

D E S C R I P T I O NPRODUCT COVERED:

Component - Magnetic Motor Controllers, Type JV, followed by one or two digits 3 through 48, may be followed by S, may be followed by G, followed by -K, may be followed by T, may be followed by three digits -501 through -600.

GENERAL:

This component is one pole single-throw magnetic motor controller with DC operating coil and with normally open contact. This component is provided with terminals for direct printed circuit mounting.

This component is intended for use in industrial applications and/or temperature-indicating and -regulating applications.

Relay Type JV is constructed of Class 130(B) insulation materials.

RATINGS: (Refer to Sec. 35 of UL 508)Contact -

5 A, 30 V dc, resistive, 100,000 cycles

5 A, 250 V ac, resistive, 100,000 cycles

1/8 hp, 125/250 V ac, 30,000 cycles

Pilot Duty, Code C 300, 30,000 cycles

* TV-2, 120 V ac, 25,000 cycles

Coil -

3 through 48 V dc

NOMENCLATURE:

The significance of the alphanumeric marking system is explained as follows:

*	$\frac{JV}{I}$	$\frac{24}{II}$	$\frac{S}{III}$	$\frac{G}{IV}$	$\frac{-K}{V}$	$\frac{T}{VI}$	$\frac{-501}{VII}$
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I. Basic Designation - JV

II. Coil Voltage

3-48 V dc

III. Coil Power

None	0.3 W
S	0.2 W

IV. Contact Material

None	Ag-Ni may be overlaid with gold
G	Ag-Ni overlaid with gold

V. Relay Construction

-K Sealed construction

VI. Terminal Arrangement

None	Type 1
T	Type 2

*

- VII. Minor constructive variation.
-501 - -600 Additional three digits used for special
variation of construction as below.
- (A) Variations of coil resistance.
 - (B) Variations of pick-up voltage, non-pick-up voltage, drop-out or hold voltage.
 - (C) Variations of operate time or release time.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in (or with), complete equipment where the acceptability of the combination is determined by Underwriters Laboratories, Inc.

* Evaluated for use in Temperature Indicating and Regulating Applications.

Conditions of Acceptability -

1. These devices should be used within their Recognized ratings as specified above.
2. Open type devices should be mounted in enclosures having adequate strength and thickness and in the intended manner and with acceptable spacings being provided.
3. The Printed Wiring Board terminals are not suitable for field wiring.

CONSTRUCTION DETAILS:

The product shall be constructed in accordance with the following description.

Spacings - Spacings of not less than 3.2 mm through-air and 6.4 mm over-surface are maintained between any uninsulated live part and uninsulated live part of opposite polarity, uninsulated grounded part other than enclosure or exposed metal part.

Corrosion Protection - All parts are of corrosion resistant material or are plated or painted.

* Marking - Ink-stamped recognized company name or "TAKAMISAWA" and model number.

MODEL JV RELAYS - FIG. 1 (S97-00733)

General - The general design, shape, and arrangement shall be as illustrated, except where variations are specifically described.

1. Base - R/C - Plastic (QMFZ2). Type CRN7030++, manufactured by Teijin Ltd. Dimensions - minimum 0.32 mm thick, 16.8 by 9.3 by 11.7 mm overall.

Alternate - Same as above, except Type 330EP&, Polyplastics Co., Ltd., minimum 0.32 mm thick.

- * Alternate Base Plate - R/C - Plastic (QMFZ2), Type BT-2330, manufactured by Dainippon Ink & Chemicals Inc. Dimensions minimum 0.35 mm thick, 16.8 by 9.3 by 11.7 mm overall.

Alternate - R/C - Plastic (QMFZ2), Type 3316&, manufactured by Polyplastics Co., Ltd., minimum 0.32 mm thick, 16.8 by 9.3 by 11.7 mm overall.

Alternate - R/C - Plastic (QMFZ2), Type SK665FR, manufactured by E I Dupont De Nemours & Co. Inc. Dimensions - minimum 0.3 mm thick, 16.8 by 9.3 by 11.7 mm overall.

2. Cover - R/C Plastic (QMFZ2), Type CRN7030++, manufactured by Teijin, Ltd. Dimensions - minimum 0.32 mm thick, 17.65 by 12.7 by 10.1 mm overall. Cover secured to base.

