

PRODUCT CERTIFICATE

Model: JUQ1

Product: CB Class Dual Power ATS

Qualified to GB/T 14048.11

Inspector: Quality Department

Date: See product package



JUQ1 CB Class

Dual Power Automatic Transfer Switch

OPERATING INSTRUCTION



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PREFACE

Thank you for choosing JUTRION. JUQ1 is a CB class dual power automatic transfer switch for reliable transfer between a normal source and a reserve source. Read this manual before installation and keep it near the equipment. Installation, commissioning and maintenance must be performed by qualified electrical personnel. Product design may be updated without prior notice; the delivered product and its nameplate take precedence.

Standard: GB/T 14048.11

Utilization category: AC-33iB

Equipment class: CB class

Installation category: III

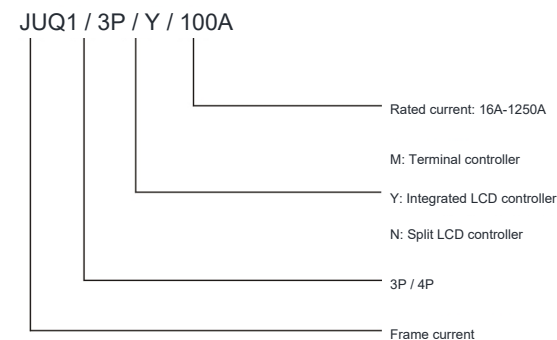
Switch protection: IP20

Controller protection: IP30

1. SAFETY PRECAUTIONS

- 1.1 Read and comply with all operating and installation rules.
- 1.2 WARNING identifies conditions that may cause serious injury or equipment damage.
- 1.3.1 Never insert or remove the controller plug while energized.
- 1.3.2 Installation and repair must be performed by qualified electrical personnel.
- 1.3.3 Never force the mechanism or controller into a working position.
- 1.3.4 Never exceed the rated load; overload may damage contacts or cause fire.
- 1.3.5 Never connect phase to neutral. For 3P units, use the specified common neutral.
- 1.3.6 Replace worn or defective parts; do not continue unsafe operation.
- 1.3.7 Keep away from explosive gas, moisture, heat, sunlight, vibration and impact.
- 1.3.8 Prevent dust, metal particles and foreign objects from entering the switch.
- 1.3.9 Follow every instruction in this manual to preserve service life.

2. MODEL DESIGNATION



3. APPLICATION AND USE

For AC 50 Hz, rated voltage 400 V and current 16 A to 1250 A. The switch transfers essential loads between normal and reserve sources. Automatic, manual, generator, fire-linkage, remote-control and communication functions depend on configuration.

4. NORMAL SERVICE CONDITIONS

Altitude ≤ 2000 m. Ambient temperature -5 °C to +40 °C; 24-hour average ≤ +35 °C. Relative humidity ≤ 50% at +40 °C, with condensation prevented. No explosive or corrosive atmosphere, conductive dust, severe shock or vibration.

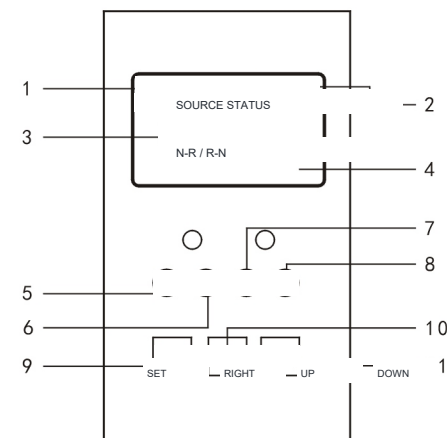
5. CONSTRUCTION AND CHARACTERISTICS

The switch consists of a microprocessor controller and a mechanically and electrically interlocked transfer mechanism. Components include molded-case circuit breakers, motor drive, reduction gears, manual handle, LCD or terminal controller, position indicators and auxiliary contacts. It has three positions: Normal ON, Both OFF and Reserve ON.

