF94-333	Flush square	DR22F3M  AF94-330	Extended square	DR22E3M  AF94-380
<i>See page 04/34, 04/45</i>		<i>See page 04/34, 04/47</i>		<i>See page 04/34, 04/46</i>	
Extended round	DR22E3L  AF94-332	Flush square (Transparent lens)	DR22F4M  AF94-443	Flush rectangular	DR22E3N  AF96-237
<i>See page 04/34, 04/46</i>		<i>See page 04/34, 04/47</i>		<i>See page 04/34, 04/48</i>	
Faceted	DR22K0L  AF96-189	Flush square (12mm high frame)	DR22F5M  AF95-658	Extended round with square bezel	DR22E3P  AF94-331
<i>See page 04/34, 04/46</i>		<i>See page 04/34, 04/47</i>		<i>See page 04/34, 04/46</i>	

Note: With resistor unit type: Not approved standard

■ Joy stick selector switches

Handle	Type	Handle	Type	Handle	Type
Ball type	AR22A0, A5  AF97-49	Ball type with lock	AR22A1, A6  AF97-45	Rubber cap type	AR22A2, A7  AF97-56
<i>See page 04/38, 04/48</i>		<i>See page 04/38, 04/48</i>		<i>See page 04/38, 04/49</i>	

■ Buzzers

Sound	Type	Sound	Type	Sound	Type
Electronic sound	DR22B5 *  KKD08-053	Magnetic sound	DR22B3  AF96-376	Electronic sound (IP54)	DR22B8 *  AF96-244
<i>See page 04/39, 04/49</i>		<i>See page 04/39, 04/49</i>		<i>See page 04/39, 04/49</i>	

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

Note  : See page 04/289

AR22 and DR22

Type number nomenclature

Pilot lights

DR22 D0L – E3 W □

① ② ③ ④ ⑤

① Product category

DR22: 22mm dia. pilot light

② Lens

D0L: Dome

E3L: Extended round

K0L: Faceted

F3M: Flush square

F4M: Flush square (Transparent lens)

F5M: Flush square (12mm high frame)

E3M: Extended square

E3N: Flush rectangular

E3P: Extended round with square bezel

③ Lamp voltage

• Incandescent lamp

54: 5.5V AC/DC, without transformer

C4: 15V AC/DC, without transformer

D4: 20V AC/DC, without transformer

E4: 24V AC/DC, without transformer

H4: 100-110V AC, with transformer

L4: 115-127V AC, with transformer

M4: 200-220V AC, with transformer

Q4: 230-254V AC, with transformer

S4: 350-380V AC, with transformer

T4: 400-440V AC, with transformer

V4: 480V AC, with transformer

W4: 500-550V AC, with transformer

• LED lamp

A3: 6V AC, without transformer

63: 6V DC, without transformer

B3: 12V AC/DC, without transformer

C3: 15V AC/DC, without transformer

E3: 24V AC/DC, without transformer

H3: 100-110V AC, with transformer

L3: 115-127V AC, with transformer

M3: 200-220V AC, with transformer

Q3: 230-254V AC, with transformer

S3: 350-380V AC, with transformer

T3: 400-440V AC, with transformer

V3: 480V AC, with transformer

W3: 500-550V AC, with transformer

H7: 110V DC, with resistor unit

58: 5.5V AC/DC, short-body without transformer

C8: 15V AC/DC, short-body without transformer

D8: 20V AC/DC, short-body without transformer

E8: 24V AC/DC, short-body without transformer

H8: 100-110V AC, short-body with transformer

L8: 115-127V AC, short-body with transformer

M8: 200-220V AC, short-body with transformer

A9: 6V AC, short-body without transformer

69: 6V DC, short-body without transformer

B9: 12V AC/DC, short-body without transformer

C9: 15V AC/DC, short-body without transformer

E9: 24V AC/DC, short-body without transformer

H9: 100-110V AC, short-body with transformer

L9: 115-127V AC, short-body with transformer

M9: 200-220V AC, short-body with transformer

④ Color of lens

G: Green

Y: Yellow

R: Red

A: Orange

W: White

S: Blue

⑤ Special product

Z9: Resisting water-soluble cutting oils and heat

Z4: Resisting sulfuration gas

ZB: Meeting IP2X finger-protection standards

Note: • The manufacturing range varies depending on the model. For details, refer to the contents of this catalog.

