

The full range of the contact blocks and transformer units suitable for the AR22 and DR22 series may also be fitted to the AR30 and DR30 series.

■ **Features**

Quick-replacement contact blocks and transformer units

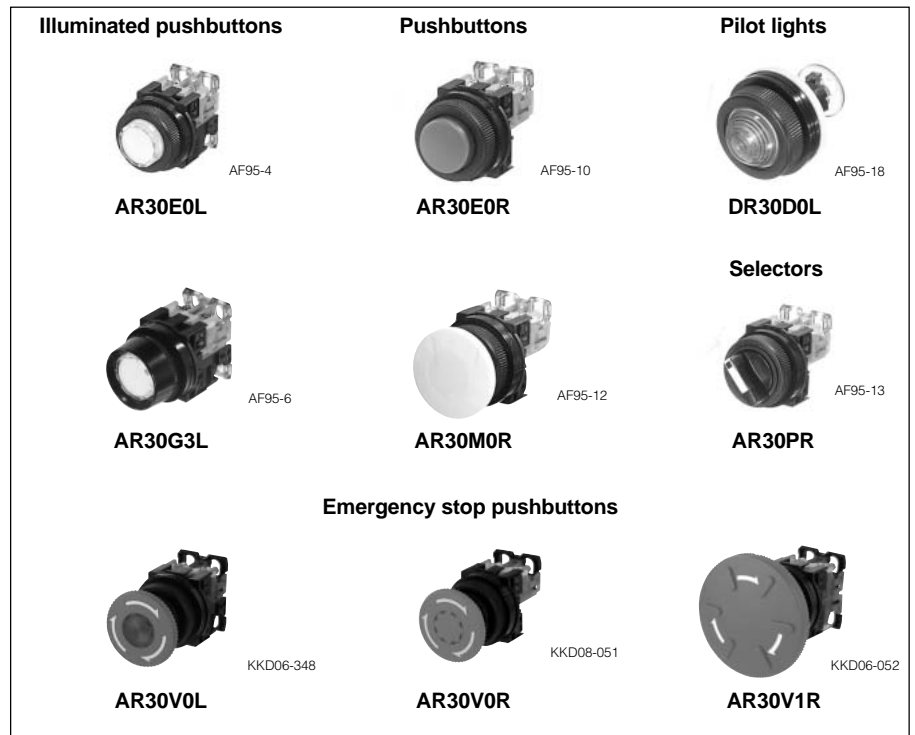
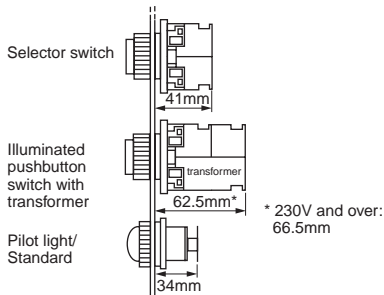
The snap-on construction makes replacement and addition of contact blocks and transformer units very simple and straightforward.

Oil-and dust-proof operator module construction

The protection level of the AR30/DR30 operator modules conforms to IEC Standard IP65. The special seals protect the operator modules and switch mechanisms against oil, dust, and grime, thus ensuring high performance in dusty and moist environments.

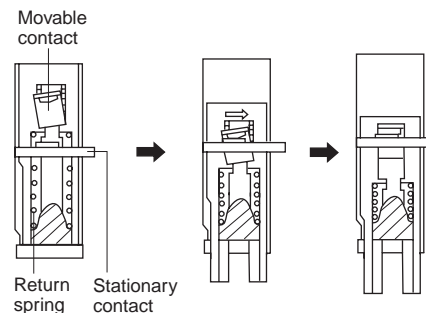
Miniaturization

- Selector switches with 1NO+1NC: 41mm deep
- Pilot lights: 34mm deep
- The transformer now occupies far less space.



Self-cleaning contacts

All the contacts are double break type and feature self-cleaning action. Every time the switch is operated, the contact surfaces are wiped with a sliding movement, thus ensuring high contact reliability even at low voltage and small current levels (5V, 5mA).



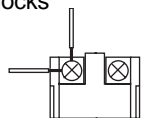
Metal nut

Safer model with metal nut is also available



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.

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 04/56 to 04/59.

Pushbuttons/Selectors/Pilot Lights/Buzzers

AR30 and DR30

Type number nomenclature

Selector and illuminated selector switches

AR30 PL – 2 □ 10 E3 G □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① Product category

AR30: 30mm dia. selector switch and illuminated selector switch

② Operator

- Selector switch

PR: Knob

PCR: Knob operated control type

WR: Lever

WCR: Lever operated control type

JR: Key

JCR: Key operated control type

JAR: Key (Long durability)

HR: Lever (Metal type)

- Illuminated selector switch

PL: Knob

③ Operation

2: 2-position, maintained

0: 2-position, spring return

3: 3-position, maintained

6: 3-position, spring/manual return (Left to center)

7: 3-position, spring/manual return (Right to center)

1: 3-position, spring return

4: 4-position, maintained (For AR30PCR, WCR)

5: 5-position, maintained (For AR30PCR, WCR)

④ Key removable position

A: Left

B: Left and right

C: Left, right and center

D: Right

E: Center

F: Right and center

G: Left and center

⑤ Contact arrangement

10: 1NO 30: 3NO

01: 1NC 03: 3NC

11: 1NO+1NC 33: 3NO+3NC

20: 2NO 40: 4NO

02: 2NC 04: 4NC

22: 2NO+2NC 44: 4NO+4NC

50: 5NO

05: 5NC

Note: Control type: See page 04/82 to 04/84

⑥ 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

⑦ Color of knob

B: Black (Not available for illuminated selector switch)

G: Green

R: Red

W: White (Not available for selector switch)

Y: Yellow (Not available for selector switch)

A: Orange (Not available for selector switch)

S: Blue (Not available for selector switch)

⑧ Key type No.

