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File E63614
Project 01SC10795

January 10, 2002

REPORT

ON

COMPONENT - MOTOR CONTROLLERS, MAGNETIC

Fujitsu Takamisawa Component Ltd.
Nagano, Japan

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DESCRIPTION

PRODUCT COVERED:

USR - Magnetic, Motor Controller, Model Series Type K1, with or without prefix FTR-, followed by A or C, followed by A, D, K or L, followed by 005 through 048, followed by W or T, followed by none or -LB, may or may not be followed by -01 through -99.

GENERAL:

These devices are single pole double throw magnetically operated switches with DC operating coil and with normally open and normally closed contacts. Some of these devices have single-pole single throw contacts arrangement with normally open contact. These devices are provided with terminals for direct printed circuit mounting. They are intended for use in industrial control equipment or temperature indicating and regulating equipment.

USR - Investigated to Standard UL 508.

RATINGS:

Contact:

Form C: Model with FTR-K1C(A,K) (#1)W
16 A, 24 V dc, Resistive, 6000 cycles.
16 A, 277 V ac, Resistive, 6000 cycles.
1 hp, 277 V ac, 6000 cycles.
1/2 hp, 125 V ac, 6000 cycles.
1/8 hp, 125 V ac, 6000 cycles.
Pilot duty, Code B300, 6000 cycles

Form A: Model with FTR-K1A(A,K) (#1)T
16 A, 24 V dc, Resistive, 6000 cycles.
16 A, 277 V ac, Resistive, 6000 cycles.
1 hp, 277 V ac, 6000 cycles.
1/2 hp, 125 V ac, 6000 cycles.
TV-5, 120 V ac, 25,000 cycles.
* Pilot duty, Code B300, 6000 cycles

RATINGS: (Cont'd.)

Form A: Model with FTR-K1A(D,L) (#1)W-LB
10 A, 277 V ac, Resistive, 6000 cycles.
1/3 hp, 125 V ac, 6000 cycles.
1/2 hp, 277 V ac, 6000 cycles.
Pilot duty, Code B300, 6000 cycles

(#1) = Coil range 5-48 V dc.

Coil:

(#1) Range 5-48 V dc.

NOMENCLATURE:

<u>FTR-K1</u>	<u>A</u>	<u>A</u>	<u>005</u>	<u>W</u>	<u>-LB</u>
I	II	III	IV	V	VI

I. Indicates types number, with or without prefix FTR-.

II. Indicates Contact configuration.

A - 1 Form A

C - 1 Form C

III. Indicates Coil Sensibility / enclosure.

A - General / Plastic sealed type

D - High Sensitive / Plastic sealed type

K - General / Flux free type

L - High Sensitive / Flux free type

IV. Indicates coil rated voltage.

005 through 048 - 5 through 48 V dc

V. Indicates contact material or TV Type.

W - Silver-tin oxide and Copper base overlaid with silver-tin oxide.

* T - TV rated (TV-5), form A only in addition to general coil Sensibility.

VI. Indicates contact rated / terminal pitch / Temperature range.

None - 16 A, 5.0mm, -40°C ~ + 85°C

LB - 10 A, 5.0mm, -40°C ~ +105°C

Or

Indicates minor construction variation. -01 through -99. Additional two digits used for special variation of construction as below.

A) Variation of coil resistance.

B) Variation of pickup voltage, non-pick up voltage, dropout voltage or hold voltage.

C) Variation of operate or release time.

D) Variation of dielectric strength.

E) Variation of coil voltage rated within 5 through 48 V dc.

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

This component has been judged on the basis of the required spacings in the Standard for Industrial Control Equipment, UL 508, Seventeenth Edition, which would cover the component itself if, submitted for unrestricted Listing.

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

Conditions of Acceptability:

1. A suitable enclosure should be provided for these devices in the end-product.
2. The relay terminals are not suitable for field wiring. The relay terminals are to be factory wired only and the suitability of the connection (including spacings between factory connectors) shall be determined.
3. These devices should be used within its Recognized rating as specified above.
4. These coils of these relays incorporate a Class 105 insulation system.

CONSTRUCTION DETAILS:

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

1. Spacings - Spacings of not less than 1/8 inch, 3.2 mm, through-air and ¼ inch, 6.4 mm, measured over-surface of insulating materials, including printed wiring boards, are maintained between any uninsulated live part and an uninsulated live part of opposite polarity, uninsulated grounded part other than the enclosure or exposed metal part.
2. Corrosion Protection - All parts are of corrosion resistant material or are plated or painted.
3. Marking - Ink-stamped label, recognized trade name and model number.