

INTRODUCTION OF PRODUCTS

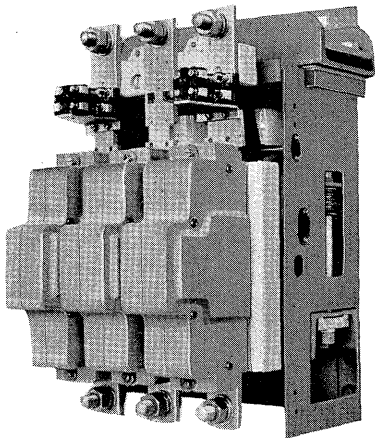
AC ELECTROMAGNETIC CONTACTOR, MODEL RC 3631-14

Along with the recent increase in power consumption of installed equipment, the demand for a large-capacity ac electromagnetic contactor is rising. Timed to meet this contemporary demand, Fuji Electric has completed the development of an ac electromagnetic contactor, Model RC 3631-14 (220 v, 150 kw, 600 amp), becoming ready for mass production and completing the marketing arrangements for the equipment. Given in the following are explanations of the contactor.

The company has hitherto been manufacturing a large-scale contactor, Model K 917-14. However, the rated current is limited to a maximum of 400 amp and the operation frequency and life span of the equipment is as low as A-3-3 (in JIS C-8325). With these disadvantages taken into consideration, Fuji Electric slightly changed contactor Model K 915 III-14, developed by Siemens, into the present new Model RC 3631-14, as one of the high-performance RC 3631 series. In the construction of the equipment, a link mechanism is adopted for the open-close unit, as in the case of the Model RC 3631-4, in order to prevent the impact of the magnet from being vertically applied to the panel upon opening or closing. The electromagnetic coil is equipped with taps for both 50 and 60 cps.

Features

- 1) With the magnetic unit arranged further inside than the contact, the installation area is minimized.
- 2) The equipment fully meets the high requirements of JIS C-8325 "A-1-1", insuring top performance.
- 3) Long life span
The link mechanism employed for the open-close unit minimizes the impact to the contact and installed surface upon opening or closing. This permits a longer life span (electrical life span exceeding 500,000 times, mechanical life span exceeding 5,000,000 times).
- 4) For the arc chamber, arc-tight porcelain of superior arc resistivity is used to reduce wear due to



- arc, being highly durable to breaking of high capacity in spite of the small size of the equipment.
- 5) Each phase is covered with an arc chamber of the totally enclosed type, eliminating the conventional need for large arc space.
- 6) Maintenance and inspection is easy.
- 7) The electromagnet has a large attracting power in spite of its small size, always effecting accurate open-close operation. The equipment is provided with a four-terminal coil for 50 and 60 cps, either rating being applicable by appropriate selection of the tap.

Ratings

Type and Performance of Motor	Maximum Applicable Motor (kw)				Maximum Continuous Current
	110 v	220 v	440 v	550 v	
Squirrel-cage Type A-1-1	75	150	250	280	600 amp
Wound-rotor Type A-1-1	75	150	300	375	

- Note (1): The wound-rotor type motor for applications exceeding that of the squirrel-cage type motor is B-1-1.
- (2): The equipment is designed for application at ambient temperatures up to 40°C. Accordingly, if it is placed in an enclosed panel and the panel internal temperature becomes a problem, this temperature should be taken into consideration by lowering the continuous current and applied wattage, as required.

Ratings of Auxiliary Contact

Maximum Continuous Current	Voltage	Rated throw-in capacity	Rated Breaking Capacity (ac, $\cos \phi=0.3\sim 1$)		Rated Breaking Capacity (dc)			
					Resistive load		Inductive load	
					(amp)	(w)	(amp)	(w)
10	24	50	10	240	10	240	10	240
	110			1100	5	550	1.3	140
	220			2200	1.3	285	0.55	120
	440			4400	0.5	220	0.27	120
	550			5500	0.3	165	0.2	110

Electromagnetic Control Coil

The following are the standard values of the voltage and frequency of the electromagnetic control coil (control circuit).

Electromagnetic Coil Capacity (maximum)		Voltage & Frequency (Standard coil specifications)			Remarks
Before throw-in (va)	After throw-in (va)				
7500	425	100 v	100 v	110 v	Four-terminal coil, for both 50 and 60 cps
		50 cps	60 cps	60 cps	
		200 v	200 v	220 v	
		50 cps	60 cps	60 cps	
		400 v	400 v	440 v	
		50 cps	60 cps	60 cps	
		500 v	500 v	550 v	
		50 cps	60 cps	60 cps	

Electromagnetic Coil Characteristics

In the case of 200 v 50 cps, the electromagnetic coil characteristics are as shown in the following:
It should be carefully noted that when the voltage and frequency change, so do the values given in the table.

Attracting Voltage (v)	Releasing Voltage (v)	Exciting Current (amp)	Loss (w)
Average 160	Average 121	Maximum 1.65	Maximum 145