

## INTRODUCTION OF PRODUCTS

# SS TYPE NEW MODEL FUJI AUTOBREAKER N.L. SERIES

As we are now living in the age of power, electric power demands are constantly on the increase. Power source equipment capacities have gone up considerably because of the enlargement of plants, the appearance of skyscrapers, the popularity of 400 v distribution systems, etc. Low voltage circuit protection devices must therefore be compact, but at the same time possess large breaking capacities.

To meet these modern requirements, Fuji Electric has developed the new Fuji Autobreaker series. This new series is based on experience gained in the production of more than 10 million Fuji Electromagnetic Switches, and is the result of the accumulation of excellent techniques and long years of research. This series meets the highest international requirements and can be conveniently used as distribution line breakers because of the very small size and extra-high breaking capacity. The new series was manufactured in accordance with JIS (Japanese Industrial Standards) C 8370, JEM (Japan Electric Machine Industry Association Standard) 1071 "Molded Case Circuit Breakers" and also satisfies the ratings in NEMA (Pub. No. AB 1).

## Features

### 1) Compact, with large breaking capacity

These breakers have extremely high breaking capacities because Fuji Electric's unique SS mechanism is employed. The breaking capacity per unit capacity and unit installation area meets the highest international requirements.

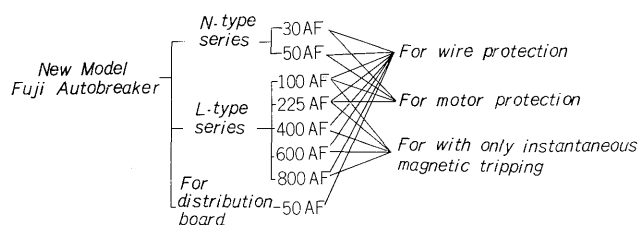
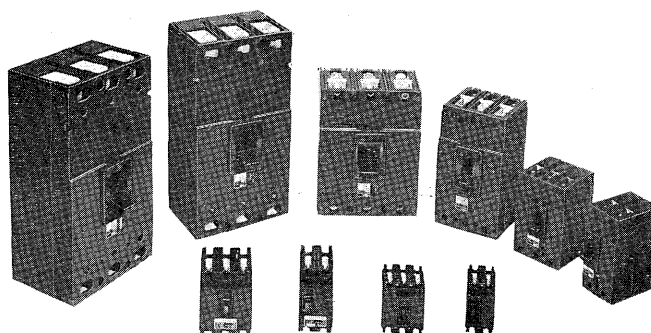
### 2) High-speed current limit breaking performance

Large short-circuit currents can be interrupted at high speed with the SS mechanism. Thermal and mechanical influence on series devices is very small and full protection is guaranteed.

### 3) Low prices and quick delivery

Even though the breaking capacity is very large, these circuit breakers are highly economical and even special equipment with auxiliary switches, etc. attached can be supplied without delay.

### 4) Excellent terminal construction



Because so-called solderless terminals are used, terminal box wiring is easy and the number of man hours required for wiring is reduced considerably. These terminals are also extremely strong since they meet the UL specifications.

### 5) Rapid making/breaking mechanism

Closing is effected only by means of a simple link mechanism, but operation is always reliable and contact is stable. Tripping is indicated by the handle position.

### 6) Tripping current can be adjusted

Instantaneous magnetic tripping current is adjustable for wire protection breakers while thermal tripping current along with instantaneous tripping current is adjustable for the motor protection breakers. Thus, reasonable protection in compliance to the particular type of equipment is made possible. Adjustment of three-phase simultaneously can be made with a single dial and adjustment time is thus reduced considerably.

## Ratings

**Ratings for the New Fuji Autobreakers for Wire Protection Use**

Application			Wire Protection Breakers													
Frame Size			30 (amp)		50 (amp)		100 (amp)		225 (amp)		400 (amp)		600 (amp)		800 (amp)	
Type			N32	N33	N52	N53	L102	L103	L202	L203	L402	L403	L602	L603	L802	L803
Number of Poles			2	3	2	3	2	3	2	3	2	3	2	3	2	3
Rated Voltage (v)	AC	240		480		600		600		600		600		600		
	DC	125		250		250		250		250		250		250		
Rated Frequency (Hz)			50/60													
Adjustment Range of Rated Current and Instantaneous Tripping Current (Standard ambient temperature 40°C)			Rated current (amp)	Rated current (amp)		Rated current (amp)	Instantaneous tripping current (amp)	Rated current (amp)	Instantaneous tripping current (amp)	Rated current (amp)	Instantaneous tripping current (amp)	Rated current (amp)	Instantaneous tripping current (amp)	Rated current (amp)	Instantaneous tripping current (amp)	
			10	15		(40)	380 ~ 580	(75)	550 ~ 1300	(125)	1000 ~ 2400	(300)	1600 ~ 4000	700	3200 ~ 8000	
			15	20		50	480 ~ 720	(100)	1000 ~ 2400	(150)		(350)		800		
			20	30		75	720 ~ 1100	125		(175)		400				
			30	40		100	950 ~ 1450	150	1000 ~ 2400	(200)	500	2100 ~ 6000				
				50				175		(225)	600					
					200			250								
					225			300								
								350			400					
			Rated Interrupting Current (amp) (NEMA)	AC	480V	5000		30,000		50,000		60,000		70,000		70,000
240V	2500				5000		70,000		100,000		100,000		100,000			
DC	250V	2500		20,000		40,000		40,000		40,000		40,000				
	125V	2500		5000												
Tripping System			Thermal—electromagnetic					Thermal—adjustable electromagnetic								
SS Trip Mechanism			Not included		Not included		Included		Included		Included		Included		Included	
Ambient Temperature Compensation Device			Not included		Not included		Included		Included		Included		Included		Included	

Note: At present, CSA, Lloyd and AB Standards are being applied

7) Ambient temperature compensation device is provided

An ambient temperature compensation device is installed within the breaker with 40°C as standard. Operation is thus unaffected by changes in ambient temperature, and it is not necessary to correct the rated current every time the ambient temperature changes.

## Types

The new Fuji Autobreaker Series consists of the following types. Four types of connection/installation systems are provided: the front surface type, back surface type, recessed type, and insertion type.