6. MAIN TECHNICAL PARAMETERS

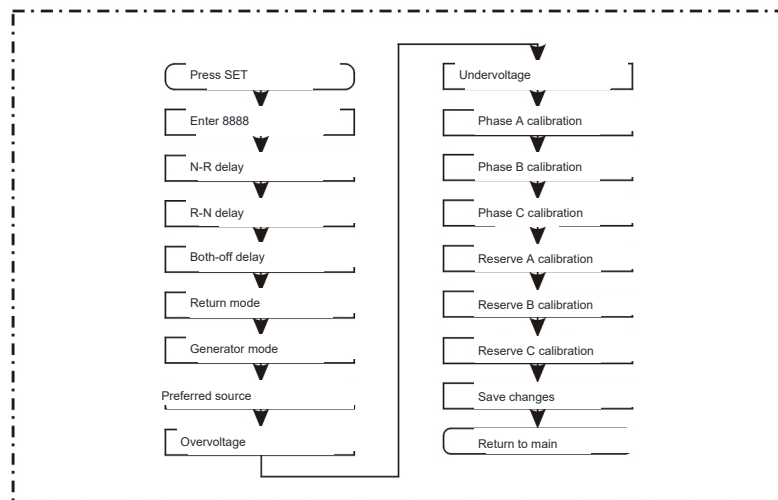
Frame current	100	225	400	630	800	1250
MCCB family	CM1	CM1	CM1	CM1	TM30	TM30
Rated current	10, 16, 20, 25, 32, 40, 50, 63, 80, 100	100, 125, 140, 160, 180, 200, 225	225, 250, 315, 350, 400	400, 500, 630	630, 700, 800	800, 1000, 1250
Operating voltage	400	400	400	400	400	400
Control voltage	230	230	230	230	230	230
Frequency	50	50	50	50	50	50
Transfer time	<=5	<=5	<=6	<=6	<=6	<=6
Utilization category	AC-33iB	AC-33iB	AC-33iB	AC-33iB	AC-33iB	AC-33iB
Mechanical life	5000	5000	3000	2500	2500	2500
Electrical life	1000	1000	1000	500	500	500
Uimp (kV)	8	8	8	8	12	12
Breaking capacity (kA)	10	10	10	12.6	16	25