A, B, C, D, E or F

("A" is standard)

⑨ Special product

Z9: Resisting water-soluble cutting oils and heat

Z8: With a contact protection cover

Z4: Resisting sulfuration gas

ZB: Meeting IP2X finger-protection standards

ZM: Metal nut

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

Pushbuttons/Selectors/Pilot Lights/Buzzers

AR30 and DR30

Ratings and specifications

● Mechanical durability

Description		Operations
Pushbutton switch	Momentary action	5 million
Illuminated pushbutton switch	Alternate action	1 million
Emergency stop pushbutton switch	With selector ring	100,000
Emergency stop illuminated pushbutton	Push-lock, turn-reset	100,000
	Push-lock, pull-reset	30,000
Selector switch	Maintained 1, 2, 3, 4-contact	1 million
	Maintained 5, 6, 7, 8-contact	500,000
	Control type, spring return, spring/manual return	200,000
Illuminated selector switch	Maintained	
	Without transformer 1, 2, 3-contact	1 million
	4-contact	500,000
	With transformer 1, 2-contact	1 million
	3-contact	500,000
	Spring return, spring/manual return	200,000

Note: Key insertion/removal durability for selector switch key types

- Key type 10,000
- Key (Long durability) type 20,000

● Buzzers

Item	DR30B5	DR30B6	DR30B0 (Discontinued)	DR30B8
Rated insulation voltage	Without transformer: 60V AC/DC With transformer: 250V AC *1			
Sound level	90dB (0.1m) 70dB (1m)			80dB (0.1m) 60dB (1.0m)
Durability	1000h		80h	1000h
Frequency	2.4 to 3.3kHz	1.9 to 2.5kHz		2.4 to 3.3kHz
Intermittent cycle	Approx. 170-cycle/min	–	–	Approx. 170-cycle/min
Current consumption	See the table below			
Dielectric strength	Without transformer: 1000V AC 1 minute With transformer: 2000V AC 1 minute *2			
Insulation resistance	100MΩ or more (500V DC megger)			
Pollution degree	3			
Vibration	Resonance: 10 to 55Hz, double amplitude 0.1mm Constant: 16.7Hz, double amplitude 3.0mm			
Shock	Mechanical durability: 500m/s ²			
Ambient temperature	–20 to +60°C (No condensation or no icing) (with resistor unit: –20 to +40°C)			
Storage temperature	–30 to +70°C			
Humidity	45 to 85%RH (within –5 to 40°C)			
Degree of protection	IP00			IP54

Note: *1 DR30B0 (without transformer): 250V AC

*2 DR30B0 (without transformer): 2000V AC 1 minute

● Current consumption

Operational voltage	Current consumption			
	DR30B5, DR30B8	DR30B6	DR30B0	
6V AC (Discontinued)	70mA AC	–	–	
6V DC	35mA DC	25mA AC	–	
24V AC	–	45mA AC	–	
24V DC	–	30mA DC	–	
24V AC/DC	40mA AC, 25mA DC	30mA AC, 20mA DC	Discontinued	
48V AC/DC (Discontinued)	65mA AC, 20mA DC	–	–	
110V AC	30mA AC	30mA AC	30mA AC	
110V DC (Discontinued)	20mA DC	–	–	
220V AC	15mA AC	15mA AC	20mA AC	

Pushbuttons/Selectors/Pilot Lights/Buzzers
AR30 and DR30
Ratings and specifications

■ **Contact ratings**
 ● **UL/CSA standards**
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

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

Description	Contact rated code	Making current · Breaking current		
		125V	250V	301V–600V
Illuminated pushbutton switch Pushbutton (Ring type selector switch: AR30S2R only) Emergency stop pushbutton switch Emergency stop illuminated pushbutton switch (Except the overlap contact types)	P600	1.1A	0.55A	0.2A
Overlap contact types of products shown above Pushbutton (Ring type selector switch: AR30S1R, S6R 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 (Ring type selector switch: 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)

● **EN standard/TÜV approved**

Description	Rated operational current			
	Rated thermal current	Rated operational voltage	AC15 (Ind. load)	
			Rated operational current	DC13 (Ind. load) Rated operational current
Illuminated pushbutton switch Pushbutton (Except the selector ring type) Emergency stop pushbutton switch Emergency stop illuminated pushbutton switch Selector switch (2-position) Illuminated selector switch (2-position)	10A	24V	6.0A	4.0A
		120V	6.0A	–
		125V	–	1.3A
		240V	6.0A	–
		250V	–	0.45A
		480V	2.5A	–
		600V	2.0A	–
Selector switch (3, 4, 5-position) Illuminated selector switch (3-position) Pushbutton with selector ring	10A	24V	6.0A	2.0A
		120V	6.0A	–
		125V	–	0.65A
		240V	6.0A	–
		250V	–	0.23A
		480V	2.5A	–
		600V	2.0A	–
Joy stick selector switch (Lever switch)	5A	24V	–	0.7A
		120V	0.3A	–
		125V	–	0.15A
		240V	0.3A	–

Lamp rated voltage UL/CSA standards, TÜV approved

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