- * Alternate - R/C - Plastic (QMFZ2), Type BT-2330, manufactured by Dainippon Ink & Chemicals Inc. Dimensions minimum 0.32 mm thick, 17.68 by 12.7 by 10.1 mm overall.

Alternate - R/C - Plastic (QMFZ2), Type 3316&, manufactured by Polyplastics Co., Ltd., minimum 0.32 mm thick, 17.65 by 12.7 by 10.1 mm overall.

Alternate - R/C - Plastic (QMFZ2), Type SK665FR, manufactured by E I Dupont De Nemours & Co. Inc. Dimensions - minimum 0.3 mm thick, 17.65 by 12.7 by 10.1 mm overall.

3. Coil Terminal - Copper alloy. Dimensions, 0.45 mm diameter, 14.6 mm long, embedded into bobbin.
4. Yoke - Carbon steel. Dimensions, 1.2 mm thick, 7.8 by 9.65 by 8.8 mm overall.
5. Coil - R/C - Magnetic Wire (OBMW2), Polyurethane coated copper wire conforming to ANSI MW75-C random wound.

6. Bobbin - R/C - Plastics (QMFZ2). Type CRN7030++, manufactured by Teijin. Dimensions - minimum 0.32 mm thick, 11.39 by 9.35 by 8.9 mm.

Alternate - Same as above, except Type 330EP &, Polyplastics Co., Ltd., minimum 0.32 mm thick.

Alternate - R/C - Plastic (QMFZ2), Type 3316 &, manufactured by Polyplastics Co., Ltd., minimum 0.32 mm thick, 11.39 by 9.35 by 8.9 mm.

Alternate - R/C - Plastic (QMFZ2), Type SK665FR, manufactured by E I Dupont De Nemours & Co. Inc. Dimensions - minimum 0.3 mm thick, 11.39 by 9.35 by 8.9 mm overall.

7. Core - Carbon steel. Dimensions 2.2 mm diameter, 8.55 mm long, with 4 mm diameter head. Inserted through bobbin and riveted to yoke.
8. Moveable Contact Arm (Spring) - Copper alloy. Dimensions, 0.11 mm thick, 8.3 by 6.8 mm overall. Secured to contact terminal by spot welding.
9. Moveable Contact - Silver alloy (85% Ag, 15% Ni), clad onto copper nickel base with gold clad, or without gold clad. Contact dimensions, 0.4 mm thick, 1.9 by 2.1 mm overall. Secured to moveable contact arm by welding.
10. Card - R/C - Plastics (QMFZ2), Type MG-350, (Mfr.), Nippon Petrochemicals Co., Ltd., dimensions, 1.6 mm thick, 7.8 by 15.3 mm overall. Armature secured to card.

Alternate - Same as above, except 7.6 by 15.25 mm overall dimensions.

Alternate - Same as above, except measures 1.6 mm thick, 7.6 by 15.25 mm overall.
- * Alternate - Same as above, except Type E6008, Sumitomo Chemical Co., Ltd., or Type G-330, Nippon Petrochemicals Co., Ltd.
11. Armature - Carbon steel, 1 mm thick, 9.75 by 5.8 mm overall, inserted into slots on card.

Alternate - Carbon steel, measured 1 mm thick, 9.45 by 5.8 mm overall.

Alternate - Same as above, except 1 mm thick, 9.45 by 5.8 mm overall.
12. Stationary Contact - Silver alloy (85% Ag, 15% Ni), clad onto copper alloy base with gold clad, or with gold clad. Contact dimensions, 0.4 mm thick, 1.9 by 2.1 mm. Secured to stationary contact arm by welding.
13. Contact Terminal - Copper alloy. Dimensions, 0.25 mm thick, 0.72 mm wide, 11.5 mm long. Molded into base.
14. Stationary Contact Arm - Copper alloy. Dimensions, 0.25 mm thick, 2.7 mm wide, 14.9 mm long. Molded into base.

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REPORT
ON
COMPONENT - MOTOR CONTROLLERS, MAGNETIC

Takamisawa Electric Co., Ltd.
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