7. CONTROLLER INTERFACE AND OPERATION



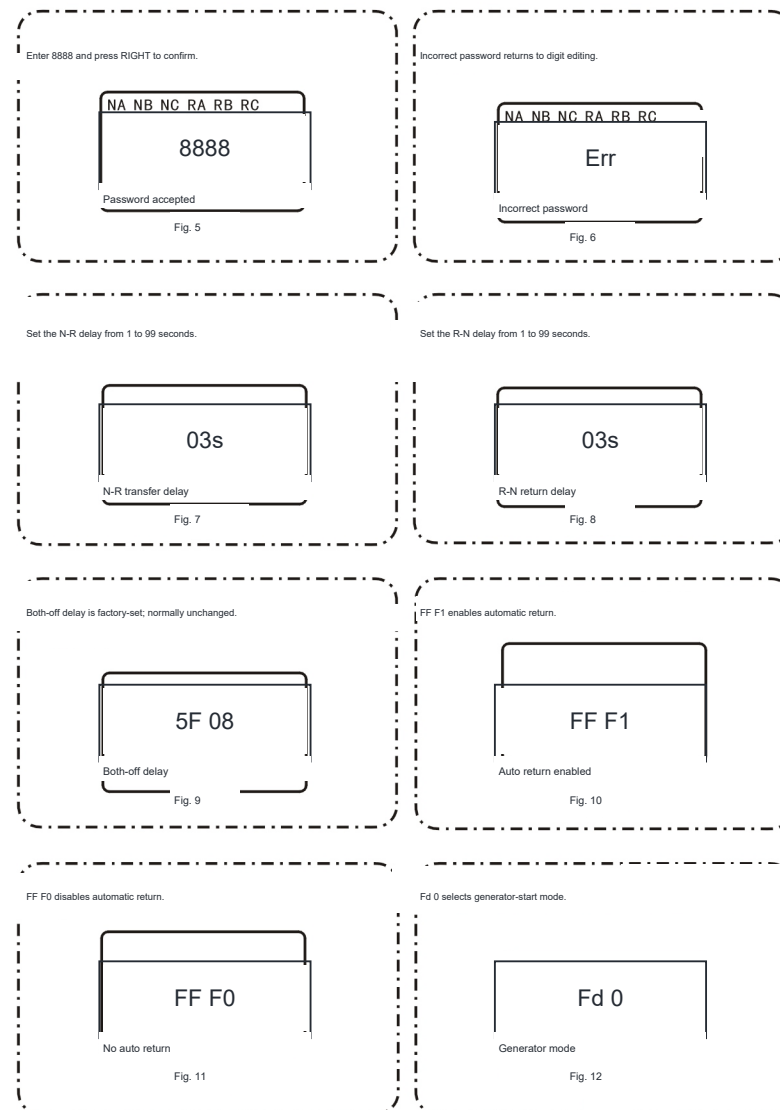
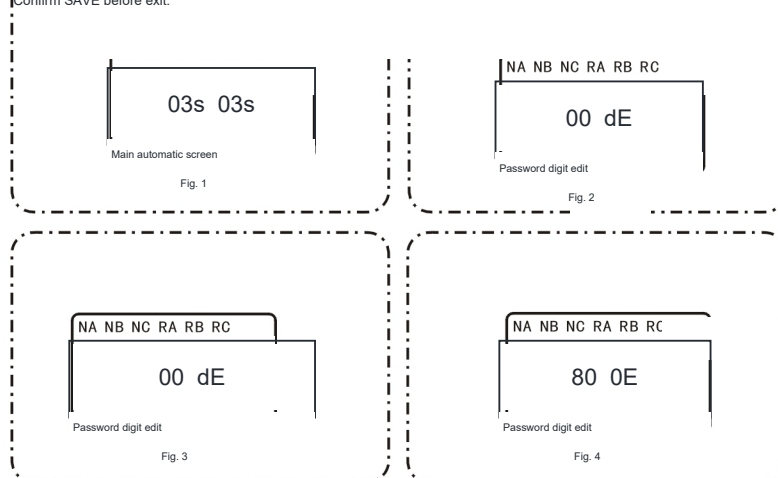
1. NA, NB, NC and RA, RB, RC show normal and reserve source phase status. Flashing or missing characters indicate abnormal voltage or phase loss. 2. MANUAL, AUTO, NORMAL, RESERVE and ALARM show mode and status. 3. The display shows delay time or parameter value. 4. N-R is transfer delay; R-N is return delay. 5. SET enters parameter mode. 6. RIGHT confirms, moves to the next item or displays phase voltages. 7. INCREASE raises a value. 8. DECREASE lowers a value and may silence the alarm. 9. MANUAL selects manual operation. 10. AUTO returns to automatic operation. 11. BOTH OFF opens both sources where configured.

8. PARAMETER SETTING SEQUENCE



9. PARAMETER SETTING EXAMPLE

Press SET, enter password 8888, use RIGHT to select an item, and use INCREASE or DECREASE to change a value.
Confirm SAVE before exit.



PARAMETER REFERENCE

Fd 1 selects standard generator mode.

Fd 1

Standard generator mode

Fig. 13

FC 0 selects Source 1 as preferred.

FC 0

Source 1 preferred

Fig. 14

FC 1 selects Source 2 as preferred.

FC 1

Source 2 preferred

Fig. 15

H1 20 sets overvoltage to 120%.

H1 20

Overvoltage: 120%

Fig. 16

L0 75 sets undervoltage to 75%.