Pilot Lights DR22

■ Pilot lights/standard

Lens	Transformer	LED lamp		Incandescent lamp	
		Lamp voltage	Type	Lamp voltage	Type
Dome  <small>AF94-333</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22D0L-A3□ DR22D0L-63□ DR22D0L-B3□ DR22D0L-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22D0L-54□ — DR22D0L-C4□ DR22D0L-E4□
	With	100–110V AC 200–220V AC	DR22D0L-H3□ DR22D0L-M3□	100–110V AC 200–220V AC	DR22D0L-H4□ DR22D0L-M4□
Extended round  <small>AF94-332</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22E3L-A3□ DR22E3L-63□ DR22E3L-B3□ DR22E3L-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22E3L-54□ — DR22E3L-C4□ DR22E3L-E4□
	With	100–110V AC 200–220V AC	DR22E3L-H3□ DR22E3L-M3□	100–110V AC 200–220V AC	DR22E3L-H4□ DR22E3L-M4□
Faceted  <small>AF96-189</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22K0L-A3□ DR22K0L-63□ DR22K0L-B3□ DR22K0L-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22K0L-54□ — DR22K0L-C4□ DR22K0L-E4□
	With	100–110V AC 200–220V AC	DR22K0L-H3□ DR22K0L-M3□	100–110V AC 200–220V AC	DR22K0L-H4□ DR22K0L-M4□
Flush square  <small>AF94-330</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22F3M-A3□ DR22F3M-63□ DR22F3M-B3□ DR22F3M-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22F3M-54□ — DR22F3M-C4□ DR22F3M-E4□
	With	100–110V AC 200–220V AC	DR22F3M-H3□ DR22F3M-M3□	100–110V AC 200–220V AC	DR22F3M-H4□ DR22F3M-M4□
Flush square (Transparent lens)  <small>AF94-443</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22F4M-A3□ DR22F4M-63□ DR22F4M-B3□ DR22F4M-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22F4M-54□ — DR22F4M-C4□ DR22F4M-E4□
	With	100–110V AC 200–220V AC	DR22F4M-H3□ DR22F4M-M3□	100–110V AC 200–220V AC	DR22F4M-H4□ DR22F4M-M4□
Flush square (12mm high frame)  <small>AF95-685</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22F5M-A3□ DR22F5M-63□ DR22F5M-B3□ DR22F5M-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22F5M-54□ — DR22F5M-C4□ DR22F5M-E4□
	With	100–110V AC 200–220V AC	DR22F5M-H3□ DR22F5M-E3□	100–110V AC 200–220V AC	DR22F5M-H4□ DR22F5M-M4□
Extended square  <small>AF94-380</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22E3M-A3□ DR22E3M-63□ DR22E3M-B3□ DR22E3M-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22E3M-54□ — DR22E3M-C4□ DR22E3M-E4□
	With	100–110V AC 200–220V AC	DR22E3M-H3□ DR22E3M-M3□	100–110V AC 200–220V AC	DR22E3M-H4□ DR22E3M-M4□
Flush rectangular  <small>AF96-237</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22E3N-A3□ DR22E3N-63□ DR22E3N-B3□ DR22E3N-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22E3N-54□ — DR22E3N-C4□ DR22E3N-E4□
	With	100–110V AC 200–220V AC	DR22E3N-H3□ DR22E3N-M3□	100–110V AC 200–220V AC	DR22E3N-H4□ DR22E3N-M4□
Extended round with square bezel  <small>AF94-331</small>	Without	6V AC 6V DC 12V AC/DC 24V AC/DC	DR22E3P-A3□ DR22E3P-63□ DR22E3P-B3□ DR22E3P-E3□	5.5V AC/DC — 15V AC/DC 24V AC/DC	DR22E3P-54□ — DR22E3P-C4□ DR22E3P-E4□
	With	100–110V AC 200–220V AC	DR22E3P-H3□ DR22E3P-M3□	100–110V AC 200–220V AC	DR22E3P-H4□ DR22E3P-M4□

