File E134517
Project 02NB04196

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REPORT

ON

COMPONENT - MOTOR CONTROLLERS, MAGNETIC

Xiamen Hongfa Electroacoustic Co. Ltd.
Fujian, China

DESCRIPTION

PRODUCT COVERED:

USR, CNR - 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 – 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 – Switches, Industrial Control, Type JQX-115F-T, JQX-115F-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 A or B, may be followed by G, may be followed by additional letters or numbers.

USR, CNR – Switches, Industrial Control, Type JQX-115F-I or HF115F-I, followed by 005 to 110, followed by -1H or –1Z, followed by Blank or S, followed by 3, followed by A, maybe followed by additional letters or numbers.

USR, CNR – Switches, Industrial Control, Type HF115F-S , followed by 5, 6, 9, 12, 18, 24, 48, 60, 110, followed by -H, followed by Blank or S, maybe followed by F, maybe followed by additional letters or numbers.

USR, CNR – Type HF115F-L, followed by 3 to 24, followed by H or Z, followed by Blank or S, Followed by 3, followed by L1 or L2, followed by T, followed by F, followed by Blank or G, 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 for Industrial Control Equipment, UL 508, Seventeenth edition.

CNR - Investigated to Canadian Standard for Industrial Control Equipment, C22.2, No. 14-10, Eleventh edition.

ELECTRICAL RATINGS:

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 ($AgSnO_2$)
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, 105°C
1 hp, 250 V ac
1 hp, 277 V ac (NO only), 40 °C
1/2 hp, 125 V ac
TV-5, 125 V ac
12 A, 277 V ac, resistive, 100K cycles (NO only), 40 °C
12 A, 120 V ac, resistive, 100K cycles (NO only), 40 °C
4 A, 347 V ac, gen. use, 6000 cycles (NC only)

Version 3A ($AgSnO_2$)
16 A, 277 V ac/ 250 V ac, resistive, 75 K cycles
B300
R300
9.2 A, 120 V ac, general use, 100K cycles, 60°C
8.2 A, 120 V ac, resistive, 100K cycles, 60°C
1/2 HP, 250 V ac
1/3 HP, 125 V ac
5 FLA/30 LRA, 250 V ac, 30k cycles, 65 °C
For 1 Form A contact (NO) with none contact plating, normal DC coil only:
20 A, 277 Vac/ 250 Vac, resistive, 40°C
1 HP, 250 Vac, 30K cycles, 40°C
1/2 HP, 125 Vac, 30k cycles, 40°C
10 FLA/60 LRA, 250 Vac, 40°C
TV-5, 120 Vac, 40°C
5 FLA/30 LRA, 250 V ac, 85°C, 30K cycles (NO contact, DC coil only)

Version 3B (AgNi)
16 A, 277 V ac, resistive, 100 K cycles
5 FLA/30 LRA, 250 V ac, 65°C, 30K cycles (require employ with Class F insulation system minimum)

ELECTRICAL RATINGS (Cont'):

Contact – Version 4 (AgCdO)
10 A, 250 Vac, resistive:
30 K cycles normally open
6 K cycles normally closed
8 A, 277 Vac, resistive, 30 K cycles
1/2 hp, 250 Vac
1/4 hp, 125 Vac
4 A, 347 Vac, gen. use, 6000 cycles (NC only)

Version 4A ($AgSnO_2$)
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°C

JQX-115F-T Version:
16 A, 277 V ac, general use, 100K cycles, 105°C
18.4 A, 250 V ac, resistive, 20K cycles (NO only) @ 105°C
120 V ac, 3 A, Tungsten, 6,000 cycles, 105°C (AgSnQ2 and NO contact only)

JQX-115F-TH Version:
10 A, 277 V ac, general use, 100K cycles, 105°C

JQX-115F-I Version:
1H: 16A, 277 V ac, general use, 75K cycles, 40°C
1Z: 16A, 250 V ac, general use, 50K cycles, 85°C (NO only)
TV-5, 120 V ac, 40°C (AgSnQ2 and NO contact only)
120 V ac, 1000 W, Tungsten, 6,000 cycles, 40°C

HF115F-S Version:

16 A, 250 VAC/277 VAC, General use, 10K cycles, SAT 85°C

TV-8, 120 VAC, 25K Cycles, SAT 40°C

3000 W, 230 VAC, Tungsten, 12K Cycles, SAT 40°C

2.2 A, 277 VAC, standard ballast, 10K Cycles, SAT 50℃

1200 W, 120 VAC, Tungsten, 6K Cycles, SAT 50°C

1200 W, 277 VAC, Tungsten, 6K Cycles, SAT 50°C

AMBIENT TEMPERATURE: 85°C, unless otherwise noted.