L0 75

Undervoltage: 75%

Fig. 17

P0 01 sets communication address 001.

P0 01

Communication address

Fig. 18

Calibrate normal phase A to a reference meter.

UA 220

Normal phase A calibration

Fig. 19

Calibrate normal phase B to a reference meter.

UB 220

Normal phase B calibration

Fig. 20

Use RIGHT to advance; use INCREASE or DECREASE to adjust. Verify calibration with a meter.

SETTING AND SAVING

Calibrate normal phase C to a reference meter.

UC 220

Normal phase C calibration

Fig. 21

Calibrate reserve phase A to a reference meter.

RA 220

Reserve phase A calibration

Fig. 22

Calibrate reserve phase B to a reference meter.

RB 220

Reserve phase B calibration

Fig. 23

Calibrate reserve phase C to a reference meter.

RC 220

Reserve phase C calibration

Fig. 24

Press RIGHT to save and return to the main screen.

03s 03s

Saved / main screen

Fig. 25

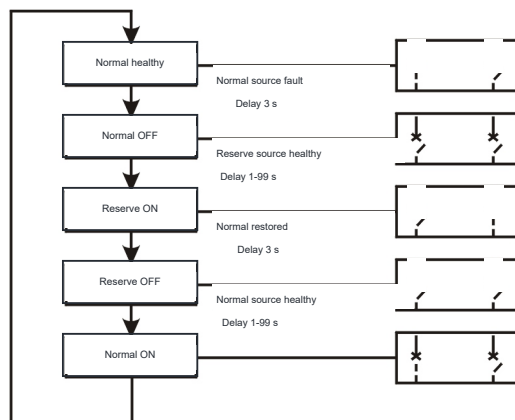
After SAVE, the controller returns to the main screen. Record settings and complete a functional test.

10. DETAILED FUNCTION DESCRIPTION

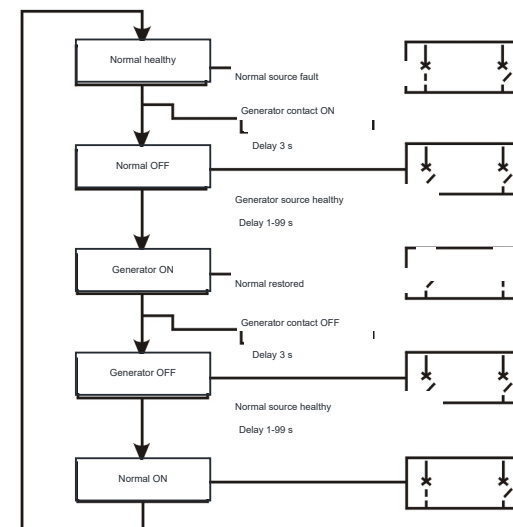
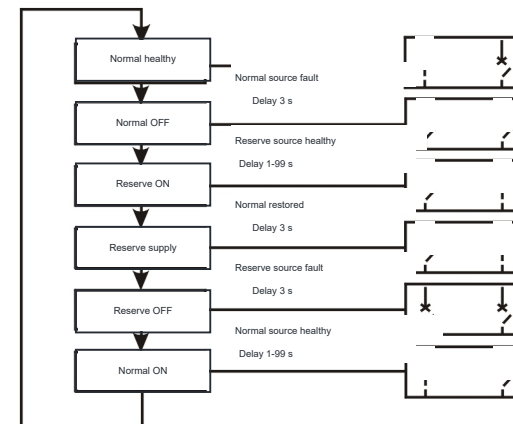
Functions include source-voltage monitoring, phase-loss detection, overvoltage, undervoltage, automatic transfer, auto-return or non-auto-return, preferred-source selection, generator start contact, fire-linkage forced both-off, manual control, alarm indication and optional remote communication. Availability depends on the ordered controller.

