

## Standard Specifications

Relay	Model	Applicable Circuit	Rating	Set Value	Power Consumption	Output Contact	Aux. Source (for external aux. Ry.)
Master Relay	WR13F-Z <sub>1</sub>	Regular 3-phase 3-wire and 3-phase 4-wire circuits	Ac 210/√3 v 5 amp 50/60 Hz Usable to 460/√3 v using aux. PT	Constant power detection sensitivity (with external CT): 0.15-0.3-0.5-1-2% or 0.2-0.5-1-2-3% Making differential voltage detection sensitivity: 2-4-6-8-10 v or 1.9-2.9-3.9 v	Voltage circuit: 40 va per phase Current circuit: 5 va per phase (including ACT) Delta V circuit: 5 mva (at 2 v) Auxiliary circuit (external): 7.4 va	Break contact: 1a Make contact: 1a De make-break capacity: 10 va (The breaker is controlled by external aux. relay HH23.)	Ac 110 v or 220 v
	WR15F-Z <sub>1</sub>	Different-capacity V and delta network circuits					
Phasing Relay	WR14F-1	Overall network circuit	Ac 210/√3 v 50/60 Hz Usable to 460/√3 v using aux. PT	Make phase: +5°-5°-15°-20° or +5°-5°-15°	Voltage circuit: 30 va Delta V circuit: 5 mva (at 2 v) Auxiliary circuit: 3.7 va	1a Make capacity 6 amp, Make-break capacity ac 200 v /amp (pf=0.4) dc 100 v 0.4 (L/R=15 ms)	Ac 110 v or 220 v (for internal aux. Ry.)

## FUSE SWITCHES "FUJI SUPER-CUT"

Fuji flush-type switches with FNH fuses are being used as large rating current fuse switches and enjoy an excellent reputation among users. These switches, however, are slightly disadvantageous in that they are relatively high priced and are comparatively large. The new "FUJI SUPER-CUT" switches have been designed to overcome these disadvantages and can be used as fuse switches by ordinary panel manufacturers as well as large users to replace the conventional knife switch plus fuse system.

"FUJI SUPER-CUT" switches, together with "FUJI HIGH-CUT" switches, now give Fuji Electric a complete line of switches. "FUJI HIGH-CUT" switches, which were placed on the market earlier, enjoy an excellent reputation and were awarded Grand Prize at the 13th All Japan Good Electrical Installation Materials Exhibition.

### Features

- Compact and economical

Since the switch and fuse blocks are constructed as a unit the switch is compact, requires little mounting space, and is economical.

- Easy mounting

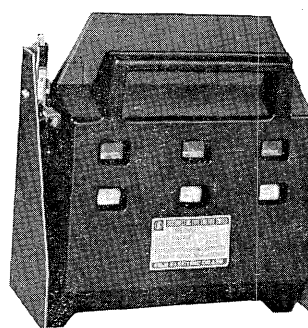
The switch is compact and can be so easily mounted on a panel that a labor savings of 30%, compared with mounting of the conventional knife switch plus fuse type switch, is possible.

- High safety

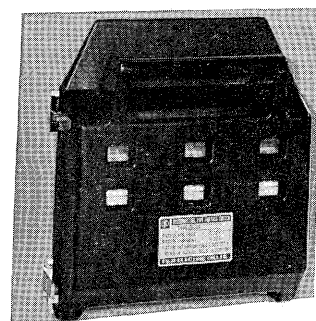
When mounted on a panel, no electrically charged components are exposed and there is therefore no danger of electrical shock. Electrical interlocks are incorporated to prevent erroneous breaking.

- Viewing windows

Viewing windows are provided to permit observation of the mounting state without opening the switch door. Since the fuses can be observed through these windows, the switch is also extremely advantageous from the viewpoint of maintenance.



Surface mounted type



Flush mounted type

- Large breaking capacity

Since FNH fuses are employed, switch breaking capacity can be as large as 500 v ac, 100 ka. Therefore, the switch is well suited to the increased capacities of modern electrical installations.

### Ratings

Mounting System	Applicable Line System	Model	Rated Voltage  (v)	Rated Current  (amp)	Applicable Rated Fuse Current  (amp)	Rated Breaking Capacity  (ka)	Make-Brake Life (mechanical) (times)	Connection Conductor (Board thickness x width) (mm)	Max. applicable cross-sectional area (mm <sup>2</sup> )	
Surface Mounted Type	Single-phase, three-wire	BNN2F□□□—21	500  (ac, dc)	200	100, 150, 200	100  (at ac 500 v)	1000	3×25	100	
		BNN4F□□□—21		400	300, 400			4×30	250	
		BNN6F□□□—21		600	500, 600			5×40	2×250	
		BNN0F□□□—21		1000	700, 800, 1000			8×60	—	
		BNN2F□□□—31		200	100, 150, 200	50  (at dc 500 v)		3×25	100	
		BNN4F□□□—31		400	300, 400			4×30	250	
		BNN6F□□□—31		600	500, 600			5×40	2×250	
		BNN0F□□□—31		1000	700, 800			8×60	—	
	Three-phase, three-wire	BNN2E□□□—21	200	100, 150, 200	100  (at ac 500 v)			3×25	100	
		BNN4E□□□—21	400	300, 400				4×30	250	
		BNN6E□□□—21	600	500, 600				5×40	2×250	
		BNN0E□□□—21	1000	700, 800, 1000				8×60	—	
Flush Mounted Type	Single-phase, three-wire	BNN2E□□□—31	500  (ac, dc)	200	100, 150, 200	50  (at dc 500 v)	1000	3×25	100	
		BNN4E□□□—31		400	300, 400			4×30	250	
		BNN6E□□□—31		600	500, 600			5×40	2×250	
		BNN0E□□□—31		1000	700, 800, 1000			8×60	—	
	Three-phase, three-wire	BNN2E□□□—21		200	100, 150, 200	100  (at ac 500 v)		3×25	100	
		BNN4E□□□—21		400	300, 400			4×30	250	
		BNN6E□□□—21		600	500, 600			5×40	2×250	
		BNN0E□□□—21		1000	700, 800, 1000			8×60	—	
		BNN2E□□□—31		200	100, 150, 200	50  (at dc 500 v)		3×25	100	
		BNN4E□□□—31		400	300, 400			4×30	250	
		BNN6E□□□—31		600	500, 600			5×40	2×250	
		BNN0E□□□—31		1000	700, 800, 1000			8×60	—	

Note: Switches with copper pieces for all three-phases are also available