Note: □ See page 04/37

■ Pilot lights/short-body without transformer

Lens	LED lamp		Incandescent lamp	
	Lamp voltage	Type	Lamp voltage	Type
 AF98-88	5.5V AC/DC	—	5.5V AC/DC	DR22D0L-58□
	6V AC	DR22D0L-A9□	6V AC	—
	6V DC	DR22D0L-69□	6V DC	—
	12V AC/DC	DR22D0L-B9□	15V AC/DC	DR22D0L-C8□
 AF98-90	5.5V AC/DC	—	5.5V AC/DC	DR22E3L-58□
	6V AC	DR22E3L-A9□	6V AC	—
	6V DC	DR22E3L-69□	6V DC	—
	12V AC/DC	DR22E3L-B9□	15V AC/DC	DR22E3L-C8□
 AF98-89	5.5V AC/DC	—	5.5V AC/DC	DR22K0L-58□
	6V AC	DR22K0L-A9□	6V AC	—
	6V DC	DR22K0L-69□	6V DC	—
	12V AC/DC	DR22K0L-B9□	15V AC/DC	DR22K0L-C8□
 AF98-92	5.5V AC/DC	—	5.5V AC/DC	DR22F3M-58□
	6V AC	DR22F3M-A9□	6V AC	—
	6V DC	DR22F3M-69□	6V DC	—
	12V AC/DC	DR22F3M-B9□	15V AC/DC	DR22F3M-C8□
 AF98-92	5.5V AC/DC	—	5.5V AC/DC	DR22F4M-58□
	6V AC	DR22F4M-A9□	6V AC	—
	6V DC	DR22F4M-69□	6V DC	—
	12V AC/DC	DR22F4M-B9□	15V AC/DC	DR22F4M-C8□
 AF98-94	5.5V AC/DC	—	5.5V AC/DC	DR22F5M-58□
	6V AC	DR22F5M-A9□	6V AC	—
	6V DC	DR22F5M-69□	6V DC	—
	12V AC/DC	DR22F5M-B9□	15V AC/DC	DR22F5M-C8□
 AF98-93	5.5V AC/DC	—	5.5V AC/DC	DR22E3M-58□
	6V AC	DR22E3M-A9□	6V AC	—
	6V DC	DR22E3M-69□	6V DC	—
	12V AC/DC	DR22E3M-B9□	15V AC/DC	DR22E3M-C8□
 KK02-234B	5.5V AC/DC	—	5.5V AC/DC	DR22E3N-58□
	6V AC	DR22E3N-A9□	6V AC	—
	6V DC	DR22E3N-69□	6V DC	—
	12V AC/DC	DR22E3N-B9□	15V AC/DC	DR22E3N-C8□
 AF98-91	5.5V AC/DC	—	5.5V AC/DC	DR22E3P-58□
	6V AC	DR22E3P-A9□	6V AC	—
	6V DC	DR22E3P-69□	6V DC	—
	12V AC/DC	DR22E3P-B9□	15V AC/DC	DR22E3P-C8□
	24V AC/DC	DR22E3P-E9□	24V AC/DC	DR22E3P-E8□