Transfer permissives

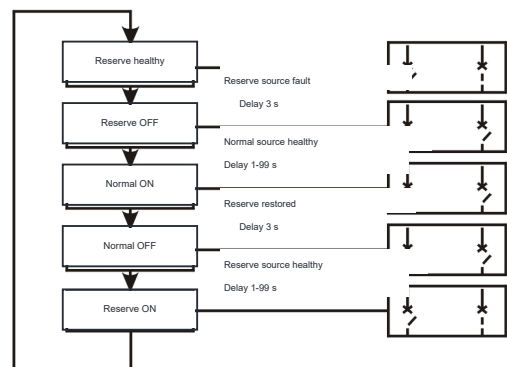
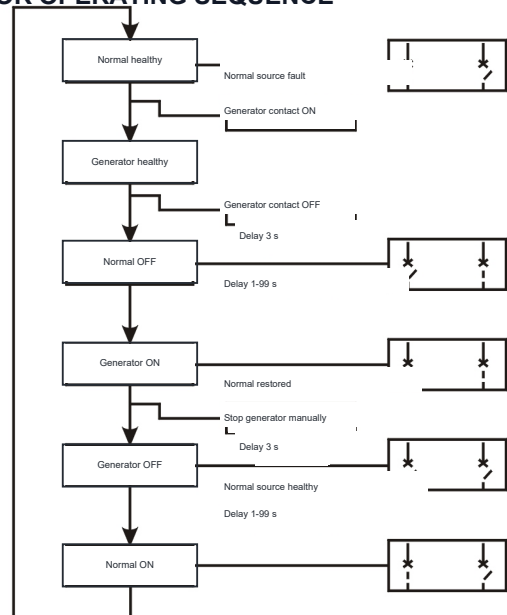
The target source must be healthy. The outgoing breaker must reach OFF before the incoming breaker closes. Position feedback must agree with the command; otherwise the controller alarms and inhibits unsafe operation.



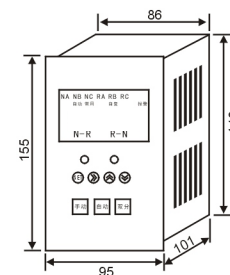
AUTOMATIC OPERATING SEQUENCES



GENERATOR OPERATING SEQUENCE

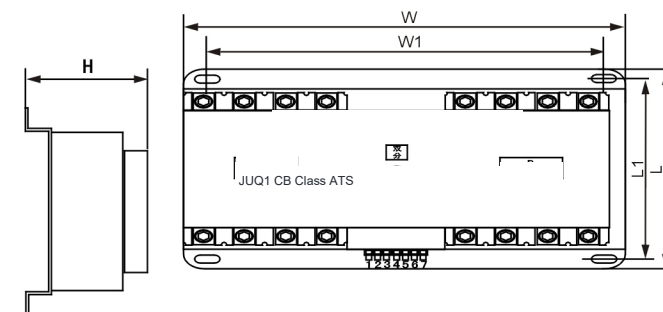


11. CONTROLLER MOUNTING CUTOUT

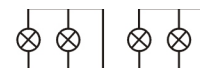


Split controller cutout: 87 x 147 mm

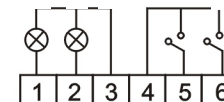
12. TERMINAL-TYPE OUTLINE AND INSTALLATION



Common neutral Normal closed Reserve closed Fire common Fire input Generator output



