File E134517
Project 02NB04196
April 16, 2002
REPORT

ON
COMPONENT - MOTOR CONTROLLERS, MAGNETIC

Xiamen Hongfa Electroacoustic Co. Ltd.
Fujian, China

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| ---: |
| Revised: 2006-08-23 |

DESCRIPTION

PRODUCT COVERED:

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USR, CNR - Component - Switches, Industrial Control, Type JQX-115F and
    HF115F, may be followed by H, Blank or A, followed by
    005-230, followed by 1H, 2H, 1D, 2D, 1Z or 2Z, may be followed
    by S, followed by 1 through 4, may be followed by A or B, may
    be followed by G, may be followed by F, may be followed by
    additional letters or numbers.
*USR, CNR - Component - Switches, Industrial Control, Type JQX-115F-Q
    and HF115F-Q, followed by 005-060, followed by 1H or 1D, may be
    followed by 3, may be followed by G, maybe followed by F, may
    be followed by additional letters or numbers.
*USR, CNR - Component - Switches, Industrial Control, Type JQX-115F-T,
    HF115F-TH, HF115F-T and HF115F-TH, followed by 005-060,
    followed by 1H or 1Z, may be followed by S, followed by 3,
    followed by B, may be followed by G, may be followed by additional
    letters or numbers.
USR, CNR - Component - Switches, Industrial Control, Type JQX-115F-I or
    HF115F-I, followed by 005 to 110, followed by 1H, followed by
    Blank or S, followed by 3, followed by A, maybe followed by
    additional letters or numbers.
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GENERAL:

These devices are enclosed, magnetically operated, single- or double-pole, single- or double-throw throw relays. SPST relays may have normally open or normally closed contacts.

USR - Investigated to Standard UL 508.

CNR - Investigated to Canadian Standard C22.2, No. 14.

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ELECTRICAL RATINGS:

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Contact - Version 1 or 2, Normal Coil (AgCdO)
    12 A, 277 V ac, resistive, 50 K cycles
    1/2 hp, 250 v ac
    1/3 hp, 125 V ac
    Version 1 or 2, Sensitive Coil (AgCdO)
    10 A, 250 V ac, resistive
    Version 1A or 2A, Normal Coil (AgSnO2)
    12 A, 277 V ac, resistive, 100 K cycles
    B300
    R300
Version 1B or 2B (AgNi)
    12 A, 277 V ac, resistive, 100 K cycles
Version 3 (AgCdO)
    16 A, 277 V ac, resistive, 50 K cycles
    9 A, 250 V ac, resistive, 100 K cycles, 105o
    1 hp, 250 V ac
    1/2 hp, 125 v ac
    TV-5, 125 V ac
    12 A, 277 V ac, resistive, 100K cycles (NO only),
    40 *}\textrm{C
    12 A, 120 V ac, resistive, 100K cycles (NO only),
    40 *}\textrm{C
Version 3A (AgSnO2)
    16 A, 277 V ac, resistive, 75 K cycles
    B300
    R300
    9.2 A, 120 V ac, general use, 100K cycles, 60o
    8.2 A, 120 V ac, resistive, 100K cycles, 60 %
    1/2 HP, 250 V ac
    1/3 HP, 125 V ac
    5 FLA/30 LRA, 250 V ac, 30k cycles, 65 o
Version 3B (AgNi)
    16 A, 277 V ac, resistive, 100 K cycles
    5 FLA/30 LRA, 250 V ac, 65o
    with Class F insulation system minimum)
Version 4 (AgCdO)
    10 A, 250 V ac, resistive:
                30 K cycles normally open
                6 K cycles normally closed
    8 A, 277 V ac, resistive, 30 K cycles
    1/2 hp, 250 v ac
    1/4 hp, 125 v ac
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    Version 4A ( }\mp@subsup{\textrm{AgSnO}}{2}{}\mathrm{ )
    8 A, 277 V ac, resistive, 75K cycles
    Version 4B (AgNi)
    8 A, 277 V ac, resistive, 100K cycles
JQX-115F-Q Version
    20 A, 277 V ac, general use, 100K cycles, 124*}\textrm{C
JQX-115F-T/TH Version:
    16 A, 277 V ac, general use, 100K cycles, 105*}\textrm{C
JQX-115F-I Version:
    16A, 277 V ac, general use, 75K cycles, 40}\mp@subsup{}{}{\circ}\textrm{C
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AMBIENT TEMPERATURE: $85^{\circ} \mathrm{C}$, unless otherwise noted.