SAT: Surrounding Ambient Temperature.

HF115F-L Version:
1 Form A

20A, 250VAC/277VAC, General use, SAT 85°C, 6K cycles
16A, 250VAC/277VAC, General use, SAT 85°C, 50K cycles
12A, 250VAC/277VAC, General use, SAT 85°C, 100K cycles
1HP, 240VAC, 30K Cycles, SAT 40°C
TV-5, 120VAC, 25K Cycles, SAT 40°C
360W, 125VAC, Tungsten lamp, 50K Cycles, SAT 40°C

1 Form C

NO:
20A, 250VAC/277VAC, General use, SAT 85°C, 6K cycles
16A, 250VAC/277VAC, General use, SAT 85°C, 50K cycles
12A, 250VAC/277VAC, General use, SAT 85°C, 100K cycles
1HP, 240VAC, 30K Cycles, SAT 40°C
NC:
16A, 250VAC/277VAC, General use, SAT 40°C, 30K cycles
* 1FORM C NO is same as 1 FORM A

AMBIENT TEMPERATURE: 85°C, unless otherwise noted.

SAT: Surrounding Ambient Temperature.

NOMENCLATURE 1:

JQX-115F	-H	012	-1H	S	1	A	G	F	xxx
A	b	c	d	e	f	g	h	i	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
A = normal AC coil

c. Coil Voltage
005 – 110 = 5 – 110 V dc
005 – 60 = 5 – 60 V dc (maximum for sensitive coil)
AC coil = 12 – 230 V ac

d. Contact Configurations
1H = SPST (NO)
2H = DPST (NO)
1D = SPST (NC)
2D = DPST (NC)
1Z = SPDT
2Z = DPDT

e. Sealing
S = sealed
Blank = unsealed

f. Version
1 = 3.5 mm, 1 pole
2 = 5 mm, 1 pole
3 = 5 mm, 1 pole
4 = 5 mm, 2 pole

g. Contact Material
Blank = AgCdO
A = $AgSnO_2$
B = AgNi

h. Contact Plating
Blank = None
G = Gold

i. Insulation
F = Class F
Blank = Class B

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

NOMENCLATURE 2:

JQX-115F-Q	012	-1H	*	3		G	F	XXX
a	b	c	d	e	f	g	h	i

a. Model Designation:
JQX-115F-Q or HF115F-Q

b. Coil Voltage:
005 – 060 = 5 – 60 V dc

c. Contact Configurations:
1H = SPST (NO)
1D = SPST (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 F = Class F

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

NOMENCLATURE 3:

JQX-115F-T/TH	012	-1H	S	*3	B	G	XXX
a	b	c	d	e	f	g	h

a. Model Designation:
JQX-115F-T or HF115F-T 0.4W
JQX-115F-TH or HF115F-TH 0.25W

b. Coil Voltage:
005 – 060 = 5 – 60 V dc

c. Contact Configurations:
1H = SPST (NO)
1Z = SPDT

d. Sealing:
S = Sealed
Blank = Unsealed

e. Version:
3 = 5.0 mm

f. Contact Material:
A = $AgSnO_2$
B = AgNi

g. Contact Plating:
Blank = None
G = Gold

h. Special Code:

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

NOMENCLATURE 4:

JQX-115F-I	012	-1H	S	3	A	xxx
a	b	c	d	e	f	g

a. Model Designation
JQX-115F-I or HF115F-I

b. Coil Voltage
005 – 110 = 5 – 110 V dc

c. Contact Configurations
1H = SPST (NO)
1Z = SPDT (NO only)

d. Sealing
S = sealed
Blank = unsealed

e. Version
3 = 5 mm

f. Contact Material
A = $AgSnO_2$

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

NOMENCLATURE 6:

HF115F-L	12	-H	S	3	L1	T	G	F	xxx
a	b	c	d	e	f	g	h	i	j

a. Model Designation
HF115F-L

b. Coil Voltage
3 – 24: 3 – 24 V dc

c. Contact Configurations
H: SPST (NO)
Z: SPDT (NO+NC)

d. Sealing
S: sealed
Blank: unsealed

e. Version
3: 5 mm, 1 pole

f. Coil version
L1: 1 coil latching
L2: 2 coil latching

g. Contact material
T: AgSnO2

h. Contact plating
Blank: No plating (standard)
G: Glod plating

i. Insulation system
F: Class F

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