Note: □ See page 04/37

Pilot Lights DR22

■ Pilot lights/short-body with transformer

Lens	LED lamp	Incandescent lamp
	Lamp voltage Type	Lamp voltage Type
Dome  <small>AF97-137</small>	100–110V AC DR22D0L-H9 <input type="checkbox"/> 200–220V AC DR22D0L-M9 <input type="checkbox"/>	100–110V AC DR22D0L-H8 <input type="checkbox"/> 200–220V AC DR22D0L-M8 <input type="checkbox"/>
Extended round  <small>AF97-138</small>	100–110V AC DR22E3L-H9 <input type="checkbox"/> 200–220V AC DR22E3L-M9 <input type="checkbox"/>	100–110V AC DR22E3L-H8 <input type="checkbox"/> 200–220V AC DR22E3L-M8 <input type="checkbox"/>
Faceted  <small>KK02-130A</small>	100–110V AC DR22K0L-H9 <input type="checkbox"/> 200–220V AC DR22K0L-M9 <input type="checkbox"/>	100–110V AC DR22K0L-H8 <input type="checkbox"/> 200–220V AC DR22K0L-M8 <input type="checkbox"/>
Flush square  <small>AF97-134</small>	100–110V AC DR22F3M-H9 <input type="checkbox"/> 200–220V AC DR22F3M-M9 <input type="checkbox"/>	100–110V AC DR22F3M-H8 <input type="checkbox"/> 200–220V AC DR22F3M-M8 <input type="checkbox"/>
Flush square (Transparent lens)  <small>AF97-133</small>	100–110V AC DR22F4M-H9 <input type="checkbox"/> 200–220V AC DR22F4M-M9 <input type="checkbox"/>	100–110V AC DR22F4M-H8 <input type="checkbox"/> 200–220V AC DR22F4M-M8 <input type="checkbox"/>
Flush square (12mm high frame)  <small>AF97-136</small>	100–110V AC DR22F5M-H9 <input type="checkbox"/> 200–220V AC DR22F5M-M9 <input type="checkbox"/>	100–110V AC DR22F5M-H8 <input type="checkbox"/> 200–220V AC DR22F5M-M8 <input type="checkbox"/>
Extended square  <small>KK02-134A</small>	100–110V AC DR22E3M-H9 <input type="checkbox"/> 200–220V AC DR22E3M-M9 <input type="checkbox"/>	100–110V AC DR22E3M-H8 <input type="checkbox"/> 200–220V AC DR22E3M-M8 <input type="checkbox"/>
Flush rectangular  <small>KK02-235B</small>	100–110V AC DR22E3N-H9 <input type="checkbox"/> 200–220V AC DR22E3N-M9 <input type="checkbox"/>	100–110V AC DR22E3N-H8 <input type="checkbox"/> 200–220V AC DR22E3N-M8 <input type="checkbox"/>
Extended round with square bezel  <small>AF97-135</small>	100–110V AC DR22E3P-H9 <input type="checkbox"/> 200–220V AC DR22E3P-M9 <input type="checkbox"/>	100–110V AC DR22E3P-H8 <input type="checkbox"/> 200–220V AC DR22E3P-M8 <input type="checkbox"/>

Note: See page 04/37

• **Lens color**

Replace the □ mark by the following lens color code

Color	Green	Red	White	Blue	Yellow	Orange
Code	G	R	W	S	Y	A

• **Lamp voltage**

Available lamp voltage are as follow.

Description	Voltage	Code		Short-body type	
		Standard type	Incandescent	LED	Incandescent
Without transformer	5.5V AC/DC	—	54	—	58
	6V AC	A3	—	A9	—
	6V DC	63	—	69	—
	12V AC/DC	B3	—	B9	—
	15V AC/DC	C3	C4	C9	C8
	20V AC/DC	—	D4	—	D8
	24V AC/DC	E3	E4	E9	E8
	With transformer	100-110V AC	H3	H4	H9
115-127V AC		L3	L4	L9	L8
200-220V AC		M3	M4	M9	M8
230-254V AC		Q3	Q4	—	—
350-380V AC		S3	S4	—	—
400-440V AC		T3	T4	—	—
480V AC		V3	V4	—	—
500-550V AC		W3	W4	—	—
With resistor unit	110V DC	H7	—	—	—