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NOMENCLATURE 1:

$$
\frac{J Q X-115 F}{A} \frac{-H}{b} \quad \frac{012}{c} \frac{-1 H}{d} \quad \frac{S}{e} \quad \frac{1}{f} \quad \frac{A}{g} \quad \frac{G}{h} \quad \frac{F}{i} \quad \frac{x x x}{j}
$$

a. Model Designation

JQX-115F or HF115F
b. Coil Version
$H=$ sensitive DC coil (for Version 1 or 2 only)
Blank = normal DC coil
$\mathrm{A}=$ normal AC coil
c. Coil Voltage
$005-110=5-110 \mathrm{~V}$ dc
$005-60=5-60 \mathrm{~V}$ dc (maximum for sensitive coil)
AC coil = 12 - 230 V ac
d. Contact Configurations
$1 \mathrm{H}=\operatorname{SPST}$ (NO)
$2 \mathrm{H}=\operatorname{DPST}$ (NO)
$1 \mathrm{D}=\operatorname{SPST}$ (NC)
$2 \mathrm{D}=\mathrm{DPST}$ (NC)
$1 Z=\operatorname{SPDT}$
$2 Z=$ DPDT
e. Sealing

S = sealed
Blank = unsealed
f. Version
$1=3.5 \mathrm{~mm}, 1$ pole
$2=5 \mathrm{~mm}$, 1 pole
$3=5 \mathrm{~mm}, 1$ pole
$4=5 \mathrm{~mm}, 2$ pole
g. Contact Material

Blank $=\mathrm{AgCdO}$
$\mathrm{A}=\mathrm{AgSnO}{ }_{2}$
$B=A g N i$
h. Contact Plating

Blank = None
$\mathrm{G}=\mathrm{Gold}$
i. Insulation
$\mathrm{F}=$ Class F
Blank = Class B

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j. Special Code: May be followed by additional letters or numbers (does not affect the construction)

NOMENCLATURE 2:

$$
\frac{J Q X-115 F-Q}{a} \frac{012}{b} \frac{-1 H}{c} \frac{\star}{d} \frac{3}{e} \frac{}{f} \quad \frac{G}{g} \frac{F}{h} \frac{X X X}{i}
$$

a. Model Designation: JQX-115F-Q or HF115F-Q
b. Coil Voltage: $005-060=5-60 \mathrm{~V} \mathrm{dc}$
c. Contact Configurations:
$1 \mathrm{H}=\operatorname{SPST}(\mathrm{NO})$
$1 \mathrm{D}=\operatorname{SPST}(\mathrm{NC})$
*d. Sealing:
Blank = Flux Proof
e. Terminal:

Nil $=$ Vertical terminal (standard)
3 = Horizontal terminal
f. Contact Material:

Blank = AgNi
g. Contact Plating:

Blank = None
G = Gold
h. Insulation:

Blank or $\mathrm{F}=$ Class F
i. Special Code:

May be followed by additional letters or numbers (does not affected the construction)

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NOMENCLATURE 3:
$\frac{J Q X-115 F-T / T H}{a} \frac{012}{b} \frac{-1 H}{c} \quad \frac{S}{d} \quad \frac{* 3}{e} \quad \frac{B}{f} \quad \frac{G}{g} \quad \frac{X X X}{h}$
a. Model Designation:

JQX-115F-T or HF115F-T 0.4 W
JQX-115F-TH or HF115F-TH 0.25 W
b. Coil Voltage:
$005-060=5-60 \mathrm{~V}$ dc
c. Contact Configurations:
$1 \mathrm{H}=\operatorname{SPST}$ (NO)
$\mathbf{1 Z}=\operatorname{SPDT}$
d. Sealing:

S = Sealed
Blank = Unsealed
e. Version:
$3=5.0 \mathrm{~mm}$
f. Contact Material: $\mathrm{B}=\mathrm{AgNi}$
g. Contact Plating:

Blank = None
$\mathrm{G}=\mathrm{Gold}$
h. Special Code:

May be followed by additional letters or numbers (does not affected the construction)

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NOMENCLATURE 4:

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\frac{J Q X-115 F-I}{a} \quad \frac{012}{b} \frac{-1 H}{c} \quad \frac{S}{d} \quad \frac{3}{e} \frac{A}{f} \quad \frac{x x x}{g}
$$

a. Model Designation

JQX-115F-I or HF115F-I
b. Coil Voltage
$005-110=5-110 \mathrm{v} \mathrm{dc}$
c. Contact Configurations $1 \mathrm{H}=\operatorname{SPST}$ (NO)
d. Sealing

S = sealed
Blank = unsealed
e. Version

$$
3=5 \mathrm{~mm}
$$

f. Contact Material

$$
\mathrm{A}=\mathrm{AgSnO}_{2}
$$

g. Special Code: May be followed by additional letters or numbers (does not affect the construction)