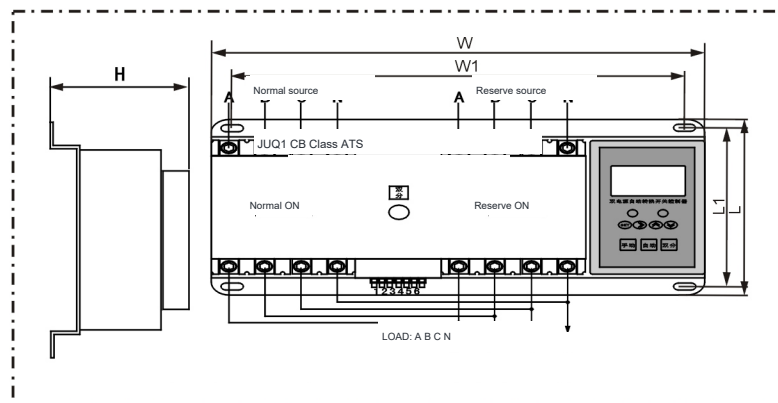
Normal wiring



Fire-linkage wiring

TERMINAL-TYPE OUTLINE AND INSTALLATION DIMENSIONS

Specification	W	W1	L	L1	H
100/3P	288	259	202	180	122
100/4P	320	290	205	182	122
250/3P	330	300	211	189	144
250/4P	365	335	209	186	144
400/3P	453	400	328	298	192
400/4P	497	444	328	298	192
630/3P	572	515	328	298	205
630/4P	632	575	325	294	205
800/3P	613	556	345	315	205
800/4P	683	627	345	315	205

13. LCD-TYPE OUTLINE AND INSTALLATION DIMENSIONS

LCD controller external terminals:

- 1 Common neutral
- 2 Normal closed indication
- 3 Reserve closed indication
- 4 Fire / generator common
- 5 Fire input
- 6 Generator output signal

For a 3-pole switch,
connect common neutral
to terminal 1.

LCD-TYPE OUTLINE AND INSTALLATION DIMENSIONS

Specification	W	W1	L	L1	H
100/3P	388	358	203	180	126
100/4P	420	390	208	185	126
225/3P	430	400	203	180	144
225/4P	465	435	204	183	144
400/3P	565	510	322	292	192
400/4P	607	552	322	292	192
630/3P	683	650	325	295	205
630/4P	740	680	319	290	205
800/3P	720	668	345	315	205
800/4P	790	735	345	315	205
1250/4P	800	750	395	370	290

14. COMMISSIONING AND MAINTENANCE

DANGER: only qualified personnel may install, commission or maintain the switch. Isolate all sources before work. Before energizing, operate the mechanism manually at least three times, verify smooth interlocking, check main and auxiliary wiring, neutral and protective earth. Test MANUAL Normal, MANUAL Reserve and Both Off. Then select AUTO and simulate source failure and recovery. Verify delays, alarms, generator, fire-linkage and remote functions. Inspect terminals, busbars, mechanism and indications at least every six months.

14.2 ROUTINE MAINTENANCE

Keep the environment within the specified limits. Confirm input voltage and frequency. Keep the switch free of oil mist, dust and condensation. At least every six months, inspect busbar joints, cable terminals, auxiliary wiring, indication consistency and mechanical operation. De-energize before cleaning, tightening or replacement.

15. AFTER-SALES SERVICE

Warranty service is subject to the sales contract and correct installation, use and maintenance. Verified manufacturing defects will be repaired or replaced within the agreed warranty period.

16. CHARGEABLE SERVICE CONDITIONS

Chargeable service applies to damage from incorrect use, unauthorized modification or repair, operation outside ratings, installation damage, lightning, fire, earthquake, abnormal voltage or other external events.

17. TROUBLESHOOTING

Fault	Symptom	Checks	Corrective action
No operation	LCD blank	Control supply, fuse, neutral and controller plug	Restore supply; tighten wiring and plug
Alarm	Continuous buzzer	Reserve source fault or alarm function active	Restore source; press DECREASE to silence
Unstable transfer	Frequent switching	Undervoltage, phase loss, imbalance or wrong thresholds	Correct supply and coordinate thresholds / delays

18. ORDERING INFORMATION

Specify JUQ1 model, frame current, rated current, poles, controller type, accessories and quantity. State communication, generator, fire-linkage, remote-control or special environmental requirements. Technical support: sales@jutron.com | WhatsApp +86 150 6847 6965.